



**NZART**

# **CALL BOOK**

**AMATEUR  
RADIO  
CALLSIGNS**

**RADIO  
& TV  
INFORMATION**



**New Zealand  
1990**

**OFFICIAL PROJECT**



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**Alan  
ZL2AJI**

**Steve  
ZL2TCG**



# AMATEUR RADIO

## What is Amateur Radio?

Amateur Radio, also affectionately known as "ham radio", is a hobby of constructing, experimenting and communicating. In New Zealand hams are licensed by the Radio Frequency Service. Once licenced, an amateur can operate radio equipment from home, from their vehicle and from anywhere in New Zealand. A number of radio frequencies have been set aside for Amateur Radio use. On these frequencies a ham can talk across town or around the world. The scope and possibilities are endless—from sending TV pictures to operating through Amateur Radio satellites.

## Who can be Hams?

Just about anyone can become a ham. Some famous people such as Kings and Prime Ministers are hams, but most are just people from all walks of life who like communicating. Young people find Amateur Radio a great training ground, older people find "hamming" an absorbing retirement hobby.

In fact Amateur Radio is more than a hobby, it is a service. Hams provide their equipment and operating skills whenever the need arises—such as for Civil Defence emergencies and Search and Rescue operations.

## How do I become a Ham?

Passing a ham licence is quite easy. For a Novice Licence you are required to obtain a 30 per cent pass in a test on radio theory, a 50 per cent pass in understanding Radio Regulations and a morse code sending and receiving test at six words per minute.

## Where do I get more information?

The New Zealand Association of Radio Transmitters (Inc.) is a non-profit association of Amateur Radio Operators. NZART has clubs and instructors in most larger cities and towns. For more information on Amateur Radio and details of club and licensing courses near you, contact:

The General Secretary, NZART, P.O. Box 40-525, Upper Hutt.



## New Zealand Association of Radio Transmitters

INC.

(Founder Member of the International Amateur Radio Union Region III Association)

Mail to: GENERAL SECRETARY, NZART HEADQUARTERS, P.O. BOX 40-525, UPPER HUTT, NEW ZEALAND.

PLEASE UPDATE MY EXISTING MEMBERSHIP RECORD AS FOLLOWS ☐ PLEASE ENROL ME AS A NEW MEMBER ☐

TRANSMITTING ☐ NON-TRANSMITTING ☐ JUNIOR ☐ FAMILY ☐ OVERSEAS ☐

ASSOCIATE ☐ LISTENER CALL ☐

MR MS MRS MISS	INITIALS	SURNAME	
	ADDRESS		
POST CODE		MEMBERSHIP NO.*	DATE

CALLSIGN
PREFERRED BRANCH, NAME OR NO.
PLEASE FIND ENCLOSED \$
MY SUBSCRIPTION TO 31 DECEMBER 19
I agree to abide by the NZART Constitution Signature:

\*Refer subscription notice or enclose latest Break-In label.

IF YOU PREFER TO PAY BY CREDIT CARD  
PLEASE COMPLETE

CARD No.

VISA ☐ BANKCARD ☐ EXPIRY DATE

SIGNATURE:



# CALL BOOK 1990

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New Zealanders. Our cover features  
the Kotuku (White Heron) logo of the  
1990 celebrations. NZART *Call Book*  
1990 is an Official 1990 Project. Several  
other Amateur Radio activities which  
are 1990 Projects will be described in  
*Break-In* during the year.

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# NZART PUBLICATIONS

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WIA Australian Callbook 1990 .....	\$14.40	\$19.40

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# NZART (Inc.) MEMBERSHIP SERVICES

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**Amateur Beacon Service** co-ordination by the Frequency Management and Technical Advisory Group

**Satellite Support** donations and fund-raising

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**Public Service Involvement** by the Amateur Radio Emergency Corps for Civil Defence and Search and Rescue

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**Amateur Radio Call Book** published annually

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**Special Projects** for funds for promoting radio in developing countries

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**Equipment Insurance Schedule** at special rates

## Editorial

For 1990 the word for Call Book is "new". Our new typesetters "TypeShop Ltd" have undertaken the task of resetting all the *Call Book* material. As with *Break-In* this year, there has been a change to a new page size and finally our new printing firm is D. N. Adams Ltd. A major benefit of the new printer is a substantial reduction in cost of production which has been passed on to members as a three dollar reduction in the price of additional copies of *Call Book* for members.

Over the last few years the method of maintaining the *Call Book* callsign listings has changed completely. In 1986 the amendments were all recorded by hand and sent to the typesetter, who in turn entered each one into his database. A full listing was then produced for proof-reading. When any errors in the setting had been located the list was returned to the typesetter for corrections. Finally at this stage, we received page proofs. Over the following three years we have built up a database including all ZL callsigns, Overseas Members and Non-Transmitting Members. Four digit post codes have also been added to all New Zealand addresses. This year as each amendment was received, the database was continually updated. Using the programs available to us we were able to cross-reference, and thereby avoid many problems which could have arisen. All amendments were rechecked before a final disk was prepared for the typesetter, who was quickly and easily able to produce the pages as they now appear in *Call Book*. As a matter of interest, the following table shows the figures for callsign alterations and address changes over the last 12 months.

Area	1989 Call Book	Additions	Deletions	1990 Call Book	Amendments
ZL1	2552	170	154	2568	216
ZL2	2111	131	142	2100	174
ZL3	976	55	83	948	87
ZL4	626	43	45	624	42
Total	6265	399	424	6240	519

A major problem, which has led to numerous complaints, is that of the details from the listing we receive from the Radio Frequency Service. We have noticed that this listing is, in some cases, different to those held in local RFS Offices. After investigation it was found that two separate computers are in operation in the RFS Head Office. It would appear that occasionally alterations have been made to the system supplying information to the local RFS Offices and not the other, from which we obtain our information. We have now been advised that work is in progress to combine the two systems and so provide a more accurate reference for the preparation of *Callbook* 1991. Members are reminded that, for any change of address, both the RFS and NZART should be advised. A Change of Address form is printed on page 14. A list of corrections to any errors contained in *Callbook* 1990 will appear in August *Break-In*. Please advise any errors to "Callbook Editor", P.O. Box 1733, Christchurch by July 10, 1990.

Many of the telephone numbers contained in *Callbook* (mainly in the Branch Directory and AREC Section Leaders listings) will change during the year. Where possible we have printed the phone number that will be applicable for most of the year i.e. my telephone number, which is currently (03) 527-862 will become (03) 352-7862 on the 30/06/90 and is therefore shown as the latter.

Once again *Call Book* includes contributions from many people, both amateur and non-amateur. For the first time three contributions have been received on disk, which reduces the effort of typesetting and proof-reading. Hopefully this number will increase in future years. My thanks go to all contributors without whom *Callbook* would merely be a listing of callsigns. Special thanks must also go to Cliff and Clare from TypeShop and to those who assisted with a large amount of proof-reading.

**Ian MacPherson**  
Call Book Editor



# NZART INFORMATION SECTION



## 1990-91 Officers

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PO Box 35-046, Naenae

## General Secretary

R. N. Copeland ZL2AKV

### NZART Headquarters

- Application for membership
- Subscription renewals
- Publications department
- Change of address (see page 14)
- General enquiries
- Examination applications

*Note: Membership number and Callsign should be on all correspondence. Please include a Break-In label if available.*

## NZART Headquarters

Visitors welcome.

Hours: 10-12, 2-4

6th Floor Astral Tower Building  
(entrance on west side of building)

88-90 Main Street

UPPER HUTT

Postal P.O. Box 40-252

Upper Hutt

Telephone (04) 282-170

## NZART Subscriptions

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a maximum of \$85.50 per family.

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application to the General Secretary

*Call Book 1990* Members \$12.00

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*Break-In* Single copy \$4.10

### Break-In Editor:

J. E. Hirtzel ZL3ADF

The Official Journal of the New Zealand Association of  
Radio Transmitters (Inc.)

Published monthly except January.

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—All articles, advertising, Hamads, Letters to the Editor:

### Editor

### Break-In

PO Box 1733

CHRISTCHURCH



### Official Broadcasts:

J. A. Meachen ZL2BHF

The monthly NZART Official Broadcast is made by:

ZL6A, WELLINGTON

3900kHz LSB

on the last Sunday of each month except December, when  
the broadcast is made on the Sunday before Christmas.

The broadcast is also made on some VHF and UHF  
repeaters. A list of these can be found in *Break-In*.

The time of the broadcast is 2000 hours. A repeat broadcast  
is made at 2100 hours.

Members and Branches are welcome to submit material  
to ZL2BHF, C/- NZART Headquarters, PO Box 40-525,  
Upper Hutt, for inclusion in the broadcasts.

### CONFERENCE OFFICIAL BROADCAST

The Official Conference Broadcast is held on the Sunday  
of Queen's Birthday Weekend at 2000 hours.



**OC AREC:**  
D. J. Mackay ZL3RW

### AREC Section Leaders Net

A monthly net of all AREC Section Leaders is held on the third Monday of each month at 1930 hours. Net is conducted by OC AREC, ZL3EX on 3900kHz Upper Sideband.

### Monitoring Service Co-ordinator:

R. E. Knowles ZL1BAD/ZL6IW

The NZART Monitoring Service is part of the IARU Monitoring System, a world-wide system of Amateur monitoring stations, concerned with the activities of non-amateur stations in amateur bands.

The primary object of the Monitoring Service is to identify, report, and have removed, all non-amateur stations in the exclusive amateur bands.

Additionally, the Service monitors our bands for statistical purposes to support submissions on band usage.

Reports on "Intruders" should be sent to ZL1BAD, *Call Book* address.

### Teletext

#### NZART Teletext Editors

Tony Dale ZL3LZ  
30 Cuffs Road, Christchurch  
Telephone (03) 887-913

Noel Barratt ZL1ATM  
42b Scott Avenue  
Mangere Bridge  
Auckland 1701

Telephone (09) 666-176  
Packet:

ZL1ATM @ ZL1AB. # AKL-NZL-OC



### Educational Development Group

The EDG was set up by Council to look after the Education and Development of Amateur Radio in New Zealand.

The Group consists of John ZL4QS, Cathy ZL2ADK and Ron ZL3MQ. The Group meets regularly each fortnight on 3650kHz and we welcome any Amateur who has anything to offer the group.

The Group is in desperate need of a Co-ordinator who can look after the Group's activities.

### MORSE TAPES

These are being compiled by Ron ZL3MQ on behalf of the Group. Please send money and tape to ZL3MQ *Call Book* address.

It is hoped the Q. & A. Book will be available to all early 1991.

The Radio Training Scheme now comes under the umbrella of the EDG Group.

Please refer to *Break-In* for up to date information.

NZART CALL BOOK, 1990



## PRESIDENTS



1926-27	E. A. Shrimpton	Z2XA
1928	R. J. Orbell	OZ1AX
1929	R. J. Orbell	ZL1AX
1930	T. R. Clarkson, MBE	ZL1FQ
1931	H. P. V. Brown	ZL3CG
1932	D. Wilkinson, QSM	ZL2AB
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1945-46	E. B. Lough	ZL2OG
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1960-62	G. McB. Salt	ZL1CK
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1969-70	W. R. Hamer	ZL2CD
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1972-73	D. E. Cleland	ZL1IY
1973-74	J. F. C. Johnson	ZL2AMJ
1974-77	W. D. Gorman, MBE	ZL2IY
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1983-85	D. J. Mackay	ZL3RW
1985-	T. D. Carrell	ZL3QL

## HONORARY LIFE MEMBERS

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1948	T. R. Clarkson, MBE	ZL2AZ
1953	R. Cassey	ZL2IQ
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1966	C. G. Liddell	ZL3ND
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1983	A. G. Godfrey	ZL1HV
1985	J. F. C. Johnson	ZL2AMJ
1986	C. W. Parton	ZL3CP
1989	R. S. H. Morgan	ZL2GQ

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### 03 WESTERN SUBURBS

Clubroom Address: 3000 Great North Road, New Lynn  
Branch Callsign: ZL1RK. Trustees: ZL1ST, ZL1AJI  
Branch Net: 3570kHz on non meeting Mondays at 1930 hours.  
146.525MHz on Thursdays at 1930 hours.  
Secretary: Norm Smith ZL1ST, phone: (09) 818-5143  
Postal Address: P.O. Box 15-122, New Lynn, Auckland 1232.  
President: Avery Jefferies ZL1AJI, phone: (09) 818-6962  
Meeting Information: First and third Mondays each month (except public holidays) at 1930 hours.  
Radio Classes: Tuesdays at 1900 hours at Kelston Boys' High School.  
Instructor: Bryce De Luca ZL1AXT, phone: (09) 784-488.

### 04 CAMBRIDGE RADIO AND ELECTRONICS CLUB

Clubroom Address: Band Rotunda Leamington Domain.  
Branch Callsign: ZL1ASW. Trustee: ZL1HP  
Branch Net: 3560kHz on Sundays at 0900 hours.  
146.575MHz on Sundays at 0900 hours.  
Secretary: M. King ZL1CDI.  
Postal Address: C/- P.O. Box 650, Cambridge 2351.  
President: Des H. Hamblin ZL1HP, phone: (071) 276-247.  
Meeting Information: Last Tuesday of each month at 1930 hours.  
Other Information: Construction every Tuesday at 1930 hours.

### 05 CHRISTCHURCH

Clubroom Address: 27 Galbraith Ave, Avonside, Christchurch 8006.  
Clubroom Telephone Number: (03) 891-188.  
Branch Callsign: ZL3AC. Trustee: ZL3RW.  
Branch Net: Canterbury 725 on Sundays 2000 hours.  
Secretary: Warren Strong, ZL3TX, phone: (03) 332-3493  
Postal Address: P.O. Box 1733, Christchurch 8000.  
President: Ron Parry, ZL3VX, phone: (03) 337-0365.  
Meeting Information: General: First Wednesday of month.  
AREC: second Wednesday of month. Both at 1945 hours.  
Radio Classes: Contact Ron Godkin, ZL3TMO. 31 Cardrona Street, Christchurch 8006. Home phone (03) 880-043.  
Other Information: "HAMLARKS" Editor, Roger Urlwin ZL3MG, (03) 351-8130.  
Branch Net: M.C., Trevor Payne ZL3AHP (03) 237-361.

### 06 SOUTHERN HAWKES BAY.

Clubroom Address: Dannevirke CD Headquarters.  
Branch Callsign: ZL2IB. Trustee: ZL2ABT.  
Branch Net: 3865 kHz each Sunday at 0930 hours.  
Secretary: R. Allison ZL2BRU, phone: (0653) 27-552  
Postal Address: Te Uri Rd, RD3 Dannevirke 5491.  
President: B. Tooke, ZL1UCZ, phone: (0650) 64-048.  
Meeting Information: Third Monday of month at Woodville Bowling Club—Dannevirke CD Headquarters alternate months.  
Radio Classes: See Branch 20 Directory listings.

### 07 NOT ALLOCATED

### 08 EASTERN SOUTHLAND

Branch Callsign: ZL4AL. Trustee: ZL4AO.  
Secretary: John Norton ZL4IM, phone (020) 53-773.  
Postal Address: C/- Private Bag, Pukerau, Southland 9750.  
President: Neil Gilder ZL4GL, phone: (020) 84-192.  
Meeting Information: Fourth Tuesday of each month at various venues.

### 09 EGMONT

In recess.

### 10 FRANKLIN AMATEUR RADIO CLUB INC.

Clubroom Address: Stadium Drive, Pukekohe.  
Branch Callsign: ZL1SA. Trustee: ZL1US.  
Branch Net: 3700kHz on Sundays at 0900 hours.  
Secretary: Murray Griffin, ZL1UHT, phone: Home (085) 86-192, Work (085) 89-588.  
Postal Address: 12 Valley Road, Pukekohe 1800.  
President: R. Jeffares ZL1BTR, phone: (09) 597-688.  
Meeting Information: Third Tuesday every month at 2000 hours.  
Other Information: Contact Officers: M. Armstrong, 77 Queen Street, Pukekohe ZL1US Ph:(085) 86-567 and R. Holt ZL1BBZ 10 Collingwood Rd, Waiuku (085) 59-549 phone (home) (085) 58-089 ext 8244 or (09) 758-999 ext 8244 or (04) 738-118 ext 8244.

# NZART BRANCH DIRECTORY

### 01 ASHBURTON BRANCH NZART

Clubroom Address: Vintage Car Club Rooms Tinwald.  
Branch Callsign: ZL3AF. Trustees: ZL3UX, ZL3AFB  
Branch Net: 144.6MHz on Mondays at 2030 hours.  
Secretary: Gordon Mattingley ZL3TRM, phone (03) 308-8555  
Postal Address: P.O. Box 361, Ashburton 8300.  
President: Les Vincent ZL3UX, phone (03) 303-6306.  
Meeting Information: Second Monday of the month, (except January)

### 02 AUCKLAND

Clubroom Address: 400 St John's Road, Meadowbank, Auckland, 1105.  
Clubroom Telephone Number: (09) 5286-755.  
Branch Callsign: ZL1AA. Trustees: ZL1KQ, ZL1AFU, ZL1BNV  
Branch Net: 146.600MHz every Monday at 2015 hours.  
Secretary: Martin Ellis ZL1ANJ, phone: (09) 528-5116.  
Postal Address: P.O. Box 18-003, Glen Innes, Auckland 1130.  
President: Don Webster ZL1CY, phone: (09) 555-554  
Meeting Information: Third Tuesday of each month from January to November at 1930 hours. AGM is second Tuesday in December. AREC meets on the last Wednesday of each month having five Wednesdays.  
Other Information: For Branch information contact either ZL1CY or ZL1ANJ, or Bob Murphy ZL1AFU, phone: (09) 534-5950.  
Clubrooms are usually open on Saturday mornings.



# NZART Directory—continued

## 11 GISBORNE AMATEUR RADIO CLUB INC.

Clubroom Address: Civil Defence Rooms/also Kaiti Hall.  
Clubroom Telephone Number: (079) 88-381.  
Branch Callsign: ZL2AA. Trustee: ZL2ANQ.  
Branch Net: 3666kHz on Sunday at 1030 hours.  
Secretary: B. J. Davoren ZL2UT, phone: (079) 88-381.  
Postal Address: P.O. Box 1017, Gisborne 3800.  
President: Ian McLachlan ZL2TNP, phone: (079) 88-659.  
Meeting Information: Second Monday each month 1930 hours.  
Committee meeting fourth Monday each month at 1930 hours.

## 12 HAMILTON AMATEUR RADIO CLUB (INC).

Clubroom Address: 90 Seddon Road, Hamilton.  
Branch Callsign: ZL1UX. Trustees ZL1AZZ.  
Branch Net: 3575kHz on Mondays at 1930 hours.  
Waikato 695 on Thursdays 2030 hours.  
Secretary: Hugh Garnett-Frizzle ZL1TSM, phone (071) 67-647  
Postal Address: P.O. Box 606, Hamilton 2000.  
President: Alan Wallace ZL1AMW, Phone (071) 439-738.  
Meeting Information: Third Wednesday monthly (except January) 1930 hours at Clubrooms.  
Radio Classes: Contact Secretary or President initially. Morse classes Sundays 0930 hours at Clubrooms.

## 13 HASTINGS/HAVERLOCK NORTH

Clubroom Address: Civil Defence Headquarters, Lyndon Road, Hastings.  
Branch Callsign: ZL2BEI. Trustee: ZL3DK.  
Branch Net: 3615kHz on Sundays at 0930 hours.  
Secretary: Frank Giles ZL2AGI, phone: (070) 84-272.  
Postal Address: 1006 Sussex Street, Hastings 4201.  
President: Bill Lowes, ZL2UBG, phone: (070) 775-078.  
Meeting Information: Fourth Wednesday of each month at Civil Defence Headquarters at 1930 hours.

## 14 HAWERA AMATEUR RADIO CLUB

Branch Callsign: ZL2AWW. Trustee: ZL2BOD.  
Secretary: Peter Williams ZL2AID, phone: (062) 84-292  
Postal Address: C/- P.O. Box 651, Hawera, South Taranaki 4800.  
President: Jeanne Gilchrist ZL2BOD, phone: (062) 88-638.  
Meeting Information: Irregular. Contact President or Secretary.

## 15 CENTRAL HAWKES BAY RADIO CLUB

Clubroom Address: "Pukeroa" Home for Disabled, Waipukurau.  
Branch Callsign: ZL2AR. Trustee: ZL2ACP.  
Branch Net: 3650kHz at 2000 NZ time.  
Secretary: J. Simcox ZL2THK, phone (0728) 89-811.  
Postal Address: P.O. Box 327 Waipukurau, Hawkes Bay 4176.  
President: I.M. Smith ZL2AFY, phone: (0728) 58-258.  
Meeting Information: Third Monday of each month at Clubrooms at 2000 hours.  
Other Information: V. Brosnan ZL2ACP, phone: (0728) 77-080.

## 16 HOROWHENUA

Clubroom Address: Jack Allen House, 21 Durham Street, Levin.  
Branch Callsign: ZL2DS. Trustee: ZL2ALB.  
Branch Net: 146.500MHz on Sundays at 1000 hours.  
3590kHz on Sundays at 0900 hours.  
Secretary: Mrs G. M. Leslie ZL2UKG, phone: (069) 37-296.  
Postal Address: 35 Robinson Street, Foxton 5551.  
President: Mr N. Broadbent, phone: (069) 81-028.  
Meeting Information: Fourth Wednesday each month except for December.

## 17 HUNTLY

In recess.

## 18 HUTT VALLEY

Clubroom Address: Birch Street Reserve, Lower Hutt.  
Branch Callsign: ZL2HV. Trustees: ZL2ASO, ZL2ARW.  
Branch Net: 3675kHz on Sundays at 0930 hours.  
Secretary: Mrs Estelle Rothschild, 83 Pretoria Street, Lower Hutt.  
Postal Address: P.O. Box 30519, Lower Hutt 6300.  
President: Alan Aston ZL2AJI, phone: (040) 647-054.  
Meeting Information: Meets in the Hutt Valley Tramping Clubrooms, situated on Birch Street Reserve, on the first Monday in the month except January—no meeting, and June when it meets second Monday in the month at 1930 hours.  
Other Information: Contact Officer: Mike Ryan ZL2BSM, phone: (04) 670-282.

## 19 INGLEWOOD

In recess.  
Contact Peter Cramer ZL2AIS, phone (067) 67-314.

## 20 MANAWATU

Clubroom Address: Totara Road, Palmerston North.  
Branch Callsign: ZL2KO. Trustee: ZL2GU.  
Branch Net: 3570kHz on Sundays at 0930 hours.  
147.125MHz on Thursdays at 2000 hours.  
Secretary: Ian Thompson ZL2BPN, phone: (063) 74-545 after 1800 hours.  
Postal Address: P.O. Box 1718, Palmerston North 5300.  
President: Mike Newell ZL2UAI, phone: (063) 69-324.  
Meeting Information: First Wednesday of the month at 1930 hours and also on the fifth Wednesday in months when they occur.  
Radio Classes: Contact Branch for information.

## 21 MANUKAU RADIO CLUB INC.

Clubroom Address: 8 Guide Place, Papatoetoe.  
Branch Callsign: ZL1QB. Trustees: ZL1AID, ZL1IJ.  
Branch Net: 3652kHz on Sundays at 0900 hours.  
146.550MHz on Mondays at 2000 hours.  
Secretary: Graham Coles ZL1BSU, phone: (09) 275-4365.  
Postal Address: 8 Guide Place, Papatoetoe 1701.  
President: Neil Kirton ZL1OV, phone: (09) 266-5888.  
Meeting Information: Daytime 1015 hours Monday of same week as third Wednesday. Evening third Wednesday of each month at 1930 hours. Technical night fourth Wednesday 1930 hours.

## 22 MARLBOROUGH BRANCH N.Z.A.R.T

Clubroom Address: Civil Defence Headquarters, Wither Road Extension, Blenheim.  
Clubroom Telephone: (057) 87-039.  
Branch Callsign: ZL2KS. Trustees: ZL2BGQ, ZL2BGL.  
Branch Net: 3566kHz on Sundays at 0900 hours.  
Blenheim 695 on Mondays at 1930 hours.  
Secretary: G. R. Simpson ZL2BK. Phone: (057) 89-390.  
Postal Address: P.O. Box 432, Blenheim 7300.  
President: R. S. Carter, phone: (057) 83-721.  
Meeting Information: Second Thursday of each month at 1930 hours except January at C.D.H.Q.  
Radio classes: Contact a committee member.

## 23 MARTON & DISTRICTS (no update received)

Clubroom Address: 359 Wellington Road, Marton.  
Branch Callsign: ZL2AMS. Trustee: ZL2VS.  
Branch Net: Taihape 6775 on Sundays at 2030 hours.  
Secretary: Marie Stewart, phone (0652) 48-889.  
Postal Address: P.O. Box 3, Bulls 5452.  
President: H. R. (Dusty) Miller, phone: (0652) 6225.  
Meeting Information: Fourth Wednesday of each month at 1930 hours.  
Radio Classes: As required. For enquiries phone (0652) 48-889 or (063 293) 606.

## 24 MOTUEKA AMATEUR RADIO CLUB (INC.)

Clubroom Address: Members Homes.  
Branch Callsign: ZL2GK. Trustee: ZL2KG.  
Secretary: C. Bearsley, phone: (0524) 86-294.  
Postal Address: P.O. Box 274, Motueka 7161.  
President: Ken Sharland ZL2KG, phone: (0524) 76-754.  
Meeting Information: First Monday of each month at 1930 hours except public holidays.

## 25 NAPIER AMATEUR RADIO CLUB INC. (no update received)

Clubroom Address: 123 Latham Street, Marewa, Napier.  
Branch Callsign: ZL2ABJ. Trustee: ZL2IC.  
Branch Net: Napier 725 on Tuesdays at 2000 hours.  
Secretary: Gordon C. Fraser ZL2NF, phone (070) 442-367.  
Postal Address: 14 Hinton Road, Taradale, Napier 4001.  
President: Laurie J. Winton ZL2TIS, phone: (070) 438-519.  
Meeting Information: Third Sunday of each month at 1930 hours in Clubrooms.  
Other Information: Napier Amateur Radio Contest Group, ZL2GT (refer Stan White ZL2AHC). Affiliated group to Branches 13 and 25—Hawkes Bay VHF Group, P.O. Box 821, Napier, President Bill Johnson, phone (070) 444-856.



# NZART Directory—continued

## 26 NELSON AMATEUR RADIO CLUB (INC.)

Branch Net: Nelson 720 on Wednesdays (except Club nights) at 2000 hours, 3890kHz on Sundays at 0900 hours.  
Secretary: Andrew Mackie ZL2THG, phone (054) 61-429 (work) (054) 75-067 (home).

Postal Address: P.O. Box 414, Nelson 7000.

President: Max Finlay ZL2BTA, phone (054) 23-366.

Meeting Information: Fourth Wednesday of each month (except December). Venue as advised in Club Newsletter. At time of writing meetings are held at Ngawhatu Hospital.

Radio Classes: Contact Dolph Lyford ZL2UL, phone (054) 86-023 or Nelson Polytechnic (054) 69-175 for details.

Other Information: The Club provides a varied and interesting program. Visitors are welcome at all meetings. If you want copies of our Newsletter *CQ Nelson* or want to advertise in it, please contact Ron Terris ZL2UBI on (054) 77-988.

## 27 NEW PLYMOUTH AMATEUR RADIO

Clubroom Address: CDHQ Marstrand Hill, New Plymouth.

Clubroom Telephone: (067) 513-787.

Branch Callsign: ZL2BDN. Trustee: ZL2AWR.

Branch Net: New Plymouth 720 on Wednesdays at 1930 hours.

Secretary: John Marsh ZL2TAS, phone (067) 27-748.

Postal Address: P.O. Box 675, New Plymouth 4600.

President: Mel Fox ZL2AWR, phone (067) 513-787.

Meeting Information: First Tuesday in month. Venue CDHQ.

Radio Classes: Contact Mel Fox (067) 513-787.

Other Information: Technical Group meeting first Tuesday in month. Venue CDHQ.

## 28 WHANGAREI BRANCH N.Z.A.R.T.

Clubroom Address: CD Headquarters, Whimp Avenue, Onerahi.

Branch Callsign: ZL1AM. Trustee: ZL1UOH.

Branch Net: 3740kHz on Sundays at 0900 hours.

Whangarei 720 on Mondays at 1930 hours.

Secretary: A. Walker ZL1BHC, phone (089) 435-1413.

Postal Address: P.O. Box 10078, Te Mai, Whangarei 0130.

President: D. T. Ewen ZL1UOH, phone (089) 432-0185.

Meeting Information: Second Wednesday of each month at 1930 hours. Most meetings at Clubrooms.

## 29. NORTH SHORE

Clubroom Address: J.F. Kennedy Memorial Park, 145 Beach Road, Castor Bay 1309.

Branch Callsign: ZL1AB. Trustees: ZL1ABS, ZL1ACX, ZL1AUW.

Branch Net: 3780kHz on Sundays 0900 hours.

Auckland 690 on Wednesdays 1930 (trial basis).

Secretary: Alan Wooller ZL1AUW, phone (09) 444-2423.

Postal Address: P.O. Box 31-103, Milford, North Shore 1330.

President: Lynn Sayer ZL2PQ, phone (09) 444-8402.

Meeting Information: First Monday of each month at 1930 hours, except June when meeting is second Monday.

Radio Classes: Brian Oliver ZL1OL at Westlake Boys' High School, phone (09) 418-2253.

Other Information: 29-er editor Paul Barratt ZL1AJY.

## 30 OTAGO

Clubroom Address: 109 Macandrew Road, Dunedin.

Clubroom Telephone Number: (024) 553-003.

Branch Callsign: ZL4AA. Trustee: ZL4MK.

Branch Net: Dunedin 690 on Sundays at 2100 hours.

Secretary: Keith R. Sellar ZL4LP, phone (024) 775-437.

Postal Address: P.O. Box 5485, Dunedin 9000.

President: Vern Haig ZL4JN, phone (024) 552-380.

Meeting Information: Each Wednesday at 1930 hours except late December and early January.

Other Information: Contact Officers Keith Shore ZL4AI and Brenda Shore ZL4OQ, phone (024) 662-618.

## 31 PAHIATUA

Clubroom Address: Main Road North, Pahiatua.

Branch Callsign: ZL2SP. Trustee: ZL2VJ.

Branch Net: 3570kHz on Thursday at 2000 hours.

Secretary: Mr H. J. Angelini, phone (0650) 67-704

Postal Address: RD2, Pahiatua 5471.

President: R.W. Brown ZL2ACK, phone (0650) 8126.

Meeting Information: Third Thursday each month Clubrooms at 2000 hours.

## 32 RAHOTU COASTAL

Clubroom Address: Domett Street, Opunake.

Branch Callsign: ZL2ANN. Trustee: ZL2OF.

Branch Net: Opunake 540 on Mondays at 1930 hours.

Secretary: J. N. Jago ZL2TNC, phone: (0624) 8257.

Postal Address: 63 Reimenschneider Street, Manaia 4851.

President: P. McNeil ZL2BQW, phone: (0661) 8028.

Meeting Information: Second Thursday at 1930 hours. Clubrooms

Domett Street, Opunake.

Radio classes: As required.

## 33 ROTORUA AMATEUR RADIO CLUB INC.

Clubroom Address: Wohlmann House, 3 Hinemoa Street, Rotorua.

Branch Net: Rotorua 735 on Fridays at 2030 hours.

Secretary: Ted Bretherton ZL1AVC, phone: (073) 459-687.

Postal Address: Rotorua Amateur Radio Club, P.O. Box 1766, Rotorua 3200.

President: B. N. Spring-Rice ZL2DQ, phone (073) 24-675.

Meeting Information: Held at Wohlmann House third Tuesday of month at 1930 hours. Informal meeting first Tuesday of month 1930 hours.

## 34 SOUTH CANTERBURY

Clubroom Address: Civil Defence HQ, Bank Street, Timaru.

Branch Callsign: ZL3UR. Trustee: ZL3CU

Secretary: Brian Hall, phone (056) 57-081

Postal Address: 27 John Street, Temuka 8752.

President: Ken Davy ZL3HG (056) 43-822.

Meeting Information: Last Monday—even numbered months at 1930 hours.

## 35 BALCLUTHA

Clubroom Address: Main South Road, Balclutha.

Branch Callsign: ZL4JF. Trustee: ZL4HD.

Branch Net: 3565kHz on Mondays at 2000 hours.

Kuriwao 675 on Mondays at 1930 hours.

Secretary: Ron Blair ZL4TLL, phone: (03) 415-7673.

Postal Address: Taumata RD Clinton, South Otago 9251.

President: Allan Taylor ZL4TJZ, Phone (03) 418-0316.

Meeting Information: First Tuesday of month at Clubrooms, Main South Road, Balclutha at 2000 hours.

Other Information: No meeting in January.

## 36 HOKITIKA

Secretary: Val Searle ZL3GW, phone: (0288) 56-741.

Postal Address: 7 Whitcombe Terrace, Hokitika 7900.

President: G. R. Bowman ZL3BH, phone (0288) 57-143.

Meeting Information: Irregular, please contact Secretary.

## 37 SOUTHLAND

Clubroom Address: 249 Etrick Street, Invercargill.

Clubroom Telephone No: (021) 88-686.

Branch Callsign: ZL4GQ. Trustees: ZL4OX, ZL4TFJ.

Secretary: Bill Obers ZL3TPE, phone: (021) 59-765.

Postal Address: P.O. Box 1260, Invercargill 9500.

President: Keith Reid ZL4NZ, phone: (021) 63-377.

Meeting Information: Third Tuesday—Branch at 2000 hours. First Tuesday—AREC at 1930 hours, except January.

Radio Classes: None this year. Enquiries to Neville Checketts ZL4OX, 21 Highfield Terrace, Invercargill.

Other Information: Contact Officer—Malcolm Davidson ZL4NO, 7 Jack Street, Invercargill, phone: (021) 68-564 (home).

## 38 TAUMARUNUI

Clubroom Address: Turaki Street (next to Police Station).

Clubroom Telephone Number: (0812) 8788.

Branch Net: Taumarunui 715 when necessary.

Secretary: Debbie Wells, phone: (0812) 57-139.

Postal Address: C/- L. H. Palmer, 229 Taupo Road, Taumarunui 2600.

President: Law Palmer ZL1TIG, phone: (0812) 8113.

Meeting Information: Second Monday of each month.



# NZART Directory—continued

## 39 TAURANGA AMATEUR RADIO CLUB

Clubroom Address: Civil Defence HQ, Barkes Corner, Tauranga.  
Clubroom Telephone Number: (075) 85-019.  
Branch Callsign: ZL1TP. Trustees: ZL1BOM, ZL1AKW, ZL1QI.  
Branch Net: 3600kHz on Sundays at 0900 hours  
Tauranga 680 on Wednesdays at 2030 hours.  
Secretary: Owen Booth ZL1USD, phone: (075) 64-104.  
Postal Address: P.O. Box 6003, Tauranga 3000.  
President: Paul Gillett ZL1QI, phone: (075) 410-504.  
Meeting Information: First Thursday of month at 1930 hours at Clubrooms.  
Radio Classes: Monday nights at clubrooms 1900-2100 hours, March to September.  
Other Information: PBBS = ZM1UX.

## 40 TE AWAMUTU

Clubroom Address: C/- C. D. Rooms, Bank Street, Te Awamutu.  
Branch Callsign: ZL1CB. Trustee: ZL1AOM.  
Branch Net: 3865kHz on Thursdays at 2030  
3555kHz on Tuesdays at 2030 hours.  
Secretary: Murray Dunwoody ZL1LZ, Phone: (07871) 6491.  
Postal Address: P.O. Box 583, Te Awamutu 2400.  
President: Peter Shaw ZL1UFS, phone: (07129) 6518.  
Meeting Information: Every third Wednesday, C. D. Rooms, Banks Street, Te Awamutu, 1945 NZST.  
Radio Classes: Technical Course Correspondence.

## 41 THAMES

Branch Callsign: ZL1DF. Trustee: ZL1APF.  
Branch Net: 3850kHz on Sundays at 0900 hours.  
Secretary: Lea Bateman ZL1APF, phone: (0843) 87-054.  
Postal Address: 109 Lambert Street, Thames 2801.  
President: Peter Williams ZL1BEB, phone: (0843) 77-281.  
Meeting Information: Irregular. Contact President or Secretary.

## 42 TITAHU BAY

Clubroom Address: Tireti Hall, Tireti Road, Titahi Bay.  
Branch Callsign: ZL2AFV. Trustee: ZL2AGY.  
Branch Net: 3710kHz on Sundays at 1100 hours.  
Secretary: K. W. Rumens, phone: (04) 328-437.  
Postal Address: 19 Duval Grove, Tawa, Wellington 6203.  
President: L. Jury ZL4SS, phone: (04) 368-516.  
Meeting Information: First Tuesday each month (except January) at 1930 hours.  
Radio Classes: As required.

## 43 WAIHI & DISTRICTS ARC

Clubroom Address: 5 Martha Street, Waihi 2991.  
Clubroom Telephone Number: (07863) 7141.  
Branch Callsign: ZL1BAE. Trustee: ZL1BAS.  
Branch Net: 146.575MHz on Sundays at 2100 hours NZST.  
Secretary: Anne Anderson ZL1TAF, phone: (07) 863-7546.  
Postal Address: 5 Martha Street, Waihi 2991 or Secretary's Call Book address.  
President: Owen Morgan ZL1BAS, phone: (07863) 8540.  
Meeting Information: First Thursday of each month, except January - Please note change of day.  
Radio classes: As required—contact Secretary. Construction Group—Sundays 1300-1500 hours at clubrooms.  
Other Information: Junior Electronics Club—contact Secretary for information. Thursday lunchtime social group. Visitors always welcome.

## 44 MATAMATA RADIO CLUB

Branch Callsign: ZL1RF. Trustee: ZL1AGA.  
Branch Net: 3560kHz on Sundays at 0900 hours.  
Secretary: Ian Perkins ZL1BFH, phone: (0818) 6839.  
Postal Address: 74 Tawari Street, Matamata 2271.  
President: John Rasmussen ZL1AGA, phone: (0818) 8269.  
Meeting Information: Second Wednesday each month at 1930 hours in staffroom of Matamata Borough Council.

## 45 WAIMARINO

Branch Callsign: ZL2MG. Trustee: ZL2AVL  
Secretary: G. W. Luscombe ZL2AVL, phone: (0658) 56-707.  
Postal Address: 5 Main Road, Waiouru 5164.  
President: T. L. Garmonsway ZL2AMT, phone: (0658) 81-448.  
Meeting Information: Irregular—please contact Secretary.

## 46 WAIRARAPA AMATEUR RADIO CLUB

Clubroom Address: Hood Aerodrome, Masterton.  
Clubroom Telephone Number: (059) 83-153.  
Branch Callsign: ZL2OA. Trustee: ZL2IC.  
Branch Net: Rewa 735 on Mondays at 2000 hours.  
Secretary: David Bray ZL2UCW, phone: (059) 25-704.  
Postal Address: P.O. Box 860, Masterton 5900.  
President: John Hudson ZL2BNT, phone: (059) 87-484.  
Meeting Information: Second Monday of each month (except January) at 1930 hours.  
Radio Classes: As required.

## 47 WAITARA AMATEUR RADIO

Clubroom Address: Waitara District Council, Queen Street, Waitara.  
Branch Callsign: ZL2TO. Trustee: ZL2BPW.  
Branch Net: 3666kHz on Tuesdays at 2000 hours.  
Secretary: Sid McKain ZL2BIF, phone: (087) 48-460.  
Postal Address: 1354 Devon Road, 42 RD, Waitara 4656.  
President: Larry Smart ZL3UD, phone: (067) 47-583.  
Meeting Information: First Sunday each month at 1930 hours in District Council Chambers.

## 48 WANGANUI AMATEUR RADIO SOCIETY (INC).

Clubroom Address: Deerstalkers Hall, 100 Peat Street, Wanganui.  
Branch Callsign: ZL2JA. Trustees: ZL2AUS, ZL2BGE.  
Secretary: M. D. Newman ZL1BNB, phone: (064) 46-830.  
Postal Address: 1 Caversham Road, Mosston, Wanganui 5001.  
President: G. R. Hawtree ZL2AHR, phone: (064) 47-501.  
Meeting Information: First non-public holiday Monday each month February to December at 1930 hours.  
Radio Classes: Contact Mike Newman ZL1BNB for information.

## 49 WESTLAND

Secretary: Kevin O'Sullivan ZL3ABY, phone: (027) 7598.  
Postal Address: 53 Marlborough Street, Greymouth 7801.  
President: Craig Terris ZL2UAY, phone: (027) 4087.  
Meeting Information: First Wednesday in the month at 1930 hours (except January). Contact Secretary or President for venue.  
Radio Classes: Contact Secretary for information.  
Other Information: Westland Repeater "695" as contact for club members. Contact Officer: Zelda Garlick ZL3AAB, 23 Lydia Street, Greymouth, phone: (027) 7332.

## 50 WELLINGTON

Clubroom Address: MED cafeteria, Webb Street, Wellington.  
Branch Callsign: ZL2WB. Trustee: ZL2AQC.  
Branch Net: 3570kHz on Sundays at 1100 hours.  
Secretary: Peter Moore, ZL2ULE, phone: (04) 845-246.  
Postal Address: P.O. Box 6464, Te Aro, Wellington 6035.  
Chairman: Bob Stewart ZL2AMI, phone: (04) 758-448.  
Meeting Information: Third Tuesday of month, except December at 1930 hours.  
Other Information: AREC Secretary Dan Doyle ZL2AQC, phone: (04) 793-407. Social group meets fourth Tuesday at 1400 hours, Lutheran Hall, King Street, Newtown. Contact Val Parminter ZL2AJ, phone: (04) 793-407.

## 51 EASTERN BAY OF PLENTY

Clubroom Address: Waiewa Street, Whakatane.  
Branch Callsign: ZL1AIU. Trustee: ZL1AOF.  
Branch Net: Edgcombe 700 on Mondays 2000 hours  
3722/3622kHz on Mondays at 1930/1935 hours.  
Secretary: Bryan Burgess ZL1CDN, phone:(home) (076) 24-721 (work) (076) 71-771.  
Postal Address: P.O. Box 2165, Whakatane 3400.  
President: George Brabant ZL1CDV, phone: (076) 84-220.  
Meeting Information: General meeting second Wednesday of the month at 1930 hours.  
Radio Classes: Every Tuesday at 1900 hours at Clubroom.

## 52 NORTHERN HAWKES BAY

No information received.



# NZART Directory—continued

## 53 TE PUKE

Clubroom Address: State Highway 2, next to Te Puke Holiday Park.  
Branch Net: 3600kHz on Sundays at 0900 hours.

Tauranga 680 on Wednesdays at 2030 hours.

Secretary: E. E. A. Brown, ZL1IB, phone: (075) 738-722.

Postal Address: 20 Gilmore Street, Te Puke, Bay of Plenty 3071.

President: F. I. Gibbs ZL1ARZ, phone: (075) 739-643.

Meeting Information: Second Tuesday each month at 1930 hours in Clubrooms. Each Saturday at 1300 hours in Clubrooms.

Radio Classes: As required.

## 54 PATEA

Branch Callsign: ZL2QF. Trustees: ZL2AFE, ZL2BJI, ZL2AHI.

Branch Net: Egmont 705 on Sundays at 0830 hours.

Secretary: Dave Robinson ZL2BJI, phone: (062) 87-486.

Postal Address: P.O. Box 156, Hawera 4800.

President: John Clarkson ZL1UJX, phone: (0623) 8576.

Meeting Information: Third Monday each month at Hawera Primary School.

## 55 WAITOMO RADIO CLUB

Clubroom Address: Thompson Avenue, Otorohanga.

Branch Callsign: ZL1IZ. Trustees: ZL1BZ, ZL1ADG

Branch Net: 3850kHz on Mondays at 2000 hours.

Waitomo 7375 on Sundays at 0900 hours.

Secretary: Ian Murrell ZL4SU, phone: (0813) 86-399.

Postal Address: 65 King Street, Te Kuiti 2500.

President: Mick Gannon ZL1HJ, phone: (0813) 87-140.

Meeting Information: First Tuesday of each month at 1930 hours.

## 56 CHRISTCHURCH WEST AMATEUR RADIO CLUB

Clubroom Address: Auburn Avenue, Upper Riccarton, Christchurch.

Branch Callsign: ZL3VV. Trustees: ZL3BJ, ZL3ACS.

Secretary: Roy C. Timms ZL3AIB, phone: (03) 351-7316.

Postal Address: C/- P.O. Box 31-095, Ilam, Christchurch 8030.

President: R. D. E. Berry ZL3TOB, phone: (03) 355-8240.

Meeting Information: Branch meeting fourth Tuesday evening each month. Morse classes every Tuesday evening at 1930 hours (1900 hours Branch Meeting night). Free 'n Easy meeting middle Wednesday each month 1330-1600 hours.

## 57 TOKOROA AMATEUR RADIO CLUB INC.

Clubroom Address: Ireland Reserve, Baird Road, Tokoroa.

Branch Callsign: ZL1AQR. Trustee: ZL1BEG.

Branch Net: Tokoroa 7025 on Mondays at 1900 hours.

Secretary: Ted Oxner ZL1TLV, phone: (0814) 65-955.

Postal Address: Ireland Reserve, Baird Road, Tokoroa 2392.

President: Des Zien ZL1TWH, phone: (0814) 66-292.

Meeting Information: Third Monday of month (except January) at 1930 hours in Clubrooms.

Radio Classes: As required. Training Officer: G. McFarlane ZL1BEG.

## 60 TAUPO

Clubroom Address: Taupo County Depot, Spa Road, Taupo.

Clubroom Telephone: (074) 84-602.

Branch Net: Taupo 675 on Mondays at 1930 hours.

Secretary: Peter Savage ZL1URD, phone: (074) 86-951.

Postal Address: 155 Rifle Range Road, Taupo 3300.

President: Graham Messenger ZL1BVO, phone: (074) 84-162.

Meeting Information: First Thursday each month at 1930 hours at Clubrooms.

## 61 CENTRAL OTAGO

Clubroom Address: Alexandra Fire Station, Centennial Ave.

Branch Net: 3660kHz on Tuesdays at 2000 hours.

Secretary: David Mulder ZL4DK, phone: (03) 446-9346.

Postal Address: 60 Ashworth Street, Alexandra 9181.

President: Wattie Beveridge ZL4ST, phone: (03) 448-6880.

Meeting Information: Fourth Thursday each month (except December) at 2000 hours.

## 62 REEFYON-BULLER

Branch Net: 3880kHz on Sundays at 2000 hours.

Secretary: Carl Hansen, phone: (0289) 28-235.

Postal Address: 6 Greenfield Street, Hector, Buller 7650.

President: George Lobb ZL3PB, phone: (0289) 7461.

Meeting Information: First Monday each month except January, second Monday if first is a public holiday. 61 Wakefield Street, Westport at 1930 hours.

Radio Classes: Contact Secretary or President.

## 63 UPPER HUTT

Clubroom Address: Rear of Upper Hutt Council Chambers, Fergusson Drive, Upper Hutt.

Clubroom Telephone: (04) 288-769 Ext 849.

A.H. (04) 288-769.

Branch Callsign: ZL2VH. Trustees: ZL2ACT, ZL2TJT.

Branch Net: Climie 730 and Climie 860—continuous.

Secretary: Joe Reed, phone: (04) 287-705.

Postal Address: 11 Wood Street, Upper Hutt 6401.

President: Chris Hannigan ZL4OY, phone: (04) 266-060.

Meeting Information: Second Sunday of each month except January.

Radio Classes: Contact Club Secretary.

Other Information: Contact Branch or AREC. R. N. Copeland ZL2AKV, phone: (04) 282-170 (work).

## 64 NORTH OTAGO

Clubroom Address: Car Club Rooms, Stoke Street.

Branch Callsign: ZL4OU. Trustee: ZL4SN.

Branch Net: 3850kHz, Oamaru 670.

Secretary: D. Hasler ZL4IX, phone: (0297) 72-454.

Postal Address: 10 Meon Street, Oamaru 8901.

President: N. McLeod ZL4SN, phone: (0297) 47-253.

Meeting Information: Second Monday each month (except January) at 1930 hours at Clubrooms.

Radio Classes: Contact D. Bokser ZL4TFF.

Other Information: Contact Officer: E. Armstrong ZL4TR, phone (0297) 48-903.

## 65 PAPAURA RADIO CLUB INC.

Clubroom Address: 2a Wood Street, Papakura.

Clubroom Telephone Number: (09) 295-8871.

Branch Callsign: ZL1VK. Trustee: ZL1AKY.

Branch Net: 3755kHz on Sundays at 0900 hours.

146.475MHz on Sundays at 0930 hours.

Secretary: Eileen Bain ZL1BRX, phone: (085) 87684.

Postal Address: P.O. Box 397, Papakura 1703.

President: Fred Johnson ZL1BUP, phone: (09) 298-6789.

Meeting Information: Second Wednesday of each month at 1930 hours.

AREC Section meets at Clubrooms on fifth Wednesday.

Radio Classes: Contact Jeff Reid ZL1AKY, phone (09) 294-8199.

Other Information: Newsletter Editors: Dave Johnstone ZL1AMN and Ron Moroney ZL1BTI.

CW Practice Sessions Fred Bain ZL1SP, 3755kHz at 1900 hours Monday to Friday.

Awards Custodian: Carol Johnstone ZL1AJL.

Hall Bookings: Clare Chapman ZL1AXC.

## 66. AUCKLAND VHF GROUP INC (no update received)

Clubroom Address: Hazel Avenue, Mount Roskill, Auckland.

Branch Callsign: ZL1BQ. Trustee: ZL1MO.

Branch Net: Auckland 6625 on Sundays at 2015 hours.

Secretary: Ken Boyce ZL1TVQ, phone: (09) 694-920.

Postal Address: P.O. Box 10-138, Balmoral, Auckland 1030.

President: Don Beale ZL1BJB, phone: (09) 294-8503.

Meeting Information: General meeting every third Monday at E Block, Auckland College of Education, Epsom, Auckland for 1989.

## 67 KAWERAU AMATEUR RADIO & HOBBIES CLUB

Clubroom Address: A.T.C. Hall Onslow Street, Kawerau.

Clubroom Telephone: (076) 38-722.

Branch Callsign: ZL1KW. Trustee: ZL1BGE.

Branch Net: 3615kHz on Wednesdays at 1930 hours except third Wednesday of the month.

Secretary: Jim Fitzpatrick ZL1CAM, phone: (07320) 846.

Postal Address: P.O. Box 209, Kawerau 3452.

President: Christine Armstrong ZL1BQW, phone: (076) 37-278.

Meeting Information: Third Wednesday of every month at 1930 hours, in Clubrooms.

## 68 NORTH CANTERBURY AMATEUR RADIO CLUB

Clubroom Address: Waimakariri District Council Car Park, Percival Street, Rangiora.

Branch Callsign: ZL3RR. Trustee: ZL3OC.

Branch Net: 146.600MHz on Sundays at 1900 hours.

3605kHz on Mondays preceeding meeting at 2030 hours.

Secretary: Lorna Allan ZL3AAZ, phone: (0502) 35-352.

Postal Address: 4 Highfield Lane, Rangiora 8254.

President: Geoff Gillman ZL3QR, phone: (0502) 27-883.

Meeting Information: Second Thursday of the month (except January) at 1930 hours.

Radio Classes: Every Wednesday, 1900-2100 hours, at the Clubrooms. Tutor Ron McMaster ZL3MQ, phone: (0327) 8278.



# NZART Directory—continued

## 69 KAPITI BRANCH

Clubroom Address: 97 Rosetta Road, Raumati South.  
Clubroom Telephone: (058) 86-664.  
Branch Callsign: ZL2KB. Trustee: ZL2JG.  
Branch Net: Kapiti 685 on Sundays at 1930 hours.  
Secretary: D. E. Young, phone: (058) 86-664.  
Postal Address: P.O. Box 166, Paraparaumu 6152.  
President: Reg Danrell, ZL2DR, phone: (058) 34-544.  
Meeting Information: First Wednesday every month (except January) in the Clubrooms, at 2000 hours.  
Radio Classes: Contact Dennis Young ZL2BFI, phone: (058) 86-664.  
Other Information: Contact Officer ZL2AGX, phone (058) 86-664 or call on Kapiti 685 or 885 repeaters.

## 70 FEILDING RADIO CLUB

Branch Callsign: ZL2AMR. Trustee: ZL2QR.  
Secretary: Alan J. Abel ZL2QR, phone: (063) 36-538.  
Postal Address: 20 Ranfurly Road, Feilding 5600.  
President: G. J. Hilchman, ZL2BNA, phone: (063) 35-847.  
Meeting Information: Second Monday, as required, at member's homes (contact Secretary).

## 71 RODNEY

Clubroom Address: Rodney District Council Office, Baxter Street, Warkworth or Civil Defence Building, School Road, Wellsford.  
Secretary: A. J. Dale ZL1ABL, phone: (08463) 8938.  
Postal Address: 61 Rodney Street, Wellsford 1493.  
President: I. A. Yule, phone: (09) 425-5948.  
Meeting Information: Second Wednesday of the month (except January) at 2000 hours. Varies between Warkworth and Wellsford check with Contact Officer.  
Contact Officers: A. J. Dale, 61 Rodney Street, Wellsford.  
W. Tester, 48 Pulham Road, Warkworth.

## 72 OPOTIKI RADIO CLUB

Clubroom Address: Opotiki Hospital, Hukutaia Road.  
Clubroom Telephone Number: (076) 56-168.  
Branch Callsign: ZL1BY. Trustee: ZL1BDG.  
Secretary: L. H. George ZL1BGH.  
Postal Address: C/- Box 315 Opotiki 3472.  
President: F. L. Mogford ZL1BDG, phone: (076) 56-932.  
Meeting Information: First Sunday each month at 0930 hours.

## 73 NORTHERN WAIROA ELECTRONICS CLUB

(no information available)

## 74 WELLINGTON VHF GROUP INC.

Clubroom Address: MED Cafeteria, Webb Street, Wellington.  
Clubroom Telephone Number: (04) 735-449.  
Branch Callsign: ZL2WA. Trustee: ZL2ARW.  
Secretary: Wayne Knowles ZL2BKC, phone: (04) 780-893.  
Postal Address: P.O. Box 12-259, Wellington North 6038.  
President: John Yaldwyn ZL2TRV, phone: (04) 783-222.  
Meeting Information: Last Thursday of each month (except December) at 1930 hours.  
Other Information: ATV Group meeting 3 weeks before main meeting.

## 75 QUEENSTOWN

Branch Callsign: ZL4NQ. Trustee: ZL4KW.  
Secretary: Peter Brentwood ZL4GU, phone: (03) 442-9549.  
Postal Address: P.O. Box 289, Queenstown 9692.  
President: Murray McCutcheon ZL4OA, phone: (03) 442-8692.  
Meeting Information: Irregular.  
Radio Classes: As required. Contact Secretary for information.

## 76 KAIKOURA RADIO CLUB

Clubroom Address: 222 Esplanade, Kaikoura.  
Branch Net: Kaikoura 690 on Saturdays at 1930 hours.  
Secretary: Revd Wilf Bool, phone: (03) 319-5936.  
Postal Address: 145 South Bay Parade, Kaikoura 7351.  
President: Bill Jackson ZL3PZ, phone: (03) 319-5302.  
Meeting Information: Second Monday at 1930 hours.

## 77 TE AROHA & DISTRICTS RADIO CLUB

Clubroom Address: Rewi Street, Te Aroha.  
Clubroom Telephone Number: (07) 884-8026.  
Branch Callsign: ZL1BSM. Trustee: ZL1BWK.  
Secretary: Grant Horn ZL1UNX, phone: (07) 884-5720.  
Postal Address: P.O. Box 24, Te Aroha 2971.  
President: Jack Sanne ZL1VH, phone: (071) 568-180.  
Meeting Information: Third Tuesday of February, April, July, October at 2000 hours.

## 78. FAR NORTH DISTRICTS AMATEUR RADIO CLUB (INC).

Branch Callsign: ZL1BG. Trustees: ZL1ALU, ZL1UEW.  
Branch Net: 3615kHz on Sundays at 2000 hours.  
Far North 710 on Thursdays at 2000 hours.  
Secretary: Russell Shackleton ZL1BQK, phone: (0889) 80-057.  
Postal Address: P.O. Box 81 Kaitiaki 0500.  
President: Clynton Allen ZL1UEW, phone: (0889) 75-706.  
Meeting Information: Second Wednesday of each odd month in member's homes.  
Radio Classes: Contact Brian Tarlton, phone (0889) 81-447.

## 79. HOWICK & DISTRICTS RADIO CLUB

Clubroom Address: R.S.A. Building, Wellington Street, Howick.  
Clubroom Telephone: (09) 534-9702.  
Branch Callsign: ZL1TB. Trustee: ZL1AOC.  
Branch Net: 3800kHz on Sundays at 0900 hours.  
146.575MHz on Wednesdays at 2000 hours.  
Secretary: Bert Toomey ZL1AQX, phone (09) 534-5161.  
Post Address: P.O. Box 82-127, Highland Park 1730.  
President: Vern Morris ZL1TDG, phone: (09) 534-2892.  
Meeting Information: Club meets first Wednesday in every month except January, at RSA Hall, Wellington Street, Howick.

## 80. HIBISCUS COAST AMATEUR RADIO CLUB INC.

Clubroom Address: 479/1 Whangaparaoa Road, Whangaparaoa 1463.  
Clubroom Telephone Number: (0942) 45-195.  
Branch Callsign: ZL1FU. Trustees: ZL1AG, ZL1ACY.  
Branch Net: 3725kHz on Sundays at 0900 hours.  
145.550MHz on Sundays at 0945.  
Secretary: W. K. Faulkner ZL1FQ, phone: (0942) 63-966.  
Postal Address: 479/1 Whangaparaoa Road, Whangaparaoa 1463.  
President: David Wadham ZL1TIS, phone: (09) 892-694, (0942) 43-002.  
Meeting Information: Fourth Monday each month (except December second Monday) at 1930 hours at Clubrooms.

## 81. WAIKATO VHF GROUP (INC)

Branch Callsign: ZL1IS. Trustees: ZL1HP.  
Branch Net: Waikato 695 on Sundays at 2015 hours.  
Secretary: Gavin Petrie ZL1UAB, phone: (071) 564-025.  
Postal Address: P.O. Box 606, Hamilton 2000.  
President: Des Hamblin ZL1HP, phone: (071) 276-247.  
Meeting Information: Committee meets January, April, July and October. General meetings are held in February, May, August and November. Listen to Net for details.

## 82. SOUTHERN WAIRARAPA A.R.C.

Clubroom Address: St John Building, Lyon Street, Featherston.  
Clubroom Telephone Number: (0553) 89-431.  
Branch Callsign: ZL2BPP. Trustee: ZL2QW.  
Branch Net: Southern Wairarapa 715.  
Secretary: Mrs P. Carr ZL2QW, phone: (0553) 89-576.  
Postal Address: P.O. Box 163, Featherston 5952.  
President: R. A. Pearce ZL2GJ, phone: (0553) 28-758.  
Meeting Information: First Sunday each month (except January) at 1930 hours.  
Radio Classes: As required.

## 83. RAGLAN AMATEUR RADIO CLUB.

Clubroom Address: 25 Bay View Road, Raglan.  
Clubroom Telephone Number: (071) 258-018.  
Branch Callsign: ZL1CCT. Trustees: ZL1BRU, ZL1BFM.  
Branch Net: 146.525MHz on Tuesdays at 1930 hours.  
3625kHz on Saturdays at 0830 hours.  
Secretary: Fred Gilbert, ZL1BRU, phone: (071) 258-018.  
Postal Address: 25 Bay View Road, Raglan 2051.  
President: Trevor Andrews, ZL1BFM, phone: (071) 258-815.  
Meeting Information: Quarterly by arrangement.

**1990 is  
New Zealand's  
year—make it  
NZART's as well**

# The Amateur's Code

The radio amateur is:

**CONSIDERATE.** . . . . never knowingly uses the air in a manner such as to lessen the enjoyment of others.

**LOYAL.** . . . . . offers loyalty, encouragement and support to fellow amateurs, local club and National Society through which amateur radio is represented to Government, the International Amateur Radio Union and the International Telecommunication Union.

**PROGRESSIVE.** . . . . with knowledge abreast of science, a well-built and efficient station and operation above reproach.

**FRIENDLY.** . . . . . slow and patient sending when requested; friendly advice and counsel to the beginner; kindly assistance, co-operation and consideration for the interests of others. These are the hallmarks of the amateur spirit.

**BALANCED.** . . . . . radio is a hobby never interfering with duties owed to home, job, school or community.

**PATRIOTIC.** . . . . . station and skill always ready for service to community and country.

## CHANGE OF ADDRESS

To ensure your details are correct for *Call Book* 1991 please complete this form.

Name \_\_\_\_\_ Callsign \_\_\_\_\_ Membership Number \_\_\_\_\_

Old Address \_\_\_\_\_ New station address \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

Postcode \_\_\_\_\_

Please tick which address you wish to appear in *Call Book*

Station ☐ Postal ☐ Both ☐

Break-In Postal address \_\_\_\_\_

(if different from above) \_\_\_\_\_

Postcode \_\_\_\_\_

Remember: If you change your address you should advise your nearest office of the Radio Frequency Service and the General Secretary of NZART.

**POST THIS FORM TO NZART—P.O. BOX 40-525, UPPER HUTT**



# New Zealand Amateur Radio Stations

## ZL1 Callsigns

<b>ZL1AA</b>	Auckland Branch NZART (Inc.), see Branch Directory	<b>ZL1CO</b>	Birss, T. H. N., Kahawai Road, Glenbrook, R.D. 1, Waiuku.1852
<b>ZL1AB</b>	North Shore Branch NZART (Inc.), see Branch Directory	<b>ZL1CR</b>	Ngakuru, R. A., 31 Wihongi Street, Kaikohe.0400
<b>ZL1AC</b>	Spackman, L. S., 124c Taylor Street, Blockhouse Bay, Auckland.1207	<b>ZL1CS</b>	Shaw, C. E., P.O. Box 2088, Whakatane.3400
<b>ZL1AE</b>	Duffin, R. W., 4 Cotterill Road, Leigh.1490	<b>ZL1CU</b>	Curtis, N. C., 9 Taraira Road, Titirangi, Auckland.1230
<b>ZL1AF</b>	Ogier, I. W., 32 Rangitane Street, Palmerston North.5301	<b>ZL1CV</b>	Firman, R. J., 19 Tainui Street, Onerahi, Whangarei.0101
<b>ZL1AG</b>	Gilbert, L. H., 3b Lillian Place, Orewa.1461	<b>ZL1CY</b>	Webster, D. M., 46 Speight Road, Kohimarama, Auckland.1105
<b>ZL1AH</b>	Wightman, J. D., 359 Maungatapu Road, Tauranga.3001	<b>ZL1CZ</b>	Duxbury, T. A., 338 St. Heliers Bay Road, Auckland.1105
<b>ZL1AI</b>	Badman, R. G., 14 Fenwick Crescent, Hillcrest, Hamilton.2001	<b>ZL1DA</b>	Wilde, C. J., 8 Newburn Road, Browns Bay, Auckland.1310
<b>ZL1AJ</b>	Culloty, H. F. J., 5 May Street, Hillcrest, Hamilton.2001	<b>ZL1DB</b>	Dugmore, K. F., 3 McBeth Drive, Te Puke.3071
<b>ZL1AK</b>	Mitchell, B. A., P.O. Box 7, 12 Ward Street, Waharoa.2272	<b>ZL1DC</b>	Hanley, A. B. D., 1/13 Koromiko Street, New Lynn, Auckland.1207
<b>ZL1AL</b>	Benton, T. J., 90 Koraha Street, Remuera, Auckland.1105	<b>ZL1DD</b>	Foster, A. E. G., 8 Tatyana Place, Massey, Auckland.1208
<b>ZL1AM</b>	Northland Branch NZART (Inc.), see Branch Directory	<b>ZL1DE</b>	Adshead, G. O., 22 Taylor Street, Avondale, Auckland.1207
<b>ZL1AN</b>	Bold, G. E. J., 15 Kauri Road, Birkenhead, Auckland.1310	<b>ZL1DF</b>	Thames Radio Club Branch 41 NZART (Inc), see Branch Directory
<b>ZL1AQ</b>	Rouse, G. C., 1 Mears Road, Hamilton.2001	<b>ZL1DG</b>	Marsh, B. G., 49 Tranmere Road, Hamilton.2001
<b>ZL1AR</b>	Walsh, J. S., Maungatapu Road, Glenfalls, R.D. 1, Morrinsville.2251	<b>ZL1DH</b>	Edwards, J. R., Messengers Road, R.D. 3, Silverdale.1462
<b>ZL1AS</b>	McRae, I. H., Flat 1, 19 Church Street, Northcote, Auckland.1309	<b>ZL1DI</b>	Logan, J. D., 21 Burton Place, Rotorua.3201
<b>ZL1AT</b>	Pawson, E., 6 County Road, Torbay, Auckland.1310	<b>ZL1DJ</b>	Hopkins, B. N., 133 Kitchener Road, Waiuku.1852
<b>ZL1AU</b>	Scouse, P. N., 10 Eastview Road, Glen Innes, Auckland.1106	<b>ZL1DK</b>	Glucina, G., 31 Chelverton Terrace, Red Beach, Orewa.1461
<b>ZL1AV</b>	Tremayne, D. T., Spencer Road, Lake Tarawera, Rotorua.3201	<b>ZL1DL</b>	Birt, E., 41 Holland Road, Northcote, Auckland.1309
<b>ZL1AW</b>	Bailey, C. A., 261 Papamoa Beach Road, R.D. 7, Te Puke.3071	<b>ZL1DM</b>	Grayson, R. T., 25 Rembrandt Place, Papakura.1703
<b>ZL1AX</b>	Crooks, G. E., 2/21 Elizabeth Street, Orewa, Auckland.1461	<b>ZL1DN</b>	Wishnowsky, R. E., 22 Okahu Road, Kaitiaki.0500
<b>ZL1AZ</b>	Brown, M. A., 38 Cyclarama Crescent, Massey, Auckland.1208	<b>ZL1DO</b>	Harvey, G. F., 267 Mt Albert Road, Mt Roskill, Auckland.1003
<b>ZL1BB</b>	Bunting, A. B., 3a Hillary Heights Avenue, Henderson, Auckland.1208	<b>ZL1DQ</b>	Menendez, R. R., 43a Portland Road, Remuera, Auckland.1105
<b>ZL1BD</b>	Wilson, A., Waingaro Road, R.D. 1, Ngaruawahia.2171	<b>ZL1DR</b>	Brooker, A. D., 35 Wordsworth Street, Leamington, Cambridge.2350
<b>ZL1BF</b>	Hall, R. J., 20b Lowtherhurst Road, Massey, Auckland.1208	<b>ZL1DS</b>	Colquhoun, P. R., 41 Alison Road, Surfdale, Waiheke Island.1470
<b>ZL1BG</b>	Far North Districts Amateur Radio Club, see Branch Directory	<b>ZL1DT</b>	Rowe, E. G., 2/24 Cromdale Avenue, Howick.1705
<b>ZL1BH</b>	Creasy, S. C., 7 Crowther Terrace, Taupo.3300	<b>ZL1DV</b>	Veale, R. S. (Mrs), 31 Rangitoto Avenue, Remuera, Auckland.1105
<b>ZL1BI</b>	Freeman, S. J., 236a Scenic Drive, Titirangi, Auckland.1207	<b>ZL1DW</b>	Pryor, M. G., 8 Slater Place, Te Puke.3071
<b>ZL1BJ</b>	Llewellyn, J. D., 7 Moreland Road, Mt. Albert, Auckland.1003	<b>ZL1DX</b>	Melville, R. A., 77 Wood Bay Road, Titirangi, Auckland.1207
<b>ZL1BK</b>	Long, R. J., 175 Green Lane Road, Green Lane, Auckland.1105	<b>ZL1DY</b>	Crickett, J. L., 1 Tulchen Avenue, Raglan.2051
<b>ZL1BL</b>	Chew, J. B., Wight Street, Huntly.2191	<b>ZL1DZ</b>	Heinen, M. J., 61 Haseler Crescent, Howick, Auckland.1705
<b>ZL1BN</b>	Kirkwood, B. J., 147 John Street, Ponsonby, Auckland.1002	<b>ZL1FA</b>	Greenaway, A. W., 11 Darraghs Road, Otumoetai, Tauranga.3001
<b>ZL1BO</b>	Laing-Smith, I. E., 69 Stamford Park Road, Waikowhai, Auckland.1004	<b>ZL1FB</b>	Bell, J. F. G., 21 Wymer Terrace, Hamilton.2001
<b>ZL1BP</b>	Harris, W. F. H., 80 Roberts Road, Te Atatu South, Auckland.1208	<b>ZL1FC</b>	Pinder, A., 209 Victoria Road, Devonport, Auckland.1309
<b>ZL1BQ</b>	Auckland VHF Group (Inc), see Branch Directory	<b>ZL1FD</b>	Armstrong, D. K., Kaituna Road, R.D. 9, Te Puke.3071
<b>ZL1BR</b>	Hanson, K. O., 10 Shelly Beach Road, Surfdale, Waiheke Island.1470	<b>ZL1FF</b>	Gifford, A. B., 566/1 Teasdale Street, Te Awamutu.2400
<b>ZL1BS</b>	Scott, D. T. S., 237 Metcalfe Road, Ranui, Auckland.1208	<b>ZL1FG</b>	Booth, B. W. G., 8 Penney Avenue, Mt. Roskill, Auckland.1004
<b>ZL1BT</b>	Thorpe, G. B., 19 Rolleston Street, Kihikihia.2400	<b>ZL1FH</b>	Barkman, D. B., 903/45 Stanley Point Road, Devonport, Auckland.1309
<b>ZL1BU</b>	Kealey, D. T., 3 Corinth Street, Meadowbank, Auckland.1105	<b>ZL1FI</b>	Power, W. T., 14 Hebe Place, Birkenhead, Auckland.1310
<b>ZL1BV</b>	Birch, R. W., Riverside Drive, Whangarei.0101	<b>ZL1FJ</b>	Lynch, R. N., 4140 Great North Road, Glendene, Auckland.1208
<b>ZL1BX</b>	Smith, M. A., 32 Glenveagh Drive, Hillsborough, Auckland.1004	<b>ZL1FK</b>	Challinor, M. J., 31 Barrons Drive, Green Bay, Auckland.1207
<b>ZL1BY</b>	Opotiki Branch 72 NZART (Inc), see Branch Directory	<b>ZL1FM</b>	Robertson, J. S., 29 Cyclarama Crescent, Massey, Auckland.1208
<b>ZL1BZ</b>	Howitt, I. M., 15 Frederick Street, Otorohanga.2554	<b>ZL1FN</b>	Keesing, S., 68 Swann Beach Road, Whangaparaoa, Auckland.1463
<b>ZL1CA</b>	Wyllie, C. R., 6 Beverley Crescent, Hillcrest, Hamilton.2001	<b>ZL1FP</b>	Anchor, G. S., 46a May Street, Mt. Maunganui.3002
<b>ZL1CB</b>	Te Awamutu Amateur Radio Club Branch 40 NZART, see Branch Directory	<b>ZL1FQ</b>	Faulkner, W. K., 22 Moenui Avenue, Orewa, Hibiscus Coast.1461
<b>ZL1CC</b>	Birt, D. J., 3 Cheeseman Place, Meadowbank, Auckland.1105	<b>ZL1FR</b>	Wood, R. S., 5 Takitimu Street, Orakei, Auckland.1105
<b>ZL1CD</b>	Baxendale, J., 224 Whitney Street, Blockhouse Bay, Auckland.1207	<b>ZL1FU</b>	Hibiscus Coast Amateur Radio Club (Inc), see Branch Directory
<b>ZL1CE</b>	Fields, R. E., Flat 2, 165 Abbotts Way, Remuera, Auckland.1106	<b>ZL1FV</b>	Runciman, G. J. (Mrs), 36 Cardiff Road, Pakuranga, Auckland.1706
<b>ZL1CG</b>	Sims, H., 8 Flata Street, Mangakino.2391	<b>ZL1FW</b>	Flowers, J. V. E., 8 Regent Street, Tauranga.3001
<b>ZL1CH</b>	Boyd, H. A., 13a Long Street, Torbay, Auckland.1310	<b>ZL1FX</b>	Hyde, K. G., 126b Te Atatu Road, Te Atatu South, Auckland.1208
<b>ZL1CJ</b>	Smith, B. W., Ruawaro, No. 2 R.D., Huntly.2191	<b>ZL1FY</b>	Armstrong, G. W., 5 Jervois Street, Kawerau.3452
<b>ZL1CK</b>	Martin, E. T., 109 Tony's Avenue, Totara, Thames.2801	<b>ZL1FZ</b>	Coates, K. J., 2 Bardia Street, Takapuna, Auckland.1309
<b>ZL1CL</b>	Leedom, C. A., 7 Crudge Street, Blockhouse Bay, Auckland.1207	<b>ZL1GA</b>	Hoy, M. H., 36 Sierra Street, Glendowie, Auckland.1105
<b>ZL1CM</b>	Prince, R. P., 104 Freyberg Street, Otumoetai, Tauranga.3001	<b>ZL1GD</b>	Carter, G. H., 21 Grand View Road, Hamilton.2001
<b>ZL1CN</b>	Woodfield, R. T., 46 Weaver Street, Whangarei.0101	<b>ZL1GF</b>	Fish, J. F., 14 Howard Road, Northcote, Auckland.1309
		<b>ZL1GI</b>	Brumby, C. J., 5 Matuhi Rise, Henderson, Auckland.1208
		<b>ZL1GJ</b>	Dobbing, S. J., 56 Pohutukawa Drive, Pukete, Hamilton.2001
		<b>ZL1GK</b>	Boyle, J. O., 3 Camelia Grove, Parklands, Waikanae.6154



# ZL1GL

ZL1GL	Kelly, T. D., 35 Rawhitroa Road, Kohimarama, Auckland.1105	ZL1JH	Hodson, L., 71 Riverside Road, Orewa, Auckland.1461
ZL1GN	Beckham, D. S. R., 30 Normondy Road, Henderson, Auckland.1208	ZL1JI	Hodgson, C. G. B., 123 Beaumonts Way Extn, Manurewa.1702
ZL1GO	Ogden, J. R., 88 Lynn Road, Glenfield, Auckland.1310	ZL1JJ	Wilson, H. W., 85 Domain Road, Papamoa.3070
ZL1GP	Henderson, R. J., 87 Grange Road, Mt. Eden, Auckland.1003	ZL1JK	Schofield, J. R., 14a Casey Avenue, Hamilton.2001
ZL1GQ	Coates, W. W., 25 Tamihana Street, Matamata.2271	ZL1JL	Wilson, W. O. B., c/- 8b Richmond Street, Hamilton.2001
ZL1GR	Goodwin, L., 13 Stafford Street, Waihi.2991	ZL1JM	McIntyre, J., 3 Tihi Road, Rotorua.3201
ZL1GS	Webb, J. L., 1 Willow Place, Whangarei.0101	ZL1JN	Turner, A., 140 Union Street, Howick.1705
ZL1GT	Hooker, B. N. N., 9 Amorino Drive, Hibiscus Coast, Orewa.1461	ZL1JO	Walker, N. A., 14 Mawney Road, Henderson, Auckland.1208
ZL1GU	Rolle, E. M., 41 Rangimarie Crescent, Snells Beach, Warkworth.1490	ZL1JP	Buckton, J. V., 14 Cockle Bay Road, Howick, Auckland.1705
ZL1GV	Spackman, B. C. W., 15 Manuka Street, Matamata.2271	ZL1JR	Jones, J. W. W., 2/18 Meadowland Drive, Howick.1705
ZL1GW	Ross, P. R., 57 May Street, Hillcrest, Hamilton.2001	ZL1JS	Baker, M. R., Atwood Road, Tamateraui, R.D. 4, Whangarei.0121
ZL1GX	Hannaford, J. W., 42 Waimarie Road, Whenuapai Village, Auckland.1450	ZL1JT	Turnwald, J. B., 29 Cliffview Drive, Green Bay, Auckland.1207
ZL1GZ	Graham, E. W., 18 Seaway Terrace, Tauranga.3001	ZL1JU	Teviotdale, B. M., Fairbank Road, Rotorua.3201
ZL1HB	Homer, H. L., 823 Te Atatu Road, Te Atatu, Auckland.1208	ZL1JY	Field, A. N., 2 Wharepaina Crescent, Rotorua.3201
ZL1HC	Colegrave, A. H., 15b Moana Road, Gisborne.3801	ZL1JZ	Davison, P. W., Poland Street, Waikato.2950
ZL1HD	Dahl, K., Taratara Road, Kaero.0556	ZL1KC	Page, A., 6 Matai Place, Otaki.6171
ZL1HE	Lord, I. K., 41a Peninsula Club, 441 Whangaparaoa Road, Whangaparaoa.1463	ZL1KF	Cholmondeley-Smith, D. R., 20 Sharon Road, Waiake, Auckland.1310
ZL1HF	Harrison, N. D., 42b Taikata Road, Te Atatu North, Auckland.1208	ZL1KG	Ramsay, R. J., 120 Kamo Road, Whangarei.0101
ZL1HH	Cottle, D. J., Rainbow Falls, R.D. 2, Kerikeri.0452	ZL1KH	Turton, J. W., C/- Puriri Park Holiday Resort, Private Bag, Orewa.1461
ZL1HI	Boghurst, B. E., 70 Ostend Road, Ostend, Waiheke Island.1470	ZL1KI	Horwood, E. W., 233 King Street, Whakatane.3400
ZL1HJ	Gannon, M., 9 Liverpool Street, Te Kuiti.2500	ZL1KK	Carter, N. A. W., 50 Victoria Avenue, Whakatane.3400
ZL1HK	Carlyle, L. G. S., 2 Cotter Avenue, Remuera, Auckland.1105	ZL1KL	Paton, E. J., 32 Pohutukawa Road, Whenuapai.1450
ZL1HL	Carrel, J. L., 167 St Andrews Road, Epsom, Auckland.1003	ZL1KM	Gardner, D. R., 111 Hinemoa Street, Rotorua.3201
ZL1HM	Harvey, S. A., 46 High Street, Rotorua, CPO Box 2002, Rotorua.3200	ZL1KN	Small, J., 32 Paddington Street, Glen Innes, Auckland.1106
ZL1HP	Hamblyn, D. H., 11 Shelly Street, Leamington, Cambridge.2351	ZL1KT	Teviotdale, D. A., Fairbank Road, Rotorua.3201
ZL1HQ	Davidson, D. M., 229 Akoranga Drive, Northcote, Auckland.1309	ZL1KU	Oliver, M. J., 19a Elbourne Street, Taradale, Napier.4001
ZL1HR	Coles, J. P., 22 Richmond Street, Cambridge.2351	ZL1KV	Poolley, E. A., 2 Ayr Street, Waihi Beach.2990
ZL1HS	Bearsley, C. I. N. (Mrs), R.D. 1, Lagmhoe/Tinwald Area.8330	ZL1KW	Kawerau Branch NZART (Inc), see Branch Directory
ZL1HT	Hardie, B. G. S., P.O.Box 29101, Auckland.1030	ZL1KX	Walford, K. W., 354 Somme Parade, Aramoho, Wanganui.5002
ZL1HU	Garion, W. G., 15 Kotanui Avenue, Army Bay, Whangaparaoa.1463	ZL1KY	Yearsley, E. S., 37a Hattaway Avenue, Bucklands Beach.1704
ZL1HV	Godfrey, A. G., 882 East Coast Road, Browns Bay, Auckland.1310	ZL1KZ	Ellery, H. F., 26 Catalina Crescent, Takapuna, Auckland.1310
ZL1HW	Dickinson, R., 8 Mawson Avenue, Torbay, Auckland.1310	ZL1LA	Rolle, R. L., 16 Stillwater Crescent, R.D. 3, Silverdale.1462
ZL1HX	Rutherford, N. J., 32 Kirrie Avenue, Te Atatu South.1208	ZL1LB	Laurent, L. M., 54 Lagoon Drive, Panmure, Auckland.1106
ZL1HY	Brown, D., 39 Haszard Street, Waihi.2991	ZL1LC	Bird, W. A., 239 Nelson Street, Invercargill.9501
ZL1HZ	Frederiksen, N. J., Mangatangi, R.D. 1, Pokeno.1872	ZL1LD	Williams, P. M. (Mrs), 144 Titirangi Road, New Lynn, Auckland.1207
ZL1IA	Pivac, I. G., 4271 Great North Road, Henderson, Auckland.1208	ZL1LE	Egan, B., 12 Island View Terrace, Howick, Auckland.1705
ZL1IB	Brown, E. E. A., 20 Gilmore Street, Te Puke.3071	ZL1LF	Elder, J. W., 17 Cedar Road, Mt. Eden, Auckland.1004
ZL1IC	Holdsworth, R., Sexton Road, R.D. 1, Hamilton.2021	ZL1LH	Cowie, D. J., 5 McCrystal Avenue, Bucklands Beach, Auckland.1704
ZL1IE	Skinner, G., 15 Hepper Street, New Lynn, Auckland.1207	ZL1LI	Hughes, P. D. P., 17 Oscar Road, Greenhithe, Auckland.1450
ZL1IG	Monks, J., 2/9 Abelia Place, Papatoetoe, Auckland.1701	ZL1LK	Sargon, R. P., 2a Enderby Drive, Te Atatu North, Auckland.1208
ZL1IH	Intermann, R. H. D., 158 Richard Street, P.O. Box 412, Opoliki.3472	ZL1LL	Cook, S., 27 Neville Street, Point Chevalier, Auckland.1002
ZL1II	Green, G. P. C., 248 Otupua Road, Timaru.8601	ZL1LM	Marsden, A. N., 9 Wanaka Place, Pakuranga, Auckland.1706
ZL1IJ	Dunningham, N. M., 5 Kingswood Road, Papatoetoe.1701	ZL1LN	Simmons, A. L., 69 Roberts Avenue Extension, Bayswater, Auckland.1309
ZL1IL	Everitt, K. M., P.O. Box 68217, Newton, Auckland.1001	ZL1LO	Robinson, I., 40 Masterton Road, Rothersey Bay, Auckland.1310
ZL1IM	Carter, E. W. A., 3 Haines Terrace, Te Kuiti.2500	ZL1LP	Parsons, E. R., 509/1 Mutu Street, Te Awamutu.2400
ZL1IN	Pearce, R. M., 125 New Windsor Road, Avondale, Auckland.1207	ZL1LQ	Ball, W. G., C/- 67a Hattaway Avenue, Bucklands Beach, Auckland.1704
ZL1IO	McNamara, T. A., 32 Galileo Street, Ngaruawahia.2171	ZL1LR	Anderson, P. C., 32 Gilmore Street, Waihi.2991
ZL1IP	Wiggins, F. V., 44 Westminster Drive, Tauranga.3001	ZL1LS	McTurk, E. C. (Mrs), 40 Silverton Road, Waihi.2991
ZL1IQ	Joseph, D. P., 51 The Drive, Epsom, Auckland.1003	ZL1LU	Heslop, W. T., 19 Corinna Street, Welcome Bay, Tauranga.3001
ZL1IR	Douglas, L. M., 17 5th Avenue, Hamilton.2001	ZL1LX	Barltrop, C., 228 Old Taupo Road, Taumarunui.2600
ZL1IS	Waikato VHF Group, see Branch Directory	ZL1LY	Brown, K. L., 38 Thompson Street, Tokoroa.2392
ZL1IT	Hayman, G. L., 318 Jervois Road, Herne Bay, Auckland.1002	ZL1LZ	Dunwoody, M. L., 126 Bridgeman Road, Te Awamutu.2400
ZL1IU	Wallace, N. L., Waikaramu Road, Waimate North.0454	ZL1MA	Small, T. H., 32b Martin Road, Manurewa.1702
ZL1IV	Irving, G. W., 50 Glass Road, Mt Roskill, Auckland.1004	ZL1MB	Farley, W. F., 8 Puri Avenue, Te Puke.3071
ZL1IX	Taylor, W. R., 65a Butterworth Drive, Glendene, Auckland.1208	ZL1MC	Hume, S. T., 17 Humber Crescent, Gate Pa, Tauranga.3001
ZL1IY	Cleland, D. E., 52 Alfred Street, Fairfield, Hamilton.2001	ZL1ME	Geard, M., 1/30a Walter Street, Takapuna, Auckland.1309
ZL1IZ	Waitomo Branch 55 NZART (Inc), see Branch Directory	ZL1MF	Crabtree, A. W., 37 Martin Road, Waihi.2991
ZL1JB	Nalder, C. H., Oruanui Road, R.D. 1, Taupo.3300	ZL1MG	Moore, J. P., 29 Valley Road, Rocky Bay, Waiheke Island.1470
ZL1JC	Granger, P. L., 7 Trent Street, Avondale, Auckland.1207	ZL1MJ	Schwass, B. R., 24 Mokorua Grove, Whakatane.3400
ZL1JD	Evans, G. E., Gleeson Road, R.D.3, Waiuku.1852	ZL1ML	Lee, M. E., 28 Seaview Road, Tawaipareira, Waiheke Island.1470
ZL1JE	Blomfield, R. J., 5 Kent Street, Te Kuiti.2500	ZL1MM	Garde-Browne, M., Bowentown Road, Athenvee, R.D.2, Kaitiaki.3051
ZL1JF	Finlay, P. T., 62 Woodside Road, Henderson, Auckland.1208	ZL1MN	Nisbet, D. I., 4 Williams Avenue, Kaikohe.0400
ZL1JG	Dent, R. E., 18 McClintock Road, Massey, Auckland.1208		



- ZL1MO** Spackman, I. H., 124c Taylor Street, Blockhouse Bay, Auckland.1207  
**ZL1MP** Poulton, G. G., 7 Rickard Place, New Lynn, Auckland.1207  
**ZL1MQ** Betson, C. W., 140 Golf Road, Green Bay, Auckland.1207  
**ZL1MR** Irwin, P. M., 29 Glendale Road, Whangarei.0101  
**ZL1MS** Inder, J. H., 19 Rushton Avenue, Otumotai, Tauranga.3001  
**ZL1MU** Crooks, D. M., 13 Burrows Avenue, Karori, Wellington.6005  
**ZL1MV** Garrard, R. C., 76 Dalwhinnie Parade, Howick, Auckland.1705  
**ZL1MW** Huggard, B. F., 12 McClintock Road, Massey, Auckland.1208  
**ZL1MX** Currie, D. J., 127 Ridge Road, Howick.1705  
**ZL1MY** Jamieson, A. S. (Miss), 99 Frederick Street, Hillsborough, Auckland.1106  
**ZL1MZ** Karl, P. J., Main Road, Ohaupo.2452  
**ZL1NA** Wilson, G. D., 1 Mt Roskill Road, Mt. Roskill, Auckland.1004  
**ZL1NB** Hitch, G. W., Rawhiti Road, R.D. 4, Hikurangi.0251  
**ZL1NC** Miller, J. G., 31 Sierra Street, Glendowie, Auckland.1105  
**ZL1ND** Cobbe, D. J., C/- D. T. Tremayne, 149 Spencer Road, Lake Tarawera, Rotorua.3201  
**ZL1NF** Garrett, R., 13 Rockisle Road, Torbay, Auckland.1310  
**ZL1NG** Muller, J., 29 Newhaven Terrace, Mairangi Bay, Auckland.1310  
**ZL1NH** White, N. R., 33 Norton Road, Otumotai, Tauranga.3001  
**ZL1NI** Thornewell, M. T., Pearson Street, Mangawhai.0270  
**ZL1NJ** Ecclesfield, B. D., 1333 Cameron Road, Greerton, Tauranga.3001  
**ZL1NK** Mander, N. K., 38 Arundel Street, Mt. Roskill, Auckland.1004  
**ZL1NM** Crocker, T. W., 70 Rosehill Drive, Papakura.1703  
**ZL1NN** Douglas, J. W., 91 Churchill Road, Rothesay Bay, Auckland.1310  
**ZL1NP** Peart, L. C., 6 Campbell Road, Maraetai Beach.1705  
**ZL1NQ** Barrell, S. J., Waitaia Road, Vinegar Hill, Whangarei.0101  
**ZL1NR** Edmonds, J. A., 92 Beach Road, Ahipara.0551  
**ZL1NS** Hickey, J., 14 Frances Street, Manurewa.1702  
**ZL1NT** Hill, B. J., 169 Rimu Street, Hamilton.2001  
**ZL1NU** Griffiths, K. B., 64 Arawa Street, New Lynn, Auckland.1207  
**ZL1NV** Jackson, B. T., 3a Ross Crescent, Orewa, Hibiscus Coast.1461  
**ZL1NX** Baveystock, S. C., 2 Fraser Street, Tauranga.3001  
**ZL1NY** Frater, D., 8 Wayne Place, Mt. Roskill, Auckland.1004  
**ZL1NZ** Duthie, D. A., Morrisons Road, Matapouri Bay, Northland.0250  
**ZL1OA** Jack, M. C., 6b Clare Place, Glenfield, Auckland.1310  
**ZL1OC** Shaw, V. (Mrs), P.O. Box 2088, Whakatane.3400  
**ZL1OD** Wallace, J. A. L., 1346 Whangaparaoa Road, Whangaparaoa.1463  
**ZL1OF** Wapp, A., Waiuku Road, Pukeoware, R.D. 1, Waiuku.1852  
**ZL1OG** Lambie, L. B., Moumoukai Valley Road, R.D.3, Papakura.1733  
**ZL1OH** Fairhead, A. D., Harry Dreadon Road, R.D. 4, Papakura.1733  
**ZL1OI** Bourne, H. K., 54 Whitehaven Road, Glendowie, Auckland.1105  
**ZL1OJ** Dowling, H. J., 52 Aurora Terrace, Hillcrest, Hamilton.2001  
**ZL1OL** Oliver, B. M., 65 Archers Road, Glenfield, Auckland.1310  
**ZL1OM** Windsor, K. W., 36 Chatswood Grove, Birkenhead, Auckland.1310  
**ZL1ON** Eglinton, G. K., 20 Mahoe Street, Matua, Tauranga.3001  
**ZL1OO** Dreaver, B. G. W., 5 Essex Street, Te Atatu South, Auckland.1208  
**ZL1OQ** Renfrew, H. F., 37 Great North Road, Warkworth.1492  
**ZL1OR** Mullions, R. E., 37 Williams Avenue, Morrinsville.2251  
**ZL1OV** Kirton, F. N., 14 Dennis Avenue, Manurewa.1702  
**ZL1OW** Burrows, J. W. L., R.D. 1, Lower Kaimai, Tauranga.3021  
**ZL1OX** Crawley, H. V., 5/238 Onewa Road, Birkenhead, Auckland, P.O.Box 34 075, Birkenhead.1330  
**ZL1OY** Muddford, K. H., Pikonui Road, Richmond Downs, R.D. 1, Walton.2273  
**ZL1PA** Papworth, A. G., 27 Alnwick Street, Warkworth, P.O. Box 32.1492  
**ZL1PB** Hanlon, K. R., 1/4 Pine Road, Orewa.1461  
**ZL1PC** Lewis, E. C., 54 Sylvan Valley Avenue, Titirangi, Auckland.1207  
**ZL1PF** Conlon, P. W., 166b Hinemoa Street, Rotorua.3201  
**ZL1PG** Morgan, J. A., 38 Dreadon Road, Manurewa.1702  
**ZL1PH** Yates, C. M., Linwood Road, Karaka, R.D. 1, Papakura.1733  
**ZL1PI** McDonald, A. K., 8 Francis Street, Whakatane.3400  
**ZL1PJ** Dare, P. H., 19 Glenfield Road, Rotorua.3201  
**ZL1PK** King, P. D., 11 Salmond Place, Hamilton, P.O.Box 126, Hamilton.2000  
**ZL1PL** Grise, M. J., 109 Norwood Road, Bayswater, Auckland.1309  
**ZL1PM** Neaverson, L. L., Riverview Road, Keri Keri.0452  
**ZL1PO** Bullin, G. K., 32 Otumotai Road, Tauranga.3001  
**ZL1PR** Farrell, J. F., 56 Belmont Avenue, Chartwell, Hamilton.2030  
**ZL1PS** Brown, T. G., 2 Hilstan Place, Onehunga, Auckland.1106  
**ZL1PT** Twiss, D. P. L., 4/77 Old Lake Road, Devonport, Auckland.1309  
**ZL1PU** Nathan, I. J., 92 Masters Avenue, Hillcrest, Hamilton.2001  
**ZL1PV** Gulde, N. G., 182 16th Avenue, Tauranga.3001  
**ZL1PW** Wrigley, P. H., 34 Clifford Street, Kaikohe.0400  
**ZL1PX** Martin, H. L., 25 Cockayne Crescent, Sunnynook, Auckland.1310  
**ZL1PY** Bates, L. F. W., 34a Manly Park Avenue, Whangaparaoa.1463  
**ZL1PZ** Sexton, I. M., 10 Fair Oaks, Pukekohe.1800  
**ZL1QB** Manukau Branch NZART (Inc), see Branch Directory  
**ZL1QC** Strachan, J. M., 44 Stredwick Drive, Torbay, Auckland.1310  
**ZL1QG** Morris, D. C., 5 Woodside Road, Henderson, Auckland.1208  
**ZL1QH** Cooke, S. R., 166 Ridge Road, Howick, Auckland.1705  
**ZL1QI** Gillett, P. A., P.O. Box 3074, Tauranga.3000  
**ZL1QJ** Nissen, K. H., Back Street, Opua.0290  
**ZL1QK** Stone, W. H., 5 Winslowe Place, Papakura.1703  
**ZL1QL** Borck, L. J. F., 6 Curtis Street, Whangarei.0101  
**ZL1QM** Ockleston, G. W., 17 Bracken Avenue, Epsom, Auckland.1003  
**ZL1QN** Hedges, K., 244 Titirangi Road, New Lynn, Auckland.1207  
**ZL1QO** Elowsson, B. W., 9 Sanctuary Point, Pakuranga.1706  
**ZL1QP** Breden, J. E., 27 Moehau Street, Te Puke.3071  
**ZL1QQ** Bush, G. H., 24 Rushton Avenue, Otumotai, Tauranga.3001  
**ZL1QS** Mason, J. F., 59 Lancaster Road, Birkdale, Auckland.1310  
**ZL1QU** Marshall, J. R., 14 Hapua Place, Taupo.3300  
**ZL1QV** Young, L. G., Brooklands, Harkness Road, R.D.1, Papakura.1733  
**ZL1QX** Mowatt, G. C., 37 Cliff Road, St. Hellers, Auckland.1105  
**ZL1QY** Williams, R. G., 67a Botanical Road, Tauranga.3001  
**ZL1QZ** Rhodes, M. C. L., Flat 2, 11a Rutherford Terrace, Meadowbank, Auckland.1105  
**ZL1RA** Swain, R. A., Tombleson Road, Otautu Bay, Rotoehu, R.D.4, Rotorua.3221  
**ZL1RB** Grant, E. W., Barry Road, Waihi.2991  
**ZL1RC** Saunders, A. G., 14 Queenwood Avenue, Hamilton.2001  
**ZL1RF** Matamata Amateur Radio Club, see Branch Directory  
**ZL1RG** Rentoul, J. M., 15 McCracken Avenue, Hamilton.2001  
**ZL1RH** Claridge, A. R. C., Waitetoko, R.D. 2, Turangi.3371  
**ZL1RI** McLaughlin, J., 60 Awatere Avenue, Beerescourt, Hamilton.2001  
**ZL1RJ** Jarlov, R. W. E., 85 Mallard Drive, Rotorua.3201  
**ZL1RK** Western Suburbs Radio Club, see Branch Directory  
**ZL1RL** Fitchett, S. A., 2 Kahu Road, Panmure, Auckland.1106  
**ZL1RM** Jeffs, J. F. C., 77 Pohutukawa Drive, Hamilton.2001  
**ZL1RN** Lewis, K. J., 25 Magee Place, Hamilton.2001  
**ZL1RO** Knox, A. T., 11 Hasbury Avenue, Epsom, Auckland.1003  
**ZL1RP** Bryce, D. G., 95 Awatapu Drive, Whakatane.3400  
**ZL1RR** Ryan, D. F., 129 Cook Street, Howick.1705  
**ZL1RS** Boggiss, R. J., 8 Silverton Road, Waihi.2991  
**ZL1RT** Maginnity, D., 5 Tidd Drive, Raglan.2051  
**ZL1RU** Harrison, L. R., c/- 28 Castledine Crescent, Glen Innes, Auckland.1106  
**ZL1RV** Gilbert, J. L., Flat 1a, 75 Owens Road, Epsom, Auckland.1003  
**ZL1RW** Wilson, R. M., 78a Arney Road, Remuera, Auckland.1105  
**ZL1RY** Shimmmin, R. L., 130 Union Road, Howick, Auckland.1705  
**ZL1RZ** Shead, K. F. S., 8 South Pacific Place, Henderson, Auckland.1208  
**ZL1SA** Franklin Branch NZART (Inc), see Branch Directory  
**ZL1SB** Sapich, S., Forest Hill Road, R.D. 1, Henderson, Auckland.1231  
**ZL1SC** Corrigan, M. L., Flat 4, 278 Birkdale Road, Birkdale, Auckland.1310  
**ZL1SD** Colquhoun, R.D., 32 Valley Road, Mt Eden, Auckland.1003  
**ZL1SE** Riddle, M. W. C., 35c Emmett Street, Greerton, Tauranga.3001  
**ZL1SF** Cooper, M. A., 60 Old Te Kuiti Road, Otorohanga.2554  
**ZL1SG** Cowie, C. A., Stratford Drive, Cable Bay, R.D.3, Kaitiaki.0500  
**ZL1SH** Adair, M. W., 41 Seavista Avenue, Birkdale, Auckland.1310  
**ZL1SI** Caskie, W. I., Flat 3, 461 Blockhouse Bay Road, Blockhouse Bay, Auckland.1207  
**ZL1SJ** Holmes, G. C., 60b Kings Road, Panmure, Auckland.1106  
**ZL1SK** Thomas, M. R., 52 Bollard Avenue, Avondale, Auckland.1207  
**ZL1SO** Miller, R. L., 52 Hinekura Avenue, Taupo.3300  
**ZL1SP** Bain, F. J., 58 George Crescent, Buckland, R.D. 2, Pukekohe.1800  
**ZL1SQ** Van Den Heuvel, T., 9 Laing Place, Otumotai, Tauranga.3001  
**ZL1SR** Coppell, B. L., 128a James Street, Whakatane.3400



# **ZL1SS**

<b>ZL1SS</b>	Skellon, D. B., 36 Mountbatten Avenue, Glenfield, Auckland.1310	<b>ZL1VK</b>	Papakura Branch NZART (Inc.), see Branch Directory
<b>ZL1ST</b>	Smith, N. E., 7 Kelwyn Road, Kelston, Auckland.1207	<b>ZL1VM</b>	Arnold, R. R., 21 Seaview Road, Milford, Auckland.1309
<b>ZL1SU</b>	MacDiamid, D. R. N., Hone Heke Road, Kerikeri.0452	<b>ZL1VN</b>	McKain, M. L., 25 Marlow Drive, Cambridge.2351
<b>ZL1SV</b>	Perkins, J. A., 2 Ponui Place, Mairangi Bay, Auckland.1310	<b>ZL1VO</b>	Whillans, F. L., 4/35 Killamey Street, Takapuna, Auckland.1309
<b>ZL1SW</b>	Curling, L. K., 14 Clotworthy Crescent, Onerahi, Whangarei.0101	<b>ZL1VR</b>	Gilligan, C. R., 4 Lambert Street, Abbotsford, Dunedin.9006
<b>ZL1SX</b>	Kirkham, A. L., 38 Waller Avenue, Bucklands Beach.1704	<b>ZL1VS</b>	Deverall, W. H., 24 Deuxberry Avenue, Northcote, Auckland.1309
<b>ZL1SY</b>	Thompson, M. G., 13 McDowell Street, Rotorua.3201	<b>ZL1VU</b>	McIsaac, A. J., 26 Ferry Parade, Herald Island, Auckland.1450
<b>ZL1SZ</b>	Evans, M. J., 14 Henderson Street, Whakatane.3400	<b>ZL1VV</b>	Kempson, C. M., 3 Horopito Road, Waikanae.6154
<b>ZL1TA</b>	Mortensen, N. H., 16 Melrose Road, Hillsborough, Auckland.1004	<b>ZL1VW</b>	Nasmith, M. K., 2/10 Jenelin Road, Henderson, Auckland.1208
<b>ZL1TB</b>	Howick and District Branch NZART (Inc.), see Branch Directory	<b>ZL1VZ</b>	Frieberg, A. G., Unit 2, 15 John Davis Road, Mt. Roskill, Auckland.1004
<b>ZL1TC</b>	Metcalf, A. D., 24 Hogan Street, Hamilton.2001	<b>ZL1WB</b>	Rowlings, B. H., 6 Mason Street, Onerahi, Whangarei.0101
<b>ZL1TD</b>	Corby, D. G., 129 Raumanga Valley Road, Whangarei.0101	<b>ZL1WC</b>	Rickard, P. V., 25 Balgown Terrace, Conifer Grove, Takanini, Auckland.1702
<b>ZL1TE</b>	Lynneberg, R., 15 Terewha Street, Turangi.3371	<b>ZL1WD</b>	Davey, W. C., 165 Riddell Road, Glendowie, Auckland.1105
<b>ZL1TF</b>	Morrison, I. McG., 31a Telstar Place, Birkenhead, Auckland.1310	<b>ZL1WF</b>	McNae, G. S., 10 Manaia View Road, One Tree Point, R.D. 1, Ruakaka.0253
<b>ZL1TG</b>	Rumming, E., 50 Corlett Street, Rotorua.3201	<b>ZL1WG</b>	Boric, H. V., 27 Cleary Road, Panmure, Auckland.1106
<b>ZL1TI</b>	Godkin, I. P., 45 The Boulevard, Pakuranga.1706	<b>ZL1WH</b>	Coe, P. H., 21 Marshall Avenue, Taupo.3300
<b>ZL1TJ</b>	Matthys(Snr), J. K. C., 2 Thwaites Place, Cambridge.2351	<b>ZL1WI</b>	Milam, R. E., 184 Sturges Road, Henderson, Auckland.1208
<b>ZL1TK</b>	Harrington, R. J., 5/28 St Stephens Avenue, Parnell, Auckland.1001	<b>ZL1WJ</b>	Sainsbury, J. R. D., 15 Beechwood Road, Browns Bay, Auckland.1310
<b>ZL1TL</b>	Pickworth, R. A., 20 Nen Street, Oamaru.8901	<b>ZL1WK</b>	MacDonald, J. E., 171 Cook Street, Howick, Auckland.1705
<b>ZL1TM</b>	Spence, K. L. J., 28 Chorley Avenue, Henderson, Auckland.1208	<b>ZL1WL</b>	Clarke, R. F. R., 26 Kendale Drive, Mathesons Bay, Leigh, Auckland.1490
<b>ZL1TN</b>	Barron, K. H., 230 Riddell Road, Glendowie, Auckland.1105	<b>ZL1WN</b>	Biggar, R. G., P.O.Box 12525, Penrose, Auckland.1135
<b>ZL1TO</b>	Potter, J. W., 52/36 McLeod Road, Henderson, Auckland.1208	<b>ZL1WO</b>	McGechie, P. C., 14 Auckland Road, Warkworth.1492
<b>ZL1TP</b>	Tauranga Branch NZART (Inc.), see Branch Directory	<b>ZL1WP</b>	Johnstone, M. R., 268b Great South Road, Manurewa.1702
<b>ZL1TQ</b>	Elliott, K. G., 17 Red Bluff Rise, Campbells Bay, Auckland.1310	<b>ZL1WQ</b>	Whitehead, E. J., House 59, Tokanui Village, Private Bag, Te Awamutu.2400
<b>ZL1TS</b>	Prentice, L. G., 5 Mountain View Road, Morningside, Auckland.1003	<b>ZL1WR</b>	Cullen, R. G., 77 Fairview Road, Te Awamutu.2400
<b>ZL1TT</b>	Roberts, R. L., 39 Kay Drive, Blockhouse Bay, Auckland.1207	<b>ZL1WT</b>	Cummins, S. C., 682 Pakura Street, Te Awamutu.2400
<b>ZL1TU</b>	Bond, P. L., 1340 Whangaparaoa Road, Whangaparaoa.1463	<b>ZL1WU</b>	Moseley, M. R., 34 Domain Street, Waiuku.1852
<b>ZL1TW</b>	Barnett, E. K., Bethlehem, R.D. 1, Tauranga.3030	<b>ZL1WV</b>	Fleetwood, F., 2/10 Tina Place, Pakuranga, Auckland.1706
<b>ZL1TY</b>	Monk, W. K. G., Matipo Avenue, Rotorua.3201	<b>ZL1WW</b>	Jensen, J. T., 106 Victoria Street, Pukekohe.1800
<b>ZL1TZ</b>	Stewart, G. W., 31 Levers Road, Tauranga.3001	<b>ZL1WY</b>	Yorke, R., 19 McLean Avenue, Papatoetoe.1701
<b>ZL1UA</b>	Harvey, J. K., 4 West Street, Waihi Beach., P.O.Box 10, Waihi Beach.2990	<b>ZL1WZ</b>	Deslandes, E. N., Rimu Road, R.D., Oratia.1230
<b>ZL1UB</b>	Wilson, D. A., 1/35 Rangitoto Terrace, Milford, Auckland.1309	<b>ZL1AAA</b>	Gordon, B. D., 11 Siota Crescent, Kohimarama, Auckland.1105
<b>ZL1UC</b>	South Pacific DX Contest Group, (Trustees: ZL1BXA, ZL1BTZ), C/- H. Buxton, 32 Castleton Street, Birkdale, Auckland.1310	<b>ZL1AAB</b>	Cardy, K. G., 28 City View Terrace, Birkenhead, Auckland.1310
<b>ZL1UD</b>	Williams, K. G., 6 Kiwi Street, Matamata.2271	<b>ZL1AAC</b>	Hammond, K. F., 14 Coppelia Avenue, Omokoroa, R.D. 2, Tauranga.3050
<b>ZL1UE</b>	Williams, M. K., Jury Road, R.D. 10, Frankton.2031	<b>ZL1AAD</b>	Lee, J., Whanarua Bay, Private Bag 1011, Opotiki.3472
<b>ZL1UG</b>	Redgrave, C. I., R.D. 1, South Kaipara Heads, Helensville.1451	<b>ZL1AAE</b>	Yearsley, J. K., R.D. 6, Tauranga.3021
<b>ZL1UH</b>	Mathieson, V. J., 99c Queen Street, Waiuku, Auckland.1852	<b>ZL1AAF</b>	Walker, R. L., 8 Faulkner Park, Taumarunui.2600
<b>ZL1UI</b>	Cardno, I. M., 5b Keldale Place, Forrest Hill, Auckland.1310	<b>ZL1AAH</b>	Backhouse, R. B., Aranui Valley Road, R.D. 2, Waimauku.1455
<b>ZL1UJ</b>	Jenner, K. W., 15 Garmons Way, Milford, Auckland.1309	<b>ZL1AAI</b>	De Jong, J. W., 29 Moire Road, Massey, Auckland.1208
<b>ZL1UK</b>	Beech, S. C., 53 Pukepuke Road, Northcote, Auckland.1309	<b>ZL1AAJ</b>	Williams, H. J., 30 Halberg Street, Glenfield, Auckland.1310
<b>ZL1UL</b>	Gilmore, G. H., Gilmore Road, Tuhikaramea, Hamilton.2001	<b>ZL1AAK</b>	Stephens, C. H. L., 56 Karaka Street, Takapuna, Auckland.1309
<b>ZL1UM</b>	Chamberlin, J. H. W., Kawakawa Bay Road, Clevedon.1751	<b>ZL1AAM</b>	Scott, P. L., 25 Chatsworth Crescent, Pakuranga.1706
<b>ZL1UO</b>	Girbin, R. A., 43a Maunu Road, Whangarei.0101	<b>ZL1AAN</b>	Falkner, H. T., 8 Kapai Street, Devonport, Auckland.1309
<b>ZL1UP</b>	Hall, E. W. H., 4 Bellevue Road, Tauranga.3001	<b>ZL1AAO</b>	Steel, L. B., The Shieling, R.D.4, State Highway 30, Rotiti.3250
<b>ZL1UQ</b>	Vermeer, J. H., c/- Post Office, Waimamaku, South Hokianga.0474	<b>ZL1AAP</b>	Swift, L. W., 53 Lucerne Road, Remuera, Auckland.1105
<b>ZL1US</b>	Armstrong, M. A. S., 77 Queen Street, Pukekohe.1800	<b>ZL1AAQ</b>	Palmer, W. J., 168 Birkdale Road, Birkdale, Auckland.1310
<b>ZL1UT</b>	Still, W. J., 14 Meadowbank Road, Meadowbank, Auckland.1105	<b>ZL1AAR</b>	Terrill, R., 3f Faith Bullock Place, New Lynn, Auckland.1207
<b>ZL1UU</b>	Twadell, A. S., 7 Prince Regent Drive, Pakuranga.1706	<b>ZL1AAS</b>	Litten, R. J., 146 Sandspit Road, Howick, Auckland.1705
<b>ZL1UV</b>	Morch, J. H. S., 13 Marina Road, Torbay, Auckland.1310	<b>ZL1AAU</b>	Elley, C. B., 14 Handley Place, Onerahi, Whangarei.0101
<b>ZL1UW</b>	Tinsley, H. G., 18 Grandview Road, Hamilton.2001	<b>ZL1AAV</b>	Aberhart, E. R., 2/37 McRae Road, Mt Wellington, Auckland.1106
<b>ZL1UX</b>	Hamilton Branch NZART (Inc.), see Branch Directory	<b>ZL1AAW</b>	Berntsen, B. M., 2 Te Mahoe Power Station Village, Te Teko.3456
<b>ZL1UY</b>	Downard, T. V. E., 13 Riverlea Drive, Katikati.3051	<b>ZL1AAX</b>	Andrews, G. S., 29 Buchanan Place, Rotorua.3201
<b>ZL1UZ</b>	Truman, A. R., 63 Clark Road, Papakura.1703	<b>ZL1AAY</b>	King, O. L., 8 Gracechurch Drive, Papatoetoe, R.D., Auckland.1734
<b>ZL1VA</b>	Jessup, G. R., see overseas members	<b>ZL1AAZ</b>	Pratt, W. R., 304 Shakespeare Street, Cambridge.2351
<b>ZL1VC</b>	Hall, L. J., 7 Kiwi Street, Matamata.2271	<b>ZL1ABA</b>	Jefferies, S. E., 60 Middleton Road, Remuera, Auckland.1105
<b>ZL1VD</b>	Cutler, J. L., 12 The Companion Way, Whitby.6253	<b>ZL1ABB</b>	Russell, M. C., 25 Sturdee Road, Manurewa, Auckland.1702
<b>ZL1VE</b>	Webber, H. W. B., 19 Pamela Place, Tauranga.3001	<b>ZL1ABC</b>	Biddle, R. R., 55 Becroft Drive, Forrest Hill, Auckland.1310
<b>ZL1VF</b>	Moller, L. J., 2/50 Sikkim Crescent, Wiri, Auckland.1701	<b>ZL1ABD</b>	Wise, F. B., 14 Royal Road, Massey, Auckland.1208
<b>ZL1VG</b>	Bicheno, N. C., 100 Wood Bay Road, New Lynn, Auckland.1207	<b>ZL1ABF</b>	Rubie, E. S., 14 Ambler Avenue, Glen Eden, Auckland.1207
<b>ZL1VH</b>	Sanne, J. H., 49 Cameron Road, Hamilton.2001	<b>ZL1ABG</b>	Rae, D., 12 Pinka Street, Dargaville.0300
<b>ZL1VI</b>	Rubie, A. E., 4 Citrus Avenue, Waihi Beach South.2990		
<b>ZL1VJ</b>	Page, A. E., 4 Vivian Drive, Omokoroa, Tauranga.3001		



- ZL1ABH** Williamson, T. J., Yacht Capella, P.O.Box 25111, St Heliers, Auckland.1130
- ZL1ABI** Maggs, A. R., 32 Potter Avenue, Northcote, Auckland.1309
- ZL1ABJ** Fergusson, D. D., Flat 1, 2 Ascot Place, Te Awamutu.2400
- ZL1ABK** Yule, I. A., 6 Awatere Place, Snells Beach, Auckland.1490
- ZL1ABL** Dale, A. J., 61 Rodney Street, Wellsford.1493
- ZL1ABM** Humphrey, M. L. G., 1009 Tararu Road, Thames.2801
- ZL1ABN** Reay, M. J. F., 16 Priscilla Crescent, Hamilton.2001
- ZL1ABP** Rutter, K. L., 26 Halsay Drive, Lynfield, Auckland.1004
- ZL1ABQ** McGill, A. K., 15 Manapouri Place, Pakuranga.1706
- ZL1ABR** Skinner, R. E., 23 Seddon Avenue, Waihi.2991
- ZL1ABS** Sheffield, M. J., Albany Highway, R.D. 4, Albany, Auckland.1310
- ZL1ABT** Stead, G. M., 93 White Swan Road, Mt. Roskill, Auckland.1004
- ZL1ABU** Lyall, G., 25 Nikau Street, New Lynn, Auckland.1207
- ZL1ABW** Oldfield, A. J., 11 Collingwood Road, Waiuku.1852
- ZL1ABX** Dukes, J. R., 102 Awaruku Road, Torbay, Auckland.1310
- ZL1ABY** Hume, D. S., 91 Eivers Road, Whakatane.3400
- ZL1ABZ** Johnson, I. P., 36 Cullen Crescent, Tokoroa.2392
- ZL1ACA** Whittaker, J. C., Carter Road, Oratia, Auckland.1207
- ZL1ACB** Gaylard, G. C., 3 Michael Avenue, Dinsdale, Hamilton.2001
- ZL1ACC** Davies, J. H., 22 Harapaki Road, Meadowbank, Auckland.1105
- ZL1ACF** Abbott, P. N., 1 Douglas McLean Avenue, Napier.4001
- ZL1ACG** Caldwell, E. G., 23 Clyma Place, Massey, Auckland.1208
- ZL1ACH** ten Velde, R. J. M., 8 Malipo Place, Tokoroa.2392
- ZL1ACJ** Turner, R. H., 7 Keiss Street, Blenheim.7301
- ZL1ACK** Marshall, R. F., Flat 1, 1 Mt Eden Road, Auckland.1003
- ZL1ACL** Field, M. L., 11 Featon Road, Waihi.2991
- ZL1ACM** Daniels, S. G., 26 Albert Road, Devonport, Auckland.1309
- ZL1ACN** Messent, D. L., Main Road, Murupara, P.O.Box 23, Murupara.3272
- ZL1ACO** Grusning, H. N., 48 Beattys Road, Pukekohe.1800
- ZL1ACR** Ramsay, F. M., Te Ranga Estate, R.D. 4, Kaero.0556
- ZL1ACS** Clarke, J. K., 106 Bassett Road, Remuera, Auckland.1105
- ZL1ACT** Bate, A. M., 1b Pacific Avenue, Mt. Maunganui.3002
- ZL1ACU** Robson, J. D., 9/130 Boundary Road, Blockhouse Bay, Auckland.1207
- ZL1ACV** Twiss, D. G. L., 4 Williams Street, Taupo.3300
- ZL1ACW** Campbell, C. W., View Road, Hikurangi.0251
- ZL1ACX** Rous, B. W., 56 Tamahere Drive, Glenfield, Auckland.1310
- ZL1ACY** Billing, C. J., 2 Norfolk Road, Stanmore Bay, Whangaparaoa.1463
- ZL1ACZ** Williams, B. C., 4 Kay Drive, Blockhouse Bay, Auckland.1207
- ZL1ADA** Carr, R. F., 32 Kentigern Close, Pakuranga, Auckland.1706
- ZL1ADB** Ataya, P. G. E. G., 4204 Great North Road, Henderson, Auckland.1208
- ZL1ADC** Meharry, R. G., 111 Clarkin Road, Fairfield, Hamilton.2001
- ZL1ADD** Irving, E. B., 26 Dudley Avenue, Huntly.2191
- ZL1ADE** Duffy, E. J., 19 Princes Avenue, Mt. Roskill, Auckland.1004
- ZL1ADF** Evetts, B., 208 James Street, Whakatane.3400
- ZL1ADG** Hunt, C. W., C/- Post Office, Hangatiki, S.H.3, Otorohanga.2550
- ZL1ADH** Nichols, D. E. G., 8 School Road, Te Atatu, Auckland.1208
- ZL1ADI** Rademacher, C. A., Wrights Road, R.D. 2, Albany.1331
- ZL1ADJ** Anderson, L. J., 19a Tui Glen Road, Birkenhead, Auckland.1310
- ZL1ADL** Wilkins, D. N., 5 Ethel Street, Sandringham, Auckland.1003
- ZL1ADM** de Lacey, N. E., 1 Hall Street, Frankton, Hamilton.2001
- ZL1ADP** Medland, F. J., 882 Whangaparaoa Road, Whangaparaoa.1463
- ZL1ADQ** Lawrence, P., 36 Patons Road, Howick.1705
- ZL1ADR** Reinhard (Jnr), P. A., Mangataira, R.D.2, Mangonui.0557
- ZL1ADS** Tibbles, W. J., 19 Kotanui Street, Army Bay, Whangaparaoa.1463
- ZL1ADT** Orr, K. R., 127 Grafton Road, Grafton, Auckland.1003
- ZL1ADV** Reynolds, E. W., 13 Coronation Street, Takapuna, Auckland.1309
- ZL1ADW** Clark, B. E., 88 Lincoln Park Avenue, Henderson, Auckland.1208
- ZL1ADX** The Church of Jesus Christ of Latter Day Saints Radio Club, (Trustee: ZL1BJU), P.O.Box 33 798, Takapuna, Auckland.1332
- ZL1ADY** Purdie, M. D., 41 Hayr Road, Auckland.1004
- ZL1ADZ** Did-Dell, R. J., 805 Queen Street, Thames.2801
- ZL1AFA** James, D. L., 8 Kesteven Avenue, St. Heliers, Auckland.1105
- ZL1AFB** Offord, J. L., 43 Queens Road, New Plymouth.4601
- ZL1AFC** Neighbours, E. R., 210 Grange Road, Otumoetai, Tauranga.3001
- ZL1AFD** Osborne, R., Waikite Road, Tauranga.3001
- ZL1AFE** De Renzy, P., Puketutu Road, R.D. 2, Matamata.2271
- ZL1AFF** Fleming, J., 43 Burns Street, Leamington, Cambridge.2351
- ZL1AFG** Hogg, O. B., 743 Maunganui Road, Mt Maunganui.3002
- ZL1AFI** Chapman, A. F., 17 Baker Street, Ashburton.8300
- ZL1AFJ** Phillips, J. F. E., 36 Mt Roskill Road, Mt Roskill, Auckland.1004
- ZL1AFK** Welch, D. H., 59 Turanga Road, R.D. 1, Henderson, Auckland.1208
- ZL1AFL** Flatt, D. A., Maungakareme Road, Oakleigh, Whangarei.0101
- ZL1AFM** Bellamy, P. R., 36 Eaton Road, Hillsborough, Auckland.1004
- ZL1AFN** Monks, W. J. S., 53 Vernal Street, Hamilton.2001
- ZL1AFO** Rogers, G. A., Spain Road, Awanui, Whangarei.0552
- ZL1AFP** Wood, L. M., 8 Grassy Downs Place, Hamilton.2001
- ZL1AFQ** Rosan, D. A. R., P.O.Box 65147, Mairangi Bay, Auckland.1330
- ZL1AFR** McCartney, B. J., 32 Gallileo Street, Ngaruawahia.2171
- ZL1AFS** Cowley, T. C. M., 850 Beach Road, Waiake, Auckland.1310
- ZL1AFT** Walker, K., 66 Willoughby Avenue, Howick, Auckland.1705
- ZL1AFU** Murphy, R. J., 19 Litten Road, Howick, Auckland.1705
- ZL1AFV** Boyce, A. R., 26 Shakespeare Street, Cambridge.2351
- ZL1AFW** Haydon, A. E., 10 Ngapi Road, Orakei, Auckland.1105
- ZL1AFZ** McLean, J. P., Newman Schoolhouse, Eketahuna.5991
- ZL1AGA** Rasmussen, J. W., 65 Smith Street, Matamata.2271
- ZL1AGB** Rorke, D., 14 Dysart Road, Tauranga.3001
- ZL1AGC** Passau, K. M., 10 Tironui Road, Papakura.1703
- ZL1AGD** Millar, I. G. S., 24 Entrician Avenue, Remuera, Auckland.1105
- ZL1AGF** Morris, N. C., Unit 3, 659 Mt. Albert Road, Royal Oak, Auckland.1003
- ZL1AGG** Jarman, J. E., Morgans Road, R.D. 2, Matamata.2271
- ZL1AGH** Murphy, A. J., 33 Carey Street, Maeroa, Hamilton.2001
- ZL1AGI** Gardener, R. S., 44 Masters Avenue, Hillcrest, Hamilton.2001
- ZL1AGJ** Hobbs, E. A., 15 Wickham Place, Tauranga.3001
- ZL1AGK** Clarke, B. T., Blackwell Drive, R.D.1, Tryphena, Great Barrier Island.1470
- ZL1AGL** Fischer, H. G., 98 Gillies Avenue, Epsom, Auckland.1003
- ZL1AGM** Sloane, J. P., 14 Whiteacres Drive, Pakuranga, Auckland.1706
- ZL1AGN** Campbell, M. H., Fencourt Road, R.D. 1, Cambridge.2351
- ZL1AGO** Williams, I. R., 144 Titirangi Road, New Lynn, Auckland.1207
- ZL1AGP** Horwood, H., 233 King Street, Whakatane.3400
- ZL1AGQ** Zimmermann, E. M., 48 Kitchener Road, Milford, Auckland., P.O.Box 31 261, Milford, Auckland.1309
- ZL1AGR** Cotton, J. K., 24b Bucklands Beach Road, Bucklands Beach, Auckland.1704
- ZL1AGS** Collins, P. E., 185 Victoria Street, Cambridge.2351
- ZL1AGT** Taylor, E. R., 15 Wickham Place, Tauranga.3001
- ZL1AGU** Sterling, I. H., 27 Cromwell Street, Mt. Eden, Auckland.1003
- ZL1AGV** Dixon, L. N., 18 Koru Street, Mangere Bridge.1701
- ZL1AGW** McDonald, D. F., Margaret Place, Ha Hei, R.D. 1, Whitianga.2856
- ZL1AGX** Clark, A. T., 18 Saint Vincents Avenue, Remuera, Auckland.1105
- ZL1AGY** Easton, J. A., R.D. 9, Wheki Valley Hill, Whangarei.0101
- ZL1AGZ** Delaney, J. D., 41 Birdwood Road, Swanson, Auckland.1208
- ZL1AHA** Boyd, J. M., 30a Mohoe Street, Rotorua.3201
- ZL1AHC** Grayston, G. H., 34 Mangapiko Street, Te Awamutu.2400
- ZL1AHD** Franklin, M. J., 52 Northboro Road, Takapuna, Auckland.1309
- ZL1AHE** Morrison, K., 38 Edward Avenue, Orewa.1461
- ZL1AHH** Simmonds, K. R., 41 Porritt Avenue, Birkenhead, Auckland.1310
- ZL1AHI** Randerson, K. D., 12 Montgomery Avenue, Onerahi, Whangarei.0101
- ZL1AHJ** Anderson, A. P., 421 Pukehangi Road, Rotorua.3201
- ZL1AHK** Tester, W., 48 Pulham Road, Warkworth.1492
- ZL1AHL** McLellan, G. L., 1 Icarus Place, Rotorua.3201
- ZL1AHM** Bell, A. D., Main Road, Waimana.3474
- ZL1AHN** Milford, R. T., Wendywood Lane, Kerikeri.0452
- ZL1AHO** Sykes, R. J., 3/286 Rosebank Road, Avondale, Auckland.1207
- ZL1AHP** Greendale, L. S., 47 Ramelton Road, Mt Roskill, Auckland.1004
- ZL1AHQ** Field, G. H., 11 Featon Road, Waihi, Thames Valley.2991
- ZL1AHR** Nolan, J. I., 3 Dairy Road, East Tamaki.1701
- ZL1AHS** Turnwald, T. F., 63 Beach Road, Castor Bay, Auckland.1309
- ZL1AHT** Buckland, I. D., 231b Titirangi Road, Titirangi, Auckland.1207
- ZL1AHU** Seakins, P. J., 99 Exmouth Road, Northcote, Auckland.1309
- ZL1AHV** Adams, W., 2 Sutton Close, Puriri Park Road, Whangarei.0101
- ZL1AHW** Hoban, R. P., Waikeria Road, No. 4 R.D., Te Awamutu.2400
- ZL1AHX** King, A. M., 36 Flaxdale Street, Birkdale, Auckland.1310
- ZL1AHY** Wallace, D. W., 68 Aotea Crescent, Tokoroa.2392
- ZL1AHZ** Kidd, B. F., P.O. Box 51-586, Pakuranga, Auckland.1730
- ZL1AIA** White, C. M., No. 1 R.D., Tokoroa.2392



# **ZL1AIC**

**ZL1AIC** Dewar, D., 6 Syntax Place, Conifer Grove, Takanini.1702  
**ZL1AID** Leng, W. K., 36 Great South Road, Papatoetoe.1701  
**ZL1AIF** Reid, D. M., Te Kooti Road, R.D. 5, Kutarere.3471  
**ZL1AIG** Falkner, G. R., 65 Turanga Road, Henderson, Auckland.1208  
**ZL1AIH** McCormack, R. K. F., Vivian Bay, Kawau Island.1490  
**ZL1AII** McPartane, I. R., 18 Huntly West Road, Ngaruawahia.2171  
**ZL1AIJ** Blake, C. B., Blackwell Drive, Tryphena, Great Barrier Island.1470  
**ZL1AIK** Lewis, P. J., c/- 178a Kimbolt on Road, Feilding, Manawatu.5600  
**ZL1AIL** Christie, W. E., 24 Bryce Avenue, Mt. Roskill, Auckland.1004  
**ZL1AIM** Keble, S. W., 43 Smiths Road, Matua, Tauranga.3001  
**ZL1AIN** Frazerhurst, T. L., 81 East Street, Hamilton.2001  
**ZL1AIO** Rimmer, E.M.(Mrs), 28 Douglas Street, Whakatane.3400  
**ZL1AIP** Parker, T. H., 202 Albert Street, Thames.2801  
**ZL1AIQ** Veale, G. A., 31 Rangitoto Avenue, Remuera, Auckland.1105  
**ZL1AIR** Armstrong, B. E., Main Road, Mill Bay, R.D. 3, Mangonui.0557  
**ZL1AIS** Dyer, R. J., 16 Blundell Avenue, Kawerau.3452  
**ZL1AIT** Hagg, J. M. K., 3 Horne Street, Hamilton.2001  
**ZL1AIU** Eastern Bay of Plenty Branch NZART (Inc.), see Branch Directory  
**ZL1AIV** Tilsley, D. G., 4 Littlejohn Street, Mt Roskill, Auckland.1004  
**ZL1AIX** Robinson, W. J., "Ahuareka", Whitford-Maraeti Road, R.D. 1, Howick.1731  
**ZL1AIZ** Lake, P. B., 12 Brasenose Place, Tawa, Wellington.6203  
**ZL1AJA** Jones, J. J. (Mrs), 213 Whitney Street, Blockhouse Bay, Auckland.1207  
**ZL1AJC** Boyle, D. H. K., Main South Road, Otorohanga.2554  
**ZL1AJD** Krippner, F. J., Te Rore, R.D. No. 6, Te Awamutu.2400  
**ZL1AJE** Ansell, M. E., 32 Routley Drive, Glen Eden, Auckland.1207  
**ZL1AJF** Krippner, J. A., Te Rore, R.D. No. 6, Te Awamutu.2400  
**ZL1AJH** Davies, J. W. (Dr), 1 Birkley Road, Bayswater, Auckland.1309  
**ZL1AJI** Jeffries, A. W., 70 Woodglan Road, Glen Eden, Auckland.1207  
**ZL1AJJ** Craig, G. H., 12 Exploration Way, Whitby, Wellington.6253  
**ZL1AJK** Wood, W. B., 8 William Souter Street, Forrest Hill, Auckland.1310  
**ZL1AJL** Johnston, C. A. (Miss), 6 Syntax Place, Conifer Grove, Takanini.1702  
**ZL1AJM** Bloxham, W. J., 14 Hutton Road, Orewa.1461  
**ZL1AJN** Holmes, W. S., R.D. 1, Waiuku.1852  
**ZL1AJO** Jones, D. A., Lot 1086, Pauanui, Ocean Beach.2850  
**ZL1AJP** Willcocks, R. J., 181 Corks Road, Whangarei.0101  
**ZL1AJQ** Hogan, A. H., P.O.Box 1497, Taupo.3300  
**ZL1AJR** Chapman, R., 50 Rukutai Street, Mission Bay, Auckland.1105  
**ZL1AJS** Barker, J. A., 24b Pigeon Mountain Road, Bucklands Beach.1704  
**ZL1AJU** Barnard, B. F., 91 Melanesia Road, Kohimarama, Auckland., P.O. Box 25-197, St Heliers, Auckland.1130  
**ZL1AJV** Irving, P. J., 4 Scott Avenue, Mangere Bridge, Auckland.1701  
**ZL1AJW** Grant, R. C., 15 Scott Road, Stanmore Bay, Whangaparaoa.1463  
**ZL1AJX** Cox, J. B., 2/25 Pah Road, Epsom, Auckland.1003  
**ZL1AJY** Barratt, M. P., 6 Brussels Place, Birkenhead, Auckland.1310  
**ZL1AJZ** Stewart, R. N., 152 Cliff View Drive, Green Bay, Auckland.1207  
**ZL1AKA** Harris, J. W., 79 Stillwater Crescent, R.D. 3, Silverdale.1462  
**ZL1AKB** Gillard, M. L. N., 22 Stewart Street, Whakatane.3400  
**ZL1AKC** Crooke, B. W., 4 Kelly Street, Rotorua.3201  
**ZL1AKD** Clay, W. V., c/- R Lamber, 7 Wilson Avenue, Whangarei.0101  
**ZL1AKE** Exeter, M. N. L., 5 Dolphin Street, Pakuranga.1706  
**ZL1AKF** Miller, F. W., 17 Harris Street, Te Puke.3071  
**ZL1AKG** Quinn, P. T. M., 9 Page Place, Hillcrest, Hamilton.2001  
**ZL1AKH** Paterson, W., 329a Oceanbeach Road, Mt Maunganui, P.O. Box 4160, Mt Maunganui.3030  
**ZL1AKI** Tait, C. V., 11 Ridge Road, Tairua.2853  
**ZL1AKJ** Studholme, D. L., 22 Anita Avenue, Mt Roskill, Auckland.1004  
**ZL1AKK** Ellison, C. L., 32 Mahoe Street, Te Awamutu.2400  
**ZL1AKL** Eagle, E. H., 35 Argyll Road, Greerton, Tauranga.3001  
**ZL1AKM** McLean, P. A., C/- N. Crook, 691a East Coast Road, Browns Bay, Auckland.1310  
**ZL1AKN** Fairest, T. R., Tapuwae Road, Poratarao, R.D. 7, Te Kuiti.2500  
**ZL1AKO** Otto, R. H., State Highway 10, Waipapa, R.D.2, KeriKeri.0450  
**ZL1AKP** Doar, S. W., 40 Corks Road, Whangarei.0101  
**ZL1AKQ** Brant, A. E., 48 Wintere Road, Papatoetoe.1701

**ZL1AKS** Wigley, J. N., 43 Ocean View Road, Northcote, Auckland.1309  
**ZL1AKT** Follett, M. S., 39 Edmund Road, Rotorua.3201  
**ZL1AKU** O'Donoghue, D. J., 22 Stanley Avenue, Milford, Auckland.1309  
**ZL1AKV** Bell, D. C., 19 Advene Road, Howick.1705  
**ZL1AKW** Horne, D. W. J., 3 Vine Avenue, Maungatapu, Tauranga.3001  
**ZL1AKX** Passau, M. B., Awanui Rise, P.O. Box 628, Papakura.1733  
**ZL1AKY** Reed, G. S., 510 Great South Road, Papakura, Auckland.1703  
**ZL1AKZ** Landor, P. M., East Otara Road, Opatiki.3472  
**ZL1ALA** Halden, J. E., Bush Road, R.D. 2, Ngatea.2852  
**ZL1ALB** Allen, D. G., 2/241 Penrose Road, Mt. Wellington, Auckland.1105  
**ZL1ALC** Barea, H., 15 Darley Street, Hamilton.2001  
**ZL1ALD** Smith, D. W., 110 Douglas Street, Whakatane.3400  
**ZL1ALE** Johnston, A. B. (Mrs), 63 Red Hill, Papakura.1703  
**ZL1ALF** Gibbs, P. N., 6 Hinau Place, Matamata.2271  
**ZL1ALG** Osborne, G. J., 34 Cobham Drive, Kawerau.3452  
**ZL1ALH** Lochmann, I. G., Nui Oat Barracks, Fort Dorset, Seatoun, Wellington.6030  
**ZL1ALJ** Fraser, T. J., Owaikura Road, R.D.3, Otorohanga.2554  
**ZL1ALK** Reed, C. M. (Mrs), 510 Great South Road, Papakura.1703  
**ZL1ALL** Young, W. G., 3 Kempthorne Crescent, Kohimarama, Auckland.1105  
**ZL1ALM** Mutch, J. T., 11 Goulstone Road, Whakatane.3400  
**ZL1ALN** Duncan, K. G., 2 Marsh Avenue, Milford, Auckland.1309  
**ZL1ALO** Giles, P. M., 11a Ozich Avenue, Te Atatu South, Auckland.1208  
**ZL1ALP** Harding, F. W., 16 Vonnell Place, Glenfield, Auckland.1310  
**ZL1ALQ** Deverick, E. I., 3 Toi Toi Place, Northcote, Auckland.1309  
**ZL1ALR** Kay, S. R., 1a Burwood Crescent, Remuera, Auckland.1105  
**ZL1ALS** Wylde, J. E., 11 Wai-iti Terrace, Whiliana.2856  
**ZL1ALT** Bowyer, J. V. M., 586 River Road, Fairfield, Hamilton.2001  
**ZL1ALU** Brott, R. O., Church Road, R.D. 2, Kaitia.0500  
**ZL1ALV** Ussher, R. R., 4 Wychwood Crescent, Rotorua.3201  
**ZL1ALW** Williamson, J. G., 70 Ngataranga Road, Devonport, Auckland.1309  
**ZL1ALX** Gubb, G. K., 15a Omana Road, Papatoetoe.1701  
**ZL1ALZ** Luke, A. R., 16 Trentham Road, Papakura.1703  
**ZL1AMB** Milne, M. B., Fahy Road, R.D., Bombay.1750  
**ZL1AMC** Zwies, O. H., 232 King Street, Invercargill.9501  
**ZL1AMD** Loretz, R. K., 169 Dominion Road, Mt Eden, Auckland.1003  
**ZL1AME** Crook, F. G., 12 Ascot Avenue, Devonport, Auckland.1309  
**ZL1AMF** Gosling, K. F., 2/18 Buckley Road, Three Kings, Auckland.1003  
**ZL1AMG** Kirby, E. G., 32b Park Street, Tauranga.3001  
**ZL1AMH** Hughes, J. S. P., 256 Glamorgan Drive, Torbay, Auckland.1310  
**ZL1AMI** Jamieson, R. A., Oropi Road, R.D. 3, Tauranga.3021  
**ZL1AMJ** Saunders, J. R., 68 Lynbrooke Avenue, Avondale, Auckland.1207  
**ZL1AMK** Jensen, E. W., 166 Godley Road, Titirangi, Auckland.1207  
**ZL1AML** Lawrence, L. J., 28 McCullough Avenue, Mt. Roskill, Auckland. (Portable).1004  
**ZL1AMM** Murphy, R. E., 5 Flaxwood Lane, Opawa, Christchurch.8002  
**ZL1AMN** Johnston, D. A., 63 Red Hill, Papakura, Auckland.1703  
**ZL1AMO** Wright, R. W., 28 Chorley Avenue, Massey, Auckland.1208  
**ZL1AMQ** Male, F. G., 67 Waipuna Road, Mt. Wellington, Auckland.1106  
**ZL1AMR** Lindsay, I. M., 1/131 Botany Road, Howick, Auckland.1705  
**ZL1AMS** Bouwknecht, H. G., 36b Nelson Street, Blenheim.7301  
**ZL1AMT** Moore, D. A., 49a Whittaker Road, Warkworth, North Auckland.1492  
**ZL1AMU** Jury, R. B., 55 Wilerton Avenue, New Lynn, Auckland.1207  
**ZL1AMW** Wallace, A. J., 20 Lorne Street, Hamilton.2001  
**ZL1AMX** Daniel, G. G. (Mrs), Whangaumu Street, R.D. 3, Whangarei.0121  
**ZL1AMY** Fletcher, I. G., 248 East Coast Road, Takapuna North, Auckland.1309  
**ZL1AMZ** Glendenning, T., 75 Cardiff Road, Pakuranga.1706  
**ZL1ANA** Barker, J. R. (Mrs), 26 Lyndhurst Street, Te Atatu South, Auckland.1208  
**ZL1ANB** Ball, C. A., 59 Ferguson Street, Manurewa.1702  
**ZL1AND** Turner, A. B., 7 Acmena Lane, Pakuranga, Auckland.1706  
**ZL1ANE** Gingles, J. C., Te Maika Road, Ngunguru, R.D. 3, Whangarei.0250  
**ZL1ANF** Beale, W. M., 12 Emerson Street, Te Aroha.2971  
**ZL1ANG** Frazerhurst, L. F., 81 East Street, Hamilton.2001  
**ZL1ANH** Hunt, G. K., 30 Grande Vue Road, Kawaha Point, Rotorua.3201



ZL1ANI	Bell, K. A., 62b Eden Terrace, Kamo, Whangarei.0101	ZL1AOB	Howe, A. M., 5 Philip Street, Papatoetoe.1701
ZL1ANJ	Ellis, J. M., 3 Hawera Road, Kohimarama, Auckland.1105	ZL1AQC	Sinclair, V. A., 37b Beatrice Avenue, Hillcrest, Auckland.1310
ZL1ANK	Daniel, J. E., Whangarua Street, R.D. 3, Whangarei.0121	ZL1AQD	Crossman, V. T., 38 Milton Road, Otumotetai, Tauranga.3001
ZL1ANL	Smith, I. G., 20 Kirk Street, Whakatane.3400	ZL1AQE	Wright, D. P., 3 Tamatea Drive, Snells Beach, Warkworth.1490
ZL1ANM	Barnett, N. M., 29 Terra Nova Street, Glen Eden, Auckland.1207	ZL1AQF	Malcomson, M. R. J., 409 Frazer Street, Tauranga.3001
ZL1ANN	Tricker, D. A. G., 100 Whangaparaoa Road, Orewa.1461	ZL1AQJ	Wrigley, J. S., 5 Derwent Street, Western Springs, Auckland.1002
ZL1ANO	Matsui, Y., 29 Balmoral Road, Epsom, Auckland.1003	ZL1AQK	Brown, C. D., 112 Beach Road, Onerahi, Whangarei.0101
ZL1ANP	Parsons, N. L. (Mrs), 509/1 Mutu Street, Te Awamutu.2400	ZL1AQL	Hintridge, M. F., 15a Cranbrook Place, Glendowie, Auckland.1105
ZL1ANQ	Herdman, R. J., 5 Sullivan Street, Whakatane.3400	ZL1AQM	Kendall, J. D., 16 Ferguson Avenue, Greenlane, Auckland.1105
ZL1ANR	Gibbins, E. G., 114 Third View Avenue, Bucklands Beach.1705	ZL1AQO	Gee, I. A. (Ivan), 5 Rhodes Avenue, Mt. Albert, Auckland.1003
ZL1ANT	Parr, J. E., 42 Parlange Street, Addington, Christchurch.8002	ZL1AQO	Shepherd, G. W., 60 Chivalry Road, Glenfield, Auckland.1310
ZL1ANU	Tuitt, M. L., 219 Panama Road, Olahuu, Auckland.1106	ZL1AQR	Tokoroa Branch NZART (Inc), see Branch Directory
ZL1ANV	Creed, R. M., 38 Hollywood Avenue, Titirangi, Auckland.1207	ZL1AQS	Sexton, J. E., Paparimu, R.D. 3, Papakura.1733
ZL1ANW	Dixon, A. W., 4/54 Gowing Drive, Meadowbank, Auckland.1105	ZL1AQT	Smith, A. G., 17 Raniera Place, Rotorua.3201
ZL1ANX	Reid, A. A., 62a Puke Road, Paeroa.2951	ZL1AQU	Boyer, C., 311 Pakuranga Road, Pakuranga.1706
ZL1ANY	Pearce, S. G., 50 Evans Street, Dunedin.9001	ZL1AQV	Barclay, S. N., 185 White Swan Road, Mt Roskill, Auckland.1004
ZL1AOA	Whitney, J. R., 4 Dawson Street, Hamilton.2001	ZL1AQX	Toomey, A. H., 38 Bradbury Road, Howick.1705
ZL1AOB	Harrop, G. N., 8 Waingaro Road, Ngaruawahia.2171	ZL1AQY	Knaggs, G. R., 31 Henderson Crescent, Tauranga.3001
ZL1AOC	Henderson, H. R. T., 11 Chesley Place, Bucklands Beach, Auckland.1704	ZL1ARA	MacDonald, A. D., 82 Dinsdale Road, Hamilton.2001
ZL1AOD	Byrnes, C. D., 31 Rosehill Drive, Papakura.1703	ZL1ARB	Smith, P. L., 56 Hobsonville Drive, West Harbour, Auckland., P.O. Box 73-073, Auckland International Airport.1730
ZL1AOE	Gillgren, S. J., 30 Hall Street, Kihikihi.2400	ZL1ARC	McKenzie, C. J. C., 4 Brylee Drive, Takanini.1702
ZL1AOF	King, J. L., 26 Pouwhare Street, Whakatane.3400	ZL1ARD	Duncan, L. E., 14 Cowley Drive, Temple View, Hamilton.2001
ZL1AOG	Hastings, W. W., 35 Dundas Road, Whangarei.0101	ZL1ARE	Liefting, E. M., Taylors Road, R.D. 3, Kaitiaki.0500
ZL1AOH	Stewart, M. I., 4 Page Place, Hamilton.2001	ZL1ARF	Wallis, B. S., 9 Verran Road, Birkenhead, Auckland.1310
ZL1AOI	Trelohen, V. G., 45 Warwick Avenue, Westmere, Auckland.1002	ZL1ARG	Miller, R. W. K., Mullet Point, R.D. No. 2, Warkworth.1492
ZL1AOJ	Robinson, J. R., 24a McKay Drive, Temple View, Private Bag 5, Frankton.2031	ZL1ARH	Rowe, P. R., 220 Balmoral Drive, Tokoroa.2392
ZL1AOK	Handisides, W. S., 117 East Coast Road, Milford, Auckland.1309	ZL1ARJ	Wadey, A. P., Karaka Road, Parakao, Whangarei.0250
ZL1AOL	Shacklock, F. W., 84 Motatau Road, Papatoetoe.1701	ZL1ARL	Neno, M. R., 226 Dickson Road, Papamoa, R.D. 7, Te Puke.3071
ZL1AOM	Brown, M. W., 290 Douglas Avenue, Te Awamutu.2400	ZL1ARM	Matthews, J. C. H., 1 Mayfair Crescent, Mairangi Bay, Auckland.1310
ZL1AON	Edginton, K. S., 69 East Street, Hamilton.2001	ZL1ARN	Brown, J. T., 32 English Street, Hamilton.2001
ZL1AOO	Holley, W., 16 Ashlynn Avenue, Papatoetoe, Auckland.1701	ZL1ARQ	Dunhill, I. H., 19 Goring Road, Mt. Albert, Auckland.1003
ZL1AOP	Frewin, H. G., 42 Walmsley Road, Waihi.2991	ZL1ARR	Russell, A. M., 4 Millic Terrace, Te Atatu, Auckland.1208
ZL1AOQ	Upsdell, D. M., 2 Wilmington Place, Forrest Hill, Auckland.1310	ZL1ART	Allen, A. W., Main Road, R.D.1, Broadwood, Northland.0553
ZL1AOS	Austin, P. H., 63 Ellison Crescent, Stanmore Bay, Whangaparaoa.1463	ZL1ARU	Langridge, E. R., 56 Somerset Road, Mt. Roskill, Auckland.1004
ZL1AOT	Margison, I., 3/28 Towai Street, St. Heliers, Auckland.1105	ZL1ARW	Forsyth, J. T., 7 Ridgemount Rise, Mangere Bridge, Auckland.1730
ZL1AOU	Southern, H. J., State Highway 2, Te Puna R.D. 2, Tauranga.3030	ZL1ARX	Wright, P. W. J., 36 Bell Street, Kawerau.3452
ZL1AOV	Matheson, J. L., Mata Road, R.D.1, Kohukohu.0471	ZL1ARY	Chandler, R. W., 36 Eastern Beach Road, Bucklands Beach.1704
ZL1AOW	Frankham, D. W., 18 Sabulite Road, Glen Eden, Auckland.1207	ZL1ARZ	Gibbs, F. I., 22 Fairview Place, Te Puke.3071
ZL1AOX	Ashley, I. T., 5 Willoughby Avenue, Howick.1705	ZL1ASA	George, R. F., 68 Cliff Road, Torbay, Auckland.1310
ZL1AOY	Young, I., 15 Glenfell Road, Mount Eden, Auckland.1003	ZL1ASB	Blake, J. J., 32 Kiwi Road, Point Chevalier, Auckland.1002
ZL1AOZ	Mackay, W. J., 49 Gladstone Road, Parnell, Auckland.1001	ZL1ASC	McCann, C. S., 45a Braemar Road, Rothesay Bay, Auckland.1310
ZL1APA	Hardy, R., 86 Mountain Road, Henderson, Auckland.1208	ZL1ASD	Bayley, E., 11 Trimmer Terrace, Papatoetoe.1701
ZL1APB	McDonald, R. W., 100 Kauri Road, Whenuapai.1450	ZL1ASE	Highley, F. K., 12 Hurley Place, Cambridge.2351
ZL1APC	Chaytor, J. M., 39b Tamihana Street, Matamata.2271	ZL1ASF	Parkinson, D. A. J., 22 Hiwihau Place, Glenfield, Auckland.1310
ZL1APE	Corbett, A. B. S., 10 Roseberry Avenue, Birkenhead, Auckland.1310	ZL1ASG	Sanderson, J. B., 25 Raurimu Avenue, Onerahi, Whangarei.0101
ZL1APF	Baleman, T. L., 109 Lambert Street, Thames.2801	ZL1ASH	Williamson, O. G., 11 Keddel Street, Frankton.2001
ZL1APG	Perston, K. J., 37 Grey Street, Kawerau.3452	ZL1ASL	Rimmer, K. S., 61 Awatapu Drive, Whakatane.3400
ZL1APH	Dittmer, C. R., 31 George Street, Morrinsville.2251	ZL1ASM	Kenealy, R. D., 119 Kihikihi Road, Te Awamutu.2400
ZL1API	Hendrie, J. G., Ormauna Road, Kaeo.0556	ZL1ASN	Adams, R. E. V., 21 Ashby Avenue, St Heliers, Auckland.1105
ZL1APJ	Jessen, R., 156 Tamamutu Street, Taupo.3300	ZL1ASO	Grayson, R. I., P.O.Box 517, Papakura.1733
ZL1APK	Turvey, G. R., 89 Homedale Street, Rotorua.3201	ZL1ASP	Abbott, R. F., 65 Kaimanawa Street, Taupo.3300
ZL1APL	Tague, T. F. E., Unit 2, 15 Birdwood Crescent, Parnell, Auckland.1001	ZL1ASR	Hartnell, G. W., P.O. Box 41, Manurewa.1732
ZL1APM	Bowers, J., 104 Hinemoa Avenue, Taupo.3300	ZL1ASU	Little, D. C., 25 Marellan Drive, Red Beach, Orewa.1461
ZL1APO	Penney, G. A., 6 Meadow Drive, Whitianga.2856	ZL1ASV	Phillips, R. L., 27a Seaview Road, Milford, Auckland.1309
ZL1APP	Haysmith, C. A., Kaukapakapa, R.D.1, Helensville.1451	ZL1ASW	Cambridge Amateur Radio Club, see Branch Directory
ZL1APQ	Crook, N. W. W. G., 691a East Coast Road, Browns Bay, Auckland.1310	ZL1ASX	Leeman, G., 76 Stillwater Crescent, R.D. 3, Stillwater.7850
ZL1APR	Rosborough, J. L., Hills Road, R.D. 1, Raglan.2051	ZL1ASZ	Anderson, A. N., 3 McKenzie Road, Mangere Bridge, Auckland South.1701
ZL1APS	Browne, N. H., 23 Te Puia Street, Kamo, Whangarei.0101	ZL1ATB	Leitch, D. A., 40 Alford Street, Waterview, Auckland.1207
ZL1APT	Jones, E. B., c/- New Zealand Foundation for the Blind, 545 Parnell Road, Auckland.1001	ZL1ATD	Marsden, J. R. G., 56 Kimpton Road, Papatoetoe.1701
ZL1APU	Sowerby, B. W., 42 Cheriton Road, Howick.1705	ZL1ATE	Babich, A. T., 48 Citrus Avenue, Waihi Beach.2990
ZL1APV	Fisher, J. R., 35 Shoreham Street, Blockhouse Bay, Auckland.1207	ZL1ATF	Sainsbury, D. G., Tanners Point, R.D. 1, Katikati.3051
ZL1APW	Marx, A. S., 43 Island View Road, Rotorua.3201		
ZL1APX	Duncan, S., 208 Ohaupo Road, Glenview, Hamilton.2001		
ZL1APY	Harris, L. M., Saies, Totara North.0550		
ZL1APZ	Franks, R. A., Scotsmans Valley Road, R.D. 1, Morrinsville., P.O. Box 11-022, Hamilton.2251		
ZL1AQA	Hood, W. F., 31 Stanley Street, Matamata.2271		



