

NZART



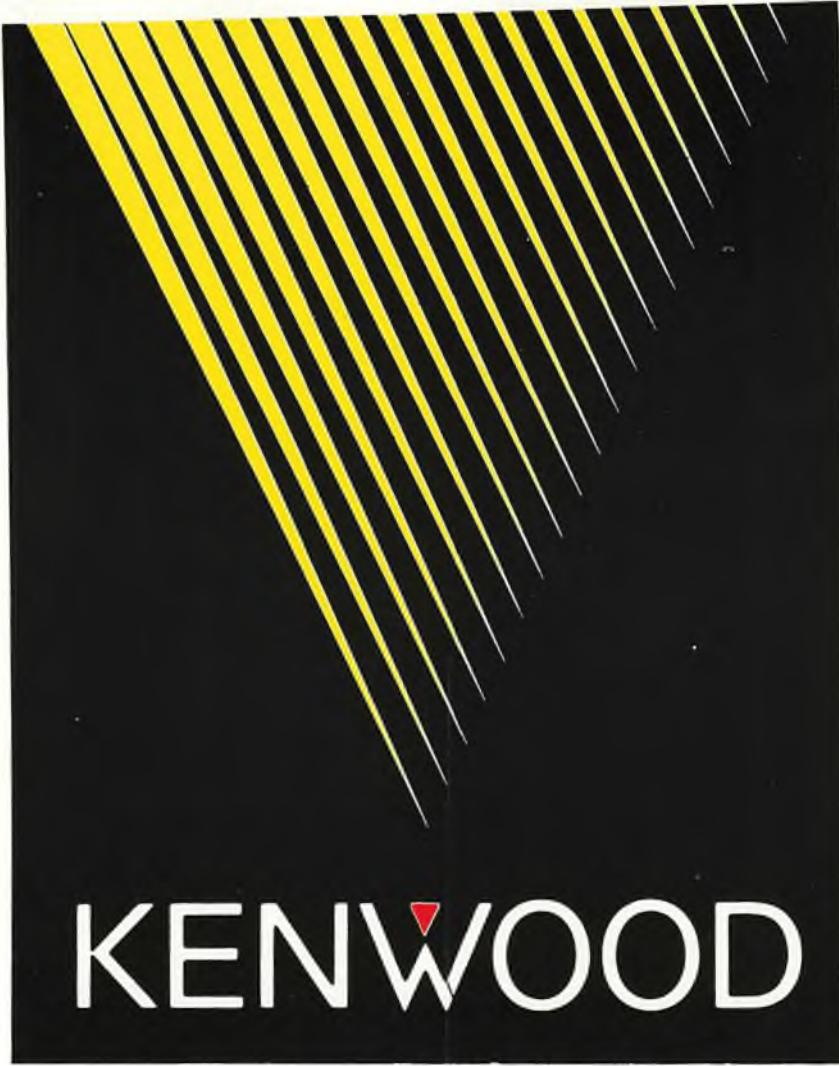
CALLBOOK



Amateur
Radio
Callsigns

1991

Radio
& TV
Information



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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 licensed, 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.

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19
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CALL BOOK 1991

A SUPPLEMENT OF BREAK-IN

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OFFICIAL JOURNAL OF
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NZART PUBLICATIONS

PO BOX 40-525, UPPER HUTT, NEW ZEALAND

NZART PUBLICATIONS

	Members' Price	Non-Members' Price
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(members only)

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See page 5.

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WEISS History of QRP	\$17.40	\$22.60
WIA Australian Callbook 1991	\$16.40	\$21.30

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Antenna Handbook, 1st Edition, 1982	\$18.20	\$23.70
Beam Antenna Handbook, 5th Edition, 1982	\$18.20	\$23.70
Cubical Quad, 3rd Edition, 1982	\$15.30	\$19.90
Interference Handbook	\$18.20	\$23.70
Low Cost Wire Antennas, 2nd Edition, 1982	\$18.20	\$23.70
Vertical Antennas	\$16.80	\$21.80

ORDERING INFORMATION—Prices include GST, postage and packing and are subject to alteration without notice. Members will be advised of the balance due before delivery. Watch Break-In for up-to-the-minute stock position. Goods are obtainable, less P & P, at NZART Headquarters between 10am and 12 noon, 2pm and 4pm, Monday to Friday. Prices for overseas postage are available upon application. Remittance MUST accompany all orders.
NON-MEMBERS use right-hand price columns. **OVERSEAS MEMBERS** should delete GST from their orders (divide by 9).
MEMBERS use left hand price columns. It is important that you supply a recent Break-In label when ordering.
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AX.25 Protocol	\$20.05	\$26.00
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W1FB Design Notes	\$17.20	\$22.40
World Map, 1980	\$7.90	\$10.25
Yagi Antenna Design	\$25.20	\$32.75

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Bright Sparks of Wireless	\$36.45	\$42.20
Buyers Guide to Amateur Radio	\$20.25	\$26.35
G-QRP Book	\$15.20	\$19.75
Handbook, 5th Edition, 1988	\$33.90	\$44.05
HF Antennas for all Locations, 1982	\$21.25	\$27.65
Microwave Handbook, Volume 1	\$54.20	\$70.45
Morse Code, 6th Edition, 1987	\$4.25	\$5.45
Practical Wire Antennas	\$19.90	\$28.90
Radio Data Reference Book	\$22.05	\$28.65
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Unpublished Masterpieces by R. F. Byrne	\$13.05	\$16.95
VHF/UHF Manual, 4th Edition, 1983	\$33.90	\$44.05
World at Their Fingertips	\$20.75	\$26.95
World Prefix Map	\$6.40	\$8.20

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New Zealand Radio Frequency Service Liaison on licensing and spectrum matters

International Representation with membership in the International Amateur Radio Union

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Satellite Co-ordination liaison with satellite organizations worldwide

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

Satellite Support donations and fund-raising

Spectrum Bandplanning for Council by the Frequency Management and Technical Advisory Group

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

Break-In Journal published eleven times a year

Amateur Radio Call Book published annually

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Video Tape Library for branch borrowing

Ionospheric Predictions printed monthly in **Break-In**

Slow Morse Practise for Amateur Radio Operators' Certificate

Monitoring Service to protect our bands

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VHF Convention for VHF constructors and experimenters

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Special Projects for funds for promoting radio in developing countries

Legal Advice on tower permits

Branch Services constitutional, legal, financial, etc.

Equipment Insurance Schedule at special rates

From the Editor

This year we welcomed a new Callsign Compiler to the *Call Book* team. Alan Chapman ZL3GX took over in January 1991 and almost immediately was advised that the RFS would not be supplying monthly updates nor the annual master list. This problem is being negotiated with the Ombudsman and RFS but had not been resolved at *Call Book* closing date. Although the lack of updates from RFS did not have a significant effect on the callsign listings this year, future listings must be in doubt if a satisfactory solution is not reached. It was pleasing to note that the RFS finally seemed to be getting their computer system in order, making a much more accurate listing possible.

The following table shows updates have dropped only marginally.

Area	1990	Additions	Deletions	1991	Amended
ZL1	2568	166	125	2609	216
ZL2	2100	139	89	2150	157
ZL3	948	52	45	955	62
ZL4	624	17	23	618	55
Total	6240	374	282	6332	490

Members are again reminded that for any change of address, both the RFS and NZART should be advised. A Change of Address form is printed on page 79.

A list of corrections to any errors contained in *Call Book* 1991 will appear in August *Break-In*. Please advise any errors to "Callbook Editor", P.O. Box 1733, Christchurch by July 10, 1991.

The major additions to *Call Book* this year are the graphical presentation of the bandplans and an expanded Television listing. An extensive listing of repeaters and beacons from WIA is also included. It was also possible to comply with the request to move the DXing pages together.

Once again many of the telephone numbers contained in *Call Book* (mainly in the Branch Directory and AREC Section Leaders listings) will change during the year. Consult your telephone directory for advice on telephone numbers in various areas.

Call Book includes voluntary contributions from many people, both amateur and non-amateur. As information in some sections has become dated I have had great difficulty in obtaining definitive updates. If you are aware of a contact for updated or new information then please drop me a line.

Overseas Subscription Address

The following list of addresses is current at press time. However, they do change from time to time, firms are bought out or taken over (*Ham Radio/CQ*, *Radio Publications/Radio Amateur Callbook* recently). Headquarters will continue to keep update changes notified in *Break-In*.

Amateur Radio

Subscriptions Department
Wireless Institute of Australia
P.O. Box 300
SOUTH CAULFIELD
Victoria 3162
Australia

Radio Communications

Subscriptions Department
Radio Society of Great Britain
Lambda House
Cranborne Road
POTTERS BAR
Herts EN6 3JW
England

QST

Subscriptions Department
The American Radio Relay League Inc.
225 Main Street
NEWINGTON, CT 06111
USA

AMSAT
Subscriptions Department
AMSAT
P.O. Box 27
WASHINGTON DC 20044
USA

CQ

Subscriptions Department
CQ Communications Inc.
Main Street
GREENVILLE, NH 03048
USA



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Vice-President:

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Administration Liaison Officer:

J. F. C. Johnson ZL2AMJ

QSL Manager:

B.E. Stewart ZL2RR

PO Box 857, Wanganui 5000

Break-In Editor:

J. E. Hirtzel ZL3ADF

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

Published monthly except January.

Call Book supplement published each June.

—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.

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 40-525, Upper Hutt
Telephone and Fax: (04) 282-170

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Annual Subscription	\$65.00
Junior Subscription	\$45.00
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per family member with a maximum of \$85.50 per family.	
Concessionary membership on application to the General Secretary	
Call Book 1991	Members \$12.00
	Non-Members \$20.00
Break-In	Single copy \$4.10

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. Wahrlich ZL1CVK

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 ZL1CVK, Call Book address.

Examination Coordinator

J. Reed ZL2AH

PO Box 40-525, Upper Hutt

Teletext

NZART Teletext Editors

Tony Dale ZL3LZ

30 Cuffs Road, Christchurch

Telephone (03) 887-913



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 meets regularly 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 North Canterbury Branch 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.

Presidents



1926-27	E. A. Shrimpton	Z2XA
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1985-91	T. D. Carrell	ZL3QL
1991-	T.C.King	ZL2AKW

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1983	A. G. Godfrey	ZL1HV
1985	J. F. C. Johnson	ZL2AMJ
1990	G. Kilpatrick	ZL1BBS

NZART Branch Index

01M	Ashburton	52C	Northern Hawkes Bay
02N	Auckland	73N	Northern Waikato
66N	Auckland VHF	72N	Opotiki
04N	Cambridge	30S	Otago
15C	Central Hawkes Bay	31C	Pahiatua
61S	Central Otago	65N	Papakura
05M	Christchurch	54C	Patea
56M	Christchurch West	75S	Queenstown
51N	Eastern Bay of Plenty	83N	Raglan
08S	Eastern Southland	32C	Rahotu Coastal
09C	Egmont—in recess	62M	Reefton-Buller
78N	Fair North	71N	Rodney
70C	Feilding	33N	Rotorua
10N	Franklin	34M	South Canterbury
11C	Gisborne	35S	South Otago
12N	Hamilton	36M	South Westland
13C	Hastings	06C	Southern Hawkes Bay
14C	Hawera	82C	Southern Wairarapa
58N	Helensville—in recess	37S	Southland
80N	Hibiscus Coast	38N	Taumarunui
16C	Horowhenua	60N	Taupo
79N	Howick	39N	Tauranga
17N	Hunlyt—in recess	77N	Te Aroha
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19C	Inglewood—in recess	53N	Te Puke
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69C	Kapiti	42C	Titahi Bay
67N	Kawerau	57N	Tokoroa
20C	Manawatu	63C	Upper Hutt
59N	Mangakino	43N	Waihi
21N	Manukau	81N	Waikato VHF
22C	Marlborough	45C	Waimarino
23C	Marton	46C	Wairarapa
44N	Matamata	47C	Waitara
24C	Motueka	55N	Waitomo
25C	Napier	48C	Wanganui
26C	Nelson	50C	Wellington
27C	New Plymouth	74C	Wellington VHF
68M	North Canterbury	03N	Western Suburbs
64S	North Otago	49M	Westland
29N	North Shore	28N	Whangarei

Letter after Branch number denotes electoral district
N=Northern, C=Central, M=Midland, S=Southern

NZART BRANCH DIRECTORY

01 Ashburton Branch NZART

Clubroom Address: Vintage Car Clubrooms, Tinwald.
Branch Callsign: ZL3AF. Trustees: ZL3UX, ZL3AFB.
President: Les Vincent ZL3UX, phone: (03) 303-6306.
Secretary: Gordon Mattingly ZL3TRM, phone: (03) 308-8555.
Postal Address: P.O. Box 361, Ashburton 8300.
Branch Net: 144.600 MHz on Mondays at 2030 hours.
Meeting Information: Second Monday each month (except January).

02 Auckland

Clubroom Address: 400 St John's Road, Meadowbank, Auckland.
Branch Callsign: ZL1AA. Trustees: ZL1KQ, ZL1AFU, ZL1BNV.
President: Don Webster ZL1CY, phone: (09) 555-554.
Secretary: Des Kealey ZL1BU, phone: (09) 524-9880.
Postal Address: P.O. Box 18-003, Glen Innes, Auckland 1130.
Branch Net: 146.600 MHz on Mondays at 2015 hours.
Meeting Information: Third Tuesday each month (except December) at 1930 hours. AGM: Second Tuesday in December. AREC: Last Wednesday each month which has five Wednesdays.
Other Information: For Branch information contact either ZL1CY or ZL1BU, or Bob Murphy ZL1AFU, phone: (09) 534-5950
Clubrooms are usually open on Saturday mornings.

03 Western Suburbs

Clubroom Address: 3000 Great North Road, New Lynn.
Branch Callsign: ZL1RK. Trustees: ZL1ST, ZL1AJI.
President: Norm Smith ZL1ST, phone: (09) 818-5143.
Secretary: Bill Carr-Neil, phone: (09) 836-9194.
Postal Address: P.O. Box 15-122, New Lynn, Auckland 1232.
Branch Net: 3570 kHz on non meeting Mondays at 1930 hours.
146.525 MHz on Thursdays at 1930 hours.
Meeting Information: Second Monday 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 Learmonth Domain.
Branch Callsign: ZL1ASW. Trustee: ZL1HP.
President: Des H. Hamlyn ZL1HP, phone: (071) 276-247.
Secretary: Ian Honey, phone: (071) 274-671.
Postal Address: P.O. Box 650, Cambridge 2351.
Branch Net: 3560 kHz on Sundays at 0900 hours.
146.575 MHz on Sundays at 0900 hours.
Meeting Information: Last Tuesday each month at 1930 hours.
Other Information: Construction every Tuesday at 1930 hours.

05 Christchurch

Clubroom Address: 27 Galbraith Avenue, Avonside, Christchurch.
Clubroom Telephone Number: (03) 891-188.
Branch Callsign: ZL3AC. Trustee: ZL3MG.
President: Ron Parry ZL3VX, phone: (03) 337-0365.
Secretary: Warren Strong ZL3TX, phone: (03) 332-3493.
Postal Address: P.O. Box 1733, Christchurch 8000.
Branch Net: Canterbury 725 on Sundays at 2000 hours.
Meeting Information: General: First Wednesday each month at 1945 hours. AREC: Second Wednesday of month at 1945 hours.
Radio Classes: Contact Les Coles ZL3UV, phone: (03) 388-5098. Study material also available.
Other Information: "HAMLARKS" Editor: Roger Urwin ZL3MG, (03) 351-8130. Branch Net MC: Trevor Payne ZL3AHP (03) 323-7361.

06 Southern Hawkes Bay

Clubroom Address: Dannevirke CD Headquarters.
Branch Callsign: ZL2IB. Trustee: ZL2ABT.
President: Riki Allison ZL2BRU, phone: (0653) 27-552.
Secretary: Riki Allison ZL2BRU, phone: (0653) 27-552.
Postal Address: Te Uri Rd, R.D. 3, Dannevirke 5491.
Branch Net: 3865 kHz on Sundays at 0930 hours.
Meeting Information: Second Sunday each month at 1930 hours at Woodville Bowling Club-Dannevirke CD Headquarters alternate months.
Radio Classes: See Branch 20 listings.

07 Not Allocated

08 Eastern Southland

Branch Callsign: ZL4AL. Trustee: ZL4AO.
President: Neil Gilder ZL4GL, phone: (03) 208-4192.
Secretary: John Norton ZL4IM, phone: (03) 205-3773.
Postal Address: c/- Private Bag, Pukerau, Southland 9750.
Meeting Information: Fourth Tuesday 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.
President: Fred Bain ZL1SP, phone: (09) 238-7684.
Secretary: Murray Griffin ZL1UHT, phone: home (09) 238-6192, work (09) 238-9588.
Postal Address: 12 Valley Road, Pukekohe 1800.
Branch Net: 3700 kHz on Sundays at 0900 hours.
Meeting Information: Third Tuesday each month at 2000 hours.
Radio Classes: Tuesday nights at 2000 hours at the Clubrooms. Contact the Secretary.
Other Information: Contact Officers: M. Armstrong ZL1US, phone: (09) 238-6567 and Bob Holt ZL1BBZ, phone: (09) 235-9549.

NZART Branch Directory—continued

11 Gisborne Amateur Radio Club Inc.

Clubroom Address: Civil Defence Rooms/also Kaiti Hall.
Clubroom Telephone Number: (06) 868-8381.
Branch Callsign: ZL2AA. Trustee: ZL2ANQ.
President: Peter Omer ZL2TRG, phone: (06) 867-2336.
Secretary: Basil Davoren ZL2UT, phone: (06) 868-8381.
Postal Address: P.O. Box 1017, Gisborne 3800.
Branch Net: 3666 kHz on Sundays at 1030 hours.
Meeting Information: Second Monday each month at 1930 hours.

12 Hamilton Amateur Radio Club (Inc.)

Clubroom Address: 88 Seddon Road, Hamilton.
Branch Callsign: ZL1UX. Trustees: ZL1NT, ZL2SR.
President: Alan Wallace ZL1AMW, phone: (071) 438-738.
Secretary: John Bell ZL1FB, phone: (071) 555-576.
Postal Address: P.O. Box 606, Hamilton 2000.
Branch Net: 3575 kHz on Mondays at 1930 hours.
Waikato 695 on Thursdays at 2030 hours.
Meeting Information: Third Wednesday each month (except January) at 1930 hours in Clubrooms.
Radio Classes: Theory every Tuesday at 1900 hours. Practical every fourth Wednesday at 1900 hours. Morse classes by arrangement. Contact Secretary or President.

13 Hastings/Havelock North

Clubroom Address: Civil Defence Headquarters, Lyndon Road, Hastings.
Branch Callsign: ZL2BEI. Trustee: ZL3DK.
President: Bill Lowes ZL2UBG, phone: (06) 877-5078.
Secretary: Frank Giles ZL2AGI, phone: (06) 878-4272.
Postal Address: 1006 Sussex Street, Hastings 4201.
Branch Net: 3615 kHz on Sundays at 0930 hours.
Meeting Information: Fourth Wednesday each month at 1930 hours.

14 Hawera Amateur Radio Club

Branch Callsign: ZL2AWW.
Secretary: Peter Williams ZL2AID, phone: (062) 84-292.
Postal Address: c/- P.O. Box 771, Hawera, South Taranaki 4800.
Meeting Information: Irregular. Contact Secretary.

15 Central Hawkes Bay Radio Club

Clubroom Address: "Pukeroa" Home for Disabled, Waipukurau.
Branch Callsign: ZL2AR. Trustee: ZL2ACP.
President: Ian Smith ZL2AFY, phone: (06) 855-8258.
Secretary: Jack Simcox ZL2THK, phone: (06) 858-9811.
Postal Address: P.O. Box 327, Waipukurau, Hawkes Bay 4176.
Branch Net: 3650 kHz at 2000 NZ time.
Meeting Information: Third Monday each month at 2000 hours.
Other Information: Victor Brosnan ZL2ACP, phone: (06) 857-7080.

16 Horowhenua

Clubroom Address: Jack Allen House, 21 Durham Street, Levin.
Branch Callsign: ZL2DS. Trustee: ZL2ALB.
President: Norman Broadbent ZL2ALB, phone: (069) 81-028.
Secretary: Mrs Gwen Leslie ZL2UKG, phone: (06) 363-7296.
Postal Address: 4 Reeve Street, Foxton 5551.
Branch Net: 146.500 MHz on Sundays at 1000 hours.
3590kHz on Sundays at 0900 hours.
Meeting Information: Fourth Wednesday each month (except December).

17 Huntly (in recess)

18 Hutt Valley

Clubroom Address: Birch Street Reserve, Lower Hutt.
Branch Callsign: ZL2HV. Trustees: ZL2ASO, ZL2ARW.
President: Lindsay Gibbs ZL2AVF, phone: (04) 661-103.
Secretary: Stephen McNeill ZL4HG, phone: (04) 670-660.
Postal Address: P.O. Box 30519, Lower Hutt 6300.
Branch Net: 3675 kHz on Sundays at 0930 hours.
Meeting Information: First Monday (second Monday in June) each month (except January) at 1930 hours in the Hutt Valley Tramping Clubrooms situated in the Birch Street Reserve.
Other Information: Contact Officer: Mike Ryan ZL2BSM, phone: (04) 670-282.

19 Inglewood (in recess)

Secretary: Tarry Martin ZL2KV, phone: (06) 756-7627.
Postal Address: P.O. Box 74, Inglewood 4651.
Other Information: Contact Peter Cramer ZL2AIS, phone: (06) 756-7314.

20 Manawatu

Clubroom Address: Totara Road, Palmerston North.
Branch Callsign: ZL2KO. Trustee: ZL2FE.
President: Peter Moore ZL2AUB, phone: (06) 358-7861.
Secretary: Ian Thompson ZL2IAN, phone: (06) 357-4545 after 1800 hours.
Postal Address: P.O. Box 171B, Palmerston North 5300.
Branch Net: 3570 kHz on Sundays at 0930 hours.
147.125 MHz on Thursdays at 2000 hours.
Meeting Information: First Wednesday each 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.
President: Terry Rist ZL1TR, phone: (09) 667-965.
Secretary: David Donaldson ZL1BFY, phone: (09) 278-7598.
Postal Address: 8 Guide Place, Papatoetoe 1701.
Branch Net: 3652 kHz and 146.550 MHz on Sundays at 0900 hours.
146.550 MHz on Mondays at 2000 hours.

Meeting Information: Third Wednesday each month at 1930 hours.
Monday of same week as third Wednesday at 1015 hours.
Technical night: Fourth Wednesday each month at 1930 hours.

22 Marlborough Branch NZART

Clubroom Address: Civil Defence Headquarters, Wither Road Extension, Blenheim.
Clubroom Telephone Number: (057) 87-039.
Branch Callsign: ZL2KS. Trustees: ZL2BGQ, ZL2BGL.
President: Robin Carter ZL2IW, phone: (057) 83-721.
Secretary: R. F. Elwood ZL2BTQ, phone: (057) 28-240.
Postal Address: P.O. Box 432, Blenheim 7300.
Branch Net: 3566 kHz on Sundays at 0900 hours.
Blenheim 695 on Mondays at 1930 hours.
Meeting Information: Second Thursday each month (except January) at 1930 hours.
Radio Classes: Contact a committee member.

23 Marton & Districts

Clubroom Address: 359 Wellington Road, Marton.
Branch Callsign: ZL2AMS. Trustee: ZL2BRR.
President: Andrew Scott ZL2BRR, phone: (0652) 6696.
Secretary: Ian Miles ZL2TZW, phone: (0652) 6310.
Postal Address: P.O. Box 311, Marton 5151.
Branch Net: Taihape 6775 on Sundays at 2030 hours.
Meeting Information: Fourth Wednesday each month at 1930 hours (2000 hours during daylight saving).
Radio Classes: As required. For enquiries phone (0652) 6696.

24 Motueka Amateur Radio Club (Inc.)

Clubroom Address: Members Homes.
Branch Callsign: ZL2GK. Trustee: ZL2SQ.
President: Ken Sharland ZL2KG, phone: (0524) 76-754.
Secretary: Carol Carter ZL1HS, phone: (054) 22-412.
Postal Address: P.O. Box 274, Motueka 7161.
Meeting Information: First Monday each month (except public holidays) at 1930 hours at members homes.

25 Napier Amateur Radio Club Inc.

Clubroom Address: 123 Latham Street, Marewa, Napier.
Branch Callsign: ZL2ABJ. Trustee: ZL2IC.
President: Mike Bull ZL2VM, phone: (06) 843-6052.
Secretary: Jos E. Wilson ZL2BAO, phone: (06) 835-0145.
Postal Address: 14 Hinton Road, Taradale, Napier 4001.
Branch Net: Napier 725 on Tuesdays at 2000 hours.
Meeting Information: Third Sunday each month at 1930 hours.
Other Information: Napier Amateur Radio Contest Group, ZL2GT (refer Stan White ZL2AHC). Affiliated group to Branches 13 and 25—Hawkes Bay VHF Group, 17 Surrey Street, Taradale; President Jock McGonigal, phone: (06) 844-2080. Meetings: Last Sunday each

NZART Branch Directory—continued

26 Nelson Amateur Radio Club (Inc.)

Branch Callsign: ZL2ARG. Trustee: ZL2BP.
President: Dolph Lyford ZL2UL, phone: (03) 548-6023.
Secretary: Andrew Mackie ZL2THG, phone: work (03) 546-1429, home (03) 547-5067.
Postal Address: P.O. Box 414, Nelson 7000.
Branch Net: Nelson 720 on Wednesdays (except clubnights) at 2000 hours. 3890kHz on Sundays at 0900 hours.
Meeting Information: Fourth Wednesday 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: (03) 548-6023 or Nelson Polytechnic (03) 546-9175 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 Merv Campbell ZL2ULJ, phone: (03) 548-6870.

27 New Plymouth Amateur Radio

Clubroom Address: CDHQ Marsland Hill, New Plymouth.
Clubroom Telephone Number: (067) 513-787.
Branch Callsign: ZL2BDN. Trustee: ZL2AWR.
President: Roy Symon ZL2BQY, phone: (067) 82-156.
Secretary: John Marsh ZL2TAS, phone: (067) 27-748.
Postal Address: c/- CD HQ, 45 Robe Street, New Plymouth 4600.
Branch Net: New Plymouth 720 on Wednesdays at 1930 hours.
Meeting Information: Third Tuesday each month. Radio room open most Saturday mornings between 0930 hours and 1200 hours.
Radio Classes: Contact Mel Fox ZL2AWR, phone: (067) 513-787.

28 Whangarei Branch NZART

Clubroom Address: CD Headquarters, Whimp Avenue, Onerahi.
Branch Callsign: ZL1AM. Trustee: ZL1UOH.
President: Donald Ewen ZL1UOH, phone: (089) 432-0185.
Secretary: Allan Walker ZL1BHC, phone: (089) 435-1413.
Postal Address: P.O. Box 10078, Te Mai, Whangarei 0130.
Branch Net: 3740 kHz on Sundays at 0900 hours.
Whangarei 720 on Mondays at 1930 hours.
Meeting Information: Second Wednesday each month at 1930 hours. Most meetings at Clubrooms.

29 North Shore

Clubroom Address: J. F. Kennedy Memorial Park, 145 Beach Road, Castor Bay.
Branch Callsign: ZL1AB. Trustees: ZL1ABS, ZL1ACX, ZL1AUW.
President: Lynn Sayer ZL2PQ, phone: (09) 444-8402.
Secretary: Alan Wooler ZL1AUW, phone: (09) 444-2423.
Postal Address: P.O. Box 31-103, Milford, North Shore 1330.
Branch Net: 3775 kHz on Sundays at 0900 hours.
Auckland 670 on Wednesdays at 2000 hours.
Meeting Information: First Monday (second Monday in June) each month at 1930 hours.
Radio Classes: Brian Oliver ZL1OL at Westlake Boys' High School, phone: (09) 418-2253.
Other Information: 29-er editor: Doug Skellon ZL1SS.

30 Otago

Clubroom Address: 109 Macandrew Road, South Dunedin.
Clubroom Telephone Number: (03) 455-3003.
Branch Callsign: ZL4AA. Trustee: ZL4MK.
President: Vern Haig ZL4JN, phone: (03) 455-2380.
Secretary: Jeanne Gilchrist ZL2BOD, phone: (03) 454-4607.
Postal Address: P.O. Box 5485, Dunedin 9000.
Branch Net: Dunedin 690 on Sundays at 2100 hours.
Meeting Information: Each Wednesday (except late December and early January) at 1930 hours.
Radio Classes: As required.
Other Information: Contact Officers: Keith Shore ZL4AI and Brenda Shore ZL4OQ, phone: (03) 466-7618.

31 Pahiatua

President: Raymond Brown ZL2ACK, phone: (0650) 68-126.
Secretary: Henry Angelini ZL2VJ, phone: (0650) 67-704.
Postal Address: R.D. 2, Pahiatua 5471.
Meeting Information: Three monthly by arrangement.

32 Rahotu Coastal

Clubroom Address: Domett Street, Opunake.
Branch Callsign: ZL2ANN. Trustee: ZL2OF.
President: William McNeil ZL2BQW, phone: (0661) 8028.
Secretary: John Jago ZL2DBX, phone: (0624) 8257.
Postal Address: 63 Reimenschneider Street, Manaia 4851.
Meeting Information: Second Thursday each month at 1930 hours.
Radio Classes: As required.

33 Rotorua Amateur Radio Club Inc

Clubroom Address: Wohlmann House, 3 Hinemoa Street, Rotorua.
President: Rick Hill ZL1OK, phone: (073) 74-004.
Secretary: Ted Breithner ZL1AVC, phone: (073) 459-687.
Postal Address: P.O. Box 1766, Rotorua 3200.
Branch Net: Rotorua 735 on Fridays at 2030 hours.
Meeting Information: Third Tuesday each month at 1930 hours Informal: First Tuesday each month 1930 hours.

34 South Canterbury (no update received)

Clubroom Address: Civil Defence HQ, Bank Street, Timaru.
Branch Callsign: ZL3UR. Trustee: ZL3CU.
President: Ken Davy ZL3HG, phone: (056) 43-822.
Secretary: Brian Hall ZL3TFA, phone: (056) 57-081.
Postal Address: 27 John Street, Temuka 8752.
Meeting Information: Last Monday of even numbered months at 1930 hours.

35 Balclutha

Clubroom Address: Main South Road, Balclutha.
Branch Callsign: ZL4JF. Trustee: ZL4HD.
President: John Blair ZL4TJO, phone: (03) 415-7849.
Secretary: Peter Brown ZL4VAG, phone: (03) 418-2253.
Postal Address: 25 Baxter Street, Balclutha 9200.
Branch Net: 3565 kHz on Mondays at 2000 hours.
Kuriwao 675 on Mondays at 1930 hours.
Meeting Information: First Tuesday each month (except January) at 2000 hours.

36 Hokitika

President: Gordon Bowman ZL3BH, phone: (0288) 57-143.
Secretary: Val Searle ZL3GW, phone: (0288) 56-741.
Postal Address: 7 Whitcombe Terrace, Hokitika, Westland.
Meeting Information: Irregular. Please contact Secretary.

37 Southland

Clubroom Address: 249 Etrick Street, Invercargill.
Clubroom Telephone Number: (03) 218-8686.
Branch Callsign: ZL4GQ. Trustees: ZL4OX, ZL4TFJ.
President: Rosie Matthews ZL4MT, phone: (03) 239-5777.
Secretary: Owen Zwies ZL1AMC, phone: (03) 217-7826.
Postal Address: P.O. Box 1260, Invercargill 9500.
Meeting Information: Branch: Third Tuesday each month at 2000 hours
AREC: First Tuesday each month (except January) at 1930 hours.
Radio Classes: Each Monday night from 1900 to 2100 hours until end of September. Enquiries to Neville Checketts ZL4OX, 21 Highfield Terrace, Invercargill.
Other Information: Contact Officer: Malcolm Davidson ZL4NO, phone: (03) 216-8564.

38 Taumarunui

Clubroom Address: Turaki Street (next to Police Station).
Clubroom Telephone Number: (0812) 8788.
President: Lew Palmer ZL1TIG, phone: (0812) 8113.
Secretary: Debbie Wells, phone: (0812) 8572.
Postal Address: c/- L.H.Palmer, 229 Taupo Road, Taumarunui 2600.
Branch Net: Taumarunui 715 when necessary.
Meeting Information: Second Monday each quarter.

39 Tauranga Amateur Radio Club

Clubroom Address: Civil Defence HQ, Barkes Corner, Tauranga.
Clubroom Telephone Number: (075) 71B-008.
Branch Callsign: ZL1TP. Trustees: ZL1BOM, ZL1AKW, ZL1QI.
President: Paul Gillett ZL1QI, phone: (075) 410-504.
Secretary: Owen Booth ZL1OB.
Postal Address: c/- 40a Esk Street, Tauranga 3001.
Branch Net: 3600kHz on Sundays at 0900 hours.
Tauranga 680 on Wednesdays at 2030 hours.
Meeting Information: First Thursday each month at 1930 hours.
Radio Classes: Monday nights at clubrooms 1900-2100 hours, March to September.
Other Information: PBBS = ZL1BSN.

NZART Branch Directory—continued

40 Te Awamutu

Clubroom Address: c/- C.D. Rooms, Bank Street, Te Awamutu.
Branch Callsign: ZL1CB. Trustee: ZL1AOM.
President: Peter Shaw ZL1UFS, phone: (071) 296-518.
Secretary: June Shaw, phone: (071) 296-518.
Postal Address: P.O. Box 583, Te Awamutu 2400.
Branch Net: 3865 kHz on Thursdays at 2030 hours.
147.375 MHz on Sundays at 1900 hours.
Meeting Information: Fourth Wednesday each month at 1945 hours.
Radio Classes: Technical Course Correspondence.

41 Thames

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

42 Titahi Bay

Clubroom Address: Tireti Hall, Tireti Road, Titahi Bay.
Branch Callsign: ZL2AFV. Trustee: ZL2AGY.
President: Leslie Jury ZL4SS, phone: (04) 368-516.
Secretary: Keith Rumens ZL2CWL, phone: (04) 328-437.
Postal Address: 19 Duval Grove, Tawa, Wellington 6203.
Branch Net: 3710 kHz on Sundays at 1100 hours.
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.
Clubroom Telephone Number: (07863) 7141.
Branch Callsign: ZL1QW. Trustee: ZL1BAS.
President: Owen Morgan ZL1BAS, phone: (07863) 8540.
Secretary: Anne Anderson ZL1TAF, phone: (07) 863-7546.
Postal Address: 5 Martha Street, Waihi 2991 or Secretary's Call Book address.
Branch Net: 146.575 MHz on Sundays at 2100 hours NZST.
3580 kHz on Thursdays at 2000 hours NZST (except meeting night).
Meeting Information: First Thursday each month (except January)
Construction Group: each Sunday at 1300-1500 hours.
Radio Classes: As required—contact Secretary.
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.
President: John Rasmussen ZL1AGA, phone: (07) 888-8269.
Secretary: Ian Perkins ZL1BFH, phone: (07) 888-6839.
Postal Address: 74 Tawari Street, Matamata 2271.
Branch Net: 3560 kHz on Sundays at 0900 hours.
Meeting Information: Second Wednesday each month at 1930 hours in staffroom of Matamata Borough Council.

45 Waimarino

Branch Callsign: ZL2MG. Trustee: ZL2AVL.
President: Talbot Garmonsway ZL2AMT, phone: (0658) 81-448.
Secretary: Gordon Luscombe ZL2AVL, phone: (0658) 56-707.
Postal Address: 5 Main Road, Waipoua 5164.
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: ZL2FC.
President: Robert Lambert ZL2BFY, phone: (059) 80-876.
Secretary: David Bray ZL2UCW, phone: (059) 25-704.
Postal Address: P.O. Box 860, Masterton 5900.
Branch Net: Rewa 735 on Mondays at 2000 hours.
Meeting Information: Second Monday 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.
President: Larry Smart ZL3UD, phone: (067) 47-583.
Secretary: Sid McKain ZL2BIF, phone: (067) 48-460.
Postal Address: 1354 Devon Road, 42 R.D., Waitara 4656.
Branch Net: 3666 kHz on Tuesdays at 2000 hours.
Meeting Information: First Sunday each month at 1930 hours.

48 Wanganui Amateur Radio Society (Inc) (no update received)

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

49 Westland

President: Craig Terris ZL2UAY, phone: (03) 768-4087.
Secretary: Kevin O'Sullivan ZL3ABY, phone: (03) 768-7598.
Postal Address: 53 Marlborough Street, Greymouth 7801.
Meeting Information: First Wednesday each month (except January) at 1930 hours. Contact Secretary or President for venue.
Other Information: Westland 695 as contact for club members. Contact Officer: Zelda Garlick ZL3AAB, phone: (03) 768-7332.

50 Wellington

Clubroom Address: MED Cafeteria, Webb Street, Wellington.
Branch Callsign: ZL2WB. Trustee: ZL2AQC.
President: Doug McNeil ZL2AOV, phone: (04) 784-520.
Secretary: Peter Moore ZL2ULE, phone: (04) 753-798.
Postal Address: P.O. Box 6464, Te Ara, Wellington 6035.
Branch Net: 3570 kHz on Sundays at 1100 hours.
Meeting Information: Third Tuesday each month (except December) at 1930 hours Social Group: Fourth Tuesday each month at 1400 hours in Lutheran Hall, King Street, Newtown. Contact Val Parminster ZL2AJ, phone: (04) 793-407.
Other Information: AREC Secretary: Dan Doyle ZL2AQC, phone: (04) 793-407.

51 Eastern Bay of Plenty (no update received)

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

52 Northern Hawkes Bay (no update received)

53 Te Puke

Clubroom Address: State Highway 2 (next to Te Puke Holiday Park).
President: Ivan Gibbs ZL1ARZ, phone: (075) 739-643.
Secretary: Eric Brown ZL1IB, phone: (075) 738-722.
Postal Address: 20 Gilmore Street, Te Puke, Bay of Plenty 3071.
Branch Net: 3600 kHz on Sundays at 0900 hours.
Tauranga 680 on Wednesdays at 2030 hours.
Meeting Information: Second Saturday each month at 1400 hours at Clubrooms. Each Saturday at 1300 hours at Clubrooms.
Radio Classes: As required.

54 Patea

Branch Callsign: ZL2QF. Trustees: ZL2AFE, ZL2BJI, ZL2AHI.
President: John Clarkson ZL1UJX, phone: (0623) 8576.
Secretary: Dave Robinson ZL2BJI, phone: (062) 87-486.
Postal Address: P.O. Box 156, Hawera 4800.
Branch Net: Egmont 705 on Sundays at 2030 hours.
Meeting Information: Third Monday each month at 1930 hours at Hawera Primary School.
Radio Classes: By arrangement.
Other Information: All examinations will be held at Kakaramea Primary School located on SH.