## ZL1ATG

ZL1ATG Gaddes, G. D. S., Reinga Road, Kerikeri.0452  
 ZL1ATI Ward, C. J., 30 Eskdale Road, Birkdale, Auckland.1310  
 ZL1ATJ Cowell, R. E., 7 Sunrise Lane, Te Atatu South, Auckland.1208  
 ZL1ATK Millar, T. R. C., 25 Moana Crescent, P.O. Box 34, Mangakino.2391  
 ZL1ATL Park, R. J., 205 Hape Road, Thames.2801  
 ZL1ATM Barrett, N., 42b Scott Avenue, Mangere Bridge, Auckland.1701  
 ZL1ATO Taumarunui Branch NZART (Inc.), see Branch Directory  
 ZL1ATQ Saller, R. T., Brind Road, Russell.0293  
 ZL1ATR Witheford, P. S., 97b Otaka Road, Otaka, Whangarei.0101  
 ZL1ATS Hoyle, R. P., 3 Hobson Street, Waihi.2991  
 ZL1ATT Louisson, G. M., 2 Oakley Avenue, Hamilton.2001  
 ZL1ATU Hayhurst, K. W., 204 Mill Street, Thames.2801  
 ZL1ATV Robertson, N. L., 23 Tauhara Street, Green Bay, Auckland.1207  
 ZL1ATW Meenagh, M. B., 223 Te Tomo Street, Te Awamutu.2400  
 ZL1ATX Vogel, H., 20 Harapaki Road, Meadowbank, Auckland.1105  
 ZL1ATY O'Keefe, J. F., 511 Scenic Drive, R.D. 1, Auckland.1732  
 ZL1ATZ Jepson, L. J., 224 Marsden Point Road, Ruakaka.0253  
 ZL1AUA Wilson, B. E., 10a Jaemont Avenue, Te Atatu South, Auckland.1208  
 ZL1AUB Watkins, G. A., 1/18 Rosehill Drive, Papakura.1703  
 ZL1AUC Langridge, R. A., 16 Jellicoe Street, Whangarei.0101  
 ZL1AUD Diamond, C. S., R.D., Rawene, Hokitika.0473  
 ZL1AUF O'Hagen, M. G., 61 Maxwell Road, Blenheim.7301  
 ZL1AUG Street, G. H., 4 Emory Drive, Takanini, Auckland.1702  
 ZL1AUH Murray, N. V., Te Toro, R.D. No. 4, Waiuku.1852  
 ZL1AUI Banks, R. S., Taupo Bay, R.D., Mangonui.0557  
 ZL1AUJ Warman, R. W., Hospital Road, Te Kopuru.0356  
 ZL1AUK Hill, M. J., 119 Sutherland Road, Otumoetai, Tauranga.3001  
 ZL1AUL Thomas, R. D., c/- Homestead Hotel, Keri Keri.0452  
 ZL1AUM Maddock, C. N., 75a Methuen Road, Avondale, Auckland.1207  
 ZL1AUN Inder, A. M. (Mrs.), 19 Rushton Street, Otumoetai, Tauranga.3001  
 ZL1AUO Forrester, T., 254 Stokes Valley Road, Stokes Valley.6306  
 ZL1AUP Bacchus, B. P., 514 Fitzroy Avenue, Hastings.4201  
 ZL1AUQ Pople, D. A. O., 19 Kingdale Road, Henderson, Auckland.1208  
 ZL1AUS Insley, J. F., 1 Tudor Rise, Whakatane.3400  
 ZL1AUU White, J. H. S., Unit 6, 97 Coronation Road, Papatoetoe, Auckland.1701  
 ZL1AUV Sanders, J. G., Greenslade Road, Raglan.2051  
 ZL1AUW Wooler, A. M., 40 Powrie Street, Glenfield, Auckland.1310  
 ZL1AUX Greaves, G. J., 40 Windoma Circle, Papatoetoe, Auckland.1701  
 ZL1AUY Burkinshaw, D. E., 30 Tiroroa Avenue, Te Atatu South, Auckland.1208  
 ZL1AVA Haag, W. K., 29 Ferguson Avenue, One Tree Hill, Auckland.1105  
 ZL1AVB Miller, S. P., Flat 2, 156 Manuka Road, Glenfield, Auckland.1310  
 ZL1AVC Bretherton, E. C., 24 Iles Road, Rotorua.3201  
 ZL1AVD Bell, D. G., 48 Dundee Place, Blockhouse Bay, Auckland.1207  
 ZL1AVE Atchinson, D. R., 783 Great South Road, Papatoetoe.1701  
 ZL1AVH Alder, S. H., 195 St Heliers Bay Road, St Heliers, Auckland.1105  
 ZL1AVI Kyle, B. V., 76 St. Andrews Road, Epsom, Auckland.1003  
 ZL1AVJ Harper, M. J., 34 Tuatara Drive, Kamo.0101  
 ZL1AVK Ruffell, W. L., 8 St. Aubyn Street, Devonport, Auckland.1309  
 ZL1AVL Manning, A. J., 7 Churchill Street, Putaruru.2371  
 ZL1AVM Means, C. B., 22 Miles Crescent, Newlands, Wellington.6004  
 ZL1AVN McElwain, B. R., 12 Vine Street, Hamilton.2001  
 ZL1AVO Robertson, K. S., 2 Jaemont Avenue, Te Atatu South, Auckland.1208  
 ZL1AVP Tweedie, L. E., 5 Quebec Road, Forrest Hill, Auckland.1309  
 ZL1AVQ Auckland University Radio Club, (Trustee: ZL1AN), 32 Princes Street, Auckland.1001  
 ZL1AVR Rowe, J. P., 24 Okareka Place, Pakuranga, Auckland.1706  
 ZL1AVS Burge, A. W., 14 Dennis Avenue, Manurewa.1702  
 ZL1AVU Garlick, C. W., 4 James Place, Papakura.1703  
 ZL1AVV McFayden, E. J., 39 Kahu Street, Rotorua.3201  
 ZL1AVW Wing, B. E., 11 McMurdo Avenue, Melville, Hamilton.2001  
 ZL1AVX Johnston, D. J., 25 Buckland Road, Epsom, Auckland.1003  
 ZL1AVY Tennent, D. R., 107a New Windsor Road, Avondale, Auckland.1207  
 ZL1AVZ Ryall, B. J., 195 Te Atatu Road, Te Atatu South, Auckland.1208  
 ZL1AWA Voss, A., 28 Matipo Street, Taupo.3300  
 ZL1AWB Ryan, R. V., 50 Surf Road, Stanmore Bay, Whangaparaoa.1463

ZL1AWD Parsons, J. N., c/- V.L.Eade, Moody Street, Gore Bay, R.D.3, Cheviot.8271  
 ZL1AWE Nicholson, A. J., 21 Egremont Street, Takapuna, Auckland.1309  
 ZL1AWF Sexton, E. A., Paparimu, R.D.3, Papakura.1733  
 ZL1AWG Palmer, H. W., 26 Hilton Road, Lynmore, Rotorua.3201  
 ZL1AWH Sopp, C. E., Cable Bay, Block Road, R.D. 3, Kaitia.0500  
 ZL1AWI Boff, A. G., Woodstock Avenue, Mackaytown., P.O. Box 28, Karangahake, via Paeroa.2950  
 ZL1AWL Brooks, D. S., C/- Post Office Claris, Great Barrier Island.1470  
 ZL1AWM Rudkin-Whyte, L. V., 214 Otahu Road, Whangamata.2992  
 ZL1AWN Erasmus, J. D., 7 Awatere Place, Snells Beach, Warkworth.1490  
 ZL1AWO Pepperell, B. F., 17 Armagh Street, Hamilton.2001  
 ZL1AWP Dennison, A. S., Heron Park Orchard, Levley Lane, Katikati.3051  
 ZL1AWQ Johnson, P. R., 22 Huia Street, Rotorua.3201  
 ZL1AWR Goodacre, H. W., Pickering Road, R.D. 3, Hamilton.2021  
 ZL1AWS O'Connell, K. D., 97 Malfroy Road, Rotorua.3201  
 ZL1AWT Everitt, A. B., 11 Luplau Crescent, Howick.1705  
 ZL1AWU Rouse, C. A., 18a Ridge Road, Browns Bay, Auckland.1310  
 ZL1AWV Ison, H. D. S., 133 Oak Tree Avenue, Browns Bay, Auckland.1310  
 ZL1AWW Welford, G. H., 30 Churchill Avenue, Manurewa.1702  
 ZL1AWX Jillings, M. A., 71 Hutchinson Road, Howick, Auckland.1705  
 ZL1AWZ Leitch, T. G., 38 David Street, Morrinsville.2251  
 ZL1AXA Burgess, G. W., 34 Booralee Avenue, Howick, Auckland.1705  
 ZL1AXB Murdoch, P. J., 183 Glengarry Road, Glen Eden, Auckland.1207  
 ZL1AXC Chapman, C. B., 35 Cosgrave Road, Papakura.1703  
 ZL1AXD McHuish, L. D., 110 Golf Road, Titirangi, Auckland.1207  
 ZL1AXE Spackman, M. L. (Rev.), The Vicarage, 20 Church Street, Devonport, Auckland.1309  
 ZL1AXF McRae, E. D., 4 Nottingham Road, Onerahi, Whangarei.0101  
 ZL1AXG Woods, M. H., 136a Coromandel Street, Newtown, Wellington.6002  
 ZL1AXH Miller, E. D. N., see Overseas Members  
 ZL1AXI Foote, J. R., Dip Road, Kamo.0101  
 ZL1AXJ Waring, B. A., 57 Reelick Avenue, Pakuranga, Auckland.1706  
 ZL1AXK Edgar, L. D., 11 Puriri Road, Whenuapai.1450  
 ZL1AXL Roberts, B. L., 41 McFadzean Drive, Blockhouse Bay, Auckland.1207  
 ZL1AXM Cook, K. J., 12 Centorian Drive, Mairangi Bay, Auckland.1310  
 ZL1AXN Anderton, T. E., 87 Woolfield Road, Papatoetoe, Auckland.1701  
 ZL1AXO Bareman, K., 17 Matipo Road, Te Atatu North, Auckland.1208  
 ZL1AXQ Hardwick, D. B., R.D. 2, Matamata.2271  
 ZL1AXS Griffin, P. J., 44 Waimari Road, Whenuapai Village, Auckland.1450  
 ZL1AXT De Luca, B. C., 20 Gwilliam Place, Freemans Bay, Auckland.1001  
 ZL1AXU Orchard, M. P., 1 The Heads, Whakatane.3400  
 ZL1AXV Richardson, K. R., 4 Redcrest Avenue, Papakura, Auckland.1703  
 ZL1AXW Shaw, M. Y., 238 Maunsell Road, Port Waikato.1890  
 ZL1AXX Smith, R. I., Caton Road, R.D. 2, Waitakere, Auckland.1230  
 ZL1AXY Hjorring, B. G., 48 Smythe Road, Henderson, Auckland.1208  
 ZL1AXZ Sample, K. W., 46a Sunrise Avenue, Mt Maunganui.3002  
 ZL1AYA D'Arcy, A. E., 2/41 East Coast Road, Milford, Auckland.1309  
 ZL1AYB Bowkett, J. A., 19 School Road, Ngongotaha.3202  
 ZL1AYC Shipman, N. J., 15 Masfield Street, Howick.1705  
 ZL1AYD Thomson, J. D., 15a Milford Road, Milford, Auckland.1309  
 ZL1AYE Midwinter, G. E. D., Otaka Valley Road, R.D. 10, Whangarei.0121  
 ZL1AYF Price, D. A., 115 Upland Road, Remuera, Auckland.1105  
 ZL1AYG Shepherd, J., 52 Wintere Road, Papatoetoe.1701  
 ZL1AYH Wallace, A. D., c/- J. Wallace, 1346 Whangaparaoa Road, Whangaparaoa.1463  
 ZL1AYI Harris, N. G., 402 Mangatapu Road, Tauranga.3001  
 ZL1AYJ Jones, E., 104b Ravenwood Drive, Forrest Hill, Auckland.1310  
 ZL1AYL Young, M. G., 15 Glenfell Road, Epsom, Auckland.1003  
 ZL1AYM Tennant, C. H., 8 McLeod Street, Weymouth, Auckland.1701  
 ZL1AYN Lowe, R. A., 43 Flower Street, Bulls.5452  
 ZL1AYO Seaman, H. A., 86 Taylor Street, Blockhouse Bay, Auckland.1207



- ZL1AYP Pickles, D. S., 371 Pakuranga Road, Pakuranga.1706  
 ZL1AYQ Maindonald, J. D., 17 McKenzie Road, Owhata, Rotorua.3201  
 ZL1AYS Stewart, R. W., 232 Great South Road, Remuera, Auckland.1105  
 ZL1AYU Thorley, A., C/- Caraliase Park, 1 Emerton Road, Waihi Beach South.2990  
 ZL1AYV Dingley, M. J., 2139 Great North Road, Avondale, Auckland.1207  
 ZL1AYW Speedy, S. L., 4a Windermere, 6 The Promenade, Takapuna, Auckland.1309  
 ZL1AYX McLeod, M. N. A., 11 Rickards Place, New Lynn, Auckland.1207  
 ZL1AYY Candy, F. A., 19a Claude Road, Manurewa, Auckland.1702  
 ZL1AYZ Natzke, R. L., 281 Racecourse Road, P.O. Box 87, Te Awamutu.2400  
 ZL1AZA Robertson, K. F., Unit 59, Hibiscus Coast Retirement Village, Red Beach, Auckland.1461  
 ZL1AZB Young, R. D., 29a George Street, Te Kuiti, P.O. Box 57.2500  
 ZL1AZC Wilson, G. E., 10 Wech Drive, Warkworth.1492  
 ZL1AZE Miller, B. D., 67 Hornsey Road, Melrose, Wellington.6003  
 ZL1AZH Pabbruwe, H. I., 99 Bradbury Road, Howick, Auckland.1705  
 ZL1AZI Hirst, J. R., 1a Northboro Road, Takapuna, Auckland.1309  
 ZL1AZJ Sutherland, S. F., Ruaroa Road, R.D. 1, Kaitiaki.0500  
 ZL1AZK Keucke, F. H., 31 Crestwood Village, 38 Golf Road, Titirangi, Auckland.1207  
 ZL1AZL Greenhalgh, R. W., Kiekie Road, Aria.2551  
 ZL1AZM Addison, R. R., 14 Clifton Road, Whakatane.3400  
 ZL1AZP Anderson, B. B., 2 Glenelg Road, Red Beach, Hibiscus Coast.1461  
 ZL1AZR Rea, J. S.(Dr), 248 Kepa Road, Mission Bay, Auckland.1105  
 ZL1AZS Christeson, E. L., 76 Highland Park Parade, Howick, Auckland.1705  
 ZL1AZT Clare, I. K., Goodall Road, Whakamarama, R.D. 6, Tauranga.3021  
 ZL1AZU Nelson, B. C., 59 Percy Street, Warkworth.1492  
 ZL1AZW Liefing, A. M. M., Taylor Road, R.D. 3, Kaitiaki.0500  
 ZL1AZX Armstrong, J. B., P.O.Box 202, Opoitiki.3472  
 ZL1AZY Green, R. G., 9 Bruce Avenue, Hamilton.2001  
 ZL1AZZ Darrall, P. G., 11 Irene Crescent, Goodleigh, Hamilton.2001  
 ZL1BAB Cooper, W. G., 7 Hartfield Rise, Papakura.1703  
 ZL1BAC Hilliar, S. W., 10 Rewhiti Avenue, Takapuna, Auckland.1309  
 ZL1BAD Knowles, R. E., Main Road, Onewhero, R.D. 2, Tuakau.1892  
 ZL1BAE Waihi Branch NZART (Inc), see Branch Directory  
 ZL1BAF Woolf, H. L., 6 Rawhiti Road, Onehunga, Auckland.1106  
 ZL1BAG McLennan, E. D., 18 Oxford Street, Tirau.2372  
 ZL1BAH Waiuku College Amateur Radio Club, (Trustee: ZL1BMD), Waiuku College, Waiuku.1852  
 ZL1BAI Trigg, L. E., Peia R.D. 3, Kaitiaki.0500  
 ZL1BAJ Candy, B. R., 19a Claude Road, Manurewa, Auckland.1702  
 ZL1BAK Burrage, D. H., 11 Bannister Place, Avondale, Auckland.1207  
 ZL1BAL Ball, T., Second Avenue, Waihou.2972  
 ZL1BAM Milligan, J. W., 88 Tiramaa Drive, Pakuranga.1706  
 ZL1BAO Marlin, H. R., 26 Dundee Place, Blockhouse Bay, Auckland.1207  
 ZL1BAP Parr, J. B., 9 Willow Way, Pakuranga, Auckland.1706  
 ZL1BAQ Heaven, K. J., 46 Workers Road, Wellsford.1493  
 ZL1BAR Marlensen, J. E., 34 Lawrence Street, Horne Bay, Auckland.1002  
 ZL1BAS Morgan, O. J., 1 Waitete Road, Waihi.2991  
 ZL1BAU Bakulich, J. V. M., Mt. Wesley Road, Dargaville.0300  
 ZL1BAV Vial, S. B., 159 Kowhai Road, Mairangi Bay, Auckland.1310  
 ZL1BAW Coleman, R. E., 94 Darraghs Road, Tauranga.3001  
 ZL1BAX Slaven, C. P., 19 Gilmore Street, Waihi.2991  
 ZL1BAY Tarlton, B. M., 8 North Road, Kaitiaki.0500  
 ZL1BAZ Davis, S. R., 5 Knowles Crescent, Waihi.2991  
 ZL1BBA Orchard, B. P., 40 Hinemoa Avenue, Taupo.3300  
 ZL1BBB Scrivener, G. Y., 295 Ocean Beach Road, Mt. Maunganui.3002  
 ZL1BBC Coleman, P. J., 11 Central Avenue, Whangarei.0101  
 ZL1BBD Sowerby, J., 120a Tawa Street, Hamilton.2001  
 ZL1BBE Innes, R. J., 3 Roland Hill, Glen Eden, Auckland.1207  
 ZL1BBF Lusk, R. I. B., 130 Scenic Drive, Titirangi, Auckland.1207  
 ZL1BBH Green, A. T., 98 Albert Street, Hamilton East.2001  
 ZL1BBJ Ede, R. P. A., 68 Glamorgan Drive, Torbay, Auckland.1310  
 ZL1BBK Allan, G. D., 194 Beach Road, Campbells Bay, Auckland.1310  
 ZL1BBL Taylor, M. F. W., 49 Whakaipo Avenue, Taupo.3300  
 ZL1BBM Ashton, H. G., 238 Rangatira Road, Birkenhead, Auckland.1310  
 ZL1BBN Parr, W. R. (Mrs), 5 Charles Edward Street, Ohaupo.2452  
 ZL1BBO Hayman, A. H., 29 Prospect Terrace, Milford, Auckland.1309  
 ZL1BBP Peace, K. I., Whangapoua Beach, R.D., Coromandel.2851  
 ZL1BBQ Maxwell, S. G., 26 Tuhaere Street, Orakei, Auckland.1105  
 ZL1BBR Chamberlin, P. C., P.O. Box 131, Clevedon.1751  
 ZL1BBS Kilpatrick, G., 157a Long Drive, St Heliers, Auckland.1105  
 ZL1BBT Orchard, H. M., 40 Hinemoa Avenue, Taupo.3300  
 ZL1BBU Medley, E. J., 10 Grosmont Terrace, Otumotai, Tauranga.3001  
 ZL1BBW Williams, K., Ody Road, Taurikura, R.D. 4, Whangarei.0250  
 ZL1BBX Warriner, A. D., c/- Public Trust Office, P.O.Box 21 359, Henderson.1231  
 ZL1BBY Brown, F. W. S., Unit 8, 221b Queen Street, Pukekohe.1800  
 ZL1BBZ Holt, R., 10 Collingwood Road, Waiuku.1852  
 ZL1BCA Batkin, B. W., Batkin Road, Hunua, R.D. 4, Papakura.1733  
 ZL1BCB Hight, B. G., 59 Pomaria Road, Henderson, Auckland.1208  
 ZL1BCC Crandall, S., Waihi Road, Paeroa.2951  
 ZL1BCE Eckelt, J. A. B., 23 Pinedale Place, Henderson, Auckland.1208  
 ZL1BCF Williamson, D. E. J., R.D.9, Poroti, Whangarei.0121  
 ZL1BCH Davis, B. C. B., 10 Willencote Place, Papakura, Auckland.1703  
 ZL1BCI Sinclair, N. S., 29 Meadowland Street, Tauranga.3001  
 ZL1BCJ Steel, R. E., c/- K.Steel, 399 Wai-iti Road, Timaru.8601  
 ZL1BCK Kamat, G. Y., 3/14 Poronui Street, Auckland.1003  
 ZL1BCL Lewis, V. A., 38b Burwood Road, Matamata.2271  
 ZL1BCN Messent, A. J., Main Road, Murupara P.O. Box 23.3272  
 ZL1BCP Peters, S. J., 43 Wilsher Crescent, Henderson, Auckland.1208  
 ZL1BCU Boyd, B. F., 8 Wallis Street, Raglan.2051  
 ZL1BCV White, J. W., 633b Kamo Road, Kamo, Whangarei.0101  
 ZL1BCW Webber, H. C., 6 Brabant Street, Whakalane.3400  
 ZL1BCX Fasher, N. C., 123 Peary Road, Mt Eden, Auckland.1003  
 ZL1BCY McMillan, D. L., 371 Day Street, Hamilton.2001  
 ZL1BCZ Drummond, D. T., 5 Griffiths Place, Hamilton.2001  
 ZL1BDA Wright, C. C., 3 Livingstone Street, Milford, Auckland.1309  
 ZL1BDB Trevena, M. R., 1 Talga Court, Conifer Grove, Takanini.1702  
 ZL1BDC Brown, N. G., 8 Tui Grove, Te Haumi, Pahiia., P.O. Box 136, Pahiia.0252  
 ZL1BDD Bowman, M. J., 8 Morice Place, Torbay, Auckland.1310  
 ZL1BDE Visser, P., 4 Kauri Crescent, Matamata.2271  
 ZL1BDF Petherick, G. R., 84 Aroha Avenue, Morningside, Auckland.1003  
 ZL1BDG Mogford, F. L., 74 Buchanan Street, Opoitiki.3472  
 ZL1BDH Laham, G. W., 5a Halberg Crescent, Whakatane.3400  
 ZL1BDI Draper, N., 61 Churchill Road, Murrays Bay, Auckland.1310  
 ZL1BDJ Monk, E. C. (Mrs), Matipo Avenue, Rotorua.3201  
 ZL1BDL Meese, R. R., 66 Westview Crescent, Onerahia, Whangarei.0101  
 ZL1BDM Hansen, A. F., No. 8 Punga Grove Avenue, Whangarei.0101  
 ZL1BDO Mancer, E. S., 10 Delshaw Avenue, Stanmore Bay, Whangaparaoa.1463  
 ZL1BDP James, J. R., 53 Hatepe Avenue, Taupo.3300  
 ZL1BDQ Wilkins, S. J., Baddeleys Beach, R.D. 2, Matakana, Warkworth.1492  
 ZL1BDR Griffin, E. F., 1 Charlton Avenue, Mt. Eden, Auckland.1003  
 ZL1BDS McKay, G. N., 9 Jonathan Way, Paparangi, Wellington.6004  
 ZL1BDT Ngakuru, N. H., 31 Wihongi Street, Kaikohe.0400  
 ZL1BDU Catton, R., 39 Andrew Road, Howick.1705  
 ZL1BDV Schischka, G., 4 Gilliam Street, New Lynn, Auckland.1207  
 ZL1BDY Seakins, J. M., 99 Exmouth Road, Northcote, Auckland.1309  
 ZL1BDZ Hoban, C. J. (Mrs), No. 4 R.D., Te Awamutu.2400  
 ZL1BEB Williams, P., Kaihere, R.D.1, Ngatea.2852  
 ZL1BEC Cobham, W. T. R., 24 Pukeko Street, Rotorua.3201  
 ZL1BED Patchett, P. B., 35a Roberts Road, Te Atatu South, Auckland.1208  
 ZL1BEF Fitzgerald, B. E., 39 Mount View Road, Melville, Hamilton.2001  
 ZL1BEG McFarlane, G. M., 3 Tui Place, Tokoroa.2392  
 ZL1BEH Linscott, D. A., 11 Puia Street, Taupo.3300  
 ZL1BEI Ellis, M. R., 22 Oldwood Street, Christchurch.8005  
 ZL1BEJ McCabe, B. R., 130 Takahe Road, Titirangi, Auckland.1207  
 ZL1BEK McTurk, P. T. R., 40 Silverton Road, Waihi.2991  
 ZL1BEL Lees, B., 172 Whitford Road, Howick.1705



# **ZL1BEM**

<b>ZL1BEM</b>	Lockwood, D. C., 7 Adams Street, Waihi.2991	<b>ZL1BHT</b>	Newcombe, B. R., Wallace Road, Te Puna, R.D. 2, Tauranga.3021
<b>ZL1BEN</b>	Doggett, G. A., 3/13 Hooker Place, Papatoetoe, Auckland.1701	<b>ZL1BHU</b>	Watson, A. G., 204a Valley Road, Mt. Maunganui.3002
<b>ZL1BEP</b>	Sharpe, N. R., Twinpines Orchard, Waimate North, R.D. 1, Ohaeawai.0454	<b>ZL1BHV</b>	Davis, W. H., 55 Pihanga Street, Taupo.3300
<b>ZL1BEQ</b>	McGee, S. R., Lewis Road, Otakiri, R.D.3, Whakatane.3400	<b>ZL1BHW</b>	Parkinson, M. A., 24 Roosevelt Road, Rotorua.3201
<b>ZL1BER</b>	Wood, G. J., Athenree, R.D. 1, Katikati.3051	<b>ZL1BHX</b>	Travaglia, A. S., Engineer's Residence, Kaitaia Hospital.0500
<b>ZL1BES</b>	Barnes, J. C., Kaipara Flat Road, Warkworth, Auckland.1492	<b>ZL1BHY</b>	Young, C. R., 1 Aotearoa Terrace, Murrays Bay, Auckland.1310
<b>ZL1BET</b>	Copeman, N. J. P., Trig Road, R.D. 1, Helensville.1451	<b>ZL1BIB</b>	Hookham, C. R., 3/405 Beach Road, Mairangi Bay, Auckland.1310
<b>ZL1BEU</b>	Jamieson, L. I. D., Ngunguru, R.D. 3, Whangarei.0250	<b>ZL1BIC</b>	Byrmand, J. L., 5 Te Anau Place, Tikipunga, Whangarei.0101
<b>ZL1BEV</b>	Derecourt, M. J., 2 Stonehurst Avenue, Waiuku.1852	<b>ZL1BID</b>	Davis, E. T., 1/31 Blease Street, New Lynn, Auckland.1207
<b>ZL1BEW</b>	Dodds, P. B., 42 Waimarie Road, Whenuapai Village, Kumeu.1454	<b>ZL1BIE</b>	Belcher, G. M., 52b Consols Street, Waihi.2991
<b>ZL1BEX</b>	Wilson, A. L. G., 16 Rahiri Road, Mt. Eden, Auckland.1004	<b>ZL1BIF</b>	Guthrie, S. J., 35 North Street, Ashhurst.5451
<b>ZL1BEY</b>	Smart, J. B., 157 Rodney Street, Wellsford.1493	<b>ZL1BIH</b>	Hearn, W. A., R.D. 2, Warkworth.1492
<b>ZL1BEZ</b>	Miller, P. G., C/- WO and SNCO Mess, RNZAF Base, Shelly Bay, Private Bag, Wellington.6020	<b>ZL1BIJ</b>	Shakes, L. C., 131 River Road, Kawerau.3452
<b>ZL1BFA</b>	Butcher, P. D., 6 Kamah Place, Rotorua.3201	<b>ZL1BIJ</b>	Williams, L., 8 Anna Watson Road, Bucklands Beach.1704
<b>ZL1BFB</b>	Walker, I. D., 51 Caronia Crescent, Mt. Roskill, Auckland.1004	<b>ZL1BIK</b>	McKechie, K. H., 13 Cron Avenue, Te Atatu South., P.O.Box 69 051, Glendene, Auckland.1230
<b>ZL1BFC</b>	Hellyar, J. S., 25 Queens Parade, Devonport, Auckland.1309	<b>ZL1BIL</b>	Edwards, M. B., Main Road, Walton.2273
<b>ZL1BFD</b>	Potts, G. C., Alfriston Road, R.D. 1, Manurewa.1732	<b>ZL1BIN</b>	Nutting, L. G. W. D., 49 Duncan Street, Raelihi.5172
<b>ZL1BFE</b>	Harland, J. C., 9 Papanui Street, Tokoroa.2392	<b>ZL1BIO</b>	Shepherd, I. H., 15 McKay Crescent, Dargaville.0300
<b>ZL1BFF</b>	McGrath, R., 4 Bank Street, Birkenhead, Auckland.1310	<b>ZL1BIP</b>	Bingham, L. H., Walker Road East, R.D. 2, Katikati.3051
<b>ZL1BFG</b>	Munro, J. E., 24 Main Road North, Tairua, Thames.2853	<b>ZL1BIQ</b>	Puffett, K. H., 51 McKean Avenue, Manurewa.1702
<b>ZL1BFH</b>	Perkins, I. M., 74 Tawari Street, Matamata.2271	<b>ZL1BIR</b>	Rist, T. A., 22 Shortt Avenue, Mangere Bridge, Auckland.1701
<b>ZL1BFJ</b>	Adams, L. B., 3 Sim Street, Matamata.2271	<b>ZL1BIS</b>	Westaway, K. F., 59 Kainui Road, Hataitai, Wellington.6003
<b>ZL1BFK</b>	Frakes, M. C., 29 Riverside Drive, Waiuku.1852	<b>ZL1BIT</b>	Davy, N. C., Chatham Avenue, Albany, R.D. 3, Auckland.1331
<b>ZL1BFL</b>	Spayde, S. L., 57 Ngataranga Road, Devonport, Auckland.1309	<b>ZL1BIU</b>	Tan, Y. K., 18 Wilmington Place, Forrest Hill, Auckland.1309
<b>ZL1BFM</b>	Andrews, T. I., 29 Lily Street, Raglan.2051	<b>ZL1BIV</b>	Garrett, J. W., 45 Karaka Road, Beachlands, Auckland.1705
<b>ZL1BFN</b>	Mathew, J. C. H., P.O.Box 234, Blenheim.7300	<b>ZL1BIW</b>	Ward, L., 60 Ranfurly Street, Dargaville.0300
<b>ZL1BFQ</b>	Daniel, A. G., 83a Elliot Street, New Plymouth.4601	<b>ZL1BIX</b>	Soppet, D. A., 4a Ruarangi Road, Mt. Albert, Auckland.1003
<b>ZL1BFR</b>	Beere, J. E. L., Main Road, R.D. 1, Howick.1731	<b>ZL1BIZ</b>	Henry, E. J. (Mrs), 27 McRae Road, Mt. Wellington, Auckland.1106
<b>ZL1BFS</b>	Birt, K. D., 3 Cheeseman Place, Meadowbank, Auckland.1105	<b>ZL1BJA</b>	Hendriksen, R. H. E., No. 1 R.D., Wellsford.1493
<b>ZL1BFV</b>	Huckin, G. S., 56 Don Buck Road, Massey, Auckland.1208	<b>ZL1BJB</b>	Beale, D. J., Bremner Road, Drury, Auckland.1752
<b>ZL1BFX</b>	Broadley, C. L., 32 Waitohi Creek Road, Thames.2801	<b>ZL1BJC</b>	Orchard, L. J. (Mrs), 1 The Heads, Whakatane.3400
<b>ZL1BFY</b>	Donaldson, D. L., 80 Woolfield Road, Papatoetoe.1701	<b>ZL1BJE</b>	Appleby, W. M., 8 Brightside Road, Whangaparaoa, Hibiscus Coast.1463
<b>ZL1BFZ</b>	Robertson, D. J., 29c Youngs Road, Papakura.1703	<b>ZL1BJF</b>	Henderson, A. R., 322 St. Heliers Bay Road, St. Heliers, Auckland.1105
<b>ZL1BGA</b>	Marlin, G. K., 26 Dundee Place, Blockhouse Bay, Auckland.1207	<b>ZL1BJG</b>	Gray, M. F., 31 Karewa Parade, Papamoa, Bay Of Plenty.3070
<b>ZL1BGB</b>	Glover, D. R., 5 Wyman Place, Pakuranga.1706	<b>ZL1BJH</b>	Jekel, H. B., 8 Oregon Place, Papakura.1703
<b>ZL1BGC</b>	Trigg, D. M., Peria, R.D. 3, Kaitaia.0500	<b>ZL1BJI</b>	Goodsir, J. W., 163 Glengarry Road, Glen Eden, Auckland.1207
<b>ZL1BGD</b>	Marr, L. R., 22 Swan Crescent, Pakuranga, Auckland.1706	<b>ZL1BJJ</b>	Morris, T. J., Paparoa Road, Te Puna, R.D. 2, Tauranga.3021
<b>ZL1BGE</b>	Whitwell, G. R., 3 Grace Street, Matata., P.O.Box 46, Matata.3453	<b>ZL1BJK</b>	Turner, R. W., Te Kauri Village, R.D. 1, Katikati.3051
<b>ZL1BGH</b>	George, L. H., 65 King Street, Opoitiki.3472	<b>ZL1BJL</b>	Williams, C., R.D. 2, Cambridge.2351
<b>ZL1BGI</b>	McCarthy, A. C., 10 Karamu Crescent, Wainuiomata.6305	<b>ZL1BJM</b>	Cain, M. C., c/- S. Punter, 35 Halver Road, Manurewa.1702
<b>ZL1BGJ</b>	Morrison, C. W., 3 Duncansby Road, Whangaparaoa.1463	<b>ZL1BJN</b>	Schlef, W. K., 13 Roslyn Road, Mt Wellington, Auckland.1106
<b>ZL1BGK</b>	Bugden, K. G., Nikau Gardens, State Highway 2, Thornton, Whakatane.3400	<b>ZL1BJO</b>	Wright, W. O., 12 Syme Crescent, Kawerau, Bay of Plenty.3452
<b>ZL1BGL</b>	Zammit, P., 45 Logan Street, Dargaville.0300	<b>ZL1BJP</b>	Parkinson, D. J., 36 Western Road, Otumoetai, Tauranga.3001
<b>ZL1BGN</b>	Rounthwaite, T., 18 Duncan Avenue, Henderson, Auckland.1208	<b>ZL1BJQ</b>	Wardley, D. E., 45c Ambler Avenue, Glen Eden, Auckland.1207
<b>ZL1BGP</b>	Paltridge, J. S., 3 Tutere Road, Papatoetoe.1701	<b>ZL1BJR</b>	Daley, J. A., c/- 11 The Esplanade, Eastern Beach, Auckland.1704
<b>ZL1BGQ</b>	McChesney, G. R., 5/1 Oakland Avenue, Papatoetoe.1701	<b>ZL1BJT</b>	Dougan, J. K., 35 Tunis Road, Panmure, Auckland.1106
<b>ZL1BGR</b>	Maddern, D. E., 463 Turere Lane, Te Awamutu.2400	<b>ZL1BJU</b>	Thompson, N. K., 20 Waipua Place, Greenhithe, R.D. 1, Auckland., P.O. 33-798, Takapuna, Auckland.1332
<b>ZL1BGS</b>	Waterhouse, F. L. K., Flat 5, Block B, Pensioner Flats, Maitland Street, Tauranga.3001	<b>ZL1BJV</b>	Turvey, W. W., 20 Nutsey Avenue, Northcote, Auckland.1309
<b>ZL1BGT</b>	Reid, L. R., 17 Luxor Place, Rotorua.3201	<b>ZL1BJW</b>	Hallett, W. R., 17 Papanui Pines, Kennedy Park Drive, Papanui Beach.2850
<b>ZL1BGU</b>	Felt, B., 103 Glamorgan Drive, Torbay.1330	<b>ZL1BJX</b>	Clark, L. D. G., 12 Richards Avenue, Papatoetoe.1701
<b>ZL1BGV</b>	Roberts, M. J., 11 Grey Street, Hamilton.2001	<b>ZL1BJY</b>	Garratt, P. R., 294 Massey Road, Mangere East, Auckland.1701
<b>ZL1BGW</b>	Maude, R. de M., 68 Levers Road, Otumoetai, Tauranga.3001	<b>ZL1BJZ</b>	Farmer, J. B. S., 88 Ngapuhi Road, Remuera, Auckland.1105
<b>ZL1BGY</b>	Owen, M. J., 157a Long Drive, St Heliers, Auckland.1105	<b>ZL1BKA</b>	McIntosh, G. S., 4 Alexander Avenue, Maraetai, Auckland.1705
<b>ZL1BGZ</b>	Forsyth, A. B., 37 College Road, Edgecumbe.3451	<b>ZL1BKB</b>	Williams, C., 13 Wren Street, Woodlands, Waikanae.6154
<b>ZL1BHB</b>	Riley, S. G., 18 Charles Road, Rotorua.3201	<b>ZL1BKC</b>	De Langen, H., 9 Cambral Road, Raglan.2051
<b>ZL1BHC</b>	Walker, A. N., Crane Road, R.D.1, Kamo.0121	<b>ZL1BKD</b>	Busch, C. T., cnr Chapel & Thomas Roads, Manukau City.1701
<b>ZL1BHD</b>	Wright, S. W., 16 Puckey Avenue, Kaitaia.0500	<b>ZL1BKF</b>	Marshall, O. H., 16 Dunlop Drive, Papanui Beach.2850
<b>ZL1BHE</b>	Mathews, J. F., 26 Oceanview Road, Northcote, Auckland.1309	<b>ZL1BKG</b>	Wilson, T. G., 53 Tirimoana Road, Te Atatu, Auckland.1208
<b>ZL1BHF</b>	Sloan, W. J., 20 Acom Street, Royal Oak, Auckland.1003	<b>ZL1BKH</b>	Hogg, E. R., 33 Simmons Crescent, Rotorua.3201
<b>ZL1BHG</b>	Robinson, I. A. S., 8 Bledisloe Court, Pukekohe.1800		
<b>ZL1BHH</b>	Ferguson, M. E., 5b Terrace Avenue, Mt. Maunganui.3002		
<b>ZL1BHI</b>	Dingle, W. M., 363b Maungatapu Road, Tauranga.3001		
<b>ZL1BHJ</b>	Dekker, J., 3 Irene Crescent, Hamilton.2001		
<b>ZL1BHL</b>	Taylor, G. L., 46 Bruce Avenue, Hamilton.2001		
<b>ZL1BHM</b>	Te Puke, C., Foster Road, R.D. 10, Frankton.2021		
<b>ZL1BHN</b>	Oliver, K. W., P.O. Box 74-293, Market Road, Auckland.1130		
<b>ZL1BHO</b>	Vickerstaff, A. A., Cottle Road, Taupaki, R.D. 2, Henderson, Auckland.1231		
<b>ZL1BHQ</b>	Powell, J. F., 47 Becroft Drive, Forrest Hill, Auckland.1310		
<b>ZL1BHR</b>	Kovac, J. D., 13 Wesley Street, Dunedin.9001		



ZL1BKJ	Salmond, A. R., 2/9 Tomintoul Place, Howick.1705	ZL1BMX	Greenaway, W. P., 10 Searanke Place, Hamilton.2001
ZL1BKK	Sandlant, P. W., 17 Mayfair Crescent, Mairangi Bay, Auckland.1310	ZL1BMY	Clegg, R. J., 47 Churchill Road, Murays Bay, Auckland.1310
ZL1BKL	Edwards, K., 49 Ocean Road, Surfdale, Waiheke Island.1470	ZL1BMZ	Padgett, A. B., 22 Finnerty Avenue, Howick, Auckland.1705
ZL1BKM	Lister, M. W. (Mrs), Jeffs Road, East Tamaki, R.D., P.O. Box 23-508, Papatoetoe East.1730	ZL1BNA	Marr, W. R. G., 27 Houhere Place, Tikipunga, Whangarei.0101
ZL1BKN	Engel, F. W., 33 Fairmount Road, Glen Eden, Auckland.1207	ZL1BNB	Newman, M. D., 30 Nikau Street, Wanganui.5001
ZL1BKP	Codlin, J. K., 71 Great South Road, Manurewa.1702	ZL1BNC	Murray, L. G., 9 Maungawhare Place, Tauranga.3001
ZL1BKQ	Searle, K. A., 58 Gordon Street, Gisborne.3801	ZL1BNE	Williamson, R., 21 Lyttelton Avenue, Forrest Hill, Auckland.1310
ZL1BKR	Adams, C. W., 104b John Downs Drive, Browns Bay, Auckland.1310	ZL1BNF	James, A. H., Pyes Pa Road, R.D. 3, Tauranga.3021
ZL1BKS	Hill, R. S., 14 Sunline Place, Ngongotaha.3202	ZL1BNG	Orton, N. J., 11 Glamis Avenue, Hamilton.2001
ZL1BKT	Wippen, J., Eastern Motel, 153 Mt Wellington Highway, Mt Wellington.1106	ZL1BNH	Murphy, P. M., Oaklands Road, R.D. 1, Papakura.1733
ZL1BKU	Dowding, P., 175 Beach Street, Waikouaiti.9162	ZL1BNI	Brant, P. A., 41 Regent Street, Papatoetoe.1701
ZL1BKV	Davidson, B. J., 130a Monarch Avenue, Northcote, Auckland.1309	ZL1BNJ	Pedersen, W. J., Union Street, Opatiki.3472
ZL1BKW	Coombs, M. J., 13 Crispian Place, Weymouth, Auckland.1701	ZL1BNK	Painting, F. J., 26 Greenacres Drive, Kawa Kawa.0271
ZL1BKX	Lees, G. D., Coulter Road, R.D. 1, Henderson, Auckland.1208	ZL1BNL	Schrackel, H. J. E., 8 McPherson Street, Remuera, Auckland.1105
ZL1BKY	Rodgers, A. E., P.O. Box 19006, Avondale, Auckland.1230	ZL1BNM	Larcombe, D. C., 21 Cornelian Crescent, Bucklands Beach.1704
ZL1BLA	Rankin, A. N., 85 Hastings Road, Mairangi Bay, Auckland.1310	ZL1BNN	Brill, A. J., 83 Stott Avenue, Birkdale, Auckland.1310
ZL1BLB	Henry, R. I., 27 McRae Road, Mt. Wellington, Auckland.1106	ZL1BNO	Twinn, M. H., 2/4 Burt Road, Mt Wellington, Auckland.1106
ZL1BLC	Fox, R. D., 36 Galaxy Drive, Mairangi Bay, Auckland.1310	ZL1BNP	Were, B. J., 28 Lachlan Drive, Dinsdale, Hamilton.2001
ZL1BLD	Churcher, B. R., 80 Hapburn Road, Glendene, Auckland.1208	ZL1BNQ	Gamble, A. A. R., 28 Barnhill Drive, Papakura.1703
ZL1BLE	Morris, T. N. J., 47 Boundary Road, Blockhouse Bay, Auckland.1207	ZL1BNR	Sando, B. C., 1 Rahopara Street, Castor Bay, Auckland.1310
ZL1BLE	Ward, M. T., Silverhill Road, Te Hana.1490	ZL1BNS	Rowe, R. G., 32 Manawa Road, Remuera, Auckland.1105
ZL1BLF	Stewart, R. D., Tauhoa, R.D.4, Warkworth.1492	ZL1BNT	Murray, K. G., 5 Te Puia Street, Kamo, Whangarei.0101
ZL1BLG	Poletti, M. J., 69 Willis Road, Papakura.1703	ZL1BNV	Keatinge, R. N., 7/232 Mt Wellington Highway, Mt. Wellington, Auckland.1106
ZL1BLH	Borland, K., 6 Wendywood Lane, Kerikeri.0452	ZL1BNW	Collin, J. V., 65 Paine Street, Judea, Tauranga.3001
ZL1BLI	Wilson, A. B., 17b Mizpah Road, Waiake, Browns Bay, Auckland.1310	ZL1BNX	Toft, T. B., 19b Ngapuhi Road, Remuera, Auckland.1105
ZL1BLJ	Ockleston, E. W., 25 Killarney Street, Takapuna, Auckland.1309	ZL1BNI	Shakes, D. B., 12 Deuxberry Avenue, Northcote, Auckland.1309
ZL1BLK	Hutchins, M. G. D., Peras Road, Waima., c/- Post Office Taheke, Northland.0450	ZL1BNZ	Clough, D. L. W., 5 Kelly Street, Rotorua.3201
ZL1BLL	Elliott, K. L., 349a Beach Road, Browns Bay, Auckland.1310	ZL1BOA	Wigg, J. D., 42 Deep Creek Road, Waikowhai, Auckland.1310
ZL1BLM	Adnitt, E. (Mrs), 10 Laing Place, Olumoetai, Tauranga.3001	ZL1BOB	Morgan, G. B., 26 Otaika Road, Whangarei.0101
ZL1BLN	Salmons, R. J., 2 Townhead Crescent, Tauranga.3001	ZL1BOC	Dennis, G. A., 91 Bridge Street, Opatiki.3472
ZL1BLR	Fish, L. G., 14 Willow Avenue, Hannah's Bay, Rotorua.3201	ZL1BOD	Norrie, B. C., 102 Browns Bay Road, Browns Bay, Auckland.1310
ZL1BLS	Smith, J. B., 45 Thornlow Street, Glendene, Auckland.1207	ZL1BOE	Muir, C. B., 429 Whitford Road, Howick, Auckland.1705
ZL1BLT	Alderwick, G. B., 18 Taiari Crescent, Kelson, Lower Hutt.6301	ZL1BOF	Urquhart, G. A., 9 Four Trees, Howick.1705
ZL1BLU	Anderson, P. A., 6 Gerontius Glade, Torbay, Auckland.1310	ZL1BOG	Donnelly, D. R., 51 Karaka Street, Hamilton.2001
ZL1BLV	Howells, D., 5 Weka Street, Rotorua.3201	ZL1BOH	Dermody, J. M., 11 Totara Park, Matakana Road, Warkworth.1492
ZL1BLW	Cook, L. J., McCarthy Street, Waihou.2972	ZL1BOI	Clinton-Baker, D., Masterton/Martinborough Road, R.D. 4, Masterton.5921
ZL1BLX	Weston, G. A., 179 Rosebank Road, Avondale, Auckland.1207	ZL1BOJ	Wilson, W. J., 22 Larcy Road, Lynmore, Rotorua.3201
ZL1BLY	Goodbrand, J. A., 12 Windsor Avenue, Kamo, Whangarei.0101	ZL1BOK	Rowntree, R. J., 106 New Windsor Road, Avondale, Auckland.1207
ZL1BLZ	Tunncliffe, G. W., 16 Wilding Avenue, Northcote, Auckland.1309	ZL1BOM	Glasgow, M. R., 124 Grange Road, Tauranga.3001
ZL1BMA	Grey, G. R., 35 Kennedy Avenue, Forrest Hill, Auckland.1310	ZL1BON	White, N. C., Station Road, Omokoroa, R.D. 2, Tauranga.3050
ZL1BMB	Moroney, P. R., 12 Pallant Street, Manurewa.1702	ZL1BOP	Emery, N. F., 10 Charmaine Road, Torbay, Auckland.1310
ZL1BMC	Peters, D. E., 80 Pohutukawa Avenue, Ohope.3454	ZL1BOQ	Duffy, D. B. H., 53 Chorley Avenue, Massey, Auckland.1208
ZL1BMD	Shaw, R. K., 49 Sea Vista Drive, Pukerua Bay, Auckland.1106	ZL1BOR	McNamara, L. I. (Mrs), 32 Galileo Street, Ngaruawahia.2171
ZL1BMF	Musgrave, J. L., 2 Vanessa Crescent, Glendowie, Auckland.1105	ZL1BOS	Williams, J. B., Kainui Road, R.D.1, Taupiri.2151
ZL1BMG	Slone, J., Thornton Road, R.D. 1, Cambridge.2351	ZL1BOT	Shuker, C. J., 18 Mason Avenue, Pukekohe.1800
ZL1BMH	Baker, R. F., 2/18 Tui Glen Road, Birkenhead, Auckland.1310	ZL1BOU	Moroz, Z., 5 Kayle Glen, Massey, Auckland.1208
ZL1BMI	Wilson, E. L., 368 Pt Chevalier Road, Pt. Chevalier, Auckland.1002	ZL1BOW	Fendley, G. L., 10 Vanda Place, Greerton, Tauranga.3001
ZL1BMJ	Taylor, A. K., 65 Uxbridge Road, Howick.1705	ZL1BOY	Minchin, H. E., House 48, C/- Post Office, Arapuni.2370
ZL1BMK	Watt, R. G., 15 McKay Crescent, Dargaville.0330	ZL1BOZ	Williams, G. C., North Road, R.D.2, Papakura.1733
ZL1BML	Harris, A. W., 20 Buckland Road, Papatoetoe North, Auckland.1701	ZL1BPA	Corin, T. G., 2 Innisfree Drive, Ellerslie, Auckland.1105
ZL1BMO	Steele, T. M., 88 Redhill Road, Papakura.1703	ZL1BPB	Smith, R. A., 37 Kensington Road, Waihi.2991
ZL1BMP	MacMillan, L. P. A., 15 Godden Crescent, Mission Bay, Auckland.1105	ZL1BPD	Cochrane, C. D., 100 Maniaia Road, Tokoroa.2392
ZL1BMQ	Marr, A. H., 5 McLennan Road, Mt Wellington, Auckland.1106	ZL1BPE	Scutts, L. J., 12 Disraeli Street, Mt Eden, Auckland.1003
ZL1BMT	Haultain, A., 54 Henderson Street, Whakatane.3400	ZL1BPF	Wilcox, H. J., 64 Taylor Road, Mangere Bridge, Manukau City.1701
ZL1BMU	Lowry, M. R., Lowry Road, Bombay, Auckland.1750	ZL1BPG	Jones, N. E., 16 Woodbridge Lane, Milford, Auckland.1309
ZL1BMV	Walker, V. L., Kings Road, Pahiia.0252	ZL1BPH	Fransham, G. E., 29 Tamaki Avenue, Otahuhu, Auckland.1106
		ZL1BPI	Ronke, B. R., Weston Lea Drive, R.D. 2, Hamilton.2021
		ZL1BPJ	Christensen, R. A., 13 Manson Street, Greerton, Tauranga.3001
		ZL1BPK	Junge, A. G., 128 Stanley Avenue, Te Aroha.2971
		ZL1BPM	Browne, L. (Mrs), 23 Te Puia Street, Kamo, Whangarei.0101
		ZL1BPN	Johnson, E. A., 11 Kowhai Park Road, Whangarei.0101
		ZL1BPO	Bach, E. A., 134 Methuen Road, Avondale, Auckland.1207
		ZL1BPP	Wilkins, D. J. H., 12 Valdesse Rise, Browns Bay, Auckland.1310
		ZL1BPQ	Nettlefingham, F. J., Matahui Road, Katikati.3051



# **ZL1BPR**

**ZL1BPR** Dunn, J. R., 264 Glenvar Road, Torbay, Auckland.1310  
**ZL1BPS** Winefield, J. W., 1/35 Cliff Road, St Heliers Bay, Auckland.1105  
**ZL1BPT** Burrage, S. G., 1/58a Maskell Street, St Heliers, Auckland.1105  
**ZL1BPU** Greenman, M., 43a Wheturangi Road, One Tree Hill, Auckland.1105  
**ZL1BPV** McLellan, A. D., 55 Orion Street, Rotorua.3201  
**ZL1BPW** Foreman, Q. S., 4c Seaview Road, Milford, Auckland.1309  
**ZL1BPX** Ansley, B. K., 114 Eskdale Road, Birkenhead, Auckland.1310  
**ZL1BPY** Glasson, P. R., 6 Challenger Street, St. Heliers, Auckland.1105  
**ZL1BPZ** Chatfield, D. J., c/- 300 Queens Drive, Lyall Bay, Wellington.6003  
**ZL1BQA** Doeli, E. D., 11 Sandspit Road, Waiuku.1852  
**ZL1BQB** Howie, P. C., 28 Pohutukawa Road, Beachlands.1705  
**ZL1BQC** Woolf, P. H., 6 Rawhiti Road, Onehunga, Auckland.1106  
**ZL1BQD** Runciman, R. J., 36 Cardiff Road, Pakuranga.1706  
**ZL1BQE** Dix, K., 21 Adel Place, Weymouth, Auckland.1701  
**ZL1BQF** Ryan, L. J., 11 Ngaire Avenue, Epsom, Auckland.1003  
**ZL1BQH** Lawson, T. A., 19 View Road, Glenfield, Auckland.1310  
**ZL1BQI** Milne, A. W., 56 Hamarana Road, R.D.1, Omokoroa, Tauranga.3021  
**ZL1BQJ** Tetenburg, C. R., 42 Pererika Street, Rotorua.3201  
**ZL1BQK** Shackleton, R. V., 8 Rongopai Place, Kaitaia.0500  
**ZL1BQL** Robinson, L. K., 5 Mera Road, Algies Bay, Warkworth.1492  
**ZL1BQM** Walker, B. F., 23 Jaemont Avenue, Te Atatu South, Auckland.1208  
**ZL1BQN** Green, E. N., 499 Olumoetai Road, Tauranga.3001  
**ZL1BQO** Hynds, A. G., 1/21 Arundel Street, Tauranga.3001  
**ZL1BQP** Buckton, M. D., 14 Cockle Bay Road, Howick., P.O.Box 38500, Howick.1731  
**ZL1BQQ** Lowther, B. L., 5 Grey Street, Opatiki.3472  
**ZL1BQS** Sadgrove, P. C., 55 Dignan Street, Point Chevalier, Auckland.1002  
**ZL1BQT** Le Varre-Waters, I. D., 127 Whitney Street, Blockhouse Bay, Auckland.1207  
**ZL1BQV** Rogan, J. K., 54 Lagoon Drive, Panmure, Auckland.1106  
**ZL1BQW** Armstrong, C. M., 5 Jervois Street, Kawerau.3452  
**ZL1BQX** Clark, L. C., 35a Jubilee Crescent, Whakatane.3400  
**ZL1BQY** Clayton, C. J., 19 The Esplanade, Bucklands Beach, Auckland.1704  
**ZL1BQZ** Jarvis, S. A., P.O. Box 2140, 61a James Street, Whakatane.3400  
**ZL1BRB** Rompa, A. P. A., 22 Abbotleigh Avenue, Te Atatu, Auckland.1208  
**ZL1BRC** Ross, S. J., 5 Roxy Terrace, Glendowie, Auckland.1105  
**ZL1BRD** Timms, D. E., Kendall Road, Kerikeri.0452  
**ZL1BRE** Kristensen, P., Keenan Road, R.D.3, Tauranga.3021  
**ZL1BRF** Stormont, B. I., 49 Kildare Avenue, St. Heliers, Auckland.1105  
**ZL1BRG** Macken, S. A. (Mrs), P.O. Box 233, Whangaparaoa.1463  
**ZL1BRJ** Furness, J. B., 2 Pukenui Road, Epsom, Auckland.1003  
**ZL1BRK** Stewart, D. A., 11 Kerry Dell, Howick.1705  
**ZL1BRL** Cornwall, P. J., 10 Park Avenue, Northcote, Auckland.1309  
**ZL1BRM** Ainsworth, C. R., 12a Correlia Road, Takapuna, Auckland.1309  
**ZL1BRN** Norgate, M. H., 49 West View Crescent, Onerahi, Whangarei.0101  
**ZL1BRO** Brenner, B. N., 67 Norwood Road, Bayswater, Auckland.1309  
**ZL1BRP** Price, P. G., 16 Ruahine Street, Tauranga.3001  
**ZL1BRQ** Macken, C. G. C., P.O. Box 233, Whangaparaoa.1463  
**ZL1BRR** Wallace, M. R., 37 Church Street, Onerahi, Whangarei.0101  
**ZL1BRS** Sutherland, S. D., 5a Manuka Street, Otaki.6171  
**ZL1BRT** Benjamin, R. D., 18 Oliver Road, Bucklands Beach, P.O. Box 54-067.1730  
**ZL1BRU** Gilbert, W. S., 25 Bay View Road, Raglan.2051  
**ZL1BRV** Gardiner, P. R., 3 Nyssa Place, Totara Heights, Manurewa.1702  
**ZL1BRW** Boghurst, A. D., 70 Ostend Road, Ostend, Waiheke Island.1470  
**ZL1BRX** Bain, E. M., 58 George Crescent, Buckland, R.D. 2, Pukekohe.1800  
**ZL1BRY** Anderson, H. C., R.D. 5, Otorohanga.2554  
**ZL1BSB** Sutherland, C. E., Ruaroa Road, Post Office, Kaitaia.0500  
**ZL1BSC** Pearce, S. W., 16 Donald Road, Kaitaia.0500  
**ZL1BSD** Millatt, J. C., 5 Mariners Grove, Algies Bay, Warkworth.1492  
**ZL1BSE** Stilt, E. L., Coopers Beach Motor Camp, R.D. 3, Kaitaia.0500  
**ZL1BSF** Talsma, P., 22a MacDonald Road, Glenview, Hamilton.2001  
**ZL1BSG** Pearce, T. K. L., 23 Aurea Avenue, Pakuranga, Auckland.1706

**ZL1BSH** The 807 Contest Group, (Trustees: ZL1GO, ZL1SC), P.O. Box 39-374, Auckland.1230  
**ZL1BSI** Hetherington, J. K., 36 Norton Road, Cherrywood, Tauranga.3001  
**ZL1BSJ** Stewart, R. C., 20 Lilian Place, Pakuranga.1706  
**ZL1BSM** Te Aroha and District R.C. Branch 77 NZART (Inc.), see Branch Directory  
**ZL1BSN** Wallingford, N., 55 Watling Street, Tauranga.3001  
**ZL1BSO** Harvey-Brain, V. C., 7 Hamilton Road, Surfdale, Waiheke Island.1470  
**ZL1BSP** Gallert, W. H., 51 Pohutukawa Avenue, Whenuapai.1450  
**ZL1BSR** Smith, D. J., 67 Harbour View Road, Omokoroa.3050  
**ZL1BSS** Hawker, A. R., 94 Harrington Road, Henderson, Auckland.1208  
**ZL1BST** Stirling, B. T., 91 Kimihia Road, Huntly.2191  
**ZL1BSU** Coles, H. G., 3/6 John Street, Mangere., P.O.Box 86-025, Mangere East.1730  
**ZL1BSV** Mace, R. J., 9 Grampian Street, Tokoroa.2392  
**ZL1BSW** Deng, A. G., 65 Orams Road, Manurewa.1702  
**ZL1BSX** Richmond, M. N., 46 Kings Road, Pahiia, Bay of Islands.0252  
**ZL1BSY** Gerritsen, J., Old Te Aroha Road, Matamata.2271  
**ZL1BSZ** Cummins, J. E. (Mrs), 682 Pakura Street, Te Awamutu.2400  
**ZL1BTA** Rodgers, S. J., 19 Craddock Street, Avondale, Auckland.1207  
**ZL1BTB** Pinfold, M. A. (Dr), 28 McKenzie Road, Rotorua.3201  
**ZL1BTC** Churchouse, M. J., 48 Selwyn Road, Howick.1705  
**ZL1BTD** Smith, T. S., 122a Birkdale Road, Birkdale, Auckland.1310  
**ZL1BTF** Rogers, L. A., Spains Road, Awanui.0552  
**ZL1BTG** Tomlinson, G. H. J., 372 Mahurangi East Road, Snells Beach, Warkworth.1490  
**ZL1BTH** Lundy, C. S., 19 Challinor Street, Hamilton.2001  
**ZL1BTI** Moroney, R. J., Flanagan Road, Drury.1752  
**ZL1BTJ** Blythen, L. E., 2/63 Oakdale Road, Hillsborough, Auckland.1004  
**ZL1BTK** Parkinson, R. J., 70 Vandeleur Avenue, Birkdale, Auckland.1310  
**ZL1BTL** Rowe, N. G., 33 Hoteo Avenue, Hunters Corner, Papatoetoe.1701  
**ZL1BTM** Stratford, N. E., Main Road, Cable Bay, R.D. 3, Kaitaia.0500  
**ZL1BTP** Tubby, E. L. (Mrs), 470 Beach Road, Papamoa.3070  
**ZL1BTQ** Allen, R., RNZN Field Station, Great Barrier Island.1470  
**ZL1BTR** Jeffares, R. J., 52 Amy Street, Ellerslie, Auckland.1105  
**ZL1BTS** Trebes, C. E., 11 Lamont Street, Hamilton.2001  
**ZL1BTU** Orange, L. R., 56 Holyoake Place, Birkenhead, Auckland.1310  
**ZL1BTV** Cheyne, G. A., c/- 87 Grange Road, Mt Eden, Auckland.1003  
**ZL1BTW** Halliday, H., 20 Hillcrest Road, Orewa.1461  
**ZL1BTX** van der Meulen, F. P., 20 Walter Street, Takapuna, Auckland.1309  
**ZL1BTY** Maindonald, D. C., 5 Peter Terrace, Castor Bay, Auckland.1309  
**ZL1BTZ** Dawe, L. J., 6 Linwood Avenue, Forrest Hill, Auckland.1310  
**ZL1BUB** Crymble, C. F., 19 Scotts Road, Manurewa.1702  
**ZL1BUC** Trigg, C. N., Peria, R.D. 3, Kaitaia.0500  
**ZL1BUD** Morris, G. A., Weston-Lea Drive, R.D. 2, Hamilton.2021  
**ZL1BUE** Dawson, J. W., Schultz Road, R.D.2, Waipua.0254  
**ZL1BUF** Mullions, R. D., 23a Fairview Road, Rotorua.3201  
**ZL1BUG** Pearce, R. D. D., 22 Carina Crescent, Torbay, Auckland.1310  
**ZL1BUH** Cox-Smith, G. W., 7 Vectis Road, Hillcrest, Hamilton.2001  
**ZL1BUI** Willis, R. P., 32c Puckey Avenue, Kaitaia.0500  
**ZL1BUJ** Mackey, C. J., Richard Road, Kauri, Whangarei.0101  
**ZL1BUK** Duske, J. S., 11 Pendene Place, Forrest Hill, Auckland.1310  
**ZL1BUL** Holmes, N. E., 5 Saddleback Rise, Murrays Bay, Auckland.1310  
**ZL1BUP** Johnson, F. T. J., 49 Youngs Road, Papakura.1703  
**ZL1BUR** Linton, S. J., 66 Bridgman Road, Te Awamutu.2400  
**ZL1BUS** O'Brien, T. N., Wisemans Road, R.D. Waitoa.2973  
**ZL1BUT** Eggleton, P. W., 2/143a Manuka Road, Glenfield Heights, Auckland.1310  
**ZL1BUU** Levin, P. C., Tahuna Road, Ohinewai, Hamilton.2192  
**ZL1BUV** Lewis, F. T., 222 Glamorgan Drive, Torbay, Auckland.1310  
**ZL1BUX** Atchinson, I. M., 783 Great South Road, Papatoetoe, Auckland.1105  
**ZL1BUY** Finn, W. J., McLeods Bay, R.D. 4, Whangarei.0121  
**ZL1BUZ** Pont, A., 23 Mount View Drive, Rotorua.3201  
**ZL1BVB** Yuen, S. T. (Mike), 7 Dallas Place, New Windsor Heights, Auckland.1207  
**ZL1BVC** McNab, P. O., 27 Choise Avenue, Glandene, Auckland.1208  
**ZL1BVD** Skinner, D. E., R.D. 1, Raglan.2051  
**ZL1BVE** Lelieveld, J. J., 58 Montgomery Crescent, Hamilton.2001



- ZL1BVF Keatinge, L. M. L. (Mrs), 8 Barnard Street, Matamata.2271  
 ZL1BVH Bishop, R. B., 11 Whiteacres Drive, Pakuranga, Auckland.1706  
 ZL1BVI Bolland, P. A., 50 Sunrise Avenue, Mairangi Bay, Auckland.1310  
 ZL1BVJ Jones, P., 41 Caronia Crescent, Mt Roskill, Auckland.1004  
 ZL1BVK Learmond, A. H., 14 Takapu Street, Henderson, Auckland.1208  
 ZL1BVL Morris, W. J.(Dr), 6 Ruha Street, Palmerston North.5301  
 ZL1BVM Sharman, R., Rowerawe Road East, R.D.2, Ngatea.2852  
 ZL1BVN van der Hulst, P. W., 212 Ohaupo Road, Hamilton.2001  
 ZL1BVO Messenger, G. E., 104 Elizabeth Street, Taupo.3300  
 ZL1BVP Chang, J. Y. S., 3 Madeleine Avenue, Glendowie, Auckland.1105  
 ZL1BVQ Edmonds, J. W., Ferry Road, Kerepehi.2950  
 ZL1BVR Parkinson, W. H. J., 51 Jacaranda Avenue, Birkdale, Auckland.1310  
 ZL1BVS Marquart, S. A. R., 29 Clyside Avenue, Bucklands Beach.1704  
 ZL1BVT Slegh, J. P., 2/69a Symonds Street, Royal Oak, Auckland.1106  
 ZL1BVU Erceg, P. J., 152 Morningside Road, Whangarei.0101  
 ZL1BVV Boylan, R. P., 59 Coronation Road, Glenfield, Auckland.1310  
 ZL1BVW Souchkoff, A. A., 28 Pentland Avenue, Mt. Eden, Auckland.1003  
 ZL1BVZ Dowling, B. N., 47 Gray Avenue, Mangera East, Auckland.1701  
 ZL1BWA Insley, M. E., c/- Giddens, 24 Rawene Avenue, Westmere, Auckland.1002  
 ZL1BWB Humphrey, G. A., 115 17th Avenue, Tauranga.3001  
 ZL1BWC Comber, J. P., 21 Castor Place, Rotorua.3201  
 ZL1BWD Dobbs, L., 2/31 Voltair Court, Howick, Auckland.1705  
 ZL1BWE Hennevel, L. R., 21 Butler Place, Kamo, Whangarei.0101  
 ZL1BWH Sheldon, B. R., 16 Carter Street, Mt. Maunganui.3002  
 ZL1BWI Rose, A., 34 Lyndhurst Road, Te Atatu South, Auckland.1208  
 ZL1BWJ Wham, C. J. L., 2 Bedford Crescent, Matamata.2271  
 ZL1BWK McConnochie, B. D., 8 Farmer Street, Te Aroha.2971  
 ZL1BWL Shaw, D. A., 15 Brown Street, Ponsonby, Auckland.1002  
 ZL1BWM Traves, D. J., Beach Road, Ahipara, P.O. Box 50.0551  
 ZL1BWO Barnaby, N. S., 42 Mains Avenue, Whangarei.0101  
 ZL1BWP Horn, B. R., 5 Monique Place, Hamilton.2001  
 ZL1BWQ Le Cornu, E. M. O., Kiriwhiri, R.D. 1, Morrinsville.2251  
 ZL1BWS Harris, J. M., 21 Tapper Crescent, Tikipunga, Whangarei.0101  
 ZL1BWT MacLean, A., 4 Quibray Place, Howick.1705  
 ZL1BWV Thompson, G. M., Otahi Road, Maungatapu.0250  
 ZL1BWVW Georgeff, N. P., 116 Springfield Road, Rotorua.3201  
 ZL1BWX Storey, G. K., 104 Eversleigh Road, Takapuna, Auckland.1309  
 ZL1BWY Collins, S. J., Beach Road, Kohukohu.0471  
 ZL1BWZ Harold, E. A. E., 32 Ellis Avenue, Mt. Roskill, Auckland.1004  
 ZL1BXA Buxton, H. C., 32 Castleton Street, Birkdale, Auckland.1310  
 ZL1BXB Grut, M. A., 97 Tiri Road, Whangaparaoa.1463  
 ZL1BXD Vencatachellum, V., 4/62 Kitchener Road, Milford, Auckland.1309  
 ZL1BXE O'Neil, E., 12/194a Hurstmere Road, Takapuna, Auckland.1309  
 ZL1BXF Young, M. B., 44 Toroa Street, Torbay, Auckland.1310  
 ZL1BXH Croucher, P. J., 73 Park Road, Te Awamutu.2400  
 ZL1BXI Flower, C. B. G., 3/41 Rangitira Road, Birkdale, Auckland.1310  
 ZL1BXJ Eman, J. J., 6 Shakespeare Road, Milford, Auckland.1309  
 ZL1BXK Herrold, N. G., Hall Road, R.D. 1, Waiuku.1852  
 ZL1BXM Miers, E. R., Lindquist Road, Ararua, R.D. 2, Matakoho.0353  
 ZL1BXN Cullen, O. D., R.D. 2 Maungaturoto, Northland.0272  
 ZL1BXO Grut, C. St. C., 97 Tiri Road, Whangaparaoa.1463  
 ZL1BXP Walsh, A. R., Kereone, R.D. 1, Morrinsville.2251  
 ZL1BXQ Walton-Tubb, A. I. P., 120 Maskell Street, St Heliers, Auckland.1105  
 ZL1BXR Robb, R. (Mrs), 8 Leonard Place, Greerton, Tauranga.3001  
 ZL1BXS Miller, P. G., R.D. 1, Russell.0293  
 ZL1BXT James, C. H., 16 May Street, Hamilton.2001  
 ZL1BXU Davis, L. H., 8 Muriwai Street, Taupo.3300  
 ZL1BXV Todd, A. J., 46a Hutton Street, Otahuhu, Auckland.1106  
 ZL1BXW Modderman, E. J., 13 Ingram Street, Papakura.1703  
 ZL1BXX Hawkins, C. R., 56 Pine Avenue, Hamilton.2001  
 ZL1BXY Makin, W. H., c/- J. & C. Hook, Waimamaku.0474  
 ZL1BXZ Winsborough, L. F., 20 Williams Street, Cambridge.2351  
 ZL1BYA Marlinson, L. R., 2/50 Howard Hunter Avenue, St Johns, Auckland.1106  
 ZL1BYB Stewart, L. F., 54 Forest Lake Road, Hamilton.2001  
 ZL1BYC Cornish, G. M.(Dr), Ponga Road, R.D. 4, Papakura.1733  
 ZL1BYD Emmett, G. J., 119 Udy's Road, Pakuranga, Auckland.1706  
 ZL1BYE Thomas, R. S., 54 Lynmore Avenue, Rotorua.3201  
 ZL1BYF Werder, K. J., Springdale Road, Waitoa.2973  
 ZL1BYG Morey, E. J., 301 Fairview Road, Te Awamutu.2400  
 ZL1BYH Farnborough, R., R.D.9, Rotokauri, Frankton.2031  
 ZL1BYI Ramsay, I. S., 8 Locke Avenue, Hillsborough, Auckland.1004  
 ZL1BYK Howell, H. G. M., 13 Bain Place, Bucklands Beach, Auckland.1704  
 ZL1BYL Alloway, F. R., Main Road, Tutanui.2250  
 ZL1BYM Armstrong, P. G., Room 6, Block 6, Student Village, Waikato University.2001  
 ZL1BYN Thompson, N. M., 75 Walworth Avenue, Pakuranga, Auckland.1706  
 ZL1BYO Williamson, B. M., 158 Elizabeth Drive, Tokoroa.2392  
 ZL1BYQ Ashmore, R. W., c/- R. A. Eagle, Esdailes Road, R.D.6, Tauranga.3021  
 ZL1BYR Whyte, W. S., 4 Regent Street, Tauranga.3001  
 ZL1BYS Harris, R. H., 17 Navarre Road, Glendowie, Auckland.1105  
 ZL1BYU McAra, R. W., 241 Northbridge, Akoranga Drive, Northcote, Auckland.1309  
 ZL1BYV Greaves, I. G., 28 Acacia Bay Road, Taupo.3300  
 ZL1BYW Allan, W. W., Hairini, R.D. 5, Te Awamutu.2400  
 ZL1BYX Coatsworth, W. K., 7 Chartwell Crescent, Hamilton.2001  
 ZL1BYZ Cartwright, G. T., 6 Haycock Avenue, Mt Roskill, Auckland.1004  
 ZL1BZA Shaw, J. N., C/- Post Office, Paerata.1450  
 ZL1BZB Barnett, Z., "Pokuru", R.D. 5, Te Awamutu.2400  
 ZL1BZC Cox, G. W., 141 Garnet Road, Westmere, Auckland.1002  
 ZL1BZD Ash, D. E., 69 Tanekaha Road, Titirangi, Auckland.1207  
 ZL1BZE Bishop, N. L., 11 Whiteacres Drive, Pakuranga.1706  
 ZL1BZF Cordes, R. K., 177 Rathgar Road, Henderson, Auckland.1208  
 ZL1BZH Nesfield, J. C., 4/10 Akehurst Avenue, New Lynn, Auckland.1207  
 ZL1BZI Van der Zee, T. P., 46 Makoriri Beach Road, Gisborne.3801  
 ZL1BZJ Newman, D. A., 112 The Avenue, Lynfield, Auckland.1004  
 ZL1BZK Lodge-Osborn, D., Turanga Road, R.D. 1, Henderson, Auckland.1208  
 ZL1BZL Greenhill, D. R., 5 Hogan Street, Pukekohe.1800  
 ZL1BZM Ellis, D. G. R., 7 Kaiwaka Road, Onerahi, Whangarei.0101  
 ZL1BZO Cundy, C. R., Browns Bay Convalescent Home, 3-7 Woodlands Crescent, Auckland.1310  
 ZL1BZP Potts, D. M., 200 St Heliers Bay Road, St Heliers, Auckland.1105  
 ZL1BZQ Kennard, T. J., 536a Tararu Road, Thames.2801  
 ZL1BZS Galland, J. M. J. E., c/- 109 Norwood Road, Bayswater, Auckland.1309  
 ZL1BZT Chiswell, D. A., The Bulloch Track, R.D.3, West Mahurangi, Warkworth.1492  
 ZL1BZV Cawte, P. L., 332 Upper Harbour Drive, Greenhithe, Auckland.1310  
 ZL1BZW Surman, J. D., 27a Lloyd Avenue, Mt. Albert, Auckland.1003  
 ZL1BZX Rodger, T. R. R., 14 King Street, Cambridge.2351  
 ZL1BZY Hill, D. B., 25 Camellia Avenue, Ruakaka.0253  
 ZL1BZZ Johnson, R. W., 8 Graham Street, Te Kopuru, P.O.Box 33, Te Kopuru.0356  
 ZL1CAA Holmberg, R. E., R.D.5, Tauranga.3021  
 ZL1CAB Harrison, E. C., 3 St. Patrick Row, Whangamata.2992  
 ZL1CAC Whittaker, D. J., 4 Oak Place, Whakatane.3400  
 ZL1CAD Harsant, N. G., 66 Exmouth Road, Northcote, Auckland.1309  
 ZL1CAE Francis, S. D., 18 Patterson Street, Sandringham, Auckland.1003  
 ZL1CAF Skevington, B. E., 46 Prisk Street, Melville, Hamilton.2001  
 ZL1CAG Francis, M. E., P.O.Box 9313, Newmarket, Auckland.1031  
 ZL1CAH Bott, B., 12a Peri Street, Tauranga.3001  
 ZL1CAI Meyer, B. F. M., Hautapu, R.D. 1, Cambridge.2351  
 ZL1CAJ Coleman, H. A., 19 Harbour Road, Ohope.3454  
 ZL1CAK Coppel, G. G., 168 James Street, Whakatane.3400  
 ZL1CAM Miller, R. N., 30 Paine Street, Tauranga.3001  
 ZL1CAN Fitzpatrick, J. D., Lake Rotoma, R.D. 4, Rotorua.3221  
 ZL1CAO Lonergan, G., 84 4th Avenue, Tauranga.3001  
 ZL1CAP Mattler, C. K. H., 25 Seddon Street, Te Kuiti.2500  
 ZL1CAQ Jones, L. R., 49 Vale Road, St. Heliers, Auckland.1105  
 ZL1CAR Gregory, J. H., 29 Ruawai Road, Mt. Wellington, Auckland.1106  
 ZL1CAS Keymer, R. C., 10 Barbary Avenue, Kelston, Auckland.1207  
 ZL1CAT Howard-Taylor, A., 2/10 Arkles Drive, Arkles Bay, Whangaparaoa.1463  
 ZL1CAU Newland, P. J., 125 Taylors Road, Mt. Albert, Auckland.1003  
 Earnshaw, M. B., 741 East Coast Bays Road, Browns Bay, Auckland.1310



## ZL1CAV

**ZL1CAV** Van Kuilenburg, P. A., 45 Farrelly Avenue, Owariraka, Auckland.1004  
**ZL1CAW** Jones, A. R., 213 Whitney Street, Blockhouse Bay, Auckland.1207  
**ZL1CAX** Laird, A. G., P.O.Box 10, Mahia.4190  
**ZL1CAY** Liddle, B. D., 3 Hinemotu Avenue, Kawerau.3452  
**ZL1CBA** De Ridder, L. J., P.O. Box 246, Kerikeri.0452  
**ZL1CBB** Nortje, F. C., R.D.1, Waiotira, Northland.0250  
**ZL1CBD** Wilson, J. A., 28 Butler Road, Kerikeri.0452  
**ZL1CBE** Wright, W. A., Main North Road, R.D.4, Kaitia.0500  
**ZL1CBF** Bobb, D. G. L., 30 Reynard Terrace, Takanini, Auckland.1702  
**ZL1CBG** Bell, G. T., 328 One Tree Point Road, Ruakaka.0253  
**ZL1CBH** Blake, J. R., 12 Sutton Close, Puriri Park Road, Maunu, Whangarei.0101  
**ZL1CBI** Guilford, L. I., Rangitane, R.D.1, Kerikeri.0452  
**ZL1CBJ** Edwards, W. H., 18 Shoebridge Crescent, Ngunguru, Whangarei.0250  
**ZL1CBK** Bird, K. J., 84 Whau Valley Road, Whangarei.0101  
**ZL1CBL** Dahl, N. L., Taratara Road, Kaeo.0556  
**ZL1CBN** Tedbury, N. F.(Mrs), 24a Moody's Avenue, Whangarei.0101  
**ZL1CBO** Beard, D. M., P.O.Box 208, Awanui.0552  
**ZL1CBP** Bennie, A. A., California Hill, State Highway 10, Awanui.0552  
**ZL1CBQ** Contesse, L. C., Kiripaka Road, Tikipunga, Whangarei.0133  
**ZL1CBR** Jarman, J. D., Franklin Road, Parua Bay, Whangarei., P.O.Box 576, Whangarei.0100  
**ZL1CBS** Peterson, R. J., c/- Taipa Area School, R.D. 3, Kaitia.0500  
**ZL1CBT** Beard, G. L., 11b Kohuhu Street, Kaitia.0550  
**ZL1CBU** Rankin, P. M., 7 Jenner Place, Avondale, Auckland.1207  
**ZL1CBV** Rhodes, I. M., 1 Easton Park Parade, Glenfield, Auckland.1310  
**ZL1CBW** Kenyon, P. N., 12 Hughs Terrace, Te Atatu North, Auckland.1208  
**ZL1CBX** Hayward, G. E., 4 Miro Place, Whitianga.2856  
**ZL1CBY** Blake, R. W., 45 Verbena Road, Birkenhead, Auckland.1310  
**ZL1CBZ** Pavitt, I. D., Cool Gardens, Boord Crescent, R.D. 1, Kumeu.1454  
**ZL1CCA** Myers, K. D., 57 Lynbrooke Avenue, Blockhouse Bay, Auckland.1106  
**ZL1CCC** Devenish-Mearns, M. H., 8 The Esplanade, Eastern Beach, Auckland.1704  
**ZL1CCD** Cumin, M. H., 197 Chivalry Road, Glenfield, Auckland.1310  
**ZL1CCE** Dearman, D. G., Cullen Street, Maungawhai Heads, Northland.0270  
**ZL1CCF** Hatton, B. E., 306 East Coast Road, Takapuna, Auckland.1309  
**ZL1CCG** McNeal, J. R., 1 Koraha Street, Remuera, Auckland.1105  
**ZL1CCI** Anderson, J. C., 1a Cherry Place, Waiuku, Auckland.1852  
**ZL1CCJ** Goodenough, A. R., 754 East Coast Road, Browns Bay, Auckland.1310  
**ZL1CCK** Swinburn, N. B., 6 Bennett Street, Mt Albert, Auckland.1003  
**ZL1CCL** Amster, M. S., 2/245 Kepa Road, Mission Bay, Auckland.1105  
**ZL1CCM** Balmer, J. G., c/- Greenpeace New Zealand, Private Bag, Wellesley Street, Auckland.1036  
**ZL1CCN** Pearce, P. B., 7 Marvon Downs Avenue, Pakuranga, Auckland.1706  
**ZL1CCO** Cogan, D. G., 50 Konini Road, One Tree Hill, Auckland.1003  
**ZL1CCP** Davis, T. A., 224 Kirkwood Street, Thames.2801  
**ZL1CCR** Brown, P. F., 143 Grampian Street, Tokoroa., P.O.Box 302, Tokoroa.2392  
**ZL1CCS** Blyde, J. V., Poland Street, R.D.2, Waihi.2991  
**ZL1CCT** Raglan Amateur Radio Club, see Branch Directory  
**ZL1CCU** Wanner, R. G., R.D.2, Rukuhia Road, Ohaupo, Hamilton.2452  
**ZL1CCV** Purves, P. S., 63b Tuhikamea Road, Hamilton.2001  
**ZL1CCW** Waikato Polytechnic. (Trustee ZL1IC), Telecom Section, Electrical Dept, Private Bag, Hamilton.2020  
**ZL1CCX** McGuire, D. H., 14 Snell Crescent, Waihi Beach, Waihi.2990  
**ZL1CCY** Scutts, W. J., 509 Brown Street, Thames.2801  
**ZL1CDA** Clear, M. R., Limmer Road, R.D.8, Te Kowhai, Frankton.2030  
**ZL1CDB** Gilbert, J. A., Ongarue Back Road, R.D.6, Taumarunui.2600  
**ZL1CDC** Molloy, B. L., 460 Great South Road, Huntly.2191  
**ZL1CDD** Van Beek, D. M., House 51, Arapuni.2370  
**ZL1CDG** Boyd, R., 14 Dundas Street, Whitianga.2856  
**ZL1CDH** Lindsey, A. R., 6 Walker Street, Waihi.2991  
**ZL1CDI** King, M., c/- E & S Phillips, Victoria Road, R.D.1, Cambridge.2351

**ZL1CDJ** Kitchen, D. H., Hart Road, R.D.3, Hamilton.2021  
**ZL1CDL** Lougher, P. W., c/- Wairere Deer Farm, R.D.2, Ngatapa, Gisborne.3821  
**ZL1CDM** Roberts, D. F., 43 Domain Road, Whakatane.3400  
**ZL1CDN** Burgess, B. W., 350 Ocean Road, Ohope.3454  
**ZL1CDP** Braid, J. B., 16/2 Burrows Street, Tauranga.3001  
**ZL1CDQ** Powell, G. W., 241 Dickson Road, Papamoa, R.D.7, Te Puke.3071  
**ZL1CDR** Kevey, E. F., East Otara Road, Opoiki., P.O.Box 116, Opoiki.3472  
**ZL1CDS** Skilton, D. B., 1/89 Chapel Street, Tauranga.3001  
**ZL1CDT** Greenaway, S. M., 11 Darragh's Road, Otumotai, Tauranga.3001  
**ZL1CDU** O'Loughlin, B. G., Heads Road, McLeods Bay, Whangarei.0101  
**ZL1CDV** Brabant, G. C., 83 Riverside Drive, Whakatane.3400  
**ZL1CDW** Keel, K. P., 14 Haig Street, Whakatane.3400  
**ZL1CED** Lee, J., c/- 32b Martin Road, Manurewa, Auckland.1702  
**ZL1CEG** Gates, A., 542 Whangaparaoa Road, Whangaparaoa.1463  
**ZL1CEH** McMaster, A. J., 19 Mons Avenue, Mt Roskill, Auckland.1004  
**ZL1CEJ** Francis, W. D., P.O.Box 9313, Newmarket, Auckland.1031  
**ZL1CUT** Alexander, C. J. (Dr), 49 Richard Farrell Avenue, Remuera, Auckland.1105  
**ZL1NAH** Cox, B. B., 21 Polandson Place, Papakura.1703  
**ZL1NAI** Mumford, C. N., 6 Graham Street, Ruakaka.0253  
**ZL1NAJ** Harvey, K. A., 16 Tikorangi Place, Whangarei.0101  
**ZL1NAK** Simpson, E. A., 4 Nixon Street, Whangarei.0101  
**ZL1NAM** Muzyka, G. Y., 33 Vermont Street, Ponsonby, Auckland.1002  
**ZL1NAS** Higgins, A., 14 Anthony Crescent, Hamilton.2001  
**ZL1NAT** Horn, S. M., 5 Monique Place, Hamilton.2001  
**ZL1NAW** Byrnes, J. A. L., 14 Sunset Crescent, Tauranga.3001  
**ZL1TAA** Miller, N. S., 134 College Road, Edgecumbe.3451  
**ZL1TAB** Thomas, R. P. T., 21 High Road, Glenfield, Auckland.1310  
**ZL1TAC** Ramsay, D. J., 10 Mary Henry Place, Whakatane.3400  
**ZL1TAD** Johnston, R. B., 3 Beere Place, Meadowbank, Auckland.1105  
**ZL1TAE** English, B. D., 35a Yattendon Road, St Heliers, Auckland.1105  
**ZL1TAF** Anderson, A. W., 32 Gilmour Street, Waihi.2991  
**ZL1TAG** Plimley, A. E., 104 Porawal Road, Thames.2801  
**ZL1TAH** Norris, L.R., 4 Gordon Street, Hamilton.2001  
**ZL1TAI** McBurney, R. T., 25 Hamilton Road, Papatoetoe.1701  
**ZL1TAK** Sergeant, P. A., 20 Marie Avenue, Te Atatu South, Auckland.1208  
**ZL1TAM** Teh, Y. W.(Dr), Doctors Hill Road, Waipu.0254  
**ZL1TAN** O'Callaghan, D. R., 10 Raumati Road, Remuera, Auckland.1105  
**ZL1TAO** Kimber, W. C., 50 Main Road, Titahi Bay, Wellington.6202  
**ZL1TAP** Adams, R. J. J., 7 London Street, St Mary's Bay, Auckland.1001  
**ZL1TAQ** Logan, H., 27 Carlton Crescent, Maraetai Beach, Auckland.1705  
**ZL1TAR** Wilkinson, R. N., 19 Island Bay Road, Beachhaven, Auckland.1310  
**ZL1TAS** Aymes, A. O., 37 Alison Street, Hamilton.2001  
**ZL1TAT** Brown, I. W., 35 Lancaster Street, Hamilton.2001  
**ZL1TAU** Coghlan, P. R., 18 Essex Street, Te Atatu South, Auckland.1208  
**ZL1TAV** Small, B. C., 62 Paice Avenue, Sandringham, Auckland.1003  
**ZL1TAW** Totman, T. W., 1/91 Browns Road, Manurewa.1702  
**ZL1TAX** Andrews, S. D., 283 Hukanui Road, Hamilton.2001  
**ZL1TAY** Thornton, D., 2/24 Stanley Avenue, Millford, Auckland.1309  
**ZL1TAZ** Purdy, G. N., 4 Ramellon Road, Mt. Roskill, Auckland.1004  
**ZL1TBA** Parsons, D. R., 12 Mutu Street, Te Awamutu.2400  
**ZL1TBB** Carter, R., 1218 Huia Road, Huia, Auckland.1450  
**ZL1TBE** Goode, R. J., 1/11 Lovelock Avenue, Mt. Eden, Auckland.1003  
**ZL1TBG** Sanson, R. G., 55 Bertram Street, Warkworth.1492  
**ZL1TBI** Archibald, G., c/- Mrs A. Were, 12 Western Street, Matamata.2271  
**ZL1TBJ** Burrows, J. J., 2 West Lynn Road, New Lynn, Auckland.1207  
**ZL1TBL** Uren, P. E., 91 Hakanoa Street, Huntly.2191  
**ZL1TBM** Harvey, R. F., 33 Birdwood Avenue, Papatoetoe.1701  
**ZL1TBN** Sanders, P., 19 Sunny Hills Avenue, Hamilton.2001  
**ZL1TBO** Phillips, R. A., 16 Douglas Avenue, Mt Albert, Auckland.1003  
**ZL1TBP** Croll, D., 25 Pouwhare Street, Whakatane.3400  
**ZL1TBQ** Angell, A. R., 49 Crane Street, Mt. Maunganui.3002  
**ZL1TBR** McIntyre, R., 3 Tihi Road, Rotorua.3201  
**ZL1TBS** Smith, L. J., 123 Sandspit Road, Howick, Auckland.1705  
**ZL1TBT** Duncan, G. E., 66 Albrecht Avenue, Mt Roskill, Auckland.1004



- ZL1TBU** Doherty, G. F., 2/23 Santiago Crescent, Glenfield, Auckland.1310
- ZL1TBV** Russ, G. M., c/- 4c Seaview Road, Milford, Auckland.1309
- ZL1TBW** Matthews, D. B., 30 Fairburn Street, Otaka.0101
- ZL1TBX** Bott, A. D., 28 Calgary Street, Sandringham, Auckland.1003
- ZL1TBY** Secombe, J. G., Oaklands Road, R.D. 1, Papakura.1733
- ZL1TBZ** Tatton, W. C., 7 Realm Place, Massey, Auckland.1208
- ZL1TCA** Chatterton, B., 6 Little Place, Hamilton.2001
- ZL1TCB** Grange, D. L., 29 Tane Road, Laingholm, Auckland.1207
- ZL1TCC** Topfer, K. K., 11 Edith Place, Hamilton.2001
- ZL1TCE** Nation, D. L., 3 Thames Street, Hamilton.2001
- ZL1TCF** Fortune, T. La T., 129 Bleakhouse Road, Howick.1705
- ZL1TCG** Neal, S.G.M., 40 Rodney Street, Wellsford.1493
- ZL1TCH** Nielsen, D., 21 Alice Avenue, Orewa.1461
- ZL1TCJ** Jackson, L. H., 55 Whythead Crescent, Kohimarama, Auckland.1105
- ZL1TCK** Woolley, M. G., 5a Springbank Lane, Te Atatu North, Auckland.1208
- ZL1TCL** Forlong, R. D., 4/20 Meadowland Drive, Hamilton.2001
- ZL1TCM** McGlashan, I., Waitoki, Kaukapakapa.1453
- ZL1TCN** Herbert, E. R., 44 Wylie Street, Tauranga.3001
- ZL1TCO** Tapp, A. J., Mt. Tiger Road, Whangarei.0101
- ZL1TCP** Matlier, J. L., 25 Seddon Street, Te Kuiti.2500
- ZL1TCR** Bell, K. G., 174 Carnoustie Drive, Wattle Downs, Manurewa, Auckland.1702
- ZL1TCT** Dennison, R. A., 26 Oriana Avenue, Lynfield, Auckland.1004
- ZL1TCU** Legg, M. E., 35 Blackmore Drive, Rotorua.3201
- ZL1TCV** Frazerhurst, W. K., 12 Loloma Drive, Bucklands Beach.1704
- ZL1TCW** Dancy, T. M., 35 McMillan Place, Howick.1705
- ZL1TCX** Turnwald, F. L., 29 Cliff View Drive, Green Bay, Auckland.1207
- ZL1TDA** Harvey, M. C., 16 Pearsons Avenue, Hamilton.2001
- ZL1TDB** Raffles, M. T. (Mrs), 54 Rockfield Road, Ellerslie, Auckland.1105
- ZL1TDC** Purves, G. S., c/- A.N. Thomson, Te Kawa Road, R.D.3, Te Awamutu.2400
- ZL1TDD** Zeusche, P. R., C/- 48 Handforth Street, Onerahi, Whangarei.0101
- ZL1TDE** Davis, W. L., 48 Chatsworth Crescent, Pakuranga, Auckland.1706
- ZL1TDF** Blair, D. J., 15 Tramway Road, Birkdale, Auckland.1310
- ZL1TDG** Morris, V., 116 Union Road, Howick, Auckland.1705
- ZL1TDH** Greenbrook, G. R., 17a Fraser Road, Devonport, Auckland.1309
- ZL1TDI** Lee, C. P., 117 Chelsea View Drive, Birkenhead, Auckland.1310
- ZL1TDJ** Burton, R. D., 11 Henderson Valley Road, Henderson, Auckland.1208
- ZL1TDK** Gotz, M. T., 14 Roosevelt Road, Rotorua.3201
- ZL1TDL** Littin, A. C., Te Hana, 1 R.D., Wellsford.1493
- ZL1TDM** Long, J. M., 137 Moore Street, Howick, Auckland.1705
- ZL1TDN** Gabbie, O. J., 3 Hobson Street, Waihi.2991
- ZL1TDO** Campbell, L. M., 7 Queensway, Three Kings, Auckland.1004
- ZL1TDP** Clough, S. D., 5 Kelly Street, Rotorua.3201
- ZL1TDR** Harding, B. D., 5 Dallas Place, New Windsor, Auckland.1207
- ZL1TDS** Wright, M. E., 16 Puckey Avenue, Kaitia.0500
- ZL1TDT** Westland, R. E. K., 18 Townhead Crescent, Tauranga.3001
- ZL1TDV** Penwarden, E. C., 13 Kupe Place, Tokoroa.2392
- ZL1TDW** Bullough, E. G., 20 Coldham Crescent, Meadowbank, Auckland.1105
- ZL1TDX** Turnbull, G. R. H., 159 Bucklands Beach Road, Bucklands Beach.1704
- ZL1TDY** Walker, H. E., 1/6a Boyd Avenue, Royal Oak, Auckland.1003
- ZL1TDZ** Miller, C. J., 45 Bell Road, Remuera, Auckland.1105
- ZL1TFB** Cooper, S. W., 41a Kelvin Road, Papakura.1703
- ZL1TFC** Godfrey, J. P., 15 Crompton Road, Massey, Auckland.1208
- ZL1TFD** Iversen, R. J., 1/3 Akahurst Avenue, New Lynn, Auckland.1207
- ZL1TFE** Carter, P. R., P.O. Box 51-193, Pakuranga, Auckland.1730
- ZL1TFF** Dreadon, A. H., 40 Woodward Street, Woodbourne.7354
- ZL1TFG** Ballantyne, D. L., Bush Road, Albany, Auckland.1310
- ZL1TFH** Swift, D. M., 42 Sherwood Road, Onerahi, Whangarei.0101
- ZL1TFI** Needham, G. M., 4 Albatross Road, Red Beach, Auckland.1461
- ZL1TFJ** Enerson, F. J. C., 20 Brookfield Terrace, Otumoetai, Tauranga.3001
- ZL1TFK** Deverell, H. C., c/- 58 Ross Street, Onerahi, Whangarei.0101
- ZL1TFL** Hawkes, R. G., 26 Penzance Road, Mairangi Bay, Auckland.1310
- ZL1TFM** Sommerville, B. G., 44 Dickens Street, Grey Lynn, Auckland.1002
- ZL1TFN** McCaughy, J. D., Te Whanapu Bay, Russell.0293
- ZL1TFO** Baine, C. J., Main Road, Broadwood.0553
- ZL1TFP** Purdy, R. G., 41 John Davis Road, Mt Roskill, Auckland.1004
- ZL1TFQ** Portman, E. F., 6 New Brighton Road, Otahuhu, Auckland.1106
- ZL1TFR** Taylor, R. I. H., 40 Ferndale Road, Mt. Wellington, Auckland.1106
- ZL1TFS** Fitzpatrick, H., Lake Rotoma, R.D. 4, Rotorua.3221
- ZL1TFV** While, P. R., 51 Cobham Drive, Morrinsville.2251
- ZL1TFW** Savage, J., 151 Valley Road, Henderson, Auckland.1208
- ZL1TFX** Rowe, R. A., 1 Summit Terrace, Hamilton.2001
- ZL1TFY** Munyard, D.A., 40 Fitzwater Place, Henderson, Auckland.1208
- ZL1TFZ** Sexton, G. J., Paparimu, R.D. 3, Papakura.1733
- ZL1TGA** Haley, A. M. E., 30 Buckingham Crescent, Papatoetoe.1701
- ZL1TGC** Henderson, V. N., 217 Glenfield Road, Glenfield, Auckland.1310
- ZL1TGD** Topping, R. M., 268 River Road, Hamilton.2001
- ZL1TGG** Soppit, T. R., 73 Astley Avenue, New Lynn, Auckland.1207
- ZL1TGI** Collier, P. G., Department of Medicine, Medical School, Dunedin.9001
- ZL1TGJ** Dick, G. W., 14 Ennis Avenue, Pakuranga.1706
- ZL1TGH** Caulfield, R. E., 58 Redhills Road, R.D. 1, Henderson.1231
- ZL1TGL** Burnand, T. T., 19 Sylvia Road, St. Heliers Bay, Auckland.1105
- ZL1TGM** Nicholson, R. D., 49 Pilkington Road, Panmure, Auckland.1106
- ZL1TGN** Lindop, P. R., 24 Borrowdace Avenue, Howick, Auckland.1705
- ZL1TGO** Johnstone, C. K., Butchers Bridge Road, Waiuku.1852
- ZL1TGP** Bielby, R. K., 4 Bennett Road, Pakuranga.1706
- ZL1TQQ** Shackleton, E. G., 5 Masfen Terrace, Kaitia.0500
- ZL1TGR** Hoole, G. L., 111 Buckland Street, Putaruru.2371
- ZL1TGS** Smith, J. M., 25 Darren Crescent, Bucklands Beach.1704
- ZL1TGT** Bain, S. G., 3 Grassy Downs Place, Hamilton.2001
- ZL1TGU** Mead, A. D., 2 Te Puia Street, Kamo, Whangarei.0101
- ZL1TGV** Holmes, B. S., Coast Road, R.D. 3, Waiuku.1852
- ZL1TGW** Watson, E. H. C., Eastbank Road, Thornton, R.D. 3, Whakatane.3400
- ZL1TGX** McNamara, A. E., 32 Galileo Street, Ngaruawahia.2171
- ZL1TGY** Prank, A., 13 Riley Place, Fitzroy, Hamilton.2001
- ZL1TGZ** Purvis, A. W., 25 Mataura Road, Waihi.2991
- ZL1THA** Sleeman, D. W. W., 6 Rosebank Terrace, Stoke, Nelson.7001
- ZL1THB** Phayer, C., 4 Korimako Place, Tokoroa.2392
- ZL1THC** Buxton, R. J., 78 Maeroa Road, Hamilton.2001
- ZL1THD** Turner, R. W., 17 Hetet Street, Te Kuiti.2500
- ZL1THE** Fletcher, D. O., 24 Guy Road, Kaikohe.0400
- ZL1THG** Bevan, T. M., 3 Glendale Drive, Hamilton.2001
- ZL1THJ** Paul, R. E., 8 Quebec Road, Milford, Auckland.1310
- ZL1THK** Russell, J. A., 60 Orakei Road, Remuera, Auckland.1105
- ZL1THL** Piper, G. L., 16 Samuel Place, Hamilton.2001
- ZL1THM** Kermode, W. R., 4 Harmony Avenue, Otahuhu, Auckland.1106
- ZL1THN** Crozier, D. K., 154 Grey Street, Onehunga, Auckland.1106
- ZL1THO** McNeil, D. R., 33 Eivers Road, Whakatane.3400
- ZL1THP** Martin, F. B., 223 Bellevue Road, Tauranga.3001
- ZL1THQ** Tunncliffe, G. O. L. J., 9 School Road, Ngongotaha.3202
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- ZL1THT** Smith, A. B., 58 Rodney Street, Hamilton.2001
- ZL1THU** Cooke-Willis, S. O., 15 Madras Street, Khandallah, Wellington.6004
- ZL1THV** Crawford, H. K., 42 Forest Lake Road, Hamilton.2001
- ZL1THW** Thwaites, I. G., 28 Golf Road, New Lynn, Auckland.1207
- ZL1THY** Dennis, G. A., 20 Red Hill Road, Papakura.1703
- ZL1THZ** Parkinson, C. R., 2/5 Paris Place, Birkenhead, Auckland.1310
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- ZL1TIC** Burgess, A. B., 4 Killarney Street, Te Puke.3071
- ZL1TIE** Brewis, J., Mair Park, Caravan Park, Whangarei.0101
- ZL1TIF** Callaghan, P. J., 5 Levesque Street, Birkdale, Auckland.1310
- ZL1TIG** Palmer, L. H., 10 Puketapu Crescent, Taumarunui.2600
- ZL1TIJ** O'Brien, K. M. J., 10 Murray Place, Lincoln.8152
- ZL1TIJ** Alley, W. J., 10 Kaholea Place, Motuoaapa., P.O.Box 59, Turangi.3371
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- ZL1TIM** Stead, J. E., 41 Norton Street, Kopuru.0356
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**ZL1TIX** Harris, K., Inlet Road, Kerikeri.0452  
**ZL1TIY** Gordon, M. B., 34 Pallant Street, Manurewa.1702  
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**ZL1TJD** Lambourn, D., 106 Bassett Road, Remuera, Auckland.1105  
**ZL1TJE** Richardson, W. A., 4 Redcrest Avenue, Papakura, Auckland.1703  
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**ZL1TJG** French, T. G., 13 Bannerman Road, Auckland.1002  
**ZL1TJH** Gyde, G. N., C/- Police Station, Hamilton.2020  
**ZL1TJI** Balkin, D. B., Balkin Road, R.D. 4, Papakura.1733  
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**ZL1TJL** Logue, J. F., No. 7 Braggs Avenue, Taumarunui.2600  
**ZL1TJM** McPherson, G. J., 49 Heybridge Street, Manurewa.1702  
**ZL1TJN** Simmonds, H. J. (Rev), 9 Riverpark Crescent, Henderson, Auckland.1208  
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**ZL1TJQ** King, K. G., 227 St Heliers Bay Road, St Heliers, Auckland.1105  
**ZL1TJR** Trickett, N. D., 42 Riddell Road, Glendowie, Auckland.1105  
**ZL1TJS** McWilliams, D. J., 54 Allenby Road, Papatoetoe.1701  
**ZL1TJT** Manning, A. R., R.D.5, Te Mawhai, Te Awamutu.2400  
**ZL1TJU** Dawson, D. H., 11 Sanctuary Point, Pakuranga.1706  
**ZL1TJX** Black, C. W., 91 Tiwerton Road, Avondale, Auckland.1207  
**ZL1TJY** Hall, P. J., 8 Milton Road, Mt Eden, Auckland.1003  
**ZL1TKA** Hindmarsh, R. J., 78 Kelvin Road, Papakura.1703  
**ZL1TKB** Shaw, A. G., 25 Blackburn Street, Hamilton.2001  
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**ZL1TKE** Clark, D. W., 29 Puriri Road, Whenuapai Village.1450  
**ZL1TKF** Treadaway, R. E., 15a Impala Place, Royal Oak, Auckland.1106  
**ZL1TKG** Talbot, V. G., 93a Pembroke Street, Hamilton.2001  
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**ZL1TKJ** Robinson, C. S., 80 Panapa Drive, Meadowbank, Auckland.1105  
**ZL1TKK** Murphy, B. R., 13 John Dee Crescent, Whangaparaoa.1463  
**ZL1TKL** Meads, D. R., 78 Hillcrest Road, Whakatane.3400  
**ZL1TKN** Baylis, M. R., 1 Munro Street, Whangarei.0101  
**ZL1TKO** Graves, C. E., 11 Casuarina Road, Bucklands Beach.1704  
**ZL1TKP** Gibson, J. W., Braemar Road, R.D. 2, Whakatane.3400  
**ZL1TKQ** Duncan, R. G., P.O. Box 11 040, Ellerslie, Auckland.1131  
**ZL1TKR** Foster, B. E., 30 Moresby Avenue, Waihi.2991  
**ZL1TKS** Duncan, A. K., 26 Ngaio Road, Kelburn, Wellington.6005  
**ZL1TKT** Pearson, F. W., 22b James Street, Whakatane.3400  
**ZL1TKU** Hilliar, D. J., 13 Chipping Dale, Mangere Bridge, Auckland.1701  
**ZL1TKW** Bodman, K. I., 21 Bernard Street, Hamilton.2001  
**ZL1TKX** Greensmith, A. S., Maddrens Road, Marua, R.D. 1, Hikurangi.0251  
**ZL1TKZ** Kleyburg, A., 20 Anderson Road, Hamilton.2001  
**ZL1TLA** Koolen, J. F. L., 32 Kings Road, Panmure, Auckland.1106  
**ZL1TLC** May, A. P., 56 Lantana Road, Green Bay, Auckland.1207  
**ZL1TLD** Walker, W. D., 44 Kawa Street, Otirohanga.2554  
**ZL1TLE** Millett, M. J., B739 Railway Settlement, Hinuera.2050  
**ZL1TLF** Cadness, R. H., 109 Glamorgan Drive, Torbay, Auckland.1310  
**ZL1TLG** Williams, I. G., Drury Hills Road, R.D. 1, Drury.1752  
**ZL1TLI** Craig, N. A., 11 Brunton Crescent, P.O. Box 496, Thames.2800  
**ZL1TLJ** Rumble, G. O., 2/10 Himalaya Crescent, Lynfield, Auckland.1004  
**ZL1TLK** McConnachie, M. E., 117 Caledonian Road, St Albans, Christchurch.8001  
**ZL1TLL** Moral, J., 78 Queen Street, Te Kuiti.2500  
**ZL1TLM** Berends, J. M., 66a Bradbury Road, Howick, Auckland.1705  
**ZL1TLN** Onrust, F., 37a Sylvia Road, St. Heliers, Auckland.1105  
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**ZL1TLQ** McMillan, D. J., 4 Inaka Place, Matamata.2271

**ZL1TLR** Walton, R. W., Artillery Road, R.D.2, Manugaturoto.0272  
**ZL1TLU** Waterhouse, D. C., 29a Puriri Park Road, Whangarei.0101  
**ZL1TLV** Oxner, E. A., Mossop Road, R.D. 1, Tokoroa.2392  
**ZL1TLX** Drake, M. J., 174 Point View Drive, R.D., Papatoetoe.1701  
**ZL1TLY** Gregory, K. E., 25 Belfast Street, Hillsborough, Auckland.1004  
**ZL1TMA** Appleyard, B. H., 13 Mole Street, Greytown.5953  
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**ZL1TME** Schwarz, M. W., Bayly Road, Tirau.2372  
**ZL1TMF** Ralston, W. B., 168 Cambridge Road, Tauranga.3001  
**ZL1TMG** Greenfield, R. S. T., 33 Tui Crescent, Maunu, Whangarei.0101  
**ZL1TMI** Moseley, S. F., 34 Domain Street, Waiuku.1852  
**ZL1TMJ** Rowlands, C. M., 68 Raurimu Avenue, Onerahi, Whangarei.0101  
**ZL1TMK** Krause, R. E., 7 Gordon Street, Kawerau.3452  
**ZL1TMM** Brooker, A. S., 290 Park Road, Te Awamutu.2400  
**ZL1TMO** Lawry, M. G., Waitaha Road, Welcome Bay, R.D.5, Tauranga.3021  
**ZL1TMP** Lovatt, R. A., 23a Janet Place, Rotorua.3201  
**ZL1TMQ** McCarthy, J. W., 22 Higgins Road, Hamilton.2001  
**ZL1TMR** Alderson, R. I., 2/19a Balkin Road, Avondale, Auckland.1207  
**ZL1TMS** Watson, C. D., Eastbank Road, R.D. 3, Whakalane.3400  
**ZL1TMT** Haywood, J. R., 22 Buscombe Road, Henderson, Auckland.1208  
**ZL1TMU** Smith, G. R., 10 Killington Crescent, Mangere, Auckland.1701  
**ZL1TMV** Wilkinson, C., 35/139 Greys Avenue, Auckland.1001  
**ZL1TMW** Shuker, M. L., 18 Mason Avenue, Pukekohe.1800  
**ZL1TMZ** Nice, K. S., 11 Janet Street, Pakuranga.1706  
**ZL1TNA** Kivell, G. J., Crosier Street, Pirongia, Te Awamutu.2450  
**ZL1TNB** Davies, D. G., Wealtha Dorm., Church College, Temple View.2030  
**ZL1TNC** Hampshire, K. R., 13 Moana Place, Morrinsville.2251  
**ZL1TND** Probine, D. C., 46 Ward Street, Taumarunui.2600  
**ZL1TNE** Edwards, W. D., 21 Grey Street, Hamilton.2001  
**ZL1TNF** Ruediger, J., 153 Totara Drive, Hamilton.2001  
**ZL1TNG** Cron, B. E., 71 Wellington Street, Hamilton.2001  
**ZL1TNI** Beiding, J. C., 20 Surville Place, Mairangi Bay, Auckland.1310  
**ZL1TNK** Davis, A. G., 3 Fred Judd Crescent, Whakalane.3400  
**ZL1TNL** Binney, H. M., 43 Barrier View Road, Leigh.1490  
**ZL1TNM** Beard, K. M., Arawhata Road, Kaingaroa.3271  
**ZL1TNN** Hansen, G. W., 133a Paramount Parade, Tikipunga, Whangarei.0101  
**ZL1TNO** O'Loan, T. J., 16 Grosvenor Street, Cambridge.2351  
**ZL1TNQ** Talbot, A. M. (Mrs), 64 Woodlands Crescent, Browns Bay, Auckland.1310  
**ZL1TNR** Bielby, F. L., 17 Old North Road, Orewa.1461  
**ZL1TNT** Maginnity, D. N., 16 Ebony Street, Christchurch.8005  
**ZL1TNV** Shanks, A. J., 39 Marellan Drive, Red Beach, Orewa.1461  
**ZL1TNW** Smith, K. W., 40 Topless Drive, Torbay, Auckland.1310  
**ZL1TNX** Chappell, P. J., Eastern Budget Motel, 416 Devon Street East, New Plymouth.4601  
**ZL1TNY** Quedley, F. J., 16 Woodhall Road, Epsom, Auckland.1003  
**ZL1TNZ** Rowe, M. J., 28 Tweed Street, Mt Maunganui.3002  
**ZL1TOB** Crawford, J. V., Communications Squadron, RNZAF Base Auckland, Post Office, Whenuapai.1450  
**ZL1TOD** McAuliffe, K., 50 Humber Crescent, Tauranga.3001  
**ZL1TOE** Pennell, A. E., Belk Road, R.D. 1, Tauranga.3021  
**ZL1TOF** Baker, G. S., 3/106 Celtic Crescent, Ellerslie, Auckland.1105  
**ZL1TOG** Taylor, L. R., 805 Riddell Road, St Heliers, Auckland.1105  
**ZL1TOH** Dale, B. H., 22 Mitchell Street, Tauranga.3001  
**ZL1TOL** Anderson, M. G., 42 Boakes Road, Mt. Wellington, Auckland.1106  
**ZL1TOO** Walker, R. M., 50 Raleigh Street, Cambridge.2351  
**ZL1TOP** Foster, M., Lone Kauri Road, Karekare, R.D., Piha, Auckland.1450  
**ZL1TOQ** Ashton, I. M., 7 Cunliffe Place, Glenfield, Auckland.1310  
**ZL1TOR** Adams, N. J., Matangi Road, R.D.4, Hamilton.2021  
**ZL1TOS** Ewens, B. S., 7 Marie Avenue, Red Beach, Orewa.1461  
**ZL1TOT** Sim, P. T., Bycroft Road, R.D.2, Drury.1752  
**ZL1TOU** Lowe, J., 51 Epsom Avenue, Epsom, Auckland.1003  
**ZL1TOW** Orr, W. B., 1c Rostrevor Avenue, Epsom, Auckland.1003  
**ZL1TOX** Stevenson, J. F. G., 20 Kirrie Avenue, Te Atatu South, Auckland.1208  
**ZL1TOY** McGilp, F. C., 6a Lilian Place, Pakuranga.1706  
**ZL1TOZ** Kennedy, R. M., North Road, R.D. 1, Clvedon.1751  
**ZL1TPB** Brooks, R. K., 391 Ellerslie-Panmure Highway, Panmure, Auckland.1106  
**ZL1TPC** Gutschlag, B. P., 2/143a Manuka Road, Glenfield, Auckland.1310



- ZL1TPD** Downs, G. M., 6 Glen Road, Henderson, Auckland.1208  
**ZL1TPE** McEwen, D. J., 9 Roby Street, Te Atatu North, Auckland.1208  
**ZL1TPF** Humphrey, J. M., 115 17th Avenue, Tauranga.3001  
**ZL1TPG** van Loon, Q. J. M., 30 Sturges Road, Henderson, Auckland.1208  
**ZL1TPH** Hayman, S. R., Wainui Road, Silverdale, Auckland.1462  
**ZL1TPI** Smirk, A. T., 10 Masons Avenue, Herne Bay, Auckland.1002  
**ZL1TPJ** Walker, B. J., Crane Road, R.D. 5, Hikurangi.0251  
**ZL1TPM** Medland, J. C., 12 Arawa Street, Hamilton.2001  
**ZL1TPN** Nielsen, R. P., 18 Oban Road, Tauranga.3001  
**ZL1TPO** Vos, P. M., 4 Durham Street, Te Atatu North, Auckland.1208  
**ZL1TPP** Locke, S. D., see ZL7TPP  
**ZL1TPQ** Richardson, W. J., 57 Esk Street, Tauranga.3001  
**ZL1TPS** Bryant, R. S., 44a Pleasant Road, Glen Eden, Auckland.1207  
**ZL1TPT** Reid, K. S., 38 Willis Road, Papakura.1703  
**ZL1TPV** Cameron, A. K., 24 Buick Crescent, Palmerston North.5301  
**ZL1TPX** Manning, B. F., 16 Clive Road, Kati Kati.3051  
**ZL1TPZ** Beard, M. C., Arawhata Road, Kaingaroa.3271  
**ZL1TQA** Coakley, A. H., 23 Butler Road, Kerikeri.0452  
**ZL1TQB** Lake, A. R., 10 Rewarewa Place, Matua, Tauranga.3001  
**ZL1TQC** Tarlton, I. H., 8 North Road, Kaitiaki.0500  
**ZL1TQD** Dil, W. T., 2/12 Rugby Road, Birkenhead, Auckland.1310  
**ZL1TQE** Palmer, G. M., 71 West Street, Pukekohe.1800  
**ZL1TQF** Webster, E. T., 40 McIntyre Road, Mangere Bridge, Auckland.1701  
**ZL1TQH** Whittaker, V. W., 17 Princess Road, Tauranga.3001  
**ZL1TQI** Reed, G. N., 1 Church Bay Road, Oneroa, Waiheke Island.1470  
**ZL1TQK** Earl, S. C., 156 Taupo Road, Taumarunui.2651  
**ZL1TQM** Joseph, D. H., 38 Sunnyside Road, Glenfield, Auckland.1310  
**ZL1TQN** Woodward, N. F., Rangiora Road, R.D.8, Te Puke.3071  
**ZL1TQP** Christensen, C. M., 82 Donald Road, Kaitiaki.0500  
**ZL1TQQ** Hobday, D. S., 12 Onedin Place, Tilitangi, Auckland.1207  
**ZL1TQR** Kennedy, I. R., 36 Montclair Rise, Browns Bay, Auckland.1310  
**ZL1TQT** Reid, J. D., 15 Dunbar Place, Tokoroa.2392  
**ZL1TQV** McLeod, D., 81 Kayes Road, Pukekohe.1800  
**ZL1TQW** O'Keefe, R. A., 8 Raetihi Crescent, Mt. Albert, Auckland.1003  
**ZL1TQX** Bott, J. C. (Mrs), Woodstock Avenue, Mackaytown, via Paeroa P.O. Box 28.2951  
**ZL1TQY** Watson, M. A. V., Poihipi Road, R.D. 1, Taupo.3300  
**ZL1TQZ** Rowe, I. S., 39 Sludfall Street, Pakuranga, Auckland.1706  
**ZL1TRA** Cox, R. O., 190 Old Wairoa Road, Papakura.1703  
**ZL1TRC** Hardwick, D. E., 66 Norrie Street, Melville, Hamilton.2001  
**ZL1TRD** Tyson, T. W., Hikamutu, Taumarunui.2600  
**ZL1TRE** Shepherd, M. B., 19 Tisdall Crescent, St Johns, Auckland.1105  
**ZL1TRF** De Wit, R., 1 Pegasus Drive, Rotorua.3201  
**ZL1TRH** Walker, A. V. (Mrs), 51 Caronia Crescent, Mt. Roskill, Auckland.1004  
**ZL1TRJ** Macaskill, S. L., 167 Waimumu Road, Massey, Auckland.1208  
**ZL1TRK** Cook, D. M., 27a Anzac Road, Whangarei.0101  
**ZL1TRL** Huljich, A. P., 137 Totara Road, Whenuapai.1450  
**ZL1TRM** Bulfe, L. W., Park Road, R.D.3, Waiuku.1852  
**ZL1TRN** Doughty, C. A., Brookley Road, Manurewa, Auckland.1702  
**ZL1TRO** Schutz, P. M., 37 Croall Crescent, Hamilton.2001  
**ZL1TRP** Dodds, D. J., Rangikapiti Road, Coopers Beach.0557  
**ZL1TRQ** Hutton, L. D., 118 Aberdeen Drive, Dinsdale, Hamilton.2001  
**ZL1TRR** Morrow, I. E., Nikau Road, R.D. 2, Pokeno.1872  
**ZL1TRS** Shate, T. P. G., 19 Scott Road, Stanmore Bay, Whangaparaoa.1463  
**ZL1TRV** Huljich, P. A., 137 Totara Road, Whenuapai.1450  
**ZL1TRX** Wilson, J. P., 10 Brian Avenue, Milford, Auckland.1309  
**ZL1TRY** Keatinge, A. R., 8 Bernard Street, Matamata.2271  
**ZL1TRZ** Martens, P. H., 300 Pukehina Parade, R.D. 9, Te Puke.3071  
**ZL1TSE** Abernethy, C. (Mrs), 20 Zealand Terrace, Kelburn, Wellington.6005  
**ZL1TSF** Fish, A. P., 9 Seaview Terrace, Mt. Albert, Auckland.1003  
**ZL1TSG** Burrows, J. P., 7 Marotiri Drive, Ruakaka.0253  
**ZL1TSH** Perenara, M. H., 10 Amokura Place, Whakatane.3400  
**ZL1TSI** Edlin, W. F., 13 Halberg Street, Papakura, Auckland.1703  
**ZL1TSJ** Cope, G. B., 1c Bathurst Street, Mt Eden.1004  
**ZL1TSK** Ladyman, D. R., 25 Carlton Street, Te Aroha.2971  
**ZL1TSL** Darvill, K. J., 38 Caen Road, Panmure, Auckland.1106  
**ZL1TSM** Garnett-Frizzle, H. H., 144b Nixon Street, Hamilton.2001  
**ZL1TSN** Hollis, M. A., 98 The Drive, Epsom, Auckland.1003  
**ZL1TSO** Soysa, S. W., 129 Portland Road, Remuera, Auckland.1105  
**ZL1TSS** Armstrong, R. C. A., 142 King Street, Cambridge.2351  
**ZL1TST** Young, J. R., 14 Childs Avenue, Pukekohe.1800  
**ZL1TSU** Osborne, P. L., 14 Oakfield Crescent, Hamilton.2001  
**ZL1TSV** Talbot, I. C., 64 Woodlands Crescent, Browns Bay, Auckland.1310  
**ZL1TSY** Law, J. A., 43 South Lynn Road, Titirangi, Auckland.1207  
**ZL1TTA** Fairweather, K. D., 81 Kenmore Street, Newlands, Wellington.6004  
**ZL1TTB** Wevers, W. F., 22 Dignan Street, Pt Chevalier, Auckland.1002  
**ZL1TTD** Downard, I. F., 252 Malfroy Road, Rotorua.3201  
**ZL1TTE** Cooke, D. C., 13 Walmer Road, Pt. Chevalier, Auckland.1002  
**ZL1TTG** Lethbridge, B. R., Ward Drive, Opuia.0290  
**ZL1TTH** Dooley, B. J., c/- 125 Meeanee Road, Taradale.4001  
**ZL1TTI** Hunter, R. A., 13 Datura Place, Sunnynook, Auckland.1310  
**ZL1TTK** Nettleingham, J., Matahau Road, Katikati.3051  
**ZL1TTL** Bryan, M. D., 16 Dalwhinnie Parade, Howick.1705  
**ZL1TTN** Goffin, C. P., c/- YMCA, 54 Moray Place, Dunedin.9001  
**ZL1TTO** Curran, W. J., Awaite Road, Paeroa.2951  
**ZL1TTP** Stagpools, V. M., c/- 49 Bould Street, Johnsonville, Wellington.6004  
**ZL1TTS** Karrasch, D. F., 24 Brooks Road, Papakura.1703  
**ZL1TTU** Godbert, F. D., Waipapa West Road, R.D. 2, Kerikeri.0452  
**ZL1TTV** Mather, P. B., 56 West Harbour Terrace, Massey, Auckland.1208  
**ZL1TTX** Moss, G. D., 1/62 Sorrel Crescent, Bucklands Beach.1704  
**ZL1TTY** Vujcich, L. M. G., 12 Maida Vale, Manurewa, Auckland.1702  
**ZL1TTZ** Broad, A. L. E., Northwood Avenue, R.D. 4, Kaitiaki.0500  
**ZL1TUA** Miller, K. I., 134 College Road, Edgecumbe.3451  
**ZL1TUB** Borman, T. G., 3 Manuka Street, Hamilton.2001  
**ZL1TUC** Cuthbert, E. W., 12 Kitenui Avenue, Mt. Albert, Auckland.1003  
**ZL1TUD** Graham, D. W., 11 Galbraith Street, Rotorua.3201  
**ZL1TUE** Robinson, G. M., 1/20 Shoreham Street, Blockhouse Bay, Auckland.1207  
**ZL1TUG** Trevena, A. R., 7 Lawrence Street, Tauranga.3001  
**ZL1TUH** Addis, B. G., 119 Motatau Road, Papaloetoe, Auckland.1701  
**ZL1TUI** Hannam, T. M., 44 Greenacres Drive, Kawakawa.0291  
**ZL1TUJ** Marr, G. E., 11 Liley Place, Remuera, Auckland.1105  
**ZL1TUK** Aymes, N. C., Mountain View Road, Otorohanga.2554  
**ZL1TUL** Richardson, R. W., 3 McKenzie Avenue, Otorohanga.2554  
**ZL1TUM** Stewart, K. R., 52 Jervis Street, Rotorua.3201  
**ZL1TUN** Fendley, D. R., 24 Seaview Road, Tauranga.3001  
**ZL1TUO** Hope, G. L., Terena Street, Mamaku, Rotorua.3250  
**ZL1TUQ** Campkin, A. D., 11 Lyford Crescent, Forrest Hill, Auckland.1310  
**ZL1TUS** Watson, D. C., Eastbank Road, Thornton, R.D. 3, Whakatane.3400  
**ZL1TUT** Alexander, S. J., Waihou Valley, R.D. 3, Okaihau.0455  
**ZL1TUV** King, A. P., Drury Hills Road, Drury, Auckland.1752  
**ZL1TUV** Lindquist, I. D., 4 Martin Place, Panmure, Auckland.1106  
**ZL1TUX** Raffles, G. E. H., 34 Dundee Place, Blockhouse Bay, Auckland.1207  
**ZL1TUY** Young, R. A., 2 Margan Place, Papakura, Auckland.1703  
**ZL1TUZ** Quirk, L., 41 Castleford Street, Green Bay, Auckland.1207  
**ZL1TVA** Richardson, R. D., c/- Sergeants Mess, RNZAF Base, Wigram, Christchurch.8004  
**ZL1TVB** Johnston, T. P., P.O. Box 32-041, Devonport.1330  
**ZL1TVE** Willis, D. R., P.O. Box 10, Rawene.0473  
**ZL1TVG** Hynes, J. K., 35 Central Avenue, Whangarei.0101  
**ZL1TVH** Simpson, S. W., 20 Westholm Way, Papakura.1703  
**ZL1TVI** Allan, R. W., c/- W. W. Allan, R.D.5, Te Awamutu.2400  
**ZL1TVJ** Ross, M. O., R.D. 1, Katikati.3051  
**ZL1TVM** Eades, M. G., 20 Keywyn Road, Kelston, Auckland.1207  
**ZL1TVO** Sylvester, R. L., 19 Ringwood Street, Torbay, Auckland.1310  
**ZL1TVP** Aikin, P. M., 179 Hokianga Road, Dargaville.0300  
**ZL1TVQ** Boyce, K. R., 33 Lambeth Road, Mt. Roskill, Auckland.1004  
**ZL1TVR** Odell, A. L., 22 Howard Road, Northcote, Auckland.1309  
**ZL1TVS** Odell, A. E., 22 Howard Road, Northcote, Auckland.1309  
**ZL1TVU** Badraun, G. F., Boeeye Bay, R.D.1, Russell.0293  
**ZL1TVW** Shipman, M. T., 10 Scanlan Street, Grey Lynn, Auckland.1002  
**ZL1TVX** Coburn, C. L., 105 Tihi Road, Rotorua.3201  
**ZL1TVY** Parr, M. I., 88 Redhill Road, Papakura.1703  
**ZL1TVZ** Bartle, D. L., 13b Seymour Road, Henderson, Auckland.1208  
**ZL1TWA** Northcote, J. A., Kie Kie Road, Aria.2551  
**ZL1TWB** Wills, T. J. E., 112 Ngamotu Road, New Plymouth.4601  
**ZL1TWC** Rowe, N. L., 28 Tweed Street, Mt Maungarui.3002  
**ZL1TWD** Sparkes, D. G., 17 Mamaku Street, Paraparaumu.6152  
**ZL1TWE** Norris, D. R. H., 14 Manning Street, Hamilton, P.O. Box 19087, Hamilton.2000



# ZL1TWF

ZL1TWF Brown, C. J. I., 35 Lancaster Street, Hamilton.2001  
 ZL1TWG Moseley, S. R., 34 Domain Street, Waiuku.1852  
 ZL1TWH Zein, D. B., 22 Stafford Place, Tokoroa.2392  
 ZL1TWI Lydiate, K., 52 Fitzwater Place, Henderson, Auckland.1208  
 ZL1TWJ Ross, E. J. A., 74 Kumlin Avenue, Tauranga.3001  
 ZL1TWW Schafer, M. T. E., 10 Canterbury Place, Parnell, Auckland.1001  
 ZL1TWM Rhodes, R. W., 45 Rangeview Road, Henderson, Auckland.1208  
 ZL1TWN Ching, Chen-Bon, R., 101 Litten Road, Howick, Auckland.1705  
 ZL1TWP Stoney, D. B., Alpine Road, R.D.4, Warkworth.1492  
 ZL1TWQ Hall, M. J., Norfolk Avenue, Rotorua, Whangarei.0121  
 ZL1TWR Palmer, S. D., 71 West Street, Pukekohe.1800  
 ZL1TWS Koli, P. A. J., c/- P. Carter, R.D.2, Featherston.5952  
 ZL1TWT Broughton, P. Y., Kaimaumau, Waiharara, R.D., Kaitiaki.0500  
 ZL1TWW Pullar, G. R., 11 Wainone Place, Warkworth.1492  
 ZL1TWW Cleave, V. J., 75 Taunton Terrace, Blockhouse Bay, Auckland.1207  
 ZL1TWX McFadzean, P. A., 40 Hain Avenue, Mangere East.1701  
 ZL1TWY Woollett, S. C., 360b Blockhouse Bay Road, Blockhouse Bay, Auckland.1207  
 ZL1TWZ Russell, G. C., 21 Highland Avenue, Titirangi, Auckland.1207  
 ZL1TXA Johnston, P. K., 1/205 Valley Road, Mt Maunganui.3030  
 ZL1TXB Fredericksen, K. P., 108 Moana Avenue, Tahunanui, Nelson.7001  
 ZL1TXC Perston, J. M., 37 Grey Street, Kawerau.3452  
 ZL1TXD Prince, R. E., 2/188 Clovelly Road, Bucklands Beach, Auckland.1704  
 ZL1TXF Lake, J. S., 17 Glynnbrooke Street, Te Atatu South, Auckland.1208  
 ZL1TXH Schultz, W., Schultz Road, R.D. 2, Waipu.0254  
 ZL1TXI Culloty-Marsh, D. L., 5 May Street, Hamilton.2001  
 ZL1TXK Burdon, R. W., Flat C, 5 Hospital Road, Blenheim.7301  
 ZL1TXL Heywood, E. J., 1/9 Kepler Place, Manukau Heights, Manukau.1701  
 ZL1TXM Dexter, J. D. G., 43 Owens Road, Epsom, Auckland.1003  
 ZL1TXN Vickery, W.L., 38 Links Road, New Lynn, Auckland.1207  
 ZL1TXO Dawson, R. N., 3 Wainone Place, Warkworth.1492  
 ZL1TXP Schultz, P. O., Schultz Road, R.D. 2, Waipu.0254  
 ZL1TXQ Rowe, A. N., 24 Okareka Place, Pakuranga.1706  
 ZL1TXR Boulius, D. G., 60a King George Avenue, Epsom, Auckland.1003  
 ZL1TXS Nield, I. J., 4a Belgium Terrace, Gisborne.3801  
 ZL1TXT Nicholson, C., 2/467 Great South Road, Penrose, Auckland.1105  
 ZL1TXU Cook, D. G., 18 Coventry Road, Hamilton.2001  
 ZL1TXV Byrmand, J. A., 10 Church Street, Onerahi, Whangarei.0101  
 ZL1TXW Brown, K. I., 2 Fitzherbert Avenue, West Harbour, Auckland.1208  
 ZL1TXX Kelly, D. B., 12 Somerset Grove, Tauranga.3001  
 ZL1TXY Kitching, J. C. H., R.D.1, Howick.1731  
 ZL1TXZ Boot, I. O. G., 204 Campbell Road, Greenlane, Auckland.1105  
 ZL1TYA Carline, I. A., 38 Kings Road, Panmure, Auckland.1106  
 ZL1TYB Atkinson, G. F., 10 Kohe Kohe Street, Kelston, Auckland.1207  
 ZL1TYD Hill, A. C., 43 South Lynn Road, Titirangi, Auckland.1207  
 ZL1TYE Brien, G. J., 33 Rosalind Road, Glenfield, Auckland.1310  
 ZL1TYF Towler, T. J., P.O.Box 27 244, Upper Willis Street, Wellington.6037  
 ZL1TYG Millen, T. A., 50 Barry Road, Waihi.2991  
 ZL1TYH Burrell, C. J., 78 Lewis Street, Hamilton.2001  
 ZL1TYI Bridger, G. D., 102 Hospital Road, Whangarei.0101  
 ZL1TYJ Ball, R. J., R.D. 1, Turangi.3371  
 ZL1TYL Taylor, P. J., 14 Gollan Road, Mt. Wellington, Auckland.1106  
 ZL1TYM Tuck, P. J., 4 Emily Way, Karori.6005  
 ZL1TYN Dunlop, B. V., Unit 1, 239 Robertson Road, Mangere, Manukau City.1701  
 ZL1TYO Fletcher, S. J., 32 Garden Heights Avenue, Glenview, Hamilton.2001  
 ZL1TYP Thompson, G. O., 197 St Aubyn Street, New Plymouth.4601  
 ZL1TYQ Sadler, J., 35 Patterson Street, Mt. Maunganui.3002  
 ZL1TYS Rust, H., Florence Avenue, Russell.0293  
 ZL1TYT Lowe, E. R., 86 Dinsdale Road, Hamilton.2001  
 ZL1TYV Jenkins, M. W., 35 Robertson Street, Rotorua.3201  
 ZL1TYW Middlemiss, G. D., Eureka Station Road, R.D. 4, Hamilton.2021  
 ZL1TYZ Jenner, A. M., c/- Radio Depot, Dinsdale, Hamilton.2000  
 ZL1TZA Jenner, R. P., P.O. Box 241, 94 Rawhiti Avenue, Matamata.2271  
 ZL1TZC McConnochie, K. N., 10 Miro Street, Te Aroha.2971  
 ZL1TZD Dodds, A. M., 18 Escalona Street, Kamo, Whangarei.0101

ZL1TZE Davison, J. G., 19 Thompson Terrace, Manurewa.1702  
 ZL1TZF Binns, N. L., 10 Denby Crescent, Tikipunga, Whangarei.0101  
 ZL1TZG McKevitt, M. J., 12 Apanui Avenue, Whakatane.3400  
 ZL1TZH Hunt, E. J., 19 Manchester Street, Dunedin.9001  
 ZL1TZI Donaldson, G. D., 80 Woolfield Road, Papatoetoe, Auckland.1701  
 ZL1TZJ Page, S. B., 717 East Coast Road, Browns Bay, Auckland.1310  
 ZL1TZK Carter, R. H., 48 Cornwall Park Avenue, Epsom, Auckland.1003  
 ZL1TZL Rowe, G. J., 73 Elizabeth Street, Rotorua.3201  
 ZL1TZN Mott, P. W., 4/7 Domain Street, Devonport, Auckland.1309  
 ZL1TZP Doell, S. D., 11 Sandspit Road, Waiuku.1852  
 ZL1TZQ Morgan, K. C., 12/19 Verbena Road, Birkdale, Auckland.1310  
 ZL1TZS Reeves, G. F., 329 East Coast Road, Mairangi Bay, Auckland.1310  
 ZL1TZU Miller, R. T., Te Wahapu Road, P.O. Box 172, Russell.0293  
 ZL1TZV Stockley, L. A. F., c/- 19 Fernglen Road, St Heliers, Auckland.1105  
 ZL1TZW Shaw, J. E. M. (Mrs), C/- Post Office, Paerata.1450  
 ZL1TZK Fryer, B. S., 38 Monarch Avenue, Glenfield, Auckland.1310  
 ZL1TZY Noble, P. V., 22 Clagery Street, Sandringham, Auckland.1003  
 ZL1TZZ Skinner, D. E., 75 Lynbrooke Avenue, New Lynn, Auckland.1207  
 ZL1UAB Petrie, G. W., 70 Mansel Avenue, Hillcrest, Hamilton.2001  
 ZL1UAD Blackwell, D. M., 16 Hawera Road, Kohimarama.1105  
 ZL1UAE Eeninkwinkel, J., Lone Kauri Road, R.D. New Lynn, Auckland.1207  
 ZL1UAG Tyson, J., 9 Tui Grove, Te Haumi, Pahiia.0252  
 ZL1UAH Dodds, M. L. E., Rangikapiti Road, Coopers Beach.0557  
 ZL1UAI Cayton, M. L., 44 Selwyn Road, Rotorua.3201  
 ZL1UAJ Thomson, J., 4 Cherry Road, Howick, Auckland.1705  
 ZL1UAK Klarwill, R. G., 7b Lingarth Street, Remuera, Auckland.1105  
 ZL1UAL Seales, P. J. M., "Ferndale", R.D.2, Broadwood, Northland.0553  
 ZL1UAM Crook, S. A., 4 Kelly Street, Rotorua.3201  
 ZL1UAN Ah-Chan, W. R., 61 Devon Street, Rotorua.3201  
 ZL1UAO Coppard, E. T., 11 Christensen Street, Waihi.2991  
 ZL1UAP Johnson, G. C., 49a Butley Drive, Pakuranga.1706  
 ZL1UAQ Carter, S. B., 10 Henare Place, Rotorua.3201  
 ZL1UAR Hishon, B. N., 39 Mears Road, Hamilton.2001  
 ZL1UAT Sowman, M. D., 48 Maraetai Village, R.D. 1, Mangakino.2391  
 ZL1UAU Clarke, K. B., 22 Farnborough Crescent, Mangere, Auckland.1701  
 ZL1UAV Nobbs, N. A., 85a King Edward Avenue, Bayswater, Auckland.1309  
 ZL1UAW Jansen, R. M., c/- J. A. Sinclair, 141 Woodham Road, Christchurch.8006  
 ZL1UAY Brunner, J., 13 Huia Street, Oneroa, Waiheke Island.1470  
 ZL1UBA Anderson, R. J.(Dr), 704 Mt Eden Road, Mt Eden, Auckland.1004  
 ZL1UBB Gardiner, R. S. A., 48 Glenvar Road, Torbay, Auckland.1310  
 ZL1UBC Bowring, A. E., 364 Thames Street, Morrinsville.2251  
 ZL1UBD Fuller, N. M., 152 Awaruku Road, Torbay, Auckland.1310  
 ZL1UBE Edwards, J. D., 147a Waipuna Road, Mt Wellington, Auckland.1106  
 ZL1UBG Millar, R. C., 82 Mount View Drive, Rotorua.3201  
 ZL1UBH Miller, R. N., 266 Whitaker Street, Te Aroha.2971  
 ZL1UBI Smith, N. C., Youngsons Road, Whakamarama, R.D. 6, Tauranga.3021  
 ZL1UBJ Findlay, D. K., Unit 2, 1 Burns Avenue, Takapuna, Auckland.1309  
 ZL1UBK Brown, G. A., 16a Ocean Road, Ohope.3454  
 ZL1UBL Falloon, G. A., 26 Glenshee Place, Highland Park, Pakuranga.1703  
 ZL1UBM Willis, B. E., 195 Taharepa Road, Taupo.3300  
 ZL1UBP Peryer, C. J., 66 Richard Farrell Avenue, Remuera, Auckland.1105  
 ZL1UBQ Crossett, T. A., 18 Raihara Street, Kaikohe.0400  
 ZL1UBR Stagg, C. D., 3 Mogridge Place, Springlands, Blenheim.7301  
 ZL1UBS Watchman, S. J., 81 Main Street, Blenheim.7301  
 ZL1UBT Sanne, G. T., 23 18th Avenue, Tauranga.3001  
 ZL1UBU Apel, E. A. M., 82 Wharf Road, Ostend, Waiheke Island.1470  
 ZL1UBV Withers, P. G., 187 Morningside Road, Whangarei.0101  
 ZL1UBW Libeau, F. L., 10 Asbury Crescent, Campbells Bay, Auckland.1310  
 ZL1UBX Finer, G. A., 27 Divich Avenue, Te Atatu, Auckland.1208



- ZL1UBY** Murphy, S. B., 14 Fallow Street, Browns Bay, Auckland.1310  
**ZL1UCA** Lang, R. G. C., 4 Goad Crescent, Hillsborough, Auckland.1004
- ZL1UCB** Stewart, R. S., 87 Tirimoana Road, Te Atatu, Auckland.1208  
**ZL1UCC** Biezebroek, J., 13 Robin Lane, Browns Bay, Auckland.1310  
**ZL1UCE** Warner, P. J., 36 Harvey Street, Taupo.3300  
**ZL1UCG** Ferguson, I. A., 36 Stanley Point Road, Devonport, Auckland.1309
- ZL1UCI** Pahl, E. W. T., 17 Landscape Road, Tauranga.3001  
**ZL1UCJ** Teviotdale, E. R. (Mrs), Fairbank Road, Rotorua.3201  
**ZL1UCK** Jane, T. R., Private Bag, Parakao Store, R.D.2, Whangarei.0121
- ZL1UCM** Parr, R., Paterangi Road, Te Awamutu.2400  
**ZL1UCP** Morrison, J. B., 81 Woodward Street, Taupo.3300  
**ZL1UCR** Jopling, W. F., 7 Lancaster Road, Birkdale, Auckland.1310  
**ZL1UCS** Stubbing, M. P., 37 Vanessa Crescent, Glendowie, Auckland.1105
- ZL1UCT** Taramoeroa, N. M., 11 Sydann Place, Kaitia.0500  
**ZL1UCU** Wright, J. R. (Miss), 28 Chorley Avenue, Massey, Auckland.1208
- ZL1UCW** Gravatt, B. P., 23 Boyce Avenue, Mt Roskill, Auckland.1004  
**ZL1UCX** Smith, K. L., 78 Pitt Street, Auckland.1001  
**ZL1UCY** Still, A. C., 44 Kennedy Road, Surfside, Waiheke Island, P.O.Box 2842, Auckland.1000
- ZL1UCZ** Tooke, B. H., R.D.2, Pahiatua.5471  
**ZL1UDA** Crompton, L. L., 130 Hone Heke Road, Kerikeri.0452  
**ZL1UDD** Mitchell, K. F., 3 Milten Place, Clarks Beach, South Auckland.1850
- ZL1UDE** Morey, E. R., 35 Elmwood Crescent, Hamilton.2001  
**ZL1UDF** Streiff, D. R., 18 Anzac Avenue, Morrinsville.2251  
**ZL1UDG** Wells, G. G., 2nd Avenue, Waihou.2972  
**ZL1UDJ** Duffell, A. H., 8 Grassy Downs Place, St Andrews, Hamilton.2001
- ZL1UDK** Marsh, L. A., Stringers Road, R.D. 1, Putaruru, P.O. Box 843, Tokoroa.2392  
**ZL1UDM** Stannard, E. A., Ngatira Road, Lichfield, R.D. 2, Putaruru.2371
- ZL1UDN** Rowe, S. W., 57 Valentine Street, Papakura.1703  
**ZL1UDO** Sinclair, S. C., 40 Sumner Street, Rotorua.3201  
**ZL1UDP** McKain, M., 59b Knighton Road, Hillcrest, Hamilton.2001  
**ZL1UDQ** Rawlings, G. K., 10a Seymour Road, Henderson.1208  
**ZL1UDR** McDonnell, T. R., 2b Faith Bullock Place, New Lynn, Auckland.1207
- ZL1UDS** Turton, G. J., 29 Centreway Road, Orewa.1461  
**ZL1UDT** McCorral-Smythe, E. G., 191 Wade River Road, Whangaparaoa.1463
- ZL1UDU** Fletcher, O. D., 1/9 Lonsdale Crescent, Rongotai, Wellington.6003  
**ZL1UDV** Frogley, C. D., 22 Mellons Bay Road, Howick, Auckland.1705
- ZL1UDW** Blackett, D. J., 56 Church Street, Northcote, Auckland.1309  
**ZL1UDY** Morgan, B. K., 62 Sunlands Drive, Manurewa, Auckland.1702
- ZL1UDZ** Greenman, P. M., 43a Wheturangi Road, One Tree Hill, Auckland.1105
- ZL1UEA** Woods, D. I., 23 Omokoroa Road, Omokoroa.3050  
**ZL1UEC** Hynds, K. E., 48 Caldwell Road, Woodbourne, Blenheim.7301
- ZL1UED** Smith, G. P., 12 Tonar Street, Northcote, Auckland.1309  
**ZL1UEF** Porter, J. W., 37 Torkar Road, Clarks Beach, R.D.4, Pukekohe.1800
- ZL1UEG** Lee, J. A., Oropi Road, Pyes Pa, R.D. 3, Tauranga.3021  
**ZL1UEH** Armstrong, M. J., 117 Woodlands Road, Opatiki.3472  
**ZL1UEI** Pritchard, R. E., 74 Meadowvale Avenue, Forrest Hill, Auckland.1310
- ZL1UEJ** Maindonald, P. G., 14 Te Ana Place, Linmore, Rotorua.3201
- ZL1UEK** Morecraft, I. G., 8 Valley Road, Pukekohe.1800  
**ZL1UEL** Abraham, G. J., 25 Churchill Street, Whakatane.3400  
**ZL1UEM** Rawlings, P. J., Whaki Valley, S. H. 14, Maungatapere.0250  
**ZL1UEN** Peters, J. W., 9 Taiporutu Place, Rotorua.3201  
**ZL1UEO** Porter, M. J., 37 Torkar Road, Clarks Beach, R.D.4, Pukekohe.1800
- ZL1UEQ** Mowatt-Wilson, K. A., 106 Moore Street, Northcote, Auckland.1309
- ZL1UER** Taylor, G. M., 805 Riddell Road, St Heliers, Auckland.1105  
**ZL1UES** Royds, P. I., 28 Ridge Street, Tauranga.3001  
**ZL1UET** Seymour, D. J., 11 Addington Avenue, Manurewa.1702  
**ZL1UEU** Taylor, M. L., 805 Riddell Road, St Heliers, Auckland.1105  
**ZL1UEW** Allen, C. W., R.D.1, Broadwood, Northland.0553  
**ZL1UEX** Turnwald, J. B., 8 Miller Street, Point Chevalier, Auckland.1002
- ZL1UEY** Voigt, R. E., Hawkins Crescent, Kerikeri.0452  
**ZL1UEB** McDonald, A., Bulltown Road, Waihi.2991
- ZL1UFC** Warburton, J. J., 670 Papamoa Beach Road, Papamoa.3070  
**ZL1UFD** Ward, B. J., 11 Melville Place, Onehunga, Auckland.1106  
**ZL1UFE** White, D. E. G., 34 Haseler Crescent, Howick, Auckland.1705
- ZL1UFG** Zeeders, P. J., R.D. 2, Te Aroha.2971  
**ZL1UFH** Nisbet, G. S., 18 Hillcrest Road, Kaikohe.0400  
**ZL1UFJ** Fortune, D. L., 129 Bleakhouse Road, Howick, Auckland.1705
- ZL1UFK** Biggar, D. R., 6 Pickwick Parade, Howick, Auckland.1705  
**ZL1UFL** Allen, G. D., 19 Robfey Crescent, Glendowie, Auckland.1105  
**ZL1UFN** Gallagher, I. R., Potts Road, R.D. 1, Howick.1731  
**ZL1UFP** Rumble, O. W., 5 Apollo Place, Rotorua.3201  
**ZL1UFQ** Nilsson, R. E., 52a Alison Street, Hamilton.2001  
**ZL1UFR** Williamson, D. H., 38a Waikato Esplanade, Ngaurawahia.2171
- ZL1UFS** Shaw, P. J., Selwyn Crescent, Ohaupo.2452  
**ZL1UFU** Frost, D. A., 183 Massey Street, Hamilton.2001  
**ZL1UFV** Gilbert, M. S., C/- Electricorp Hostel, 1 Iwiheke Place, Turangi.3371
- ZL1UFW** Nicholls, G. R. B., 7 Eastern Beach Road, Bucklands Beach.1704
- ZL1UFY** James, T. C., 12 McHardy Place, Glenfield, Auckland.1310  
**ZL1UFZ** Pirih, R. G., Hobsonville Officers' Mess, RNZAF Base, Auckland.1450
- ZL1UGA** Mulder, R. G., 44 Marvon Downs Avenue, Pakuranga, Auckland.1706
- ZL1UGB** Clark, S. P., c/- A.J.Snedden, Taurangaruru Road, R.D.3, Waiuku.1852
- ZL1UGC** Sturgess, J. G., c/- 18b Meadowlands Drive, Howick, Auckland.1705
- ZL1UGD** Parr, A. J., c/- Parr, R.D. 3, Ohaupo.2452  
**ZL1UGE** Benner, M. T., 18 Andes Avenue, Mangere Bridge, Auckland.1701
- ZL1UGF** Dempsey, J. M., 47 Elizabeth Street, Rotorua.3201  
**ZL1UGG** Hewer, P. K., 16 Adel Place, Weymouth.1702  
**ZL1UGH** Walsh, R. H. N., 84 Paraonui Road, Tokoroa.2392  
**ZL1UGI** Parsonage, P. C. J., 45a Takutai Avenue, Bucklands Beach, Auckland.1704
- ZL1UGK** Baumgartner, A. E., 92 Ardern Avenue, Whangaparaoa.1463
- ZL1UGL** Donaldson, P. N., 21 Macmurdo Avenue, Glenview, Hamilton.2001
- ZL1UGM** Mowry, A. K., c/- 9 Victoria Avenue, Whakatane.3400  
**ZL1UGN** Brown, E. L., 42a Kowhai Avenue, Upper Hutt.6401  
**ZL1UGO** Maxwell, L. S., 70 Sylvan Crescent, Te Atatu, Auckland.1208
- ZL1UGT** Gulliver, K. E., 2/114a Kervil Avenue, Te Atatu North, Auckland.1208
- ZL1UGU** Bird, C. A., 84 Whau Valley Road, Whangarei.0101  
**ZL1UGV** Cole, N. G., Kawi Road, Levin.5500  
**ZL1UGX** Armstrong, K. J., 12 Churchill Street, Pukekohe.1800  
**ZL1UGZ** Hannah, R. T., 61 Rhine Vale Close, Western Heights, Henderson.1208
- ZL1UHA** McLaren, G. C., 18a North Street, Whangarei.0101  
**ZL1UHG** Dentith, C. C. R., 60 Ngataranga Road, Devonport, Auckland.1309
- ZL1UHH** Carruthers, A. J., 61 Drake Street, Howick, Auckland.1705  
**ZL1UHK** Cavanaugh, F. N., 6 Harvey Place, Kohimarama, Auckland.1105
- ZL1UHL** Buchan, D. R., 29 Price Crescent, Mt Wellington, Auckland.1106
- ZL1UHM** Ellmers, L. A., 8 Alamein Avenue, Onerahi, Whangarei.0101  
**ZL1UHN** Jacobson, I. R. B. (Dr), 10c Holgate Road, Kohimarama, Auckland.1105
- ZL1UHO** Craig, G. G. P., 14 Jenner Road, Nelson.7001  
**ZL1UHQ** Smith, D. J., 156 Rangitoto Road, Papatoetoe.1701  
**ZL1UHR** Wendelborn, L. N., 46 Danbury Drive, Torbay, Auckland.1310
- ZL1UHS** Windram, M. R., 30 Pluto Place, Birkenhead, Auckland.1310
- ZL1UHT** Griffin, M. E., 12 Valley Road, Pukekohe.1800  
**ZL1UHU** Davey, A. J., 5 Capricorn Place, Browns Bay, Auckland.1310
- ZL1UHV** Tennent, R. C., 107a New Windsor Road, Avondale, Auckland.1207
- ZL1UHX** Brammer, P. A., Ashers Road, R.D. 5, Tauranga.3021  
**ZL1UHZ** Sutton, L. M., 207 Fergusson Drive, Thames.2801  
**ZL1UIA** Paton, J. S., 1 Tamariki Avenue, Kelston, Auckland.1207  
**ZL1UIB** Sykes, N. J., Hutt Hospital Nurses Home, High Street, Lower Hutt.6301
- ZL1UIC** Gilbert, A. J., 25 King Street, Cambridge.2351  
**ZL1UID** Gordon, S. L., 34 Pallant Street, Manurewa.1702  
**ZL1UIE** Carpenter, R. W., 22 Ridgewood Crescent, Auckland, P.O.Box 66105, Beach Haven.1330



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ZL1UIF Apol, J., 82 Wharf Road, Ostend, Waiheke Island.1470  
 ZL1UIG Abbot, S. A., 3a Pa Road, Pukerua Bay, Wellington.6252  
 ZL1UIH Ruiter, R., 43 Woolley Street, Christchurch.8007  
 ZL1UII Bridge, B. E. A., 17 Paddington Street, Glen Innes, Auckland.1106  
 ZL1UIK Shireman, D. V., 11 McEntee Road, Waitakere, Auckland.1231  
 ZL1UIM Campbell, R. S., 25 Eccles Place, Otara, Auckland.1701  
 ZL1UIO Frew, D. J., c/- 116a Osprey Drive, Tauranga.3001  
 ZL1UIP Glass, G. W., Gun Club Road, R.D.1, Pukekohe.1800  
 ZL1UIQ Wilken, R. M., Flat 3, 23 Hillcrest Avenue, Northcote, Auckland.1309  
 ZL1UIR Wilson, G. J., 21 Betley Crescent, Hamilton.2001  
 ZL1UIS Smiley, R. E., Pakiri Block Road, Tomorata, R.D. 4, Wellsford.1493  
 ZL1UIU Jenkins, S. E. M., 35 Robertson Street, Rotorua.3201  
 ZL1UIW Kearns, B. T., c/- M.M.Hill, Mangataipa Road, R.D.2, Okaihau.0455  
 ZL1UIY Stevenson, R. A., 761 East Coast Road, Browns Bay, Auckland.1310  
 ZL1UIZ Barnett, N. R., Pokuru, R.D.5, Te Awamutu.2400  
 ZL1UJA Morrissey, M. A., 19 Chadlington Street, Christchurch.8009  
 ZL1UJC Corrigan, T. L., 4/278 Birkdale Road, Birkdale, Auckland.1310  
 ZL1UJD Stewart, B. C., R.D. Larmers Road, P.O. Box 421, Kaitiaki.0500  
 ZL1UJE Bilch, A. B., House 10, Waipapa Village, Mangakino.2391  
 ZL1UJF Davies, L. J., 22 Brighton Road, Waihi Beach.2990  
 ZL1UJG Murphy, K. L. G., 8 Tamar Place, Newton, Hamilton., P.O. Box 19-044, Hamilton.2001  
 ZL1UJI Cohen, C. W., 27 Coroglen Avenue, Birkenhead, Auckland.1310  
 ZL1UJK Griffin, W. P., 4/6 Keys Terrace, St Heliers Bay, Auckland.1105  
 ZL1UJL Miller, R. P., 129 Church Street, Onerahi, Whangarei.0101  
 ZL1UJN Type, O. H. D., 14 Wanganui Avenue, Heme Bay, Auckland.1002  
 ZL1UJO Cranna, A. W., 47 Coronation Road, Morrinsville.2251  
 ZL1UJP Cobb, R. P., 8 Beaubank Road, Kelston, Auckland.1207  
 ZL1UJQ Meredith, R. W., 65 Westwood Street, Tauranga.3001  
 ZL1UJR Jarvis, I. H., 4 Catherine Crescent, Te Aroha.2971  
 ZL1UJS Ferguson, K. D., 3 Grove Lane, Pakuranga, Auckland.1706  
 ZL1UJU Runciman, S. R., 1/16 Parramatta Place, Howick, Auckland.1705  
 ZL1UJV Hayes, L. T., 161 Whangaparaoa Road, Orewa.1461  
 ZL1UJW Haigh, C. B., 12 Kauri Road, Oratia, Auckland.1207  
 ZL1UJX Clarkson, E. J., 4 Elizabeth Street, Patea.5181  
 ZL1UJY Hall, A. N., 26 Seymour Street, Christchurch.8004  
 ZL1UJZ McCarthy, J. A., 309 Mt. Eden Road, Auckland.1003  
 ZL1UKB Hayes, G. M., 161 Whangaparaoa Road, Orewa.1461  
 ZL1UKD Haigh, W. H., 12 Kauri Road, Oratia, Auckland.1207  
 ZL1UKE Halliwell, P. W., 67 Gladstone Road, Northcote, Auckland.1309  
 ZL1UKG Loveridge, P. R., 5 Mostyn Street, Kingsland, Auckland.1003  
 ZL1UKH Dancy, S. C., 56 Sunrise Avenue, Mairangi Bay, Auckland.1310  
 ZL1UKI Ujdur, R., Main Road, Awanui.0552  
 ZL1UKJ Morley, K. H. G., 258 Sunset Road, Mairangi Bay, Auckland.1310  
 ZL1UKK Tremain, S. L., 73 Parker Avenue, Levin.5500  
 ZL1UKL McLean, A. K., 10 Orpheus Place, Papakura.1703  
 ZL1UKM George, S. J., 43 Santiago Crescent, Sunnynook, Auckland.1310  
 ZL1UKN Massey, B. G., 2/38 Koromiko Street, New Lynn, Auckland.1207  
 ZL1UKO Ngakuru, D., 31 Wihongi Street, Kaikohe.0400  
 ZL1UKP McCafferty, W. M., 52 Woodside Avenue, Northcote, Auckland.1309  
 ZL1UKQ Lisi, D. A., 29 Baldwin Avenue, Rotorua.3201  
 ZL1UKS Cottle, K. J., 4 Truro Road, Cambridge, Wellington.6251  
 ZL1UKT Dancy, N. K., 35 McMillan Place, Howick.1705  
 ZL1UKU Ashton, N. J., 7 Cunliffe Place, Glenfield, Auckland.1310  
 ZL1UKV Watson, D. G., 203 Henderson Valley Road, Henderson, Auckland.1208  
 ZL1UKX Hobson, J., 20 Hobsonville Road, Auckland.1208  
 ZL1UKY Wastney, R. B. C., 458a Don Bucks Road, Massey, Auckland.1208  
 ZL1ULB Sall, G. G. R., Rerewhakaaitu Road, R.D. 3, Rotorua.3221  
 ZL1ULC Armstrong, D. J., 41 Wingrove Road, Rotorua.3201  
 ZL1ULD Faithfull, B. B., 43 Roseberry Avenue, Birkenhead, Auckland.1310  
 ZL1ULF Morris, D. G., 151 Portage Road, Papatoetoe.1701  
 ZL1ULG Winsor, M. A., 4 Wainone Place, Warkworth.1492

ZL1ULH Petersen, P. L., 1/19a Fontenay Street, Mt Albert, Auckland.1003  
 ZL1ULI Littlewood, B. R., 34 Mason Avenue, Pukekohe.1800  
 ZL1ULK Griffen, D. G., 12 Valley Road, Pukekohe.1800  
 ZL1ULM Heap, C. E., 11 View Mount, Stoke, Nelson.7001  
 ZL1ULN Goode, D. S., 40 Riverpark Crescent, Henderson, Auckland.1208  
 ZL1ULO Wykes, P. B., 61 Houchens Road, Hamilton.2001  
 ZL1ULP Heaslip, P. T. R., 127 Lake View Road, Hamilton.2001  
 ZL1ULS Duncan, R., 173 Taharepa Road, Taupo.3300  
 ZL1ULT Olliff, G. M., 5 Corlinka Place, Takarini., P.O.Box 51-557, Auckland.1730  
 ZL1ULV Turnwald, M. J., 29 Cliff View Drive, Greenbay, Auckland.1207  
 ZL1ULW Barnett, R. W., 6 Donald Street, Whangarei.0101  
 ZL1ULX Rasmussen, K. S., 54 Banbury Crescent, Hamilton.2001  
 ZL1ULZ Bradnam, R. J., 58 Fancourt Street, Meadowbank, Auckland.1105  
 ZL1UMA Wilton, L. A., Parr Road, R.D.10, Palmerston North.5321  
 ZL1UMC Twentyman, I. R., 3 Ayr Road, Pakuranga, Auckland.1706  
 ZL1UMD Pope, K. B., 19 Buckland Road, Tuakau.1892  
 ZL1UMG Wallace, L. G., 20 Lorne Street, Hamilton.2001  
 ZL1UMH Milnes, F. S., 26 Park Avenue, Tokoroa.2392  
 ZL1UMI Hardie, M. P., 44 Salisbury Road, Birkenhead, Auckland.1310  
 ZL1UMJ Allen, E. L., 452 Pt Chevalier Road, Pt Chevalier, Auckland.1002  
 ZL1UMK Winefield, C. S., 7 Kaka Crescent, Tokoroa.2392  
 ZL1UML Harland, W. R., 4 Tawa Place, Waiuku.1852  
 ZL1UMN Barnett, E. W., "Pokuru", R.D. 5, Te Awamutu.2400  
 ZL1UMO Hemsworth, K., 6 Freyberg Place, Howick.1705  
 ZL1UMQ Fielding, T., 26 Roosevelt Road, Rotorua.3201  
 ZL1UMS Allen, P. P., 59 Kerr Street, Devonport, Auckland.1309  
 ZL1UMU Anderson, E. D., 13 Simmonds Avenue, Mt Roskill, Auckland.1004  
 ZL1UMV Mackay, T. D., Leith Street, Dunedin.9001  
 ZL1UMX Moffat, J. A., Beach Road, Chucks Cove, Whangarei.0101  
 ZL1UMY Devey, R. F., 24 McKain Place, Hamilton.2001  
 ZL1UNB Galland, E. C., 19 Forrest Hill Road, Takapuna, Auckland.1310  
 ZL1UNC Morgan, H. J., 3 Sonia Avenue, Remuera, Auckland.1105  
 ZL1UND Sanders, R. W., Fairview Avenue, R.D.1, Albany, Auckland.1331  
 ZL1UNF West, G. J., 12 Surf Road, Whangaparaoa.1463  
 ZL1UNG Bowdler, R. M., 17 Kelston Street, New Lynn, Auckland.1207  
 ZL1UNH Lawrence, A. J., 34 Brentwood Avenue, Mt Eden, Auckland.1003  
 ZL1UNI Smith, S. R., 42 Ingram Street, Papakura, Auckland.1703  
 ZL1UNN Shaw, A. J., 1288 Papamoa Beach Road, Papamoa.3070  
 ZL1UNQ Evans, S. B., Gleeson Road, R.D.3, Waiuku.1852  
 ZL1UNS Bell, K., 7 June Place, Torbay, Auckland.1310  
 ZL1UNT Matthews, J. H., 13 Radcliffe Street, Whangarei.0101  
 ZL1UNU Kearney, C. R., 31 Dagenham Street, Manurewa.1702  
 ZL1UNV Henley, G. D., House 18, Atiamuri Village.3291  
 ZL1UNW Driver, M. J., Purerua, R.D. 1, Kerikeri.0452  
 ZL1UNX Horn, D. G., Tautiti Road, R.D. 3, Te Aroha.2971  
 ZL1UNY Hill, M. M., Mangataipa Road, R.D.2, Okaihau.0455  
 ZL1UOB West, B. D., 67 Woodlands Road, Opoiki.3472  
 ZL1UOD Furby, N., Whakamaru NZED Village, Mangakino.2391  
 ZL1UOF Hanley, B. D. C., 9 Donegal Crescent, Greenwoods, Napier.4001  
 ZL1UOG Martens, J., R.D.1, Mangonui.0557  
 ZL1UOH Ewen, D. T., 113 Main Road, Waipu.0254  
 ZL1UOJ Blakey, C. T., Ryans Road, R.D. 5, Wellsford, Auckland.1493  
 ZL1UOK Oldenburg, B., 46a Mains Avenue, Whangarei.0101  
 ZL1UOM Jane, M. I., 87 King Street, Waiuku.1852  
 ZL1UOO Bain, A. M., 58 George Crescent, Buckland, R.D. 2, Pukekohe.1800  
 ZL1UOP Schultz, T. F., Schultz Road, Waipu.0254  
 ZL1UOR Evans-McLeod, B. E., 21 Laurence Street, Gate Pa, Tauranga.3001  
 ZL1UOS Davy, K. J. P., Mataiawhera Street, Rotorua.3201  
 ZL1UOT Davy, C. J., Mataiawhera Street, Rotorua.3201  
 ZL1UOU Tottenham, R. D., 13a Andrew Road, Howick, Auckland.1705  
 ZL1UOV Saine, M. J., Main Road, Broadwood.0553  
 ZL1UOW Wells, E. L., 9 Tamaki Bay Drive, Pakuranga, Auckland.1706  
 ZL1UOZ Gates, N. L., 542 Whangaparaoa Road, Whangaparaoa.1463  
 ZL1UPA Schutz, W., 87a Hikutaia Road, Opoiki., P.O.Box 386, Opoiki.3472  
 ZL1UPD Grayson, A. W., 56 Kemp Road, Kerikeri.0452  
 ZL1UPF McKee, R. R., 9 Wattle Street, New Lynn, Auckland.1207  
 ZL1UPG Hopkins, D. B. J., Old Taupo Road, R.D.1, Putaruru.2371



- ZL1UPH** Roberts, J. B., 79 Nelson Street, Opatiki.3472  
**ZL1UPI** Gee, J. B., 19 Ben Alder Crescent, Tokoroa.2392  
**ZL1UPJ** Hooson, R. L., Main Dargaville Highway, R.D. 9, Whangarei.0121  
**ZL1UPK** Ramanui, D. T., 69 Hinemoa Street, Whakatane.3400  
**ZL1UPM** Dunne, G. M., 26 Treeways, Pakuranga.1706  
**ZL1UPN** McNaughton, G. B., 12 Pierce Road, Milford, Auckland.1309  
**ZL1UPO** Moore, H. J., 22 Pukehana Avenue, Epsom, Auckland.1003  
**ZL1UPP** Sinclair, D. J., 86 Alexander Street, Howick.1705  
**ZL1UPQ** Morris, S. A., Weston-Lea Drive, R.D. 2, Hamilton.2021  
**ZL1UPR** Rayner, B. J., 46 York Street, Hamilton.2001  
**ZL1UPS** Smialowski, K. P., 17 Rawhiti Street, Tauranga.3001  
**ZL1UPT** Donnelly, S. F., 37 Dunton Drive, Tauranga.3001  
**ZL1UPU** Adlam, R. A., 41 Kittyhawk Row, Bulls.5452  
**ZL1UPV** Edwards, P. F., 6 Melody Lane, Otahuhu, Auckland.1106  
**ZL1UPW** Tse, H. W. T., 32 Campbell Street, Taumarunui.2600  
**ZL1UPX** McCann, K. M., 35 Mahoe Road, Manunui.2651  
**ZL1UQC** Beazley, L., Post Office, Broadwood, Northland.0553  
**ZL1UQD** Christensen, A. L., 82 Donald Road, Kaitia.0500  
**ZL1UQE** Collis, M. V., Park Road, R.D.3, Waiuku.1852  
**ZL1UQG** Byrmand, S. J., 5 Te Anau Place, Tikipunga, Whangarei.0101  
**ZL1UQH** Martens, W., R.D.1, Mangonui.0557  
**ZL1UQI** Taylor, R. J., 29 Kitchener Street, Kaitia.0500  
**ZL1UQJ** Reinhard (Snr), P. A., Mangataraire, R.D.2, Mangonui.0557  
**ZL1UQK** Biggins, A. J., 16 Erin Street, Tikipunga, Whangarei.0101  
**ZL1UQL** Carson, A. R., 5c Mair Street, Whangarei.0101  
**ZL1UQN** Mead, P. G., 40 Silverstream Road, Whangarei.0101  
**ZL1UQO** Smith, S. R., 28 Easton Park Parade, Glenfield, Auckland.1310  
**ZL1UQP** Pivac, C. D., 4271 Great North Road, Henderson, Auckland.1208  
**ZL1UQQ** Huber, C., 80 Eugenia Rise, Totara Heights, Manukau.1701  
**ZL1UQR** Qureshi, C., 2 Koangi Street, Remuera, Auckland.1105  
**ZL1UQS** Adamson, D. J., 100 Donovan Street, Blockhouse Bay, Auckland.1207  
**ZL1UQU** Coombs, T. R., 13 Crispian Place, Weymouth, Auckland.1702  
**ZL1UQW** Wharton-Allen, R. J., 180 Shaw Road, Oratia, Auckland.1207  
**ZL1URA** Robson, P. A., Muir Road, R.D.1, Papakura.1733  
**ZL1URB** King, R. T., 4b Walpole Avenue, Manurewa, Auckland.1702  
**ZL1URC** Savage, L. W., 155 Rifle Range Road, Taupo.3300  
**ZL1URD** Savage, P. W., 155 Rifle Range Road, Taupo.3300  
**ZL1URE** Boxell, G. R., 60 Oliver Road, Kihikihi.2430  
**ZL1URG** Evans-McLeod, R. J., R.D.8, Frankton.2031  
**ZL1URH** Anderson, E. W., 69 Nevada Road, Hamilton.2001  
**ZL1URI** Edridge, A. L., 5 Warwick Avenue, Hamilton.2001  
**ZL1URJ** Smith, J. A., R.D.8, Frankton.2031  
**ZL1URK** Huntly Power Station Amateur Radio Club, (Trustee C. J. Allan), c/- Huntly Power Station, Private Bag, Huntly.2191  
**ZL1URL** Croonen, P. W., Thompson Road, Te Rahu.2400  
**ZL1URN** Green, N. R., 15a Windsor Drive, Tairua.2853  
**ZL1URO** Thomson, J. W., 31 Rotokauri Road, Newton, Hamilton.2001  
**ZL1URP** Brickland, R. L., 6 Ascot Avenue, Te Awamutu.2400  
**ZL1URQ** McBain, J. R., 92a Kamahi Street, Stokes Valley, Lower Hutt.6306  
**ZL1URR** Foote, A. S., 3 Fyvie Avenue, Tawa, Wellington.6203  
**ZL1URS** Ruysch, J., 82 Victoria Avenue, Whakatane.3400  
**ZL1URT** Kane, L. D. A., 54 Grey Street, Kawerau.3452  
**ZL1URU** Coppel, J. M., 128a James Street, Whakatane.3400  
**ZL1URV** McKenzie, R. C., 24 Henderson Street, Whakatane.3400  
**ZL1URW** McKenzie, T. M., 24 Henderson Street, Whakatane.3400  
**ZL1URY** Graham, N. L., 7 Bedford Place, Mt Maunganui.3002  
**ZL1URZ** Baldwin, K. W., 6 Karamea Street, Murupara.3272  
**ZL1USA** Tangohau, J. H., 6a Totara Street, Tokoroa.2392  
**ZL1USB** Spellman, M. P., 8 Glenfield Road, Rotorua.3201  
**ZL1USC** Mordecai, I. W., 1 Pedlar Street, Rotorua.3201  
**ZL1USD** Booth, O. R., 24a Margaret Road, Tauranga.3001  
**ZL1USF** Blackburn, P. W., 118 Third View Avenue, Beachlands, Auckland.1705  
**ZL1USG** Nettleingham, P., Matahui Road, R.D. 2, Katikati.3051  
**ZL1USH** Lewis, J. E., 47 Meadowland Street, Tauranga.3001  
**ZL1USI** Simpson, L. W., 21 Wiremu Street, Tauranga.3001  
**ZL1USJ** Goodall, W. R., 3/23 Robins Road, Judea, Tauranga.3001  
**ZL1USR** Cottle, J. N., Rainbow Falls Road, R.D.2, Kerikeri.0452

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<b>ZL2AB</b>	Wilkinson, D., 8a Koru Road, R.D. 4, New Plymouth.4621	<b>ZL2CZ</b>	Clibborn, G. H., 30 Kent Terrace, Taradale, Napier.4001
<b>ZL2AC</b>	Turnbull, P., 6 Steele Road, Hamilton.2001	<b>ZL2DC</b>	Chisholm, W. P., 86 Featherston Street, Palmerston North.5301
<b>ZL2AD</b>	Conroy, T. R., 2 Elzy Street, Blenheim.7301	<b>ZL2DD</b>	Scott, D. F., 68 Chatsworth Road, Silverstream.6402
<b>ZL2AE</b>	Lancaster, A. B., 47 Frank Wilson Terrace, New Plymouth.4601	<b>ZL2DF</b>	Fraser, D. L., 9 Bentinck Street, Upper Hutt.6401
<b>ZL2AF</b>	Wilkinson, J., 30 Lancaster Street, Levin.5500	<b>ZL2DG</b>	Bayley, G. S., 902 Churchill Street, Hastings.4201
<b>ZL2AG</b>	Bruce, J. R., c/- J. C. Bruce, No. 1 R.D., Taihape.5163	<b>ZL2DH</b>	Welsh, J. W., 63 McKinnon Loop, Te Anau.9681
<b>ZL2AH</b>	Reed, W. St. J., 11 Wood Street, Upper Hutt.6401	<b>ZL2DI</b>	Shortt, J. H., 80 Savage Crescent, Palmerston North.5301
<b>ZL2AI</b>	1st Kelburn 1909 Scout Group Radio Club, (Trustee T.R.Millar), 39 Ngaio Road, Kelburn, Wellington.6005	<b>ZL2DL</b>	MacDonald, J. L., 32 Grey Street, Marton.5151
<b>ZL2AJ</b>	Parminster, H. V., 121 The Ridgeway, Wellington.6002	<b>ZL2DM</b>	Christian, T. C., 41 Te Whiti Street, Kilmorie, Wellington.6003
<b>ZL2AK</b>	Rowson, L. T., 141 Tukapa Street, Westown, New Plymouth.4601	<b>ZL2DN</b>	Lucas, D. C., 38 Maitland Avenue, Stoke, Nelson.7001
<b>ZL2AL</b>	Jennings, L. F., 203 Beresford Street, Hastings.4201	<b>ZL2DO</b>	Wiffen, M. A., 138 Beach Road, Haumoana.4250
<b>ZL2AM</b>	Shirley, J. R., "Burnside", P.O.Box 19, Bay View, Napier.4151	<b>ZL2DP</b>	Budd, G. L., 59 The Drive, Tawa, Wellington.6203
<b>ZL2AN</b>	Shepherd, E. R., Waimarama Beach, P.O.Box 8333, Havelock North.4231	<b>ZL2DQ</b>	Spring-Rice, B. N., Banksia Place, R.D. 4, Rotorua.3201
<b>ZL2AO</b>	Finlay, E. M., Resident 8, Makara Radio, Wellington.6005	<b>ZL2DR</b>	Danrell, R. A., 43 Matai Street, Waikanae.6154
<b>ZL2AP</b>	Eade, A., 137 Winchester Street, Levin.5500	<b>ZL2DS</b>	Horowhenua Branch NZART (Inc), see Branch Directory
<b>ZL2AQ</b>	Gabites, J. F., 83 Seaview Road, Paraparaumu Beach.6153	<b>ZL2DT</b>	Cordy, J. G. G., 50 Strathmore Avenue, Wellington.6003
<b>ZL2AR</b>	Central Hawkes Bay Branch NZART (Inc.), see Branch Directory	<b>ZL2DU</b>	Millane, M. L., 132 Campbell Street, Karori, Wellington.6005
<b>ZL2AS</b>	Stevens, P. S., 913 Victoria Street, Hastings.4201	<b>ZL2DV</b>	Campbell, B. E., 60b Kings Road, Panmure, Auckland.1106
<b>ZL2AT</b>	Beale, E. W., 301 Frimley Avenue, Hastings.4201	<b>ZL2DW</b>	Hughes, W. J. T., 25 Cobden Street, Gisborne.3801
<b>ZL2AU</b>	Wilson, W. C., 21 London Road, Korokoro, Petone.6303	<b>ZL2DX</b>	Patchett, G. P., 223 Sutherland Road, Lyall Bay, Wellington.6003
<b>ZL2AV</b>	Paterson, R. A., 15 Mariner Street, Palmerston North.5301	<b>ZL2DY</b>	Parsons, A. D., 30 John Street, Upper Hutt.6401
<b>ZL2AW</b>	Bonnington, R. L., Cable Bay R.D. 1, Nelson.7021	<b>ZL2DZ</b>	Brasell, C. R., "Klondyke", P.O.Box 24, Coalgate, Canterbury.8171
<b>ZL2AY</b>	McComb, D. R., 20 Montrose Street, Nelson.7001	<b>ZL2FA</b>	Butler, G. B., 46 Winter Street, Gisborne.3801
<b>ZL2AZ</b>	Clarkson, T. R., 35 Walter Road, Lowry Bay, Eastbourne.6304	<b>ZL2FB</b>	Mathews, S. C., 36 Peters Avenue, Palmerston North.5301
<b>ZL2BA</b>	Grantham, T. C., 22 Boltons Road, Masterton.5901	<b>ZL2FC</b>	Coutts, C. G., 35 Daniel Street, Masterton.5901
<b>ZL2BB</b>	Bradshaw, F. R., 40 Simla Avenue, Havelock North.4201	<b>ZL2FD</b>	Butel, D., 39 Mulberry Street, Lower Hutt.6301
<b>ZL2BC</b>	Gentry, K. R., 8 Chudleigh Grove, Churton Park, Wellington.6004	<b>ZL2FE</b>	Falkner, B. A., 49 Karina Terrace, Palmerston North.5301
<b>ZL2BD</b>	Brown, G. E., 35 Chamberlain Street, Nelson.7001	<b>ZL2FG</b>	Torrie, A. W., 114 Blue Pacific Parade, Riversdale Beach.5970
<b>ZL2BE</b>	Woollard, C. J., 16 Caemavon Drive, Flaxmere, Hastings.4201	<b>ZL2FH</b>	Garth, P. E., Te Koawa Station, R.D. 2, Te Karaka, Gisborne.3821
<b>ZL2BF</b>	Wyse, A. J., P.O. Box 9288, Wellington.6031	<b>ZL2FI</b>	Gaunt, P. J., 28 Balliol Drive, Tawa, Wellington.6203
<b>ZL2BG</b>	Williams, P. G., Mangakuri, R.D. 14, Havelock North.4231	<b>ZL2FJ</b>	Withy, D. G., 16 Kenmore Street, Newlands, Wellington.6004
<b>ZL2BH</b>	McGregor, I. J., 20 Davis Crescent, Upper Hutt.6401	<b>ZL2FK</b>	Huggins, W. P., Te Karaka Rest Home, 60 Weka Street, Miramar, Wellington.6003
<b>ZL2BJ</b>	Gibson, G. A., 14 Seddon Street, Aramoho, Wanganui.5001	<b>ZL2FL</b>	Kuring, K. C., 60b Eatwell Avenue, Paraparaumu Beach.6153
<b>ZL2BK</b>	Simpson, G. R., 8a Faulkland Drive, Blenheim.7301	<b>ZL2FM</b>	Burr, E. J., 87 Stanley Road, Gisborne.3801
<b>ZL2BL</b>	Beswick, D. J., 283 Happy Valley Road, Wellington.6002	<b>ZL2FP</b>	George, S. B., 6 Seymour Street, Waiara.4656
<b>ZL2BM</b>	Nankivell, F. R., 133 Main Road, Bay View, Napier.4001	<b>ZL2FP</b>	Burgoynes, T. A., 3 Shakespear Walk, Nelson.7001
<b>ZL2BN</b>	Tatton, L. A., 89 Firstview Avenue, Beachlands, Auckland.1705	<b>ZL2FR</b>	Dyett, N. D., 71 Coutts Street, Wellington.6003
<b>ZL2BO</b>	Simpson, W. N., 6 Krammer Street, Motueka.7161	<b>ZL2FS</b>	Priest, J. R., 26 Woolcombe Terrace, New Plymouth.4601
<b>ZL2BP</b>	Walker, J. G., 106 Salisbury Road, Richmond, Nelson.7002	<b>ZL2FT</b>	Dixon, C. W., 76 Lahore Street, Wairoa.4192
<b>ZL2BQ</b>	Mitchell, A. W., 3 Townsend Road, Miramar, Wellington.6003	<b>ZL2FU</b>	Hird, E. J., 61 Mantell Street, Seatoun, Wellington.6003
<b>ZL2BR</b>	Hunt, A. F., 4 Manu Crescent, New Plymouth.4601	<b>ZL2FV</b>	Richter, B. E., 50 Burns Avenue, Palmerston North.5301
<b>ZL2BS</b>	Ward, T. W., P.O. Box 4127, New Plymouth.4600	<b>ZL2FW</b>	Harbridge, L. W., 20 Mascot Street, Tawa.6203
<b>ZL2BT</b>	Tanner, A. R., Karere Road, Kairanga, Longburn.5330	<b>ZL2FX</b>	Wright, R. J., Flat 34 181#183 Daniell Street, Newtown, Wellington.6002
<b>ZL2BU</b>	Lane, F. J. K., 178a 11th Avenue, Tauranga.3001	<b>ZL2FY</b>	Harkett, R. J., 41 Chesterton Street, Johnsonville, Wellington.6004
<b>ZL2BV</b>	Tozer, B. R., 15 Manly Park Avenue, Whangaparaoa.1463	<b>ZL2FZ</b>	Reeve, R. P., 129 South Road, Masterton.5901
<b>ZL2BW</b>	Harling, D. S., 142 Quebec Road, Nelson.7001	<b>ZL2GA</b>	Johnson, D. F. T., 15 Field Street, Upper Hutt.6401
<b>ZL2BX</b>	Creswell, A. F., 17 Aliwa Street, Petone.6303	<b>ZL2GC</b>	Ruane, M., 9 Heather Grove, Fairfield, Lower Hutt.6301
<b>ZL2BY</b>	Berry, R. E., 29 Benares Street, Khandallah, Wellington.6004	<b>ZL2GD</b>	Beeby, R. E., 1 Pukatea Street, Eastbourne.6304
<b>ZL2BZ</b>	Dunn, A. E., 31 York Street, Levin.5500	<b>ZL2GF</b>	Cooper, C., 275 Muriwai Road, Eastbourne, Wellington.6304
<b>ZL2CA</b>	Vernall, R. B., 90 Campbell Street, Karori, Wellington.6005	<b>ZL2GG</b>	Smith, W. T., 17 Oxford Street, Palmerston North.5301
<b>ZL2CC</b>	Rowe, C. F., 28 Clyma Street, Upper Hutt.6401	<b>ZL2GH</b>	Attawell, B. E., 19 Iranui Road, Gisborne.3801
<b>ZL2CD</b>	Hamer, W. R., 187 Seatoun Heights Road, Miramar, Wellington.6003	<b>ZL2GI</b>	Banks, K. G., 29 Taunton Place, Stoke, Nelson.7001
<b>ZL2CE</b>	Bicknell, J. A., Papawai Road, Greytown.5953	<b>ZL2GJ</b>	Pearce, R. A., 17 Lake Ferry Road, R.D. 2, Featherston.5952
<b>ZL2CG</b>	Cornick, M. L., 23 Oakley Avenue, Marton.5151	<b>ZL2GK</b>	Motueka Branch NZART, see Branch Directory
<b>ZL2CH</b>	McGrath, F. P., 4 Cautley Street, Richmond, Nelson.7002	<b>ZL2GL</b>	Dormer, F. G., 18 Marquet Place, Tairua via Thames.2853
<b>ZL2CI</b>	Sinton, A. J., 6 Chester Street, Greenmeadows, Napier.4001	<b>ZL2GM</b>	Minshall, G. T., 8 Woodward Street, Taupo.3300
<b>ZL2CJ</b>	Hitchcock, R. F., 5 McArthur Street, Palmerston North.5301	<b>ZL2GN</b>	Reakes, G. C., 5 Paisley Street, Levin.5500
<b>ZL2CK</b>	Fleming, J. C., 9 Park Lane, Waitara.4656	<b>ZL2GO</b>	Fownes, H. G., 71 Rimu Road, Paraparaumu.6152
<b>ZL2CM</b>	Hastings, F. W., 114 Waterloo Road, Lower Hutt.6301	<b>ZL2GP</b>	Ru Bay, J., P.O.Box 5063, Palmerston North.5300
<b>ZL2CN</b>	Grover, W. E., 57 Buller Street, New Plymouth.4601	<b>ZL2GQ</b>	Morgan, R. S. H., 18 Hammerton Street, Naenae, Wellington.6301
<b>ZL2CO</b>	Neumer, G., 48 Ava Street, Petone.6303	<b>ZL2GR</b>	Stiles, G. R., 376b Hardy Street, Nelson.7001
<b>ZL2CP</b>	Cormack, J. B. B., 63 Queenwood Road, Levin.5500	<b>ZL2GS</b>	Henry, A. S., 2c Crescent Street, Richmond.7002
<b>ZL2CQ</b>	Henderson, J. M., Howie Road, Fern Flats, R.D. 2, Marton.5151	<b>ZL2GT</b>	Napier Amateur Radio Club Contest Group, (Trustee ZL2AHC), c/- Stan White, 20 Hanley Crescent, Napier.4001
<b>ZL2CR</b>	Miller, N., 36 Stanley Street, Berhampore, Wellington.6002	<b>ZL2GU</b>	Hanley, R. H., 15 Pirie Street, Palmerston North.5301
<b>ZL2CS</b>	Anderson, B. R. S., 13 Pembroke Road, Stratford.4700	<b>ZL2GV</b>	Hutton, J. D., Huttons Newton Mall Pharmacy, Grandview Road, Hamilton.2001
<b>ZL2CU</b>	Bell, C., 22 Oswald Street, Gisborne.3801	<b>ZL2GW</b>	Beatson, A. P., Orinoco, R.D. 1, Motueka.7161
<b>ZL2CV</b>	Fulton, J. M. L. H., 60 Shelbourne Street, Nelson.7001	<b>ZL2GX</b>	White, J. M., 152 Lytton Road, Gisborne.3801
<b>ZL2CW</b>	Gilbert, G. B., 18 Edgcombe Street, Newlands, Wellington.6004	<b>ZL2GY</b>	Taillie, L. I., Old Post House, Te Kemara Avenue, Pahia.0252



- ZL2GZ** Panckhurst, K. D., 117 Whitaker Street, Gisborne.3801  
**ZL2HA** Gentry, L. J. (Mrs), 8 Chudleigh Grove, Churton Park, Wellington.6004  
**ZL2HB** Stephens, D. A., 2 Riverbend Road, Napier.4001  
**ZL2HC** Bradbury, N. H., 19 Avon Street, Waterloo, Lower Hutt.6301  
**ZL2HD** Andrews, J. R., 66 Khandallah Road, Khandallah, Wellington.6004  
**ZL2HE** Law, A. E., Umutaoroa, R.D. 8, Dannevirke.5491  
**ZL2HF** French, W. B., 4 Rata Place, Masterton.5901  
**ZL2HG** Breen, P. W., Poraiti, R.D. 2., Napier.4021  
**ZL2HH** Simpson, L. J., 6b Seddon Street, Waikanae.6154  
**ZL2HI** Willis, M. W., Harpoon Hill, Whangaparapara, Great Barrier Island.1470  
**ZL2HJ** Garrett, W. E. A., 128 Pendarves Street, New Plymouth.4601  
**ZL2HK** Wakely, J. R., 109 Mt View Road, Wanganui.5001  
**ZL2HN** Dayman, F. R., 31 Fergusson Drive, Gisborne.3801  
**ZL2HO** Warner, B. A., 23 City View Grove, Harbour View, Lower Hutt.6301  
**ZL2HP** Kendrick, T. J., 3 Ascot Street, Palmerston North.5301  
**ZL2HQ** Harris, G. F., 15 Montana Road, Upper Hutt.6401  
**ZL2HS** Shennan, C. V., Highway 3, P.O. Box 30, Turakina.5152  
**ZL2HT** Hooker, D. D., 1a Reeve Drive, Havelock North.4201  
**ZL2HV** Hutt Valley Branch NZART (Inc.), see Branch Directory  
**ZL2HW** Marsh, N. O., 16 Harris Street, Waitara.4656  
**ZL2HX** Cossgrave, D. A., 7 Torquay Terrace, Wellington.6002  
**ZL2HY** Green, W. J., 6 Ash Street, Gisborne.3801  
**ZL2IB** Dannevirke Branch NZART (Inc.), see Branch Directory  
**ZL2IC** Sharman, L. A., 43 Tom Parker Avenue, Napier.4001  
**ZL2IE** Millard, O. J., Main Road, Clive.4152  
**ZL2IF** Rolls, E. G., 2/14 Arapiki Road, Stoke, Nelson.7001  
**ZL2IG** Tombs, E. P., Ihakara, R.D. 1, Levin.5500  
**ZL2IH** Selwood, G. R., 62b Mazengarb Road, Paraparaumu Beach.6153  
**ZL2II** Caldwell, D. G., 88 Jubilee Road, Khandallah, Wellington.6004  
**ZL2IJ** Eastwood, R. J., 39a College Street, Wanganui.5001  
**ZL2IK** Mulhare, P. J., 88 Tiverton Road, Blockhouse Bay, Auckland.1207  
**ZL2IL** Pottinger, R. S., 32 De Menech Grove, Avalon, Lower Hutt.6301  
**ZL2IM** McLea, Q. F., 322 Devon Street West, New Plymouth.4601  
**ZL2IN** Crompton, R. E., 27 Kapiti Crescent, Titahi Bay.6202  
**ZL2IO** Collins, E. S., Main Road, Wakapuka, R.D. 1, Nelson.7021  
**ZL2IP** Treeby, R. J., 7 Turehu Street, New Plymouth.4601  
**ZL2IQ** Cassey, R., 9 Alabama Road, Blenheim.7301  
**ZL2IR** Cuttriss, N. A., 40 Redvers Drive, Belmont, Lower Hutt.6301  
**ZL2IS** Were, G., 180 Regan Street, Stratford.4700  
**ZL2IT** Lilley, E. C., 1b Harvey Road, Napier.4001  
**ZL2IU** Purdey, R. G., 7 Bermuda Grove, Paraparaumu.6152  
**ZL2IV** Gorman, D. D., 15 Lawson Place, Mt Victoria, Wellington.6001  
**ZL2IW** Carter, R. S., 16a Farmar Street, Blenheim.7301  
**ZL2IX** Parker, C. H., Tiraumea Road, Pahiatua.5471  
**ZL2IY** Gorman, W. D., 11 David Crescent, Karori, Wellington.6005  
**ZL2IZ** Bartlett, J. R., 165 Valley Road, Gisborne.3801  
**ZL2JA** Wanganui Branch NZART (Inc.), see Branch Directory  
**ZL2JB** Bullen, W. G., 11 Tasman Street, New Plymouth.4601  
**ZL2JC** Cook, S. A., Awakino Road, R.D. 1, Te Kuiti.2500  
**ZL2JD** Duncan, J. R., 7 Crown Hill, Onepoto, Titahi Bay.6202  
**ZL2JE** Morison, R. D., 40 Kiriwai Road, Paramata.6250  
**ZL2JF** Pickering, L. D., c/- 138 Cranford Street, Christchurch.8001  
**ZL2JG** Anderson, G. A., 20 Leybourne Avenue, Waikanae.6154  
**ZL2JH** Nicol, D. S., 12 Hewitts Road, R.D. 1, Linton.5450  
**ZL2JI** Thompson, J. P., 1 Healey Place, Gisborne.3801  
**ZL2JJ** Byam, S. P., R.D. 2, Waverley.5182  
**ZL2JK** Butler, D. B., Gorge Road, R.D. 1, Otaki.6171  
**ZL2JL** Prime, D. R., 57 Waerenga Road, Otaki.6171  
**ZL2JM** Moore, J. A., 1 Denbigh Street, Feilding.5600  
**ZL2JN** Hodder, A. A., 394 Somme Parade, Wanganui.5001  
**ZL2JO** Lambert, N. H., 7 Sunbrae Drive, Silverstream.6402  
**ZL2JP** Hinchcliffe, R. G., Castlepoint Delivery Centre, Castlepoint, Wairarapa.5970  
**ZL2JQ** White, J. T., 121a Tasman Street, Nelson.7001  
**ZL2JS** Black, I. W., 46 Harris Street, Marton.5151  
**ZL2JT** Mackie, J. B., 8 Tarata Street, Stoke, Nelson.7001  
**ZL2JV** Crawford, C. R. H., 20 Chapman Crescent, Naenae, Lower Hutt.6301  
**ZL2JX** Hodgson, E. R., 20 Colombo Street, Palmerston North.5301  
**ZL2JY** Vincent, G. C., 91 Derby Street, Feilding.5600  
**ZL2JZ** Jury, E. G., "Glendower", Ponatahi Road, R.D. 2, Carterton.5951  
**ZL2KA** Blakeley, P. W., 78 Upland Road, Kelburn, Wellington.6005  
**ZL2KB** Kapiti Branch 69 NZART (Inc.), see Branch Directory  
**ZL2KC** Moess, C. R., 13 Churchill Avenue, Feilding.5600  
**ZL2KD** Shepherd, D. A. C., 13 View Road, Titahi Bay.6202  
**ZL2KE** Smith, W. A. D., P.O. Box 72, Urenui.4655  
**ZL2KF** Fellows, S. K., 21 Harbourview Road, Wellington.6005  
**ZL2KG** Sharland, K. O., Kina Beach Road, R.D. 1, Upper Moutere.7152  
**ZL2KI** Armstrong, M. W., 58 Winchester Street, Levin.5500  
**ZL2KJ** Casey, B. F., 45 Ames Street, Paekakariki.6151  
**ZL2KK** Kerr, R. F., 149 Tainui Terrace, Te Awamutu.2400  
**ZL2KL** Johns, T. H., 4 Sydney Place, Wanganui.5001  
**ZL2KM** Robertson, G. A., 34 Upham Street, Taradale.4001  
**ZL2KN** Trainor, A. P. T., 118 Dimock Street, Titahi Bay, Wellington.6202  
**ZL2KO** Manawatu Branch NZART Inc., see Branch Directory  
**ZL2KP** Lowe, E. E., 17 Ellesmere Crescent, Palmerston North.5301  
**ZL2KR** Cole, K. R., 10b Pohutukawa Crescent, Raumati Beach.6150  
**ZL2KS** Marlborough Branch NZART Inc., see Branch Directory  
**ZL2KT** Brooker, R. G., Ikanui Road, Hastings.4201  
**ZL2KU** Donald, R. J., Long Bay Road, P.O. Box 36, Coromandel.2851  
**ZL2KV** Martin, C. J. T., Mountain Road, Inglewood.4651  
**ZL2KX** Wickstead, C. G., 1/25 Avondale Road, Taradale, Napier.4001  
**ZL2KY** Conner, M. G., 3 Oxford Crescent, Upper Hutt.6401  
**ZL2KZ** Kingston, G., 53 Tannadyce Street, Wellington.6003  
**ZL2LB** Milner, M. O., 38 Lincoln Avenue, Tawa, Wellington.6203  
**ZL2LC** Chapman, M. A., 21 Waikato Street, Island Bay, Wellington.6002  
**ZL2LD** Munn, P. M., 111 Essex Street, Masterton.5901  
**ZL2LE** Pinhey, J., 210 Tukapa Street, New Plymouth.4601  
**ZL2LF** Dingley, P. D., 8 Vogel Place, Napier.4001  
**ZL2LG** Dunning, S. P., 17 Kanpur Road, Wellington.6004  
**ZL2LH** Sharland, R. T., 409 Wakefield Quay, Nelson.7001  
**ZL2LI** Simpson, C. J. C., 125 Broderick Road, Johnsonville, Wellington.6004  
**ZL2LJ** O'Grady, P. L., 8 Cambridge Street, Tawa.6203  
**ZL2LM** Merrick, L. F., 22 Bledisloe Avenue, Nelson.7001  
**ZL2LN** Davenport, N. B., 3 Blenheim Place, Motueka.7161  
**ZL2LO** Kerr, C. M., 99 Mt View Road, Wanganui.5001  
**ZL2LQ** Coote, D., 19 Corlett Road, Pimmlerton.6251  
**ZL2LR** Dinnan, E. J., 6 Warren Street, Paparangi, Wellington.6004  
**ZL2LS** Kirkland, F. S., Petane Grange, R.D. 2, Napier.4021  
**ZL2LV** Ryan, J. F., 44 Sylvan Avenue, Waikanae.6154  
**ZL2LW** Wright, L. J., 14 Tennyson Street, Upper Hutt.6401  
**ZL2LX** Motion, R., 80 Haukore Street, Maungatapu, Tauranga.3001  
**ZL2LZ** Rumsey, J. R., 51 Freyberg Street, Lyall Bay, Wellington.6003  
**ZL2MA** McGuire, K. J., 14 De Castro Place, Titahi Bay.6202  
**ZL2MB** Montgomerie, J. C., 11 Gardiner Place, Havelock North.4201  
**ZL2MC** Waikanae District Museum Radio Club, (Trustees: ZL2DR, ZL2JG), 9 Elizabeth Street, Waikanae.6154  
**ZL2MD** Mills, C. W., 43 Great North Road, Wanganui.5001  
**ZL2ME** Roe, C. R., 9a Churchill Street, Kaikoura.7351  
**ZL2MG** Waimarino Branch NZART Inc., see Branch Directory  
**ZL2MH** Neal, E. W., 116a Waerenga Road, Otaki.6171  
**ZL2MI** McCulloch, J. G., 81 Kemp Street, Kilbirnie, Wellington.6003  
**ZL2MJ** Perry, F. G., P.O. Box 124, Otaki.6171  
**ZL2MK** Puddy, R. D., 18a Hammond Road, Taradale, Napier.4176  
**ZL2ML** Castles, C. R. M., 2 Kauri Street, Gisborne.3801  
**ZL2MM** Adcock, H. F., 78 Opaki Road, Masterton.5901  
**ZL2MN** Meyer, L. H., 23 Canterbury Street, Tamatea, Napier.4001  
**ZL2MO** Brown, N. L., 72 Kapanui Road, Waikanae.6154  
**ZL2MQ** Crook, P. M., 6 Bale Place, Havelock North.4201  
**ZL2MR** Blair, D. I., 9 Dickson Crescent, Wanganui.5001  
**ZL2MS** Strange, D. E., 19 Perry Street, Heretaunga, Upper Hutt.6401  
**ZL2MT** Raiton, G. H., 85a Pleasant Road, Glen Eden, Auckland.1208  
**ZL2MU** Jupp, A. L., 1322 Devon Road, 42 R.D. 1, Waitara.4656  
**ZL2MV** Fail, D. G., 68 Brightwater Terrace, Palmerston North.5301  
**ZL2MW** Clark, M. J., 115 Maxwell Road, Blenheim.7301  
**ZL2MX** Bellini, B. C., 11 Handley Place, New Plymouth.4601  
**ZL2MY** Spackman, T. J., 224 Parklands Avenue, New Plymouth.4601  
**ZL2MZ** Pool, B. L., 9 Rembrandt Avenue, Linden.6203  
**ZL2NA** Shanks, J. M., 21 Pokohiwi Road, Normandale, Lower Hutt.6301  
**ZL2NB** Barlow, F. E., 15 Sutherland Crescent, Metrose, Wellington.6003  
**ZL2NC** Lethbridge, P. J., 7 Salcombe Terrace, New Plymouth.4601



# **ZL2ND**

**ZL2ND** Shaw, A. J., "Little Broom", R.D. 2, Napier.4021  
**ZL2NF** Frazer, G. C., 14 Hinton Road, Napier.4001  
**ZL2NG** Aked, M. S., 10 Vaulduse Avenue, Paraparaumu Beach.6153  
**ZL2NH** Bayly, R. B., Wainui Road, Gisborne.3801  
**ZL2NI** Dumbleton, G. W., 6 Naughton Terrace, Kilbirnie, Wellington.6003  
**ZL2NJ** Tarrant, P. E., 104b Main Street, Foxton.5551  
**ZL2NK** Donaldson, B. J., 184 Normandale Road, Lower Hutt.6301  
**ZL2NL** Clinch, V. J., 20 Scotland Street, Picton.7372  
**ZL2NM** Stewart, H. A. S., 35 Lockwood Road, R.D. 5, Palmerston North.5321  
**ZL2NN** Pye, J. C., 33 Wyndham Road, Pinehaven, Upper Hutt.6402  
**ZL2NO** Grace, K. E., 9 Te Ara Road, Pukerua Bay.6252  
**ZL2NP** Smith, F. J. A., 21 Otatara Road, Taradale, Napier.4001  
**ZL2NQ** Evaroa, D. T., Appleby Road, R.D. 7, Drury, Auckland.1752  
**ZL2NR** Rubery, T. F., 3 McDonald Place, Marton.5151  
**ZL2NS** Douche, W. P., 347 Ohiro Road, Brooklyn, Wellington.6002  
**ZL2NU** Budd, L. A., 69 Tahuri Street, Manaia, Taranaki.4851  
**ZL2NV** Johnston, A. F., 21 Brooklands Road, Atawhai.7001  
**ZL2NX** Kiwi Contest Group, (Trustee ZL2BNJ), c/- M. J. French, 10 Gurney Road, Lower Hutt.6301  
**ZL2NY** Weissberg, B. G., Otahi Road, R.D. 9, Whangarei.0121  
**ZL2NZ** Milner, G. L. (Mrs), 38 Lincoln Avenue, Tawa, Wellington.6203  
**ZL2OA** Wairapa Branch NZART (Inc.), see Branch Directory  
**ZL2OB** Pye-Smith, J., 161a Milton Street, Nelson.7001  
**ZL2OC** Lambie, W. L., 12 Foster Street, Avalon.6301  
**ZL2OD** Barnes, W. D., 142 Renall Street, Masterton.5901  
**ZL2OE** Logan, D. J., 42 Horokiki Road West, Newlands, Wellington.6004  
**ZL2OF** Pentelow, L. C., Kina Road, No 1 R.D., Opunake.4653  
**ZL2OG** Chisnall, R. R., 71 Lakings Road, Blenheim.7301  
**ZL2OH** McMillan, W. I., 7 Hillary Street, Tawa.6203  
**ZL2OJ** Sainsbury, R. P., 34 York Street, Masterton.5901  
**ZL2OK** Dickson, A. J., 193 Park Road, Palmerston North.5301  
**ZL2OL** Sigglekow, R. W., 9 Raukawa Street, Stokes Valley.6306  
**ZL2OM** Cooksey III, W. F., 112 Oak Street, Gisborne.3801  
**ZL2ON** Symons, R. T., 3/55 Church Road, Taradale, Napier.4001  
**ZL2OO** Smith, A. H., Rangiotu-Rongotea Road, R.D. 7, Palmerston North.5321  
**ZL2OP** Scambary, G. E., 54 Athlone Crescent, Lower Hutt.6301  
**ZL2OQ** Prichard, G. H., 14 Queen's Road, New Plymouth.4601  
**ZL2OR** Osborne, D. O., 9 Greenock Place, Palmerston North.5301  
**ZL2OS** Lonsdale, J., 41 Maxwell Avenue, Wanganui.5001  
**ZL2OV** Lee, W. C., 11 Henderson Street, Karori, Wellington.6005  
**ZL2OZ** Martin, O. W., 21b Cadman Street, Dannevirke.5491  
**ZL2PA** Leele, J. B., 22 Lansdowne Crescent, Masterton.5901  
**ZL2PB** McLaren, H. B., 10 Towai Street, Stoke, Nelson.7001  
**ZL2PC** Mitchell, G. W., 20 Tainui Street, Raumati Beach.6150  
**ZL2PD** Woodfield, A. O. J., 24 Beverley Street, Christchurch.8001  
**ZL2PF** King, T., 126 Russell Street, Gisborne.3801  
**ZL2PG** Laird, A. K., 24 Patrick Street, Petone.6303  
**ZL2PH** Hanify, G. C. P., 40 Surrey Road, Wanganui.5001  
**ZL2PI** Treleaven, A. R., 88 Monrad Street, Palmerston North.5301  
**ZL2PJ** Spellman, P. J., 36 Record Street, New Plymouth.4601  
**ZL2PL** Young, C. T., 3a Princeton Road, Raumati Beach.6150  
**ZL2PM** Coneybeer, G. B., 103 Campbell Street, Wanganui.5001  
**ZL2PO** Tout, R. E., 1/132 Collingwood Street, Nelson.7001  
**ZL2PP** Sinclair, J. D. J., 13 Marlowe Street, Stoke, Nelson.7001  
**ZL2PQ** Sayer, L. A. (Ms), 49b Peach Road, Glenfield, Auckland.1310  
**ZL2PR** Speedy, S. B., "Woodbank", Private Bag, Dannevirke.5491  
**ZL2PS** Petone Technical Inst. Radio Club, (Trustee ZL2AVF), Private Bag, Petone.6331  
**ZL2PT** Meyrick, B. B. P., 14 Churcher Street, Feilding.5600  
**ZL2PU** Pye, J. T., 33 Wyndham Road, Pinehaven, Upper Hutt.6402  
**ZL2PV** Molony, M., 66 Longfellow Street, Upper Hutt.6401  
**ZL2PY** Heslop, H. G., 6 Leicester Street, Stoke, Nelson.7001  
**ZL2QA** Kermeen, L. V., 22 Chittick Street, Stokes Valley.6306  
**ZL2QB** Wenzel, K. D., R.D. 1, Upper Moutere.7152  
**ZL2QC** Noble, W. A., 170 Te Atatu Road, Te Atatu South, Auckland.1208  
**ZL2QD** de la Cour, C., 20 Whau Street, Wellington.6002  
**ZL2QE** Patea Branch NZART (Inc.), see Branch Directory  
**ZL2QG** Brunton, W.R., 98 Hospital Road, Blenheim.7301  
**ZL2QI** Cheesman, R. A., 20 Parkway, Wainuiomata.6305  
**ZL2QJ** Lane, L. A., 41 Punga Street, Tangimoana.5450  
**ZL2QK** Kenny, E. J., 5 Townley Street, Gisborne.3801  
**ZL2QM** Burry, J. P. P., Westshore Motor Camp, Westshore, Napier.4001  
**ZL2QN** Burrell, G. A., 20a Tawa Terrace, Tawa.6203  
**ZL2QQ** Cook, S. T., 57 Stanley Crescent, Nelson.7001  
**ZL2QR** Abel, A. J., 20 Ranfurly Road, Feilding.5600

**ZL2QS** Padman, N. B., 12a McHardy Street, Havelock North.4201  
**ZL2QW** Carr, P. (Mrs), 21 Hardie Grove, Featherston.5952  
**ZL2QX** Robinson, D. M., 21 Blackmore Drive, Rotorua.3201  
**ZL2QY** Neilson, P. D. (Mrs), 13 Matene Street, Otaki.6171  
**ZL2QZ** Wright, B. E., 27 Stanley Street, Wainuiomata.6305  
**ZL2RB** Thompson, C. I. N., 19 Bideford Street, New Plymouth.4601  
**ZL2RE** Norling, E. W. J., 17 Ngirimu Street, Palmerston North.5301  
**ZL2RF** Fletcher, A. E., 480 Fergusson Drive, Upper Hutt.6401  
**ZL2RG** Robb, P. J., 277 Neilson Street, Onehunga, Auckland.1106  
**ZL2RI** Savell, B. E., 4 Burnham Street, Petone.6303  
**ZL2RJ** Hopgood, D. J., 45 Lomita Road, Johnsonville, Wellington.6004  
**ZL2RM** Colcutt, G. P., 60 Hawera Road, Kohimarama, Auckland.1105  
**ZL2RN** Royal Naval Amateur Radio Society (NZ Branch), (Trustee: ZL2TX), 55 Kakaniki Grove, Waikanae.6154  
**ZL2RO** Ashford, J. W., c/- Omaio Village, P.O. Box 2045, Stoke.7030  
**ZL2RQ** Small, J., 3 Bristol Street, Upper Hutt.6402  
**ZL2RS** Coote, S. R., 20 Tuckett Place, Nelson.7001  
**ZL2RT** Jackson, H. R., Takarei Terrace, Mokau.4650  
**ZL2RU** Rowe, I. S., 88 Washington Avenue, Brooklyn, Wellington.6002  
**ZL2RV** Wells, R. E., Tawhara Station, Wairoa.4192  
**ZL2RX** Randall, R. E. B., 32 Rotomanu Crescent, Mangakino.2391  
**ZL2RY** Baker, P. N., 12 Shackie Lane, Whitby, Wellington.6253  
**ZL2RZ** Wall, A. M., Homewood Road, R.D. 12, Masterton.5921  
**ZL2SA** Harner, B., 5 Harewood Grove, Fendallion Park, Upper Hutt.6401  
**ZL2SB** Petherick, E. R., 23 Anaru Street, Raumati Beach.6150  
**ZL2SD** White, R. L., 74 Norbion Road, Foxton.5551  
**ZL2SE** Armstrong, G. C., 20 Mohaka Street, Wainuiomata.6305  
**ZL2SF** Lewis, A. W., 18 Finlay Terrace, Mt. Cook, Wellington.6002  
**ZL2SH** Beale, A. L., 14 Te Oti Street, Paraparaumu Beach.6153  
**ZL2SJ** Norden, A. P., see Overseas Members  
**ZL2SK** Adamson, D. P., Old Kipps Road, R.D. 10, Palmerston North.5321  
**ZL2SN** Black, R. B., Omaha Road, R.D. 5, Hastings.4221  
**ZL2SO** McDonnell, D., 124 Cook Street, Palmerston North.5301  
**ZL2SP** Pahiatua Branch NZART (Inc.), see Branch Directory  
**ZL2SQ** McQuillan, H., Tasman R.D. 1, Upper Moutere.7152  
**ZL2SR** Carran, S. R., 39 Te Aroha Street, Claudelands, Hamilton.2001  
**ZL2SS** Wallace, G. J., 5 Westland Road, Wellington.6002  
**ZL2ST** Rolfe, D., 12 Haydon Street, Palmerston North.5301  
**ZL2SU** Harris, J. R., 148 Condell Avenue, Christchurch.8005  
**ZL2SW** Wedderspoon, W., 4 Cardall Street, Newtown, Wellington.6003  
**ZL2SX** Andrews, D. V., 66 Khandallah Road, Wellington.6004  
**ZL2SY** Hartwell, L. W., 41 Kells Avenue, Wanganui.5001  
**ZL2SZ** Pye, E. G. (Mrs), 33 Wyndham Road, Pinehaven, Upper Hutt.6402  
**ZL2TA** McNeamie, K. B., 8 Dunk Place, Palmerston North.5301  
**ZL2TB** Linney, E., 6 Bailey Grove, Trentham.6401  
**ZL2TC** Dale, K. W., 4 Foyle Street, Wellington.6002  
**ZL2TE** Ireson, S., 18 Gardena Avenue, Bell Block, New Plymouth.4602  
**ZL2TF** McKelvie, H. J. M., 32 Fitzroy Street, Napier.4001  
**ZL2TG** Parker, B. W., 59 Routley Crescent, Upper Hutt.6401  
**ZL2TH** Weenink, H., 16 Mahoe Street, Lower Hutt.6301  
**ZL2TI** Conner, D. P., 40 Marewa Road, Hataitai, Wellington.6003  
**ZL2TJ** Torley, J. D., 11 Moorhouse Street, Taradale, Napier.4001  
**ZL2TK** Garing, T. R., 17 Cotswold Crescent, Newlands, Wellington.6004  
**ZL2TL** Wright, H. A. L., 130 Pukepapa Road, Marton.5151  
**ZL2TM** Edwards, F. R., 4 Lewis Street, Gisborne.3801  
**ZL2TN** Brighting, T. L., 18 Ashford Avenue, Palmerston North.5301  
**ZL2TO** Waitara Branch NZART, see Branch Directory  
**ZL2TP** Pascoe, E. J., 22 Centennial Crescent, Gisborne.3801  
**ZL2TQ** Jensen, R. T., 33 Iona Road, Havelock North.4201  
**ZL2TR** Dalimore, S. C., 26 Marybank Road, Atawhai, Nelson.7030  
**ZL2TS** Nixon, H. W. J., 19 Bay Drive, Titahi Bay, Wellington.6202  
**ZL2TT** Wills, R. E., 24 View Road, Wellington.6202  
**ZL2TU** Adin, B. E., 18 Duke Street, Levin.5500  
**ZL2TV** Boyer, J. P., 32 Beachville Crescent, Nelson.7001  
**ZL2TW** McCutcheon, O. D. F., c/- 13 Moeller Street, Taradale.4001  
**ZL2TX** Hardy, N. A. T., 55 Kakariki Grove, Waikanae.6154  
**ZL2UB** Lowe, J. M., 23 Te Whiti Road, Korokoro, Petone.6303  
**ZL2UC** Saunderson, R. W., 26 Waiho Terrace, Porirua.6201  
**ZL2UD** Rodda, P. J., 11 Avion Terrace, Paraparaumu Beach.6153  
**ZL2UF** Arthur, D. B., 51 Maraetai Heights Road, Maraetai.1705  
**ZL2UH** Leslie, D. A., 3 Carter Street, Belmont, Lower Hutt.6301  
**ZL2UI** Bailey, I. L., 42 Catlins Crescent, Palmerston North.5301



- ZL2UK** Hulls, C. H., 11 Margaret Street, Levin.5500  
**ZL2UL** Lyford, A. W., 8 Roto Street, Tahunanui, Nelson.7001  
**ZL2UN** Robinson, C. B., 58 Denbigh Road, Feilding, P.O. Box 429.5600
- ZL2UQ** Williams, R. C., 10a Stuart Street, Levin.5500  
**ZL2UR** Lockie, H. A., 70 Cashmere Avenue, Wellington.6004  
**ZL2UT** Davoren, B. J., 25 Rutene Road, Gisborne.3801  
**ZL2UV** Kibble, A. R., Horokiki Hill, Petone.6303  
**ZL2UW** Nauls, R. D., Brauncewell Farm, Tangihua Road, Maungakareme.0250
- ZL2UX** MacDonald, J. R., 39 Aniseed Grove, Upper Hutt.6401  
**ZL2UY** Parker, H. J., 15 Bush Street, Naenae, Lower Hutt.6301  
**ZL2UZ** Spotswood College Amateur Radio Club, (Trustee: ZL2BBN), Private Bag, New Plymouth.4620
- ZL2VA** Vaughan, D. L., 70 Glen Road, Raumati South.6150  
**ZL2VB** Browne, A. H., 98 Renown Road, Raumati South.6150  
**ZL2VC** Zawodny, C. J., 8 Burwood Road, Christchurch.8009  
**ZL2VD** Tideman, A. L., R.D. 2, Nelson.7021  
**ZL2VE** Hansen, G. H., 9 Sanders Avenue, Napier.4001  
**ZL2VG** Smith, I. R., "Lyndon", R.D. 3, Te Karaka.3871  
**ZL2VH** Upper Hutt Branch NZART (Inc.), see Branch Directory  
**ZL2VI** Manning, E. E., 33 Tiverton Crescent, New Plymouth.4601  
**ZL2VJ** Angelini, H. J., R.D. 2, Pahiatua.5471  
**ZL2VK** Wallace, I. R., 22 Parson Street, Wanganui.5001  
**ZL2VL** Gloag, G. F., 25 Grey Street, Woodville.5473  
**ZL2VM** Bull, M. B., 51 Liverpool Crescent, Napier.4001  
**ZL2VN** Gaudin, W. G., 18 Trafalgar Street, New Plymouth.4601  
**ZL2VO** Hayman, G. C., 73 Makora Road, Masterton.5901  
**ZL2VP** Cheshire, A. H., 5 Seddon Street, Upper Hutt.6401  
**ZL2VQ** Gaudin, G. C. (Mrs), 18 Trafalgar Street, New Plymouth.4601
- ZL2VR** Chapman, D. J., 459 Kennedy Road, Napier.4001  
**ZL2VS** Miller, H. R., 41 Alexandra Street, Marlton.5151  
**ZL2VT** Arthur, A. J. M. (Mrs), 51 Maraetai Heights Road, Maraetai.1705
- ZL2VV** Carter, L. J., 13 Waterview Road, Devonport, Auckland.1309  
**ZL2VW** Gray, O. T., 16 Gonville Avenue, Wanganui.5001  
**ZL2VX** Dickson, S., 67 Mills Road, Wellington.6002  
**ZL2VY** Klein, B. J., 49 Milne Crescent, Taika.6301  
**ZL2VZ** Eyles, J. R., 30 Surrey Street, Richmond, Nelson.7002
- ZL2WA** Wellington VHF Group, see Branch Directory  
**ZL2WB** Wellington Branch NZART (Inc.), see Branch Directory  
**ZL2WC** Crabtree, W. D., P.O. Box 87, Napier.4000  
**ZL2WD** Deller, F. J. G., 3/29 Ward Street, Upper Hutt.6401  
**ZL2WE** Stead, J. L., Pohara, R.D. 1, Takaka.7172  
**ZL2WF** Wensley, N. L., 2 Riverside Drive, Whangarei.0101  
**ZL2WG** Nunns, H., 42 Norman Road, Gisborne.3801  
**ZL2WH** McAuley, A. W., 151 Townsend Road, Miramar, Wellington.6003
- ZL2WI** Wilkinson, J. G., 12 Hillcrest Drive, Palmerston North.5301  
**ZL2WJ** Ross, J. B., Moncrieff Avenue, Tahunanui, Nelson.7001  
**ZL2WK** Hattersley, S. G., 15 Rata Street, Nelson.7001  
**ZL2WL** Hurrell, L. W., 9 Hereford Place, Tamatea, Napier.4001  
**ZL2WM** Lagerstedt, E. C., 83 Gordon Street, Dannevirke.5491  
**ZL2WN** Carlisle, J. W., 32 Nile Street, Lower Hutt.6301  
**ZL2WO** Burnett, A. M. R., 21 Elizabeth Street, Rangiora.8254  
**ZL2WR** Whitehead, E. S., Unit 12, Taradale Masonic Village, 15 Devonshire Place, Taradale, Napier.4001
- ZL2WS** Scott, W. G., P.O. Box 859, Napier.4000  
**ZL2WT** Thomson, W. J., 33 Donald McLean Street, Newtown, Wellington.6002
- ZL2WV** Rowe, J. B., 8 Evelyn Place, New Plymouth.4601  
**ZL2WW** Hyndman, J. E., 7 Wadsworth Crescent, Blenheim.7301  
**ZL2WX** Day, D. G., 106 Cleveland Terrace, Nelson.7001  
**ZL2WY** Mildon, J. W., 28 Christian Street, Dannevirke.5491  
**ZL2YL** NZ WARO, (Trustee: ZL2BOD), 20 Vogel Street, Hawera.4800
- ZL2AAA** White, M. C., 502 Huia Street, Hastings.4201  
**ZL2AAC** Bridgman, A. H. S., 261 Mitchell Street, Brooklyn, Wellington.6002
- ZL2AAD** Bartlett, L. R., 9 Waverley Street, Gisborne.3801  
**ZL2AAE** Kelling, A. R., 3 Dickson Street, Gisborne.3801  
**ZL2AAF** Duncan, R. E., 107 Ironside Road, Johnsonville, Wellington.6004
- ZL2AAG** Barker, E. J., 12 Ashford Avenue, Palmerston North.5301  
**ZL2AAH** Sayers, R. K. F., 9 Brunswick Road, Aramoho, Wanganui.5002
- ZL2AAI** McPake, E. G., 7 Balgownie Avenue, Wanganui.5001  
**ZL2AAJ** Davis, S. B., 8 Kawai Place, Wanganui.5001  
**ZL2AAK** Hubbard, J. A., 36 Queenswood Road, Levin.5500  
**ZL2AAM** Wilson, I. J., 83 Cracroft Street, Waitara.4656  
**ZL2AAN** Thompson, R. N., 1010 Gordon Road, Hastings.4201  
**ZL2AAO** Shackel, M. W. O., c/- Post Office, Opuia.0290  
**ZL2AAP** Meek, P., 59 Alexander Avenue, Napier.4001
- ZL2AAQ** Jeffers, R. J., 42 Raine Street, Wanganui.5001  
**ZL2AAS** McCutcheon, H. A., 351 High Street, Dannevirke.5491  
**ZL2AAT** Mowat, K. H., 9 Ruamoana Place, Omokoroa, R.D. 2, Tauranga.3021
- ZL2AAU** Starck, A. J., 177 Smart Road, R.D. 2, New Plymouth.4621  
**ZL2AAV** Cooper, R. L., 21 Mill Street, Marton.5151  
**ZL2AAW** Berbedes, P. G., 12 Beach Street, Tangimoana.5450  
**ZL2AAX** Martin, L. H., 64 Glen Road, Stokes Valley, Wellington.6306  
**ZL2AAY** Turnbull, W. I., 5 Annandale Street, New Plymouth.4601  
**ZL2AAZ** Grundy, C. G., 119 East Frederick Street, Mayfair, Hastings.4201
- ZL2ABA** Harris, W. R. B., Mangaroa Road, R.D. 4, Hastings.4221  
**ZL2ABB** Campbell, S. H., 20 Erin Street, Palmerston North.5301  
**ZL2ABC** Hughes, T., 10 Bainton Street, Christchurch.8005  
**ZL2ABD** Stampa, K. W., Normanby Road, Manaia.4851  
**ZL2ABE** Erwood, E., 190 Waimea Road, Nelson.7001  
**ZL2ABF** Foley, T. J., 115 Taradale Road, Napier.4001  
**ZL2ABG** McGee, N., 2 Waldron Crescent, Abbotsford, Dunedin.9006
- ZL2ABI** Smith, D. L., 705 Maitland Crescent, Hastings.4201  
**ZL2ABJ** Napier Branch NZART (Inc.), see Branch Directory  
**ZL2ABL** Bramley, K. J., 14 Rembrandt Avenue, Linden.6203  
**ZL2ABM** Elvy, D. L., 7 Norwich Street, Wellington.6005  
**ZL2ABN** Ridding, G. B., 50 Mulberry Street, Maungaraki, Lower Hutt.6301
- ZL2ABO** Hughes, A. H., 117 Park Road, Palmerston North.5301  
**ZL2ABQ** Keenan, D. St. J., 13 Ruru Crescent, Heretaunga Park, Silverstream.6402
- ZL2ABR** Parkinson, J. H., 1009 Rata Street, Hastings.4201  
**ZL2ABT** Turner, O. D., Cadman Road, Dannevirke.5491  
**ZL2ABU** van der Burgh, J. E. C., 12 Chilton Drive, Paraparaumu.6152  
**ZL2ABW** Steer, D. W., 24 Dorset Avenue, New Plymouth.4601  
**ZL2ABX** Bishop, R. T., 1 Bowling Road, Greenmeadows, Napier.4001
- ZL2ABY** Huggard, J. D., 22a Rimu Street, New Plymouth.4601  
**ZL2ABZ** Moore, J. A. W., 42 Wright Street, Wellington.6002  
**ZL2ACA** Barnett, W. J., R.D. 1, Mapua, Upper Moutere.7150  
**ZL2ACB** Pengelly, A. P., 56 Wilberforce Street, Miramar, Wellington.6003
- ZL2ACC** Sutherland, J. M., 600 Pepper Street, Hastings.4201  
**ZL2ACD** Corrie, R. D., 35 Fox Street, Opunake.4653  
**ZL2ACE** Greene, R. P., 5 Aranui Avenue, Castlecliff, Wanganui.5003  
**ZL2ACF** Stagpoole, V. M., 49 Bould Street, Johnsonville.6004  
**ZL2ACG** Glassey, R. B., 422 Jackson Street, Petone.6303  
**ZL2ACH** Robertson, B. R., 537 Ruahine Street, Palmerston North.5301
- ZL2ACJ** Watson, J. S., 24 Gardener Street, Levin.5500  
**ZL2ACK** Brown, R. W. N., 9 Duke Street, Pahiatua.5471  
**ZL2ACL** Myhill, J., 14 Stanton Crescent, Christchurch.8002  
**ZL2ACM** Gore, C., Roberts Line, Bunnythorpe, R.D. 8, Palmerston North.5321
- ZL2ACN** Lakeman, D. T., 55a Manuka Street, Masterton.5901  
**ZL2ACO** Jeffs, D. E., 132 Hill Road, Belmont, Lower Hutt.6301  
**ZL2ACP** Brosnan, V. W., R.D. 3, Waipawa.4175  
**ZL2ACS** Mai, G. A., 20 Cardiff Road, Pakuranga, Auckland.1706  
**ZL2ACT** Smith, G. F., 26 Sheridan Crescent, Upper Hutt.6401  
**ZL2ACU** Finlay, P. A., 154 Parkvale Road, Karori, Wellington.6005  
**ZL2ACW** Golliob, R., 6 Holborn Drive, Stokes Valley.6306  
**ZL2ACX** Hart, F. M., 82 Oriel Avenue, Tawa.6203  
**ZL2ACY** Hewett, E. S., 8 Fitzroy Flats, Fitzroy Street, Feilding.5600  
**ZL2ACZ** Bickerstaff, R. R., 12 Enfield Road, Napier.4001
- ZL2ADA** Anderson, J. K., 68 Kurupae Road, Taupo.3300  
**ZL2ADB** Barrow, G. W. B., 60 Bledisloe Crescent, Wainuiomata.6305  
**ZL2ADC** Weston, W. F., 35 Kummer Crescent, Masterton.5901  
**ZL2ADD** Lund, O. M., 1 Cherry Grove, Strathmore.6003  
**ZL2ADE** Turner, A. L., 108a Hillcrest Road, Raumati Beach.6150  
**ZL2ADG** Donovan, G. J., 7 Marine Parade, Paraparaumu.6152  
**ZL2ADH** Boyd, I. McL., 132 Wainuiomata Road, Wainuiomata.6305  
**ZL2ADI** Blackwood, R. L., 2 Sommerville Terrace, Tawa, Wellington.6203
- ZL2ADJ** Billing, H. B., 8 Witako Street, New Plymouth.4601  
**ZL2ADK** Purdie, C. M. (Mrs), 65 Hedges Street, Sanson.5450  
**ZL2ADL** Gilbert, T. J., 5A Newbourne Crescent, Blenheim.7301  
**ZL2ADM** Smith, I. G., Hill View, 94 Guppy's Road, Greenmeadows, Napier.4001
- ZL2ADN** Stuart, J. D., 11 Kipling Street, Palmerston North.5301  
**ZL2ADO** Wilkinson, J., 69a Park Road, Carterton.5951  
**ZL2ADP** Vile, M. E., 12 Hicks Crescent, Waikanae Beach.6150  
**ZL2ADR** Burley, C. J., 37 Pope Street, Camborne, Plimmerton.6250  
**ZL2ADT** Brown, W. C., 9 Rawhiti Street, Nelson.7001  
**ZL2ADU** Gorton, H. J., 166 Tasman Street, Opunake.4653  
**ZL2ADV** Hodges, W., 317 Suffolk Road, Stoke, Nelson.7001  
**ZL2ADW** West, J. D., 17 Chesney Street, Bell Block, New Plymouth.4601



# ZL2ADY

**ZL2ADY** Gallagher, B. G., 84 Thomas Street, Stokes Valley, Lower Hutt.6306

**ZL2ADZ** Renner, W. G., c/- Post Office, Ormond.3870

**ZL2AFA** Rae, A. O., 38 Newbury Street, Palmerston North.5301

**ZL2AFB** Burr, A. J., 25 Waiwera Place, New Plymouth.4601

**ZL2AFC** Burr, M. K., 48 Holborn Drive, Stokes Valley.6306

**ZL2AFE** Clarkson, R. J., 13 York Street, Eltham.4751

**ZL2AFF** King, F. B., Patons Road, Takaka.7172

**ZL2AFG** Gentry, L. R., Parkhill Road, R.D. 2, Hastings.4221

**ZL2AFI** Nicholls, G. A., 465 Ruahine Street, Palmerston North.5301

**ZL2AFJ** Simpson, M. C., 14 Montrose Drive, Nelson.7001

**ZL2AFK** Ford, P. L., 36 Akatea Road, Korokoro, Petone.6303

**ZL2AFL** Jordan, N., 12 Caesars Place, Churton Park, Wellington.6004

**ZL2AFM** Hawke, P. D., 91a Tipahi Street, Nelson.7001

**ZL2AFN** MacLean, A. K., Hukaroa Road, Raetihi.5172

**ZL2AFO** Burney, R. J., 115 Kowhai Street, Naenae, Lower Hutt.6301

**ZL2AFP** Wassilief, C., 69 Tiber Street, Island Bay, Wellington.6002

**ZL2AFQ** Lawson, E. J., 22 Bryon Street, Upper Hutt.6401

**ZL2AFR** Gorman, B. D., 66 Pacific Street, Timaru.8601

**ZL2AFS** Chew, L. R., 87 Ngamotu Road, New Plymouth.4601

**ZL2AFT** Anderson, B. P., 429 Albert Street, Palmerston North.5301

**ZL2AFU** Udy, H. A. F., 1 Tudor Road, Pahiatua.5471

**ZL2AFV** Titahi Bay Branch NZART (Inc.), see Branch Directory

**ZL2AFW** Jones, B. N., 13 Taupata Street, Castlecliff, Wanganui.5003

**ZL2AFX** Newton, R. J., R.D. 2, Blenheim.7321

**ZL2AFY** Smith, I. M., Hinerangi Road, Hatuma, R.D. 1, Waipukurau.4176

**ZL2AFZ** Studd, G. C., 70 Russell Street, Napier.4001

**ZL2AGB** Martelletti, G. P., 44 Kapuni Street, Maniaia.4851

**ZL2AGC** Waldmann, K. J., 20 Tawai Street, Upper Hutt.6401

**ZL2AGD** Kampkes, B., 135 Main Road, Bay View, Napier.4001

**ZL2AGE** Mouritsen, J., 14 Ashridge Road, Napier.4001

**ZL2AGH** Marshall, A. W., 32 Plymouth Road, Hastings.4201

**ZL2AGI** Giles, F. A., 1006 Sussex Street, Hastings.4201

**ZL2AGJ** Coatham, S. P., 11 Sherwood Street, Otumotai, Tauranga.3001

**ZL2AGL** Livingston, R. P., Palmers Road, R.D. 1, Brightwater.7151

**ZL2AGM** Weaver, D. B., 6 Tankersley Crescent, Masterton.5901

**ZL2AGN** Thompson, J. B., 50 Collingwood Street, Palmerston North.5301

**ZL2AGO** Wolf, J. M., 12 Celeste Place, Glenfield, Auckland.1310

**ZL2AGP** Weir, D. G., 4 St. Francis Grove, Lower Hutt.6301

**ZL2AGQ** Cleveland, F. L., 38 Havelock Street, Mornington, Wellington.6002

**ZL2AGR** Williams, R. L., 15 Pinney Avenue, Lower Hutt.6301

**ZL2AGS** Gotlieb, G. D. (Mrs), 6 Holborn Drive, Stokes Valley.6306

**ZL2AGU** Steel, G. J., Comer Arataki and Te Mata Roads, Havelock North.4201

**ZL2AGW** Gillon, K. R., 16 Te Whiti Grove, Korokoro, Petone.6303

**ZL2AGX** Young, B. D. (Mrs), 97 Rosetta Road, Raumati South.6150

**ZL2AGY** Marr, A. H., 3 Crown Hill, Titahi Bay, Wellington.6202

**ZL2AGZ** Groy, P. S., 3/211 Windsor Avenue, Hastings.4201

**ZL2AHA** Wards, I. J., Manutahi, R.D. 2, Patea.5181

**ZL2AHB** Douglas, L. S., 16 Ngaio Road, Waikanae.6154

**ZL2AHC** White, S. J., 20 Henley Crescent, Napier.4001

**ZL2AHD** Fowler, M. F., 3 North Esk Street, Nelson.7001

**ZL2AHE** Wilson, A. J., 30 Adventure Drive, Whitby, Porirua.6201

**ZL2AHF** Dodson, A., 33 Cluny Road, Pimmerton.6251

**ZL2AHH** Keong, P. W., cnr Thompson & Davidson Roads, Havelock North.4201

**ZL2AHI** Meads, A. M., 272 High Street, Eltham.4751

**ZL2AHJ** Ward, J. D., 9/280 Grey Street, Palmerston North.5301

**ZL2AHK** Knofflock, T. C., 41 Scotland Street, Picton.7372

**ZL2AHL** Harris, F. C., 53 Fairs Road, Milson, Palmerston North.5301

**ZL2AHM** Smith, R. A., 121 Slacks Road, Palmerston North.5301

**ZL2AHN** Ashley, R. A., Te Horo Beach Road, R.D., Otaki.6171

**ZL2AHO** Owen, D. W., 12 Whirinaki Street, Upper Hutt.6401

**ZL2AHR** Hawtree, G. R., 50 Fox Road, Wanganui.5001

**ZL2AHS** Dallas, S., 96 Te Anau Road, Wellington.6003

**ZL2AHT** Frost, H. A., 77 Meanees Road, Taradale, Napier.4001

**ZL2AHU** O'Hara, E. R., "Omega", Ngaumu Road, R.D. 10, Masterton.5921

**ZL2AHX** Greaney, E. C., 168 Waghorne Street, Napier.4001

**ZL2AHY** Howard, C. B., 24b Clearmont Crescent, New Plymouth.4601

**ZL2AIA** Steele, R., 30 Miller Road, Mangere Bridge, Auckland.1701

**ZL2AIB** Campbell, W. A., 225a Tukapa Street, New Plymouth.4601

**ZL2AIC** Drogemüller, C. H., 25d Egmont Street, Wanganui.5001

**ZL2AID** Williams, P. R., 432 Manawapou Road, Hawera.4800

**ZL2AIE** Parker, W. J., 213 Redwood Street, Blenheim.7301

**ZL2AIG** Catt, G. D., 11 Taverner Street, Carterton.5951

**ZL2AIH** Harding, A. G. F., 6 Bowline Place, Whitby, Porirua.6253

**ZL2AIJ** Newbery, M. D., 35 Crofton Road, Ngaio, Wellington.6004

**ZL2AIK** Smyth, W. M., 49c Doralto Road, New Plymouth.4601

**ZL2AIL** McManaway, P. H., R.D. 1, Matarawa, Carterton.5951

**ZL2AIN** James, L. A., 110 Redwood Street, Blenheim.7301

**ZL2AIO** Voss, R. B., Mill Road, Kopane, 6 R.D., Palmerston North.5321

**ZL2AIP** Curry, R. G., 1 Flaxmere Street, Waikanae.6150

**ZL2AIQ** Harvey, S. C., 802 Clive Street, Hastings.4201

**ZL2AIR** Morris, S. W., Main Highway, Clareville, Carterton.5951

**ZL2AIS** Cramer, F. H., 34 James Street, Inglewood.4651

**ZL2AIT** Whiting, P. C., 91 St Andrews Road, Plimmer.6251

**ZL2AIV** Mitchell, W. J., 52 Locking Street, Nelson.7001

**ZL2AIW** Sutherland, I. R., 4 Watchorn Place, Foxton Beach.5552

**ZL2AIX** Gemmell, A. F., 39 Clippell Street, Titahi Bay, Porirua.6202

**ZL2AIY** Hunter, D. R., 16 Torlesse Street, Wakatu, Nelson.7001

**ZL2AIZ** Wright, L. L., 30 Discovery Drive, Whitby, Paramata.6253

**ZL2AJA** Plum, B. F., 6 Porritt Place, Stoke, Nelson.7001

**ZL2AJB** Hodge, L. D., 23 Kent Crescent, Palmerston North.5301

**ZL2AJC** Hulse, R. L., 24 Hautana Square, Lower Hutt.6301

**ZL2AJD** Dodds, J. F., 13 Waiheke Street, Waikanae.6154

**ZL2AJE** Carpenter, E. D., 27 Canterbury Street, Tamatea, Napier.4001

**ZL2AJF** Vernon, J. H., 130 Mairangi Road, Wellington.6001

**ZL2AJG** Giblin, A. G., 27 West Avenue, Richmond, Nelson.7001

**ZL2AJH** Andrewes, L. M., 45 Burrows Avenue, Karori, Wellington.6005

**ZL2AJI** Aston, A. G., 98 Hine Road, Wainuiomata.6305

**ZL2AJJ** McHardy, R. A., 762 Gladstone Road, Gisborne.3801

**ZL2AJK** Martin, E. O., 32 Frederick Street, Lower Hutt.6301

**ZL2AJL** Sutherland, D. C., 23 Peakes Road, Wanganui.5001

**ZL2AJM** Donovan, M. F., 16 Ngaio Road, Waikanae.6154

**ZL2AJN** Heinz, D. P., 56 Tukuka Street, Nelson.7001

**ZL2AJP** Vartha, I. R., 7 Collett Street, Lower Hutt.6301

**ZL2AJQ** Compier, J. C., 35 Endcliffe Road, Gisborne.3801

**ZL2AJR** Teward, G. J., 26 Horopito Road, Waikanae.6154

**ZL2AJV** Small, I. R., 207 Tudor Avenue, Hastings.4201

**ZL2AJW** Marston, K., 119 Devon Street, Rotorua.3201

**ZL2AJX** Moore, K. J., 54 Herbert Avenue, Palmerston North.5301

**ZL2AJY** Donoghue, R. H., 10 Finnimore Terrace, Wellington.6002

**ZL2AJZ** Wellington Polytechnic Radio Club, (Trustees: R. Stevens, S. Swan, S. Adams), c/- School of PETE, Private Bag, Wellington.6020

**ZL2AKA** Ribbon, C. E., 34 Abbott Street, Gisborne.3801

**ZL2AKB** Keik, C. E., 460 Frankley Road, R.D. 1, New Plymouth.4621

**ZL2AKC** Larkin, J. F. L., 16 Hackett Street, Wanganui East.5001

**ZL2AKD** Faulding, R. G., 5 Manuka Street, Palmerston North.5301

**ZL2AKE** Watson, M. B., 25 Armagh Terrace, Marton.5151

**ZL2AKF** Peffers, W. F., 57 Kakariki Grove, Waikanae.6154

**ZL2AKG** McGonigal, J. W. R., 17 Surrey Street, Taradale, Napier.4001

**ZL2AKH** Hayward, W. B., 23 Mt Vernon Place, Nelson.7001

**ZL2AKI** Moles, G. J., 5 Edward Street, Bulls.5452

**ZL2AKJ** Freeth, C. A., 56 Fifehire Crescent, Nelson.7001

**ZL2AKK** Moss, J. B., 9 Seyton Street, Stratford.4700

**ZL2AKL** Howard, W. S., c/- Post Office, Bunnythorpe.5453

**ZL2AKM** Glassey, R. B., c/- University Hall, Maidstone Road, Christchurch.8004

**ZL2AKN** Smith, L. K., Main Road, S H 2, Bethlehem, Tauranga.3001

**ZL2AKO** Oakley, J. W., Slipstream, Reikorangi Road, Waikanae.6154

**ZL2AKP** Hunt, C. L., 30 Raglan Avenue, Palmerston North.5301

**ZL2AKQ** Littleford, R. H., 39 Woodvale Grove, Lower Hutt.6300

**ZL2AKR** Roberts, E., 116 Kowhai Street, Lower Hutt.6301

**ZL2AKS** Taylor, D., 31 Ahuriri Street, Wellington.6003

**ZL2AKT** Bundle, R. J., 12 Mahoe Street, Linden, Wellington.6203

**ZL2AKU** Crosby, B. D., 28 Sheridan Crescent, Upper Hutt.6401

**ZL2AKV** Copeland, R. N., P.O.Box 40-525, Upper Hutt.6400

**ZL2AKW** King, T. C., 72 Chelmsford Street, Wellington.6004

**ZL2AKX** Morris, E. C., 3 Peel Place, Wainuiomata.6305

**ZL2AKY** Comber, C. M., 54 Reid Avenue, Hawera.4800

**ZL2AKZ** Barden, T. W. A., Paradise Road, Coopers Beach, Northland.0557

**ZL2ALA** Kenny, A. R., 60 Pokohiwi Road, Normandale, Lower Hutt.6301

**ZL2ALB** Broadbent, N. D., R.D. 20, Ohau, Levin.5500

**ZL2ALC** Maxwell, H. J., 7 Rakeiora Grove, Korokoro, Petone.6303

**ZL2ALD** Gillespie, M. E., Onahau Bay, Picton.7372

**ZL2ALE** Roberts, A. L., Durham Drive, Havelock North.4201

**ZL2ALF** Marr, Y. E., 3 Crown Hill, Titahi Bay.6202

**ZL2ALG** Fredericksen, C. A., 18 Champion Terrace, Nelson.7001

**ZL2ALH** Imlay, B. W., 46 Tibury Street, Lower Hutt.6301

**ZL2ALI** Clark, E. A., 88 Malberry Road, Mangere East, Auckland.1701



- ZL2ALJ** Fletcher, A. B., 127 Melbourne Road, Island Bay, Wellington.6002
- ZL2ALK** Borlase, R. C., 289 Fitzherbert Avenue, Palmerston North.5301
- ZL2ALL** Tompkins, A. W., Rangiwahia, R.D. 54, Kimbolton.5653
- ZL2ALM** Lovegrove, P. J., 145 Carlisle Road, Browns Bay, Auckland.1310
- ZL2ALN** Broderick, T. E., 173 Hill Street, Richmond, Nelson.7002
- ZL2ALO** Shearman, A. J., 15 Swainson Street, Naenae.6301
- ZL2ALP** Paton, P. J., 41 Hyde Street, Wainuiomata.6305
- ZL2ALQ** Appleton, J. W., 17 Bone Crescent, Hawera.4800
- ZL2ALR** Jury, J. M., "Glendower", Ponatahi Road, R.D. 2, Carterton.5951
- ZL2ALS** Morris, R. A., 16 Bristol Square, Lower Hutt.6301
- ZL2ALU** Turnham, P. E., 243 Waterloo Road, Lower Hutt.6301
- ZL2ALW** Barnett, L. J., Manuhara Road, R.D., Pongaroa.5472
- ZL2ALX** Tarrant, G. W., Rawhitiua, R.D. 8, Masterion.5921
- ZL2ALY** Walker, C. M., Flat 1, 21 Dorking Road, Wellington.6002
- ZL2ALZ** Healey, G. W. R., 78 Sidlaw Street, Strathmore Park, Wellington.6003
- ZL2AMA** Flack, A. B., 17 Turfiff Crescent, Tawa, Wellington.6203
- ZL2AMB** Chinery, P. R. J., 192 High Street, Eltham.4751
- ZL2AMC** Sargent, F. W., 56 Hurford Road, R.D. 4, Omata, New Plymouth.4621
- ZL2AMD** Lamont, D. H., 510 Kennedy Road, Napier.4001
- ZL2AME** Heath, C. A., 9 Patutu Grove, Upper Hutt.6401
- ZL2AMF** Wilson, G. R. S., 38 Hetherington Road, Swanson, Auckland.1230
- ZL2AMG** Wensley, L. A., Beach Road, Motueka.7161
- ZL2AMH** Dew, E. E., 55a McHardy Street, Havelock North.4201
- ZL2AMI** Stewart, R. G., 105 Orangi Kaupapa Road, Wellington.6005
- ZL2AMJ** Johnson, J. F. C., 15 Field Street, Upper Hutt.6401
- ZL2AMK** Vendt, G. R., 60 Bird Grove, Stokes Valley.6306
- ZL2AML** Warner, T. R., 32 Endeavour Street, New Plymouth.4601
- ZL2AMM** Morris, S. J., 1 Sidlaw Street, Strathmore, Wellington.6003
- ZL2AMN** IBM Amateur Radio Club, (Trustee ZL2BDW), Postal address: P.O. Box 3343, Wellington.6000
- ZL2AMO** Spackman, M. L., 2/168 Gloucester Street, Taradale, Napier.4001
- ZL2AMP** Fretter, M. E., R.D. 2, Wanganui.5021
- ZL2AMQ** Nicholls, C. A., 135 Benmore Avenue, Palmerston North.5301
- ZL2AMR** Feilding and Districts Radio Club, see Branch Directory
- ZL2AMS** Marton Branch NZART (Inc.), see Branch Directory
- ZL2AMT** Garmonsway, T. L., "Hiria" Rangiwahia, R.D. 1, Taihape.5163
- ZL2AMU** Ashe, D. A., 34 Wai-iti Crescent, Lower Hutt.6301
- ZL2AMV** Mudford, D. W., 58 Le Quesne Road, Bay View, Napier.4151
- ZL2AMX** Gardner, K. D., 19 Hiropi Street, Newtown, Wellington.6002
- ZL2AMY** Davies, D. D., 71 Thurlough Grove, Karori, Wellington.6005
- ZL2AMZ** Humphris, G. J., 18 Horokiwi Road, Newlands, Wellington.6004
- ZL2ANA** Neilson, A. K., 13 Matene Street, Otaki.6171
- ZL2ANB** Fenton, F. A., 27 Blake Street, Waitara.4656
- ZL2ANC** Watkins, W. T., 218 St. Aubyn Street, New Plymouth.4601
- ZL2AND** Wallace, R. I., 21 Fox Street, Featherston.5952
- ZL2ANE** Cooney, J. L., 53 Wainuiomata Road, Wainuiomata.6305
- ZL2ANG** Tipler, B. F., Mangaehoa Road, R.D. 22, Stratford.4700
- ZL2ANI** McLeod, S. A., 4 Trevelyan Street, Onekawa, Napier.4001
- ZL2ANJ** McNabb, G. M., 91 Trewavas Street, Motueka.7161
- ZL2ANL** McNeill, J. H., 19 Russell Street, Marton.5151
- ZL2ANP** Williamson, J. J., Waituna, 9 R.D., Feilding.5600
- ZL2ANQ** Keane, P. M. (Rev), 61 Main Road, Makaraka, Gisborne.3801
- ZL2ANR** Robertson, J., 100 Cluny Road, Pimmerton.6251
- ZL2ANS** Martin, D. W., 111 Avenue Road, Greenmeadows, Napier.4001
- ZL2ANT** Thomas, A., 35 Three Mile Bush Road, Kamo, Whangarei.0101
- ZL2ANU** Bennett, K. P., 44b Wither Road, Blenheim.7301
- ZL2ANW** White, R. W., 10 Wairere Road, Wanganui.5001
- ZL2ANX** Central Institute of Technology Radio Club, (Trustee: ZL2ABQ), CIT Students Union (Inc), Somme Road, Heretaunga.6402
- ZL2ANY** Williams, C. F., 4 Wilson Street, Hawera.4800
- ZL2ANZ** Barber, V. L., 36 Roslyn Road, Napier.4001
- ZL2AOA** Wall, T. F., Mahaki, R.D. 1, Martinborough.5954
- ZL2AOB** Parker, D. T., 7 Darwin Road, Gisborne.3801
- ZL2AOC** Hamilton, A. M. M., 39 Ngaio Road, Kelburn, Wellington.6005
- ZL2AOD** Catterall, J. A., 93 Parkers Road, Tuhunanui, Nelson.7001
- ZL2AOE** Wood, T. E., 12 Rereve Grove, Oaklands, Upper Hutt.6401
- ZL2AOF** Beardon, V. W., Autler Road, Manaia.4851
- ZL2AOG** Green, G. R., 7 Russell Street, Marton.5151
- ZL2AOI** Malkin, E., 1007 Konini Street, Hastings.4201
- ZL2AOJ** Ryder, S. F., 67 Gillespies Road, Upper Hutt.6401
- ZL2AOK** Wallis, G. A., 23 Bruce Avenue, Brooklyn, Wellington.6002
- ZL2AOL** McBeth, D. O., 103 Poplar Grove, New Plymouth.4601
- ZL2AOM** McGrath, R. L., 104 Kulim Avenue, Tauranga.3001
- ZL2AON** Crossley, R. S., Flemington Road, Wanganui.5001
- ZL2AOP** Sinclair, M. L., 1 Porritt Place, Tamatea, Napier.4001
- ZL2AOR** Mackintosh, A. B., 34 Marian Drive, Gisborne.3801
- ZL2AOU** Langevad, M. W., Grahams Beach Road, R.D. 4, Waiuku.1852
- ZL2AOV** Howan, V. E. (Mrs), 7 Almora View, Ascot Park, Porirua.6201
- ZL2AOX** McNeill, D. A., 58 Fraser Avenue, Johnsonville, Wellington.6004
- ZL2AOY** Purvis, R. H., 23 Graham Street, Auckland.1001
- ZL2AOZ** Edwards, M. R., 92 Creswick Terrace, Northland, Wellington.6005
- ZL2APA** Davidson, W. E., No. 10 R.D., Palmerston North.5321
- ZL2APB** Chippendale, J. G., 66 Reid Avenue, Hawera.4800
- ZL2APC** Plank, E. W., 182 Bridge Street, Bulls.5452
- ZL2APD** Burton, H., 34 Hathaway Avenue, Karori, Wellington.6005
- ZL2APE** Holmwood, E. A., 11 Newton Place, Palmerston North.5301
- ZL2APF** Parnell, J. C., 87 Duncan Terrace, Wellington.6003
- ZL2APG** Lusty, F. W., 40 Ihaha Street, Waitara.4656
- ZL2APH** Sutherland, N., 30 Paremata Street, Nelson.7001
- ZL2API** Haisman, R. A., 27 Valley Road, Gisborne.3801
- ZL2APJ** Gillette, H. C., 6 Mahoe Avenue, Palmerston North.5301
- ZL2APK** Vaughan, R. G., 205 Roseita Road, Raumati Beach.6150
- ZL2APL** Campbell, E. P., 823 Cook Place, Hastings.4201
- ZL2APM** Westwood, I. J., 25 Raukawa Street, Himatangi Beach.5550
- ZL2APO** Parker, T. C., 5 Damian Grove, Lower Hutt.6301
- ZL2APQ** Leigh, P., 94 South Karori Road, Wellington.6005
- ZL2APR** Aydon, A., 71 Weka Street, Nelson.7001
- ZL2APS** Pope, T. J., 80 Victoria Street, Carterton.5951
- ZL2APT** Sullivan, D. H., 56 Keopa Street, Levin.5500
- ZL2APV** Ropata, P. T., 11 Kittyhawk Row, Bulls.5452
- ZL2APW** Jury, G. V., 529c Carrington Road, R.D. 1, New Plymouth.4621
- ZL2APX** Nugent, R. F., Clairvale Farm, R.D. 2, Omaka, Blenheim.7321
- ZL2APY** O'Dwyer, M., 135 Guppy Road, Taradale, Napier.4001
- ZL2APZ** Hartwig, G., 66 Lincoln Street, Ashhurst.5301
- ZL2AQA** Benson, K. J., 14 Regent Place, New Plymouth.4601
- ZL2AQC** Allen, D. B., 1 Brookes Terrace, Waitara.4656
- ZL2AQD** Doyle, D., 47 Cashmere Avenue, Khandallah, Wellington.6004
- ZL2AQE** Watson, J. E., 50 Ellesmere Avenue, Miramar, Wellington.6003
- ZL2AQF** Shorland, J. H., 12 Lenox Grove, Johnsonville, Wellington.6004
- ZL2AQH** Ward, J. G., Akaroa Road, P.O. Box 74, Pongaroa.5472
- ZL2AQI** Voss, S. J., Mill Road, Kopane, 6 R.D., Palmerston North.5321
- ZL2AQK** Cheyne, J. A., 12 Aberdeen Avenue, Palmerston North.5301
- ZL2AQL** Millard, A. J., 34 Volga Street, Wellington.6002
- ZL2AQN** Spearman, M. B., 5 Climie Crescent, Hawera.4800
- ZL2AQO** Heald, P. J., 12 Atarua Grove, Paraparaumu.6152
- ZL2AQP** Wilson, K. A. (Mrs), 80 Wycliffe Street, Onekawa, Napier.4001
- ZL2AQQ** Clouston, T. W., 28 Fox Street, Opunake.4653
- ZL2AQR** Ammundsen, J. G., 17 Satara Crescent, Khandallah, Wellington.6004
- ZL2AQS** Crawley, R. J. C., 1018 Totara Street, Hastings.4201
- ZL2AQT** Duckworth, P. D., 7 Einstein Street, Gisborne.3801
- ZL2AQU** Benton, S. W., "Wainawhenua", Kahautara Road, R.D. 1, Featherston.5952
- ZL2AQW** Anderson, G. W. J., 32 Chichester Drive, Silverstream.6402
- ZL2AQX** Laing, D. J. H., 6 McDonald Street, Taita, Lower Hutt.6301
- ZL2AQY** Macartney, R. A., 7 Fromont Street, Wanganui.5001
- ZL2AQZ** Olson, E. L., 58 Titania Street, Stratford.4700
- ZL2ARB** Edgecombe, C. J., Ngawhin Road, Ararata, R.D., Hawera.4800
- ZL2ARC** Davis, J., 19 Titoki Street, Gisborne.3801
- ZL2ARD** Christie, R. F., 259 Cambridge Street North, Levin.5500
- ZL2ARE** Schofield, D. T., 34 Kiwi Road, Raumati Beach.6150
- ZL2ARF** Harris, L. W., 7 Cameron Road, Napier.4001
- ZL2ARG** Lane, J. R., c/- Electricorp, R.D. 3, Napier.4021
- ZL2ARH** Nelson Branch NZART (Inc), see Branch Directory
- ZL2ARI** Henderson, M. J., c/- 1 Awarua Crescent, Havelock North.4201
- ZL2ARK** Wills, A. J., 73 Donovan Road, Paraparaumu.6152
- ZL2ARL** Wilkins, R. R., Iona Road, Havelock North.4201
- ZL2ARM** Prior, R. T., 28 Shelley Street, Palmerston North.5301
- ZL2ARN** Peel, J. S., 19 The Esplanade, Westshore, Napier.4001
- ZL2ARP** Stewart, D. G., 1 Edgewater Street, Waikanae.6154
- Collins, R. J., "L'Chayim", Peka Peka Road, R.D. 1, Waikanae.6154



## ZL2ARQ

**ZL2ARQ** Pahl, D. G., Dee Road, R.D. 1, Upper Moutere.7152  
**ZL2ART** McQuinlan, T., 6 Whanake Street, Titahi Bay.6202  
**ZL2ARV** Black, R. C., 25 Marsden Road, Stoke, Nelson.7001  
**ZL2ARW** Williams, P. R., 15 Pinny Avenue, Lower Hutt.6301  
**ZL2ARX** Pomfret-Brown, G. E., 29 Bishopdale Avenue, Stoke, Nelson.7001  
**ZL2ARY** Jenks, M. D., 34 Waitaki Street, Christchurch.8007  
**ZL2ARZ** Collins, J. L., 8 Marine Parade, Wairoa.4192  
**ZL2ASA** Dinsdale, B., 14 Benmore Avenue, Palmerston North.5301  
**ZL2ASB** Anderson, N. H., 109 Aro Street, Wellington.6002  
**ZL2ASC** Denton, R. J., 17 Rangiora Terrace, Tahunanui, Nelson.7001  
**ZL2ASD** Darby, A. R., 47 McLaren Street, R.D. 1, Mangaroa.6421  
**ZL2ASE** Williams, R. B., 35 Trelawney Road, Wainuiomata.6305  
**ZL2ASF** Fogerty, S. F., 367 High Street, Motueka.7151  
**ZL2ASG** Waterall, T. H., 26 William Street, Hataitai, Wellington.6003  
**ZL2ASH** Clark, B. S., 5 Mamaku Grove, Khandallah, Wellington.6004  
**ZL2ASI** Law, A., 1 Kopara Grove, Stokes Valley.6306  
**ZL2ASJ** Major, J. E., 86 Quebec Street, Wellington.6003  
**ZL2ASK** Tuffnell, B. R., Flat 2, 31 Perth Street, Christchurch.8001  
**ZL2ASL** Leitch, J. H., Dudley Road, R.D. 6, Inglewood.4651  
**ZL2ASM** Glew, R. E., 58 Henderson Line, Marton.5151  
**ZL2ASO** Sewell, J. R., 57 Hine Road, Wainuiomata.6305  
**ZL2ASP** Colquhoun, T. R., 39 Melrose Road, Island Bay, Wellington.6002  
**ZL2ASQ** Dawson, E. K., 680 East Coast Road, Browns Bay, Auckland.1310  
**ZL2ASR** Gill, A. H., Middle Road, R.D. 11, Havelock North.4201  
**ZL2AST** Groombridge, J. E., 15 Oakleigh Street, Maungaraki, Lower Hutt.6301  
**ZL2ASW** Avery, G. S., Camerons Line, Feilding.5600  
**ZL2ASY** Currie, R. G., 75 Hair Street, Wainuiomata.6305  
**ZL2ASZ** Wardlaw, D. A., c/- NZART, Astral Towers, Upper Hutt.6401  
**ZL2ATA** Johnson, J. M. (Mrs), P.O.Box 174, Pahiatua.5471  
**ZL2ATB** Blackwell, F. N., 103 Kenmore Street, Newlands, Wellington.6004  
**ZL2ATC** Harris, E. J. (Mrs), 7 Cameron Road, Napier.4001  
**ZL2ATE** Manley, R. C., 22 Amberley Avenue, Palmerston North.5301  
**ZL2ATF** Dee, R. A., 13b Naseby Street, Merivale, Dunedin.9001  
**ZL2ATI** Erikson, A. M., 8a Cautley Street, Richmond.7002  
**ZL2ATJ** Cartwright, K. C., 8 McNaughton Street, Waitara.4656  
**ZL2ATK** Trye, M., 2/40 West Coast Road, Glen Eden, Auckland.1207  
**ZL2ATL** Williams, V. V. H. (Mrs), Atkins Road, Patutahi., P.O. Box 78, Gisborne.3800  
**ZL2ATM** Williams, C. M., Atkins Road, Patutahi., P.O. Box 78, Gisborne.3800  
**ZL2ATN** Aplin, E. L., 16 Kaka Street, Masterton.5901  
**ZL2ATO** Oborn, L. E., 91 Norton Park Grove, Lower Hutt.6301  
**ZL2ATP** Hursthouse, M. W. (Dr), 306 Princess Drive, Nelson.7001  
**ZL2ATS** Huberts, G. H., 46 Lysnar Street, P.O. Box 6, Gisborne.3800  
**ZL2ATT** Thompson, A. J., 11 London Terrace, Palmerston North.5301  
**ZL2ATU** Horn, I. G., 79 Thatcher Street, Castlecliff, Wanganui.5003  
**ZL2ATV** Clench, H. J., 13 Ilam Grove, Kelson, Lower Hutt.6301  
**ZL2ATW** Lang, W. J., 138 Buick Crescent, Palmerston North.5301  
**ZL2ATX** Haskell, E. H. E., 124 Taupo View Road, Taupo.3300  
**ZL2ATZ** Shortall, J. P., 82 Menin Road, Onekawa, Napier.4001  
**ZL2AUA** Burch, M. A. G., 8 Lochiel Road, Khandallah, Wellington.6004  
**ZL2AUB** Moore, P. J., 54 Herbert Avenue, Palmerston North.5301  
**ZL2AUC** Keegan, R. J., 11 Malaghan Grove, Johnsonville, Wellington.6004  
**ZL2AUD** Martin, W., 4 Bella Grove, Naenas, Lower Hutt.6301  
**ZL2AUE** King, M., Flat 21, 10/12 Austin Street, Wellington.6001  
**ZL2AUF** Blair, S. G., 15 Poplar Grove, Thorndon, Wellington.6001  
**ZL2AUH** O'Shea, P. F., 39 Folkestone Drive, Flaxmere, Hastings.4230  
**ZL2AUI** Danrell, F. R., 1215 North Willowpark Road, Hastings.4201  
**ZL2AUJ** Catchpole, D., 25 Taipakupaku Road, Miramar, Wellington.6003  
**ZL2AUK** Leckie, D. A., 12 Pencarrow Crescent, Wainuiomata.6305  
**ZL2AUL** Bird, J. W., 131 Whites Line East, Lower Hutt.6301  
**ZL2AUN** Francis, L. J., 1 Worcester Street, Taradale, Napier.4001  
**ZL2AUO** Bould, J. R., Flat 1, 42 Chelwood Street, Palmerston North.5301  
**ZL2AUR** Tong, Tse-Ying, 24 Flanders Avenue, Napier.4001  
**ZL2AUS** Stewart, B. E., 1 Caversham Road, Mosston, Wanganui.5001  
**ZL2AUT** Morton, L. W., 112 Union Street, Foxton.5551  
**ZL2AUV** Rockell, J. E., 2/10 Maimi Street, Mangere East, Auckland.1701  
**ZL2AUW** Nash, A. L. J., Honi Taipua Street, Manakau, Levin.5500  
**ZL2AUX** Lewer, D. H., 113 Pukepapa Road, Marton.5151  
**ZL2AUY** Murphy, N. J., 69 Ames Street, Paekakariki.6151  
**ZL2AUZ** Blair, R. L., 12 Cleland Street, Palmerston North.5301  
**ZL2AVA** McLauchlan, A. A. W., 81 Parker Avenue, Levin.5500  
**ZL2AVB** Hargreaves, A. P., 29 King Edward Street, Eltham.4751

**ZL2AVC** McDermott, R. J. O., 35 Highbury Road, Kelburn, Wellington.6005  
**ZL2AVE** Fittis, A. H., 5 Tyndall Street, Pahiatua.5471  
**ZL2AVF** Gibbs, L. V., 19 Camellia Terrace, Lower Hutt.6301  
**ZL2AVG** Reynolds, M. G., P.O.Box 63, Porangahau Road, Waipukurau.4173  
**ZL2AVH** Chong, A. V., 240 Whirinaki Road, R.D. 2, Napier.4021  
**ZL2AVI** Savage, R. B., 2a Waverley Street, Richmond, Nelson.7002  
**ZL2AVJ** McNabb, M. D., Kina Beach Road, Tasman, R.D. 1, Upper Moutere.7152  
**ZL2AVK** Kane, D., 11 Bay Street, Petone.6303  
**ZL2AVL** Luscombe, G. W., Main Road, Waiouru.5164  
**ZL2AVM** Morris, R. H. C., 21 Rangoon Street, Khandallah, Wellington.6004  
**ZL2AVO** Davis, B. F., 45 Roto Street, Tahunanui, Nelson.7001  
**ZL2AVQ** Dement, F. W. H., 162 Bartholomew Road, Levin.5500  
**ZL2AVR** Dinnie, J. S., 27 Rodney Avenue, Te Horo Beach. Postal: P.O. Box 8, Te Horo.6170  
**ZL2AVS** Heath, B. O., 32 Nikau Street, Eastbourne.6304  
**ZL2AVT** Tremear, K. D., 12a Thynne Street, Foxton.5551  
**ZL2AVU** England, S. J., Villa 51, Masonic Village, Queen Street East, Levin.5500  
**ZL2AVV** Hewitt, I. R., 21 Camerons Line, R.D. 5, Feilding.5600  
**ZL2AVW** Carter, J. G., 10 Cracroft Street, Devonport, Auckland.1309  
**ZL2AVX** Rhodes, C. J., 54 Kempton Street, Greytown.5953  
**ZL2AVY** Owen, M. L., Main Road, Makara., P.O. Box 17048, Karori, Wellington.6033  
**ZL2AWA** Farquhar, W. E., 17 Stansell Avenue, Nelson.7001  
**ZL2AWB** Craigie, C. J., 45 Gillespies Road, Upper Hutt.6401  
**ZL2AWC** Wellington College Amateur Radio Club, (Trustee ZL2AOK), P.O.Box 16-073, Wellington.6030  
**ZL2AWE** Cooke, P., 31 Kent Crescent, Palmerston North.5301  
**ZL2AWF** Alexander, D. G., 34 Tennyson Street, Petone.6303  
**ZL2AWG** Roberts, J. C., 40 Grahams Road, Christchurch.8004  
**ZL2AWH** Brosnan, D. C., 120 Maddison Street, Hastings.4201  
**ZL2AWI** Sherley, H. F., 37 Kiwi Road, Raumati Beach.6150  
**ZL2AWJ** Woodhouse, C. W., 51 Houtana Street, Lower Hutt.6301  
**ZL2AWK** Wilson, L. G., 32d Bauchop Road, Lower Hutt.6301  
**ZL2AWL** McMillan, E. M., 6 Anthony Place, Bay View, Napier.4151  
**ZL2AWM** Macdonald, K. A., 68b Chatsworth Road, Upper Hutt.6401  
**ZL2AWN** Lewis, L. D., 20 Horopito Road, Waikanae.6154  
**ZL2AWO** Campin, J. W., 40 Trevola Street, Blockhouse Bay, Auckland.1207  
**ZL2AWP** Wills, A. E. (Mrs), R.D. 1, Karaka, Papakura.1733  
**ZL2AWR** Fox, M., 89 Cook Street, New Plymouth.4601  
**ZL2AWS** Sayers, P. A., 97 Happy Valley Road, Ohio Bay, Wellington.6002  
**ZL2AWT** Hopwood, F. B., 109 Park Road, Palmerston North.5301  
**ZL2AWU** Tiller, B. A., 68 Donovan Road, Paraparaumu Beach.6153  
**ZL2AWV** Hawera Branch NZART (Inc.), see Branch Directory  
**ZL2AWY** Williams, D. M., 28 Highbury Avenue, Palmerston North.5301  
**ZL2AWZ** Faupel, S. K., 92 Reeves Road, Papakura Heights, Auckland.1706  
**ZL2AXB** Crawley, D. R. K., Campbell Road, R.D. 1, Wanganui.5021  
**ZL2AXC** Ragan, J. H., 45 Selwyn Crescent, Wanganui.5001  
**ZL2AXD** Belding, W. E., 30 Duke Street, Levin.5500  
**ZL2AXE** Widmer, J. B., Otaraoa Road, R.D. 43, Waitara.4656  
**ZL2AXG** Young, W. D. D., 20 Rexwood Street, Carterton.5951  
**ZL2AXI** Leslie, G., 35 Robinson Street, Foxton.5551  
**ZL2AXJ** Holdsworth, R., 3 Best Street, Wainuiomata.6305  
**ZL2AXK** Sommerville, W. V., 21 Bridge View Road, Birkenhead, Auckland.1310  
**ZL2AXL** Harvey, P. R., 4a Norton Road, Otumotai, Tauranga.3001  
**ZL2AXM** Wilkins, S. J., 3 Kentucky Street, Upper Hutt.6401  
**ZL2AXN** Crane, R. G., 101 Anzac Parade, Wanganui.5001  
**ZL2AXO** Mathers, R. W., P.O. Box 54, Pohara Valley Road, Takaka.7172  
**ZL2AXP** Latta, I. K., 31 Collingwood Street, Palmerston North.5301  
**ZL2AXQ** Rowlands, R. E., 55 Fairview Crescent, Kelburn, Wellington.6005  
**ZL2AXR** Ramsay, K. A., 79 Yule Street, Lyall Bay, Wellington.6003  
**ZL2AXS** Bowden, B. A., 19 Margate Place, Flaxmere, Hastings.4201  
**ZL2AXT** Bremford, J. D., 9 Winston Street, Crofton Downs, Wellington.6004  
**ZL2AXU** Wharton, J. H., 14 Celia Street, Stratford.4700  
**ZL2AXV** Hulston, J. R., 7 Earlston Grove, Lower Hutt.6301  
**ZL2AXW** Andrew, P. J., 6 Eton Place, Palmerston North.5301  
**ZL2AXY** Devenport, J. A., 17 Sunny Grove, Wainuiomata.6305  
**ZL2AXZ** Goodfellow, D. R., 1/48 Menin Road, Raumati South.6150  
**ZL2AYA** Little, A. J., 7 Earl Street, Levin.5500  
**ZL2AYB** Fisher, W. G., 40 Beauchamp Street, Karori, Wellington.6005  
**ZL2AYC** Richards, H. J., 5 Meachen Crescent, Blenheim.7301



- ZL2AYD** Barker, B. A., Cole Street, Dannevirke.5491  
**ZL2AYE** Wastney, R. J., 126 The Ridgeway, Stoke, Nelson.7001  
**ZL2AYF** Amies, B. W., 20 Greer Crescent, Tawa.6203  
**ZL2AYG** Bowden, R. E., 10 Kennedy Grove, Stokes Valley.6306  
**ZL2AYH** Simpson, A. R., 6 Murray Avenue, Hawera.4800  
**ZL2AYI** Brooks, J. D., Te Uru, Utuwai, R.D., Ashhurst.5451  
**ZL2AYJ** Visser, A., 72 McLeod Street, Upper Hutt.6401  
**ZL2AYK** Kelly, R. W., 406 South Road, Hawera.4800  
**ZL2AYM** Schofield, C. O., Spring Grove, R.D. 1, Wakefield.7181  
**ZL2AYO** Hurley, G., 19 Hillcrest Road, Raumati.6150  
**ZL2AYP** Scarfe, T. W., P.O.Box 67, Greytown.5953  
**ZL2AYQ** Hill, K. J., 27 Welland Place, Wellington.6002  
**ZL2AYR** Kingston, B. L., 4/49 High Street, Renwick.7352  
**ZL2AYS** Burton, H. C., 34 Stewart Street, Aramoho, Wanganui.5002  
**ZL2AYT** Bolton, P. E., 27 Ariki Street, Lower Hutt.6301  
**ZL2AYU** Leask, D. W., 11 Cannon Street, New Plymouth.4601  
**ZL2AYW** Thwaites, C. L., 4 Brian Barry Street, Blenheim.7301  
**ZL2AYX** Pohl, K. P., 58 Norton Park Avenue, Lower Hutt.6301  
**ZL2AYY** Waghorn, T. J., 87 Chelmsford Street, Ngaio, Wellington.6004  
**ZL2AYZ** Cousins, W. G., 1 Clinton Way, Wellington.6002  
**ZL2AZA** Borrell, D., 5 Taupo Crescent, Plimmerton.6251  
**ZL2AZB** McKay, D. K., 28 Eltham Road, Blenheim.7301  
**ZL2AZC** Dunn, D. A., 1017a Frederick Street, Hastings.4201  
**ZL2AZE** Stretch, F., 122 Muller Road, Blenheim.7301  
**ZL2AZG** Dagg, R. I., 1009 Garry Street, Hastings.4201  
**ZL2AZH** Noel, L. E. H., Humber Street, Rongotea.5454  
**ZL2AZI** Boivin, R. A., 141 Winchester Street, Ashhurst.5451  
**ZL2AZJ** Cole, A. G., 66 Ponsonby Road, Karori, Wellington.6004  
**ZL2AZK** Lankshear, B. R., 222 Howick Road, Blenheim.7301  
**ZL2AZL** Bell, G. J., Victoria Terrace, Ohau.5554  
**ZL2AZM** Cooper, B. V., 3a Denbigh Square, Feilding.5600  
**ZL2AZN** Walker, D. G., 16 Stephen Street, Johnsonville, Wellington.6004  
**ZL2AZP** Pinny, H. G., 8 Wakefield Grove, Waikanae.6154  
**ZL2AZQ** Davies, S. J., see overseas members  
**ZL2AZR** Harris, M. G., 222 Main South Road, Paraparaumu.6152  
**ZL2AZS** Bush, C. J. T., 363 Devon Street West, New Plymouth.4601  
**ZL2AZT** Thomas, G. D., 10 Morning View, Titahi Bay.6202  
**ZL2AZV** Stephen, J. M., 6 Legorne Lane, Havelock North.4201  
**ZL2AZW** Thomson, E. M., 31 Rotokauri Road, Hamilton.2001  
**ZL2AZY** Owen, S. C., Main Road, Makara.6203  
**ZL2AZZ** Randall, J. H., 7a Sunny Glen, Waikanae.6154  
**ZL2BAC** Osborne, T. G., 144 Matai Road, Raumati.6150  
**ZL2BAD** Bennett, W. A., Tucker Road, R.D. 1, Gisborne.3821  
**ZL2BAE** Searing, J. J., 6/51 Austin Street, Mt Victoria, Wellington.6001  
**ZL2BAF** Donoghue, C. J., 33 Gracechurch Drive, East Tamaki, Auckland, R.D. Papatoetoe.1734  
**ZL2BAG** Martin, P. J., Palmer Road, R.D. 29, Kaponga.4752  
**ZL2BAH** Mace, R. R., Main South Road, R.D. 4, Omata, New Plymouth.4621  
**ZL2BAI** Garth, D. J., Te Koawa Station, R.D. 2, Te Karaka, Gisborne.3821  
**ZL2BAJ** Blackley, D., 116 Darlington Road, Miramar, Wellington.6003  
**ZL2BAK** Douglas, R. J., 507 Riverside Drive North, Lower Hutt.6301  
**ZL2BAL** Laing, A. J., 21 Napier Road, Ashhurst.5451  
**ZL2BAM** Durdle, B. M., 27a Montana Place, New Plymouth.4601  
**ZL2BAN** Davison, G., Forlongs Road, R.D. 7, Feilding.5600  
**ZL2BAO** Wilson, J. E., 20 James Foley Avenue, Napier.4001  
**ZL2BAQ** Carr, P. H., 17 Timaru Grove, Kelson, Lower Hutt.6301  
**ZL2BAR** Allardice, M. H., 49 Raykott Terrace, Khandallah, Wellington.6004  
**ZL2BAS** Longly, S. McL., 6a Lambton Road, Napier.4001  
**ZL2BAT** Ramage, B. H., 95 Gossamer Drive, Pakuranga.1706  
**ZL2BAU** Mallett, P. J., 22 Meehan Street, Blenheim.7301  
**ZL2BAV** Ruddie, D. J., St. Andrews College, Papanui Road, Christchurch.8005  
**ZL2BAW** McCarron, J. R., 24 Marewa Road, Hataitai, Wellington.6003  
**ZL2BAY** Elvy, S. J., 5b Mountain View Road, Blenheim.7301  
**ZL2BAZ** Forrester, I. J., 3 Duncraig Road, Silverstream, Upper Hutt.6402  
**ZL2BBA** Rundle, W. J., 67 Rimu Road, Raumati.6150  
**ZL2BBC** Belmont Scout Group HQ, (Trustee ZL2BAQ), 6 Fantail Grove, Belmont, Wellington.6301  
**ZL2BBD** Urwin, H. C. R., 14 Brook Street, Nelson.7001  
**ZL2BBE** Tolley, H. G. R., 1 Kauri Grove, Lansdowne, Masterton.5901  
**ZL2BBF** Feickert, B., 9 Pioneer Grove, Silverstream, Upper Hutt.6401  
**ZL2BBG** Wilhers, F. R., 19 Brassey Road, Wanganui.5001  
**ZL2BBH** Jansen, J. H., 1 Pufflet Road, Havelock North.4201  
**ZL2BBJ** Corney, A. C., 43 Clulha Avenue, Wellington.6004  
**ZL2BBK** Hislop, S. J. K., See Overseas Members.  
**ZL2BBL** Barwick, L. G. A., 25 Wades Avenue, Christchurch.8002  
**ZL2BBM** Black, E. G., 9 Tudor Court, Paraparaumu Beach.6153  
**ZL2BBN** Finch, B. P., 142 Brooklands Road, New Plymouth.4601  
**ZL2BBO** Lealand, T. P., 16a Hunter Street, Hawera.4800  
**ZL2BBP** Childs, P. L., 30 Snowdens Crescent, Blenheim.7301  
**ZL2BBQ** Edgar, M. M., 16 St Clio Street, Ilam, Christchurch.8004  
**ZL2BBS** Doig, A. M., 68 Arlie Road, Plimmerton.6251  
**ZL2BBT** Grove, K. E., 3 Lomond Street, Newlands, Wellington.6004  
**ZL2BBU** Pearmain, C. E., 47 Alton Street, Nelson.7001  
**ZL2BBV** Gorst, T. H., 2 Belmont Street, Havelock North.4201  
**ZL2BBW** Byles, T. W., 16 Wedgewood Grove, Palmerston North.5301  
**ZL2BBY** Bray, H. J. J., 7 Alexandra Road, Wellington.6003  
**ZL2BBZ** Dickson, L. P., Lower Okoki Road, 45 R.D., Urenui.4655  
**ZL2BCA** Scott, D. L., 10 Waimea Road, Nelson.7001  
**ZL2BCB** Tunnicliffe, C. G., 128 Vogel Street, Palmerston North.5301  
**ZL2BCC** Chang, A. G. M., 11 Redwood Close, Paraparaumu.6152  
**ZL2BCD** Dean, F. R. J., 47 Tweed Road, Papakowhai.6250  
**ZL2BCF** Pratt, D. H., 62 Ruskin Road, Newlands, Wellington.6004  
**ZL2BCG** Jackson, J., Thorp Street, Motueka., P.O.Box 218, Motueka.7161  
**ZL2BCH** Brayshaw, K. V., 63 Balfour Street, Wellington.6002  
**ZL2BCK** Thorp, G. R., 110 Riverbend Road, Napier.4001  
**ZL2BCL** Dagg, A. H., 77 Barker Road, Mawera, Napier.4001  
**ZL2BCO** Gooch, G. M., 6b Williams Terrace, Palmerston North.5301  
**ZL2BCP** Bromley, J. H., 9 Archer Place, Westport.7601  
**ZL2BCR** Christie, A. J., 259 Cambridge Street, Levin.5500  
**ZL2BCS** Hooker, B. C. A., 2/212 Lovedale Road, Hastings.4201  
**ZL2BCT** Clements, D. J., 179 Main Street, Greytown.5953  
**ZL2BCU** Stephenson, W. R., 21 Belmont Terrace, Lower Hutt.6301  
**ZL2BCV** Williams, C. W., 151 Waihi Road, Hawera.4800  
**ZL2BCW** Kerr, M. J. B., 8 Tarikaka Street, Ngaio, Wellington.6004  
**ZL2BCX** Luxford, J. W., R.D. 9, Feilding.5600  
**ZL2BCY** Wallen, E. J., 66 Wildish Street, Gisborne.3801  
**ZL2BCZ** Bailey, I. K., 2/273 College Street, Palmerston North.5301  
**ZL2BDB** Herbert, J. W., Onekura Bay, Queen Charlotte Drive, Picton.7372  
**ZL2BDO** Harris, R. S., Mt. Adde, R.D. 4, Blenheim.7321  
**ZL2BDE** Gisborne Boys' High School Radio Club, Roebuck Road, Gisborne.3801  
**ZL2BDF** Garratt, H., 172 Knights Road, Lower Hutt.6401  
**ZL2BDG** Head, B. P., 22 Greenvalley Rise, Glenfield, Auckland.1310  
**ZL2BDH** Hulse, J. C., Pughs Road, R.D., Richmond.7031  
**ZL2BDI** Grenfell, N. W., 112 Fitzherbert Street, Featherston.5952  
**ZL2BDJ** Sutherland, G. D. K., 40 Budge Street, Blenheim.7301  
**ZL2BDK** Rodda, D. G., "Petersham Place", 94 Tikoki Street, Masterton.5901  
**ZL2BDL** McLachlan, R. M., 152 Te Mata Road, Havelock North.4201  
**ZL2BDM** Mote, B. J., 55 Burness Road, Greenmeadows, Napier.4001  
**ZL2BDN** New Plymouth Branch NZART (Inc.), see Branch Directory  
**ZL2BDQ** Johnson, W. J., 363 Westminster Avenue, Napier.4001  
**ZL2BDR** Greig, N. A., 145 Normandale Road, Lower Hutt.6301  
**ZL2BDS** Corbett, A. A., 587 Featherstone Street, Palmerston North.5301  
**ZL2BDT** Robotham, R. W., 30 East Street, Palmerston North.5301  
**ZL2BDU** Pickett, B. T., 4 Harrow Place, Palmerston North.5301  
**ZL2BDV** Inge, S. R., 9 High Street, Island Bay, Wellington.6002  
**ZL2BDW** Smith, G. B., 1299 Fergusson Drive, Upper Hutt.6301  
**ZL2BDZ** Johnson, G. V., 19 Dawson Street, Pahiatua.5471  
**ZL2BEC** Hislop, R. G., 44 Donnelley Drive, Wainuiomata.6305  
**ZL2BED** Dunkley, G. J. H., 53c Chatsworth Road, Silverstream.6402  
**ZL2BEE** Williams, D., 12 Kippenberger Street, Masterton.5901  
**ZL2BEF** London, P. R., 12 Herbert Street, Masterton.5901  
**ZL2BEG** Cropp, B. A., 7 Blue Mountains Road, Silverstream.6402  
**ZL2BEI** Hastings Branch NZART (Inc.), see Branch Directory  
**ZL2BEJ** Squire, D. N., White Rose Dairy, Main Road, Okato.4652  
**ZL2BEK** Campbell, L. T., 14 Leighton Avenue, Lower Hutt.6301  
**ZL2BEL** Hoogeveen, W., 35 Ramanui Avenue, Hawera.4800  
**ZL2BEM** Mackrell, T. F., Maru Maru School, Wairoa.4192  
**ZL2BEN** Fretter, M. S. E., R.D. 2, Wanganui.5021  
**ZL2BEO** Colley, M. J., 23 Churchill Avenue, Richmond, Nelson.7002  
**ZL2BEP** Whitford, P. C., 54 Aurora Terrace, Wellington.6001  
**ZL2BEQ** Penberthy, P. M., 5 R.D., Rangitiki Line, Newbury, Palmerston North.5321  
**ZL2BER** Crompton, R. P. K., 54 Reinga Road, R.D. 2, Kerikeri.0452  
**ZL2BEU** Neumer, E. M., 7 Copeland Street, Lower Hutt.6301  
**ZL2BEV** Vondruska, A. J. J. M., P.O.Box 27-332, Wellington.6037  
**ZL2BEX** Ramsay, D. A., Fox Hill, R.D. 1, Wakefield.7181  
**ZL2BEZ** Clark, A. R., 116a Cranford Street, St Albans, Christchurch.8001  
**ZL2BFA** Parkinson, R. M. (Mrs), 38 Sovereign Street, Nelson.7001  
**ZL2BFB** Wilde, R. H., 179 Cook Street, Palmerston North.5301  
**ZL2BFD** Walshe, R. J., 42 Wainuiomata Road, Wainuiomata.6305



## ZL2BFE

- ZL2BFE Edgar, F., North Street, Motueka.7161  
ZL2BFF Cummerfield, G. C., 3 Croxley Place, Palmerston North.5301
- ZL2BFG Webley, H. R., 32e Mission Street, Lower Hutt.6301  
ZL2BFH Holt, D., 5 Hillary Heights, Gisborne.3801  
ZL2BFI Young, D. E., 97 Rosetta Road, Raumati South.6150  
ZL2BFJ Ireland, P. J., 45 George Street, Levin.5500  
ZL2BFK Potroz, K. N., 206 Mayfair Avenue, Hastings.4201  
ZL2BFM Thomas, K. F., 17d Manu Crescent, New Plymouth.4601  
ZL2BFN Crabtree, J. A., 2 Guadeloupe Crescent, Grenada, Wellington.6004
- ZL2BFO Largerstedt, B. A., 26 Russell Road, Wainuiomata.6305  
ZL2BFP Kinge, G. H., 62 Oak Street, Gisborne.3801  
ZL2BFQ Geange, S. W., 2a Victoria Street, Levin.5500  
ZL2BFR Wiggins, H. N., 23 Slacks Road, Palmerston North.5301  
ZL2BFS Rushton, G. A. W., 149 Te Moana Road, Waikanae.6154  
ZL2BFT Cavanagh, B. J., 67 Alexander Avenue, Napier.4001  
ZL2BFU Lacey, G., 27 Bledisloe Street, Masterton.5901  
ZL2BFV McIver, W. C., 22a Ballance Street, New Plymouth.4601  
ZL2BFW Peters, R. E. F., 50 Arapiki Road, Stoke, Nelson.7001  
ZL2BFX Kerr, A. J., 50a Chelmsford Street, Ngaio, Wellington.6004  
ZL2BFY Lambert, R., 12 Belts Avenue, Masterton.5901  
ZL2BFZ Thum, F. A., 107 Houghton Bay Road, Wellington.6003  
ZL2BGA Grainger, K. B., 366c Devonport Road, Tauranga.3001  
ZL2BGB Barnett, C. J., 42a Darlington Road, Wellington.6003  
ZL2BGC Passuello, M. G. D., 50 Apuka Street, Brooklyn, Wellington.6002
- ZL2BGD York, R. W. F., 41a Nelson Street, Blenheim.7301  
ZL2BGE Boyle, L., 37 Lewis Avenue, Wanganui.5001  
ZL2BGF Toms, R. V., 45 Moncur Drive, Rotorua.3201  
ZL2BGH Bridge, G. H., 38 Ngatoto Street, Ngaio, Wellington.6004  
ZL2BGI Pycroft, W. J., 11 Ellesmere Avenue, Miramar, Wellington.6003
- ZL2BGJ Jonas, G. M., Otaraoa Road, R.D. 43, New Plymouth.4656  
ZL2BGK England, V. I. (Mrs), 29 Horokiwi Road, Newlands, Wellington.6004
- ZL2BGL Conway, I. W., Caseys Road, Blind River, Seddon.7353  
ZL2BGN Eccles, K. R., Tarrant Road, R.D. 1, Upper Moutere.7152  
ZL2BGO Grove, P. E., 38 Tilbury Street, Lower Hutt.6301  
ZL2BGP Griffith, K. C., 801e Queen Street East, Hastings.4201  
ZL2BGQ Buckton, G. S., 44 McLauchlan Street, Blenheim.7301  
ZL2BGT Bennett, P., 19 Wainui Street, Nelson.7001  
ZL2BGU Clemens, W. E., 5 Lowry Street, Richmond, Nelson.7002  
ZL2BGW Kisby, M., 3 Richmond Hill, Tawa, Wellington.6203  
ZL2BGX Smith, W. H., 65 Sefton Street, Wadestown, Wellington.6001  
ZL2BGY Bennett, A. J., 2 Cheltenham Terrace, Newlands, Wellington.6004
- ZL2BGZ McLean, G. M., 107 Richmond Street, Petone.6303  
ZL2BHB Kitching, L. A., 9 Isel Place, Stoke, Nelson.7001  
ZL2BHC Wilcox, C., 35 Jeep Road, Raumati South.6150  
ZL2BHD Bateman, G. W., 54 Murray Avenue, Hawera.4800  
ZL2BHE Walker, D. C., c/- R. Walker, 9 Milne Terrace, Island Bay, Wellington.6002
- ZL2BHF Meachen, J. A., 31 Perry Street, Silverstream, Upper Hutt.6402
- ZL2BHG Lawson, J. R., 114 Hospital Road, Blenheim.7301  
ZL2BHH Burnham, E. D., 15 Tawa Street, Levin.5500  
ZL2BHI Orams, K. J., 13 Eagle Street, Karori, Wellington.6005  
ZL2BHJ Andrews, G. J. (Mrs), 66 Khandallah Road, Khandallah, Wellington.6004
- ZL2BHK Johnson, D. H., 11 Linwood Drive, Paraparaumu.6152  
ZL2BHL Fowler, R. L., Main Road, R.D. 3, Riwaka.7160  
ZL2BHM Matthews, E. F., Moeawatea, R.D., Waverley.5182  
ZL2BHN Allardyce, J. P. G., Marcellin Hall, 30 Korma Road, Royal Oak, Auckland.1106
- ZL2BHO Henderson, R. L., Main Road, Waiohiki.4150  
ZL2BHP Walker, J., 4 St. Ronans Avenue, Lower Hutt.6301  
ZL2BHQ Miller, A., 27 Fairfield Avenue, Lower Hutt.6301  
ZL2BHR Inwood, R. G., 22 Benmore Avenue, Palmerston North.5301  
ZL2BHS Bowden, C. J., 64 Kiwi Crescent, Tawa, Wellington.6203  
ZL2BHT McLaren, D. M., 26 Van Dieman Street, Nelson.7001  
ZL2BHV Kilgour, A. D., 12 Miriona Grove, Paekakariki.6151  
ZL2BHW Quayle, R. P., 7 Te Pari Pari Road, Pukerua Bay.6252  
ZL2BHX Vernon, T. J. E., 1 Whio Street, Taihape.5163  
ZL2BHZ Searle, P. M., 58 Russell Street, Gisborne.3801  
ZL2BIB Meikle, D. A., 4 Angle Street, Picton.7372  
ZL2BID Gordon, A. F. W., 64 King Street, Taradale, Napier.4001  
ZL2BIE Phillips, E. L., 1/5 Jebson Street, Christchurch.8001  
ZL2BIF McKain, S. J., 1354 Devon Road, R.D. 42, Waitara.4656  
ZL2BIG Bingham, W. J., 31 Elizabeth Street, Feilding.5600  
ZL2BIJ Wincer, R. A., 82 Cleveland Terrace, Nelson.7001  
ZL2BIJ Pugh, A. G. E., 6 Smith Street, Paekakariki.6151  
ZL2BIL Morris, R. K., 5 Lilac Lane, Maungaraki, Lower Hutt.6301
- ZL2BIM Green, A. K., 197 Luckens Road, Westharbour, Auckland.1208
- ZL2BIN Fletcher, G. L., 7 Collingwood Street, Nelson.7001  
ZL2BIO Barnes, D. J., 16 Jackson Street, Nelson.7001  
ZL2BIQ Thorne, G. S., 1 Emerson Street, Shirley, Christchurch.8006  
ZL2BIR Kidd, P. R., 70 McLeod Street, Upper Hutt.6401  
ZL2BIS Porter, I. G., 20 Belfield Street, Christchurch.8006  
ZL2BIT Willan, L. R., 8 Warren Place, New Plymouth.4601  
ZL2BIU McCaw, J. I., 8 Thornley Street, Titahi Bay.6202  
ZL2BIV Kendall, G. N., 20 Hawthorne Street, Christchurch.8005  
ZL2BIW Rusbatch, G., 116 Lyndhurst Road, Hastings.4201  
ZL2BIY Galyer, R. A., 906 Albert Street, Hastings.4201  
ZL2BIZ Stephenson, W. V., 460 Te Moana Road, Waikanae.6154  
ZL2BJA Salmen, A. H., 8 Mudie Street, Lower Hutt.6301  
ZL2BJB Horne, D. A., c/- Pinenui, Belmont Road, R.D. 1, Plimmerton.6251
- ZL2BJC Hill, I. McK. G., 29 Holdsworth Avenue, Trentham.6402  
ZL2BJD Robson, E. H., 64 Alexander Avenue, Napier.4001  
ZL2BJE Day, S. M., see ZL2BJE  
ZL2BJF Beaumont, A. P., 39 Peck Street, Lower Hutt.6301  
ZL2BJG McGregor, B. A., 10 Saville Row, Johnsonville, Wellington.6004
- ZL2BII Robinson, D. W., 88 Manawapou Road, Hawera.4800  
ZL2BIJ Dewick, J. A., 98 Riverbend Road, Napier.4001  
ZL2BJP De Grey, P. J., 156 Brooklands Road, New Plymouth.4601  
ZL2BJQ Guest, R., 15 Webber Street, Paraparaumu Beach.6153  
ZL2BJR Wilkinson, K. S., c/- W. St. J. Reed, 11 Wood Street, Upper Hutt.6401
- ZL2BJS Jamieson, D. R., 2 Waipuna Street, Blenheim.7301  
ZL2BJU Thompson, J. J., 15 Golf Road, Paraparaumu Beach.6153  
ZL2BJV Menzies, K. J., Main Road, Grovetown, Blenheim.7301  
ZL2BJX Thompson, J. S., 124 Manuka Street, Stokes Valley.6306  
ZL2BJY Benson, A. P., 29 Robinson Road, Foxton.5551  
ZL2BJZ Murdock, H. D. A., 15 Arawa Street, Raumati Beach.6150  
ZL2BKA Dale, J. S. A., 16 Kiwi Road, Devonport, Auckland.1309  
ZL2BKB Hanson, H. G., c/- R. A. Garlick, 23 Lydia Street, Greymouth.7801
- ZL2BKC Knowles, W. D., 39a Clifford Road, Johnsonville, Wellington.6004
- ZL2BKD Barriball, E. C., 66 Bell Street, Linden.6203  
ZL2BKE Glassey, E. C., 422 Jackson Street, Petone.6303  
ZL2BKF Tompkins, B. H., R.D. 4, New Plymouth.4621  
ZL2BKG Thorpe, R., 108 Winara Avenue, Waikanae.6154  
ZL2BKH Wharton, C. D., Pakaraka Road, R.D. 6, Masterton.5901  
ZL2BKI Hurst, J. J., 154 Kahu Road, Paremata.6250  
ZL2BKJ Dacom, B. P. W., 21 Gebbie Road, Taradale, Napier.4001  
ZL2BKK Powell, D. B., 1 Oliver Road, Bucklands Beach.1704  
ZL2BKL Allen, B. W., 38 Wesley Avenue, New Plymouth.4601  
ZL2BKM Meek, A. P., 17 Colchester Crescent, Newlands, Wellington.6004
- ZL2BKN Burling, B. N. G., 102a Harold Holt Avenue, Napier.4001  
ZL2BKO Christensen, K. D., 4/159 Ferguson Street, Palmerston North.5301
- ZL2BKP MacDonald, J. V., 4/34 Allen Road, Raumati Beach.6150  
ZL2BKR Truman, H. J., 21 Rintoul Grove, Stokes Valley.6306  
ZL2BKS Brown, K. J., 2/8 Motueka Street, Ngaio, Wellington.6004  
ZL2BKU Burton, F. S., 48 Wikitoria Road, Wanganui.5001  
ZL2BKV Pompe, H. G. A., 10 Beach Road, Haumoana.4250  
ZL2BKW Harrowfield, T. R., Roberts Line, R.D. 8, Palmerston North.5321
- ZL2BKY Cox, K. L., 37 Cuba Street, Petone.6303  
ZL2BKZ Rodrigues, J. F. C., 115 Brooklands Road, New Plymouth.4601
- ZL2BLA Hyde, G. D., 130 The Parade, Paekakariki.6151  
ZL2BLB Ames, M. L., Queen Street East, R.D. 1, Levin.5500  
ZL2BLC Ottaway, J. T. J., 32 Owen Street, Belmont, Lower Hutt.6301  
ZL2BLD Turner, B. W., Cadman Road, Dannevirke.5491  
ZL2BLE Dew, A. W., Willow Grove, Homebush, Masterton.5921  
ZL2BLF Kooy, W., 39 Waiho Terrace, Porirua.6201  
ZL2BLG Patterson, R. A., 338 High Street, Dannevirke.5491  
ZL2BLH Ellison, D. M., Highway 2, Opapa, Hawkes Bay.4172  
ZL2BLI Inkster, D. J., P.O. Box 27, Ohakune.5171  
ZL2BLJ Hodgkinson, J., 171 Tukapa Street, New Plymouth.4601  
ZL2BLK Baynam, P. S., Pyle Road West, One Tree Point, R.D. 1, Ruakaka.0253
- ZL2BLM Shaw, V. S., 13a Weathers Place, Taradale, Napier.4001  
ZL2BLN Rait, N. A. H., 2 Revans Street, Featherston.5952  
Scarrott, P. E., Buchanan Road, Bay View, Hawkes Bay.4001
- ZL2BLO Moore, P. C., 8 Maxwell Street, Napier.4001  
ZL2BLP Rodgers, G. K., 72 Fleete Street, Christchurch.8006  
ZL2BLQ Mangin, S. G., 33 West Street, Greytown.5953  
ZL2BLS Lavery, M. W., 16 Morrissey Street, Hawera.4800  
ZL2BLT Bourke, R. F., 179 Fairfield Road, Hawera.4800