NZART Branch Directory—continued

55 Waitomo Radio Club

Clubroom Address: Thompson Avenue, Otorohanga.
Branch Callsign: ZL1IZ. Trustees: ZL1BZ, ZL1ADG.
President: Mick Gannon ZL1HJ, phone: (0813) 87-140.
Secretary: Ian Murrell ZL4SU, phone: (0813) 86-399.
Postal Address: 65 King Street, Te Kuiti 2500.
Branch Net: 3850 kHz on Mondays at 2000 hours.
Waitomo 7375 on Sundays at 0900 hours.
Meeting Information: First Tuesday each month at 1930 hours.

56 Christchurch West Amateur Radio Club

Clubroom Address: Auburn Avenue, Upper Riccarton, Christchurch.
Branch Callsign: ZL3VV. Trustees: ZL3ACS, ZL3ADL.
President: Dudley Berry ZL3TOB, phone: (03) 894-718.
Secretary: Roy C. Timms ZL3AIB, phone: (03) 351-7316.
Postal Address: c/- P.O. Box 31-095, Ilam, Christchurch 8030.
Meeting Information: Branch: Fourth Tuesday each month at 1930 hours Free 'n Easy: Middle Wednesday each month 1330-1600 hours.
Radio Classes: Morse classes every Tuesday at 1930 hours (1900 hours on Branch Meeting night).

57 Tokoroa Amateur Radio Club Inc

Clubroom Address: Ireland Reserve, Baird Road, Tokoroa.
Branch Callsign: ZL1AQR. Trustee: ZL1UPI.
President: Des Zein ZL1TWH, phone: (07) 886-6290.
Secretary: Ted Oxner ZL1TLV, phone: (07) 886-5955.
Postal Address: Ireland Reserve, Baird Road, Tokoroa 2392.
Branch Net: Tokoroa 7025 on Mondays at 1900 hours.
Meeting Information: Third Monday each month (except January) at 1930 hours.
Radio Classes: As required. Training Officer: George McFarlane ZL1BEG.

58 Helensville (in recess)

59 Mangakino (no update received)

60 Taupo

Clubroom Address: A.C. Reserve, A.C. Baths Avenue, Taupo.
President: Graham Messenger ZL1BVO, phone: (074) 84-162.
Secretary: Ian Greaves ZL1BYV, phone: (074) 84-448.
Postal Address: 28 Acacia Bay Road, Taupo 3300.
Branch Net: Taupo 675 on Mondays at 1930 hours.
Meeting Information: First Thursday each month at 1930 hours.

61 Central Otago

Clubroom Address: Alexandra Fire Station, Centennial Avenue.
President: David Mulder ZL4DK, phone: (03) 448-9346.
Secretary: John Holley ZL4TCN, phone: (03) 446-8653.
Postal Address: 44 Scotland Street, Roxburgh.
Branch Net: 3660 kHz on Tuesdays at 2000 hours.
Meeting Information: Fourth Thursday each month (except December) at 2000 hours.

62 Rotorua-Buller

President: Les Hart ZL3AAV, phone: (0289) 8896.
Secretary: Carl Hansen ZL3DAD, phone: (0289) 28-235.
Postal Address: 6 Greenfield Street, Hector, Buller 7650.
Branch Net: 3880 kHz on Sundays at 2000 hours.
Meeting Information: First Monday (second Monday if first is a public holiday) each month (except January) at 1930 hours at 61 Wakefield Street, Westport.
Radio Classes: Contact Secretary or President.

63 Upper Hutt

Clubroom Address: Rear of Upper Hutt Council Chambers, Fergusson Drive, Upper Hutt.
Clubroom Telephone Number: (04) 288-769 Ext 849 A.H. (04) 288-769.
Branch Callsign: ZL2VH. Trustees: ZL2ACT, ZL2TJT.
President: Chris Hannigan ZL4OY, phone: (04) 266-060.
Secretary: Joe Reed ZL2AH, phone: (04) 287-705.
Postal Address: 11 Wood Street, Upper Hutt 6401.
Branch Net: Clowie 730 and Clowie 860 - continuous.
Meeting Information: Second Sunday each month (except January).
Radio Classes: Contact Club Secretary.
Other Information: Contact Branch or AREC: Neville Copeland ZL2AKV, phone: work (04) 282-170.

64 North Otago

Clubroom Address: Car Club Rooms, Stoke Street, Oamaru.
President: Neil McLeod ZL4SN, phone: (03) 434-7253.
Secretary: Doug Hasler ZL4IX, phone: (03) 437-2454.
Postal Address: 10 Mean Street, Oamaru 8901.
Branch Net: Oamaru 670 on first Monday of each month at 1930 hours.
Meeting Information: Second Monday each month (except January) at 1930 hours.
Radio Classes: Contact Dave Bokser ZL4TFF, phone: (03) 434-5480.
Other Information: Contact Officer: Ellwood Armstrong ZL4TR, phone: (03) 434-8903.

65 Papakura Radio Club Inc.

Clubroom Address: 2a Wood Street, Papakura.
Branch Callsign: ZL1VK. Trustee: ZL1AKY.
President: David Karrasch ZL1TTS, phone: (09) 298-5271.
Secretary: Dave Morris ZL1ULF, phone: (09) 278-2465.
Postal Address: P.O. Box 397, Papakura 1703.
Branch Net: 3755 kHz on Sundays at 0900 hours.
147.325 MHz on Sundays at 0930 hours.
Meeting Information: Second Wednesday each month at 1930 hours.
AREC: Fifth Wednesday each month.
Radio Classes: Contact Geoff Reed ZL1AKY, phone: (09) 298-4124. CW Practice Fred Bain ZL1SP, 3755 kHz at 1900 hours Monday to Friday.
Other Information: Newsletter Editors: Dave Johnstone ZL1AMN and Ron Moroney ZL1BTI. Awards Custodian: Carol Johnstone ZL1AJL.

66 Auckland VHF Group Inc

Clubroom Address: end of Hazel Avenue (off Dominion Road), Mount Roskill, Auckland.
Branch Callsign: ZL1BQ. Trustee: ZL1MO.
President: Ron Phillips ZL1TBO, phone: (09) 896-230.
Secretary: Malcolm Brown ZL1AZ, phone: (09) 833-9549.
Postal Address: P.O. Box 10-138, Dominion Road, Auckland 1030.
Branch Net: Auckland 6625 on Sundays at 2015 hours.
Meeting Information: General: Third Monday each month at Clubrooms at 1930 hours. Projects: Every Wednesday from 1900 hours. All welcome. AREC: Fourth Monday of month (only when required).
Other Information: Newsletter (Spectrum) Editor: Mike Sheffield ZL1ABS, phone: (09) 415-9584. Membership—contact Phil Callaghan, phone: (09) 444-0553. Contest Manager: Jack Burrows ZL1TBJ, phone: (09) 872-959.

67 Kawerau Amateur Radio & Hobbies Club

Clubroom Address: A.T.C. Hall, Onslow Street, Kawerau.
Clubroom Telephone Number: (076) 38-722.
Branch Callsign: ZL1KW. Trustee: ZL1BGE.
President: Les Gates ZL1VBR, phone: (076) 38-416.
Secretary: Jim Fitzpatrick ZL1CAM, phone: (07320) 846.
Postal Address: P.O. Box 209, Kawerau 3452.
Branch Net: 3615 kHz on Wednesdays (except third) at 1930 hours.
Meeting Information: Third Wednesday each month at 1930 hours.

68 North Canterbury Amateur Radio Club

Clubroom Address: Waimakariri District Council Car Park, Percival Street, Rangiora.
Branch Callsign: ZL3RR. Trustee: ZL3OC.
President: Geoff Gillman ZL3QR, phone: (0502) 27-883.
Secretary: Lorna Allan ZL3AAZ, phone: (0502) 35-352.
Postal Address: 4 Highfield Lane, Rangiora 8254.
Branch Net: 146.600 MHz on Sundays at 1900 hours.
3605kHz on Mondays preceding meetings at 2030 hours.
Meeting Information: Second Thursday each month (except January) at 1930 hours.
Radio Classes: For information contact the tutor: Ron McMaster ZL3MQ, phone: (03) 278-278.

NZART Branch Directory—continued

69 Kapiti Branch

Clubroom Address: 97 Rosetta Road, Raumati South.
Clubroom Telephone Number: (058) 86-664.
Branch Callsign: ZL2KB. Trustee: ZL2JG.
President: Bob Harwood ZL2TIN, phone: (058) 84-787.
Secretary: Dennis Young ZL2BFI, phone: (058) 86-664.
Postal Address: P.O. Box 166, Paraparaumu 6152.
Branch Net: Kapiti 685 on Sundays at 1930 hours.
Meeting Information: First Wednesday each month (except January) at 2000 hours.
Radio Classes: Contact Dennis Young ZL2BFI, phone: (058) 86-664.
Other Information: Contact Officer: Dawn Young ZL2AGX, phone: (058) 86-664 or call on Kapiti 685 or 885 repeaters.

70 Feilding Radio Club

Branch Callsign: ZL2AMR. Trustee: ZL2QR.
President: G. J. Hitchman ZL2BNA, phone: (063) 36-847.
Secretary: Alan J. Abel ZL2QR, phone: (063) 36-538.
Postal Address: 20 Ranfurly Road, Feilding 5600.
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.
President: I. A. Yule, phone: (09) 425-5948.
Secretary: Alan Dale ZL1ABL, phone: (09) 423-8938.
Postal Address: 61 Rodney Street, Wellsford 1493.
Meeting Information: Second Wednesday each month (except January) at 2000 hours. Varies between Warkworth and Wellsford—check with Contact Officer.
Other Information: Contact Officers: Alan Dale ZL1ABL, phone: (09) 423-8938 and William Tester ZL1AHK, phone: (09) 425-7299.

72 Opotiki Radio Club

Clubroom Address: Opotiki Hospital, Hukutaia Road.
Clubroom Telephone Number: (07) 315-6168 or (07) 315-7187.
President: Frank Mogford ZL1BDG, phone: (07) 315-6932.
Secretary: Lionel George ZL1BGH.
Postal Address: c/- P.O. Box 315, Opotiki 3472.
Meeting Information: First Sunday each month at 0930 hours.

73 Northern Wairoa Electronics Club (no update received)

74 Wellington VHF Group Inc.

Clubroom Address: MED Cafeteria, Webb Street, Wellington.
Clubroom Telephone Number: (04) 735-449.
Branch Callsign: ZL2WA. Trustee: ZL2ARW.
President: David Andrews ZL2SX, phone: (04) 795-786.
Secretary: Wayne Knowles ZL2BKC, phone: (04) 780-893.
Postal Address: P.O. Box 12-259, Wellington North 6038.
Meeting Information: Last Thursday each month (except December) at 1930 hours. Trading Table opens at 1900 hours. ATV Group: 3 weeks before main meeting.

75 Queenstown

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

76 Kaikoura Radio Club

Clubroom Address: 222 Esplanade, Kaikoura.
President: Bill Jackson ZL3PZ, phone: (03) 319-5302.
Secretary: Revd Wilf Bool ZL3GF, phone: (03) 319-5936.
Postal Address: 145 South Bay Parade, South Bay, Kaikoura 7351.
Branch Net: Kaikoura 690 on Saturdays at 1930 hours.
Meeting Information: Second Monday each month at 1930 hours.

77 Te Aroha & Districts Radio Club (no update received)

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

78 Far North Districts Amateur Radio Club (Inc.)

Branch Callsign: ZL1BG. Trustees: ZL1ALU, ZL1AUI.
President: Bob Banks ZL1AUI, phone: (09) 406-0692.
Secretary: Russell Shackleton ZL1BOK, phone: (09) 408-0057.
Postal Address: P.O. Box 81, Kaitaia 0500.
Branch Net: 3615 kHz on Sundays at 2000 hours.
Paikauri 6775 on Thursdays at 2000 hours.

Meeting Information: Second Wednesday each odd month in member's homes.

Radio Classes: Contact Brian Tarlton, phone: (09) 408-1447.

79 Howick & Districts Radio Club

Clubroom Address: R.S.A. Building, Wellington Street, Howick.
Branch Callsign: ZL1TB. Trustee: ZL1AOC.
President: Vern Morris ZL1TDG, phone: (09) 534-2892.
Secretary: Bert Toomey ZL1AQX, phone: (09) 534-5161.
Postal Address: P.O. Box 82-127, Highland Park 1730.
Branch Net: 3800 kHz on Sundays at 0900 hours.
146.575 MHz on Wednesdays at 2000 hours.

Meeting Information: First Wednesday each month (except January).

80 Hibiscus Coast Amateur Radio Club Inc

Clubroom Address: 479/1 Whangaparaoa Road, Whangaparaoa.
Clubroom Telephone Number: (0942) 45-195.
Branch Callsign: ZL1FU. Trustees: ZL1AG, ZL1ACY, ZL1BRQ.
President: David Wadham ZL1TIS, phone: (09) 892-694.
Secretary: Keith Faulkner ZL1FQ, phone: (0942) 63-966.
Postal Address: 479/1 Whangaparaoa Road, Whangaparaoa 1463.
Branch Net: 3725 kHz on Sundays at 0900 hours.
146.550 MHz on Sundays at 0945 hours.

Meeting Information: Fourth Monday (second Monday in December) each month at 1930 hours.

81 Waikato VHF Group (Inc.)

Branch Callsign: ZL1S. Trustee: ZL1HP.
President: Des Hamblin ZL1HP, phone: (071) 276-247.
Secretary: Gavin Petrie ZL1UAB, phone: (071) 564-025.
Postal Address: P.O. Box 606, Hamilton 2000.
Branch Net: Waikato 695 on Sundays at 2015 hours.
Meeting Information: General meetings held in February, May, August and November. Listen to Net for details. Committee meetings are held in January, April, July and October.

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.
President: Bob Pearce ZL2GJ, phone: (0553) 28-758.
Secretary: David Simmonds ZL2TWX, phone: (0553) 88-414.
Postal Address: Kahutara Road, Featherston RD 1, 5952.
Branch Net: Southern Wairarapa 715.
Meeting Information: First Sunday each month (except January) at 1930 hours.
Radio Classes: As required.

83 Raglan Amateur Radio Club

Clubroom Address: Community House Basement, Bow Street, Raglan.
Clubroom Telephone Number: (07) 825-8142.
Branch Callsign: ZL1CCT. Trustees: ZL1BRU, ZL1AUV.
President: Jack Sanders ZL1AUV, phone: (07) 825-8566.
Secretary: Fred Gilbert ZL1BRU, phone: (07) 825-8018.
Postal Address: 25 Bay View Road, Raglan 2051.
Branch Net: 146.525 MHz on Tuesdays at 1900 hours.
3625 kHz on Saturdays at 0830 hours.
Meeting Information: Quarterly by arrangement.

*Write that
article for
Break-In*

AREC Officers

E. Call		Call	Home	Work	Deputy	Call	Home	Work
ZL3EX	OC AREC	Don Mackay	ZL3RW	03/338-3211	03/667-443	Geoff Chapman	ZL4PX	03/385-1815
ZL2EXA	Secretary AREC	Jim Meachen	ZL2BH	04/278-694	04/619-0885			03/539-721
ZL1EX	Area Officer ZL1	Merv Passau	ZL1AKX	09/298-4575				
ZL2EX	Area Officer ZL2	Terry Waghorn	ZL2AYY	04/797-853	04/726-947	Jim Rowe	ZL1AVR	09/576-4502
ZL3EXA	Area Officer ZL3	Geoff Chapman	ZL3PX	03/385-1815	03/639-721	Jim Meachen	ZL2BHF	09/795-363
ZL4EX	Area Officer ZL4	Ron Kingston	ZL4MK	03/454-4664		Gareth Bradshaw	ZL3VP	04/278-594
						Bob Smith	ZL4OC	03/332-2406
							ZL4GU	03/477-4215

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		Simon Watt-Wyness	ZL1TJB	09/521-2807	09/524-4076
ZL1EB	North Shore	Terry James	ZL1UFY	09/444-6364	09/444-0739	Allan Wooler	ZL1AUW	09/444-2423	09/570-5655
ZL1EC	Hamilton	Steve Carran	ZL2SR	071/555-519	071/557-411	John Hutton	ZL2GV	071/72-993	071/70-065
ZL1ED	Te Awamutu	Peter Shaw	ZL1UFS	071/296-519		Ron Brickland	ZL1CDE		
ZL1EE	Taumarunui	Lew Palmer	ZL1TIG	0812/58-113	0812/58-260				
ZL1EF	Waihi	Ron Boggiss	ZL1RS	07/863-4555	07/863-8877	Peter Anderson	ZL1LR	07/863-7546	07/863-7546
ZL1EG	Northland	Kevin Bell	ZL1ANI	089/435-329	089/482-599	Don Ewen	ZL1UDH	089/432-0185	
ZL1EH	Matamata	W. Coates	ZL1GO	07/888-7107		John W. Rasmussen	ZL1AGA	07/888-8269	07/888-8058
ZL1EI	Thames	Ken Hayhurst	ZL1ATU	0843/87-330		Lea Bateman	ZL1APF	0843/87-054	
ZL1EJ	Tauranga	Graham Humphrey	ZL1BWB	075/789-643	075/779-127	Neil Graham	ZL1URY	075/757-720	075/753-141
ZL1EK	Western Sub.	Kevin Rutler	ZL1ABP	09/871-663	09/854-341	Roly Jury	ZL1AMU	09/874-636	09/874-636
ZL1EL	Cambridge	Tony Boyce	ZL1AFV	071/276-107	071/277-358	Des Hamblyn	ZL1HP	071/276-247	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	Bob Holt	ZL1BBZ	09/235-9549		Colin Shuker	ZL1BOT	09/238-7350	09/758-999
ZL1EO	Kawerau	Gary Armstrong	ZL1FY	076/37-278	076/33-435	Barry Liddle	ZL1CAY	076/38-970	076/33-860
ZL1EP	Waitomo	Mick Gannon	ZL1HJ	0913/97-149		Bob Biomfield	ZL1JE	0913/98-264	
ZL1EQ	Rotorua	Graeme Hunt	ZL1ANH	073/486-852	073/486-852	Peter Dare	ZL1PJ	073/456-469	073/475-899
ZL1EA	Tokoroa	George McFarlane	ZL1BEG	07/886-5522		Murray Parkinson	ZL1BHW	073/484-561	
ZL1ES	Papakura	Richard Gamble	ZL1BNQ	09/299-6189	09/570-2888	Dick Van Beek	ZL1CDD	07/883-5771	07/883-5763
ZL1ET	Taupo	Merv Taylor	ZL2PX	074/70-915		David Karrasch	ZL1TTS	09/298-5271	09/266-5453
ZL1EU	Manukau	Granville Emmett	ZL1BYD	09/576-8490	09/576-8490	Graham Messenger	ZL1BVO	074/84-162	
ZL1EV	Ta Puke	Eric Brown	ZL1B	075/738-722		John Carruthers	ZL1AAL	09/535-7363	09/535-7363
ZL1EW	Rodney	Martin Winsor	ZL1ULG	09/425-7855	09/425-8100	Murray R Neno	ZL1ARL	075/420-574	075/737-329
ZL1EY	Opotiki	John Pederson	ZL1BNJ	073/15-6757	073/15-6757	George Wilson	ZL1AZC	09/425-7925	
ZL1EZ	Dargaville	Les Ward	ZL1BIW	0884/7079		Wilfred Shultz	ZL1UPA	073/15-6289	073/15-7469
ZL6EA	Far North	Brian Tarlton	ZL1BAY	09/408-1447	09/408-1447	M Baxlich	ZL1BAU	0884/7975	0884/8369
	Kerikeri					Owen Brott	ZL1ALU	09/408-0729	09/408-0729
	Kaikohe					Ian Wilson	ZL1CBD	09/407-8901	09/407-8814
						Phil Wrigley	ZL1PW	09/401-2399	09/401-2399
ZL6EB	Te Aroha	Brian McConnochie	ZL1BWK	07/884-8871	07/884-8189	Grant Horn	ZL1UNX	07/884-5720	
ZL6EC	Hibiscus Coast	Blair Jackson	ZL1NV	09/426-6664	09/444-5101	Greg Needhan	ZL1TFI	09/426-8183	09/426-5351
ZL6ED	Mangakino	R. E. Randle	ZL2RX	080/28-977					
ZL6EE	Mount Roskill	Quentin Foreman	ZL1BPW	09/410-7236	09/410-7236	Rib Compier	ZL2AJQ	06/888-8636	
ZL2EA	Gisborne	Rowley Haisman	ZL2APH	08/688-6422	08/687-9499	David Leask	ZL2AYU	067/33-493	067/510-680
ZL2EB	New Plymouth	Wayne Gaudin	ZL2VN	067/35-800	067/81-051	John West	ZL2ADW	067/70-635	067/510-200
ZL2ED	Wanganui	Craig Mills	ZL2MD	06/345-0766	06/345-4109	Bob Jeffers	ZL2AAQ	06/343-2107	06/345-4109
ZL2EE	Hastings	Peter Stevens	ZL2AS	06/878-9726		Fraser Burns	ZL2TKV	06/878-2753	06/878-9998
ZL2EF	Kapiti	Len Blackley	ZL2FP	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 Able	ZL2QR	063/36-538	
ZL2EH	Sth Hawkes Bay	Arthur Law	ZL2-E	0653/49-171		Gary Gloag	ZL2VL	0650/48-682	0650/48-811
ZL2EI	Manawatu	Dexter Muir	ZL3-H	06/356-5475	06/356-5475	Jeanette Lambert	ZL2UDV	059/88-213	059/88-270
ZL2EJ	Wairarapa	Robin Reeve	ZL2FZ	059/82-211	059/88-000	T Clouston	ZL2AOP	0661/8082	
ZL2EK	Rahotu Coastal	W. G. McNeil	ZL2BQW	0661/8028		Geoff Smith	ZL2BDW	04/288-866	04/691-222
ZL2EL	Upper Hutt	Gavin Smith	ZL2ACT	04/279-533	04/821-506	Wilbert Knol	ZL2BSJ	04/835-264	04/861-029
ZL2EM	Wellington	Murray Milner	ZL2-B	04/324-739	04/823-333	Bob Peters	ZL2FW	03/547-5477	03/547-9721
ZL2EN	Nelson	Dolph Lyford	ZL2UL	03/548-6023	03/548-6023	Gordon Bucknor	ZL2BGQ	03/578/9464	
ZL2EO	Marlborough	Roger Lawson	ZL2BGH	03/578-6986	03/578-9494				
ZL2EP	Inglewood	Terry Martin	ZL2KV	06/756-7627					
ZL2EQ	Napier	Geoff Clicborn	ZL2CZ	06/844-6039	06/844-6710	Mike Bull	ZL2VM	06/843-6502	06/835-3299
ZL2ER	Waimarino	Bill Luscombe	ZL2AVL	0658/56-707					
ZL2ES	Horowhenua	Robin Christie	ZL2ARC	069/83-330	069/87-335	Errol Burnham	ZL2BHH	069/85-970	069/48-795
ZL2ET	Titahi Bay	Brian Ariens	ZL2AYF	04/326-378	04/324-954				
ZL2EU	Pahiatua	Paul Johnson	ZL2BNP	0650/68-094	0650/68-094	G Johnson	ZL2BDZ	0650/68-196	0650/67-456
ZL2EV	Patea	Graeme Bateman	ZL2BHD	062/84-793		John Clarkson	ZL1UJX	0623/8576	
ZL2EW	Marton	Brian Purdie	ZL2TPS	063/293/606		Ian Miles	ZL2TZW	0652/6310	0652/8189
ZL2EY	Hutt Valley	Bob Sewell	ZL2ASO	04/646-929		Bernard Wright	ZL2CZ	04/646-433	04/801-7262
ZL7EC	Waitara	Jonathan Herbert	ZL2BPW	067/23-441		Anne Griffiths	ZL2BV	067/23-827	
ZL7ED	Sth Wairarapa	Stewart Benton	ZL2ACT	0553/89-685	0553/89-685	Pauline Carr	ZL2CW	0553/89-576	0553/89-576
ZL3EA	Christchurch	Geoff Chapman	ZL3PX	03/385-1815	03/639-721	Stan Whitfield	ZL3AP	03/358-3089	
ZL3EB	Westland	Kevin O'Sullivan	ZL3ABY	03/768-7588	03/768-0242	Craig Terri	ZL2UAY	03/768-4087	03/768-0336
ZL3EC	Sth Canterbury	Ken Davy	ZL3HG	03/684-3822	03/684-3822	Kevin Waters	ZL3	03/684-7291	03/688-9079
ZL3ED	Ashburton	Alan Chapman	ZL1AFI	03/08-7737		Les Vincent	ZL3UX	053/35-306	
ZL3EE	South Westland	Ron Seale	ZL3MY	0228/567-41	0228/567-41	Gary Seale	ZL3DT	0288/560-21	0288/560-21
ZL3EF	Reefton-Buller	John Griffiths	ZL3AFN	0289/8399		Carl Hansen	ZL3DAD	0289/28-235	0289/7379
ZL3EG	Nth Canterbury	Anne McMaster	ZL3VR	03/27-8278		Lorna Allan	ZL3AAZ	0502/35-352	
ZL3EH	Kaikoura	Bill Jackson	ZL3PZ	03/319-5981		R J Godfrey	ZL3DR	03/319-5558	
ZL4EA	Otago	Alan Cross	ZL4QK	03/487-9619	03/477-0803	David Stevenson	ZL4SB	03/487-8030	03/465-5440
ZL4EB	E. Southland	Dick Whyte	ZL4AQ	03/208-6793	03/208-7433	Alister Allan	ZL4AO	03/208-7288	03/208-7288
ZL4EC	Southland	Neville Cheekets	ZL4OX	03/216-6599	03/216-6599	Mike Cockeram	ZL4IC	03/235-8222	03/218-2869
ZL4ED	Balclutha	John Blair	ZL4JO	03/415-7849	03/415-7573	John Smith	ZL4VAA	03/415-7243	03/415-7243
ZL4EE	Central Otago	Watlie Beveridge	ZL4ST	03/448-6880	03/448-8038	Ewen Mason	ZL4TKS	03/444-9240	03/444-9240
ZL4EF	North Otago	Dave Bokser	ZL4FF	03/434-5480	03/434-6825	D Walker	ZL4TDF		
ZL4EG	Queenstown	Russ Watson	ZL4JW	03/442-9374	03/442-8664	P L Brentwood	ZL4GU	03/442-9549	03/442-8564

Official AREC records have also been updated from Branch Directories. Any errors or omissions should be notified to Jim Meachen ZL2BHF immediately

New Zealand Amateur Radio Stations

ZL1 Callsigns

ZL1AA	Auckland Branch NZART (Inc.), see Branch Directory
ZL1AB	North Shore Branch NZART (Inc.), see Branch Directory
ZL1AC	Spackman, L. S., 124c Taylor Street, Blockhouse Bay, Auckland 1207
ZL1AD	Blackett, D. J., 56 Church Street, Northcote, Auckland 1309
ZL1AE	Duffin, R. W., 4 Cotterill Road, Leigh 1490
ZL1AF	Ogier, I. W., 32 Rangitane Street, Palmerston North 5301
ZL1AG	Gilbert, L. H., 3b Lilian Place, Orewa 1461
ZL1AH	Wightman, J. D., 359 Maungatapu Road, Tauranga 3001
ZL1AI	Badman, R. G., 14 Fenwick Crescent, Hillcrest, Hamilton 2001
ZL1AJ	Culloty, H. F. J., 5 May Street, Hillcrest, Hamilton 2001
ZL1AK	Mitchell, B. A., P.O. Box 7, 12 Ward Street, Waharoa 2272
ZL1AL	Benton, T. J., 54 Rawhiti Road, One Tree Hill, Auckland 1106
ZL1AM	Northland Branch NZART (Inc.), see Branch Directory
ZL1AN	Bold, G. E. J., 15 Kauri Road, Birkenhead, Auckland 1310
ZL1AO	Allison, J. N., P.O. Box 185, Taumarunui 2600
ZL1AP	Den Exter, J. M. G., P.O. Box 68-472, Newton, Auckland 1032
ZL1AQ	Rouse, G. C., 1 Mears Road, Hamilton 2001
ZL1AR	Walsh, J. S., Maungatapu Road, Glenfalls, R.D. 1, Morrinsville 2251
ZL1AS	McRae, I. H., Flat 1, 19 Church Street, Northcote, Auckland 1309
ZL1AU	Scouse, P. N., 17 Caluna Crescent, Totara Heights, Manukau 1701
ZL1AV	Tremayne, D. T., Spencer Road, Lake Tarawera, Rotorua 3201
ZL1AW	Bailey, C. A., 261 Papamoa Beach Road, R.D. 7, Te Puke 3071
ZL1AZ	Brown, M. A., 38 Cyclorama Crescent, Massey, Auckland 1208
ZL1BB	Bunting, A. B., 3a Hillary Heights Avenue, Henderson, Auckland 1208
ZL1BD	Wilson, A., Waingaro Road, R.D. 1, Ngaruawahia 2171
ZL1BF	Hall, R. J., 20b Lowtherhurst Road, Massey, Auckland 1208
ZL1BG	Far North Districts Amateur Radio Club, see Branch Directory
ZL1BH	Creasy, S. C., 7 Crowther Terrace, Taupo 3300
ZL1BI	Freeman, S. J., 236a Scenic Drive, Titirangi, Auckland 1207
ZL1BJ	Llewellyn, J. D., 36 Weston Avenue, Mt Albert, Auckland 1003
ZL1BK	Long, R. J., 175 Green Lane Road, Green Lane, Auckland 1105
ZL1BL	Chew, J. B., Wight Street, Huntly 2191
ZL1BN	Kirkwood, B. J., 147 John Street, Ponsonby, Auckland 1002
ZL1BO	Laing-Smith, I. E., 69 Stamford Park Road, Waikowhai, Auckland 1004
ZL1BP	Harris, W. F. H., 80 Roberts Road, Te Atatu South, Auckland 1208
ZL1BQ	Auckland VHF Group (Inc.), see Branch Directory
ZL1BR	Hanson, K. O., 10 Shelly Beach Road, Surfdale, Waiheke Island 1470
ZL1BS	Scott, D. T. S., 237 Metcalfe Road, Ranui, Auckland 1208
ZL1BT	Thorpe, G. B., 19 Rolleston Street, Kihikihi 2400
ZL1BU	Kealey, D. T., 3 Corinth Street, Meadowbank, Auckland 1105
ZL1BV	Birch, R. W., Riverside Drive, Whangarei 0101
ZL1BX	Smith, M. A., 32 Glenveagh Drive, Hillsborough, Auckland 1004
ZL1BZ	Howitt, I. M., 15 Frederick Street, Otorohanga 2554
ZL1CA	Wyllie, C. R., 6 Beverley Crescent, Hillcrest, Hamilton 2001
ZL1CB	Te Awamutu Amateur Radio Club Branch 40 NZART, see Branch Directory
ZL1CC	Birt, D. J., 3 Cheeseman Place, Meadowbank, Auckland 1105
ZL1CD	Baxendale, J., 224 Whitney Street, Blockhouse Bay, Auckland 1207
ZL1CE	Fields, R. E., Flat 2, 165 Abbotts Way, Remuera, Auckland 1106
ZL1CG	Sims, H., 8 Rata Street, Mangakino 2391
ZL1CH	Boyd, H. A., 13a Long Street, Torbay, Auckland 1310
ZL1CI	Meyer, T. R., 12 Honeysuckle Lane, Mairangi Bay, Auckland 1310
ZL1CJ	Smith, B. W., Ruawaro, No. 2 R.D, Huntly 2191
ZL1CK	Martin, E. T., 109 Tony's Avenue, Totara, Thames 2801
ZL1CL	Leedom, C. A., 7 Crudge Street, Blockhouse Bay, Auckland 1207
ZL1CM	Prince, R. P., 104 Freyberg Street, Otumoetai, Tauranga 3001
ZL1CN	Woodfield, R. T., 46 Weaver Street, Whangarei 0101
ZL1CO	Birss, T. H. N., Kahawai Road, Glenbrook, R.D. 1, Waiuku 1852
ZL1CP	Jacobson, C. J., Maungatapere, P.O. Box 947, Whangarei 0100
ZL1CR	Ngakuru, R. A., 31 Wihongi Street, Kaikohe 0400
ZL1CS	Shaw, C. E., P.O. Box 2088, Whakatane 3400
ZL1CU	Curtis, N. C., 9 Tairea Road, Titirangi, Auckland 1207
ZL1CV	Firman, R. J., 19 Tainui Street, Onerahi, Whangarei 0101
ZL1CX	Morgan, B. K., 62 Sunlands Drive, Manurewa, Auckland 1702
ZL1CY	Webster, D. M., 46 Speight Road, Kohimarama, Auckland 1105
ZL1CZ	Duxbury, T. A., 338 St. Heliers Bay Road, Auckland 1105
ZL1DA	Wilde, C. J., 8 Newburn Road, Browns Bay, Auckland 1310
ZL1DB	Dugmore, K. F., 3 McBeth Drive, Te Puke 3071
ZL1DC	Hanley, A. B. D., 1/13 Koromiko Street, New Lynn, Auckland 1207
ZL1DD	Foster, A. E. G., 8 Tatyana Place, Massey, Auckland 1208
ZL1DE	Adshead, G. O., 35 Trevola Street, Avondale, Auckland 1207
ZL1DF	Thames Radio Club Branch 41 NZART (Inc.), see Branch Directory
ZL1DG	Marsh, B. G., 49 Tranmere Road, Hamilton 2001
ZL1DH	Edwards, J. R., Messengers Road, R.D. 3, Silverdale 1462
ZL1DI	Logan, J. D., 44 Tudor Crescent, Hamilton 2001
ZL1DJ	Hopkins, B. N., 133 Kitchener Road, Waiuku 1852
ZL1DK	Glucina, G., 31 Chelverton Terrace, Red Beach, Orewa 1461
ZL1DL	Birt, E., 41 Holland Road, Northcote, Auckland 1309
ZL1DM	Grayson, R. T., 25 Rembrandt Place, Papakura 1703
ZL1DN	Wishnowsky, R. E., 22 Okahu Road, Kaitaia 0500
ZL1DO	Harvey, G. F., 267 Mt Albert Road, Mt Roskill, Auckland 1003
ZL1DQ	Menendez, R. R., 43a Portland Road, Remuera, Auckland 1105
ZL1DR	Brooker, A. D., 35 Wordsworth Street, Leamington, Cambridge 2350
ZL1DS	Colquhoun, P. R., 41 Alison Road, Surfdale, Waiheke Island 1470
ZL1DT	Rowe, E. G., 2/24 Cromdale Avenue, Howick 1705
ZL1DV	Veate, R. S. (Mrs), 31 Rangitoto Avenue, Remuera, Auckland 1105
ZL1DW	Pryor, M. G., 8 Slater Place, Te Puke 3071
ZL1DX	Melville, R. A., 77 Wood Bay Road, Titirangi, Auckland 1207
ZL1DZ	Heincen, M. J., 61 Haseler Crescent, Howick, Auckland 1705
ZL1FA	Greenaway, A. W., 11 Darraghs Road, Otumoetai, Tauranga 3001
ZL1FB	Bell, J. F. G., 21 Wymer Terrace, Hamilton 2001
ZL1FC	Pinder, A., 209 Victoria Road, Devonport, Auckland 1309
ZL1FD	Armstrong, D. K., Kaituna Road, R.D. 9, Te Puke 3071
ZL1FF	Gifford, A. B., 566/1 Teasdale Street, Te Awamutu 2400
ZL1FG	Booth, B. W. G., 8 Penney Avenue, Mt. Roskill, Auckland 1004
ZL1FH	Barkman, D. B., 903/45 Stanley Point Road, Devonport, Auckland 1309
ZL1FI	Power, W. T., 14 Hebe Place, Birkenhead, Auckland 1310
ZL1FJ	Lynch, R. N., 4140 Great North Road, Glendene, Auckland 1208
ZL1FK	Challinor, M. J., 31 Barrons Drive, Green Bay, Auckland 1207
ZL1FM	Robertson, J. S., 29 Cyclorama Crescent, Massey, Auckland 1208
ZL1FN	Keesing, S., 68 Swann Beach Road, Whangaparaoa, Auckland 1463
ZL1FP	Anchor, G. S., 46a May Street, Mt. Maunganui 3002
ZL1FQ	Faulkner, W. K., 22 Moenui Avenue, Orewa, Hibiscus Coast 1461
ZL1FR	Wood, R. S., 5 Takitimu Street, Orakei, Auckland 1105
ZL1FU	Hibiscus Coast Amateur Radio Club (Inc.), see Branch Directory
ZL1FV	Runciman, G. J. (Mrs), 36 Cardiff Road, Pakuranga, Auckland 1706
ZL1FW	Flowers, J. V. E., 8 Regent Street, Tauranga 3001
ZL1FX	Hyde, K. G., 126b Te Atatu Road, Te Atatu South, Auckland 1208
ZL1FY	Armstrong, G. W., 5 Jervois Street, Kawerau 3452
ZL1FZ	Coates, K. J., 2 Bardia Street, Takapuna, Auckland 1309
ZL1GA	Hoy, M. H., 36 Sierra Street, Glendowie, Auckland 1105
ZL1GB	Powell, D. B., 1 Oliver Road, Bucklands Beach, Auckland 1704
ZL1GD	Carter, G. H., 21 Grand View Road, Hamilton 2001

ZL1GF

ZL1GF Fish, J. F., 14 Howard Road, Northcote, Auckland 1309
ZL1GI Brumby, C. J., 5 Matuhu Rise, Henderson, Auckland 1208
ZL1GJ Dobbing, S. J., 56 Pohutukawa Drive, Pukete, Hamilton 2001
ZL1GK Boyle, J. O., 3 Camelia Grove, Parklands, Waikanae 6154
ZL1GL Kelly, T. D., 35 Rawhitiroa Road, Kohimarama, Auckland 1105
ZL1GN Beckham, D. S. R., 27 Fifth Avenue, Mt Albert, Auckland 1003
ZL1GO Ogden, J. R., 88 Lynn Road, Glenfield, Auckland 1310
ZL1GP Henderson, R. J., 87 Grange Road, Mt. Eden, Auckland 1003
ZL1GQ Coates, W. W., 25 Tamihana Street, Matamata 2271
ZL1GR Goodwin, L., 13 Stafford Street, Waihi 2991
ZL1GS Webb, J. L., 1 Willow Place, Whangarei 0101
ZL1GT Hooker, B. N. N., 9 Amorino Drive, Hibiscus Coast, Orewa 1461
ZL1GU Rolfe, E. M., 41 Rangimarie Crescent, Snells Beach, Warkworth 1490
ZL1GV Spackman, B. C. W., 15 Manuka Street, Matamata 2271
ZL1GW Ross, P. R., 57 May Street, Hillcrest, Hamilton 2001
ZL1GX Hannaford, J. W., 42 Waimarie Road, Whenuapai Village, Auckland 1450
ZL1GZ Graham, E. W., 18 Seaway Terrace, Tauranga 3001
ZL1HB Homer, H. L., 823 Te Atatu Road, Te Atatu, Auckland 1208
ZL1HC Colegrave, A. H., 15b Moana Road, Gisborne 3801
ZL1HD Dahl, K., Taratara Road, Kaeo 0556
ZL1HE Lord, I. K., 41a Peninsula Club, 441 Whangaparaoa Road, Whangaparaoa 1463
ZL1HF Harrison, N. D., 42b Taikata Road, Te Atatu North, Auckland 1208
ZL1HG Grewal, H. (Mrs), 39a La Rosa Street, Green Bay, Auckland 1207
ZL1HH Cottle, D. J., Rainbow Falls, R.D. 2, Kerikeri 0452
ZL1HI Boghurst, B. E., 70 Ostend Road, Ostend, Waiheke Island 1470
ZL1HJ Gannon, M., 9 Liverpool Street, Te Kuiti 2500
ZL1HK Carlyle, L. G. S., 2 Cotter Avenue, Remuera, Auckland 1105
ZL1HL Carrel, J. L., 167 St Andrews Road, Epsom, Auckland 1003
ZL1HM Harvey, S. A., 46 High Street, Rotorua, CPO Box 2002, Rotorua 3200
ZL1HP Hamlyn, D. H., 11 Shelley Street, Leamington, Cambridge 2351
ZL1HR Coles, J. P., 42 Hartford Avenue, Papamoa, P.O. Box 2111, Tauranga 3000
ZL1HS Carter, C. I. N. (Mrs), 34 Higgs Road, Mapua, Nelson., P.O. Box 274, Motueka, Nelson 7161
ZL1HT Hardie, B. G. S., P.O. Box 29-101, Auckland 1030
ZL1HU Garton, W. G., 15 Kotanui Avenue, Army Bay, Whangaparaoa 1463
ZL1HV Godfrey, A. G., 882 East Coast Road, Browns Bay, Auckland 1310
ZL1HW Dickinson, R., 8 Mawson Avenue, Torbay, Auckland 1310
ZL1HX Rutherford, N. J., 32 Kirrie Avenue, Te Atatu South 1208
ZL1HY Brown, D., 39 Haszard Street, Waihi 2991
ZL1HZ Frederiksen, N. J., Mangatangi, R.D. 1, Pokeno 1872
ZL1IA Pivac, I. G., 4271 Great North Road, Henderson, Auckland 1208
ZL1IB Brown, E. E. A., 20 Gilmore Street, Te Puke 3071
ZL1IC Holdsworth, R., Sexton Road, R.D. 1, Hamilton 2021
ZL1IE Skinner, G., 15 Hepper Street, New Lynn, Auckland 1207
ZL1IG Monks, J., 2/9 Abelia Place, Papatoetoe, Auckland 1701
ZL1IH Intermann, R. H. D., 158 Richard Street, P.O. Box 412, Opotiki 3472
ZL1II Green, G. P. C., 248 Otipua Road, Timaru 8601
ZL1IJ Dunningham, N. M., 5 Kingswood Road, Papatoetoe 1701
ZL1IM Carter, E. W. A., 3 Haines Terrace, Te Kuiti 2500
ZL1IN Pearce, R. M., 125 New Windsor Road, Avondale, Auckland 1207
ZL1IO McNamara, T. A., 32 Galileo Street, Ngaruawahia 2171
ZL1IP Wiggins, F. V., 44 Westminster Drive, Tauranga 3001
ZL1IQ Joseph, D. P., 51 The Drive, Epsom, Auckland 1003
ZL1IR Douglas, L. M., 17 5th Avenue, Hamilton 2001
ZL1IS Waikato VHF Group, see Branch Directory
ZL1IT Hayman, G. L., 318 Jervois Road, Herne Bay, Auckland 1002
ZL1IU Wallace, N. L., Signals Road, Okaihau, Northland, P.O. Box 143, Kaikohe 0400
ZL1IV Irving, G. W., 50 Glass Road, Mt Roskill, Auckland 1004
ZL1IX Taylor, W. R., 65a Butterworth Drive, Glendene, Auckland 1208
ZL1IY Cleland, D. E., 52 Alfred Street, Fairfield, Hamilton 2001
ZL1IZ Waitomo Branch 55 NZART (Inc.), see Branch Directory
ZL1JB Nalder, C. H., Oruanui Road, R.D. 1, Taupo 3300

ZL1JC Granger, P. L., 7 Trent Street, Avondale, Auckland 1207
ZL1JD Evans, G. E., Gleeson Road, R.D. 3, Waiuku 1852
ZL1JE Bloomfield, R. J., 5 Kent Street, Te Kuiti 2500
ZL1JF Finlay, P. T., 62 Woodside Road, Henderson, Auckland 1208
ZL1JG Dent, R. E., 18 McClintoch Road, Massey, Auckland 1208
ZL1JH Hodson, L., 71 Riverside Road, Orewa, Auckland 1461
ZL1JJ Wilson, H. W., 85 Domain Road, Papamoa 3070
ZL1JK Schofield, J. R., 14a Casey Avenue, Hamilton 2001
ZL1JM McIntyre, J., 3 Tihī Road, Rotorua 3201
ZL1JN Turner, A., 140 Union Street, Howick 1705
ZL1JO Walker, N. A., 14 Mawney Road, Henderson, Auckland 1208
ZL1JP Buckton, J. V., 14 Cockle Bay Road, Howick, Auckland 1705
ZL1JR Jones, J. W. W., 2/18 Meadowland Drive, Howick 1705
ZL1JS Baker, M. R., Attwood Road, Tamaterau, R.D. 4, Whangarei 0121
ZL1JT Turnwald, J. B., 29 Cliffview Drive, Green Bay, Auckland 1207
ZL1JU Teviotdale, B. M., Fairbank Road, Rotorua 3201
ZL1JW Paltridge, J. S., 3 Tutere Road, Papatoetoe 1701
ZL1JY Field, A. N., 2 Wharepaina Crescent, Rotorua 3201
ZL1JZ Davison, P. W., Poland Street, Waikino 2950
ZL1KC Page, A., 6 Matai Place, Otaki 6171
ZL1KF Cholmondeley-Smith, D. R., 20 Sharon Road, Waiake, Auckland 1310
ZL1KG Ramsay, R. J., 120 Kamo Road, Whangarei 0101
ZL1KH Turton, J. W., 13/11 Pomaria Road, Henderson, Auckland 1208
ZL1KI Horwood, E. W., 233 King Street, Whakatane 3400
ZL1KK Carter, N. A. W., 50 Victoria Avenue, Whakatane 3400
ZL1KL Paton, E. J., 32 Pohutukawa Road, Whenuapai 1450
ZL1KN Boyd, J. M., 30a Mohoe Street, Rotorua 3201
ZL1KP Burgess, A. B., 4 Killarney Street, Te Puke 3071
ZL1KQ Small, J., 32 Paddington Street, Glen Innes, Auckland 1106
ZL1KT Teviotdale, D. A., Fairbank Road, Rotorua 3201
ZL1KU Oliver, M. J., 19a Elbourne Street, Taradale, Napier 4001
ZL1KV Pooley, E. A., 2 Ayr Street, Waihi Beach 2990
ZL1KW Kawerau Branch NZART (Inc.), see Branch Directory
ZL1KX Walford, K. W., 354 Somme Parade, Aramoho, Wanganui 5002
ZL1KY Yearsley, E. S., 37a Hattaway Avenue, Bucklands Beach 1704
ZL1KZ Ellery, H. F., 26 Catalina Crescent, Takapuna, Auckland 1310
ZL1LB Laurent, L. M., 54 Lagoon Drive, Panmure, Auckland 1106
ZL1LC Bird, W. A., 239 Nelson Street, Invercargill 9501
ZL1LD Williams, P. M. (Mrs), 144 Titirangi Road, New Lynn, Auckland 1207
ZL1LE Egan, B., 12 Island View Terrace, Howick, Auckland 1705
ZL1LF Elder, J. W., 17 Cedar Road, Mt. Eden, Auckland 1004
ZL1LH Cowie, D. J., 5 McCrystal Avenue, Bucklands Beach, Auckland 1704
ZL1LI Hughes, P. D. P., 17 Oscar Road, Greenhithe, Auckland 1450
ZL1LK Sargon, R. P., 2a Enderby Drive, Te Atatu North, Auckland 1208
ZL1LL Cook, S., 27 Neville Street, Point Chevalier, Auckland 1002
ZL1LM Marsden, A. N., 9 Wanaka Place, Pakuranga, Auckland 1706
ZL1LN Simmons, A. L., 69 Roberts Avenue, Bayswater, Auckland 1309
ZL1LO Robinson, I., 40 Masterton Road, Rothesay Bay, Auckland 1310
ZL1LP Parsons, E. R., 509/1 Mutu Street, Te Awamutu 2400
ZL1LR Anderson, P. C., 32 Gilmore Street, Waihi 2991
ZL1LS McTurk, E. C. (Mrs), 40 Silverton Road, Waihi 2991
ZL1LT Malcomson, M. R. J., 413 Frazer Street, Tauranga 3001
ZL1LU Heslop, W. T., 19 Corinna Street, Welcome Bay, Tauranga 3001
ZL1LX Barlthrop, C., 228 Old Taupo Road, Taumarunui 2600
ZL1LY Brown, K. L., 38 Thompson Street, Tokoroa 2392
ZL1LZ Dunwoody, M. L., 126 Bridgeman Road, Te Awamutu 2400
ZL1MA Small, T. H., 32b Martin Road, Manurewa 1702
ZL1MB Farley, W. F., 8 Puriri Avenue, Te Puke 3071
ZL1MC Hume, S. T., 17 Humber Crescent, Gate Pa, Tauranga 3001
ZL1MD McLellan, A. D., 55 Orion Street, Rotorua 3201
ZL1ME Geard, M., 1/30a Walter Street, Takapuna, Auckland 1309
ZL1MF Crabtree, A. W., 37 Martin Road, Waihi 2991
ZL1MG Moore, J. P., 29 Valley Road, Rocky Bay, Waiheke Island 1470
ZL1MH Hutchins, M. G. D., Taheke Private Bag, Kaikohe, Northland 0400
ZL1MI Warriner, A. D., c/- Public Trust Office, P.O. Box 21-359, Henderson 1231
ZL1MJ Schwass, B. R., 24 Mokorua Grove, Whakatane 3400

- ZL1ML** Lee, M. E., 28 Seaview Road, Tawaipareira, Waiheke Island 1470
- ZL1MM** Garde-Browne, M., Bowemtown Road, Athenree, R.D. 2, Katikati 3051
- ZL1MN** Nisbet, D. I., 4 Williams Avenue, Kaikohe 0400
- 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, Otumoetai, 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 Rockside Road, Torbay, Auckland 1310
- ZL1NG** Muller, J., 29 Newhaven Terrace, Mairangi Bay, Auckland 1310
- ZL1NH** White, N. R., 33 Norton Road, Otumoetai, Tauranga 3001
- ZL1NI** Thornewell, M. T., Pearson Street, Mangawhai 0270
- ZL1NJ** Ecclesfield, B. D., 43 Maihi Crescent, 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., Waitaua Road, Vinegar Hill, Whangarei 0101
- ZL1NS** Hickey, J., 12 Gloucester Road, 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
- ZL1NZ** Duthie, D. A., Morrisons Road, Matapouri Bay, Northland 0250
- ZL1OA** Jack, M. C., 68 Clare Place, Glenfield, Auckland 1310
- ZL1OB** Booth, O. R., 40a Esk Street, Tauranga 3001
- 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., Mourmoukai 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
- ZL1OK** Hill, R. S., 14 Sunline Place, Ngongotaha 3202
- ZL1OL** Oliver, B. M., 65 Archers Road, Glenfield, Auckland 1310
- ZL1OM** Windsor, K. W., 36 Chatswood Grove, Birkenhead, Auckland 1310
- ZL1ON** Eglinton, G. K., 47a Ridge Road, Otumoetai, 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., 494 Thames Street, Morrisville 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** Mudford, 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
- 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 Salmon 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 Otumoetai Road, Tauranga 3001
- ZL1PR** Farrell, J. F., 56 Bellmont 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, Otumoetai, 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** Mowat, G. C., 37 Cliff Road, St. Heliers, Auckland 1105
- ZL1QY** Williams, R. G., 67a Botanical Road, Tauranga 3001
- ZL1QZ** Rhodes, M. C. L., 13a Rutherford Terrace, Meadowbank, Auckland 1105
- ZL1RA** Swain, R. A., 9 Raekitawhiti Street, Turangi 3371
- 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
- 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** Shimmin, 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., 3/9 Wha Street, Hamilton 2001
- ZL1SG** Cowie, C. A., Stratford Drive, Cable Bay, R.D. 3, Kaitaia 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., P.O. Box 82-043, Highland Park, Auckland 1730
- ZL1SK** Thomas, M. R., 52 Bolland 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, Otumoetai, Tauranga 3001
- ZL1SR** Coppell, B. L., 128a James Street, Whakatane 3400

ZL1SS

ZL1SS Skellon, D. B., 36 Mountbatten Avenue, Glenfield, Auckland 1310
ZL1ST Smith, N. E., 7 Kelwyn Road, Kelston, Auckland 1207
ZL1SU MacDiamid, D. R. N., Hone Heke Road, Kerikeri 0452
ZL1SV Perkins, J. A., 2 Ponui Place, Mairangi Bay, Auckland 1310
ZL1SW Curling, L. K., 14 Clotworthy Crescent, Onerahi, Whangarei 0101
ZL1SX Kirkham, A. L., 38 Waller Avenue, Bucklands Beach 1704
ZL1SY Thompson, M. G., 13 McDowell Street, Rotorua 3201
ZL1SZ Evans, M. J., 14 Henderson Street, Whakatane 3400
ZL1TA Mortensen, N. R., 16 Melrose Road, Hillsborough, Auckland 1004
ZL1TB Howick and District Branch NZART (Inc.), see Branch Directory
ZL1TC Metcalfe, A. D., 24 Hogan Street, Hamilton 2001
ZL1TD Corby, D. G., 129 Raumanga Valley Road, Whangarei 0101
ZL1TE Lynneberg, R., 15 Terewha Street, Turangi 3371
ZL1TF Morrison, I. McG., 31a Telstar Place, Birkenhead, Auckland 1310
ZL1TG Rummung, E., 50 Corlett Street, Rotorua 3201
ZL1TI Godkin, I. P., 45 The Boulevard, Pakuranga 1706
ZL1TJ Matthys (Snr), J. K. C., 2 Thwaites Place, Cambridge 2351
ZL1TK Harrington, R. J., 5/28 St Stephens Avenue, Parnell, Auckland 1001
ZL1TL Pickworth, R. A., 20 Nen Street, Oamaru 8901
ZL1TM Spence, K. L. J., 28 Chorley Avenue, Henderson, Auckland 1208
ZL1TN Barron, K. H., 230 Riddell Road, Glendowie, Auckland 1105
ZL1TO Potter, J. W., 52/36 McLeod Road, Henderson, Auckland 1208
ZL1TP Tauranga Branch NZART (Inc.), see Branch Directory
ZL1TQ Elliott, K. G., 17 Red Bluff Rise, Campbells Bay, Auckland 1310
ZL1TR Rist, T. A., 22 Shortt Avenue, Mangere Bridge, Auckland 1701
ZL1TS Prentice, L. G., 5 Mountain View Road, Morningside, Auckland 1003
ZL1TT Roberts, R. L., 39 Kay Drive, Blockhouse Bay, Auckland 1207
ZL1TU Bond, P. L., 1340 Whangaparaoa Road, Whangaparaoa 1463
ZL1TW Barnett, E. K., Bethlehem, R.D. 1, Tauranga 3030
ZL1TY Monk, W. K. G., 23 Matipo Avenue, Rotorua 3201
ZL1TZ Stewart, G. W., 31 Levers Road, Tauranga 3001
ZL1UA Harvey, J. K., 4 West Street, Waihi Beach, P.O. Box 10, Waihi Beach 2990
ZL1UB Wilson, D. A., 1/35 Rangitoto Terrace, Milford, Auckland 1309
ZL1UC South Pacific DX Contest Group, (Trustees: ZL1BXA, ZL1BTZ), c/- H. Buxton, 32 Castleton Street, Birkdale, Auckland 1310
ZL1UD Williams, K. G., 6 Kiwi Street, Matamata 2271
ZL1UE Williams, M. K., Jury Road, R.D. 10, Frankton 2031
ZL1UG Redgrave, C. I., 48 Civil Avenue, Te Atatu South, Auckland 1208
ZL1UH Mathieson, V. J., 99c Queen Street, Waiuku, Auckland 1852
ZL1UI Cardno, I. M., 5b Keldale Place, Forrest Hill, Auckland 1310
ZL1UJ Jenner, K. W., 15 Garmons Way, Milford, Auckland 1309
ZL1UK Beech, S. C., 53 Pupuke Road, Northcote, Auckland 1309
ZL1UL Gilmore, G. H., Gilmore Road, Tuhiakaramea, Hamilton 2001
ZL1UM Chamberlin, J. H. W., Kawakawa Bay Road, Clevedon 1751
ZL1UN Alidzanovic, M., P.O. Box 83-831, Auckland 1730
ZL1UO Gibrin, R. A., 15 Bernard Street, Whangarei 0101
ZL1UP Hall, E. W. H., 4 Bellevue Road, Tauranga 3001
ZL1US Armstrong, M. A. S., 77 Queen Street, Pukekohe 1800
ZL1UT Still, W. J., 14 Meadowbank Road, Meadowbank, Auckland 1105
ZL1UU Twadell, A. S., 7 Prince Regent Drive, Pakuranga 1706
ZL1UV Morsch, J. H. S., 13 Marina Road, Torbay, Auckland 1310
ZL1UW Tinsley, H. G., 18 Grandview Road, Hamilton 2001
ZL1UX Hamilton Branch NZART (Inc.), see Branch Directory
ZL1UY Downard, T. V. E., 13 Riverlea Drive, Katikati 3051
ZL1UZ Truman, A. R., 63 Clark Road, Pakurura 1703
ZL1VA Jessup, G. R., see overseas members
ZL1VC Hall, L. J., 7 Kiwi Street, Matamata 2271
ZL1VD Cutler, J. L., 12 The Companion Way, Whitby 6253
ZL1VE Webber, H. W. B., 19 Pamela Place, Tauranga 3001
ZL1VF Moller, L. J., 228 Dobson Street, Ashburton 8300
ZL1VG Bicheno, N. C., 100 Wood Bay Road, New Lynn, Auckland 1207
ZL1VH Sanne, J. H., 49 Cameron Road, Hamilton 2001
ZL1VI Rubie, A. E., 4 Citrus Avenue, Waihi Beach South 2990
ZL1VK Papakura Branch NZART (Inc.), see Branch Directory

ZL1VM Arnold, R. R., 21 Seaview Road, Milford, Auckland 1309
ZL1VN McKain, M. L., 59b Knighton Road, Hamilton 2001
ZL1VO Whillans, F. L., 4/35 Killarney Street, Takapuna, Auckland 1309
ZL1VR Gilligan, C. R., 4 Lambert Street, Abbotsford, Dunedin 9006
ZL1VS Deverall, W. H., 24 Deuxberry Avenue, Northcote, Auckland 1309
ZL1VU McIsaac, A. J., 26 Ferry Parade, Herald Island, Auckland 1450
ZL1VV Kempson, C. M., 3 Horopito Road, Waikanae 6154
ZL1VW Nasmyth, M. K., 2/10 Jenelin Road, Henderson, Auckland 1208
ZL1VZ Friberg, A. G., Unit 2, 15 John Davis Road, Mt. Roskill, Auckland 1004
ZL1WA Wills, A. E. (Mrs), R.D. 1, Karaka, Papakura 1733
ZL1WB Rowfings, B. H., 6 Mason Street, Onerahi, Whangarei 0101
ZL1WD Davey, W. C., 165 Riddell Road, Glendowie, Auckland 1105
ZL1WF McNae, G. S., 10 Manaia View Road, One Tree Point, R.D. 1, Ruakaka 0253
ZL1WG Boric, H. V., 27 Cleary Road, Panmure, Auckland 1106
ZL1WH Coe, P. H., 21 Marshall Avenue, Taupo 3300
ZL1WI Milam, R. E., 184 Sturges Road, Henderson, Auckland 1208
ZL1WJ Sainsbury, J. R. D., see overseas members
ZL1WK MacDonald, J. E., 171 Cook Street, Howick, Auckland 1705
ZL1WL Clarke, R. F. R., 26 Kendale Drive, Mathesons Bay, Leigh, Auckland 1490
ZL1WN Biggar, R. G., P.O. Box 12-525, Penrose, Auckland 1135
ZL1WO McGechie, P. C., 11 Rosario Crescent, Red Beach, Whangaparaoa 1461
ZL1WP Johnstone, M. R., 268b Great South Road, Manurewa 1702
ZL1WQ Whitehead, E. J., Booms Hill, Kauaeranga, R.D. 2, Thames 2821
ZL1WR Cullen, R. G., 77 Fairview Road, Te Awamutu 2400
ZL1WT Cummins, S. C., 682 Pakura Street, Te Awamutu 2400
ZL1WU Moseley, M. R., 34 Domain Street, Waiuku 1852
ZL1WV Fleetwood, F., 2/10 Tina Place, Pakuranga, Auckland 1706
ZL1WW Jensen, J. T., 106 Victoria Street, Pukekohe 1800
ZL1WY Yorke, R., 19 McLean Avenue, Papatoetoe 1701
ZL1WZ Deslandes, E. N., Rimu Road, R.D., Oratia 1230
ZL1AAA Gordon, B. D., 11 Siota Crescent, Kohimarama, Auckland 1105
ZL1AAB Cardy, K. G., 28 City View Terrace, Birkenhead, Auckland 1310
ZL1AAC Hammond, K. F., 14 Coppelia Avenue, Omakaroa, R.D. 2, Tauranga 3050
ZL1AAD Lee, J., Whanarua Bay, Private Bag 1011, Opotiki 3472
ZL1AAE Yearsley, J. K., R.D. 5, Tauranga 3021
ZL1AAF Walker, R. L., Otapouri Road, R.D. 1, Owhanga 2656
ZL1AAH Backhouse, R. B., Ararimu Valley Road, R.D. 2, Waiaukau 1455
ZL1AAI De Jong, J. W., 29 Moire Road, Massey, Auckland 1208
ZL1AAJ Williams, H. J., 30 Halberg Street, Glenfield, Auckland 1310
ZL1AAK Stephens, C. H. L., 56 Karaka Street, Takapuna, Auckland 1309
ZL1AAL Carruthers, A. J., 61 Drake Street, Howick 1705
ZL1AAM Scott, P. L., 25 Chatsworth Crescent, Pakuranga 1706
ZL1AAN Falkner, H. T., 8 Kapai Street, Devonport, Auckland 1309
ZL1AAO Steel, L. B., The Shieling, R.D. 4, Rotorua 3221
ZL1AAP Swift, L. W., 53 Lucerne Road, Remuera, Auckland 1105
ZL1AAQ Palmer, W. J., 168 Birkdale Road, Birkdale, Auckland 1310
ZL1AAR Terril, R., 31 Faith Bullock Place, New Lynn, Auckland 1207
ZL1AAS Litton, R. J., 146 Sandpit Road, Howick, Auckland 1705
ZL1AAU Elley, C. B., 14 Handley Place, Onerahi, Whangarei 0101
ZL1AAV Aberhart, E. R., 2/37 McRae Road, Mt Wellington, Auckland 1106
ZL1AAW Berntsen, B. M., 2 Te Mahoe Power Station Village, Te Teko 3456
ZL1AAAX Andrews, G. S., 29 Buchanan Place, Rotorua 3201
ZL1AAAY King, O. L., 8 Gracechurch Drive, Papatoetoe, R.D., Auckland 1734
ZL1AAZ Pratt, W. R., 304 Shakespeare Street, Cambridge 2351
ZL1ABA Jefferies, S. E., 60 Middleton Road, Remuera, Auckland 1105
ZL1ABB Russell, M. C., 25 Sturdee Road, Manurewa, Auckland 1702
ZL1ABC Biddle, R. R., 55 Bcroft Drive, Forrest Hill, Auckland 1310
ZL1ABD Wise, F. B., 14 Royal Road, Massey, Auckland 1208
ZL1ABF Ruble, E. S., 14 Amble Avenue, Glen Eden, Auckland 1207
ZL1ABG Rae, D., 12 Pirika Street, Dargaville 0300
ZL1ABH Williamson, T. J., Yacht Capella, P.O. Box 25-111, St Heliers, Auckland 1130
ZL1ABI Maggs, A. R., 32 Potter Avenue, Northcote, Auckland 1309
ZL1ABJ Ferguson, 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 Humpfrey, M. L. G., 1009 Tararu Road, Thames 2801
ZL1ABN Reay, M. J. F., 16 Priscilla Crescent, Hamilton 2001
ZL1ABP Rutter, K. L., 4 Hepper Street, New Lynn, Auckland 1207
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. 1, Albany, Auckland 1310
ZL1ABT Stead, G. M., 93 White Swan Road, Mt. Roskill, Auckland 1004
ZL1ABW Oldfield, A. J., 11 Collingwood Road, Waiuku 1852
ZL1ABX Dukes, J. R., 102 Awaruku Road, Torbay, Auckland 1310
ZL1ABY Hume, D. S., 91 Evers 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 Matipo 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, Kaeo 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
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 Everts, 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., 2/15 Summermist Drive, Northpark, Howick 1705
ZL1ADR Reinhard (Jnr), P. A., Mangataraire, 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
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., Maungakaramea 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 65-147, Mairangi Bay, Auckland 1330
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
ZL1AFX Kilby, M. R., 38 Canberra Avenue, Lynfield, Auckland 1004
ZL1AFY Haydon, A. E., 10 Ngapipi 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
ZL1AGE Trye, K. G., 7 Crescent Hills Court, Howick, Auckland 1705
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., 5 Fieldstone Court, Northpark, Howick, Auckland 1705
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, Marigere Bridge 1701
ZL1AGW McDonald, D. F., Margaret Place, Hahei, 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
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
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
ZL1AHO Sykes, R. J., 3/286 Rosebank Road, Avondale, Auckland 1207
ZL1AHP Greendale, L. S., 16 Radnor 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 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. 2, Opotiki 3472
ZL1AIG Falkner, G. R., 65 Turanga Road, Henderson, Auckland 1208
ZL1AIH McCormack, R. K. F., Vivian Bay, Kawau Island 1490
ZL1AIJ McFarlane, 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 Kimbolton Road, Feilding, Manawatu 5800

ZL1AIL Christie, W. E., 24 Bryce Avenue, Mt. Roskill, Auckland 1004

ZL1AIM Kebble, S. W., c/- Post Office, Bethlehem, Tauranga 3030

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

ZL1AQ 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 Haggio, J. M. K., 3 Horne Street, Hamilton 2001

ZL1AIU Eastern Bay of Plenty Branch NZART (Inc.), see Branch Directory

ZL1AIV Tilley, D. G., 4 Littlejohn Street, Mt Roskill, Auckland 1004

ZL1AIX Robinson, W. J., "Ahureka", 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

ZL1AJB Moore, J. K., 39b Tobin Street, Pukekohe 1800

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 Woodglen 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 Hatton Road, Orewa 1461

ZL1AJN Holmes, W. S., R.D. 1, Waiuku 1852

ZL1AO Jones, D. A., Lot 1086, Pauanui, Ocean Beach 2850

ZL1AJP Willcocks, R. J., 181 Corks Road, Whangarei 0101

ZL1AQJ Hogan, A. H., P.O. Box 1497, Taupo 3300

ZL1AJR Chapman, R., 16 Rudleigh Avenue, Ilam, Christchurch 8004

ZL1AJS Barker, J. A., P.O. Box 54-068, Bucklands Beach,

Auckland 1730

ZL1AJT Jessop, G. D., 1/4 Inkerman Street, Onehunga 1106

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 Crook, B. W., 3 Icarus Plaza, 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

ZL1AKH Paterson, W., 329a Oceanbeach Road, Mt Maunganui, P.O. Box 4160, Mt Maunganui 3030

ZL1AKI Tai, C. V., 12 Mayfair Avenue, Hamilton 2001

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, Graertown, Tauranga 3001

ZL1AKM McLean, P. A., c/- N. Crook, 691a East Coast Road, Browns Bay, Auckland 1310

ZL1AKN Fairest, T. R., Tapuwae Road, Poratara, 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, Opotiki 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 Baraa, H., 34 Vardon Road, 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 Hinu 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 Kemphorne 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, Whitianga 2856

ZL1ALT Bowyer, J. V. M., 586 River Road, Fairfield, Hamilton 2001

ZL1ALU Brott, R. O., Church Road, R.D. 2, Kaitaia 0500

ZL1ALV Ussher, R. R., 4 Wychwood Crescent, Rotorua 3201

ZL1ALW Williamson, J. G., 70 Ngatarangi Road, Devonport, Auckland 1309

ZL1ALX Gubb, G. K., 15a Omaha Road, Papatoetoe 1701

ZL1ALZ Luke, A. R., 16 Trentham Road, Papakura 1703

ZL1AMB Milne, M. B., Fahey Road, R.D., Bombay 1750

ZL1AMC Zwies, O. H., 232 King Street, Invercargill 9501

ZL1AME Crook, F. G., 12 Ascot Avenue, Devonport, Auckland 1309

ZL1AMG Kirby, E. G., 52 Whittaker Street, Otumoetai, 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

ZL1AMT Moore, D. A., 49a Whittaker Road, Warkworth, North

Auckland 1492

ZL1AMU Jury, R. B., 55 Willerton Avenue, New Lynn, Auckland 1207

ZL1AMW Wallace, A. J., 20 Lorne Street, Hamilton 2001

ZL1AMX Daniel, G. G. (Mrs), Whangamu 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

ZL1ANJ Ellis, J. M., 3 Hawera Road, Kohimarama, Auckland 1105

ZL1ANK Daniel, J. E., Whangamu Street, R.D. 3, Whangarei 0121

ZL1ANL Smith, J. G., 20 Kirk Street, Whakatane 3400

ZL1ANM Barnett, N. M., 29 Terra Nova Street, Glen Eden,

Auckland 1207

ZL1ANN Tricker, D. A. G., 100 Whangaparaoa Road, Orewa 1461

ZL1ANO Matsui, Y., 29 Balmoral Road, Epsom, Auckland 1003

ZL1ANP Parsons, N. L. (Mrs), 509/1 Mutu Street, Te Awamutu 2400

ZL1ANQ Herdman, R. J., 5 Sullivan Street, Whakatane 3400

ZL1ANR Gibbons, E. G., 114 Third View Avenue, Bucklands

Beach 1705

ZL1ANT Parr, J. E., 42 Parlane Street, Addington, Christchurch 8002

- ZL1ANU** Tutton, M. L., 219 Panama Road, Otahuhu, Auckland 1106
ZL1ANV Creed, R. M., 38 Hollywood Avenue, Titirangi, Auckland 1207
ZL1ANW Dixon, A. W., 4/54 Gowing Drive, Meadowbank, Auckland 1105
ZL1ANX Reid, A. A., 62a Puke Road, Paeroa 2951
ZL1ANY Pearce, S. G., 50 Evans Street, Dunedin 9001
ZL1AOA Whitney, J. R., 4 Dawson Street, Hamilton 2001
ZL1AOB Harrop, G. N., 8 Waingaro Road, Ngaruawahia 2171
ZL1AOC Henderson, H. R. T., 11 Chesley Place, Bucklands Beach, Auckland 1704
ZL1AOD Byrnes, C. D., 31 Rosehill Drive, Papakura 1703
ZL1AOE Gillgren, S. J., c/- R Young, 8 Roblyn Place, Lincoln, Canterbury 8152
ZL1AOF King, J. L., 26 Pouwhare Street, Whakatane 3400
ZL1AOG Hastings, W. W., 35 Dundas Road, Whangarei 0101
ZL1AOH Stewart, M. I., 4 Page Place, Hamilton 2001
ZL1AOI Trethowen, V. G., 45 Warwick Avenue, Westmere, Auckland 1002
ZL1AOJ Robinson, J. R., 24a McKay Drive, Temple View, Private Bag 5, Frankton 2031
ZL1AOK Handisides, W. S., 117 East Coast Road, Milford, Auckland 1309
ZL1AOL Shacklock, F. W., 84 Motatau Road, Papatoetoe 1701
ZL1AOM Brown, M. W., 290 Douglas Avenue, Te Awamutu 2400
ZL1AON Edginton, K. S., 69 East Street, Hamilton 2001
ZL1AOO Holley, W., 16 Ashlynne Avenue, Papatoetoe, Auckland 1701
ZL1AOP Frewin, H. G., 42 Walmsley Road, Waihi 2991
ZL1AOQ Upsdell, D. M., 2 Wilmington Place, Forrest Hill, Auckland 1310
ZL1AOS Austin, P. H., 63 Elliston Crescent, Stanmore Bay, Whangaparaoa 1463
ZL1AOT Margison, I., 3/28 Towai Street, St. Heliers, Auckland 1105
ZL1AOU Southern, H. J., State Highway 2, Te Puna R.D. 2, Tauranga 3030
ZL1AOV Matheson, J. L., Mata Road, R.D. 1, Kohukohu 0471
ZL1AOW Frankham, D. W., 18 Sabulite Road, Glen Eden, Auckland 1207
ZL1AOX Ashley, I. T., 5 Willoughby Avenue, Howick 1705
ZL1AOY Young, I., 15 Glentell Road, Mount Eden, Auckland 1003
ZL1AOZ Mackay, W. J., 49 Gladstone Road, Parnell, Auckland 1001
ZL1APA Hardy, R., 86 Mountain Road, Henderson, Auckland 1208
ZL1APB McDonald, R. W., 100 Kauri Road, Whenuapai 1450
ZL1APC Chaytor, J. M., 39b Tamihana Street, Matamata 2271
ZL1APE Corbett, A. B. S., 10 Roseberry Avenue, Birkenhead, Auckland 1310
ZL1APP Bateman, T. L., 109 Lambert Street, Thames 2801
ZL1APG Perston, K. J., 37 Grey Street, Kawerau 3452
ZL1APH Dittmer, C. R., 31 George Street, Morrinsville 2251
ZL1APJ Jessen, R., 156 Tamamutu Street, Taupo 3300
ZL1APK Turvey, G. R., 89 Homedale Street, Rotorua 3201
ZL1APL Tague, T. F. E., Unit 2, 15 Birdwood Crescent, Parnell, Auckland 1001
ZL1APM Bowers, J., 104 Hinemoa Avenue, Taupo 3300
ZL1APO Penney, G. A., 6 Meadow Drive, Whitianga 2856
ZL1APP Haysmith, C. A., Kaukapakapa, R.D. 1, Helensville 1451
ZL1APQ Crook, N. W. W. G., 691a East Coast Road, Browns Bay, Auckland 1310
ZL1APP Rosborough, J. L., Hills Road, R.D. 1, Raglan 2051
ZL1APS Browne, N. H., 23 Te Puia Street, Kario, Whangarei 0101
ZL1APT Jones, E. B., c/- N.Z. Foundation for the Blind, 545 Parnell Road, Auckland 1001
ZL1APU Sowerby, B. W., 42 Cheriton Road, Howick 1705
ZL1APV Fisher, J. R., 35 Shoreham Street, Blockhouse Bay, Auckland 1207
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
ZL1AQAA Hood, W. F., 31 Stanley Street, Matamata 2271
ZL1AQBB Howe, A. M., 5 Philip Street, Papatoetoe 1701
ZL1AQCC Sinclair, V. A., 37b Beatrice Avenue, Hillcrest, Auckland 1310
ZL1AQDD Crossman, V. T., 38 Milton Road, Otumoetai, Tauranga 3001
ZL1AQEE Wright, D. P., 3 Tamatea Drive, Snells Beach, Warkworth 1490
ZL1AQF Wrigley, J. S., 5 Derwent Street, Western Springs, Auckland 1002
ZL1AQK Brown, C. D., 112 Beach Road, Onerahi, Whangarei 0101
ZL1AQL Hinbridge, M. F., 11b Clare Street, Cambridge 2351
ZL1AQM Kendall, J. D., 16 Ferguson Avenue, Greenlane, Auckland 1105
ZL1AQO Gee, I. A. (Ivan), 5 Rhodes Avenue, Mt. Albert, Auckland 1003
ZL1AQQ Shepherd, G. W., 60 Chivalry Road, Glenfield, Auckland 1310
ZL1AQR Tokoroa Branch NZART (Inc.), see Branch Directory
ZL1AQS Sexton, J. E., Paparimu, R.D. 3, Papakura 1733
ZL1AQST Smith, A. G., 17 Raniera Place, Rotorua 3201
ZL1AQU Boyer, C. 311 Pakuranga Road, Pakuranga 1706
ZL1AQV Barclay, S. N., 185 White Swan Road, Mt Roskill, Auckland 1004
ZL1AQX Toomey, A. H., 38 Bradbury Road, Howick 1705
ZL1AQY Knaggs, G. R., 31 Henderson Crescent, Tauranga 3001
ZL1ARA MacDonald, A. D., 82 Dinsdale Road, Hamilton 2001
ZL1ARB Smith, P. L., 56 Hobsonville Road, West Harbour, Auckland 1208
ZL1ARC McKenzie, C. J. C., 4 Brylee Drive, Takanini 1702
ZL1ARD Duncan, L. E., 14 Cowley Drive, Temple View, Hamilton 2001
ZL1ARE Liefting, E. M., Taylors Road, R.D. 3, Kaitaia 0500
ZL1ARF Wallis, B. S., see overseas members
ZL1ARG Millar, R. W. K., Mullet Point, R.D. No. 2, Warkworth 1492
ZL1ARH Rowe, P. R., 220 Balmoral Drive, Tokoroa 2392
ZL1ARJ Wadey, A. P., Karaka Road, Parakao, Whangarei 0250
ZL1ARK Simpson, E. A., 4 Nixon Street, Whangarei 0101
ZL1ARL Neno, M. R., 226 Dickson Road, Papamoa, R.D. 7, Te Puke 3071
ZL1ARM Matthews, J. C. H., 1 Mayfair Crescent, Mairangi Bay, Auckland 1310
ZL1ARN Brown, J. T., 32 English Street, Hamilton 2001
ZL1ARQ Dunhill, I. H., 19 Goring Road, Mt. Albert, Auckland 1003
ZL1ARR Russell, A. M., 4 Milich Terrace, Te Atatu, Auckland 1208
ZL1ART Allen, A. W., Main Road, R.D. 1, Broadwood, Northland 0553
ZL1ARW Forsyth, J. T., 7 Ridgemount Rise, Mangere Bridge, Auckland 1730
ZL1ARX Wright, P. W. J., 36 Bell Street, Kawerau 3452
ZL1ARY Chandler, R. W., 36 Eastern Beach Road, Bucklands Beach 1704
ZL1ARZ Gibbs, F. I., 22 Fairview Place, Te Puke 3071
ZL1ASB Blake, J. J., 32 Kiwi Road, Point Chevalier, Auckland 1002
ZL1ASC McCann, C. S., 45a Braemar Road, Rothesay Bay, Auckland 1310
ZL1ASD Bayley, E., 11 Trimmer Terrace, Papatoetoe 1701
ZL1ASE Highley, F. K., 12 Hurley Place, Cambridge 2351
ZL1ASF Parkinson, D. A. J., 22 Hihihau Place, Glenfield, Auckland 1310
ZL1ASG Sanderson, J. B., 25 Raurimu Avenue, Onerahi, Whangarei 0101
ZL1ASH Williamson, O. G., 11 Keddell Street, Frankton 2001
ZL1ASL Rimmer, K. S., 18 Montrose Street, Gisborne 3801
ZL1ASM Kenealy, R. D., 119 Kihikihi Road, Te Awamutu 2400
ZL1ASN Adams, R. E. V., 21 Ashby Avenue, St Heliers, Auckland 1105
ZL1ASO Grayson, R. I., P.O. Box 517, Papakura 1733
ZL1ASP Abbott, R. F., 65 Kaimanawa Street, Taupo 3300
ZL1ASU Little, D. C., 25 Marellen Drive, Red Beach, Orewa 1461
ZL1ASV Phillips, R. L., 11a Agincourt Street, Glenfield, Auckland 1310
ZL1ASW Cambridge Amateur Radio Club, see Branch Directory
ZL1ASX Leeman, G., 76 Stillwater Crescent, R.D. 3, Stillwater 7850
ZL1ASZ Anderson, A. N., 3 McKenzie Road, Mangere Bridge, Auckland South 1701
ZL1ATB Leitch, D. A., 40 Alford Street, Waterview, Auckland 1207
ZL1ATD Marsden, J. R. G., 56 Kimpton Road, Papatoetoe 1701
ZL1ATE Babich, A. T., 48 Citrus Avenue, Waihi Beach 2990
ZL1ATG Geddes, G. D. S., Reinga Road, Kerikeri 0452
ZL1ATI Ward, C. J., 30 Eskdale Road, Birkdale, Auckland 1310
ZL1ATJ Cowell, R. E., 14 Bosnyak Drive, 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
ZL1ATN Long, G. T., 3/16 Commodore Drive, Lynfield, Auckland 1004
ZL1ATO Taumarunui Branch NZART (Inc.), see Branch Directory
ZL1ATQ Salter, R. T., Brind Road, Russell 0293
ZL1ATR Witheford, P. S., 97b Otaika Road, Otaika, Whangarei 0101
ZL1ATS Hoyles, R. P., 3 Hobson Street, Waihi 2991
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