- ZL2BLU Smith, W. B., 12 Clifford Street, Hawera.4800  
 ZL2BLV Christian, J. M., 12 Golders Place, Taupo.3300  
 ZL2BLW Batt, L. A., 33 Waterhouse Road, Masterton.5901  
 ZL2BLX McLaughlan, A. C. L., 122 Redwood Avenue, Tawa.6203  
 ZL2BLY Ashwell, D. H., 3/14 Armour Place, Napier.4001  
 ZL2BMA Calvert, R. H. G., Fabians Road, R.D. 1, Greytown.5953  
 ZL2BMB Walker, M. K. R., 10 Butler Street, Naenae.6301  
 ZL2BMC Childs, J. R., 5 Savage Crescent, Waipukurau.4176  
 ZL2BMD Pearson, R. K., Fountains Road, Christchurch.8003  
 ZL2BME Clarke, G. R., 57 Kauri Street, Miramar, Wellington.6003  
 ZL2BMG Dunlop, J. A., 23 Tarata Street, Wanganui.5001  
 ZL2BMH Irving, J. E., c/- Irvings Dairy, Bridge Street, Bulls.5452  
 ZL2BMI Sears, E. J.(Rev), 31 Ferry Road, Spring Creek, Marlborough.7350  
 ZL2BMJ Railton-Jacks, P. N., 31 Seaforth Avenue, Palmerston North.5301  
 ZL2BMK Bowman, R. F., 146 Conclusion Street, Ascot Park, Porirua.6201  
 ZL2BML McCormick, C. D. K., 13 Main Road, Westshore, Napier.4001  
 ZL2BMN Irving(Snr), J. E., 30 Achilles Street, Stratford.4700  
 ZL2BMO Garrod, J., P.O. Box 3225, Richmond.7031  
 ZL2BMP Barnes, T. H., 47 Larsen Crescent, Tawa, Wellington.6203  
 ZL2BMQ Moual, W. A., c/- Pukeora Home, P.B., Waipukurau.4176  
 ZL2BMR Vining, L. G., 49 Havelock Avenue, Palmerston North.5301  
 ZL2BMS Moore, M. B., 187 Riverside Drive, Lower Hutt.6301  
 ZL2BMV Hathaway, R. L. S., 18 Adams Lane, Blenheim.7301  
 ZL2BMW Foster, P. K., 15a Transom Close, Whitby.6253  
 ZL2BMX McIvor, D., 65 Doralto Road, New Plymouth.4601  
 ZL2BMY Meek, E., 1 Harrow Street, Taradale, Napier.4001  
 ZL2BMZ Murray, P. L., "Highland Orchard", Paparata Road, R.D., Bombay.1750  
 ZL2BNA Hitchman, G. J., Feilding Road, Feilding.5600  
 ZL2BNB Walker, R. A., 24 Callins Crescent, Palmerston North.5301  
 ZL2BNC Cook, R. A., 50 Spencer Street, Crofton Downs, Wellington.6004  
 ZL2BND Smith, T. W., 4 St Johns Terrace, Tawa, Wellington.6203  
 ZL2BNE Marr, N. C., 7 Rothwell Place, Blenheim.7301  
 ZL2BNF Grant, L. G., 34 Ferguson Street, Bay View, Napier.4001  
 ZL2BNG Gibellini, J. A., 71 Point Road, Monaco, Nelson.7001  
 ZL2BNH Bastin, F. T., 103 Gascoigne Street, Hastings.4201  
 ZL2BNI Gardner, N. N., 158 Nile Street East, Nelson.7001  
 ZL2BNJ French, M. J., 10 Gurney Road, Belmont, Lower Hutt.6301  
 ZL2BNL Cook, M. J., 18 Rubens Place, Burnside, Christchurch.8005  
 ZL2BNM McKay, P. G., Rowley Crescent, Grovetown, Blenheim.7301  
 ZL2BNN Robinson, H. T., 6 Becroft Drive, Forrest Hill, Auckland.1310  
 ZL2BNO Taylor, R. D., 21 McLaren Street, Mangaroa, Upper Hutt.6401  
 ZL2BNP Johnson, P. G., P.O.Box 174, Pahiatua.5471  
 ZL2BNQ Claydon, K. W., 183 Tukapa Street, New Plymouth.4601  
 ZL2BNR Bos, F., 34 Albert Street, Pahiatua.5471  
 ZL2BNS Townshend, A. P., 35a Marybank Road, Nelson.7001  
 ZL2BNT Hudson, G. J., 5 Konini Street, Masterton.5901  
 ZL2BNU Ryba, K. A., c/- Education Department, Massey University.5330  
 ZL2BNV Lows, P. A., 12 Wye Street, Island Bay, Wellington.6002  
 ZL2BNW Walbridge, S. W., 94 Barnard Street, Wadestown, Wellington.6001  
 ZL2BNX Isherwood, K., c/- Napier Hospital, Private Bag, Napier.4020  
 ZL2BNY Gill, W., Aroha, Horokiwi Road, Petone, Wellington.6303  
 ZL2BNZ Trubshaw, J. R., 6 Belk Place, Feilding.5600  
 ZL2BOA Thorp, M. D., 110 Riverbend Road, Napier.4001  
 ZL2BOB Priest, B. W., 21 Winchester Street, Palmerston North.5301  
 ZL2BOD Gilchrist, L. J. (Mrs), P.O.Box 651, 20 Vogel Street, Hawera.4800  
 ZL2BOE Large, R. A., 44 Donnelley Drive, Wainuiomata.6305  
 ZL2BOG Joyce, G. T., Valley Road, Gisborne.3801  
 ZL2BOI Moretti, G. S., 12 Milverton Avenue, Palmerston North.5301  
 ZL2BOJ Harris, R. E., 57 Princess Street, Waitara.4656  
 ZL2BOL Biggins, B. F., 70 Lohia Street, Khandallah, Wellington.6004  
 ZL2BOM Phillips, O. K., 118 Long Melford Road, Palmerston North.5301  
 ZL2BOO Hope, M. R., P.O. Box 812, Blenheim.7300  
 ZL2BOP Bradley, R. L.(Rev), R.D. 1, Wai-iti, Wakefield, Nelson.7021  
 ZL2BOQ Groat, J. E., 586 Ferguson Street, Palmerston North.5301  
 ZL2BOS Grant, H. H., 15 Grove Street, Nelson.7001  
 ZL2BOT Kennedy, S. R., 25 Beresford Street, Pukekohe.1800  
 ZL2BOU Carter, A. F., 13 Todd Place, Richmond, Nelson.7002  
 ZL2BOV Griffiths, B. A.(Mrs), Main North Road, Urenui.4655  
 ZL2BOW Howan, A. R., 7 Almora View, Ascot Park, Porirua.6201  
 ZL2BOY Clarke, R. G., 3 Whilby Place, New Plymouth.4601  
 ZL2BOZ Flowers, F. J., 70 Hellyers Street, Birkdale, Auckland.1310  
 ZL2BPB Sandilands, L. C., 16 Riversdale Road, Upper Hutt.6401  
 ZL2BPC Hayward, E. V., 23 Mt Vernon Place, Nelson.7001  
 ZL2BPD Donovan, P. E., 389 Muritai Road, Eastbourne.6304  
 ZL2BPE Vennix, J. H., 89 Mitchell Street, Brooklyn, Wellington., P.O.Box 9029, Wellington.6031  
 ZL2BPF Cotter, M. C., 24 Rodney Street, Woburn, Lower Hutt.6301  
 ZL2BPG Harding, B. P., 55 Hillside Drive, Maoribank, Upper Hutt.6401  
 ZL2BPH Simmonds, J. H., Kahutara Road, R.D. 1, Featherston.5952  
 ZL2BPI Watt, I. D., 9 Edelweiss Grove, Timberlea, Upper Hutt.6402  
 ZL2BPJ Maddock, R. H., 7 Haylock Grove, Totara Park, Upper Hutt.6401  
 ZL2BPK Johns, B. K., c/- Radio Regulatory, P.O. Box 9343, Wellington.6031  
 ZL2BPL Kerslake, M. G. R., 1 Marama Terrace, Eastbourne.6304  
 ZL2BPN Thompson, I., 8 Dampier Avenue, Palmerston North.5301  
 ZL2BPO Mainwaring, P., 2 Dysart Road, Otumotai, Tauranga.3001  
 ZL2BPP South Wairarapa Amateur Radio Club, see Branch Directory  
 ZL2BPQ Scherf, M. W., 30 Arun Crescent, Melrose, Wellington.6003  
 ZL2BPR Hoyt, B. E., 33 Workshop Road, Masterton.5901  
 ZL2BPS Stewart, P. J., Akatarawa Road, R.D. 2, Upper Hutt.6421  
 ZL2BPT Crow, G. J., Coupers Road, R.D. 3, Palmerston North.5321  
 ZL2BPU Goodall, R. N., 31 Plymouth Road, Flaxmere, Hastings.4201  
 ZL2BPV Johnston, A. A., 26 Grey Street, Woodville.5473  
 ZL2BPW Herbert, J. O., Mataro Road, R.D. 45, Urenui.4655  
 ZL2BPX Thompson, S. A., 8 Dampier Avenue, Palmerston North.5301  
 ZL2BPY Crook, D. J., 11 Forward Street, Greenmeadows, Napier.4001  
 ZL2BPZ McIvor, W. G., 4 Halifax Street, Wainuiomata.6305  
 ZL2BQA Nield, G. S., 4a Belgium Terrace, Gisborne.3801  
 ZL2BQM Brooking, S. C., 8 Robert Short Street, Wairoa, Hawkes Bay.4192  
 ZL2BQN Hedley, W. A., 39 Mitchell Road, Wairoa.4192  
 ZL2BQU Douglass, W. S., 5 Poharama Place, New Plymouth.4601  
 ZL2BQV Waterson, I. B., 4a Antonio Street, Stratford.4700  
 ZL2BQW McNeil, W. G., 86 Domett Street, Opunake.4653  
 ZL2BQX Hoogeveen, S.(Bill), 58 Burns Street, P.O.Box 156, Hawera.4800  
 ZL2BQY Symon, D. R., 8 Richmond Street, New Plymouth.4601  
 ZL2BRA Cash, I. M., 40 Hutchins Street, Waitara.4656  
 ZL2BRB Ballantyne, J. N., 10 Holford Street, New Plymouth.4601  
 ZL2BRC Ballantyne, J., 10 Holford Street, New Plymouth.4601  
 ZL2BRP Wheatley, M. J., 100 Wills Crescent, Ashhurst.5451  
 ZL2BRQ Grahame, K. S., c/- 21 Mill Street, Marton.5151  
 ZL2BRR Scott, A. S., 66 Alexandra Street, Marton.5151  
 ZL2BRS Russell, S. G., 85 Rugby Street, Palmerston North.5301  
 ZL2BRT Rogers, N. D., 20 Hudson Avenue, Bulls.5452  
 ZL2BRU Allison, R., Te Uri Road, R.D. 3, Dannevirke.5491  
 ZL2BRV Cook, V. R., 95 Niblett Street, Wanganui.5001  
 ZL2BSI Newcombe, S. D., 4a Banksia Grove, Maungaraki, Lower Hutt.6301  
 ZL2BSJ Knol, W., 13b Waikato Street, Island Bay, Wellington.6002  
 ZL2BSK Hyndman, R. H., 20 Central Terrace, Alicetown, Lower Hutt.6301  
 ZL2BSL Matheson, J. D., 43 Tirhanga Road, Lower Hutt.6301  
 ZL2BSM Ryan, M. D., 6 Woodvale Grove, Eponi, Lower Hutt.6301  
 ZL2BSN Alabaster, E. J., 79 Victory Crescent, Tawa, Wellington.6203  
 ZL2BSO Mitchell, A. B., 37 Satara Crescent, Khandallah, Wellington.6004  
 ZL2BSP Lloyd, L. V., 4 Nola Avenue, Raumati Beach.6150  
 ZL2BSQ Lawrence, R. W. C., 25 Linwood Drive, Paraparaumu.6152  
 ZL2BSS Graham, W., 8 West Road, Northland, Wellington.6005  
 ZL2BST Tichon, B. W., 19 Homsey Road, Melrose, Wellington.6003  
 ZL2BSU Dove, K. N., c/- 112b Amanda Avenue, Hamilton.2001  
 ZL2BSV Mitchell, M. G., 37 Satara Crescent, Khandallah, Wellington.6004  
 ZL2BSW Gedy, E. D. M., 15 Seine Street, Island Bay, Wellington.6002  
 ZL2BSX Whibley, D. G., 96 Clifford Road, Johnsonville, Wellington.6004  
 ZL2BSY Oliver, A. D., 2 Rosewood Place, Paraparaumu Beach.6153  
 ZL2BSZ Beechey, R. D., 12 Kowhai Grove, Waikanae.6154  
 ZL2BTB Large, M., 44 Donnelley Drive, Wainuiomata.6305  
 ZL2BTC Rawlings, R. F., 23 Seaview Crescent, Picton.7372  
 ZL2BTD King-Turner, P. R., 67 Broadway, Picton.7372  
 ZL2BTF Budge, D.(Dr), 63 High Street, Motueka.7161  
 ZL2BTG Woodham, R. B., 18 Goulter Street, Seddon.7353  
 ZL2BTH Emslie, H. H., 39 New Renwick Road, Blenheim.7371  
 ZL2BTI House, T. S. R., c/- Riverlea Gardens, Appleby, Richmond.7031



## ZL2BTJ

ZL2BTJ York, K. E., 28 Cubitt Street, Blenheim.7301  
 ZL2BTK Willings, H. K., 27 Oxford Street, Picton.7372  
 ZL2BTO Duncan, C. W., 15 Seaton Street, Marybank, Nelson.7001  
 ZL2BTP Snow, R. J., 5 Rimu Street, Nelson.7001  
 ZL2BTR Simpson, Z. H., 1/86 Grove Street, Nelson.7001  
 ZL2BTU Daken, T. R., 15 Scollard Street, Picton.7372  
 ZL2BTV Ching, G. R., 51 McLaughlan Street, Blenheim.7301  
 ZL2HAM Schollum, W. D., 41 Mill Road, Gisborne.3801  
 ZL2NAE Hooper, D. R., 7 Cornwall Street, Eltham.4751  
 ZL2NBK Brown, J. R., 42 Owen Street, Newton, Wellington.6002  
 ZL2NBP Holdom, K. A., 31 St Johns Terrace, Tawa, Wellington.6203  
 ZL2TAA Rennie, P. W. G., 64 Park Terrace, Blenheim.7301  
 ZL2TAB Stanners, J. L., 81 Old Karori Road, Karori, Wellington.6005  
 ZL2TAC Hinton-Cooper, K. E., 49 Titania Street, Stratford.4700  
 ZL2TAD Van Boheemen, D. J., 78 Dimock Street, Titahi Bay, Wellington.6202  
 ZL2TAE Mallinson, E. J., 64 Seymour Street, Blenheim.7301  
 ZL2TAG Cooney, G. P., Deme Technical Staff, Trentham Camp, Trentham.6402  
 ZL2TAH Bennett, A. J., 12 Tudor Court, Paraparaumu Beach.6153  
 ZL2TAI Pope, H. N., 171 Howick Road, Blenheim.7301  
 ZL2TAJ Kingsbeer, B. H., 10 Luton Street, Palmerston North.5301  
 ZL2TAK Squires, D. R., 6 Waipounamu Drive, Lower Hutt.6301  
 ZL2TAL Ingham, C. G., 138 Dowse Drive, Maungaraki, Lower Hutt.6301  
 ZL2TAM Gyde, R. V., 148a Pioneer Road, New Plymouth.4601  
 ZL2TAN Cooper, I. L., 116 Rutene Road, Gisborne.3801  
 ZL2TAP Fairbairn, R., 49 Salisbury Road, Richmond, Nelson.7002  
 ZL2TAQ O'Donnell, A. A., 39 Lismore Street, New Plymouth.4601  
 ZL2TAR Baker, W. R. E., 118 Taylor Terrace, Tawa.6203  
 ZL2TAS Hadfield, C. I., 69 Major Drive, Nelson, Lower Hutt.6301  
 ZL2TAU Ingham, J. D., 138 Dowse Drive, Maungaraki, Lower Hutt.6301  
 ZL2TAV Marsh, J. K., P.O.Box 26, Oakura.4650  
 ZL2TAX Wilson, S. J., 50 Sheridan Terrace, Johnsonville, Wellington.6004  
 ZL2TAY Murray, R. D., 101 Frederick Street, Hastings.4201  
 ZL2TBA Barnes, E. J., 54 Brooker Grove, Newlands, Wellington.6004  
 ZL2TBB Crook, R. J., 72 Fraser Avenue, Johnsonville, Wellington.6004  
 ZL2TBD Higgett, L. G., Main Road, Wharekaho Beach, Whitianga.2856  
 ZL2TBE Drew, A. L. B., 16 Tuatoru Street, Eastbourne.6304  
 ZL2TBF Owen, N. A., 45d Oxford Street, Tawa.6203  
 ZL2TBG Hood, S. W., 122 Duncan Street, Wanganui.5001  
 ZL2TBH Carnley, L. J., 39 Hilltop Avenue, Whangarei.0101  
 ZL2TBK Snelson, K. H., 12 Stairhes Drive North, Whiby, Porirua.6201  
 ZL2TBL Henderson, G. J., 30 Wisteria Grove, Lower Hutt.6301  
 ZL2TBM Love, G. A., 2 Karaka Crescent, Levin.5500  
 ZL2TBN Lott, A. G., 11 Poynter Street, Blenheim.7301  
 ZL2TBP O'Donnell, J. N., 39 Lismore Street, New Plymouth.4601  
 ZL2TBQ Shennan, B. V., 31 Fossiler Avenue, Lower Hutt.6301  
 ZL2TBR Norgrove, A. E., 90 South Karori Road, Karori, Wellington.6005  
 ZL2TBS Wills, R. E., 66 Park Road, Lower Hutt.6301  
 ZL2TBU Highman, R. E., Moutapu Bay, Mahau Sound, Marlborough, R.D. 2, Picton.7372  
 ZL2TBX Ward, L. A., 11 Pinny Avenue, Lower Hutt.6301  
 ZL2TBY Stevens, J. E. R., 48 Chesterlon Street, Johnsonville, Wellington.6004  
 ZL2TCA Carson, M. R., Tayforth Road, R.D. 4, Wanganui.5021  
 ZL2TCB Annand, R. C., 67 Joli Road, Havelock North.4201  
 ZL2TCC Milsom, M. A., 8 Lyndfield Lane, Newlands, Wellington.6004  
 ZL2TCD Poulsen, J. M., 2/14 Monckton Street, Feilding.5600  
 ZL2TCE Dobbs, A. J., 14 Oaklands Grove, Upper Hutt.6401  
 ZL2TCF Brown, G. R., 28 John Street, Stokes Valley.6306  
 ZL2TCG Phillips, A. R. J., 5 Mount Street, Kelburn, Wellington.6005  
 ZL2TCH Taylor, I. L., 1 High Road, Hawera.4800  
 ZL2TCJ Clifford, I. R., 9 Falcon Street, Porirua.6201  
 ZL2TCK Slipkovits, S. P., 76 View Road, Houghton Bay, Wellington.6003  
 ZL2TCL Coombridge, J. P., Marchant Road, Kaitake.6401  
 ZL2TCM Preston, R. T., 16b Witako Street, Lower Hutt.6301  
 ZL2TCN Taylor, T. J. A., 37 Riversdale Drive, New Plymouth.4601  
 ZL2TCO Lacey, J. D., 39 Polo Road, Lower Hutt.6301  
 ZL2TCP Downs, F. W. P., 58a Chatsworth Road, Silverstream.6402  
 ZL2TCR Barnhill, J. D., 26 Garfield Street, Brooklyn, Wellington.6002  
 ZL2TCS Denton, S. B., 18 Roto Street, Nelson.7001  
 ZL2TCG Foley, M. J., St Bedes College, Main North Road, Christchurch.8005  
 ZL2TCR Wardell, M. G., 7 Lorne Street, Dargaville.0300  
 ZL2TCS Smith, S. D., 9 Rosendale Crescent, Palmerston North.5301

## ZL2TCT

## ZL2TCU

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## ZL2TGL

## ZL2TGM

## ZL2TGN

## ZL2TGU

## ZL2TGR

## ZL2TGS

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## ZL2TGW

## ZL2TGX

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 Rumsey, F. C.(Mrs), 21 Malone Road, Lower Hutt.6301  
 Meads, G. T., 12 Totara Terrace, Inglewood.4651  
 Berry, R. M., 27 Hikanui Drive, Havelock North.4201  
 Greenbank, R. J., 31 Somes Crescent, Newlands, Wellington.6004  
 Barraud, J. M., 1 Michigan Crescent, Totara Park, Upper Hutt.6401  
 Leckie, G. F., House 18, Whakamaru, Mangakino.2391  
 Nelson, K. D., 14 Pavola Grove, Glenfield, Auckland.1310  
 Layton, G. R., 54a Nicholson Road, Khandallah, Wellington.6004  
 Illingsworth, R. J., 178 Main Road, Tawa.6203  
 Clifford, K. S., 46a Oxford Terrace, Lower Hutt.6301  
 Morrison, J. F., 27 Mulgrave Street, Ashhurst.5451



- ZL2TGY** Spranger, K. J., 167 Barrett Road, New Plymouth.4601  
**ZL2TGZ** Allmand, H. M., P.O.Box 35, Te Horo.6170  
**ZL2THA** Peart, C. J., Burnside Road, Takaka.7172  
**ZL2THB** Cole, R. K., 117 Rewai Street, Paraparaumu.6152  
**ZL2THC** Dowle, G. B., 533 Carrington Road, R.D. 1, New Plymouth.4621  
**ZL2THD** Riggs, P. T., 470 Stokes Valley Road, Stokes Valley.6306  
**ZL2THG** Mackie, A. J., 8 Tarata Street, Stoke, Nelson.7001  
**ZL2THI** Marshall, D. W., 195 Egmont Street, Patea.5181  
**ZL2THJ** Gill, T. B., 69 Cambria Street, Nelson.7001  
**ZL2THK** Simcox, J., Racecourse Road, P.O. Box 327, Waipukurau.4176  
**ZL2THM** Bons, A. D., 149 Avonhead Road, Christchurch.8004  
**ZL2THN** Osmond, C. M., 124 Tilley Road, Paekakariki.6151  
**ZL2THP** Dewsnap, A. V., 30 Ruru Crescent, Heretaunga, Upper Hutt.6402  
**ZL2THQ** Newlands, R. G., 14 Vasanta Avenue, Ngaio, Wellington.6004  
**ZL2THS** Shaw, J. L., 13a Weathers Place, Taradale, Napier.4001  
**ZL2THT** Champaloup, O. J., 2/10 Garden Place, Auckland.1004  
**ZL2THU** Cropp, I. E., 7 Blue Mountains Road, Silverstream.6402  
**ZL2THV** Neill, W. J., 14 Martin Grove, Normandale, Lower Hutt.6301  
**ZL2THW** Muir, A. W., 1 Ridvan Grove, Ngaio, Wellington.6004  
**ZL2THX** Blanchard, D. C., 13h York Crescent, New Plymouth.4601  
**ZL2THY** McCarthy, W. S., 1/201a Prospect Road, Hastings.4201  
**ZL2THZ** Douglas, M. E., 3 William Street, Wellington.6003  
**ZL2TIA** Clough, D. H., 3 Argyle Place, New Plymouth.4601  
**ZL2TIC** Wildbore, D. I., Waitare Beach Road, Levin.5500  
**ZL2TID** Baker, N. E., Cnr Te Aute/Mt. Erin Road, R.D. 2, Hastings.4221  
**ZL2TIE** Guilford, A. E., 27 Rose Road, Grey Lynn, Auckland.1002  
**ZL2TIF** Wilson, D. J. W., 13 Kinross Street, Blenheim.7301  
**ZL2TIJ** Prosser, R. H. C., 18 George Street, Rolleston.8004  
**ZL2TIJ** Ordish, J. I., 19 Hendry Avenue, Hillsborough, Auckland.1004  
**ZL2TIK** Buchanan, I. A., Motuapa, R.D. 2, Turangi.3371  
**ZL2TIL** Maxwell, D. M., 7 Plunket Avenue, Petone.6303  
**ZL2TIM** Lumsden, K. M., 19 Taonui Street, Papakura, Auckland.1703  
**ZL2TIN** Harwood, R. D., 187 Matai Road, Raumati Beach.6150  
**ZL2TIQ** Brieseman, P. J., 14 Tainui Terrace, Tawa.6230  
**ZL2TIR** Taylor, G. A., c/- Wai-Tai Farm, R.D. 1, Hastings.4221  
**ZL2TIS** Winton, L. J., 47 Richmond Street, Napier.4001  
**ZL2TIT** Taylor, A. F., 54 Emano Street, Nelson.7001  
**ZL2TIU** Brownlie, S. M., Ligar Bay, R.D. 1, Takaka.7172  
**ZL2TIV** Ballantine, R. N., 31 John Sims Drive, Broadmeadows, Wellington.6004  
**ZL2TIW** Anderson, A. E., 76 Skibo Street, Dunedin.9001  
**ZL2TIX** Smith, T. R., 31 Bird Grove, Stokes Valley.6306  
**ZL2TIY** Harmsworth, J. (Mrs), Jonkers Road, Waitakere, Auckland.1230  
**ZL2TIZ** Collins, G. N., 26 Harris Street, Marton.5151  
**ZL2TJA** Walker, A. L., Flat 3, 216 Annesbrook Drive, Nelson.7001  
**ZL2TJB** Fitzsimons, D. F., 44a Waimea Road, Nelson.7001  
**ZL2TJC** Wakely, B., 15 Greenhill Road, Nelson.7001  
**ZL2TJF** Graham, G. J., 32 Caldwell Road, Woodbourne, Blenheim.7301  
**ZL2TJG** Laing, I. J., "Longridge", Kaiwairua, R.D. 1, Featherston.5952  
**ZL2TJH** Whittington, A. N., 13 Hereford Street, Wanganui.5001  
**ZL2TJI** Bould, R. M., 97 Ohariu Road, Wellington.6004  
**ZL2TJJ** Hannon, G. J., 600 Massey Street, Hastings.4201  
**ZL2TJK** Williams, G. C., 18 Ronberg Street, Palmerston North.5301  
**ZL2TJL** Thompson, R. E., 25 Findlay Street, New Plymouth.4601  
**ZL2TJM** Baker, R. E., 10 Harris Street, Feilding.5600  
**ZL2TJN** Cristensen, T. G., 36 Surrey Street, Taradale, Napier.4001  
**ZL2TJO** Brice, D., 43 Fairview Avenue, Feilding.5600  
**ZL2TJP** Bryant, P., 62 Clarence Street, Vogeltown, Wellington.6002  
**ZL2TJQ** Hawker, B. C., 26 Hawkeswood Place, Avonhead, Christchurch.8004  
**ZL2TJS** Lowe, C. N., c/- Barlod Ltd, P.O.Box 3137, Fitzroy, New Plymouth.4630  
**ZL2TJT** Schmidt, J. T., 9 Ponderosa Grove, Maoribank, Upper Hutt.6401  
**ZL2TJU** Singleton, R. J., 9 Westfeigh Way, Newlands, Wellington.6004  
**ZL2TJV** Pointon, A. C., 21 Balgownie Avenue, Gonville, Wanganui.5001  
**ZL2TJW** Stewart, K. F., 1 Caversham Road, Mosston, Wanganui.5001  
**ZL2TJX** Evans, E. T., 16 Davidson Avenue, Napier.4001  
**ZL2TKA** Rickards, C. M., 21a Longview Drive, New Plymouth.4601  
**ZL2TKC** Dannatt, R., 83e Govett Avenue, New Plymouth.4601  
**ZL2TKD** Willis, W. J. F., 16 Langbein Street, Nelson.7001  
**ZL2TKE** McLean, W. P., 44a Ranui Road, Remuera, Auckland.1105  
**ZL2TKF** Hodge, D. M., 19 King Street, Feilding.5600  
**ZL2TKG** Wright, M. A., 28 Cunliffe Street, Johnsonville, Wellington.6004  
**ZL2TKI** Sanson, I. M., see ZL7TKI.  
**ZL2TKJ** Harmsworth, A. G., Jonkers Road, Waitakere, Auckland.1230  
**ZL2TKK** Siegenthaler, J. B., 3/3 Ngaio Gorge Road, Wellington.6004  
**ZL2TKL** Thornton, W. H., 404 Hart Drive, Hastings.4201  
**ZL2TKM** McRoberts, K., 49 Arrow Street, Nelson.7001  
**ZL2TKN** Rowe, C. G., 117 Hamlet Street, Stratford.4700  
**ZL2TKP** Fleming, A. J., 33 Clifton Drive, Waitara.4656  
**ZL2TKR** Brown, R. G., 64b Tipahi Road, Nelson.7001  
**ZL2TKT** Verry, A. C., Waitotara Store, Waitotara.5180  
**ZL2TKV** Burns, F. N. R., 1010 Waipuna Street, Hastings.4201  
**ZL2TKW** Butt, A. J., 26 Hornsey Road, Melrose, Wellington.6003  
**ZL2TKX** Lillis, S. M., 21a Pilmuir Street, Lower Hutt.6301  
**ZL2TKY** Pattle, K. A., 10 Woodstock Terrace, Tawa.6203  
**ZL2TKZ** Wilkinson, K. T., 3/77 Ocean Beach Road, Mount Maunganui.3002  
**ZL2TLA** Benis, H. G., 165 Rosetta Road, Raumati Beach.6150  
**ZL2TLB** Biller, J. S., 25 Kaitangata Crescent, Kelston, Lower Hutt.6301  
**ZL2TLC** Wills, M. J., P.O.Box 31-227, Lower Hutt.6300  
**ZL2TLD** McAllister, G. B., 101 Glenmore Street, Kelburn, Wellington.6005  
**ZL2TLE** Ramsay, K. J., 41 Franklyn Road, Tawa, Wellington.6203  
**ZL2TLF** Sargent, D. J., Motukawa Road, R.D. 7, Inglewood.4651  
**ZL2TLH** Barber, M. B., 136 Mark Avenue, Grenada Village, Wellington.6004  
**ZL2TLI** Wood, M. K., 20 Chetwode Grove, Newlands, Wellington.6004  
**ZL2TLJ** Jones, B. L., 11 Turville Crescent, Newlands, Wellington.6004  
**ZL2TLL** Wallace, D. P., 149 Orangi Kaupapa Road, Wellington.6005  
**ZL2TLM** Fowles, G. F., 90 Clarence Cox Crescent, Napier.4001  
**ZL2TLN** Nicholson, C. L., 1b/186 The Terrace, Wellington.6001  
**ZL2TLO** Gough, M. Q., 24 Atawhai Drive, Nelson.7001  
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**ZL2TLZ** Donnell, A., 73 Ngaio Street, Waikanae.6154  
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**ZL2TMF** Saynor, E. K., 62 Kamahi Street, Stokes Valley.6306  
**ZL2TMI** Lill, V. E., 33 Tawa Terrace, Tawa.6203  
**ZL2TMJ** Major, G. M., 7 Colonial Drive, Palmerston North.5301  
**ZL2TML** Willis, W. P., 106 Lawrence Crescent, Hillpark, Manurewa.1702  
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**ZL2TMV** McAuliffe, P. N. G., 5 Takahe Place, Tokoroa.2392  
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**ZL2TMZ** Woodfield, N. C., Hepi Terrace, Whakapapa Village, Mt. Ruapehu.2650  
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**ZL2TNP** McLachlan, I. M., 38 Ranfurly Street, Gisborne.3801  
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- ZL2TXG** Muldrock, J. H., 9 Station Road, Waverley.9001
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- ZL2TZW** Miles, I. D., 82 Mill Street, Marton. Postal: P.O. Box 311, Marton.5151
- ZL2TZX** Hoskins, R. H., 25 Ludlam Crescent, Lower Hutt.6301
- ZL2TZZ** Meek, E. P., 71 Memorial Avenue, Christchurch.8005
- ZL2UAA** Bissett, W. L., 3/19 Parrish Road, Sandringham, Auckland.1003
- ZL2UAC** Pedder, R. A., 8 Thomas Hook Street, Tawa.6203
- ZL2UAD** Emerson, W. R., 30 Heatherlea Heights, Feilding.5600
- ZL2UAF** Hill, M. B., 25a Woodmancote Road, Khandallah, Wellington.6004
- ZL2UAG** Rumsey, D. C., c/- 83 Atkinson Avenue, Otaki.6171
- ZL2UAH** Butler, N. A., 470 College Street, Palmerston North.5301
- ZL2UAJ** Newell, M. C., 21 Joseph Street, Palmerston North.5301
- ZL2UAK** Stewart, C. W., 16 Jillian Drive, Ranui.1208
- ZL2UAL** Huberts, K., 24 Lysnar Street, Gisborne.3801
- ZL2UAM** Pollard, P. B., 29 Seddon Crescent, Gisborne.3801
- ZL2UAN** Wills, A. R., 66 Park Road, Belmont, Lower Hutt.6301
- ZL2UAO** Murphy, G. R., 274 Songer Street, Stoke, Nelson.7001
- ZL2UAQ** McCrea, D. J., 11 Dalstram Grove, Palmerston North.5301
- ZL2UAS** Slater, D. J., 35 Wyndham Road, Ashhurst.5451
- ZL2UAT** Griffiths, R. L., 81 River Terrace, Brightwater, Nelson.7001
- ZL2UAU** Evans, G. R., 30 Margaret Road, Raumati Beach.6150
- ZL2UAV** James, A. R., 413 Frederick Street, Hastings.4201
- ZL2UAY** Terris, C. A., 9 Kerr Avenue, Cobden, Greymouth.7850
- ZL2UAZ** Pearlless, D. H., 107 McLeod Street, Upper Hutt.6401
- ZL2UBA** Maitland, I. J., P.O.Box 743, Wanganui.5001
- ZL2UBB** Gibson, R. I., 31 Hobart Street, Wellington.6003
- ZL2UBC** Vidulich, M. J., Flat 6, 71 Firth Street, Hamilton.2001
- ZL2UBD** Stern, N. G., Kopane, Main Road, R.D. 6, Palmerston North.5321
- ZL2UBE** Davies, R. G., 12 Staysail Place, Whitby.6201
- ZL2UBF** Graham, R. A., 15 Kaituna Street, Palmerston North.5301



## **ZL2UBG**

**ZL2UBG** Lowes, C. W., 27 St Hill Lane, Havelock North.4201  
**ZL2UBH** Cole, L. R., 8 London Road, Korokoro, Petone.6303  
**ZL2UBI** Terris, R. D., 45 Marlowe Street, Stoke, Nelson.7001  
**ZL2UBJ** Curran, B. L., c/- Blockhouse, Pungarehu Road, Pungarehu.4650  
**ZL2UBK** Webber, D., 4 Victory Crescent, Tawa.6203  
**ZL2UBM** Taylor, G. J. W., Hammericks Road, R.D. 3, Blenheim.7321  
**ZL2UBN** Briggs, A. G., 580 Lowe Street, Hastings.4201  
**ZL2UBO** Grenfell, S. K., 2/15 Tahi Street, Miramar, Wellington.6003  
**ZL2UBP** Riordan, I. M., Upper Takaka, Nelson.7172  
**ZL2UBQ** Freer, R. I. R., 240 Kennedy Road, Napier.4001  
**ZL2UBS** Scott, G. H., 140 Epuni Street, Lower Hutt.6301  
**ZL2UBU** Howie, I. M. C., 9 Trelissick Crescent, Ngaio, Wellington.6004  
**ZL2UBX** Grubner, L., 16 Virginia Grove, Brooklyn, Wellington.6002  
**ZL2UBZ** Gaudin, G. W., 18 Trafalgar Street, New Plymouth.4601  
**ZL2UCA** Gilchrist, R. J., 61 Heta Road, New Plymouth.4601  
**ZL2UCB** Rimmer, B. J., 27 Ryan Crescent, Greenmeadows East, Napier.4001  
**ZL2UCD** Calvert, D. A., Fabians Road, R.D. 1, Greytown.5953  
**ZL2UCE** Hursthouse, D. E., 24 Duart Road, Havelock North.4201  
**ZL2UCF** Dewar, A. M., 248a Ohio Road, Brooklyn, Wellington.6002  
**ZL2UCG** Birchall, O. J., 123 Winchester Street, Ashhurst.5451  
**ZL2UCI** Rawdon, P. D., 14 Morrison Grove, Stokes Valley, Lower Hutt.6306  
**ZL2UCJ** Birt, K. J., 103 Victoria Street, Hawera.4800  
**ZL2UCL** White, R. J., 14a Howard Street, Gore.9700  
**ZL2UCM** Mordecai, D. M. R., 257 Mill Road, Otaki.6171  
**ZL2UCN** Burston, E. S. D., Pakihikura, R.D. 3, Hunterville.5161  
**ZL2UCO** Evans, B., South Featherston Road, R.D. 1, Featherston.5952  
**ZL2UCP** Doney, G. I., 32 D'Arcy Road, Wanganui.5001  
**ZL2UCS** McPherson, M. E., 19 Alexandra Street, Marton.5151  
**ZL2UCT** Oborn, D. E., 126 Constable Street, Newtown, Wellington.6002  
**ZL2UCW** Bray, D. K., Mai Road, Mauriceville.5990  
**ZL2UCX** Davis, S. I., 37 Golf Road, Tahunanui, Nelson.7001  
**ZL2UCZ** Barrow, B. A., 47 Wood Street, Wainuiomata.6305  
**ZL2UDA** Barnes, B. R., 7 Monowai Place, Wanganui.5001  
**ZL2UDB** Learmonth, B. H., Main Road, Kopane, R.D. 6, Palmerston North.5321  
**ZL2UDD** Reese, L. W. J., 50 Harold Holt Avenue, Napier.4001  
**ZL2UDE** Senior, R. J., 34 Lahore Street, Wairoa.4192  
**ZL2UDG** Phillips, R. S., 42 Caldwell Road, Woodbourne, Blenheim.7301  
**ZL2UDH** Knebel, D. J., 28 Chartwell Drive, Crofton Downs, Wellington.6004  
**ZL2UDJ** Ritchie, L. T., 26 Maunder Street, Marton.5151  
**ZL2UDL** Nixon, T. J., 16 Balliol Drive, Tawa.6203  
**ZL2UDO** Nield, P. J., 4a Belgium Terrace, Gisborne.3801  
**ZL2UDP** Cooper, A. J., 6 Denholm Road, Napier.4001  
**ZL2UDQ** Mulligan, G. D., 68 Homewood Avenue, Karori, Wellington.6005  
**ZL2UDR** Cole, G. P., 58 Woodhouse Avenue, Wellington.6005  
**ZL2UDS** Durbridge, D. S., 19 Colombo Street, Palmerston North.5301  
**ZL2UDU** Parker, H. R., 59 Routley Crescent, Upper Hutt.6401  
**ZL2UDV** Lambert, J.(Mrs), 12 Betts Avenue, Masterton.5901  
**ZL2UDX** Lawn, M. J., 42 Gloaming Hill, Onepoto, Titahi Bay.6202  
**ZL2UDY** Heywood, B., 270 High Street, Eltham.4751  
**ZL2UDZ** Andrews, I. F., 11 Partridge Street, Taita, Lower Hutt.6301  
**ZL2UEA** Goldfinch, R. Q., 3 Ellerslie Avenue, Chedworth, Hamilton.2001  
**ZL2UEC** Packer, B. A., 10 Patna Street, Ngaio, Wellington.6004  
**ZL2UEF** Whittaker, J. W., 53 Cornwall Street, Masterton.5901  
**ZL2UEG** Thorp, R. J., 26 Southwark Avenue, Tamatea, Napier.4001  
**ZL2UEH** Steenhart, L., Cliff Road, R.D. 1, Kina, Upper Moutere.7152  
**ZL2UEI** McConnell, W. K., 8 Partington Place, Hamilton.2001  
**ZL2UEL** Evans, R., 30 Margaret Road, Raumati Beach.6150  
**ZL2UEQ** Berger, R., 38a Morley Street, New Plymouth.4601  
**ZL2UES** Payne, M. H., 24 Tutere Place, Wanganui.5001  
**ZL2UET** Wardell, D. M., 17 Halesowen Avenue, Sandringham, Auckland.1003  
**ZL2UEU** Smith, B. J., 19 Fieldstone Court, Northpark, Howick.1705  
**ZL2UEV** Tong, J., 44 Lakewood Avenue, Churton Park, Wellington.6004  
**ZL2UEW** Aurisch, P. J., 2 Taranaki Street, Wanganui.5001  
**ZL2UFA** Wilson, B. D., 35 Witako Street, Lower Hutt.6301  
**ZL2UFE** Vickers, M. P., 2 George Street, Eltham.4751  
**ZL2UFH** Huntingdon, R. J., 11 Thistle Street, Napier.4001  
**ZL2UFI** Gooding, M. S., P.O.Box 16, Featherston.5952  
**ZL2UFJ** Baker, G. C., 110 Wood Street, Palmerston North.5301

**ZL2UFK** Johnston, W. K., 12 George Porter Apartments, Hopper Street, Newtown, Wellington.6001  
**ZL2UFL** Collard, M. T., 8 Reeves Close, Hamilton.2001  
**ZL2UFM** Lambert, A. C., 44 Strange Street, Waitara.4656  
**ZL2UFN** Blyde, G. R., 18 Egmont Street, Kaponga., P.O.Box 10, Kaponga.4752  
**ZL2UFP** Cordy, M., 122 Parkvale Road, Karori, Wellington.6005  
**ZL2UFR** Gibson, B. S., 8 Murtle Street, Omokoroa, R.D. 2, Tauranga.3021  
**ZL2UFS** Kent, A. A., 5 Raymond Terrace, Lower Hutt.6301  
**ZL2UFW** Baldwin, T. N., 158 Raleigh Street, R.D. 42, Waitara.4656  
**ZL2UFY** Whale, D. M., 4 Whakarirangi Avenue, Westshore, Napier.4001  
**ZL2UFZ** Shore, R. I., Sandspit Road, R.D. 2, Warkworth.1492  
**ZL2UGC** Clark, B. A., 15 Deller Drive, Carterton.5951  
**ZL2UGF** Gratton, M. L., 31 Dominica Crescent, Grenada Village, Wellington.6004  
**ZL2UGG** Syme, D. R., 17 Rogers Road, Bay View, Napier.4001  
**ZL2UGH** Newport, C. W., 162 Kawai Street South, Nelson.7001  
**ZL2UGJ** Skinner, T. P., 17 Mahoe Avenue, Palmerston North.5301  
**ZL2UGL** Southam, J. E., 32 Kandy Crescent, Ngaio, Wellington.6004  
**ZL2UGM** Thomson, B. J., 16 Victory Crescent, Tawa.6203  
**ZL2UGN** Gregory, B., 46 Corinna Street, Porirua.6201  
**ZL2UGP** Pears, D. M., 17 Palmer Crescent, Heretaunga, Upper Hutt.6402  
**ZL2UGR** Smith, P. R., Unit 1 53 Clifford Road, Johnsonville, Wellington.6004  
**ZL2UGS** Jones, B. R., Ohaupo Road, R.D. 3, Ohaupo.2452  
**ZL2UGV** Senior, J. I. M., 34 Lahore Street, Wairoa.4192  
**ZL2UGW** Cumings, L. J., R.D. 2, Mauriceville.5990  
**ZL2UGY** Reisima, A. J., 31 Perry Street, Silverstream, Upper Hutt.6402  
**ZL2UIB** Morrish, I. D., 47 Everest Street, Khandallah, Wellington.6004  
**ZL2UIH** Briggs, G. J., 580 Lowe Street, Hastings.4201  
**ZL2UIK** Scott, D. E., 133 Harbour Road, Ohope.3454  
**ZL2UIJ** Davidson, M. W., 16 Worcester Street, Levin.5500  
**ZL2UIN** Gregory, A., 46 Corinna Street, Porirua.6201  
**ZL2UIO** Mantering, W. L., 4 Kimer Street, Burwood, Christchurch.8009  
**ZL2UIQ** Baldwin, P. J., 12 Airedale Place, Waitara.4656  
**ZL2UIU** Belchamber, M., 19a Pine Street, Gisborne.3801  
**ZL2UIV** Candy, S. T. R., P.O. Box 56072, Linden, Wellington.6230  
**ZL2UIY** Baird, S. L. C., 22 The Sounding, Whitby.6253  
**ZL2UIJG** Lowes, D. W., c/- D. McCormick, R.D. 3, Irwell, Leeston.8151  
**ZL2UIJH** Roberts, W. S., 188 Nikau Street, Hastings.4201  
**ZL2UIJI** Harvey, J. R., 801 Collinge Road, Hastings.4201  
**ZL2UIJJ** Newson, J. R., 424 Huia Street, Hastings.4201  
**ZL2UIJK** Kyle, J. P., 807 Anson Street, Hastings.4201  
**ZL2UIJL** Riden, C. P., The Loop, Riverbend Road, Napier.4001  
**ZL2UIJM** Manuel, J. D., 24 Avenue Road, Napier.4001  
**ZL2UIJN** Sinclair, N. J., 8 Kapu Grove, New Plymouth.4601  
**ZL2UIJO** Jorgensen, L. H., 265 South Road, R.D. 4, New Plymouth.4621  
**ZL2UIJP** Robinson, P. H., 10b Barribal Street, New Plymouth.4601  
**ZL2UIJQ** Makawe, T. D. J., 27 Clifton Drive, Waitara.4656  
**ZL2UIJR** Rutherford, K. M., 3b Leatham Avenue, New Plymouth.4601  
**ZL2UIJS** Sinclair, J. J., 8 Kapu Grove, New Plymouth.4601  
**ZL2UIJT** Jury, N. J., 529c Carrington Road, R.D. 1, New Plymouth.4601  
**ZL2UIJW** Warriner, J. R. K., 3 Christopher Way, Paparangi, Wellington.6004  
**ZL2UIKC** Knight, S. J., 22a Sussex Street, Levin.5500  
**ZL2UIKD** Fleming, T. A., R.D. 11, Foxton.5551  
**ZL2UIKE** Williams, J. P., 25a Ikitara Road, Wanganui.5001  
**ZL2UIKG** Leslie, G. M.(Mrs), 35 Robertson Street, Foxton.5551  
**ZL2UIKI** Chandler, H. B., 34 Keith Street, Palmerston North.5301  
**ZL2UIKR** Roberts, S. A., 84 Bell Street, Featherston.5952  
**ZL2UIKS** Prentice, N. C., 79 Nottingham Street, Karori, Wellington.6005  
**ZL2UIKT** Hughes, C. M., 741 High Street, Lower Hutt.6301  
**ZL2UIKV** Thompson, D. A., 87 Norton Park Grove, Lower Hutt.6301  
**ZL2UIKX** Hale, R. E., 23 Ballinger Crescent, Newlands, Wellington.6004  
**ZL2UIKY** Vowell, D. J., 7 Silverton Grove, Churton Park, Wellington.6004  
**ZL2UIKZ** Clapcott, P. J., 11 Trinidad Crescent, Grenada, Wellington.6004  
**ZL2UILB** Martin, G., 5 Atherstone Lane, Belmont, Lower Hutt.6301  
**ZL2UILC** Newson, I. S., 9 Mercury Way, Whitby, Wellington.6253



ZL2ULD Lennox, B. T., 40 Kanpur Road, Broadmeadows,  
Wellington.6004  
 ZL2ULE Moore, P. R., 73a Grafton Road, Roseneath,  
Wellington.6001  
 ZL2ULF Daley, B. K., 47 Chamberlain Road, Karori, Wellington.6005  
 ZL2ULG Van Toorenburg, L. M. L., 48 Phillip Street, Johnsonville,  
Wellington.6004  
 ZL2ULH Dickson, A. G., 8 Gipps Street, Atawhai, Nelson.7001  
 ZL2ULJ Campbell, M. H., 136a Parkers Road, Nelson.7001  
 ZL2ULL Hookham, K. A., 23 Nicholls Road, Halswell,  
Christchurch.8003  
 ZL2ULN Bruckel, P., 10 Old Renwick Road, Blenheim.7301  
 ZL2ULO Lawson, C., 114 Hospital Road, Blenheim.7301  
 ZL2ULR Burns, A. F., 5 Turners Road, Picton.7372  
 ZL2ULS Bromley, R. J., 10 Chamboard Place, Nelson.7001  
 ZL2ULT Taylor, G. R., 163 Waikawa Road, Picton.7372  
 ZL2ULU Elvy, J. M., 5b Mountain View Road, Blenheim.7301  
 ZL2ULV Allan, P. D., 20a Courtney Street, Motueka.7161  
 ZL2ULW Rice, L. J., 67 Wither Road, Blenheim.7301  
 ZL2ULX Buckton, L., 44 McLauchlan Street, Blenheim.7301

## SHIFTING HOUSE?

Remember to advise  
the following:

### AMATEUR LICENCE—

Inform the Radio Inspector at your  
nearest New Zealand Radio  
Frequency Management Service  
Office

### Break-In DELIVERY—

Advise the General Secretary,  
NZART HQ, PO Box 40525, UPPER HUTT,  
of your new address.  
Mention your callsign and membership number.

This advice will be forwarded to the  
*Call Book* compiler to amend your  
*Call Book* listing.



## ZL3 Callsigns

<b>ZL3AC</b>	Christchurch Branch NZART (Inc.), see Branch Directory	<b>ZL3DD</b>	Mitchell, A. R., 55 Shoreham Street, Blockhouse Bay, Auckland.1207
<b>ZL3AD</b>	Donehue, W. R., No. 1 R.D., Timaru.8621	<b>ZL3DE</b>	Hawes, S. C., Timaru Hospital, Timaru.8630
<b>ZL3AE</b>	Festing, D. A., Main Road, Oxford, North Canterbury.8353	<b>ZL3DF</b>	Yoeman, J. C., 110 Bristol Street, Christchurch.8001
<b>ZL3AF</b>	Ashburton Branch NZART (Inc.), see Branch Directory	<b>ZL3DG</b>	Hood, N. D., 47a Aorangi Road, Christchurch.8005
<b>ZL3AG</b>	Roberts, G. C., 59 Thomson Street, Ashburton.8300	<b>ZL3DH</b>	Hardie, W. S., 245a Harewood Road, Christchurch.8005
<b>ZL3AH</b>	Jones, D. L., 53 Wales Street, Halswell, Christchurch.8003	<b>ZL3DI</b>	Tylee-Porter, G. J., Crossgates Farm, Cryers Road, Southbridge, R. D. 3, Christchurch.8150
<b>ZL3AI</b>	Fraser, D. J., Glenmark Street, Waipara.8270	<b>ZL3DJ</b>	Gill, M. E., River Road, Greenpark, R.D. 2, Christchurch.8021
<b>ZL3AJ</b>	McDonald, K. R., 44 Inwoods Road, Christchurch.8009	<b>ZL3DK</b>	Walker, D. J., 36 Ardrossan Avenue, Flaxmere, Hastings.4201
<b>ZL3AK</b>	Sandford, G. G., Flat 3, 44 Peel Street, Geraldine.8751	<b>ZL3DM</b>	Calvert, R. L., 253a Waimairi Road, Christchurch.8004
<b>ZL3AL</b>	Smythe, G. C., 300 Withells Road, Christchurch.8004	<b>ZL3DP</b>	Meikle, B., 24 Abraham Heights, Nelson.7001
<b>ZL3AM</b>	Kirk, R. E., 43 Dover Street, Christchurch.8001	<b>ZL3DR</b>	Godfrey, R. J., Main South Road, R. D. 2, Kaikoura.7351
<b>ZL3AN</b>	Duff, B. F., 30 Frensham Crescent, Christchurch.8006	<b>ZL3DS</b>	Brewster, D. W., 860 Avonside Drive, Christchurch.8006
<b>ZL3AO</b>	Bell, M. W., 203 Weston Road, Christchurch.8005	<b>ZL3DT</b>	Searle, G. G., c/- Post Office, Hokitika.7900
<b>ZL3AP</b>	Whitfield, S. J. N., 48 Hawthornden Road, Avonhead, Christchurch.8004	<b>ZL3DV</b>	Jefferis, E. W., 15 Kingsgate Place, Christchurch.8005
<b>ZL3AR</b>	Whyte, B. T., 17 Cambridge Street, Ashburton.8300	<b>ZL3DW</b>	Edward, L. N. M., 45d Glenharrow Avenue, Christchurch.8004
<b>ZL3AS</b>	Sams, C. G. A., 80 Straven Road, Christchurch.8001	<b>ZL3DX</b>	McGee, W. H., 11 Glenavon Place, Christchurch.8004
<b>ZL3AT</b>	Mahoney, M. F., 23 Holmwood Road, Christchurch.8001	<b>ZL3DY</b>	Firman, R. K., 181 Morgans Road, Timaru.8601
<b>ZL3AU</b>	Dekker, P., Albany Heights Road, R.D. 2, Albany.1331	<b>ZL3DZ</b>	Thomson, G., 2 Naylor Street, Waimate.8791
<b>ZL3AW</b>	Phillips, M. A., 168 Esplanade, Kaikoura.7351	<b>ZL3FB</b>	Schroeder, W. F., The Vicarage, 8 Roxburgh Street, Christchurch.8002
<b>ZL3AX</b>	Tillman, N. W., 45c Main Road, Redcliffs, Christchurch.8008	<b>ZL3FC</b>	Guthrie, M. W., 74 Merivale Lane, Christchurch.8001
<b>ZL3AY</b>	Mason, G. E., Mason's Flat, Hawarden.8274	<b>ZL3FD</b>	Pollard, J. P. W., 363 Hills Road, Christchurch.8001
<b>ZL3AZ</b>	Rayner, D. A., 23 Waitohi Street, Christchurch.8004	<b>ZL3FE</b>	Kelly, I. J. H., 7 Tuirau Place, Ilam, Christchurch.8004
<b>ZL3BA</b>	Drumm, B. G., 12 Martin Street, Hamilton.2001	<b>ZL3FH</b>	Francis, C. G., 6 Pratt Street, New Brighton, Christchurch.8009
<b>ZL3BB</b>	Gray, G. W., 125 Highcliff Road, Shiel Hill, Dunedin.9001	<b>ZL3FJ</b>	Brown, D. A., 62 Hudson Street, Christchurch.8005
<b>ZL3BD</b>	Ludwig, M., 105 Beachville Road, Christchurch.8008	<b>ZL3FK</b>	Hepburn, L. D., 22 Gwynfa Avenue, P. O. Box 1410, Christchurch.8002
<b>ZL3BE</b>	Christchurch Boys' High School Radio Club, (Trustee: ZL3TX), P.O.Box 8157, Riccarton, Christchurch.8034	<b>ZL3FL</b>	Cox, W. F., 55 Daniels Road, Christchurch.8005
<b>ZL3BF</b>	Salt, J. S., 6 Leslie Street, Upper Riccarton, Christchurch.8004	<b>ZL3FM</b>	Campbell, R. J., 3 Shamrock Place, Christchurch.8003
<b>ZL3BG</b>	Himing, L. C., 23 Coopers Road, Shirley, Christchurch.8006	<b>ZL3FN</b>	Wilson, R. J., 11 High Street, Greymouth.7801
<b>ZL3BH</b>	Bowman, G. R. B., 158 Revell Street, Hokitika.7900	<b>ZL3FO</b>	Blackmore, J. H., 364 Riverlaw Terrace, St. Martins, Christchurch.8002
<b>ZL3BI</b>	Brice, K. L., 18 College Avenue, Christchurch.8005	<b>ZL3FP</b>	Kyle, E. A. J., 12a Mountfort Street, Christchurch.8002
<b>ZL3BJ</b>	Hunter, L. C., 42 Stanton Crescent, Christchurch.8002	<b>ZL3FQ</b>	Hamlin, J. H., 26 Brabourne Street, Christchurch.8002
<b>ZL3BK</b>	Halliburton, G. A., 6 Barlow Street, Christchurch.8004	<b>ZL3FR</b>	Nixon, M. A., 10 Dulles Place, Papanui, Christchurch.8005
<b>ZL3BL</b>	Holland, B. N., 75 Blankney Street, Christchurch.8004	<b>ZL3FS</b>	Seed, D. P. (Mrs), 831 Cashmere Road, Halswell, Christchurch.8003
<b>ZL3BM</b>	Cook, D., 40 Mays Road, Papanui, Christchurch.8005	<b>ZL3FT</b>	Clapham, T. S., 31 Ronaldsay Street, Palmerston.9161
<b>ZL3BN</b>	Sim, G. W., 47 Teesdale Street, Christchurch.8005	<b>ZL3FU</b>	McPhail, T. K., 7 Ostend Place, Christchurch.8004
<b>ZL3BO</b>	King, M. R., 126 Fox Street, Gisborne.3801	<b>ZL3FV</b>	McCracken, W. D., 14 Northcote Road, Papanui, Christchurch.8005
<b>ZL3BP</b>	Mountford, T. G., 141a Otupua Road, Timaru.8601	<b>ZL3FW</b>	O'Brien, J. R., 508 Marine Parade, Christchurch.8007
<b>ZL3BQ</b>	Urwin, A. J. (Mrs), 30 Ryeland Avenue, Christchurch.8004	<b>ZL3FX</b>	McSherry, O. E., 50 Napier Road, Havelock North, Hawkes Bay.4201
<b>ZL3BR</b>	White, M. G., Mangawhero Road, P. O. Box 62, Eltham 5.4751	<b>ZL3FY</b>	Gardner, R., 62 Palatine Terrace, Christchurch.8002
<b>ZL3BS</b>	Tweedie, S. B., 167 Wales Street, Oaklands, Christchurch.8003	<b>ZL3FZ</b>	Fraser, B. H. L., 113 Beresford Street, Christchurch.8007
<b>ZL3BT</b>	White, E. I., 5 Clementine Lane, Christchurch.8008	<b>ZL3GA</b>	Allan, N. J., 11 Longmuir Street, Christchurch.8004
<b>ZL3BU</b>	McNeill, E. D., 43b Bowenvale Avenue, Christchurch.8002	<b>ZL3GB</b>	Cronin, D. W., 86 St. Martins Road, St. Martins, Christchurch.8002
<b>ZL3BV</b>	Schaefer, L. M., 10 Bridge Street, Greymouth.7801	<b>ZL3GC</b>	Baker, D. M., c/- Mr J. McGlashan, P.O.Box 557, Timaru.8600
<b>ZL3BW</b>	Burt, G. L., 114 Marsden Road, Greymouth.7801	<b>ZL3GD</b>	King, S. G., c/- Mrs R.M.Hewson, R.D. 8, Anama, Ashburton.8300
<b>ZL3BX</b>	Patrick, B. L., 1 Kanuku Place, Cashmere, Christchurch.8002	<b>ZL3GE</b>	Wellford, A. R., 12 Devon Street, Timaru.8601
<b>ZL3BY</b>	Halford, B. B., 37 McHardie Street, Wallaceville, Upper Hutt.6401	<b>ZL3GF</b>	Boal, W. A., 145 South Bay Parade, South Bay, Kaikoura.7351
<b>ZL3BZ</b>	Johnson, C., 10 Harris Street, Pleasant Point.8772	<b>ZL3GH</b>	Mitchell, N. J., 15 Blossomdale Place, Christchurch.8005
<b>ZL3CA</b>	Sandford, T. W., Unwin Road, Orton R. D. Temuka.8752	<b>ZL3GI</b>	Halliburton, G. J., 6 Barlow Street, Fendalton, Christchurch.8004
<b>ZL3CB</b>	Newton, B. A. (Mrs), 172 Bridle Path Road, Christchurch.8002	<b>ZL3GJ</b>	Reynolds, A. E., 117 Roker Street, Christchurch.8002
<b>ZL3CC</b>	Crosby, K. G., 175 Trevors Road, Ashburton.8300	<b>ZL3GK</b>	Richardson, T. C. W., 7 Kamahi Place, Poroa, Greymouth.7870
<b>ZL3CD</b>	Smillie, J. W., 7 Barnes Street, Timaru.8601	<b>ZL3GL</b>	Philips, R. J., 11 Bencard Place, Christchurch.8002
<b>ZL3CE</b>	Hewson, J. N., 8 Dunns Avenue, Pines Beach, Kaipoi.8252	<b>ZL3GM</b>	Pimm, O. W., 59a Dunbarton Street, Redwood, Christchurch.8005
<b>ZL3CF</b>	Lec, C. P., 6 Haycock Avenue, Mt Roskill, Auckland.1004	<b>ZL3GN</b>	Dacombe, A. N., 33a Huntsbury Avenue, Christchurch.8002
<b>ZL3CG</b>	Silverwood, K., 12 Banbury Street, Waimangaroa.7650	<b>ZL3GO</b>	Scott, T. R., Ruapuna, No 5 R.D., Ashburton.8300
<b>ZL3CI</b>	Isherwood, B., 134 Park Street, Hokitika.7900	<b>ZL3GP</b>	Middlemiss, P. G., 17 De Boge Place, Christchurch.8006
<b>ZL3CK</b>	Seay, M. R., 61 Henry Hill Road, Taupo.3300	<b>ZL3GQ</b>	Watson, P. W., Hamptons Road, R. D. 4, Christchurch.8021
<b>ZL3CL</b>	McKay, A. D., 2 Cedars Street, Christchurch.8002	<b>ZL3GR</b>	McInnes, D. C., 72 Westgrove Avenue, Christchurch.8004
<b>ZL3CM</b>	Burrell, K. M., 5 Jacaranda Grove, Maungaraki, Lower Hutt.6301	<b>ZL3GS</b>	Wright, G. M., 25 Dunedin Street, Redwood, Christchurch.8005
<b>ZL3CN</b>	Mantell, G. N., 1 Logie Place, Bromley, Christchurch.8006	<b>ZL3GT</b>	Somerville, J. H., 14 Park Lane, Timaru.8601
<b>ZL3CO</b>	Wylie, P. B., 101 Englefield Road, Belfast, Christchurch.8005	<b>ZL3GV</b>	Keremelis, T., Flat 1, 421 Worcester Street, Christchurch.8001
<b>ZL3CP</b>	Parton, C. W., St Annes Court, 224 Lincoln Road, Christchurch.8002	<b>ZL3GW</b>	Searle, V., 7 Whitcombe Terrace, Hokitika.7900
<b>ZL3CS</b>	Downer, G. H., Larcombs Road, No. 5 R.D., Christchurch.8021	<b>ZL3GX</b>	Chapman, A. S., 7 Dellow Place, Christchurch.8002
<b>ZL3CT</b>	Bennett, R. S., 67 Aronui Road, Alexandra.9181	<b>ZL3GY</b>	Morgan, D. K., 6a Mendip Place, Christchurch.8005
<b>ZL3CU</b>	Moffatt, S. Z., 33 Bidwell Street, Timaru.8601		
<b>ZL3CV</b>	Gilligan, M. S. J., 368 Barrington Street, Christchurch.8002		
<b>ZL3CX</b>	Emerson, T. C., 8 James Street, Glenfield, Auckland.1310		
<b>ZL3CY</b>	Hutchison, D. E., 44 Hawthornden Road, Christchurch.8004		
<b>ZL3CZ</b>	Felmingham, C. E., 3 Gilbert Road, Poroa, Greymouth.7870		
<b>ZL3DB</b>	Buschl, B. D., 6/30 Gambia Place, Papanui, Christchurch.8005		
<b>ZL3DC</b>	Grindrod, R. J., 5 Macrocarpa Place, Ranui, Auckland.1208		



- ZL3GZ** Smith, H. E., North Street, Clinton.9251  
**ZL3HA** Arnold, H. F., 23 Cornwell Street, Christchurch.8001  
**ZL3HB** Deans, R. H., Tara, Coalgate.8171  
**ZL3HC** Brittenden, C. E. R., 329 Wainoni Road, Christchurch.8007  
**ZL3HD** Chambers, D. H., 5 Stiles Place, Dallington, Christchurch.8006  
**ZL3HE** Harris, J. G., 528 Hagley Avenue, Christchurch.8001  
**ZL3HG** Davy, K. T., 17 Haddon Street, Timaru.8601  
**ZL3HH** Wylie, R. L., 21 Vickery Street, Kaiapoi.8252  
**ZL3HI** Holtum, J. W. A., 18 Brussels Place, Birkenhead, Auckland.1310  
**ZL3HK** Hayes, W. F., 90 Bright Street, Cobden, Greymouth.7850  
**ZL3HL** Thompson, S. A., 48 Tossell Road, Prebbleton.8153  
**ZL3HM** Evans, C. E., 123 Beach Road, Kaikoura.7351  
**ZL3HN** Holtum, J. W., 461 Johns Road, Harewood, Christchurch.8005  
**ZL3HO** Lowry, R. C., 10 Palmers Road, North Beach, Christchurch.8009  
**ZL3HR** Leitch, A., 113 Beresford Street, Christchurch.8007  
**ZL3HS** Kempthorne, J. H., 44 Cannon Hill Crescent, Christchurch.8008  
**ZL3HT** Lyford, A. R., 7 Swansea Road, Stratford.4700  
**ZL3HU** Sandford, B. D., 9 Verena Place, Green Bay, Auckland.1207  
**ZL3HV** Fisher, P. J., 152a Brooklands Drive, New Plymouth.4601  
**ZL3HW** Wallace, C. W., 26 Lynfield Avenue, Christchurch.8004  
**ZL3HX** Marshall, D. A., 4 Geisha Road, Waikuku, North Canterbury.8250  
**ZL3HY** Fleming, J. G., 107 Lonsdale Street, Christchurch.8009  
**ZL3HZ** Southgate, W. A., 7 Paeroa Street, Christchurch.8004  
**ZL3IA** Tyerman, P. F., 9 Elstow Place, Spreydon, Christchurch.8002  
**ZL3IB** Walker, J. R. L., 19 Athol Terrace, Christchurch.8004  
**ZL3IC** McCulloch, E. N., 21 Norwich Street, Christchurch.8006  
**ZL3ID** Pettigrew, W. L., 148 Peel Street, Westport.7601  
**ZL3IE** Hopkinson, L. G., 107 Evans Street, Timaru.8601  
**ZL3IG** Ross, P. J., 4 Oakfield Street, Christchurch.8005  
**ZL3IH** Preston, W. L., Rhoborough Downs, Lake Pukaki, PB, Fairlie.8771  
**ZL3II** Serra, K. C., 15 Stapletons Road, Christchurch., P.O. Box 26034, Christchurch.8030  
**ZL3IJ** Inglis, J. M., 288 Estuary Road, Christchurch.8007  
**ZL3IL** Wooding, M. G., 374 Ruahine Street, Palmerston North.5301  
**ZL3IM** Sullivan, J. T., 34 Rollesby Street, Christchurch.8002  
**ZL3IN** Cox, R., 16 College Avenue, Christchurch.8005  
**ZL3IO** Crossman, G. D., 2 Wallingford Road, Temuka.8752  
**ZL3IQ** Drummond, W. P., 11 Reid Crescent, Ashburton.8300  
**ZL3IR** Benson, A. F., 32 Euston Street, Christchurch.8004  
**ZL3IS** Soanes, G. A., 245 Westminster Street, Mairehau, Christchurch.8001  
**ZL3IT** MacDonald, J. D., 42 Buchanan Street, Timaru.8601  
**ZL3IU** Gray, N. C., Springburn, R.D. 1, Ashburton.8300  
**ZL3IV** Vickery, K., 139 Raven Street, Kaiapoi.8252  
**ZL3IZ** Duncan, A., 41a William Street, Richmond.7002  
**ZL3JA** Avery, J. L., 442 Hills Road, Christchurch.8001  
**ZL3JB** Nutley, A., c/- Alp Sports, 216 Hereford Street, Christchurch.8001  
**ZL3JC** Watson, J. P., 12 Forty Street, Timaru.8601  
**ZL3JD** Van Kuilenberg, P. H., 45 Farrelly Avenue, Mt Roskill, Auckland.1004  
**ZL3JE** Stewart, D. A., 33 King Street, Paeroa.8790  
**ZL3JF** Henderson, H. P., 35 Hillview Crescent, Timaru.8601  
**ZL3JG** Rawstorn, G. J., P.O.Box 19-533, Woolston, Christchurch.8030  
**ZL3JI** Foulds, L. F., 131 Culbarts Road, Christchurch.8006  
**ZL3JJ** Crump, M. W., 9 Peraki Street, Kaiapoi.8252  
**ZL3JK** Williams, H. E., 51 Westholme Street, Christchurch.8005  
**ZL3JL** McFarlane, A. R., 48 Chalmers Avenue, Ashburton.8300  
**ZL3JM** Bennett, P. W., Te Araroa, Station Road, Temuka.8752  
**ZL3JN** Mummery, B. H., 8 McIntyre Street, Shirley, Christchurch.8001  
**ZL3JO** Papesch, A. J. G. (Dr), 37 Rembrandt Place, Burnside, Christchurch.8005  
**ZL3JP** Langley, E. W., 8 Cowes Street, Avondale, Christchurch.8007  
**ZL3JQ** Poll, A. K., 155 Halswell Road, Christchurch.8002  
**ZL3JR** Kelly, S. J. C., 22a Cascade Place, Christchurch.8008  
**ZL3JU** Sorensen, A. G., 62 Shortland Street, Christchurch.8006  
**ZL3JV** MacGeorge, B. A., 9 Opie Street, Waimate.8791  
**ZL3JX** Rowlands, T. E., "Ruthin", R.D. 2, Kaiapoi.8252  
**ZL3JY** Stalker, J. P., Greenpark, No. 4 R.M.D., Christchurch.8021  
**ZL3JZ** Dumbleton, R. S., 30 Koromiko Street, Christchurch.8002  
**ZL3KA** Macer, J., 31 Colwyn Street, Christchurch.8005  
**ZL3KC** Cuttriss, S. A., 33 Brabourne Street, Christchurch.8002  
**ZL3KE** McGrath, R. E., 42 Lyndhurst Crescent, Christchurch.8007  
**ZL3KG** Willmott, W. R., c/- Willmotts Drapers, 26 Royal Arcade, Timaru.8601  
**ZL3KI** Jackson, D. W., 4 Creswell Lane, Blenheim.7301  
**ZL3KJ** Jones, E. V., 155 Derby Street, Westport.7601  
**ZL3KK** Goodare, T. T., 8 Cutts Road, Christchurch.8004  
**ZL3KL** Howell, B. C., 6 Deepdale Street, Christchurch.8005  
**ZL3KM** Woodfield, M. K., 72 Salamanca Road, Sunnynook, Auckland.1310  
**ZL3KN** Ellis, T. C., Flat 3, 460 Gloucester Street, Christchurch.8001  
**ZL3KP** Parr, W. E., 30 Cranbrooke Ave, Christchurch.8005  
**ZL3KQ** Hellyar, G. I., 280 Innes Road, St Albans, Christchurch.8005  
**ZL3KR** Hughes, A. G., 4 Exton Street, Christchurch.8005  
**ZL3KS** Downer, M. H., 34 Torquay Place, Christchurch.8005  
**ZL3KT** Olsson, E. E., 14 Buntley Street, Christchurch.8004  
**ZL3KU** Waters, K. A., 17 Ormond Road, Napier.4001  
**ZL3KW** Faass, S. R. F., 13a Miriana Street, Maungatapu, Tauranga.3001  
**ZL3KX** Harrington, R. J., Mount Harris Road, 9 R.D., Waimate.8791  
**ZL3KY** Talbot, A. D., 37 Park View Terrace, Timaru.8601  
**ZL3KZ** Neilson, J. B., 3 Cadman Street, Runanga, Greymouth.7854  
**ZL3LA** Ludbrook, S. W., 12 Rawson Street, New Brighton, Christchurch.8009  
**ZL3LB** Hamilton, W. R., 17 Braithwaite Street, Christchurch.8004  
**ZL3LC** Corner, P. E., 217 Gloucester Street, Christchurch.8001  
**ZL3LD** Saunders, B. C., 14 Stackhouse Avenue, Christchurch.8005  
**ZL3LE** Guard, B. N., 80 Hassall Street, Timaru.8601  
**ZL3LF** Baynham, B. F., Pyle Road West, One Tree Point, R.D. 1, Ruakaka.0253  
**ZL3LG** Jackson, C. J., 74 Cambridge Street, Ashburton.8300  
**ZL3LH** Muir, D. N., 6 Oriana Place, Palmerston North.5301  
**ZL3LI** Neal, J. V., c/- Officers Mess, RNZAF Base Ohakea, Private Bag, Palmerston North.5450  
**ZL3LK** McGowan, J. S., 2 Rhodesvale Terrace, Christchurch.8002  
**ZL3LL** Leadley, J. M., "Woodlands", R. D. 7, Ashburton.8300  
**ZL3LM** Burrell, N. W., 209 Ilam Road, Christchurch.8004  
**ZL3LN** Penney, V. J., 16 Dorsett Place, Christchurch.8002  
**ZL3LO** Cairns, A., 42 Santa Maria Avenue, Christchurch.8008  
**ZL3LP** Brown, H. P., 8 Neill Street, Hornby, Christchurch.8004  
**ZL3LQ** Paltridge, K. K., 131 Warrington Street, Christchurch.8001  
**ZL3LS** Miller, G. C., 30 Nirvana Street, Brooklands, Christchurch.8009  
**ZL3LT** Stanbury, A. C., 43 Dunedin Street, Redwood, Christchurch.8005  
**ZL3LU** Campbell, G. R., 24 Rosamund Place, Christchurch.8003  
**ZL3LV** Davey, R. L., 24 Hartford Street, Christchurch.8005  
**ZL3LX** Kirkpatrick, I. J., 99 Bickerton Street, Christchurch.8006  
**ZL3LY** Eddington, J. A., 23 Ferner Street, Christchurch.8006  
**ZL3LZ** Dale, A. J. E., 25 Tancred Street, Christchurch.8001  
**ZL3MA** Kingswell, G. N., "Highlands", P. O. Box 93, Geraldine.8751  
**ZL3MB** Wilson, M. J. G., 23 Vauxhall Street, Bishopdale, Christchurch.8005  
**ZL3MC** McKenzie, D. S., 47 Kotare Street, Fendalton, Christchurch.8004  
**ZL3MD** Millyard, A. M., 150 Wainoni Road, Christchurch.8006  
**ZL3ME** Bramley, C. J., 7 Edward Street, Prebbleton.8153  
**ZL3MF** Oates, D. J., Carters Beach, c/- P. O. Box 20, Westport.7600  
**ZL3MG** Urtwin, R. A., 30 Ryeland Avenue, Burnside, Christchurch.8004  
**ZL3MH** Macer, D. R. J., 31 Colwyn Street, Christchurch.8005  
**ZL3MI** Sullivan, R. E., 103a Jeffreys Road, Bryndwr, Christchurch.8005  
**ZL3MJ** Lewis, C. T., 30 Te Rama Place, Christchurch.8006  
**ZL3MK** Phillips, A. S., 148 Brookside Terrace, Bryndwr, Christchurch.8005  
**ZL3ML** McNicol, A. D., 26 Gainford Street, Christchurch.8004  
**ZL3MM** Hills, R. I., 25 Rapaki Road, Christchurch.8002  
**ZL3MN** Gibson, E. N., 52 Rimu Street, Timaru.8601  
**ZL3MO** Cole, W. R., Grange Settlement Road, Temuka.8752  
**ZL3MQ** McMaster, R. J., 8 Greens Road, Kaiapoi R. D. 1.8252  
**ZL3MR** Warner, J. A., 11 Goulds Road, Timaru.8601  
**ZL3MS** Brash, J. P., 14 Rydal Street, Christchurch.8002  
**ZL3MT** Thompson, M. C., R.D. 1, Westport.7621  
**ZL3MU** Henshall, E. H. (Mrs), 281 Innes Road, Christchurch.8005  
**ZL3MV** Morrin, E. C., 45 Wychbury Street, Spreydon, Christchurch.8002  
**ZL3MY** Searle, R. W., 7 Whitcombe Terrace, Hokitika.7900  
**ZL3MZ** Garlick, P. R., 23 Lydia Street, Greymouth.7801  
**ZL3NA** Robinson, D. G., Kowhitirangi, R.D., Hokitika.7900  
**ZL3NB** Swann, A., 29 Manor Place, Bryndwr, Christchurch.8005  
**ZL3NC** Ingram, R. C., Morpeth Street, Rapahoe, Greymouth.7800  
**ZL3ND** Liddell, C. G., 356 Avonside Drive, Christchurch.8006  
**ZL3NE** Gyde, R. M., 26 Anita Avenue, Mt. Roskill, Auckland.1004  
**ZL3NG** McVicar, J. J., Razorback Road, Bombay, Auckland.1750



# **ZL3NH**

**ZL3NH** Rogers, P. J., Corner Cashmere and Happy Home Roads, Christchurch.8003

**ZL3NI** Walker, D. N., 46 Hamilton Street, Temuka.8752

**ZL3NJ** Rumens, E. A., 51a Wainoni Road, Christchurch.8006

**ZL3NL** Tait, A. Mc M., 8 Ashbourne Street, Christchurch.8005

**ZL3NM** Young, R. S., Anarewa Crescent, Stephens Bay, Motueka.7161

**ZL3NO** Johannis, K. L., 6 Pittville Street, No. 2 R.D., Rangiora.8254

**ZL3NP** Johnstone, G. V. O., 19 Main South Road, Upper Riccarton, Christchurch.8004

**ZL3NQ** Drever, G. R., 139 Belt Road, Ashburton.8300

**ZL3NR** Campbell, L. S., 83 Farrington Avenue, Christchurch.8005

**ZL3NS** Ostitis, T., 128 Brookside Terrace, Christchurch.8005

**ZL3NT** Blackwell, G. C., 3 Dobson Street, Christchurch.8002

**ZL3NU** Collett, L. M., 263 Cannon Hill Crescent, Christchurch.8008

**ZL3NV** O'Connor, E. P., 6 Stephens Street, Rangiora.8254

**ZL3NW** MacIntosh, R. M., Main North Road, R.D. 1, Kaiapoi.8252

**ZL3NY** Stapley, G. P., 220 Opawa Road, Christchurch.8002

**ZL3OA** MacDonald, B. A., 221 Middle Road, Ashburton.8300

**ZL3OC** Home, R. C., 115 Blackett Street, Rangiora.8254

**ZL3OD** Barnes, G. J., 70 Thompson Street, Cambridge.2351

**ZL3OE** Richards, D. L., 38 Frankleigh Street, Christchurch.8002

**ZL3OF** Milne, I. F., 143 Sparks Road, Christchurch.8002

**ZL3OG** Sandford, C. J., 38 St. Albans Avenue, Mt Eden, Auckland.1003

**ZL3OH** Knoef, F. J. C., 54 Harbour Road, Christchurch.8009

**ZL3OI** Godfrey, K. E., 3 Wycola Avenue, Hei Hei, Christchurch.8004

**ZL3OJ** Digby, N. M., 4 Norfolk Street, Christchurch.8005

**ZL3OK** Lark, M. J., Motueka Quay, Motueka.7161

**ZL3ON** Nicholls, J. B., 3 Cliff Street, Christchurch.8008

**ZL3OP** Prebble, N. W., 134 Waimairi Road, Ilam, Christchurch.8004

**ZL3OQ** Sorensen, E. A., 37 Hendon Street, St. Albans, Christchurch.8001

**ZL3OU** Bellamore, A. H., 87 Radley Street, Christchurch.8002

**ZL3OV** Scrivener, E. H., Flax Cottage, Main North Road, Waikuku.8250

**ZL3OW** Coman, H. O., 24 Digby Place, Christchurch.8006

**ZL3OX** Mitchell, C. J., 58a Hackthorne Road, Cashmere, Christchurch.8002

**ZL3OY** Coull, G., 45 Seven Oaks Drive, Christchurch.8005

**ZL3OZ** Burberry, R. L., 25 Percival Street, Beckenham, Christchurch.8002

**ZL3PA** Jenner, D. J., 62 Pembroke Road, Northland, Wellington.6005

**ZL3PB** Lobb, G. W., 62a Peel Street, Westport.7601

**ZL3PD** Pluck, R. L., Forbes Road, Tai Tapu.8150

**ZL3PE** Carruthers, J. E., 80 Gilberthorpes Road, Hornby, Christchurch.8004

**ZL3PF** Asher, A. S., 143b Memorial Avenue, Christchurch.8005

**ZL3PH** Rowe, B., 250 Grahams Road, Burnside, Christchurch.8005

**ZL3PI** Bartrum, B. R., 31b Bowenvale Avenue, Cashmere, Christchurch.8002

**ZL3PJ** Grewar, M. A., "Rimu" Westland.7954

**ZL3PL** Lobb, R. E. (Mrs), 62a Peel Street, Westport.7601

**ZL3PM** McGee, P. D., 1 Craigieburn Street, Darfield.8172

**ZL3PN** Boorer, G. F., 48a Newton Street, Timaru.8601

**ZL3PO** Turner, D. K., 39 Dillons Point Road, Blenheim.7301

**ZL3PQ** Were, D. A., 97 Campbell Road, Onehunga, Auckland.1106

**ZL3PR** Petersen, C. M., 24 Derby Street, Westport.7601

**ZL3PS** Davidson, F. W., 25 Stedmere Street, Bryndwr, Christchurch.8005

**ZL3PT** Douglas, J. C. (Miss), "Giggleswick", Seymour Street, Millerton.7650

**ZL3PV** Walker, W., Springston. 8150

**ZL3PX** Chapman, G. A., 8 Boys Place, Christchurch.8001

**ZL3PZ** Jackson, W. B., 42 Churchill Street, Kaikoura.7351

**ZL3QB** McGlashan, D. C., 501b Ilam Road, Christchurch.8005

**ZL3QC** Mullis, N. A., 104 Mooray Avenue, Bishopdale, Christchurch.8005

**ZL3QD** Clark, E. R., 5 Chedworth Avenue, Christchurch.8005

**ZL3QE** Browne, E. M. J., 9 Sarsfield Street, Southbridge.8150

**ZL3QF** Cotton, M., 145 Raven Street, Kaiapoi.8252

**ZL3QG** Ross, G. L., 255 Cannon Hill Crescent, Christchurch.8008

**ZL3QH** Stanton, K. A., 7 Rutherglen Avenue, P. O. Box 31095, Christchurch.8030

**ZL3QI** Wornall, C. J., 5 Manlo Terrace, St. Andrews Hill, Christchurch.8008

**ZL3QJ** Havord, P. R., 16 Worsleys Road, Christchurch.8002

**ZL3QK** Dawson, R., 41 Garlands Road, Christchurch.8002

**ZL3QL** Carrell, T. D., 33 Ryeland Avenue, Christchurch.8004

**ZL3QN** Barber, F. E., 20 Lomax Place, Christchurch.8004

**ZL3QO** Allan, J. M., 4 Highfield Lane, Rangiora.8254

**ZL3QP** Spencer, R. D., Weedons Ross Road, R.D. 6, West Melton, Christchurch.8021

**ZL3QQ** Seed, T. J., 831 Cashmere Road, Halswell, Christchurch.8003

**ZL3QR** Gillman, G. H., 120 Highway 72, Woodend.8255

**ZL3QT** Delis, J. B. G., 455a Johns Road, Harewood, Christchurch.8005

**ZL3QU** Borrell, R. P., 93 Chapter Street, Christchurch.8005

**ZL3QV** Smith, R. H., 76 Santa Maria Avenue, Christchurch.8008

**ZL3QW** Betteridge, O. J., 8 Chambers Street, Napier.4001

**ZL3QX** Mayo, G. J. L., 9 Westenra Terrace, Christchurch.8002

**ZL3QY** Belcher, E. W., 1 Hall Street, Cobden, Greymouth.7850

**ZL3QZ** Daniels, F. J. H., Ngakawau, via Westport.7650

**ZL3RA** Riach, C. D., 25 Buffon Street, Waltham, Christchurch.8002

**ZL3RB** Davis, A. W., Aylesbury Road, No. 1 R.D., Christchurch.8021

**ZL3RC** Signal, C. B., 8 Bridge Street, Temuka.8752

**ZL3RD** Davey, D. R., 7 Westview Crescent, West Melton, R.D. 6, Christchurch.8021

**ZL3RE** Bott, R. A., 404 Cashmere Road, Christchurch.8002

**ZL3RF** Dickey, C. N., 20 Todd Avenue, Christchurch.8005

**ZL3RH** Pampa, P. G., 21 Atiamuri Village, R.D. 1, Atiamuri.3291

**ZL3RI** Hughes, J. O., 82 Hall Street, Cobden, Greymouth.7850

**ZL3RJ** Hutton, B. G., 15 Galway Avenue, Christchurch.8005

**ZL3RK** McKenzie, T. J., 73 Cygnet Street, North New Brighton, Christchurch.8009

**ZL3RL** Tunnicliffe, D. N., 3/24 Marriner Street, Sumner, Christchurch.8008

**ZL3RN** Yeates, D. R., 69 St. Andrews Hill Road, St. Andrews Hill, Christchurch.8008

**ZL3RO** Walsh, G. J., 30 Howarth Road, Fairfield.9006

**ZL3RP** Nobbs, R. L., 22 Shand Crescent, Riccarton, Christchurch.8004

**ZL3RQ** Riordan, G. B., 25a Taylors Avenue, Christchurch.8005

**ZL3RR** North Canterbury Amateur Radio Club, see Branch Directory

**ZL3RS** Campbell, D., 78 Cotswold Avenue, Bishopdale, Christchurch.8005

**ZL3RT** Rayner, L. A., 693/2 Fairview Road, Te Awamutu.2400

**ZL3RU** Bennett, R. G. T., 60 Kirkwood Avenue, Christchurch.8004

**ZL3RV** Rigg, I. K., 50 St. John Street, Christchurch.8006

**ZL3RW** Mackay, D. J., 22 Waipara Street, Christchurch.8002

**ZL3RY** Clark, E. J., 5 Albert Terrace, Christchurch.8002

**ZL3RZ** King, S. P., 12 Nayland Street, Christchurch.8008

**ZL3SA** Gibbs, R. A., 11 Pandora Street, Christchurch.8009

**ZL3SB** Riordan, A. A. C., 95 Crofton Road, Harewood, Christchurch.8005

**ZL3SC** Shearman, G. D., 68 Proctor Street, Christchurch.8005

**ZL3SD** Powell, M. B., 1/23 Kent Lodge Avenue, Avonhead, Christchurch.8004

**ZL3SE** Harvey, M. A., 4 Coster Street, Wakatu, Nelson.7001

**ZL3SF** Maloney, J. N., 31 Middlepark Road, Christchurch.8004

**ZL3SG** Harbeck, A. D., 28 Marlborn Crescent, Christchurch.8005

**ZL3SI** Little, G. W., 81A Banks Avenue, Christchurch.8006

**ZL3SJ** Fraser, G. J., 206 Major Hornbrook Road, Christchurch.8008

**ZL3SK** Patrick, T. L., 46 Sherborne Street, Christchurch.8001

**ZL3SL** Leeming, D. S., 92 Clyde Road, Fendalton, Christchurch.8004

**ZL3SM** Graham, B. N., 90 Churchill Street, Kaikoura.7351

**ZL3SN** Oldham, J. E., 40 Russell Street, Westport.7601

**ZL3SO** Kilkolly, J. W., Haselden Street, Westport.7601

**ZL3SP** Brookman, P. J., 361 Gardiners Road, Christchurch.8005

**ZL3SQ** Hadfield, A. I., 2/284 Manchester Street, Christchurch.8001

**ZL3SR** Webster, R. D., 2a Nihil Crescent, Mission Bay, Auckland.1105

**ZL3SS** Langrish, T. F., 36 Bowenvale Avenue, Christchurch.8002

**ZL3ST** Williams, K. E., 185 Greers Road, Christchurch.8005

**ZL3SU** Orchard, P. J., 15 Palmerston Street, Greymouth.7801

**ZL3SV** Watson, G. L., P. O. Box 262, Motueka.7161

**ZL3SW** Carter, D. R., Mt. Gay, Pleasant Point.8772

**ZL3SY** Thomas, P. A., 270 Centaurus Road, Christchurch.8002

**ZL3SZ** Dalrymple, D. L., 65 Frankleigh Street, Christchurch.8002

**ZL3TA** Ritchie, M. V. H., 11 Hands Road, Hillmorton, Christchurch.8002

**ZL3TC** Smith, T. M. (Mrs), North Street, Clinton.9251

**ZL3TD** Daly, P. P., 117 Emmett Street, Shirley, Christchurch.8001

**ZL3TE** Turner, J. N., 2/202a Main Road, Redcliffs, Christchurch.8008

**ZL3TF** Isles, P. R., 50 Woodville Street, St. Albans, Christchurch.8001

**ZL3TG** Copland, G. M., 11 Peel Street, Christchurch.8005

**ZL3TH** Gould, P. N., No. 10 R.D., Waimate.8791

**ZL3TI** Button, B. H., 86 Lake Terrace Road, Burwood, Christchurch.8006

**ZL3TJ** Currie, W. J., 31 Haselden Street, Westport.7601



- ZL3TK** Martin, D. F., 28 High Street, Greymouth.7801  
**ZL3TL** Paterson, M. S., 120 Hastings Street, Christchurch.8002  
**ZL3TM** Buchanan, W. A., 24 Dowling Road, Paroa, Greymouth.7870  
**ZL3TN** Dowling, D. W., Fairview, R. D. 2, Timaru.8621  
**ZL3TP** MacLean, A. G., 9 Horton Street, Pleasant Point.8772  
**ZL3TR** Haynes, J. C., 26 Roosevelt Avenue, Christchurch.8001  
**ZL3TS** Smith, A. E., 23 Deloraine Street, Christchurch.8002  
**ZL3TT** Symes, A. C. O., 5 Gilwell Street, Christchurch.8006  
**ZL3TU** Shamock, M. A., 6 Ashby Place, Christchurch.8005  
**ZL3TV** Ching, W. M., 47 Leeston Street, Ashburton.8300  
**ZL3TW** Riley, T. R., 20 Rearsby Drive, Halswell, Christchurch.8003  
**ZL3TX** Strong, W. S., 20a Hackthorne Road, Christchurch.8002  
**ZL3TY** McQuarrie, R. J., Weenink Road, Greymouth.7801  
**ZL3TZ** Rio, N. N., see ZL7TZ  
**ZL3UA** Mulholland, F. S. T., 4 Bramwell Street, Dallington, Christchurch.8006  
**ZL3UB** Stevenson, H. H., 16 Wilsons Road, Christchurch.8002  
**ZL3UC** Eden, G. C., 41 Neville Street, Christchurch.8002  
**ZL3UD** Smart, L. E., 48 Leslie Street, Waitara.4656  
**ZL3UE** Prattley, R. H., Ellesmere Road, R. D. 2, Christchurch.8021  
**ZL3UF** Prue, B. O., 111 Union Street, New Brighton, Christchurch.8007  
**ZL3UG** Lewis, G. H., 361 Karori Road, Karori, Wellington.6005  
**ZL3UI** Meredith, F. P. R., 63 Harrow Street, Christchurch.8001  
**ZL3UK** Julian, T. D., 16 Donner Street, Christchurch.8005  
**ZL3UL** Smith, A. F., 39 Wesley Street, Kaiapoi.8252  
**ZL3UN** Marshall, A. J., No. 7 R.D., Ashburton.8300  
**ZL3UP** McNicholl, M. W., 4 Corie Street, Christchurch.8004  
**ZL3UQ** Black, A. W., 48 Checketts Avenue, Halswell, Christchurch.8003  
**ZL3UR** South Canterbury NZART (Inc.), see Branch Directory  
**ZL3US** Smith, P. G., 3 Blakiston Street, Christchurch.8002  
**ZL3UT** Hartley, D., 23 Wellington Street, Linwood, Christchurch.8001  
**ZL3UU** Gordon, M., 3 Rydal Street, Christchurch.8002  
**ZL3UV** Coles, L. F., 232 Shortland Street, Christchurch.8006  
**ZL3UW** Conroy, H., 51 Bellbrook Crescent, Shirley, Christchurch.8001  
**ZL3UX** Vincent, L. L., Lismore, R. D. 5, Ashburton.8300  
**ZL3UY** Brown, A. G., 355 Pine Avenue, South Brighton, Christchurch.8007  
**ZL3UZ** McKenzie, C. D., 17 Hulverstone Drive, Christchurch.8007  
**ZL3VA** Williams, D. T., 13 Liggins Street, Christchurch.8006  
**ZL3VB** Winter, D., 8 Baretta Street, Christchurch.8002  
**ZL3VG** Burling-Claridge, J. A., 4 Coventry Street, Christchurch.8001  
**ZL3VH** Roozen, A. C. M., P. O. Box 80, 40 Forbes Road, Tai Tapu.8150  
**ZL3VI** Melhuish, B. J., 34 St Andrews Hill Road, Christchurch.8008  
**ZL3VJ** MacGeorge, A. A. G., 10 Manurewa Street, Christchurch.8004  
**ZL3VK** Lawrence, J. E., 25 Andrew Street, Timaru.8601  
**ZL3VM** Wilson, D. W. T., Seaford, No. 7 R. D., Ashburton.8300  
**ZL3VN** Bradley, J. N., 169 Weston Road, Christchurch.8005  
**ZL3VO** Elder, J., 30 Maling Street, Christchurch.8006  
**ZL3VP** Bradshaw, G. J., 159 Ashgrove Terrace, Christchurch.8002  
**ZL3VR** McMaster, A. S. (Mrs), Greens Road, R.D. 1, Kaiapoi.8252  
**ZL3VS** Uden, B. G., Selwyn Lakes Road, Irwell, R.D. 3, Christchurch.8021  
**ZL3VT** Vasta, A. I., 13 Kaka Road, South Bay, Kaikoura.7351  
**ZL3VU** Hayes, R. S., 7 Flannery Street, Leeston.8151  
**ZL3VV** Christchurch West Amateur Radio Club, see Branch Directory  
**ZL3VW** Winskill, I. E., Caverhill, No. 1 R.D., Cheviot.8271  
**ZL3VX** Parry, R. I., 18 Sunvale Terrace, Christchurch.8002  
**ZL3VY** Dixon, A. P., 16 Kildare Terrace, Lincoln.8152  
**ZL3VZ** Paterson, A. J., 52 Cavendish Road, Christchurch.8005  
**ZL3WC** Reeves, N. J., 10 North Street, Motueka.7161  
**ZL3WD** Gilbert, G. R., 3 Lyttelton Street, Lincoln.8152  
**ZL3WE** Longson, H. J. O., 21 Kinnaird Place, Christchurch.8002  
**ZL3WF** Wade, D. L., 8 Sabys Road, Halswell, Christchurch.8003  
**ZL3WG** Baird, J. F., 11 Aynsley Terrace, Christchurch.8002  
**ZL3WH** St. Andrews College Radio Club, (Trustee: ZL3RJ), Papanui Road, Christchurch.8005  
**ZL3WI** Wilkinson, J. F., Le Bons Bay, R.D., Akaroa.8161  
**ZL3WJ** Young, W. H., 74a Innes Road, Christchurch.8005  
**ZL3WK** Martin, E. (Mrs), 867 Ferry Road, Woolston, Christchurch.8002  
**ZL3WL** O'Connell, G. E., 31 Murray Street, Greymouth.7801  
**ZL3WM** Oliver, J. A., Main Road, Tai Tapu.8150  
**ZL3WN** Askey, G., 106 North Avon Road, Christchurch.8001  
**ZL3WO** Welsh, L. D., 18 Woodlands Place, Christchurch.8007  
**ZL3WQ** Mackey, C. J., 1 Camp Street, Ahaura.7850  
**ZL3WR** Martin, V. E., 867 Ferry Road, Woolston, Christchurch.8002  
**ZL3WS** Tombling, F., 20 Derwent Street, Christchurch.8005  
**ZL3WT** Duncan, M. W., 37 Mountfort Street, Christchurch.8002  
**ZL3WU** Wright, A. F., 65 Ludstone Road, Kaikoura.7351  
**ZL3WV** Rigby, F., Ellesmere Junction, Springston, R.D. 4.8021  
**ZL3WX** Smillie, B., 19 Greenfield Place, Christchurch.8005  
**ZL3WY** Yeates, J. M. (Mrs), 69 St. Andrews Hill Road, St. Andrews Hill, Christchurch.8008  
**ZL3WZ** Lewitt, D. W., Miners Arms Road, Old West Coast Road, R.D. 6, Christchurch.8021  
**ZL3AAA** Garlick, R. A., 23 Lydia Street, Greymouth.7801  
**ZL3AAB** Garlick, Z. H. (Mrs), 23 Lydia Street, Greymouth.7801  
**ZL3AAC** Atkinson, H. R., 98 Condell Avenue, Papanui, Christchurch.8005  
**ZL3AAD** Alderson, G. E., 7 Priors Road, R. D. 1, Rangiora.8254  
**ZL3AAF** Crichton, R. J. C., 98 Estuary Road, Christchurch.8007  
**ZL3AAG** Batterbury, C., 4 Chedworth Avenue, Bishopdale, Christchurch.8005  
**ZL3AAH** O'Brien, W. M., 255 Estuary Road, Christchurch.8007  
**ZL3AAI** Grey, G. R., 89 Walters Road, Christchurch.8005  
**ZL3AAK** Wathne, S. R., 487 Greers Road, Papanui, Christchurch.8005  
**ZL3AAL** Vincent, R. K., 1 Hartley Place, Palmerston North.5301  
**ZL3AAN** Colville, L. M., 115 Cameron Street, Ashburton.8300  
**ZL3AAO** Ballantyne, S. T., 9 Wilsons Road, St. Martins, Christchurch.8002  
**ZL3AAQ** Banks, L. F., Buller Gorge, P. B. Westport.7620  
**ZL3AAR** Adams, P. H. L., 7 Alexander Terrace, Greymouth.7801  
**ZL3AAS** Silke, A. J., 61a Cheyenne Street, Upper Riccarton, Christchurch.8004  
**ZL3AAT** van Waelsden, F. H. A. M., 208 Grimseys Road, Christchurch.8005  
**ZL3AAU** Miller, J. G., 30 Fairford Street, Christchurch.8005  
**ZL3AAV** Hart, L. J. W., 61 Wakefield Street, Westport.7601  
**ZL3AAW** Simpson, W., 43 Alport Road, Christchurch.8006  
**ZL3AAY** Bowie, A. F. S., 10 Claremont Avenue, Christchurch.8005  
**ZL3AAZ** Allan, L. L. (Mrs), 4 Highfield Lane, Rangiora.8254  
**ZL3ABA** Allan, S. L., 4 Highfield Lane, Rangiora, North Canterbury.8254  
**ZL3ABB** McKay, D. J., 55 Wingate Street, Christchurch.8005  
**ZL3ABC** Hooker, R. O., 272 Wainoni Road, Christchurch.8007  
**ZL3ABD** Hancock, C. W. L., 17 Mafeking Street, Christchurch.8007  
**ZL3ABE** Roberts, B. M., 135 Russell Street, Westport.7601  
**ZL3ABF** Webbink, J. H., 11 Wattle Drive, North New Brighton, Christchurch.8009  
**ZL3ABH** Middlemiss, I. R., 427 Linwood Avenue, Christchurch.8006  
**ZL3ABJ** Jensen, B. D., 21 Colwyn Street, Christchurch.8005  
**ZL3ABK** Keen, R. A., 36 Lindsay Street, Timaru.8601  
**ZL3ABL** Brookes, I. A., 34 Allnatt Street, Temuka.8752  
**ZL3ABM** Graham, D., Manukau Central Caravan Park, 902 Great South Road, Manukau City.1701  
**ZL3ABN** Lawry, D. W., Emerson Crescent, Church Bay, Banks Peninsula.8012  
**ZL3ABO** Glass, B. L., 31 View Road, Campbells Bay, Auckland.1310  
**ZL3ABP** Snushall, J. G., Beach Road, Kaikoura.7351  
**ZL3ABQ** Bailey, K. W., 5 Wilson Street, Renwick, Blenheim.7301  
**ZL3ABR** Harris, G. T., 194 Hawthornden Road, Christchurch.8004  
**ZL3ABS** Smith, G. B., 39 Roberta Drive, Christchurch.8002  
**ZL3ABU** Strachan, I. S., 22 Rowses Road, Christchurch.8007  
**ZL3ABV** Jackson, P., 64 McQueens Road, Cheviot.8271  
**ZL3ABW** Maunders, H. B., 23 Buchanan Road, Christchurch.8004  
**ZL3ABY** O'Sullivan, K. D., 53 Marlborough Street, Greymouth.7801  
**ZL3ACB** Mollison, G. W. P., 11 Goya Place, Christchurch.8005  
**ZL3ACC** Chambers, C. H., 21 De Ville Place, Christchurch.8006  
**ZL3ACD** Batchelor, G. W., 41 Kirkwood Avenue, Christchurch.8004  
**ZL3ACE** Dodgshun, J. C., 10 Devonport Lane, Christchurch.8001  
**ZL3ACF** Richardson, J. T., 3 Monowai Crescent, Christchurch.8009  
**ZL3ACG** Heyward, K. W., 46 Yellowstone Crescent, Christchurch.8009  
**ZL3ACH** White, D. J., 7 R.D., Waimate.8791  
**ZL3ACJ** Parker, T. L., 4 Margot Lane, Christchurch.8008  
**ZL3ACK** Leeming, N. V., 17 Heaton Rhodes Place, Christchurch.8002  
**ZL3ACL** Bidlake, R. P., 72a Canada Street, Timaru.8601  
**ZL3ACM** Zampese, M. J. (Mrs), 26 Olwyn Terrace, Frankton, Hamilton.2001  
**ZL3ACN** Honey, R. M., 167 Brittan Street, Hokitika.7900  
**ZL3ACP** Van Slooten, F., 16 Greenhurst Street, Sockburn, Christchurch.8004  
**ZL3ACR** Chapman, A. R. B., 35 Proctor Street, Christchurch.8005  
**ZL3ACS** Borgfeldt, C. D., 37 Blankney Street, Hornby, Christchurch.8004  
**ZL3ACT** Patten, G. J., 435 Lower Styx Road, Christchurch.8009  
**ZL3ACU** McKay, B., 23 Palmside Street, Christchurch.8002



## ZL3ACV

**ZL3ACV** Hickman, K. A., 5 Cotswold Avenue, Christchurch.8005  
**ZL3ACW** Crawford, W. E. H., 3 Melville Street, Christchurch.8005  
**ZL3ACX** Robbins, K. F., 83 Springfield Road, St. Albans, Christchurch.8001  
**ZL3ACZ** Ingram, R. T., 80 Romily Street, Westport.7601  
**ZL3ADA** Bell, R. W., 32 Flower Street, Christchurch.8005  
**ZL3ADB** Crase, G. E., 63 Wakefield Street, Westport.7601  
**ZL3ADC** Lintott, N., 49 Jocelyn Street, Christchurch.8005  
**ZL3ADE** Ayre, G., RNZAF Station, Wigram, Christchurch.8004  
**ZL3ADF** Hirtzel, J. E., 451 Greers Road, Christchurch.8005  
**ZL3ADG** Burnside High School Radio Club, (Trustee ZL3TQH), Greers Road, Christchurch.8005  
**ZL3ADH** Boote, R. J., 8 Hinton Road, Karoro, Greymouth.7870  
**ZL3ADI** Ingram, A. W. W., 60 Nortons Road, Christchurch.8004  
**ZL3ADJ** Jennings, L. W., 5 Ilex Place, Kaiapoi.8252  
**ZL3ADK** Fitzgerald, K. P., 24 Mathers Road, Christchurch.8002  
**ZL3ADL** Wise, R. A., 36 Springs Road, Sockburn, Christchurch.8004  
**ZL3ADN** Dykes, G., 3 Fraser Place, Rangiora.8254  
**ZL3ADO** Dolamore, C. J., 59a Dunbarton Street, Redwood, Christchurch.8005  
**ZL3ADP** MacDonald, D. C., 221 Middle Road, Ashburton.8300  
**ZL3ADQ** Hamilton, J. C., 12 Updale Place, Christchurch.8003  
**ZL3ADR** Pritchard, B. D., 120 West Bell, Rangiora.8254  
**ZL3ADS** Squire, D. D., Waitohi, Temuka.8752  
**ZL3ADT** Johnson, R. D., 189 Queensbury Street, Christchurch.8006  
**ZL3ADU** Van der Knapp, H., 92 Halswell Junction Road, Christchurch.8003  
**ZL3ADV** Phillips, R. W., 31 Appleby Crescent, Christchurch.8005  
**ZL3ADW** Phillips, H. J. (Mrs), 31 Appleby Crescent, Christchurch.8005  
**ZL3ADX** Carney, W. J., 164 Pacific Road, Christchurch.8009  
**ZL3ADZ** Wignall, T. J. S., 2/43 McLean Street, Linwood, Christchurch.8006  
**ZL3AFA** Kelly, C. W. B., 34 Liverton Crescent, Christchurch.8005  
**ZL3AFB** Stirling, K. W., 127 Trevors Road, Ashburton.8300  
**ZL3AFC** Simpson, P. R., 168c Monks Spur Road, Redcliffs, Christchurch.8008  
**ZL3AFD** Haberecht, D. C., 272 Wainoni Road, Christchurch.8007  
**ZL3AFE** Zampese, L., 26 Olwyn Terrace, Frankton, Hamilton.2001  
**ZL3AFF** O'Brien, C. M., 255 Estuary Road, Christchurch.8007  
**ZL3AFG** Wykes, W. G., c/- Dr T. J. Seed, 831 Cashmere Road, Halswell, Christchurch.8003  
**ZL3AFH** Latham, W. I., 168 Mackenzie Avenue, Opawa, Christchurch.8002  
**ZL3AFJ** Stone, W., 69 Mary Street, Papanui, Christchurch.8005  
**ZL3AFN** Griffiths, J. P., 105 Brougham Street, Westport.7601  
**ZL3AFO** Christensen, P. J., 123 Forlar Street, Mornington, Dunedin.9001  
**ZL3AFP** Smith, D. L., 53 Farquhars Road, Redwood, Christchurch.8005  
**ZL3AFQ** Duxbury, I. N., 99 Maidstone Road, Christchurch.8004  
**ZL3AFR** Burke, J. P., 246 Main North Road, Redwood, Christchurch.8005  
**ZL3AFS** Percy, E. A., 239 Condell Avenue, Papanui, Christchurch.8005  
**ZL3AFT** Williamson, C. N., St. John of God Hospital, Nash Road, Halswell, Christchurch.8003  
**ZL3AFV** Henden, J. R., 221 Innes Road, St. Albans, Christchurch.8005  
**ZL3AFW** Wilson, W. E., 232 Coast Road, Wainuiomata.6305  
**ZL3AFX** Morrin, M. E., 45 Wychbury Street, Spreydon, Christchurch.8002  
**ZL3AFZ** Hall, C. L., 20 Sumner Street, Spreydon, Christchurch.8002  
**ZL3AGA** Bolland, N., 12 Brent Place, Christchurch.8005  
**ZL3AGB** Barrett, T., 47 Arnold Street, Sumner, Christchurch.8008  
**ZL3AGD** Holland, A. D., 5 Rose Street, Ranui Heights, Porirua.6201  
**ZL3AGE** Holland, J. A. (Mrs), 5 Rose Street, Ranui Heights, Porirua.6201  
**ZL3AGF** Blanchard, J. S., 9 Farrington Avenue, Bishopdale, Christchurch.8005  
**ZL3AGG** Pope, G. C., R.D. 3, Timaru.8621  
**ZL3AGH** Banks, J., 418 Greers Road, Christchurch.8005  
**ZL3AGI** Leys, T., 46 Waratah Street, Christchurch.8007  
**ZL3AGJ** Whitlow, T. J., 45 Geddis Street, Rangiora.8254  
**ZL3AGK** Lucas, T. H., 8 Willyan Avenue, Christchurch.8009  
**ZL3AGL** Sinclair, S., 54 Withells Road, Avonhead, Christchurch.8004  
**ZL3AGM** Jackson, B. A., 42 Churchill Street, Kaikoura.7351  
**ZL3AGN** Vuleta, M. S., 19 Aviemore Street, Timaru.8601  
**ZL3AGO** McManus, T. C., Maungati, R. D. 2, Timaru.8621  
**ZL3AGP** Thomson, G. G., 10 Hanrahan Street, Christchurch.8004  
**ZL3AGQ** Harris, D. W., 67 Ayers Street, Rangiora.8254  
**ZL3AGR** McCallister, C. R., 6 Waimarama Street, Waikawa Bay, Picton.7372

**ZL3AGS** Lovell, J. D., 41 Yardley Street, Avonhead, Christchurch.8004  
**ZL3AGT** Foster, I. M., Cronadun, R.D. 1, Reefton.7853  
**ZL3AGX** McCutcheon, R. B. W., Silverstream Courts, 13/234 Colombo Street, Christchurch.8002  
**ZL3AGY** Moyle, J. R., 68 Clyde Road, Christchurch.8004  
**ZL3AHK** Cudby, K. B., 21 Stapletons Road, Christchurch.8001  
**ZL3AHL** Lyon, K. W., 401 Greers Road, Christchurch.8005  
**ZL3AHM** Dineen, R. T., 82 Greenpark Street, Christchurch.8002  
**ZL3AHN** Whitley, W. G., 13 Heyders Road, Christchurch.8009  
**ZL3AHO** Reed, B. S., 9 Smith Street, Kaiapoi.8252  
**ZL3AHP** Payne, A. T., 9 Factory Road, Belfast, Christchurch.8005  
**ZL3AHQ** McDonald, A. W., 318 Cranford Street, St Albans, Christchurch.8005  
**ZL3AHR** Rietz, B. A., 31 Colwyn Street, Bryndwr, Christchurch.8005  
**ZL3AHS** Symes, B. A., 5 Gilwell Street, Christchurch.8005  
**ZL3AHT** Holland, S. M., 15 Zephyr Terrace, Governors Bay, Lyttelton.8012  
**ZL3AHU** Holland, M. C., 15 Zephyr Terrace, Governors Bay, Lyttelton.8012  
**ZL3AHV** Papanui High School Radio Club, (Trustee: ZL3AHP), Langdons Road, Christchurch.8005  
**ZL3AHW** Williams, N. D., 8 Rawhiti Avenue, Christchurch.8009  
**ZL3AHX** Wells, P. H., 12 Harrow Street, Christchurch.8001  
**ZL3AHY** Lovell, M. E., 41 Yardley Street, Avonhead, Christchurch.8004  
**ZL3AHZ** Dalrymple, M. B., 122 Mersey Street, St Albans, Christchurch.8001  
**ZL3AIA** Allan, J. L., 4 Highfield Lane, Rangiora.8254  
**ZL3AIB** Timms, R. C., 238 Ilam Road, Christchurch.8004  
**ZL3AIC** Chilton, M. T., 183 Belfast Road, Belfast, Christchurch.8005  
**ZL3AID** Hawksley, K. A., 4 Winchfield Street, Christchurch.8007  
**ZL3AIX** Tillman, E. S., 15 Grimseys Road, Christchurch.8005  
**ZL3ATP** Pringle, A. T., see ZL5ATP  
**ZL3NAB** Pringle, W. M.  
**ZL3NAG** Heazlewood, P. R., 28 Arthur Street, Christchurch.8004  
**ZL3NAH** Gorton, D. M., 7 Meadowville Avenue, Christchurch.8002  
**ZL3NAI** Chapman, S. J., 7 Dellow Place, Christchurch.8002  
**ZL3NAT** Boyes, D. G., 6 Marshall Street, Woolston, Christchurch.8002  
**ZL3RPS** Radio Preservation Society of New Zealand (Ferryroad) Inc, (Trustee ZL3BI), 269 Bridle Path Road, Christchurch.8002  
**ZL3TAA** Fletcher, J. N., 7 Waiwera Place, Wairera.1460  
**ZL3TAB** Hyde, I. E., 4 Powell Crescent, Christchurch.8004  
**ZL3TAC** Collins, B. A., 47 Yardley Street, Christchurch.8004  
**ZL3TAD** Cullen, L., 46 Wilton Crescent, Christchurch.8005  
**ZL3TAE** Clark, M. W., 474 Manchester Street, Christchurch.8001  
**ZL3TAF** Taege, B. S., 23 Holderness Place, Avonhead, Christchurch.8004  
**ZL3TAG** Down, S. J., 219 Grahams Road, Christchurch.8005  
**ZL3TAI** Grandiek, J. N., Curry Road, R.D. 7, Invercargill.9521  
**ZL3TAJ** Gill, I. D., River Road, Greenpark, R.D. 2, Christchurch.8021  
**ZL3TAK** Woods, A. K., 6 Waipara Street, Christchurch.8002  
**ZL3TAL** Harrison, K. B., 16 Arkwright Place, Halswell, Christchurch.8003  
**ZL3TAM** Mason, G. J., 6 Bideford Place, Christchurch.8006  
**ZL3TAN** Roozen, A. A. F., c/- 40 Forbes Road, Tai Tapu.8150  
**ZL3TAO** MacPherson, I. W., 27 Dunbarton Street, Christchurch.8005  
**ZL3TAP** Van Schooten, L. A. G., 195b Wairakei Road, Christchurch.8005  
**ZL3TAR** Johnson, H. M., 14 Arthur Street, Christchurch.8004  
**ZL3TAS** Prior, C. A., 19 Davidson Crescent, Hornby, Christchurch.8004  
**ZL3TAT** Baker, E. J. A., Murray Place, Lake Tekapo.8770  
**ZL3TAV** Parr, W. B., 16a Wildberry Street, Christchurch.8002  
**ZL3TAW** Smith, M. W. J., 7 Pohutukawa Drive, Opunake.4653  
**ZL3TAX** Churchward, M. J., 1/39c Middleton Road, Christchurch.8004  
**ZL3TAY** Ross, M. J., 32 Zephyr Terrace, Governors Bay, R.D. 1, Lyttelton.8012  
**ZL3TAZ** Greer, R. B., 365 Armagh Street, Christchurch.8001  
**ZL3TBA** Wong, A. F. D. K., Ilam Flats, Flat 3, Canterbury University, Christchurch.8004  
**ZL3TBB** Wormald, R. G., 247a Wairakei Road, Bryndwr, Christchurch.8005  
**ZL3TBC** Grenfell, A. D., 61 Dunbars Road, Christchurch.8003  
**ZL3TBD** Symonds, A. C., 19 Stiles Place, Burwood, Christchurch.8006  
**ZL3TBE** Pritchard, D. V., c/- Recreational Res, Duntroon.8950  
**ZL3TBG** O'Neill, T. J., 89 Pages Road, Christchurch.8006  
**ZL3TBH** Osborne, R. W., c/- Camp David R.D. 3, Waipara.8270  
**ZL3TBJ** Baird, K. A., 1 Brenchley Avenue, Christchurch.8005  
**ZL3TBL** Adams, S. R., 9 Baffin Grove, Kingston, Wellington.8002



ZL3TBM Love, G. T., 171 Main Road, Amberley.8251  
 ZL3TBO Tapp, B. S., 8 Kitchener Place, Christchurch.8002  
 ZL3TBP Evans, J. S., 11 Eros Place, Christchurch.8009  
 ZL3TBQ Johnstone, D. E., 291 Burwood Road, Christchurch.8009  
 ZL3TBR Black, D. R., 11 Epsom Avenue, Epsom, Auckland.1003  
 ZL3TBS Johnson, J. G., 56 Rototal Road, Takaka.7172  
 ZL3TBT Lee, M. O., 260 Cashmere Road, Halswell, Christchurch.8003  
 ZL3TBU Watson, A. N., 107 Buffalo Beach Road, Whitianga.2856  
 ZL3TBW Stevenson, M. H., 48 Huntsbury Avenue, Huntsbury, Christchurch.8002  
 ZL3TBZ Barker, H. J., 900 Lower Styx Road, Christchurch.8009  
 ZL3TCA Knewstubb, F. R., 219b Beach Road, Christchurch.8009  
 ZL3TCC Norris, T. P., 60 Peer Street, Christchurch.8004  
 ZL3TCD McMahon, D. D., 15 Haring Avenue, Christchurch.8002  
 ZL3TCE Cobb, P. B., 2 Weymouth Grove, Wainuiomata.6305  
 ZL3TCG Deans, J. M., 36 North Terrace, Darfield.8172  
 ZL3TCH Chapman, M. H., 23 Huntsbury Avenue, Christchurch.8002  
 ZL3TCI Lucas, P. K., Cape Foulwind Road, R.D. 2, Westport.7621  
 ZL3TCJ King, T. J., Ashburton Gorge Road, R.D. 1, Ashburton.8300  
 ZL3TCK Sands, A. J., 14 Victoria Street, Rangiora.8254  
 ZL3TCL Averill, T. L. F., 99 Puriri Street, Christchurch.8004  
 ZL3TCM Ramsey, R. B., 31 Rollesby Street, Christchurch.8002  
 ZL3TCN Hardie, S. R., 245a Harewood Road, Christchurch.8005  
 ZL3TCP Parish, I. J., 2 Hislop Street, Geraldine.8751  
 ZL3TCQ Jack, K. S., 45 Hornbrook Street, Temuka.8752  
 ZL3TCT McCaw, R. C., 6 Farndale Place, Christchurch.8004  
 ZL3TCU Duxbury, J. S., 51 Aorangi Road, Christchurch.8005  
 ZL3TCV Garraway, W. A., 120 Warren Crescent, Christchurch.8002  
 ZL3TCW Strachan, J. H., 41 New Brighton Road, Christchurch.8006  
 ZL3TCX Brewerton, T. R., 14 Crampton Road, Reefton.7853  
 ZL3TCY Farrall, N. R., 12 Muir Avenue, Christchurch.8003  
 ZL3TCZ Kennedy, K. R., 158 Battery Road, Napier.4001  
 ZL3TDA Tapp, S. J., 8 Kitchener Place, Opawa, Christchurch.8002  
 ZL3TDB Milne, O. D., 12 Stanbury Avenue, Christchurch.8002  
 ZL3TDC Thomson, R. Y., 6 Princes Street, Temuka.8752  
 ZL3TDD Marks, J. W. J., 20 Dobson Street, Christchurch.8002  
 ZL3TDF Smith, B. A., "Charodale", Old West Coast Road, R.D. 1, Christchurch.8021  
 ZL3TDG Jenkins, R. M., 62c Rockinghorse Road, Christchurch.8007  
 ZL3TDH Clark, N. L., 37 Radbrook Street, Christchurch.8004  
 ZL3TDI Telfer, P. B., 39 Liverton Crescent, Bishopdale, Christchurch.8005  
 ZL3TDJ Beazley, D. A., Punga Grove, Hans Bay, Lake Kanieri.7950  
 ZL3TDK Emmett, B. A., 176 Vivian Street, Christchurch.8009  
 ZL3TDL Wright, D. J., 65 Ludstone Road, Kaikoura.7351  
 ZL3TDM Harding, J. M., 15 Elm Grove, Christchurch.8001  
 ZL3TDN Tait, J. J., 101a Nayland Street, Christchurch.8008  
 ZL3TDP Wilson, D. P. H., 67 Aotea Terrace, Christchurch.8002  
 ZL3TDQ Downey, E. J., 67 Tuckers Road, Christchurch.8005  
 ZL3TDR Smith, K. J., 17 Tyne Street, Timaru.8601  
 ZL3TDS Taylor, E. G., 335 Hills Road, Christchurch.8001  
 ZL3TDT Drury, B. D., 20 Ryeland Avenue, Fendalton, Christchurch.8004  
 ZL3TDU Hislop, G. E., Puketa, R.D. 2, Kaikoura.7351  
 ZL3TDX Woods, B. M., 11 Moyna Avenue, Christchurch.8006  
 ZL3TDY Cavill, J. P., 36 Outram Grove, Kelson, Lower Hutt.6301  
 ZL3TFA Hall, B. W., 27 John Street, Temuka.8752  
 ZL3TFB Bool, W. J., 32 Trafalgar Street, New Plymouth.4601  
 ZL3TFC Dalton, T. P., Governors Bay Road, Cass Bay, R.D., Lyttelton.8033  
 ZL3TFD Rhodes, D., Rapaki, P. O. Box 44, Lyttelton.8033  
 ZL3TFE Cook, H. P., 9 Boyne Avenue, Christchurch.8005  
 ZL3TFG MacKay, D. R., 56 Purchas Street, Christchurch.8001  
 ZL3TFH Hudson, R. F., 109 Shakespeare Street, Greymouth.7801  
 ZL3TFI Wright, B. A., 21 Koromiko Street, Christchurch.8002  
 ZL3TFJ Lundy, R. J., 47 White Street, Rangiora.8254  
 ZL3TFK Weir, R. G., 64a Selwyn Street, Somerfield, Christchurch.8002  
 ZL3TFL Maher, R. H., 172e Rockinghorse Road, Christchurch.8007  
 ZL3TFM MacFarlane, M. J., 35 Manor Place, Christchurch.8005  
 ZL3TFN Wood, K. L. B., 162 Luckens Road, West Harbour, Auckland.1208  
 ZL3TFQ Dawkes, R. L., 513 Russley Road, Christchurch.8004  
 ZL3TFR Smales, K. A., 42 Manse Road, Kurow.8951  
 ZL3TFS Soal, D. F., 62 Nelson Street, Ashburton.8300  
 ZL3TFT Morris, P. L., 28 Esperance Street, Christchurch.8005  
 ZL3TFU Mathieson, H. M., 349 Main South Road, Hornby, Christchurch.8004  
 ZL3TFV Brookas, B. R., 1 Godley Place, Timaru.8601  
 ZL3TFW Van Til, H. J., 21 Kimberley Grove, Palmerston North.5301  
 ZL3TFX West, R. O., 97 Colombo Street, Christchurch.8002

ZL3TFY Tizzard, R. W., 9 Cherry Place, Bishopdale, Christchurch.8005  
 ZL3TFZ Harris, F. D. E. M., 343 Riccarton Road, Christchurch.8004  
 ZL3TGA Aitken, G. D., 38 Hooker Avenue, Bryndwr, Christchurch.8005  
 ZL3TGB Graham, J. C., 170 Hampshire Street, Christchurch.8007  
 ZL3TGC Davison, C. N., 29 Skerton Avenue, Christchurch.8004  
 ZL3TGE Windelburn, W. A., 2/401 Hereford Street, Christchurch.8001  
 ZL3TGI Hunter, M., 111 Racecourse Road, Ashburton.8300  
 ZL3TGJ Cherry, W. D., 131 Rose Street, Somerfield, Christchurch.8002  
 ZL3TGL Van Lindt, R., 4 Westby Street, Christchurch.8002  
 ZL3TGM Flecknoe, G. A., 6 Kyeboim Place, Christchurch.8004  
 ZL3TGN Richardson, G. R., 127 Rimu Street, Hamilton.2001  
 ZL3TGP Parkyn, P. R., 86 Rahera Street, Christchurch.8002  
 ZL3TGO Halverson, D. L., 3 Basfia Avenue, Wanganui.5001  
 ZL3TGR Timewell, I. D., P.O.Box 706, Timaru.8600  
 ZL3TGS Oliver, A. J., 2/32b Huntsbury Avenue, Christchurch.8002  
 ZL3TGU Bissland, D. J., 12 Highgate Avenue, Christchurch.8001  
 ZL3TGV Winslade, R. H., 15 Hunt Street, Timaru.8601  
 ZL3TGW Hart, A. R. K., 11 Hampton Road, Christchurch.8005  
 ZL3TGX Henry, D. H., 34 Alexandra Street, Christchurch.8001  
 ZL3TGY Streeter, T. J., 77 View Road, Invercargill.9501  
 ZL3TGZ Moyle, C. M., 68 Clyde Road, Christchurch.8004  
 ZL3THA Heaton, J., 101 Russell Road, Manurewa, Auckland.1702  
 ZL3THB Cree, R. A., 18 Woolley Street, Christchurch.8006  
 ZL3THD Claydon, R. C., 45 Liverton Crescent, Christchurch.8005  
 ZL3THE Bartlett, K. E., Fairdown, R. D. 1, Westport.7621  
 ZL3THG Keeley, L. J., 23 Wills Street, Ashburton.8300  
 ZL3THH Smith, G. R., 110 Pages Road, Christchurch.8006  
 ZL3THI Wealleans, G. A., 37 Eglington Street, Christchurch.8007  
 ZL3THJ Philpott, J. W., 46 Kimberley Street, Christchurch.8005  
 ZL3THK Errington, G. S., 9 Kiteroa Place, Christchurch.8002  
 ZL3THL Hillary, D. N., 84 Isleworth Street, Christchurch.8005  
 ZL3THM Sandford, N. D. O., 45 Torrens Road, Hillmorton, Christchurch.8002  
 ZL3THN Price, G. D., 358 Breezes Road, Christchurch.8007  
 ZL3THO Lauder, C. D., 118 Gemstone Drive, Upper Hutt.6401  
 ZL3THP Platt, R. G., Main South Road, Rolleston.8004  
 ZL3THQ Corbett, R. K., 1 Dalton Place, Christchurch.8005  
 ZL3THR Buist, A. M., 38 Merlincote Crescent, Governors Bay, Lyttelton.8012  
 ZL3THU McMaster, B. T. R., 72 Fleete Street, Christchurch.8006  
 ZL3THV Bennett, B. D., "Te Araroa", Station Road, Temuka.8752  
 ZL3THX Ferriss, A. E., 50 Mariner Street, Christchurch.8008  
 ZL3THY Fearn, R. D., 2/69f David Street, New Plymouth.4601  
 ZL3THZ Barron, A. D., 124 St. James Avenue, Christchurch.8005  
 ZL3TIA Taylor, D. A., Ski Plane Division, P.O.Box 8, Mt Cook.8770  
 ZL3TIB Hely, M. O., R.D. 2, Christchurch.8021  
 ZL3TIC Foubister, M. A., 94 Hoon Hay Road, Christchurch.8002  
 ZL3TIE Thomas, K. M., 19a Kingham Place, Avonhead, Christchurch.8004  
 ZL3TIF Bryant, H. G. H., 129 Scarborough Street, Kaikoura.7351  
 ZL3TIG McNeill, R. G., 78 McMaster Street, Invercargill.9501  
 ZL3TII Freeth, G. D., 25 Ngaurimu Street, Christchurch.8006  
 ZL3TIJ Wilde, R. C., Gladstone Street, Hawarden.8274  
 ZL3TIK Rodgers, P. N., 29 Porter Street, Ashburton.8300  
 ZL3TIL Errington, J. G., 11 Paparoa Street, Christchurch.8005  
 ZL3TIO Stewart, P. G. C., 76 Patten Street, Christchurch.8006  
 ZL3TIQ McCorkindale, D. R., 52 Canada Street, Timaru.8601  
 ZL3TIR Williams, P. S., 24 Newnham Terrace, Christchurch.8004  
 ZL3TIS Donnelly, E. J., 249 Bower Avenue, Christchurch.8009  
 ZL3TIU Cole, L. J., 5 Sheehen Road, Te Atatu South, Auckland.1208  
 ZL3TIX Stevens, J. B., 15 Bevington Street, Christchurch.8004  
 ZL3TIY Fyffe, N. B. H., 31a McBratneys Road, Christchurch.8006  
 ZL3TIZ Dixon, B. J., 81 Shakespeare Street, Greymouth.7801  
 ZL3TJA Thompson, D. A. J., 19 Tawa Street, Timaru.8601  
 ZL3TJB Johnstone, P., 419 Cashmere Road, Christchurch.8003  
 ZL3TJC Briggs, N. E., 124 Riverside Drive, Whakatane.3400  
 ZL3TJD Wilson, P. J., Bottom Flat, 85 Overtoun Terrace, Hataitai, Wellington.6003  
 ZL3TJF Barrington, R. K., c/- J. L. Matheson, Mata Road, R.D. 1, Kohukohu.0471  
 ZL3TJH Robinson, P. J., 20 Leonie Place, Christchurch.8007  
 ZL3TJI Senior, G. J., Homie Station, R.D. 2, Timaru.8621  
 ZL3TJJ Ward, A. J., 178 Bridle Path Road, Christchurch.8002  
 ZL3TJK Lorimer, B. C., Opuha Street, Orari, P.O.Box 35, Orari.8750  
 ZL3TJL Lye, R. D., 7 Cromer Place, Christchurch.8007  
 ZL3TJM Dillon, G. A., 35 Huntsbury Avenue, Christchurch.8002  
 ZL3TJN Hills, M. P. A. T., Wilsons Road, R.D. 9, Feilding.5600



## ZL3TJO

ZL3TJO Sutherland, J. G. D., 12 Jocelyn Street, Christchurch.8005  
 ZL3TJP Walker, R. W., c/- 56a Burwood Road, Christchurch.8009  
 ZL3TJQ Potter, A. R., 1 Titoki Street, Christchurch.8004  
 ZL3TJR Carter, R. S., 34 Cameron Street, Ashburton.8300  
 ZL3TJS Whitfield, B. W., 101 Solitaires Avenue, Mt. Pleasant, Christchurch.8008  
 ZL3TJT Nicol, J. R., 10 Lochee Street, Christchurch.8004  
 ZL3TJU McConnell, M. M., Orchard Reserve, 111 Gardiners Road, Christchurch.8005  
 ZL3TJV Osborne, K. W., 67 MacDonald Street, Timaru.8601  
 ZL3TJW Rickard, B. S., 37 Nelson Street, Ashburton.8300  
 ZL3TJX Laughton, T. J., 43 Rowley Avenue, Hoon Hay, Christchurch.8002  
 ZL3TJY Allan, S. E. (Mrs), 4 Highfield Lane, Rangiora.8254  
 ZL3TKA Gumbrell, C. B., 47 Cauton Street, Auckland.1105  
 ZL3TKB Bryenton, W. D., 16 Aldersley Street, Christchurch.8001  
 ZL3TKC Lawton, C. J. M., 48 Hazelwood Avenue, Hamilton.2001  
 ZL3TKD Godfrey, C. Y., R. D. 2, Kaikoura.7351  
 ZL3TKE Vallance, D. J., 39 Vancouver Crescent, Wainoni, Christchurch.8006  
 ZL3TKF Greentree, P. C., 34 Rata Street, Christchurch.8004  
 ZL3TKG Neill, R. N., 39 Ellesmere Crescent, Palmerston North.5301  
 ZL3TKI Empson, T. M., 53 McKenzie Avenue, Christchurch.8002  
 ZL3TKJ Forsythe, L. J., 65a East Belt, Lincoln.8152  
 ZL3TKK Johnston, A. R., R.D. 11, Rakaia.8355  
 ZL3TKM Cox, A. R., 54 Hawkesbury Avenue, St. Albans, Christchurch.8001  
 ZL3TKO Jaynes, V., Lookout Road, R.D. 2, Takaka.7172  
 ZL3TKP Gardiner, I. D., 29 Kellys Road, Christchurch.8005  
 ZL3TKQ McInnes, G. W., P.O.Box 13 689, Christchurch.8031  
 ZL3TKR Dwyer, D. S., 15 Cygnet Street, Christchurch.8009  
 ZL3TKS Thomas, A. J., DSIR Physical Engineering Laboratory, Omakau.9182  
 ZL3TKT Grant, L. J., c/- Mrs J. Stackhouse, 16 Clayton Road, Amberley.8251  
 ZL3TKV Lang, A. N., 62 Rahera Street, Christchurch.8002  
 ZL3TKW Williamson, I. S., c/- 14 Ebbing Place, Christchurch.8005  
 ZL3TKX Patterson, H. W., 33 Leinster Terrace, Lincoln.8152  
 ZL3TKZ McFarlane, S. A., 37 Hawford Road, Christchurch.8002  
 ZL3TLB Crawford, C. R., 81 Balrudry Street, Christchurch.8004  
 ZL3TLE Weir, D. R. (Mrs), 64a Selwyn Street, Christchurch.8002  
 ZL3TLF Mitchell, K. C., 96 Pohutukawa Avenue, Ohope.3454  
 ZL3TLG Steffensen, K. A., 10a Sefton Street, Belfast, Christchurch.8005  
 ZL3TLI Rowe, B. C. T., 40 Harris Street, Waimate.8791  
 ZL3TLJ McConnell, D. A., Orchard Reserve, 111 Gardiners Road, Christchurch.8005  
 ZL3TLM Mills, M. D., 87 Wattle Drive, Christchurch.8009  
 ZL3TLO McCombs, J. D., 8 Freeman Street, Christchurch.8008  
 ZL3TLQ Harrall, E. D., 90 Gayhurst Road, Dallington, Christchurch.8006  
 ZL3TLR Lee, P. B., 23a Salford Avenue, Christchurch.8005  
 ZL3TLT James, K. D., 442 Pinehill Road, Dunedin.9001  
 ZL3TLU Chapman, R. C., 30 Picton Avenue, Christchurch.8001  
 ZL3TLV Chapman, B. K. (Mrs), 30 Picton Avenue, Christchurch.8001  
 ZL3TLW Perry, S. J., 255 Hoon Hay Road, Christchurch.8002  
 ZL3TLX Vickers, L. W., 17 Walkers Road, Lyttelton.8012  
 ZL3TLZ Bettridge, A. H. J., 81 Pine Avenue, Christchurch.8007  
 ZL3TMA Bettridge, M. J., 2 Cook Street, Carters Beach, Westport.7601  
 ZL3TMC McGregor, W. L., Flat 3, 184 Fitzgerald Avenue, Christchurch.8001  
 ZL3TMF Wilson, J. O., 9 Merton Street, Hobsonville, Auckland.1450  
 ZL3TMG Davidson, F. W., 24 Roberts Road, Christchurch.8004  
 ZL3TMH Hutchison, B., 15 Tabart Street, Christchurch.8002  
 ZL3TMJ Hughes, R. E., 158 Jollie Street, Hokitika.7900  
 ZL3TMK Officer, B. C., 40 Redwood Avenue, Tawa.6203  
 ZL3TMM Watson, P. M. J., 54 Kent Lodge Avenue, Christchurch.8004  
 ZL3TMO Godkin, R. W., 31 Cardrona Street, Christchurch.8006  
 ZL3TMP Pringle, N. F., Gladstone Street, Hawarden.8274  
 ZL3TMQ Pot, M. J., 6 Te Kiteroa Grove, Wellington.6004  
 ZL3TMR Waters, G. A. S., 19 Carole Crescent, Pakuranga.1706  
 ZL3TMV Nicholls, P. J., 33 Seven Mile Road, Runanga.7854  
 ZL3TMY Payne, D. W., 204 Rutland Street, Christchurch.8005  
 ZL3TNC Andrew, E. D. B., 448b Harewood Road, Bishopdale, Christchurch.8005  
 ZL3TNE Egan, P. D., see overseas members  
 ZL3TNG Hulston, G. F., 4 Kaitangata Crescent, Kelson, Lower Hutt.6301  
 ZL3TNH Drowley, C. A., 15 Moonstone Grove, Upper Hutt.6401  
 ZL3TNI Sinclair, L. C., 28 Palmside Street, Spraydon, Christchurch.8002

ZL3TNJ Davis, B., 59 Carnarvon Street, Linwood, Christchurch.8006  
 ZL3TNK Von Biel, H. A., 149d Major Hornbrook Road, Christchurch.8008  
 ZL3TNL Maunsell, P. B., 31 Barrie Street, Christchurch.8002  
 ZL3TNO Pearce, S. J., 21 Glenmore Avenue, Christchurch.8005  
 ZL3TNS Clay, P. D., 5 Appleby Highway, Richmond, Nelson.7002  
 ZL3TNW McHobie, W. D., 47 Malby Avenue, Timaru.8601  
 ZL3TNX Allison, H. C. F., 59 Hounslow Street, Christchurch.8004  
 ZL3TNY Brown, S. D., 78a Hackthorne Road, Christchurch.8002  
 ZL3TNZ Gillick, K. J., 119a Prestons Road, Christchurch.8005  
 ZL3TOA Gowers, R. J., Petern Street, Hinds.8351  
 ZL3TOB Berry, R. D. E., c/- Electrical & Electronic Engineering Dept, University Of Canterbury, Private Bag, Christchurch.8030  
 ZL3TOC Marshall, R. W., 19 Fraser Crescent, Twizel.8773  
 ZL3TOD Robertson, C., 15 Wytlys Road, Avonhead, Christchurch.8004  
 ZL3TOE Steel, P. J., 57 Woolley Street, Wainoni, Christchurch.8007  
 ZL3TOF Warren, P. A., 313 Wainoni Road, Christchurch.8007  
 ZL3TOG Smith, R. J., 18 Hazelwood Avenue, Karori, Wellington.6005  
 ZL3TOH Fordyce, A. A., 28 Meadow Street, Christchurch.8005  
 ZL3TOI King, A. F., 2/363 Withells Road, Christchurch.8004  
 ZL3TOJ Meyers, D. R., Carrs Road, Loburn, R.D. 2, Rangiora.8254  
 ZL3TOM Moates, C. M. G., Private Bag, Parakao, Whangarei.0250  
 ZL3TON Roy, E., 106 Hills Road, Christchurch.8001  
 ZL3TOO Sullivan, C. D., 14 Bidwell Place, Christchurch.8002  
 ZL3TOP Back, C. R., 42-44 Charles Street, Kaiapoi.8252  
 ZL3TOR Turnbull, J. W. M., 304 Cannon Hill Crescent, Christchurch.8008  
 ZL3TOT Foster, P. J., 5a Vancouver Crescent, Christchurch.8006  
 ZL3TOV Martin, B. E., Taipa Heights Drive, Taipa, Whangarei.0101  
 ZL3TOZ Hurst, D. W., 31 Wakanui Road, Ashburton.8300  
 ZL3TPE Obers, W. L. T., 154 Ross Street, Invercargill.9501  
 ZL3TPI Parry, D. G., 18 Sunvale Terrace, Cashmere, Christchurch.8002  
 ZL3TPO Turnbull, P. D., 21 Earp Street, Johnsonville, Wellington.6004  
 ZL3TPQ Whittam, J. S., 8 Bevington Street, Avonhead, Christchurch.8004  
 ZL3TPT Thompson, B. N., 18 Gunns Crescent, Christchurch.8002  
 ZL3TPU Jackson, W. G., 117 Fisher Parade, Pakuranga, Auckland.1706  
 ZL3TPV Holland, D. J., 117 Brynley Street, Christchurch.8004  
 ZL3TPW Burdekin, B. W., 180 Huxley Street, Christchurch.8002  
 ZL3TPY Fotheringham, J. P., 45 Wilkie Crescent, Naenaa, Wellington.6301  
 ZL3TPZ Campbell, G. J., 23 O'Briens Road, Sockburn, Christchurch.8004  
 ZL3TQC Graham, J. N., 90 Churchill Street, Kaikoura.7351  
 ZL3TQD Roxburgh, J. G., 13 Pound Road, Leeston.8151  
 ZL3TQE Aitchison, M. S., 61 Longfellow Street, Christchurch.8002  
 ZL3TQF Grealbanks, J., c/- Corners Road, R.D. 1, Whitianga.2856  
 ZL3TQH Wiltshire, R., 4 Merton Place, Christchurch.8005  
 ZL3TQJ Morrison, L. I., 82a Wansbeck Street, Oamaru.8901  
 ZL3TON Strachan, J. W., 13 Rimu Street, Timaru.8601  
 ZL3TQP Tailoko, A. J., 16 Portland Street, Dargaville.0300  
 ZL3TQQ Allan, L. R., 45 Pine Avenue, Christchurch.8007  
 ZL3TQX Slatter, S. E., 135 Sumnervale Drive, Christchurch.8008  
 ZL3TRA Johnson, D. A., 16 Romilly Street, Westport.7601  
 ZL3TRB Brace, A. J., 14 Queen Street, Westport.7601  
 ZL3TRG Genal, R., c/- NZ Post, Kaniera, Hokitika.7950  
 ZL3TRH Anderson, B. M., House 3, Seaview Hospital, Hokitika.7900  
 ZL3TRI Beckmann, L., 3 Coups Terrace, Kaiapoi.8252  
 ZL3TRJ Spurdie, D. P., 48 Wimborne Crescent, Christchurch.8006  
 ZL3TRL Parker, G. T., 4 Margot Lane, Christchurch.8008  
 ZL3TRM Mattingley, G. T., 89 Creek Road, Ashburton.8300  
 ZL3TRN Brammah, L., 31 Rata Street, Christchurch.8004  
 ZL3TRO Gibbs, R. J., 23 Oxford Road, Rangiora.8254  
 ZL3TRQ Quantick, L. H., 4 Ayers Street, Rangiora.8254  
 ZL3TRR Nixon, H. E., 10 Dulles Place, Christchurch.8005  
 ZL3TRS Moran, S. P., 38 Colesbury Street, Christchurch.8005  
 ZL3TRU Jones, S., 20 Morley Street, Christchurch.8005  
 ZL3TRV Robbins, D. J., 66 Acacia Avenue, Christchurch.8004  
 ZL3TRW Powell, J., P.O.Box 15, Waikari.8276  
 ZL3TRX Hadler, D. J., 11 De Havilland Street, Christchurch.8004  
 ZL3TRZ Anderson, J. C., 191 West Belt, Rangiora.8254  
 ZL3TSA Adams, R. J., 49 Hilton Street, Kaiapoi.8252  
 ZL3TSG Van Royan, G. H., Woodbury Road, R.D. 21, Geraldine.8751  
 ZL3TSJ Cole, G. J., Grange Settlement Road, Temuka.8752  
 ZL3TSM Miller, N. E. (Mrs), 30 Fairford Street, Christchurch.8005