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, Hokianga 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., 104 Third View Avenue, Beachlands,
Auckland 1705

ZL1AUV Sanders, J. G., Greenslade Road, Raglan 2051
ZL1AUW Wooller, A. M., 40 Powrie Street, Glenfield, Auckland 1310
ZL1AUX Greaves, G. J., 40 Windoma Circle, Papatoetoe,
Auckland 1701

ZL1AYU Burkinshaw, D. E., 30 Tiroroa Avenue, Te Atatu South,
Auckland 1208

ZL1AVB Miller, S. P., 143 Manuka Road, Glenfield, Auckland 1310
ZL1AVC Bretherton, E. C., 24 Illes Road, Rotorua 3201
ZL1AVD Bell, D. G., 48 Dundee Place, Blockhouse Bay,
Auckland 1207

ZL1AVE Atchinson, D. R., 783 Great South Road, Papatoetoe 1701
ZL1AVG Johnson, P. R., 22 Huia Street, Rotorua 3201
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., 45 Upland Road, Huntly 2191

ZL1AVM Means, C. B., 22 Miles Crescent, Newlands, Wellington 6004
ZL1AVN McElwain, B. R., 12 Vine Street, Hamilton 2001
ZL1AVO Robertson, K. S., 249b Edmonton Street, Te Atatu South,
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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, Malville, Hamilton 2001
ZL1AVX Johnston, D. J., 25 Buckland Road, Epsom, Auckland 1003
ZL1AVY Tennent, D. R., 107a New Windsor Road, Avondale,
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ZL1AVZ Ryall, B. J., 195 Te Atatu Road, Te Atatu South,
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ZL1AWA Voss, A., 28 Matipo Street, Taupo 3300
ZL1AWD Parsons, J. N., c/- V.L.Eade, Moody Street, Gore Bay, R.D. 3,
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ZL1AWE Nicholson, A. J., 21 Egmont Street, Takapuna,
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ZL1AWI Bott, A. G., Woodstock Avenue, Mackaytown., P.O. Box 28,
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ZL1AWO Pepperell, B. F., 17 Armagh Street, Hamilton 2001
ZL1AWP Dennis, A. S., Heron Park Orchard, Levley Lane,
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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
ZL1AWV Ison, H. D. S., 133 Oak Tree Avenue, Browns Bay,
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ZL1AWW Welford, G. H., 30 Churchill Avenue, Manurewa 1702

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ZL1AWZ Leitch, T. G., 38 David Street, Morrinsville 2251

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ZL1AXD Melhuish, L. D., 110 Golf Road, Titirangi, Auckland 1207

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ZL1AXH Miller, E. D. N., see Overseas Members

ZL1AXI Foote, J. R., Dip Road, Kamo 0101

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ZL1AXL Roberts, B. L., 35 Francis-Curtis Avenue, Blockhouse Bay,
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ZL1AXV Richardson, K. R., 4 Redcrest Avenue, Papakura,
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ZL1AYB Bowkett, J. A., 19 School Road, Ngongoaha 3202
ZL1AYC Shipman, N. J., 15 Massfield Street, Howick 1705
ZL1AYD Thomson, J. D., 15a Milford Road, Milford, Auckland 1309
ZL1AYE Midwinter, G. E. D., Otaika Valley Road, R.D. 10,
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ZL1AYF Price, D. A., 115 Upland Road, Remuera, Auckland 1105
ZL1AYG Shephard, J., 52 Wintere Road, Papatoetoe 1701
ZL1AYH Wallace, A. D., c/- J. Wallace, 1346 Whangaparaoa Road,
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ZL1AYO Seaman, H. A., 86 Taylor Street, Blockhouse Bay,
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ZL1AYP Pickles, D. S., 371 Pakuranga Road, Pakuranga 1706
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ZL1AYU Thorley, A., c/- Caraliase Park, 1 Emerton Road, Waihi
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ZL1AYZ Natzke, R. L., 281 Racecourse Road, P.O. Box 87, Te
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ZL1AZI Hirst, J. A., 1a Northboro Road, Takapuna, Auckland 1309
ZL1AZJ Sutherland, S. F., Ruaroa Road, R.D. 1, Kaitaia 0500
ZL1AZK Keucke, F. H., 31 Crestwood Village, 38 Golf Road, Titirangi,
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- ZL1AZU Nelson, B. C., 59 Percy Street, Warkworth 1492
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- ZL1BAB Cooper, W. G., 7 Hartfield Rise, Papakura 1703
- ZL1BAC Hilliar, S. W., 10 Rewhili 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., 24 Oxford Street, Tirau 2372
- ZL1BAH Waiuku College Amateur Radio Club. (Trustee: ZL1BMD). Waiuku College, Waiuku 1852
- ZL1BAI Trigg, L. E., Peria R.D. 3, Kaitaia 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 Tiraumea Drive, Pakuranga 1706
- ZL1BAO Martin, 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 Martensen, J. E., 34 Lawrence Street, Herne Bay, Auckland 1002
- ZL1BAS Morgan, O. J., 1 Waitele Road, Waihi 2991
- ZL1BAU Bakulich, J. V. M., Mt. Wesley Road, Dargaville 0300
- ZL1BAV Vial, S. B., 159 Kohai 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, Kaitaia 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
- 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
- ZL1BBM Ashton, H. G., 238 Rangatira Road, Birkenhead, Auckland 1310
- ZL1BBN Parr, W. R. (Mrs), 5 Charles Edward Street, Ohaupo 2452
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- ZL1BBR 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 Helliers, Auckland 1105
- ZL1BBT Orchard, H. M., 40 Hinemoa Avenue, Taupo 3300
- ZL1BBU Medley, E. J., 10 Grosmont Terrace, Otumoetai, Tauranga 3001
- ZL1BBW Williams, K., Ody Road, Taurikura, R.D. 4, Whangarei 0250
- 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 Eckett, 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
- 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, Whakatane 3400
- ZL1BCX Fasher, N. C., 123 Peary Road, Mt Eden, Auckland 1003
- ZL1BCY McMillan, D. L., 371 Dey 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, Paithia, P.O. Box 136, Paithia 0252
- ZL1BDD Bowman, M. J., 8 Morice Place, Torbay, Auckland 1310
- ZL1BDE Visser, P., 4 Kauri Crescent, Matamata 2271
- ZL1BDF Petherick, G. R., 64 Aroha Avenue, Morningside, Auckland 1003
- ZL1BDG Mogford, F. L., 74 Buchanan Street, Opotiki 3472
- ZL1BDH Latham, G. W., 5a Halberg Crescent, Whakatane 3400
- ZL1BDI Draper, N., 61 Churchill Road, Murrays Bay, Auckland 1310
- ZL1BDJ Monk, E. C. (Mrs), 23 Matipo Avenue, Rotorua 3201
- ZL1BDL Meese, R. R., 66 Westview Crescent, Onerahi, 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., Baddleys Beach, R.D. 2, Matakana, Warkworth 1492
- ZL1BDR Griffin, E. F., 1 Charlton Avenue, Mt. Eden, Auckland 1003
- 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
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- ZL1BEK McTurk, P. T. R., 40 Silverton Road, Waihi 2991
- ZL1BEL Lees, B., 172 Whitford Road, Howick 1705
- ZL1BEM Lockwood, D. C., 7 Adams Street, Waihi 2991
- ZL1BEN Doggett, G. A., c/- 46 Glenvista Place, Glenfield, Auckland 1310
- ZL1BEP Sharpe, N. R., Twinpines Orchard, Waimate North, R.D. 1, Ohaeawai 0454
- ZL1BEQ McGee, S. R., Lewis Road, Otakiri, R.D. 3, Whakatane 3400
- ZL1BER Wood, G. J., Athenee, R.D. 1, Katikati 3051
- ZL1BES Barnes, J. C., P.O. Box 2232, Rotorua 3200
- ZL1BET Copeman, N. J. P., Trig Road, R.D. 1, Helensville 1451
- ZL1BEU Jamieson, L. I. D., Ngunguru, R.D. 3, Whangarei 0250
- ZL1BEV Derecourt, M. J., 2 Stonehurst Avenue, Waiuku 1852
- ZL1BEW Dodds, P. B., 42 Waimarie Road, Whenuapai Village, Kumeu 1454
- ZL1BEX Wilson, A. L. G., 16 Rahiri Road, Mt. Eden, Auckland 1004
- ZL1BEY Smart, J. B., 157 Rodney Street, Wellsford 1493
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- ZL1BFK Frakes, M. C., 29 Riverside Drive, Waiuku 1852
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- ZL1BGB Glover, D. R., 5 Wyman Place, Pakuranga 1706
- ZL1BGC Trigg, D. M., Peria, R.D. 3, Kaitaia 0500
- ZL1BGD Marr, L. R., 22 Swan Crescent, Pakuranga, Auckland 1706

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ZL1BGK Bugden, K. G., c/- I McCombe, Brandon Brookfield, P.O. Box 240, Auckland 1000
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ZL1BGN Routhwaite, T., 18 Duncan Avenue, Henderson, Auckland 1208
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ZL1BGS Waterhouse, F. L. K., Flat 5, Block B, Pensioner Flats, Mairland Street, Tauranga 3001
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ZL1BHD Wright, S. W., 16 Puckey Avenue, Kaitaia 0500
ZL1BHE Matthews, J. F., 26 Oceanview Road, Northcote, Auckland 1309
ZL1BHF Sloan, W. J., 20 Acorn Street, Royal Oak, Auckland 1003
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ZL1BHI Dingle, W. M., 363b Maungatapu Road, Tauranga 3001
ZL1BJJ Dekker, J., 3 Irene Crescent, Hamilton 2001
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ZL1BHR Kovac, J. D., 13 Wesley Street, Dunedin 9001
ZL1BHS Deverell, H. C., 44 Mackersy Road, Whangarei 0101
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ZL1BHU Watson, A. G., 204a Valley Road, Mt. Maunganui 3002
ZL1BHV Davis, W. H., 55 Pihanga Street, Taupo 3300
ZL1BHW Parkinson, M. A., 24 Roosevelt Road, Rotorua 3201
ZL1BHX Travaglia, A. S., Engineer's Residence, Kaitaia Hospital 0500
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ZL1BIB Hookham, C. R., 59a Maxwellton Drive, Mairangi Bay, Auckland 1310
ZL1BIC Byrnand, J. L., 5 Te Anau Place, Tikipunga, Whangarei 0101
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ZL1BIH Hearn, W. A., R.D. 2, Warkworth 1492
ZL1BII Shakes, L. C., 131 River Road, Kawerau 3452
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ZL1BIL Edwards, M. B., Main Road, Walton 2273
ZL1BIN Nutting, L. G. W. D., 49 Duncan Street, Raetihi 5172
ZL1BIO Shepherd, I. H., 15 McKay Crescent, Dargaville 0300
ZL1BIP Bingham, L. H., Walker Road East, R.D. 2, Kalikati 3051
ZL1BIQ Puffett, K. H., 51 McKean Avenue, Manurewa 1702
ZL1BIS Westaway, K. F., 7 Hilton Way, Johnsonville, Wellington 6004
ZL1BIT Davy, N. C., Chatham Avenue, Albany, R.D. 3, Auckland 1331
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ZL1BIW Ward, L., 60 Ranfurly Street, Dargaville 0300
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ZL1BJA Hendriksen, R. H. E., No. 1 R.D., Wellsford 1493
ZL1BJB Beale, D. J., Bremner Road, Drury, Auckland 1752
ZL1BJC Orchard, L. J. (Mrs), 1 The Heads, Whakatane 3400
ZL1BJE Appleby, W. M., 8 Brightside Road, Whangaparaoa, Hibiscus Coast 1463
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ZL1BJI Goodsir, J. W., 2/2 Hadfield Avenue, Waterview, Auckland 1207
ZL1BJJ Morris, T. J., Paparoa Road, Te Puna, R.D. 2, Tauranga 3021
ZL1BKL Turner, R. W., Main Road, Waitoa 2973
ZL1BKL Williams, C., R.D. 2, Cambridge 2351
ZL1BKM Cain, M. C., c/- S. Punter, 35 Halver Road, Manurewa 1702
ZL1BKN Schlef, W. K., 13 Roslyn Road, Mt Wellington, Auckland 1106
ZL1BKO Wright, W. O., 12 Syme Crescent, Kawerau, Bay of Plenty 3452
ZL1BKP Parkinson, D. J., 36 Western Road, Otumoetai, Tauranga 3001
ZL1BHQ Wardley, D. E., 45c Ambler Avenue, Glen Eden, Auckland 1207
ZL1BKR Daley, J. A., c/- 11 The Esplanade, Eastern Beach, Auckland 1704
ZL1BKT Dougan, J. K., 35 Tunis Road, Panmure, Auckland 1106
ZL1BKV Thompson, N. K., 11 Homestead Place, Glenview, Hamilton 2001
ZL1BKV Turvey, W. W., 20 Nutsey Avenue, Northcote, Auckland 1309
ZL1BKW Hallett, W. R., 17 Pauanui Pines, Kennedy Park Drive, Pauanui Beach 2850
ZL1BKT Clark, L. D. G., 12 Richards Avenue, Papatoetoe 1701
ZL1BKV Garratt, P. R., 294 Massey Road, Mangere East, Auckland 1701
ZL1BKT Farmer, J. B. S., 88 Ngapuhi Road, Remuera, Auckland 1105
ZL1BKA McIntosh, G. S., 4 Alexander Avenue, Maraetai, Auckland 1705
ZL1BKB Williams, C., 13 Wren Street, Woodlands, Waikanae 6154
ZL1BKC De Langen, H., 9 Camrai Road, Raglan 2051
ZL1BKD Busch, C. T., cnr Chapel & Thomas Roads, Manukau City 1701
ZL1BKF Marshall, O. H., 16 Dunlop Drive, Pauanui Beach 2850
ZL1BKG Wilson, T. G., 53 Tirimoana Road, Te Atatu, Auckland 1208
ZL1BKH Hogg, E. R., 33 Simmons Crescent, Rotorua 3201
ZL1BKI Salmond, A. R., 2/9 Tomintoul Place, Howick 1705
ZL1BKJ Sandlant, P. W., 17 Mayfair Crescent, Mairangi Bay, Auckland 1310
ZL1BKK Edwards, K., 49 Ocean Road, Surfdale, Waiheke Island 1470
ZL1BKL Lister, M. W. (Mrs), Jeffs Road, East Tamaki, R.D., P.O. Box 23-508, Hunters Corner 1730
ZL1BKM Engel, F. W., 33 Fairmount Road, Glen Eden, Auckland 1207
ZL1BKN Codlin, J. K., 71 Great South Road, Manurewa 1702
ZL1BKP Searle, K. A., 58 Gordon Street, Gisborne 3801
ZL1BKT Adams, C. W., 104b John Downs Drive, Browns Bay, Auckland 1310
ZL1BKT Dowding, P., 175 Beach Street, Waikouaiti 9162
ZL1BKT Davidson, B. J., 130a Monarch Avenue, Northcote, Auckland 1309
ZL1BKV Coombs, M. J., 13 Crispian Place, Weymouth, Auckland 1701
ZL1BKT Lees, G. D., Coulter Road, R.D. 1, Henderson, Auckland 1208
ZL1BKT Rodgers, A. E., P.O. Box 19-006, Avondale, Auckland 1230
ZL1BKT Rankin, A. N., 11 Ngatira Place, Snells Beach, Warkworth 1452
ZL1BKT Henry, R. I., 27 McRae Road, Mt. Wellington, Auckland 1106
ZL1BKT Fox, R. D., 36 Galaxy Drive, Mairangi Bay, Auckland 1310
ZL1BKT Churcher, B. R., 80 Hapburn Road, Glendene, Auckland 1208
ZL1BLC Morris, T. N. J., 47 Boundary Road, Blockhouse Bay, Auckland 1207
ZL1BLC Ward, M. T., Mangatarata Station, Tokomaru Bay, East Coast 3853
ZL1BLE Stewart, R. D., Tauhoa, R.D. 4, Warkworth 1492
ZL1BLF Poletti, M. J., 69 Willis Road, Papakura 1703
ZL1BLG Borland, K., 6 Wendywood Lane, Kerikeri 0452
ZL1BLH Wilson, A. B., 17b Mizpah Road, Wake, Browns Bay, Auckland 1310
ZL1BLI Ockleston, E. W., 25 Killarney Street, Takapuna, Auckland 1309
ZL1BLK Elliott, K. L., 349a Beach Road, Browns Bay, Auckland 1310
ZL1BLL Adnitt, E. (Mrs), 10 Laing Place, Otumoetai, Tauranga 3001
ZL1BLQ Salmons, R. J., 2 Townhead Crescent, Tauranga 3001
ZL1BLR Fish, L. G., 16 Willow Avenue, Hannah's Bay, Rotorua 3201
ZL1BLS Smith, J. B., 13 Selwyn Avenue, Titirangi, Auckland 1207
ZL1BLT Alderwick, G. B., 16 Foster Crescent, Belmont, Lower Hutt 6301
ZL1BLU Anderson, P. A., 6 Gerontius Glade, Torbay, Auckland 1310

ZL1BLV	Howells, D., 267 Pohutukawa Avenue, Ohope, Whakatane 3454	ZL1BON	White, N. C., Station Road, Omokoroma, R.D. 2, Tauranga 3050
ZL1BLW	Cook, L. J., McCarthy Street, Waihou 2972	ZL1BOP	Emery, N. F., 10 Charmaine Road, Torbay, Auckland 1310
ZL1BLX	Weston, G. A., 179 Rosebank Road, Avondale, Auckland 1207	ZL1BOQ	Duffy, D. B. H., Waiuku Road, Puni, R.D. 3, Pukekohe 1800
ZL1BLY	Goodbrand, J. A., 12 Windsor Avenue, Kamo, Whangarei 0101	ZL1BOR	McNamara, L. I. (Mrs), 32 Galileo Street, Ngaruawahia 2171
ZL1BLZ	Tunncliffe, G. W., 16 Wilding Avenue, Northcote, Auckland 1309	ZL1BOS	Williams, J. B., Kainui Road, R.D. 1, Taupiri 2151
ZL1BMA	Grey, G. R., 35 Kennedy Avenue, Forrest Hill, Auckland 1310	ZL1BOT	Shuker, C. J., 18 Mason Avenue, Pukekohe 1800
ZL1BMB	Moroney, P. R., 12 Pallant Street, Manurewa 1702	ZL1BOU	Moroz, Z., 5 Kayle Glen, Massey, Auckland 1208
ZL1BMC	Peters, D. E., 80 Pohutukawa Avenue, Ohope 3454	ZL1BOW	Fendley, G. L., 10 Vanda Place, Greerton, Tauranga 3001
ZL1BMD	Shaw, R. K., 49 Sea Vista Drive, Pukerua Bay, Auckland 1106	ZL1BOY	Minchin, H. E., House 48, c/- Post Office, Arapuni 2370
ZL1BMF	Musgrave, J. L., 2 Vanessa Crescent, Glendowie, Auckland 1105	ZL1BOZ	Williams, G. C., North Road, R.D. 2, Papakura 1733
ZL1BMG	Scone, J., Thornton Road, R.D. 1, Cambridge 2351	ZL1BPA	Corin, T. G., 2 Innisfree Drive, Ellerslie, Auckland 1105
ZL1BMH	Baker, R. F., 2/18 Tui Glen Road, Birkenhead, Auckland 1310	ZL1BPB	Smith, R. A., 37 Kensington Road, Waihi 2991
ZL1BMI	Wilson, E. L., 368 Pt Chevalier Road, Pt. Chevalier, Auckland 1002	ZL1BPD	Cochrane, C. D., 100 Manaia Road, Tokoroa 2392
ZL1BMJ	Taylor, A. K., 65 Uxbridge Road, Howick 1705	ZL1BPF	Wilcox, H. J., 64 Taylor Road, Mangere Bridge, Manukau City 1701
ZL1BMK	Watt, R. G., 15 McKay Crescent, Dargaville 0330	ZL1BPG	Jones, N. E., 16 Woodbridge Lane, Milford, Auckland 1309
ZL1BML	Harris, A. W., 20 Buckland Road, Papatoetoe North, Auckland 1701	ZL1BPH	Fransham, G. E., 29 Tamaki Avenue, Otahuhu, Auckland 1106
ZL1BMO	Steele, T. M., 88 Redhill Road, Papakura 1703	ZL1BPI	Ronke, B. R., Weston Lea Drive, R.D. 2, Hamilton 2021
ZL1BMP	MacMillan, L. P. A., 15 Godden Crescent, Mission Bay, Auckland 1105	ZL1BPJ	Christensen, R. A., 13 Manson Street, Greerton, Tauranga 3001
ZL1BMQ	Marr, A. H., 5 McLennan Road, Mt Wellington, Auckland 1106	ZL1BPK	Junge, A. G., 128 Stanley Avenue, Te Aroha 2971
ZL1BMT	Haultain, A., 54 Henderson Street, Whakatane 3400	ZL1BPM	Browne, L. (Mrs), 23 Te Puia Street, Kamo, Whangarei 0101
ZL1BMU	Lowry, M. R., Lowry Road, Bombay, Auckland 1750	ZL1BPN	Johnson, E. A., 11 Kowhai Park Road, Whangarei 0101
ZL1BMV	Walker, V. L., Kings Road, Pahia 0252	ZL1BPO	Bach, E. A., 134 Methuen Road, Avondale, Auckland 1207
ZL1BMX	Greenaway, W. P., 8 Stewart Place, Hamilton 2001	ZL1BPP	Wilkins, D. J. H., 12 Valdese Rise, Browns Bay, Auckland 1310
ZL1BMY	Clegg, R. J., 47 Churchill Road, Murrays Bay, Auckland 1310	ZL1BHQ	Nettlingham, F. J., Matahui Road, Katikati 3051
ZL1BMZ	Padgett, A. B., 22 Finnerty Avenue, Howick, Auckland 1705	ZL1BPR	Dunn, J. R., 264 Glenvar Road, Torbay, Auckland 1310
ZL1BNA	Marr, W. R. G., 27 Houhere Place, Tikipunga, Whangarei 0101	ZL1BPT	Burrage, S. G., 1/58a Maskell Street, St Heliers, Auckland 1105
ZL1BNB	Newman, M. D., 30 Nikau Street, Wanganui 5001	ZL1BPU	Greenman, M., Sim Road, R.D. 1, Papakura, South Auckland 1733
ZL1BNC	Murray, L. G., 9 Maungawhare Place, Tauranga 3001	ZL1BPW	Foreman, Q. S., 4c Seaview Road, Milford, Auckland 1309
ZL1BNE	Williamson, R., 21 Lyttelton Avenue, Forrest Hill, Auckland 1310	ZL1BPX	Ansley, B. K., 114 Eskdale Road, Birkenhead, Auckland 1310
ZL1BNF	James, A. H., Pyes Pa Road, R.D. 3, Tauranga 3021	ZL1BPZ	Chatfield, D. J., c/- 300 Queens Drive, Lyall Bay, Wellington 6003
ZL1BNG	Orton, N. J., 11 Glamis Avenue, Hamilton 2001	ZL1BQA	Doell, E. D., 11 Sandspit Road, Waiuku 1852
ZL1BNH	Murphy, P. M., Oaklands Road, R.D. 1, Papakura 1733	ZL1BQB	Howie, P. C., 28 Pohutukawa Road, Beachlands 1705
ZL1BNI	Brant, P. A., 41 Regent Street, Papatoetoe 1701	ZL1BQC	Wolf, P. H., 2 Bourbon Terrace, Karori, Wellington 6005
ZL1BNJ	Pedersen, W. J., Union Street, Opotiki 3472	ZL1BQD	Runciman, R. J., 36 Cardiff Road, Pakuranga 1706
ZL1BNK	Painting, F. J., 26 Greenacres Drive, Kawa Kawa 0271	ZL1BQE	Dix, K., 21 Adel Place, Weymouth, Auckland 1701
ZL1BNL	Schricker, H. J. E., 8 McPherson Street, Remuera, Auckland 1105	ZL1BQF	Ryan, L. J., 11 Ngaire Avenue, Epsom, Auckland 1003
ZL1BNM	Larcombe, D. C., 21 Cornelian Crescent, Bucklands Beach 1704	ZL1BQH	Lawson, T. A., 19 View Road, Glenfield, Auckland 1310
ZL1BNN	Brill, A. J., 83 Stott Avenue, Birkdale, Auckland 1310	ZL1BQI	Milne, A. W., 56 Hamurana Road, Omokoroa Beach, R.D. 2, Tauranga 3021
ZL1BNO	Twiname, M. H., 2/4 Burt Road, Mt Wellington, Auckland 1106	ZL1BQJ	Tetenburg, C. R., Ward Road, R.D. 2, Rotorua 3221
ZL1BNP	Were, B. J., 28 Lachlan Drive, Dinsdale, Hamilton 2001	ZL1BQK	Shackleton, R. V., 8 Rongopai Place, Kaitaia 0500
ZL1BNO	Gamble, A. A. R., 28 Barnhill Drive, Papakura 1703	ZL1BQL	Robinson, L. K., 5 Mera Road, Algies Bay, Warkworth 1492
ZL1BNR	Sando, B. C., 1 Rahopara Street, Castor Bay, Auckland 1310	ZL1BQM	Walker, B. F., 23 Jaemont Avenue, Te Atatu South, Auckland 1208
ZL1BNS	Rowe, R. G., 32 Manawa Road, Remuera, Auckland 1105	ZL1BQN	Green, E. N., 499 Otumoetai Road, Tauranga 3001
ZL1BNT	Murray, K. G., 5 Te Puia Street, Kamo, Whangarei 0101	ZL1BQQ	Hynds, A. G., 1/21 Arundel Street, Tauranga 3001
ZL1BNU	Mancer, P. J., c/- 10 Delshaw Avenue, Stanmore Bay, Whangaparaoa 1463	ZL1BQP	Buckton, M. D., 14 Cockle Bay Road, Howick, P.O. Box 38-500, Howick 1731
ZL1BNV	Keatinge, R. N., 7/232 Mt Wellington Highway, Mt. Wellington, Auckland 1106	ZL1BQQ	Lowther, B. L., 5 Grey Street, Opotiki 3472
ZL1BNW	Collin, J. V., 65 Paine Street, Judea, Tauranga 3001	ZL1BQT	Le Varre-Waters, I. D., 127 Whitney Street, Blockhouse Bay, Auckland 1207
ZL1BNX	Toft, T. B., 19b Ngapuhi Road, Remuera, Auckland 1105	ZL1BQV	Rogan, J. K., 54 Lagoon Drive, Panmure, Auckland 1106
ZL1BNY	Shakes, D. B., 12 Deuxberry Avenue, Northcote, Auckland 1309	ZL1BQW	Armstrong, C. M., 5 Jervois Street, Kawerau 3452
ZL1BNZ	Clough, D. L. W., 5 Kelly Street, Rotorua 3201	ZL1BQX	Clark, L. C., 36a Jubilee Crescent, Whakatane 3400
ZL1BOA	Wigg, J. D., 42 Deep Creek Road, Torbay, Auckland 1310	ZL1BQY	Clayton, C. J., 19 The Esplanade, Bucklands Beach, Auckland 1704
ZL1BOB	Morgan, G. B., 25 Otaika Road, Whangarei 0101	ZL1BQZ	Jarvis, S. A., P.O. Box 2140, 61a James Street, Whakatane 3400
ZL1BOC	Dennis, G. A., 91 Bridge Street, Opotiki 3472	ZL1BRB	Rompa, A. P. A., 22 Abbotleigh Avenue, Te Atatu, Auckland 1208
ZL1BOD	Norrie, B. C., 102 Browns Bay Road, Browns Bay, Auckland 1310	ZL1BRC	Ross, S. J., 5 Roxy Terrace, Glendowie, Auckland 1105
ZL1BOE	Muir, C. B., 429 Whitford Road, Howick, Auckland 1705	ZL1BRD	Timms, D. E., Kendall Road, Kerikeri 0452
ZL1BOF	Urquhart, G. A., 9 Four Trees, Howick 1705	ZL1BRE	Kristensen, P., Keenan Road, R.D. 3, Tauranga 3021
ZL1BOG	Donnelly, D. R., 51 Karaka Street, Hamilton 2001	ZL1BRL	Stormont, B. I., 49 Kildare Avenue, St. Heliers, Auckland 1105
ZL1BOI	Clinton-Baker, D., Masterton/Martinborough Road, R.D. 4, Masterton 5921	ZL1BRG	Macken, S. A. (Mrs), P.O. Box 233, Whangaparaoa 1463
ZL1BOJ	Wilson, W. J., 22 Larcy Road, Lynmore, Rotorua 3201	ZL1BRJ	Furness, J. B., 2 Pukenui Road, Epsom, Auckland 1003
ZL1BOK	Rowntree, R. J., 106 New Windsor Road, Avondale, Auckland 1207	ZL1BRK	Stewart, D. A., 11 Kerry Dell, Howick 1705
ZL1BOM	Glasgow, M. R., 124 Grange Road, Tauranga 3001	ZL1BRL	Cornwall, P. J., 10 Park Avenue, Northcote, Auckland 1309
		ZL1BRN	Norgate, M. H., 49 West View Crescent, Onerahi, Whangarei 0101
		ZL1BRP	Brenner, B. N., 67 Norwood Road, Bayswater, Auckland 1309
			Price, P. G., 16 Ruahine Street, Tauranga 3001

ZL1BRQ

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., P.O. Box 87-097, Meadowbank, Auckland 1130
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
ZL1BCS Pearce, S. W., 16 Donald Road, Kaitaia 0500
ZL1BSD Millett, J. C., 5 Mariners Grove, Algiess Bay, Warkworth 1492
ZL1BSE Stitt, 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 Hetherton, J. K., 36 Norton Road, Cherrywood, Tauranga 3001
ZL1BSJ Stewart, R. C., 20 Lillian 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., 85 O'Brien Road, Rocky Bay, 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., 4/27 Weymouth Road, Manurewa 1702
ZL1BSU Coles, H. G., 41 Homestead Road, Whangaparaoa 1463
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, Paihia, 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, Owhata, 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., 37 Sandwich Road, St Andrews, 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 Vandaleur 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., 3 Rutland Road, Mt Wellington, Auckland 1106
ZL1BTR Jeffares, R. J., 34 Amy Street, Ellerslie, Auckland 1105
ZL1BTS Trebes, C. E., 11 Lamont Street, Hamilton 2001
ZL1BTT MacKay, C. D., R3 Musik Point, Bucklands Beach, Auckland 1704
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., c/- P.O. Box 15-291, Auckland 1232
ZL1BTZ Dawe, L. J., 6 Linwood Avenue, Forrest Hill, Auckland 1310
ZL1BUB Crymble, C. F., 19 Scots 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, Waipu 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., P.O. Box 3102, Onerahi, Whangarei 0100
ZL1BUJ Mackey, C. J., R.D. 1, Kamo, Whangarei 0121
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
ZL1BUV Linton, S. J., 66 Bridgman Road, Te Awamutu 2400
ZL1BUS O'Brien, T. N., Wisemans Road, R.D. 2, Waitoa 2973
ZL1BUT Eggleton, P. W., 2/143a Manuka Road, Glenfield Heights, Auckland 1310
ZL1BUU Levin, P. C., Gower Road, R.D. 2, Taupiri 2171
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
ZL1BV Yuen, S. T. (Mike), 7 Dallas Place, New Windsor Heights, Auckland 1207
ZL1BVC McNab, P. O., 27 Choise Avenue, Glendene, Auckland 1208
ZL1BVD Skinner, D. E., R.D. 1, Raglan 2051
ZL1BVE Lefeveld, J. J., 58 Montgomery Crescent, Hamilton 2001
ZL1BF Keatinge, L. M. L. (Mrs), 8 Barnard Street, Matamata 2271
ZL1BVG Reid, D., 13a Lancaster Road, Beachhaven, Auckland 1310
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., Rawerera Road East, R.D. 2, Ngatea 2852
ZL1BVN van der Hulst, P. W., 212 Ohauo 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 Sleigh, J. P., 2/69a Symonds Street, Royal Oak, Auckland 1106
ZL1BVU Erceg, P. J., 152 Morningside Road, Whangarei 0101
ZL1BVW Boylan, R. P., 59 Coronation Road, Glenfield, Auckland 1310
ZL1BVW Souchkoff, A. A., 1/2 Dexter Avenue, Mt. Eden, Auckland 1003
ZL1BVZ Dowling, B. N., 47 Gray Avenue, Mangere East, Auckland 1701
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 Hennefeld, 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 McCornochie, B. D., 8 Farmer Street, Te Aroha 2971
ZL1BWL Shaw, D. A., 15 Brown Street, Ponsonby, Auckland 1002
ZL1BWM Trayes, D. J., Beach Road, Ahipara 0551
ZL1BWO Barnaby, N. S., 42 Mains Avenue, Whangarei 0101
ZL1BWP Horn, B. R., 5 Monique Place, Hamilton 2001
ZL1BWO Le Cornu, E. M. O., Kiwitahi, R.D. 1, Morrinsville 2251
ZL1BWS Harris, J. M., 21 Tapper Crescent, Tikipunga, Whangarei 0101
ZL1BWT MacLean, A., 4 Quibray Place, Howick 1705
ZL1BWW Thompson, G. M., Otuhi Road, Maungatapere 0250
ZL1BWW Georgeff, N. P., 116 Springfield Road, Rotorua 3201
ZL1BWX Storey, G. K., 30 Beresford Street, Bayswater, Auckland 1309
ZL1BWY Collins, S. J., Beach Road, Kohukohu 0471
ZL1BZW 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., 103 Nile Road, Milford, Auckland 1309
ZL1BXE O'Neil, E., 12/194a Hurstmere Road, Takapuna, Auckland 1309
ZL1BXF Young, M. B., 44 Tora Street, Torbay, Auckland 1310
ZL1BXH Croucher, P. J., 73 Park Road, Te Awamutu 2400
ZL1BXI Flower, C. B. G., 3/41 Rangatira Road, Birkdale, Auckland 1310
ZL1BXJ Eman, J. J., 6 Shakespeare Road, Milford, Auckland 1309
ZL1BXX Herrold, N. G., Hall Road, R.D. 1, Waiuku 1852

ZL1BXM	Miers, E. R., R.D. 9, Dargaville 0330
ZL1BXN	Culler, O. D., 62 Hurndall Street, Maungaturoto 0272
ZL1BKO	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 Muritai Street, Taupo 3300
ZL1BXV	Todd, A. J., 61a Hillside Road, Papatoetoe 1701
ZL1BXW	Modderman, E. J., Bycroft Road, R.D. 2, Drury 1752
ZL1BXX	Hawkins, C. R., 56 Pine Avenue, Hamilton 2001
ZL1BXY	Makin, W. H., c/- J. & C. Hook, Waimamaku 0474
ZL1BZX	Winsborough, L. F., 20 Williams Street, Cambridge 2351
ZL1BYA	Martinson, 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, Tatuanui 2250
ZL1BYM	Armstrong, P. G., 58 Cambridge Road, Hamilton 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., 15 Currell Way, Howick, Auckland 1705
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
ZL1BYY	Cartwright, G. T., 6 Haycock Avenue, Mt Roskill, Auckland 1004
ZL1BYZ	Shaw, J. N., c/- Post Office, Paerata 1450
ZL1BZA	Barnett, Z., "Pokuru", R.D. 5, Te Awamutu 2400
ZL1BZB	Cox, G. W., 141 Garnet Road, Westmere, Auckland 1002
ZL1BZC	Ash, D. E., 69 Tanekaha Road, Titirangi, Auckland 1207
ZL1BZD	Bishop, N. L., 11 Whiteacres Drive, Pakuranga 1706
ZL1BZE	Cordes, R. K., 177 Rathgar Road, Henderson, Auckland 1208
ZL1BZF	Nesfield, J. C., 4/10 Akehurst Avenue, New Lynn, Auckland 1207
ZL1BZH	Van der Zee, T. P., 46 Makorini Beach Road, Gisborne 3801
ZL1BZI	Newman, D. A., 112 The Avenue, Lynfield, Auckland 1004
ZL1BZJ	Lodge-Osborn, D., Turanga Road, R.D. 1, Henderson, Auckland 1208
ZL1BZK	Greenhill, D. R., 5 Hogan Street, Pukekohe 1800
ZL1BZL	Ellis, D. G. R., 7 Kaiwaka Road, Onerahi, Whangarei 0101
ZL1BZO	Potts, D. M., 200a St Heliers Bay Road, St Heliers, Auckland 1105
ZL1BZP	Kennard, T. J., 536a Tararu Road, Thames 2801
ZL1BZQ	Galland, J. M. J. E., c/- 109 Norwood Road, Bayswater, Auckland 1309
ZL1BZT	Cawte, P. L., 332 Upper Harbour Drive, Greenhithe, Auckland 1310
ZL1BZV	Surman, J. D., 27a Lloyd Avenue, Mt. Albert, Auckland 1003
ZL1BZW	Rodger, T. R. R., 14 King Street, Cambridge 2351
ZL1BZX	Hill, D. B., 25 Camellia Avenue, Ruakaka 0253
ZL1BZZ	Holmberg, R. E., R.D. 5, Tauranga 3021
ZL1CAA	Harrison, E. C., 3 St. Patrick Row, Whangamata 2992
ZL1CAB	Whittaker, D. J., 4 Oak Place, Whakatane 3400
ZL1CAC	Harsant, N. G., 66 Exmouth Road, Northcote, Auckland 1309
ZL1CAD	Francis, S. D., P.O. Box 9313, Newmarket, Auckland 1031
ZL1CAE	Skevington, B. E., 46 Prisk Street, Melville, Hamilton 2001
ZL1CAF	Francis, M. E., P.O. Box 9313, Newmarket, Auckland 1031
ZL1CAG	Bott, B., 12a Peri Street, Tauranga 3001
ZL1CAH	Meyer, B. F. M., Hautapu, R.D. 1, Cambridge 2351
ZL1CAI	Coleman, H. A., 19 Harbour Road, Ohope 3454
ZL1CAJ	Coppell, G. G., 168 James Street, Whakatane 3400
ZL1CAK	Miller, R. N., 30 Paine Street, Tauranga 3001
ZL1CAM	Fitzpatrick, J. D., Lake Rotoma, R.D. 4, Rotorua 3221
ZL1CAN	Lonergan, G., 84 4th Avenue, Tauranga 3001
ZL1CAP	Jones, L. R., 49 Vale Road, St. Heliers, Auckland 1105
ZL1CAQ	Gregory, J. H., 29 Ruawai Road, Mt. Wellington, Auckland 1106
ZL1CAR	Keymer, R. C., 10 Barbary Avenue, Kelston, Auckland 1207
ZL1CAS	Howard-Taylor, A., 2/10 Arkles Drive, Arkles Bay, Whangaparaoa 1463
ZL1CAT	Newland, P. J., 125 Taylors Road, Mt. Albert, Auckland 1003
ZL1CAU	Earnshaw, M. B., 741 East Coast Bays Road, Browns Bay, Auckland 1310
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, I. A., 28 Butler Road, Kerikeri 0452
ZL1CBE	Wright, W. A., Main North Road, R.D. 4, Kaitaia 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
ZL1CBL	Dahl, N. L., Taratarua Road, Kaeo 0556
ZL1CBN	Tedbury, N. F. (Mrs), 24a Moody's Avenue, Whangarei 0101
ZL1CBO	Beard, D. M., P.O. Box 208, Awanui 0552
ZL1CQS	Contesse, L. C., Kiripaka Road, Tikipunga, Whangarei 0133
ZL1CBS	Peterson, R. J., c/- Taipa Area School, R.D. 3, Kaitaia 0500
ZL1CBT	Beard, G. L., 11b Kohuhu Street, Kaitaia 0550
ZL1CBU	Rankin, P. M., see overseas members
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, Birkdale, Auckland 1310
ZL1CBZ	Pavitt, I. D., Cool Gardens, Board Crescent, R.D. 1, Kumeu 1454
ZL1CCA	Myers, K. D., 57 Lynbrook Avenue, Blockhouse Bay, Auckland 1106
ZL1CCC	Devenish-Meares, 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, I. 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 2452
ZL1CCV	Purves, P. S., 63b Tuhikaramea 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
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., 60 Stafford Street, Cambridge 2351
ZL1CDJ	Kitchen, D. H., Hart Road, R.D. 3, Hamilton 2021
ZL1CDL	Lougher, P. W., Russel Road, 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., 36 Faulkner Street, Tauranga 3001

ZL1CDQ

ZL1CDQ Powell, G. W., 241 Dickson Road, Papamoa, R.D. 7, Te Puke 3071

ZL1CDR Kevey, E. F., East Otara Road, Opotiki, P.O. Box 116, Opotiki 3472

ZL1CDS Skilton, D. B., 1/89 Chapel Street, Tauranga 3001

ZL1CDT Greenaway, S. M., 11 Darragh's Road, Otumoetai, 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

ZL1CDX Fielding, T., 26 Roosevelt Road, Western Heights, Rotorua 3201

ZL1CDY Walker, R. G., c/- Post Office, Opua, Bay of Islands 0290

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

ZL1CEI Norman, C. R., 30c West Tamaki Road, St Heliers, Auckland 1106

ZL1CEJ Francis, W. D., P.O. Box 9313, Newmarket, Auckland 1031

ZL1CGA Kane, F. L. D.