## ZL4 Callsigns

<b>ZL4AA</b>	Otago Branch NZART (Inc.), see Branch Directory	<b>ZL4DC</b>	Cambridge, D. A. H., R. D. 1, Cromwell.9191
<b>ZL4AB</b>	Gray, H. A., 102 Brownston Street, Wanaka.9192	<b>ZL4DD</b>	Van Veen, H. M. G., 161 Evans Street, Ohope, Dunedin.9001
<b>ZL4AC</b>	Lowe, A. F., 287 Barrow Street, Bluff.9503	<b>ZL4DE</b>	Magon, T. E., see overseas members
<b>ZL4AE</b>	Wesley, I. C., 34 Truby King Street, Merrilands, New Plymouth.4601	<b>ZL4DF</b>	MacDonald, V. E., 5 Perth Street, Mosgiel.9007
<b>ZL4AF</b>	Falconer, A. E., Whiterig, No. 1 R.D., Gore., P. O. Box 214, Gore.9700	<b>ZL4DG</b>	Wolf, W. G. W., 1 Freyberg Road, Fairfield, Dunedin.9006
<b>ZL4AG</b>	Boshier, R. F., 30 Aylon Drive, Glenfield, Auckland.1310	<b>ZL4DI</b>	Bain, C. R., 24 McKerrow Street, Waverley, Dunedin.9001
<b>ZL4AH</b>	Sansom, W. R., 8 Puriri Street, Timaru.8601	<b>ZL4DJ</b>	Baird, R. A., 87 Ventry Street, Alexandra.9181
<b>ZL4AI</b>	Shore, K. H., 1 Upland Street, Dunedin.9001	<b>ZL4DK</b>	Mulder, D. J., 60 Ashworth Street, Alexandra.9181
<b>ZL4AJ</b>	Agnew, A. C., 105 Cavell Street, Dunedin.9001	<b>ZL4DL</b>	Leslie, A. J., 8 Stanley Street, Mornington, Dunedin.9001
<b>ZL4AK</b>	Dowman, W. F., 99 Aln Street, Oamaru.8901	<b>ZL4DN</b>	Sharp, J. R., 41 Greenhill Avenue, Wakari, Dunedin.9001
<b>ZL4AL</b>	Eastern Southland Branch NZART (Inc.), see Branch Directory	<b>ZL4DO</b>	Sutton, R. J., 4a Crompton Road, Massey, Auckland.1208
<b>ZL4AO</b>	Allan, A. N., Charlton, No. 4 R.D., Gore.9700	<b>ZL4DP</b>	Ewans, W. S., 215 Broughton Street, Gore.9700
<b>ZL4AP</b>	Smith, R. C., Pine Bush, No 1 R.D., Wyndham.9758	<b>ZL4DQ</b>	Maslen, I. A., 62 Chambers Street, Dunedin.9001
<b>ZL4AQ</b>	Whyte, R. A., 7 Charles Street, Gore.9700	<b>ZL4DR</b>	Irving, J. T., 28 King Street, Mosgiel.9007
<b>ZL4AR</b>	Cole, R. S., 46 Walton Park Avenue, Fairfield, Dunedin.9006	<b>ZL4DS</b>	Carr, D. W., 46 Saunders Street, Dunedin.9001
<b>ZL4AS</b>	Gray, L. C., 16 Lincoln Terrace, Balclutha.9200	<b>ZL4DT</b>	Preddy, S. G., 105 Glenross St., Dunedin.9001
<b>ZL4AT</b>	Treweek, C. A. (Mrs), 576 Herbert Street, Invercargill.9501	<b>ZL4DU</b>	Stiglish, C. A., 58 Argyle Street, Mornington, Dunedin.9001
<b>ZL4AU</b>	Ernst, R. W., "Hollypine", Roslyn Bush Road, R.D. 2, Invercargill.9521	<b>ZL4DV</b>	Richards, P. D., 18 Holyhead Street, Outram.9155
<b>ZL4AV</b>	Christie, G. A., 37 Garnet Street, Gore.9700	<b>ZL4DW</b>	Babington, A. M., 162 Pomona Street, Invercargill.9501
<b>ZL4AW</b>	Pickford, W. J., Black Road, 9 R.D., Invercargill., P.O.Box 491, Invercargill.9500	<b>ZL4DX</b>	Anstice, S. R., 293 York Place, Dunedin.9001
<b>ZL4AX</b>	Sandford, H. D., 130 MacAndrew Road, Dunedin.9001	<b>ZL4DY</b>	Daniol, E. H., 4 Redcliffe Crescent, Ashburton.8300
<b>ZL4AY</b>	McLeod, J. H., 39 David Street, Invercargill.9501	<b>ZL4DZ</b>	Willets, N. E., 23 Yarmouth Street, Balclutha.9200
<b>ZL4AZ</b>	Sidey, T. K. S., 16 Tolcarne Avenue, Dunedin.9001	<b>ZL4FA</b>	Spittle, B. J., 17 Pioneer Crescent, Helensburgh, Dunedin.9001
<b>ZL4BA</b>	Jones, G. L., 8 Yare Lane, Balclutha.9200	<b>ZL4FC</b>	Dominey, R. J., 67 King Street, Timaru.8601
<b>ZL4BC</b>	Ferris, J. L., 7 Peterson Place, Bridge Hill, Alexandra.9181	<b>ZL4FD</b>	Hedge, H. G., 1/23a Eversleigh Road, Takapuna, Auckland.1309
<b>ZL4BD</b>	Helean, F. P., 3 Passmore Crescent, Maori Hill, Dunedin.9001	<b>ZL4FE</b>	McConnachie, M. J., 3 Lakeside Drive, Lake Waitaki.8950
<b>ZL4BE</b>	Whiteley, F., 31 Maybank Street, Opoho, Dunedin.9001	<b>ZL4FF</b>	Gillies, I. B., 7 Duncraig Street, Invercargill.9501
<b>ZL4BF</b>	Smith, L. K., 1a Wycherley Drive, Bucklands Beach, Auckland.1704	<b>ZL4FG</b>	Russell, W. J., 255 Yarrow Street, Invercargill.9501
<b>ZL4BG</b>	Mitchell, J. R., 49 McKerrow Street, Dunedin.9001	<b>ZL4FH</b>	Hall, J. N., 8 Watkin Street, Pine Hill, Dunedin.9001
<b>ZL4BH</b>	East Otago High School Radio Club, (Trustee: ZL4FI), P. O. Box 58, Palmerston, Otago.9161	<b>ZL4FI</b>	Askin, M. G., Moeraki, R. D. 2, Palmerston, Otago.9161
<b>ZL4BI</b>	Caldwell, J., Seaward Road, Edendale, Invercargill.9752	<b>ZL4FJ</b>	Austin, F. J., 8 Dunblane Street, Dunedin.9001
<b>ZL4BJ</b>	Wickens, J. R., 9 Fleet Street, Masterton.5901	<b>ZL4FK</b>	Fisher, K. G., 7 Nepal Place, Christchurch.8005
<b>ZL4BK</b>	McDonald, N. M., 3 Kinloch Street, Blenheim.7301	<b>ZL4FL</b>	Farquharson, D. A., 134 Martin Road, Fairfield.9006
<b>ZL4BL</b>	Millar, T. E., 38 Begg Street, Dunedin.9001	<b>ZL4FP</b>	McLeod, R. J., 134 Bay View Road, Dunedin.9001
<b>ZL4BM</b>	McCallum, R. H., Ashley Downs, R.D., Clinton.9252	<b>ZL4FR</b>	Jeromson, W. J., 196 Highcliff Road, Dunedin.9001
<b>ZL4BN</b>	Collett, D. K., 33 Dryden Street, Milton.9254	<b>ZL4FS</b>	Faulkner, D. N., 11 Parkdale Drive, Wanganui.5001
<b>ZL4BO</b>	Jackson, V. R., Milton Park, R. D. 1, Invercargill.9521	<b>ZL4FT</b>	Mitchell, G. L., 7a Tudor Lane, Mosgiel.9007
<b>ZL4BP</b>	Collett, W. G., 35 Wharfedale Street, Macandrew Bay, Dunedin.9003	<b>ZL4FV</b>	Willoughby, J. R., 136 Elizabeth Street, Invercargill.9501
<b>ZL4BQ</b>	Brown, A. R., Wainakarua Road, Kakanui, Oamaru.8950	<b>ZL4FW</b>	Watson, P. J., Curio Bay, No. 1 R.D., Tokanui, Invercargill.9671
<b>ZL4BR</b>	Thompson, H. G., 47 Forth Street, Mataura.9753	<b>ZL4FX</b>	O'Reilly, P. R., 60 Surrey Street, Dunedin.9001
<b>ZL4BS</b>	Aldridge, J. T., 87 Trevors Road, Ashburton.8300	<b>ZL4FY</b>	Port, P. E., 104 Hall Road, Sawyers Bay, Dunedin.9008
<b>ZL4BT</b>	McKenzie, J. D., 268 Wai-iti Road, Timaru.8601	<b>ZL4FZ</b>	Smart, R. G., 26 Olive Street, Christchurch.8001
<b>ZL4BU</b>	Stephens, R. D., 72 Wilfrid Street, Invercargill.9501	<b>ZL4GA</b>	Homer, G. C., 5 Conway Street, Macandrew Bay, Dunedin.9003
<b>ZL4BV</b>	McConnell, J. R., 73 Banks Street, Invercargill.9501	<b>ZL4GB</b>	Carter, D. J., 60 Antrim Street, Invercargill.9501
<b>ZL4BW</b>	Williamson, B. C., Horrace Street, Cromwell.9191	<b>ZL4GC</b>	Shand, T. J., 52 Bremner Road, Fairfield, Dunedin.9006
<b>ZL4BX</b>	Anderson, J. L., 64 Main Road, Brighton, Dunedin.9151	<b>ZL4GD</b>	Wilkey, T. G., 68 Marine Parade, Bluff.9503
<b>ZL4BY</b>	Jenner, M. G., 40 Murano Street, Dunedin.9001	<b>ZL4GE</b>	Hurring, C. J., 1a Belmont Lane, Dunedin.9001
<b>ZL4BZ</b>	Eve, C. R., c/- Tauraroa Area School, R. D. 8, Whangarei.0121	<b>ZL4GF</b>	Balan, S. C., 45a Brandon Road, Glen Eden, Auckland.1207
<b>ZL4CA</b>	Williamson, A. E., Leicester Street, Hampden.8950	<b>ZL4GG</b>	Boddy, K. H., 47 Newcastle Street, Clyde.9180
<b>ZL4CB</b>	Costigan, L. J., 46 Bayne Street, Invercargill.9501	<b>ZL4GJ</b>	Service, T. R., 5 Bremridge Place, Hamilton.2001
<b>ZL4CC</b>	Chocketts, C. V. (Mrs), 21 Highfield Terrace, Invercargill.9501	<b>ZL4GK</b>	Colvin, L. J., 6 Grant Road, Gisborne.3801
<b>ZL4CD</b>	Dimmock, C., 92 Exmouth Street, Invercargill.9501	<b>ZL4GL</b>	Gilder, N. J., 37 Pomona Street, Gore.9700
<b>ZL4CF</b>	McLaren, A. D., 16 Melbourne Street, South Dunedin.9001	<b>ZL4GM</b>	Ellis, D. N., 146 Exmouth Street, Invercargill.9501
<b>ZL4CG</b>	Bathurst, C. F., Mokotua, R. D. 7, Invercargill.9521	<b>ZL4GN</b>	Lodge, S. F., 35 Graham Street, Mosgiel.9007
<b>ZL4CH</b>	Spry, W. D., 6 Clementine Lane, Christchurch.8008	<b>ZL4GO</b>	Thomas, M. E., 27 Stirling Crescent, Mosgiel.9007
<b>ZL4CI</b>	Stronach, N., 78 View Street, Manapouri.9680	<b>ZL4GQ</b>	Southland Branch NZART (Inc.), see Branch Directory
<b>ZL4CK</b>	Wark, A. J., 1 Sutcliffe Street, Dunedin.9001	<b>ZL4GR</b>	Walsh, T., 17 McKinnon Terrace, Sunshine Bay, Queenstown.9692
<b>ZL4CM</b>	Martin, A. J. T., 8 Lark Street, Oamaru.8901	<b>ZL4GS</b>	Graham, E. J. W., F2/426 Armagh Street, Christchurch.8001
<b>ZL4CN</b>	Peterson, A. McN., 26 Aolea Street, Dunedin.9001	<b>ZL4GT</b>	Skinner, L. C., 200 Surrey Street, Dunedin.9001
<b>ZL4CP</b>	Baird, O. L., 131 Nelson Street, Invercargill.9501	<b>ZL4GU</b>	Brentwood, P. L., 39a Greenstone Place, Fernhill, Queenstown.9692
<b>ZL4CR</b>	Middleton, C. E., 36 Green Street, Mosgiel.9007	<b>ZL4GV</b>	Wilkey, D. G., 68 Marine Parade, Bluff.9503
<b>ZL4CT</b>	Southland Boys High School Radio Club, (Trustee: ZL4LX), 215 Herbert Street, Invercargill.9501	<b>ZL4GW</b>	McDonald, B. N., 45 Goodman Street, Windsor, Christchurch.8006
<b>ZL4CU</b>	Dudley, G. J., Pomona Road, R. D. 11, Invercargill.9521	<b>ZL4GX</b>	Collie, D. B., 48 Thurso Street, Invercargill.9501
<b>ZL4CV</b>	McKenzie, J., c/- Chateau Blanc, P.O.Box 25-163, Christchurch.8030	<b>ZL4GY</b>	Wills, M. E., 48 Purdie Street, Invercargill.9501
<b>ZL4CW</b>	Barker, W. G., 30 Kowhai Avenue, Invercargill.9501	<b>ZL4HA</b>	Young, B. S., 9 Crescent Street, Purakanui, R.D. 1, Port Chalmers.9030
<b>ZL4CY</b>	Shaw, W., c/- Railway Hotel, Invercargill.9501	<b>ZL4HB</b>	Folton, G. L., 25 Lowe Street, Dunedin.9001
<b>ZL4CZ</b>	Brain, E. R., 38 Cranley Street, Dunedin.9001	<b>ZL4HC</b>	Waters, M. J., 6 Barling Street, MacAndrew Bay, Dunedin.9001
<b>ZL4DA</b>	Harman, I. A., 49 Alexander Street, Abbotsford, Green Island.9006	<b>ZL4HD</b>	Findlater, J. L. L., 37 Gormack Street, Balclutha.9200
<b>ZL4DB</b>	Cahill, E., Earnsclough Road, Alexandra.9181	<b>ZL4HE</b>	Montgomery, A. M., 4 Hoylake Street, Outram.9255
		<b>ZL4HF</b>	Kindon, H. A. R., 53 Montague Street, Dunedin.9001
		<b>ZL4HG</b>	McNeill, S. J. E., 86 Waddington Drive, Lower Hutt.6301
		<b>ZL4HI</b>	Bruce, F., 1 Croydon Place, Kamo, Whangarei.0101
		<b>ZL4HJ</b>	Bulger, J. W. P., 1 King Street, Mosgiel.9007



# **ZL4HK**

**ZL4HK** McNaught, R. G., 217 Princess Street, Invercargill.9501  
**ZL4HL** Smirk, A. H. C., 68 Cannington Road, Maori Hill, Dunedin.9001  
**ZL4HM** Whelan, M. L., 142 West Street, Invercargill.9501  
**ZL4HN** Booth, W. J., Drummond, R.D. 8, Invercargill.9521  
**ZL4HO** Sutton, K. E., 97 Grey Street, Invercargill.9501  
**ZL4HP** Rait, B. G., Longwood, No. 1 R.D., Riverton.9654  
**ZL4HQ** Williams, J. C., 143 Albert Street, Invercargill.9501  
**ZL4HR** Nisbet, G. J., 33 Sutcliffe Street, Dunedin.9001  
**ZL4HS** Marsh, W. J., 34 Fair View Terrace, Sawyers Bay, Dunedin.9008  
**ZL4HT** Powley, D. M. L. J., 82 Catherine Crescent, Newlands, Wellington.6004  
**ZL4HW** Robertson, K. W., 223 Herbert Street, Invercargill.9501  
**ZL4HX** Paulson, R., St. Peters School, Kakapo Street, Gore.9700  
**ZL4HY** Baxter, P. M. (Mrs), 456 Peninsula Road, Kelvin Heights, Queenstown.9692  
**ZL4IA** Baker, J. C., Beacon Point Road, Wanaka, Central Otago.9192  
**ZL4IB** Williams, R. F., c/- F. L. Williams, 12a Stuart Street, Levin.5500  
**ZL4IC** Cockeram, M. R., Actaeon Road, Makarewa, R.D. 6, Invercargill.9521  
**ZL4ID** Hill, S. G., 54 Rhodes Terrace, Dunedin.9001  
**ZL4IE** Mason, J. A., 29 Cannington Road, Dunedin.9001  
**ZL4IG** Fox, A. R. E., 30 Vyner Road, Otago, R.D. 9, Invercargill, P.O. Box 475, Invercargill.9500  
**ZL4IH** Frame, S. R., 38 Melbourne Street, Invercargill.9501  
**ZL4II** Hollebon, K. W., Irvine Road, 2 R.D., Dunedin.9021  
**ZL4IK** Emslie, C. R., 47 Barr Street, Dunedin.9001  
**ZL4IM** Norton, J., c/- Private Bag, Pukerua, Southland.9750  
**ZL4IN** Faulkner, W. E., 124 Frank Street, Gore.9700  
**ZL4IO** Malkin, M. J. (Mrs), 1007 Konini Street, Hastings.4201  
**ZL4IQ** Knowles, D. C., 29 Tasman Road, Otematata.8950  
**ZL4IR** Jensen, M. D., 12 Lochiel Road, Khandallah, Wellington.6004  
**ZL4IS** Smirk, B. A., 68 Cannington Road, Maori Hill, Dunedin.9001  
**ZL4IT** Sawyers, R. N., 70 Preston Crescent, Dunedin.9001  
**ZL4IU** Swale, C. S., 13/60 Stirrat Street, Invercargill.9501  
**ZL4IV** Looser, E. A., 6b Runciman Street, Green Island, Dunedin.9006  
**ZL4IW** Holden, P. J., 175 Scott Street, Dunedin.9001  
**ZL4IX** Hasler, D. G., 10 Meon Street, Oamaru.8901  
**ZL4IZ** Jeffery, I. W., 7 Point Bush Road, Waimate.8791  
**ZL4JA** Birse, K. C., 14 Martben Crescent, Christchurch.8005  
**ZL4JC** McLennan, E. J. (Mrs), 11 Emerson Street, Concord, Dunedin.9006  
**ZL4JD** Dudley, J. T., 11 Fraser Street, Waikiki, Invercargill.9501  
**ZL4JE** Elliot, J., 36 Grange Street, Dunedin.9001  
**ZL4JF** South Otago Branch NZART (Inc.), see Branch Directory  
**ZL4JG** MacDonald, E. R., 318 Main South Road, Dunedin.9006  
**ZL4JH** Harrow, J. C., 529 Tweed Street, Invercargill.9501  
**ZL4JI** Woods, J. R., Taiapa Road, Otago, R.D. 9, Invercargill.9521  
**ZL4JJ** Ferris, R. J., 269 Stokes Valley Road, Stokes Valley.6306  
**ZL4JK** Stanton, M. G., 44 Koa Street, Gore.9700  
**ZL4JL** Stewart, R. D., 4 Arawa Street, Gore.9700  
**ZL4JM** Richardson, J., 87 Newcastle Street, Clyde.9180  
**ZL4JN** Haig, A. V., 43 Melbourne Street, Dunedin.9001  
**ZL4JO** Johnstone, M. O., Newhaven, 1 R.D., Owaka.9255  
**ZL4JP** McKenzie, G. A., Waiparu, No. 7 R.D., Gore.9700  
**ZL4JQ** Torrance, A. M., 16 Lupton Street, Waverley, Wanganui.5182  
**ZL4JR** Rait, J. N. (Mrs), Longwood, No. 1 R.D., Riverton.9654  
**ZL4JS** Stonehouse, R. P. M., 40 Mornington Road, Dunedin.9001  
**ZL4JT** Jennings, J. T., 15 Coolock Street, Dunedin.9001  
**ZL4JU** Middleton, C. H., c/- Alpine Helicopters, R.D. 1, Cromwell.9191  
**ZL4JV** Barry, J. M., Malling Road, Redwood Valley, Richmond.7031  
**ZL4JW** Watson, R. J., 13 Oregon Drive, Kelvin Heights, Queenstown.9692  
**ZL4JX** Rait, R. J., Longwood, R.D. 1, Riverton.9654  
**ZL4JZ** Woodward, A. E., c/- Woodward, Baton Valley, R.D. 2, Wakefield.7181  
**ZL4KA** Spence, P. C., 62 Roy Crescent, Concord, Dunedin.9006  
**ZL4KB** Gearing, W. J., Felldene Farm, R. D. 2, Wakefield, Nelson.7181  
**ZL4KC** Air Training Corps Radio Club No. 12 Invercargill Squadron, (Trustee: ZL4OH), Army Hall, Victoria Avenue, Invercargill.9501  
**ZL4KD** Kirk, B. B., 24 Grand View Road, Auckland.1105  
**ZL4KE** Colyer, J. V., 17 Clutha Street, Alexandra.9181  
**ZL4KF** France, K. N., 41 Glencarron Street, Alexandra.9181  
**ZL4KG** Rhodes, T. W., 78 Spottiswoode Street, Andersons Bay, Dunedin.9001

**ZL4KH** Shine, D. H. J., 11 Northview Crescent, Roslyn, Dunedin.9001  
**ZL4KJ** Robertson, D. C., 45 Maitland Street, Invercargill.9501  
**ZL4KK** Gillick, M. M., 30 Oakland Street, Dunedin.9001  
**ZL4KL** Lister, K. B., 37 Marine Parade, Macandrew Bay, Dunedin.9003  
**ZL4KM** Craig, A. J., 3 Milner Street, Oamaru.8901  
**ZL4KN** Findlater, R. B., 36 Coast Road, Karitane.9160  
**ZL4KO** Williams, T. J., 48 Every Street, Dunedin.9001  
**ZL4KP** Cochran, W. G., 19 Centennial Avenue, Balclutha.9200  
**ZL4KR** Pearce, A. M., 173 Helensburgh Road, Dunedin.9001  
**ZL4KT** Waring, D., 35 Rata Drive, Otematata.8950  
**ZL4KU** Taylor, S. J., 66 Royal Terrace, Alexandra.9181  
**ZL4KV** Patton, J. A., 15 Kensington Place, Taupo.3300  
**ZL4KW** Kibblewhite, K. C., Larch Hill, Frankton Road, Queenstown.9692  
**ZL4KX** McCormick, B. P., 39 Moana Crescent, Dunedin.9001  
**ZL4KY** Jones, H. A., 1 Edinburgh Place, Balclutha.9200  
**ZL4KZ** Lobb, R. J., 62 Sydney Street, Invercargill.9501  
**ZL4LB** Beagley, G. T., Precelley Street, Allanton, R. D. 2, Mosgiel.9032  
**ZL4LC** Carroll, E. P., 6 Benhar Street, Dunedin.9001  
**ZL4LD** Haines, P. C., 37 Wairoa Street, Dunedin.9001  
**ZL4LE** Evans, L. M., Tussock Creek, R. D. 6, Invercargill.9521  
**ZL4LF** Masterton, D., 17 Lochend Street, Dunedin.9001  
**ZL4LG** Beardsmore, G. F., 15 Penrich Street, Green Island, Dunedin.9006  
**ZL4LH** Milsom, P. S., 20 Lanark Street, Mosgiel.9007  
**ZL4LI** Amon, L. E. S., 700 Castle Street, Dunedin.9001  
**ZL4LJ** McKenzie, A. I., 24 Scotland Terrace, Green Island, Dunedin.9006  
**ZL4LK** Whitty, M. J., 20 Edinburgh Street, Green Island, Dunedin.9006  
**ZL4LL** Benson, J. A., 15 Heath Street, Andersons Bay, Dunedin.9001  
**ZL4LM** Nallawalla, A., c/- 1 Upland Street, Dunedin.9001  
**ZL4LN** Tall, E. J., 19 Graham Street, Mosgiel.9007  
**ZL4LP** Sellar, K. R., 34 City Road, Dunedin.9001  
**ZL4LR** Hunt, F. G., 38 Dame Street, Waikouaiti.9162  
**ZL4LS** Howie, G. A., 12 Theyers Street, Alexandra.9181  
**ZL4LT** Richards, F. B., 84 Onetaunga Road, Birkenhead, Auckland.1310  
**ZL4LU** Costard, T. J., 17 Stirling Street, Andersons Bay, Dunedin.9001  
**ZL4LV** Johnson, P. W., Saddle Hill Road, Fairfield, R.D. 1, Dunedin.9021  
**ZL4LW** Woodford, L. A., 90 Palmerston Street, Riverton.9654  
**ZL4LX** Evans, R. W., 558 Tay Street, Invercargill.9501  
**ZL4LY** Macaskill, D. J., 34 Stirling Street, Invercargill.9501  
**ZL4LZ** Telford, B., Ruru Avenue, Otago, R.D. 9, Invercargill.9521  
**ZL4MA** Ferguson, T. R., 22 Turnbull Street, Invercargill.9501  
**ZL4MB** Andrews, S. E., 14 Como Street, Dunedin.9001  
**ZL4MC** McGowan, D. F., 7 Arthur Street, Oamaru.8901  
**ZL4MD** Hayes, K. J., Ripponvale Road, R.D. 2, Cromwell, P.O. Box 143, Cromwell.9191  
**ZL4ME** MacDonald, D. T., 155 Brockville Road, Dunedin.9001  
**ZL4MF** Bell, J. W., 66 Elizabeth Street, Invercargill.9501  
**ZL4MG** McKenzie, W. J., 115 Mcquarrie Street, Invercargill.9501  
**ZL4MH** McKenzie, E. D., 6 Drivers Road, Dunedin.9001  
**ZL4MI** Tidbury, S. J., Otakau Golf Course Road, Otakau.9521  
**ZL4MJ** Mitchell, J. S., 109 Layard Street, Invercargill.9501  
**ZL4MK** Kingston, R. W. G., 12 Kenilworth Street, Waverley, Dunedin.9001  
**ZL4ML** Lamont, M. S., 3 Garden Place, Glenleith, Dunedin.9001  
**ZL4MM** Murray, R. W., 101 Inniscort Street, Cromwell.9191  
**ZL4MN** Mosley, J. D., 67 Gladstone Road, Dunedin.9001  
**ZL4MO** Askey, A. J., 30 Murano Street, Waverley, Dunedin.9001  
**ZL4MP** Crichton, J., 14 Franklin Street, Dunedin.9001  
**ZL4MR** Mabon, A. C., 29 Crosby Street, Dunedin.9001  
**ZL4MS** Dalliesi, P. J. C., Chertsey Court, 217d Huahine Street, Terrace End, Palmerston North, P.O. Box 5284, Palmerston North.5301  
**ZL4MT** Matthews, R. H., Main Road, Mokotua, R. D. 1, Invercargill.9521  
**ZL4MU** Cook, R. K., 230 Crawford Street, Invercargill.9501  
**ZL4MV** Dawson, G. L., 32 Vernon Street, Invercargill.9501  
**ZL4MW** Ward, W. T. R., West Plains Road, R.D. 4, Invercargill.9521  
**ZL4MX** Govan, W. A., 28 Ann Street, Dunedin.9001  
**ZL4MY** Treweek, M. E., 576 Herbert Street, Invercargill.9501  
**ZL4MZ** Sherlaw, W. G., Waipori Falls. 9150  
**ZL4NA** Dinkelaar, F., 48 Cranbrook Avenue, Christchurch.8005  
**ZL4NB** Barkman, D. J., 36 Walton Street, Kaikorai, Dunedin.9001  
**ZL4NC** Patterson, B. R., 66 Koremata Street, Dunedin.9001



- ZL4ND** Cunninghame, P. J., 63 High Street, Mosgiel.9007  
**ZL4NF** Fox, R., 26 Sarajevo Place, Ranui, Auckland.1230  
**ZL4NH** McRadden, P., 93 Tomahawk Road, Andersons Bay, Dunedin.9001  
**ZL4NI** Braddock, A. R. (Mrs), 39 Norton Street, Gore.9700  
**ZL4NJ** Scott, I. R., 514 Yarrow Street, Invercargill.9501  
**ZL4NK** Kan, N. C. Y., 90 North Road, North East Valley, Dunedin.9001  
**ZL4NL** Taylor, A. J., 37 Dipton Street, Invercargill.9501  
**ZL4NO** Davidson, M., 7 Jack Street, Invercargill.9501  
**ZL4NP** Goodin, N. H., 325 Tomahawk Road, Dunedin.9001  
**ZL4NQ** Queenstown Branch 75 NZART, see Branch Directory  
**ZL4NR** McVie, K. R., 9 Davies Street, Concord, Dunedin.9006  
**ZL4NS** Hagen, R. L., 23 Milford Street, Invercargill.9501  
**ZL4NU** Mackay, A. J., Montana, 2 R.D., Heriot.9152  
**ZL4NV** Selwyn, T. A., 16 Victoria Street, Timaru.8601  
**ZL4NW** Lee, N. P. C., 51 Dome Street, Invercargill.9501  
**ZL4NX** Etienneaux, D. H., 46 Greenock Street, Dunedin.9001  
**ZL4NZ** Reid, K. W., 7 Skye Street, Invercargill.9501  
**ZL4OA** McCutcheon, M. C., Littles Road, R.D. 1, Queenstown.9692  
**ZL4OC** Smith, R. F., 4 Spiers Road, Dunedin.9001  
**ZL4OD** Parsons, R. D., 69 Oreti Street, Invercargill.9501  
**ZL4OE** Cumming, C. T., 100 Doon Street, Waverley, Dunedin.9001  
**ZL4OF** Adams, C. A., 38 Warden Street, Opoho, Dunedin.9001  
**ZL4OH** McNeill, R. A., 27 Murphy's Road, Blenheim.7301  
**ZL4OI** Sim, R. J., Gordon Road, R.D. 2, North Taieri, Mosgiel.9032  
**ZL4OJ** Collie, D. B., 21 Avenal Street, Invercargill.9501  
**ZL4OL** McAlevey, M. J., Double Hill Road, Waitati.9160  
**ZL4OM** McIver, P. D., 10 Rata Drive, Otematata.8950  
**ZL4ON** Summerell, B. W., 457 Racecourse Road, Invercargill.9501  
**ZL4OO** Central Otago Branch NZART, see Branch Directory  
**ZL4OP** Morris, D. P., 134 Stobo Street, Invercargill.9501  
**ZL4OQ** Shore, B. F. (Mrs), 1 Upland Street, Dunedin.9001  
**ZL4OR** Reeves, W. A., 205 Tomahawk Road, Andersons Bay, Dunedin.9001  
**ZL4OS** Fleming, I. D., 43 Carnarvon Street, Invercargill.9501  
**ZL4OT** Smith, L. H., Walwhenua, R.D. 9, Hastings.4221  
**ZL4OU** North Otago Branch NZART, see Branch Directory  
**ZL4OV** Major, L. H., 16 Maybank Street, Opoho, Dunedin.9001  
**ZL4OW** Vincent, S. V., 30 Charles Street, Weston, Oamaru.8901  
**ZL4OX** Checketts, R. N., 21 Highfield Terrace, Invercargill.9501  
**ZL4OY** Hannagan, C. C., 51 Plateau Road, Upper Hutt.6401  
**ZL4OZ** Adams, D. A., 47 Wray Street, Dunedin.9001  
**ZL4PA** Lamb, M. A., 90 Princes Street, Invercargill.9501  
**ZL4PB** Christie, D. A., 116 Birdwood Avenue, Beckenham, Christchurch.8002  
**ZL4PC** Haigh, F., c/- 99 Eglinton Road, Mornington, Dunedin.9001  
**ZL4PD** Neill, K. G., 38 Teignmouth Street, Green Island, Dunedin.9006  
**ZL4PE** Blyth, B. W., Price Road, Winton.9662  
**ZL4PF** Lindsay, M. G., c/- Wellington Radio, Private Bag, Wellington.6020  
**ZL4PG** Lloyd, D. A., 180 Forbury Road, Dunedin.9001  
**ZL4PH** Drayton, G. J., Lochiel, R.D. 1, Winton.9662  
**ZL4PI** Huband, G. J., 18 Norman Street, Dunedin.9001  
**ZL4PJ** Blain, W. A., 640 Tay Street, Invercargill.9501  
**ZL4PK** McLean, G. P., 87 Easter Crescent, Dunedin.9001  
**ZL4PL** Hutchings, T. J., 153 Leet Street, Invercargill.9501  
**ZL4PM** Marsh, P., 33 Falcon Street, Dunedin.9001  
**ZL4PN** Skeet, B. R., 123 Dunstan Road, R.D. 2, Alexandra.9181  
**ZL4PO** Price, L. J., 68 Matua Road, R.D. 9, Invercargill.9521  
**ZL4PP** Cairns, J. G., 35 Royal Terrace, Alexandra.9181  
**ZL4PQ** Pryde, G. W., 25 Brownville Crescent, Maori Hill, Dunedin.9001  
**ZL4PR** Russell, P. F., Bryson Road, Otatara, 9 R.D., Invercargill.9521  
**ZL4PS** Stonehouse, P. R., 70 Bamborough Street, Invercargill.9501  
**ZL4PT** Thompson, K. P., 180 Mornington Road, Dunedin.9001  
**ZL4PU** Watson, G. M., 4 H.R.D., Oamaru.8921  
**ZL4PV** Virtue, A. D. S., Shropshire Street, P. O. Box 18, Kingston.9660  
**ZL4PW** Stevens, C. A. (Mrs), 5 Lanes Road, Bridge Hill, Alexandra.9181  
**ZL4PX** McMillan, A. D. K., 22 Jameson Avenue, St Albans, Christchurch.8005  
**ZL4PY** Ball, G. L., 181 Albany Street, Dunedin.9001  
**ZL4PZ** Gilchrist, A. J. H., 20 Vogel Street, Hawera.4800  
**ZL4QA** Grieve, L. M., Kennington, 1 R.D., Invercargill.9521  
**ZL4QB** Grocott, R. F., 49 Holyoake Crescent, Lower Hutt.6301  
**ZL4QC** Walton, A. D., 132 Martin Road, Fairfield, Dunedin.9006  
**ZL4QD** Hand, K. A., 45 Aotea Street, Dunedin.9001  
**ZL4QE** Pearce, B. H., Dunvegan, Clinton.9251  
**ZL4QG** Nilson, F. E. G., 19 District Road, Roseneath, Sawyers Bay, Dunedin.9005  
**ZL4QH** Adams, R. J., 4a Wharfe Street, Oamaru.8901  
**ZL4QI** McDiarmid, K. G., 41 Towey Street, Oamaru.8901  
**ZL4QJ** Burtenshaw, J. S., 101 Tramway Road, Hamilton.2001  
**ZL4QK** Cross, A., 11 Ryehill Street, Callon Hill, Dunedin.9001  
**ZL4QL** Smithies, R. B., 2 Talbot Street, Invercargill.9501  
**ZL4QM** McLaren, J. B., 8 Marlborough Crescent, Richmond, Nelson.7001  
**ZL4QN** Bonney, J. E., 47 Seaward Road, Edendale.9752  
**ZL4QO** Lawson, D., 32 Saddle View Place, Fairfield, Dunedin.9006  
**ZL4QP** Harwood, P. J., 13 Hanson Street, Portobello, Dunedin.9004  
**ZL4QQ** Marshall, W. H., 39 Bellona Street, St. Kilda, Dunedin.9001  
**ZL4QS** Lochhead, J. R., "The Balloon", R. D. 1, Kaitangata.9253  
**ZL4QT** Donoghue, A. M., 439 Highgate, P. O. Box 6036, Dunedin.9030  
**ZL4QU** Piper, R. V., Drysdale Road East, R.D. 2, Myross Bush, Invercargill.9521  
**ZL4QV** Walsh, J. F., 38 Skibo Street, Kew, Dunedin.9001  
**ZL4QX** Logan, L. N., 18 Asquith Street, Caversham, Dunedin.9001  
**ZL4QY** Williams, J. W. L., 72 Russell Street, Alexandra.9181  
**ZL4RA** Drayton, M. J., Moores Road, R.D. 8, Invercargill.9521  
**ZL4RB** Naish, A. W., Kakanui, 5 R.D., Oamaru.8921  
**ZL4RC** Wekking, J. H. J., 38 Jollie Road, Twizel.8773  
**ZL4RD** Perrin, C. D., c/- 34 Hassall Street, Timaru.8601  
**ZL4RE** Murgatroyd, E. M., 97 Factory Road, Mosgiel.9007  
**ZL4RF** Osborne, H. F., 8 Conway Crescent, Invercargill.9501  
**ZL4RG** Calvert, K. C., P.O.Box 6055, Invercargill North.9530  
**ZL4RJ** Elliott, A. J., 175 Bourke Street, Invercargill.9501  
**ZL4RK** Simpson, I. E., 58 Price Street, Waikiki, Invercargill.9501  
**ZL4RL** Kimside, A. J., Flat 13, Dorset Towers, 8001  
**ZL4RM** Wijkstra, E., 28 White Street, Invercargill.9501  
**ZL4RN** Donoghue, A. M., 439 Highgate, P. O. Box 6036, Dunedin North.9000  
**ZL4RO** Graham, J. D., 212 Broughton Street, Gore.9700  
**ZL4RP** Gillions, R. M., 7 Maryport Street, Lawrence.9153  
**ZL4RQ** Pycroft, B. E., 261 Wellington Road, Wainuiomata.6305  
**ZL4RR** Moore, J. S. F., 49 Nelson Street, Dunedin.9001  
**ZL4RS** Jonker, J. A., 31 Burns Street, Milton.9254  
**ZL4RT** Smith, D. J., P.O.Box 435, Nelson.7000  
**ZL4RU** Powe, R. L., Horserange Road, Palmerston.9161  
**ZL4RV** Tamplin, A. F. K., 58 Cooper Street, Karori, Wellington.6005  
**ZL4RW** Bailey, W. D., 35 Tyne Street, Roslyn, Dunedin.9001  
**ZL4RX** MacDiarmid, R. M., 43 Cargill Street, Dunedin.9001  
**ZL4RY** Richardson, L. J., 87 Newcastle Street, Clyde.9180  
**ZL4RZ** Jardine, M. A., 153 Eden Street, Oamaru.8901  
**ZL4SA** Helm, P. D., 28 Stafford Street, Ranfurly.9171  
**ZL4SB** Stevenson, D. J., 10 Sutcliffe Street, Dunedin.9001  
**ZL4SC** Rait, M. P., Longwood, R.D. 1, Riverton.9654  
**ZL4SD** Excell, R. A., 144 Te Anau Terrace, Te Anau.9681  
**ZL4SE** Brannigan, A. M., c/- 18 Holyhead Street, Outram.9155  
**ZL4SF** Walt, B. F., 91 Weston Road, Oamaru.8901  
**ZL4SH** Orr, N. A., 3/4 Coronation Road, Glenfield, Auckland.1310  
**ZL4SJ** Bromley, I. J., 6 Homeslead Road, Whangaparaoa.1463  
**ZL4SL** Pope, K., 171 Howick Road, Blenheim.7301  
**ZL4SM** Finer, W. R., 27 Divich Avenue, Te Atatu South, Auckland.1208  
**ZL4SN** McLeod, N. C., 65 Stuart Street, Oamaru.8901  
**ZL4SO** Ellis, K. M., 3 Hawera Road, Kohimarama, Auckland.1105  
**ZL4SQ** Leadley, A. M., Mangaotaki Road, Piopio.2555  
**ZL4SR** Fletcher, R. E., 19 Riverside Drive South, Lower Hutt.6301  
**ZL4SS** Jury, L. S., 20 Whenua View, Titahi Bay.6202  
**ZL4ST** Beveridge, G. W., 83 Russell Street, Alexandra.9181  
**ZL4SU** Murrell, I. G., 65 King Street, Te Kuiti.2500  
**ZL4SV** Hayter, J. W., 22 Omapere Road, Kaikohe.0400  
**ZL4SW** Hodgson, B. J., 171 North Road, Dunedin.9001  
**ZL4SX** Lovatt, D. J., 23a Janel Place, Rotorua.3201  
**ZL4TA** Millar, G. E., 18a Arun Street, Oamaru.8901  
**ZL4TB** Campbell, A. J. N., Myross Road, R.D. 6, Invercargill.9521  
**ZL4TF** Wallace, J. M., 95 Chelmsford Street, Invercargill.9501  
**ZL4TH** Sloan, B. H., 10/146 Kew Road, Invercargill.9501  
**ZL4TJ** Ellenden, E., 37 Caron Street, Invercargill.9501  
**ZL4TM** Gorton, W. J., Orion Road, Makarewa.9660  
**ZL4TN** Browne, D. J., 23 Hayle Street, Oamaru.8901  
**ZL4TO** Mann, I. A., 72 Greig Street, Broad Bay, Dunedin.9004  
**ZL4TP** Garry, A. M., 4 Tilburn Street, Halfway Bush, Dunedin.9001  
**ZL4TQ** Sum, D. A., 44 Adelaide Street, Petone.6303  
**ZL4TR** Armstrong, E. W., 15 London Street, Weston, North Otago.8901  
**ZL4TS** Smith, J. W., R.D. 1, Newhaven, Owaka.9255  
**ZL4TV** Adamson, A. T., 311 Pine Hill Road, Liberton, Dunedin.9001  
**ZL4NAB** Clapham, E. S., 31 Ronaldsay Street, Palmerston.9161  
**ZL4NAJ** Johnston, N. A., Blue Cliff Station, R.D. 24, St Andrews, Dunedin.9021



# ZL4TAA

ZL4TAA Woods, A. M., 5 Beaumont Road, Dunedin.9001  
 ZL4TAB Olsen, W. J., 11 Estuary Crescent, Fairfield, Dunedin.9006  
 ZL4TAC Parish, D. A., 25 Truscot Avenue, Johnsonville, Wellington.6004  
 ZL4TAD Wilhelmsen, G. R., 24 Aberdeen Road, St. Clair, Dunedin.9001  
 ZL4TAE Thomas, T. M., 105 Lamach Road, Dunedin.9001  
 ZL4TAG Enright, A., 22 Main Road, Waldronville, Dunedin.9006  
 ZL4TAH Checketts, G. N., 21 Highfield Terrace, Invercargill.9501  
 ZL4TAI Calder, A. D., Ardgowan, R.D. 10, Oamaru.8921  
 ZL4TAJ Paterson, E. G., Waianiwa, R.D. 4, Invercargill.9521  
 ZL4TAK Bowen, D. J., 9c Ravelston Street, Dunedin.9001  
 ZL4TAL Russell, N., 3/156 Salford Street, Invercargill.9501  
 ZL4TAM Mamadjanian, A. P., 413 Centre Street, Invercargill.9501  
 ZL4TAN Kramer, K. H., 82 Russell Road, Christchurch.8004  
 ZL4TAO Hetherington, M. B., 36 Mary Street, Invercargill.9501  
 ZL4TAP Johnston, G. H. L., 230 Talbot Street, Invercargill.9501  
 ZL4TAQ Howell, A. D., 18 Beverley Street, Merivale, Christchurch.8001  
 ZL4TAR Kirkby, K. J., 5 Lesney Street, Dunedin.9001  
 ZL4TAS Doak, D. E., 205 Princes Street, Invercargill.9501  
 ZL4TAU Richards, O. C., 31 Maitland Street, Dunedin.9001  
 ZL4TAV Gordon, G. P. C., 9 Salmond Street, Dunedin.9001  
 ZL4TAX Checketts, C. M., 21 Highfield Terrace, Invercargill.9501  
 ZL4TAY Field, E. T., 192 Lagan Street, Bluff.9503  
 ZL4TAZ Wade, R. B., 25 Rewa Street, Sunshine, Dunedin.9001  
 ZL4TBA Croy, P. R., R. D. 2, Challis Point, Dunedin.9001  
 ZL4TBB Sapwell, H. W. D., 4 McDonald Street, Dunedin.9001  
 ZL4TBC Fischer, F. J., 133 Marama Avenue North, Otatara, Invercargill.9521  
 ZL4TBD Puklowski, N. A., 127 North Street, Ashhurst.5451  
 ZL4TBE Hurley, D. A., 8 President Avenue, Papakura.1703  
 ZL4TBF McNamara, B. R., Lauder, R.D. 2, Oamaru.8921  
 ZL4TBI Thompson, E. R., 119 Kapu Road, Paramata.6250  
 ZL4TBL MacDonald, C. S., 50 Dunlop Street, Wallacetown, Invercargill.9501  
 ZL4TBM Bayne, A. R., 49 O'Byrne Place, Invercargill.9501  
 ZL4TBN Nelson, D. A., 23 Grant Dalton Drive, Taieri Airport, Mosgiel.9007  
 ZL4TBO Stewart, E. A., Main Road, Kuri Bush, Brighton.9151  
 ZL4TBP Staitle, G. T., 8 Forfar Street, Mosgiel.9007  
 ZL4TBR Cleaver, R. A. J., 97 Robertson Street, Gore.9700  
 ZL4TBS Anderson, M. H., 28 Thompson Street, Queenstown.9692  
 ZL4TBV Wilson, P. W. R., 236 Taieri Road, Dunedin.9001  
 ZL4TBY Reid, D. R., 8 Manse Street, Waimate.8791  
 ZL4TBZ Mason, K. A., 41 Jennifer Street, Christchurch.8005  
 ZL4TCA Griffith, I. W., 17 Gilmore Street, Dunedin.9001  
 ZL4TCB Walker, B. A., Goodwood Road, R.D. 1, Palmerston.9161  
 ZL4TCC Le Quesne, P. W. H., 23 Oriel Place, Pirimai, Napier.4001  
 ZL4TCD Todd, R. J., Naumai Street, Gore.9700  
 ZL4TCE Wilkins, R. J., Allans Beach Road, Portobello.9004  
 ZL4TCF Norgrove, T. J., 9 Dakota Place, Waldronville, Dunedin.9006  
 ZL4TCI Barker, B. B., Larnach Castle, Dunedin.9001  
 ZL4TCJ Wagener, A. R., c/- R. D. Wagener, Main Road, R.D. 4, Kaitiaki.0500  
 ZL4TCK Mawby, D. J., 4 Claremont Avenue, Chartwell, Hamilton.2001  
 ZL4TCL Allan, G. L., 7 Princess Street, Marton.5151  
 ZL4TCM Ireland, B. D., 482 Thames Highway, Oamaru.8901  
 ZL4TCN Holley, J. A. C., 44 Scotland Street, Roxburgh.9156  
 ZL4TCC Mooney, W. J., 21 Greenhill Avenue, Dunedin.9001  
 ZL4TCP Tarlton, A. I. G., c/- C. W. Allen, Main Road, R.D. 1, Broadwood.0553  
 ZL4TCR Beadle, A. J., 9 Kilgour Street, Dunedin.9001  
 ZL4TCS Falconer, E. F., Whiterig, Gore.9700  
 ZL4TCT Sinclair, R. W., 70 Lorn Street, Invercargill.9501  
 ZL4TCU Phelvin, K. W., 22 Bourbon Terrace, Karori, Wellington.6005  
 ZL4TCV Nixon, D. B., 2/171 River Road, Richmond, Christchurch.8001  
 ZL4TCW Smith, A., 64 Dome Street, Invercargill.9501  
 ZL4TCX Grieve, R. J., 56 Cargill Street, Invercargill.9501  
 ZL4TCY Childs, P. B., 17 Duckworth Street, Dunedin.9001  
 ZL4TCZ Gollop, P. J., 2/71 Melbourne Street, Invercargill.9501  
 ZL4TDA Clearwater, B. G., 36 King Street, Mosgiel.9007  
 ZL4TDB Wilden, J. H., 46 Hocken Street, Dunedin.9001  
 ZL4TDD Fischer, P. J., 133 Marama Avenue North, Otatara, Invercargill.9501  
 ZL4TDE Gallagher, P. R., 112 John Sims Drive, Johnsonville, Wellington.6004  
 ZL4TDF Walker, J. D., 7 Meon Street, Oamaru.8901  
 ZL4TDG Webber, R. J., 42 Ryehill Street, Dunedin.9001  
 ZL4TDI Bowen, P. D. O., 207 Taieri Road, Dunedin.9001  
 ZL4TDJ Dingwall, A. B., 47 Gikison Street, Dunedin.9001  
 ZL4TDK Dwyer, W. A., 21 Summerline Avenue, Dunedin.9001  
 ZL4TDL Jones, I. E., P. O. Box 295, Mosgiel.9032

ZL4TDM Laurie, C. S., 43 Dunbarton St., Christchurch.8005  
 ZL4TDN Garry, N. A., 27 Salmond Street, Dunedin.9001  
 ZL4TDO Cathro, S. G., 6 Gala Street, Dunedin.9001  
 ZL4TDP Aronsen, P. G., 10 Girvan Street, Wallacetown, Invercargill.9502  
 ZL4TDQ Davidson, R. W., 251 Pomona Street, Invercargill.9501  
 ZL4TDR Zoest, A. R., 116 Evans Street, Dunedin.9001  
 ZL4TDS King, W. A., R.D. 2, Millers Flat.9154  
 ZL4TDT Johnson, W. A., 16 Herbert Street, Gore.9700  
 ZL4TDU Lynn, I. G., 26 Larkin Street, Dunedin.9001  
 ZL4TDX McAllum, H. J. F., 32a Wroxton Terrace, Fendalton, Christchurch.8001  
 ZL4TDZ Duffy, K. J., 50 Catherine Street, Invercargill.9501  
 ZL4TFC Thayer, M. P., 24 Chisholm Place, Dunedin.9001  
 ZL4TFD Ball, D. R., 2c Towey Street, Oamaru.8901  
 ZL4TFF Bokser, D. L., 3 Earn Street, Oamaru.8901  
 ZL4TFG Neill, P. G., 36 Teignmouth Street, Green Island, Dunedin.9006  
 ZL4TFH Allen, M. F., 36 Barclay Street, Dalmore, Dunedin.9001  
 ZL4TFI Brodie, J. T., 31 Clifford Street, Dunedin.9001  
 ZL4TFJ Shirreffs, C. S., 145 Scandrett Street, Invercargill.9501  
 ZL4TFK Fletcher, R. F., 9 Benhar Street, Dunedin.9001  
 ZL4TFL Collier, J. B., 86 Mailer Street, Mornington, Dunedin.9001  
 ZL4TFP Bedford, W. M., c/- Milburn Gardens, R.D. 2, Milton.9254  
 ZL4TFR Waters, J. L., P.O. Box 11, Kingston, Southland.9660  
 ZL4TFV Calder, D. G., 6 Union Street, Winton.9662  
 ZL4TFW Gamble, A. A., Oakdale, R.D. 1, Takahue, Kaitiaki.0500  
 ZL4TFY Craighead, G., 162 Balmacewen Road, Dunedin.9001  
 ZL4TGA Scott, P. R., 99 Gikinson Street, Dunedin.9001  
 ZL4TGB Grant, W. A., 7 Lochend Street, Dunedin.9001  
 ZL4TGC Bowie, D. R., 302 Main Road, Green Island, Dunedin.9006  
 ZL4TGD Downey, B. T., Portobello Road, Vauxhall, Dunedin.9001  
 ZL4TGF Williams, G. B., 64 Forfar Crescent, Invercargill.9501  
 ZL4TGG Keen, R. G., 274 Highcliff Road, Andersons Bay, Dunedin.9001  
 ZL4TGH Connolly, R. C., Blueskin Road, R.D. 1, Port Chalmers.9005  
 ZL4TGI Pettigrew, A. D., 384 McQuarrie Street, Invercargill.9501  
 ZL4TGL Smith, R. A. J. A., 50 Dryden Street, Milton, South Otago.9254  
 ZL4TGM Black, W. A., 49 Royal Terrace, Dunedin.9001  
 ZL4TGN Nisbet, R. A., 123 Milton Street, Christchurch.8002  
 ZL4TGP Watson, R. M., 21 Arcus Street, Whangarei.0101  
 ZL4TQG Andrews, B. D., 14 Como Street, Dunedin.9001  
 ZL4TGR Watson, D. K., 114 Cannington Road, Maori Hill, Dunedin.9001  
 ZL4TGS Faulkner, D. L., 34 Clifden Road, Tuatapere.9655  
 ZL4TGT Gerrie, A. L., 105 Riselaw Road, Calton Hill, Dunedin.9001  
 ZL4TGV Allan, R. P., 29 Venus Street, Invercargill.9501  
 ZL4TGW McGregor, T. R., 11b Allendale Road, Dunedin.9001  
 ZL4TGY Parris, R. C., 57 Rata Drive, Otematata.8950  
 ZL4TGZ Paterson, S. L. (Mrs.), "Waianiwa", R.D. 4, Invercargill.9521  
 ZL4THA Hall, S. J., 2 Sutcliffe Street, St. Clair, Dunedin.9001  
 ZL4THC Andrews, J. W. A., 65 Stuart Street, Invercargill.9501  
 ZL4THE Booth, A. W., 6 Essex Street, Balclutha.9200  
 ZL4THF Burge, G. G., 12 Pederson Place, Bucklands Beach, Auckland.1704  
 ZL4THG McAuliffe, K. J., 184 Morton Street, Invercargill.9501  
 ZL4THH Searle, J., 22 Chisholm Place, Andersons Bay, Dunedin.9001  
 ZL4THI Christie, A. R., 9 Koremata Street, Green Island, Dunedin.9006  
 ZL4THJ Rabbidge, M. J., "Crayburn", No. 1 R.D., Tokanui, Southland.9671  
 ZL4THK Sinclair, D. H., 8 Argyle Street, Weston, Oamaru.8901  
 ZL4THL Davidson, R. J., Earnscleugh Road, Clyde.9180  
 ZL4THN Hannah, I. R., 34 Statham Street, Dunedin.9001  
 ZL4THO Larsen, S. N., 108 Rosebank Avenue, Wakari, Dunedin.9001  
 ZL4THP Da-Rin, K. J. V., 36 South Road, Dunedin.9001  
 ZL4THQ Crimp, G. R., 31 Davies Road, New Plymouth.4601  
 ZL4THR Spence-Ord, K. D., 18 Ash Street, Oamaru.8901  
 ZL4THS O'Cain, P. J., 394 Nees Street, Invercargill.9501  
 ZL4THT Blee, A. R., 7 Campbell Street, Alexandra.9181  
 ZL4THV Stevens, D. B., 52 Newby Street, Invercargill.9501  
 ZL4THX Cleland, M. J., 38 Ahyle Street, Oamaru.8901  
 ZL4THY Englefield, B. R., 7 Taylor Avenue, Motueka.7161  
 ZL4THZ McLean, C. J., Longbush, R. D. 1, Invercargill.9521  
 ZL4TIA Larsen, C. M., 108 Rosebank Street, Wakari, Dunedin.9001  
 ZL4TIB Wallace, W. D., 17 Delphic Street, Sawyers Bay, Dunedin.9008  
 ZL4TIC Stewart, C. H., 29 Paisley Place, Invercargill.9501  
 ZL4TID McRae, G. F., 1 Hillcrest Avenue, Maitua.9753  
 ZL4TIE Barber, B. J., "Glencoe", R.D. 2, Invercargill.9521  
 ZL4TIG Hill, A. R. M., 16 Wyre Street, Kaitangata.9253  
 ZL4TIH Jackson, G. A. G., 23 Naish Street, Balclutha.9200



**ZL4TH** Pierson, W. E., 16 Naish Street, Balclutha.9200  
**ZL4THK** Curline, A. J., 151 Tennyson Street, Dunedin.9001  
**ZL4THL** Drage, I. J., 171 Morton Street, Invercargill.9501  
**ZL4THM** Watson, N. R., 59 Rountree Street, Christchurch.8004  
**ZL4THN** Murdoch, G. N., Mototua, R.D. 11, Invercargill.9521  
**ZL4THO** Moore, J. S., 10 Dalrymple Street, Dunedin.9001  
**ZL4THP** Dupont, C. C., 6 Lothian Crescent, Invercargill.9501  
**ZL4THQ** McLaren, G. D., 12 Douglas Street, Wakatipu.9690  
**ZL4THR** Woodrow, P. J., 32 Baker Street, Stirling, South Otago.9256  
**ZL4TIS** Williams, A. R., 26 Centre Street, Invercargill.9501  
**ZL4TIW** King, D. J., 48 Forfar Street, Mosgiel.9007  
**ZL4TIY** Laroo, G. M., 617 York Street, Hastings.4201  
**ZL4TIZ** Thomson, A. A., 3 Shirley Place, Dunedin.9001  
**ZL4TJA** Boshier, S. W., 14 Pethig Place, Christchurch.8003  
**ZL4TJB** McCall, D. A., c/- A. G. McCall, 42 Filleul Street, Invercargill.9501  
**ZL4TJC** Cavanagh, D. B., 74 Koa Street, Gore.9700  
**ZL4TJD** Williamson, P. B. A., Flat G, Austen Court, 82 Forth Street, Dunedin.9001  
**ZL4TJE** Townsend, A. A., 179 Newlands Road, Newlands, Wellington.6004  
**ZL4TJH** Balch, R. M., 23 Connell Street, Dunedin.9001  
**ZL4TJJ** Meyer, L., 43 Arawa Street, Dunedin.9001  
**ZL4TJK** King, A. E. J., Kaka Point, R.D. 1, Balclutha.9200  
**ZL4TJL** Maley, G. K., 127 Ritchie Street, Invercargill.9501  
**ZL4TJM** Fleury, B. R., 30 Ventnor Street, Dunedin.9001  
**ZL4TJN** Peirson, J. R. W., 34 Gladstone Road, Dunedin.9001  
**ZL4TJO** Blair, J. G. H., 5 Merrie Creek Road, Clinton.9251  
**ZL4TJP** Askin, F. A., Neath Street, Moeraki.8950  
**ZL4TJR** Smither, M. E., 210 Brockville Road, Dunedin.9001  
**ZL4TJS** Holland, B. J., c/- Police Station, Waikari.8276  
**ZL4TJT** Holland, J. P., Otago Yacht Club, Dunedin.9001

**ZL4TJW** Anderson, R. J., 3 Cross Street, Oamaru.8901  
**ZL4TJX** Nicholls, M. A., 12 Salisbury Road, Richmond, Nelson.7002  
**ZL4TJY** Currie, M. R., 15 Ferry Street, Wyndham.9758  
**ZL4TJZ** Taylor, A. J., 75 Eddystone Street, Kaitangata.9253  
**ZL4TKC** Greenwood, T. N., Marama Avenue South, Otatara, R.D. 9, Invercargill.9521  
**ZL4TKD** Anderson, M. L., 141 Catherine Street, Invercargill.9501  
**ZL4TKF** Kent, A. W., 101 Richmond Street, Petone, Wellington.6303  
**ZL4TKH** Turner, K. F. M., "Waimatuku", 8 R.D., Invercargill.9521  
**ZL4TKK** Spence, R. W., 343 Herbert Street, Invercargill.9501  
**ZL4TKM** Mitchell, G. D., 19 Ascog Road, Ravensbourne, Dunedin.9002  
**ZL4TKN** Harvey, B. J., 26 Carson Street, Morningside, Dunedin.9001  
**ZL4TKP** Hogg, G. M., 6 Michie Street, Bellknowes, Dunedin.9001  
**ZL4TKQ** Tamplin, N. L. A., 58 Cooper Street, Karori, Wellington.6005  
**ZL4TKS** Mason, E. C., 16 John Street, Ranfurly.9171  
**ZL4TKT** Doak, N. L., 205 Princes Street, Invercargill.9501  
**ZL4TKU** McLean, G. W., 102 Ravelston Street, Dunedin.9001  
**ZL4TKZ** Austin, T. D., 19 Flagstaff Road, Bluff.9503  
**ZL4TLA** MacArthur, P. J., 52 Salmond Street, Dunedin.9001  
**ZL4TLB** Rae, B. G., 8 Brent Street, Dunedin.9001  
**ZL4TLC** Brundell, J. B., 164 Gladstone Road, Mosgiel.9007  
**ZL4TLD** Dunn, G. G., 27 Northfield Avenue, Dunedin.9001  
**ZL4TLE** Elliott, L. G., 36a Murano Street, Dunedin.9001  
**ZL4TLF** Osborne, K. F., Milburne, R.D., Milton.9254  
**ZL4TLG** McConechy, G. S., 71 Heywood Street, Invercargill.9501  
**ZL4TLI** Wright, D. W., 309 Talbot Street, Invercargill.9501  
**ZL4TLK** Mathews, T. L., Main Road, Mokotua R.D. 1, Invercargill.9521  
**ZL4TLL** Blair, R. C. W., Taumata, R.D., Clinton.9251  
**ZL4TLN** Taylor, B. H., 75 Eddystone Street, Kaitangata.9253

## New Zealand Radio Frequency Service Offices

● All amateur radio licencing matters.

Office	Delivery Address	Postal Address	Telephone No
Head Office	Ministry of Commerce Building, 33 Bowen Street, WELLINGTON	P.O. Box 2847	(04) 732-200
Whangarei	National Mutual Building, Rathbone Street, WHANGAREI	P.O. Box 449	(089) 488-491
Auckland	Altos House, Cnr Newton Road and Abbey Street, Newton, AUCKLAND	P.O. Box 68-217	(09) 788-537
Hamilton	512 Grey Street, HAMILTON	P.O. Box 982	(071) 387-150
Tauranga	Departmental Building, McLean Street, TAURANGA	P.O. Box 847	(075) 799-229
Rotorua	Government Life Building, 9 Haupapa Street, ROTORUA	P.O. Box 847	(073) 460-370
Gisborne	New Zealand Post Building, Grey Street, GISBORNE	P.O. Box 339	(079) 78-424
Napier	First Floor, Manchester Unity Building Cnr Kennedy Road and Nuffield Avenue, Marewa, NAPIER	P.O. Box 4162 Marewa	(070) 435-829
New Plymouth	Cnr Liardet and Pendarves Streets, NEW PLYMOUTH	P.O. Box 217	(067) 88-139
Palmerston North	First Floor, 328-330 Broadway Avenue, PALMERSTON NORTH	P.O. Box 5063	(063) 66-710
Wellington	70 Bloomfield Terrace, LOWER HUTT	P.O. Box 31-433	(04) 665-537
Nelson	First floor, Farm Products, 42 Halifax Street, NELSON	P.O. Box 997	(054) 82-446
Greymouth	Post Office Building, Tainui Street, GREYMOUTH	P.O. Box 442	(027) 80-312
Christchurch	St. Elmo Courts, 47 Hereford Street, CHRISTCHURCH	P.O. Box 1800	(03) 654-401
Timaru	Room 102, First Floor, Railway Station, Station Street, TIMARU	P.O. Box 589	(056) 48-120
Dunedin	12 Hanover Street, DUNEDIN	P.O. Box 5647 MORAY PLACE	(024) 771-125
Invercargill	Post Office Building, 13 Esk Street, INVERCARGILL	P.O. Box 247	(021) 44-952



# New Zealand Dependencies

## ZL5, 6, 7, 8, 9, 0

### ZL5

#### Antarctica

ZL5ATP Pringle, A. T., C/- DSIR, Scott Base, Antarctica.

### ZL6

#### NZART

ZL6A New Zealand Association of Radio Transmitters (Inc.), PO Box 40-525, Upper Hutt.  
ZL6E AREC Master Station.  
ZL6IW NZART Monitoring Service, C/- R. E. Knowles ZL1BAD, Onewhero, RD 2, Tuakau.

### ZL7

#### Chatham Islands

ZL7TZ Rio, N. N., Tuku Road, Waitangi.  
ZL7BJE Day, S. M., PO Box 175, Waitangi.  
ZL7NAA Wyld, J., "Glory", Pitt Island.  
ZL7TKI Sanson, I. M., PO Box 65, Waitangi.  
ZL7TPP Locke, S., Radio Station, Waitangi.

### ZL8

#### Kermadec Islands

### ZL9

#### Auckland and Campbell Islands

### ZL0

#### Overseas Visitors

ZL0...

## South Pacific Amateur Radio Listings

### Tonga

A35AA Straw, C. M., Paradise Hotel, Vava'u.  
A35AI Macgillivray, Alastair J., PO Box 15, Nuku'alofa.  
A35AR Doi, Y., Kimiko Guest House.  
A35BG Tapio, B. R., Phoenix Motel.  
A35CE Moehring, H., Beach House.  
A35CH Hohenwallner, Ing. C., Kimiko Guest House, Nuku'alofa.  
A35CX Johnson, W. A., PO Box 263, Nuku'alofa.  
A35DM Martens, D., Yacht *Hic*.  
A35DP Nakamata, T., Kimiko Guest House.  
A35DX Peter, H., Beach House Nuku'alofa.  
A35EK Kusterer, M. E., MV *Doulos*.  
A35EM Toyofuku, S., Kimiko Guest House.  
A35HK Kitayama, H., Kimiko Guest House.  
A35HN Hama Na'ati (President), PO Box 46, Nuku'alofa.  
A35IC Miyazaki, J., Kimiko Guest House.  
A35JZ Zinsmeyer, J. M., Yacht *Menchune*.  
A35KB Burke, K., Longoteme, PO Box 1.  
A35KD Orlosky, K. T., Nuku'alofa.  
A35KG Gerhard, K., Sopa, Nuku'alofa.  
A35KH Klaas, H., MV *Doulos*.  
A35LF Lemeki, Malu, PO Box 46, Nuku'alofa.  
A35LM Macmillan, L. A., 15 Godden Crescent, Mission Bay, Auckland.  
A35MB Burch, M. A., Yacht *Ngaio*.  
A35ML Lehtosaari, M., Ramanlal Hotel.  
A35MP Potts, M. D., PO Box 30, Neiafu, Vava'u.  
A35MR Smith, J. B., Yacht *M. Reef*.  
A35MS Schuster, Manfred, (Secretary), Tofoa Tongatapu.  
A35OQ Nordlund, L. E., Hill Top Hotel, Vava'u.  
A35PL Schwarzkredl, P., Paradise Hotel, Vava'u.  
A35RV Munt, Robert B., Nuku'alofa.  
A35RW Weaver, R. G., Dateline Hotel, Nuku'alofa.  
A35SA Moore, R. J. (Treasurer), Nuku'alofa.  
A35SK Thunstrom, Alf, R., Nelafo Vava'u.  
A35ST Thompson, S. J., Yacht *Cannille*.  
A35UF Schmidt, U., Beach House.  
A35VB Ilmari, N. V., Phoenix Motel.  
A35VZ Zinsmeyer, V. J., Yacht *Menchune*.  
A35WI Cartwright, C. C., Nuku'alofa.  
A35WR Rogan, Warren R., Vessel *Antares*.  
A35XX Brenner, W., Friendly Island Motel.  
A35YO Hashimoto Yoji, Kimiko Guest House.

### Cook Islands

ZK1AA Kingan, S., PO Box 66, Rarotonga.  
ZK1AD Dean, A., PO Box 259, Rarotonga.  
ZK1AH Hosking, A. V., PO Box 459, Rarotonga.

ZK1AN Davis, Sir Thomas, PO Box 116, Rarotonga.  
ZK1AQ Malcolm, R., Atiu Island.  
ZK1AR Darling, R. S., Rarotonga.  
ZK1BB Cook Islands Boys Brigade, C/- ZK1AD, PO Box 259, Rarotonga.

ZL1BP Savage H., PO Box 168, Rarotonga.  
ZK1BS Boy Scouts, PO Box 120, Rarotonga.  
ZK1BW Walters, B., Tupapa, Rarotonga.  
ZK1CG Rivera, V., PO Box 618, Rarotonga.  
ZK1CI Cook Islands Amateur Radio Club, PO Box 277, Rarotonga.

ZK1CL Scheel, K. E., Titikaveka, Rarotonga.  
ZK1CP Utanga, T., PO Box 98, Rarotonga.  
ZK1CQ Wright, R., QSL via ZL1AMO.  
ZK1CS Swaboda, W., PO Box 19, Rarotonga.  
ZK1CT Guinea, Dr A., Mauke Island, CI.  
ZK1CX Pearson, N., PO Box 15, Rarotonga.  
ZK1CY Tupou, T., PO Box 209, Rarotonga.  
ZK1DB Gibbons, A., PO Box 277, Rarotonga.  
ZK1DD Clarke, D. J., Aitutaki Island, CI.  
ZK1DG Godger, J., Rarotonga.  
ZK1DQ Lang, B., Rarotonga.  
ZK1MA Tupou, T., C/- ZK1CY, Rarotonga.  
ZK1MG Gladding, M., PO Box 709, Rarotonga.  
ZK1NT Tangaroa, N., PO Box 126, Rarotonga.  
ZK1RS Sutton, J. R., Rarotonga.  
ZK1TB Wilhelm, L. L., W7TB, USA.  
ZK1TW Wichman, T., PO Box 129, Rarotonga.  
ZK1WL Latham, W., Penrhyn Island, CI.

### Fiji

3D2AA Aisake, A., PO Box 4969, Suva.  
3D2AG de Ramon, A., PO Box 14633, Suva.  
3D2AJ McIssac, A. J., PO Box 425, Suva.  
3D2AN Wooler, M. J., St Johns College, Cawaci, Levuka.  
3D2BC Caldwell, B. K., PO Box 15349, Suva.  
3D2CC Carter, T. F., Muscat Cove Resort.  
3D2CM Northcott, R. L., PO Box 1168, Suva.  
3D2CS Broadbridge, E. K., PO Box 1046, Suva.  
3D2CT Jinenez, C. T., PO Box 567, Suva.  
3D2DB Banks, D. D., PO Box 13884, Suva.  
3D2DM Meyers, D. D., PO Box 184, Suva.  
3D2DW Olley, D. W. W., PO Box 238, Suva.  
3D2EC Corner, R. E., Wakaya Island.  
3D2ER Singh, Raj, GPO Box 184, Suva.  
3D2ES Saphore, E., UN Mineral Res. Dept., Suva.  
3D2FK Kloss, F. R., PO Matei, Taveuni.  
3D2GH George, J. H., PO Box 3126, Lami.  
3D2GR Clark, G. R., Private Mailbag, Nadi Airport.



3D2JC Caldwell, J. D., PO Box 184, Suva.  
 3D2JO Turaganivalu, J., 14 Alexander Street, Suva.  
 3D2JN Nicol, J. W., Westpac, Suva.  
 3D2MP Prakash, M., PO Box 5324, Raiwaqa.  
 3D2MR Mar, G., PO Box 271, Suva.  
 3D2NB Harding, F. W., Carpenters Shipping, Suva.  
 3D2PO Doncaster, N. I. C., PO Box 184, Suva.  
 3D2PS Schulz, A. F. P., PO Box 5372, Raiwaqa.  
 3D2RA Allan, P. R., PO Box 631, Suva.  
 3D2RP Prasad, R., PO Box 1267, Labasa, Fiji Islands.  
 3D2SS First Suva Scout Group, Box 2344, Government Buildings, Suva.  
 3D2UR USP Amateur Radio Club, Box 1168, Suva.

## Niue

ZK2GJ Jackson, G., PO Box 37, Niue Island.  
 ZK2JD Duncan, J., PO Box 37, Niue Island.  
 ZK2JT Thompson, J. J., PO Box 37, Niue Island.

## Vanuatu (no update received for 1990)

YJ8AA Tsuda, Y., C/- PO Box 665, Port Vila, Efate Island.  
 YJ8AP Poulet, A., C/- PO Box 665, Port Vila, Efate Island.  
 YJ8DE Discombe, R., PO Box 56, Port Vila, Efate Island.  
 YJ8DX Vanuatu Amateur Radio Society, Vila Club, PO Box 665, Port Vila, Efate Island.  
 YJ8EK Kumon, E., PO Box 1016, Port Vila, Efate Island.  
 YJ8ES Vanuatu Amateur Radio Society, Santo Club, C/- VARS, PO Box 665, Port Vila, Efate Island.  
 YJ8FB Beardsley, F., PO Box 16, Port Vila, Efate Island.  
 YJ8GG Grilhault des Fontains, G., PRV, Malekula.  
 YJ8GK Kumon, G., PO Box 1016, Port Vila, Efate Island.  
 YJ8GP Pearl, S., PO Box 623, Port Vila, Efate Island.  
 YJ8IND Independence Day (Special Event), C/- VARS, PO Box 665, Port Vila, Efate Island.  
 YJ8JS Shackley, N. J., C/- PO Box 665, Port Vila, Efate Island.  
 YJ8JT Laille, G., PO Box 423, Port Vila, Efate Island.  
 YJ8KB Barlow, A. K., PO Box 730, Port Vila, Efate Island.  
 YJ8MC Mariello, M., C/- PO Box 665, Port Vila, Efate Island.  
 YJ8NBA Armstrong, B., PO Box 873, Port Vila, Efate Island.  
 YJ8NCF Foote, C. L., PO Box 14, Luganville, Espiritu Santo.  
 YJ8NJW Watson, J. E., PO Box 683, Port Vila, Efate Island.  
 YJ8NRL Leong, R., PO Box 50, Port Vila, Efate Island.  
 YJ8NRM MacDonald, R., PO Box 535, Port Vila, Efate Island.  
 YJ8NRN Newell, R. S., C/- PO Box 665, Port Vila, Efate Island.  
 YJ8OK Watson, T. L., PO Box 683, Port Vila, Efate Island.  
 YJ8YS Yatuka, S., C/- PO Box 665, Port Vila, Efate Island.

## Solomon Islands

H44GP Pearson, G., PO Box 292, Honiara.  
 H44GR Richardson, G., PO Box 127, Honiara.  
 H44MB Bowman (Capt.), M., PO Box G32, Honiara.  
 H44RA Alexander, R., PO Box 332, Honiara.  
 H44SH Honeysett, S., PO Box 620, Honiara.  
 H44SI Solomon Island Radio Society, PO Box 418, Honiara.

## New Caledonia

FK0BE Galineau, Charles, Caserne Normandie, Box 12, Noumea.  
 FK0BH Simplot, Patrick, Box 4681, Noumea.  
 FK0BI Aime, Georges, Caserne Normandie, Box 12, Noumea.  
 FK0BJ Cannell, Bernard, Caserne Meunier, Box 12, Noumea.  
 FK0BK Martin-Latour, Yves, Box 301, Tontouta.  
 FK0BL Rysdyk, Peter, C/- Follenfant, Box 2, Ile des Pins.  
 FK0BM Barbaza, Jean, 138 Rue de l'Anse Vata, Noumea.  
 FK0BN Bernard, Philippe, Box 257, La Foa.  
 FK0BO Cazenueve, Bernard, Box 12, Noumea.  
 FK1RF Chardola, Jean-Claude, Box 3111, Noumea.  
 FK1RI Kryger, Monique, 21 rue Charbonneau, Noumea.  
 FK1RK Amal, Gerard, 30 rue E. Sphar, Noumea.  
 FK1RN Hervais, Francisque, 36 Lot Lafleur Nondoue, Dumbéa.  
 FK1RO Szymanski, Pascal, 193 RT 13, Box 544, Noumea.  
 FK1RP Roussel, Jean-Yves, 2 rue Sirius, Noumea.  
 FK1RR Miossec, Gil, 19 rue Janisel, Noumea.  
 FK1RS Gallois, Jean-Pierre, 7 rue Calimbro, Noumea.  
 FK1RU Mignot, Jean-Pierre, Box 90, Bourail.  
 FK1RX Ollivaud, Jean-Yves, 59 rue G. Laroque, Noumea.  
 FK1RY Devaut, Christian, Box 1260, Noumea.  
 FK1SA Chevalier, Jacques, 70 rue G. Laroque, Noumea.  
 FK1SC Fere, Gaetane, 8 rue du Jura, Noumea.  
 FK1SF Limousin, Claude, 18 rue Bouquet de la Cyre, Noumea.  
 FK1SG Forzy, Michael, 27 rue de la Gazelle, Noumea.  
 FK1SU Esposito, Eric, 4 rue Ronsard, Box 4480, Noumea.

FK1TG Roussel, Odile, Hauts du Val Plaisance, Noumea.  
 FK1TK Rainer, Henri, 190 rue Boutmy, Box 4608, Noumea.  
 FK1TS Hardstaff, Phillip, Box 3956, Noumea.  
 FK8AF Guerlain, Georges, Ouenghi, Bouloupari.  
 FK8AH Garbe, Robert, Box 4490, Noumea.  
 FK8AL Garbe, Jean, Box 3994, Noumea.  
 FK8AS Poulet, Achille, Port Vila, Vanuatu.  
 FK8AV Schuppe, Henri, Papeete, Tahiti.  
 FK8AX Lesueur, Henri, Box 541, Noumea.  
 FK8AY Thomas, Daniel, Box 1960, Noumea.  
 FK8BC Thomas, Henry, Box 637, Noumea.  
 FK8BG Cullell, Gilbert, QSL to F6EWK.  
 FK8BK Houdart, Louis, Box G 5, Noumea, Cedex.  
 FK8BR Ynel-Mine, Maurice, Pouembout.  
 FK8BT Perrier, Roger, Box 3956, Noumea.  
 FK8CC Deramane, Simon, 88 bis rue de Papeete, Noumea.  
 FK8CE Hoarau, Dominique, Box 138, Bourail.  
 FK8CI Chambon, Pierre, "Les Niaux", 11 Saint Michel.  
 FK8CL Etienne Stanislas, Box 643, Boulari.  
 FK8CP Touzard, Remi, Box 945, Noumea.  
 FK8CQ Naser, Louis, Box 6304, Noumea.  
 FK8CR Szymanski, Eddy, QSL via F6EWK.  
 FK8CW Pihahuna, William, Box 3286, Noumea.  
 FK8DD Torope, Samuel, Box 3040, Noumea.  
 FK8DI Rabu, Dominique, 5 rue C. Savoie, Noumea.  
 FK8DJ Kryger, Jean-Claude, 21 rue Charbonneau, Noumea.  
 FK8DK Florentin, Maurice, Box A 1, Noumea, Cedex.  
 FK8DL Roussel, Jean-Claude, Hauts du Val Plaisance, Noumea.  
 FK8DM Thouyay, Gilles, Box 2016, Noumea.  
 FK8DS Grilhault des Fontaines, Gabriel, Box 1197, Noumea.  
 FK8DU Valadier, Jean, Box 9, Tontouta.  
 FK8DX Marc, Joel, 38 rue de Verdun, Noumea.  
 FK8DZ Rivalon, Luc, 29 rue Testard, Noumea.  
 FK8EA Moncomble, Gerard, Box A 1, Noumea, Cedex.  
 FK8EB Pesnel, Henri, 30 ave Michel Ange, Noumea.  
 FK8ED Martel, Alain/Gisele, Box 4681, Noumea.  
 FK8EF Martin, Arsene, Box 3519, Noumea.  
 FK8EG Rozier, Jean, Box 71, Tontouta.  
 FK8EH Ollivaud, Francois, Box 4202, Noumea.  
 FK8EI Cardona, Jean-Jacques, Box 2749, Noumea.  
 FK8EJ Lung Fong, Bernard, Box 672, Noumea.  
 FK8EL Bon, Ovide, 9 rue des Freres Arthur, Noumea.  
 FK8EM Wagner, Pierre, 68 rue de 24 Septembre, Noumea.  
 FK8EN Baldi, Joseph, 21 bis rue de Verteuil, Noumea.  
 FK8EO Routier, Richard, 131 RT 13, Noumea.  
 FK8EP Thevenet, Jean, Box 1980, Noumea.  
 FK8EQ Bougel, Emile, 37 rue Jules Verne, Noumea.  
 FK8ES Beaulis, Gilbert, Lot 432 Koutio, Dumbéa.  
 FK8ET Duferron, Jean-Michel, Box 3859, Noumea.  
 FK8EV Juncas, Jacques, Internat, Kone.  
 FK8EW Leperlier, Karl, 6 rue du Collier Blanc, Noumea.  
 FK8EX Lesaulnier, Rene, 131 route de l'Anse Vata, Noumea.  
 FK8EY D'Hollande, Eugene, Box 2233, Noumea.  
 FK8EZ Menard, Raymond, 40 rue Louis Catalan, Noumea.  
 FK8FA Tuband, Aimee, Box 447, Mont Dore.  
 FK8FB Debien, Lionel, Box 428, Noumea.  
 FK8FC Tourette Michel, Box 2309, Noumea.  
 FK8FE Vele, Jean-Marc, Box 4696, Noumea.  
 FK8FF Eschembrenner, Guy, Box 3956, Noumea.  
 FK8FG Le Pelletier, Bernard, Box 6258, Noumea.  
 FK8FH Cornaille, Alain, Box 3204, Noumea.  
 FK8FI Nagle, Alain, Box 136, La Foa.  
 FK8FK Torregrossa, Jean-Philippe, Box 8485, Noumea.  
 FK8FL Gazengel, Albert, Box 4561, Noumea.  
 FK8FM Demene, Thierry, Box 3956, Noumea.  
 FK8FO Chanaron, Jean-Paul, Box 7133, Noumea.  
 FK8FP Lesca, Pierre, Box A 2, Noumea, Cedex.  
 FK8FQ Moreau, Jean-Claude, Box 3956, Noumea.  
 FK8FR Nixon, John, Box 65, Noumea.  
 FK8FS Todori, Georges, Box 3956, Noumea.  
 FK8FT Bertolino, Henri, Box 135, Païta.  
 FK8FU Moutaigne, Daniel, QSL via NA5U.  
 FK8FV Estienne, Daniel, 79 rue de Sebastopol, Noumea.  
 FK8FW Coutant, Gerard, 2 rue J. Jugan, Noumea.  
 FK8FX Mercier, Yvon, Box J 4, Noumea, Cedex.  
 FK8FY Nicolas, Jean-Claude, Box 1527, Noumea.  
 FK8FZ Blanchet, Yves, 35 rue Alfred de Vigny, Noumea.  
 FK8GA Andrea, Georges, 8 rue du Jura, VDC, Noumea.  
 FK8GB Soares, Antonio, Box 3125, Noumea.  
 FK8GC Berniere, Charles, 16 rue Felix Broche, Noumea.  
 FK8GD Faura, Patrice, Bat F2 rue 18 Juin Magenta, Noumea.  
 FK8GF Millot, Alexandre, Box 3977, Noumea.  
 FK8GG Ambrogio, Francois, Box 344, Noumea.  
 FK8GH Lebiez, Jean-Louis, Box 1094, Noumea.  
 FK8GI Lebiez, Françoise, Box 1094, Noumea.  
 FK8GJ Bourez, Marc, QSL via F6CXJ.



# COMMUNICATION



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NATIONAL RETAIL DISPLAY - COM-CENTRE, AUCKLAND. PHONE (09) 673-213, OR YOUR LOCAL YAESU DEALER



# NZART Non-Transmitting Members

as at February 22, 1990

Armstrong, K. M., ZL1315, P.O.Box 209, Kawerau.3452

Bahniuk, P., 16 Armidale Street, Petone.6303  
Beck, W. R., 15 Napier Terrace, Napier.4001  
Biggelaar, P. J., c/- P.D.C., Post Office, Parakai.1450  
Bilby, D. F., ZL2310, 3 Kiwi Road, Raumati Beach.6150  
Bilton, R. C., ZL1221, 17 Brydon Place, Avondale, Auckland.1207  
Bocock, J. W., 64 Uxbridge Road, Howick.1705  
Booth, G. D., ZL485, 10 Harvey Terrace, Balclutha.9200  
Brenchley, G. C., 58 Diaz Drive, Flaxmere, Hastings.4201  
Brown, J. A., 17 McLintock Street, Johnsonville, Wellington.6004

Carran, P. S., 50 Bengal Drive, Christchurch.8002  
Carrell, S. J., 33 Ryeland Avenue, Christchurch.8004  
Carrell, T. R., 33 Ryeland Avenue, Christchurch.8004  
Carter, R. D., 31 Tongariro Street, Hamilton.2001  
Cassie, A. F., 68 Oriol Avenue, Tawa.6203  
Cook, R., 29 Ascot Terrace, Thorndon, Wellington.6001  
Couchman, J. N., P.O.Box 319, Palmerston North.5300

Dawson, S. F., 23 Ansonby Street, Avonhead, Christchurch.8004  
Dent, P. W., 6 Mathew Place, Whangarei.0101  
Donaldson, M. H., P.O.Box 899, Papakura.1733  
Duran, R. A., 3/130 Kohimarama Road, Auckland, P.O.Box 25-130, St Heliers, Auckland.1130

Ellis, G. P., ZL364, 74 Le Cren Street, Timaru.8601  
Ensor, M., 84 Wheturangi Road, One Tree Hill, Auckland.1105  
Etèveaux, G., ZL2236, 8 Clematis Grove, Lower Hutt.6301  
Eustace, R. W., 19 Rapakai Street, R.D.11, Turakina Beach.5152  
Evans, A., ZL1298, P.O.Box 164, Matamata.2271

Farrow, J., ZL202, 25 Wai-iti Crescent, Lower Hutt.6301  
Feldon, D. C., ZL2269, 5 Memphis Place, Rotorua.3201  
Ferguson, K. D., 3 Grove Lane, Pakuranga.1706  
Fluerty, R. M., 24 The Sounding, Whitby.6251  
France, R. E., 3 Muir Street, Green Island, Dunedin.9006  
Fraser, P. J., 128 Totara Drive, Hamilton.2001  
Freeth, V., P.O.Box 66-029, Beach Haven, Auckland.1330  
Fryer, R. J., 10 Mahana Road, Paraparaumu.6153

Gaudin, D. A. J., 18 Trafalgar Street, New Plymouth.4601  
Gee, D. M., ZL139, 5 Rhodes Avenue, Mt Albert, Auckland.1003  
George, S. B., 6 Seymour Street, Waitara.4656  
Gordon, M. J., 80 Bridge Street, South Brighton, Christchurch.8007  
Gorman, J. G., ZL1269, 15 Clark Road, Papakura, Auckland.1703  
Gray, J. S. H., 336 Sunset Road, Rotorua.3201  
Gray, K. A., 7 Haunui Road, Pukerua Bay.6252  
Grey, G. J., ZL2257, 17 Kitchener Terrace, Raroa, Johnsonville.6004  
Gullett, I. W., 55b Kings Avenue, Wanganui.5001  
Gusscott, N., ZL2266, 4 Penrose Street, Lower Hutt.6301

Haines, C. A., ZL4113, 37 Wairoa Street, Dunedin.9001  
Hansen, J., P.O.Box 39, Swanson.1230  
Hardy, C. J., ZL2316, 55 Kakariki Grove, Waikanae.6154  
Hardy, D. R. T., ZL2315, 55 Kakariki Grove, Waikanae.6154  
Hardy, P. W. T., ZL2314, 55 Kakariki Grove, Waikanae.6154  
Harper, E. J., 233 The Esplanade, Petone.6303  
Hastings, A. W. A., P.O.Box 10-219, The Terrace, Wellington.6036  
Hellberg, D. J., Norfolk Road, R.D.1, Carterton.5951  
Holdaway, R. S., 6 Beechwood Close, Paraparaumu Beach.6153  
Hull, O. R., c/- 12 Grainger Road, Te Atatu, Auckland.1208  
Hunter, G. R. K., 145 Mellons Bay Road, Howick.1705  
Hutchinson, G. J., Eltham Road, R.D.32, Opunake.4653  
Hutton, W., 26 Cedar Drive, Kelvin Heights, R.D.2, Queenstown.9692

Jamieson, J. W., P.O.Box 5, Dannevirke.5491  
Jennings, B. F., 10 William Street, Whangarei.0101  
Johnson, R. A., ZL2217, Cliff Road, R.D.1, Marton.5151  
Jury, T. R., 24 Stephens Crescent, Palmerston North.5301

Kelly, R. A., 53 Fairview Crescent, Kelburn, Wellington.6005  
Killick, R. F., 67 Dunbars Road, Halswell, Christchurch.8003  
King, B. R., 36 Flaxdale Street, Birkdale, Auckland.1310

Lake, S., 686 Remuera Road, Remuera, Auckland.1105  
Lamberton, J. J., 97 Lynn Road, Glenfield, Auckland.1310  
Lambeth, F. R., 24 Marslin Street, Alexandra.9181  
Lawn, B. A., 29a Brecon Road, Stratford.4700  
Lee, J. W., 48 Tinirau Street, Wanganui.5001  
Lee, I. K. M., 11 Knigges Avenue, Wellington.6001  
Levin, C. G. W., R.D.9, Palmerston North.5321  
Luxton, L. F., "Ahura", 3 Luxton Place, Christchurch.8008

McAnulty, G. B., 1 Landsdowne Crescent, Maslerton.5901  
McCallum, I. B., 146 Winara Avenue, Waikanae.6154  
McIntyre, J. S., 27 Albert Street, Island Bay, Wellington.6002  
McNickle, R. G., 1 Cedar Place, New Plymouth.4601  
MacPherson, G. D., 27 Dunbarton Street, Redwood, Christchurch.8005

Marshall, D. W., 7 Cobden Lane, Napier.4001  
Meikle, R. C., 32 Raroa Terrace, R.D. Oratia, Auckland.1230  
Midwinter, G. G., 473 Ruahine Street, Palmerston North.5301  
Milne, A. C., 111 Essex Street, Masterton.5901  
Mitchell, M. D., ZL1248, P.O.Box 13-501, Onehunga, Auckland.1132  
Moore, J. R., 4a Eliot Street, New Plymouth.4601  
Moss, R. V., ZL2196, 19 Mysore Street, Khandallah, Wellington.6004

Nisbet, A. C., c/- Data Bank Systems, P.O.Box 3647, Wellington.6000

Orchard, P. N., 92 Springs Road, Hornby, Christchurch.8004

Park, R. A., ZL2259, P.O.Box 30-152, Lower Hutt.6300  
Parsons, C., 44 Yearsley Place, Manurewa, Auckland.1702  
Pawson, S. R., P.O.Box 186, Masterton.5900  
Pearce, Z. M., ZL2129, 17 Lake Ferry Road, R.D.2, Featherston.5952  
Poletti, N. R., 186 Normandale Road, Lower Hutt.6301  
Powe, S. E., Killinchy, R.D., Leeston.8151  
Pye, E., ZL2163, 33 Wyndham Road, Pinehaven, Upper Hutt.6402  
Pye, J., ZL2162, 33 Wyndham Road, Pinehaven, Upper Hutt.6402

Rait, I. C., ZL4115, "Longwood", R.D.1, Riverton.9654  
Rait, S. M., ZL498, "Longwood", R.D.1, Riverton.9654  
Reeves, L. J., 75 Banks Road, Mt Wellington, Auckland.1106  
Richards, P. D., 26 Malcolm Avenue, Christchurch.8002  
Robertson, J. H., Blackmount Station, R.D.2, Otautau.9653  
Robinson, J. P., 6 Northview Crescent, Dunedin.9001  
Roylands, D. M., Landsroy Poultry Farm, Ohariu Valley, Johnsonville, Wellington.6004  
Russell, R. D., 54 George Street, Blenheim.7301

Seufert, J. A., 1a Panama Court, Orewa.1461  
Stone, E. T. G., 45 Longburn Road, Henderson, Auckland.1208  
Sutton, G. A., Dunn Road, Ararimu, R.D.3, Drury.1752  
Sutton, R. L., P.O.Box 22-011, Khandallah, Wellington.6030  
Sykes, J. W. A., 38b Clark Road, Kamo, Whangarei.0101  
Swain, P. J., 29 Shackle Lane, Whitby, Wellington.6253

Thirkettle, R. J., ZL3126, 206 Strickland Street, Christchurch.8002  
Thomas, R., ZL136, 2 Matai Avenue, Matamata.2271  
Thomson, B. D., ZL149, 14 Puriri Street, Kamo, Northland.0101  
Treanary, G. A., ZL3112, 48 Mathers Road, Christchurch.8002  
Tucker, L. A. M., 407 Cameron Road, Tauranga.3001

Wallace, B. R., 20 Lorne Street, Hamilton.2001  
Webb, B. D., ZL2262, 71 Hillside Drive, Upper Hutt.6401  
Webb, W. R. C., 13 Rembrandt Avenue, Linden.6203  
Wiggins, F. G., ZL1306, 12 Windsor Street, Tokoroa.2392  
Wilkinson, B. C., P.O.Box 64, Kawerau.3452



# NZART Overseas Members

as at February 22, 1990

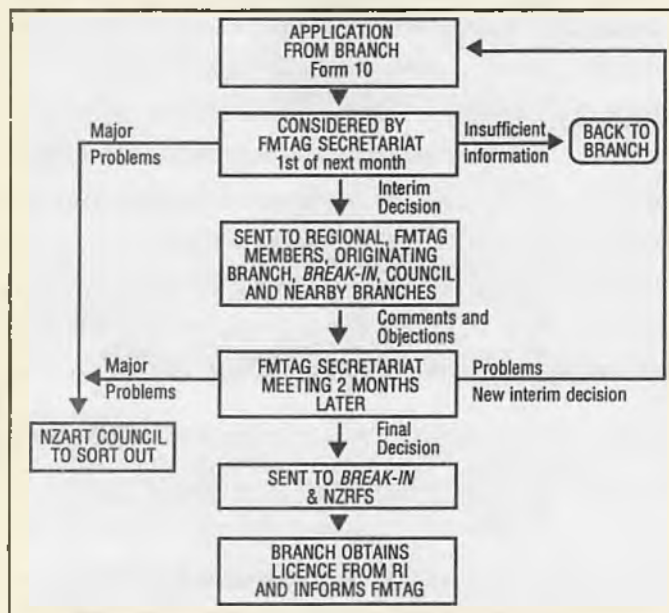
- Aarsse, A. J., VK4QA, P.O.Box 211, Nambour, Queensland 4560, Australia.
- Allaway, E. J., G3FKM, 10 Knightlow Road, Birmingham, B17 8QB, England.
- Allen, G. P., W3RLA, 7 Hilldale Circle, Lansdowne, PA 19050, USA
- Barrington, R. K., VK2DOV, 37 Oatley Park Avenue, Oatley, NSW 2223, Australia.
- Boe, T., N/Keisermark 15, N-3190 Horten, Norway.
- Bowman, H. N., 20 Hazelgrove, Gateshead NE10 8DP, Tyne and Wear, United Kingdom.
- Broadbridge, E. K., 3D2CS, c/- P.O.Box 1046, Suva, Fiji.
- Brook, R. L., VK2AI, P.O.Box 148, Gosford, NSW 2250, Australia.
- Bruyne, W., PA3BLL, Marshallplein 26, 2286LM Ryswyk ZH, The Netherlands.
- Campbell, A., GM3VAR, 2 Dunlin Crescent, Houston, PA6 7GX, Scotland.
- Chatfield, D. J., ZL1BPZ, P.O.Box 98, Mt Tamborine, QLD 4272, Australia.
- Clarke, B. S., VK5BS, 17 Sycamore Avenue, Novar Gardens, SA 5040, Australia.
- Clarke, D. J., ZK1DD, P.O.Box 10, Aitutaki Island, South Cook Islands.
- Cooksley, G., VK2FNB, P.O.Box 175, Tamworth, NSW 2340, Australia.
- Couch, D., VK6WT, 9 The Grove, Wembley, WA 6014, Australia.
- Creasy, S. C., ZL1BH, Tyburn House, Sha Ha, Sai Kung, NT, Hong Kong.
- Cruden, M. C., VK2ASC, 9 Nioka Road, Narrabeen, NSW 2101, Australia.
- Cunliffe, R., GOHVJ, 2 Elizabeth House, Didsbury Road, Stockport, SK4 2AY, England.
- Curling, L. K., VK3NM, 18 Lexington Street, Vermont, VIC 3133, Australia.
- Discombe, R., YJ8DE, P.O.Box 56, Port Vila, Efate Island, Vanuatu.
- Donovan, G. J., ZL2ADG, c/- Royal Brunei Airlines, P.O.Box 737, Bandar Seri, Begawan, Brunei.
- Edward, R. D., VK6AOK, 13 Broome Street, Nedlands, WA 6009, Australia.
- Egan, P. D., ZL3TNE, c/- TCB-Ibrahim Sdn Bhd, P.O.Box 2720, Bandar Seri, Begawan 1927, Brunei Darussalam.
- Fraser, B. H., ZL3FZ, Route 3, Box 3455, Orland, CA 95963, USA.
- Gaizatu, M., P.O.Box 5498, Tokyo International, 100-31, Japan.
- Garrod, J., VK2EHM, ZL2BMO, P.O.Box 5229, Bundaberg, Queensland 4670, Australia.
- Gooday, J. D., 12 Marlborough Hall, 4 Ward Avenue, Potts Point, NSW 2011, Australia.
- Grant, L. J., VK2KYJ, 45 Monash Street, Wentworthville, 2145, Australia.
- Hall, W. G., G8JM, 48 Hawkden, N.Chingford, London E4 7PF, England.
- Hardisty, N. E., VK4BIT, 93 Minto Crescent, Arana Hills, Brisbane, Queensland 4054, Australia.
- Harms, D., VK3XDJ, R.M.B. 6483, Everton, Upper Victoria 3746, Australia.
- Hathaway, R. L. S., G3JHI, 30 Berkley Drive, Hornchurch, Essex RM11 3PY, England.
- Hills, J. D., VK6YAX, P.O.Box 323, Melville, Perth WA 6156, Australia.
- Hislop, S. J. K., VE7ANF, 3814 Cadboro Bay Road, Victoria BC V8P 5E6, Canada.
- Hoover III, H., W6ZH, 1520 Circle Drive, San Marino, California 91108, USA.
- Horner, W. J., VK4MWZ, 26 Iron Street, Gympie, QLD 4570, Australia.
- Irvine, E. J., VK3BXA, "Moorilyn", Thoona, VIC 3726, Australia.
- Ishikawa, K., JA2AUI, 62 Kinjo Nishio-Shi, Aichi-Ken 445, Japan.
- Jardine, M. A., VK2BUJ, P.O.Box 408, Lavington, NSW 2641, Australia.
- Johnson, C., KOGWI, 3654 Polk, NE Minneapolis, Minnesota 55418, USA.
- Kelly, B., VE7CBK, 8700 Minler Road, Richmond, BC V7C 3T9, Canada.
- Kerns, J., N4PUQ, 273 Sisson Street, Oliver Springs, Tenn 37840, USA.
- Laidlaw, D. J., VK3KDI, 40 Butterworth Street, Swan Hill, VIC 3585, Australia.
- Lickfeld, K. G. (Prof.Dr), DL3FM, Romebecker WEG71 D-4330, Mulheim A D, Ruhr 1, West Germany.
- Louttit, L. W., VK2BE, 17 Thompson Street, Earlwood, NSW 2206, Australia.
- Magon, T. E., VK2CBC, ZL4DE, 4/1 Bedford Place, South Coogee, NSW 2034, Australia.
- Mawhinney, P. E., VK2AFW, 3/23 Henley Road, Homebush, West Sydney NSW 2140, Australia.
- Maxwell, J. A., W6CF, P.O.Box 473, Redwood Estates, CA 95044, USA.
- McDougall, D. S., W9IV, 25 Pine Forest Road, Haines City, Florida 33844, USA.
- McGilp, F. C., G8URB, Meadows Beechfield, Frilsham, Newbury, Berks RG16 9XD, England.
- McLellan, D. P., VK4DPM, 30 Barcoorah Street, Westlake, QLD 4074, Australia.
- Miles, G. R., VK4UGC, 11 Kestrel Drive, Burleigh Waters, QLD 4220, Australia.
- Millard, G. O., VK6GK, 19/64 Hastings Street, Scarborough, WA 6019, Australia.
- Miller, E. D. N., VK4CIV, ZL1AXH, P.O.Box 2009, Southport, Queensland 4215, Australia.
- Movius, L. J., NT6B, 20985 Sultana Drive, Perris, CA 92370-8930, USA.
- Mutton, J. O., WA6JUA, 721 Sierra Street, El Segundo, CA 90245, USA.
- Mutzelburg, R. K., VK4IY, 51 Spicer Street, Laidley, QLD 4341, Australia.
- Nallawalla, A. (Flt. Lt.), ZL4LM, P.O.Box 539, Werribee, Victoria 3030, Australia.
- Norden, A. P., VK4CGN, ZL2SJ, Sun Surf Motel, 56-58 Nicklin Way, Kaurana Waters, 4575 Sunshine Coast, Queensland, Australia.
- Peyton, T. M. (Dr), VK3XTP, P.O.Box 108, Keilor 3036, Australia.
- Reid, D. D., W9RWD, P.O.Box 773, Tremont, Illinois 61568, USA.
- Rogers, G. L., VK6RO, 22 Grace Street, Ferndale, WA 6155, Australia.
- Samsu, B. S., YBOEBS, 935 North Whittier Drive, Beverley Hills, CA 90210, USA.
- Sheley, J. W., KA6DXY, 5849 Hansen Drive, Pleasanton, CA 94566, USA.
- Sloane, C., VK2EEC, 2 Lancelot Street, Blacktown, NSW 2148, Australia.
- Smith, J. W., KA7APJ, 4711 NE 50th, Seattle, WA 98105, USA.
- Switzer, G. E., VK2SR, 53 Turf Street, Grafton, NSW 2460, Australia.
- Tabiang, H. J., T30BC, Abemama Island, Republic of Kiribati, Central Pacific Ocean.
- Thurlow, P., G4YUP, 41 Kings Way, Billericay, Essex CM11 2QF, England.
- Tittler, J., A18A, 135 Riviera Drive #342, Los Gatos, CA 95030-5409, USA.
- Toomath, B. E., VK4BTE, Unit 4, 14 Waterloo Street, Cleveland QLD 4163, Australia.
- Walker, R. W., VK2YRX, P.O.Box 279, Drummdynl, NSW 2047, Australia.
- Wardlaw, D., VK3ADW, 21 Tormey Street, North Baldwin, VIC 3104, Australia.
- Watkins, W. A., ZL4DO, P.O.Box 262, Airlie Beach, 4802, Australia.
- Wilkinson, K. S., JG1YCI, C.P.O.Box 1748, Tokyo, Japan 100-91.
- Wilson, C. R., K1GVA, 61 Warwick Street, Portland, Maine 04102, USA.
- Wilson, P., VE7CCF, 110-145 King Edward Street, Coquitlam, BC V3K 6L9, Canada.
- Wilson, R. L., VK2BRC, Glencoe, Canobolas Road, Orange, NSW 2800, Australia.
- Woods, A. H. G., G8NNG, 14 Anstead Drive, Rainham, Essex RM13 7QS, England.
- Wright, C. P., VK7LZ, 10 Highgate Street, Youngtown, TAS 7249, Australia.
- Wylks, W. G., VK2BWY, 14 Hector McWilliam Drive, Tuross Head, NSW 2537, Australia.



## FMTAG FREQUENCY MANAGEMENT AND TECHNICAL ADVISORY GROUP

The Frequency Management and Technical Advisory Group (FMTAG), are a group that determine frequency assignments and set technical standards for NZART Council. A data base of amateur fixed stations is maintained, a summary of which is printed in this Call Book. NZART Branches may apply to FMTAG to establish fixed stations. The procedure is shown in Figure 1. Start by writing to the secretary for an FMTAG Form 10.

From time to time FMTAG publishes in Break-In papers on technical matters of current interest for comment and discussion. We are always keen to have feedback from amateurs on these matters, and any other issues that you think should be addressed.



FMTAG consists of a secretariat in Wellington consisting of a Chairman ZL2SX; Secretary ZL2TAX; and Frequency Co-ordinator ZL2TAR.

There are ten regional members of the group: ZL1UEU, ZL1UAB, ZL1TKL, ZL1BTB, ZL1QI, ZL2BPY, ZL2TYP, ZL1THA, ZL3TAC and ZL3NM.

**Address all FMTAG correspondence to:  
FMTAG Secretary, ZL2TAX  
54 Brooker Grove  
Wellington 4.**

### Technical standards

	Polarization	Bandwidth/Mode	Bands
FM voice repeaters	V	16kOF3EJN	29 MHz up
FM non-regenerating data repeaters	V	16kHz/any	29 MHz up
Digipeaters	V	16kHz/any Protocol any	29 MHz up also 26.957 to 27.283 MHz
ATV repeaters/beacons	H	6M25C3F/750kF3EGN CCIR system B	70 cm up
Beacons	V or H	less than 1kHz/A1 or F1	28 MHz up
Propagation/interference monitors	V	16kHz/any	70 cm up
Links	any	30 kHz below 23 cm/any	70 cm up

## THE NZART QSL BUREAU

The NZART QSL Bureau is one of a network of bureaux established throughout the world by the IARU to facilitate the exchange of QSL cards between NZART members and radio amateurs, in other countries. The service is free to both transmitting and receiving members of the NZART and is available to non-members for 25 cents per card.

A "member" is an operator or listener who is a member of the NZART at Branch and National level in accordance with clause 27(c) of the NZART Constitution.

### Outward Cards

All QSL cards for transmission to radio amateurs and listeners in New Zealand and other countries should be posted to the **QSL Manager, NZART QSL Bureau, P. O. Box 35-046, Naenae, Lower Hutt.**

QSL cards should not exceed normal postcard dimensions (140x90 mm). The call sign of the person to whom the card is addressed should be printed **clearly** in large letters on both sides of the card, ie, ensure that the letter V will be read as V, not U, etc.

Weigh all packages carefully before despatch in order to ensure adequate postage is paid, as the Bureau may refuse to pay any shortage which usually costs double the deficient postage plus a surcharge. Cards should be sorted into New Zealand call sign order, USA call areas, Australian call areas and all others into alphabetical order. Cards should be posted to the QSL Bureau on a three or four weekly basis rather than a three or four monthly or a one or more yearly basis.

Members must enclose a current *Break-In* label with each bundle of cards forwarded direct or through their Branch to the QSL Bureau. Non-members must enclose the equivalent of 25 cents per card.

Cards received without the *Break-In* label or the remittance of 25 cents per card will not be processed until such time as proof of membership is established or the remittance is received.

### An item of Particular Importance

If you work a ZLØ, ZL5, ZL6, ZL7, ZL8, ZL9, ZM5, ZM6, ZM7, ZM8, ZM9, ZK3, ZK4, ZK5, ZK6, ZK7, ZK8, or ZK9 station you should ascertain where the QSL card is to be forwarded and show this information on the back of the card. If on the other hand you are using one of the above calls you should advise any station you contact where his or her QSL card should be forwarded to and indicate to your contact that this information should be shown on the back of the card. **Failure to meet this requirement could result in QSL cards being returned to the senders with the endorsement "unclaimed".**

### Collecting cards from the Sub-Bureaux by Members and Non-Members

Supply your particular QSL Sub-Bureau listed below with stamped self-addressed envelopes (of size not less than 170x170mm).

ZL1—J. Small ZL1KQ, 32 Paddington Street, Glen Innes Auckland 1106.



ZL2—T. Marr ZL2AGY, 3 Crown Hill, Titahi Bay 6202.  
 ZL3—G. Halliburton ZL3GI, 6 Barlow Street, Christchurch 8004.  
 ZLØ—L. G. Wilson ZL2AWK, P.O. Box 35-046, Naenae Lower Hutt 6300.  
 ZL5 to ZL9—L. G. Wilson ZL2AWK.  
 ZK3 to ZK9—L. G. Wilson ZL2AWK.  
 ZM5 to ZM9—L. G. Wilson ZL2AWK.

Make sure your address is legible on the self-addressed, stamped envelope. Print your callsign on the front of the envelope, as the Sub-Bureau deals only with callsigns, not with operators' names.

Any specific requests for forwarding cards should be printed on the back of the envelope such as "send when 15 cards" or "send when weighs 250g", etc.

Envelopes should be numbered and "Last Envelope" marked on one so that the recipient automatically knows when to renew the supply.

It should be noted that the Sub-Bureaux are arranged in callsign groups, and therefore if you are a ZL1 living in another district in New Zealand your cards will be held by the ZL1 Sub-Bureau. Similarly with ZL2, ZL3, and ZL4.

## General Notes

If you don't exchange QSL cards or only exchange cards in special circumstances, you should make this quite clear to your contact. This will save you, your contact and the QSL Manager, time, labour and money.

QSL cards are posted to and received from over 240 QSL Bureaux throughout the world. In addition many cards are received direct from operators and listeners overseas for distribution to members via the ZL Sub-Bureau.

The QSL Bureau is staffed by one voluntary member, namely the QSL Manager. He handles approximately 30,000 to 40,000 cards per month and if operators and listeners follow the simple rules mentioned above this will greatly assist him to provide an efficient and cheap QSL service to members.

Members can obtain the address of any overseas QSL Bureau or Bureaux, a specification for a standard QSL card and any other information required regarding the QSL service from the QSL Manager, P.O. Box 35-046, Naenae, Lower Hutt. All such requests should be accompanied by a stamped self-addressed envelope.

**The telephone number of the QSL Bureau is Wellington (04) 699-238.**

## Video Tape Library

Listed below are current titles of video tapes held in the Headquarters video tape library for loan to Branches. The only charge is for postage. Each tape comes within the 500 gram non-standard second-class mail rate at 95c and this can be multiplied up for more than one tape posting.

However, a quick turnaround of tapes is essential for the scheme to operate. Don't put the tapes away in a drawer after your Branch meeting. Have it in the post the same evening. One Branch held a tape for six months and one other circulated among Branches without advising Headquarters.

Titles and Details are:

1. *All China RDF Competition*  
A serious **30 minute** look at Amateur Radio Direction Finding—an official sport in China.
2. *The Happy Flyers Techniques of RDF*  
A **26 minute** Audio/Visual presentation of the theory and techniques for VHF Radio Direction Finding.
3. *Moving up to Amateur Radio plus A Hams Wide World*  
**15 and 60 minutes.** General information and public relations material for Amateur Radio. A little dated now but good general information. ARRL Production.
- \*4. *The Aerial Circus with Dud Charman G6CJ*  
**45 minutes.** Verification of the theory of operation of a variety of VHF and HF antennae. See the theory confirmed by means of scale model antennae.
5. *Amateur Radio's Newest Frontier*  
**30 minutes.** A recent production from ARRL. Looks at the Radio Amateurs' involvement in space.
6. *Yaesu Production*  
A look at the production of Yaesu equipment, the factory staff, working conditions, equipment assembly and testing.
7. *NAREC 50*  
A **60 minute** production by Branch 24. Looks at the Napier Conference and the 50th Anniversary of AREC.
- \*8. *Communications-The Hidden Revolution*  
**135 minutes.** An address and demonstration by the Engineer-in-Chief, New Zealand Post Office, on modern communications techniques and methods.
9. *The Integration and Launch of AMSAT OSCAR-10*  
A **35 minute** preview of the preparation and launch of OSCAR-10 by Werner Haus DJ5KQ.
10. *AMSAT OSCAR-10*  
**28 minutes.** A further look at OSCAR-10 preparation and launch. Contains much of the footage in (9) above. A more pacy presentation. Film shown at Christchurch Conference 1985.

11. *Packet Radio Primer*  
A **30 minute** introduction to packet radio for beginners. A good Branch meeting tape.
12. *The Wonderful Wide World of Amateur Radio*  
Produced by JARL, a **27 minute** look at amateur radio in Japan.
13. *IARU Region 3 Association Conference 1985-RSGB.*
14. *IARU Region 3 Association Conference 1985-WIA.*
15. *NZART ATV Official Broadcast, 30 March 1986.*
16. *Bill Orr W6SAI Whakatane Conference Opening June 1988, 20 minutes.*
17. *1987 Dayton Hamvention KGØP production, 30 minutes.*
18. *ARRL's New World of Amateur Radio, 1988 (via W6SAI).*
19. *W6SAI Sunday 5-6-88 Lecture Linear Amplifiers*
20. *Component Identification-ZL1TOF, 18 minutes.*
21. *Launch Ariane IV 15-6-88, Vibration Test and Integration of OSCAR-13.*
22. *Interview with Gerald Beattie 21-6-89, 28 minutes.*

In addition audio tapes are held for loan:  
 NZART Monitoring Service  
 Sounds of Amateur Radio—WIA  
 Last AGM set of tapes (6)

Note: Tapes above denoted \* are more appropriate for a technical audience. Other tapes are suitable for general viewing.

Applications to General Secretary, NZART, P.O. Box 40-525, Upper Hutt.

## Amateur Radio Examination

Examination Entry Forms can be obtained from your local office of the Radio Frequency Service, from NZART Branch Secretaries, or from Headquarters. The current examination fee is \$10.00 plus GST for Part A and \$9.00 plus GST for Part B.

The syllabus for the Amateur Radio Examination can be viewed in the 1987 NZART Call Book, pages 109-111, and is still current.

The examination scheme is under review. The examination has been devolved from the Ministry of Commerce, Communications Division, to NZART. The first NZART-conducted examinations were held in March 1990. It is expected that the examinations in September 1990 (and perhaps in March 1991) will follow the same pattern. Details of developments and changes will be published in *Break-In* and in Branch circulars from time to time.

The address of the Co-ordinator, NZART Examinations Division, is NZART Headquarters, PO Box 40-525, Upper Hutt.



## The NZART Reciprocal Licencing Bureau

With appropriate licences and approvals, New Zealand radio amateurs may operate in some overseas countries. This is possible through "reciprocal agreements" between governments, through "Commonwealth recognition" or "guest licences". These three arrangements are distinctly different and apply in different countries in different ways.

It can be a lengthy business to get approval to operate in some countries. A residential qualification of months may be needed. Some countries prohibit portable and hand-held operation and may require that the station installation be inspected and tested. Procedures, rules and bands available vary considerably.

Council have appointed Russ Garlick, ZL3AAA, as the co-ordinator for the "NZART Reciprocal Licence Bureau." Should you contemplate an overseas trip, an early enquiry could assist you to obtain overseas operating privileges. Russ keeps information on the requirements and procedures that a ZL radio amateur should follow to operate in many countries. He can supply the address of the licensing authority with whom you should correspond in most countries, and the address of the IARU amateur radio society. It will be appreciated that a long lead-time is necessary in your dealings with overseas administrators.

Finally, it would be appreciated if you could provide Russ with copies of licences, regulatory brochures, etc., when you return, so that your experience can be used to assist others who travel.

The address is: Mr R. A. Garlick, ZL3AAA, 23 Lydia Street, Greymouth. Remember to include your NZART membership number or a Break-In label.

### To obtain and Australian Amateur Visitors Licence

An application for an amateur station licence should be made on a form DOC57 to any DOC office. The Department of Communications have offices in all main cities, where in most cases a licence can be issued over the counter. The licence is valid up to one year. The Department has an info brochure "Guide to Amateurs Visiting Australia" available, known as DOC517.

The application should be accompanied by photostat copies of valid licence held and operators certificate and copy of receipt of payment for your New Zealand licence. A remittance of \$A26 is also required on application.

Providing documentation is in order there should be no difficulties in obtaining a licence by bona-fide visitors.

The kind of licence issued would be the equivalent of the applicants home licence. The operation of the licence must conform to Australian amateur band conditions and radio regulations.

### To obtain a USA Amateur visitors licence Reciprocal Agreements

New Zealanders who hold a valid licence issued in New Zealand may apply for a permit to operate in the USA.

#### Application

Application form FCC 610A is available from the Bureau. A photocopy of your valid licence must be included in the application form to the FCC. The permit is valid for one year unless your home licence expires sooner. Apply at least 60 days in advance. The USA licence is renewable. Apply to Federal Communication Commission, Gettysburg, Pennsylvania 17325, USA. An address in the USA must be given (this can be a bank, ham friend, motel etc.).

#### Identification on the Air

You will sign your home (native) call, plus the Morse "/" or phone "portable", followed by the representative prefix of the call area where you are allocated (for example, ZL1AAA/W1 and ZL3ZZZ/KP4). At least once during each contact with another amateur station, you must give your geographical location (in English) as nearly as possible by city and state, or US possession.

#### Frequencies and Transmitter Power

You will have all the privileges that you have in your home country as long as they do not exceed the privileges of the Amateur Extra Class licence of the USA.

### Guest Licences

New Zealand licenced operators can obtain a guest licence in the Republic of South Africa, Hong Kong and Finland.

### Visitors to New Zealand

Intending visitors requiring information can do so from:

NZART Reciprocal Licencing Bureau

Russ Garlick ZL3AAA

23 Lydia Street, Greymouth

New Zealand 7801.

Visitors are also advised to obtain a copy of the NZART Call-book, which contains amateur frequencies, band plans, repeater locations, branch information and much other information. Call-book will be of assistance to amateur radio visitors travelling in our country and can be purchased from:

NZART General Secretary

P.O.Box 40-525, Upper Hutt

New Zealand.

The current price is \$NZ20.

### Short term

Generally a "licenced" overseas amateur visiting New Zealand may be permitted to operate, while visiting this country for up to four weeks, on 144 MHz or above, under the following conditions:

1. No application need be made.
2. No fee is charged.
3. For a period of not more than four weeks.
4. They should be able, if necessary, to satisfy the RFS that they hold a current licence and/or certificate equivalent to the New Zealand Limited or General qualification, valid for the term of their visit.
5. A copy of their current licence and/or certificate must be carried whilst in New Zealand.
6. Usage meets the requirements of the New Zealand Radio Regulations 1987 and conform to the terms, conditions and restrictions applying to amateur apparatus operating in New Zealand.
7. They operate using their home callsign suffixed by ZL1, 2, 3, 4 as appropriate.

NOTE: Those amateurs wishing to operate below 144 MHz or for more than four weeks must make application for a visitors licence and be licenced in a country with reciprocal agreement or British Commonwealth agreement with New Zealand.

### Reciprocal Agreement

Countries with reciprocal agreements with New Zealand are Sweden, Switzerland, United States of America, French Republic, Netherlands and West Germany.

### British Commonwealth Agreement

Holders of valid amateur certificates issued in Australia, United Kingdom, Canada, Cook Islands, India, Niue, Papua New Guinea, Zimbabwe and Irish Republic.

No prior application is necessary. A personal application should be made to an office of the NZRFS and a licence will be issued immediately over the counter. Applicants must submit:

1. A valid copy of the operating licence which must indicate the morse speed at which the applicant qualified.
2. A New Zealand postal address where all correspondence can be sent.
3. For British Commonwealth recognition the appropriate licence fee is payable based on length of stay in New Zealand.

Applicants with less than 12wpm morse qualification will be granted a Limited licence. Higher qualifications can be obtained by passing the appropriate examination in the usual way. Applicants with 12wpm or higher morse speed qualifications will be granted a General licence.

Visiting amateurs will be allocated callsigns from the ZLØ series.

The New Zealand Radio Regulations governing amateur band operations must be adhered to.



## Monitoring Service

The "EMM" column on the report form (below) is an abbreviation for Emission, as in Mode of Emission. It is obvious from reports received that many amateurs do not know how to classify signals. The following, simplified from the International Radio Regulations, may assist.

The basic characteristics of radio emissions are usually given in a three symbol group, such as A1A for Morse Code.

These symbols are arrived at as follows:

First symbol—type of modulation of the main carrier.

Second symbol—nature of signal(s) modulating the main carrier.

Third symbol—type of information to be transmitted.

Modulation used only for short periods and incidental purposes, such as identification, may be ignored.

## Tables

1. First symbol—type of modulation of main carrier

- |  |   |
|--|---|
| 1.1 Emission of an unmodulated carrier   | N |
| 1.2 Emission in which the main carrier is amplitude modulated, including angle-modulated sub-carriers—                         |   |
| 1.2.1 Double-sideband  | A |
| 1.2.2 Single-sideband, full carrier  | H |
| 1.2.3 Single-sideband, reduced or variable carrier   | R |
| 1.2.4 Single-sideband, suppressed carrier  | J |
| 1.2.5 Independent sidebands  | B |
| 1.2.6 Vestigial sideband   | C |
| 1.3 Emission in which the main carrier is angle-modulated—   |   |
| 1.3.1 Frequency modulation   |   |
| 1.3.2 Phase modulation   | G |
| 1.4 Emission in which the main carrier is amplitude and angle-modulated either simultaneously or in a pre-established sequence | D |
| 1.5 Emission of pulses—  |   |
| 1.5.1 Sequence of unmodulated pulses   | P |
| 1.5.2 A sequence of pulses—  |   |
| 1.5.2.1 Modulated in amplitude   | K |
| 1.5.2.2 Modulated in width/duration  | L |

- |  |   |
|--|---|
| 1.5.2.3 Modulated in position/phase  | M |
| 1.5.2.4 In which the carrier is angle-modulated during the period of the pulse | Q |
| 1.5.2.5 Combination of the above   | V |

- |  |   |
|--|---|
| 1.6 Cases not covered above in which an emission consists of the main carrier modulated in a combination of angle, amplitude, or pulse | W |
| 1.7 Cases not otherwise covered  | X |

**2. Second symbol—nature of signals modulating the main carrier—**

- |     |  |   |
|-----|--|---|
| 2.1 | No modulating signal   | 0 |
| 2.2 | A single channel containing quantized or digital information, without the use of a modulating sub-carrier* | 1 |
| 2.3 | A single channel containing quantized or digital information, with the use of a modulating sub-carrier*    | 2 |
| 2.4 | Single channel containing analogue information   | 3 |
| 2.5 | Two or more channels containing quantized or analogue information  | 7 |
| 2.6 | Two or more channels containing analogue information   | 8 |
| 2.7 | Composite system with quantized or digital information together with analogue information                  | 9 |
| 2.8 | Cases not otherwise covered  |   |

*This includes time-division multiplex	X
--	---

3. Third symbol—type of information to be transmitted.

- |   |   |
|---|---|
| 3.1 No information transmitted                | N |
| 3.2 Telegraphy—for aural reception A          |   |
| 3.3 Telegraphy—for automatic reception        | B |
| 3.4 Facsimile                                 | C |
| 3.5 Data transmission, telemetry, telecommand | D |
| 3.6 Telephony—including sound broadcasting    | E |
| 3.7 Television (video)                        | F |
| 3.8 Combination of above                      | W |
| 3.9 Cases not otherwise covered               | X |

Example: Morse at 80wpm. It's a double sideband emission, which gives a first symbol of "A". It's a single channel of digital information, without modulating sub-carriers, which gives a second symbol of "1" and it's Telegraphy for automatic reception, which gives a third symbol of "B".

**NZART MONITORING SERVICE REPORT FORM**

Reported by (callsign) \_\_\_\_\_

Frequency in kiloHertz \_\_\_\_\_

**To: NZART MONITORING SERVICE ZL6IW  
C/- R. E. Knowles ZL1BAD  
Onewhero, RD 2, Tuakau 1982**

Call sign of station (where known) causing harmful interference to the Amateur Service \_\_\_\_\_

[illegible]

Print Clearly. Differentiate between zero and O in callsigns. Send to Co-ordinator on last day of month.



# New Zealand Amateur Radio Milestones

Compiled by: Fred Johnson ZL2AMJ, 15 Field Street, Upper Hutt

- 1923 Regulations for Amateur, Experimental and Broadcasting stations gazetted on 17 January.  
By June, nine licences had been issued.  
First amateur radio contact with Australia on 26 April, 1923, between Frank Bell 4AA and Chas McClurcan 2CM on 160 metres.
- 1924 22 May, Ivan O'Meara 2AC in Gisborne, contacted C. Braggio CB8 in Argentina.  
21 September, 4AA made first two-way contact with 6BCB in North America, on 118 metres.  
18 October 6pm, the first ever direct two-way radio contact with Britain, between Shag Valley 4AA Frank Bell, and London, Cecil Goyder 2SZ, on 92 metres.
- 1925 International Amateur Radio Union formed in Paris on 18 April, with 23 countries represented. Z4AA Member of Executive Committee. Number of licences reached 100.
- 1926 In Auckland on 16 August, the New Zealand Association of Radio Transmitter formed. Subscription 2/6d for six months. First portable transmitter/receiver licence to 2GA.
- 1927 International Telecommunication Union Conference in Washington established internationally-agreed frequency bands.  
Sangster Shield contest started.
- 1928 January, first issue of *Break-In*.  
On 23 September, Hilton Arthur OZ1AN made first overseas contact on 10 metres working Australian station OA3CP in Melbourne.  
First crystal-controlled amateur transmitter in New Zealand built and operated by OZ4AE and OZ4AL.
- 1929 ZL became the amateur radio prefix for New Zealand.  
NZART admitted to IARU.  
Harmonically related bands came into use.  
QSL Bureau handled 390 inward cards at a cost of 13/8d.  
NZART negotiated a reduction in licence fee from £2/2/- to £1/10/-.
- 1930 11 March, 9pm, ZL1AA made contact with F8AW for first 10 metre contact between New Zealand and Europe.  
Myrtle Earland ZL3AG, first YL operator.
- 1931 3 February, Napier Earthquake—the genesis of AREC.  
QSL Bureau handling outward cards at 1/2d each within New Zealand and 1d each overseas.
- 1932 6 March, first AREC Field Day.  
Radio regulations gazetted, increase in morse test speed to 12wpm.
- 1933 NZART log book available at 1/6d.  
Official broadcasts resumed at 15wpm.
- 1934 Two-way aeronautical mobile contact made on 5 metres (60MHz) between ZL4BV and ZL4CA.  
NZART became an Incorporated Society.
- 1935 TV experiments authorized on the 5 metre band and on wavelengths below 1 metre.  
ZL2RC and ZL2OG communicated over a 8.5 mile path on 5 metres.  
VK/ZL/OC contest started.
- 1936 First E-M-E attempts, on 5 metres using ICW.
- 1938 First TV article published in *Break-In*.
- 1939 World War II Closed down amateur radio for the duration.  
*Break-In* published in cyclo-styled form throughout.
- 1945 8 December, 7.30 p.m. "H' Night". Amateur radio in New Zealand resumed on 3.5 to 3.96MHz and 58.5 to 60MHz only. Morse test 15wpm.
- 1946 Memorial Contest started.  
50 to 54MHz made available.  
Call Book included in NZART subscription as service to members.  
Official broadcasts by ZL2IY commenced.
- 1947 First two-way contact across Cook Strait on 50MHz, 50MHz record made by ZL1HY and ZL4BK at 635 miles.
- 1948 First article on SSSC (SSB) in *Break-In*.  
First contacts on 2400MHz, by ZL4BP and ZL4DH.  
First two-way trans-Tasman contacts on 50MHz.
- 1949 The Maori language accepted as plain language for amateur radio.  
Name of REC changed to Amateur Radio Emergency Organization (AREO) but changed almost immediately to Amateur Radio Emergency Corps (AREC).  
144 to 148MHz made available.  
144MHz record contact by ZL3AQ and ZL3JX at 54 miles.  
World record 50MHz contact between ZL4GY and USA.
- 1951 ZL2ACB and ZL3LE make the first inter-district contact on 144MHz.  
World record 144MHz contact, 1340 miles between ZL3AR and VK2AH.
- 1952 Frequency Measuring Contest started.  
National Field day started.  
First SSB transmitters built by and two-way contacts made by ZL1AU, ZL1QS, and ZL4AE.  
First ZL2 to ZL4 contact on 2 metres between ZL2SM and ZL4BN.  
21 to 21.45MHz available.  
Examination became 50 multi-choice questions.
- 1953 420MHz record contact of 50 miles between ZL3AR and ZL3AQ.
- 1954 First two way contact on 10 GHz, between ZL2AKP and ZL2GQ.  
First transistor articles in *Break-In*.  
First transistorized transmitter, on 160 metres by ZL4GP.  
Foreign languages permitted as plain language for amateur radio.
- 1956 First two-way RTTY contact between New Zealand ZL1WB and USA W0BP.
- 1958 On-air demonstration of 405 line TV on 420 MHz by ZL2APC.
- 1959 Midnight 31 January, 50 to 51MHz withdrawn for use for Channel 1 TV.
- 1960 ZL2GX achieves world first 300 DXCC.
- 1961 OSCAR-1 launched 14 December, first heard by ZL2HP on 17 December.
- 1962 Minimum age for amateur operators' certificate reduced to 14 years.  
Maximum power limit raised from 100 watts to 150 watts final anode input power.  
WARO formed.
- 1963 Doug Gorman ZL2IY awarded MBE in Birthday Honours for services to amateur radio and SAR. Non-morse licence for operation above 144MHz introduced.
- 1964 First hand-held 2 metre solid-state transceiver demonstrated by ZL2APC.
- 1965 First all-electronic scanning receiver demonstrated by ZL2APC.  
First Auckland to South Island QSO on 144MHz, by ZL1AZR and ZL2ASF.
- 1966 Integrated circuits mentioned in *Break-In*.
- 1967 First mention of FETs in *Break-In*.  
Establishment of beacons on 144, 432 and 1215MHz approved.  
Slowscan TV on HF bands approved.  
Reciprocal Licensing introduced.
- 1968 IARU Region III Association formed, at Sydney.
- 1969 Use of "Hertz" adopted by NZPO.  
World record E-M-E contact ZL1AZR and SM7BAE on 144MHz.  
ZM prefix permitted for Cook Bi-centenary.  
ZL1WB appointed command station for Australia-OSCAR-5.



- 1970 First amateur band repeater authorized in Christchurch.  
"Bandplan" Committee formed for 2m repeaters.  
New New Zealand Radio Regulations introduced. Grades I, II and III replaced the HF permit system.  
First participation in JOTA.
- 1971 2 metre FM repeaters established at Whangarei and Waikato.  
ITU Space Conference in Geneva.  
Birth of Amateur Satellite Service.  
Second IARU Region III Conference, in Tokyo.
- 1972 All grades of operators authorized to work through OSCAR-6.  
ZL1WB appointed Command Services for OSCAR-6.
- 1973 Morse speed reduced to 12 wpm for Grade I Operators.
- 1974 ZM prefix permitted for Commonwealth Games.  
First full-colour ATV test-pattern transmitted by ZL2TAR.
- 1975 Third IARU Region III Conference, in Hong Kong.
- 1976 Use of 1803 to 1813 kHz authorized.  
Golden Jubilee of NZART celebrated.  
Sir William Pickering guest speaker at conference.  
Tone digits first used on a repeater, by ZL2AMJ.  
Licence fee raised to \$6.00  
First full-colour cover for *Break-In*.
- 1977 Novice grade licence introduced.
- 1978 40 metre band extended to 7.3MHz on a non-interference basis.  
Fourth IARU Region III conference, in Bangkok.  
Wellington ATV repeater operational.  
First two-way contact on 24GHz, by ZL2ARW and ZL2TRV.
- 1979 Licence fee raised to \$10.00  
Hart Postlewaite WB6CQW guest speaker at Conference.  
WARC in Geneva, NZART paid for an Amateur Service representative (ZL2AMJ) to attend as a member of the New Zealand delegation.  
Term of office of President and Council extended to two years.  
50 to 50.15MHz sharing arrangement introduced.  
First Cook Strait crossing by two-way ATV, by ZL2TWM and ZL2ASF.  
First 432MHz E-M-E contact with USA by ZL2BCG, and K5JL.  
432MHz E-M-E record contact between ZL2BCG and I5MSH.  
Tasman Sea crossed on 432MHz, by ZL1TAB and VK2BQJ.
- 1980 World record E-M-E contact between ZL3AAD and DL9KR on 432MHz.  
QSL Bureau handled 247 000 cards at a cost of \$1,300.  
Frequency Management Working group established.  
Callsigns made permanent for operators moving between radio districts.
- 1981 Conference opened by His Excellency the Governor-General.  
ZLØ prefix introduced for visitors to New Zealand.  
Random 5-letter groups approved for morse broadcasts from approved stations.  
144MHz bandplan changes to 600kHz offset for FM repeaters.  
First 2m linear repeater, Dunedin, ZL1BTB and ZL4DO.
- 1982 Licence fee raised to \$13.  
10.1MHz band made available.  
Non-morse operators permitted on 51 to 53MHz band.  
Fifth IARU Region III Association Conference, at Manila.  
AREC 50th Birthday celebrations.  
Tasman Sea crossed on 1296MHz by ZL1AVZ and VK2BDN.
- 1983 World Communications Year, ZM prefix used.  
Tom Clarkson ZL2AZ received MBE in Birthday Honours List for services to amateur radio.  
New Frequency Allocation List gives extended band at 1.8MHz, and new bands above 47GHz, Grade II and Novice Bands at 28MHz. CW or Phone, CW identification by RTTY operators no longer a regulatory requirement. Bandplans and emissions for the Amateur Service to regulate.
- Packet radio used in New Zealand by ZLs 1AOX, 1WN, 1UFX.  
World record for packet radio by ZL1AOX and W3IØI on 28MHz band.  
First NZ to Chatham Islands contacts on 144MHz band by ZL4OY/C and ZL3AR.  
First ZL-ZL moon bounce contact between ZL3AAD and ZL2AQE on the 432MHz band on July 16.  
A similar feat achieved on August 15 on the 1296 MHz band.  
First 610 MHz contact in ZL by ZL2AQF and ZL2ARW on December 3, between Mt. Kaukau and Kakanui.  
World Amateur Radio International Conference (WARIC) held in Tokyo.
- 1984 Chatham, Kermadec, and Auckland/Campbell Islands became ZL7, ZL8, and ZL9 respectively.  
Review of Amateur Service by NZPO.  
Morse transmission authorized for Grade III operators.  
First operation from the top of Mt. Cook (ZL3TIG, hand held 2m).
- 1985 18.068MHz band made available.  
Karl Meinzer DJ4ZC guest speaker at Conference in Christchurch.  
Sixth IARU Region III Association Conference, at Auckland, with visit by IARU President and ITU General-Secretary.  
IARU Administrative Council met in Auckland.  
First FK8-ZL contact on 144MHz, by ZL2TPY and FK8EM.
- 1986 NZART Official Broadcast simulcasted on 3900kHz and on Amateur TV for the first time.  
Amendment to Radio Regulations from 21 July established General, Limited, and Novice Licence grades. Morse test to include figures. Provisions made for credit for partial exam passes. Power measurement changed to mean/PEP output power rating. Logbook not now obligatory but recommended. Licence fee increased to \$25.00 plus GST.  
First 6m packet radio contact with VK, ZL2BKC and VK2YME.
- 1987 Examination became all multi-choice questions.  
Official Broadcast networking on 3900kHz and VHF repeaters commenced.  
New Zealand Post Office replaced on 1 April 1987 by the New Zealand Radio Frequency Service as Administration for New Zealand. Licence Fee made \$35 plus GST.  
24.89 to 24.99MHz band available.  
610-620MHz band extended to 622MHz.  
A ZL amateur attends IARU Administrative Council meeting for first time (Netherlands-ZL2AMJ).  
National link-Auckland-Wellington-opened, later extended to Christchurch.  
JOTA provisions for Scout and Guide Camp stations during World Jamboree.  
First ZL 2304MHz E-M-E contact, ZL2AQE and W3IWI, world record.
- 1988 New Radio Regulations from 1 January 1988.  
Third-Party Welfare Traffic permitted for the first time for aftermath of March North Island storm disaster (Cyclone Bola).  
W6SAI guest speaker at conference.  
80m Novice band extended to 3.625MHz.  
14-year age limit for Amateur Licence dropped.  
April 23, first North Island South Island contact on 610MHz band, ZL2AJI Mt Robert, ZL2UGR Mt Taranaki.  
Seventh IARU Region III Association Conference, Seoul.  
First southern hemisphere to northern hemisphere 6m E-M-E contact, ZL2BGJ and W6JKV.  
World record 6m E-M-E contact, ZL2BGJ and WA4NJP.
- 1989 ZM prefix permitted from June 1989 to end of 1990 for XIV Commonwealth Games and New Zealand's 150th Year Celebrations.  
Dan Wilkinson ZL2AB received QSM in Birthday Honours List for services to Amateur Radio.  
NZART makes written and verbal submissions to a Parliamentary Select Committee for the first time. (Radio-communications Bill).





# International Amateur Radio Union

(Prepared by the NZART Overseas Committee)



You, a radio amateur, should be familiar with these two international bodies:

## The International Telecommunication Union

The ITU is the highest authority for the regulation of all radio services. It is recognised by the United Nations as the specialised agency responsible for the control of telecommunications. Its Convention has the status of a treaty which is binding on all nations which sign it.

One hundred and sixty nations are members of the ITU.

New Zealand is a member and the NZ Radio Frequency Service is the administration department which represents New Zealand in ITU affairs.

The ITU maintains and extends international co-operation for the improvement and rational use of telecommunications of all kinds; promotes the development of technical facilities and effi-

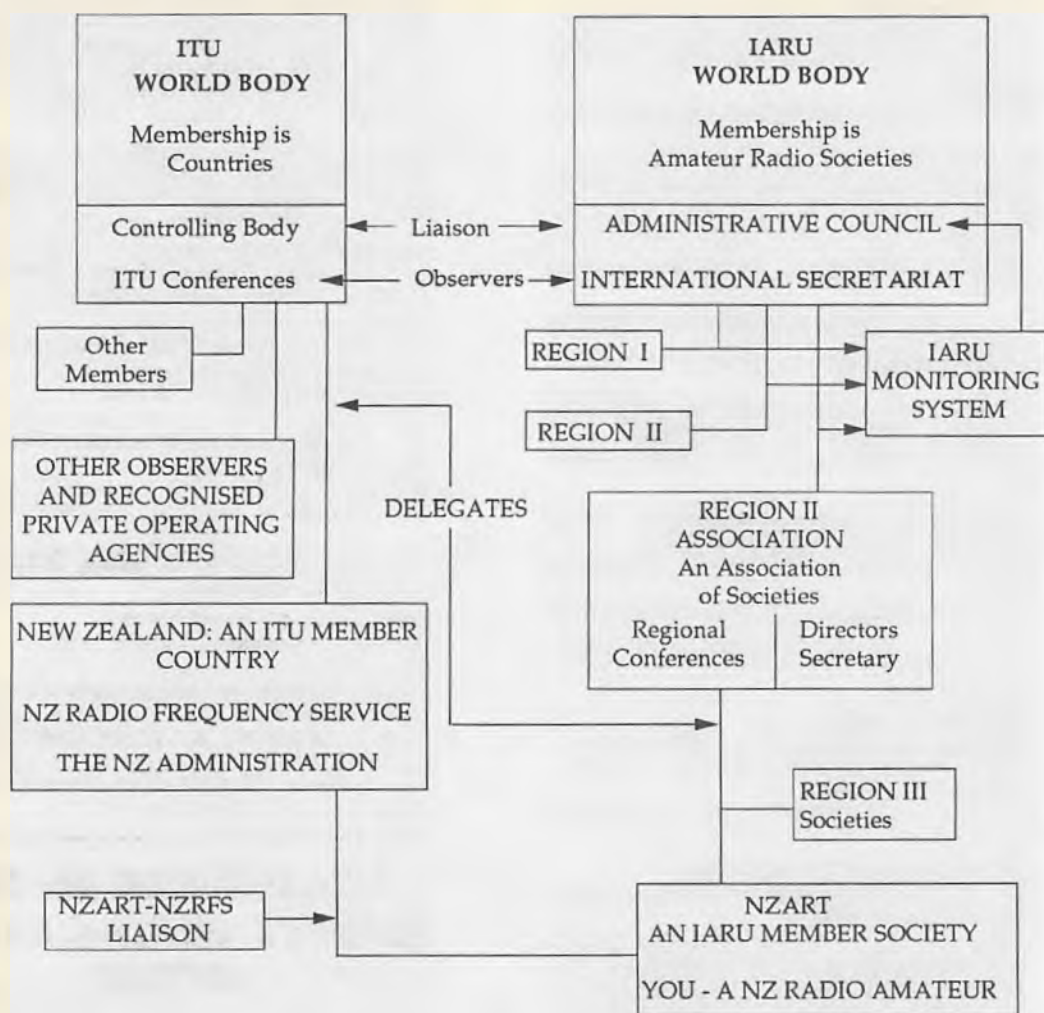
cient operation of telecommunications services; and harmonises the actions of all nations to attain these ends.

The ITU has its headquarters in Geneva, and holds frequent conferences concerning some or all of the radio services. The Amateur Service (which includes the Amateur Satellite Service) is of most interest to us, but the activities of the other services have also to be closely monitored.

The conclusions reached by ITU conferences are the basis for international and national radio regulations.

The World Administrative Radio Conference held in Geneva in 1979 (WARC-79) gave rise to the ITU Radio Regulations 1982, further revised by the 1983 WARC for the Mobile Services, and now form the ITU Radio Regulations 1985.

All radio services within the borders of New Zealand are controlled by the New Zealand Radio Regulations, Telecommunications Act, and Radio Communications Act, and these reflect the ITU Radio Regulations.





## The International Amateur Radio Union

The IARU is a voluntary union of amateur radio societies and was founded in 1925. NZART was a founder member, and is still a member, with more than 125 other societies. The prime purpose of IARU is the protection of the Amateur Service.

The IARU is controlled by an Administrative Council (AC) which is composed of a President, Vice-President and two representatives from each of the three ITU regions:

1. Region I is Europe, the USSR and Africa,
2. Region II is the Americas, and
3. Region III is the rest of the world.

An International Secretariat (IS) provides the Secretary and administrative services. Any amateur radio society can be nominated to provide the IS; it then has the privilege of nominating the president and Vice-President. Currently the American Radio Relay League (ARRL) is the IS society.

The "Business" of IARU is transacted at a series of triennial regional conferences arranged so that one is held each year. The member-societies of the region meet at these regional conferences to discuss common problems, to find solutions, to determine policy, and to otherwise promote the viability of amateur radio in the region. Each individual IARU member society provides input to the international scene through the mechanism of the regional conferences.

New Zealand is in Region III, and NZART is a founder member of the IARU Region III Association, founded in 1968. The Association Secretariat is in Tokyo. Between conferences the affairs of the region are attended to by the Association's five Directors who are elected at the regional conference to serve until the next conference. NZART is a very active member of the Region III Association.

## Links and Recognition

IARU enjoys "recognition" by the ITU and can be admitted to ITU conferences with "observer" status. This is of tremendous significance because it provides the opportunity to contribute to and to even directly influence what is done by the national delegations at ITU conferences. The IARU is usually directly represented at ITU conferences by a specially selected "Observer Team" drawn from specialists in amateur radio affairs from IARU societies worldwide.

In addition IARU has an indirect influence through members of national delegations who are also radio amateurs.

For some important conferences (e.g. WARC-79), a representative of the Amateur Service has been included in some national delegations to ITU conferences. NZART financed a representative in New Zealand's delegation to WARC-79. This is a task that will need repeating for a forthcoming conference. The training of suitable people has already commenced and budgeting is planned.

NZART has access to the New Zealand administration via the NZART-Administration Liaison Officer, and from there to the ITU. A first objective for NZART is to deserve and keep the goodwill of the New Zealand Radio Frequency Service (NZRFS), hence to continue the enlightened official attitude New Zealand radio amateurs have enjoyed in the past, to ensure that official New Zealand influence in ITU circles will be in the right direction.

In addition, through the IARU Region III Association, NZART is able to assist other societies in an effort to have the right things for amateur radio done by their administrations.

## International problems for Amateur Radio

All classes of radio service compete to get their share of the radio frequency spectrum which is a shared resource. Most services wield very strong influence through government representatives at ITU conferences where decisions are affected by many factors, political, economic and social. At times the atmosphere is hostile to amateur radio. Some decisions take many years to implement. The patient pursuit of long-term policies is needed to promote the future welfare of the Amateur Service.

Some Services (broadcasting is a typical example) have great resources, money and political influence. The Amateur Service by contrast must rely entirely on support from national amateur radio societies through national administrations and by IARU Observers at conferences.

The cost of this continuing vigilance is high and comes from radio amateurs in national societies and from devoted voluntary efforts by amateur radio specialists. It is an ongoing problem and your support is important.

## Where Do I Fit In?

As a radio amateur, your NZART Membership is vital to all of us. Membership of NZART, and through that your support to the NZART-NZRFS Liaison and overseas liaison, is vital. It is essential to all the other radio amateurs that you be a member. You are playing your part to ensure the continuance of amateur radio for everybody. You should be encouraging every other radio amateur to belong and help with the work too.

Remember, there is no actual security for the Amateur Service. Constant vigilance, time and money to protect our regulatory provisions are needed.

## International Amateur Radio Union

### Administrative Council

Richard L. Baldwin, W1RU-President, IARU  
Michael J. Owen, VK3KI-Vice President, IARU  
Larry E. Price, W4RA-Secretary, IARU  
L. v. d. Nadort, PA0LOU-Chairman, IARU Region I Division  
John Allaway, G3FKM-Secretary, IARU Region I Division  
Alberto Shaio, HK3DEU-President, IARU Region II  
Thomas B. J. Atkins, VE3CDM-Secretary, IARU Region II  
David Rankin, 9V1RH-Chairman, IARU Region III Association  
D. D. Devan, 9M2DD-Director, IARU Region III Association  
(Region III has a policy of rotating its members of the AC to give all directors experience)

### IARU International Secretariat

Address: P. O. Box 2067, Statesboro, GA 30458, U.S.A.  
Secretary: Larry E. Price, W4RA

### IARU Region III Association

Address: P.O. Box 73, Toshima, Tokyo 170-91, Japan  
Location: Matsuoaka Bldg. No. 2, 1-14-5 Sugamo, Toshima, Tokyo 170, Japan  
Chairman: David Rankin 9V1RH/VK3QV, P.O. Box 14, Pasir Panjang Singapore 9111, Singapore.  
Secretary: Masayoshi Fujioka JM1UXU  
Directors: D. D. Devan 9M2DD, 43 Jalan Bukit Midah, Taman Midah Cheras, 56000 Kuala Lumpur, Malaysia.  
Fred Johnson ZL2AMJ, 15 Field Street, Upper Hutt, New Zealand  
Keigo Komuro JA1KAB, 1-6-13 Kokubunjidai, Ebina 243-04, Japan  
David A. Wardlaw VK2ADW, 21 Tormey Street, North Balwyn, Victoria, 3104, Australia.  
**Monitoring System Co-ordinators**  
International: R. E. Knowles ZL1BAD, Onewhero, R.D. 2, Tuakau, New Zealand  
Region I: J. v. d. Velde PA0VDV, Fazantenhof 57, 3755 EE Eemnes, Netherlands  
Region II: M. L. Gibson W7JIE, 1215 N. 28th Place, Renton, WA 98056, USA.  
Region III: Bill Martin VK2COP, 33 Somerville Road, Hornsby Heights NSW 2077, Australia

**Contribute to the  
NZART WARC FUND  
NOW!**



# International Amateur Radio Union—List of Member Societies

16 February 1990

- ALGERIA:** Amateurs Radio Algeriens (ARA)  
**ANDORRA:** Unio Radioaficionats Andorrans (URA)  
**ANGOLA:** Liga dos Amadores de Radio de Angola (LARA)  
**ANTIGUA AND BARBUDA:** Antigua and Barbuda Amateur Radio Society (ABARS).  
**ARGENTINA:** Radio Club Argentino (RCA)  
**ARUBA:** Aruba Amateur Radio Club (AARC)  
**AUSTRALIA:** Wireless Institute of Australia (WIA)  
**AUSTRIA:** Österreichischer Versuchssenderverband (OVSV).  
**BAHAMAS:** Bahamas Amateur Radio Society (BARS)  
**BAHRAIN:** Amateur Radio Association Bahrain (ARAB)  
**BANGLADESH:** Bangladesh Amateur Radio League (BARL).  
**BARBADOS:** Amateur Radio Society of Barbados (ARSB).  
**BELGIUM:** Union Belge des Amateurs-Emetteurs/Unie van de Belgische Amateur-Zenders (UBA)/Union der Belgischen Amateur-funker.  
**BELIZE:** Belize Amateur Radio Club (BARC).  
**BERMUDA:** Radio Society of Bermuda (RSB).  
**BOLIVIA:** Radio Club Boliviano (RCB).  
**BOTSWANA:** Botswana Amateur Radio Society (BARS).  
**BRAZIL:** Liga de Amadores Brasileiros de Radio Emissao (LABRE).  
**BRITISH VIRGIN ISLANDS:** British Virgin Islands Radio League (BVIRL).  
**BRUNEI:** Negara Brunei Darussalam Amateur Radio Association (BDARA).  
**BULGARIA:** Bulgarian Federation of Radio Amateurs (BFRA).  
**BURMA/MYANMAR:** Burma Amateur Radio Transmitting Society (BARTS).  
**CANADA:** Canadian Radio Relay League (CRRL).  
**CAYMAN ISLANDS:** Cayman Amateur Radio Society (CARS).  
**CHILE:** Radio Club de Chile (RCCH).  
**CHINA:** Chinese Radio Sports Association (CRSA).  
**COLOMBIA:** Liga Colombiana de Radioaficionados (LCRA).  
**COSTA RICA:** Radio Club de Costa Rica (RCCR).  
**CUBA:** Federacion de Radioaficionados de Cuba (FRC).  
**CYPRUS:** Cyprus Amateur Radio Society (CARS).  
**CZECHOSLOVAKIA:** Central Radio Club of Czechoslovakia (CRCC).  
**DENMARK:** Eksperimenterende Danske Radioamatorer (EDR).  
**DJIBOUTI:** Association des Radioamateurs de Djibouti (ARAD).  
**DOMINICAN REPUBLIC:** Radio Club Dominicano (RCD).  
**DOMINICA, COMMONWEALTH OF:** Dominica Amateur Radio Club (DARC).  
**EQUADOR:** Guayaquil Radio Club (GRC).  
**EGYPT:** Egypt Amateur Radio Society (EARS).  
**EL SALVADOR:** Club de Radio Aficionados de El Salvador (CRAS).  
**FAROE ISLANDS:** Faroes Radio Amateurs (FRA).  
**FIJI:** Fiji Association of Radio Amateurs (FARA).  
**FINLAND:** Suomen Radioamatooriliitto (SRAL).  
**FRANCE:** Réseau des Emetteurs Français (REF).  
**FRENCH POLYNESIA:** Club Oceanien de Radio et d'Astronomie (CORA).  
**GABON:** Association Gabonaise des Radio-Amateurs (AGRA).  
**GAMBIA:** Radio Society of The Gambia (RSTG).  
**GERMANY:** (Democratic Republic of): Radiosportverband der D.D.R. (RSV).  
**GERMANY:** (Federal Republic of): Deutscher Amateur-Radio-Club (DARC).  
**GHANA:** Ghana Amateur Radio Society (GARS).  
**GIBRALTAR:** Gibraltar Amateur Radio Society (GARS).  
**GREECE:** Radio Amateur Association of Greece (EAP).  
**GUENADA:** Grenada Amateur Radio Club (GARC).  
**GUATEMALA:** Club de Radioaficionados de Guatemala (CRAG).  
**GUYANA:** Guyana Amateur Radio Association (GARA).  
**HAITI:** Radio Club d'Haiti (RCH).  
**HONDURAS:** Radio Club de Honduras (RCH).  
**HONG KONG:** Hong Kong Amateur Radio Transmitting Society (HARTS).  
**HUNGARY:** Magyar Radioamator Szovetseg (MRASZ).  
**ICELAND:** Íslenskir Radioamatorar (IRA).  
**INDIA:** Amateur Radio Society of India (ARSI).  
**INDONESIA:** Organisasi Amatir Radio Indonesia (ORARI).  
**IRELAND:** Irish Radio Transmitters Society (IRTS).  
**ISRAEL:** Israel Amateur Radio Club (IARC).  
**ITALY:** Associazione Radioamatori Italiani (ARI).  
**IVORY COAST:** Association der Radio-Amateurs Ivoiriens (ARAI).  
**JAMAICA:** Jamaica Amateur Radio Association (JARA).  
**JAPAN:** Japan Amateur Radio League (JARL).  
**JORDAN:** Royal Jordanian Radio Amateur Society (RJRAS).  
**KENYA:** Radio Society of Kenya (RSK).  
**KOREA:** Korean Amateur Radio League (KARL).  
**KUWAIT:** Kuwait Amateur Radio Society (KARS).  
**LEBANON:** Association des Radio-Amateurs Libanais (RAL).  
**LESOTHO:** Lesotho Amateur Radio Society (LARS).  
**LIBERIA:** Liberia Radio Amateur Association (LRAA).  
**LIECHTENSTEIN:** Amateurfunk Verein Liechtenstein (AFVL).  
**LUXEMBOURG:** Réseau Luxembourgeois des Amateurs d'Ondes Courtes (RL).  
**MALAYSIA:** Malaysian Amateur Radio Transmitters' Society (MARTS).  
**MALTA:** Malta Amateur Radio League (MARL).  
**MAURITIUS:** Mauritius Amateur Radio Society (MARS).  
**MEXICO:** Federacion Mexicana de Radio Experimentadores (LMRE).  
**MONACO:** Association des Radio-Amateurs de Monaco (ARM).  
**MONTSERRAT:** Montserrat Amateur Radio Society (MARS).  
**MOROCCO:** Association Royale des Radio-Amateurs du Maroc (ARRAM).  
**MOZAMBIQUE:** Liga dos Radio Emissores de Mocambique (LREM).  
**NETHERLANDS:** Vereniging voor Experimenteel Radio Onderzoek in Nederland (VERON).  
**NETHERLANDS ANTILLES:** Vereniging voor Experimenteel Radio Onderzoek in Nederlandse Antillen (VERONA).  
**NEW ZEALAND:** New Zealand Association of Radio Transmitters (NZART).  
**NICARAGUA:** Club de Radioexperimentadores de Nicaragua (CREN).  
**NIGERIA:** Nigerian Amateur Radio Society (NARS).  
**NORWAY:** Norsk Radio Relae Liga (NRRL).  
**OMAN:** Royal Omani Amateur Radio Society (ROARS).  
**PAKISTAN:** Pakistan Amateur Radio Society (PARS).  
**PANAMA:** Liga Panamena de Radio aficonados (LPRA).  
**PAPUA NEW GUINEA:** Papua New Guinea Amateur Radio Society (PNGARS).  
**PARAGUAY:** Radio Club Peruaro (RCP).  
**PERU:** Radio Club Paraguayo (RCP).  
**PHILIPPINES:** Philippine Amateur Radio Association (PARA).  
**POLAND:** Polski Związek Krotkofalowcow (PZK).  
**PORTUGAL:** Rede dos Emissores Portugueses (REP).  
**ROMANIA:** Federatia Romana de Radioamatorism (FRR).  
**SAN MARINO:** Associazione Radioamatori della Repubblica di San Marino (ARRSM).  
**SENEGAL:** Association des Radio-Amateurs du Senegal (ARAS).  
**SIERRA LEONE:** Sierra Leone Amateur Radio Society (SLARS).  
**SINGAPORE:** Singapore Amateur Radio Transmitting Society (SARTS).  
**SOLOMON ISLANDS:** Solomon Islands Radio Society (SIRS).  
**SOUTH AFRICA:** South African Radio League (SARL).  
**SPAIN:** Union de Radioaficionados Espanoles (URE).  
**SRI LANKA:** Radio Society of Sri Lanka (RSSL).  
**SURINAME:** Vereniging van Radio Amateurs in Suriname (VRAS).  
**SWAZILAND:** Radio Society of Swaziland (RSS).  
**SWEDEN:** Foreningen Sveriges Sandreamatorer (SSA).  
**SWITZERLAND:** Union Schweizerischer Kurzwellen-Amateure (USKA).  
**SYRIA:** Technical Institute of Radio (TIR).  
**THAILAND:** Radio Amateur Society of Thailand (RAST).  
**TONGA:** Amateur Radio Club of Tonga (ARCOT).  
**TRINIDAD AND TOBAGO:** Trinidad and Tobago Amateur Radio Society (TTARS).  
**TURKEY:** Telsiz Radyo amatorleri Cemiyeti (TRAC).  
**UNITED KINGDOM:** Radio Society of Great Britain (RSGB).  
**URUGUAY:** Radio Club Uruguayo (RCU).  
**USA:** American Radio Relay League (ARRL).  
**USSR:** Radio Sport Federation of the USSR (RSF).  
**VANUATU:** Vanuatu Amateur Radio Society (VARS).  
**VENEZUELA:** Radio Club Venezolano (RCV).  
**WESTERN SAMOA:** Western Samoa Amateur Radio (WSARC).  
**YUGOSLAVIA:** Savez Radio-Amatera Jugoslavije (SRJ).  
**ZAIRE:** Union Zairoise des Radio-Amateurs (UZRA).  
**ZAMBIA:** Radio Society of Zambia (RSZ).  
**ZIMBABWE:** Zimbabwe Amateur Radio Society (ZARS).



# International Amateur Radio Union—Amateur Radio Licensing Status

31 January, 1990

Region I						Region II					
Country	Total Stations	Total Operators	Society Members	Licensed Members	Data Year	Country	Total Stations	Total Operators	Society Members	Licensed Members	Data Year
Algeria	109	190	3500	190	87	Antigua & Barbuda	19	25	16	12	88
Andorra	98	152	108	96	85	Argentina	?	23450	2000	?	89
Angola	Information Not Available					Aruba	25	49	22	18	87
Austria	4200	4600	3650	?	89	Bahamas	?	?	14	11	88
Bahrain	35	34	50	34	87	Barbados	200	200	80	60	78
Belgium	4980	4880	3915	2725	89	Nelize	122	122	122	122	84
Botswana	37	37	22	18	86	Bermuda	100	100	120	90	89
Bulgaria	983	983	983	983	85	Bolivia	2100	2087	2087	2087	87
Cyprus	456	450	185	180	89	Brazil	26100	25686	11946	10274	89
Czechoslovakia	2850	2738	9628	2738	89	Br. Virgin Islands	9	9	10	9	79
Denmark	10105	10105	5217	4300	88	Canada	23703	?	5524	5524	89
Djibouti	17	20	19	17	86	Cayman Islands	28	28	22	22	85
Egypt	14	22	25	22	89	Chile	7620	9232	2000	1800	87
Faroe Islands	105	102	122	72	89	Colombia	4000	7000	2000	2000	85
Finland	3931	3820	5006	3820	89	Costa Rica	1707	1951	297	253	86
France	14579	14134	9527	7685	89	Cuba	690	653	653	653	89
Gabon	21	21	24	21	89	Commonwealth of					
Gambia	35	33	26	25	85	Dominica	36	35	90	35	88
German Democratic Republic	2089	3685	25566	3685	89	Dominican Republic	3705	3700	320	320	86
Federal Republic of Germany	59931	58144	50365	42770	89	Ecuador	1685	1775	1775	1775	88
Ghana	Information Not Available					El Salvador	604	600	172	170	89
Gibraltar	21	20	25	20	88	Grenada	20	?	43	30	83
Greece	1007	1000	1032	849	89	Guatemala	350	350	150	150	85
Hungary	4643	4204	9647	4204	89	Guyana	Information Not Available				
Iceland	119	?	153	91	79	Haiti	18	19	19	19	78
Ireland	1412	1560	699	611	87	Honduras	?	?	110	80	83
Israel	528	523	652	523	89	Jamaica	60	80	68	46	89
Italy	28004	28000	17109	11900	89	Mexico	4996	4910	1158	1158	88
Ivory Coast	201	201	301	201	88	Montserrat	30	30	26	26	85
Jordan	120	119	119	119	82	Netherlands Antilles	61	60	43	43	89
Kenya	56	55	95	50	89	Nicaragua	100	115	80	80	85
Kuwait	130	129	119	105	89	Panama	750	750	400	400	83
Lebanon	47	47	29	29	88	Paraguay	890	1300	585	499	85
Lesotho	20	19	14	14	89	Peru	2366	2355	801	696	89
Liberia	99	101	101	101	89	Suriname	73	72	62	62	88
Liechtenstein	16	15	19	11	89	Trinidad & Tobago	201	200	216	164	87
Luxembourg	426	431	340	281	89	USA	467305	464800	153325	142572	89
Malta	273	295	128	90	88	Uruguay	?	3015	525	525	88
Mauritius	42	41	41	41	89	Venezuela	5100	11213	1800	1800	89
Monaco	53	52	31	30	86	<b>Total</b>	<b>581000</b>	<b>590000</b>	<b>188681</b>	<b>175585</b>	
Morocco	51	174	174	174	89	<b>Average</b>	<b>16000</b>	<b>15900</b>	<b>5099</b>	<b>4746</b>	
Mozambique	Information Not Available					<b>Region III</b>					
Netherlands	15439	15321	11100	8300	89	Australia	17915	17465	7650	6920	89
Nigeria	102	109	2845	109	89	Bangladesh	0	0	30	0	83
Norway	5619	5454	3394	3019	89	Brunei	119	111	85	80	88
Oman	50	48	98	48	89	China	24	60	484	60	88
Poland	8083	7420	9550	7420	89	Fiji	19	17	17	17	89
Portugal	2514	2500	1200	1100	88	French Polynesia	182	?	130	120	84
Romania	1293	983	7964	983	88	Hong Kong	398	390	293	267	87
San Marino	50	49	42	42	89	India	2875	2800	973	971	88
Senegal	173	172	172	172	88	Indonesia	60280	60000	72000	60000	88
Sierra Leone	27	29	56	23	87	Japan	951937	?	153111	151951	89
South Africa	4721	4691	2716	1994	89	Korea	2865	5864	2600	1600	89
Spain	40848	40689	19246	15954	89	Malaysia	180	246	346	150	88
Swaziland	Information Not Available					Myanmar/Burma	Information Not Available				
Sweden	11079	10563	6848	6494	88	New Zealand	6264	6106	3209	2812	89
Switzerland	4440	4440	4556	3576	89	Pakistan	80	80	42	18	87
Syria	3	9	13	9	89	Papua New Guinea	131	126	52	48	87
Turkey	108	100	378	100	89	Philippines	850	835	3286	835	88
USSR	52241	64002	142978	11761	89	Singapore	58	56	43	43	85
United Kingdom	55000	54000	36971	30115	88	Solomon Islands	8	7	7	7	89
Yugoslavia	4643	3888	19500	3888		Sri Lanka	130	127	297	89	89
Zaire	Information Not Available					Thailand	202	200	700	200	88
Zambia	29	29	32	29	87	Tonga	?	19	28	8	82
Zimbabwe	105	101	138	88	86	Vanuatu	25	23	24	20	87
<b>Total</b>	<b>348410</b>	<b>355852</b>	<b>418563</b>	<b>187049</b>		Western Samoa	12	11	11	11	89
<b>Average</b>	<b>5807</b>	<b>5931</b>	<b>6976</b>	<b>3117</b>		<b>Total</b>	<b>1044573</b>	<b>1021106</b>	<b>245418</b>	<b>226227</b>	
						<b>Average</b>	<b>45416</b>	<b>44396</b>	<b>10670</b>	<b>9836</b>	
						<b>Worldwide</b>					
						<b>Total</b>	<b>1974000</b>	<b>1967000</b>	<b>852000</b>	<b>589000</b>	
						<b>Average</b>	<b>16500</b>	<b>16400</b>	<b>7100</b>	<b>4900</b>	



# Allocation of International Callsigns

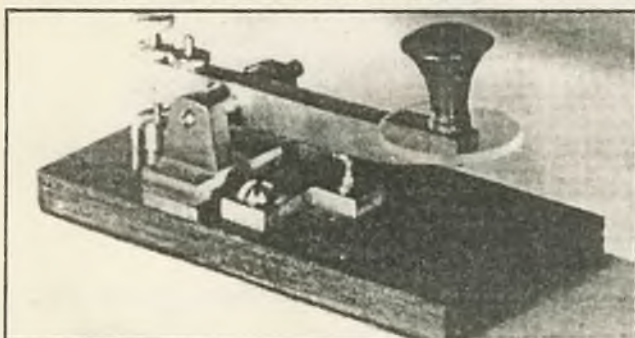
AAA-ALZ	United States of America	H2A-H2Z	Cyprus
AMA-AOZ	Spain	H3A-H3Z	Panama (Republic of)
APA-ASZ	Pakistan (Islamic Republic of)	H4A-H4Z	Solomon Islands
ATA-AWZ	India	H6A-H7Z	Nicaragua
AXA-AXZ	Australia	H8A-H9Z	Panama (Republic of)
AYA-AZZ	Argentine Republic		
A2A-A2Z	Botswana	IAA-IZZ	Italy
A3A-A3Z	Tonga (Kingdom of)		
A4A-A4Z	Oman (Sultanate of)	JAA-JSZ	Japan
A5A-A5Z	Bhutan (Kingdom of)	JTA-JVC	Mongolian Peoples' Republic
A6A-A6Z	United Arab Emirates	JWA-JXZ	Norway
A7A-A7Z	Qatar (State of)	JYA-JYZ	Jordan (Hashemite Kingdom of)
A8A-A8Z	Liberia (Republic of)	JZA-JZZ	Indonesia (Republic of)
A9A-A9Z	Bahrain (State of)	J2A-J2Z	Djibouti (Republic of)
		J3A-J3Z	Grenada
BAA-BZZ	China (Peoples' Republic of)	J4A-J4Z	Greece
		J5A-J5Z	Guinea-Bissau (Republic of)
CAA-CEZ	Chile	J6A-J6Z	Saint Lucia
CFA-CKZ	Canada	J7A-J7Z	Dominica
CLA-CMZ	Cuba	J8A-J8Z	St. Vincent and Grenadines
CNA-CNZ	Morocco (Kingdom of)		
COA-COZ	Cuba	KAA-KZZ	United States of America
CPA-CPZ	Bolivia (Republic of)		
CQA-CUZ	Portugal	LAA-LNZ	Norway
CVA-CXZ	Uruguay (Oriental Republic of)	LOA-LWZ	Argentine Republic
CYA-CZZ	Canada	LXA-LXZ	Luxembourg
C2A-C2Z	Nauru	LYA-LYZ	Union of Soviet Socialist Republics
C3A-C3Z	Andorra (Principality of)	LZA-LZZ	Bulgaria (Peoples' Republic of)
C4A-C4Z	Cyprus	L2A-L2Z	Bulgaria (Peoples' Republic of)
C5A-C5Z	Gambia (Republic of the)	L2A-L9Z	Argentine Republic
C6A-C6Z	Bahamas (Commonwealth of the)		
C7A-C7Z	World Meteorological Organisation	MAA-MZZ	Great Britain and Northern Ireland
C8A-C9Z	Mozambique (Peoples' Republic of)		
		NAA-NAA	United States of America
DAA-DRZ	Germany (Federal Republic of)		
DSA-DTZ	Korea (Republic of)	OAA-OCZ	Peru
DUA-DZZ	Philippines (Republic of the)	ODA-ODZ	Lebanon
D2A-D3Z	Angol (People's Republic of)	OEA-OEZ	Austria
D4A-D4Z	Cape Verde (Republic of)	OFA-OJZ	Finland
D5A-D5Z	Liberia (Republic of)	OKA-OMZ	Czechoslovakia Socialist Republic
D6A-D6Z	Comoros (Federal and Islamic Republic)	ONA-OTZ	Belgium
D7A-D9Z	Korea (Republic of)	OUA-OZZ	Denmark
		PAA-PIZ	Netherlands (Kingdom of the)
EAA-EHZ	Spain	PJA-PJZ	Netherlands Antilles
EIA-EJZ	Ireland	PKA-POZ	Indonesia (Republic of)
EKA-EKZ	Union of Soviet Socialist Republics	PPA-PYZ	Brazil (Federative Republic of)
ELA-ELZ	Liberia (Republic of)	PZA-PZZ	Suriname (Republic of)
EMA-EOZ	Union of Soviet Socialist Republics	P2A-P2Z	Papua New Guinea
EPA-EQZ	Iran (Islamic Republic of)	P3A-P3Z	Cyprus
ERA-ESZ	Union of Soviet Socialist Republics	P4A-P4Z	Aruba
ETA-ETZ	Ethiopia	P5A-P9Z	Korea (Democratic Peoples' Republic of)
EUA-EWZ	Byelorussian Soviet Socialist Republic		
EXA-EZZ	Union of Soviet Socialist Republics	QAA-QZZ	(Service abbreviations)
FAA-FZZ	France	RAA-RZZ	Union of Soviet Socialist Republics
GAA-GZZ	Great Britain and Northern Ireland		
		SAA-SMZ	Sweden
HAA-HAZ	Hungarian Peoples' Republic	SNA-SRZ	Poland (Peoples' Republic of)
HBA-HBZ	Switzerland (Confederation of)	SSA-SSM	Egypt (Arab Republic of)
HCA-HDZ	Ecuador	SSN-STZ	Sudan (Democratic Republic of the)
HEA-HEZ	Switzerland (Confederation of)	SUA-SUZ	Egypt (Arab Republic of)
HFA-HFZ	Poland (Peoples' Republic of)	SVA-SZZ	Greece
HGA-HGZ	Hungarian Peoples' Republic	S2A-S3Z	Bangladesh (People's Republic of)
HHA-HHZ	Haiti (Republic of)	S6A-S6Z	Singapore (Republic of the)
HIA-HIZ	Dominican Republic	S7A-S7Z	Seychelles
HJA-HKZ	Colombia (Republic of)	S9A-SPZ	Sao Tome and Principe (Democratic Republic of)
HLA-HLZ	Korea (Republic of)		
HMA-HMZ	Korea (Democratic Peoples' Republic of)	TAA-TCZ	Turkey
HNA-HNZ	Iraq (Republic of)	TDA-TDZ	Guatemala (Republic of)
HOA-HPZ	Panama (Republic of)	TEA-TEZ	Costa Rica
HQA-HRZ	Honduras (Republic of)	TFA-TFZ	Iceland
HSA-HSZ	Thailand	TGA-TGZ	Guatemala (Republic of)
HTA-HTZ	Nicaragua	THA-THZ	France
HUA-HUZ	El Salvador (Republic of)	TIA-TIZ	Costa Rica
HVA-HVZ	Vatican City State	TJA-TJZ	Cameroon (United Republic of)
HWA-HYZ	France	TKA-TKZ	France
HZA-HZZ	Saudi Arabia (Kingdom of)	TLA-TLZ	Central African Republic



TMA-TMZ	France	3WA-3WZ	Vietnam (Socialist Republic of)
TNA-TNZ	Congo (People's Republic of)	3XA-3XZ	Guinea (Revolutionary peoples' Republic of)
TOA-TQZ	France	3YA-3YZ	Norway
TRA-TRZ	Gabon Republic	3ZA-3ZZ	Poland (Peoples' Republic of)
TSA-TSZ	Tunisia		
TTA-TTZ	Chad (Republic of the)	4AA-4CZ	Mexico
TUA-TUZ	Ivory Coast (Republic of)	4DA-4IZ	Philippines (Republic of the)
TVA-TXZ	France	4JA-4LZ	Union of Soviet Socialist Republics
TYA-TYZ	Benin (Peoples' Republic of)	4MA-4MZ	Venezuela (Republic of)
TZA-TZZ	Mali (Republic of)	4NA-4OZ	Yugoslavia (Social Federal Republic of)
T2A-T2Z	Tuvalu	4PA-4SZ	Sri Lanka (Democratic Socialist Republic)
T3A-T3Z	Kiribati Republic	4TA-4TZ	Peru
T4A-T4Z	Cuba	4UA-4UZ	United Nations Organisation
T5A-T5Z	Somali Democratic Republic	4VA-4VZ	Haiti (Republic of)
T6A-T6Z	Afghanistan (Democratic Republic of)	4WA-4WZ	Yemen Arab Republic
T7A-T7Z	Republic of San Marino	4XA-4XZ	Israel (State of)
		4YA-4YZ	International Civil Aviation Organisation
UAA-UQZ	Union of Soviet Socialist Republics	4ZA-4ZZ	Israel (State of)
URA-UTZ	Ukrainian Soviet Socialist Republic		
UUA-UZZ	Union of Soviet Socialist Republics	5AA-5AZ	Libya (Socialist Peoples' Libyan Arab Jamahiriya)
VAA-VGZ	Canada	5BA-5BZ	Cyprus
VHA-VNZ	Australia	5CA-5GZ	Morocco (Kingdom of)
VOA-VOZ	Canada	5HA-5IZ	Tanzania (United Republic of)
VPA-VSZ	Great Britain and Northern Ireland	5JA-5KZ	Colombia (Republic of)
VTa-TWZ	India	5LA-5MZ	Liberia (Republic of)
VXA-VYZ	Canada	5NA-5OZ	Nigeria (Federal Republic of)
VZA-VZZ	Australia	5PA-5QZ	Denmark
V2A-V2Z	Antigua and Barbuda	5RA-5SZ	Madagascar (Democratic Republic of)
V3A-V3Z	Belize	5TA-5TZ	Mauritania (Islamic Republic of)
V4A-V4Z	St. Christopher and Nevis	5UA-5UZ	Niger (Republic of the)
V8A-V8Z	Brunei	5VA-5VZ	Togolese Republic
		5WA-5WZ	Western Samoa
WAA-WZZ	United States of America	5XA-5XZ	Uganda (Republic of)
		5YA-5ZZ	Kenya (Republic of)
XAA-XIZ	Mexico	6AA-6BZ	Egypt (Arab Republic of)
XJA-XOZ	Canada	6CA-6CZ	Syrian Arab Republic
XPA-XPZ	Denmark	6DA-6JZ	Mexico
XQA-XRZ	Chile	6KA-6NZ	Korea (Republic of)
XSA-XSZ	China (Peoples' Republic of)	6OA-6OZ	Somali Democratic Republic
XTA-XTZ	Burkina Faso	6PA-6SZ	Pakistan (Islamic Republic of)
XUA-XUZ	Kampuchea (Democratic)	6TA-6UZ	Sudan (Democratic Republic of the)
XVA-XVZ	Vietnam (Socialist Republic of)	6VA-6WZ	Senegal (Republic of the)
XWA-XWZ	Laos Peoples' Democratic Republic	6XA-6XZ	Madagascar (Democratic Republic of)
XXA-XXZZ	Portugal	6YA-6YZ	Jamaica
XYA-XZZ	Burma (Socialist Republic of the Union of)	6ZA-6ZZ	Liberia (Republic of)
YAA-YAZ	Afghanistan (Democratic Republic of)	7AA-7IZ	Indonesia (Republic of)
YBA-YHZ	Indonesia (Republic of)	7JA-7NZ	Japan
YIA-YIZ	Iraq (Republic of)	7OA-7OZ	Yemen (Peoples' Democratic Republic of)
YJA-YJZ	Vanuatu	7PA-7PZ	Lesotho (Kingdom of)
YKA-YKZ	Syrian Arab Republic	7QA-7QZ	Malawi (Republic of)
YLA-YLZ	Union of Soviet Socialist Republics	7RA-7RZ	Algeria (Algerian Democratic and Popular Republic)
YMA-YMZ	Turkey	7SA-7SZ	Sweden
YNA-YNZ	Nicaragua	7TA-7YZ	Algeria (Algerian Democratic and Popular Republic)
YOA-YRZ	Romania (Socialist Republic of)	7ZA-7ZZ	Saudi Arabia (Kingdom of)
YSA-YSZ	El Salvador (Republic of)		
YTA-YUZ	Yugoslavia (Social Federal Republic of)	8AA-8IZ	Indonesia (Republic of)
YVA-YYZ	Venezuela (Republic of)	8JA-8NZ	Japan
YZA-YZZ	Yugoslavia (Socialist Federal Republic of)	8OA-8OZ	Botswana (Republic of)
YSA-Y9Z	German Democratic Republic	8PA-8PZ	Barbados
		8QA-8QZ	Maldives (Republic of)
ZAA-ZAZ	Albania (Socialist Peoples' Republic of)	8RA-8RZ	Guyana
ZBA-ZJZ	Great Britain and Northern Ireland	8SA-8SZ	Sweden
ZKA-ZMZ	New Zealand	8TA-8YZ	India
ZNA-ZOZ	Great Britain and Northern Ireland	8ZA-8ZZ	Saudi Arabia (Kingdom of)
ZPA-ZPZ	Paraguay (Republic of)		
ZQA-ZQZ	Great Britain and Northern Ireland	9BA-9DZ	Iran (Islamic Republic of)
ZRA-ZUZ	South Africa (Republic of)	9EA-9FZ	Ethiopia
ZVA-ZZZ	Brazil (Federative Republic of)	9GA-9GZ	Ghana
Z2A-Z2Z	Republic of Zimbabwe	9HA-9HZ	Malta
		9IA-9JZ	Zambia (Republic of)
2AA-2ZZ	Great Britain and Northern Ireland	9KA-9KZ	Kuwait (State of)
		9LA-9LZ	Sierra Leone
3AA-3AZ	Monaco	9MA-9MZ	Malaysia
3BA-3BZ	Mauritius	9NA-9NZ	Nepal
3CA-3CZ	Equatorial Guinea (Republic of)	9OA-9TZ	Zaire (Republic of)
3DN-3DZ	Swaziland (Kingdom of)	9UA-9UZ	Burundi (Republic of)
3DN-3DZ	Fiji	9VA-9VZ	Singapore (Republic of)
3EA-3FZ	Panama (Republic of)	9WA-9WZ	Malaysia
3GA-3GZ	Chile	9XA-9XZ	Rwanda (Republic of)
3HA-3UZ	China (People's Republic of)	9YA-9ZZ	Trinidad and Tobago
3VA-3VZ	Tunisia		



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3.5-144MHz

**\$146.00**

PLUS PACK & FREIGHT

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PLUS PACK & FREIGHT



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YAESU FT-757 GXII  
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APPLICATIONS



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SHORTWAVE MW AND SHORTWAVE  
GENERAL COVERAGE RECEIVER



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YAESU FT-4700RH  
VHF/UHF HOME  
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YAESU FT-212RH  
45 WATT 2M TRANSCEIVER

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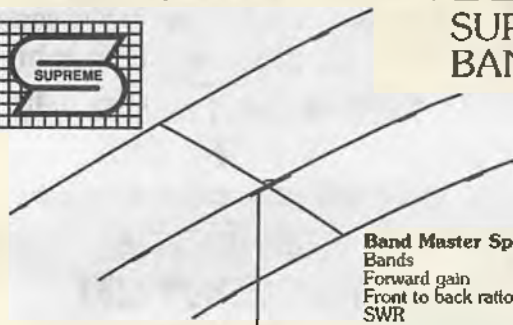
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# SUPREME ANTENNAS



## SUPREME BANDMASTER



### Band Master Specification

Bands	20, 15, 10 metres
Forward gain	up to 8dB
Front to back ratio	20dB or better
SWR	1.5 to 1 or less
Max. element length	7.970m (25' 10")
Boom length	3.660m (12' 0")
Turning radius	4.500m (14' 9")
Wind load	378N (86 lbs)
Wind surface	0.372m (4')
Assembled weight	8.5kg (18.73 lbs)
Power rating	300W
Feedline	52Ω RG.8/u
Feedline length	13.700m (45') or more
Mast diameter	45mm (1 3/4" OD)

### Power Master Specification

Power rating	Full length limit
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## SUPREME VERTICALMASTER 4 BAND DX VERTICAL ANTENNA

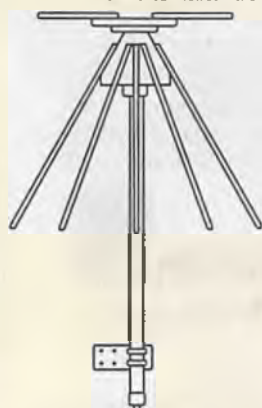
### Specifications

Bands	160, 80, 40 and 20 metres
Height	12.2 metres
SWR	Less than 1.5:1 at resonance on all bands
Feedline	50Ω co-axial
Power Rating	Full legal limit



### SIGNALMASTER 7 BAND VERTICAL

SIGNALMASTER is a totally new development in Vertical aerial design. 160 metres to 10 metres AUTOMATICALLY. Use the full antenna height of 7.8m on all 6 bands for better performance and efficiency. This is the first time that a vertical aerial has been available in New Zealand with these outstanding features. SIGNALMASTER operates this way:  
10 metres—as a full 1/4 wavelength giving better performance than other 1/4 wave systems.  
15 metres—on an extended 1/4 wavelength with a decoupling stub.  
20 metres—a full 1/4 wavelength giving a high base impedance matching into a 1/4 wave impedance transformer in the feedline.  
80 and 40 metres—the resonator provides the inductive reactance for resonance plus top loading effect.  
160 metres—the 160m base loading resonator provides a full base loaded vertical



## SUPREME DISCONEMASTER

### Broad Band VHF-UHF Antenna

Specifications	
Operating range	70MHz to above 450MHz
Polarisation	Vertical
Rating	1KW PEP
Impedance	50Ω
Termination	SO239

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## PRICE SCHEDULE

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### —SUPREME—

#### HF ANTENNA SYSTEMS

SUPREME Power Master high power Tri-band Beam	584.20
SUPREME Band Master standard Tri-Band Beam	506.10
SUPREME Vertical Master 4 band DX Vertical	450.20
SUPREME Signal Master 7 band Vertical Antenna	383.60
SUPREME Discone Master VHF/UHF broadband Antenna	186.20
SUPREME Wire Master Traps—Amateur bands (pair)	81.40
SUPREME Wire Master Traps—Special requirements (pair)	121.90
SUPREME Mobile Master multiband Mobile HF Whip	216.75
SUPREME Mobile Whips 6ft 80/40/20/15/10	51.20
SUPREME Heavy Duty CP flanged base	August
SUPREME Mobile Whips 6ft—Special requirements	POA

#### VHF/UHF ANTENNA SYSTEMS

RF 3-element 6m Beam	263.85
RF 5-element 2m Beam	62.90
RF 10-element 2m Beam	125.75
RF 10-element H/V 2m Crossed Beam	163.90
RF 16-element 432MHz Log Periodic	98.15
RF balun 6m	34.30
RF balun 2m	22.24
SUPREME 1/4 λ Magnetmaster 2m	61.40
SUPREME 5/8 λ Gutter Grip 2m	54.18
SUPREME 5/8 λ Cowl Mount 2m	80.85
SUPREME 1/2 λ Cowl Mount 2m	59.35
SUPREME Bracket Mounts for Cowl Mount	8.25
SUPREME Co-Linear 2m	49.00
SUPREME Slim Jim 2m	32.70

#### MARINE ANTENNAS

SUPREME HF 6ft Whips—made to specifications	POA
SUPREME VHF 1/2 λ Whip	59.35

#### CITIZEN BAND ANTENNAS

Ground Plane—4 Radial	105.50
SUPREME Cowl Mount w/base pre-tuned	62.65
SUPREME Cowl Mount w/base tunable	54.55
SUPREME Gutter Grip	60.25
SUPREME 6N Whip	51.20

#### ANTENNA ACCESSORIES

SUPREME CP Ferrules—for HF Base	3.10
SUPREME VHF Base with Bung and Washer	13.20
SUPREME VHF Tilt Down Adaptor	25.85
SUPREME Collets	7.20
SUPREME Bungs for VHF Base	5.55
SUPREME Tuning Tips 2m and CB	5.45
SUPREME Coaxial Switches 1 Pole 5 Position	52.80
SUPREME replacement Rubber Duckie 2m	28.80
SUPREME replacement Rubber Duckie CB	30.00
SUPREME replacement Rubber Duckie Marine	34.70
SUPREME 1kW Baluns 1:1 or 4:1	93.25

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# ICOM

## COMMUNICATIONS EQUIPMENT



## SUPREME ANTENNAS

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### IC-735 HF ALL BAND TRANSCEIVER

- General Coverage Receiver
- Compact and lightweight
- 12 Memory Channels
- 100W Output
- Extra Large LCD Readout
- 105dB Dynamic Range
- Receiver Incremental Tuning (RIT)
- Programmed and Memory Scans
- Built-in Attenuator and Preamplifier
- Passband Tuning
- Adjustable Notch Filter
- Automatic Gain Control (AGC)
- Noise Blanker
- HM-12 Microphone Included
- CW Semifull Break In
- CW Narrow Filter (Optional)
- Electronic Keyer (Optional)



### IC-751A HF ALL BAND TRANSCEIVER

- General Coverage Receiver
- 32 Memory Channels
- 105dB Dynamic Range
- 100W Output
- 100% Duty Cycle Rated
- Built-in Electronic Keyer
- CW Semifull Break-in
- 500Hz CW Filter Included
- Adjustable Noise Blanker
- Passband Tuning
- Adjustable Notch Filter
- HM-36 Microphone Included
- Programmed, Memory and Mode Scans
- Built-in Attenuator and Preamplifier



### IC-R100 Mobile/Base Receiver

For the enthusiast who prefers a more permanent installation the IC-R100 is ideal giving full frequency coverage of 500kHz-1800MHz and AM/FM, FM wide modes of operation. The IC-R100 boasts 100 memory channels to store your favourite stations and features similar to the little pocket receiver.



### IC-R7000 COMMUNICATIONS RECEIVER

- USB, LSB, FM, FM-Narrow, AM
- Wide Frequency Coverage
- 99 Memory Channels
- Infra-Red Remote Control (Optional)
- Variable Scan Speed and Delay
- Noise Blanker
- DC Kit for Portable Operation (Optional)
- Voice Synthesizer (Optional)
- Six Scanning Functions



### IC-R1 Handportable Receiver

The new IC-R1 is a pocket-size receiver with continuous 150kHz through 1300MHz, AM/FM and FM wide reception. With 100 memory channels this tiny receiver is packed full of features: multi-scan functions, 11 search step increments, clock timer, power-save, S-meter and a convenient frequency selection via the keypad or tuning knob.

### DUAL-BAND VHF-UHF HAND HELD IC-24AT TRANSCEIVER

#### COMPACT AND LIGHTWEIGHT

Even with so many functions the streamlined IC-24AT/ET weighs only 340g and measures just 52(W)x 136 (H)x 34.5 (D)mm with the BP-82 BATTERY PACK.

#### CROSSBAND FULL DUPLEX CAPABILITY

The IC-24AT/ET is capable of simultaneously transmitting on the 144MHz band and receiving on the 430 (440)MHz band and vice versa. Use this capability to make convenient telephone-style full duplex QSOs.

#### FULL 5W OUTPUT POWER

By connecting a 13.8V external DC power supply, the IC-24AT/ET delivers a full 5W of output power on both bands. You'll reach distant repeaters.



### IC-3210 DUAL BAND FM TRANSCEIVER

- Full Duplex Crossband Operation
- 20 Double-spaced Memory Channels
- Built-in Duplexer
- Two Call Channels
- Four Priority Watch Functions
- Programmed, Memory and Selected Band Memory Scan
- 1750Hz Tone Call (Europe)
- Variable LCD Backlight Intensity
- Tone Squelch and Pocket Beep Functions (Optional)

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# Terms, Conditions and Restrictions Applying to Amateur Radio Apparatus Licence

1. The licence permits the use of radio apparatus to conduct Radiocommunication for the purpose of self training, intercommunication and technical investigation other than for pecuniary gain.
2. Nothing in the licence, the International Radio Regulations 1982, Radiocommunications Act 1989, or the Radio Regulations 1987 prohibits any person in distress from using any means at that person's disposal to attract attention, indicate the person's position, and obtain assistance.
3. The apparatus, to which the licence relates, shall operate only on the frequency(ies), and power(s) shown on the schedule for the purpose specified on or annexed to the licence.
4. All reasonable care has been used in making radio frequency assignments. The nature of frequency assignments is such that no guarantee can be made that implementation and use will be trouble free. Accordingly the Crown does not accept liability under any circumstances for any loss or damage of any kind. In the event that frequency change is required, all costs are the sole responsibility of the licensee.
5. The licence is valid for the period specified on the front of the licence. The licence may be revalidated upon payment of the prescribed fee as set out in the THIRD SCHEDULE of the Radio Regulations 1987.
6. The emission from amateur radio apparatus for any radiocommunication should be of the minimum bandwidth and power as is necessary to ensure a satisfactory service.
7. Power Limits for Amateur Radio Apparatus:  
For Amateur Radio Apparatus the power limit shall be:
  - i. Novice Grade;  
The radio frequency power output shall not exceed 10 watts mean power, or 30 watts peak envelope power.
  - ii. Limited or General Grade:  
The radio frequency power output shall not exceed 120 watts mean power, or 400watts peak envelope power.

## Notes to Amateur Frequency Allocation Chart

1. These bands are available for use by all Amateur licensees at times of natural disaster in connection with international relief operations, subject to the approval of the Secretary.
2. The bands 7.0-7.1MHz; 14.0-14.25MHz; 21.00- 21.45MHz; 24.890-24.990MHz; 28.0-29.7MHz; 144- 146MHz; 435-438MHz; 1260-1270MHz (earth-to-space direction only); 2.4-2.45GHz; 3.40-3.41GHz; 5.65- 5.67GHz (earth-to-space direction only); 5.83-5.85GHz (space-to-earth direction only); 10.45-10.5GHz; 24.0-24.05GHz; 47.0-47.2GHz; 75.5-81GHz; 142-149GHz; and 241-250GHz may also be used for amateur satellite communications.
3. These bands are or may be allocated for use by other services. Amateur licensees may not use them in a manner which interferes with such other services.
4. The frequencies 27.12MHz, 2.45GHz, 5.8GHz, and 24.125GHz are designated for industrial, scientific and medical (ISM) purposes with emissions confined within  $\pm 163\text{kHz}$ ,  $\pm 50\text{MHz}$ ,  $\pm 75\text{MHz}$ , and  $\pm 125\text{MHz}$  respectively of these frequencies. Amateur licensees operating telecontrol within these limits must accept interference from ISM equipment.
5. The band 275-400GHz is allocated for use by amateur licensees on a temporary basis for experimentation and development purposes.
6. Until further notice the following spot frequencies may not be used: 1800kHz ( $\pm 3\text{kHz}$ ); 1860kHz ( $\pm 3\text{kHz}$ ); 10.130MHz ( $\pm 3\text{kHz}$ ); 1850kHz-1950kHz may not be used in a manner which interferes with navigation uses of those frequencies.
7. Telecontrol and telemetry operation only. Power output is not to exceed 5W mean power.
8. The band 50-50.15MHz is allocated for temporary use. Operation is only permitted outside television programme hours.
9. Operation on these bands by General Grade licensees is not permitted within 12 months of obtaining the qualification. This does not apply to the sub band 21.10MHz to 21.20MHz.
10. These bands are allocated for use by other primary services and Amateur usage is on a secondary service basis. Users of a secondary service cannot claim protection from harmful interference from users of a primary or permitted service to which frequencies are already assigned or may be assigned at a later date.

8. No licensee of amateur radio apparatus shall use, or permit to be used, any such apparatus for the transmission of international communications on behalf of persons not being authorized amateur radio operators unless such communications are specifically authorized by the countries concerned.

(a) The passing of brief messages of a personal nature on behalf of non-licensed people or organizations within New Zealand is permitted, provided no tolls, fees or other consideration shall be received or collected by the licensee of the amateur apparatus.

(b) The licensee of amateur radio apparatus may permit persons other than qualified amateur operators to use the apparatus to pass brief personal messages under the direct supervision of the licensee. Under no circumstances may persons other than the authorized amateur operators engage in calling or signing-off procedures, or manipulate the controls of apparatus.

9. The licensee is only permitted to use the frequency bands listed below for the grade specified on the front page of the licence.

## 10. Amateur Frequency Allocation Chart.

Frequency Band	Notes	Use Restricted to Certificate holders of
1800-1950kHz	3 and 6	General
3.50-3.90MHz	1 and 3	General
3.525-3.625MHz	1 and 3	Novice
7.00-7.10MHz	1, 2 and 9	General
7.10-7.30MHz	3, 9 and 10	General
10.10-10.15MHz	1, 3, 6, 9 and 10	General
14.00-14.35MHz	1, 2 and 9	General
18.068-18.168MHz	1 and 9	General
21.00-21.45MHz	1, 2 and 9	General
21.10-21.20MHz	1 and 2	Novice, General
24.89-24.990MHz	1, 2 and 9	General
27.12MHz	4 and 7	All Grades
28.00-29.70MHz	2	General
28.10-28.60MHz	2	Novice
50.00-50.15MHz	3 and 8	Limited & General
51.00-53.00MHz	3	Limited & General
144.0-146.0MHz	1 and 2	Limited & General
146.0-148.0MHz	3	Limited & General
430-449.75MHz	2, 3 and 10	Limited & General
610-622MHz	3 and 10	Limited & General
1.24-1.30GHz	2, 3 and 10	Limited & General
2.30-2.45GHz	2, 3, 4 and 10	Limited & General
3.30-3.50GHz	2, 3 and 10	Limited & General
5.65-5.85GHz	2, 3, 4 and 10	Limited & General
10.0-10.5GHz	2, 3 and 10	Limited & General
24.00-24.05GHz	2 and 4	Limited & General
24.05-24.25GHz	3, 4 and 10	Limited & General
47.0-47.2GHz	2	Limited & General
75.5-76.0GHz	2	Limited & General
76.0-81GHz	2 and 3	Limited & General
119.98-120.02GHz	3 and 10	Limited & General
142-144GHz	2	Limited & General
144-149GHz	2, 3 and 10	Limited & General
241-248GHz	2, 3 and 10	Limited & General
248-250GHz	2	Limited & General
275-400GHz	3 and 5	Limited & General



## New Zealand HF Bandplans

These plans help you comply with the official Frequency Allocation List: The class of emission from an amateur station shall be selected in the light of the total available bandwidth for all users and shall be in accordance with current operating practice.

These plans represent current operating practice.

Band (MHz)	Emission (See Notes)
1.8-1.95	6
3.5-3.55	N
3.55-3.9	6
7.0-7.03	N
7.03-7.3	6
10.1-10.15	N
14.0-14.1	N
14.1-14.35	6
18.068-18.11	N
18.11-18.168	6
21.0-21.1	N
21.1-21.45	6
24.89-24.93	N
24.93-24.99	6
27.12 ±0.163	T
28.0-28.1	N
28.1-29.5	6, B, S,
29.5-29.7	10

### Data sub-bands

7MHz: Data sub-band	7.025- 7.040 MHz
10MHz: Data sub-band	10.140-10.150 MHz
14MHz: Data sub-band	14.070-14.112 MHz*
18MHz: Data sub-band	18.100-18.110MHz*
21MHz: Data sub-band	21.070-21.125MHz*
24MHz: Data sub-band	24.920-24.930 MHz*
28MHz: Data sub-band	28.050-28.150 MHz*

\* Denotes no change from Auckland 1985 band plan.

### Notes

N = Narrow-band modes; i.e., CW and RTTY. RTTY operating normally is at the high-frequency end of the segment. Call Book-listed selcal (RTTY selective calling) frequencies should be avoided by stations using other modes. SSB Phone may be used for morse practice texts by stations in 3.53-3.55 MHz segment.

6 = All modes except MCW and AFSK, to a MAXIMUM bandwidth of 6 kHz.

10 = All modes except MCW and AFSK to a MAXIMUM bandwidth of 10 kHz.

B = Beacons: Transmitting on Call Book-listed beacon frequencies should be avoided.

T = Telecontrol and telemetry only.

Refer to Index for designated frequencies and detailed bandplans.

All amateurs are reminded of:

1. The ITU Radio Regulations (Edition of 1982), including:

307. The bandwidths of emissions shall also be such to ensure the most efficient utilisation of the spectrum; in general this requires that bandwidths be kept at the lowest value which the state of the technique and the nature of the service permits.

1804. All stations shall radiate only as much power as is necessary to ensure a satisfactory service.

2. The New Zealand Radio Regulations 1987.

3. NZART Current Policy, Section 12A, Bandplans (Break-In, page 2, October 1983):

d. All radio amateurs are requested to observe the published New Zealand bandplans which are to assist others to follow their interests with a minimum impact on you, and to assist you to follow your interests with minimum impact on others.

### Data Mode Usage on 14 MHz Band

Considering the dramatic increase in data mode usage on the 20m band, it is recommended that the sub-band for these classes of signals be 14.070 MHz to 14.112MHz (with +500 Hz at 14.100 MHz for CW beacons) and within that data sub-band the current practices of traditional data modes may continue up to 14.095 MHz with 14.095 MHz to 14.112 MHz being reserved for other data modes including Packet.

## Where Can I Find It?

### NZART Policies

Code of Practice for BCI/TVI cases: October 1981, pages 37-44.

Content of ATV transmission: May 1984, Page 19.

NZART Current Policy: August 1982 pages 25-29; plus update October 1983, page 2.

Pirate operators and improperly licensed stations: August 1983, page 3.

Policy on Amateur Bands: November 1983, page 2.

Policy on Citizens Band: April 1982, page 3.

Policy on Radio Interference: August 1982, page 29.

Repeater and Beacon Policy: August 1981, pages 31-38; plus update August 1982, page 31.

Rules for AREC: November 1981, pages 30 and 31.

### NZPO and NZRFS Letters

Amateur radio traffic handling, content of messages, September 1989, page 3.

Amateurs responsible for own bandplanning: July 1983, page 2.

Callsigns held for two years: July 1980, page 225.

Club Stations—callsigns and operator grades: September 1979, page 358.

Conduct of Morse Practice Sessions: April 1982, page 2.

Examination morse test to contain both letters and figures:

January/February 1987, page 3.

Experimental Licensees, use of Callsigns: January/February 1990, page 11.

Mainland Call Suffix transportable to ZL7, 8, 9: October 1983, page 2.

Malicious Interference: November 1981, page 2.

Operation on 50-50.15MHz, November 1989, page 17.

Shortened Callsigns for contest groups: August 1986, page 3.

Transmitting equipment—control of sales: July 1980, page 255.

Use of callsign suffixes /P/M and /MM: August 1984, page 4.

Use of Tape Recorders on-air: January 1951, page 76.

Use of "ZM" prefix: November 1983, page 2.

Use of 5-letter groups for Morse Training: April 1982, page 2.

"ZL" not to be omitted from callsigns: May 1958, page 3.

"ZLQ" callsigns for visitors: December 1980, page 551.

### Miscellaneous

Amateur Bands and their use at time of natural disaster—Resolution 640: August 1983, page 21.

AREC and NZART membership: August 1984, page 33.

Civil Defence and the Radio Amateur—CD Bandplan: December 1981, pages 18-21.

Freedom of Speech: September 1984, page 18.

LOCATOR System: August 1984, page 14.

No GST for overseas member subscriptions: March 1987, page 3.

NZART Badge background: November 1982, page 24.

Radio Amateurs—Assistance to Police: December 1982, page 34.

Spectrum piracy: November 1983, page 14.

Towers and Townplanning: December 1982, page 36; also March 1983, page 21.



# NZART VHF/UHF Bandplans

## 144MHz Bandplan

- 144MHz—E-M-E
  - SSB, Beacons
  - Space, Data
  - repeater in
- 145MHz—
  - Repeater out
  - Space
- 146MHz—
  - Repeater in
  - FM simplex
  - Repeater out
- 147MHz—
  - Repeater out
  - FM simplex
  - Repeater in
- 148MHz—

### Notes:

1. Amateur satellite service 144.3 to 144.5 and 145.8 to 146 protected from other use.
2. E-M-E, CW 144.0 to 144.1
3. SSB calling, ZL 144.2, Oceania 144.1
4. Beacons 144.25 to 144.3 according to geographic plan.
5. FM repeaters 16F3, polarisation vertical, spacing 25kHz.
  - 145.325 to 145.775 split - 600kHz
  - 146.625 to 147.000 split - 600kHz
  - 147.025 to 147.375 split + 600kHz
 Repeaters are named by frequency. first digit is unit MHz. If the unit kHz is zero, delete it from name: e.g., a repeater that transmits on 147.100 is called 710, a repeater that transmits on 146.625 is called 6625. See fixed station directory for full list. Standard repeaters may be called data repeaters if there is no data regeneration involved and data is the primary use.
6. FM simplex 146.425 to 146.625 and 147.400 to 147.625 FM simplex calling 146.475  
ATV liaison 147.400  
ATV auxiliary audio input 147.450 (non-exclusive)
7. Linear repeaters will be mixed within the "145" repeater group. Bandwidth is not to exceed 30kHz.
8. 144.60 to 144.70 is reserved for single frequency data channels including store and forward Digipeaters.
  - 144.600 Primary data national link gateway
  - 144.625 Secondary data national link gateway
  - 144.650 Primary data local fixed stations
  - 144.675 Secondary data local fixed stations
  - 144.700 Data primary calling
9. Frequencies 144.1 to 144.25 and 144.5 to 144.6 not designated, general use.

## 430MHz Bandplan

- 430MHz—Links
- 432MHz—SSB
  - Beacons
- 434MHz—FM repeater inputs
- 436MHz—Space
- 438MHz—Links
  - FM repeater outputs
- 440MHz—
- 442MHz—
- 444MHz—
- 446MHz—
- 448MHz—
- 449.75MHz—Links

### Notes:

1. Amateur satellite service 435 to 438 protected from other use.
2. FM repeaters 5MHz split, 16F3, at .025MHz steps. Polarisation vertical.
  - Inputs (433.500 to 434.975)
  - Outputs (438.500 to 439.975)
 Repeaters are named by frequency. First digit is unit MHz. If the unit kHz is zero delete it from name, e.g. a repeater that transmits on 438.500 is called 850, one that transmits on 438.550 is called 855, one that transmits on 438.525 is 8525.
3. FM simplex frequencies  
433.30 to 433.475 in .025 MHz steps.  
Named 330 to 3475.
4. SSB calling frequency 432.2
5. E-M-E 431.975 to 432.025.
6. Beacons 433.0 to 433.28
7. Link frequency bands 430.0 to 431.0  
438.0 to 438.45  
449.0 to 449.75
8. ATV channel 1 video 443.25 sound 448.75

## 610MHz Bandplan

- 610MHz—SSB
  - Beacons
- 612MHz—
- 614MHz—
- 616MHz—
- 618MHz—
- 620MHz—
- 622MHz—

### Notes:

1. SSB calling frequency 610.2
2. FM calling frequency 610.3
3. Beacons 610.4 to 610.5
4. ATV Channel 2 Vision 615.25 sound 620.75 (E39).

## 1240MHz Bandplan

- 1240MHz—
- 1250MHz—
- 1260MHz—Links
  - Space (up links only)
- 1270MHz—SSB
  - FM repeater out
- 1280MHz—
- 1290MHz—
- 1300MHz—Links

### Notes:

1. Amateur satellite service, 1260 to 1270 protected from other use.
2. ATV allocation allows two repeater pairs using AM modulation or one repeater using FM modulation.

Channel	AM assignments		
		Vision	Sound
3	1243 to 1250	1244.25	1249.75
4	1250 to 1257	1251.25	1256.75
5	1276 to 1283	1277.25	1282.75
6	1283 to 1290	1284.25	1289.75



FM assignments			
Channel	Centre Frequency	Audio Subcarrier	
34	1243 to 1257	1250.0	5.5MHz
56	1276 to 1290	1283.0	5.5MHz
3. FM repeaters + 20 MHz split, 16F3, polarisation vertical. 1271.10, 1271.20 .... up to 1272.00. Named 110, 120, etc.			
4. Beacons 1297.0 to 1297.3.			
5. Repeater links 1259 to 1260 and 1299 to 1300.			
6. Narrow band modes 1270 to 1271 and 1295 to 1299.			
7. Specific designated frequencies:			
SSB calling 1270.2 or 1296.2			
FM calling 1270.3 or 1296.3			
E-M-E band 1295.9 to 1296.1			

### 2300MHz Bandplan

2300MHz—Links
—E-M-E
2310MHz—
—
2320MHz—E-M-E
—FM repeater outputs
2330MHz—
—
2340MHz—ATV
—
2350MHz—
—
2360MHz—FM repeater inputs
—
2370MHz—
—
2380MHz—ATV
—

2390MHz—E-M-E
—Links
2400MHz—
—
2410MHz—
—
2420MHz—
—Space (down links only)
2430MHz—
—
2440MHz—
—
2450MHz—
—

### Notes:

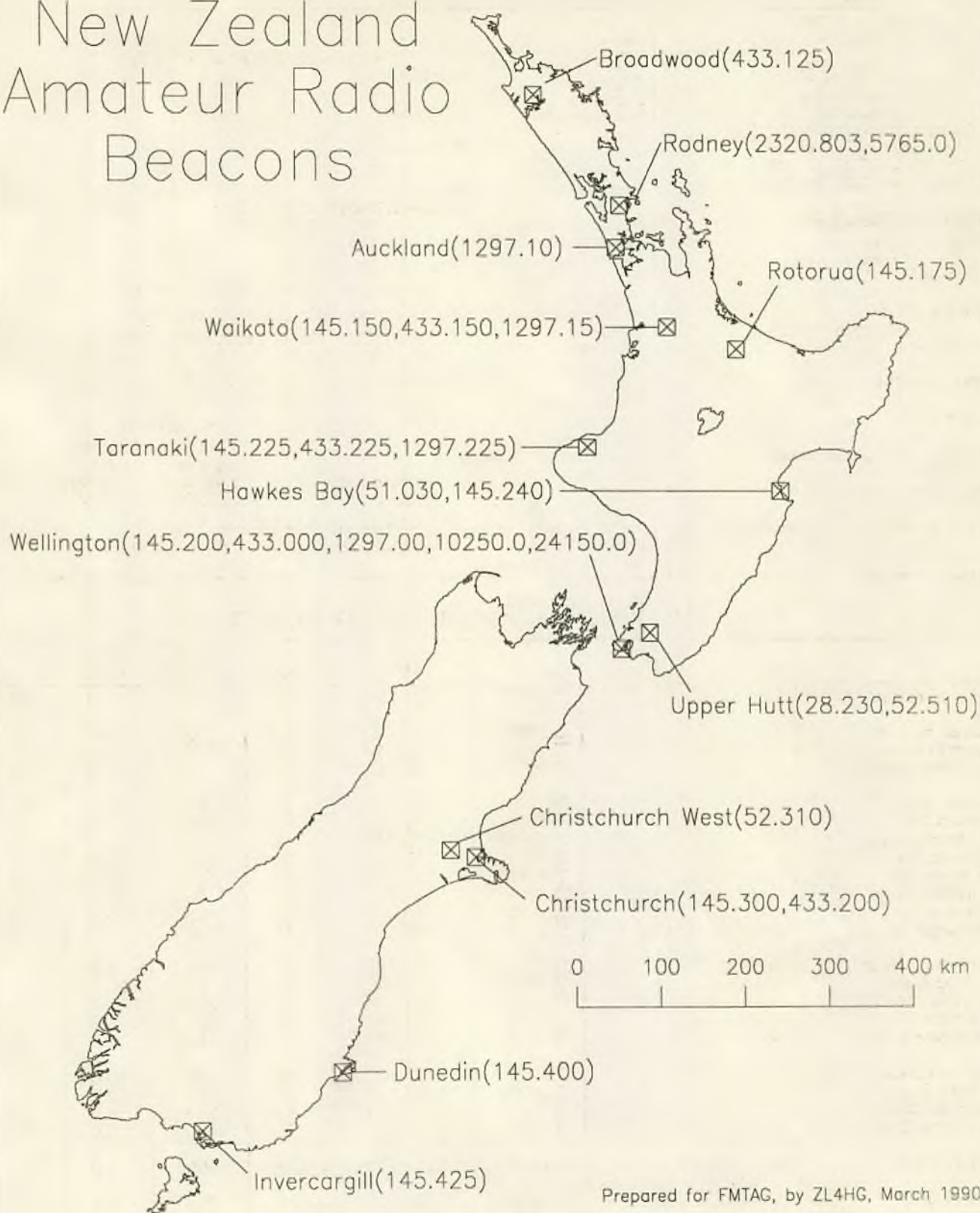
1. E-M-E 2304 to 2304.025  
2320 to 2320.025  
2390 to 2392
  2. SSB calling 2304.2
  3. Narrow band modes 2304.1 to 2325 general use
  4. FM simplex 2329 to 2330 calling 2329.6
  5. FM repeaters +33MHz split, 16F3, polarisation vertical. 2325.10, 2325.20 ... to 2328.90. Named 510, 520, etc.
  6. Wideband links 2300 to 2303.8  
2395 to 2398.8
  7. FM-TV (or AM TV by local arrangement)
- |              | Centre frequency | Audio subcarrier |
|--------------|------------------|------------------|
| 2330 to 2358 | 2344.0           | 7.5 MHz          |
| 2362 to 2390 | 2376.0           | 7.5 MHz          |
8. Beacons 2320.8 to 2321.0
  9. Amateur satellite service 2400 to 2450.

## New Zealand Amateur Radio Beacons

Name	Site	Call	Freq. MHz	Mode	Height mASL	EIRP watts	Branch
Upper Hutt 10m	Mount Climie	ZL2MHF	28.230	F1	867	1.0	63
Hawkes Bay 6m	Napier	ZL2MHB	51.030	F2	3	10.0	25
Upper Hutt 6m	Mount CLimie	ZL2MHF	52.510	F1	867	4.0	63
Christchurch West 6m	Aylesbury	ZL3MHF	52.310	F1	11	50.0	56
Waikato 2m	Hamilton	ZL1VHW	145.150	F1	97	10.0	81
Rotorua 2m	Kakanui	ZL1VHR	145.175	A1	504	6.0	33
Hawkes Bay 2m	Napier	ZL2MHB	145.240	F2	3	1.0	25
Taranaki 2m	Inglewood	ZL2VHT	145.225	F1	239	20.0	27
Wellington 2m	Hawkins Hill	ZL2UHF	145.200	F1	533	20.0	74
Christchurch 2m	Christchurch	ZL3VHF	145.300	F1	30	30.0	05
Dunedin 2m	Rotary Park	ZL4VHF	145.400	F1	160	20.0	30
Invercargill 2m	Southland Hospital	ZL4VHI	145.425	A1	25	5.0	37
Broadwood 70cm	Ngatieke #2	ZL1UHB	433.125	F2	240	2.0	78
Waikato 70cm	Hamilton	ZL1VHW	433.150	F1	97	20.0	81
Taranaki 70cm	Inglewood	ZL2VHT	433.225	F1	239	10.0	27
Wellington 70cm	Hawkins Hill	ZL2UHF	433.000	F1	533	12.0	74
Christchurch 70cm	Marley Hill	ZL3UHF	433.200	F1	488	2.0	05
Auckland 23cm	Nihotupu	ZL1UHF	1297.100	F1	330	10.0	66
Waikato 23cm	Hamilton	ZL1VHW	1297.150	F1	97	10.0	81
Taranaki 23cm	Inglewood	ZL2VHT	1297.225	F1	239	5.0	27
Wellington 23cm	Hawkins Hill	ZL2UHF	1297.000	F1	533	5.0	74
Rodney 13cm	—	ZL1SHF	2320.803	F2	305	5.0	71
Rodney 6cm	—	ZL1SHF	5765.000	F2	305	0.5	71
Wellington 3cm	Hawkins Hill	ZL2UHF	10.250GHz	F2	533	0.3	74
Wellington 24GHz	Hawkins Hill	ZL2UHF	24.100GHz	F2	533	0.05	74



# New Zealand Amateur Radio Beacons



Prepared for FMTAG, by ZL4HG, March 1990



# New Zealand Amateur Radio Fixed Station Directory

## TWO METRE BAND—FM REPEATERS

Name		Site	Output Freq.	Height mASL	Branch
Far North	710	Mount Mangataureia	147.100	513	78
Kaikohe	715	Browns Hill	147.150	388	78
Whangarei	720	Parakiora	147.200	392	28
Dargaville	7175	Pukewharariki	147.175	320	73
Rodney	730	Dome	147.300	341	71
Auckland	690	Ruaotewhenua	146.900	391	66
Bombay	670	Mount Puketutu	146.700	376	66
Auckland	6625	Port Waikato	146.625	403	66
Tairua	6975	Tairua	146.975	349	81
Waikato	695	Mount Te Aroha	146.950	944	81
Tauranga	680	Mount Minden Te Puna	146.800	286	39
Edgecumbe	700	Mount Edgecumbe	147.000	777	81
Waitomo	7375	Rangitoto Range	147.375	869	55
Tokoroa	7025	Whakamar	147.025	743	57
Rotorua	735	Mt Ngongotaha	147.350	869	33
Taupo	675	Maroanui	146.750	897	60
Taumarunui	715	Hikurangi	147.150	770	38
Kakaramea	7275	Kakaramea	147.275	1313	38
Poverty Bay	680	Kaiti Hill	146.800	122	11
Gisborne	690	Whakapuna	146.900	950	11
Napier	725	Tarapouni	147.250	1308	25
Hawkes Bay	670	Kahuranaki	146.700	652	13
New Plymouth	720	Power Station Chimney	147.200	190	27
Opunake	540	Opunake	145.400	1559	54
Wanganui	690	Maewa	146.900	658	48
Taihape	6775	Mount Mataroa	146.775	799	23
Southern Hawkes Bay	665	Mount Wharite	146.650	915	06
Manawatu	7125	Pahiatua Track	147.125	488	20
Masterton	680	Mount Rangitumau	146.800	604	46
Rewa	735	Mount Rewa	147.350	604	46
Holdsworth	7175	Mount Holdsworth	147.175	1470	46
Barton	7325	Mount Barton	147.325	1300	46
Southern Wairarapa	715	Warrens Airstrip	147.150	500	82
Kapiti	685	Mount Field	146.850	615	69
Climie	730	Mount Climie	147.300	867	63
Titahi Bay	675	Onepoto Reservoir	146.750	90	42
Belmont	710	Mount Belmont	147.100	450	74
Lower Hutt	700	Mount Fitzherbert	147.000	377	18
Golden Bay	735	Richmond Hill	147.350	620	24
Motueka	670	Mount Campbell	146.700	1328	24
Nelson	720	Saddle Hill	147.200	1215	26
Blenheim	695	Jamies Knob	146.950	277	22
Murchison	680	Mount Murchison	146.800	1469	26
Westport	675	Cape Foulwind Lighthouse	146.750	91	62
Westport	715	Mount Rochfort	147.150	1041	62
Kaikoura	690	Kaikoura Peninsula	146.900	91	76
Greymouth	695	Sewell Peak	146.950	834	49
Christchurch	705	Marley Hill	147.050	488	05
Christchurch	725	Herbert Peak	147.250	926	05
Tekapo	680	Mount Rollesby	146.800	1341	34
Timaru	6625	Mount Horrible	146.625	332	34
Waimate	695	Mount Studholme	146.950	1088	34
Oamaru	670	Station Peak	146.700	886	64
Alexandra	700	Fruitlands	147.000	1478	61
Queenstown	685	Double Cone	146.850	2286	75
Dunedin	665	Highcliffe	146.650	310	30
Dunedin	690	Mount Cargill	146.900	674	30
Balclutha	675	Kuriwao	146.750	638	35
Gore	695	McLeod's Hill	146.950	640	37
Invercargill	680	Bald Hill, Otautau	146.800	798	37

Split -600kHz (user transmits low), 145.325 to 145.775, 146.625 to 147.000

+600kHz (user transmits high), 147.025 to 147.975

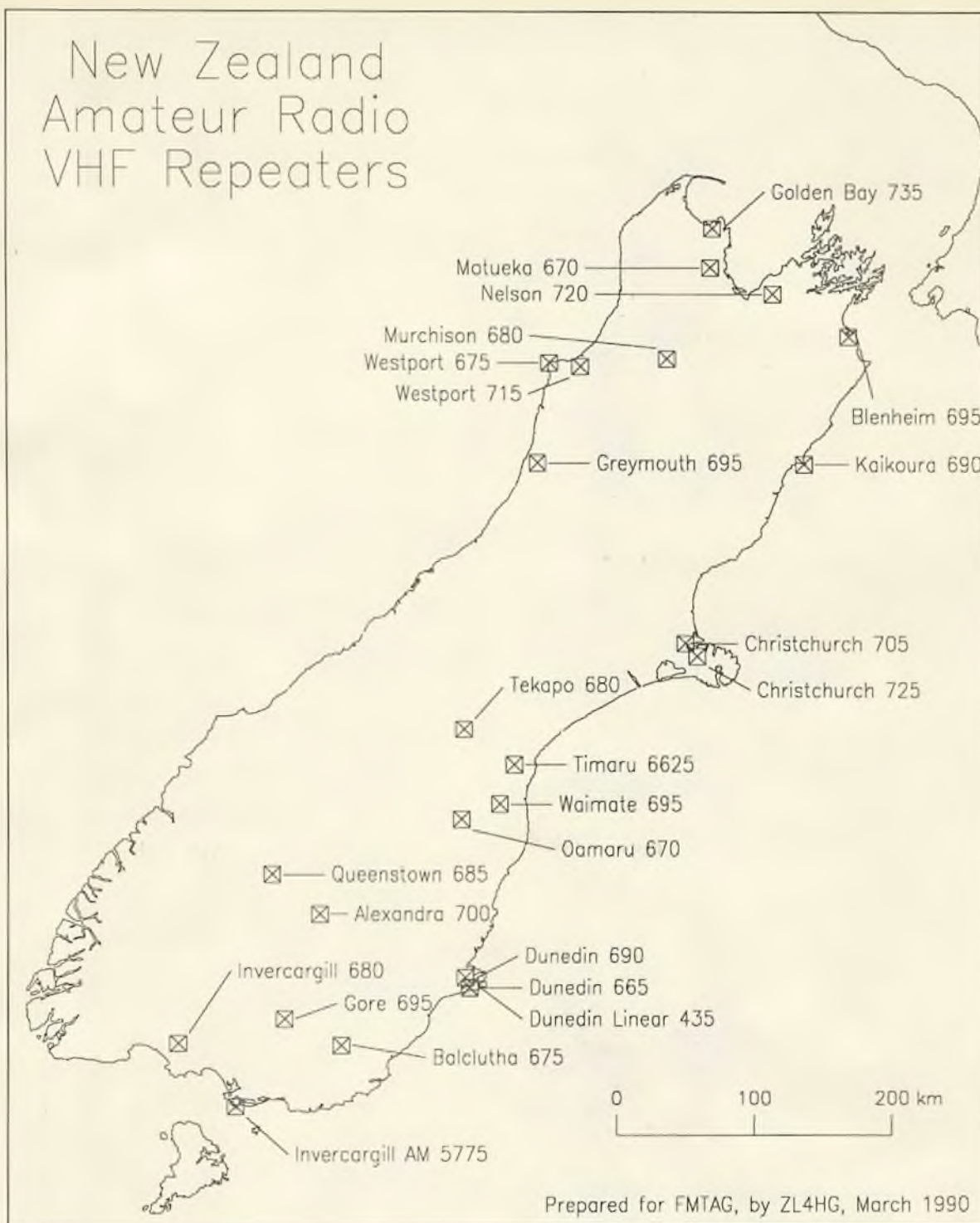
No tone required, no time out used. Polarisation all vertical.

Mode voice. 16KOF3EJN means 5kHz transmitter RF deviation which implies with voice a 16 kHz wide IF filter in the receiver.

Short Term Special Purpose repeaters for portable/emergency use are not listed. Frequencies used for these are 6675, 6725, 6825, 6875, and 6925.



# New Zealand Amateur Radio VHF Repeaters



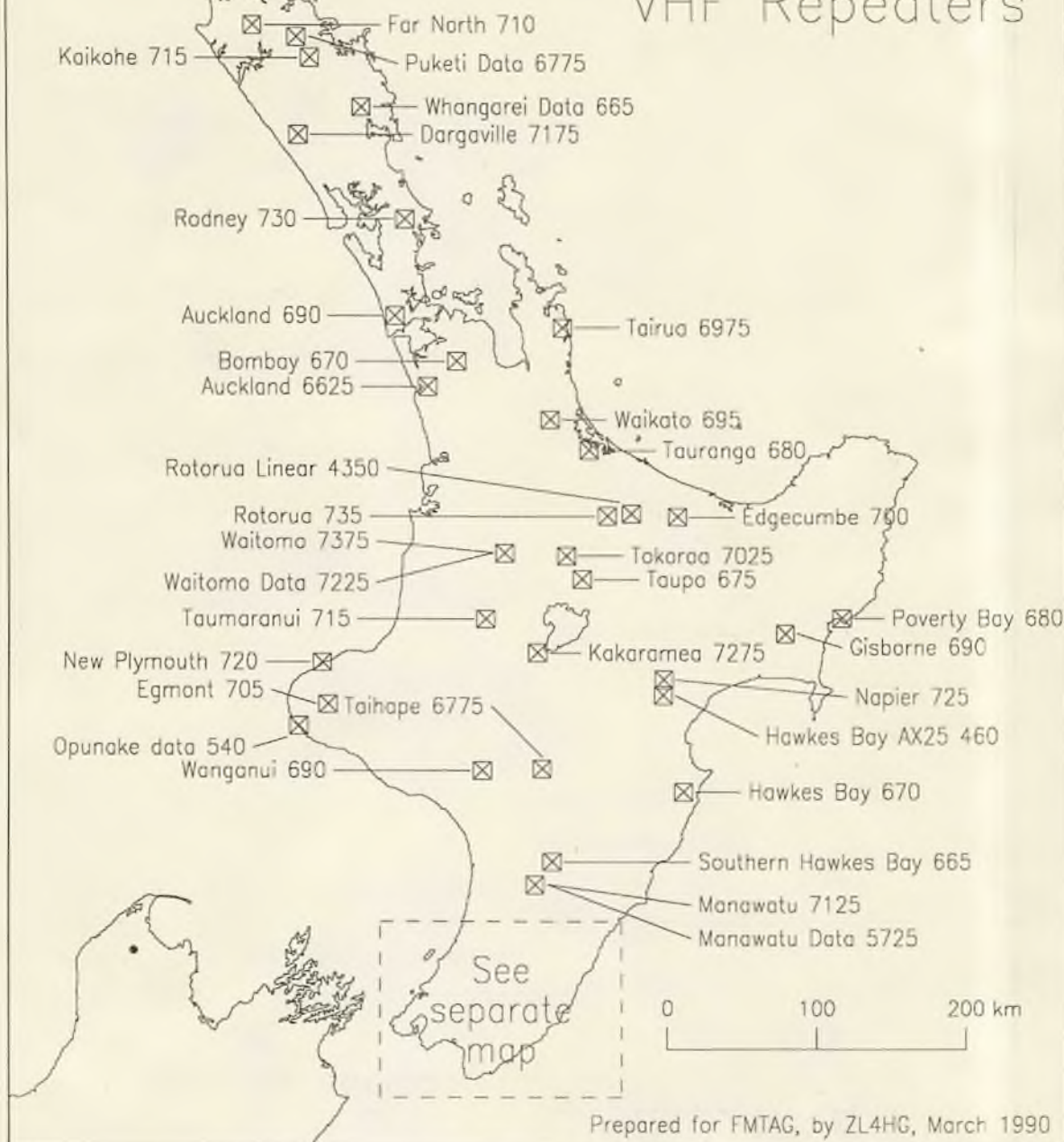
Prepared for FMTAG, by ZL4HG, March 1990

## AM and Linear Repeaters

Name	Site	Input Freq	Output Freq	Height mASL	Branch
Rotorua Linear	Moerangi	144.950	144.350	685	33
Dunedin Linear	Highcliff	144.950	144.350	210	30
Invercargill AM	Bluff Hill	144.650	145.775	265	37



# New Zealand Amateur Radio VHF Repeaters



## DATA REPEATERS—Standard Repeater primarily used for Digital Modes

Name	Site	Output Freq.	Height mASL	Branch
Pukoti Data	Manginangina	146.775	378	78
Whangarei Data	Parakiore	146.650	392	28
Waitomo Data	Rangitoto Range	147.225	869	55
Manawatu Data	Pahiatua Track	145.725	488	20
Wellington Data	Hawkins Hill	146.625	533	74





## Two Metre Simplex Frequencies

Simplex Name	Frequency (MHz)	
6425	146.425	calling
6475	146.475	
6525	146.525	
6575	146.575	
6625	146.625	ATV liaison
7400	147.400	
7425	147.425	
7450	147.450	
7475	147.475	ATV repeater sound input
7525	147.525	
7575	147.575	
7625	147.625	



## DIGIPEATERS—Single Frequency Store and Forward (AX25)

Name	Site	Freq.	Height mASL	Branch	Digipeater Call	Alias
Northland	—	144.65	—	28	ZL1AM-1	HUK
Ardmore	—	144.65	—	—	ZL1UNI-1	AKL
Klondyke	Port Waikato	144.65	403	—	ZL1BQ-3	*
Hamilton	—	144.65	—	—	ZL1UX-1	HAM
Rangitoto	Rangitoto Range	144.65	869	55	ZL1IZ-1	OTO
Tauranga	Papamoa	144.65	224	39	ZL1TP-1	BOP
Whakatane	—	144.65	—	—	ZL1AIU	N/A
Gisborne	Hikurangi	144.65	1444	11	ZL2GIS-1	ARO
Gisborne	—	144.65	—	—	ZL2TFM-1	GSB
New Plymouth	Harford	144.65	200	27	ZL2BDN-1	NPL
Waitara	—	144.65	—	—	ZL2UFW-1	NP2
Mount Egmont	—	144.65	—	—	ZL2?	MEG
Hawkes Bay	Kahuranake	144.65	792	25	ZL2BQK-3	HBV
Napier	—	144.65	—	—	ZL2AMD-10	NPE
Manawatu	Mt Wharite	144.65	915	20	ZL2IB-1	PMR
Kapiti	Mt Field	144.65	615	69	ZL2KB-1	KAP
Christchurch	Marley Hill	144.65	488	05	ZL3CHC	CHC
Timaru	Mt Studholme	144.65	1000	34	ZL3UR-1	MSD
Queenstown	Double Cone	144.65	2286	75	ZL4NQ-1	ZQN
Dunedin	Mt Cargill	144.65	674	30	ZL4AA-1	DUD

\*ROSE system, not NetRom compatible.

### Amendments:

## Bulletin Boards

ZL2TMQ	Whangarei	ZL2BFJ	Levin
*ZL1AB	Auckland	*ZL2WA	Wellington
*ZM1UX	Hamilton	ZL2AHK	Picton
ZL1TJK	Tokoroa	*ZL3AC	Christchurch
*ZL2BDN	Waitara	*ZL4AA	Dunedin
ZL2RB	New Plymouth	ZL4TAY-9	Invercargill
ZL2BQK	Napier		

\*BBS operated by Branch.

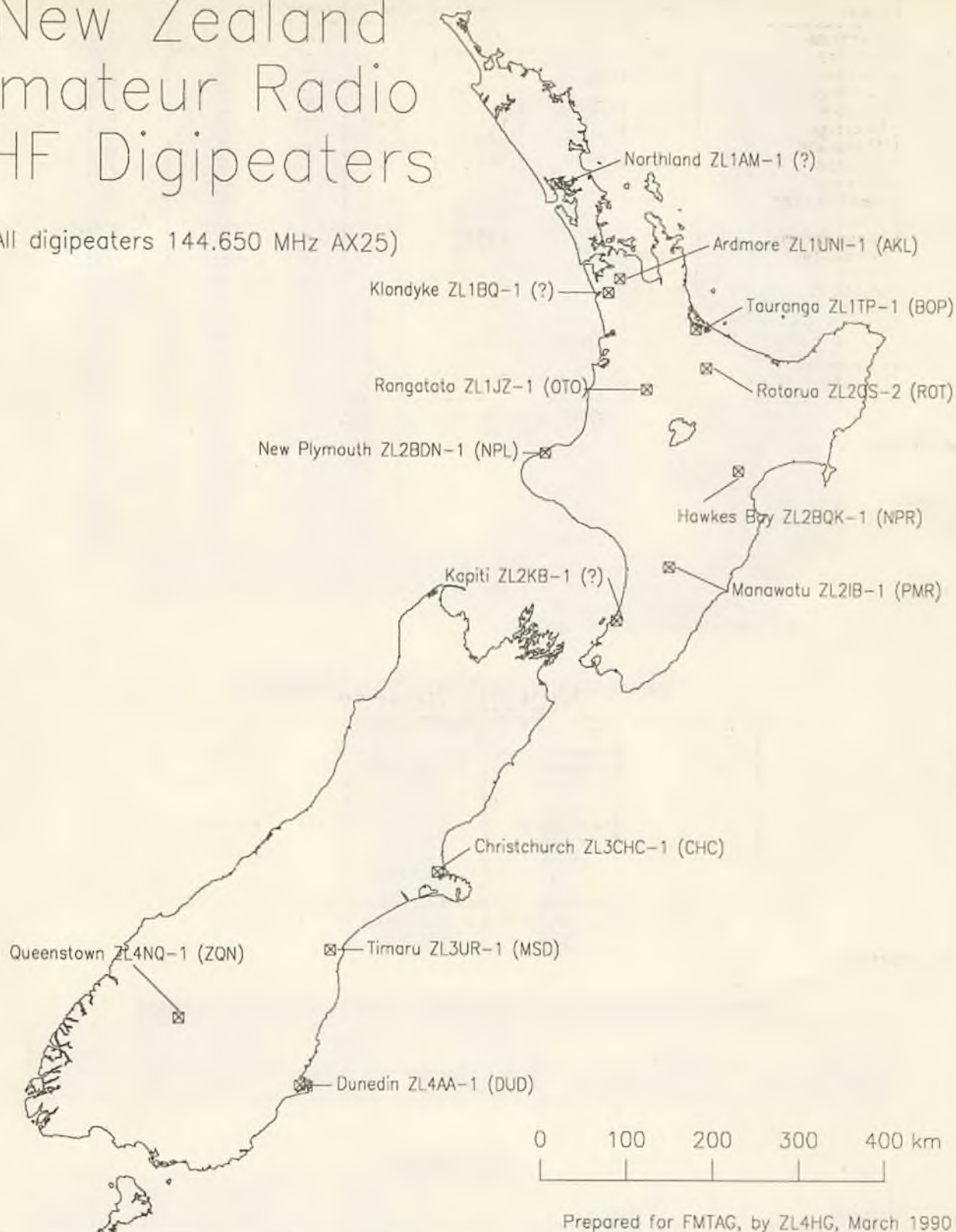
Note: Bulletin Boards (especially individually operated) constantly vary in operation. This list will probably be incorrect at time of publication.

### Amendments:



# New Zealand Amateur Radio VHF Digipeaters

(All digipeaters 144.650 MHz AX25)



Prepared for FMTAG, by ZL4HG, March 1990

See the "Digital Modes" column of *Break-In*  
for regular and additional information



# New Zealand Amateur Radio Fixed Station Directory

## SEVENTY CENTIMETRE BAND—FM REPEATERS

Name	Site	Output Freq.	Height mASL	Branch
Whangarei 870	Parahaki	438.700	240	28
Auckland 850	Mt. Eden	438.500	200	66
Auckland 900 (L)	Port Waikato	439.000	403	66
Hunua 895	Clements Hill	438.950	300	65
Waikato 860	Mount Te Aroha	438.600	944	81
Tauranga 885	Mount Minden	438.850	286	39
Tokorua 865	Whakamaru	438.650	793	57
Wairarapa 870	Rangitoto Range	438.700	869	55
Rotorua 855	Mount Ngongotaha	438.550	757	33
Egmont 4025 (L)	East Mount Egmont	434.025	1509	74
Egmont 880	East Mount Egmont	438.800	1559	54
Waimarino 875	Turoa Skifield	438.750	2050	45
Hawkes Bay 900	Te Mata Peak	439.000	389	25/13
Hawkes Bay 870	Te Mata Peak	438.700	389	25/13
Taihape 865	Cleavers Hill	438.650	822	23
Manawatu 8525	Pahiatua Track	438.525	488	20
Kapiti 885	Mount Field	438.850	615	69
Climie 860	Mount Climie	438.600	867	63
Tawa 895	Tawa	438.950	70	74
Wellington 850	Mount Victoria	438.500	195	74
Wellington 900 (L)	Mount Belmont	439.000	450	74
Nelson 890	Fringed Hill	438.900	793	26
Blue Duck 3975 (L)	Blue Duck	433.975	1021	74
Christchurch 900 (L)	Marley Hill	439.000	488	74/05
Hornby 850	Cass Peak	438.500	522	56
Dunedin 850	Mount Cargill	438.500	674	30
Invercargill 870	Invercargill City	438.700	45	37

Split -5 MHz, except for Egmont and Blue Duck link repeaters which are +5 MHz.

Short Term Special Purpose repeaters for portable/emergency use are not listed.

STSP frequencies used are 8675 and 8750.

(L) denotes National Link repeaters.

## Seventy Centimetre Simplex Frequencies

Simplex Name	Frequency (MHz)
330	433.300
3325	433.325
335	433.350
3375	433.375
340	433.400
3425	433.425
345	433.450
3475	433.475

## TWENTY-THREE CENTIMETRE BAND—FM REPEATERS

Name	Site	Input Freq.	Output Freq.	Height mASL	EIRP watts	Branch
Wellington 120	Mount Victoria	1291.200	1271.200	195	13	74

## TELEVISION

Name	Site	Input Freq.	Output Freq.	Height mASL	Branch
Auckland ATV	(Temporary)	443.25	615.250	—	66
Wellington ATV	Mt Belmont	443.25	615.250	450	74
Tasman Bay ATV	Saddle Hill	615.25	443.25	1215	24
Albany ATV	Albany	615.25	443.25	66	

ATV repeater input 443.25 MHz vision, 449.75 MHz sound, output 615.25 MHz vision, 620.75 sound.

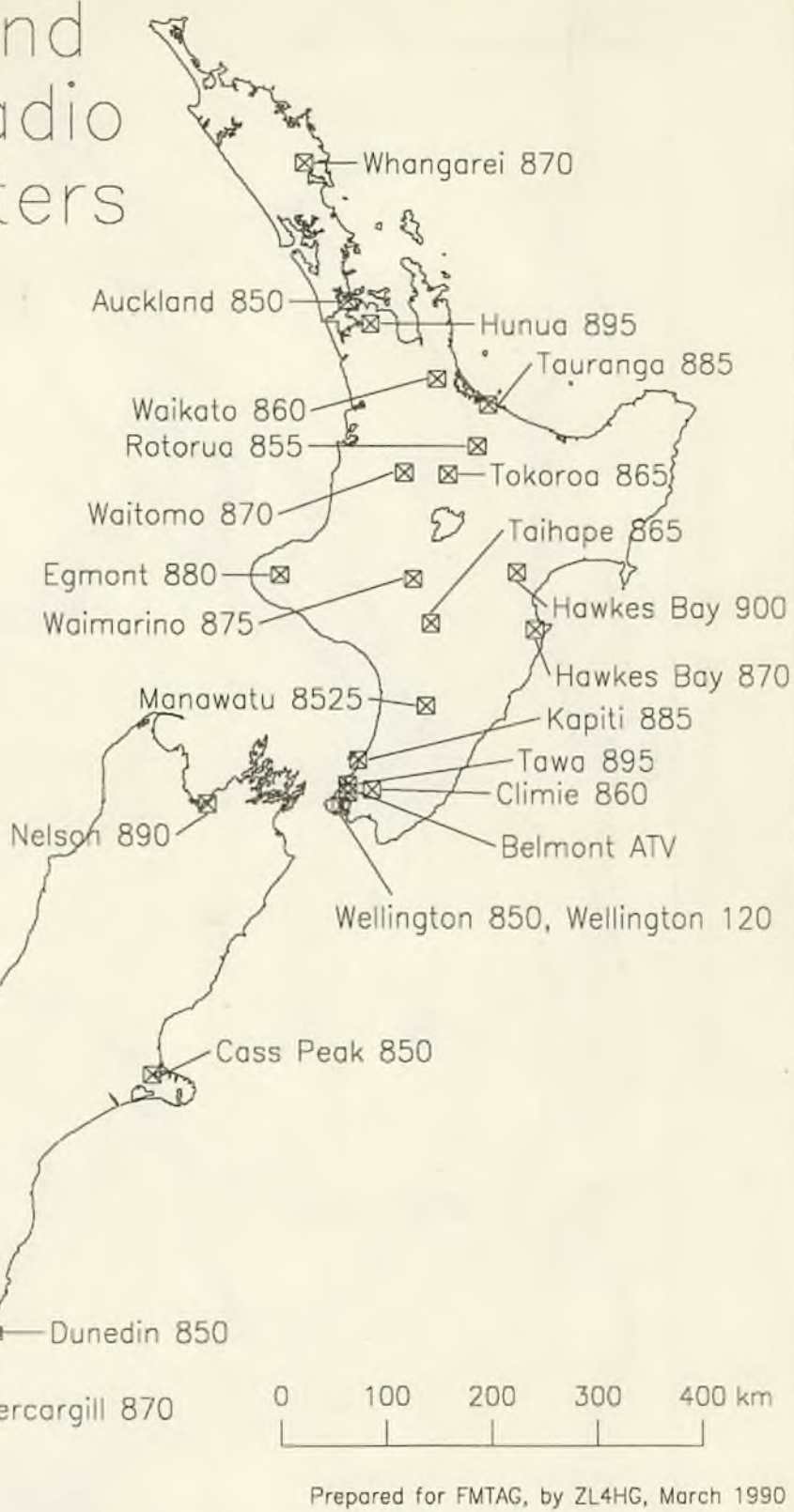


**New Zealand Amateur Radio National Link**

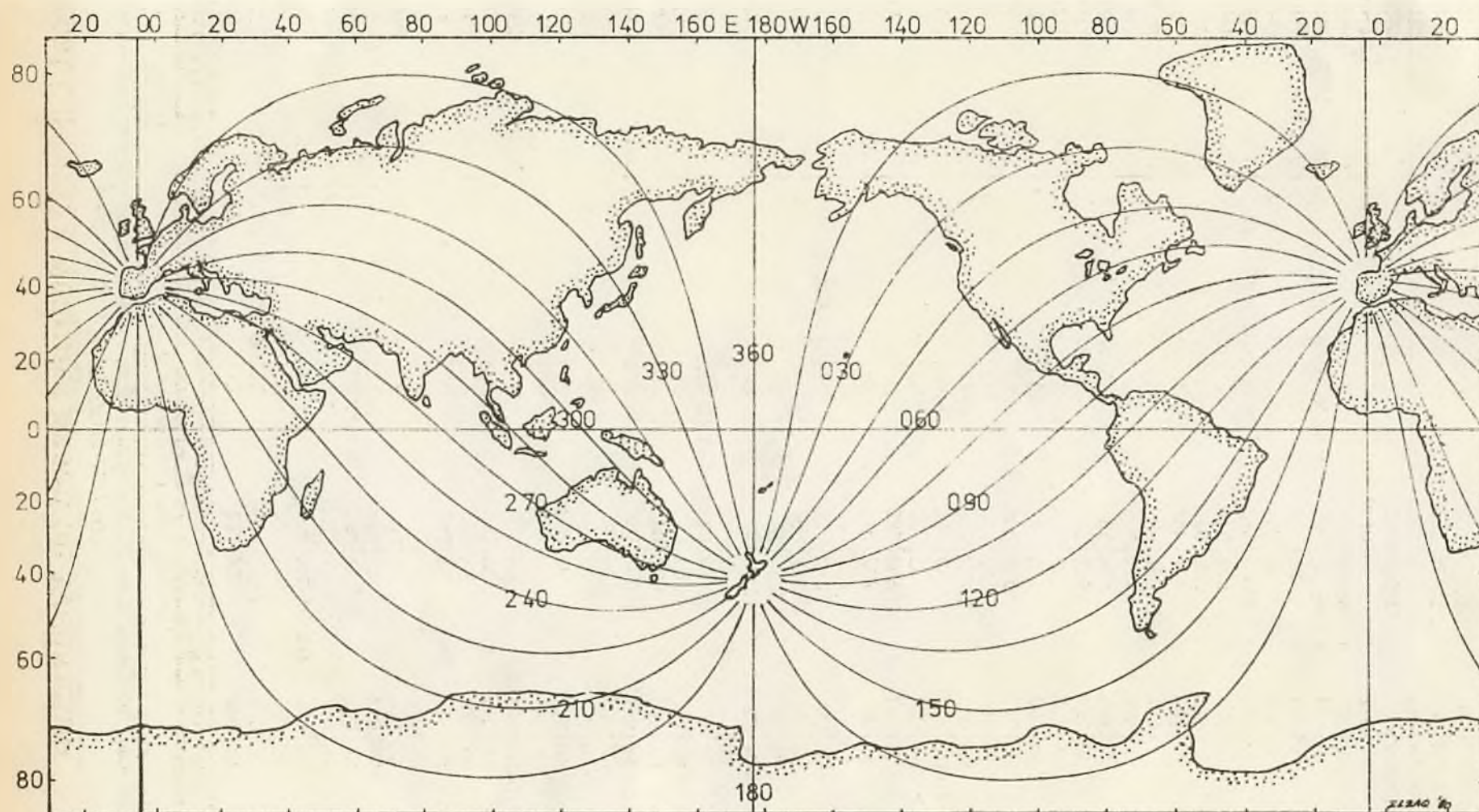
Map showing the locations of various radio stations across New Zealand:

- Auckland (Lat 36°)
- Lyttelton (Lat 43°)
- Wellington (Lat 41°)
- Dunedin (Lat 45°)
- Christchurch (Lat 43°)

Scale: 0 100 200 300 400 km / 0 100 200 miles









# Great Circle DX Bearings Based on Wellington

prepared by RON MURPHY ZL1AMM

Listed below are the approximate short path bearings based on the great circle map centred on Wellington. These listings, based on true north, will point your directional antenna in the appropriate direction before final adjustment depending on the sharpness to which the antenna was installed. The long path bearings are about 180 degrees in the opposite direction.

A good inexpensive Azimuth (great circle on Wellington) map, number NZMS 47, is obtainable from metropolitan offices of the Department of Survey and Land Information. Available from overseas are several computer-derived DX beam headings.

A2	210	FW	N	KP2	90	TT	220	XZ	290	4X	265
A3	20	FY	115	KP4	90	TU	160	Y2-9	320	4Z	265
A4	270	G	345	KP5	90	TY	190	YA	290	5A	260
A5	295	GC	345	KX	350	TZ	160	YB, YC, YD	300	5B	270
A6	275	GD	5	LA	335	UA1, 3, 4, 6	320	YI	270	5H	230
A7	275	GI	15	LU	135	UA2	320	YJ	330	5N	195
A9	275	GJ, GU	345	LY	320	UA9, 0	330	YK	270	5R	225
A, K, N, W	60	GM	N	LX	325	UB	300	YL	320	5T	160
AP	280	GW	350	LZ	285	UC	310	YN	90	5U	175
BV	315	H4	335	N, K, W, A	60	UD	290	YO	285	5V	175
BY	315	HA	300	OA	110	UF	290	YS	90	5W	20
C2	N	HB	300	OD	275	UG	290	YU	285	5X	235
C3	280	HB0	300	OE	305	UH	290	YV	100	5Z	235
C5	155	HC	100	OH, OJ	330	UI	290	YV0	100	6O	245
C6	95	HC8	90	OK	310	UJ	290	ZA	275	6W	150
C9	230	HH	90	ON	330	UL	290	ZB	180	6Y	90
CE	130	HI	90	OX	20	UM	290	ZC	270	7O	275
CE0	110, 120	HK	100	OY	N	UO	285	ZD7	180	7P	220
CO	80	HK0	90	OZ	330	UP, LY	320	ZD8	170	7Q	230
CN	220	HL	325	P2	310	UQ, YL	320	ZD9	170	7X	240
CP	125	HP	90	P4	95	UR, ES	320	Z2	220	7Z	260
CT	130	HR	90	PA	330	V2	95	ZF	90	8P	90
CT3	140	HS	285	PJ	95	V3	85	ZK1N	50	8Q	275
CU2, CT2	90	HV	280	PJ7	90	V4	95	ZK1S	60	8R	110
CX	140	HZ	260	PY	140	V5	200	ZK2	N	9G	185
CY9, 0	65	I	280	PY0	125, 145	V6, 7	320	ZK3	30	9H	250
D2, 3	210	IS	270	PZ	100	V85	290	ZL7	110	9J	220
D4	150	J2	245	RA	see UA	VE	50	ZL8	30	9K	270
D6	230	J3	95	S0	140	VK	280	ZL9	190	9L	165
DJ	320	J5	155	S2	290	VK9L	290	ZP	125	9M2, 4	285
DU	310	J6	95	S7	240	VK9N	340	ZS	210	9M6, 8	285
EA	260	J7	95	S9	205	VK9X	275	ZS2M	210	9N	295
EA6	250	J8	95	SM, SK, SL	330	VK9Y	270	ZS3, ZS9	200	9Q	230
EA8	140	JĀ	335	SP	310	VK9Z	320	1A0	280	9U	230
EA9	180	JD	335	ST, ST0	250	VK0H	220	1S	285	9V	285
EI	10	JT	325	SU	260	VK0M	210	3A	295	9X	230
EL	180	JW	5	SV	270	VP2	95	3B6	235	9Y	100
EP	280	JX	5	T2	N	VP5	95	3B7	235		
ES	320	JY	265	T30	N	VP8	150	3B8	235		
ET	245	K, N, A, W	60	T31	20	VP9	80	3B9	230		
F, FD, FE	310	KC6	320	T32	30	VQ9	265	3C	205		
FC	230	KG4	90	T33	N	VR6	90	3C0	205		
FG	100	KH1	15	T5	245	VS6	305	3D2	N		
FH	230	KH2	320	T7	280	VU	270	3DA0	220		
FK	340	KH3	20	TA	280	VU7A	285	3V	250		
FM	95	KH4	N	TF	15	VU7L	275	3X	155		
FO	60	KH5, KH5K	30	TG	90	W, K, N, A	60	3Y, Bouvet	185		
FP	65	KH6	25	TI	90	XE	70	3Y, Peter I	155		
FR	235	KH7	N	TI9	90	XF4	70	4J	330		
FS	100	KH8	20	TJ	205	XT	180	4K2/FJL	N	Antarctica	180
FT5W	220	KH9	350	TK	230	XU	295	4S	280	Abu Ail	255
FT5X	225	KH0	320	TL	205	XV	295	4U/ITU	300	Banaba	N
FT5Y	180	KL	15	TN	210	XW	295	4U/UN	65	Conway Reef	N
FT5Z	230	KP1	90	TR	200	XX	305	4W	255	Jarvis Is.	30



## 28 MHz Beacon Project

This project is sponsored and encouraged by IARU and organised by Alan Taylor G3DME. The establishment of the beacons has stimulated scientific interest in the propagation paths revealed by the reception of the beacons. They also provide signals on what may otherwise be a dead band.

Reports on beacon reception should be sent to ZL3ND, 356 Avonside Drive, Christchurch 8006.

\*Indicates that the beacon has been heard in ZL at least once so far in cycle 22.

Freq MHz	Call sign	QTH
28.175	VE3TEN*	Canada
28.195	IY4M*	Italy (robot)
28.200	GB3SX	Crowborough, England
28.2025	ZS5VHF*	Natal
28.205	DLØIGI*	Mt Predighstul, east of Munich
28.212	EA6RCM*	Box 1000, Palma, Majorca
28.215	GB3RAL*	Slough, England (20 W)
28.220	5B4CY*	Cyprus (26 W, GP antenna)
28.2225	HG2BHA PY2AMI*	Hungary (10 W, GP antenna) Brazil
28.227	FX5TEN*	Toulouse
28.229	EA6AU	Balearic Island
28.230	ZL2MHF*	Mt. Climie, New Zealand (50 W, vert. dipole)
28.235	VP9BA*	Southampton, Bermuda
28.2375	LA5TEN*	Oslo, Norway
28.240	OA4CK*	Lima, Peru
28.240	5Z4ERR	Kiambu
28.246	EA3JA*	Barcelona
28.2475	ZS1CTB*	Capetown, South Africa
28.250	ZZ1ANB*	Zimbabwe
28.250	4N3ZHK*	Mt Kum.
28.2525	OH2TEN*	Finland
28.255	LU1UG*	Argentina
28.257	DKØTEN	Konstanz, Germany
28.259	VK5WI*	Adelaide, Australia
28.2615	VK2RSY*	Sydney, Australia
28.264	VK6RWA*	Perth, Australia
28.266	VK6RTW*	Albany, Australia
28.268	VK8VF	Darwin, Australia
28.270	VK4RTL*	Townsville, Australia
28.270	ZS6PW*	Pretoria, South Africa
28.272	9L1FTN	Sierra Leone
28.2775	DFØAAB*	Lutjenberg, Germany (40 W, GP antenna)
28.2825	VE2HOT*	
28.2835	OKØEG*	Czechoslovakia
28.284	VP8ADE*	Falkland Is. (V-beam to England)
28.290	VS6TEN*	Hong Kong (10 W vertical)
28.300	ZS1LA	South Africa

The above are listed as Official Stations of the International Beacon Project.

The following are listed and many of them have been heard but their operational status is unknown.

28.050	PY2GOB	28.267	KB4UPI*
28.191	VE6YF*	28.275	AL7GQ
28.200	KF4MS*	28.2815	WB2BBW*
28.202	KE5GY*	28.285	KA4WPH*
28.206	KJ4X*	28.286	KA1YE*
28.2075	W8FKL*		KK4M*
28.208	WA1IOB	28.286	KE2DI*
28.2085	NX2O*	28.287	W8OMV
28.210	KC4DPC*	28.288	W2N2H
28.217	WB9VMY*	28.292	LU2FFV
28.218	W8UR*	28.295	WB8UPN*
28.222	W9UXO*	28.295	WC8E*
28.224	WDØHSP	28.295	W3VD*
28.225	KW7Y*	28.296	W6NLG
28.232	KD4EC*	28.297	WA4DJS*
28.233	W7JPI*	28.301	KF4MS*
28.242	LU4FM*	28.303	PT7AAC*
28.252	W7JX*	28.306	PT8AA*
28.255	WB4JHS*	28.888	W6IRT*
28.256	WT8D*	28.890	W9GOE
28.260	KA1NSV*	28.992	DLØANN
28.263	KC6BSJ*		

## 14 MHz Beacons

This series is sponsored by the Northern Californian DX Foundation. The beacons all operate in turn on the one frequency of 14.100 MHz. The series starts on the hour. They send the following series of signals at the powers indicated:

QST de (callsign)	100W
• —	100W
• • —	10W
• • • —	1W
• • • • —	0.1W
sk de (call)	100W

The call sequence is as follows:

T+0 min	4U1UN/B	New York
T+1	W6WX/B	Stanford
T+2	KH6O/B	Honolulu
T+3	JA2IGY	Ise City
T+4	4X6YU/B	Tel Aviv
T+5	OH2B	Espoo
T+6	CT3B	Funchal
T+7	ZS6DN/B	Pretoria
T+8	LU4SAA	Santa Cruz
T+9	HK4LR/B	Colombia

## Australian Beacons

Call Sign	Frequency MHz	Site
VK8VF	144.010	Darwin
VK6RBS	144.020	Busselton
VK4RTT	144.400	Mt Mowbrall
VK1RCC	144.410	Mt Majura
VK2RSY	144.420	Dural
VK3RTG	144.430	Glen Waverley
VK4RIK	144.445	Mt Haren
VK4RTL	144.445	Mt Stuart
VK6RTW	144.465	Albany
VK7RMC	144.470	Newnham
VK8RRSB	144.485	Alice Springs
VK3RGG	144.530	Mt Anakie
VK3RGI	144.535	Moe
VK6RTU	144.650	Kalgoorlie
VK2RCW	144.950	Turrumurra
VK3RCW	144.950	Mt Waverley
VK6RPH	145.000	Cloverdale
VK3RML	146.700	Ferry Creek
VK6RAP	420.100	Roleystone
VK6RBS	432.060	Busselton
VK6RPR	432.140	Cloverdale
VK1RBC	432.410	Melba
VK2RSY	432.420	Dural
VK3RTG	432.430	Glen Waverley
VK4RSD	432.440	Mt Coot-Tha
VK4RIK	432.445	Mt Haren
VK4RTL	432.445	Mt Stuart
VK6RTW	432.465	Albany
VK3RGG	432.530	Mt Anakie
VK3RMB	432.535	Mt Buninyong
VK6RTU	432.565	Kalgoorlie
VK6RWC	434.925	Lesmurdie
VK6RBS	1296.180	Busselton
VK1RBC	1296.410	Melba
VK2RSY	1296.420	Dural
VK6RPR	1296.420	Nedlands
VK4RSD	1296.440	Mt Coot-Tha
VK4RIK	1296.445	Mt Haren

**Write that article  
for  
Break-In**



# SIX METRE BEACONS

Frequency	Callsgn	Location	LOC	ERPW	Mode	Source	Date
50.000	G3BUX	Buxton	IO93BF	40	A1A	RadCom	12/89
50.005	H44HIR	Hontera	Q100—	10	—	ZL3AAU	25/3/90
50.005	ZS2SDX	Port Elizabeth	KF25—	1—	A1A	AR	3/90
50.010	ZS1STB	Still Bay	KF05—	25	F1A	JA DXer	9/89
50.011	JA2IGY	Mie	PM84—	10	—	ZL3AAU	29/3/90
50.013	P29BPL	Port Moresby	Q130—	30	—	AR	6/90†
50.015	PJ2B	Bonatre Is.	FK52TF	15	—	JA DXer	9/89
50.015	SZ2DH	Athens	KM18MM	10	—	AR	3/90
50.017	JA6YBR	Miyazaki University	PM51RT	50/1	—	ARA	Vol. 12 No. 11
50.017	JA6ZJH	Miyazaki	PM51RU	10	A1A	AR	3/90†
50.020	GB3SDX	Anglesey	IO73TJ	100	F1A	RadCom	12/89
50.020	CX1CCC	Uruguay	—	5	—	AR	3/90
50.0225	FR5SDX	Union Is	LG58—	2	—	RadCom	1/90
50.025	OH1SDX	Finland	KP11QU	50	A1A	RadCom	11/89
50.025	6Y5RC	Kingston	FK17MX	40	F1A	AR	3/90
50.027	ZS6PW/B	Pretoria	KG44—	—	—	RadCom	11/89
50.0275	JA7ZMA	Fukushima City	QM07—	—	—	ZL3TY	2/4/90
50.030	CTOWW	Portugal	IN61GE	40	F1A	AR	3/90
50.032	ZS5SDX	South Africa	KG50—	—	—	AR	3/90
50.033	ZD8VHF	Ascension Is.	II22TB	50	A1A	AR	3/90
50.035	ZB2VHF	Gibraltar	IM76HE	100	A1A	AR	3/90
50.035	ZS3VHF	South Africa	JG87—	—	—	AR	3/90
50.038	FY7THF	French Guiana	GJ35—	100	F1A	AR	3/90
50.040	SV15X	Greece	—	—	—	RadCom	7/89†
50.0425	GB3CTC	St Austell	IO70OJ	—	—	RadCom	3/90*
50.045	OX3VHF	Greenland	GP60QQ	20	A1A	AR	3/90†
50.048	TG4BFC	Guatemala	IO91—	—	—	AR	3/90
50.048	VE6ARC	Grand Prairie	DO75—	50	A1A	ARRL Dir	89/90†
50.050	GB3NHQ	Potters Bar	IO91VQ	15	F1A	RadCom	12/89
50.050	ZS6DN	Pretoria	KG44—	—	A1A	AR	3/89
50.055	Z86LN/B	South Africa	KG46—	10	—	RadCom	11/89
50.056	VK8VF	Darwin	PH57—	—	—	AR	3/90
50.0575	TF3SDX	Iceland	HP94CC	50	A1A	AR	3/90
50.060	GB3RMK	Inverness	IO77UO	40	F1A	RadCom	12/89
50.062	PY2AA	Sao Paulo	GG66—	25	A1A	AR	12/89
50.062	GB3NGI	Garvagh	IO65PA	15	F1A	RadCom	12/89
50.063	KH6HI	Hawaii	BL01—	—	—	AR	3/90
50.064	WD7Z/B	Arizona	EL59—	75	—	ZL3AAU	1/3/90
50.065	GB3IO	Jersey	IN89—	8	F1A	RadCom	12/89
50.065	NB30/1	Rhode Is.	FN41—	100	—	AR	3/90
50.065	WD7X/B	New Mexico	DM75—	—	—	ZL3AAU	12/3/89†
50.066	VK6RPR	Perth	OF78—	10	F1A	AR	3/90
50.067	WA6LJZ	Oxnard CA	DM04—	70	A1A	ARRL Dir	89/90†
50.068	K6FV/B	Woodside CA	CM87UL	100	A1A	ZL3AAU	14/4/90
50.073	ZS4SA	Danversville	KG33—	—	—	RadCom	11/89
50.075	VS6SDX	Hong Kong	OL72—	30	—	AR	3/90
50.078	TI22NA	Costa Rica	EK70—	20	A1A	AR	3/90
50.080	HC8SDX	Galapagos Is.	EL59—	10	A1A	AR	3/90
50.080	KH6JJK	Hawaii	BL11—	5	—	AR	3/90
50.085	9H15IX	Malta	JM75FV	25	A1A	AR	3/90
50.086	VP2MO	Montserrat	FK86—	10	A1A	AR	3/90
50.088	VE1SDX	New Brunswick	FN65—	50	A1A	AR	3/90
50.090	KJ6BZ	Johnston Is.	AK56—	10	—	AR	3/90
50.092	W5GTP	Louisiana	*M40—	30	A1A	AR	3/90
50.099	KP4EKG	Puerto Rico	FK68—	—	—	AR	3/90
50.099	VP5D	Turks & Caicos	FL31—	10	—	ZL3AAU	2/4/90
50.100	HC2FG	Ecuador	FI07—	8	A1A	AR	3/90
50.100	KG6DX	Guam	QK23KL	40	A1A	AR	3/90
50.100	5H1HK	Tanzania	—	—	—	AR	3/90
50.100	ZS3E	—	JG87—	—	—	ZL2BGL	26/2/89*
50.110	A61XL	United Arab Emirates	LL74—	50	—	AR	3/90
50.120	4S7EA	Sri Lanka	MJ97—	50	—	AR	3/90
50.321	ZS5SDX	South Africa	KG50—	—	—	AR	3/90
50.490	JG1ZGW	Tokyo	PM95—	10	A1A	AR	3/90
50.499	5B4CY	Zyvi	KM54PS	15	F1A	AR	3/90
50.904	ZS1SDX	—	KF05—	25	F1A	RadCom	11/90
51.030	ZL2MHB	Napier	RF80—	10	F2	FMTAG	3/90*
52.100	2K2SDX	Nlue	AH50—	—	F1A	AR	3/90
52.150	VK0CK	Macquarie Island	QD95—	—	—	AR	2/90†
52.200	VK8VF	Darwin	PH57—	15	F1A	AR	3/90
52.300	VK2RBH	Broken Hill	—	—	F1A	AR	2/89†
52.310	ZL3MHF	Aylesbury	RE66—	8	F2A	FMTAG	3/90
52.320	VK6RTT	Wickham	OG89—	—	F1A	AR	3/90
52.325	VK2RHV	Newcastle	QF57—	—	F1A	ZL3AAU	2/3/90
52.330	VK3RGG	Geelong	QF21—	4	F1A	AR	3/90
52.345	VK4ABP	Longreach	QG26—	—	—	AR	3/90
52.350	VK6RTU	Kalgoorlie	PF09—	—	F1A	AR	2/90
52.370	VK7RST	Hobart	QW37—	—	F1A	AR	3/90
52.410	VK1RCC	Mt Majura	—	—	—	AR	2/90
52.418	VK0MA	Mawson	MC12—	—	—	AR	2/89†
52.420	VK2RSY	Sydney	QF56—	—	F1A	ZL3AAU	23/2/90
52.425	VK2RGB	Gunnedah	QF59—	—	F1A	AR	3/90
52.435	VK3RMV	Hamilton	QF12—	—	F1A	AR	3/90
52.440	VK4RTL	Townsville	QH30—	—	F1A	AR	3/90
52.445	VK4RIK	Cairns	QH23—	—	—	AR	3/90
52.450	VK5VF	Mount Lofty	PF95—	—	A1A	AR	3/90
52.460	VK6RPH	Perth	OF78—	—	F1A	AR	3/90
52.465	VK6RTW	Albany	OF84—	—	F1A	AR	3/90
52.470	VK7RNT	Launceston	QE38—	—	F1A	AR	3/90
52.485	VK8RAS	Alice Springs	PG66—	—	F1A	AR	3/90
52.510	ZL2MHF	Mt Cottle	RE78BU	4	F1	ZL2CD	30/3/90
53.625	VK2RSN	Sugarloaf Range	—	—	—	AR	2/90
53.900	VK3RMS	Olinda	—	—	—	AR	2/90

\* Not Operational † Status Unknown "Source" callsgns indicate beacons heard in ZL UPDATED 16-3-90 Prepared by ZL3AAU



# Conversion between Geodetic and Grid Locator systems

by EDMUND T. TYSON, N5JTY

This simple paper system lets you convert latitudes and longitudes to grid locators—and vice versa—without a computer or calculator. Give it a try on your next "gridpedition"!

The grid locator system is widely used in Europe and North America for reporting station position during contacts at VHF and above. (In Europe this system is usually referred to as the Maidenhead Locator System.) One of the advantages of grid locators is that they describe positions in four or six characters—compared to the ten or fourteen characters necessary with the geodetic (latitude/longitude) system. A six-character grid locator describes a coarse position with its first two characters and, with successive characters, refines the position to an area 2.5' of latitude by 5' of longitude in size. This article describes a tabular method of converting between the grid locator and latitude/longitude systems.

## Brief Anatomy of a Grid Locator

Of a full (six-character) grid locator, three characters (the first, third and fifth) specify longitude in steps of increasing precision; the remaining three characters (the second, fourth and sixth) specify latitude in steps of increasing precision (see Figure 1).

The first character (always a letter) of a grid locator specifies longitude in 20° increments, with the letter A corresponding to the interval 180°W to 160°W, the letter B corresponding to the interval 160°W to 140°W, and so on until the letter R, which covers 160°E to 180°E longitude.

The second character in a grid locator specifies latitude in 10° increments. For instance, the letter A covers the interval from 90°S to 80°S, B covers 80°S to 70°S, and so on until R, which specifies latitudes from 80°N to 90°N. West longitudes and south latitudes are treated as *negative* values in the grid locator system; east longitudes and north latitudes are *positive*.

The third and fourth characters are digits in the range 0 through 9. The third character divides longitude lines into 2° increments; the fourth character divides latitude zones into 1° increments.

The last two characters (always letters) in a grid locator subdivide the 2°x1° rectangles designated by the third and fourth characters into smaller rectangles that are 5'x2.5' of arc in size. The letters A through X are used to specify each co-ordinate of these 5'x2.5' rectangles.

## Conversion tables

Tables 1 through 6 inclusive can be used to convert latitude and longitude to grid locators, or grid locators to latitude and longitude.

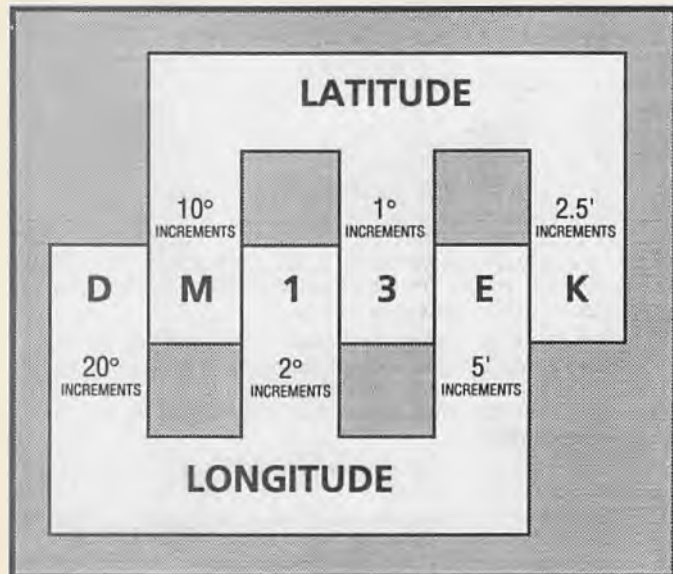


Figure 1.

**Table 1**  
1st Longitude Character

Degrees Longitude	
↓	
-180	
-160	
-140	
-120	
-100	
-80	
-60	
-40	
-20	
0	
+20	
+40	
+60	
+80	
+100	
+120	
+140	
+160	
+180	

Letter

**Table 2**  
2nd Longitude Character

Degrees Longitude		
↓		
-20	0	0
-18	1	+2
-16	2	+4
-14	3	+6
-12	4	+8
-10	5	+10
-8	6	+12
-6	7	+14
-4	8	+16
-2	9	+18
0		+20

↑  
Number

**Table 3**  
3rd Longitude Character

Minutes Longitude		
↓		
-120	A	0
-115	B	+5
-110	C	+10
-105	D	+15
-100	E	+20
-95	F	+25
-90	G	+30
-85	H	+35
-80	I	+40
-75	J	+45
-70	K	+50
-65	L	+55
-60	M	+60
-55	N	+65
-50	O	+70
-45	P	+75
-40	Q	+80
-35	R	+85
-30	S	+90
-25	T	+95
-20	U	+100
-15	V	+105
-10	W	+110
-5	X	+115
0		+120

↑  
Letter

## Converting Latitude and Longitude to Grid Locators

Example: The location of an observatory at 105° 44.0'W longitude and 32° 58.8'N latitude can be readily converted to a grid locator. Find the longitude characters first. (Remember: West longitude is negative in the grid locator system.) According to Table 1, the first grid character is D because the observatory's longitude is between -100° and -120°. Record the first character of the unknown locator, leaving space for the characters to come:

D — — — —

(For values of longitude that are exact multiples of 20°, work from zero and choose the grid locator letter "above" the correct exact latitude value. For examples: -120° longitude = C, not D; +20° longitude = K, not J. Apply this "use the higher letter or number" rule to Tables 1 through 6 whenever you must work with exact multiples of the longitude and latitude increments reflected in the tables.)

So far, we have accounted for exactly 100° of the observatory's longitude. Find the second longitude character by referring to Table 2 for the number corresponding to the longitude remainder, -5° 44.0'. Because -5° 44.0' falls within the -4° to -6° range, the number is 7. We now have two characters of the grid locator:

D — 7 — — —



**Table 4**  
1st Latitude  
Character

Degrees Latitude	
↓	
-90	A
-80	B
-70	C
-60	D
-50	E
-40	F
-30	G
-20	H
-10	I
0	J
+10	K
+20	L
+30	M
+40	N
+50	O
+60	P
+70	Q
+80	R
+90	
↑	Letter

**Table 5**  
2nd Latitude  
Character

Degrees Latitude		
↓		
-10	0	0
-9	1	+1
-8	2	+2
-7	3	+3
-6	4	+4
-5	5	+5
-4	6	+6
-3	7	+7
-2	8	+8
-1	9	+9
0	9	+10
↑	Number	

**Table 6**  
3rd Latitude  
Character

Minutes Latitude		
↓		
-60.0	A	0.0
-57.5	B	+2.5
-55.0	C	+5.0
-52.5	D	+7.5
-50.0	E	+10.0
-47.5	F	+12.5
-45.0	G	+15.0
-42.5	H	+17.5
-40.0	I	+20.0
-37.5	J	+22.5
-35.0	K	+25.0
-32.5	L	+27.5
-30.0	M	+30.0
-27.5	N	+32.5
-25.0	O	+35.0
-22.5	P	+37.5
-20.0	Q	+40.0
-17.5	R	+42.5
-15.0	S	+45.0
-12.5	T	+47.5
-10.0	U	+50.0
-7.5	V	+52.5
-5.0	W	+55.0
-2.5	X	+57.5
0.0		+60.0
↑	Letter	

Now we have accounted for exactly 104° of the observatory's -105° 44.0' longitude. Use Table 3 to find the letter that corresponds to the remaining -1° 44.0' of longitude. Expressed in minutes -1° 44.0' = -60' + -44.0', or -104.0'. This number falls within the range -100' to -105' range, so the third longitude letter is D. Now we have all three longitude characters of the unknown grid locator:

D — 7 — D —

The three latitude characters come next. The observatory's latitude is 32° 58.8' N. This is a positive latitude in the grid locator system. According to Table 4, the first latitude character is M because the observatory's latitude is between +30° and +40°. We now have four grid characters:

DM7 — D —

The most significant latitude character, M, accounts for exactly 30° of the observatory's latitude. Find the second latitude character by referring to Table 5 for the number corresponding to the latitude remainder, +2° 58.8'. Because +2° 58.8' falls in the +2° to +3° range, that number is 2. We now have five grid locator characters:

DM72D —

So far, we have accounted for exactly 32° of the observatory's +32° 58.8' latitude. Use Table 6 to find the letter corresponding to the remaining +58.8' of latitude. Because 58.8' falls within the +57.5' to +60.0' range, that letter is X. We now have the observatory's complete grid locator: DM72DX.

### Converting Grid Locators to Latitude and Longitude

The conversion of grid locators to geodetic co-ordinates can be illustrated with the grid locator DM13EK. The geodetic co-ordinates we find will correspond to the exact centre of the region specified by DM13EK. As before, it's useful to separate the grid locator into elements of longitude and latitude. Also as before, we'll do the longitude first:

D	=	-100°
1	=	-16°
E	=	-1° 35'
Round	=	0° 2.5'
Sum	=	-117° 37.5', or 117° 37.5'W

The rounding term is used to compute the longitude of the centre of the specified region—a region 5°x2.5' (longitude by latitude) in size because DM13EK is a six-character locator. We know that the longitudinal centre of this region must lie somewhere along a line half—2.5'—of the region's longitudinal width (5') from its eastern and western edges, so the longitude rounding term is 2.5'. (The rounding term must carry the same sign as that of the other co-ordinate digits [negative rounding terms for negative longitudes and latitudes, positive rounding terms for positive longitudes and latitudes].) Next we'll calculate the latitude specified by DM13EK:

M	=	+30°
3	=	+3°
K	=	+0° 25'
Round	=	0° 1.25'
Sum	=	+33° 26.25', or 33° 26.25'N latitude

For six-character locators, the latitude rounding term is 1.25' because the region designated by a six-character locator is 2.5' wide in latitude. Again, the rounding term must carry the same sign as that of the other co-ordinate digits.

For four-character (grid-square) locators, the rounding terms are 1° (longitude) and 30' (latitude) because grid squares are 2°x1° (longitude by latitude) in size. As before, the grid-square rounding terms must carry the same sign as that of the other digits in their respective co-ordinates.

For more examples of grid locators, see Table 7. Use the co-ordinates and grid locators shown there as a basis for practice in converting geodetic co-ordinates to grid locators, and vice-versa.

The Rand-McNally Road Atlas can be used for estimating station locations by interpolating between the geodetic co-ordinates marked on the edges of the atlas' state maps. For the highest

**Table 7**  
Sample Grid Locators

City	Longitude	Latitude	Locator
Munich	11° 36.5' E	48° 8.8' N	JN58TD
Montevideo	56° 12.7' W	34° 54.6' S	GD15VC
Washington DC	77° 3.9' W	38° 55.2' N	FM18LW
Wellington	174° 44.7' E	41° 17.0' S	RE78IR

Remember: West longitudes and south latitudes are treated as negative values in the grid locator system; east longitudes and north latitudes are positive.



**PREVENT  
PIRATES**  
make sure you  
sell your  
transmitter to a  
licensed  
amateur.



precision, use US Geological Survey quad sheets that cover your areas of interest.

## Summary

Tables 1 through 6, inclusive provide a field-transportable method of converting between the geodetic and grid-locator systems. For Field Day exercises and VHF/UHF contests, the tables provide a means of cross-checking station co-ordinates when the station computer has been left at home.

## References

J. Lindholm, "VHF/UHF Century Club Awards", QST, January 1983, pp 49-51.

W. Overbeck, "A Universal Grid-Locator Program for Your Personal Computer", QST, December 1986, pp 30-31.

Edmund T. Tyson became interested in Amateur Radio in the early 1940s. Entering military service in 1944, he worked in various career fields involving electronics. Assigned to Wright Field in 1953, Ed worked on airborne TV systems for reconnaissance. In 1957, he was assigned as project engineer to establish and operate an observatory for tracking and photographing satellites. Retiring after 33 years of military and civilian service, Ed has been involved in designing and building electronic and computer equipment for astronomical applications. He is currently involved in relocating a 48-inch telescope from New Mexico to California. He was licensed as a Technician in 1986 and upgraded to Advanced Class in 1988.

Thanks to QST for permission to reprint this article.

+120 +122 +124 +126 +128 +130 +132 +134 +136 +138 +140 +142 +144 +146 +148 +150 +152 +154 +156 +158 +160 +162 +164 +166 +168 +170 +172 +174 +176 +178 +180																																					
-30	PF09	PF19	PF29	PF39	PF49	PF59	PF69	PF79	PF89	PF99	QF09	QF19	QF29	QF39	QF49	QF59	QF69	QF79	QF89	QF99	RF09	RF19	RF29	RF39	RF49	RF59	RF69	RF79	RF89	RF99							-30
-31	PF08	PF18	PF28	PF38	PF48	PF58	PF68	PF78	PF88	PF98	QF08	QF18	QF28	QF38	QF48	QF58	QF68	QF78	QF88	QF98	RF08	RF18	RF28	RF38	RF48	RF58	RF68	RF78	RF88	RF98							-31
-32	PF07	PF17	PF27	PF37	PF47	PF57	PF67	PF77	PF87	PF97	QF07	QF17	QF27	QF37	QF47	QF57	QF67	QF77	QF87	QF97	RF07	RF17	RF27	RF37	RF47	RF57	RF67	RF77	RF87	RF97							-32
-33	PF06	PF16	PF26	PF36	PF46	PF56	PF66	PF76	PF86	PF96	QF06	QF16	QF26	QF36	QF46	QF56	QF66	QF76	QF86	QF96	RF06	RF16	RF26	RF36	RF46	RF56	RF66	RF76	RF86	RF96							-33
-34	PF05	PF15	PF25	PF35	PF45	PF55	PF65	PF75	PF85	PF95	QF05	QF15	QF25	QF35	QF45	QF55	QF65	QF75	QF85	QF95	RF05	RF15	RF25	RF35	RF45	RF55	RF65	RF75	RF85	RF95							-34
-35	PF04	PF14	PF24	PF34	PF44	PF54	PF64	PF74	PF84	PF94	QF04	QF14	QF24	QF34	QF44	QF54	QF64	QF74	QF84	QF94	RF04	RF14	RF24	RF34	RF44	RF54	RF64	RF74	RF84	RF94							-35
-36	PF03	PF13	PF23	PF33	PF43	PF53	PF63	PF73	PF83	PF93	QF03	QF13	QF23	QF33	QF43	QF53	QF63	QF73	QF83	QF93	RF03	RF13	RF23	RF33	RF43	RF53	RF63	RF73	RF83	RF93							-36
-37	PF02	PF12	PF22	PF32	PF42	PF52	PF62	PF72	PF82	PF92	QF02	QF12	QF22	QF32	QF42	QF52	QF62	QF72	QF82	QF92	RF02	RF12	RF22	RF32	RF42	RF52	RF62	RF72	RF82	RF92							-37
-38	PF01	PF11	PF21	PF31	PF41	PF51	PF61	PF71	PF81	PF91	QF01	QF11	QF21	QF31	QF41	QF51	QF61	QF71	QF81	QF91	RF01	RF11	RF21	RF31	RF41	RF51	RF61	RF71	RF81	RF91							-38
-39	PF00	PF10	PF20	PF30	PF40	PF50	PF60	PF70	PF80	PF90	QF00	QF10	QF20	QF30	QF40	QF50	QF60	QF70	QF80	QF90	RF00	RF10	RF20	RF30	RF40	RF50	RF60	RF70	RF80	RF90							-39
-40	PE09	PE19	PE29	PE39	PE49	PE59	PE69	PE79	PE89	PE99	QE09	QE19	QE29	QE39	QE49	QE59	QE69	QE79	QE89	QE99	RE09	RE19	RE29	RE39	RE49	RE59	RE69	RE79	RE89	RE99							-40
-41	PE08	PE18	PE28	PE38	PE48	PE58	PE68	PE78	PE88	PE98	QE08	QE18	QE28	QE38	QE48	QE58	QE68	QE78	QE88	QE98	RE08	RE18	RE28	RE38	RE48	RE58	RE68	RE78	RE88	RE98							-41
-42	PE07	PE17	PE27	PE37	PE47	PE57	PE67	PE77	PE87	PE97	QE07	QE17	QE27	QE37	QE47	QE57	QE67	QE77	QE87	QE97	RE07	RE17	RE27	RE37	RE47	RE57	RE67	RE77	RE87	RE97							-42
-43	PE06	PE16	PE26	PE36	PE46	PE56	PE66	PE76	PE86	PE96	QE06	QE16	QE26	QE36	QE46	QE56	QE66	QE76	QE86	QE96	RE06	RE16	RE26	RE36	RE46	RE56	RE66	RE76	RE86	RE96							-43
-44	PE05	PE15	PE25	PE35	PE45	PE55	PE65	PE75	PE85	PE95	QE05	QE15	QE25	QE35	QE45	QE55	QE65	QE75	QE85	QE95	RE05	RE15	RE25	RE35	RE45	RE55	RE65	RE75	RE85	RE95							-44
-45	PE04	PE14	PE24	PE34	PE44	PE54	PE64	PE74	PE84	PE94	QE04	QE14	QE24	QE34	QE44	QE54	QE64	QE74	QE84	QE94	RE04	RE14	RE24	RE34	RE44	RE54	RE64	RE74	RE84	RE94							-45
-46	PE03	PE13	PE23	PE33	PE43	PE53	PE63	PE73	PE83	PE93	QE03	QE13	QE23	QE33	QE43	QE53	QE63	QE73	QE83	QE93	RE03	RE13	RE23	RE33	RE43	RE53	RE63	RE73	RE83	RE93							-46
-47	PE02	PE12	PE22	PE32	PE42	PE52	PE62	PE72	PE82	PE92	QE02	QE12	QE22	QE32	QE42	QE52	QE62	QE72	QE82	QE92	RE02	RE12	RE22	RE32	RE42	RE52	RE62	RE72	RE82	RE92							-47
-48	PE01	PE11	PE21	PE31	PE41	PE51	PE61	PE71	PE81	PE91	QE01	QE11	QE21	QE31	QE41	QE51	QE61	QE71	QE81	QE91	RE01	RE11	RE21	RE31	RE41	RE51	RE61	RE71	RE81	RE91							-48
-49	PE00	PE10	PE20	PE30	PE40	PE50	PE60	PE70	PE80	PE90	QE00	QE10	QE20	QE30	QE40	QE50	QE60	QE70	QE80	QE90	RE00	RE10	RE20	RE30	RE40	RE50	RE60	RE70	RE80	RE90							-49
-50	PD09	PD19	PD29	PD39	PD49	PD59	PD69	PD79	PD89	PD99	QD09	QD19	QD29	QD39	QD49	QD59	QD69	QD79	QD89	QD99	RD09	RD19	RD29	RD39	RD49	RD59	RD69	RD79	RD89	RD99							-50
-51	PD08	PD18	PD28	PD38	PD48	PD58	PD68	PD78	PD88	PD98	QD08	QD18	QD28	QD38	QD48	QD58	QD68	QD78	QD88	QD98	RD08	RD18	RD28	RD38	RD48	RD58	RD68	RD78	RD88	RD98							-51
-52	PD07	PD17	PD27	PD37	PD47	PD57	PD67	PD77	PD87	PD97	QD07	QD17	QD27	QD37	QD47	QD57	QD67	QD77	QD87	QD97	RD07	RD17	RD27	RD37	RD47	RD57	RD67	RD77	RD87	RD97							-52
-53	PD06	PD16	PD26	PD36	PD46	PD56	PD66	PD76	PD86	PD96	QD06	QD16	QD26	QD36	QD46	QD56	QD66	QD76	QD86	QD96	RD06	RD16	RD26	RD36	RD46	RD56	RD66	RD76	RD86	RD96							-53
-54	PD05	PD15	PD25	PD35	PD45	PD55	PD65	PD75	PD85	PD95	QD05	QD15	QD25	QD35	QD45	QD55	QD65	QD75	QD85	QD95	RD05	RD15	RD25	RD35	RD45	RD55	RD65	RD75	RD85	RD95							-54
-55	PD04	PD14	PD24	PD34	PD44	PD54	PD64	PD74	PD84	PD94	QD04	QD14	QD24	QD34	QD44	QD54	QD64	QD74	QD84	QD94	RD04	RD14	RD24	RD34	RD44	RD54	RD64	RD74	RD84	RD94							-55
-56	PD03	PD13	PD23	PD33	PD43	PD53	PD63	PD73	PD83	PD93	QD03	QD13	QD23	QD33	QD43	QD53	QD63	QD73	QD83	QD93	RD03	RD13	RD23	RD33	RD43	RD53	RD63	RD73	RD83	RD93							-56
-57	PD02	PD12	PD22	PD32	PD42	PD52	PD62	PD72	PD82	PD92	QD02	QD12	QD22	QD32	QD42	QD52	QD62	QD72	QD82	QD92	RD02	RD12	RD22	RD32	RD42	RD52	RD62	RD72	RD82	RD92							-57
-58	PD01	PD11	PD21	PD31	PD41	PD51	PD61	PD71	PD81	PD91	QD01	QD11	QD21	QD31	QD41	QD51	QD61	QD71	QD81	QD91	RD01	RD11	RD21	RD31	RD41	RD51	RD61	RD71	RD81	RD91							-58
-59	PD00	PD10	PD20	PD30	PD40	PD50	PD60	PD70	PD80	PD90	QD00	QD10	QD20	QD30	QD40	QD50	QD60	QD70	QD80	QD90	RD00	RD10	RD20	RD30	RD40	RD50	RD60	RD70	RD80	RD90							-59
-60																																					-60

## Australian 2 metre Simplex Frequencies

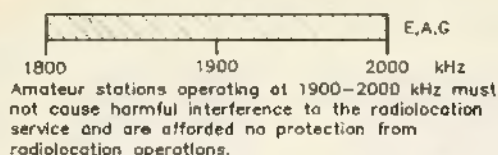
Frequency (MHz)	Recommended Use	Frequency (MHz)	Recommended Use
146.450	Primary Voice	147.425	ATV Liaison
146.500	National calling (primary)	147.450	ATV/SSTV/FAX
146.600	RTTY	147.475	SSTV/FAX Liaison
147.300	ATV Liaison	147.500	National calling (secondary)
147.325	RTTY	147.550	Micro nets
147.350	RTTY	147.575	Data nets
147.400	ATV Liaison	147.600	Data packet

### Notes:

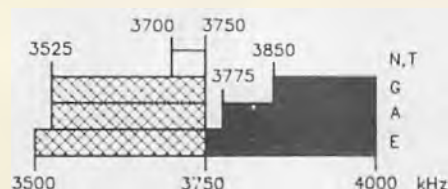
1. FM channels spacing is 25kHz and repeater offset is 600kHz.
2. FM channel numbers designated by last four digits of (repeater output) frequency.



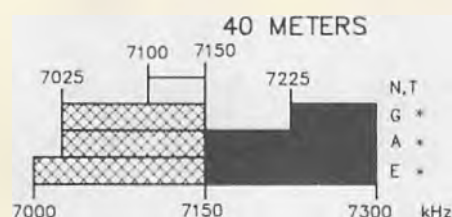
## 160 METERS



## 80 METERS



5167.5 kHz (SSB only): Alaska emergency use only.



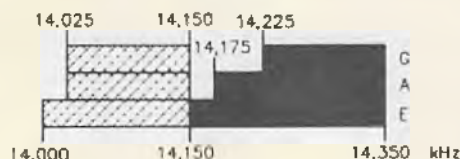
• Phone operation is allowed on 7075-7100 kHz in Puerto Rico, US Virgin islands and areas of the Caribbean south of 20 degrees north latitude; and in Hawaii and areas near ITU Region 3, including Alaska.

## 30 METERS



Maximum power on 30 meters is 200 watts PEP output. Amateurs must avoid interference to the fixed service outside the US.

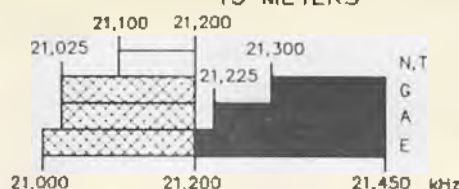
## 20 METERS



## 17 METERS



## 15 METERS



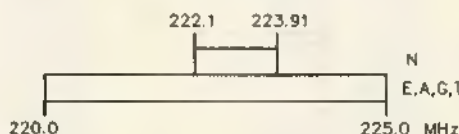
## 12 METERS



Novices and Technicians are limited to 200 watts PEP output on 10 meters.



## 1.25 METERS

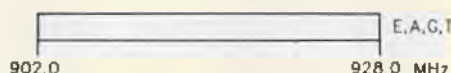


Novices are limited to 25 watts PEP output from 222.1 to 223.91 MHz.

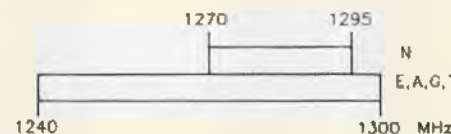
## 70 CENTIMETERS



## 33 CENTIMETERS



## 23 CENTIMETERS



Novices are limited to 5 watts PEP output from 1270 to 1295 MHz

# US AMATEUR BANDS

Revised November 15, 1989

### US AMATEUR POWER LIMITS

At all times, transmitter power should be kept down to that necessary to carry out the desired communications. Power is rated in watts PEP output. Unless otherwise stated, the maximum power output is 1500 W. Power for all license classes is limited to 200 W in the 10,100-10,150 kHz band and in all Novice subbands below 28,100 kHz. Novices and Technicians are restricted to 200 W in the 28,100-28,500 kHz subbands in addition. Novices are restricted to 25 W in the 222.1-223.91 MHz subband and 5 W in the 1270-1295 MHz subband.

Operators with Technician class licenses and above may operate on all bands above 50 MHz. For more detailed information see The FCC Rule Book.

### KEY

- = CW, RTTY and data
- = CW, RTTY, data, MCW, phone and image
- = CW, phone and image
- = CW and SSB
- = CW, RTTY, data, phone, and image
- = CW only

E = AMATEUR EXTRA  
A = ADVANCED  
G = GENERAL  
T = TECHNICIAN  
N = NOVICE





# Australian Duplex Repeater List February 1990

OUTPUT TXFREQ	INPUT RXFREQ	SITE	COVERAGE	OUTPUT TXFREQ	INPUT RXFREQ	SITE	COVERAGE
146.9000	146.3000	Black Hill	VK1RAC	146.9000	146.3000	Smeaton Hill	VK3RBS
146.9500	146.3500	Mt Ginini	VK1RGI	146.9000	146.3000	Mt Nowa Nowa	VK3REB
438.3750	433.3750	Isaacs Ridge North	VK1RIR	146.9000	146.3000	Swan Hill	VK3RSH
438.5250	433.5250	Mt Ginini	VK1RGI	146.9500	146.3500	Mt William	VK3RWZ
29.6200	29.5200		VK2RAH	147.0000	146.4000	Mt Anakie	VK3RGL
53.6250	52.6250	Sugarloaf Range	VK2RSN	147.0000	146.4000	Mt Big Ben	VK3RNE
53.8500	52.8500	Dural	VK2RWI	147.0250	147.6250	Mt Fatigue	VK3RGS
146.6250	146.0250	Byron Bay	VK2RBB	147.0500	147.6500	Mt Livingstone	VK3RGO
146.6250	146.0250	Razorback	VK2RLD	147.0500	147.6500	Robinvale	VK3RVL
146.6500	146.0500	Mt Coramba	VK2RCH	147.0500	147.6500	Mt Warrnambool	VK3RWL
146.6500	146.0500	Mt Bindo	VK2RDX	147.0750	147.6750	Heathmont	VK3RCR
146.6500	146.0500	Terry Hie Hie	VK2RMI	147.1000	147.7000	Mt Porepunkah	VK3RPH
146.6750	146.0750	Blacktown (RTTY)	VK2RTY	147.1000	147.7000	Bass Hill	VK3RSG
146.7000	146.1000	Mt Canobolas	VK2RAO	147.1250	147.7250	Geelong	VK3RGC
146.7000	146.1000	Milton	VK2RMU	147.1500	147.7500	Mt Alexander	VK3RCV
146.7000	146.1000	Middle Brother	VK2RPM	147.1750	147.7750	Olinda	VK3REC
146.7250	146.1250	Somersby	VK2RAG	147.2250	147.8250	Mt Baw Baw	VK3RWG
146.7500	146.1500	Mumbulla Mt	VK2RFS	147.2500	147.8500	Mt Macedon	VK3RMM
146.7500	146.1500	Mt Gibraltar	VK2RHR	147.2750	147.8750	Mt Cawley	VK3ROW
146.7500	146.1500	Mt Cranney	VK2RTM	147.3000	147.9000	Victoria Wide	VK3RWP
146.7500	146.1500	Mt Flackney	VK2RWG	147.3500	147.9500	Olinda	VK3RTY
146.7750	146.1750	Sugarloaf Range	VK2RTZ	434.2750	439.2750	Mt Macedon	VK3RMM
146.8000	146.2000	Needle Mtn	VK2RCC	438.0750	433.0750	Mt St Leonard	VK3RMU
146.8000	146.2000	Goomellabah	VK2RJC	438.1750	433.1750	Devils River	VK3RUG
146.8000	146.2000	Heathcote	VK2RLE	438.2250	433.2250	Olinda	VK3ROU
146.8000	146.2000	Kendell Trig	VK2RTD	438.2750	433.2750	Victoria Wide	VK3RWE
146.8250	146.2250	Bundook Mountain	VK2RET	438.3750	433.3750	Carrajong	VK3RGU
146.8500	146.2500	Mt Kaputar	VK2RAB	438.4750	433.4750	Mt Hollowback	VK3RBU
146.8500	146.2500	Mt Murray	VK2RAW	438.4750	433.4750	Bendigo	VK3RCV
146.8500	146.2500	Mt Bingar	VK2RGF	438.5250	433.5250	Mitcham	VK3RAD
146.8750	146.2750	Terrey Hills	VK2RMB	438.5250	433.5250	Mt Stanley	VK3RNU
146.9000	146.3000	Mt Sugarloaf	VK2RAN	438.5250	433.5250	Merbein	VK3RRU
146.9000	146.3000	Boona Mount	VK2RRT	438.6250	433.6250	Victoria Wide	VK3RWI
146.9250	146.3250	North Ryde	VK2RGR	438.6750	433.6750	Mt William	VK3RWU
146.9500	146.3500	Glenn Innes	VK2RNE	439.3750	434.3750	Glen Waverley	VK3RSE
146.9750	146.3750	Mt Sugarloaf (RTTY)	VK2RAN	439.4250	434.4250	Chesney Vale	VK3RDU
147.000	146.4000	Dural	VK2RWI	439.5750	434.5750	Mt Anakie	VK3RGL
147.0250	147.6250	Paddington	VK2ROT	439.7250	434.7250	Arthurs Seat	VK3RPU
147.0500	147.6500	Mount Druitt	VK2RBM	53.7250	52.7250	Calloope Range	VK4RGA
147.1000	147.7000	Grenfell	VK2RWM	53.7250	53.1250	Mount Haren	VK4RIK
147.1000	147.7000	Mt Arthur	VK2RZL	146.6250	146.0250	Gladstone	VK4RGT
147.1500	147.7500	Chatswood	VK2RWS	146.6500	146.0500	Roma	VK4ROM
147.2000	147.8000	Mt Cambewarra	VK2RSD	146.6750	146.0750	Mt Kiangarow	VK4RET
147.2250	147.8250	Lane Cove	VK2RST	146.6750	146.0750	Longlands Gap	VK4RTA
147.2500	147.8500	Asquith	VK2RNS	146.7000	146.1000	Mt Archer	VK4RAR
147.2750	147.8750	Sublime Point (R/V)	VK2RIL	146.7000	146.1000	Mt Stuart	VK4RAT
147.3000	147.9000	Springwood	VK2RTS	146.7000	146.1000	Springbrook	VK4RGC
147.3750	147.9750	Cabbage Tree Mtn	VK2RGL	146.7000	146.1000	Mount Isa	VK4RMI
147.9250	147.3250	Mt Gray	VK2RGN	146.7250	146.1250	Mt Gordon	VK4RSB
438.0750	433.0750	Somersby	VK2RAG	146.7500	146.1500	Mt Lofty	VK4RDD
438.1750	433.1750	Terrey Hills	VK2RMB	146.7750	146.1750	Prosperine	VK4RDY
438.1750	433.1750	Doughboy Mountain	VK2RNT	146.8000	146.2000	Mt Goonaneman	VK4RBU
438.2250	433.2250	Port Kembla	VK2RUW	146.8000	146.2000	Thursday Island	VK4RTI
438.2750	433.2750	Chatswood	VK2RWS	146.8000	146.3500	Weipa	VK4RWP
438.3250	433.3250	Mt Marie	VK2REE	146.8500	146.2500	Buderim	VK4RSC
438.3250	433.3250	Grenfell	VK2RWM	146.8750	146.2750	Chinchilla	VK4RCH
438.3750	433.3750	Kurrajong Heights	VK2RUT	146.9000	146.3000	Mt Stradbroke	VK4RAI
438.4250	433.4250	Hurstville	VK2RUH	146.9000	146.3000	Calliope Range	VK4RGA
438.4750	433.4750	Chatswood	VK2RRS	146.9250	146.3250	Mount Mee	VK4RRC
438.5250	433.5250	Middle Brother	VK2RPM	146.9500	146.3500	Mt Bellenden Ker	VK4RCA
438.5250	433.5250	Dural	VK2RWI	146.9750	146.3750	Blue Mtn Nebo	VK4RRR
438.6250	433.6250	Merewether	VK2RUM	147.0000	146.4000	Mt Glorious	VK4RBN
438.6750	433.6750	Mt Sugarloaf	VK2RAN	147.0000	146.4000	Black Mtn	VK4RMK
438.6750	433.6750	Nightcap Range	VK2RSC	147.1000	147.7000	Boulder Mtn	VK4RGY
438.6750	433.6750	Willans Hill	VK2RTW	147.1500	147.7500	Spring Hill	VK4RAG
438.7250	433.7250	Sublime point	VK2RIL	147.1500	147.7500	Kedron	VK4RWI
1281.7500	1293.7500	Dural	VK2RWI	147.3000	147.9000	Mt Glorious	VK4RQT
29.6400	29.5400		VK3RHF	147.3500	147.9500	Mt Inkerman	VK4RII
53.5500	52.5500	Wattle Glen	VK3RMH	147.6500	147.0500	Mt Cotton	VK4RBT
53.5750	52.5750	Dandenong	VK3RDD	147.6750	147.0750	Mt Cotton	VK4RBT
53.6750	52.6750	Lake Mountain	VK3RTN	147.8250	147.2250	Manly West	VK4REG
53.9750	52.9750	Mt Buller	VK3RGM	147.8500	147.2500	Mt Devlin	VK4RCB
146.6500	146.0500	Donalds Knob	VK3REG	438.0250	433.0250	Mt Tamborine	VK4RTQ
146.6500	146.0500	Mt Wombat	VK3RGV	438.0750	433.0750	Buderim	VK4RSC
146.7000	146.1000	Mt Mitta Mitta	VK3RNC	438.2250	433.2250	Mt Stuart	VK4RAT
146.7000	146.1000	Ouyen	VK3RON	438.2250	433.2250	Springbrook	VK4RGC
146.7500	146.1500	Mt Bunninyong	VK3RBA	438.3750	433.3750	Ipswich	VK4RWM
146.8000	146.2000	Mt Tassie	VK3RLV	438.4250	433.4250	Prosperine	VK4RMU
146.8000	146.2000	Mildura	VK3RMA	438.4750	433.4750	Maleny	VK4RXX
146.8500	146.2500	Kinglake	VK3RMN	438.5000	433.5000	Hodgson Range	VK4RHR



OUTPUT TXFREQ	INPUT RXFREQ	SITE	COVERAGE	OUTPUT TXFREQ	INPUT RXFREQ	SITE	COVERAGE
438.5250	433.5250	Mt Coot-Tha	VK4RBC Brisbane	146.9500	146.3500	Shay Gap	VK6I
438.6250	433.6250	Spring Hill	VK4RAG Brisbane	146.9500	146.3500	State Wide	VK6R
438.6250	433.6250	Kedron	VK4RWI Wicen Portable	146.9750	146.3750	Kalgoorlie	VK6RI
438.6750	433.6750	Mt Goonaniman	VK4RBU Bundaberg	147.0000	146.4000	Fairfield	VK6RA
438.7000	433.7000	Mt Mowbullan	VK4RDG Darling Downs	147.0000	146.4000	State Wide	VK6RAI
438.8250	433.8250	Mt Boulder	VK4RGY Gympie	147.0000	146.4000	Port Hedland	VK6REE
438.9500	433.9500	Redbank Plains	VK4RBA Brisbane	147.0000	146.4000	Roleystone	VK6RGN
439.2750	434.2750	Toowoomba	VK4RDU Toowoomba	147.0500	147.6500	Mt Mambup	VK6RNV
439.3500	434.3500	Mount Haren	VK4RIK Cairns & Dist.	147.1000	147.7000	W A Wide	VK6RTY
146.6500	146.0500	Naracoorte	VK4RNC Naracoorte	147.1750	147.7750	Catalby	VK6RWC
146.6750	146.0750	O'Halloran Hill	VK5RSV Pt Pirie & Dist.	147.2000	147.8000	Hoddywell	VK6RIC
146.7000	146.1000	The Bluff	VK5RMN Cowell	147.2250	147.8250	Saddleback	VK6RCT
146.8000	146.2000	Coolanie	VK5REP Barossa Valley	147.2500	147.8500	Ocean Hill	VK6RHW
146.8250	146.2250	Angaston	VK5RBV Adelaide	147.3000	147.9000	Busselton	VK6RHS
146.8500	146.2500	Houghton	VK5RHO Mt Gambier	147.3500	147.9500	Tic Hill	VK6REN
146.9000	146.3000	Mount Gambier	VK5RMG Adelaide	438.2250	433.2250	Roleystone	VK6RBN
147.0000	146.4000	Craters	VK5RAD Barossa Valley	438.5250	433.5250	Mt Duncan	VK6RTH
438.3250	433.3250	Mount Gambier	VK5ROH Adelaide	438.6750	433.6750	Mt Wellington	VK6RUF
438.4250	433.4250	Angaston	VK5RBV Adelaide	53.8250	52.8250	Snow Hill	VK6RBN
438.5250	433.5250	Craters	VK5RVP Adelaide	146.6250	146.0250	Mt Barrow	VK6RMD
1381.2500	1261.2500		VK5RWH Perth	146.7000	146.1000	Mt Faulkner	VK7RAD
29.6300	29.5300	Tic Hill	VK6RHF Perth	146.7500	146.1500	Barren Tier	VK7RHT
53.8000	52.8000	Bunbury	VK6RTH Bunbury	146.9000	146.3000	Mt Arthur	VK7RNW
146.6500	146.0500	Whim Creek	VK6RSW Carnarvon	147.0000	146.4000	Millers Bluff	VK7REC
146.6750	146.0750	Roleystone	VK6RCA Perth	147.2500	147.8500	Mt Nelson	VK7RAA
146.7000	146.1000	Albany	VK6RAP Albany	438.5000	433.5000	Table Cape	VK7RAF
146.7250	146.1250	Esperance	VK6RES Koolan Island	438.5500	433.5500	Nhulunbuy	VK7RIN
146.7500	146.1500	Koolan Island	VK6RKI Lesmurdie	438.5750	433.5750	Karama	VK7RAB
146.7500	146.1500	Lesmurdie	VK6RLM Perth	438.6000	433.6000	Alice Springs	VK7RER
146.8000	146.2000	Tic Hill	VK6RTH Karratha	438.6500	433.6500	Palmerston	VK7RTC
146.8000	146.2000	Karratha	VK6RWP Albany	146.6500	146.0500	Darwin	VK7RAC
146.8250	146.2250	Mt Barker	VK6RAA Exmouth	146.7000	146.1000	Darwin	VK8RMS
146.8500	146.2500	Northwest Cape	VK6REX Kalgoorlie	146.9500	146.3500	Darwin	VK8RDA
146.8500	146.2500	Kambalda	VK6RKB Perth	147.0000	146.4000	Darwin	VK8RCA
146.8750	146.2750	O'Connor	VK6RSR Bunbury	438.2750	433.2750	Darwin	VK8RTE
146.9000	146.3000	Mt William	VK6RMW			Darwin	VK8RDN

## Australian 70cm Bandplan Operation

Repeater Output Frequency (MHz)	Recommended Use	Repeater Output Frequency (MHz)	Recommended Use
433.025-433.725	FM repeater inputs	438.750-439.250	FM simplex
433.750-434.250	Simplex	438.775	RTTY
434.275-434.975	FM repeater inputs	438.800	WICEN
438.025-438.725	FM repeater outputs	438.825	Voice (secondary)
438.025	Mobile voice	438.875	Data
438.075	Mobile voice (secondary)	438.925	RTTY
438.125	RTTY	439.000	Voice (national primary)
438.175	Mobile voice	439.050-439.075	Data packet
438.225	Mobile voice (secondary)	439.125	Voice secondary
438.275	WICEN portable	438.275-439.975	FM repeater outputs
438.325	Mobile voice	439.275	Mobile voice
438.375	Mobile voice (secondary)	439.325	RTTY
438.425	Mobile voice	439.425	Mobile voice
438.475	Mobile voice	439.475	RTTY
438.525	Mobile voice (national primary)	439.575	Mobile voice
438.575	Data	439.725	Mobile voice
438.625	WICEN portable	439.875	Mobile voice
438.675	Mobile voice (secondary)	439.975	SSTV
438.725	RTTY		

### Notes:

1. FM channel spacing is 25kHz and repeater offset is 4MHz.
2. FM channel numbers designated by last four digits of (repeater output frequency).
3. FM channels with no specific recommended use may be used for any purpose.