ZL1CHH Russell, W. P., The Peninsular Club, 18/441 Whangaparaoa Road, Whangaparaoa 1463

ZL1CMR Rowlands, C. M., 68 Raurimu Avenue, Onerahi, Whangarei 0101

ZL1COD Shearer, J. M., McKinney Road, Warkworth 1492

ZL1CQA Vuleta, M. S., 1/17 Panorama Road, Mt Wellington, Auckland 1106

ZL1CRH Shireman, D. V., R.D. 4, Te Toro Beach Road, Waiuku 1852

ZL1CUT Alexander, C. J. (Dr), 49 Richard Farrell Avenue, Remuera, Auckland 1105

ZL1CVK Wahrlich, R. M., Whangamarino Road, R.D. 2, Te Kauwhata 2152

ZL1CWH Stuart, D. T., 180a St Heliers Bay Road, St Heliers, Auckland 1105

ZL1DAA Beaumont, G. S., 6 Keyte Street, Whangarei 0101

ZL1DAB Williams, G. H., Ody Road, R.D. 4, Whangarei 0100

ZL1DAG Reynolds, P. J. (Miss), c/- Post Office, Ngunguru, Northland 0250

ZL1DAH Mead, A. D., 2 Te Puia Street, Kamo, Whangarei 0101

ZL1DAJ Cottle, J. N. (Mrs), Rainbow Falls Road, R.D. 2, Kerikeri 0452

ZL1DAS Werlberger, B., 118 Brunton Crescent, Thames 2801

ZL1DAX Thomson, J., 4 Cherry Road, Howick, Auckland 1705

ZL1DAY Tutuha, W. D., 48 Milne Street, Hunterville 5161

ZL1DBE Whittaker, V. W., 17 Princess Road, Tauranga 3001

ZL1DBF Gabble, O. J., 3 Hobson Street, Waihi 2991

ZL1DBG Allan, R. W., c/- W. W. Allan, R.D. 5, Te Awamutu 2400

ZL1DBH Cooper, H. G. T., 34 Omokoroa Road, R.D. 2, Tauranga 3021

ZL1DBI Sheldon, R. L. (Mrs), 18 Carter Street, Mt Maunganui 3002

ZL1DBK Wighton, A. K., Ainsworth Road, R.D. 6, Tauranga 3021

ZL1DBL Ralston, W. B., 168 Cambridge Road, Tauranga 3001

ZL1FOX Sinclair, S. C., 40 Sumner Street, Rotorua 3201

ZL1HKW Hooi, K. W., 7a Millard Street, Hillsborough, Auckland 1004

ZL1JIM Munro, J. E., 24 Main Road North, Tairua, Via Thames 2853

ZL1MAX Clear, M. R., Limmer Road, R.D. 8, Te Kowhai, Frankton 2030

ZL1MDE Derkens, M. H. A., c/- B. Enticott, 173 Ocean Beach Road, Mt Maunganui 3002

ZL1MJJ Janor, M. J., R6 Musick Point, Bucklands Beach, Auckland 1310

ZL1NAH Cox, B. B., 21 Polandon Place, Papakura 1703

ZL1NAI Mumford, C. N., 6 Graham Street, Ruakaka 0253

ZL1NAJ Harvey, K. A., P.O. Box 155, Maungatapere 0250

ZL1NAL Matheson, K. L. (Miss), Mata Road, Kohukohu, Northland 0471

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

ZL1NAX Borland, T. W. P., 20 Weka Street, Whakatane 3400

ZL1NBA Abraham, H. H., c/- Paua Station, Private Bag, Kaitaia 0500

ZL1NPP Sturgess, A. E. (Mrs), 2/18 Meadowland Drive, Howick, Auckland 1705

ZL1RWJ Johnson, R. W., 8 Graham Street, Te Kopuru, P.O. Box 33, Te Kopuru 0356

ZL1TAA Miller, N. S., 134 College Road, Edgecumbe 3451

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

ZL1TAH Plimley, A. E., 104 Porawai Road, Thames 2801

ZL1TAI Norris, L. R., 4 Gordon Street, Hamilton 2001

ZL1TAK McBurney, R. T., 25 Hamilton Road, Papatoetoe 1701

Sargent, 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, Milford, Auckland 1309

ZL1TAZ Purdy, G. N., 4 Ramelton Road, Mt. Roskill, Auckland 1004

ZL1TBA Parsons, D. R., 12 Mutu Street, Te Awamutu 2400

ZL1TBB Carter, R., 1218 Huia Road, Huia, Auckland 1450

ZL1TBC McIsaac, D. V. G., 11 Middlesex Road, Waterview, Auckland 1207

ZL1TBD Davies, R. G., 12 Staysail Place, Whitby, Wellington 6253

ZL1TBE Goode, R. J., 1/11 Lovelock Avenue, Mt. Eden, Auckland 1003

ZL1TBF Faulkner, R. J. (Mrs), 34 Raurenga Avenue, 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., 2/2 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., Newells Road, R.D. 3, Hamilton 2021

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

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, Otaika 0101

ZL1TBX Bott, A. D., 28 Calgary Street, Sandringham, Auckland 1003

ZL1TBY Seccombe, J. G., Oaklands Road, R.D. 1, Papakura 1733

ZL1TBZ Tatton, W. C., 7 Realm Place, Massey, Auckland 1208

ZL1TCB Chatterton, B., 6 Little Place, Hamilton 2001

ZL1TCC Topfer, K. K., 11 Edith Place, Hamilton 2001

ZL1TCE Nation, D. L., 3 Fox 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

ZL1TCI Grange, D. L., 29 Tane Road, Laingholm, Auckland 1207

ZL1TCJ Jackson, L. H., 55 Whytehead 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., Kahikatea Flats Road, R.D. 1, Kaukapakapa, Via Helensville 1453

ZL1TCN Herbert, E. R., 44 Wylie Street, Tauranga 3001

ZL1TCO Tapp, A. J., Mt. Tiger Road, Whangarei 0101

ZL1TCP Mattler, J. L., 25 Seddon Street, Te Kuiti 2500

ZL1TCQ Lewton, C. P., P.O. Box 2651, Auckland 1000

ZL1TCR Bell, K. G., 174 Carnoustie Drive, Wattle Downs, Manurewa, Auckland 1702

ZL1TCT Dennison, R. A., 29 Koromiko Street, New Lynn, Auckland 1207

ZL1TCU Legg, M. E., 35 Blackmore Drive, Rotorua 3201

ZL1TCV Frazerhurst, W. K., 12 Lolorna Drive, Bucklands Beach 1704

ZL1TCW Dancy, T. M., 35 McMillan Place, Howick, Auckland 1705

ZL1TCZ Turnwald, F. L., 29 Cliff View Drive, Green Bay, Auckland 1207

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	ZL1TGV	Holmes, B. S., Coast Road, R.D. 3, Waiuku 1852
ZL1TDE	Davis, W. L., 48 Chatsworth Crescent, Pakuranga, Auckland 1706	ZL1TGW	Watson, E. H. C., Eastbank Road, Thornton, R.D. 3, Whakatane 3400
ZL1TDF	Blair, D. J., 15 Tramway Road, Birkdale, Auckland 1310	ZL1TGX	McNamara, A. E., 32 Galileo Street, Ngaruawahia 2171
ZL1TDG	Morris, V., 116 Union Road, Howick, Auckland 1705	ZL1TGY	Frank, A., 13 Riley Place, Fitzroy, Hamilton 2001
ZL1TDH	Greenbrook, G. R., 17a Fraser Road, Devonport, Auckland 1309	ZL1TGZ	Purvis, A. W., 25 Mataura Road, Waihi 2991
ZL1TDI	Lee, C. P., 117 Chelsea View Drive, Birkenhead, Auckland 1310	ZL1THA	Sleeman, D. W. W., 6 Rosebank Terrace, Stoke, Nelson 7001
ZL1TDJ	Burton, R. D., 11 Henderson Valley Road, Henderson, Auckland 1208	ZL1THB	Phayer, C., 4 Korimako Place, Tokoroa 2392
ZL1TDK	Gotz, M. T., 14 Roosevelt Road, Rotorua 3201	ZL1THC	Buxton, R. J., 78 Maeroa Road, Hamilton 2001
ZL1TDL	Littin, A. C., R.D. 5, Wellsford 1493	ZL1THD	Turner, R. W., 17 Hetet Street, Te Kuiti 2500
ZL1TDM	Long, J. M., 137 Moore Street, Howick, Auckland 1705	ZL1THE	Fletcher, D. O., 24 Guy Road, Kaikohia 0400
ZL1TDP	Clough, S. D., 5 Kelly Street, Rotorua 3201	ZL1THG	Bevan, T. M., 3 Glendale Drive, Hamilton 2001
ZL1TDR	Harding, B. D., 5 Dallas Place, New Windsor, Auckland 1207	ZL1THJ	Paul, R. E., 8 Quebec Road, Milford, Auckland 1310
ZL1TDS	Wright, M. E., 16 Puckey Avenue, Kaitaia 0500	ZL1THK	Russell, J. A., 60 Orakei Road, Remuera, Auckland 1105
ZL1TDT	Westland, R. E. K., 18 Townhead Crescent, Tauranga 3001	ZL1THL	Piper, G. L., 16 Samuel Place, Hamilton 2001
ZL1TDV	Penwarden, E. C., 13 Kupe Place, Tokoroa 2392	ZL1THM	Kermode, W. R., 4 Harmony Avenue, Otahuhu, Auckland 1106
ZL1TDW	Bullough, E. G., 20 Coldham Crescent, Meadowbank, Auckland 1105	ZL1THN	Crozier, D. K., 154 Grey Street, Onehunga, Auckland 1106
ZL1TDX	Turnball, G. R. H., 159 Bucklands Beach Road, Bucklands Beach 1704	ZL1THO	McNeil, D. R., 33 Eivers Road, Whakatane 3400
ZL1TDY	Walker, H. E., 4 Hepper Street, New Lynn, Auckland 1207	ZL1THP	Martin, F. B., 223 Bellevue Road, Tauranga 3001
ZL1TDZ	Miller, C. J., 45 Bell Road, Remuera, Auckland 1105	ZL1THQ	Tunncliffe, G. O. L. J., 9 School Road, Ngongotaha 3202
ZL1TEK	Collins, P., 395 East Coast Road, Mairangi Bay, Auckland 1310	ZL1THR	Lawson, D. W., 906 Three Kings Road, Three Kings, Auckland 1004
ZL1TEM	Gulliver, F. J. (Mrs), 54 McLeod Road, Te Atatu South, Auckland 1208	ZL1THS	Rosborough, J. A., 3 Hinemoa Street, Waihi Beach 2990
ZL1TEP	Rankin, D. J., 3 Troy Place, Glendowie, Auckland 1105	ZL1THT	Smith, A. B., 58 Rodney Street, Hamilton 2001
ZL1TES	Bruce, K. W., 37 Japonica Avenue, Birkdale, Auckland 1310	ZL1THU	Cooke-Willis, S. O., 15 Madras Street, Khandallah, Wellington 6004
ZL1TFA	Schwarz, B. A., 6 Leeds Street, Hamilton 2001	ZL1THV	Crawford, H. K., 42 Forest Lake Road, Hamilton 2001
ZL1TFB	Cooper, S. W., 41a Kelvin Road, Papakura 1703	ZL1THW	Thwaites, I. G., 28 Golf Road, New Lynn, Auckland 1207
ZL1TFC	Godfrey, J. P., 15 Crompton Road, Massey, Auckland 1208	ZL1THY	Dennis, G. A., 20 Red Hill Road, Papakura 1703
ZL1TFD	Iversen, R. J., 1/3 Akehurst Avenue, New Lynn, Auckland 1207	ZL1THZ	Parkinson, C. R., 2/5 Paris Place, Birkenhead, Auckland 1310
ZL1TFF	Carter, P. R., 2 Harford Place, Pakuranga, Auckland 1706	ZL1TIA	Dingley, D. G., 2139 Great North Road, Avondale, Auckland 1207
ZL1TFF	Dreadon, A. H., 40 Woodward Street, Woodbourne 7354	ZL1TIE	Brewis, J., Mair Park, Caravan Park, Whangarei 0101
ZL1TFG	Ballantyne, D. L., Bush Road, Albany, Auckland 1310	ZL1TIF	Callaghan, P. J., P.O. Box 10-0735, North Shore Mail Centre, Auckland 1330
ZL1TFH	Swift, D. M., 42 Sherwood Road, Onerahi, Whangarei 0101	ZL1TIG	Palmer, L. H., 10 Puketapu Crescent, Taumarunui 2600
ZL1TFJ	Enser, F. J. C., 20 Brookfield Terrace, Otumoatai, Tauranga 3001	ZL1TII	O'Brien, K. M. J., 10 Murray Place, Lincoln 8152
ZL1TFL	Hawkes, R. G., 26 Penzance Road, Mairangi Bay, Auckland 1310	ZL1TIJ	Alley, W. J., 10 Kahotea Place, Motuoapa, P.O. Box 59, Turangi 3371
ZL1TFM	Sommerville, B. G., 44 Dickens Street, Grey Lynn, Auckland 1002	ZL1TIK	Mowry, L. E., 25 Warwick Place, Brookfield, Tauranga 3001
ZL1TFN	McCaughey, J. D., Te Wahapu Bay, Russell 0293	ZL1TIL	Clarke, W. D., 21 Fruitvale Road, New Lynn, Auckland 1207
ZL1TFO	Baine, C. J., Main Road, Broadwood 0553	ZL1TIM	Stead, J. E., 41 Norton Street, Kopuru 0356
ZL1TFP	Purdy, R. G., 41 John Davis Road, Mt Roskill, Auckland 1004	ZL1TIN	Taylor, K. L., 7 Poihae Street, Turangi 3371
ZL1TFQ	Portman, E. F., 6 New Brighton Road, Otahuhu, Auckland 1106	ZL1TIO	Bowers, S., 21 Hingaia Street, Turangi 3371
ZL1TFR	Taylor, A. I. H., 40 Ferndale Road, Mt. Wellington, Auckland 1106	ZL1TIP	Hickson, D. L., 41 Kururau Road, Taumarunui 2600
ZL1TFS	Fitzpatrick, H., Lake Rotoma, R.D. 4, Rotorua 3221	ZL1TIQ	Watson, J. R., 19 Tania Place, Blockhouse Bay, Auckland 1207
ZL1TFT	Thomson, L. F., 171 Bucklands Beach Road, Bucklands Beach, Auckland 1704	ZL1TIR	MacLardy, W. J., South Highway, Whitianga 2856
ZL1TFV	White, P. R., 51 Cobham Drive, Morrisville 2251	ZL1TIS	Wadham, D. R. A., 889 Whangaparaoa Road, Whangaparaoa 1463
ZL1TFW	Savage, J., 151 Valley Road, Henderson, Auckland 1208	ZL1TIU	Parker, D. W., 99 Balmoral Road, Mt. Eden, Auckland 1004
ZL1TFX	Rowe, R. A., 1 Summit Terrace, Hamilton 2001	ZL1TIW	Doherty, S., 4 Springside Place, New Lynn, Auckland 1207
ZL1TFY	Munyard, D. A., 40 Fitzwater Place, Henderson, Auckland 1208	ZL1TIX	Harris, K., Inlet Road, Kerikeri 0452
ZL1TFZ	Sexton, G. J., Paparimu, R.D. 3, Papakura 1733	ZL1TIZ	Gordon, M. B., 34 Pallant Street, Manurewa 1702
ZL1TGA	Haley, A. M. E., 30 Buckingham Crescent, Papatoetoe 1701	ZL1TJA	Powell, A. T., 152 Masters Avenue, Hamilton 2001
ZL1TGC	Henderson, V. N., 217 Glenfield Road, Glenfield, Auckland 1310	ZL1TJB	Watt-Wyness, S. C., 1 Wynsfield Garden, St. Heliers, Auckland 1105
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ZL1TGI	Collier, P. G., 1/358 York Place, Dunedin 9001	ZL1TJE	Richardson, W. A., 4 Redcrest Avenue, Papakura, Auckland 1703
ZL1TGT	Dick, G. W., 14 Ennis Avenue, Pakuranga 1706	ZL1TJF	Fraknovany, G. A., 10 Canberra Avenue, Lynfield, Auckland 1004
ZL1TGU	Caulfield, R. E., 58 Redhills Road, R.D. 1, Henderson 1231	ZL1TJG	French, T. G., 13 Bannerman Road, Auckland 1002
ZL1TGU	Burnand, T. T., 19 Sylvia Road, St. Heliers Bay, Auckland 1105	ZL1TJH	Gyde, G. N., c/- Police Station, Hamilton 2020
ZL1TGM	Nicholson, R. D., 49 Pilkington Road, Panmure, Auckland 1106	ZL1TJI	Batkin, D. B., Batkin Road, R.D. 4, Papakura 1733
ZL1TGN	Lindop, P. R., 24 Borrowdace Avenue, Howick, Auckland 1705	ZL1TJK	Munden, A. J., 24 Paracnui Road, Tokoroa 2392
ZL1TGO	Johnstone, C. K., Butchers Bridge Road, Waiuku 1852	ZL1TJL	Logue, J. F., No. 7 Braggs Avenue, Taumarunui 2600
ZL1TGP	Bielby, R. K., 4 Bennett Road, Pakuranga 1706	ZL1TJM	McPherson, G. J., 49 Heybridge Street, Manurewa 1702
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ZL1TMK Krause, R. E., 7 Gordon Street, Kawerau 3452
ZL1TMM Brooker, A. S., 290 Park Road, Te Awamutu 2400
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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
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ZL1TNF Ruediger, J., 153 Totara Drive, Hamilton 2001
ZL1TNG Cron, B. E., 71 Wellington Street, Hamilton 2001
ZL1TNI Belding, J. C., 20 Survile Place, Mairangi Bay,
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ZL1TNK Davis, A. G., 3 Fred Judd Crescent, Whakatane 3400

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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
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ZL1TOO Walker, R. M., 50 Raleigh Street, Cambridge 2351
ZL1TOP Foster, M., Lone Kauri Road, Karekare, R.D., Piha,
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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
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ZL1TOY McGilp, F. C., 6a Lilian Place, Pakuranga 1706
ZL1TOZ Kennedy, R. M., North Road, R.D. 1, Clevedon 1751
ZL1TPB Brooks, R. K., 391 Ellerslie-Panmure Highway, Panmure,
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ZL1TPC Gutschlag, B. P., 2/143a Manuka Road, Glenfield,
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ZL1TPD Downs, G. M., 6 Glen Road, Henderson, Auckland 1208
ZL1TPE McEwen, D. J., 9 Roby Street, Te Atatu North,
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ZL1TPF Humphrey, J. M., 115 17th Avenue, Tauranga 3001
ZL1TPG van Loon, Q. J. M., 30 Sturges Road, Henderson,
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ZL1TPI Smirk, A. T., 10 Masons Avenue, Herne Bay, Auckland 1002
ZL1TPJ Walker, B. J., Crane Road, R.D. 1, Kamo 0131
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 ZL1TPP
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, Pakuranga 1703
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ZL1TQK Earl, S. C., 156 Taupo Road, Taumarunui 2651
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ZL1TQP Christensen, C. M., 82 Donald Road, Kaitaia 0500
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- ZL1TRD** Tyson, T. W., Hikamutu, Taumarunui 2600
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 ZL1UKM George, S. J., 43 Santiago Crescent, Sunnynook, Auckland 1310
 ZL1UKN Massey, B. G., 4 Bournemouth Avenue, St Lukes, Auckland 1003
 ZL1UKO Ngakuru, D., 31 Wihongi Street, Kalkohe 0400
 ZL1UKP McCafferty, W. M., 52 Woodside Avenue, Northcote, Auckland 1309
 ZL1UKQ List, D. A., 90 Tallyho Street, Rotorua 3201
 ZL1UKR Saint Kentigern College, Pakuranga 1730
 ZL1UKS Cotile, K. J., 4 Truro Road, Cambourne, Wellington 6251
 ZL1UKT Dancy, N. K., 35 McMillan Place, Howick 1705
 ZL1UKU Ashton, N. J., 7 Cunlife Place, Glenfield, Auckland 1310
 ZL1UKV Watson, D. G., 203 Henderson Valley Road, Henderson, Auckland 1208
 ZL1UKX Hobson, J., 20 Hobsonville Road, Auckland 1208
 ZL1UKY Westany, R. B. C., 458a Don Bucks Road, Massey, Auckland 1208
 ZL1ULB Salt, 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 Griffin, D. G., 12 Valley Road, Pukekohe 1800
 ZL1ULM Heap, C. E., 11 View Mount, Stoke, Nelson 7001
 ZL1ULN Goode, D. B., 40 Riverpark Crescent, Henderson, Auckland 1208
 ZL1ULO Wykes, P. B., 61 Houchens Road, Hamilton 2001
 ZL1ULS Duncan, R., 173 Taharepa Road, Taupo 3300
 ZL1ULT Olliff, G. M., 5 Corlinka Place, Takanini, 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
 ZL1UMB Manning, G. S., 12 Annison Avenue, Titirangi 1207
 ZL1UMC Twentyman, I. R., 3 Ayr Road, Pakuranga, Auckland 1706
 ZL1UMD Pope, K. B., George Crescent, Buckland, R.D. 2, Pukekohe 1800
 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 Winfield, C. S., 7 Kaka Crescent, Tokoroa 2392
 ZL1UML Harland, W. R., 9 Romilly Court, Papakura 1703
 ZL1UMN Barnett, E. W., "Pokuru", R.D. 5, Te Awamutu 2400
 ZL1UMO Hemsworth, K., 6 Freyberg Place, Howick 1705
 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., Coulstons Road, R.D. 2, Pukekohe 1800
 ZL1UNJ Swales, J. R., 22 Summermist Drive, Northpark, Howick 1705
 ZL1UNM Mantell, W. R., P.O. Box 53-093, Auckland Airport 1030
 ZL1UNN Shaw, A. J., 1288 Papamoa Beach Road, Papamoa 3070
 ZL1UNQ Evans, S. B., Gleeson Road, R.D. 3, Waiuku 1852
 ZL1UNR Savage, B. J., 8c Fairleigh Avenue, Mt Albert, Auckland 1004
 ZL1UNS Bell, K., 7 June Place, Torbay, Auckland 1310

ZL1UNT Matthews, J. H., 33 Manapouri 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., Purerau, R.D. 1, Kerikeri 0452
 ZL1UNX Horn, D. G., Tautiti Road, R.D. 3, Te Aroha 2971
 ZL1UNY Hill, M. M., Church Road, R.D. 2, Kaitaia 0500
 ZL1UOB West, B. D., 67 Woodlands Road, Opotiki 3472
 ZL1UOC Cotton, S. A., P.O. Box 59-078, Mangere Bridge, Auckland 1730
 ZL1UOD Furby, N., Whakamaru NZED Village, Mangakino 2391
 ZL1UOF Hanley, B. D. C., R.D. 1, Takapau 4174
 ZL1UOG Martens, J., R.D. 1, Mangonui 0557
 ZL1UOH Ewen, D. T., 113 Main Road, Waipu 0254
 ZL1UOJ Blaize, C. T., Ryans Road, R.D. 5, Wellsford, Auckland 1493
 ZL1UOK Oldenburg, B., 46a Mains Avenue, Whangarei 0101
 ZL1UOM Jane, M. I., 27 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
 ZL1OUU Tottenham, R. D., 13a Andrew Road, Howick, Auckland 1705
 ZL1OUV Baine, M. J., Main Road, Broadwood 0553
 ZL1UOW Wells, E. L., P.O. Box 135, Matata, Rotorua 3200
 ZL1UOZ Gates, N. L., 542 Whangaparaoa Road, Whangaparaoa 1463
 ZL1UPA Schutz, W., 87a Hikutaia Road, Opotiki, P.O. Box 386, Opotiki 3472
 ZL1UPD Grayson, A. W., 56 Kemp Road, Kerikeri 0452
 ZL1UPF McKee, R. R., 9 Wattie Street, New Lynn, Auckland 1207
 ZL1UPG Hopkins, D. B. J., R.D. 1, Old Taupo Road, Putaruru 2371
 ZL1UPH Roberts, J. B., 79 Nelson Street, Opotiki 3472
 ZL1UPI Gee, J. B., see ZL5UPI
 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., 26a Liverpool Street, 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 Kiltiyhawk 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, Kaitaia 0500
 ZL1UQE Collis, M. V., Park Road, R.D. 3, Waiuku 1852
 ZL1UQG Byrnard, S. J., 5 Te Anau Place, Tikipunga, Whangarei 0101
 ZL1UQH Martens, W., R.D. 1, Mangonui 0557
 ZL1UQI Taylor, R. J., 29 Kitchener Street, Kaitaia 0500
 ZL1UQJ Reinhard (Snr), P. A., Mangataraire, R.D. 2, Mangonui 0557
 ZL1UQL Carson, A. R., 5c Mai Street, Whangarei 0101
 ZL1UQN Mead, P. G., 199a Don Bucks Road, Massey, Auckland 1208
 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., c/- Tapu PDC, Thames Coast 2821
 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, Nawton, 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., B2 Victoria Avenue, Whakatane 3400
ZL1URT	Kane, L. D. A., 54 Grey Street, Kawerau 3452
ZL1URU	Coppell, 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
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	Smith, M. S., 38 Hamilton Road, Herne Bay, Auckland 1002
ZL1USE	Sopp, T. G., Cable Bay Block Road, R.D. 3, Kaitaia 0500
ZL1USF	Blackbourn, 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., 52b Kouto Road, Rotorua 3201
ZL1USO	Hepple, R. A., P.O. Box 56-323, Mt Eden, Auckland 1030
ZL1USY	Taylor, D. K., 5 Ellerslie Park Road, Ellerslie, Auckland 1105
ZL1UTE	Neill, T. J., 10 Peter Buck Road, Avondale, Auckland 1207
ZL1UTP	Williams, L. K., Old Railway Road, Kumeu 1454
ZL1UUB	Reid, D. T. M., 24 McDougall Street, Manurewa 1702
ZL1UUJ	Bonnington, L. M., 6 Woodland Avenue, Snells Beach, Auckland 1490
ZL1UUK	Ramsey-Turner, R., P.O. Box 50, Waimauku, Auckland 1455
ZL1UUQ	James, A. B. (Mrs), 12 McHardy Place, Glenfield, Auckland 1310
ZL1UUR	Hughes, S. D. P., 256 Glamorgan Drive, Torbay, Auckland 1310
ZL1UVC	Green, G. A., c/- Joseph, Okura Road, R.D. 2, Albany, Auckland 1331
ZL1UVU	MacLeod, A. J., 38 Hamilton Road, Herne Bay, Auckland 1002
ZL1UWF	Horn, S. M. (Mrs), 1/2 Short Street, Papakura 1703
ZL1UWK	Willridge, D. W., 19 Hatherlow Crescent, Glenfield, Auckland 1310
ZL1UWW	Trommel, C. C., P.O. Box 95-074, Swanson, Auckland 1230
ZL1UWV	Cardy, J., 28 City View Terrace, Birkenhead, Auckland 1310
ZL1UXA	Lamberton, J. J., 97 Lynn Road, Glenfield, Auckland 1310
ZL1UXB	Norman, D. H., 63 Clonbern Road, Remuera, Auckland 1105
ZL1UXQ	Walsh, J. C., 84 Paraonui Road, Tokoroa 2392
ZL1UYC	Bell, C. G., 21 Leila Place, Manukau, South Auckland 1701
ZL1UYX	Bycroft, P. E., 14a Cranswick Crescent, Matamata 2271
ZL1UZA	McLaren, G. C., 1 Rosier Road, Glen Eden, Auckland 1207
ZL1VAA	Holroyd, A. M., 60 Raumanga Heights Drive, Whangarei 0101
ZL1VAB	Manning, E., P.O. Box 11, Awanaui 0552
ZL1VAC	Hallmond, W. H., 24 Charlotte Street, Dargaville 0300
ZL1VAD	Graham, H. J. M. (Ms), 82 Donald Road, Kaitaia 0500
ZL1VAE	Trayes, A. J. (Mrs), P.O. Box 50, Ahipara, Northland 0551
ZL1VAF	Biddick, P., P.O. Box 195, Mangonui 0557
ZL1VAJ	Nicholson, J. H., 54 Donald Road, Kaitaia 0500
ZL1VAU	Donaldson, P. L. J., 46a Domain Road, Whakatane 3400
ZL1VAV	Kendall, R. F. (Mrs), 171 Bridge Street, Opotiki 3472
ZL1VAW	Wakefield, I. C., Wakefields, 95 The Strand, Whakatane 3400
ZL1VAX	Doney, T. A., P.O. Box 87, Edgecumbe 3451
ZL1VAY	Kendall, R. D., 171 Bridge Street, Opotiki 3472
ZL1VAZ	Treasure, P. G., 26 Kirk Street, Whakatane 3400
ZL1VBA	Short, D. R., 121b Pillans Road, Tauranga 3001
ZL1VBB	Borland, R., 20 Weka Street, Whakatane 3400
ZL1VBC	Squires, J. E., 77 Harbour Road, Ohope 3454
ZL1VBD	Squires, W. J., 77 Harbour Road, Ohope 3454
ZL1VBF	Gedye, D., P.O. Box 4188, Mt Maunganui South 3030
ZL1VBJ	Scott, A. J., 25 Tuthill Street, Tauranga 3001
ZL1VBK	Clare, A. B., Goodall Road, R.D. 6, Tauranga 3021
ZL1VBL	McKain, C. A., 8 Exeter Street, Mt Maunganui 3002
ZL1VBM	Faulkner, G. R., 59 6th Avenue, Tauranga 3001
ZL1VBN	Allen, D. G., 112 Windermere Drive, Tauranga 3001
ZL1VBR	Gates, L. J., 30 Hobson Street, Kawerau 3452
ZL1VBS	Osborne, M. J., 34 Cobham Drive, Kawerau 3452
ZL1VBU	Sheather, P., 25 Louvain Street, Whakatane 3400
ZL1VBV	Edwards, C. I., 36 Pouwhare Street, Whakatane 3400
ZL1VBW	Liddle, Y. D. M. (Mrs), 3 Hinemotu Avenue, Kawerau 3452
ZL1VCB	Hoete, N. C., P.O. Box 290, Kawerau 3452
ZL1VCI	Simpson, I. G., 18 Te Aria Place, Rotorua 3201
ZL1VCL	Rogers, I. T., 3 Parkdale Crescent, Kaitaia 0500
ZL1VCO	Leslie, O., 3 Parkdale Crescent, Kaitaia 0500

SHIFTING HOUSE?

REMEMBER TO ADVISE THE FOLLOWING

AMATEUR LICENCE

Inform the Radio Inspector at your nearest
New Zealand Radio Frequency Service Office (see page 85)

BREAK-IN DELIVERY

Advise the General Secretary, NZART HQ
P.O. Box 40-525, UPPER HUTT
of your new address.

Mention your Callsign and Membership Number.

This advice will be forwarded to the Call Book Callsign Compiler who will amend your Call Book listing.

ZL2 Callsigns

ZL2AA	Gisborne Branch NZART (Inc), see Branch Directory	ZL2CW	Gilbert, G. B., 18 Edgecombe Street, Newlands, Wellington 6004
ZL2AC	Turnbull, P., 6 Steele Road, Hamilton 2001	ZL2CX	Stening, P. D., 6a Marsden Road, Stoke, Nelson 7001
ZL2AD	Conroy, T. R., 2 Elzy Street, Blenheim 7301	ZL2CY	Francois, L. G., 21a Avon Place, Richmond, Nelson 7002
ZL2AE	Lancaster, A. B., 47 Frank Wilson Terrace, New Plymouth 4601	ZL2CZ	Clibborn, G. H., 30 Kent Terrace, Taradale, Napier 4001
ZL2AF	Wilkinson, J., 30 Lancaster Street, Levin 5500	ZL2DA	Appleton, D., 107 Chaucer Road North, Napier 4001
ZL2AG	Bruce, J. R., c/- J. C. Bruce, No. 1 R.D., Taihape 5163	ZL2DB	Brown, A. D., 154 Barnard Street, Wellington 6001
ZL2AH	Reed, W. St. J., 11 Wood Street, Upper Hutt 6401	ZL2DC	Chisholm, W. P., 86 Featherston Street, Palmerston North 5301
ZL2AI	1st Kelburn 1909 Scout Group Radio Club, (Trustee T.R. Millar), 39 Ngao Road, Kelburn, Wellington 6005	ZL2DD	Scott, D. F., 68 Chatsworth Road, Silverstream 6402
ZL2AJ	Parminter, H. V., 121 The Ridgeway, Wellington 6002	ZL2DE	Davies, G. S. F., 25 Marne Street, Palmerston North 5301
ZL2AK	Rowson, L. T., 141 Tukapa Street, Westown, New Plymouth 4601	ZL2DF	Fraser, D. L., 9 Bentinck Street, Upper Hutt 6401
ZL2AL	Jennings, L. F., 203 Beresford Street, Hastings 4201	ZL2DG	Bayley, G. S., 902 Churchill Street, Hastings 4201
ZL2AM	Shirley, J. R., "Burnside", P.O. Box 19, Bay View, Napier 4151	ZL2DH	Wolsh, J. W., 7/56 Golf Road, Tahunaui, Nelson 7001
ZL2AN	Shepherd, E. R., Waimarama Beach, P.O. Box 8333, Havelock North 4231	ZL2DI	Shortt, J. H., 80 Savage Crescent, Palmerston North 5301
ZL2AO	Finlay, E. M., Resident 8, Makara Radio, Wellington 6005	ZL2DK	Keenan, D. S. J., 13 Ruru Crescent, Heretaunga Park, Silverstream 6402
ZL2AP	Eade, A., 137 Winchester Street, Levin 5500	ZL2DL	MacDonald, J. L., 32 Grey Street, Marton 5151
ZL2AQ	Gables, J. F., 83 Seaview Road, Paraparaumu Beach 6153	ZL2DM	Christian, T. C., 41 Te Whiti Street, Kilbirnie, Wellington 6003
ZL2AR	Central Hawkes Bay Branch NZART (Inc), see Branch Directory	ZL2DN	Lucas, D. C., 38 Maitland Avenue, Stoke, Nelson 7001
ZL2AS	Stevens, P. S., 913 Victoria Street, Hastings 4201	ZL2DO	Wiffen, M. A., 138 Beach Road, Haumoana 4250
ZL2AT	Beale, E. W., 301 Frimley Avenue, Hastings 4201	ZL2DP	Budd, G. L., 59 The Drive, Tawa, Wellington 6203
ZL2AU	Wilson, W. C., 21 London Road, Korokoro, Lower Hutt 6303	ZL2DQ	Spring-Rice, B. N., Banksia Place, R.D. 4, Rotorua 3201
ZL2AV	Paterson, P. A., 15 Marriner Street, Palmerston North 5301	ZL2DR	Danrell, Reg A., 43/45 Matai Street, Waikanae 6154
ZL2AW	Bonnington, R. L., Cable Bay R.D. 1, Nelson 7021	ZL2DS	Horowhenua Branch NZART (Inc), see Branch Directory
ZL2AY	McComb, D. R., 26 Montrose Drive, Atawhai, Nelson 7001	ZL2DT	Cordy, J. G. G., 50 Strathmore Avenue, Wellington 6003
ZL2AZ	Clarkson, T. R., 35 Walter Road, Lowry Bay, Eastbourne 6304	ZL2DU	Millane, M. L., 132 Campbell Street, Karori, Wellington 6005
ZL2BA	Grantham, T. C., 22 Boltons Road, Masterton 5901	ZL2DV	Campbell, B. E., 60b Kings Road, Panmure, Auckland 1106
ZL2BB	Bradshaw, F. R., 40 Simla Avenue, Havelock North 4201	ZL2DW	Hughes, W. J. T., 1/28 Aberdeen Road, Gisborne 3801
ZL2BC	Gentry, K. R., 8 Chudleigh Grove, Churton Park, Wellington 6004	ZL2DX	Patchett, G. P., 223 Sutherland Road, Lyall Bay, Wellington 6003
ZL2BD	Brown, G. E., 35 Chamberlain Street, Nelson 7001	ZL2DY	Parsons, A. D., 30 John Street, Upper Hutt 6401
ZL2BE	Woollard, C. J., 16 Caernarvon Drive, Flaxmere, Hastings 4201	ZL2DZ	Brasell, C. R., "Klondyke", P.O. Box 24, Coalgate, Canterbury 8117
ZL2BF	Wyse, A. J., P.O. Box 9288, Wellington 6031	ZL2FA	Butler, G. B., 46 Winter Street, Gisborne 3801
ZL2BG	Williams, P. G., Mangakuri, R.D. 14, Havelock North 4231	ZL2FB	Matthews, S. C., 36 Peters Avenue, Palmerston North 5301
ZL2BH	McGregor, I. J., 20 Davis Crescent, Upper Hutt 6401	ZL2FC	Coutts, C. G., 35 Daniel Street, Masterton 5901
ZL2BJ	Gibson, G. A., 14 Seddon Street, Aramoaho, Wanganui 5001	ZL2FD	Butel, D., 39 Mulberry Street, Lower Hutt 6301
ZL2BK	Simpson, G. R., 8a Faulkland Drive, Blenheim 7301	ZL2FE	Falkner, B. A., 49 Kanina Terrace, Palmerston North 5301
ZL2BL	Beswick, D. J., 283 Happy Valley Road, Wellington 6002	ZL2FG	Torrie, A. W., 114 Blue Pacific Parade, Riversdale Beach 5970
ZL2BM	Nankivell, F. R., 133 Main Road, Bay View, Napier 4001	ZL2FH	Garth, P. E., Glenroa Station, R.D. 2, Otoko, Gisborne 3871
ZL2BN	Tatton, L. A., 89 Firstview Avenue, Beachlands, Auckland 1705	ZL2FI	Gaunt, P. J., 28 Balliol Drive, Tawa, Wellington 6203
ZL2BO	Simpson, W. N., 6 Krammer Street, Motueka 7161	ZL2FJ	Withy, D. G., 16 Kenmore Street, Newlands, Wellington 6004
ZL2BP	Walker, J. G., 106 Salisbury Road, Richmond, Nelson 7002	ZL2FK	Huggins, W. P., Te Karaka Rest Home, 60 Weka Street, Miramar, Wellington 6003
ZL2BQ	Mitchell, A. W., 3 Townsend Road, Miramar, Wellington 6003	ZL2FL	Kuring, K. C., 60b Eatwell Avenue, Paraparaumu Beach 6153
ZL2BR	Hunt, A. F., 4 Manu Crescent, New Plymouth 4601	ZL2FM	Burr, E. J., 87 Stanley Road, Gisborne 3801
ZL2BS	Ward, T. W., P.O. Box 4127, New Plymouth 4600	ZL2FP	George, S. B., 6 Seymour Street, Waitara 4656
ZL2BU	Lane, F. J. K., 178a 11th Avenue, Tauranga 3001	ZL2FQ	Burgoyne, T. A., 3 Shakespear Walk, Nelson 2001
ZL2BV	Tozer, B. R., 15 Manly Park Avenue, Whangaparaoa 1463	ZL2FR	Dyett, N. D., 71 Coutts Street, Wellington 6003
ZL2BW	Harling, D. S., 142 Quebec Road, Nelson 7001	ZL2FS	Priest, J. R., 26 Woolcombe Terrace, New Plymouth 4601
ZL2BX	Creswell, A. F., 17 Atiawa Street, Petone 6303	ZL2FT	Dixon, C. W., 76 Lahore Street, Waroa 4192
ZL2BY	Berry, R. E., 29 Benares Street, Khandallah, Wellington 6004	ZL2FU	Hird, E. J., 61 Mantell Street, Seatoun, Wellington 6003
ZL2BZ	Dunn, A. E., 31 York Street, Levin 5500	ZL2FV	Richter, B. E., 50 Burns Avenue, Palmerston North 5301
ZL2CA	Vennall, R. B., 90 Campbell Street, Karori, Wellington 6005	ZL2FW	Harbridge, L. W., 20 Mascot Street, Tawa 6203
ZL2CB	Bartlett, J. R., 18 Lynda Avenue, Paparangi, Wellington 6004	ZL2FX	Wright, R. J., Flat 34 181#183 Daniell Street, Newtown, Wellington 6002
ZL2CC	Rowe, C. F., 28 Clyma Street, Upper Hutt 6401	ZL2FY	Harkett, R. J., 41 Chesterton Street, Johnsonville, Wellington 6004
ZL2CD	Hamer, W. R., 187 Seaton Heights Road, Miramar, Wellington 6003	ZL2FZ	Reeve, R. P., 129 South Road, Masterton 5901
ZL2CE	Bicknell, J. A., Papawai Road, Greyltown 5953	ZL2GA	Johnson, D. F. T., 15 Field Street, Upper Hutt 6401
ZL2CF	Hodges, W., 317 Suffolk Road, Stoke, Nelson 7001	ZL2GB	Little, A. J., 7 Earl Street, Levin 5500
ZL2CG	Cornick, M. L., 23 Oakley Avenue, Marton 5151	ZL2GC	Ruane, M., 27 Norton Park Avenue, Fairfield, Lower Hutt 6301
ZL2CH	McGrath, F. P., 4 Cautley Street, Richmond, Nelson 7002	ZL2GD	Beeby, R. E., 1 Pukalea Street, Eastbourne 6304
ZL2CI	Sinton, A. J., 6 Chester Street, Greenmeadows, Napier 4001	ZL2GF	Cooper, C., 275 Muritai Road, Eastbourne, Wellington 6304
ZL2CJ	Hitchcock, R. F., 5 McArthur Street, Palmerston North 5301	ZL2GG	Smith, W. T., 17 Oxford Street, Palmerston North 5301
ZL2CK	Fleming, J. C., 9 Park Lane, Waitara 4656	ZL2GH	Attewell, B. E., 19 Iranui Road, Gisborne 3801
ZL2CL	Guest, R., 15 Webber Street, Paraparaumu Beach 6153	ZL2GI	Banks, K. G., 29 Taunton Place, Stoke, Nelson 7001
ZL2CM	Hastings, F. W., 114 Waterloo Road, Lower Hutt 6301	ZL2GJ	Pearce, R. A., 17 Lake Ferry Road, R.D. 2, Featherston 5952
ZL2CN	Grover, W. E., 57 Buller Street, New Plymouth 4601	ZL2GK	Motueka Branch NZART, see Branch Directory
ZL2CO	Neumer, G., 48 Ava Street, Petone 6303	ZL2GL	Dormer, F. G., 18 Marquet Place, Tairua via Thames 2853
ZL2CP	Cormack, J. B. B., 63 Queenwood Road, Levin 5500	ZL2GN	Reakes, G. C., 5 Paisley Street, Levin 5500
ZL2CQ	Henderson, J. M., Howie Road, Fern Flats, R.D. 2, Marton 5151	ZL2GO	Fownes, H. G., 71 Rimu Road, Paraparaumu 6152
ZL2CR	Miller, N., 36 Stanley Street, Berhampore, Wellington 6002	ZL2GP	Ru Bay, J., 100 Gillespies Line, Palmerston North 5301
ZL2CS	Anderson, B. R. S., 13 Pembroke Road, Stratford 4700	ZL2GR	Stiles, G. R., 376b Hardy Street, Nelson 7001
ZL2CT	Evans, B., South Featherston Road, R.D. 1, Featherston 5952	ZL2GS	Henry, A. S., 2c Crescent Street, Richmond 7002
ZL2CU	Bell, C., 22 Oswald Street, Gisborne 3801	ZL2GT	Napier Amatuer Radio Club Contest Group, (Trustee ZL2AHC), c/- Stan White, 20 Henley Crescent, Napier 4001
ZL2CV	Fulton, J. M. L. H., 60 Shelbourne Street, Nelson 7001	ZL2GU	Hanley, R. H., 15 Pirie Street, Palmerston North 5301
		ZL2GV	Hutton, J. D., 118 Aberdeen Drive, Hamilton 2001
		ZL2GW	Bealson, A. P., Orinoco, R.D. 1, Motueka 7161
		ZL2GX	White, J. M., 152 Lytton Road, Gisborne 3801

- ZL2GY Taillie, L. I., Old Post House, Te Kemara Avenue, Paihia 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, R.D. 1, Claris, 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 Ferguson 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 Cossgrove, 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 Roilo, 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 Crumpton, R. E., 27 Kapiti Crescent, Titahi Bay 6202
 ZL2IO Collins, E. S., Main Road, Wakapuaka, R.D. 1, Nelson 7021
 ZL2IP Treeby, R. J., 7 Turehu Street, New Plymouth 4601
 ZL2IR Cuttriss, N. A., 40 Redvers Drive, Belmont, Lower Hutt 6301
 ZL2IS Were, G., 180 Regan Street, Stratford 4700
 ZL2IT Lilley, E. C. C., 1b Harvey Road, Napier 4001
 ZL2IU Purdey, R. G., 7 Burmuda Grove, Paraparaumu 6152
 ZL2IV Gorman, D. D., 15 Lawson Place, Mt Victoria, Wellington 6001
 ZL2IW Carter, R. S., 16 Bomford Street, Blenheim 7301
 ZL2IX Parker, C. H., Tiraumea Road, Pahiaiaua 5471
 ZL2IY Gorman, W. D., 11 David Crescent, Karori, Wellington 6005
 ZL2IZ Bartleet, 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 Monson, 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., 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., 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., see overseas members
 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., 2 Arnott 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 Casoy, B. F., 45 Ames Street, Paekakariki 6151
 ZL2KK Kerr, R. F., 78 Southgate Road, Wellington 6002
 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
 ZL2KL Donald, R. J., 9 Timandra Street, New Plymouth 4601
 ZL2KV Martin, C. J. T., Mountain Road, Inglewood 4651
 ZL2KW Betteridge, O., 8 Chambers Street, Napier 4001
 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 Tarnadyce 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., 2 Kereru Place, 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
 ZL2LF 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 Blomfield Place, Motueka 7161
 ZL2LO Kerr, C. M., 99 Mt View Road, Wanganui 5001
 ZL2LQ Coote, D., 19 Corlett Road, Plimmerton 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 Montomerie, 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
 ZL2MF French, M. J., 10 Gurney Road, Belmont, Lower Hutt 6301
 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., 1Ba 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 Kapuanui 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 Railton, G. H., 85a Pleasant Road, Glen Eden, Auckland 1208
 ZL2MU Jupp, A. L., 1322 Devon Road, 42 R.D., 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 Shaw, A. J., 6 Whakarire Avenue, Westshore, Napier 4001
 ZL2NF Frazer, G. C., 14 Hinton Road, Napier 4001
 ZL2NG Aked, M. S., 10 Vaughton Avenue, Paraparaumu Beach 6153
 ZL2NH Bayly, R. B., Wairui 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

ZL2NM Stewart, H. A. S., 41 Tautahanga Road, Turangi 3371
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., Otuhi Road, R.D. 9, Whangarei 0121
ZL2NZ Milner, G. L. (Mrs), 38 Lincoln Avenue, Tawa, Wellington 6203
ZL2OA Wairarapa Branch NZART (Inc.), see Branch Directory
ZL2OB Pye-Smith, J., 98 Waimea Road, Nelson 7001
ZL2OC Lambie, W. L., 12 Foster Street, Avalon 6301
ZL2OE Logan, D. J., 42 Horokiri Road West, Newlands, Wellington 6004
ZL2OF Pentelow, L. C., Kina Road, No 1 R.D., Opunake 4653
ZL2OG Chishall, 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. R., 112 Oak Street, Gisborne 3801
ZL2ON Symons, R. T., 3/55 Church Road, Taradale, Napier 4001
ZL2OO Smith, A. H., Rangiota-Rongotea Road, R.D. 7, Palmerston North 5321

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 Leete, 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
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., Omaio Village, P.O. Box 2045, Stoke, Nelson 7030

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
ZL2PX Taylor, M. F. W., "Parklands", R.D. 1, Martinborough, Wairarapa 5954

ZL2PY Heslop, H. G., 6 Leicesfer 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
ZL2QF Patea Branch NZART (Inc.), see Branch Directory
ZL2QG Brunton, W.R., 98 Hospital Road, Blenheim 7301
ZL2QJ Lane, L. A., 41 Punga Street, Tangimoana 5450
ZL2QK Kenny, E. J., 5 Townley Street, Gisborne 3801
ZL2QM Burry, J. P. P., 9 and 13 Corry Avenue, 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 Ngarimu 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

ZL2RK Dallas, S., 96 Te Anau Road, Wellington 6003
ZL2RL Berg, B. L., 3 Waikare Avenue, Lower Hutt 6301

ZL2RM

ZL2RN Collecutt, G. P., 60 Hawera Road, Kohimarama, Auckland 1105
ZL2RO Royal Naval Amateur Radio Society (NZ Branch), (Trustee: ZL2TX), 55 Kakariki Grove, Waikanae 6154
ZL2RQ Ashford, J. W., c/- Omaio Village, P.O. Box 2045, Stoke 7030
ZL2RR Small, J., 3 Bristol Street, Upper Hutt 6402
ZL2RS Stewart, B. E., 1 Caversham Road, Mosston, Wanganui 5001
ZL2RT Coote, S. R., 1 Newman Drive, Nelson 7001
ZL2RU Jackson, H. R., Takarei Terrace, Mokau 4650
ZL2RV Rowe, I. S., 88 Washington Avenue, Brooklyn, Wellington 6002
ZL2RY Wells, R. E., Tawhara Station, Wairoa 4192
ZL2RZ Baker, P. N., 12 Shackleton Lane, Whitby, Wellington 6253
ZL2SA Wall, A. M., Homewood Road, R.D. 12, Masterton 5921
ZL2SB Harner, B., 5 Harewood Grove, Fendalton Park, Upper Hutt 6401
ZL2SD Petherick, E. R., 23 Anaru Street, Raumati Beach 6150
ZL2SE White, R. L., 74 Norbiton Road, Foxton 5551
ZL2SF Armstrong, G. C., 20 Mohaka Street, Wainuiomata 6305
ZL2SH Lewis, A. W., 18 Finlay Terrace, Mt. Cook, Wellington 6002
ZL2SJ Beale, A. L., 14 Te Oti Street, Paraparaumu Beach 6153
ZL2SK Norden, A. P., 2/16 Arcadia Road, Epsom, Auckland 1003
ZL2SM Adamson, D. P., Old Kipps Road, R.D. 10, Palmerston North 5321
ZL2SN Smart, L. E., 48 Leslie Street, Waltara 4656
ZL2SO Black, R. B., Omaha Road, R.D. 5, Hastings 4221
ZL2SP McDonell, D., 124 Cook Street, Palmerston North 5301
ZL2SQ Pahiatua Branch NZART (Inc.), see Branch Directory
ZL2SR McQuillan, H., Tasman R.D. 1, Upper Moutere 7152
ZL2SS Carran, S. R., 39 Te Aroha Street, Claudelands, Hamilton 2001
ZL2ST Wallace, G. J., c/- 70 Warwick Street, Wellington 6005
ZL2SU Rolfe, D., 12 Haydon Street, Palmerston North 5301
ZL2SW Harris, J. R., 148 Condell Avenue, Christchurch 8005
ZL2SX Wedderspoon, W., 4 Cardall Street, Newtown, Wellington 6003
ZL2SY Andrews, D. V., 66 Khandallah Road, Wellington 6004
ZL2SZ Hartwell, L. W., 41 Kells Avenue, Wanganui 5001
ZL2TA Pye, E. G. (Mrs), 33 Wyndham Road, Pinehaven, Upper Hutt 6402
ZL2TB McNearnie, K. B., 8 Dunk Place, Palmerston North 5301
ZL2TC Linney, E., 6 Bailey Grove, Trentham 6401
ZL2TF Dale, K. W., 4 Foyle Street, Wellington 6002
ZL2TG McKelvie, H. J. M., 32 Fitzroy Street, Napier 4001
ZL2TH Parker, B. W., 9 Edelweiss Grove, Upper Hutt 6401
ZL2TI Weenink, H., 16 Mahoe Street, Lower Hutt 6301
ZL2TJ Conner, D. P., 40 Marewa Road, Hataitai, Wellington 6003
ZL2TK Torley, J. D., 83 The Esplanade, Westshore, Napier 4001
ZL2TL Garing, T. R., 17 Cotswold Crescent, Newlands, Wellington 6004
ZL2TM Wright, H. A. L., 130 Pukepapa Road, Marton 5151
ZL2TN Edwards, F. R., 4 Lewis Street, Gisborne 3801
ZL2TO Brighting, T. L., 18 Ashford Avenue, Palmerston North 5301
ZL2TP Waitara Branch NZART, see Branch Directory
ZL2TQ Pascoe, E. J., 22 Centennial Crescent, Gisborne 3801
ZL2TR Jensen, R. T., 33 Iona Road, Havelock North 4201
ZL2TS Dallimore, S. C., 26 Marybank Road, Atawhai, Nelson 7030
ZL2TT Nixon, H. W. J., 19 Bay Drive, Titahi Bay, Wellington 6202
ZL2TU Wills, R. E., 23 Lyndfield Lane, Newlands, Wellington 6003
ZL2TV Adin, B. E., 18 Duke Street, Levin 5500
ZL2TW Boyer, J. P., 32 Beachville Crescent, Nelson 7001
ZL2TX McCutcheon, O. D. F., c/- 13 Moeller Street, Taradale 4001
ZL2UB Hardy, N. A. T., 55 Kakariki Grove, Waikanae 6154
ZL2UC Lowe, J. M., 23 Te Whiti Road, Krokoro, Petone 6303
ZL2UD Saunderson, R. W., 26 Waiho Terrace, Porirua 6201
ZL2UF Rodda, P. J., 11 Avion Terrace, Paraparaumu Beach 6153
ZL2UH Arthur, D. B., 51 Maraetai Heights Road, Maraetai 1705
ZL2UI Leslie, D. A., 3 Carter Street, Belmont, Lower Hutt 6301
ZL2UJ Bailey, I. L., 42 Catlins Crescent, Palmerston North 5301
ZL2UK Sadgrove, P. C., 7 McKenzie Street, Witherlea, Blenheim 7301
ZL2UL Hulls, C. H., 11 Margaret Street, Levin 5500
ZL2UN Lyford, A. W., 8 Roto Street, Tahunanui, Nelson 7001
ZL2UQ Robinson, C. B., 58 Denbigh Road, Feilding, P.O. Box 429 5600
ZL2UR Williams, R. C., 10a Stuart Street, Levin 5500
ZL2UT Lockie, H. A., 70 Cashmere Avenue, Wellington 6004
ZL2UV Davoren, B. J., 22 Island Road, Gisborne 3801
ZL2UW Kibble, A. R., Horokiri Hill, Petone 6303
ZL2UX Naulls, R. D., Brauncewell Farm, Tangihua Road, Maungakaramea 0250
ZL2UY MacDonald, J. R., 39 Aniseed Grove, Upper Hutt 6401
ZL2UZ Parker, H. J., 15 Bush Street, Naenae, Lower Hutt 6301

ZL2UZ	Spotswood College Amateur Radio Club, (Trustee: ZL2BBN), Private Bag, New Plymouth 4620	ZL2ABE	Erwood, E., 190 Waimea Road, Nelson 7001
ZL2VA	Vaughan, D. L., 70 Glen Road, Raumati South 6150	ZL2ABF	Foley, T. J., 115 Taradale Road, Napier 4001
ZL2VB	Browne, A. H., 98 Renown Road, Raumati South 6150	ZL2ABG	McGee, N., 2 Waldron Crescent, Abbotsford, Dunedin 9006
ZL2VC	Zawodny, C. J., 8 Burwood Road, Christchurch 8009	ZL2ABI	Smith, D. L., 705 Maitland Crescent, Hastings 4201
ZL2VD	Tideman, A. L., R.D. 2, Nelson 7021	ZL2ABJ	Napier Branch NZART (Inc.), see Branch Directory
ZL2VE	Hansen, G. H., 9 Sanders Avenue, Napier 4001	ZL2ABL	Bramley, K. J., 14 Rembrandt Avenue, Linden 6203
ZL2VG	Smith, I. R., "Lyndon", R.D. 3, Te Karaka 3871	ZL2ABM	Eivy, D. L., 7 Norwich Street, Wellington 6005
ZL2VH	Upper Hutt Branch NZART (Inc.), see Branch Directory	ZL2ABN	Ridding, G. B., 50 Mulberry Street, Maungaraki, Lower Hutt 6301
ZL2VI	Manning, E. E., 33 Tiverton Crescent, New Plymouth 4601	ZL2ABO	Hughes, A. H., 117 Park Road, Palmerston North 5301
ZL2VJ	Angelini, H. J., R.D. 2, Pahiatua 5471	ZL2ABR	Parkinson, J. H., 1009 Rata Street, Hastings 4201
ZL2VK	Wallace, I. R., 22 Parson Street, Wanganui 5001	ZL2ABS	Tong, J., 44 Lakewood Avenue, Johnsonville, Wellington 6004
ZL2VL	Gibag, G. F., 25 Grey Street, Woodville 5473	ZL2ABT	Turner, O. D., Cadman Road, Dannevirke 5491
ZL2VM	Bull, M. B., 51 Liverpool Crescent, Napier 4001	ZL2ABU	van der Burgh, J. E. C., 12 Chilton Drive, Paraparaumu 6152
ZL2VN	Gaudin, W. G., 18 Trafalgar Street, New Plymouth 4601	ZL2ABV	Mitchell, P. R., 6 Grey Street, Feilding 5600
ZL2VO	Hayman, G. C., 73 Makora Road, Masterton 5901	ZL2ABW	Steer, D. W., 24 Dorset Avenue, New Plymouth 4601
ZL2VP	Cheshire, A. H., 5 Seddon Street, Upper Hutt 6401	ZL2ABX	Bishop, R. T., 1 Bowling Road, Greenmeadows, Napier 4001
ZL2VQ	Gaudin, G. C. (Mrs), 18 Trafalgar Street, New Plymouth 4601	ZL2ABY	Huggard, J. D., 22a Rimu Street, New Plymouth 4601
ZL2VR	Chapman, D. J., 459 Kennedy Road, Napier 4001	ZL2ABZ	Moore, J. A. W., 42 Wright Street, Wellington 6002
ZL2VS	Miller, H. R., 41 Alexandra Street, Marton 5151	ZL2ACA	Barnett, W. J., R.D. 1, Mapua, Upper Moutere 7150
ZL2VT	Arthur, A. J. M. (Mrs), 51 Maraetai Heights Road, Maraetai 1705	ZL2ACB	Pengelly, A. P., 56 Wilberforce Street, Miramar, Wellington 6003
ZL2VV	Carter, L. J., 13 Waterview Road, Devonport, Auckland 1309	ZL2ACC	Sutherland, J. M., 600 Pepper Street, Hastings 4201
ZL2VW	Gray, O. T., 16 Gonville Avenue, Wanganui 5001	ZL2ACD	Corric, R. D., 35 Fox Street, Opunake 4653
ZL2VX	Dickson, S., 67 Mills Road, Wellington 6002	ZL2ACE	Greene, R. P., 5 Aranui Avenue, Castlecliff, Wanganui 5003
ZL2VZ	Eyles, J. R., 28 Surrey Street, Richmond, Nelson 7002	ZL2ACF	Stagpoole, V. M., 49 Bould Street, Wellington 6004
ZL2WA	Wellington VHF Group, see Branch Directory	ZL2ACG	Glasyer, R. B., 422 Jackson Street, Petone 6303
ZL2WB	Wellington Branch NZART (Inc.), see Branch Directory	ZL2ACH	Robertson, B. R., 537 Ruahine Street, Palmerston North 5301
ZL2WC	Crabtree, W. D., P.O. Box 87, Napier 4000	ZL2ACJ	Watson, J. S., 24 Gardener Street, Levin 5500
ZL2WD	Deller, F. J. G., 3/29 Ward Street, Upper Hutt 6401	ZL2ACK	Brown, R. W. N., 9 Duke Street, Pahiatua 5471
ZL2WE	Stead, J. L., Pohara, R.D. 1, Takaka 7172	ZL2ACL	Myhill, J., 14 Stanton Crescent, Christchurch 8002
ZL2WF	Wensley, N. L., 2 Riverside Drive, Whangarei 0101	ZL2ACM	Gore, C., Roberts Line, Bunnythorpe, R.D. 8, Palmerston North 5321
ZL2WH	McAuley, A. W., 151 Townsend Road, Miramar, Wellington 6003	ZL2ACN	Lakeman, D. T., 55a Manuka Street, Masterton 5901
ZL2WI	Wilkinson, J. G., 12 Hillcrest Drive, Palmerston North 5301	ZL2ACO	Jeffs, D. E., 132 Hill Road, Belmont, Lower Hutt 6301
ZL2WJ	Ross, J. B., 16 Moncrieff Avenue, Tahunanui, Nelson 7001	ZL2ACP	Brosnan, V. W., R.D. 3, Waipawa 4175
ZL2WK	Hattersley, S. G., 15 Rata Street, Nelson 7001	ZL2ACS	Mai, G. A., 20 Cardiff Road, Pakuranga, Auckland 1706
ZL2WL	Hurrell, L. W., 9 Hereford Place, Tamatea, Napier 4001	ZL2ACT	Smith, G. F., 28 Sheridan Crescent, Upper Hutt 6401
ZL2WM	Lagerstedt, E. C., 83 Gordon Street, Dannevirke 5491	ZL2ACU	Finlay, P. A., 154 Parkvale Road, Karori, Wellington 6005
ZL2WN	Carlisle, J. W., 32 Nile Street, Lower Hutt 6301	ZL2ACW	Gotlieb, R., 6 Holborn Drive, Stokes Valley 6306
ZL2WO	Burnett, A. M. R., 21 Elizabeth Street, Rangiora 8254	ZL2ACX	Hart, F. M., 82 Oriel Avenue, Tawa 6203
ZL2WR	Whitehead, E. S., Unit 12, Taradale Masonic Village, 15 Devonshire Place, Taradale, Napier 4001	ZL2ACY	Hewett, E. S., 119 East Street, Feilding 5600
ZL2WS	Scott, W. G., P.O. Box 859, Napier 4000	ZL2ACZ	Bickerstaff, R. R., 12 Enfield Road, Napier 4001
ZL2WT	Thomson, W. J., 33 Donald McLean Street, Newtown, Wellington 6002	ZL2ADA	Anderson, J. K., 68 Kurupae Road, Taupo 3300
ZL2WV	Rowe, J. B., 8 Evelyn Place, New Plymouth 4601	ZL2ADB	Barrow, G. W. B., 60 Bledisloe Crescent, Wainuiomata 6305
ZL2WW	Hyndman, J. E., 7 Wadsworth Crescent, Blenheim 7301	ZL2ADC	Weston, W. F., 35 Kummer Crescent, Masterton 5901
ZL2WX	Day, D. G., 106 Cleveland Terrace, Nelson 7001	ZL2ADD	Lund, O. M., 1 Cherry Grove, Strathmore 6003
ZL2WY	Mildon, J. W., 28 Christian Street, Dannevirke 5491	ZL2ADE	Turner, A. L., 108a Hillcrest Road, Raumati Beach 6150
ZL2YL	NZ WARO, (Trustee: ZL2BOD), P.O. Box 2201, South Dunedin 9030	ZL2ADG	Donovan, G. J., 7 Marine Parade, Paraparaumu 6152
ZL2AAA	White, M. C., 502 Huia Street, Hastings 4201	ZL2ADH	Boyd, I. McL., 132 Wainuiomata Road, Wainuiomata 6305
ZL2AAC	Bridgman, A. H. S., 261 Mitchell Street, Brooklyn, Wellington 6002	ZL2ADI	Blackwood, R. L., 2 Sommerville Terrace, Tawa, Wellington 6203
ZL2AAD	Bartlett, L. R., 9 Waverley Street, Gisborne 3801	ZL2ADJ	Billing, H. B., 8 Witako Street, New Plymouth 4601
ZL2AAE	Kelling, A. R., 3 Dickson Street, Gisborne 3801	ZL2ADK	Purdie, C. M. (Mrs), 65 Hedges Street, Sanson 5450
ZL2AAF	Duncan, R. E., 107 Ironside Road, Johnsonville, Wellington 6004	ZL2ADL	Gilbert, T. J., 5A Newbourne Crescent, Blenheim 7301
ZL2AAG	Barker, E. J., 12 Ashford Avenue, Palmerston North 5301	ZL2ADM	Smith, I. G., Hill View, 94 Guppy's Road, Greenmeadows, Napier 4001
ZL2AAH	Sayers, R. K. F., 9 Brunswick Road, Aramoana, Wanganui 5002	ZL2ADN	Stuart, J. D., 11 Kipling Street, Palmerston North 5301
ZL2AAI	McPake, E. G., 7 Balgownie Avenue, Wanganui 5001	ZL2ADO	Wilkinson, J., 69a Park Road, Carterton 5951
ZL2AAJ	Davis, S. B., 8 Kawau Place, Wanganui 5001	ZL2ADP	Vile, M. E., 12 Hicks Crescent, Waikanae Beach 6150
ZL2AAK	Wilson, I. J., 83 Cracroft Street, Waitara 4656	ZL2ADR	Burley, C. J., 37 Pope Street, Camborne, Plimmerton 6250
ZL2AAK	Thompson, R. N., 1010 Gordon Road, Hastings 4201	ZL2ADT	Brown, W. C., 9 Rawhiti Street, Nelson 7001
ZL2AAO	Shackel, M. W. O., c/- Post Office, Opua 0290	ZL2ADU	Gorton, H. J., 166 Tasman Street, Opunake 4653
ZL2AAP	Meek, P., 59 Alexander Avenue, Napier 4001	ZL2ADW	West, J. D., 17 Chesney Street, Bell Block, New Plymouth 4601
ZL2AAQ	Jeffers, R. J., 42 Raine Street, Wanganui 5001	ZL2ADZ	Scott, J. R., Dagnum, Rockford, R.D., Oxford 8253
ZL2AAS	McCUTCHEON, H. A., 351 High Street, Dannevirke 5491	ZL2AFA	Gallagher, B. G., 84 Thomas Street, Stokes Valley, Lower Hutt 6306
ZL2AAT	Mowat, K. H., 9 Ruamoa Place, Omokoroma, R.D. 2, Tauranga 3021	ZL2FB	Renner, W. G., c/- Post Office, Ormond 3870
ZL2AAU	Starck, A. J., 177 Smart Road, R.D. 2, New Plymouth 4621	ZL2FC	Rae, A. O., 38 Newbury Street, Palmerston North 5301
ZL2AAV	Cooper, R. L., 21 Mill Street, Marton 5151	ZL2FE	Burr, A. J., 26 Waiwera Place, New Plymouth 4601
ZL2AAW	Berbedes, P. G., 12 Beach Street, Tangimoana 5450	ZL2FF	Burr, M. K., 48 Holborn Drive, Stokes Valley 6306
ZL2AAAX	Martin, L. H., 64 Glen Road, Stokes Valley, Wellington 6306	ZL2AFF	Clarkson, R. J., 13 York Street, Eltham 4751
ZL2AAAY	Turnbull, W. I., 5 Annandale Street, New Plymouth 4601	ZL2FG	King, F. B., Patons Rock, Takaka 7172
ZL2AAZ	Grundy, C. G., 119 East Frederick Street, Mayfair, Hastings 4201	ZL2FH	Gentry, L. R., Parkhill Road, R.D. 2, Hastings 4221
ZL2ABA	Harris, W. R. B., Marigaoa Road, R.D. 4, Hastings 4221	ZL2AFI	Hardie, A. F., 54 Roxburgh Street, Mt Victoria, Wellington 6001
ZL2ABB	Campbell, S. H., 20 Erin Street, Palmerston North 5301	ZL2AFJ	Nicholls, G. A., 465 Ruahine Street, Palmerston North 5301
ZL2ABC	Hughes, T., 10 Bainton Street, Christchurch 8005	ZL2AFK	Simpson, M. C., 14 Montrose Drive, Nelson 7001
ZL2ABD	Stampa, K. W., Normanby Road, Manaia 4851	ZL2AFL	Ford, P. L., 36 Akatea Road, Korokoro, Petone 6303
		ZL2AFM	Jordan, N., 12 Caesars Place, Churton Park, Wellington 6004
			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
ZL2AFT Wassileff, C., 69 Tiber Street, Island Bay, Wellington 6002
ZL2AQF Lawson, E. J., 22 Bryon Street, Upper Hutt 6401
ZL2AFR Gorman, B. D., 66 Pacific Street, Timaru 8601
ZL2AFS Chew, L. R., 17c Selwyn Street, 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., Hineraangi Road, Hatuma, R.D. 1,
Walpukurau 4176

ZL2AFZ Studd, G. C., 70 Russell Street, Napier 4001
ZL2AGB Martelletti, G. P., 44 Kapuni Street, Manaia 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, Otumoetai,
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
ZL2AGT Williams, G. C., 6 Denbigh Street, Feilding 5600
ZL2AGU Steel, G. J., Corner 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 Grey, P. S., 3/211 Windsor Avenue, Hastings 4201
ZL2AHA Wards, I. J., Manutahi, R.D. 2, Patea 5181
ZL2AHB Douglas, L. S., 2/106 Barrington Street, Christchurch 8002
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, Plimmerton 6251
ZL2AHG Drajewicz, J. J., NZ Post HQ, 5th Floor, 2/27 Waterloo Quay,
Wellington 6001

ZL2AHH Keong, P. W., cnr Thompson & Davidson Roads, Havelock
North 4201
ZL2AHI Meads, A. M., 272 High Street, Eltham 4751
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
ZL2AHT Frost, H. A., 77 Meanee Road, Taradale, Napier 4001
ZL2AHU O'Hara, E. R., "Omega", Ngamu 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., P.O. Box 13-467, Onehunga, Auckland 1132
ZL2AIB Campbell, W. A., 225a Tukapa Street, New Plymouth 4601
ZL2AIC Drogemuller, C. H., 25d Egmont Street, Wanganui 5001
ZL2AID Williams, P. R., 132 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 Dorallo 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, Plimmerton 6251
ZL2AIW Sutherland, I. R., 4 Watchorn Place, Foxtown 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., 63 Riverside Drive, Lower Hutt 6301
ZL2AJD Dodds, J. F., 13 Waiheke Street, Waikanae 6154
ZL2AJE Carpenter, E. D., 27 Canterbury Street, Tarnatea, 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 Peaks Road, Wanganui 5001
ZL2AJM Donovan, M. F., 16 Ngaoi 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., 611 Aberdeen Road, Gisborne 3801
ZL2AJR Teward, G. J., 26 Horopito Road, Waikanae 6154
ZL2AJV Small, I. R., 207 Tudor Avenue, Hastings 4201
ZL2AJW Marston, K., 8b Trent Place, Rotorua 3201
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 Franklin 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., 26 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 Fifeshire Crescent, Nelson 7001
ZL2AKK Moss, J. B., 9 Søylen 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, Rekorangi 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., 108 Moana Avenue, Tahunanui,
Nelson 7001

ZL2ALH Imlay, B. W., 46 Tilbury Street, Lower Hutt 6301

ZL2ALI Clark, E. A., 88 Mallberry 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., 12 Somerset Road, Springvale,
Wanganui 5001