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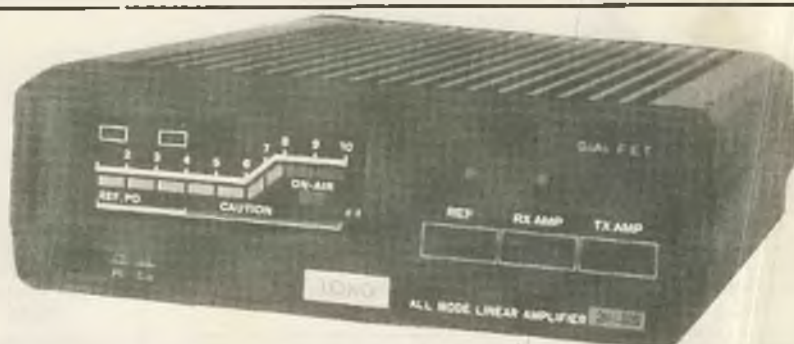
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# Amateur Satellites

by IRVING SPACKMAN ZL1MO

Worldwide and regional communications via amateur satellites has been possible as part of the Amateur Radio Service since the launch of OSCAR-6 back in 1972. Since that time 24 more have been successfully launched from sites in USA, USSR, French Guiana, and Japan.

One of the greatest difficulties at this time, is in fact the one that amateurs have the least control over—the launch vehicle! The relationship between the various launch agencies and the Amateur Satellite Organisations has always been one of close friendship and co-operation, and every opportunity for a "ride" has been gratefully accepted. However, the reduced frequency of non-commercial, or non-military launches with suitable spare space, at minimum cost, has meant that amateur launch opportunities have been very infrequent, and where opportunities for semi-commercial launches have been available, they have been very costly.

A change of approach recently, allowed other ways of achieving a low cost "ride" into orbit—that of designing our spacecraft to "fit" into areas otherwise unusable. Arianespace have developed a new structure—the Ariane Structure for Auxiliary Payloads (ASAP)—which has been specially designed to provide small secondary payloads with inexpensive launch opportunities, by housing them in what otherwise would be wasted space.

Another intriguing approach, which has been examined and found practical is to build our spacecraft into necessary, but discarded components for other spacecraft once they have attained orbit. This concept is being developed in the case of the Phase 4 program, where the adaptor ring, fitted to a Geostationary spacecraft, will be used as the housing for the Phase 4A spacecraft.

## Satellite Frequency Allocations

International agreements have made provision for the Amateur Satellite Service to operate in the 7, 14, 21, 24, 29, 144, 435, and 1260MHz bands, plus the 2.4, 3.4, 5.6, 10, 24, 47, 75, 142 and 240GHz allocations. However, so far operation has only been seen in the following bands:

BAND	FREQUENCIES	REMARKS
15m	21.25 to 21.30MHz	Uplink frequency used
10m	29.30 to 29.50MHz	Downlinks frequency used
2m	145.80 to 146.00MHz	Both up and downlinks
70cm	435.00 to 438.00MHz	Both up and downlinks
23cm	1260 to 1270MHz	Uplink only permitted
13cm	2401 to 2402MHz	Downlink only permitted

Whilst operation in these frequency regions is set by international agreement at World Administrative Conferences, for many countries the ultimate decision as to whether the Satellite sub-bands are permitted is by authorisation of the administration of the specific country. Usage at local level is generally by "gentleman's agreement" observing "bandplans" laid down by specific Amateur Organisations such as the RSGB and NZART.

## Satellite Modes and Terminology

OSCAR stands for "Orbital Satellite Carrying Amateur Radio", and "RS" is used to identify the predominant series of Russian Amateur satellites because they send RS in their identifying call, although the official designation by the Russians is "RADIO-1" through to "RADIO-11". UoSATS2, 3 or 4 (University of Surrey Satellites) are identified as UoSAT OSCARs 11, 14 and 15 respectively giving rise to the abbreviations UO-11 etc. Other amateur spacecraft launched by the Russians were named ISKRA (little spark!) and the latest satellite launched by Japan for JAMSAT/JARL as JAS-2 (Japan Amateur Satellite) has been called FUJI OSCAR-20 or FO-20.

The type of operation of satellite transponders is specified by THE MODE, which essentially is an indication of the specific frequencies being handled via the transponder. The current types are:

Mode	Uplink (MHz)	Downlink (MHz)
A	145.8-146.0	29.3-29.5
B	435.0-438.0	145.8-146.0
J	145.8-146.0	435.0-438.0
K	21.25-21.30	29.3-29.5
L	1260-1270	435.0-438.0
S	435.0-438.0	2401-2402
T	21.25-21.30	145.8-146.0

NOTE: In some cases two modes may be operated simultaneously.

The operating schedule of the satellite which will set the day/time the spacecraft may use a specific mode or be switched off can be implemented by direct ground control or under the supervision of an on-board computer system—the OBC or IHU (Integrated Housekeeping Unit as it is known in the Phase III series of OSCARs).

Current operational schedules may change from day to day, week to week, etc, so it is necessary to regularly check the most up-to-date and easily accessible sources. In some cases the satellite's own beacon transmissions or bulletins are such a source of up-to-the-minute information.

## Orbital Information, parameters and Predictions

Every satellite is given one reference orbit each day. It is the first EQX (Northbound Equator Crossing) for that satellite after 0000UTC. So for example for UoSAT UO-11:- Satellite Cat. No. 14781; Date: March 8 1990. Orbit No. 32262 EQX 01:23:43; 63.72° W. Long.

To calculate the succeeding crossing times, it is only necessary to add the orbit period, and increment of West longitude as many times as is necessary to bring the spacecraft within the time or longitude of interest.

It should be noted that the predictions for all spacecraft are done in the manner above, with the exception of those in Geostationary orbit, who never effectively cross the equator, but merely rotate above it remaining essentially over the one spot on earth. Also EQX type predictions for a highly elliptical orbiting spacecraft such as Phase 3 OSCAR-13 are not much value to us users, since the satellite appears to hang in one place in the sky for perhaps 9 out of its 11½ hour orbit.

With the elliptical type of orbit it is more convenient to provide a prediction for when the satellite rises over our horizon (acquisition of satellite—AOS); the time of mid-point through its visible period; and the time it sets (Loss of Satellite—LOS). In addition a set of bearings in azimuth degrees relative to true North and elevation in degrees above the horizon, is given for a range of times throughout the visible part of the orbit to aid aiming directional antenna at the spacecraft.

Since most of the orbits of Amateur Satellites are well above the remnants of the earth's atmosphere there is little effect of friction, and consequently the parameters of the orbit change little from week to week. It is thus possible to provide reasonably accurate predictions up to several weeks ahead. They are currently available on a weekly basis on the Sunday VHF nets from Auckland and Waikato repeaters.

For further information regarding satellite prediction data you are invited to contact the writer enclosing a SASE.

## Orbital parameters

The orbital reference data described earlier cannot be obtained accurately in a direct fashion, but is derived from more precise measurements known as Keplerian Orbital Elements, named after the mathematician and astronomer Johannes Kepler. He was able to formulate a set of rules which all orbiting bodies obey. This data is nowadays derived by radar, or optical observation of the particular spacecraft, and refined over a period of time by organisations such as NASA to produce a set of seven essential elements. These are:



INCLINATION; ECCENTRICITY; the RIGHT ASCENSION of ASCENDING NODE (in short RAAN); ARGUMENT of the PERIGEE; MEAN ANOMALY; MEAN MOTION; EPOCH Time.

In some cases a quantity called the SEMI-MAJOR AXIS or SMA is given as well as or in place of MEAN MOTION.

Other factors commonly given in association with the "elements" are the specific set number, the orbit number for which the other parameters apply, and the "drag" or first derivative of the mean motion which allows continuous correction of the data for the effects of atmospheric drag, the earth not being a true sphere, and the gravitational effects of moon and sun.

Access to "Element Sets", as they are called, on a regular basis can be achieved simply by sending an SASE to ZL1MO. They also can be requested from the various Nets detailed later and for those with Packet Capability probably from your local BBS.

### Computer Satellite Predictions

In general the lower altitude polar-orbiting satellites which have inclinations ranging from 80 to 100 degrees are visible from anywhere in New Zealand for periods ranging between 10 and 25 minutes on each of two or three consecutive passes, followed by a similar group 10 to 12 hours later.

If in one such group the satellite moves from north to south, then the next group will be in the opposite direction, as our point on the earth's surface appears under the other side of the orbit. The first useful orbit will appear to the east, the subsequent ones overhead or out to the west.

The exception to this rule occurs when spacecraft such as the Space Shuttle, or Orbiting Laboratories such as the Russian "MIR", are considered. When the orbit's inclination is around 50 degrees we find that we get a block of six to eight consecutive orbits within range, followed by a period of 10 to 12 hours when no orbits are visible. The sequence of the direction of passes are always the same but the apparent direction changes between first and last passes by about 260°.

Use of a personal computer to calculate orbital information such as AOS, TCA, LOS and bearing and elevation data between these points has become the norm for the regular satellite user. From the lowly but practical ZX81 and pocket computers through to all of the common brands to the IBM PCs and clones, the basis of most of the common programs used is Tom Clarke, W3WV's "Basic Orbits" which was published in AMSAT's *Orbit* magazine for March/April 1981.

This program has been translated into various dialects of BASIC, and also Pascal for most popular home computers. There are also a number of other programs written by other satellite users, utilizing the unique capabilities of various computers to give a range of data formats plus graphic presentations, to dramatically portray the paths the satellite takes across the earth's surface, determine its "footprint" and whether there is "mutual visibility" between two stations, whilst computing and displaying the direction the spacecraft's antennas should be pointing, etc.

For further information you may contact the author, with an SASE, stating your requirements and type of computer.

Other sources of software are the publications: *Amateur Radio Software*, published by RSGB; *Satellite Tracking Software for the Radio Amateur*, by John Branegan GM4IHJ, available via the Sinclair Amateur Radio Users' Group; and pamphlets describing a wide range of software available from both AMSAT-NA and AMSAT-UK. There is also a range of software available particularly for the C-64 and IBM clones from AMSAT-VK.

### Where do I get more information?

There are a number of books and magazines available to help those interested in amateur satellites. All the handbooks published by the National Societies have useful chapters as does the RSGB VHF/UHF Manual. A very good publication is *The Satellite Experimenters Handbook* published by the ARRL. This 200 page book contains a wealth of information on satellites, orbital prediction, and ground station equipment. Another useful publication *The UoSAT Spacecraft Data Booklet* is available from the University of Surrey whilst handbooks on AO-10, RS series, FO-20 and AO-13 are available from several sources.

AMSAT-UK publish OSCAR NEWS every two months. This excellent booklet contains a wealth of up-to-date data, and arrives by airmail within about two weeks of final preparation.

AMSAT-NA publish a newsletter type publication every few weeks, called *Amateur Satellite Report (ASR)*. AMSAT-NA also publish a quarterly publication called *The AMSAT Journal*.

A monthly technical publication called QEX contains many excellent satellite related articles and is published by ARRL.

Another publication available a little closer to home is the AMSAT-VK monthly newsletter. Containing an up-to-date information, gathered from this part of the globe, it arrives by airmail within a week.

Enquiries regarding membership of AMSAT-NA; AMSAT-UK or AMSAT-VK, or subscription to QEX, can be obtained by enquiry to the author with an SASE.

Here in ZL, the author provides a HOT-LINE-NEWS monthly newsletter, containing latest information, Keplerian Elements, and satellite bulletins as of the end of each month. To receive details about this service contact the ZL1MO enclosing an SASE.

There is a net operating each week—propagation and net controller permitting, on 14.282 and 7.103MHz simultaneously on Saturdays 2200hours. UTC (Sunday Morning NZ 1000hours) conducted by ZL1WN for VK, ZL and Pacific Islands. Information on this net is derived directly from AMSAT news sources with direct input from AMSAT editorial staff world-wide. Check-ins are taken for five to ten minutes prior to net time.

Both the Waikato 695 and Auckland 6625 VHF Sunday nights net is at 2115 also include a brief satellite report containing predictions and late breaking news.

If you have Packet capability, then a considerable amount of Satellite News can be found on your local BBS and for those with TELETEXT receiving facility, Page 304 is updated periodically with data.

Finally, those equipped to receive them, will find regular bulletins and data transmitted by the UoSAT UO-11 satellite at 1200 BPS NBFM, on the 145.825 downlink frequency.

For more information on these facilities contact the author enclosing an SASE.

### Operational Status of Current Spacecraft

#### UoSAT-2 (UO-11): Cat 14781

Beacons: 145.825; 435.025; 2401.5MHz

Data and Bulletins at 1200bps. FSK NBFM. Also transmissions on 435.025MHz at 4800bps. CCD image transmissions and Digita-talker transmissions all under automatic Diary control. Digital Communication Experiment (DCE) in use between Gateway ground stations in many countries.

#### FUJI-OSCAR-20 (FO-20): Cat. 20480

Launched 7 February 1990. Inclination 99 degrees. Apogee 1740km. Perigee 912km.

Transponders: JA (SSB/CW). Uplink: 145.900-146.00MHz. Downlink: 435.900-435.800. CW Beacon: 100mW 435.795MHz;

JD (Digital BBS). Uplink: four channels 145.85, 145.87, 145.89 and 145.91MHz. Modulation 1200bps Manchester Encoded NBFM. Downlink: 435.91MHz 1W 1200bps BPSK also Beacon.

Depending on amount of solar illumination both transponders may be operating. More details in *Break-In*.

#### RS-10/11 (COSMOS 1861): Cat 18129

Note—the two systems are separate but carried on and using power from 1861.

Both RS-10 and 11 can operate under modes K, KA, T, KT.

RS-10: Uplink: 145.860-145.900MHz and/or 21.160-21.200MHz. Downlink: 29.360-29.400MHz and/or 145.860-145.900MHz. Beacon: 29.357/145.857/145.903MHz depending on Mode(s). Robot uplink: 21.120/145.820MHz. Downlink: 29.403MHz.



**RS-11—Uplink:** 145.910–145.950MHz and/or 21.210–21.250MHz. **Downlink:** 29.410–29.450MHz and/or 145.910–145.950MHz. **Beacon** 29.407/145.907/145.953MHz depending on Mode(s). **Robot uplink:** 21.170/145.870MHz. **Downlink:** 29.453MHz.

#### **OSCAR-10: Cat 14129**

Elliptical Orbit 26°, Long Period 11½ hours.

Limited Mode B operation possible depending on Satellite/Sun relationship. On-Board Computer (OBC) non-operational due to radiation damage to memory, thus preventing any attitude changes to spacecraft.

**Mode-B uplink:** 435.027–435.179MHz equates with **Downlink:** 145.977–145.825MHz (inverting).

**General (145.810MHz) and Engineering (145.987MHz) Beacons** not normally operational but may turn on under certain conditions.

For details of operating schedules see *Break-In* or contact ZL1MO.

#### **OSCAR-13 (Phase III): Cat. 19216**

Elliptical orbit. Period 686.70 minutes.

#### **Four Modes: B; JL; L and S:**

1. **Mode-B:** General Beacon 145.812; Engineering Beacon 145.985MHz. Uplink passband 435.423–435.573MHz equates with downlink 145.975–145.825MHz (inverting).
2. **Mode-L:** General beacon 435.651MHz. Uplink passband 1269.351–1269.641MHz equates with downlink 436.005–435.715MHz (inverting).
3. **Mode-J:** Uplink passband 144.423–144.473MHz equates to downlink 435.990–435.940MHz (inverting).
4. **Mode-S:** Beacon 2400.325MHz. Uplink passband 435.601–435.637MHz equates to downlink 2400.747–2400.711MHz (inverting).

#### **New Satellites**

Note: The following six satellites were all launched on 22 January 1990. Inclination 98.7°. Altitude 825km.

#### **UoSAT-3 (UO-14): Cat. 20437**

**Mode-J** Pacsat using 1200bps AFSK/9600bps FSK. Uplink: TBA. Downlink: 435.070MHz 1200bps AFSK/9600bps FSK.

Experiments to study Cosmic Particles and total radiation dosage are also carried.

#### **UoSAT-4 (UO-15): Cat 20438**

Downlink: 435.120MHz 9600bps FSK.

This spacecraft is similar to UO-14 in control, power supply, telemetry and command areas but is primarily a technology test mission, with sophisticated data processing and CCD camera systems, plus a solar-cell test-bed experiment.

#### **Microsat PACSAT-OSCAR-16 (AO-16): Cat 20439**

AMSAT-NA's Mode-J PACSAT. Using FO-12 communications format. Uplinks: 145.900; 145.920; 145.940; 145.960MHz Manchester Encoded FM. Downlink: 437.025MHz BPSK or 437.050MHz BPSK using Raised Cosine Modulation. A Mode-S Downlink is also present, on 2401.142MHz transmitting the same format as on 70cm when commanded on.

#### **Microsat DO-17: Cat 20440**

BRAMSAT's DOVE (Digital Orbiting Voice Encoding Satellite). Downlink: 145.825MHz NBFM. Educational spacecraft transmitting messages and telemetry as speech or as standard AX.25 packets at 1200bps. An additional downlink uses S-Band on 2401.220MHz.

#### **Microsat WO-18: Cat 20441**

Weber State College's WEBERSAT. A facility for video data collection from CCD Camera and transmission by packet radio techniques. Uplink: TBA. Downlink: 437.075MHz BPSK or 437.100MHz BPSK Raised Cosine Modulation. A range of other experiments also have telemetry on same frequency. Will also receive and retransmit ATV uplinked on 23cm and has PACSAT capability as well if required.

#### **Microsat LO-19: Cat 20442**

AMSAT-Argentina's LUSAT. A Mode-J PACSAT. Uplinks: 145.900; 145.880; 145.860; 145.840MHz Manchester Encoded 1200bps NBFM. Downlink: 437.150MHz BPSK (as per FO-12 format).

Secondary Payload: CW Beacon on 437.125MHz. Transmitting limited range of telemetry at 12wpm. Intended to bring satellite operations to Argentinian Amateurs who don't have packet capability.

For further details on any of these satellites see *Break-In* or contact ZL1MO with SASE for further technical information.

#### **Other Satellites pending**

##### **RS-12/13**

Similar to RS-10/11, this dual system will also be carried on a host spacecraft. It is ready for launch when the host is required to replace an existing spacecraft currently in service.

##### **RS-14**

Another Russian Amateur Satellite due to be carried aloft on a host, GEOS, a Russian Geological Survey Satellite. Due for launch in July 1990, RS-14 should carry a Mode-B transponder and a Digital system similar to RUDAK, designed and built by AMSAT-DL. Mode-B Uplink: 435.080–435.180MHz. Downlink: 145.950–145.850MHz (inverting). RUDAK-2 uplink: 435.100MHz 1200bps FSK or 435.150MHz 4800bps FSK. Downlink: 145.990MHz 1200bps PSK.

8

## **WARO NZ Women Amateur Radio Operators**

WARO was formed in 1961–62 by a small but keen group of YL transmitters and has steadily grown both in numbers and enthusiasm ever since.

For the annual subscription (constantly under review, currently \$6.00 for New Zealand members) members receive four quarterly *Bulletins* containing items of interest to operators and friends, with special attention to YL activities.

Associate members—YLs who do not have a transmitting licence are welcome, as are YLs from overseas, many of whom are sponsored by ZL members.

#### **Object**

To promote and encourage interest in Amateur Radio amongst women.

NZART CALL BOOK, 1990

#### **Officers 1989–90**

**President:** Carol Gaudin ZL2VQ

**Vice-President:** Ann McMaster ZL3VR

**Secretary:** Christine Armstrong ZL1BQW, PO Box 209, Kawerau.

**Treasurer:** Dawn Young ZL2AGX

**Award Custodian:** Vicki Shaw ZL1OC. P.O. Box 2088, Whakatane.

**Contest Manager:** Jeanne Gilchrist ZL2BOD

**Sub-Editor to Break-In:** Val Searle ZL3GW

YL Nets: These are held every Monday evening at 8.00 p.m. (9.00 p.m. during daylight saving time) on 3.700 MHz, except 5th Monday on 3.6 MHz. Newcomers welcome.



# Digital Modes

by ALAN WALLACE ZL1AMV

Digital communication modes represent one of the fastest growing areas of interest in amateur radio, with the past decade seeing many developments. While there are other digital modes that radio amateurs are experimenting with, RTTY, AMTOR, and Packet Radio are the main digital modes on amateur radio.

## RTTY

Baudot code is still the common denominator of RTTY modes, but it is far from standardized itself. The correct term is CCITT International Alphabet No. 2, and the main dialects of it go under the general names of Baudot (for mainly US derived machines). The differences between these codes is in the punctuation characters and would not be noticed between two operators unless they used punctuation such as "!", ":", "%", etc.

Baudot is sent at differing speeds in different areas. Most US operation is at 45.45 baud (a hangover from a speed limitation by the FCC of 60wpm for any coded operation), at 45 baud in Europe, while all operation in New Zealand is at 50 baud (after a collective decision to standardize to the commercial speed). Nowadays, computers have almost completely taken over from the mechanical teleprinter, so baud rate changes are no longer the problem they once were. This does not mean that there are no Creeds or Teletypes still operating—there are a number of these reliable beasts still clanking on in ZL.

ASCII is used to a small degree on amateur bands. The proliferation of personal computers in the ham shack, often with in-built communications facilities designed to work on telephone networks, has increased operation in this mode. A number of operators shift to ASCII to transmit longer files at a faster rate, and W1AW transmits the ARRL bulletins in ASCII. The speed is generally standardized at 110 baud, however faster rates, such as 200 and 300 baud, are used, with varying degrees of success.

## AMTOR

One common problem with direct printing RTTY (such as Baudot and ASCII) is errors in reception. If there is any slight disturbance to the received signal, it is quite likely that an incorrect character will be printed. This is not a major problem in the average amateur conversation, as the rest of the sentence will usually fill in the gaps. However, on all but the best contacts, important details (e.g. frequencies), must be repeated a couple of times to ensure that the other station gets what you want to say. This form of operation may be satisfactory for hams but it is not satisfactory for commercial operation such as ship to shore teletype.

AMTOR can be thought of as a more advanced form of RTTY which includes automatic acknowledgement of each group of characters sent, or a request for repeat. This results in error-free communication (at the expense of speed, especially in poor conditions). The protocol is very specific so there is no variation in the transmission speed of 100 baud. As this mode requires more sophisticated equipment able to handle the handshaking functions and a relatively fast receive/transmit changeover in your radio, the number of operators is a little down on the simpler modes.

The main feature of AMTOR is that it uses the Moore code, which is made up of seven unit characters (bits), but utilizing a select few of the possible combinations, thus allowing a receiving station to tell if a received code is correct or not. AMTOR operation involves the transmitting station sending three characters, then waiting for a response from the receiving station. The response will either be "roger", "go ahead" or "no go" (or perhaps nothing at all if the path has faded out). The transmitting station then either repeats the last three characters, or sends the next three. This operation is a form of ARQ (& Automatic ReQuest), known as AMTOR Mode A.

By sending text in bursts of three characters, awaiting one character reply, then sending three more, AMTOR requires radio equipment which can change from transmit to receive in a very short time. On-air AMTOR has a characteristic fast "chirp-chirp" sound.

There is another version of AMTOR (Mode B) which also uses the Moore code (i.e. has the ability to detect errors), but is an FEC (Forward Error Correction) system, rather than an ARQ system. Instead of a transmit and wait acknowledgement system, Mode B simply transmits every character twice, three characters apart. This allows the receiving station two goes at getting it right. As a result, Mode B AMTOR is more reliable than RTTY, but not as reliable as Mode A AMTOR. Mode B, as it does not require acknowledge responses from the receiving station, is used for news broadcasts, and CQ calls. Mode A also is limited by the specified timing to short-path HF contacts due to the radio propagation time around the world, so Mode B is necessary for some contacts.

## RTTY/AMTOR Mailboxes

There are a number of SELCAL/Mailbox stations operating, including ZL2HO and ZL1AMV which monitor 7045kHz in Baudot, and VK2AGE who monitors 7045kHz in AMTOR ARQ.

## Packet Radio

RTTY is reliable at good signal strengths and AMTOR provides reliability at low signal levels, but while transfer is faster than many typing speeds, it is rather slow for large messages, and permits only conversation per "channel". Recent innovations such as selcal and mailbox systems have greatly improved the versatility of these modes, but they are still restricted by their speed, reliability, economy of spectrum, and limited character sets. Neither system permits the reliable transfer of full eight bit data.

Packet radio solves these problems with a sophisticated message format permitting the transfer of full eight bit data to specified receivers at high speed, along with error checking capabilities. Increased channel utilization and the potential for the worldwide linking of stations (i.e. networking) are just some of packet radio's favourable attributes.

Basically each "packet" is sent as a complete block with a unique eight bit pattern (called a flag) indicating its start and finish. The block consisting of the two flags and data between them is called a packet (or a frame if you want to get technical). Within this packet is the destination address of the packet, the source (i.e. sender's) address, control information on the type of packet being sent (control, acknowledgement, information), data (where applicable), and a CRC (Cyclical Redundancy Check) which enables the receiver to determine whether there are any errors in the received packet. The exact format of the packet is laid down by an agreed protocol. (A full explanation of packet radio can be found in recent editions of the *ARRL Handbook*, and other such publications.)

The first protocol widely used by amateurs was known as the VADCG V1 protocol. While this protocol facilitated early experimentation, it had a number of limitations. To overcome these limitations, a new protocol called AX.25 was developed. AX.25 is based on X.25, an international packet-switching protocol.

Packet radio requires the use of a computer to handle the protocol and the exchange of data. This may be done by either programming a personal computer, or by using a dedicated computer called a TNC (Terminal Node Controller) connected between a computer/terminal and the radio. The TNC approach leaves the operator's computer free to handle application activities.

## Common Operating Frequencies

### RTTY/AMTOR

ZL net frequencies:

80 metres	3545kHz
40 metres	7045kHz

International Operating Frequencies:

80 metres	3610-3640
40 metres	7040-7060
20 metres	14080-14100
10 metres	28080-28100



## Packet Radio

ZL operating frequencies:

2 metres—most operation on 144.65MHz, see the FMTAG Bandplans for full details.

International Operating Frequencies:

40 metres 7030-7040  
20 metres 14100-14150

## Packet BBS Operation

There are a large number of packet radio Bulletin Board Stations operating in ZL, mostly with access on 2 metres. To use these stations, simply connect, and enter your command. The command "H" for help responds with a list of features of that BBS.

Facilities available on a BBS are very comprehensive, however the most commonly used commands are:

LM—"List Mine"—this will provide a list of message numbers, and subjects, for messages to you.

Rxxx—"Read message number xxx"—After listing your messages, to read one, note the message number, and enter a read command for that number.

KM—"Kill Mine"—Kill all messages addressed to me, that I have read. Note that you cannot kill a message until you have read it.

L—"List messages"—This lists all new messages and bulletins on the BBS since you last listed messages. Note that if this is your first time on a BBS, or you have not checked in for some time, this command will result in a very long reply.

S ZL1XYZ—"Send message to station call sign ZL1XYZ"—The BBS will then prompt you for a subject (one line of up to 60 characters), then the message content. End the message with either "/" or control "Z".

B—"Bye"—This logs you off the BBS, and it initiates a disconnect from you. In fact you can log off simply by disconnecting.

## BBS forwarding

The packet BBS network in ZL is capable of forwarding a message throughout New Zealand, and to most locations overseas.

A map is included in the repeater section of *Call Book* showing the main centre BBSs. To send a message to a distant amateur, note the call sign of their local BBS, and use that as the message address. For example:

If you reside in Auckland, and have a message for an amateur in Christchurch, all that is required is for you to enter an @ in the send command to the appropriate BBS, e.g.:

S ZL3ABC @ ZL3AC—This will command the BBS network to forward your message to the ZL3AC BBS (in Christchurch). The forwarding is completely automatic, and often the message will pass through a number of BBS on the way.

Most BBS stations are operated by interested amateurs from their home, using their own computers, therefore new stations often appear, and some old stations go off the air. For this reason a current list of active BBS stations is difficult to maintain. Recently a number of Branches of NZART have set up BBS stations, using Club resources. By their nature these stations will be somewhat more permanent, and are marked \*\* on the map.

## Forwarding mail overseas

To send mail overseas, you simply insert the destination BBS as usual. For example, to send a message to G3ABC at the G7ABC BBS, simply enter this into your local BBS as:

S G3ABC @ G7ABC

The local BBS will forward this to the current overseas gateway, and from there the overseas HF forwarding networks will carry the message.

## Digipeaters

A number of "Level 3" digipeaters have been installed on hill-tops. These consist of standard TNCs operating special software, providing a store and forward packet repeater.

NZART CALL BOOK, 1990

# Hamology

## amateur radio ... the course

**Second Edition**, Brian Oliver ZL1OL's popular course notes now up-dated ...

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- |   |         |
|---|---------|
| — Member's price (please include proof of membership) | \$23.00 |
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- (prices include GST, postage and packing)

## Post order and remittance to:

Oliver Electronics and Communications Ltd,  
65 Archers Road, Glenfield, Auckland 1310

The most common software being operated currently is "TheNet", which provides a form of networking based on "Nodes". Each digipeater is regularly broadcasts a list of other digipeaters (nodes) it can hear, and that it has heard about from the next digipeater down the chain. This way all digipeaters in a network build up a list of all others, and the route to each other.

A user simply connects to his local digipeater, and enters the command "N", for nodes, and the digipeater will reply with the list of the nodes in the network. The user then issues a command to the digipeater to connect to the desired node, and the digipeater will automatically connect through all the required intermediate digipeaters to the destination. The user can then command the far end digipeater to connect to his destination home station.

Another type of digipeater software is called "Rose". This also provides network working, but in a very different way to "TheNet". Rose networks are based on a number scheme, using the local telephone STD codes. To use a Rose network you must know the call sign of the local digipeater, and the numeric code of the destination node. For example to work home station ZL1XYZ through a local digipeater call sign ZL1BQ-3, and destination node numeric code 400000, a user would issue this command:

C ZL1XYZ V ZL1BQ-3,400000

While the structure of this command is similar to "Level 2" home station digipeating, in fact the Rose software intercepts the path, and provides full store and forward repeating through the network.

## Current Information

A regular weekly news broadcast on ZL digital mode happenings is broadcast on 7045kHz, Sunday mornings at 0930 hours (local time), first in Baudot, then repeated in AMTOR FEC. It is also available on the VHF packet network throughout the country. This provides updates on digipeater and BBS happenings, also RTTY and AMTOR mailbox and operating information.



## OLD TIMERS CLUB

The objects of the Old Timers' Club (ZL) are set out in our Constitution adopted in 1954. They are as follows:

1. To recognise service to Amateur Radio;
2. To revive and maintain interests and good fellowship among the older members in the common cause.
3. To offer aid to Young Timers.

Full membership is available to any ZL amateur who has held an amateur licence for the last 25 years or more and is still an active amateur. In addition, Associate Membership is available to any ZL amateur who has attained the age of 60 years (and over) and has been an active amateur for 20 or more years. Voting privileges are not available to Associate Members.

No subscription or entrance fee is payable. However, a small donation is acceptable with the membership application to assist the Club's modest expenses, mainly postage and stationery, which are helped from time to time with other small donations.

Application for Membership forms may be obtained from a member of the Districts Representative Committee or from the National Secretary and evidence of eligibility which is to be submitted shall include:

1. Date of original licence;
2. Operator's Certificate number;
3. Original Callsign held and any others;
4. Present Callsign and address;
5. Full name;
6. Sufficient postage to cover postal charges;
7. All applications for membership must be proposed and seconded by two members of the OTC.

On acceptance a Certificate is issued to all Full and Associate Members. In addition, a further handsome Certificate of Merit is available on request to those who attain 50 years and 60 years of Amateur Service.

The Club is duly affiliated to the New Zealand Association of Radio Transmitters (Inc.).

All correspondence should be addressed to the National Secretary:

P. C. Anderson ZL1LR, 32 Gilmour Street, Waihi 2991.

If a reply is expected, please enclose a stamped, self addressed envelope.

Articles relating to all aspects of OTC or of vintage Radio for publication in the OTC section of Break-In are welcomed by, and should be addressed direct to our Scribe, Don Sutherland ZL2AJL, 23 Peakes Road, Wanganui.

### Nets and Awards

National Nets are held every Sunday from 9.30am with the Secretary's official news at 10.00am. on the 40m band as follows: 7058±kHz (SSB, AM, CW) with news on this frequency 7120±kHz AM.

Should conditions on 40m be unsatisfactory, the Net Controller may decide that the Net will QSY to 80m, 3820kHz (SSB etc.) 3850kHz (AM)

Please check these frequencies if in doubt.

### Office Bearers

**Patron:** D. Wilkinson ZL2AB

**Grand Old Man:** John Baxendale ZL1CD

**General Secretary:** P. C. Anderson ZL1LR

**Net Controllers:** J. A. Cheyne ZL2AQI  
C. V. Shennan ZL2HS  
T. R. Colquhoun ZL2ASP

**Assistants:** K. R. Hanlon ZL1PB

AM Phone—D. G. Alexander ZL2AWF

### Districts Representative Committee (Main Centres):

H. L. Martin ZL1PX  
T. R. Colquhoun ZL2ASP  
L. C. Hunter ZL3BJ  
S. G. Hill ZL4ID

### and assistants (Other centres):

G. C. Rouse ZL1AQ  
R. H. Hanley ZL2GU  
E. W. Belcher ZL3QY  
J. V. Colyer ZL4KE

**OTC Column in Break-In Scribe:** D. C. Sutherland ZL2AJL

**Certificate Preparation:** Anne Anderson ZL1TAF

## AREC AMATEUR RADIO EMERGENCY CORPS

Formed in 1932 following the Napier Earthquake, the AREC objects are:

To provide emergency communications within New Zealand and to provide a body of trained radio operators who can be available at short notice.

There are 74 sections of AREC throughout New Zealand each with its own Section Leader responsible for organisation and training and each attached to a Branch of NZART from whence the members of the section are drawn.

Section Leaders liaise with emergency services such as Police, St John Ambulance, Red Cross, Civil Defence and Search and Rescue at the local level. Co-ordination at the national level with similar organizations and Government Agencies is done by the Officer Commanding who is appointed by the NZART Council.

### AREC Section Leaders Net

A monthly net of all AREC Section Leaders is held on the third Monday of each month at 1930 hours. The Net is conducted by the OC AREC, ZL3EX, on 3900kHz Upper Sideband.

### AREC Procedure

In most AREC search operations outside stations are quite often called upon to assist with relay work and these stations find difficulty in following AREC operating procedure. The following is the basic procedure for Telephony. CW procedure is covered in the AREC Manual.

1. Establishing contact: "ZL2ELA ZL2ELA ZL2ELA. This is ZL2ELB. How do you copy? Over."

2. ZL2ELA acknowledges as follows: "ZL2ELB this is ZL2ELA. Roger, your signals, Readability 5, Strength 8, go ahead. Over."

3. ZL2ELB replies: "Roger, I have message for you. Message begins, ZL2ELB 1, 121320. Addressed Brown. Text begins. Weather here fine. Signature Black. End of message. Over."

4. ZL2ELA replies: "Roger No. 1. I have no traffic for you. Over."

5. ZL2ELB replies: "Roger. No further traffic here. Over".

6. ZL2ELA replies: "Roger. ZL2ELB, this is ZL2ELA, out."

Note 1: The use of the signing procedures "over" and "out". When you sign "out" it is very desirable to check the channel before you call your next station. Signing out means you have finished your contact—final finals should be avoided.

Note 2: You will see callsigns have been omitted except for calling and signing. Callsigns should, however, be used (a) when other stations are in the operating net, (b) when conditions are poor and there could be some doubt. In these cases the operating station simply signs over as follows: "ZL2ELB this is ZL2ELA Over."

Note 3: Stern callsigns (eg ZL2EL) are personal issues to Section Leaders and MUST only be used by that Section Leader.

The use of correct operating procedures, whilst it may appear irksome and over-efficient to some, does save considerable time if



every operator is aware of what to expect. We should aim at efficiency: efficiency saves time, and seconds are very valuable when a channel is busy. No one objects to the odd wisecrack or personal remark; these all help to relieve the tension, but these remarks must be kept to times when the channels are not busy. If a channel is busy, be brief and clear messages quickly and efficiently. Should an operator have an urgent message to clear, he should break in on the channel and say so—but he should use his discretion with the degree of urgency of his message—bearing in mind that out-station traffic must, for obvious reasons, have priority in the use of the channel.

Note: The procedure phrase "Break" is never to be used as a directive to another station to transmit. The correct signal for this purpose is the word "Over".

## Emergency Procedures

### Emergency and Distress Calling:

Where it is required to attract attention in cases of emergency or distress, there are certain Phone and CW calls that are internationally recognised. These should be employed only where absolutely necessary for safety of life or property.

### Distress:

On CW send "SOS" (send this as a single signal); on Phone say "Mayday". These signals indicate that the sender is in grave and imminent danger and requests immediate assistance. This distress call has absolute priority over all other transmissions.

(This signal has absolute priority over all other signals. All stations that hear it must immediately cease any transmission capable of interfering with the distress traffic, and shall continue to listen on the frequency used for the distress call. The call is not to be addressed to a particular station, and acknowledgement of receipt shall not be given before the distress message, which follows, is sent.)

### Urgency:

On CW send "XXX XXX XXX"—send each letter distinctly. On Phone say "PAN" (Pronounced "pahn") three times. These signals indicate that the calling station has a very urgent message to transmit concerning the safety of a ship, aircraft, vehicle, or some person on board or in sight. The urgency signal has priority over all other communications except distress.

### Safety:

"TTT" or "SECURITE": spoken three times (pronounced "SAYCURITAY") indicating navigational or meteorological warning.

It is allowable in cases of extreme emergency to use any frequency or mode of transmission whatever, if the operator considers that he may thus obtain assistance more quickly—but this action should only be taken when normal methods are inadequate.

When using distress or urgency signals always announce call-sign and location and if no contact is made, keep calling with the important parts of the information—you may be heard by some station which is unable to reply.

## AREC Emergency Frequencies

AREC is permitted to operate on the following frequencies which are reserved for AREC use in emergencies:

1875–1900 kHz  
3500  
3900  
7100

2m frequencies by local arrangement.

The general calling frequencies for station requiring assistance in emergency is 3900 kHz Upper Sideband and this frequency is monitored by AREC personnel during such mishaps as severe storms, power failures, earthquakes, etc. Once the initial contact has been made, transmission should be made only on 3.9 Mhz or 3.5 Mhz.

## AREC Callsigns

The callsigns given in the list of AREC Section Leaders and Deputies on page 158 are the basic section callsigns. In an AREC

Section operation or practice, the base callsign is to be a three-letter callsign ending "A".

The basic two-letter callsigns of the Section is allocated to the Section Leader on a personal basis and may not be used by any other person.

The three-letter callsigns of the Section first called upon to provide communications shall be used for all stations in the forward area, and shall be allocated by the Section Leader of that Section. In a mountain search, the callsign ending in "A" is to be allocated to the base station in control of the base to road-end operations (e.g. Local Police Station or Local SAR centre); the callsign ending "B" to the main road-end station; the one ending in "C" to the station controlling communications in the forward area, (i.e. the Field Search Headquarters); the remainder of the callsigns to other stations as required.

Where a station is required to operate as a relay for distant stations his basic section callsign plus the letter "X" should be used as the Relay Station callsign (eg ZL2ELX).

## The Phonetic Code

The Phonetic Code should be used with considerable discretion. Its primary purpose is to obviate confusion between letters and figures which have similar sounds, e.g.: BCDEGPTV, AKJ, MN, QU, FS, TWO, THREE, FIVE, NINE.

The possibility of confusion increases greatly under adverse operating conditions such as adjacent channel interference, high level of acoustic and electrical background noise, poor audio quality (including inferior articulation), fading, etc. Under these conditions more frequent use of the phonetic code may be necessary. However, when there is a complete absence of interference of any kind and signals are perfectly readable, phonetics can be eliminated except for difficult place names, proper names, and unusual words. Regardless of the quality of the circuit phonetics should always be used for callsigns during the establishment of initial contact. It is important to memorise the code thoroughly and to avoid using substitute words.

## Phonetic Alphabet

Some words are likely to be misunderstood when passed over radio telephone circuits, due to phonetic similarity. A number of phonetic alphabets have been introduced to overcome this. The following being the most generally accepted at the present time.

A	ALFA	AL fah
B	BRAVO	BRAH voh
C	CHARLIE	CHAR lee
D	DELTA	DELL tah
E	ECHO	ECK oh
F	FOXTROT	FOKS trot
G	GOLF	GOLF
H	HOTEL	hoh TELL
I	INDIA	IN dee ah
J	JULIET	JEW lee ETT
K	KILO	KEY loh
L	LIMA	LEE mah
M	MIKE	MIKE
N	NOVEMBER	no VEM ber
O	OSCAR	OSS cah
P	PAPA	pah PAH
Q	QUEBEC	Kwee BECK or Key BECK
R	ROMEO	ROW me oh
S	SIERRA	See AIR rah
T	TANGO	TANG go
U	UNIFORM	YOU nee form or OO nee form
V	VICTOR	VIK tor
W	WHISKEY	WISS key
X	X-RAY	ECKS ray
Y	YANKEE	YANG kee
Z	ZULU	ZOO loo

1 WUN    2 TOO    3 thuh-REE    4 FO-wer    5 FI-yiv  
6 SIX    7 seVEN    8 AIT    9 NI-ner    0 ZERO





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## Jamboree on the Air

A window on the Scouting and Guiding world



The Jamboree on the Air (JOTA) is an annual international activity which enables Scouts and Guides living all over the world to exchange greetings by Amateur Radio. This enables them to find out at first hand what it is to be a member of the world-wide fellowship of Scouts and Guides. It gives them an understanding and appreciation of other ways of life and of Scouting and Guiding in other countries.

From a small beginning in 1958, over 300,000 Scouts and Guides now take part in JOTA from thousands of amateur stations. No world-wide activity involves more Scouts and Guides than JOTA, and it has now become the greatest annual event in the Scout, Guide and Amateur Radio calendars.

The simplest way for Scouts and Guides to join in is for them to visit an amateur radio station sometime during the JOTA period. At the station on the day, the amateur operator establishes a contact with another JOTA station, and then hands over the microphone for the Scouts or Guides to talk to those at the other station.

Many Districts have District Organizers to arrange local participation. Some Scout Groups and Guide Companies have close contact with local radio amateurs (eg, parents) and make use of their stations for their JOTA activities.

Often, an amateur can set up a station at a Scout or Guide Headquarters, or some other "interesting" or appropriate place.

Many JOTA stations are set up at camps, the radio activities being incorporated into the camping programme.

JOTA is co-ordinated by the World Scout Bureau in Geneva and is organized by the National Organizers in each Scouting country. The New Zealand National Organizer is Jim Parnell ZL2APE. He is assisted by Gael Pye ZL2SZ, who promotes JOTA for New Zealand Guiding. Many Scout Districts have their own District JOTA Organizer who arrange for the Scouts and Guides to visit amateur stations so they may take part in JOTA.

JOTA is always held during the 24 hours of the third full weekend in October of each year. This year, it will be held on 20 and 21 October. As this is **Labour Weekend**, there is no reason why JOTA stations should not also operate on Monday 23 October if a longer period for contacting countries on the other side of the International Date Line is desired.

JOTA this year has been registered as a Sesquicentennial activity.



# AWARDS

## Award Notes

When applying for an award, whether through NZART or through an overseas Society, courtesy demands that you observe the following: (1) PRINT your name, address and callsign; (2) Clearly state what award (and endorsements) you are applying for; (3) Supply checking sheet with callsigns, dates of QSOs, mode, etc.; (4) Enclose required funds (currency/IRC/stamps) as requested.

## For NZART Awards

1. The usually accepted rules apply to all NZART awards.
2. NZART stresses the HONOUR SYSTEM. Awards applicants need NOT hold QSL cards for claimed contacts. It is sufficient to merely certify that the QSO was legitimately made. This no QSL rule applies ONLY to NZART sponsored awards.

3. Endorsements for mode/time/location etc., made at applicant's request.
  4. Stamps or currency from any country accepted instead of IRC but cheques NOT desirable.
  5. Post applications to Awards Manager ZL2GX, 152 Lytton Road, Gisborne, New Zealand.
- ★ APPLICATION FORMS suitable for most awards are available from Awards Manager (SASE please).

## Cost of Awards

NB—Cost given for awards are those for ZL applicants. Overseas applicants pay \$2.00 for each NZART award EXCEPT WAP (\$3.00) and 5x5 (\$3.00) or where reciprocal arrangements have been made. Airmail postage is \$1.00 extra.

## ENZART

### A prestige award to honour NZART

1. In three parts—(A) Basic award requires 200 points with endorsements for 250, 300, 350 points. (B) Honour award requires 400 points with endorsements for each additional 50 points. (C) HONOUR PLAQUE for 500 points.
2. Points earned as follows by contacting an NZART member who is on the voting roll of the Branch concerned—Phone QSO, 1; CW QSO, 2; Club Station QSO, 2; YL op. QSO, 1; UHF, VHF QSO, 1; Mobile QSO, 1; AMSAT QSO, 1; Branch President QSO, 1.
3. It is essential to clearly determine that the operator contacted is a financial member of NZART and on the voting roll of the Branch concerned.
4. Contacts claimed with a Branch Station must be from a Clubroom or other permanent headquarters, or alternatively when the station is being operated in a contest, from an exhibition, or other activity of a similar kind. Contacts as a result of callsign "swapping" at a member's QTH are not eligible.
5. Contacts with mobiles are eligible only when the mobile station is within 30 miles of his Branch's Clubrooms or his own QTH. (Note rule 3 above.)
6. One station may be claimed in several categories—e.g. the Branch President can be claimed for both Phone and for CW as well as for Branch President—but EACH claimed must be for a separate contact, and the contacts must be not less than 24 hours apart.
7. Contacts must be "Phone to Phone" or "CW to CW".
8. "Club Net" contacts are not eligible until the net concludes, while contacts made in an organized "awards net" with MC etc., are not eligible.
9. Permanent changes of QTH by claimant are permitted and likewise contacts made during genuine temporary operation.
10. ZL applicants must be members of NZART and all applicants must certify that each contact made fulfils award requirements. No QSL card need be held or submitted but applications must be made on special Check List—cost 10 cents plus SASE (large). Contacts must date 1-11-76 or later.
11. Each certificate costs \$1.00. Endorsements free but SASE required.
12. Applications to NZART Awards Manager, ZL2GX.

## WAP—"Worked All Pacific"

Contacts required with 30 different "Oceania Countries".

Eligible countries ... Any Oceania country, i.e. eligible as Oceania for WAC. (See DXCC list.) Cost \$2.00.

## Five Band WAP

Contact any 30 eligible Pacific Countries (as count for Oceania for WAC), each on FIVE different bands making a total of 150. Send list of log extracts (QSLs not required to be held) to Awards

Manager ... with \$8.00. REWARD: Wooden Shield surmounted with NZART badge and suitably inscribed. (Extra overseas postage for AIRMAIL—\$2.00.)

## Antipodes Award

All round Achievement recognized as:

1. Technical
  - (a) Stations of claimant (receiver, transmitter, antenna) to be home built, to be completely of amateur design and construction which the operator has personally developed and constructed;
  - (b) Commercially constructed equipment or kitsets from any source are not eligible.
2. Operating
  - Three QSOs to be made with stations (these stations NOT required to meet above requirements) in the general "antipodes continental area" of the claimant—(e.g. ZL to Europe).

Applications to ZL2GX (NZART) with \$1.00 with certification that rules have been observed. (Award suggested by ZL2AMJ.)

## NZA—New Zealand Award

Available to all radio amateurs other than ZL.

Requirements:

- 35 contacts with ZL1.
- plus 35 contacts with ZL2.
- plus 20 contacts with ZL3.
- plus 10 contacts with ZL4
- plus 1 contact with ZL "territory"—either from N.Z. Antarctica, Chatham Islands, Kermadec Islands, or Campbell Island. This one contact may be substituted by 20 ordinary ZL contacts if desired.

This makes a minimum of 101 contacts which should be dated from December 8, 1945. (Cost \$1.00).

## NZC—New Zealand Counties

Basic award required contacts with 20 different New Zealand Counties. Endorsements for 40, 60, 80, 100 are made with a special certificate for 112. Map showing counties is depicted elsewhere, while checking sheet is available from NZART (see below).

1. Initial certificate with any or all endorsements to 100 costs \$1.00.
2. Separate endorsements to 100, after issue of basic award, costs 20 cents for any group—or 1 IRC. Plus SASE.
3. Special Certificate for "NZC 112" costs \$1.00
4. Checking sheets which MUST be used and which are returned to applicant for record purposes cost 20 cents (1 IRC).
5. NZC "224"—the "224" Shield was instituted to recognize very outstanding achievement—that of "double 112" with different stations contacted in the relevant counties for each



NZC 112. Current cost is \$11.00. Applicants for NZC 224 must first hold TWO NZC 112 Awards.

6. The operator on a "County DXpedition" whether Mobile or Fixed Portable may claim that County for his own NZC credit.
7. The original "Counties List" will be maintained irrespective of deletions or additions. The criteria will be the actual area of operation which must be determined by the honour of the operator.
8. Overseas applicants—extra \$2.00 for postage on "224" plaque.

### "ZLA" Award

Contacts required with Auckland City, Wellington City, Christchurch City, Dunedin City, Antarctica ZL5, Campbell Island, Chatham Island, Kermadec Island. Applicants must send certified list to Awards Manager ZL2GX with \$1.00 or stamps from country of applicant. Specially produced certificate.

### WAZL—"Worked All New Zealand"

Contacts required for 45 different Branches of NZART—EXCEPT FOR OVERSEAS APPLICANTS (for whom only 35 are required). Special endorsement when WAZL completed within 12 month period. NB: Mobiles operating outside their own Branch Area must use the Branch Number of the area in which they are operating (for WAZL credit). Cost \$1.00.

NZART Branches for WAZL—See Branch Directory on pages 8-13.

### VHFCC—VHF Century Club

One hundred points required from QSOs with ZL stations on the following basis:

- 50 MHz band contacts count 1 point.
  - 144 MHz band contacts count 3 points.
  - 432 MHz band contacts count 6 points.
- (Further bands may be added in the future).

The same station may be claimed once on any one band but may be claimed repeatedly on different bands.

Endorsement stickers available for 200, 300, 400, 500 points. (Cost \$1.00).

### WAD—A VHF Award

Contacts required on any VHF band (or mixture of VHF bands) with ZL1, ZL2, ZL3, ZL4—One contact per Call Area. Cost—\$1.00. Endorsements for Satellite QSOs.

### "5 x 5"—Five by Five

This Premier Award has been instituted to recognize the increasing interest in Five Band DX operation. The initial award requires that the same station be contacted on five bands repeated with five different DXCC countries. First endorsement after a further five has been contacted (total of ten) with the 20 endorsement requiring another ten and so on to 100. Certified list with full QSO data and fee of \$2.00 which includes all endorsements. Certificate is outstanding and is overprinted in embossed gold. Contacts must date from 1945. Applications to ZL2GX.

### NZLA—New Zealand Lakeside Award

1. For Basic Award, contacts are required with stations operating on the shores of TEN (10) freshwater lakes in New Zealand. Endorsements for each additional ten lakes up to 40; Honour Award for 50 lakes with further endorsement for each additional ten.
2. Stations must be located within ONE kilometre of the water or in a town on the lake shore.
3. Full rules are with the Check Sheets which MUST be used when applying for NZLA—these cost 20 cents plus SASE (large).
4. Basic Award costs \$1.00, and large SASE for any endorsement; Honour Award is \$1.00 and SASE for any endorsement.
5. Check Sheets from Awards Manager ZL2GX, to whom all applications must be directed.
6. Eligible contacts must date 1-5-76 or later.

NOTE: Check Sheets are returned to applicant and make up a complete record of lakes credited towards award. Basic work for this award was done for NZART by Mike Groth ZL1AHF.

### CJC

#### Captain James Cook Award

To perpetuate the memory of this world famous navigator and seaman—in three classes: Basic "Sailor Class" requires contacts with—G in Yorkshire; FO8; ZL2; VK2; KH6 ... For "Officers Class"—"Sailor Class" contacts as well as ZL1, ZL3, ZL4, VK3, VK4, VK9 New Guinea, and any Antarctic station ... For "Command Class", as for "Officer Class" as well as any five of the following—VE2, VO, VR5, YJ8, FK8, CE8, KL7.

Certified list (confirmations not required) with \$1.00 to ZL2GX.

### Tiki Award

Work five different ZLs each on FIVE different bands dated post-war. Cost \$1.00.

### ZL1 Award

Basic Award requires contacts with 125 ZL1 stations dating post-war. Endorsements 175 and 250.

### ZL2 Award

Basic Award requires contacts with 100 different ZL2 stations dating post-war. Endorsements for 150 and 200.

### ZL3 Award

Basic Award requires contacts with 50 different ZL3 stations dating post-war. Endorsements for 75 and 100.

### ZL4 Award

Basic Award requires contact with 25 different ZL4 stations dating post-war. Endorsements for 35 and 50.

Note: cost of ZL1/2/3/4 Certificates is \$1.00 each with any endorsements. Further endorsements will cost 10 cents or 1 IRC UNLESS a new certificate is required instead of "sticker", in which case the cost is 35 cents. On issue, certificates will be endorsed for band/mode as requested and for any yearly period of time (January through December). Such endorsements are of course available to applicants at any time after the initial award has been made. ZL or ZM combination is OK. Applications with list to ZL2GX.

### "ZL-72" Award

Overseas stations work 50 different ZL stations during 1972; ZL stations work 100 as follows: 35 ZL1, 35 ZL2, 20 ZL3, 10 ZL4 during 1972. Certified list with \$1.00 to Awards Manager ZL2GX. "ZL-73" "ZL-74" "ZL-75" "ZL-76" "ZL-77" "ZL-78" "ZL-79" "ZL-80" "ZL-81" "ZL-82" "ZL-83" "ZL-84", etc.

Rules for ZL-72 except ZL and/or ZM are acceptable. Certificate will be rather unusual but appropriate. All applications to ZL2GX—(GCR) or 25 contacts on 160 with all districts represented.

This award ceased on 31 December 1989.

### MIA

#### Minor Islands Award

For contacts with minor islands of the New Zealand coast—e.g. Kapiti Island, Portland Island, Great Barrier Island, Little Barrier Island, Waiheke Island, D'Urville Island, Rangitoto Island, Kawau Island, Motutapu Island, etc., from which FIVE contacts are required. Certified list with \$1.00 to ZL2GX.

NB: So-called "Islands" in Auckland area which are connected to mainland by a causeway are not eligible.

### IARU Region III Operating Awards

To publicise Region III

1. The award is available to licensed amateurs and SWLs.
2. Contacts made after April 5 1982 are eligible.
3. QSL cards NOT required. Send certified list of eligible contacts from Log Book.
4. Cost is \$1.00 (surface) \$2.00 (airmail) for postage charges only.



5. Eligible countries are those in Region III whose amateur societies are members of IARU Region III Association. These are: Australia, Bangladesh, Brunei, China (PRC), Fiji, French Polynesia (FO8 only), Hong Kong, India, Indonesia, Japan, Korea, Malaysia, New Zealand, Pakistan, Papua New Guinea, Philippines, Singapore, Solomon Islands, Sri Lanka, Thailand, Tonga, Vanuatu.

#### PLUS:

ONE Country credit from US Territories in the Pacific from Guam, Northern Marianas, American Samoa, Wake Island, Baker Howland Group, as presented by ARRL. ONE Country credit from Pitcairn Island (VR6), Chagos Archipelago (VQ9), represented by RSGB. Current total of available "countries" is 24. Requirements for Award as from January 1 1986: Basic, 7 areas; Silver Endorsement, 15 areas; Gold Endorsement, 20 areas. These to be reviewed as considered necessary by the custodian who would recommend appropriately to the Secretariat.

## New Zealand Women Amateur Radio Operators

### WARO Award

#### General

Contacts may be any mode, any band or mixed, with applicants contacts all from the same QTH (except as in VHF Section), but contacts via repeaters, in WARO Nets or contests are not eligible. No QSLs required. Send full log details certified by one other licensed radio amateur to Custodian Vicki Shaw ZL1OC, PO Box 2088, Whakatane, New Zealand with sufficient postage for return of award.

#### HF Section

ZL and VK stations work 12 WARO members resident in New Zealand, DX stations work six. Contacts to date from 1 June 1969. Endorsement seals available to ZL and VK stations for each additional 12 contacts, DX stations six. Contacts with DX members of WARO qualify for endorsements but applications must contain at least three ZL contacts.

#### VHF Section

Ten VHF contacts with WARO members dating from 1 January 1979. WARO members and/or applicants may be home station, mobile or portable. Endorsements for each additional five.

#### SWL Section

ZL and VK stations list 20 contacts heard with WARO members, DX list ten, dating from 1 January 1979. List full log details with call signs of both stations. Endorsements for each additional ten (five for DX stations).

### NZWARO Century Award

1. Applications to contain full log details of contacts with 100 NZWARO members (DX members included) dating from 1 June 1987, and to be signed by one other licensed radio amateur.
2. Contacts may be any mode, any band or mixed, and from any QTH, but each YL claimed must be a financial member of NZWARO at the time of the contact and may be counted only once.
3. Contacts made via repeaters, in nets and in contests will qualify.
4. No QSLs required. Send list of full log details and \$2.00 to Custodian, Vicki Shaw ZL1OC, PO Box 2088, Whakatane, New Zealand.

### NZWARO Mountain Buttercup Award

1. For contacts with licensed NZWARO members, resident, visiting, mobile, etc, in the 60 towns named in the official list. WARO members working mobile, portable, etc may claim the relevant town for her own credit.
2. Contacts may be any mode, any band or mixed and made from any QTH, but each YL worked must be a financial member of NZWARO at the time of the contact and must be within a 25km radius of the centre of the town claimed.

6. Awards may be endorsed for any mode or band.
7. Applications to NZART Awards Manager, 152 Lytton Road, Gisborne, New Zealand.

### National Parks Award

1. For contacts made with stations operating WITHIN boundaries of a New Zealand National Park.
2. Basic award requires TWO contacts.
3. Usual NZART awards rules apply.
4. Endorsement: for each extra two contacts; for VHF Simplex; for VHF via repeater; for each amateur band; etc.
5. Duplicate Contacts (with SAME station) permitted ...
  - \*\* on different amateur bands
  - \*\* on different days
  - \*\* from different Parks.
6. Eligible contacts to date from January 1 1988.
7. Applications with \$2.00 to NZART Awards Manager.

3. Contacts made via repeaters, in nets and in contests will qualify and the same WARO members may be contacted in any number of towns.
4. Award dates from 1 January 1989. Send applications after 30 contacts containing full log details with the name of YL and town where worked, signed by one other radio amateur, together with \$2.00 to Custodian Vicki Shaw ZL1OC, PO Box 2088, Whakatane, New Zealand. An official list of towns required to be worked available from the custodian upon receipt of stamped addressed envelope. No QSLs required. Stickers for each 5 up to 60.
5. Endorsement seals for each further ten contacts using the same list of towns. The same WARO members may be worked but each must be in a different town to where previously claimed. Please send SAE with endorsement applications.

#### North Island

1. Auckland
2. Dannevirke
3. Dargaville
4. Eketahuna
5. Featherston
6. Gisborne
7. Hamilton
8. Hawera
9. Helensville
10. Kaikohe
11. Kaitia
12. Masterton
13. Matamata
14. Morrinsville
15. Napier
16. New Plymouth
17. Opoitiki
18. Orewa
19. Otaki
20. Paia

#### Palmerston North

22. Papakura
23. Putaruru
24. Rotorua
25. Taihape
26. Taumarunui
27. Taupo
28. Tauranga
29. Thames
30. Te Awamutu
31. Te Kuiti
32. Turangi
33. Upper Hutt
34. Waihi
35. Wairoa
36. Wanganui
37. Wellington
38. Wellsford
39. Whakatane
40. Whangarei

#### South Island

41. Alexandra
42. Ashburton
43. Balclutha
44. Blenheim
45. Christchurch
46. Cromwell
47. Dunedin
48. Gore
49. Greymouth
50. Hokitika
51. Invercargill
52. Kaikoura
53. Motueka
54. Nelson
55. Oamaru
56. Queenstown
57. Reefton
58. Timaru
59. Wanaka
60. Westport

### Papakura Radio Club "21" Award

For contacts with 20 members of Papakura Radio Club PLUS ZL1VK dating from 1-1-77. Band/mode endorsements; certificates not numbered; cost \$2.00. Apply to Miss C. Johnson, ZL1AJL, P.O. Box 397, Papakura.

### Gisborne Award

Requirements: Contacts after January 1 1969, as follows:  
Gisborne amateurs—ten different stations  
ZL—four stations  
Rest of world—two stations.  
Cost: \$1.00 apply to ZL2GX.

### Manawatu Award

For overseas stations working FIVE stations who are members of Manawatu Branch 20. Certified list and \$3.00 or five IRCs to ZL2AFT, 429 Albert Street, Palmerston North.



### Horowhenua Award

For contacts in Branch 16 area—Levin, Otaki, Waikanae, Shannon, with bonus points for amateurs in various categories. Involved rules—for details write to: N.D. Broadbent ZL2ALB, R. D. 20, Ohau, Levin.

### Reefton-Buller Award

Basic Award requires contact with any five Branch members; Merit Award requires, in addition to Basic, that ZLs contact—one Branch 62 Mobile, one XYL and the Club Station ZL3WP; while overseas stations contact any of those mentioned. Special merit for contacts made in 1973 between October 1 and December 31. No QSLs required. Send certified list with \$1.00 to ZL2GX. List of members, etc., available from Branch 62 Secretary.

### Christchurch Award

Requirements: Christchurch amateurs 25 different stations; rest of ZL—15 stations; VK—10 stations; rest of world—5 stations. Cost: ZLs 50 cents; others US\$1.00 or equal. Applications to Awards Manager, Box 1733, Christchurch.

### Bay of Plenty Awards

Overseas stations contact five stations in the area (Opotiki, Rotorua, Tauranga, Whakatane) while ZLs required ten, or five on VHF. Send certified list with \$2.50 to ZL1BJP, 36 Western Road, Otumotetai, Tauranga.

Simplex contacts only.

### Kapiti

Details March 1990 *Break-In* page 39. Enquiries to Awards Manager, ZL2AWI, PO Box 166, Paraparaumu.

### Overseas Awards

Note:

1. There are hundreds of awards which are publicised in amateur radio periodicals throughout the world each month! Many are listed in RSGB publication *Amateur Radio Awards* (priced in UK £1.20) and several publications of *DX Awards Guide* by Chuck Ellis, priced about \$7.00 to \$8.00 each! CHC Directory of Awards has been revised and published by NZART member Scott Douglas KB7SB. This is a very comprehensive publication selling for about US\$12.50 (check with ZL2GX about these).
2. Most overseas awards can be certified by NZART Awards Manager so the QSLs don't have to be sent overseas BUT, always send a FULL checking list with all QSO data, etc., on which can be written the certification and which can be sent as the application. (ARRL Awards cannot be certified).
3. ALWAYS SEND SUFFICIENT RETURN POSTAGE for QSLs, etc. Print name and address on each sheet of paper used.

### A-1 Operator Club

The basic aim of the A-1 Operator Club is to promote good operating in the amateur bands. To become a member one must be nominated by at least two operators who already belong. Every amateur should strive to merit nomination by following standard operating practice, by observing the rules of good Phone operation, and making his CW as clean and accurate as possible. An attractive certificate is awarded to each amateur who qualifies for membership. Note: This award is sponsored by the ARRL. Several ZL amateurs are members. Strive to merit nomination—you never know who may be listening. Similar awards are: TOPS; FOC; HSC.

### WAC—Worked All Continents

Issued by IARU only through affiliated Societies. Applications from financial members of NZART only, must be made through the Awards Manager, accompanied by a checking sheet, QSL cards from the six continents, and return stamped envelope.

The following eight certificates are available: Basic (mixed mode),

### Waitomo Award

Make 10 points with Branch 55 contacts as follows: VHF Simplex or CW, 2 points; VHF or UHF Repeater, 1 point; HF Phone, 1 point; HF CW, 2 points; VHF Satellite, 2 points; Club Station ZL1IZ, 2 points.

Log details and \$2.00 to ZL1IZ, 65 King Street, Te Kuiti.

### Wanganui Award

For contacts since 1-1-82 with permanent residents in the Wanganui area—one point; with Wanganui-based Mobile stations regardless of location—one point; with ZL2JA—two points. Overseas stations require three points; ZLs require five points. (Repeater contacts acceptable.)

QSO details with \$1.00 to Award Manager, 1 Caversham Road, Wanganui.

### Western Suburbs Radio Club Award

For contacts with any New Zealand amateur station. Use last letter of callsigns to make up words WESTERN SUBURBS RADIO CLUB. Branch 03 members may be used as bonus to replace any missing letters. Endorsement for band/mode. Certified list with 50 cents (overseas six IRCs or \$1.00) to WSRC, P.O. Box 15-122, New Lynn, Auckland 7.

### "Rhododendron Festival" Award

This award is to be held by the combined clubs of Taranaki on or about November each year to coincide with the local Rhododendron Festival. The Award Certificate will be one of a series of coloured, hand painted prints of named Rhododendron varieties by the well-known Taranaki artist, Janet Marshall.

The Award is on all bands, modes, etc, and is available to all amateurs and SWLs both in New Zealand and overseas.

Correspondence to Box 675 New Plymouth.

CW, Phone, SSTV, RTTY, FAX, Satellite and 5-band. In addition, the following endorsement stickers are available: QRP, 1.8 MHz, 3.5MHz, 50MHz, 144MHz, any higher frequency band and 6-band. Contacts made on 10/18/24 MHz or via satellite are void for the 5-band certificate and 6-band sticker.

QRP is defined as five watts OUTPUT (10W input) and QRP contacts must date on or after January 1 1985.

ZL applicants must be NZART members and enclose *Break-In* label with application.

There is NO charge.

### French Awards

For information on DDFM, DUF, DTA, DTC, DPE, write to REF, 69 Bd de Bercy, Paris 12 (with 1 IRC) for full information bulletin. (This can be obtained on loan from Awards Manager ZL2GX.)

(Applicants for above can be certified by Awards Manager.)

### CQ Magazine Awards

Application forms for CQ Awards available from ZL2GX—for WPX, SSB DX, CW DX, WAZ.

### RSGB Awards

For WBC, BCRTA, CDX, etc—SASE to ZL2GX.

### ARRL Awards

#### WAS—Worked All States

Obtain the rules and application forms for WAS and 5BWAS by sending a business-size SAE and a few IRC to the ARRL Headquarters, 225 Main Street, Newington, CT 06111, USA.

#### DXCC—DX Century Club

\*See "Countries List" in this Call Book.

Many endorsements etc. available—full reprint of rules (4 A4 sheets) from Awards Manager for \$1.00.



# New Zealand Counties

1st District  
Bay of Islands  
Coromandel  
Franklin  
Gt. Barrier/Waiheke  
Hauraki Plains  
Hobson  
Hokianga  
Mangonui  
Matamata  
Ohinemuri  
Opotiki  
Otamatea  
Otorohanga  
Piako  
Raglan  
Rodney  
Rotorua  
Taumarunui  
Taupo  
Tauranga  
Thames  
Waikato  
Waipa  
Waitemata  
Waitomo  
Whakatane  
Whangarei  
Whangaroa

2nd District  
Akitio  
Awatere  
Clifton  
Cook  
Dannevirke

Egmont  
Eketahuna  
Eltham  
Featherston  
Golden Bay  
Hawera  
Hawkes Bay  
Horowhenua  
Hutt  
Inglewood  
Kairanga  
Kiwitea  
Manawatu  
Marlborough  
Masterton  
Oroua  
Pahiatua  
Patangata  
Patea  
Pohangi  
Rangitikei  
Stratford  
Taranaki  
Waipu  
Waikohu  
Waimarino  
Waimate West  
Waimera  
Waipawa  
Waipukurau  
Wairarapa South  
Wairoa  
Waitotara  
Wanganui  
Woodville



3rd District  
Akaroa  
Amuri  
Ashburton  
Ashley  
Buller  
Chatham Islands  
Cheviot  
Ellesmere  
Eyre  
Geraldine  
Grey  
Halswell  
Heathcote  
Inangahua  
Kaikoura  
Kowai  
Levels  
Mackenzie  
Malvern  
Mt. Herbert  
Oxford  
Paparua  
Rangiora  
Tawera  
Waimairi  
Waimate  
Waipara  
Wairewa  
Westland

4th District  
Bruce  
Clutha  
Fiord  
Lake  
Maniopot  
Peninsula  
Southland  
Stewart Island  
Taieri  
Tuapeka  
Vincent  
Waihemo  
Waikouaiti  
Waitaki  
Wallace

*Refer to Contest and Awards pages for details of the New Zealand Counties Award.*



# DXCC Countries List

Current Countries Total 324—Revised 1990—Reproduced courtesy ARRL.

PREFIX	COUNTRY	Con- ti- nent	ZONE	
			ITU	CQ
A2	Botswana	AF	57	38
A3	Tonga	OC	62	32
A4	Oman	AS	39	21
A5	Bhutan	AS	41	22
A6	United Arab Emirates	AS	39	21
A7	Qatar	AS	39	21
A9	Bahrain	AS	39	21
AP-AS	Pakistan	AS	41	21
BV	Taiwan	AS	44	24
BY, BT	China	AS	(A)	23,24
C2	Nauru	OC	65	31
C3	Andorra	EU	27	14
C5	The Gambia	AF	46	35
C6	Bahamas	NA	11	08
C8-C9	Mozambique	AF	53	37
CA-CE	Chile	SA	14, 16	12
CE9/KC4 <sup>23</sup>	Antarctica	AN	(B)	(C)
CE0	Easter Is.	SA	63	12
CE0	San Felix	SA	14	12
CE0	Juan Fernandez	SA	14	12
CM, CO	Cuba	NA	11	08
CN	Morocco	AF	37	33
CP	Bolivia	SA	12, 14	10
CT	Portugal	EU	37	14
CT3	Madeira Is.	AF	36	14
CU, CT2	Azores	EU	36	33
CV-CX	Uruguay	SA	14	13
CY0	Sable Island	NA	09	05
CY9	St. Paul Island	NA	09	05
D2-3	Angola	AF	52	36
D4	Cape Verde	AF	46	35
D6 <sup>26</sup>	Comoros	AF	53	39
DA-DL <sup>2</sup>	Federal Republic of Germany	EU	28	14
DU-DZ	Philippines	OC	50	27
EA-EH	Spain	EU	37	14
EA6-EH6	Balearcic Is.	EU	37	14
EA8-EH8	Canary Is.	AF	36	33
EA9-EH9	Ceuta and Melilla	AF	37	33
EI-EJ	Ireland	EU	27	14
EL	Liberia	AF	46	35
EP-EQ	Iran	AS	40	21
ET	Ethiopia	AF	48	37
F	France	EU	27	14
FT8W	Crozet	AF	68	39
FT8X	Kerguelen Is.	AF	68	39
FT8Z	Amsterdam & St. Paul Is.	AF	68	39
FG	Guadeloupe	NA	11	08
FJ, FS <sup>1</sup>	Saint Martin	NA	11	08
FH <sup>26</sup>	Mayotte	AF	53	39
FK	New Caledonia	OC	56	32
FM	Martinique	NA	11	08
FO	Clipperton Is.	NA	10	07
FO	French Polynesia	OC	63	32
FP	St. Pierre & Miquelon	NA	09	05
FR/G <sup>4</sup>	Glorioso Is.	AF	53	39
FR/J, E <sup>2</sup>	Juan de Nova, Europe	AF	53	39
FR	Reunion	AF	53	39
FR/T	Tromelin	AF	53	39
FW	Wallis & Futuna Is.	OC	62	32
FY	French Guiana	SA	12	09
G	England	EU	27	14

PREFIX	COUNTRY	Con- ti- nent	ZONE	
			ITU	CQ
GD	Isle of Man	EU	27	14
GI	Northern Ireland	EU	27	14
GJ	Jersey	EU	27	14
GM	Scotland	EU	27	14
GU	Guernsey & Dep.	EU	27	14
GW	Wales	EU	27	14
H4	Solomon Is.	OC	51	28
HA, HG	Hungary	EU	28	15
HB	Switzerland	EU	28	14
HB0	Liechtenstein	EU	28	14
HC-HD	Ecuador	SA	12	10
HC8-HD8	Galapagos Is.	SA	12	10
HH	Haiti	NA	11	08
HI	Dominican Republic	NA	11	08
HJ-HK	Colombia	SA	12	09
HK0	Malpelo Is.	SA	12	09
HK0	San Andreas & Providencia	NA	11	07
HL	Korea	AS	44	25
HQ-HP	Panama	NA	11	07
HQ-HR	Honduras	NA	11	07
HS	Thailand	AS	49	26
HV	Vatican	EU	28	15
HZ	Saudi Arabia	AS	39	21
I	Italy	EU	28	15
ISQIM0	Sardinia	EU	28	15
J2	Abu Ali, Jabal at Tair	AS	39	21
J3	Djibouti	AF	48	37
J5	Grenada	NA	11	08
J6	Guinea-Bissau	AF	46	35
J7	St. Lucia	NA	11	08
J8	Dominica	NA	11	08
JA-JS	St. Vincent & Dep.	NA	11	08
JD1 <sup>5</sup>	Japan	AS	45	25
JD1 <sup>6</sup>	Minami Torishima	OC	45	27
JD1 <sup>6</sup>	Ogasawara	AS	45	27
JT-JV	Mongolia	AS	32, 33	23
JW	Svalbard	EU	18	40
JX	Jan Mayen	EU	18	40
JY	Jordan	AS	39	20
K, W, N, AA-AK	United States of America	NA	6, 7, 8	3, 4, 5
KC6 <sup>28</sup> (E. Caroline Is.)	Micronesia	OC	65	27
KC6 <sup>29</sup> (W. Caroline Is.)	Belau	OC	64	27
KG4	Guantanamo Bay	NA	11	08
KH1	Baker, Howland Is.	OC	61, 62	31
KH2	Guam	OC	64	27
KH3	Johnston Is.	OC	61	31
KH4	Midway Is.	OC	61	31
KH5	Palmyra, Jarvis Is.	OC	61	31
KH5	Kingman Reef	OC	61	31
KH6	Hawaiian Is.	OC	61	31
KH7	Kure Is.	OC	61	31
KH8	American Samoa	OC	62	32
KH9	Wake Is.	OC	65	31
KH0	Mariana Is.	OC	64	27
KL7	Alaska	NA	1, 2	1
KP1	Navassa Is.	NA	11	08
KP2	Virgin Is.	NA	11	08
KP4	Puerto Rico	NA	11	08
KP5, KP5 <sup>27</sup>	Desecheo Is.	NA	11	08
KX6	Marshall Is.	OC	65	31
LA-LN	Norway	EU	18	14



PREFIX	COUNTRY	Con- li- nent	ZONE	
			ITU	CQ
LQ-LW	Argentina	SA	14, 16	13
LX	Luxembourg	EU	27	14
LZ	Bulgaria	EU	28	20
OA-OC	Peru	SA	12	10
OD	Lebanon	AS	39	20
OE	Austria	EU	28	15
OF-D1	Finland	EU	18	15
OH	Aland Is.	EU	18	15
OJ	Market Reef	EU	18	15
OK-OM	Czechoslovakia	EU	28	15
ON-OT	Belgium	EU	27	14
OX	Greenland	NA	5, 75	40
OY	Faroe Is.	EU	18	14
OZ	Denmark	EU	18	14
P2*	Papua New Guinea	OC	51	28
P4 <sup>31</sup>	Aruba	SA	11	09
PA-PI	Netherlands	EU	27	14
PJ2, 4, 9	Bonaire, Curacao (Neth Antilles)	SA	11	09
PJ5, 6, 7, 8	St. Maarten, Saba St. Eustatius	NA	11	08
PP-PY	Brazil	SA	(D)	11
PPØ-PYØ	Fernando de Noronha	SA	13	11
PPØ-PYØ	St. Peter & St. Paul Rocks	SA	13	11
PPØ-PYØ	Trinidad & Martin Vaz Is.	SA	15	11
PZ	Suriname	SA	12	9
S2	Bangladesh	AS	41	22
S7	Seychelles	AF	53	39
S9	Sao Tome & Principe	AF	47	36
SØ <sup>32</sup>	Western Sahara	AF	46	33
SA-SM	Sweden	EU	18	14
SN-SR	Poland	EU	28	15
ST	Sudan	AF	48	34
STØ	Southern Sudan	AF	48	34
SU	Egypt	AF	38	44
SV-SZ	Greece	EU	28	20
SV5	Dodecanese	EU	28	20
SV9	Crete	EU	28	20
SV/A	Mount Athos	EU	28	20
T2 <sup>14</sup>	Tuvalu	OC	65	31
T3	W. Kiribati (Gilbert & Dcn Is.)	OC	65	31
T31	C. Kiribati (Brit. Phoenix Is.)	OC	62	31
T32	East Kiribati (Line Is.)	OC	61, 63	31
T33	Banaba Island	OC	65	31
T5	Somalia	AF	48	37
T7	San Marino	EU	28	15
TA-TC	Turkey	EU/AS	39	20
TF	Iceland	EU	17	40
TG, TD	Guatemala	NA	11	07
TI, TE	Costa Rica	NA	11	07
TI9	Cocos Is.	NA	11	07
TJ	Cameroon	AF	47	36
TK	Corsica	EU	28	15
TL <sup>6</sup>	Central African Republic	AF	47	36
TN <sup>6</sup>	Congo	AF	52	36
TR <sup>10</sup>	Gabon	AF	52	36
TT <sup>11</sup>	Chad	AF	47	36
TU <sup>12</sup>	Ivory Coast	AF	46	35
TY <sup>13</sup>	Benin	AF	46	35
TZ <sup>14</sup>	Mali	AF	46	35
UA1,3,4,6	European Russian RSFSR	EU	(E)	16
UA1	Franz Josef Land	EU	75	40
UA2	Kaliningrad	EU	29	15
UA9, Ø	Asiatic RSFSR	AS	(F)	(G)
UB, UT, UY	Ukraine	EU	29	16
UC	Byelorussia	EU	29	16
UD	Azerbaijan	AS	29	21

PREFIX	COUNTRY	Con- li- nent	ZONE	
			ITU	CQ
UF	Georgia	AS	29	21
UG	Armenia	AS	29	21
UH	Turkmenistan	AS	30	17
UI	Uzbekistan	AS	30	17
UJ	Tadzhikistan	AS	30	17
UL	Kazakhstan	AS	29-31	17
UM	Kirghizia	AS	30-31	17
UO	Moldavia	EU	29	16
UP	Lithuania	EU	29	15
UQ	Latvia	EU	29	15
UR	Estonia	EU	29	15
V2	Antigua Barbuda	NA	11	08
V3	Belize	NA	11	07
V4 <sup>15</sup>	St. Christopher & Nevis	NA	11	08
V8	Brunei	OC	54	28
VE, VO, VY	Canada	NA	(H)	1-5
VK	Australia	OC	(I)	29, 30
VK	Lord Howe Is.	OC	60	30
VK9	Willis Is.	OC	60	30
VK9	Christmas Is.	OC	54	29
VK9	Cocos-Keeling Is.	OC	54	29
VK9	Mellish Reef	OC	56	30
VK9	Norfolk Is.	OC	60	32
VKØ	Heard Is.	AF	68	39
VKØ	Macquarie Is.	OC	60	30
VP2E <sup>15</sup>	Anguilla	NA	11	08
VP2M <sup>15</sup>	Montserrat	NA	11	08
VP2V <sup>15</sup>	British Virgin Is.	NA	11	08
VP5	Turks & Caicos Is.	NA	11	08
VP8	Falkland Is.	SA	16	13
VP8, LU	South Georgia Is.	SA	73	13
VP8, LU	South Orkney Is.	SA	73	13
VP8, LU	South Sandwich Is.	SA	73	13
VP8,CE9,HFØ,LU,4K1	South Shetland Is.	SA	73	13
VP9	Bermuda	NA	11	05
VQ9	Chagos	AF	41	39
VR6	Pitcairn Is.	OC	63	32
VS6	Hong Kong	AS	44	24
VU	India	AS	41	22
VU	Andaman & Nicobar Is.	AS	49	26
VU	Laccadive Is.	AS	41	22
XA-XI	Mexico	NA	10	06
XA4-XI4	Revilla Giedo	NA	10	06
XT <sup>17</sup>	Burkina Faso	AF	46	35
XU	Kampuchea	AS	49	26
XX9	Macao	AS	44	24
XW	Laos	AS	49	26
XY-XZ	Burma	AS	49	26
Y2-9 <sup>8</sup>	German Democratic Republic	EU	28	14
YA	Afghanistan	AS	40	21
YB-YH <sup>21</sup>	Indonesia	OC	51, 54	28
YI	Iraq	AS	39	21
YJ	Vanuatu	OC	56	32
YK	Syria	AS	39	20
YN	Nicaragua	NA	11	07
YO-YR	Romania	EU	28	20
YS	El Salvador	NA	11	07
YT-YU, YZ	Yugoslavia	EU	26	15
YV-YY	Venezuela	SA	12	09
YØ	Aves Is.	NA	11	08
Z2	Zimbabwe	AF	53	38
ZA	Albania	EU	28	15
ZB2	Gibraltar	EU	37	14
ZC4	Cyprus (UK Sov. Base Areas)	AS	39	20
ZD7	St. Helen	AF	66	36



PREFIX	COUNTRY	Continent	ZONE	
			ITU	CQ
ZDB	Ascension Is.	AF	65	36
ZD9	Tristan de Cunha & Gough Is.	AF	66	38
ZF	Cayman Is.	NA	11	08
ZK1	South Cook Is.	OC	62	32
ZK1	North Cook Is.	OC	62	32
ZK2	Niue	OC	62	32
ZK3	Tokelau	OC	62	31
ZL-ZM	New Zealand	OC	60	32
ZL7	Chatham Is.	OC	60	32
ZL8	Kermadec Is.	OC	60	32
ZL9	Auckland & Campbell Is.	OC	60	32
ZP	Paraguay	SA	14	11
ZR-ZU	South Africa	AF	57	38
ZR2-ZU2	Prince Edward & Marion Is.	AF	57	38
ZR3-ZU3	S.W. Africa (Namibia)	AF	57	38
ZS9 <sup>2</sup>	Walvis Bay	AF	57	38
1A0 <sup>1</sup>	Sovereign Mil. Order of Malta	EU	28	15
1S <sup>1</sup>	Sprally Is.	AS	50	26
3A	Monaco	EU	27	14
3B6, 7	Agelega & St. Brandon	AF	53	39
3B8	Mauritius	AF	53	39
3B9	Rodriguez I	AF	53	39
3C	Equatorial Guinea	AF	47	36
3C0	Pagalu Is.	AF	52	36
3D2	Conway Reef	OC	56	32
3D2	Fiji	OC	56	32
3D2	Roluma Island	OC	56	32
3DA	Swaziland	AF	57	38
3V	Tunisia	AF	37	33
3W, XV	Vietnam	AS	49	26
3X	Guinea	AF	46	35
3Y	Bouvet	AF	67	38
3Y	Peter I.	AN	72	12
4J1	Malyj Vysotskij Island	EU	29	16
4P-4S	Sri Lanka	AS	41	22
4U	ITU Geneva	EU	28	14
4U	Headquarters, United Nations	NA	08	05
4W	Yemen	AS	39	21
4X, 4Z	Israel	AS	39	20
5A	Libya	AF	38	34
5B	Cyprus	AS	39	20
5H-5I	Tanzania	AF	53	37
5N-5O	Nigeria	AF	46	35
5R-5S	Madagascar	AF	53	39
5T <sup>18</sup>	Mauritania	AF	46	35
5U <sup>18</sup>	Niger	AF	46	35
5V	Togo	AF	46	35
5W	Western Samoa	OC	62	32
5X	Uganda	AF	48	37
5Y-5Z	Kenya	AF	48	37
6V-6W <sup>20</sup>	Senegal	AF	46	35
6Y	Jamaica	NA	11	08
7O	Peoples' Dem. Rep. of Yemen	AS	39	21
7P	Lesotho	AF	57	38
7Q	Malawi	AF	53	37
7T-7Y	Algeria	AF	37	33
8P	Barbados	NA	11	08
8Q	Maldives Is.	AS/AF	41	22
8R	Guyana	SA	12	09
9G <sup>22</sup>	Ghana	AF	46	35
9H	Mali	EU	28	15
9I-9J	Zambia	AF	53	36
9K	Kuwait	AS	39	21
9L	Sierra Leone	AF	46	35
9M2, 4 <sup>23</sup>	West Malaysia	AS	54	28

PREFIX	COUNTRY	Continent	ZONE	
			ITU	CQ
9M6, 8 <sup>23</sup>	East Malaysia	OC	54	28
9N	Nepal	AS	42	22
9Q-9T	Zaire	AF	52	36
9U <sup>24</sup>	Burundi	AF	52	36
9V <sup>24</sup>	Singapore	AS	54	28
9X <sup>24</sup>	Rwanda	AF	52	36
9Y-9Z	Trinidad & Tobago	SA	11	09

#### CONTINENT

AF = AFRICA  
AN = ANTARCTICA  
AS = ASIA  
EU = EUROPE  
NA = NORTH AMERICA  
OC = OCEANIA  
SA = SOUTH AMERICA

#### ZONE NOTES

(A) 33, 42, 43, 44  
(B) 67, 69-74  
(C) 12, 13, 29, 30, 32, 38, 39  
(D) 12, 13, 15  
(E) 19, 20, 29, 30  
(F) 20-26, 30, 35, 75  
(G) 16, 17, 18, 19, 23  
(H) 2, 3, 4, 9, 75  
(I) 55, 58, 59

#### Footnotes

1. Unofficial Prefix.
2. (DA-DL) Only contacts made September 17, 1973,, and after, will count for this country.
3. (Y2-9) Only contacts made September 17, 1973, and after will count for this country.
4. (FR) Only contacts made June 25, 1960, and after, will count for this country.
5. (JD, KA1) Formerly Marcus Island.
6. (JD, KA1,) Formerly bonin and Volcano Islands.
7. (P2) Only contacts made September 16, 1975, and after, will count for this country.
8. (TL) Only contacts made August 13, 1960, and after will, count to this country.
9. (TN) Only contacts made August 15, 1960, and after, will count for this country.
10. (TR) Only contacts made August 17, 1960, and after, will count for this country.
11. (TT) Only contacts made August 7, 1960, and after, will count for this country.
12. (TU) Only contacts made August 7, 1960, and after, will count for this country.
13. (TY) Only contacts made August 1, 1960, and after will count for this country.
14. (TZ) Only contacts made June 20, 1960 and after, will count for this country.
15. (VP2) For DXCC credits on QSOs made May 31, 1958 and before, see page 97, June 1958 QST.
16. (T2, VR8) Only contacts made January 1, 1976, and after, will count for this country.
17. (XT) Only contacts made August 5, 1960, and after, will count for this country.
18. (5T) Only contacts made June 20, 1960, and after, will count for this country.
19. (5U) Only contacts made August 3, 1960, and after, will count for this country.
20. (6W) Only contacts made June 20, 1960, and after, will count for this country.
21. (8F, YB) Only contacts made May 1, 1963, and after, will count for this country.
22. (9G) Only contacts made March 5, 1957, and after, will count for this country.
23. (9M2, 4, 6, 8) Only contacts made September 16, 1963, and after, will count for these countries.
24. (9U, 9X) Only contacts made July 1, 1962, and after will count for these countries.



25. (9V) Contacts made between September 16, 1963, to August 8, 1965 count for West Malaysia.
26. (D6, FH8) Only contacts made July 5, 1975, and after, count for this country.
27. (KP5, KP4) Only contacts made March 1, 1979, and after, count for this country.
28. (KC6) Includes Yap Islands January 1, 1981 and after.
29. (KC6) Includes Yap Islands December 31 1980 and before.
30. (ZC4) Only contacts made August 16, 1960 and after count for this country.

31. (P4) Only contacts made January 1, 1986 and after count for this country.
32. (S0) Contacts with Rio de Oro (Spanish Sahara), EA9, also count for this country..
33. Also AT0, DP0, FT8Y, LU, OR4, VK0, VP8, Y8, ZL5, ZS1, ZX0, 3Y, 4K1, 8J1, etc. QSL via country under whose auspices the particular station is operating. The availability of a third-party traffic agreement and a QSL Bureau applies to the country under whose auspices the particular station is operating.

## Deleted Countries

### Deleted Countries Total: 51

Credit for any of these countries can be given if the date of contact with the country in question agrees with the date(s) shown in the corresponding footnote.

PREFIX	COUNTRY	Con- ti- nent	ZONE	
			ITU	CQ
AC3 <sup>1,2</sup>	Sikkim	AS	41	22
AC4 <sup>1,3</sup>	Tibet	AS	41	23
C9 <sup>1</sup>	Manchuria	AS	33	24
CN2 <sup>5</sup>	Tangier	AF	37	33
CR8 <sup>1</sup>	Damao, Diu	AS	41	22
CR8 <sup>6</sup>	Goa	AS	41	22
CR8, CR10 <sup>7</sup>	Portuguese Timor	OC	54	28
DA-DM <sup>8</sup>	Germany	EU	28	14
EA9 <sup>9</sup>	Itini	AF	37	33
ET2 <sup>10</sup>	Eritrea	AF	48	37
FF <sup>11</sup>	French West Africa	AF	46	35
FH, FB8 <sup>12</sup>	Comoros	AF	53	39
FI8 <sup>13</sup>	French Indo-China	AS	49	26
FN8 <sup>14</sup>	French India	AS	41	22
FQ8 <sup>15</sup>	French Equatorial Africa	AF	47, 52	36
HK0 <sup>16</sup>	Bajo Nuevo	NA	11	08
HK0, KP3, KS4 <sup>16</sup>	Serrana Bank and Roncador Cay	NA	11	07
J1 <sup>17</sup>	Trieste	EU	28	15
IS <sup>18</sup>	Italian Somaliland	AF	48	37
JD1/7J1 <sup>19</sup>	Okino Tori-shima	AS	45	27
JZ0 <sup>20</sup>	Netherlands New Guinea	OC	51	28
KR6, 8, JR6, KA6 <sup>21</sup>	(Ryukyu Islands) Okinawa	AS	45	25
KS4 <sup>22</sup>	Swan Islands	NA	11	07
KZ5 <sup>23</sup>	Canal Zone	NA	11	07
P2, VK9 <sup>24</sup>	Papua Territory	OC	51	28
P2, VK9 <sup>24</sup>	Territorial New Guinea	OC	51	28
PK1, 2, 3 <sup>25</sup>	Java	OC	54	28
PK4 <sup>26</sup>	Sumatra	OC	54	28
PK5 <sup>26</sup>	Netherlands Borneo	OC	54	28
PK6 <sup>27</sup>	Celebe & Molucca Is.	OC	54	28
UN1 <sup>28</sup>	Karelo-Finnish Republic	EU	19	16
VO <sup>29</sup>	Newfoundland, Labrador	NA	09	02, 05
VO1, 5H1 <sup>28</sup>	Zanzibar	AF	53	37
VO6 <sup>29</sup>	British Somaliland	AF	48	37
VO9 <sup>30</sup>	Aldabra	AF	53	39
VO9 <sup>30</sup>	Desroches	AF	53	39
VO9 <sup>30</sup>	Farquhar	AF	53	39
VS2, 9M2 <sup>31</sup>	Malaya	AS	54	28
VS4 <sup>31</sup>	Sarawak	OC	54	28
VS9H <sup>32</sup>	Kuria Muria Is.	AS	39	21
ZC5 <sup>33</sup>	British North Borneo	OC	54	28
ZC6, 4X1 <sup>33</sup>	Palestine	AS	39	20
ZD4 <sup>34</sup>	Gold Coast, Togoland	AF	46	35
1M <sup>35</sup>	Minerva Reef	OC	62	32
70/V59K <sup>36</sup>	Kamaran Is.	AS	39	21
8Z4 <sup>37</sup>	Saudi Arabia/Iraq Neutral Zone	AS	39	21
8Z5, 9K3 <sup>38</sup>	Kuwait/Saudi Arabia Neutral Zone	AS	39	21
9S4 <sup>39</sup>	Saar	EU	28	14
9U5 <sup>40</sup>	Ruanda-Urundi	AF	52	36
<sup>41</sup>	Blenheim Reef	AF	41	39
<sup>42</sup>	Geyser Reef	AF	53	39

1. Unofficial prefix.
2. (AC3) Only contacts made 30 April 1975 and before count for this country. Contacts made 1 May 1975 and after count as India (VU).
3. (AC4) Only contacts made 30 May 1974 and before count for this country. Contacts made 31 May 1974 and after count as China (BY).
4. (C9) Only contacts made 15 September 1963 and before count for this country. Contacts made 16 September 1963 and after count as China (BY).
5. (CN2) Only contacts made 30 June 1960 and before count for this country. Contacts made 1 July 1960 and after count as Morocco (CN).
6. (CR8) Only contacts made 31 December 1961 and before count for this country.
7. (CR8, CR10) Only contacts made 14 September 1976 and before count for this country.
8. (DA-DM) Only contacts made 16 September 1973 and before count for this country. Contacts made 17 September 1973 and after count as either FRG (DA-DL) or GDR (Y2-Y9).
9. (EA9) Only contacts made 13 May 1969 and before count for this country.
10. (ET2) Only contacts made 14 November and before count for this country. Contacts made 15 November 1962 and after count as Ethiopia (ET).
11. (FF) Only contacts made 6 August 1960 and before count for this country.
12. (FH, FB8) Only contacts made 5 July 1975 and before count for this country. Contacts made 6 July 1975 and after count as Comoros (D6) or Mayotte (FH).
13. (FI8) Only contacts made 20 December 1950 and before count for this country.
14. (FN8) Only contacts made 31 October 1954 and before count for this country.
15. (FQ8) Only contacts made 16 August 1960 and before will count for this country.
16. (HK0, KP3, KS4) Only contacts made 16 September 1981 and before count for this country. Contacts made 17 September 1981 and after count as San Andres (HK0).
17. (I1) Only contacts made 31 March 1957 and before count for this country. Contacts made 1 April 1957 and after count as Italy (I).
18. (IS) Only contacts made 30 June 1960 and before count for this country.
19. (JD1/7J1) Only contacts made from 30 May 1976 to 30 November 1980 count for this country. Contact made 1 December 1980 and after count as Ogasawara (JD1).
20. (JZ0) Only contacts made 30 April 1963 and before country for this country.
21. (KR6, 8, JR6, KA6) Only contacts made 14 May and before count for this country. Contacts made 15 May 1972 and after count as Japan (JA).
22. (KS4) Only contacts made 31 August 1972 and before count for this country. Contacts made 1 September 1972 and after count as Honduras (HR).

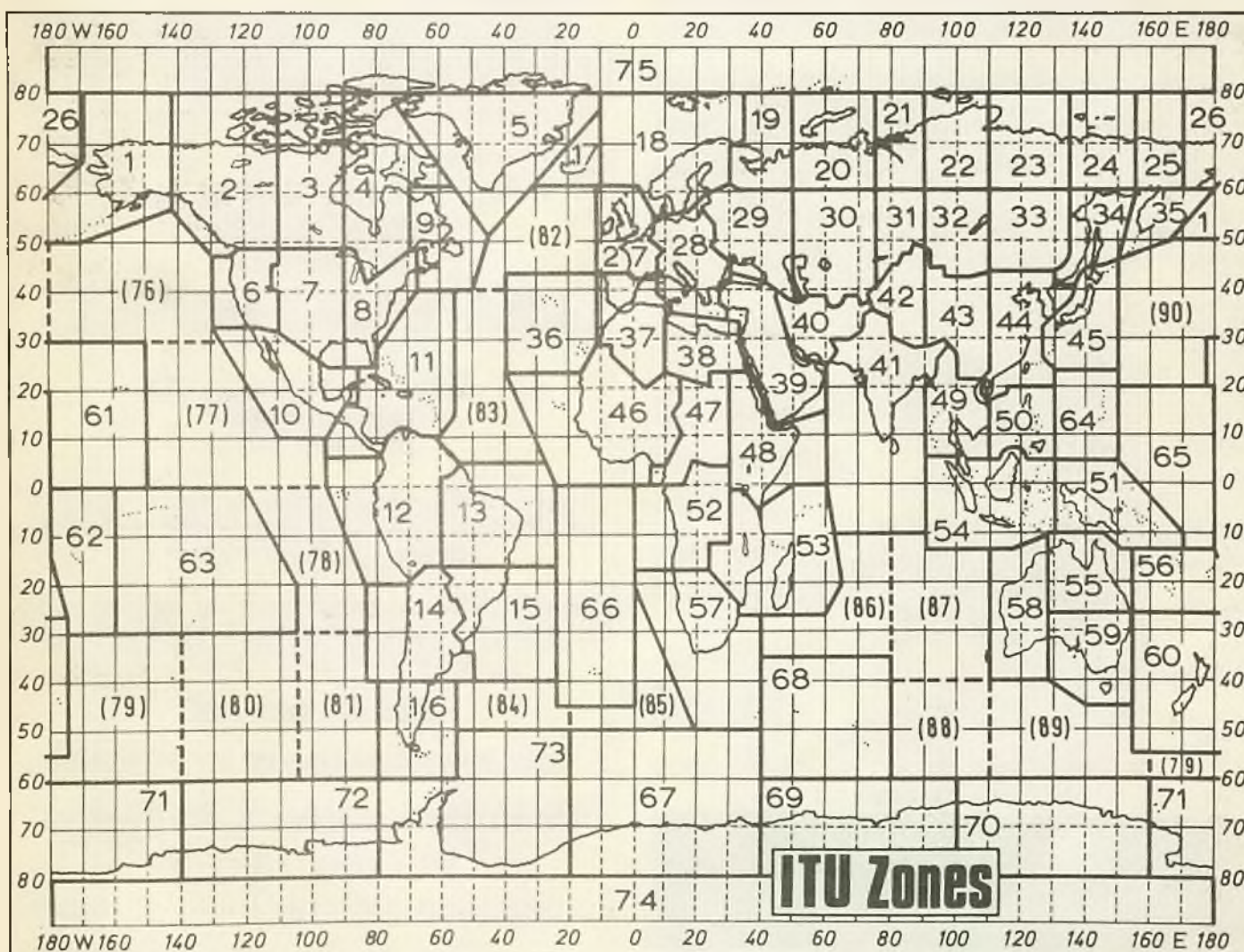
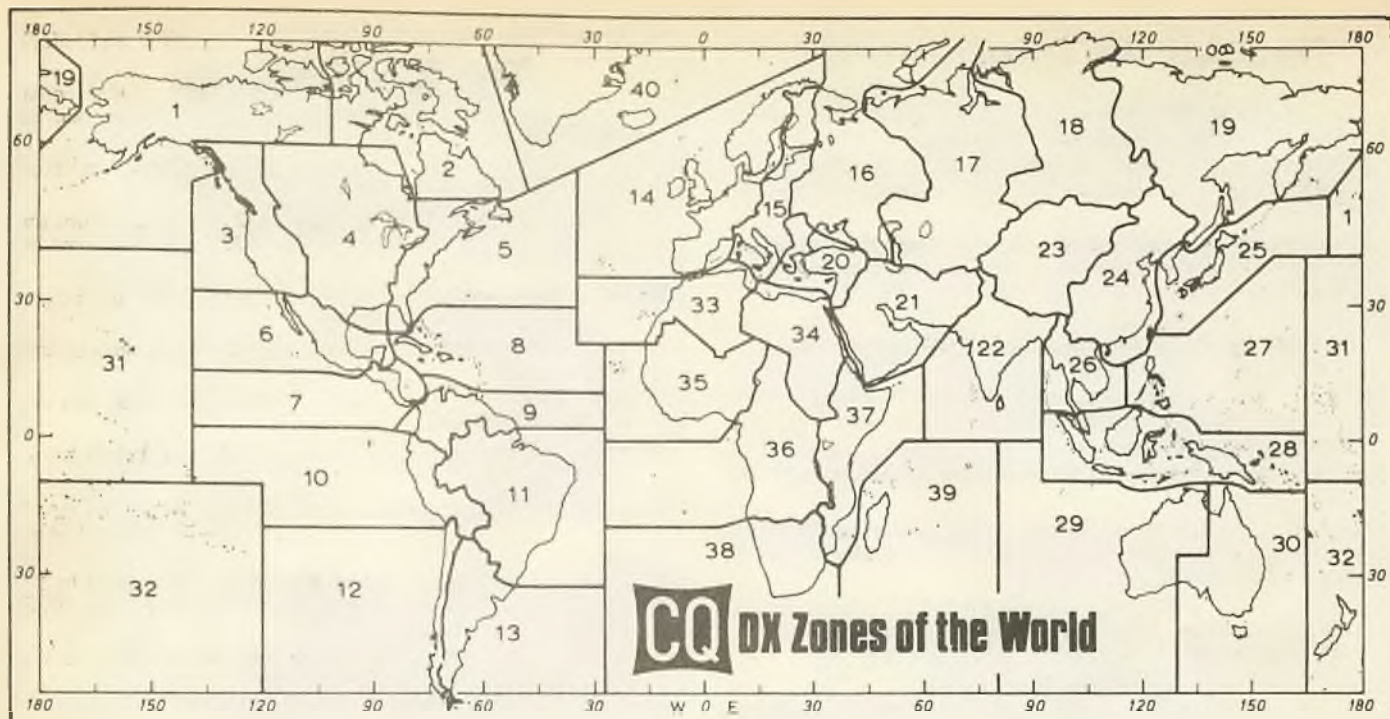


23. (KZ5) Only contacts made 30 September 1979 and before count for this country.
24. (P2, VK9) Only contacts made 15 September 1975 and before count for this country. Contacts made 16 September 1975 and after count as Papua New Guinea (P2).
25. (PK1-6) Only contacts made 30 April 1963 and before count for this country. Contacts made 1 May 1963 and after count as Indonesia (YB).
26. (UN1) Only contacts made 30 June 1960 and before count for this country. Contacts made 1 July 1960 and after count as European RSFSR (UA).
27. (VO) Only contacts made 31 March 1949 and before count for this country. Contacts made 1 April 1949 and after count as Canada (VE).
28. (VQ1, 5H1) Only contacts made 31 May 1974 and before count for this country. Contacts made 1 June 1974 and after count as Tanzania (5H).
29. (VQ6) Only contacts made 30 June 1960 and before count for this country.
30. (VQ9) Only contacts made 28 June 1976 and before count for this country. Contacts made 29 June 1976 and after count as Seychelles (S7).
31. (VS2, VS4, ZC5, 9M2) Only contacts made 15 September 1963 and before count for this country. Contacts made 16 September 1963 and after count as West Malaysia (9M2) or East Malaysia (9M6, 8).
32. (VS9H) Only contacts made 29 November 1967 and before count for this country.
33. (ZC6, 4X1) Only contacts made 30 June 1968 and before count for this country. Contacts made 1 July 1968 and after count as Israel (4X).
34. (ZD4) Only contacts made 5 March 1957 and before count for this country.
35. (1M) Only contacts made 15 July 1972 and before count for this country. Contacts made 16 July 1972 and after count as Tonga (A3).
36. (7Q/V59K) Only contacts made 10 March 1982 and before count for this country.
37. (8Z4) Only contacts made 25 December 1981 and before count for this country.
38. (8Z5, 9K3) Only contacts made 14 December 1969 and before count for this country.
39. (9S4) Only contacts made 31 March 1957 and before count for this country.
40. (9U5) Only contacts made 1 July 1962 to 30 June 1962 count for this country. Contacts made 1 July 1962 and after count as Burundi (9U) or Rwanda (9X).
41. (Blenhelm Reef) Only contacts made from 4 May 1967 to 30 June 1975 count for this country. Contacts made 1 July 1975 and after count as Chagos (VQ9).
42. (Geyser Reef) Only contacts made from 4 May 1967 to 28 February 1978 count for this country.

## Prefix Cross References

A8=EL	J4=SV	VP2A (before 1982)=V2	ZD4 (before 1958)=9G
AC (before 1972)=A5	KA1=JD1	VP2D (before 1979)=J7	ZD5 (before 1969)=3DA
AH=KH	KA2AA-KA8ZZ=JA	VP2G (before 1975)=J3	ZD6 (before 1965)=7Q
AL7=KL7	KB6 (before 1979)=KH1	VP2K (before 1984)=V4 or VP2E	ZE (before 1981)=Z2-9
AM-AO=EA	KC4 (Navassa)=KP1	VP2L (before 1980)=J6	ZK9 (1983)=ZK2
AT-AW=VU	KG6 (before 1979)=KH2	VP2S (before 1980)=J8	ZM6 (before 1963)=5W
AX=VK	KG61 (before 1970)=JD1	VP3 (before 1967)=8R	ZM7 (before 1984)=ZK3
AY-AZ=LU	KG6R, S, T, (before 1979)=KH0	VP4 (before 1963)=9Y	ZS7 (before 1969)=3D6
CF-CK=VE	KJ6 (before 1979)=KH3	VP5 (Jamaica)=6Y	ZS8 (before 1967)=7P
CL=CO	KM6 (before 1979)=KH4	VP6 (before 1967)=8P	ZS9 (before 1967)=A2
CQ-CS=CT	KP4 (Desecheo)=KP5	VP7 (before 1974)=C6	ZV-ZZ=PY
CR3 (before 1974)=J5	KP6 (before 1979)=KH5	VQ2 (before 1965)=9J	3B-3C (before 1968)=VE
CR4 (before 1976)=D4	KS6 (before 1979)=KH8	VQ3 (before 1962)=5H	3D6 (before 1988)=3DA
CR5 (before 1976)=S9	KV4 (before 1979)=KP2	VQ4 (before 1964)=5Z	3G=CE
CR6 (before 1976)=D2	KW6 (before 1979)=KH9	VQ5 (before 1963)=5X	3Z=SP
CR7 (before 1976)=C9	L2-9=LU	VQ8 (before 1969)=3B	4A-4C=XE
CR9 (before 1985)=XX9	LY=UP	VQ8 (Chagos)=VQ9	4D-4I=DU
CT2 (before 1986)=CU	M1 (before 1984)=T7	VQ9 (Seychelles)=S7	4J-4L=U
CX0=CE9/VP8	MP4B (before 1972)=A9	VR1 (before 1980)=T30/31	4M=YV
CY-CZ=VE	MP4M (before 1972)=A4	VR2 (before 1971)=3D2	4N-4O=YU
CY0 (before 1985)=CY9	MP4Q (before 1972)=A7	VR3 (before 1980)=T32	4T=OA
DM-DT (before 1980)=Y2-9	MP4T, D (before 1972)=A6	VR4 (before 1979)=H4	4U1VIC=OE
EA0 (before 1969)=3C	NH=KH	VR5 (before 1971)=A3	4V=HH
EK, EM-EQ, ER-ES, EU-EZ=U	NL7=KL7	VR8 (before 1979)=T2	5J-5K=HK
FA-FF (after 1983)=F	NP=KP	VS1 (before 1966)=9V	5L-5M=EL
FA (before 1963)=7X	OQ (before 1961)=9Q	VS5 (before 1985)=V8	6C=YK
FB8 (before 1961)=5R	P4 (before 1986)=PJ	VS7 (before 1949)=4S	6D-6J=XE
FB8 (before 1985)=FT	PX (before 1970)=C3	VS9A, P, S (before 1968)=7O	6O=T5
FC (before 1985)=TK	RA, RN=UA	VS9M=8Q	6T-6U=ST
FD8 (before 1961)=5V	RB-RR=UB-UR	VS9O (before 1961)=A4	7A-7I=YB
FE8 (before 1961)=TJ	RS=U	VX-VY=CY0/VE	7G (before 1967)=3X
FL (before 1978)=J2	RT=UB	WH=KH	7J-7N=JA, JD
FU8 (before 1982)=YJ	RU-RZ=U	WL7=KL7	7S=SM
GB=G	S4 (Ciskei)=ZS	WP=KP	7Z=HZ
GC (before 1977)=GJ/GU	S8 (Transkei)=ZS	XJ-XO=VE	8A-8I=YB
H2=5B	T4=CO	XP=OX	8J-8N=JA
H3=HP	T4 (Venda)=ZS	XQ-XR=CE	8O=A2
H5 (Bophutatswana)=ZS	TH, TM, TO-TQ, TV-TX=F	XV=3W	8S=SM
H7=YN	UN, UV, UW, UZ=UA	XX7 (before 1976)=C9	9A (before 1984)=T7
HE=HB	V9 (Venda)=ZS	YL=UQ	9B-9D=EP
HM (before 1982)=HL	VA-VG=VE	ZB1 (before 1965)=9H	9E-9F=ET
HT=YN	VH-VN=VK	ZD1 (before 1962)=9L	
HU=YS	VK9 (Nauru)=C2	ZD2 (before 1961)=5N	
HW-HY=F	VP1 (before 1982)=V3	ZD3 (before 1966)=C5	







## Slow Morse Transmissions

(Compiled from *Break-In ZL1AN*  
"Morseman" Column)

**3550kHz Alf ZL4SD, Neville ZL4CI**—Monday-Friday 0730-0930 NZST or 0800-0900 NZDT. (January/February 1990.)

**3560kHz Richard ZL1BOK**—Monday-Thursday from 2030 hours. Starts at 6wpm increasing to 12wpm over the next hour. Computer generated at 12wpm rate. (July, November 1989. March 1990.)

**3698kHz VK2RCW (Sysop Barry VK2AAB)**—Continuous morse practise station and beacon operated by Hornsby and Districts Radio Club. Outputs the edited contents of a local Packet Radio bulletin board at 12wpm. (May 1990.)

**3755kHz Fred ZL1SP**—Branch 65 Frequency. Monday-Friday 1900 local time except first and second Wednesday of the month.

This is not a beginners' group but a polish up session for those approaching test standard. Seven three-minute blocks of text at 13wpm plus read back. (April 1990.)

## MORSE CODE TRAINING

PETER SMITH, ZL1ARB

Sooner or later, every would-be amateur is faced with the problem of learning the Morse Code. How this is attempted will, of course, depend on the student's particular circumstances but it has been established that for the majority of learners, any problems associated with mastering the code stem directly from the manner of their introduction to it.

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C-FIVE	Plain language text in three minute segments, 10-15 wpm	\$ 5.50	\$ 4.50
C-SIX	Numerals 0-9 with full and abbreviated zero and spoken accompaniment	\$ 5.50	\$ 4.50
C-SEVEN	Random letters, figures and special characters, 10-15 wpm	\$ 5.50	\$ 5.50
C-EIGHT	Plain language text, 20-30 wpm	\$ 5.50	\$ 4.50
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## The R-S-T System

### Readability

- 1—Unreadable.
- 2—Barely readable, some words distinguishable.
- 3—Readable with considerable difficulty.
- 4—Readable with practically no difficulty.
- 5—Perfectly readable.

### Signal Strength

- 1—Faint signals barely perceptible.
- 2—Very weak signals.
- 3—Weak signals.
- 4—Fair signals.
- 5—Fairly good signals.
- 6—Good signals.
- 7—Moderately strong signals.
- 8—Strong signals
- 9—Extremely strong signals.

### Tone

- 1—Harsh, broad hiss, no perceptible tone.
- 2—Harsh, broad hiss, just perceptible tone.
- 3—Harsh, broad non-sinusoidal tone.
- 4—Harsh, broad tone, badly hum-modulated.
- 5—Poor sinewave, badly hum-modulated.
- 6—Good sinewave, pronounced hum modulation.
- 7—Good sinewave, definite hum modulation.
- 8—Excellent sinewave, just perceptible hum modulation.
- 9—Perfect sinewave.

The "tone" scale is used for reporting the amount of hum on a CW signal. If the signal has chirp, the letter "C" can be appended. If the signal has key-clicks, the letter "K" can be appended. Most of the signals you hear will be T9.

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## Abbreviations for CW Work

ABT	About	OB	Old boy
AGN	Again	OC	Old chap
ANT	Antenna	OM	Old man
AR K	End of transmission	OP; OPR	Operator
AR VA	Final end of transmission	OT	Old timer; Old top
AS	Wait		
BCI	Broadcast interference	PSE;	Please
BCL	Broadcast listener	PWR	Power
BK	Break; I wish to break-in (interrupt) a transmission in progress	R	Received as transmitted; are (sometimes also used as a decimal point, e.g. 1R5)
BN	All between; been	RCVR; RX	Receiver
BUG	Semi-automatic key	REF	Refer to; Referring to; Reference
B4	Before	RFI	Radio frequency interference
C	Yes	RIG	Station equipment
CL	I am closing my station; call	RPRT, REPT	Report
CPI, CPY	Copy	RPT	Repeat; I repeat
CQ	Calling any station	RTT; RTTY	Radioteletype
CUAGN	See you again	RX; RCVR	Receiver
CUD	Could		
CUL	See you later	SA	Say
CW	Continuous wave, i.e. radio telegraphy	SASE	Self-addressed, stamped envelope
		SED	Said
DE	From	SIG	Signal
DR	Dear	SKED	Schedule
DX	Distance, foreign countries	SRI	Sorry
		SSB	Single sideband
ER	Here	SUM	Some
ES	And; &		
FB	Fine business, excellent	T	Zero (0)
FER	For	THO	Though
FM	Frequency modulation; From	THRU; THRO	Through
		TMW	Tomorrow
GA	Go ahead, continue sending; good afternoon	TNX; TKS	Thanks
GB	Goodbye	TT	That
GE	Good evening	TU; TKU	Thank you
GG	Going; grounded grid	TVI	Television interference
GM	Good morning	TX	Transmitter
GN	Good night	TXT	Text
GND	Ground		
GUD	Good	U	You
		UR	Your; You are (sometimes YR)
HI	Laughter; High	URS	Yours (sometimes YRS)
HPE	Hope	VFO	Variable frequency oscillator
HR	Here; Hear; Hour	VY	Very
HV; HVE	Have		
HW	How	WID	With
		WKD; WKG	Worked; Working
K	Go ahead	WL	Well; Will
KN	specific station go ahead	WUD	Would
		WX	Weather
MA:MILS	Milliamperes		
MNI	Many	XCVR	Transceiver
MSG	Message	XMTR; TX	Transmitter
N	No; North	XTAL	Crystal
NCS	Net control station	XYL; YF	Wife
ND	Nothing doing		
NIL	Nothing; I have nothing for you	YL	Young lady
NR	Number		
NW	Now	73	Best Regards
		88	Love and kisses

**More articles are required for "Break-In"**  
**CAN YOU HELP?**



## The Q-Code

QRG	Will you tell me my exact frequency (or that of ...)? Your exact frequency (or that of ...) is ...kHz.	QSB	Are my signals fading? Your signals are fading.
QRH	Does my frequency vary? Your frequency varies.	QSD	Are my signals mutilated? Your signals are mutilated.
QRI	How is the tone of my transmission? The tone of your transmission is ... (1. Good; 2. Variable; 3. Bad)	QSK	Can you hear me between your signals and if so can I break in on your transmission? I can hear you between my signals; break in on my transmission.
QRK	What is the intelligibility of my signals (or those of ...)? The intelligibility of your signals (or those of ...) is ... (1. Bad; 2. Poor; 3. Fair; 4. Good; 5. Excellent)	QSL	Can you acknowledge receipt? I am acknowledging receipt.
QRL	Are you busy? I am busy (or I am busy with ...) Please do not interfere.	QSM	Shall I repeat the last message I sent you, or some previous message? Repeat the last message which you sent me (or message(s) number(s) ...)
QRM	Is my transmission being interfered with? Your transmission is being interfered with ... (1. Nil; 2. Slightly; 3. Moderately; 4. Severely; 5. Extremely)	QSN	Did you hear me (or ...) on ...kHz? I did hear you (or ...) on ...kHz.
QRN	Are you troubled by static? I am troubled by static ... (1-5 as under QRM)	QSO	Can you communicate with ... direct or by relay? I can communicate with ... direct (or by relay through ...)
QRO	Shall I increase power? Increase power.	QSP	Will you relay to ...? I will relay to ...
QRP	Shall I decrease power? Decrease power.	QST	General call preceding a message addressed to all amateurs and ARRL members.
QRQ	Shall I send faster? Send faster (... wpm).	QSU	Shall I send or reply on this frequency (or ...kHz)? Send or reply on this frequency (or ...kHz).
QRS	Shall I send more slowly? Send more slowly (...wpm)	QSV	Shall I send a series of Vs on this frequency (or on ...kHz)? Send a series of Vs on this frequency (or on ...kHz)
QRT	Shall I stop sending? Stop sending.	QSW	Will you send on this frequency (or on ...kHz)? I am going to send on this frequency (or on ...kHz)
QRU	Have you anything for me? I have nothing for you.	QSX	Will you listen to ... on ...kHz? I am listening to ... on ...kHz.
QRV	Are you ready? I am ready.	QSY	Shall I change to transmission on another frequency? Change to transmission on another frequency (or on ...kHz).
QRW	Shall I inform ... that you are calling him on ...kHz? Please inform ... that I am calling on ...kHz.	QSZ	Shall I send each word or group more than once? Send each word or group twice (or ... times).
QRX	When will you call me again? I will call you again at ... hours (on ...kHz).	QTC	How many messages have you to send? I have ... messages for you (or for ...)
QRZ	Who is calling me? You are being called by ... (on ...kHz)	QTH	What is your location? My location is ...
QSA	What is the strength of my signals (or those of ...)? The strength of your signals (or those of ...) is ... (1. Scarcely perceptible; 2. Weak; 3. Fairly good; 4. Good; 5. Very good)	(QTHR)—Location as per <i>Call Book</i>	
		QTR	What is the correct time? The time is ...

## International Morse Code

### Morse Alphabet

A ·—  
B —···  
C —·—·  
D —··  
E ·  
F ··—·  
G —·—  
H ····  
I ··  
J ·— — —  
K —·—  
L —···  
M — —

N —·  
O — — —  
P —·—·  
Q — — ·—  
R ·—·  
S ···  
T —  
U ··—  
V ··—·  
W —·—  
X —·—·  
Y —·—·  
Z — — ··

### Numerals

1 ·— — — —  
2 ··— — —  
3 ···— —  
4 ····—  
5 ·····

6 —·— ··  
7 —·— ··  
8 —·— ··  
9 —·— ··  
0 — — — — —

### Procedure Signals

Full stop (·) ·····  
Comma (,) —·—·  
Colon (:) — — ··  
Question mark/Repeat (?) ····  
Apostrophe (') —·—·  
Hyphen/dash (-) —·—·  
Fraction bar (/) —·—·  
Parenthesis (left hand) ( ( ) ) —·—·  
Parenthesis (right hand) ( ) ( ) —·—·  
Quotation marks (") —·—·  
Error (·) ·····

### Spacing and length of signal

1. A dash is equal to three dots.
2. The space between the signals which form the same letter is equal to one dot.
3. The space between two letters is equal to three dots.
4. The space between two words is equal to seven dots.



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A sort of postal trading table, issued monthly to Branches (timed to arrive for your meeting), replete with great up-to-the-minute bargains, of both new and used equipment, new releases etc. You can have your own copy just by sending us a stamped addressed envelope. Don't feel that just because an item has been advertised it will have already gone -we have such a volume of equipment passing through our Display Centre that we can frequently offer an even later trade-in!

## Serving you, and the interests of Amateur Radio



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Company Secretary



Grant ZL1UMB  
Retail Manager

We won't show you a list of 'promises' to give good service, or support our products.

That's because we believe undivided attention to our customers, courtesy, honesty and helpfulness are basic to any business, particularly ours.

It's a matter of professional pride.

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Alan ZL2TSR  
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Phil ZL1BED  
Retail Assistant

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# COM-CENTRE

## NZ's LARGEST AMATEUR EQUIPMENT EMPORIUM

### THE ULTIMATE IN AMATEUR BASE STATIONS



**YAESU FT767:** Solid state multimode transceiver. A fantastic performer, with ALL mod cons. With 6m, 2m and 70cm transverters, makes a one-rig station for less than \$6,000, plus GST. This has got to be the ultimate base station.

**KENWOOD TS940:** A serious radio for the serious operator. FM, SSB, CW, AM, FSK. Dual VFO's. Graphic display of operating features. 40 memory channels, programmable scanning.

**YAESU FT736:** An all mode VHF/UHF full duplex base station, covering four of the 50mHz, 144mHz, 220mHz, 430mHz, 440mHz and 1.2GHz bands using installable modules. 10W on 50mHz and 1.2GHz, 25W on the others. A host of mod cons, 100 memories, 14 VFO's.

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**YAESU FT747:** A compact SSB/CW/AM transceiver with FM option. 100W PEP on all amateur HF bands, general coverage receiver 100kHz-30MHz. 20 memories, split frequency etc. Perfect for portable/mobile.

**YAESU FT757:** Three micro-processors, twin VFO's almost all the options, with scanning, all bands 160m-30MHz, general coverage receiver 500kHz-30MHz. Light and compact, yet with 100W PEP output.

**KENWOOD TS 680S:** A high performance HF transceiver, for SSB, CW, AM, FM for all amateur bands 160m-30MHz. Compact and versatile.

**KENWOOD TS440S:** A most versatile rig. Again, not sparing the extras - automatic ATU built in. P/S req for constant base use. Very compact, this little rig is MUCH more than a mobile.

### VHF UHF MOBILE - BASE MULTIMODE TRANSCEIVERS



**YAESU FT 212RH:** Yaesu's prestigious 45 Watt compact CPU controlled FM Base-Mobile transceiver, for two metres.



**YAESU FT290RH:** Most versatile 2m transceiver. A full 25 Watt multimode, doubles as a 5 Watt shoulder pack. Perfect for AREC or SAR.



**YAESU FT4700:** Dual Band. Expensive, but totally impressive. This rig has total versatility. Typical Upper Echelon equipment from Yaesu.

**YAESU TWINS:**  
TOP SHELF  
VHF & UHF MOBILES

**YAESU FT712RH:**  
The matching UHF version of the 212. 35 Watts on 70cm.

### EVER POPULAR OFTEN ESSENTIAL AMATEUR HANDHELD



**YAESU FT411:** LATEST, Ultra compact 2M h/h with a huge range of features. 49 tunable memories, 2 VFO's, 16 keys. Scans. Up to 5W output.



**YAESU FT73R:** Ultra compact, with many features. Rain proof, an ideal outdoor rig. CPU controlled, 10 memories. Scans, up to 5W o/p.



**STANDARD 150E:** Latest addition to our stock range. This complete package includes charger, spare battery pack. Ideal 2m Handheld



**YAESU FT470RH:** Compact, includes the new F 8and (Police). Capable of 5W RF, well weatherproofed, an ideal unit for a wide range of uses.

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Quality Communications Receivers, for Amateur or SWL alike:  
**NRD 525**  
**FRG8800**  
**R5000**



#### SCANNERS

VHF/UHF programmable Scanning Receivers & Monitors:  
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**AOR2002, AOR3000**  
**FRG9600**  
Standard AX700

#### EXTRAS

ANCILLARY EQUIPMENT:  
**PK232 Data Terminal**  
**Tokyo HiPower**  
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**Curtis Keyer**  
**Power Supplies**

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A big range of all sorts of Station Extras: ATU's, SWR Bridges, Dummy Loads, Coaxial Switches, Clocks, Speakers, Coax Cable, 450 Ohm ladder line, Plugs, Connectors, Adaptors. In fact, we can usually supply just about any station accessory you need - right off the shelf. Give us a call.

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## GETTING OUT — That's what it's all about!

### COM-SENDER —

Out great range of HiTec antennas made especially for Com-Centre

### ★ HF ANTENNAS:

CS3Y 3 element Yagi-20/15/10 metres  
300W, 3.6m boom ..... \$497

CS7V 7 band vertical, 160-10m  
Height 8m ..... \$393

COM-SLOPER complete 80-10m dipole kit.  
Popular for fixed or portable ..... \$ 96

TRAPS: For multiband dipoles, all bands  
.. pair: \$90



BALUNS

Toroidal baluns, PL259, up to  
30MHz. 1:1 and 4:1 ..... \$72

### ★ TRIDENT MOBILE:

A Top performer, this  
convenient mobile whip covers  
80-10 metres, tunable over  
80m, and comes complete  
with mount ..... \$169

### ★ VHF ANTENNAS:

CS25Y 5 element 2m Yagi 2m boom . \$ 82

CS210Y 10 ele. 2m Yagi 4m boom ..... \$144

A CS2C 2m mobile vert. collinear .... \$ 46

B CS258 2m 5/8 mobile whip ..... \$ 35

C MOPOLE: 2m 1/2w whip. No radials req.  
Complete with SO239 mount ..... \$ 59

D HOT ROD: Hi Gain telescopic whi  
handhelds ..... \$ 59

RINGO: 2m base antenna ..... \$ 59

RADIAL KIT for base use of mobile VHF  
antennas ..... \$ 45

### ★ UHF ANTENNAS:

E CS7C 70cm mobile collinear ..... \$ 27

CSUY 12 element 70cm Yagi ..... \$112

### ★ SPECIAL PURPOSE:

SCANTENNA: VHF/UHF 30-500MHz  
broad band High gain vertical. Ideal for 6, 2,  
70cm transceiver, BRILLIANT for Scanners,  
3.4m high, 50 ohm input. .... \$174

DISCONE: Wide band multifrequency  
omnidirectional for 70-450MHz .... \$187

### ★ MOUNTS

for above antennas:

F Hinge mount ..... \$ 40

G Magnetic Base, with SO239 ..... \$ 72

Magnetic Base complete with Mopole ..... \$120

H Small fixed base for bonnet/boot .. \$ 20

I Universal De Luxe gutter mount .... \$ 18

J Rigid plastic gutter mount ..... \$ 12

K Mirror or pole mount ..... \$ 14

L SO239 mobile coaxial socket ..... \$ 11

### ROTATORS

YAESU's range of  
both Azimuth and  
Alt-Azimuth rotators  
were designed and  
manufactured by ro-  
tator specialists.

They are made to  
last a lifetime, in  
weatherproof mela-  
mine coated  
aluminium, permanently lubricated for main-  
tenance free operation.

MODEL	APPLICATION	PRICE
G- 250	Light duty	\$ 222
G- 400	Light/medium duty	\$ 495
G- 600	Medium duty	\$ 765
G-1000	Heavy duty	\$ 844
G-500A	Elevation only	\$ 435
G-5400	Alt-azimuth	\$1033
G-5600	Alt-azimuth	\$1247



### A FANTASTIC WAY TO START - OR TO UPDATE!



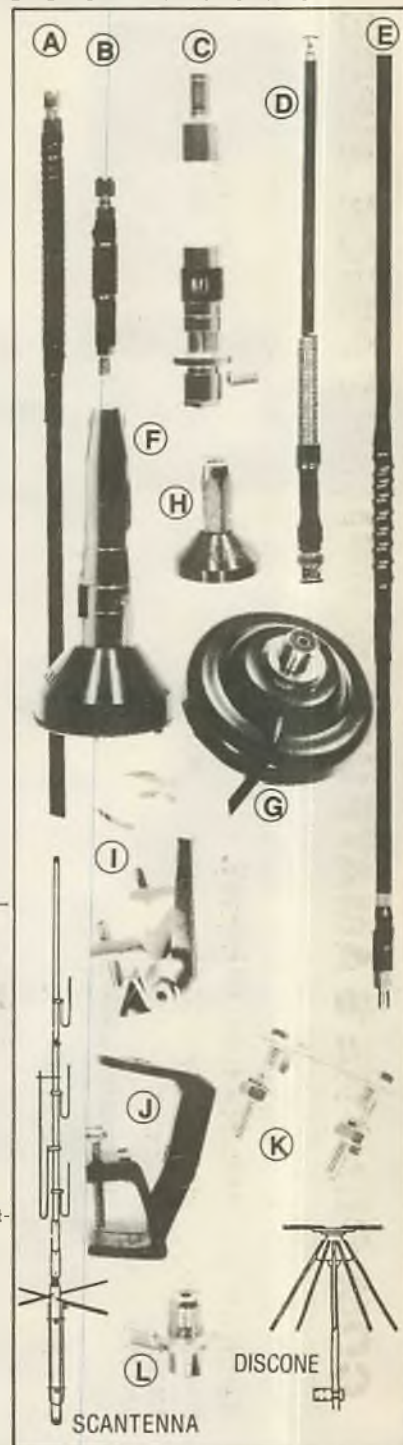
### THE 'ALL HF-ALL BANDS' BLACK COAXIAL DIPOLE

This little beauty can be strung up almost  
anywhere. We've tried! It will load without any  
trouble, straight into the back of the rig.

— DO NOT USE AN A.T.U.! —

This antenna will perform from 1.8 to  
30MHz, with a flat SWR (we found it 1.7:1)  
throughout. Not just a beginner's antenna,  
this performs creditably against trapped  
dipoles and verticals. As a broad-band base  
or portable antenna, this is exceptional.

And it is only \$290. You couldn't  
build an ATU for that!



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## COM-CENTRE'S AMATEUR EQUIPMENT PRICE GUIDE

At Com-Centre, N.Z.'s largest communications equipment emporium, handling equipment from all the recognised manufacturers, we have the opportunity to appraise daily a great diversity of new and used gear that passes through our hands. Our responsibility to our clients is to ensure you acquire equipment best suited to your requirements, and of course at a price to suit the budget! It is not possible to furnish full details in this sectionalised guide, but I can assure you of an honest appraisal and every assistance in making any decision concerning our Amateur Radio equipment.

### Section 1: VHF/UHF EQUIPMENT.

CLASSIFICATION	FEATURES & APPLICATION	LIMITATION	PRICE RANGE	SOME MODELS COMMONLY AVAILABLE
<b>2 METRES:</b> <b>Hand Helds — (early)</b>	 Second work-horse handheld. Standby in the car. Monitoring local repeater. Hand field work, AREC etc.	Lack of memories. Availability of battery packs. No scan, search etc.	\$200 — \$350, depending on extras	AOR 240 SEEC T1200 Yaesu FT207 ICOM 2A
<b>70 CM/2 Metres</b> <b>Programmable Handhelds</b>	Full facilities offered on Base stations, e.g. Scan, Memories etc. Portable or base use. Versatile system. Field use - AREC etc. Keypad Freq. entry. Extended coverage possible.	Power o/p, unless additional linear amp. fitted. Limited operation period if operated on batteries. Mobile operation difficult without optional spkr/mic. Limited simplex coverage. Requires familiarity with operation.	\$400 — \$800 depends on extras	Yaesu FT209RH, FT709RH Kenwood TR3500, 3600, 2500, 2600, TH215, TH415 ICOM IC02A, IC04A Kenpro KT220
<b>70CM/2 METRES</b> <b>Programmable Micros</b>	 Pocket sized portables. Most features of larger handhelds, but often without keypad freq. entry. Rugged construction for demanding application.	As with larger handhelds	\$400 — \$650	Yaesu FT23/73 Kenwood TH25/45 ICOM Y2A, Y4A
<b>70CM/2 METRES</b> <b>Mobile Transceivers</b>	 Designed primarily for mobile operation although suitable for base use with appropriate power supply. Excellent in any mobile installation with new sets shrinking as mounting space in cars lessens. Fully programmable, most with extended coverage. Power from 10 - 80 watts, 25 or 45 accepted as normal. Most user-friendly for ease of mobile operation. Extremely competitive market with additional features on every new model. Some dual band rigs available.	Power supply additional if base operation required. Generally FM only for simplex/repeater work. Size can be problem when mounting earlier sets. Some earlier digital displays difficult to read. Too many bells & whistles unnecessarily complicate simple mobile use. Diplexer or multi-band antenna necessary for dual banders.	\$350 — \$1000 Dual Banders from \$1200	Wide range is constantly changing. Currently: Kenwood TM201, TM421, TR7730, TM2530, TM2550, TM2570 Yaesu FT211, FT2700 ICOM IC25, IC27, IC28, IC3200 and many many more models
<b>70CM/2 METRES</b> <b>Multimode Transceivers</b>	 Primarily base station use, with most including a built-in power supply. Essential for accessing satellites, prestigious in appearance & application for keen VHF/UHF DXing enthusiasts. Many capable of high power operation. Some have multiband facilities — 15-10-6-2-70cm etc. Yaesu's latest FT767GX incorporates VHF/UHF in the single General Coverage Transceiver.	Complicated in mobile application. Other than satellite work FM tends to be most favoured mode. Expensive for single band operation. Most too large for mobile installation. "User Friendliness" if simple repeater-FM use is common operation.	\$500 — \$2200	Kenwood TS711, TS751, TS700 ICOM C251, IC271, IC211 Yaesu FT726, FT767

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NZART CALL BOOK, 1990

## COM-CENTRE'S AMATEUR EQUIPMENT PRICE GUIDE

### Section 2: HF EQUIPMENT:

#### CLASSIFICATION

#### FEATURES & APPLICATION

#### LIMITATION

#### PRICE RANGE

#### SOME MODELS COMMONLY AVAILABLE

##### VALVE RIGS:



Second standby station. Beginners base station. Usually incorporates matching power supply as a complete ready-to-go HF Station. Always represents good value if operator can support own equipment.

Requires Tender Loving Care to maintain specs. Increasing difficulty acquiring spares. Receiver sensitivity & Freq stability not comparable with modern equipment. Generally limited to mains operation. Decline in popularity - replaced with solid state equipment.

\$180 — \$400

TRIO 599  
Yaesu FT200, FT400/401  
Swan 350/500  
Collins, Drake,  
National NCX series

##### VALVE FINALS:



Improved receiver specifications, especially frequency stability and reliability. Ideal second station. Still very popular internationally as Amateur Base Station. Many later models have all the modern bells & whistles, including digital display, WARC bands etc. Tolerates greater mismatch than S/S gear.

Most limited to mains operation. Require "Loading and Tuning" before transmitting. Size, although most incorporate full mains power supply.

\$400 — \$1100

Yaesu FT101 Series  
FT560, FT901,  
Kenwood TS520, TS530,  
TS820, TS830, TS900.

##### SOLID STATE (earlier)



High performance receiver characteristics, the extras generally reflected in the price. 12 volt operation, ideal for mobile. Require power supply, generally 20 amps. for base use. Size enables portable or mobile operation. Broad-Band final amplifiers require no tuning of transmit stages. New models incorporate the WARC bands. Improved reliability and stability.

Require nominal 50 ohm antenna, therefore ATU often required to optimise performance. Power supply cost for base use needs consideration. No general coverage receiver facility.

\$600 — \$1200

Icom:  
IC701, IC720, IC730, IC740.  
Yaesu:  
FT908, FT301, FT7(B).  
Kenwood: TS120(S/V),  
TS130(S/V), TS180

##### GENERAL COVERAGE TRANSCEIVERS



The latest in Amateur equipment. Fully solid state, covering all Amateur bands and incorporating a general coverage receiver. 3 major manufacturers have settled on a similar approach:

The Bank balance! \$1900 — \$11,000

- 1: An economy rig, limiting the extras incorporated in packaging and simplifying operation and price tag.
- 2: A versatile up-market rig for mobile, portable or base operation with little spared in extras.
- 3: The ultimate in Amateur Station equipment, designed primarily for prestigious base station use, incorporating power supplies, ATU's etc.



► Yaesu: FT747 (\$1995), Kenwood TS140/680 (\$2150),  
Icom IC735 (\$2255)

► Yaesu FT757 (\$2250); Kenwood TS440 (\$2570),  
Icom IC751a (\$2495), IC761

► Yaesu FT767 (\$4100); Kenwood TS940 (\$4686);  
Icom IC781 (\$10,450)

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# Time and Frequency

## Review of Timekeeping in New Zealand

The DSIR took over responsibility for the Time Service when the Department was formed in 1926, but the story goes back much further.

It all began in 1862, when Captain Stephen Carkeek, Controller of Customs, recommended to the Superintendent of Wellington Province that a transit instrument, an astronomical clock, and a time ball be placed in the new Custom House which was to be erected on what eventually became the site of the General Post Office.

A transit instrument allows mean local time to be calculated. This is the time appropriate to the longitude of the point of measurement, relative to the Greenwich Meridian, allowing four minutes per degree of longitude, or one hour per 15 degrees. It was not until 1868 that the General Government proclaimed a uniform time for New Zealand based on the meridian 172° 30' East. The advent of the telegraph had made rapid communications possible and therefore the concept of a uniform time feasible without the need for observations in every town and port. New Zealand was in fact the first country to establish a uniform time by legislation, and its scientists played an important role in establishing uniform time zones in certain other countries.

A new Colonial observatory was built in Wellington in 1869 in the Bolton Street Cemetery, on the site where the Richard John Seddon memorial now stands. Seddon's death in 1906, and the choice of the site for the memorial, precipitated the move of the Observatory to its present site in the Botanical Gardens in Kelburn. A small red brick building was erected on the site of the old Gardens Battery. It was completed in 1907 and became known as the Hector observatory, after Sir James Hector, who had been Director of the Colonial Observatory.

Experiments with radio time signals began in 1916, with the reception of signals from Melbourne and transmission to ships in the vicinity of New Zealand and to Tahiti. Other regular services were established in 1919.