ZL2ALP Paton, P. J., 41 Hyde Street, Wainuiomata 6305

ZL2ALQ Appleton, J. W., 17 Bone Crescent, Hawera 4800

ZL2ALR Jury, J. M., "Glandower", Ponatahi Road, R.D. 2,
Carterton 5951

ZL2ALS Morris, R. A., 16 Bristol Square, Lower Hutt 6301

ZL2ALT Tong, A. C., 12 Princes Street, Hawera 4800

ZL2ALU Turnham, P. E., 243 Waterloo Road, Lower Hutt 6301

ZL2ALW Barnett, L. J., Manuhara Road, R.D., Pongaroa 5472

ZL2ALX Tarrant, G. W., Rawhitirua, R.D. 8, Masterton 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 Turriff 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	Garnonsway, T. L., "Hiria" Rangiwaea, 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 Thurleigh 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
ZL2AND	Wallace, R. I., 21 Fox Street, Featherston 5952
ZL2ANE	Cooney, J. L., 53 Wainuiomata Road, Wainuiomata 6305
ZL2ANF	MacLean, H. R., 19 Turriff Crescent, Linden, Wellington 6203
ZL2ANG	Tipler, B. F., Mangaeho 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
ZL2ANM	Johnson, B. L., 25 John Street, Trentham, Upper Hutt 6402
ZL2ANP	Williamson, J. J., Waituna, 9 R.D., Feilding 5600
ZL2ANO	Keane, P. M. (Rev), 61 Main Road, Makaraka, Gisborne 3801
ZL2ANR	Robertson, J., 100 Cluny Road, Plimmerton 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., 17b Treadwell Street, Wanganui 5001
ZL2ANX	Central Institute of Technology Radio Club, (Trustee: ZL2ABQ), CIT Students Union (Inc), Private Bag, Trentham 6430
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, Tahunanui, Nelson 7001
ZL2AOE	Wood, T. E., 12 Rerewa Grove, Oaklands, Upper Hutt 6401
ZL2AOF	Reardon, V. W., Autler Road, Manaia 4851
ZL2AOG	Green, G. R., 7 Russell Street, Marton 5151
ZL2AOH	Sutton, R. L., 12c Herbert Gardens, 186 The Terrace, Wellington 6001
ZL2AOI	Malkin, E., 4/412 West Avenue Road, Hastings 4201
ZL2AOJ	Ryder, S. F., 67 Gillespies Road, Upper Hutt 6401
ZL2AOK	Wallis, G. A., 23 Bruce Avenue, Brooklyn, Wellington 6002
ZL2AOI	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
ZL2AOO	Sinclair, M. L., 1 Porritt Place, Tamatea, Napier 4001
ZL2AOP	Mackintosh, A. B., 34 Marian Drive, Gisborne 3801
ZL2AOR	Langevad, M. W., Grahams Beach Road, R.D. 4, Waiuku 1852
ZL2AOT	Sanders, K. D., 17 Bird Grove, Stokes Valley 6306
ZL2AOU	Howan, V. E. (Mrs), 7 Almora View, Ascot Park, Porirua 6201
ZL2AOV	McNeill, D. A., 58 Fraser Avenue, Johnsonville, Wellington 6004
ZL2AOW	Purvis, R. H., 23 Graham Street, Auckland 1001
ZL2AOX	Edwards, M. R., 92 Creswick Terrace, Northland, Wellington 6005
ZL2AOZ	Davidson, W. E., No. 10 R.D., Palmerston North 5321
ZL2APA	Chippendale, J. G., 66 Reid Avenue, Hawera 4800
ZL2APB	Plank, E. W., 182 Bridge Street, Bulls 5452
ZL2APC	Burton, H., 23 Lynmouth Avenue, Karori, Wellington 6005
ZL2APD	Holmwood, E. A., 11 Newton Place, Palmerston North 5301
ZL2APE	Parnell, J. C., 87 Duncan Terrace, Wellington 6003
ZL2APF	Lusty, F. W., 40 Ihaha Street, Waitara 4656
ZL2APG	Sutherland, N., 36 Pare mata Street, Nelson 7001
ZL2APH	Halsman, R. A., 27 Valley Road, Gisborne 3801
ZL2API	Gillette, H. C., 6 Mahoe Avenue, Palmerston North 5301
ZL2APJ	Vaughan, R. G., 205 Rosetta Road, Raumati Beach 6150
ZL2APK	Campbell, E. P., 823 Cook Place, Hastings 4201
ZL2APL	Westwood, I. J., 25 Raukawa Street, Himatangi Beach 5550
ZL2APM	Parker, T. C., 5 Damian Grove, Lower Hutt 6301
ZL2APO	Leigh, P., 94 South Karori Road, Wellington 6005
ZL2APQ	Aydon, A., 71 Weka Street, Nelson 7001
ZL2APR	Pope, T. J., 80 Victoria Street, Carterton 5951
ZL2APS	Sullivan, D. H., 56 Keepa Street, Levin 5500
ZL2APT	Ropata, P. T., 11 Kittyhawk Row, Bulls 5452
ZL2APV	Jury, G. V., 12 Aubrey Street, New Plymouth 4601
ZL2APW	Nugent, R. F., Clairvale Farm, R.D. 2, Omaka, Blenheim 7321
ZL2APX	O'Dwyer, M., 135 Guppy Road, Taradale, Napier 4001
ZL2APY	Hartwig, G., 66 Lincoln Street, Ashhurst 5301
ZL2APZ	Benson, K. J., 14 Regent Place, New Plymouth 4601
ZL2AQAA	Allen, D. B., 1 Brookes Terrace, Waitara 4656
ZL2AQAC	Doyle, D., 47 Cashmere Avenue, Khandallah, Wellington 6004
ZL2AQD	Watson, J. E., 50 Ellesmere Avenue, Miramar, Wellington 6003
ZL2AQE	Shorland, J. H., 12 Lenox Grove, Johnsonville, Wellington 6004
ZL2AQF	Ward, J. G., Akaroa Road, P.O. Box 74, Pongaroa 5472
ZL2AQH	Voss, S. J., Mill Road, Kopane, 6 R.D., Palmerston North 5321
ZL2AQI	Cheyne, J. A., 12 Aberdeen Avenue, Palmerston North 5301
ZL2AQK	Millard, A. J., 34 Volga Street, Wellington 6002
ZL2AQL	Spearman, M. B., 5 Clunie Crescent, Hawera 4800
ZL2AQN	Heald, P. J., 12 Atarau Grove, Paraparaumu 6152
ZL2AQO	Wilson, K. A. (Mrs), 80 Wycliffe Street, Onekawa, Napier 4001
ZL2AQP	Clouston, T. W., 28 Fox Street, Opunake 4653
ZL2AQQ	Ammundsen, J. G., 17 Satara Crescent, Khandallah, Wellington 6004
ZL2AQR	Crawley, R. J. C., 1018 Totara Street, Hastings 4201
ZL2AQS	Duckworth, P. D., 7 Einstein Street, Gisborne 3801
ZL2AQT	Benton, S. W., "Wainawhenua", Kahaurara Road, R.D. 1, Featherston 5952
ZL2AQU	Anderson, G. W. J., 32 Chichester Drive, Silverstream 6402
ZL2AQW	Laing, D. J. H., 6 McDonald Street, Taupo, Lower Hutt 6301
ZL2AQX	Macartney, R. A., 7 Fronton Street, Wanganui 5001
ZL2AQY	Olson, E. L., 58 Titania Street, Stratford 4700
ZL2AQZ	Edgecombe, C. J., 10 Princes Street, Hawera 4800
ZL2ARB	Davis, J., 19 Titoki Street, Gisborne 3801
ZL2ARC	Christie, R. F., 259 Cambridge Street North, Levin 5500
ZL2ARD	Schofield, D. T., 34 Kiwi Road, Raumati Beach 6150
ZL2ARE	Harris, L. W., 7 Cameron Road, Napier 4001
ZL2ARF	Lane, J. R., 3 Bassett Place, Taradale, Napier 4001
ZL2ARG	Nelson Branch NZART (Inc), see Branch Directory
ZL2ARH	Henderson, M. J., P.O. Box 8513, Havelock North 4231
ZL2ARI	Wills, A. J., 73 Donovan Road, Paraparaumu 6152
ZL2ARJ	Webb, B. D., 71 Hillside Drive, Upper Hutt 6401
ZL2ARK	Wilkins, R. R., Iona Road, Havelock North 4201
ZL2ARL	Prior, R. T., 28 Shelley Street, Palmerston North 5301
ZL2ARM	Peel, J. S., 19 The Esplanade, Westshore, Napier 4001
ZL2ARN	Stewart, D. G., 75 Nimmo Avenue East, Waikanae 6154
ZL2ARP	Collins, R. J., "L'Chayim", Peka Peka Road, R.D. 1, Waikanae 6154
ZL2ARQ	Pahl, D. G., Dee Road, R.D. 1, Upper Moutere 7152
ZL2ART	McQuinlan, T., 6 Whanake Street, Titahi Bay 8202
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., 25 Kirner Street, Christchurch 8009
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 7161
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

ZL2ASL

- 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
 ZL2ATH Erikson, A. M., 8a Caulton Street, Richmond 7002
 ZL2ATI Cartwright, K. C., 8 McNaughton Street, Waitara 4656
 ZL2ATJ Trye, M., 2/40 West Coast Road, Glen Eden, Auckland 1207
 ZL2ATK Williams, V. V. H. (Mrs), Atkins Road, Patutahi, P.O. Box 78, Gisborne 3800
- ZL2ATL Williams, C. M., Atkins Road, Patutahi, P.O. Box 78, Gisborne 3800
- ZL2ATM 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., 2/24 Curacao Place, Half Moon Bay, Auckland 1704
- 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., P.O. Box 54-158, Plimmerton 6251
 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, Naenae, Lower Hutt 6301
 ZL2AUE King, M., 52 Roseneath Terrace, Wellington 6001
 ZL2AUF Blair, S. G., 15 Poplar Grove, Thorndon, Wellington 6001
 ZL2AUH O'Shea, P. F., 39 Folkestone Drive, Flaxmere, Hastings 4290
 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
 ZL2AUT Morton, L. W., 112 Union Street, Foxton 5551
 ZL2AUV Rockell, J. E., 2/10 Mairi Street, Mangere East, Auckland 1701
- ZL2AUW Nash, A. L. J., Honi Taipua Street, Manakau, Levin 5553
 ZL2AUX Lewer, D. H., 113 Pukepapa Road, Marton 5151
 ZL2AJY 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 167, Waipawa 4175
 ZL2AVH Chong, A. V., 240 Whirinaki Road, R.D. 2, Napier 4021
 ZL2AVI Savage, R. B., 12 Hull Street, Oamaru 8901
 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, Khandaiah, Wellington 6004
- ZL2AVO Davis, B. F., 343 Nayland Road, Stoke, Nelson 7001
 ZL2AVQ Dement, F. W. H., 162 Bartholemew 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
 ZL2AVX Rhodes, C. J., 54 Kempton Street, Greytown 5953
 ZL2AVY Owen, M. L., Main Road, Makara, P.O. Box 17-048, 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
- 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., 1 Ranara Court, Palmerston North 5301
 ZL2AWU Tiller, B. A., 68 Donovan Road, Paraparaumu Beach 6153
- ZL2AWW 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
- ZL2AXA Dewar, A. M., 248a Ohio Road, Wellington 6002
- 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
- ZL2AXF Widmer, J. B., Otaracca Road, R.D. 43, Waitara 4656
- ZL2AXG Young, W. D. D., 20 Rexwood Street, Carterton 5951
- ZL2AXH Aitchison, W. B., 10 Margaret Street, Wadestown, Wellington 6001
- ZL2AXI Leslie, G., 4 Reeve 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, Otumoetai, 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., 130a Cheviot Road, Lowry Bay, Wellington 6304
- 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
- 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., 15 Lyndhurst Road, 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, Utuwal, R.D., Ashhurst 5451
- ZL2AYJ Visser, A., 72 McLeod Street, Upper Hutt 6401
- ZL2AYK Kelly, R. W., 406 South Road, Hawera 4800
- ZL2AYM Scholefield, C. O., Spring Grove, R.D. 1, Wakefield 7181
- ZL2AYO Hurley, G., 3 Pohutukawa Crescent, 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
- 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 Bay Street, Blenheim 7301
- ZL2AYR 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., 11 Reynolds Road, Havelock North 4201
 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
 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., 45 Pufflet Road, Havelock North 4201
 ZL2AZW Thomson, E. M., 31 Rotokauri Road, Hamilton 2001
 ZL2AZY Owen, S. C., Main Road, Makara, P.O. Box 17-048, Karori, Wellington 6033
 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., P.O. Box 11-774, Wellington 6000
 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. (Mrs), Glenroa Station, R.D. 2, Otoko, Gisborne 3871
 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., 7 Rangimarie Flats, Bowen Street, Feilding 5600
 ZL2BAO Wilson, J. E., 151 Milton Road, Napier 4001
 ZL2BAQ Carr, P. H., 17 Timaru Grove, Kelson, Lower Hutt 6301
 ZL2BAR Allardice, M. H., 49 Rajkot Terrace, Broadmeadows, 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 ZL2BAO), c/- Mrs M. Ritchie, 5 Bermer Road, Belmont, Lower Hutt 6301
 ZL2BBB Unwin, 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 Withers, F. R., 19 Brassey Road, Wanganui 5001
 ZL2BBH Jansen, J. H., 1 Pufflet Road, Havelock North 4201
 ZL2BBJ Corney, A. C., 43 Clutha 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
 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 Okopi Road, 45 R.D., Urenui 4655
 ZL2BCA Scott, D. L., 180 Moana Avenue, 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, Marewa, 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
 ZL2BD Herbert, J. W., Onekura Bay, Queen Charlotte Drive, Picton 7372
 ZL2BDD Harris, R. S., Mt. Adde, R.D. 4, Blenheim 7321
 ZL2BDE Gisborne Boys' High School Radio Club, 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 Featherston 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 Ferguson Drive, Upper Hutt 6301
 ZL2BDZ Johnson, G. V., West Road, Mangatainoka, Paikiatua 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
 ZL2BEN Fretter, M. S. E., R.D. 2, Wanganui 5021
 ZL2BEO Colley, M. J., 23 Churchill Avenue, Richmond, Nelson 7002
 ZL2BEP Whiteford, 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 Neurer, E. M., 7 Copeland Street, Lower Hutt 6301
 ZL2BEV Vondruska, A. J. M., P.O. Box 27-332, Wellington 6037
 ZL2BEX Ramsay, D. A., 20 Main Road, St. Andrews 8790
 ZL2BEY Wilkins, A. G. J., P.O. Box 76, Ohau via Levin 5554
 ZL2BEZ Clark, A. R., 116a Cranford Street, St Albans, Christchurch., P.O. Box 21-150, Edgeware, Christchurch 8030
 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 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., 208 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
 ZL2BFP 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
 ZL2BFW 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 Betts Avenue, Masterton 5901
 ZL2BFZ Thum, F. A., 42 Rimu Street, Waikanae 6154
 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
 ZL2BGG Jamieson, J. C., 31 David Street, New Plymouth 4601

ZL2BGF

- ZL2BGH** Bridge, G. H., 38 Ngatoto Street, Ngaio, Wellington 6004
ZL2BGI Pycroft, W. J., 12 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
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, Johnsonville, Wellington 6004
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
ZL2BH8 Kitching, L. A., 9 Isel Place, Stoke, Nelson 7001
ZL2BHC Wilcox, C., 35 Jeep Road, Raumati South 6150
ZL2BDH 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., Moewatea, R.D., Waverley 5182
ZL2BHN Allardice, J. P. G. (Rev), Catholic Parish House, 121 Bank Street, Whangarei 0101
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., 76 South Road, Masterton 5901
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 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
ZL2BIP Paterson, C., 6a Marsden Road, Stoke, Nelson 7001
ZL2BIQ Thorner, G. S., 1 Emerson Street, Shirley, Christchurch 8006
ZL2BIR Kidd, P. R., 70 McLeod Street, Upper Hutt 6401
ZL2BIS Porter, I. G., 20 Bellfield Street, Christchurch 8006
ZL2BIT Willan, L. H., 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
ZL2BJB Horne, D. A., c/- Pinneu, Belmont Road, R.D. 1, Pimerton 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
ZL2BJI Robinson, D. W., 88 Manawapou Road, Hawera, Taranaki 4800
ZL2BJM Dewick, J. A., 98 Riverbend Road, Napier 4001
ZL2BJO Cathcart, S. J., 17 Westhaven Grove, Palmerston North 5301
ZL2BJP De Grey, P. J., 156 Brooklands Road, New Plymouth 4601
ZL2BJR Wilkinson, K. S., c/- W. St. J. Reed, 11 Wood Street, Upper Hutt 6401
ZL2BJS Jamieson, D. R., 2 Waipuna Street, Blenheim 7301
ZL2BHU 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
ZL2BJZ Murdock, H. D. A., 17 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., 10 Limerick Grove, Ascot Park, Porirua 6201
ZL2BKD Bariball, 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 Winaria Avenue, Waikanae 6154
ZL2BKH Wharton, C. D., Pakaraka Road, R.D. 6, Masterton 5901
ZL2BKI Hurst, J. J., 154 Kahu Road, Parekata 6250
ZL2BKJ Dalcom, B. P. W., c/- 21 Otatara Road, Taradale, Napier 4001
ZL2BKL Allen, B. W., Inland North Road, R.D. 43, Waitara 4656
ZL2BKM Meek, A. P., 17 Colchester Crescent, Newlands, Wellington 6004
ZL2BKN Burling, B. N. G., 102a Harold Holt Avenue, Napier 4001
ZL2BKP MacDonald, J. V., 4/34 Allen Road, Raumati Beach 6150
ZL2BHQ Petrie, P. O., 30 Aspiring Avenue, P.O. Box 4269, Palmerston North 5300
ZL2BKR Truman, H. J., 21 Rintoul Grove, Stokes Valley 6306
ZL2BKS Brown, K. J., 2/8 Motueka Street, Ngaio, Wellington 6004
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
ZL2BKT 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 Waihi Terrace, Porirua 6201
ZL2BLG Patterson, R. A., 338 High Street, Dannevirke 5491
ZL2BLH Elison, 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 Baynham, P. S., Pyle Road West, One Tree Point, R.D. 1, Ruakaka 253
ZL2BLL Shaw, V. S., 13a Weathers Place, Taradale, Napier 4001
ZL2BLM Rait, N. A. H., 2 Revans Street, Featherston 5952
ZL2BLN Scarrott, P. E., Buchanan Road, Bay View, Hawkes Bay 4001
ZL2BLO Moore, P. C., 8 Maxwell Street, Napier 4001
ZL2BLP Rodgers, G. K., 72 Fleet 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., 766 Devon Road, Bell Block, New Plymouth 4601
ZL2BLV Christian, J. M., 12 Golders Place, Taupo 3300
ZL2BLW Batt, L. A., 33 Waterhouse Road, Masterton 5901
ZL2BLX McLauchlan, A. C. L., 122 Redwood Avenue, Tawa 6203
ZL2BLY Ashwell, D. H., 3/4 Barton Place, Marewa, Napier 4001
ZL2BMA Calvert, R. H. G., Fabians Road, R.D. 1, Greytown 5953
ZL2BMB Walker, M. K. R., 10 Butler Street, Naenae 6301
ZL2BMD Childs, J. R., 5 Savage Crescent, Waipukurau 4176
ZL2BME Pearson, R. K., 406a Southampton Street East, Hastings 4201
ZL2BMH Clarke, G. R., 57 Kauri Street, Miramar, Wellington 6003
ZL2BMI Irving, J. E., 38 Lawry Street, New Plymouth 4601
ZL2BMJ Sears, E. J. (Rev), 31 Ferry Road, Spring Creek, Marlborough 7350
ZL2BMK Railton-Jacks, P. N., 31 Seaforth Avenue, Palmerston North 5301
ZL2BML Bowman, R. F., 146 Conclusion Street, Ascot Park, Porirua 6201
ZL2BMM McCormick, C. D. K., 13 Main Road, Westshore, Napier 4001
ZL2BNN 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 Mouat, W. A., c/- Pukeko 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 6259
ZL2BMX McIver, 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
ZL2BNAA Hitchman, G. J., Feilding Road, Feilding 5600
ZL2BNB Walker, R. A., 24 Collins 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., 4 The De Cesare Way, Nelson 7001
ZL2BNK	Moore, C. J., Waiaruru Road, R.D. 5, Taihape 5163
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., 86 Rewa Street, Inglewood 4651
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	Lowe, P. A., 12 Wye Street, Island Bay, Wellington 6002
ZL2BNW	Walbridge, S. W., 21a Satara Crescent, Khandallah, Wellington 6004
ZL2BNX	Isherwood, K., c/- Napier Hospital, Private Bag, Napier 4020
ZL2BNY	Gill, W., Aroha, Horowhenua 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), 1 Norman Street, Tainui, Dunedin 9001
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. P., 7 Almora View, Ascot Park, Porirua 6201
ZL2BOY	Clarke, R. G., 3 Whitby Place, New Plymouth 4601
ZL2BOZ	Flowers, F. J., 70 Helyers Street, Birkdale, Auckland 1310
ZL2BPB	Sandifars, 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., Kahurata Road, R.D. 1, Fealherston 5952
ZL2BPI	Watt, I. D., c/- P.O. Box 85, Fealherston 5952
ZL2BPJ	Maddock, R. H., 3 Percy Cameron Street, Avalon, Lower Hutt 6301
ZL2BPK	Johns, B. K., 77 Wai-iti Crescent, Woburn, Lower Hutt 6301
ZL2BLB	Kerslake, M. G. R., 1 Marama Terrace, Eastbourne 6304
ZL2BPO	Mainwaring, P., 2 Dysart Road, Otumoetai, Tauranga 3001
ZL2BPP	South Wairarapa Amateur Radio Club, see Branch Directory
ZL2BPQ	Scherl, 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	Craw, 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	McDvor, W. G., 4 Halifax Street, Wainuiomata 6305
ZL2BQA	Nield, G. S., 4a Belgium Terrace, Gisborne 3801
ZL2BQM	Brooking, S. C., & Robert Shortt Street, Wairoa, Hawkes Bay 4192
ZL2BQN	Hedley, W. A., 39 Mitchell Road, Wairoa 4192
ZL2BQU	Douglass, W. S., 5 Poharama Place, New Plymouth 4601
ZL2BQW	McNeil, W. G., 86 Dornett 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 Halford Street, New Plymouth 4601
ZL2BRC	Ballantyne, J., 10 Halford Street, New Plymouth 4601
ZL2BQQ	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., c/- 21 Mill Street, Marton 5151
ZL2BRU	Allison, R., Te Uri Road, R.D. 3, Dannevirke 5491
ZL2BRV	Cook, V. R., 95 Niblett Street, Wanganui 5001
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., "Karinga", West Bush Road, R.D. 8, Masterton 5921
ZL2BSM	Ryan, M. D., 6 Woodvale Grove, Epuni, Lower Hutt 6301
ZL2BSN	Alabaster, E. J., 79 Victory Crescent, Tawa, Wellington 6203
ZL2BSO	Mitchell, A. B., 37 Satara Crescent, Khandallah, Wellington 6004
ZL2BSQ	Lawrence, R. W. C., 25 Linwood Drive, Paraparaumu 6152
ZL2BSB	Graham, W., 8 West Road, Northland, Wellington 6005
ZL2BST	Tichbon, B. W., 19 Hornsey Road, Melrose, Wellington 6003
ZL2BSU	Dove, K. N., c/- 112b Amanda Avenue, Hamilton 2001
ZL2BSW	Gedy, E. D. M., 15 Seine Street, Island Bay, Wellington 6002
ZL2BSX	Whibley, D. G., 96 Clifford Road, Johnsonville, Wellington 6004
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 7301
ZL2BTI	House, T. S. R., c/- Riverlea Gardens, Appleby, Richmond 7031
ZL2BTJ	York, K. E., 28 Cubitt Street, Blenheim 7301
ZL2BTK	Willings, H. K., 27 Oxford Street, Picton 7372
ZL2BTL	Steinhart, L., Cliff Road, R.D. 1, Kina, Upper Moutere 7152
ZL2BTO	Duncan, C. W., 15 Seaton Street, Atawhai, Nelson 7030
ZL2BTP	Snow, R. J., 5 Rimu Street, Nelson 7001
ZL2BTQ	Elwood, R. F., 44 High Street, Renwick 7352
ZL2BTR	Simpson, Z. H., 1/86 Grove Street, Nelson 7001
ZL2BTU	Daken, T. R., 15 Scotland Street, Picton 7372
ZL2BTV	Ching, G. R., 51 McLaughlin Street, Blenheim 7301
ZL2CDH	Marshall, N. R. D., 58 Fitzherbert Avenue, Wanganui 5001
ZL2CTM	Morris, C. T., Nav/Com AVMS, RNZAF Base, Ohakea 5450
ZL2CWL	Rumens, K. W., 19 Duval Grove, Tawa, Wellington 6203
ZL2DAQ	Weston, G. R., 2 Pirinoa Street, Feilding 5600
ZL2DAR	Emerson, W. R., 30 Heatherlea Heights, Feilding 5600
ZL2DBA	Jorgensen, L. H., 265 South Road, R.D. 4, New Plymouth 4621
ZL2DBC	Child, J., 73 Mana Crescent, New Plymouth 4601
ZL2DBE	Pearl, C. J., Burnside Road, Takaka 7172
ZL2DBO	O'Donnell, J. N., 39 Lismore Street, New Plymouth 4601
ZL2DBR	Jones, V. L. (Mrs), 100 Centennial Avenue, Waitara 4656
ZL2DBX	Jago, J. N., 63 Reimenschneider Street, Manai 4851
ZL2FAH	Hamlin, F. A., 40 Oak Street, Masterton 5901
ZL2GIS	Data Users Group, Gisborne 3800
ZL2HAM	Schollum, W. D., 41 Mill Road, Gisborne 3801
ZL2HGB	Bouwnegel, H. G., 36b Nelson Street, Blenheim 7301
ZL2IAN	Thompson, I., 8 Dampier Avenue, Palmerston North 5301
ZL2JAD	Dunlop, J. A., 23 Tarata Street, Wanganui 5001
ZL2JIM	Craig, J. P., 9 Warangi Street, New Plymouth 4601
ZL2KBS	Waterson, I. B., 4a Antonio Street, Stratford 4700
ZL2KEN	Dewar, D. B., 7 Richardson Avenue, Gisborne 3801
ZL2KEY	Moore, K. J., 54 Herbert Avenue, Palmerston North 5301
ZL2LOW	Lowe, C. N., Hall Terrace, Ohakura, R.D. 4, New Plymouth 4621
ZL2MAX	Wheale, M. J., 100 Wills Crescent, Ashhurst 5451
ZL2NAE	Hooper, D. R., 7 Cornwall Street, Eltham 4751
ZL2NAX	Love, J. E., 20 Bomby Street, Aramoho, Wanganui 5001
ZL2NBB	Psawson, S. R., P.O. Box 186, Masterton 5900
ZL2NBD	Nash, M. C., 29 Punga Street, Tangimoana 5450
ZL2NBJ	Brown, J. R., 42 Owen Street, Newton, Wellington 6002
ZL2NBK	Holdom, K. A., 31 St Johns Terrace, Tawa, Wellington 6203
ZL2NBP	Rennie, P. W. G., 64 Park Terrace, Blenheim 7301
ZL2NBR	Jamieson, A. D., 2 Waipuna Street, Blenheim 7301
ZL2RNS	Royal Signals Amateur Radio Society, Waikanae 6154
ZL2TAA	Stanners, J. L., 81 Old Karori Road, Karori, Wellington 6005
ZL2TAB	Hinton-Cooper, K. E., 49 Titania Street, Stratford 4700
ZL2TAC	Van Boheemen, D. J., 78 Dimock Street, Tilahi Bay, Wellington 6202
ZL2TAD	Mallinson, E. J., 64 Seymour Street, Blenheim 7301
ZL2TAF	Cookson, F. J., 25 Maymorn Road, Te Marua 6421
ZL2TAG	Bennett, A. J., 12 Tudor Court, Paraparaumu Beach 6153
ZL2TAH	Pope, H. N., 62d Stephenson Street, Blenheim 7301
ZL2TAJ	Kingsbeer, B. H., 10 Luton Street, Palmerston North 5301
ZL2TAJ	Squires, D. R., 6 Waipounamu Drive, Lower Hutt 6301

ZL2TAJ

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ZL2TAM Cooper, I. L., 116 Rutene Road, Gisborne 3801
ZL2TAN Fairbairn, R., 49 Salisbury Road, Richmond, Nelson 7002
ZL2TAO O'Donnell, A. A., 39 Lismore Street, New Plymouth 4601
ZL2TAP Baker, W. R. E., 118 Taylor Terrace, Tawa 6203
ZL2TAQ Hadfield, C. I., 69 Major Drive, Kelson, Lower Hutt 6301
ZL2TAR Ingham, J. D., 138 Dowse Drive, Maungaraki, Lower Hutt 6301
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ZL2TAV Murray, R. D., 101 Frederick Street, Hastings 4201
ZL2TAW Russ, D., 153 Cracraft Street, Waitara 4656
ZL2TAX Barnes, E. J., 54 Brooker Grove, Newlands, Wellington 6004
ZL2TAY Crook, R. J., 72 Fraser Avenue, Johnsonville, Wellington 6004
ZL2TAZ Fitzgerald, P. J., 51 Antrim Street, Invercargill 9501
ZL2TBA Higgott, L. G., Main Road, Wharekaho Beach, Whitianga 2856
ZL2TBB Drew, A. L. B., 16 Tuatoru Street, Eastbourne 6304
ZL2TBC Foster, D. L., c/- J. L. Foster, Matangi, R.D., Hamilton 2021
ZL2TBE Hood, S. W., 122 Duncan Street, Wanganui 5001
ZL2TBF Carnley, L. J., 39 Hilltop Avenue, Whangarei 0101
ZL2TBG Snelson, K. H., 12 Staithes Drive North, Whiby, Porirua 6201
ZL2TBH Henderson, G. J., 30 Wisteria Grove, Lower Hutt 6301
ZL2T8K Love, G. A., 2 Karaka Crescent, Levin 5500
ZL2TBL Lott, A. G., 11 Poynter Street, Blenheim 7301
ZL2TBN Shennan, B. V., 31 Rossiter Avenue, Lower Hutt 6301
ZL2TBP Norgrove, A. E., 90 South Karori Road, Karori, Wellington 6005
ZL2TBQ Wills, R. E., 66 Park Road, Lower Hutt 6301
ZL2TBR Highman, R. E., Moutapu Bay, Mahau Sound, Marlborough, R.D. 2, Picton 7372
ZL2TBS Ward, L. A., 11 Pinny Avenue, Lower Hutt 6301
ZL2TBU Stevens, J. E. R., 48 Chesterton Street, Johnsonville, Wellington 6004
ZL2TBV Asteraki, D. L., 24 Chichester Drive, Silverstream, Upper Hutt 6402
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ZL2TBY Annand, R. C., 67 Joll Road, Havelock North 4201
ZL2TBZ Milsom, M. A., 1d Brora Crescent, Papakowhai, Porirua 6201
ZL2TCA Poulsen, J. M., 2/14 Monckton Street, Feilding 5600
ZL2TCB Dobbs, A. J., 14 Oaklands Grove, Upper Hutt 6401
ZL2TCC Brown, G. R., 28 John Street, Stokes Valley 6306
ZL2TCD Phillips, A. R. J., 5 Mount Street, Kelburn, Wellington 6005
ZL2TCE Taylor, I. L., 1 High Road, Hawera 4800
ZL2TCF Clifford, I. R., 4 Rothwell Street, Titahi Bay 6202
ZL2TCG Stipkovits, S. P., 76 View Road, Houghton Bay, Wellington 6003
ZL2TCH Coombridge, J. P., Merchant Road, Kaitoke 6401
ZL2TCJ Preston, R. T., 16b Witako Street, Lower Hutt 6301
ZL2TCK Taylor, T. J. A., 37 Riversdale Drive, New Plymouth 4601
ZL2TCL Lacey, J. D., 39 Poto Road, Lower Hutt 6301
ZL2TCM Downs, F. W. P., 58a Chatsworth Road, Silverstream 6402
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ZL2TCO Denton, S. B., 59 The Ridgeway, Stoke, Nelson 7001
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ZL2TCT McFarlane, P. H., 4 Lambley Road, Titahi Bay, Wellington 6202
ZL2TCU Milne, R. J., Chemistry Division, DSIR, Private Bag, Petone 6331
ZL2TCV Bennett, M. A., 95 Karaka Street, Wanganui 5001
ZL2TCX Ireland, K. J., 45 George Street, Levin 5500
ZL2TCZ Stratford High School Radio Club, (Trustee: P. Greenwood), P.O. Box 204, Stratford 4700
ZL2TDA Dawson, D. J., 4 Cohen Place, Milson, Palmerston North 5301
ZL2TDB Trim, G. J., 171 Stout Street, Gisborne 3801
ZL2TDC De Grey, S. J., 53 Iredale Road, Hawera 4800
ZL2TDD Clarke, T. R., 192 Helston Road, Paparangi, Wellington 6004
ZL2TDF Dicker, J. L., Wairmea West, R.D., Brightwater, Nelson 7151
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ZL2TDI Doney, P. A., 32 D'Arcy Road, Wanganui 5001
ZL2TDJ Cairns, K. D., 82 Maupuia Road, Miramar, Wellington 6003
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ZL2TDN Therkleson, G. L., 25 Marine Drive, Sorrento Bay, Eastbourne, Wellington 6304

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ZL2TDP Charles, C. F., 87 Pasedena Crescent, Totara Park, Upper Hutt 6401
ZL2TDQ Best, A. G., CIT Hall Of Residence, Private Bag, Heretaunga 6430
ZL2TDR Gilgrist, H. T., 183 Te Moana Road, Waikanae 6154
ZL2TDS Boyd, C. B., 39 Cuba Street, Palmerston North 5301
ZL2TDT Chandler, L. W., 14 Dittmer Street, Otaki 6171
ZL2TDU Walker, G. J., 4/35 Green Street, Tahunau, Nelson 7001
ZL2TDV Grover, D., P.O. Box 26-044, Newlands, Wellington 6030
ZL2TDW Devonport, B., Private Bag, Gisborne 3820
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ZL2TDZ Morrison, C. M. K., 63a Church Street, Devonport, Auckland 1309
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ZL2TFD Scott, W. M., 7 Kettle Avenue, Palmerston North 5301
ZL2TFG Crawley, W. G., 75 Somersett Road, Wanganui 5001
ZL2TFI Pickett, B. M., 7 Ruakaka Street, Hornby, Christchurch 8004
ZL2TFJ Pascoe, J. H., 31 Taupo Crescent, Plimmerton, Wellington 6251
ZL2TFN Rhodes, V., 46 Blagdon Road, New Plymouth 4601
ZL2TFO Brown, E. J., 6 Villa Place, Bell Block, New Plymouth 4602
ZL2TFP Blackley, L. C., 26 Kaitawa Crescent, Paraparaumu 6152
ZL2TFS Sears, M. E., 31 Ferry Road, Spring Creek, Marlborough 7350
ZL2TFT Stohr, F. A., 36a Pretoria Street, Lower Hutt 6301
ZL2TFV Etheridge, P. R., 6/184 Powderham Street, New Plymouth 4601
ZL2TFY Candy, D. O., 18b Cockburn Street, Onerahi, Whangarei 0101
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ZL2TGF Moore, T. E., 24 Normanby Street, Newtown, Wellington 6002
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ZL2TGY Jones, G. W., 100 Centennial Avenue, Waitara 4656
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ZL2TGM Meads, G. T., 12 Totara Terrace, Inglewood 4651
ZL2TGN Berry, R. M., 27 Hikanui Drive, Havelock North 4201
ZL2TGO Greenbank, R. J., 31 Somes Crescent, Newlands, Wellington 6004
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ZL2TGV Illingsworth, R. J., 178 Main Road, Tawa 6203
ZL2TGW Clifford, K. S., 46a Oxford Terrace, Lower Hutt 6301
ZL2TGX Morrison, J. F., 27 Mulgrave Street, Ashhurst 5451
ZL2TGY Spranger, K. J., 167 Barrett Road, New Plymouth 4601
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ZL2THI Marshall, D. W., 195 Egmont Street, Patea 5181
ZL2THJ Gill, T. B., 69 Cambria Street, Nelson 7001
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ZL2THN Osmond, C. M., 124 Tilley Road, Paekakariki 6151
ZL2THP Dewsnap, A. V., 30 Ruru Crescent, Heretaunga, Upper Hutt 6402
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ZL2THS Shaw, J. L., 13a Weatherly Place, Taradale, Napier 4001
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ZL2THU Cropp, I. E., 7 Blue Mountains Road, Silverstream 6402
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ZL2THW Muir, A. W., 1 Ridvan Grove, Ngaio, Wellington 6004
ZL2THX Blanchard, D. C., 13h York Crescent, New Plymouth 4601
ZL2THY McCarthy, W. S., 26 Bangor Avenue, Flaxmere, Hastings 4201
ZL2THZ Douglas, M. E., 44 Apuka Street, Brooklyn, Wellington 6002
ZL2TIA Clough, D. H., 3 Argyle Place, New Plymouth 4601
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
ZL2TII Prosser, R. H. C., 18 George Street, Rolleston 8004

- ZL2TIK Buchanan, I. A., Motuoapa, R.D. 2, Turangi 3371
 ZL2TIL Maxwell, D. M., 7 Plunket Avenue, Petone 6303
 ZL2TIM Lumsden, K. M., 19 Taohui Street, Papakura, Auckland 1703
 ZL2TIN Harwood, R. D., 187 Matai Road, Raumati Beach 6150
 ZL2TIO Barnes, P. E., 54 Brooker Grove, Newlands, Wellington 6004
 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
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 ZL2TJA Walker, A. L., Flat 3, 216 Annesbrook Drive, Nelson 7001
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 ZL2TJC Wakely, B., 1/3 The Ridgeway, Stoke, Nelson 7001
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 ZL2TJG Laing, I. J., "Longridge", Kaiwaiwai, 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
 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
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 ZL2TJT Schmidt, J. T., 9 Ponderosa Grove, Maoribank, Upper Hutt 6401
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 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
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 ZL2TKF Hodge, D. M., 19 King Street, Feilding 5600
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 ZL2TKI Sansom, I. M., see ZL2TKI
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 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
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 ZL2TLR Smith, B. W., 261a Riverside Drive, Lower Hutt 6301
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 ZL2TLV Dickson, M. P., Upper Hastings Road, R.D. 21, Stratford 4700
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 ZL2TLY Gunn, J. A., Main South Road, Manutahi 4800
 ZL2TLZ Donnell, A., 73 Ngaio Street, Waikanae 6154
 ZL2TMC Savory, M. O., 17 Zealand Street, Highbury, Wellington 6005
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 ZL2TME Jones, S. E., 38 Alfred Street, Nelson 7001
 ZL2TMF Saynor, E. K., 62 Kamahi Street, Stokes Valley 6306
 ZL2TMI Lili, V. E. R.D. 1, Plimmerton 6251
 ZL2TMJ Major, G. M., 7 Colonial Drive, Palmerston North 5301
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 ZL2TMM Hindley, J., 7 Kavanagh Place, Havelock 7371
 ZL2TMO Stewart, I. L., 5 Mandalay Flats, R.D. 9, Whangarei 0121
 ZL2TMS Pallesen, P. A., 808n Riverslea Road, Hastings 4201
 ZL2TMT Bondy, F., 24 William Street, Hataitai, Wellington 6003
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 ZL2TMZ Woodfield, N. C., 56 Sladden Street, Lower Hutt 6301
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 ZL2TNL Shearer, D. B., c/- 80 Noel Street, Cambridge 2351
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 ZL2TNN Dobson, H. M., 76 Valley Road, Gisborne 3801
 ZL2TNP McLachlan, I. M., 38 Ranfurly Street, Gisborne 3801
 ZL2TNQ Plowman, T. S., 141 Thompson Road, Napier 4001
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 ZL2TNT Scott, G. W., R.D. 4, Palmerston North 5321
 ZL2TNU Devon, D. R., 2 Tweed Street, Oamaru 8901
 ZL2TNW Earl, T. H., 148 Kelburn Parade, Wellington 6005
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ZL2UEW