In 1926 the Department of Scientific and Industrial Research was formed, and became responsible for the Time Service. Although precision in time signals of a quarter of a second was claimed until the 1950s, the actual errors were often greater than this. The Geophysics Division of the DSIR was formed in 1951, and took

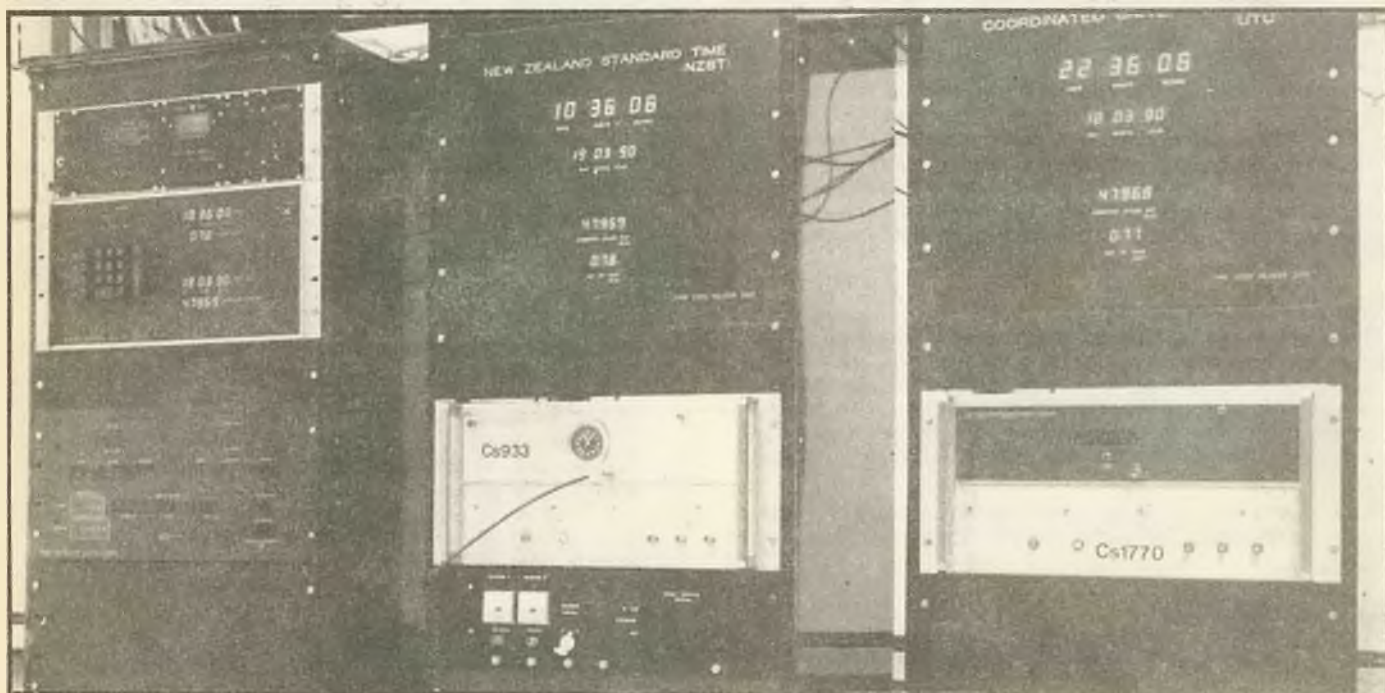
over administrative responsibility for the Time Service. It was not until 1962, however, that any real advances were made. Clocks which used the very stable electrical oscillations of quartz crystals were installed. Checks were made regularly against radio time signals from overseas which were obtained from astronomical observations, and appropriate corrections were made for the propagation time to Wellington.

More recently, the world's time has been related to an even more stable clock than our rotating earth—the vibrations of the caesium atom. Each element has its characteristic frequency of vibration, such as that of sodium which gives us the familiar orange colour of highway lighting. Although the characteristic frequency of caesium is particularly stable, a caesium clock on its own does not constitute a time standard. Rather, information from caesium clocks maintained by standards laboratories around the world is collated by the Bureau International des Poids et Mesures (BIPM) in Paris to provide Co-ordinated Universal Time (UTC), often abbreviated to Universal Time (UT).

## Time and Frequency Standard

In 1987 responsibility for the Time Service passed to the Physics and Engineering Laboratory (PEL), DSIR, at Gracefield, Lower Hutt, where the New Zealand time standard is maintained by means of three caesium clocks. Linkage to the BIPM is via the VLF Omega navigation system which provides time to within ten microseconds, and via the Global Positioning Satellite system which gives accuracies of better than one microsecond. The geostationary GOES satellite provides a back-up time code accurate to about 100 microseconds.

The time standard is also New Zealand's frequency standard, accurate to parts in  $10^{13}$ . Standard frequency dissemination to New Zealand users is via the TV1 and TV2 television transmissions. The colour burst frequencies of these transmissions are controlled by rubidium oscillators which are monitored against the PEL caesium clocks, and are usually within parts in  $10^{11}$  of the nominal colour burst frequency of 4.43361875MHz. The highest accuracies, approaching one part in  $10^{12}$ , are obtained by comparing the timing of selected synchronisation pulses with results obtained at PEL.



Two of the three atomic clocks constituting the New Zealand time and frequency standard (lower centre and lower right). The time pip generator is upper left.



## New Zealand Standard Time and Daylight Saving

The Mean Time Act of 1868 gave us a time of 11 hours 30 minutes ahead of Greenwich Mean Time. This was until 1927 when clocks were advanced one hour for summer. This daylight saving measure was not well received, so in the following year the advance was reduced to half an hour. After the advance in 1944 the clocks were not put back for the winter. Because this was equivalent to adopting a new standard meridian, the position was regularised by the New Zealand Standard Time Act of 1945. New Zealand Standard Time is thus 12 hours ahead of Greenwich Mean Time, now called Universal Time (UT), i.e. it is the mean time for the 180° meridian. The Time Act of 1974 allowed for an advance of one hour, normally from 0200 hours NZST on the last Sunday in October until 0200 hours NZST on the first Sunday in March of the following year. This defined New Zealand Daylight Time (NZDT) to be 13 hours ahead of Universal Time. In 1989/90 daylight saving was extended, starting on the first Sunday in October and finishing on the third Sunday in March.

## Local Time Signals

The most widely used time signals are those broadcast by the Broadcasting Corporation of New Zealand, both on the National Programme and some commercial stations. Some private radio stations also broadcast the time signals. These signals are transmitted every hour and consist of six "pips" of 1000 Hz tone, at one second intervals, the beginning of each pip marking the exact second. When a pip marks the exact hour, its length is doubled. The precision with which the beginning of the long pip marks the exact hour is usually less than 10 microseconds as it leaves PEL. Delays along telephone lines to the Broadcasting Corporation and in radio propagation to the remote parts of New Zealand can amount to a few milliseconds.

On certain occasions there are seven pips broadcast. This happens when, by international agreement, Universal Time is delayed by one second to keep it in step with astronomical time as determined by the Earth's rotation. This is done when necessary, but is not predictable because the Earth's rotation rate is variable when compared with the extremely stable caesium clocks. Universal Time was set up to be slightly fast, so that a "leap second" could be added on the first day of January or July, if necessary.

## Talking Clock

The DSIR operates a talking clock which is made available to the New Zealand public via the Telecom NZ 0900 service for a standard charge, currently 65 cents per call from anywhere in New Zealand. On dialling 0900 45-678 to access the talking clock, the user receives a voice announcement of the time followed by three "pips" of 1000Hz tone. The start of the third pip is the exact time. The announcement and pips are repeated at 10 second intervals to give six time announcements in all, ensuring that the full minute is always included. The accuracy of the talking clock is limited by the propagation delay of the telephone network which would not normally exceed 30 milliseconds for the remotest parts of New Zealand.

## Why all this accuracy?

There will always be a need for accurate time-keeping. Digital watches are now commonplace, and their owners are naturally conscious of accurate time. In the scientific community, astronomers and seismologists, among others, need access to accurate clocks for their measurements, and it is very convenient to have time signals obtainable via the broadcast band on any domestic radio.

Every effort will be made to ensure that the accuracy of the time signals is maintained, and perhaps even improved as technology develops.

## WWV and WWVH

The National Bureau of Standards broadcasts standard time and frequency transmissions continuously through stations WWV and WWVH.

Station WWV is located at Fort Collins, Colorado and broadcasts continuously on the radio frequencies of 2.5, 5, 10, 15 and

20MHz. Station WWVH is located at Kauai, Hawaii and broadcasts continuously on the radio frequencies of 2.5, 5, 10 and 15MHz.

Both stations are controlled by caesium atomic oscillators. The frequencies are stable to better than one part in  $10^{11}$  at all times, compared with the primary atomic standards maintained at the NBS Boulder laboratories. Changes in the propagation medium cause frequency changes which are several orders greater than the uncertainties described above.

## Standard Time Signals

Seconds pulses are transmitted continuously, even during tones and announcements, and are derived from the same oscillator which generates the carrier frequency. Each minute, except the first of the hour begins with an 800 millisecond tone of 1000Hz at WWV and 1200Hz at WWVH. The first minute of the hour begins with an 800 millisecond tone of 1500Hz from both stations.

All time announcements are referred to in terms of Co-ordinated Universal Time, UTC. More precisely, the actual time scale is the Co-ordinated Universal Time Scale as maintained by the NBS.

The 0 to 24 hours system is used starting with 0000 at longitude zero. The first two figures give the hour and the last two figures give the minutes past the hour when the tone returns. The time announcement refers to the end of an announcement interval, i.e., to the time when the 0.8 second long audio tone begins.

At WWV a male voice announcement of Co-ordinated Universal Time is given during the last 7.5 seconds of each minute. At 1035 UTC for instance, the voice announcement, given in English, is: "At the tone, ten hours thirty-five minutes Co-ordinated Universal Time".

At WWVH a female voice announcement of UTC is given during the period 45 seconds to 52.5 seconds after the minute. It should be noted that the voice announcement of WWVH precedes that of WWV by 7.5 seconds. However, the tone markers referred to in both announcements occur simultaneously, although they may not be so received due to propagation effects. The use of a female voice at WWVH and a male voice at WWV assists in distinguishing the two stations.

## Universal Time Corrections

With the use as from the beginning of 1972 of the atomic time scale as the International time scale and because the rate of rotation of the earth is not constant, differences between mean solar time (UTI) and the atomic time will accrue which in time could become inconvenient. It is therefore necessary to make periodic adjustments to the atomic scale so that it roughly approximates UTI. Therefore, instead of frequent small corrections, as in the past, large corrections of one full second will be made at infrequent intervals, which are not expected to average more than one a year and will usually be made on the last day of either June or December.

An adjustment was made on December 31, 1989 of one second so that the atomic time scale now leads UTI by 25 seconds. The atomic time scale will thus be at all times within 0.7 seconds of mean solar time. These corrections will be encoded and broadcast once every minute from both stations.

The method of coding UTI corrections uses a system of double second pulses. The first through the eighth second pulse, when marked by a double pulse, will indicate a "plus" correction, and from the ninth through the fifteenth a "minus" correction. The amount of correction is determined by counting the number of second pulses which are doubled. For example, if the first, second and third second pulses are doubled, the UTI correction is 0.3 seconds. Or if the ninth, tenth, eleventh, twelfth, thirteenth and fourteenth second pulses are doubled, the UTI correction is "minus" 0.6 seconds. The UTI correction is also encoded in the IRIG-H BCD code.

## Standard Audio Frequencies

Standard audio frequencies of 440Hz, 500Hz and 600Hz are broadcast by the two stations. The duration of each transmitted tone is approximately 45 seconds. A 600Hz tone is broadcast by WWV during odd minutes and during even minutes by WWVH. A



500Hz tone is broadcast during alternate periods unless voice announcements or silent periods are scheduled. The 440Hz tone is broadcast beginning one minute after the hour at WWVH and two minutes after the hour at WWV. The 440Hz tone is omitted during the first hour of the UTC day to act as a day marker.

No audio tones or special announcements are broadcast during a semi-silent period from either station. The periods are from 45 to 50 minutes after the hour from WWV and from 15 minutes to 20 minutes after the hour at WWVH.

The 29th and 59th seconds are omitted in each minute. Each pulse is preceded by 10 milliseconds of silence and followed by 25 milliseconds of silence.

### Propagation and Geophysical Forecasts

A broadcast of radio propagation conditions and solar activity is broadcast in voice during part of every eighteenth minute of each hour from WWV. The announcements are short term forecasts, updated as required, every six hours if needed. Those operators particularly interested should consult QST, January 1975, page 84, for specific details.

### VNG

The Australian time and frequency station VNG is operating again, now from Sydney NSW, and is run by a voluntary users' group using a surplus transmitter operating on 5, 10 and 15MHz. The users' group has thus far been unsuccessful in regaining the VNG frequencies of 4.5, 7.5 and 12MHz which were lost when the original Overseas Telecommunication Commission station at Lyndhurst, Victoria, was closed.

### Tribute to L. Spackman

This year Len Spackman ZL1AC bows out as author of the Standard Frequency Transmissions section of the *Call Book*. It is a pleasure to acknowledge Len's long-standing contribution.

**A.C. Corney, Group Manager (Applied Physics) Physics and Engineering Laboratory, DSIR.**



## Ever baffled by World Clocks?

There is no need to be confused by a maze of foreign city names which cannot relate to their times.

**The ZONE VIEW GLOBAL CLOCK\*** provides pictorial views of 30 Time Zones, differentiated by colour, clearly showing the time and day in each zone. Now you can know at a glance who's in bed, who's having lunch, and who might be on the air.

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Rec. Ret. \$82.00 plus P & P

\*25cm diameter quartz

## Frequencies Available For Use In The Citizen Radio Service Are As Follows

Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	26.330	21	26.580
2	26.340	22	26.590
3	26.350	23	26.620
4	26.370	24	26.600
5	26.380	25	26.610
6	26.390	26	26.630
7	26.400	27	26.640
8	26.420	28	26.650
9	26.430	29	26.660
10	26.440	30	26.670
11	26.450	31	26.680
12	26.470	32	26.690
13	26.480	33	26.700
14	26.490	34	26.710
*15	26.500	35	26.720
16	26.520	36	26.730
17	26.530	37	26.740
18	26.540	38	26.750
19	26.550	†39	26.760
20	26.570	†40	26.770

\* Channel 15 (26.500 MHz) is to be used solely for calling distress and safety. Full carrier emissions (A3E or H3E) are to be used on this channel.

SSB and DSB usage is to be separated, with SSB being used from Channel 26 (26.630 MHz) upwards.

† Channels 39 (26.760 MHz) and 40 (26.770 MHz) are shared with other services and users can expect interference from time to time.

To reduce interference between the new channel assignments and seven old assignments, it is necessary that usage of the following frequencies cease by 31 March 1989:

- 26.425 MHz (Previous Channel 1)
- 26.475 MHz (Previous Channel 3)
- 26.525 MHz (Previous Channel 5)
- 26.575 MHz (Previous Channel 7)
- 26.625 MHz (Previous Channel 9)
- 26.675 MHz (Previous Channel 11)
- 26.725 MHz (Previous Channel 13)

Licensees are required to have crystals for these frequencies removed and/or replaced by 31 March 1989.

FOR FURTHER INFORMATION OBTAIN A COPY OF THE "CITIZEN RADIO SERVICE" BROCHURE FROM THE RADIO FREQUENCY SERVICE.



## VHF Marine Repeaters

Licensee	Ch	Location	Grid Reference
<b>North Island:</b>			
Far North Repeater Association	60	Mt Camel	N6/615054
Bay of Islands Marine Radio Association	63	Russell Heights	N11/642525
Whangarei VHF Marine Repeater Association	64	Parua Bay	N20/927939
Telecom Networks and International	60	Quinns Road	N42/105488
	62	Deadman's Point	N43/934592
Auckland Volunteer Coast Guard Association	65	* North Moeheu	N35/863016
	88	Trig M2	N35/876001
	86	* Auckland	N42/280590
Opito VHF Marine Radio Users Association	61	Opito Bay	N40/302753
	84	Opito Bay	N40/302753
Rotorua VHF Marine Association Inc	64	Whakaungakau	N76/846088
Tauranga Volunteer Coast Guard Association	62	Mayor Island	N58/737084
Lake Taupo VHF Mariners Association	61	Karangahape Cliffs	N102/285245
Whakatane Coast Guard Association	60	Whakatane Heads	N69/453268
Waihou Bay Volunteer Coast Guard	63	Cape Runaway	N62/407726
East Cape Volunteer Coast Guard	61	* Tawhiti	N81/734079
Gisborne-Tatapouri Sports Fishing Club	60	Tatapouri Hill	N98/515385
Mahia SMCRA	63	Mahia	N117/317808
Napier Radio Communication Association Inc	62	Kahuranaki	N141/286022
Telecom Networks and International	61	Mt Rewa	N163/468452
Port Nicholson Association Radio	62	Mt Kaukau	N164/338283
Taranaki Volunteer Coast Guard Association	61	Plymouth Track	N108/611751
		Mt Egmont	
Manukau Volunteer Coast Guard Inc	63	* South Manukau Head	N46/085362
	63	† Lookout Drive	N42/152464
<b>South Island:</b>			
Mount Campbell/Nelson Marine Radio Association	60	Mt Campbell	S13/242482
Marlborough Marine Radio Association	63	Kahikatea	S22/400282
	65	* Kaimua	S15/134382
Lyttelton Maritime VHF Association	63	Herbert Peak	S84/095368
	60	Blue Duck	S42/068155
Timaru Maritime VHF Association	61	Mt Studholme	S118/489217
Otago Maritime VHF Association	62	Hautai Hill	S164/348825
Southland Maritime VHF Users Association	61	Bluff Hill	S182/355765
Westland Maritime VHF Association	63	Paparoa	S44/858937

\* Channel has been assigned but station is not yet in service.

† Temporary service being provided until permanent station can be established.

**Chl 16 (156.8 MHz)**—The international distress, safety and calling frequency for the maritime mobile VHF radiotelephone service.

All ships licensed for operation in the authorised bands between 156 MHz and 174 MHz must be able to transmit and receive on this frequency.

**Chl 6 (156.3 MHz) and Chl 8 (156.4 MHz)**—For intership working. As with Chl 16 all vessels must fit Chl 6 with Chl 8 optional.

**Chl 12 (156.6 MHz) and Chl 14 (156.7 MHz)**—For communication with coast stations on port operation matters.

**Chl 9 (156.450 MHz), Chl 10 (156.500 MHz), Chl 11 (156.550 MHz) and Chl 13 (156.650 MHz)**—For communication with Harbour Authorities on port operation and ship movement matters.

FOR FURTHER INFORMATION OBTAIN "SMALL SHIPS RADIOTELEPHONE SERVICE" BROCHURE FROM THE RADIO FREQUENCY SERVICE.

**Chl 60 (156.025/160.625 MHz),**

**Chl 61 (156.075/160.675 MHz),**

**Chl 62 (156.125/160.725 MHz),**

**Chl 63 (156.175/160.775 MHz),**

**Chl 64 (156.225/160.825 MHz) and**

**Chl 65 (156.275/160.875 MHz)**—Two frequency talk-through repeater channels.

**Chl 68 (156.425 MHz)**—For use nationally by 'rescue' organisations. Also for communication with Wellington Radio.

**Chl 71 (156.575 MHz) and Chl 74 (156.725 MHz)**—For working between coast stations and ship stations after communication has been established on Chl 16.

**Chl 77 (156.875 MHz)**—Is available for aquatic events.

**Chl 88 (157.425/162.025 MHz)**—Repeater channel for SAR communications.

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## Radio New Zealand Short Wave Service

A new 100kW transmitter was commissioned at Rangitaiki (just north of the Napier-Taupo road) on 24 January 1990. The transmitter is located at grid reference NZMS 1 N103/885185 or NZMS 260 U18/077566. It feeds two 8-dipole curtain arrays hung between three 70m guyed masts and directed to the Eastern and Western Pacific Islands. The antennas can be used separately or in combination to serve from French Polynesia to Papua-New Guinea. They operate from 9MHz to 18MHz with a gain of approximately 18 to 20dB, giving an effective radiated power of up to 10MW. We hope to install two additional antennas which will operate from 6MHz to 9MHz in a few years time when the sunspot numbers drop.

The 100kW transmitter is a French Thompson CSF unit which employs the latest high efficiency technology, including dynamic amplitude carrier modulation, provision for single sideband operation and remotely controlled automatic tuning and switching. It uses two TH581 hypervaportron (vapour cooled) tubes (RF amplifier and modulator) with a lower powered RF driver tube. The remaining amplifiers and rectifiers etc are solid state.

The variable input and output capacitances and inductances of the final RF amplifier tube are water cooled and the DC voltage across the RF amplifier and modulator is approximately 28kV. The station is unmanned and operated from Radio New Zealand's master control room in Wellington. Maintenance is carried out by the BCL transmission team based at Paengaroa near Te Puke.

The station at present operates on 17680kHz to Polynesia and the Eastern Pacific from 1700 to 1900 UTC, and from 0330 to 0930 UTC; to Melanesia and the Western Pacific on 17680kHz from 1905 to 2100 UTC and from 0630 to 0930 UTC, and a general service to both areas on 17680kHz from 2100 to 2400 UTC. This schedule is temporary and is generally changed quarterly. Alternative frequencies which may be used are 15485kHz, 17730kHz and 9850kHz.

So far we have excellent reception reports from all around the world and particularly from the Pacific Islands.

The old faithful AWA 7.5kW shortwave transmitters at Titahi Bay which have been operating for over 40 years, can now take a well-earned rest!

## Television Broadcasting Frequencies

### VHF

#### Channels

Channels 1 to 3 are VHF Low Band (Band I—44 to 68MHz).

Channels 4 to are VHF High Band (Band III—174 to MHz).

Transmission standard conform to CCIR System B (VHF) and System G (UHF), which principally means 625 line PAL colour with 5.5MHz inter-carrier spacing.

Channel Number	Frequency Limits (MHz)	Vision Carrier Frequency (MHz)	Sound
1	44 to 51	42.25	50.75
2	54 to 61	55.25	60.75
3	61 to 68	62.25	67.75
4	174 to 181	175.25	180.75
5	181 to 188	182.25	187.75
6	188 to 195	189.25	194.75
7	195 to 202	196.25	201.75
8	202 to 209	203.25	208.75
9	209 to 216	210.25	215.75
10	216 to 223	217.25	
11	223 to 230	224.25	

The vision carrier is always 1.25MHz above the lower channel edge (eg, 511.25 in the case of E26) and the analogue sound carrier is always 1.25MHz below the top edge (eg, 516.75 in the case of E26).

### Proposed UHF Channels

E24	MHz		MHz
24	494-502	44	652-662
25	502-510	45	662-670
26	510-518	46	670-678
27	518-526	47	678-686
28	526-534	48	686-694
29	534-542	49	694-702
30	542-550	50	702-710
31	550-558	51	710-718
32	558-566	52	718-726
33	566-574	53	726-734
34	574-582	54	734-742
35	582-590	55	742-750
36	590-598	56	750-758
37	598-606	57	758-766
38	606-614	58	766-774
40	622-630	59	774-782
41	630-638	60	782-790
42	638-646	61	790-798
43	646-654	62	798-806
44	654-662		

## Television Frequency Plan

Transmission Site	Coverage Area	Channels/Polarization
Horokaka	Lower Northland	5, 11, 9 H
Parahaki	Whangarei	4, 2, 7 V
Waatarua	Auckland	2, 4, 7, H
Te Aroha	Waikato/Bay of Plenty	1, 3, V (TV1, 2 only)
Ruru	Waikato	9 V (TV3)
Kopukairua	Bay of Plenty	7 V (TV3)
Pukepoto	Rotorua	5, 7, 11 H
Putauaki	Eastern Bay of Plenty	6, 8, 2, V
Mt Egmont	Taranaki	6, 8, 10 H
Mt Erin	Hawkes Bay	6, 8, 10 V
Wharite	Manawatu	2, 4, 7 V
Kaukau	Wellington	1, 5, 11 H
Sugarloaf	Canterbury	3, 8, 6 H
Mt Cargill	Coastal Otago	2, 4, 10 H
Hedgehope	Southland	1, 3, 7 H

Note: The notation used, ie 3, 8, 6 H means Channel 3 is used for TV1, Channel 8 for TV2 and Channel 6 is used for TV3, all with antenna horizontally polarized.

## BREAK-IN LABELS

Your callsign: **1 MACPHERSON**  
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**CHRISTCHURCH 6**

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 First two digits is year of joining (if advised)

Date label printed: **22/04/90**



# Radio Broadcasting Stations

Callsign	Station Name	Location	Frequency	Power kW/ERP	Transmitter Site	Grid Reference NZMS 1	Ant. Height in metres
1ZK	Radio Northland	Kaitaia	1026(S)	2	Waipapakauri	N10/762784	Mast 55
1ZE	Radio Northland	Kaikohe	1215	5	Ohaeawai	N15/383402	Mast 53
1ZN	Radio Northland	Whangarei	1026(S)	5	Otaika	N24/833900	Mast 90
1ZB	News Talk 1ZB	Auckland	1080	10	Henderson	N42/152612	Mast 122
1ZH	Hits & Memories 1ZH	Hamilton	1269	5	Eureka	N56/906584	Mast 98
1ZD	Radio Bay of Plenty	Tauranga	1008	10	Paengaroa	N67/879437	Mast 153
1ZW	Radio Waitomo	Te Kuiti	1170	0.4	Waitomo	N83/649881	Mast 55
1ZO	Radio Forestland	Tokoroa	1413	2	Wiltstown	N75/276012	Mast 55
1ZU	King Country Radio	Taumarunui	1512	1	Taumarunui	N101/773136	Tower 41
2ZG	Gisborne's Radio 2ZG	Gisborne	945	2	Wainui	N98/438335	Mast 53
2ZC	Bay City Radio	Napier	1278	2	Pakowhai	N134/285307	Tower 41
2ZP	Radio Taranaki	New Plymouth	1053	2	Bell Block	N109/704948	Mast 53
2ZH	Radio Taranaki	Hawera	1557	2	Normanby	N129/850350	Tower 41
2ZW	River City Radio	Wanganui	1197	2	Kaitoke	N138/616824	Mast 55
2ZA	Radio 2ZA	Palmerston North	927	2	Kairanga	N149/063366	Mast 53
2ZD	Radio Wairarapa	Masterton	846	2	Waingawa	N158/079613	Mast 55
2ZB	Wellington 2ZB	Wellington	1035	20	Titahi Bay	N160/403453	Mast 122
2ZE	Radio Marlborough	Blenheim	1539	1	Blenheim	S28/244984	Tower 41
2ZF	Radio Marlborough	Picton	1584	0.4	Picton	S22/303216	Tower 41
2ZN	Radio Nelson	Nelson	1341	2	Stoke	S20/570227	Mast 53
2ZT	Radio Nelson	Takaka	1269	0.4	Motupipi	S8/236834	Mast 45
3ZA	Radio Scenicland	Greymouth	747	2	Kumara	S51/680728	Mast 122
3ZR	Radio Scenicland	Reefton	1521	0.2	Reefton	S83/350279	Tower 61
3ZW	Radio Scenicland	Westport	1287	2	Cape Foulwind	S23/968731	Tower 41
3ZB	Christchurch 3ZB	Christchurch	1098	5	Ouruhia	S76/035665	Mast 137
3ZE	Ashburton 3ZE	Ashburton	873	1	Winchmore	S92/180239	Mast 90
3ZC	Radio Caroline	Timaru	1152	5	Fairview	S111/690511	Mast 90
3ZO	Radio Caroline	Twizel	1485	0.1	Twizel	S109/769687	Mast 28
4ZW	Radio Waitaki	Oamaru	1395	2	Weston	S136/508695	Mast 55
4ZB	Dunedin 4ZB	Dunedin	1044	10	Highcliff	S164/227705	Mast 122
4ZG	Hokonui Radio	Gore	558	5	Dacre	S177/575134	Mast 98
4ZA	Southland's 4ZA	Invercargill	864	10	Dacre	S177/575134	Mast 98
4ZF	Southland's 4ZA	Te Anau	612	0.4	Te Anau	S149/761103	Mast 55
1GEY-FM	Radio Geyserland	Rotorua	97.5	0.4	Pukepoto	N76/813048	Tower 33
1GEY-FM	Radio Geyserland	South Rotorua	90.9	0.2	Paeroa Range	N85/724747	Tower 22
1TPO-FM	Radio Lakeland	Taupo	96.7	0.6	Tuhingamata	N94/472350	Tower 61
1TPO-FM	Radio Lakeland	Lake Taupo	92.4	0.2	Karangahape	N102/285245	Tower 30
2ZK-FM	Ninety-six FM	Hastings	95.9	3.0	Mt Erin	N141/257090	Tower 50
2ZK-FM	Ninety-six FM	Waioa	99.7	0.04	Awamate Road	N115/772000	Pole 10
1YK	National Radio	Kaitaia	837(S)	2	Waipapakauri	N10/762784	Mast 55
1YE	National Radio	Kaikohe	981	2	Ohaeawai	N15/383402	Mast 53
1YX	National Radio	Northland	837(S)	2	Otaika	N24/833900	Mast 90
1YA	National Radio	Auckland	756	20	Henderson	N42/151606	Mast 153
1YW	National Radio	Waikato	1143	2	Eureka	N56/906584	Mast 98
1YZ	National Radio	Bay of Plenty	819	10	Paengaroa	N67/879437	Mast 153
1YT	National Radio	Taupo	1494	2	Taupo	N94/546396	Mast 53
2YW	National Radio	Gisborne	1314	2	Wainui	N98/438335	Mast 53
2YZ	National Radio	Hawkes Bay	630	20	Opapa	N141/411021	2 Mast 88
2YP	National Radio	Taranaki	1530	2	Bell Block	N109/704948	Mast 53
2YM	National Radio	Manawatu	1449	2	Kairanga	N149/063360	Mast 53
2YA	National Radio	Wellington	567	50	Titahi Bay	N160/397450	Mast 220
2YX	National Radio	Nelson	1116	2	Stoke	S20/570227	Mast 53
3YZ	National Radio	Westland	918	10	Kumara	S51/680728	Mast 122
3YW	National Radio	Buller	1458	0.4	Cape Foulwind	S23/968731	Tower 41
3YA	National Radio	Canterbury	675	20	Gebbies Pass	S84/009363	2 Tower 91
4YA	National Radio	Otago	810	20	Highcliff	S164/232703	Mast 153
4YW	National Radio	Alexandra	639	2	Alexandra	S133/187555	Mast 107
4YQ	National Radio	Queenstown	1134	2	Queenstown	S132/569684	Tower 41
4YZ	National Radio	Southland	720	10	Dacre	S177/575134	Mast 98
1YC	AM Network	Auckland	882	10	Henderson	N42/151606	Mast 153
2YC	AM Network	Wellington	657	50	Titahi Bay	N160/397450	Mast 220
3YC	AM Network	Canterbury	963	10	Gebbies Pass	S84/012361	2 Tower 91
4YC	AM Network	Otago	900	10	Highcliff	S164/232703	Mast 153
2YB	Access Radio	Wellington	783	20	Titahi Bay	N160/403453	Mast 122
1ZM-FM	Auckland	Auckland	97.4	40	Waiaerua	N41/092512	Tower 122
Q90-FM	Taranaki	New Plymouth	90.0	3	Mt Egmont	N119/664635	Tower 43
2MZM-FM	Manawatu	Palmerston North	90.6	40	Wharite	N149/332474	Tower 122
2ZZM-FM	Wellington	Wellington	90.9	40	Kaukau	N164/338283	Tower 122
2ZZM-FM	Wellington	Hutt Valley	93.5	0.6	Towai	N164/480288	Pole 20
3ZM-FM	Canterbury	Christchurch	91.3	40	Sugarloaf	S84/015473	Tower 121



Callsign	Station Name	Location	Frequency	Power kW/ERP	Transmitter Site	Grid Reference NZMS 1	Ant. Height in metres
1WCP-FM	Concert Network	Auckland	92.6	40	Waiaatarua	N41/092512	Tower 122
	Concert Network	Waikato/BOP	91.4	40	Te Aroha	N57/234777	Tower 126
	Concert Network	Taupo	98.3	0.2	Tuhingamata	N94/472350	Tower 61
	Concert Network	Taranaki	91.6	3	Mt Egmont	N119/664635	Tower 43
	Concert Network	Hawkes Bay	91.8	3	Mt Erin	N141/257090	Tower 50
	Concert Network	Manawatu	89	40	Wharite	N149/332474	Tower 122
	Concert Network	Wanganui	99	0.1	Mt Jowett	N138/593916	Pole 20
	Concert Network	Wairarapa	99.2	2.5	Otahoua	N162/234598	Tower 52
2WCP-FM	Concert Network	Kapiti Coast	98.3	0.6	Forest Heights	N157/632759	Tower
	Concert Network	Wellington	92.5	40	Kaukau	N164/338283	Tower 122
	Concert Network	Hutt Valley	95.6	0.6	Towai	N164/480288	Pole 20
3CCP-FM	Concert Network	Nelson	91.4	3	Gramplans	S20/630264	Tower 61
	Concert Network	Canterbury	89.7	40	Sugarloaf	S84/015473	Tower 121
	Concert Network	Sumner/Redcliffs	99.9	0.8	Southshore	S84/093552	Pole 27
	Concert Network	Banks Peninsula	95.3	0.8	Mt Pearce	S84/266340	Tower 33
	Concert Network	South Canterbury	99.3	3.2	Mt Studholme	S118/489217	Tower 61
	Concert Network	Otago	92.6	25	Mt Cargill	S164/197789	Tower 105
	Concert Network	Dunedin	99	0.25	Highcliff	S164/232703	Mast 153
	Concert Network	Abbotsford	89	0.05	Saddle Hill	S163/027675	Pole 10
1XI	Radio I	Auckland	1332	5	Te Atatu	N042/183617	2 Mast
1XP	Radio Pacific	Auckland	1593	5	Pakuranga	?	Mast
1XW	Radio Pacific Waikato	Hamilton	954	2	Hamilton	N065/851482	Mast
1XX	One Double X	Whakatane	1242(S)	2	Whakatane	?	Mast
1XX	One Double X	Murupara	1242(S)	0.1	Galatea	?	Mast
1XF	Radio Te Arawa	Rotorua	1440	0.2	Tihiotonga	N76/700996	Mast 55
2XR	Ngati Poru	Ruatoria	585	2	Ruatoria	N72/721309	Mast
2XS	2XS-AM	Palmerston North	828	2	Kairanga	N149/053335	Mast
2XX	Radio 2XX Horowhenua	Levin	1377	2	Te Horo	N157/617802	2 Mast
2XW	Radio Windy	Wellington	891	5	Korokoro	N160/410301	Mast
3XA	Radio Avon	Christchurch	1260	2	Marshlands	S076/005623	Mast
4XA	Radio Central	Alexandra	531	2	Alexandra	S134/212509	Mast
4XC	Resort Radio	Queenstown	1539(S)	1	Peninsula Hill	?	Mast
4XE	Resort Radio	Wanaka	1539(S)	0.1	Wanaka	S115/963136	Mast
4XO	Music Radio 4XO	Dunedin	1206	2	Highcliff	S164/216701	Mast
4XI	Radio Foveaux	Invercargill	1224	2	Invercargill	S177/460010	Mast
1XT	Village Radio	Tauranga	1368	0.1	Otemoetai	?	?
2XA	Print Disabled Radio	Levin	1602	2	Levin	?	?
	Mang-O-Nui Ltd	Rotorua	1350	2	Tihiotonga	N76/700996	Mast 55
2YB	Te Upoko I Te Ika	Wellington	783/1161	20/1	Titahi/Mt Vic.	N160/403453	Mast 122
	Radio Rhema	Auckland	1251	5	Henderson	N042/152606	Mast
1XC	Radio Rhema	Tauranga	540(S)	5	Papamoa	N058/810544	?
1XH	Radio Rhema	Hamilton	855	5	Hamilton	N056/815524	Mast
2X?	Radio Rhema	Hawkes/Pov Bay	648	2	Mahia	?	?
	Radio Rhema	New Plymouth	540(S)	2	New Plymouth	N109/843764	?
2XG	Radio Rhema	Wellington	1503(S)	5	Horokiwi	N160/401315	Mast
2XL	Radio Rhema	Nelson	801	1	Richmond	S014/686384	?
3XG	Radio Rhema	Christchurch	1503(S)	2	Marshlands	S076/006612	?
	Radio Rhema	Timaru	594	2	St Andrews	S119/736373	?
4XD	Dunedin Radio 4XD	Dunedin	1305	2	Highcliff	S164/207701	Mast
1KCC-FM	K Double C FM	Kaitia	91.2	1	Maungataniwha	N10/030630	Tower 52
1KCC-FM	K Double C FM	Kaikohe	89.6	1	Hikurangi	N19/248186	Tower 61
1KCC-FM	K Double C FM	Lower Northland	92.4	1	Horokaka	N24/652787	Tower 49
1KCC-FM	K Double C FM	Whangarei	90.3	0.1	Parahaki	N20/848982	Pole 17
	Radio Hauraki	Auckland	99.0	40	Waiaatarua	N41/092512	Tower 122
1STU-FM	Campus Radio BFM	Auckland	91.8	1	Waiaatarua	N41/092512	Tower 122
1ROQ-FM	Triple M	Auckland	89.4	40	Waiaatarua	N41/092512	Tower 122
1MJK-FM	91 FM	Auckland	91	40	Waiaatarua	N41/092512	Tower 122
1KIW-FM	Kiwi FM	Waikato	89.8	40	Te Aroha	N57/234777	Tower 126
1KIW-FM	Kiwi FM	Tauranga	93.4	0.6	Kopukairua	N58/711537	Tower
1WSU-FM	Contact 89 FM	Hamilton	89		Hamilton	?	?
1HOT-FM	Lake City 96 FM	Rotorua	95.9	0.1	Ngongotaha	N76/680070	Pole
1KIS-FM	Taupo's 93.5 KIS FM	Taupo	93.5	0.1	Whakaroa	N93/433401	Pole
	93 FM Hawkes Bay	Hawkes Bay	92.7	3	Mt Erin	N141/257090	Tower 50
2NRG-FM	Energy FM	Taranaki	93.2	3	Mt Egmont	N119/664635	Tower 43
2MMM-FM	Radio Massey	Palmerston North	99.4		Palmerston Nth	N149/108314	?
2XKS-FM	Radio 2XS	Palmerston North	92.2	40	Wharite	N149/332474	Tower 122
89-FM	Radio Active 89-FM	Wellington	89		Tinakori Hill	?	?
2FFF-FM	New Ffleshire FM	Nelson	93	3	Gramplans	S20/630264	Tower 61
3RDU-FM	Radio UFM	Christchurch	98.3		Sugarloaf	S84/015473	Tower 121
FMX-FM	C93 FM	Christchurch	92.9	40	Sugarloaf	S84/015473	Tower 121
4SAO-FM	Radio One	Dunedin	91		Mt Cargill	S164/197789	Tower 105
1TRR-FM	Radio Rhema	Taupo	95.1		Whakaroa	N93/433401	Pole
3CCT-FM	Plains FM Comm Acc	Christchurch	96.9	3	Sugarloaf	S84/015473	Tower 121

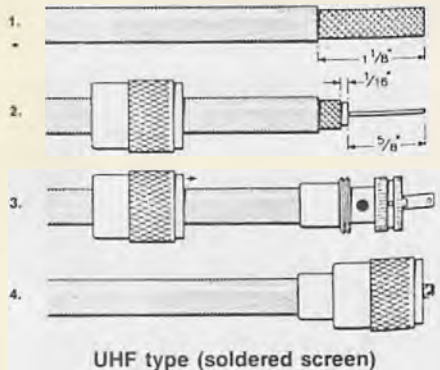


# Coaxial plug assembly

## RSGB VHF/UHF Manual

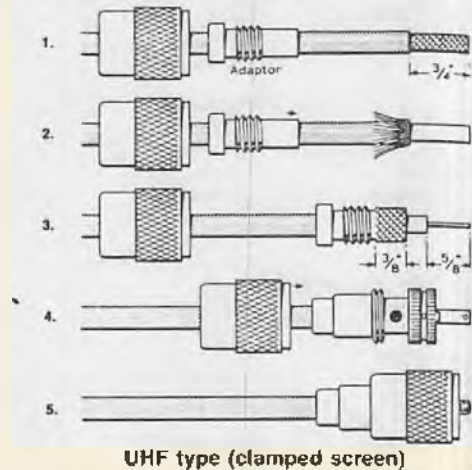
### UHF type (soldered screen)—PL259

1. Cut end of cable even. Remove vinyl jacket 1 1/8".
2. Bare 5/8" of centre conductor. Trim braided shield. Slide coupling ring on cable. Tin exposed conductor and braid.
3. Screw the plug sub-assembly on cable. Solder assembly to braid through solder holes. Use enough heat to create bond of braid to shell. Solder centre conductor to contact.
4. For final assembly, screw coupling ring on plug sub-assembly.



### UHF type (clamped screen)—PL259

1. Cut end of cable even. Remove vinyl jacket 3/4". Slide coupling ring and adaptor on cable.
2. Fan braid slightly and fold back as shown.
3. Position adaptor to dimension shown. Press braid down over body of adaptor and trim to 3/8". Bare 5/8" of conductor. Tin exposed centre conductor.
4. Screw plug sub-assembly on adaptor, solder braid to shell through solder holes. Use enough heat to create bond of braid to shell. Solder conductor to contact.
5. For final assembly, screw coupling ring on plug sub-assembly.



## Computer Interfacing Charts

These charts have been designed to assist in interfacing printers and other peripherals to computer systems.

### Code Conversion Table

Printers require control sequences to enable their special features, e.g. to change character sizes. This chart shows all the standard characters together with their various numeric representations. When using BASIC, characters can be represented by a decimal number, e.g. A=CHR\$(65). Operating systems, Monitors and Word Processor initialisation often require Hexadecimal (Base 16) numbers. Here A=41. The minicomputer world often uses octal numbers. In this case A="101. This chart also converts numbers up to 255 between the three bases.

The control codes, used for controlling data transmission and peripheral features are given with explanations. They can be generated by using the Control Key and the appropriate upper case character, e.g. <CTRL> G gives the Bell, and <CTRL> M is the same as a carriage return. The ESC character [CHR\$(27), Hexadecimal '1B, Octal '033] is often used for enabling command sequences.

### Centronics Parallel Interface

This connection system is the most commonly used for printers.

The computer sets the eight data lines to the byte required. The Data Strobe line which is normally about +5V is momentarily pulsed to 0V to transfer the character to the printer.

The printer tells the computer when it can send another character by pulsing the Acknowledge line. Alternatively the computer can keep sending characters until the printer sets the Busy line to +5V. Paper empty, select status and Fault conditions can be sensed by the computer using the designated lines.

### RS232-C (V24) Simplified

This serial communications system is used extensively by terminals and by some printers. Two way communication requires only one line for data transfer to the computer, and one from the computer. The eight data bits of a character are transmitted sequentially, prefixed by a start bit, and followed sometimes by a parity bit to check for correct transmission, and always by stop bits. The characters are transmitted sequentially in this format. The Baud rate is the number of bits transmitted per second. The control lines carry status information including Busy and Ready between computer and terminal. Seldom are all of them used together. In many applications control lines are not required. The chart correlates the various circuit names used in manuals with the pin number, function, source of the signal and description.

## Beacon and repeater Trustees.

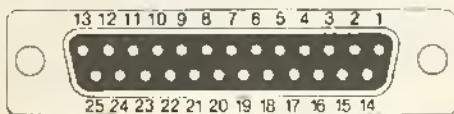
## Don't forget to inform the FMTAG of any status change.



H = Hexadecimal. O = Octal. D = Decimal. CC = Control Code.  
C = ASCII Character. (American Standard Code for Information Interchange)

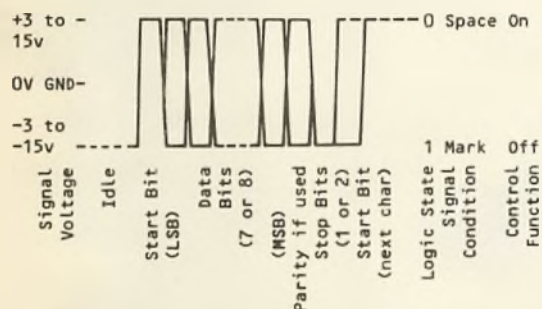
H	O	D	CC	EXPLANATION	H	O	D	C	H	O	D	C	H	O	D	C	H	O	D	C	H	O	D	C	H	O	D	C	
00	000	0	NUL	Null	20	040	32		40	100	64	a	60	140	96	i	80	200	128	A0	240	160	C0	300	192	E0	340	224	
01	001	1	SOH	Start of Heading	21	041	33	!	41	101	65	A	61	141	97	a	81	201	129	A1	241	161	C1	301	193	E1	341	225	
02	002	2	STX	Start of Text	22	042	34	"	42	102	66	B	62	142	98	b	82	202	130	A2	242	162	C2	302	194	E2	342	226	
03	003	3	ETX	End of Text	23	043	35	#	43	103	67	C	63	143	99	c	83	203	131	A3	243	163	C3	303	195	E3	343	227	
04	004	4	EOT	End Transmission	24	044	36	\$	44	104	68	D	64	144	100	d	84	204	132	A4	244	164	C4	304	196	E4	344	228	
05	005	5	ENQ	Enquiry	25	045	37	%	45	105	69	E	65	145	101	e	85	205	133	A5	245	165	C5	305	197	E5	345	229	
06	006	6	ACK	Acknowledge	26	046	38	&	46	106	70	F	66	146	102	f	86	206	134	A6	246	166	C6	306	198	E6	346	230	
07	007	7	BEL	Bell	27	047	39	'	47	107	71	G	67	147	103	g	87	207	135	A7	247	167	C7	307	199	E7	347	231	
08	010	8	BS	Backspace	28	050	40	(	48	110	72	H	68	150	104	h	88	210	136	A8	250	168	C8	310	200	E8	350	232	
09	011	9	HT	Horizontal Tab	29	051	41	)	49	111	73	I	69	151	105	i	89	211	137	A9	251	169	C9	311	201	E9	351	233	
DA	012	10	LF	Line Feed	2A	052	42	*	4A	112	74	J	6A	152	106	j	8A	212	138	AA	252	170	CA	312	202	EA	352	234	
0B	013	11	VT	Vertical Tab	2B	053	43	+	4B	113	75	K	6B	153	107	k	8B	213	139	AB	253	171	CB	313	203	EB	353	235	
0C	014	12	FF	Form Feed	2C	054	44	,	4C	114	76	L	6C	154	108	l	8C	214	140	AC	254	172	CC	314	204	EC	354	236	
0D	015	13	CR	Carriage Return	2D	055	45	-	4D	115	77	M	6D	155	109	m	8D	215	141	AD	255	173	CD	315	205	ED	355	237	
DE	016	14	SD	Shift-Out	2E	056	46	.	4E	116	78	N	6E	156	110	n	8E	216	142	AE	256	174	CE	316	206	EE	356	238	
DF	017	15	SI	Shift-In	2F	057	47	/	4F	117	79	O	6F	157	111	o	8F	217	143	AF	257	175	CF	317	207	EF	357	239	
10	020	16	DLE	Data Link Escape	30	060	48	0	50	120	80	P	70	160	112	p	90	220	144	BO	260	176	DO	320	208	FO	360	240	
11	021	17	DC1	X-ON	31	061	49	1	51	121	81	Q	71	161	113	q	91	221	145	BI	261	177	DI	321	209	FI	361	241	
12	022	18	DC2	Device Control 2	32	062	50	2	52	122	82	R	72	162	114	r	92	222	146	BE	262	178	DE	322	210	F2	362	242	
13	023	19	DC3	X-OFF	33	063	51	3	53	123	83	S	73	163	115	s	93	223	147	BS	263	179	DS	323	211	F3	363	243	
14	024	20	DC4	Device Control 4	34	064	52	4	54	124	84	T	74	164	116	t	94	224	148	BT	264	180	DT	324	212	F4	364	244	
15	025	21	NAK	Not Acknowledge	35	065	53	5	55	125	85	U	75	165	117	u	95	225	149	BU	265	181	DU	325	213	F5	365	245	
16	026	22	SYN	Synchronous Idle	36	066	54	6	56	126	86	V	76	166	118	v	96	226	150	BV	266	182	DV	326	214	F6	366	246	
17	027	23	ETB	End Trans. Block	37	067	55	7	57	127	87	W	77	167	119	w	97	227	151	BW	267	183	DW	327	215	F7	367	247	
18	030	24	CAN	Cancel	38	070	56	8	58	130	88	X	78	170	120	x	98	230	152	BX	270	184	DX	330	216	F8	370	248	
19	031	25	EM	End of Medium	39	071	57	9	59	131	89	Y	79	171	121	y	99	231	153	BY	271	185	DY	331	217	F9	371	249	
1A	032	26	SUB	Substitute Char	3A	072	58	:	5A	132	90	Z	7A	172	122	z	9A	232	154	BA	272	186	DA	332	218	FA	372	250	
1B	033	27	ESC	Escape	3B	073	59	;	5B	133	91	[	7B	173	123	[	9B	233	155	BB	273	187	DB	333	219	FB	373	251	
1C	034	28	FS	File Separator	3C	074	60	<	5C	134	92	\	7C	174	124	\	9C	234	156	BC	274	188	DC	334	220	FC	374	252	
1D	035	29	GS	Group Separator	3D	075	61	=	5D	135	93	]	7D	175	125	]	9D	235	157	BD	275	189	DD	335	221	FD	375	253	
1E	036	30	RS	Record Separator	3E	076	62	>	5E	136	94	^	7E	176	126	^	9E	236	158	BE	276	190	DE	336	222	FE	376	254	
1F	037	31	US	Unit Separator	3F	077	63	?	5F	137	95	_	7F	177	127	_	9F	237	159	BF	277	191	DF	337	223	FF	377	255	
⤴ To generate use Control Key <CTRL> with																													

25 pin connector using round terminals  
View of front of Socket (female connector)



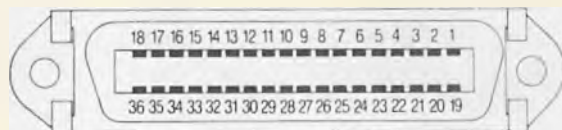
DTE = Data Terminal Eqpt (Printer, Modem port)  
DCE = Data Communications Eqpt (Printer port, Modem)

PIN	CIRCUIT	FUNC	SRC	CODE	DESCRIPTION
1	AA	101	Gnd	-	FG Frame Ground
2	BA	103	Data	DTE TD	Transmit Data
3	BB	104	Data	DCE RD	Receive Data
4	CA	105	Cont	DTE RTS	Ready to Send
5	CB	106	Cont	DCE CTS	Clear to Send
6	CC	107	Cont	DCE DSR	Data Set Ready
7	AB	102	Gnd	-	SG Signal Ground
8	CF	109	Cont	DCE CD	Carrier Detect
20	CD	108	Cont	DTE DTR	Data Terminal Ready
21	CG	110	Cont	DCE SQD	Signal Quality Detect
22	CE	125	Cont	DCE RI	Ring Indicator
23	CH	111	Cont	DTE DRS	Data Rate Select



Control signals must be on to allow data transfer

36 pin connector using flat contacts.  
View of front of socket (female - groove down middle)



PIN	SIGNAL	SRC	PIN	SIGNAL	SRC
1	* Data strobe pulse	Comp	19	Signal ground	-
2	Data bit 1 (LSB)	Comp	20	Signal ground	-
3	Data bit 2	Comp	21	Signal ground	-
4	Data bit 3	Comp	22	Signal ground	-
5	Data bit 4	Comp	23	Signal ground	-
6	Data bit 5	Comp	24	Signal ground	-
7	Data bit 6	Comp	25	Signal ground	-
8	Data bit 7	Comp	26	Signal ground	-
9	Data bit 8 (MSB)	Comp	27	Signal ground	-
10	* Acknowledge pulse	Prt	28	Signal ground	-
11	Busy	Prt	29	Signal ground	-
12	Paper Empty	Prt	30	Signal ground	-
13	Select	Prt	31	* Input prime	Comp
14	Signal ground	-	32	* Fault	Prt
15	No connection	-	33	Signal ground	-
16	Signal ground	-	34	* Ext prime	Comp
17	Chassis ground	-	35	No connection	-
18	+ 5 volts DC	Prt	36	Input busy	Prt

Signals TTL levels: Active +2 to +5V, False +0 to +0.4V  
\* Inverted signals: Active +0 to +0.4V, False +2 to +5V

Compiled by

**CONTROL**  
MICROCOMPUTERS

P.O. Box 68-474 Auckland, Ph (09) 600-687



# Commonly Used Symbols And Abbreviations

<b>A</b>	ampere, amplification factor	<b>CPU</b>	central processing unit	<b>G</b>	gram
<b>AC</b>	alternating current	<b>CQ</b>	general call to all stations	<b>g</b>	giga (10 <sup>9</sup> );
<b>A/D</b>	analogue-to-digital	<b>CRT</b>	cathode-ray tube	<b>G</b>	conductance; magneto motive force
<b>AF</b>	audio frequency	<b>ct</b>	centre tap	<b>GaAs FET</b>	gallium arsenide field-effect transistor
<b>afc</b>	automatic frequency control	<b>CTCSS</b>	continuous tone coded squelch system	<b>GDO</b>	grid-dip or gate-dip oscillator
<b>afsk</b>	audio frequency shift keying	<b>CW</b>	continuous wave (code); clockwise	<b>GHz</b>	gigahertz
<b>agc</b>	automatic gain control	<b>D</b>		<b>gnd</b>	ground
<b>Ah</b>	ampere hour	<b>D</b>	electrostatic displacement; flux density	<b>H</b>	henry; magnetic field strength
<b>alc</b>	automatic load (or level) control	<b>D/A</b>	digital-to-analogue	<b>H</b>	height above mean terrain
<b>AM</b>	amplitude modulation	<b>dB</b>	decibel	<b>HAAT</b>	high frequency (3-30 MHz)
<b>a.m.</b>	morning	<b>dBd</b>	antenna gain referenced to a dipole	<b>HF</b>	heterodyne-frequency oscillator
<b>AMSAT</b>	Radio Amateur Satellite Corporation	<b>dBDM</b>	double-balance diode mixer	<b>HFO</b>	highest possible frequency;
<b>AMTOR</b>	Amateur Teleprinting Over Radio	<b>dB</b>	antenna gain referenced to an isotropic, a dipole has a gain of 2.14 dB	<b>hpf</b>	high pass filter
<b>anl</b>	automatic noise limiter	<b>dBm</b>	decibel referred to 1 milliwatt	<b>HT</b>	high tension
<b>ant</b>	antenna	<b>dBW</b>	decibel referred to 1 watt	<b>Hz</b>	hertz
<b>AOS</b>	acquisition of signal	<b>DC</b>	direct current	<b>I</b>	current
<b>ARA</b>	Amateur Radio Association	<b>det</b>	detector	<b>I</b>	current
<b>ARC</b>	Amateur Radio Club	<b>DF</b>	direction finder; direction finding	<b>IARU</b>	International Amateur Radio Union
<b>AREC</b>	Amateur Radio Emergency Corps	<b>DIP</b>	dual-in-line package, 14 to 16 pins	<b>IC</b>	integrated circuit
<b>ARS</b>	Amateur Radio Society; Amateur Radio Station	<b>dpdt</b>	double-pole double-throw	<b>i-d</b>	identification; identifier
<b>ASCII</b>	American National Standard Code for Information Interchange	<b>dpst</b>	double-pole single-throw	<b>ID</b>	inside diameter
<b>ATV</b>	amateur television	<b>dsb</b>	double sideband	<b>IF</b>	intermediate frequency
<b>avc</b>	automatic volume control	<b>DTL</b>	diode-transistor logic	<b>IMD</b>	inter-modulation distortion
<b>AWG</b>	American wire gauge	<b>DTMF</b>	dual tone multi-frequency	<b>I/O</b>	input/output
<b>az-el</b>	azimuth-elevation	<b>DVM</b>	digital voltmeter	<b>IRC</b>	international reply coupon
<b>B</b>		<b>DX</b>	long distance	<b>ISB</b>	independent sideband
<b>B</b>	flux density; susceptance	<b>DXCC</b>	DX Century Club	<b>ITU</b>	International Telecommunication Union
<b>BASIC</b>	Beginner's All-purpose Symbolic Instruction Code (computer language)	<b>E</b>	voltage	<b>IW</b>	Intruder Watch (Monitoring Service)
<b>b</b>	byte (a group of bits or binary digits, usually eight)	<b>E</b>	base of Napierian logs	<b>J</b>	Joule
<b>bc</b>	broadcast	<b>e</b>	emitter-coupled logic	<b>J</b>	indicator for reactive component of an impedance; (+j inductive; -j capacitive); joule
<b>BCD</b>	binary-coded-decimal	<b>ECL</b>	emitter-coupled logic	<b>j</b>	junction field-effect transistor
<b>BCI</b>	broadcast interference	<b>ECO</b>	electron-coupled oscillator	<b>JFET</b>	
<b>bcl</b>	broadcast listener	<b>EHF</b>	extra high frequency (30-300GHz)	<b>K</b>	kilo (1000)
<b>bd</b>	baud (bits/sec)	<b>EHT</b>	extra high tension	<b>k</b>	kilobyte; specific inductive capacity; Kelvin; dielectric constant
<b>ber</b>	bit error rate	<b>eirp</b>	effective isotropic radiated power	<b>K</b>	kilogram
<b>bit</b>	binary digit	<b>EMC</b>	electro-magnetic capability	<b>kHz</b>	kilohertz (10 <sup>3</sup> )
<b>BFO</b>	beat-frequency oscillator	<b>E-M-E</b>	earth-moon-earth (moonbounce)	<b>km</b>	kilometre
<b>bpf</b>	band pass filter	<b>emf</b>	electromotive force (voltage)	<b>kV</b>	kilovolt
<b>bw</b>	bandwidth	<b>EMI</b>	electro-magnetic interference	<b>kW</b>	kilowatt
<b>byte</b>	computer word, 8 bits	<b>EMP</b>	electromagnetic pulse	<b>kWh</b>	kilowatt hour
<b>C</b>		<b>EPRM</b>	erasable programmable read-only memory	<b>L</b>	self inductance
<b>C</b>	Celsius, capacity, Coulomb	<b>EUV</b>	extreme ultra-violet radiation	<b>L</b>	inductance-capacitance
<b>c</b>	velocity of EM waves	<b>EQX</b>	equator crossing	<b>LC</b>	liquid crystal display
<b>CATV</b>	cable television	<b>erp</b>	effective radiated power	<b>LCD</b>	light-emitting diode
<b>CB</b>	citizens band	<b>F</b>	frequency	<b>LED</b>	low frequency (30-300kHz)
<b>CCIR</b>	International Radio Consultative Committee	<b>F</b>	farad; Fahrenheit	<b>LF</b>	left-hand circular polarisation
<b>CCIT</b>	Consultative Committee for International Telegraph and Telephone (ITU)	<b>FAX</b>	facsimile	<b>thcp</b>	linear master oscillator
<b>CCS</b>	constant current source	<b>FCC</b>	Federal Communications Commission	<b>LMO</b>	local oscillator
<b>cctv</b>	closed circuit television	<b>FD</b>	Field Day	<b>loran</b>	long-range navigation
<b>ccw</b>	coherent CW; counter-clockwise	<b>FET</b>	field-effect transistor	<b>LOS</b>	loss of signal
<b>CD</b>	Civil Defence	<b>FF</b>	flip-flop	<b>lp</b>	long periodic; long path
<b>Ch</b>	channel	<b>FM</b>	frequency modulation	<b>LSB</b>	lower sideband; least significant bit
<b>cm</b>	centimetre	<b>FMT</b>	frequency measuring test	<b>LSI</b>	large-scale integration
<b>CMOS</b>	(or COSMOS)—complementary-symmetry metaloxide semiconductor	<b>FMTAG</b>	Frequency Management Technical and Advisory Group	<b>LT</b>	low tension
<b>coax</b>	coaxial cable or connector	<b>fsd</b>	full scale deflection	<b>luf</b>	lowest usable frequency
<b>COR</b>	carrier-operated relay	<b>FSK</b>	frequency-shift keying	<b>lw</b>	longwave; long wire



**M**  
m metre (distance or band); milli (10<sup>-3</sup>); mass  
**M**  
mA mega (10<sup>6</sup>); mutual inductance  
milliampere (one-thousandth of an Amp)  
mA-H milliampere hour  
MARS Military Affiliate Radio System  
MATV multi-access television  
MF medium frequency (300-3000kHz)  
mH millihenry  
MHz megahertz (10<sup>6</sup>)  
mike; mic microphone  
mini-DIP dual-in-line package of 8 pins  
mi/h miles per hour  
mi/s miles per second  
mix mixer  
mm millimetre  
MO master oscillator  
MOS metal oxide semiconductor  
mod modulator  
modem modulator/demodulator  
MOX manually operated switching  
ms millisecond  
m.s. meteor scatter  
m/s metres per second  
MSB most significant bit  
MSI medium-scale integration  
MSTV medium-scan television  
MUF maximum usable frequency  
MUX multiplex; multiplexer  
mV millivolt  
mW milliwatt

**N**  
N modulation factor  
n nano (10<sup>-9</sup>)  
nbfm narrow-band frequency modulation  
nbvm narrow-band voice modulation  
n.c. no connection  
NC normally closed  
NF noise figure  
NiCad nickel cadmium  
NL noise limiter  
NMOS n-channel MOS  
NO normally open  
npn negative-positive-negative  
nS nanosecond  
NZART New Zealand Association of Radio Transmitters

**O**  
OD outside diameter  
OM old man  
op amp operational amplifier  
osc oscillator  
OSCAR Orbiting Satellite Carrying Amateur Radio  
OTC Old Timers' Club  
oz ounce

**P**  
p pico (10<sup>-12</sup>)  
P power  
PA power amplifier; public address system

PAM pulse amplitude modulation  
PCB printed (or etched) circuit board  
PCM pulse code modulation  
PEP peak envelope power  
pF picofarad  
ph phone  
PIN positive intrinsic negative  
PIV peak inverse voltage  
pk peak  
pk-pk peak to peak

PLL phase-locked loop  
PM phase modulation  
p.m. afternoon/night  
PMOS p-channel MOS  
pnp positive-negative-positive  
ppi plan position indicator (radar)  
pot potentiometer  
PROM programmable read-only memory  
PRV peak reverse voltage  
PSK phase-shift keying  
PTO permeability-tuned oscillator  
PTT push-to-talk  
PSU power supply unit

**Q**  
Q figure of merit (tuned circuits); charge; quantity  
QRP low power (less than 10 watts input)  
QTHR address correct in Call Book

**R**  
R resistance  
RAM random access memory  
R/C radio control  
R-C resistor-capacitor  
rcvr receiver  
rev/min revolutions per minute  
RF radio frequency  
RFC radio-frequency choke  
RFI radio-frequency interference  
rhcp right-hand circular polarisation  
RI Radio Inspector  
RIT receiver incremental tuning  
RLC resistor, inductance, capacitor network  
rms root-mean-square  
RO Radio Officer  
ROM read-only memory  
rptr repeater  
RS Radiosport Satellite (USSR)  
RSGB Radio Society of Great Britain  
RST readability-strength-tone  
RT radiotelephone  
RTL resistor-transistor logic  
RTTY radioteletype  
Rx receiver

**S**  
S second; magnetic reluctance; Siemens  
SAE self-addressed envelope  
SASE stamped SAE  
SCR silicon-controlled rectifier  
SHF super-high frequency (3-30GHz)  
SINAD Ratio of Signal to Noise and Distortion  
SM silver mica (capacitor)  
SNR; S/N signal-to-noise ratio  
spdt single-pole double-throw  
spst single-pole single-throw  
SS sweepstakes; spread spectrum  
SSB single sideband  
SSC AMSAT Phase III special service channels  
SSI small-scale integration  
SSTV slow-scan television  
STSP short-term special purpose (FM repeaters)  
SWL shortwave listener  
SWR standing-wave ratio  
sync synchronous; synchronising  
SYNCART synchronous satellite carrying Amateur Radio Transponder

**T**  
t time; temperature  
T period; temperature  
TA technical adviser  
TCA time of closest approach  
TE trans-equatorial (propagation)  
tfc traffic  
THz terahertz (10<sup>12</sup>)  
THD total harmonic distortion  
tpi turns per inch  
T-R transmit-receive  
TTL; T<sup>2</sup>L transistor-transistor logic  
TTY teletypewriter (from Teletype, the trade mark of Teletype Corporation)

TV television  
TVI television interference  
Tx transmitter

**U**  
UHF ultra-high frequency (300-3000 MHz)  
UJT uni-junction transistor  
UoSAT University of Surrey educational/research satellite (Great Britain)  
USB upper sideband  
UTC Universal Co-ordinated Time  
uV ultra-violet light

**V**  
V volt; voltage  
VA Volt-Ampere  
VCO voltage-controlled oscillator  
VCR video cassette recorder  
VCXO voltage-controlled crystal oscillator  
VFBO variable-frequency beat oscillator  
VFO variable frequency oscillator  
VHF very-high frequency (30-300 MHz)  
VLSI very large scale integration  
VOM volt-ohm-milliammeter  
VOX voice-operated switching  
VR voltage regulator  
VSWR voltage standing-wave ratio  
VTVM vacuum-tube voltmeter  
VU volume unit  
VXO variable crystal oscillator

**W**  
W watt; work  
WAC Worked All Continents  
WARC World Administrative Radio Conference  
WAS Worked All States  
wbfm wide-band FM  
Wh watt-hours  
wpm words per minute  
ww wire wound; wire wrap  
wx weather

**X**  
X reactance; electrostatic field strength  
xcvr transceiver  
XO crystal oscillator  
xfmr transformer  
xmtr transmitter  
xtal crystal  
XYL wife

**Y**  
Y admittance  
YF wife

**Z**  
Z impedance; UTC time



## Conversion Factors (Metric-Imperial)

1 millimetre (mm)	= 0.03937 inch
1 centimetre (cm) = 10mm	= 0.3937 inch
1 metre (m) = 100cm	= 39.37 inches, 3.28 feet, 1.094 yards
1 kilometre (km) = 1000m	= 3280.8 feet, 1094 yards, 0.621 miles
1 gram (g) = 1000mg	= 0.03574 ounces
1 kilogram (kg) = 1000g	= 2.2046 pounds
1 tonne (t) = 1000kg	= 0.98 ton, 2204.6 pounds
1 cubic centimetre (cm <sup>3</sup> ) = 1000mm <sup>3</sup>	= 0.6102 cubic inches
1 cubic metre (m <sup>3</sup> )	= 35.3 cubic feet, 1.3 cubic yards
1 litre (l)	= 0.220 imperial gallons, 0.264 US gallons
1 kilopascal (kPa)	= 0.145 lbs/sq. inch, 0.009867 atmospheres
1 kilojoule (kJ)	= 0.948 BTU, 0.239 kilocalories, 737.56ft/lb
1 kilowatt (kW)	= 1.34 horsepower, 73.7ft.lb/sec
1 Newton (N)	= 0.2248lb force
1 Tesla (T)	= 10,000 gauss

## Colour Codes

## Prefixes for Multiples and Sub-multiples of Quantities

Multiple or Sub-multiple	Name	Prefix
10 <sup>12</sup>	Tera	T
10 <sup>9</sup>	Giga-	G
10 <sup>6</sup>	Mega-	M
10 <sup>3</sup>	Kilo-	k
10 <sup>2</sup>	Hecto	h
10	Deca	da
10 <sup>-1</sup>	Deci	d
10 <sup>-2</sup>	Centi-	c
10 <sup>-3</sup>	Milli-	m
10 <sup>-6</sup>	Micro-	μ
10 <sup>-9</sup>	Nano-	n
10 <sup>-12</sup>	Pico-	p

### Tantalum Capacitors

Top/Middle band: Value in μF (2 digits)

Middle Spot: Multiplier

Bottom band: Maximum voltage

Colour Code	Value	Multiplier	Voltage
Black	0	1	10.0
Brown	1	×10	1.6
Red	2	×100	0.4
Orange	3	×1k	40.0
Yellow	4	×10k	6.3
Green	5	×100k	16.0
Blue	6		20.0
Violet	7	×0.0001	
Grey	8	×0.01	25.0
White	9	×0.1	2.5

### Capacitors

Top band: First digit of value

Second band: Second digit of value (gives value in pF)

Third band: Multiplier

Fourth band: Tolerance—White 10%, Black 20%

Bottom Band: Voltage

### Resistors

Bands from closest to lead:

First digit of value

Second digit of value

Multiplier

Tolerance.

Colour Code	Value	Multiplier	Tolerance
Black	0	×1	
Brown	1	×10	1%
Red	2	×100	2%
Orange	3	×1k	
Yellow	4	×10k	
Green	5	×100k	
Blue	6	×1M	
Violet	7	×10M	
Grey	8		
White	9		
Gold			5%
Silver			10%
No band			20%

### Notes

- 1% tolerance resistors have five bands. The first three give three digits of value, the rest as above.
- Bands are closer to one end of the resistor. Read bands in sequence from this end.

## Preferred Number Series

(a) 10% Tolerance E12

10 12 15 18 22 27 33 39 47 56 68 82

(b) 5% Tolerance E24

10 11 12 13 15 16 18 20 22 24 27 30  
33 36 39 43 47 51 56 62 68 75 82 91

## Useful Formulae

### Wavelength (in metres)

Free space=300/f(MHz)

Half-wave wire dipole=143/f(MHz)

### Resonant frequency of an LC circuit

$f=0.159155/\sqrt{LC}$

### The quality factor or Q of a circuit at resonance is

$Q=2\pi f L/r$

### The 3dB bandwidth of such a single tuned circuit

$B=f(\text{res})/Q$

### Estimate of transformer rating

Output=31 A<sup>2</sup> watts

where A=core cross-section in sq.ins.

or Output=4.8 A<sup>2</sup> watts if A is in sq.cm.

### Ohms Law

$V = IR = W/I = \sqrt{WR}$

$I = V/R = W/V = \sqrt{W/R}$

$R = V/I = V^2/W = W/I^2$

$W = VI = I^2 R = V^2/R$

### Mains Plug Wiring

Phase	Brown	Red
Neutral	Blue	Black
Earth	Green/Yellow	Green

### Average, Peak, RMS Values

Multiplication factor for sine wave

	Average	RMS	Peak	Peak-Peak
Average	—	1.11	1.57	3.14
RMS	0.9	—	1.414	2.828
Peak	0.637	0.707	—	2.0



# Constitution

## OF THE NEW ZEALAND ASSOCIATION OF RADIO TRANSMITTERS INCORPORATED

### 1. NAME:

The name of the Society shall be "The New Zealand Association of Radio Transmitters Incorporated".

### 2. INTERPRETATION:

(a) In this Constitution, if not inconsistent with the context—  
"Association" means The New Zealand Association of Radio Transmitters Incorporated.

"Active Amateur" where used in relation to a nomination for the Executive Council means a transmitting member who holds an amateur station licence and who has been actively engaged in transmitting on amateur frequencies during the six month period prior to the date upon which the nomination is submitted.

"Amateur Radio" means all things associated with the Amateur Service, that is to say a radiocommunication service carried on by duly authorised persons interested in radio technique by way of intercommunication and technical investigation solely with a personal aim and without pecuniary interest.

"Branch" means a branch of the Association formed in accordance with this Constitution and which has not been deleted from the Register of Branches or placed in recess by Council.

"Electoral District" means one of the districts for the election of the Executive Council provided for by this Constitution.

"Executive Council" or "Council" means those Officers of the Association who hold office by virtue of a ballot of all members entitled by this Constitution to vote and includes those Officers returned to elective positions unopposed or appointed to fill a casual vacancy.

"National Conference" is an alternative name for the Annual General Meeting of the Association, and where so used (unless the context requires a contrary interpretation) does not include other activities organised or held in conjunction with the Annual General Meeting.

"Officers" means the Executive Council, the General Secretary, the Treasurer, and the persons designated as Appointed Officers by Council under paragraph 18 of this Constitution.

"Official Journal" means the publication designated as such by the Executive Council in terms of paragraph 28 hereof.

"Unfinancial" in relation to a member means a member whose subscription is unpaid after the date on which it falls due.

(b) The provisions of the Acts Interpretation Act 1924 and the recognised rules for the interpretation of written documents generally shall be applied in the interpretation of this Constitution.

*Words referring to a novice licence were deleted from the definition of "Active Amateur" by the Annual General Meeting in Whakatane in 1988 consequent upon regulatory provisions making novice licences becoming non-terminating.*

### 3. OBJECTS:

The objects of the Association shall be the maintenance and expansion of the Amateur Service in New Zealand by:

- (a) the encouragement of recruits into the Amateur Radio movement
- (b) the provision of guidance and instruction in radio technique and operating
- (c) the promotion organisation and conduct of activities on a national and a local basis to achieve high standards in the skills involved in Amateur Radio
- (d) the publication of an Official Journal
- (e) making known the merits of Amateur Radio in the community and nation
- (f) representing the interests of Amateur Radio
  - (i) with the Administration responsible for radio services, and
  - (ii) with other official authorities both national and international controlling conditions for Amateur Radio activities
- (g) collaborating with the National Amateur Radio Societies of other countries in the interests of world progress in Amateur Radio
- (h) taking any appropriate actions regarding the international regulations of radio, to safeguard Amateur Radio interests

- (i) the organising and provision of communication services for the authorities as required
- (j) taking such other action which in the opinion of the Executive Council is consistent with these objects.

*The word "Government" was deleted from Sub-paragraph (f) (i) by the Annual General Meeting in Whakatane in 1988. A reference to the "New Zealand Post Office" was deleted from Paragraph (i) by the same General Meeting following the repeal by Parliament of the Post Office Act 1959.*

### 4. MEMBERSHIP:

(a) The following rights, together with any other rights conferred by other parts of this constitution shall be the rights of members of the Association.

- (i) to attend without payment or pre-enrolment the Annual General Meeting of the Association,
- (ii) to vote on Association business with the branch of the Association to which they are attached for voting purposes in terms of paragraph 25(g) hereof,
- (iii) to introduce for discussion at an Annual General Meeting of the Association any matter within the objects of the Association,
- (iv) to seek the advice and support of the Association or of the Executive Council on any matter within the objects of the Association,
- (v) to nominate or be nominated for election to the offices of President or membership of the Executive Council,
- (vi) to vote in any election, referendum or ballot.

(b) Membership of the Association shall be divided into the following classes:

- (i) Transmitting Membership
- (ii) Non-transmitting Membership
- (iii) Associate Membership
- (iv) Honorary Membership
- (v) Honorary Life Membership

(c) Transmitting Members shall be members resident in New Zealand who hold a current Amateur Station Licence, including a member holding only a novice licence or qualification. Transmitting Members shall have full membership rights.

(d) Non-transmitting Members shall be members resident in New Zealand who do not hold a current Amateur Station Licence and shall have full membership rights with the exception of the following:

- (i) they shall have no right to hold elective office
- (ii) they shall have no right to vote on any remit to amend this Constitution
- (iii) they shall have no right to vote at a General Meeting or in a referendum on any matter which affects only the rights or special interests of transmitting members.

(e) Associate Members shall be persons who by reason of overseas residence do not qualify as ordinary members. Associate Members (whether or not they hold an Amateur Station Licence) shall have the same membership rights as Non-transmitting members with the following further exceptions:

- (iv) they shall have no vote whatsoever on any matter before a General Meeting or in a referendum,
- (v) they shall have no right to be notified of any General Meeting.

(f) Council may at its discretion and on such conditions as to notification of meetings and participation in postal ballots as it thinks fit either generally or for a particular member, group of members or occasion permit a person to be a transmitting or non-transmitting member notwithstanding overseas residence provided that such a member while resident overseas shall not be eligible to be a member of the Executive Council.

(g) Honorary Members shall for the period of their Honorary Membership have all the privileges of the class of membership to which they would otherwise belong but shall pay no subscription.

(h) Honorary Life Members shall be persons who have rendered valuable or distinguished service to the Association at National level and shall have all the privileges of the class of Member-



ship to which they would otherwise belong but shall pay no subscription.

- (i) The General Secretary shall as the circumstances or qualifications of members change, transfer a member from one class of membership to another.

## **5. ELECTION OR APPOINTMENT TO MEMBERSHIP:**

- (a) Application for membership shall be made on the form prescribed by Council from time to time, and the form so prescribed shall contain a declaration that if accepted for membership the applicant shall abide by the Constitution of the Association.
- (b) As soon as practicable after receiving an application for membership together with the current subscription (or a pro rata proportion thereof for the balance of the subscription year) the General Secretary shall:
  - (i) provisionally enrol the applicant in the Register of Members, and
  - (ii) advise Council of the application.
- (c) Upon the application receiving the approval of Council the applicant shall be admitted as a member of the Association.
- (d) A provisional member shall, pending his admission as a member, be entitled to all the privileges of the class of membership to which he has been admitted except the right to hold office or be nominated for the Executive Council.
- (e) If an applicant has previously been refused membership or has been expelled from the Association or if the General Secretary believes there is good reason for so doing then the General Secretary shall action the application in the manner prescribed above but without first enrolling the applicant as a provisional member. Council may at any time prior to the approval of an application direct that an applicant's name be removed from the list of provisional members.
- (f) Honorary Members may be appointed by Council for a period not exceeding two years.
- (g) Honorary Life Members shall be appointed by a General Meeting of the Association upon the recommendation of Council and shall not be required to pay any subscription.
- (h) Any member may resign his membership at any time by notice in writing addressed to the General Secretary at the registered office of the Association, but shall not be entitled to a refund of any subscription paid.

## **6. FORFEITURE OF MEMBERSHIP:**

- (a) If a complaint is made to Council in writing that any member of the Association has acted or is acting in a manner contrary to the Constitution of the Association or otherwise in a manner likely to bring Amateur Radio into disrepute, then Council may if it considers there are good grounds for so doing, conduct an enquiry into the conduct of the member.
- (b) Any such enquiry shall be conducted by Council at a meeting summoned for that purpose and shall be conducted by such method of procedure as Council may determine.
- (c) Before the enquiry is held the member complained of shall be served with notice of the proceedings and shall be given at least one month's notice of the time and place thereof. The notice of time and place shall have annexed a copy of the original complaint and shall state specifically that the matter is being actioned in terms of this section of the Constitution.
- (d) Any members whose actions are the subject of such enquiry may appear at the enquiry and may make submissions on his own behalf. He may be represented by Counsel or by another person on his behalf. He may call witnesses to give oral evidence and may submit written representations of reasonable length to Council.
- (e) If the member, having been properly notified, fails to appear at the appointed time and place or to make representations or to be represented by Counsel or by some other person, Council may proceed to hear and determine the matter forthwith.
- (f) The Association shall not be liable for the expenses of the member in respect of travelling, accommodation, engagement of Counsel, calling any witness or in any other way in connection with the enquiry but Council may at its discretion and without admission of liability by so doing make a grant to the member to cover the whole or any part of his expenses.

- (g) Council may at the expense of the Association engage Counsel and call witnesses relating to the matter in question.

- (h) If in the opinion of the majority of the Council the member whose conduct is the subject of the enquiry has acted or is acting in a manner contrary to the Constitution of the Association or otherwise in a manner likely to bring Amateur Radio or the Association into disrepute the Council may admonish him or may expel him from the Association.

- (i) In all cases where the Council imposes one of the penalties prescribed above, the fact that the penalty has been imposed together with a brief statement of the circumstances, shall be notified to all members either by inclusion in the business of the National Conference or in such other manner as the Council shall decide and in addition Council shall disclose to all members the name of the member upon whom the penalty was imposed unless Council considers there are special reasons why the name of the member should not be so disclosed.
- (j) Council may at its discretion delegate the hearing of any complaint to a sub-committee of Council or, alternatively, in special circumstances, of which the Council shall be the judge, to a Commissioner who need not be a member of the Association. It shall be the duty of any sub-committee of Council or of the Commissioner to hear the complaint in the manner described above, and to report to Council and make recommendations as to whether the complaint has been proved and as to the appropriate penalty to impose, but in all such circumstances the final decision as to whether the complaint has been proved and as to the penalty to be imposed shall be taken by the Council.
- (k) In the event of any complaint being received against a member of the Executive Council, that member shall not remain present at any meeting of the Executive Council while discussion relating to the complaint takes place, and shall not vote or be included in counting a quorum for any matter in connection with the complaint.

## **7. SUBSCRIPTION:**

- (a) Council may levy an annual subscription on members of the Association and may from time to time divide the membership into classes and declare that the different classes of members so divided shall pay only a proportion of the annual subscription.
- (b) Council may not more than once each subscription year vary the subscription so levied, but shall not increase the subscription by more than twenty-five per cent without the approval of a majority vote at a General Meeting.
- (c) Unless specifically otherwise provided for in this Constitution the division of membership into classes pursuant to sub paragraph (a) above shall be for the purpose only of assessing the subscription payable and shall not in any way otherwise affect the privileges of the class of membership to which any member belongs.
- (d) The annual subscription shall fall due on the 1st day of January in each year and any member whose subscription is unpaid on that date shall be unfinancial and shall not be entitled to the privileges of membership. Any member whose subscription remains unpaid after the 31st March in any year shall have his name removed from the Register of Members provided that if the whole of the arrears of subscription are paid and the General Secretary is satisfied that the failure to pay was due to inadvertence or other good cause then that person shall be re-instated to the Register of Members upon application and shall not be required to re-apply for membership.
- (e) Council may at its discretion direct that payment of all or any part of the subscription of any member be remitted.

## **8. NOMINATIONS FOR OFFICE:**

- (a) Council shall every two years direct that an election be held for the office of President and for the Executive Council and shall not later than the 1st day of September in the year prior to the holding of the election appoint a Returning Officer (who shall not be eligible to be a candidate in the election) who shall have the duty of conducting the election in accordance with this Constitution.
- (b) The Returning Officer shall forthwith upon his appointment give notice of his appointment and of the election by publica-



tion in the Official Journal and call for nominations for the office of President and for the Executive Council. The Notice of Election shall provide that nominations are to reach the Returning Officer on the 31st day of December in the year prior to the year in which the election is to be held. The Returning Officer shall however treat mail reaching him either by postal delivery or by clearance from a Post Office box on the 1st day of January as having been received in time, but the Returning Officer shall not be required to make more than one postal box clearance on the 1st day of January.

- (c) Every nomination shall be in writing and shall be signed by the person nominating and by a seconder and shall be countersigned by the members nominated. The nomination shall also contain a certificate signed by all three parties that the candidate is an active amateur, provided that if a nomination is received without such a certificate, it shall be the duty of the Returning Officer either to obtain such a certificate or to satisfy himself by other means that the candidate is an active amateur before including the candidate in the ballot.
- (d) A member may be nominated for both the office of President and Councillor for a district and a member so nominated shall have his name on the ballot paper both for President and for Council. In the event of the member being elected to both offices, he shall be deemed to prefer the office of President and the next successful candidate in the election for Council shall be deemed elected. If there has been no ballot for the election of Council then the President's position on Council shall be filled as a casual vacancy.
- (e) In the election for Council only members attached to branches (in the manner provided for in paragraph 25 (d) hereof) within the electoral district for which the election is being held shall be entitled to nominate or be nominated for office or vote in any election.
- (f) In the event of Council failing to appoint a Returning Officer for any election year it shall be the duty of the General Secretary to act as Returning Officer and to conduct the election without further appointment or direction than this provision.

## 9. CONDUCT OF ELECTIONS:

- (a) The Returning Officer shall in each election year arrange for the preparation of ballot papers and ballot envelopes which together with such biographical details of candidates as he has received, edited where necessary, shall be posted during the month of February to every financial member entitled to vote at his address shown in the Register of Members.
- (b) In the ballot for President the member shall strike out the name or names of the candidate or candidates not voted for leaving on the ballot paper unstruck out, the name of the candidate for whom the member does wish to vote.
- (c) In the ballot for Councillors the member shall strike out the names of the candidate or candidates not voted for leaving on the ballot paper, unstruck out, the name or names of the candidates or candidate for whom the member does wish to vote. A member may vote for fewer candidates than there are to be elected.
- (d) It shall be the duty of the member to place the completed ballot paper in the ballot envelope addressed to the Returning Officer but otherwise unmarked. This envelope in turn shall be placed in a further envelope also addressed to the Returning Officer but bearing the member's name, address and call sign (if any).
- (e) Upon being satisfied that the person named in the envelope is entitled to vote, the Returning Officer shall remove the interior envelope and place it in the ballot ensuring always that the envelope is unmarked and that the voter cannot be identified.
- (f) The ballot shall close on the 20th March, and all ballot papers shall be posted or otherwise delivered to reach the Returning officer by that date. The Returning Officer shall, however, treat mail reaching him either by postal delivery or by clearance from a Post Office box on the following day as having been received in time, but the Returning Officer shall not be required to make more than one postal box clearance on the day following the closing of the ballot.
- (g) The Returning Officer shall appoint two scrutineers (not being candidates in the election) who together with the Returning Officer shall count the votes cast. Should any question arise as

to a member's entitlement to vote or as to the propriety of any vote the same shall be determined by the Returning Officer. The Returning Officer's decision shall however not bind any subsequent Inspecting Officer.

- (h) After the completion of counting the Returning Officer shall make a written declaration of the result of the election, showing the number of votes cast for each candidate and shall forward a copy of the declaration to the President, the General Secretary and to each candidate and shall arrange publication in the official journal.
- (i) In the event of equality of voting, the Returning Officer shall decide by lot in the presence of two scrutineers, which of the candidates is to be returned.
- (j) Upon election (except as provided for in Clause 10 (a) hereof) the Executive Council shall hold office from the conclusion of the National Conference following their election until the next Council takes office.

## 10. ELECTION IRREGULARITIES:

- (a) Within fourteen days of the declaration of a result any candidate, Council or a branch, may request an enquiry into the conduct of an election, stating precisely the reasons for seeking any enquiry, whereupon Council, or in the cases of urgency, the President acting alone may appoint an Inspecting Officer to report to Council on the conduct of an election.
- (b) The Inspecting Officer shall be a person who was not a candidate in the election and preferably, who has previously held a national elective office in the Association. It shall be the duty of the Inspecting Officer to consider any complaints made and report forthwith in writing to the Council.
- (c) Upon receiving the report of the Inspecting Officer Council may—
  - (i) annul the result of the election or any section thereof and call new elections giving such directions as to closing time for nominations, etc., as may be necessary, or
  - (ii) alter the declaration of the result if satisfied that a clear error has been made, or
  - (iii) declare that notwithstanding any irregularities the result of the election has not been affected, and confirm the declaration of the result.
- (d) In the event of new elections being called, they shall be held promptly, and the outgoing President and Council shall remain in office until the Returning Officer has declared the result thereof.
- (e) Any member of Council whose positions on Council would or might be affected by the report of the Inspecting Officer, shall not be counted in a quorum or be entitled to vote on any motion relating to the adoption of the Inspecting Officer's report, provided that, if the application of this rule would leave the meeting of Council without the quorum prescribed herein for Council business, then all Council members may vote notwithstanding that their positions are so affected.

## 11. CONTROL OF THE ASSOCIATION:

- (a) The business of the Association shall be entrusted to an Executive Council which shall consist of the following:
  - (i) The President and a Vice-President chosen in accordance with the provisions of paragraph 17 hereof;
  - (ii) The Immediate Past-President (except where the President has been elected for a second term, in which case the office of Immediate Past-President shall not be filled);
  - (iii) [Six] Councillors for the [[Northern]] electoral district which shall consist of amateurs belonging to branches having their headquarters located in an area where call signs beginning with ZL1 are allocated at the time this Constitution comes into force;
  - (iv) [Six] Councillors from the [[Central]] electoral district which shall consist of amateurs belonging to branches having their headquarters in an area where call signs beginning with ZL2 are allocated at the time this Constitution comes into force;
  - (v) [Three] Councillors from the [[Midlands]] electoral district which shall consist of amateurs belonging to branches having their headquarters in an area where call signs beginning with ZL3 are allocated at the time this Constitution comes into force;
  - (vi) [Two] Councillors from the [[Southern]] electoral district



which shall consist of amateurs belonging to branches having their headquarters in an area where call signs beginning with ZL4 are allocated at the time this Constitution comes into force.

- (b) Where a member resides in an area to which call signs with a prefix other than ZL1, ZL2, ZL3 and ZL4 are allocated or an area otherwise having distinctive call signs that member shall be placed in the electoral district of his choice.

*The words in square brackets were inserted in place of the original wording by the 1981 Annual General Meeting in Auckland. The words in double square brackets were inserted in place of the original wording by the 1985 Annual General Meeting at Christchurch.*

## 12. MEETINGS OF THE EXECUTIVE COUNCIL:

- (a) The Council of the Association shall meet as often as the business of the Association shall require.
- (b) The Executive Council may in addition to meeting in person, conduct its affairs by means of radio-communication on an amateur frequency subject however to the provisions of the Radio Regulations 1970. A meeting convened and held in this manner shall be deemed to be duly convened and held.
- (c) Where the Executive Council meets by means of radio-communication a member who for good reason is unable to take part in the meeting may record his views by correspondence. A member of the Executive Council recording his views in this way shall be deemed to have been present at the meeting for the purpose of Clause 12 (f) hereof.
- (d) A meeting of the Council may be called by the President or Acting-President (as provided for in paragraph 17 (b) and shall be called upon the written request of three members of the Executive Council. Any such request shall be directed to the President and the President shall call the meeting within seven days to be held in the first instance by radio-communication within fourteen days of the receipt of a written request. The written request shall specify the nature of the business to be conducted at the meeting.
- (e) Seven members of the Executive Council present in person or by radio-communication representing at least three different electoral districts shall constitute a quorum.
- (f) Any member of Council who is absent from three consecutive meetings of Council without being granted leave of absence shall be deemed to have resigned, and the General Secretary shall forthwith declare a vacancy in Council. Leave of absence may be granted by Council either before or after a proposed absence and in special circumstances after the declaration of a vacancy, in which case the Council member shall be reinstated. In the event of leave of absence being granted after the declaration of a vacancy, Council shall cause a statement of its reasons for granting leave to be announced to the National Conference or in the Official Journal, whichever shall first be practicable.
- (g) Where a vacancy has been declared, the Council member who has vacated office shall not be reappointed (unless leave of absence is subsequently granted) before the next Council takes office.
- (h) The acts of any member of the Executive Council shall be valid notwithstanding that any defect is afterwards discovered in his election or appointment.
- (i) Except where otherwise provided by this Constitution a Councillor or any member may contract with the Association, may vote and be counted in a quorum on any matter in which he has a financial interest provided that he first declares to the Council, either generally in respect of a continuing interest or specifically for a particular case, the nature of that interest. No decision of Council shall, however, be challenged on the grounds that a Councillor so interested has voted in respect of a matter in which he has an interest, if the vote was cast by the member in good faith and through inadvertence.

## 13. SUB-COMMITTEE OF COUNCIL:

- (a) Council may appoint such sub-committees as it deems necessary to assist in its work. All sub-committees shall contain at least one member of Council, and in addition (with the exception of a sub-committee appointed in terms of Clause 6 (j) hereof) the President shall be an ex-officio member of all sub-committees.
- (b) All sub-committees shall report to Council and shall forward a

copy of all minutes to the General Secretary and to the President. Where practicable and taking into account the expense involved Council members shall also receive a copy of all minutes.

## 14. PROPERTY OF THE ASSOCIATION AND POWERS OF COUNCIL:

- (a) Council shall have control of the funds and assets of the Association and shall have all administrative powers necessary for properly carrying out all the objects of the Association in accordance with this Constitution and which are not specifically reserved to the Association in General Meeting. All other specific powers granted to Council in this Constitution are in augmentation of this general power and shall not be read as restricting it in any way.
- (b) Council shall from time to time as it considers necessary authorise expenditure for the furtherance of the objects of the Association.
- (c) With the proper approval of the National Conference Council shall have the power to borrow money for the furtherance of the objects of the Association and to secure the payment thereof by the issue of Debentures, or by Mortgage or charge or lien upon the whole or any part of the Association property or assets, both present and future, provided always that Council may, without the prior approval of a National Conference, borrow on overdraft from the Association bankers a sum not exceeding one-fifth of subscription income for the then current year.
- (d) Council may invest any funds of the Association not immediately required upon any investments authorised by the law of New Zealand for the investment of trust funds.
- (e) Council may purchase, take on lease, exchange, hire or otherwise acquire any real or personal property and any rights or privileges which Council may think necessary for the purpose of any of the objects of the Association.
- (f) Council may sell, improve, manage, develop, exchange, lease, dispose of or otherwise deal with all or any part of the Association property.
- (g) Where by this Constitution or by any regulations made hereunder the General Secretary or any other officer is empowered to make any decision or exercise any discretion, any decision so made or any discretion so exercised, may be reviewed by Council may substitute its own discretion or decision for that of the General Secretary or Officer.
- (h) Where by this Constitution or by any regulations made hereunder Council is required or entitled to exercise a discretion or make any decision on a matter of administration, the exercise of that discretion and the making of that decision may be delegated by Council to any Officer of the Association but reserving always the right of review by Council.
- (i) The property of the Association shall be employed solely for the furtherance of the objects of the Association and any profits or surplus arising from the use thereof shall remain the property of the Association.
- (j) Any member acting for the Association with the proper authority who incurs expense on the Association's behalf shall be entitled to reimbursement from the Association's property and shall be indemnified to the extent of the Association's property and effects against personal losses except such as happen through his own wilful act or default.

## 15. BANKING:

- (a) The banking of the Association shall be with such banking concerns as may from time to time be directed by Council.
- (b) All monies received by or on behalf of the Association shall be paid promptly into an account or accounts and cheques, bills and withdrawal forms drawn on such accounts shall be signed by the President, or a Councillor, or the Treasurer and shall be countersigned by the General Secretary, or by a second Council member appointed by Council for this purpose.

## 16. VACANCIES ON COUNCIL:

- (a) A member of the Executive Council shall be deemed to have vacated his office on the happening of any of the following events:
- (i) by the member's death or resignation,



- (iii) upon the member being removed from office by a Special General Meeting,
  - (iv) upon being absent from three meetings of Council in terms of Clause 12 (f) without leave of absence,
  - (v) in the event of the member (not being the President or Immediate Past-President) taking up permanent residence in an electoral district other than that for which he was elected provided that this clause shall apply only if the member so takes up residence prior to the 1st day of January in an election year,
  - (vi) in the event of the member leaving New Zealand permanently or for an indefinite period,
  - (vii) in the event of the Vice-President becoming President whereupon the Vice-President's place on Council shall become vacant.
- (b) Any vacancy so created shall be a casual vacancy and the position shall be filled by a member appointed by Council. A member appointed to fill a casual vacancy shall hold office until the next Council takes office. Any Council position not filled at an election shall be deemed a casual vacancy.
  - (c) A member of the Executive Council may be removed from office only by a two-thirds vote of a Special General Meeting summoned for that purpose. Where Council receives a requisition for a Special General Meeting for the purpose of removing a Councillor, Council may decline to call that meeting if it is within six months of the date upon which a National Conference is due.
  - (d) In voting whether or not to call a Special General Meeting requisitioned for in terms of this clause, any Councillor, whose position would be affected by the proposed motion, shall not be entitled to vote nor shall that Councillor be included in a quorum.

## 17. THE VICE PRESIDENT:

- (a) Council shall as soon as possible after taking office elect from among its members (excluding the Immediate Past-President unless he also holds an elective position on Council) a Vice-President who shall have generally the duty of assisting the President on an as required basis.
- (b) Upon the President leaving New Zealand or being otherwise temporarily unable to carry out his duties, the Vice-President shall become Acting President and while carrying out his duties shall have all the powers vested in the President by this constitution. While Acting President the Vice-President shall retain his position as an elected Councillor and there shall be no vacancy on Council.
- (c) In the event of the office of President becoming vacant, the Vice-President shall become President by virtue of this provision without the necessity of any appointment or election. Council shall thereupon appoint a further Vice-President in the manner provided for in paragraph (a) above.
- (d) The Vice-President shall become President automatically if after calling nominations no nomination is received for the office of President. The Vice-President shall not, however, be included in any ballot unless he has been properly nominated in terms of Paragraph 8 hereof.
- (e) In the event of both the President and Vice-President being absent from New Zealand or otherwise unable to carry out the duties of President, Council shall appoint an Acting President from among its own members.

## 18. APPOINTED OFFICERS:

- (a) Council shall, as soon as possible after taking office, appoint a General Secretary and a Treasurer and shall determine the terms (including remuneration) upon which they shall hold office. It shall be the duty of the General Secretary and Treasurer so appointed to carry out the duties of their respective offices as outlined in this Constitution.
- (b) Council may create such offices as it deems fit to assist it in the administration of Association affairs, and may appoint officers to administer those offices whether elected members of the Council or not and may from time to time authorise the payment of honoraria to such officers.
- (c) Council may appoint deputies to the various officers who shall have such powers as Council directs. An officer may delegate his duties and powers to his deputy, either generally or for a

specific occasion. In the absence of an Officer, a deputy may exercise the powers of the Officer unless council when appointing the deputy, otherwise directs.

- (d) Any Officer may choose assistants (who shall not be called deputies) to assist him in his work from time to time. An assistant shall not exercise the powers of the Officer unless he is also appointed a deputy by Council.

## 19. GENERAL MEETINGS:

- (a) There shall be held in each year a National Conference which shall be the Annual General Meeting of the Association. The National Conference shall be held on the Saturday of the weekend of the Sovereign's official birthday observance in the month of June at a venue to be chosen not more than two years in advance by a previous National Conference.
- (b) In the event of a special or unforeseen circumstance arising, Council may direct that the National Conference for any year be held at a different venue from the venue so chosen, and may also direct that the Conference be held on a different date, provided that in no circumstances shall the Conference be postponed for any period exceeding three months.
- (c) The General Secretary or in his absence or default, any member of the Executive Council shall give notice of venue and place for the Annual General Meeting by publication in the Official Journal at least one clear month prior to the Conference.
- (d) In the event of Council altering the venue and/or the date of the National Conference as aforesaid, the General Secretary shall in addition to giving notice in the Official Journal—
  - (i) advise by registered mail any member of the Executive Council who is not present at the meeting which altered the date and/or venue.
  - (ii) advise each Branch Secretary by registered mail,
  - (iii) take such other steps as Council may direct to ensure that all members of the Association are properly notified of the meeting.
- (e) A General Meeting shall not be impeached or called into question in any way solely by failure to give notice thereof as aforesaid provided that the failure is caused by accident or inadvertence.
- (f) A quorum at any General Meeting shall consist of representation either in person or by delegates or proxy of at least two-thirds of the transmitting members of the Association.
- (g) If within two hours of the time appointed for the holding any General Meeting a quorum is not present no meeting shall be held. However, in the case of an Annual General Meeting the members present or represented shall constitute a quorum for an adjournment to a further time and date.
- (h) It shall be the duty of the President or, in his absence, the Vice-President to act as Chairman at all General Meetings. In the event of the absence from a meeting of both the President and Vice-President the meeting shall elect its own Chairman.

## 20. ATTENDANCE AT GENERAL MEETINGS:

- (a) General Meetings of the Association shall consist of the following persons:
  - (i) the Executive Council and such additional Officers as the Executive Council requires to attend,
  - (ii) Delegates representing each branch of the Association,
  - (iii) any individual members of the Association who wish to be present in person rather than be represented by their branch delegate or proxy.
- (b) Each branch of the Association will, prior to any General Meeting, call a meeting at which all members of the Association attached to that branch for voting purposes shall be entitled to attend. The branch shall at that meeting from among the members of the Association attached to it for voting purposes, select not more than two delegates to represent the branch at the General Meeting.
- (c) A branch which is unable to be represented by one of its own members may appoint a proxy who shall be a financial member of the Association. A branch may also appoint the General Secretary to be a proxy, and the General Secretary may, at his discretion, in turn appoint some other person (being a financial member of the Association) to represent the branch at the General Meeting.



- (d) At the same meeting all remits shall be discussed and voted upon and the delegates shall, unless given discretion, be charged with casting the branch vote at National Conference in proportion to the voting, (whether for, against or abstaining) at branch level.

## **21. VOTING AT NATIONAL CONFERENCE AND SPECIAL GENERAL MEETINGS:**

- (a) Voting on any remit or other motion at a National Conference shall be conducted in any one of the following ways at the discretion of the Chairman—  
 (i) by voice,  
 (ii) by show of hands,  
 (iii) by actual count of votes.
- (b) The declaration of a result by the Chairman shall be final and shall be accepted by all members as conclusive of the result of the votes and the fact that it has been passed with any necessary majority, provided that if the result is declared on the basis of a vote by voice or by show of hands, any delegate or member may before the meeting proceeds to the next business require the vote to be retaken by a poll of votes.
- (c) Unless otherwise specifically required by law or by this Constitution a majority of those present and voting at any General Meeting shall decide any question.
- (d) Branch delegates or proxies when voting on any matter before the General Meeting shall be entitled to exercise one vote for every financial member of the Association attached to that branch for voting purposes by the General Secretary, provided that if any member of the branch being present in person indicates to the Chairman prior to the first vote conducted at the meeting, that he wishes to vote in person, that member may do so, and the branch vote shall be reduced accordingly.
- (e) The General Secretary shall certify to the General Meeting the number of votes a branch is entitled to exercise and the certificate of the General Secretary to the meeting (whether or not in writing) shall be conclusive.
- (f) The vote of a delegate at a General Meeting shall be conclusive and shall not be impeached or challenged by the meeting or any person thereat upon the ground that the delegate is acting outside the instructions given by his branch.

## **22. REMITS:**

- (a) Any—  
 (i) branch, or  
 (ii) five financial members, or  
 (iii) Council, by majority vote,  
 may bring forward to the National Conference a written notice of motion upon any matter relating to Association policy and such a written notice of motion shall be called a remit. A remit for inclusion in the agenda at National Conference shall be submitted to the General Secretary not later than the 31st day of December, unless Council at its discretion agrees to receive such a remit at a later date.
- (b) A remit may, however, be amended at the National Conference provided that the amendment does not change the substance of the remit and provided further that any regulations relating to the manner in which an amendment is to be presented have been complied with.
- (c) A remit shall be notified in the Official Journal and shall thereupon be placed on the order paper for National Conference. It shall be debated forthwith without being seconded. The Chairman shall allow the remit to be fully debated taking into account the time available and shall not accept any formal motion which would unreasonably shorten the debate. The Chairman of the meeting may, nonetheless, place a time limit upon discussion and retain a discretion to put the vote when in his view it has been amply debated.
- (d) It shall be the duty of the General Secretary to notify Council of all remits received, and Council may, where appropriate, adopt remits (other than remits amending the Constitution) forthwith without waiting for the National Conference.
- (e) After the voting on remits Council shall as soon as practicable consider each remit, which has been passed by the National Conference, and shall consider how best it is to be put into effect and shall consider further whether any Association statement of current policy needs amendment as a result of the

remit. Where appropriate, Council members or Officers shall be appointed to follow up the remit. The General Secretary or some other person appointed by Council shall report to the branch or members who have proposed the remit, of the action taken by Council and shall keep them informed of follow up action.

## **23. MODE OF CALLING SPECIAL GENERAL MEETINGS:**

- (a) A special General Meeting of the Association may be called at any time upon resolution by Council, and it shall be the duty of the General Secretary, or in his absence or default, any member of the Executive Council, to give notice of the venue and place by notice in the Official Journal of the Association at least one month prior to the date for which the meeting is scheduled.
- (b) A special General Meeting shall be called upon the written requisition of any two hundred members or upon the written request of any seven branches, and shall be called for a day not earlier than one month or later than three months after receipt of the requisition. The requisition shall state in as precise terms as is practical, the nature of the business to be transacted unless the same shall be placed on the agenda in advance by Council. All business to be transacted shall be stated in the notice calling the meeting.
- (c) Notwithstanding the above, Council may in exceptional circumstances of which it shall be the judge, call a special General Meeting giving to members less than one month's notice. In such event, instead of giving notice in the manner set out in paragraph (a) hereof, Council may give directions as to the manner in which notice is to be given to members and in such event shall ensure as a minimum that:  
 (i) all Council members are notified of the meeting whether by letter or telephone call,  
 (ii) that all branch secretaries are personally notified whether by personal communication, letter to their last known official branch address or by telephone call.
- (d) A special General Meeting called with less than one month's notice shall have no power to amend this Constitution.

## **24. ALTERATIONS OF CONSTITUTION:**

- (a) This Constitution may be repealed in whole or in part added to or amended at any National Conference by motion moved and voted upon in the same manner in which a remit is moved and voted upon.
- (b) Any such repeal, addition or amendment shall require a sixty percent majority of the National Conference.
- (c) A remit proposing altering the Constitution shall be submitted to Council prior to the 1st day of January in the year in which the National Conference, at which it is to be considered, is to be held, unless Council at its discretion agrees to receive such a remit at a later date. Council shall obtain such legal or other advice as it deems prudent, and shall make such advice available to the National Conference when the remit is considered.
- (d) A remit amending the Constitution shall be invalid and shall not be put to vote unless it states the actual text of the proposed addition or amendment, and in the case of a repeal, amendment or substitution, specifies the actual words to be repealed, amended or substituted.
- (e) A remit amending the Constitution may, however, be amended at the National Conference provided that the amendment does not change the substance of the remit and provided further, that any regulations relating to the manner in which an amendment is to be presented have been complied with.

## **25. ESTABLISHMENT OF BRANCHES AND MEMBERSHIP:**

- (a) Council may approve the formation of a branch of the Association at any place within New Zealand upon receipt of an application in writing signed by any five or more ordinary members, who are financial with the Association, requesting that they be recognised as a branch.
- (b) In deciding whether or not to approve the application Council shall take into account—



- (i) whether the area or special needs of the applicants are already served by existing branches,
- (ii) whether the granting of the application would significantly weaken any existing branch or branches to the point that their ability to continue functioning as a branch becomes doubtful,
- (iii) such other factors as council in its discretion deems fit.

- (c) Council may, at its discretion, delete a branch from the Register of Branches or alternatively, direct that it be placed in recess if its membership drops below five members or it appears to have ceased to function as a branch. A branch so placed in recess may be reactivated upon application made in the same manner as for the formation of a new branch.
- (d) Every member of the Association shall be attached to the General Secretary to a branch of the Association of the member's own choice, within the electoral district in which the member resides, and no member shall be so attached to more than one branch.
- (e) In special circumstances a member may request to be attached to a branch other than a branch within the electoral district in which the member resides and in such case the General Secretary may at his discretion attach the member to a branch outside the member's electoral district.
- (f) Upon a member changing his address, the General Secretary shall as appropriate, transfer the member's attachment to another branch.
- (g) Attachment to a branch by the General Secretary shall not in itself confer membership of that branch upon the member so attached but shall entitle the member to vote with that branch whenever remits are discussed or polls of Association members are conducted at branch level.

## 26. AFFILIATION:

- (a) Council may grant to any Society or Club having similar objects to the Association, the status of being an affiliate of the Association. Such an affiliated club shall have the following rights:
  - (i) to describe itself as being affiliated to the Association,
  - (ii) to seek the advice and support of the Association or of the Executive Council on any matter within the objects of the Association.
- (b) In granting affiliation, Council may by regulation or resolution make the affiliation subject to such other conditions or restrictions as it thinks fit.

## 27. CONDUCT OF BRANCH AFFAIRS:

- (a) Every branch shall have a Constitution or a set of rules the terms of which shall be subject to the approval of Council and which shall not be inconsistent with this Constitution.
- (b) A branch may remain unincorporated, but where practicable, branches shall incorporate either under the Incorporated Societies Act 1908, or the Incorporated Societies Amendment Act 1920, provided always that the Association shall accept no liability for the actions of a branch whether incorporated or not.
- (c) A branch may, by its Constitution, provide separately for the admission of its own members and the levying of a subscription additional to the Association subscription, but shall not admit to membership any persons who hold an Amateur Operators Certificate, unless they are also members of the Association.
- (d) A branch may publish a newsletter, but shall take care not to compete with the Official Journal.
- (e) Every branch shall be required to register an official branch address with the General Secretary, and all notices and circulars shall (unless otherwise expressly provided in this Constitution) be sufficiently addressed if they are posted by ordinary pre-paid mail to that address. Branches shall keep the address as permanent as practicable.

## 28. OFFICIAL JOURNAL:

- (a) Council shall publish or cause to be published an Official Journal to be known by such name as Council or the National Conference shall direct. The frequency of publication and other conditions of publication shall be as are from time to time determined by resolution of the Executive Council.

- (b) Council shall appoint an Editor, who shall observe the Editorial policy laid down by Council and shall be responsible to Council.
- (c) Every member shall be entitled to receive a copy of the Official Journal provided that where more than one member resides in a household, Council may either generally, or in a particular case, allow a reduced subscription for the second and subsequent members resident in the household and direct that only one copy of the Official Journal be forwarded to the household so long as the reduced subscription continues to be paid.

## 29. REGULATIONS:

- (a) Council shall have power to make regulations on matters arising out of this Constitution and regulations so made shall, provided they are not inconsistent with this Constitution or the Incorporated Societies Act 1908, be binding upon all members.
- (b) Council may add to, alter, or repeal all regulations so made, provided that unless the nature of the regulation otherwise requires, no regulation shall be binding until fourteen days after promulgation to members by publication in the Official Journal.

## 30. REFERENDUM:

- (a) At the request in writing of any two hundred financial members who shall not all be members of the same district, Council shall submit any matters detailed therein to the members who would be entitled to vote thereon as if the matters were before a General Meeting and shall conduct a poll thereon to take the general opinion of members. The result of the poll shall not be binding upon Council unless the proposal submitted is approved by more than one half of the members.
- (b) Council may of its own volition conduct a referendum.

## 31. INTERPRETATION AND CASES NOT PROVIDED FOR:

- (a) Subject to the decision of any Court of competent jurisdiction Council shall be the authority for the interpretation of this Constitution.
- (b) In the event of any matter arising for which no provision has been made in this Constitution, or in the event of there being found any conflict of interpretation between the two different parts of this Constitution, Council may by resolution give directions as to the manner in which the matter in question or the conflict is resolved. Any resolution so passed shall, upon notification to members, be binding in all respects as though the same were a regulation.

## 32. CONTROL AND USE OF THE COMMON SEAL:

The Association shall have a common seal which shall be kept in the custody of the General Secretary for the time being and shall be affixed to any document only by resolution of the Council, and each impression of the seal shall be valid only if attested in writing by any one of the President, Vice-President or the General Secretary, and in addition, by two members of the Council.

## 34. DUTIES OF THE TREASURER:

- (a) It shall be the duty of the Treasurer—
  - (i) To receive all monies due to the Association.
  - (ii) To pay its accounts.
  - (iii) To supervise its book of account.
- (b) The Treasurer shall present to the Executive Council a properly audited financial statement and balance sheet within thirty days of the end of the financial year.
- (c) The books of account shall be audited each year by an Auditor who is a member of the New Zealand Society of Accountants. An abstract of the accounts together with the Audit Report shall be published annually in the Official Journal.
- (d) The Auditor shall be appointed annually by the National Conference after hearing the recommendations of Council, which recommendations shall not be in any way binding upon the National Conference.
- (e) Council shall approve the remuneration of the Auditor and may delegate this power of approval to the Treasurer.



### 35. GENERAL SECRETARY:

- (a) It shall be the duty of the General Secretary—
  - (i) To act in all things under the direction of the Council.
  - (ii) To convene all meetings of the Association and of the Council except as otherwise provided herein.
  - (iii) To keep minutes of all meetings.
  - (iv) Generally to conduct correspondence upon behalf of the Council.
  - (v) To maintain a Register of Members showing the name and address and occupation of each member and the date of his election to membership.
  - (vi) To maintain a Register of Branches showing the name of each branch and the address for mailing purposes.
  - (vii) To perform such other duties as Council may from time to time direct.

### 36. NOTIFICATION TO AND SERVICE UPON MEMBERS:

- (a) Any notice which by this Constitution or by Regulations made hereunder is required to be served upon a member shall be served either personally or by posting the same to his last known place of address or occupation by prepaid registered post and the same shall be deemed to have been served in the ordinary course of post.
- (b) Where by this Constitution notice is to be given to a member it shall be given by posting the same by prepaid mail addressed to the member's last address recorded in the Register of Members.

### 37. AMATEUR RADIO EMERGENCY CORPS:

- (a) Council shall cause to be established by Regulation a sub group to be known as the "Amateur Radio Emergency Corps" which shall, under the direction of Council, be entrusted with achieving Clause 3 (i) of the Objects of the Association.
- (b) The Corps so established shall be divided into sections under the control of an Officer Commanding to be appointed by Council. Each section shall be attached to a branch and the Regulations shall provide generally for the mode of attachment. The regulations may also provide for matters which are to be left to the Constitution of an individual branch, provided that nothing shall be included in the Regulations or in any branch Constitution which would impair the operational efficiency of the Corps.

### 38. WINDING UP OF THE ASSOCIATION:

Upon the winding up of the Association and after payment of all liabilities has been made, the remaining assets shall be disposed of as resolved by special resolution passed at the General Meeting at which the special resolution for winding up is confirmed by transferring those remaining assets to any other Association, Society or Club having similar objects to this Association or any organisation, Charity or trust established exclusively or partly for similar objects.

THESE are the rules marked "A" referred to in the declaration of ARTHUR GEORGE GODFREY of Auckland, declared at Auckland this 11th day of December 1979 before me:  
A Solicitor of the Supreme Court of New Zealand.

## Rules for Amateur Radio Emergency Corps

New rules for AREC to reflect changed conditions have been under consideration for some time and are now published to take effect on the 1st January 1982. Branches and Section Leaders are asked to study these carefully and confer when necessary with the Officer Commanding.

### 1. NAME

The name of the corps shall be "Amateur Radio Emergency Corps" in these rules called "the Corps".

### 2. OBJECTS

The objects of the Corps shall be:

- (a) to provide emergency communications in conjunction with other organisations as the situation demands, e.g. Search & Rescue, Civil Defence, New Zealand Police, etc.
- (b) to provide a body of trained radio operators who can be made available at short notice.

### 3. MEMBERSHIP

- (a) Any member of the Association may apply to become a member of the Corps and if acceptable to the Section Leader shall be enrolled as a member. A Section Leader shall not enrol persons attached (in terms of Clause 25 (a) of the Association Constitution) to branches other than the branch to which the section is responsible (in accordance with Clause 6 (c) of these rules) unless arrangements have been made with the branch or branches to which the proposed members are attached. This regulation shall not prevent arrangements between Section Leaders for the deployment and interchange of personnel for operational purposes from outside their own sections.
- (b) Where a section has among its personnel members from a branch other than the branch to which the section is attached, the Section Leader shall ensure that the other branch or branches on matters affecting the section as a whole are kept informed and are consulted.
- (c) A member may resign from the Corps at any time by giving notice to his Section Leader and may also be deleted from the list of members upon ceasing to take part in the activities of the Corps.
- (d) Upon enrolling a member or upon a resignation or upon deleting a member from the list of members the Section Leader shall notify the Commanding Officer.

- (e) The Commanding Officer shall issue an identification card to each member which card shall be in the form from time to time directed or approved by the Council and which shall remain the property of the Association. The Commanding Officer may require former members of the Corps to surrender their identification cards to him.
- (f) In the event of the member of the Association being denied admission to the Corps by a Section Leader that member may ask the Officer Commanding to review the Section Leader's decision and the Officer Commanding may over-rule the Section Leader and direct that that member be admitted as a member of the Corps. If the Officer Commanding confirms the Section Leader's decision then the member may ask Council to further review the Section Leader's decision, and Council after hearing the Officer Commanding may direct that that member be admitted as a member of the Corps. The decision of Council shall be final and shall not be subject to further review.

### 4. THE OFFICER COMMANDING

- (a) The Officer Commanding shall be appointed by Council and shall hold office from the time of his appointment until the conclusion of the next Annual General Meeting of the Association unless the appointment is sooner terminated by Council.
- (b) The Officer Commanding shall be directly responsible to Council and shall put into force the policy decided upon by Council.
- (c) The Officer Commanding shall have the authority directly to communicate with any branch to which a section is attached in relation to matters affecting the Corps, and may communicate with directly and instruct any Area Officer, Section Leader, or Section Members.
- (d) The Officer Commanding shall submit a yearly report on the activities of the Corps to Council.
- (e) Council may appoint one or more deputies to the Officer Commanding in accordance with Clause 18(c) of the Constitution.

### 5. AREA OFFICERS

- (a) Council may upon the request of the Officer Commanding appoint an Area Officer who shall have generally the respon-



sibilities outlined in Part 2.2 of the AREC Manual (April 1978 edition) together with such additional responsibilities as Council may approve.

- (b) The appointment of an Area Officer shall be by letters of appointment from the Officer Commanding the terms of which shall be subject to the approval of Council. The letter of appointment shall clearly define the area and clearly state the duties for which the Area Officer is responsible.
- (c) The person appointed to be an Area Officer need not be a Section Leader.
- (d) Once appointed, an Area Officer shall hold office until the appointment is cancelled by the Officer Commanding or by Council.

## 6. SECTIONS

- (a) Any branch of the Association may apply to Council to establish a section and Council before dealing with the application shall refer the application to the Officer Commanding for a report.
- (b) The name of each section shall be "Name of Branch..... Section Amateur Radio Emergency Corps".
- (c) Each section shall be responsible to a branch for its administration in accordance with these regulations.
- (d) It shall be the responsibility of each branch to which a section is attached to:
  - (i) ensure that the section remains active and at all times ready and (within the limits of branch finance) properly equipped to carry out its duties as directed by the Officer Commanding.
  - (ii) ensure that the assets held by the branch for AREC purposes (whether such assets are the property of the branch or of the Association) are fully inventorised and properly maintained by the section.
  - (iii) ensure that financial statements for funds held by the branch for AREC purposes are prepared and included in the branch accounts. Where appropriate, or where directed by Council or the Officer Commanding the accounts shall be properly audited.
- (e) Nothing in this part of these regulations shall enable the branch to intervene in the operational responsibility of the Officer Commanding, the Area Officer, Section Leader (or any person acting for them) while the section is actually engaged in communication for an emergency or an exercise, or preparing for the same.
- (f) A section which has ceased to be active may be deleted from the Register of Sections by Council upon the recommendation of the Officer Commanding.

## 7. OFFICERS

- (a) The officers of a section shall consist of a Section Leader and such deputies and assistants as the Section Leader himself shall choose who shall form a Committee for the section. The Section Leader shall have generally the duties outlined in the AREC Manual, together with such additional duties as the Officer Commanding may direct or which local circumstances require.
- (b) The Treasurer of the branch to which the section is responsible shall (whether or not he is formally a member of the section) be ex officio the Treasurer of the section.
- (c) The Section Leader shall be chosen to hold office for a period of one year in any one of the following ways:
  - (i) by appointment by the Branch Committee at initial formation.
  - (ii) by election by the members of the branch as a whole.
  - (iii) by election by the members of the section.
- (d) The method of choosing the Section Leader shall be determined by the branch by its constitution or by resolution of a branch general meeting. Where a branch makes no provision for choosing a Section Leader, then the Section Leader shall be elected by the members of the section.
- (e) A Section Leader may be removed from office at any time by a two-thirds majority vote of those present and voting at a special general meeting of the branch to which the section is attached, notwithstanding the manner in which he has been chosen for office.
- (f) Before passing any such resolution a branch shall give at least

thirty days notice to the Officer Commanding and the Section Leader and allow both the Section Leader and the Officer Commanding to address the meeting at which the resolution is to be voted upon.

## 8. GENERAL MEETINGS

- (a) General meetings of a section may be called at any time. The provisions of the branch constitution relating to the manner of calling general meetings for the branch shall be followed as nearly as practical.
- (b) General meetings may be held at the same time as and in conjunction with meetings of the branch provided adequate notice of the business to be transacted has been given.
- (c) One-third of the members of the section shall constitute a quorum, unless the Officer Commanding directs in a particular case and for a particular meeting that a smaller number shall be sufficient to constitute a quorum.
- (d) Where there is doubt as to the proper procedure for calling or conducting a general meeting the Officer Commanding may give directions either generally or in respect of any particular general meeting and a general meeting held in accordance with those directions shall be deemed to have been properly convened and conducted.

## 9. SPECIAL REGULATIONS

- (a) The provisions of these regulations shall apply to all AREC sections provided that a branch may by its constitution or by resolutions provide for different provisions in respect of its section from the provisions outlined in these regulations.
- (b) No such special provisions shall come into force until the actual text of the constitution or of the resolution has been approved by council after hearing the views of the Officer Commanding.
- (c) The approval of Council to any such special provisions shall not be given unless the operational responsibility of the Officer Commanding in operations and exercises is preserved.

## 10. SUBSIDISED EQUIPMENT

Where a section obtains a subsidy for the purchase of equipment through an application requiring the approval of the Officer Commanding that equipment shall not be sold, exchanged or otherwise disposed of without the written consent of the Officer Commanding.

## 11. SAVINGS AND TRANSITIONAL

- (a) The Officer Commanding shall forthwith after the coming into force of these regulations supply Council with a schedule of operational sections together with the name of the branch to which the section is attached and all sections so scheduled shall be deemed to have been properly established under these regulations.
- (b) All Section Leaders in office at the date these regulations come into force shall be deemed to have been duly elected or appointed to office and shall thereafter conduct their sections in accordance with these regulations.
- (c) These regulations shall come into force on the 1st day of January 1982.

## 12. GENERAL

Sections shall conduct their internal affairs with a minimum of formality but otherwise in accordance with these rules. Should any question of interpretation arise or should any event or circumstances arise for which no provision is made in these rules, the Officer Commanding may give directions in writing, either generally or in the particular case, and such directions shall be binding on the branch and the Section concerned.

## REMEMBER

**When operating on a repeater—  
LEAVE A THREE SECOND  
BREAK  
to check for any priority traffic**

11



# AREC Officers

E. Call			Call	Home	Work	Deputy	Call	Home	Work
ZL3EX	OC AREC	Don Mackay	ZL3RW	03/383-211	03/667-443				
ZL2EXA	Secretary AREC	Jim Meachen	ZL2BHF	04/278-694	04/6190-885				
ZL1EX	Area Officer ZL2	Merv Passau	ZL1AKX	09/298-4575					
ZL2EX	Area Officer ZL2	Terry Waghorn	ZL2AYY	04/797-853	04/726-947	Jim Meachen	ZL2BHF	04/278-694	04/6190-885
ZL3EXA	Area Officer ZL3	Geoff Chapman	ZL3PX	03/851-815	03/639-721	Gareth Bradshaw	ZL3VP	03/332-2406	03/639-797
ZL4EX	Area Officer ZL4	Ron Kingston	ZL4MK	024/44-664		Bob Smith	ZL4QC	024/763-941	024/799-799

## AREC Section Leaders And Deputies compiled from Branch Directories

E. Call	Section	Section Leader	Call	Home	Work	Deputy Leader	Call	Home	Work
ZL1EA	Auckland	Don Webster	ZL1CY	09/555-554		Tom Glendenning	ZL1AMZ	09/583-053	
ZL1EB	North Shore	Allan Woolter	ZL1AUW	09/444-2423	09/570-5655	R Williamson	ZL1BNE	09/410-6030	
ZL1EC	Hamilton	Steve Carran	ZL2SR	071/555-519	071/555-519	Bruce Cron	ZL1TNG	071/64-889	071/496-020
ZL1ED	Te Awamutu	Allan Brooker	ZL1TMM	07871/7992	07871/5332	Murray Dunwoody	ZL1LZ	07871/6491	
ZL1EE	Taumarunui	Ross Walker	ZL1AAF	0812/56-747	0812/58-139	Ken McCann	ZL1UPX	0812/7441	0746/7441
ZL1EF	Waihi	John Blyde	ZL1CCS	07863/6893		Peter Anderson	ZL1LR	07863/7546	07863/7546
ZL1EG	Northland	Kevin Bell	ZL1ANI	089/4353281	089/484-339	Ross Langridge	ZL1AUC	089/487-173	089/483-659
ZL1EH	Matamata	W Coates	ZL1GQ	0818/7107		John W Rasmussen	ZL1AGA	0818/8269	0818/8058
ZL1EI	Thames	Ken Hayhurst	ZL1ATU	0843/87-330		Lea Hayterman	ZL1APF	0843/87-054	
ZL1EJ	Tauranga	Graham Humphrey	ZL1BWB	075/789-643	075/779-127	Roger Prince	ZL1CM	075/63-431	075/63-431
ZL1EK	Western Sub.	Kevin Rutter	ZL1ABP	09/659-838					
ZL1EL	Cambridge	Tony Boyce	ZL1AFV	071/276-107	071/277-358	Des Hamblyn	ZL1HP	071/276-247	
ZL1EM	Eastern B.O.P.	John Herdman	ZL1ANQ	076/87-953	076/86-458	Alan McDonald	ZL1PI	076/87-740	076/88-967
ZL1EN	Franklin	C Shuker	ZL1BOT	085/87-350	079/56-999	Fred Bain	ZL1SP	085/87-684	
ZL1EO	Kawerau	Gary Armstrong	ZL1FY	076/37-278	076/33-436	Barry Liddle	ZL1CAY	076/38-970	076/33-860
ZL1EP	Waitomo	Mick Gannon	ZL1HJ	0813/87-140		Bob Blomfield	ZL1JE	0813/86-264	
ZL1EQ	Rotorua	Graeme Hunt	ZL1ANH	073/86-852	073/86-852	Peter Anderson	ZL1AHJ	073/86-488	073/81-199
						Murray Parkinson	ZL1BHW	073/84-561	073/479-463
ZL1ER	Tokoroa	G McFarlane	ZL1BEG	0814/65-522		Dick Van Beek	ZL1CDD	081425/771	
ZL1ES	Papakura	Richard Gamble	ZL1BNQ	09/299-6189	09/570-2858	David Karrasch	ZL1TTS	09/298-5271	09/266-5453
ZL1ET	Taupo	John Bowers	ZL1APM	074/89-601		Graham Messenger	ZL1BVO	074/84-162	
ZL1EU	Manukau	G Emmett	ZL1BYD	09/568-490		Dick Kendall	ZL1AQM	09/595-411	09/376-801
ZL1EV	Te Puke	Eric Brown	ZL1IB	075/738-722		Murray R Neno	ZL1ARL	075/420-574	075/737-329
ZL1EW	Rodney	Ralph Sanson	ZL1TBG	09/425-8474	09/425-8059	W Tesler	ZL1AHK	09/425-7299	09/425-8837
ZL1EY	Opoiki	John Pederson	ZL1BNJ	076/56-757	076/56-757	M Shultz	ZL1UBA	076/56-289	076/56-289
ZL1EZ	Dargaville	Les Ward	ZL1BW	0884/7079		M Bakulich	ZL1BAU	0884/7975	0884/8369
ZL6EA	Far North	Brian Tarlton	ZL1BAY	0889/81-447		Owen Brott	ZL1ALU	0889/80-729	
	Kerikeri					Ian Wilson	ZL1CBD	0887/78-901	0887/78-814
	Kaikohe					Dan Fletcher	ZL1THE	0887/80-609	
ZL6EB	Te Aroha	B McConnochie	ZL1BWK	07/884-8871	07/884-8189	Grant Horn	ZL1UNX	07/884-5720	
ZL6EC	Hibiscus Coast	John Wallace	ZL1OD	0942/40-196		Blair Jackson	ZL1NV	0942/66-664	09/444-5101
ZL6ED	Mangakino								
ZL6EE	Mount Roskill	Ian Talbot	ZL1TSV	09/478-7549	09/478-7549	Irving Spackman	ZL1MO	09/674-886	
ZL2EA	Gisborne	Rowley Halsman	ZL2APH	079/86-422	079/85-089	Rib Compier	ZL2AJQ	079/88-636	
ZL2EB	New Plymouth	Wayne Gaudin	ZL2VN	067/35-800	067/80-989	David Leask	ZL2AYU	067/33-493	067/510-680
						John West	ZL2ADW	067/70-635	067/510-200
ZL2ED	Wanganui	Craig Mills	ZL2MD	064/50-766	064/54-109	Bob Jeffers	ZL2AAQ	064/32-107	064/54-109
ZL2EE	Hastings	Peter Stevens	ZL2AS	070/89-728		Fraser Burns	ZL2TKV	070/82-753	070/89-998
ZL2EF	Kapiti	Len Blackley	ZL2TFP	058/87-048	058/87-048	Jim Randal	ZL2AZZ	058/36-213	058/85-034
ZL7EA	Feilding	G J Hitchman	ZL2BNA	063/35-847		A J Abie	ZL2QR	063/36-538	
ZL2EH	Sih Hawkes Bay	A Law	ZL2HE	0653/49-171	0653/46-029	Denis Dawson	ZL2TDA	0650/48-960	0650/48-811
ZL2EI	Manawatu	Dexter Muir	ZL3LH	063/65-475	063/67-104	John Groat	ZL2BOO	063/75-072	063/79-194
ZL2EJ	Wairarapa	Robin Reeve	ZL2FZ	059/82-211	059/88-000	Jeanette Lambert	ZL2UDV	059/88-213	059/82-270
ZL2EK	Rahotu Coastal					T Clouston	ZL2AQP	0661/8062	
ZL2EL	Upper Hutt	Gavin Smith	ZL2ACT	04/278-533	04/821-506	Geoff Smith	ZL2BDW	04/268-866	04/691-222
ZL2EM	Wellington	Murray Milner	ZL2LB	04/324-739	04/823-333	Wilbert Knol	ZL2BSJ	04/835-264	04/861-029
ZL2EN	Nelson	Andrew Mackie	ZL2THG	054/75-067	054/61-429	Bob Peters	ZL2BFW	054/76-477	054/79-721
ZL2EO	Marlborough	Gordon Buckdon	ZL2BGQ	057/894-64		Roger Lawson	ZL2BHG	057/869-86	057/894-94
ZL2EP	Inglewood	Tarry Martin	ZL2KV	067/67-627		Jack Leitch	ZL2ASL	067/67-421	
ZL2EQ	Napier	Geoff Clibborn	ZL2CZ	070/446-039	070/448-710	David Syme	ZL2UGG	070/266-376	
ZL2ER	Waimarino	Bill Luscombe	ZL2AVL	0658/56-707		David Inkster	ZL2BLI	0658/58-596	
ZL2ES	Horowhenua	Robin Christie	ZL2ARC	069/83-330	069/87-035	Errol Burnham	ZL2BHH	069/85-970	069/48-795
ZL2ET	Titahi Bay	Brian Amies	ZL2AYF	04/326-378					
ZL2EU	Pahiatua	Paul Johnson	ZL2BNP	0650/8094		G Johnson	ZL2BDZ	0650/681-96	0650/7456
ZL2EV	Patea	Graeme Bateman	ZL2BHD	062/84-793		John Clarkson	ZL1UJX	0623/8576	
ZL2EW	Marton	Cathie Purdie	ZL2ADK	063293/606	063299/730	Ian Miles	ZL2TZW	0652/6310	
ZL2EY	Hutt Valley	Bob Sewell	ZL2ASO	04/646-929		Bernard Wright	ZL2QZ	04/646-433	04/666-969
ZL7EC	Waitara	Jonathan Herbert	ZL2BPW	067/23-441		Anne Griffiths	ZL2BOV	067/23-827	
ZL7ED	Sih Wairarapa	Stewart Benton	ZL2AQT	0553/89-685	0553/89-685	Selwyn Roberts	ZL2UKR	0553/89-185	
ZL3EA	Christchurch	Geoff Chapman	ZL3PX	03/851-815	03/639-721	Stan Whitfield	ZL3AP	03/358-3089	03/332-6453
ZL3EB	Westland	Kevin O'Sullivan	ZL3ABY	027/7598	027/80-242	Craig Terris	ZL2UAY	027/4087	027/80-336
ZL3EC	Sih Canterbury	Ken Davy	ZL3HG	056/43-822	056/43-822	Phil Bennett	ZL3JM	056/57-573	
ZL3ED	Ashburton	Alan Chapman	ZL1AFI	03/308-7737		Les Vincent	ZL3UX	053/36-306	
ZL3EE	South Westland	Ron Searle	ZL3MY	0228/567-41	0288/567-41	Gary Searle	ZL3DT	0288/560-21	0288/560-21
ZL3EF	Reefton-Buller	John Griffiths	ZL3AFN	0289/8399	0289/7259	Graeme Crase	ZL3ADB		0289/7259
ZL3EG	Nih Canterbury	Anne McMaster	ZL3VR	0327/8278	03/654-401	Lorna Allan	ZL3AAZ	0502/35-352	
ZL3EH	Kaikoura	Bill Jackson	ZL3PZ	03/319-5981		R J Godfrey	ZL3DR	03/319-5558	
ZL4EA	Otago	A Cross	ZL4QK	024/879-619	024/770-803	David Stevenson	ZL4SB	024/878-030	024/878-030
ZL4EB	E. Southland	Dick Whyte	ZL4AQ	020/86-793	020/87-433	Alister Allan	ZL4AO	020/87-288	
ZL4EC	Southland	Neville Checketts	ZL4OX	021/66-599	021/66-599	Mike Cockeram	ZL4IC	021/358-222	021/82-869
ZL4ED	Balclutha	John Lockhead	ZL4QS	0341/39-827	021/66-599	John Blair	ZL4TJO	0341/57-849	0341/57-673
ZL4EE	Central Otago	W Beveridge	ZL4ST	03/448-6880	03/448-8038	Ewen Mason	ZL4TKS	03/444-9240	03/444-9200
ZL4EF	North Otago	D Bokser	ZL4TFF	0297/454-80	0297/47-981	D Walker	ZL4TDF	0297/71-262	
ZL4EG	Queenstown	Russ Watson	ZL4JW	03/442-9374	03/442-8564	P L Brentwood	ZL4GU	03/442-9549	03/442-8564

\*No 1990 information supplied.

Official AREC records have also been updated from Branch Directories. Any errors or omissions should be notified to Jim Meachen ZL2BHF immediately



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# SCE — ICOM

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As each new *Call Book* appears, we at SCE are happy to see the steady increase in the number of licensed Hams in New Zealand. As always we strongly recommend you join NZART, so that you may reap the maximum benefit from your Hobby. As the sole New Zealand distributors of ICOM Communications Equipment, we are proud to be able to supply you with the most up-to-date and innovative gear available today. On the pages of *Break-In* each month, you will find details of the latest and greatest from ICOM, and many other SCE/ICOM lines as of May 1 1990 with prices applying at that date.

#### Two Meter Equipment

**The IC-2SAT series.** This is the new standardised form for all of ICOM's Handheld transceivers. Features built in batteries with the option of add on batteries. Up to 5W output with the appropriate battery. 48 memory channels which will store separate offsets, DTMF codes and CTCSS sub-tones. See October 1989 *Break-In* for more details. **\$670**

**The IC-2GAT series.** This Handheld has a big 7W output, 20 memory scanning, DTMF built in, very rugged construction with heaps of other features. See October 1988 *Break-In* for more details and product review. **\$660**

**Handheld Accessories.** We stock a full range of accessories for all of the Handhelds that ICOM are currently manufacturing together with accessories for earlier models. Accessories include Speaker/Microphones, spare Battery Packs of various Ampere/Hour ratings and terminal voltage ratings, DC-DC regulators for models that need them to run off external 12V systems, Leatherette Cases to suit all combinations of Handheld and Battery Case combinations and Headset/Boom-microphones for the later model Handhelds. Sit-in base chargers for rapid battery charging are available for all models.

**The IC-228A—**Ultra compact 2m mobile, 25W output, 20 memories, scanning, repeater reverse, full duplex or simplex from memory. Coverage 140-160MHz. **\$898**

**The IC-228H—**Same as IC-228A but with 50W output. See August 1988 *Break-In*. **\$990**

**The IC275H—**Now all mode two metre rig, matching style with the IC-735, 32 memories, scanning, built-in optional pre-amp, optional built-in AC power supply. This superb rig has all the goodies and provides 100W output. The very best for satellite and general two metre use—can't beat high power! See July 1988 *Break-In*. **\$2380**

**Receiving pre-amplifiers—**The IC-AG20, built-in pre-amp for the 25W IC-275A \$231.00. The IC-AG25, external pre-amp for the 100W IC-275H \$283.00. The IC-AG35, external pre-amp for the 80W IC-475H \$302.00.

#### Two Metre/432 MHz Dual Band Equipment

**The IC-32AT—**This is the top of the line for ICOM handhelds and sets the way for others to follow. Both band 144/430 with features such as full duplex, 5.5 watts output on both bands, 20 memory channels for either UHF or VHF, rugged construction. See January/February 1989 *Break-In* for more details. **\$898**

**The IC-24AT series.** This top-of-the-line Handheld is the same size as the IC-2SAT series and is capable of a big 5W output with the appropriate battery pack. Some of the standard features are, keyboard as well as tuning control of frequency and DTMF etc, up to 80 memory channels, dual band function display, 24 hour resident clock with alarm features, six different scan functions, and many other features which make this model the most popular dual-band Handheld in the range. **\$875**

**The IC-3210—**Dual band 25W super compact FM Mobile. Covers both two metres and 432MHz FM bands. Built-in duplexer allows one antenna connection to a dual band antenna. Complete with all the usual ICOM features, ten memory channels, four scanning modes—memory, band, program and priority scan—and bright LCD display. See November 1988 *Break-In*. **\$1210**

**The IC-2400** Dual Band mobile transceiver is the latest in the ICOM range of 45W mobiles. Features dual displays, full duplex operation, simultaneous dual band watch, 40 memory channels, pocket beep function, and many more features. See November 1989 *Break-In* for more details. **\$1560**

#### 432 MHz Gear

**The IC-4SAT series.** Same as the IC-2SAT series but 430-450MHz. **TBA.**

**The IC-4GAT series.** Same as the IC-2GAT series but 430-450MHz **\$695**

**Accessories.** The same as above under two meter equipment.

**The IC-475H—**New all-mode 432MHz rig, matching styling with the IC-735. Thirty-two memories, scanning, built-in optional pre-amp, optional built-in AC power supply, a really nice piece of equipment, with a very useful 80W to contribute to your satellite operation, or other 432MHz use—a great high-power 432 rig. See July 1988 *Break-In*. **\$2735**

#### 1296 MHz Gear

**The IC-120—**Another ICOM first! A complete 1296MHz FM transceiver ready to go. Covers 1260-1300MHz in 10kHz or 20kHz steps with 1MHz up/down, six memory channels, 1W output transmit, receive sensitivity less than 0.5µV for 20dB noise quieting, less than 0.3µV for 12dB SINAD. **\$1180**

**The IC1271A—**1296MHz All Mode base station transceiver covering 1240-1300MHz, SSB, CW and FM. A healthy 10W plus RF output, independent transmit and receive frequencies available, 100 Hz digital PPL synthesiser, frequency stability ±.0003% 0°C-50°C, receiver sensitivity SSB and CW, less than .16µV for 10dB S+N/N, FM less than .22µV for 12dB SINAD. **\$2702**

**The IC-PS25—**Built in AC power supply option. **\$517**

**The IC-AG1200—**Mast head pre-amp **\$281**



#### HF Gear

**The IC-725**—The very best, latest state of the art HF mobile or home base super compact rig. All Hambands transceive 1.8MHz–30MHz, FM, CW, AM, SSB. General coverage receive 0.1–30MHz 100W RF output, 100 per cent duty cycle, speech processor, 26 memory channels, program scan, memory scan plus built-in pre-amp, noise blanker, switchable AGC, 105dB dynamic range, sensitivity SSB and CW 1.6–30MHz less than 0.15µV for 10dB S/N. See March 1989 *Break-In*. **\$1890**

**The IC-726 HF Transceiver.** Same as the IC-725 above but includes the six meter band as well!! See January/February 1990 *Break-In*. **\$2490**

**The IC-735 HF transceiver.** Same size as the IC-725 and IC-726 but fully featured. As standard, full QSK, Noise Blanker, Preamp, VOX, speech Compressor, PBT, Notch filter. All modes including AM and FM, and many other features. **\$2585**

**The IC-PS55**—matching power supply. **\$817**

**The IC-AT150**—Autotuner \$1039. **The IC-AH3** Autotuner for random wires. **\$1062**

**The IC-751A**—The same matching styling as the new generation IC-275 and IC-475 rigs. Full general coverage receive 100 KHz–30MHz, full Ham Band coverage, the usual convenient three-speed band spread, superb receive sensitivity, built-in pre-amp, 32 memories, scanning, 100W out on SSB, CW, RTTY, FM and has an AM transmit and receive mode with PBT and 9MHz crystal notch filter, high performance speech processor, all-mode squelch, adjustable AGC, noise blanker, and last, but not least, the Icom-developed J-FET DBM gives the receiver a 105dB dynamic range. Supplied complete with FM option, marker and desk microphone and built-in electronic keyer (PS35 built-in supply \$420 with set) **\$3615**

**The IC-765 HF Transceiver.** This very advanced HF transceiver comes complete with Automatic Tuner and built-in Power Supply. It is stacked full of features that come standard such as RF Attenuator, IF Shift, Notch Filter, RF Speech Compressor and very effective Noise Blanker. Refer to April 1990 *Break-In* for more details. **\$6445**

**The IC-781**—The ultimate radio for those who want the very best there is to have. No other rig on the market has these features or surpasses it. For more details you must get a detailed brochure to appreciate its quality. Please send today for your brochure. **\$11200**

#### Communications Receivers

**The IC-R1.** This super small General Coverage receiver has no rivals at all!! It is the same size as the IC-2S series and covers 100kHz to 1300MHz!! It is a true hand held Scanner in every meaning of the word. Keep an eye on future editions of *Break-In* for more details or write today. **\$760**

**The IC-R100.** This unit is the mobile version of the IC-R1. Super small for easy installation in a car. Ideal for mobile scanning. Keep an eye on future *Break-In's* for more details or write today. **\$1150**

**The IC-R71.** The commercial grade IC-R71 covers all the HF Ham Bands with full band spread, and yet by selecting the general coverage mode, it covers 100kHz to 30MHz continuous, SSB, CW, AM, RTTY (and FM with the option). It also has a built-in pre-amp and superb sensitivity. Twelve volt DC or 240V AC operation, 32 memory channels and even an infra-red remote tuning option. **\$2175**

**The IC-R7000**—Commercial grade VHF/UHF communications receiver matching the IC-R71, covers 25–1000MHz and 1025–2000MHz (Specs guaranteed 25–1000 and 1260–1300 MHz). General coverage receive SSB, FM wide and narrow, AM and CW, six tuning speeds, 0.1, 1.0, 5, 10, 12.5 or 25kHz, dial lock noise blanker, S-meter, attenuator, optional IC-12 infra-red remote control and optional voice synthesiser. Frequency stability 5 ppm at 10°C–+60°C sensitivity—SSB .3µV or less; AM 1.0V or less; FM .3µV or less. Just great! **\$2450**

**The IC-R9000**—HF—VHF—UHF communications receiver. Complete with spectrum analyser. The tops in receivers. **\$6640**

#### Antennas

##### HF Beams—

**The Creative Design**—heavy duty, exceptionally well made HF Beams featuring optimum spaced elements on 14, 21 and 28MHz for optimum gain. See April 1988 *Break-In*.

**The CD-318**—Four element beam, three full spread elements effective on each band giving, 7, 8 and 8.5dB gain on 14, 21 and 28MHz. **\$895**

**The CD-318B**—Five element beams, four full spaced elements on each band, giving 7.5, 9 and 9.5dB gain on 14, 21 and 28MHz. **\$1099**

##### VHF Antennas

**The SCE 2/58G**—Two metres, 5/8 mobile whip with gutter grip. **\$32**

**The SCEH-2CL**—Two metres collinear, 3.7dB, has radial hub unit. **\$52**

**The SCEH-432CL**—432MHz collinear 3.7dB and also uses radial hub unit. **\$46**

**Beams**—Two metres, seven element, 8dB, with balun \$127, Two metre, 11 element, LPY \$147, 432MHz, seven element, 10dB with balun. **\$135**

##### Rotators

**The KR400**—HF rotator medium weight for HF beams and very heavy VHF/UHF arrays, 240V \$530, mast mount for the KR 400 if required. **\$45**

**The KR500**—Elevation rotator for OSCAR antennas. **\$570**

**The KR600**—Heavy duty rotator for the CD-318 and 318B Beams (mast mount if required, \$46). **\$698**

**Antenna Accessories**—hard drawn stranded copper wire, 140 feet \$15.90, imported egg insulators \$2.30, imported foam coax, RG8U \$5.35 metre, RG8X \$2.52 metre (note RG8U is 2 kW), 470Ω ladder line \$52/100 feet, six-core rotator cable \$1.60 metre. Baluns 1:1 Bencher \$64, also 2kW low filters \$115, coax switches, two position \$62 four position \$160, 50Ω PL259 jumper leads, half metre \$7.80, 1 metre \$7.95.

##### Linear Amplifiers

**The Icom IC-2KL**—All solid-state linear, 160–10m including the new bands, auto band switching with new IC-720A or with the IC-720 when fitted with an LDA unit. Runs 1kW input on SSB and CW. No tune up! Expensive but how convenient. Complete with AC power supply. **\$4700**

##### Power Supplies—SCE power supplies for solid-state rigs—

**The SCE-DC25**—Heavy duty 13.8V 25A max., regulated supply with twin output terminals.

**The SCE-DC8**—New, suitable for the new breed of 25 watt, 2 metre FM sets, and will supply up to around 7.5 A max., with 5-6 continuous. An attractive unit finished with the usual SCE black and silver—New Model!

##### Antenna Tuners

**The MFJ-941D**—160–10m, up to 300W, tunes coax, random wires, and balanced feeders. SWR/power meter and has rear-mounted, four position antenna switch. **\$548**

**The IC-AT100**—Fully automatic tuner, auto-bandswitching with the IC-720A and IC-730, IC-740, IC-750. **\$1206**

**The IC-AT150**—Fully automatic antenna tuner for the IC-735 and IC-725. Auto bandswitching, the latest technology. **\$1039**

**The IC-AT500**—As per the AT100 but handles up to 1kW for use with the IC-2KL **\$1626**

**The IC-MN100**—Passive antenna matcher provides less than 1.5 SWR with short dipoles, and random end feed wires from 1.5–30MHz. **\$449**

**The IC-AH3**—Fully automatic tuner for the IC-735 and IC-725, tunes random end fed wires, and/or the IC-AH2B mobile whip. **\$1372**

**The IC-AH2B**—Mobile whip and base unit. **\$507**

**Speech synthesizers** available for the 751, R71, 27A, 27H, 27I and 471 models. **\$139**

**The very best 73 from your totally Ham licensed staff—Barry ZL1AAA, Roly ZL1BQD, Gail ZL1FV.**



# Cardiopulmonary Resuscitation (CPR)

## AIRWAY



**Establish unresponsiveness —**

Shake and shout.

**Call for help.**

**Position victim** flat on back  
on firm surface.

### OPEN AIRWAY

Tilt head well back.

Lift chin with fingers.

## BREATHING



Look, listen and feel for breathing.

If absent,

### BEGIN RESCUE BREATHING

Keep victim's head tilted back.

Pinch nostrils.

Take deep breath, blow firmly with  
tight seal over victim's mouth.

Give **two full breaths** initially.

Chest must rise and fall.

## CIRCULATION



**Check carotid pulse.**

Place two fingers on victim's Adam's  
apple, then slide into groove at its  
side. If pulse absent,

### BEGIN EXTERNAL CARDIAC COMPRESSION

Kneel by patient.

With **heel** of hands, press lower half  
of breastbone downwards 3.8 – 5cms  
(1½ – 2").

The fingers may be extended or  
interlocked, or the top hand may  
grip the wrist of the hand  
underneath.

Keep arms straight and fingers clear  
of chest.

Press down straight towards spine.

**One rescuer:** 15 compressions  
(80 – 100/minute) 2 full breaths.

**Continue resuscitation** until natural  
breathing starts again and pulse  
returns or advanced care is  
available.



The National Heart Foundation of New Zealand