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 Place, Hamilton 2001
ZL2UFM Lambert, A. C., 44 Strange Street, Waitara 4656
ZL2UFN Blide, 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 Myrtle Street, Omokoroa, R.D. 2, Tauranga 3021
ZL2UFS Kent, A. A., 5 Raymond Terrace, Lower Hutt 6301
ZL2UFU Herron, D. W., 46 Bauchop Road, Lower Hutt 6301
ZL2UFW Baldwin, T. N., 158 Raleigh Street, R.D. 42, Waitara 4556
ZL2UFY Whale, D. M., 4 Whakarrie Avenue, Westshore, Napier 4001
ZL2UFZ Shore, R. I., Sandspit Road, R.D. 2, Warkworth 1492
ZL2UGA Dunn, B. J., 23b Brooker Grove, Newlands, Wellington 6004
ZL2UGB Brenchley, G. C., 58 Diaz Drive, Flaxmere, Hastings 4201
ZL2UGC Clark, B. A., 15 Deller Drive, Carterton 5951
ZL2UGE Dodds, L. V., 28 Balliol Drive, Tawa 6203
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., 17a Pimlico Place, Newlands, Wellington 6004
ZL2UGM Thomson, B. J., 16 Victory Crescent, Tawa 6203
ZL2UGN Gregory, B., 6 Cobham Street, Levin 5500
ZL2UGP Pears, D. M., 173a Te Moana Road, Waikanae 6154
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
ZL2UGY Reisima, A. J., 31 Perry Street, Silverstream, Upper Hutt 6402
ZL2UHM Reardon, B. J., 10 Westway, Wanganui 5001
ZL2UIB Morrison, 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
ZL2UIL Davidson, M. W., 16 Worcester Street, Levin 5500
ZL2UIN Gregory, A., 6 Cobham Street, Levin 5500
ZL2UIO Mannerling, W. L., 4 Kirner Street, Burwood, Christchurch 8009
ZL2UIQ Baldwin, P. J., 12 Airedale Place, Wairara 4656
ZL2UIU Belchamber, M., 19a Pine Street, Gisborne 3801
ZL2UIV Candy, S. T. R., P.O. Box 56-072, Linden, Wellington 6230
ZL2UIY Baird, S. L. C., 8 Westra View, Tawa 6203
ZL2UJG Lowes, D. W., c/- D. McCormick, R.D. 3, Inwell, Leeston 8151
ZL2UJH Roberts, W. S., 188 Nikau Street, Hastings 4201
ZL2UJI Harvey, J. R., 801 Collinge Road, Hastings 4201
ZL2UJJ Newsom, J. R., 424 Huia Street, Hastings 4201
ZL2UJK Kyle, J. P., 807 Anson Street, Hastings 4201
ZL2UJL Riden, C. P., The Loop, Riverbend Road, Napier 4001
ZL2UJM Manuel, J. D., 24 Avenue Road, Napier 4001
ZL2UJN Sinclair, N. J., 8 Kapu Grove, New Plymouth 4601
ZL2UJP Robinson, P. H., 10b Barriball Street, New Plymouth 4601
ZL2UJQ Makawie, T. D. J., 27 Clifton Drive, Waitara 4656
ZL2UJR Rutherford, K. M., 3b Leaham Avenue, New Plymouth 4601
ZL2UJS Sinclair, J. J., 8 Kapu Grove, New Plymouth 4601
ZL2UJT Jury, N. J., 12 Aubery Street, New Plymouth 4621
ZL2UJW Warriner, J. R. K., 3 Christopher Way, Paparangi, Wellington 6004
ZL2UKC Knight, S. J., 22a Sussex Street, Levin 5500
ZL2UKD Fleming, T. A., R.D. 11, Foxton 5551
ZL2UKE Williams, J. P., 25a Ikalara Road, Wanganui 5001
ZL2UKF King, A., 2 Ferguson Street, Marlon 5151
ZL2UKG Leslie, G. M. (Mrs), 4 Reeve Street, Foxton 5551
ZL2UKI Chandler, H. B., 34 Keith Street, Palmerston North 5301
ZL2UKR Roberts, S. A., 84 Bell Street, Featherston 5952
ZL2UKS Prentice, N. C., 79 Nottingham Street, Karori, Wellington 6006
ZL2UKT Hughes, C. M., 741 High Street, Lower Hutt 6301
ZL2UKV Thompson, D. A., 87 Norton Park Grove, Lower Hutt 6301
ZL2UKX Hale, R. E., 23 Bellringer Crescent, Newlands, Wellington 6004
ZL2UKY Vowell, D. J., 7 Silverton Grove, Churton Park, Wellington 6004
ZL2UKZ Clapcott, P. J., 11 Trinidad Crescent, Grenada, Wellington 6006
ZL2ULB Martin, G., 5 Atherton Lane, Belmont, Lower Hutt 6301
ZL2ULC Newson, I. S., 9 Mercury Way, Whitby, Wellington 6253

ZL2ULD Lennox, B. T., 40 Kanpur Road, Broadmeadows, Wellington 6004
ZL2ULE Moore, P. R., 126 Orangi Kaupapa Road, Northland Wellington 6005
ZL2ULF Daley, B. K., 47 Chamberlain Road, Karori, Wellington
ZL2ULG Van Toorenburg, L. M. L., 48 Phillip Street, Johnson 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 Ely, J. M., 58 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
ZL2ULY Meffan, P. M., 125 Collingwood Street, Nelson 7001
ZL2UMD Smith, J. W., 256 Waiwhetu Road, Lower Hutt 6401
ZL2UMG Watkins, A. L., 36 Shearer Crescent, Naenae, Lower Hutt 6301
ZL2UMW Babbage, D. R., 27 Shirley Street, Karori, Wellington 603
ZL2UMY Davidson, B. J. C., 14 Sunnyview Drive, Brown Owl, Upper Hutt 6401
ZL2UNT Parker, P. G. (Mrs), 64 Pahiatua Street, Palmerston North 5301
ZL2UNW Roberts, B. G., 4 Glenahoy Crescent, Wellington 6004
ZL2UOL Levick, A. H., 17 Mascot Street, Tawa, Wellington 6203
ZL2USM Fox, A. C. K., 37 St John Terrace, Tawa, Wellington 6203
ZL2UTZ Rawding, D., 4 Shackle Lane, Whitby 6253
ZL2UWQ Storey, S. A., 113 Kahu Road, Parematā 6250
ZL2UYW Laybourn, R. A., 146 Pembroke Road, Northland, Wellington 6005
ZL2UXO Cars, G. R., 18 Birch Place, Wanganui 5001
ZL2UYG Hand, G. P. O. Box 54-216, Parematā 6251
ZL2UYH Gusscott, N., 4 Penrose Street, Lower Hutt 6301
ZL2UZF Davies, K. N., 911a Outrun Road, Hastings 4201
ZL2VAF Newson, J. R., 424 Huia Street, Hastings 4201
ZL2VAG Gentles, D. M. A. (Mrs), 298a Kennedy Road, Napier 400
ZL2VAH White, G., 807 Kowhai Street, Hastings 4201
ZL2VAL Hawtree, V. (Mrs), 50 Fox Road, Wanganui 5001
ZL2VAQ Sargisson, M. D., 18 Seddon Street, Feilding 5600
ZL2VAR Anderson, G. A., Loop Line, R.D. 1, Masterton 5921
ZL2VAS Kessell, D. A., 115 Amberley Avenue, Palmerston North 530
ZL2VAT Clayton, A. C., 9 Plymouth Street, Palmerston North 530
ZL2VAU Heilberg, D. J., Norfolk Road, R.D. 1, Carterton 5951
ZL2VAV Hawtree, N. R., 50 Fox Road, Wanganui 5001
ZL2VAW Waghorn, E. D., 131 North Street, Feilding 5600
ZL2VAX Fleming, P. A., State Highway One, R.D. 11, Foxton 5551
ZL2VAY Wild, D. A. (Ms), 18 Birch Place, Wanganui 5001
ZL2VAZ Bonnington, S. K. (Miss), Arapaepae Road, R.D. 1, Levin 5500
ZL2VBA Brown, P. W., 45 Heta Road, New Plymouth 4601
ZL2VBB Vivian, B., 44c Cumberland Street, New Plymouth 4601
ZL2VBC Rosewarne, C. C., 83 Manawapou Road, Hawera 4800
ZL2VBE Gulliver, C., 39 Parris Street, Waitara 4656
ZL2VBF Cattermole, G. R., 15 York Street, Motueka 7161
ZL2VBG Crudge, M. R., 94 King Edward Street, Motueka 7161
ZL2VBH Holdaway, M. C., 19a Lane Street, Blenheim 7301
ZL2VBI Allan, G. (Mrs), 20a Courtney Street, Motueka 7161
ZL2VBJ Bromley, S. J. (Mrs), 9 Archer Place, Westport 7601
ZL2VBL Packer, D. W., 12 James Place, Richmond 7002
ZL2VBM Mattsen, R. A. (Miss), 422 High Street, Motueka 7161
ZL2VBO Goodger, G. W., 5 Dodson Road, Takaka 7172
ZL2VBT Kemsley, T. R., 100 Pitcairn Street, Oakura 4650
ZL2VCI Bromley, A. J. (Miss), 127 Vanguard Street, Nelson 7001
ZL2WEG Wellington East Girls College, Mt Victoria, Wellington 6001
ZL2KY Cliff, M. A., 31 Ruapehu Street, Wanganui 5001

ZL3 Callsigns

ZL3AC	Christchurch Branch NZART (Inc.), see Branch Directory
ZL3AD	Donehue, W. R., No. 1 R.D., Timaru 8621
ZL3AE	Festing, D. A., Main Road, Oxford, North Canterbury 8353
ZL3AF	Ashburton Branch NZART (Inc.), see Branch Directory
ZL3AG	Roberts, G. C., 59 Thomson Street, Ashburton 8300
ZL3AH	Jones, D. L., 53 Wales Street, Halswell, Christchurch 8003
ZL3AI	Fraser, D. J., Glenmark Street, Waipara 8270
ZL3AJ	McDonald, K. R., 44 Inwoods Road, Christchurch 8009
ZL3AK	Sandford, G. G., Flat 3, 44 Peel Street, Geraldine 8751
ZL3AL	Smythe, G. C., 300 Withells Road, Christchurch 8004
ZL3AM	Kirk, R. E., 43 Dover Street, Christchurch 8001
ZL3AN	Duff, B. F., 30 Frensham Crescent, Christchurch 8006
ZL3AO	Bell, M. W., 203 Weston Road, Christchurch 8005
ZL3AP	Whitfield, S. J. N., 48 Hawthornden Road, Avonhead, Christchurch 8004
ZL3AR	Whyte, B. T., 17 Cambridge Street, Ashburton 8300
ZL3AS	Sams, C. G. A., 80 Straven Road, Christchurch 8001
ZL3AT	Mahoney, M. F., 23 Holmwood Road, Christchurch 8001
ZL3AU	Dekker, P., Albany Heights Road, R.D. 2, Albany 1331
ZL3AW	Phillips, M. A., 168 Esplanade, Kaikoura 7351
ZL3AX	Tillman, N. W., 45c Main Road, Redcliffs, Christchurch 8008
ZL3AY	Mason, G. E., Mason's Flat, Hawarden 8274
ZL3AZ	Rayner, D. A., 23 Waitohi Street, Christchurch 8004
ZL3BB	Gray, G. W., 125 Highcliff Road, Shiel Hill, Dunedin 9001
ZL3BC	McFarlane, C. A. (Miss), 43 Division Street, Christchurch 8004
ZL3BD	Ludwig, M., 105 Beachville Road, Christchurch 8008
ZL3BE	Christchurch Boys' High School Radio Club, (Trustee: ZL3TX), P.O. Box 8157, Riccarton, Christchurch 8034
ZL3BF	Salt, J. S., 6 Leslie Street, Upper Riccarton, Christchurch 8004
ZL3BG	Hirning, L. C., 23 Coopers Road, Shirley, Christchurch 8006
ZL3BH	Bowman, G. R. B., 158 Revell Street, Hokitika 7900
ZL3BI	Brice, K. L., 18 College Avenue, Christchurch 8005
ZL3BJ	Hunter, L. C., 42 Stanton Crescent, Christchurch 8002
ZL3BK	Halliburton, G. A., 6 Barlow Street, Christchurch 8004
ZL3BL	Holland, B. N., 75 Blankney Street, Christchurch 8004
ZL3BM	Cook, D., 40 Mays Road, Papanui, Christchurch 8005
ZL3BN	Sim, G. W., 47 Teesdale Street, Christchurch 8005
ZL3BO	King, M. R., 126 Fox Street, Gisborne 3801
ZL3BP	Mountford, T. G., 2/207a Otipua Road, Timaru 8601
ZL3BQ	Urlwin, A. J. (Mrs), 30 Ryeland Avenue, Christchurch 8004
ZL3BR	White, M. G., Mangawhero Road, P. O. Box 62, Eltham 5 4751
ZL3BS	Tweedie, S. B., 167 Wales Street, Oaklands, Christchurch 8003
ZL3BT	White, E. I., 5 Clementine Lane, Christchurch 8008
ZL3BU	McNeill, E. D., 43b Bowenvale Avenue, Christchurch 8002
ZL3BV	Schaeff, L. M., 10 Bridge Street, Greymouth 7801
ZL3BW	Burt, G. L., 114 Marsden Road, Greymouth 7801
ZL3BX	Patrick, B. L., 1 Kanuku Place, Cashmere, Christchurch 8002
ZL3BY	Halford, B. B., 37 McHardie Street, Wallaceville, Upper Hutt 6401
ZL3BZ	Johnson, C., 10 Harris Street, Pleasant Point 8772
ZL3CA	Sandford, T. W., Unwin Road, Orton R. D. Temuka B752
ZL3CB	Newton, B. A. (Mrs), 172 Bridie Path Road, Christchurch 8002
ZL3CC	Crosby, K. G., 175 Trevors Road, Ashburton 8300
ZL3CD	Smillie, J. W., 7 Barnes Street, Timaru 8601
ZL3CE	Hewson, J. N., 8 Dunns Avenue, Pines Beach, Kaiapoi 8252
ZL3CF	Lec, C. P., 6 Haycock Avenue, Mt Roskill, Auckland 1004
ZL3CG	Silverwood, K., 12 Banbury Street, Waimangaroa 7650
ZL3CI	Isherwood, B., 134 Park Street, Hokitika 7900
ZL3CK	Seay, M. R., 4 Mt Royal Avenue, Mt Albert, Auckland 1003
ZL3CL	McKay, A. D. G., 2 Cedars Street, Christchurch 8002
ZL3CM	Burrell, K. M., 5 Jacaranda Grove, Maungaraki, Lower Hutt 6301
ZL3CN	Mantell, G. N., 2/47a Tilford Street, Christchurch 8006
ZL3CO	Wylie, P. B., 101 Englefield Road, Belfast, Christchurch 8005
ZL3CS	Downer, G. H., Larcombs Road, No. 5 R.D., Christchurch 8021
ZL3CT	Bennett, R. S., 67 Aronui Road, Alexandra 9181
ZL3CU	Moffatt, S. Z., 33 Bidwell Street, Timaru 8601
ZL3CV	Gilligan, M. S. J., 368 Barrington Street, Christchurch 8002
ZL3CX	Emerson, T. C., 40b Derwent Crescent, Titirangi, Auckland 1003
ZL3CY	Hutchison, D. E., 44 Hawthornden Road, Christchurch 8004
ZL3DB	Buschl, B. D., c/- Sorenson, 62 Shortland Street, Christchurch 8006
ZL3DC	Grindrod, R. J., 5 Macrocarpa Place, Ranui, Auckland 1208
ZL3DD	Mitchell, A. R., 55 Shoreham Street, Blockhouse Bay, Auckland 1207
ZL3DE	Hawes, S. C., Timaru Hospital, Timaru 8630
ZL3DF	Yoeman, J. C., 110 Bristol Street, Christchurch 8001
ZL3DG	Hood, N. D., 47a Aorangi Road, Christchurch 8005
ZL3DH	Hardie, W. S., 245a Harewood Road, Christchurch 8005
ZL3DI	Tylee-Porter, G. J., Crossgates Farm, Cryers Road, Southbridge, R.D. 3, Christchurch 8150
ZL3DJ	Gill, M. E., River Road, Greenpark, R.D. 2, Christchurch 8021
ZL3DK	Walker, D. J., 36 Ardrossan Avenue, Flaxmere, Hastings 4201
ZL3DP	Meikle, B., 3 Tyne Street, Mosgiel 9007
ZL3DR	Godfrey, R. J., Main South Road, R. D. 2, Kaikoura 7351
ZL3DS	Brewster, D. W., 860 Avonside Drive, Christchurch 8006
ZL3DT	Searle, G. G., c/- Post Office, Hokitika 7900
ZL3DV	Jefferys, E. W., 15 Kingsgate Place, Christchurch 8005
ZL3DW	Edward, L. N. M., 45d Glenarrow Avenue, Christchurch 8004
ZL3DX	McGee, W. H., 11 Glenavon Place, Christchurch 8004
ZL3DY	Firman, R. K., 181 Morgans Road, Timaru 8601
ZL3DZ	Thomson, G., 2 Nayor Street, Waimate 8791
ZL3FB	Schroeder, W. F., The Vicarage, 8 Roxburgh Street, Christchurch 8002
ZL3FC	Guthrie, M. W., 74 Merivale Lane, Christchurch 8001
ZL3FD	Pollard, J. P. W., 363 Hills Road, Christchurch 8001
ZL3FF	Kelly, I. J. H., 7 Tuirau Place, Ilam, Christchurch 8004
ZL3FG	O'Neill, J. J., 26 McBratneys Road, Christchurch 8006
ZL3FH	Francis, C. G., 6 Pratt Street, New Brighton, Christchurch 8009
ZL3FJ	Brown, D. A., 62 Hudson Street, Christchurch 8005
ZL3FK	Heppburn, L. D., 22 Gwynfa Avenue, Christchurch 8002
ZL3FL	Cox, W. F., 55 Daniels Road, Christchurch 8005
ZL3FM	Campbell, R. J., 3 Shamrock Place, Christchurch 8003
ZL3FN	Wilson, R. J., 11 High Street, Greymouth 7801
ZL3FO	Blackmore, J. H., 364 Riverlaw Terrace, St. Martins, Christchurch 8002
ZL3FP	Kyle, E. A. J., 12a Mountfort Street, Christchurch 8002
ZL3FQ	Hamlin, J. H., 26 Brabourne Street, Christchurch 8002
ZL3FR	Nixon, M. A., 10 Dulles Place, Papanui, Christchurch 8005
ZL3FS	Seed, D. P. (Mrs), 831 Cashmere Road, Halswell, Christchurch 8003
ZL3FT	Clapham, T. S., 31 Ronaldsay Street, Palmerston 9161
ZL3FU	McPhail, T. K., 7 Ostend Place, Christchurch 8004
ZL3FV	McCracken, W. D., 14 Northcote Road, Papanui, Christchurch 8005
ZL3FW	O'Brien, J. R., 508 Marine Parade, Christchurch 8007
ZL3FX	McSherry, O. E., 50 Napier Road, Havelock North, Hawkes Bay 4201
ZL3FY	Gardner, R., 62 Palatine Terrace, Christchurch 8002
ZL3FZ	Fraser, B. H. L., 113 Beresford Street, Christchurch 8007
ZL3GA	Allan, N. J., 11 Longmuir Street, Christchurch 8004
ZL3GB	Cronin, D. W., 86 St. Martins Road, St. Martins, Christchurch 8002
ZL3GC	Baker, D. M., c/- Mr J. McGlashan, P.O. Box 557, Timaru 8600
ZL3GD	Kingan, S. G., c/- Mrs R.M. Hewson, R.D. 8, Anama, Ashburton 8300
ZL3GE	Welford, A. R., 12 Devon Street, Timaru 8601
ZL3GF	Boot, W. A., 145 South Bay Parade, South Bay, Kaikoura 7351
ZL3GI	Halliburton, G. J., 6 Barlow Street, Fendalton, Christchurch 8004
ZL3GJ	Reynolds, A. E., 117 Roker Street, Christchurch 8002
ZL3GK	Richardson, T. C. W., 7 Kamahi Place, Paroa, Greymouth 7870
ZL3GL	Philips, R. J., 11 Benارد Place, Christchurch 8002
ZL3GM	Pimm, O. W., 59a Dunbarton Street, Redwood, Christchurch 8005
ZL3GN	Dacombe, A. N., 33a Huntsbury Avenue, Christchurch 8002
ZL3GO	Scott, T. R., Ruapuna, No. 5 R.D., Ashburton 8300
ZL3GP	Middlemiss, P. G., 17 De Bloge Place, Christchurch 8006
ZL3GQ	Watson, P. W., Hamptons Road, R. D. 4, Christchurch 8021
ZL3GR	McInnes, D. C., 72 Westgrove Avenue, Christchurch 8004
ZL3GS	Wright, G. M., 25 Dunedin Street, Redwood, Christchurch 8005
ZL3GT	Somerville, J. H., 14 Park Lane, Timaru 8601
ZL3GV	Kerdeleidis, T., Flat 1, 421 Worcester Street, Christchurch 8001
ZL3GW	Searle, V., 7 Whitcombe Terrace, Hokitika 7900
ZL3GX	Chapman, A. S., 7 Dellow Place, Christchurch 8002
ZL3GY	Morgan, D. K., 6a Mendip Place, Christchurch 8005
ZL3GZ	Smith, H. E., North Street, Clinton 9251
ZL3HA	Arnold, H. F., 29 Cornwall 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 Tosswill 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., 2/112 Avonside Drive, Avondale, Christchurch 8006
- 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., 259 Williams Street, Kaiapoi 8252
- 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 26-034, Christchurch 8030
- ZL3IJ Inglis, J. M., 288 Estuary Road, Christchurch 8007
- ZL3IL Wooding, M. G., 374 Rushine Street, Palmerston North 5301
- ZL3IM Sullivan, J. T., 34 Rollesby Street, Christchurch 8002
- ZL3IN Cox, R. (Dr), 304 Papanui Road, 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
- ZL3IX Hope, G. M., 17 Colchester Crescent, Newlands, Wellington 6004
- ZL3IY 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 Kullenberg, P. H., 45 Farrelly Avenue, Mt Roskill, Auckland 1004
- ZL3JE Stewart, D. A., 33 King Street, Pareora 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 Cuthberts 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., 88 Chalmers Avenue, Ashburton 8300
- ZL3JM Bennett, P. W., Te Araroa, Station Road, Temuka 8752
- ZL3JN Mummary, 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., 127 Summervale Drive, Christchurch 8008
- ZL3JV MacGeorge, B. A., 9 Opie Street, Waimate 8791
- ZL3JX Rowlands, T. E., "Ruthin", 419 Tram Road, Clarkville, 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
- 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 Hellyer, 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 Bentley Street, Christchurch 8004
- ZL3KU Waters, K. A., 17 Ormond Road, Napier 4001
- ZL3KV Brown, H. H., 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 Slackhouse 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. (Rev), Chaplains Office, RNZAF Base Chakea, Private Bag, Palmerston North 5320
- ZL3LK McGowan, J. S., 2 Rhodesvale Terrace, Christchurch 8002
- ZL3LL Leadley, J. M. (Mrs), Dromore, R.D. 2, Ashburton 8300
- ZL3LM Burrell, N. W., 209 Ilam Road, Christchurch 8004
- ZL3LN Penney, V. J., 16 Derrett 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., P.O. Box 11-273, Sockburn, Christchurch 8030
- 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 Urwin, R. A., 30 Ryeland Avenue, Fendalton, 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
- 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 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., 10 Clotilda Place, Christchurch 8005
ZL3NS	Ositis, 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
ZL3NX	Edgar, M. M., 16 St Clio Street, Ilam, Christchurch 8004
ZL3NY	Stapley, G. P., 220 Opawa Road, Christchurch 8002
ZL3OA	MacDonald, B. A., 221 Middle Road, Ashburton 8300
ZL3OC	Horne, 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., 401a Barrington Street, 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., 34 Panorama Road, Christchurch 8008
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
ZL3PP	Crichton, R. J., 98 Estuary Road, Christchurch 8007
ZL3PR	Petersen, C. M., 51 Derby Street, Westport 7601
ZL3PS	Davidson, F. W., 25 Sledmere Street, Bryndwr, Christchurch 8005
ZL3PT	Douglas, J. C. (Miss), "Giggleswick", Seymour Street, Millerton 7650
ZL3PV	Walker, W., Springfield, 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., 1 Talaro Place, 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 Menlo 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., Egans Road, R.D. 1, Rangiora 8254
ZL3QP	Spencer, R. D., Weeds 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
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	Pumpa, 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
ZL3RL	Tunncliffe, D. N., P.O. Box 56-402, Auckland 1003
ZL3RN	Yeates, D. R., 69 St. Andrews Hill Road, St. Andrews Hill, Christchurch 8008
ZL3RO	Walsh, G. J., 37 Edith Street, Fairfield, Dunedin 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 Cotswool 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 Martbarn Crescent, Christchurch 8005
ZL3SH	Hardie, S. R., 245a Harewood Road, 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., 222 Esplanade, Kaikoura 7351
ZL3SN	Oldham, J. E., 40 Russell Street, Westport 7601
ZL3SO	Kilkelly, 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., c/- Air New Zealand, Private Bag, Auckland 1030
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, R.D. 12, Timaru 8621
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 8006
ZL3TG	Copland, G. M., 11 Peel Street, Christchurch 8005
ZL3TH	Gould, P. N., No. 10 R.D., Wimate 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 8009
ZL3TU	Sharnock, M. A., 6 Ashby Place, Christchurch 8005

ZL3TV

ZL3TV Ching, W. M., 47 Leeston Street, Ashburton 8300
ZL3TW Riley, T. R., 20 Rearby Drive, Halswell, Christchurch 8003
ZL3TX Strong, W. S., 20c Hackthorne Road, Christchurch 8002
ZL3TY McQuarrie, R. J., Weenink Road, Greymouth 7801
ZL3TZ Rio, N. N., 14 Gunson Street, Ponsonby, Auckland 1001
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 McConnachie, M. E., 117 Caledonian Road, St Albans, Christchurch 8001
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 Dormer Street, Christchurch 8005
ZL3UL Smith, A. F., 39 Wesley Street, Kaiapoi 8252
ZL3UP McNicholl, M. W., 4 Corfe Street, Christchurch 8004
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 Connroy, H., 51 Bellbrook Crescent, Shirley, Christchurch 8001
ZL3UX Vinc.ent, 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
ZL3VE No.36 (A.T.C.) Squadron Radio Club, Army Hall, Gresson Street, Greymouth 7801
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., Seafield, 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, Linc.ohn 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, Linc.ohn 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
ZL3WP Buller High School Radio Club, Westport 7601
ZL3WQ Mackey, C. J., 1 Camp Street, Ahaura 7850
ZL3WR Martin, V. E., 867 Ferry Road, Woolston, Christchurch 8002
ZL3WS Tombling, F., 10 Crofton Road, 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 8006
ZL3WZ Lewitt, D. W., Miners Arms Road, Old West Coast Road, R.D. 8, 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
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 Wathe, S. R., 487 Greers Road, Papanui, Christchurch 8005
ZL3AAL Vinc.ent, 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., 84 Wakefield Street, Westport 7601
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., 7 Kenwyn 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. I., 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 Mauder, H. B., 23 Buchanan's 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., 21b 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., 36 Sheffield Crescent, Christchurch 8005
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 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., 59 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., 10 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 Belt, Rangiora 8254
ZL3ADS	Squire, D. D., Waiohi, 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	Wylks, 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., 11 Ridgeway Place, Hamilton 2001
ZL3APP	Smith, D. L., 53 Farquhar's Road, Redwood, Christchurch 8005
ZL3AQF	Duxbury, I. N., 99 Maidstone Road, Christchurch 8004
ZL3AFR	Burke, J. P., 246 Main North Road, Redwood, Christchurch 8005
ZL3AFS	Pearcy, 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
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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	Whillay, T. J., 260 West Belt, Rangiora 8254
ZL3AGK	Lucas, T. H., 8 Willyan Avenue, Christchurch 8009
ZL3AGL	SInclair, S., 54 Withills Road, Avonhead, Christchurch 8004
ZL3AGM	Jackson, B. A., 22 Guadeloupe Crescent, Granada Village, Wellington 6004
ZL3AGN	Vuleta, M. S., 19 Aviemore Street, Timaru 8601
ZL3AGO	McManus, T. C., Maungatani, 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., 16 Gascoigne Street, Blenheim 7301
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
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ZL3AIB	Timms, R. C., 238 Ilaro Road, Christchurch 8004
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ZL3AIT	Allan, L. R., 45 Pine Avenue, Christchurch 8007
ZL3AIX	Tillman, E. S., 15 Grimseys Road, Christchurch 8005
ZL3AJC	Strachan, J. H., 41 New Brighton Road, Christchurch 8006
ZL3AJE	Robbins, D. J., 66 Acacia Avenue, Christchurch 8004
ZL3AJK	Jenkins, R. M., 62c Rocking Horse Road, Christchurch 8007
ZL3AJW	Wilds, J. R., 32 Bay View Road, Cass Bay, Lyttelton 8012
ZL3ARM	Maher, R. H., 172e Rockinghorse Road, Christchurch 8007
ZL3ATP	Pringle, A. T.
ZL3DAA	Johnson, D. A., 16 Romilly Street, Westport 7601
ZL3DAD	Hansen, C. A., 6 Greenfield Street, Hector, Buller 7650
ZL3LCO	Blocksgate, D. J., 31 Woodville Road, Linwood, Christchurch 8006
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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
ZL3NAS	Smith, W. E., 9 Wolsey Place, Hillmorton, Christchurch 8002
ZL3NAT	Boyes, D. G., 6 Marshall Street, Christchurch 8002
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ZL3TAC	Collins, B. A., 43 Martbern Crescent, Christchurch 8005
ZL3TAD	Cullen, L., 46 Wilton Crescent, Christchurch 8005
ZL3TAF	Taege, B. S., 23 Holderness Place, Avonhead, Christchurch 8004
ZL3TAG	Down, S. J., 219 Grahams Road, Christchurch 8005
ZL3TAI	Grandiek, J. N., 255 Main South Road, Christchurch 8004
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ZL3TAK	Woods, A. K., 6 Waipa 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. A., 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
ZL3TAU	MacPherson, G. D. (Mrs), 27 Dunbarton Street, Redwood, Christchurch 8005
ZL3TAV	Parr, W. B., 16a Wildberry Street, Christchurch 8002
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., 34 Massey Crescent, Christchurch 8001
ZL3TBD	Symonds, A. C., 19 Stiles Place, Burwood, Christchurch 8006
ZL3TBE	Pritchard, D. V., c/- Recreational Res, Dunroon 8950
ZL3TBG	O'Neill, T. J., 89 Pages Road, Christchurch 8006
ZL3TBH	Osborne, R. R. W., c/- Camp David R.D. 3, Waipara 8270
ZL3TBM	Baird, K. A., 1 Brenchley Avenue, Christchurch 8005
ZL3TBO	Love, G. T., 171 Main Road, Amberley 8251
ZL3TBP	Tapp, B. S., 8 Kitchener Place, Christchurch 8002
ZL3TBQ	Evans, J. S., 11 Eros Place, Christchurch 8009
ZL3TBR	Johnstone, D. E., 291 Burwood Road, Christchurch 8009
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ZL3TBT

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,
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 ZL3TBZ Barker, H. J., 900 Lower Styx Road, Christchurch 8009
 ZL3TCF Knewstubb, F. R., 219b Beach Road, Christchurch 8009
 ZL3TCC Norris, T. P., 60 Peer Street, Christchurch 8004
 ZL3TCD McMahon, D. D., 15 Harling 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
 ZL3TCP Parish, I. J., 2 Hislop Street, Geraldine 8751
 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
 ZL3TCX Brewerton, T. R., 169 Buller Road, Reefton 7853
 ZL3TDA Tapp, S. J., 8 Kitchener Place, Opawa, Christchurch 8002
 ZL3TDB Milne, O. D., 12 Stanley 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
 ZL3TDH Clark, N. L., 37 Radbrook Street, Christchurch 8004
 ZL3TDI Teller, P. B., 39 Liverton Crescent, Bishopdale,
 Christchurch 8005
 ZL3TDJ Beazley, D. A., Punga Grove, Hans Bay, Lake Kaniere 7950
 ZL3TDK Emmett, B. A., 1/76 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, Kelso, Lower Hutt 6301
 ZL3TFA Hall, B. W., 27 John Street, Temuka 8752
 ZL3TFC Dalton, T. P., Governors Bay Road, Cass Bay, R.D.,
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 ZL3TFD Rhodes, D., Rapaki, P. O. Box 44, Lyttelton 8033
 ZL3TFF 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., 10 Alpers Place, Hillmorton, Christchurch 8002
 ZL3TFK Weir, R. G., 64a Selwyn Street, Somerfield,
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 ZL3TFM MacFarlane, M. J., 35 Manor Place, Christchurch 8005
 ZL3TFN Wood, K. L. B., 162 Luckens Road, West Harbour,
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 ZL3TFO Slubberfield, J. M., 138 Rutland Street, Christchurch 8005
 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,
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 ZL3TFV Brookes, 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,
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 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 Windellburn, W. A., 2/401 Hereford Street, Christchurch 8001
 ZL3TGI Hunter, M., 111 Racecourse Road, Ashburton 8300
 ZL3TGJ Cherry, W. D., 131 Rose Street, Somerfield,
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 ZL3TGL Van Lindt, R., 4 Westby Street, Christchurch 8002
 ZL3TGM Flecknoe, G. A., 6 Kyeburn Place, Christchurch 8004
 ZL3TGN Richardson, G. R., 127 Rimu Street, Hamilton 2001
 ZL3TGP Parkyn, P. R., 86 Rahera Street, Christchurch 8002

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 ZL3TGU Bissland, D. J., 12 Highgate Avenue, Christchurch 8001
 ZL3TGV Winslade, R. H., 15 Hunt Street, Timaru 8601
 ZL3TGX Hart, A. R. K., 11 Hampton Road, Christchurch 8005
 ZL3TGY Henry, D. H., 34 Alexandra Street, Christchurch 8001
 ZL3TGH Streeter, T. J., 77 View Road, Invercargill 9501
 ZL3THI Moyle, C. M., 58 Clyde Road, Christchurch 8004
 ZL3THB Cree, R. A., 18 Woolley Street, Christchurch 8006
 ZL3THD Clayton, R. C., 45 Liverton Crescent, Christchurch 8005
 ZL3THE Bartlett, K. E., 24 Eastons Road, Westport 7601
 ZL3THG Keeley, L. J., 23 Wills Street, Ashburton 8300
 ZL3THH Smith, G. R., 110 Pages Road, Christchurch 8008
 ZL3THI Wealeans, G. A., 37 Eglington Street, Christchurch 8007
 ZL3THJ Philpott, J. W., 46 Kimberley Street, Christchurch 8005
 ZL3THK Errington, G. S., 9 Kitearoa Place, Christchurch 8002
 ZL3THL Hillary, D. N., 84 Isleworth Street, Christchurch 8005
 ZL3THM Sandford, N. D. O., 45 Torrens Road, Hillmorton,
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 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 Merlin Crescent, Governors Bay,
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 ZL3THS Taylor, P. J. (Ms), 41 Dunn Street, Somerfield,
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 ZL3THX Ferriss, A. E., 50 Marriner Street, Christchurch 8008
 ZL3THZ Barron, A. D., 124 St. James Avenue, Christchurch 8005
 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,
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 ZL3TIF Bryant, H. G. H., 129 Scarborough Street, Kaikoura 7351
 ZL3TIG McNeill, R. G., 39 Hackthorne Road, Christchurch 8002
 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
 ZL3TIM Van Garderen, J., 21 Greta Place, Christchurch 8002
 ZL3TIO Stewart, P. G. C., 76 Patten Street, Christchurch 8006
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 ZL3TIS Donnelly, E. J., 249 Bower Avenue, Christchurch 8009
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 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
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 ZL3TJJ Ward, A. J., 178 Bridle Path Road, Christchurch 8002
 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 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 Whifield, B. W., 101 Soleares Avenue, Mt. Pleasant,
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 ZL3TJT Nicol, J. R., 10 Lochee Street, Christchurch 8004
 ZL3TJU McConnell, M. M., Orchard Reserve, 111 Gardeners Road,
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 ZL3TJX Laughton, T. J., 43 Rowley Avenue, Hoon Hay,
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 ZL3TKB Bryenton, W. D., 16 Aldersley Street, Christchurch 8001
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ZL3TKI	Empson, T. M., 53 McKenzie Avenue, Christchurch 8002
ZL3TKJ	Forsythe, L. J., 65a East Belt, Linc.ohn 8152
ZL3TKK	Johnston, A. R., R.D. 11, Rakaih 8355
ZL3TKM	Cox, A. R., 54 Hawkesbury Avenue, St.Albans, Christchurch 8001
ZL3TKP	Gardiner, I. D., 29 Kellys Road, Christchurch 8005
ZL3TKQ	McInnes, G. W., 96 Domain Terrace, Christchurch 8002
ZL3TKR	Dwyer, D. S., 15 Cygnet Street, Christchurch 8009
ZL3TKS	Thomas, A. J., DSIR Physical Sciences Div, Lauder, Dunedin 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, Linc.ohn 8152
ZL3TLB	Crawford, C. R., 81 Baldray Street, Christchurch 8004
ZL3TLC	Bettridge, C. M. (Mrs), 81 Pine Avenue, South Brighton, Christchurch 8007
ZL3TLD	Dore, B. L., 66a Cottonwood Street, Parklands, Christchurch 8009
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
ZL3TLL	Sullivan, M. T. D., 115 Middle Road, Ashburton 8300
ZL3TLM	Mills, M. D., 87 Wattle Drive, Christchurch 8009
ZL3TLN	Digby, C. M. (Mrs), 4 Norfolk Street, Christchurch 8005
ZL3TLO	McCombs, J. D., P.O. Box 2708, Christchurch 8000
ZL3TLP	Butler, P. K., 165 Springs Road, Hornby, Christchurch 8004
ZL3TLQ	Harrall, E. D., 90 Gayhurst Road, Dallington, Christchurch 8006
ZL3TLR	Lee, P. B., 23a Salford Avenue, Christchurch 8005
ZL3TLS	Richards, P. D., 28 Malcolm Avenue, Christchurch 8002
ZL3TLT	James, K. D., 442 Pinehill Road, Dunedin 9001
ZL3TLU	Chapman, R. C., 16 Rudleigh Avenue, Ilam, Christchurch 8004
ZL3TLV	Chapman, B. K. (Mrs), 16 Rudleigh Avenue, Ilam, Christchurch 8004
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., 19 Woodhouse Street, Christchurch 8006
ZL3TMF	Wilson, J. O., 9 Merton Street, Hobsonville, Auckland 1450
ZL3TMG	Davidson, F. W., 24 Roberts Road, Christchurch 8004
ZL3TMH	Hutchison, B., Old West Coast Road, R.D. 6, Christchurch 8021
ZL3TMI	Wilson, D. A., 17 Balthurst Street, Ashburton 8300
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 Caroli Crescent, Pakuranga 1706
ZL3TMT	Sullivan, B., 78 Browns Road, Christchurch 8001
ZL3TMV	Nicholls, P. J., 33 Seven Mile Road, Runanga 7854
ZL3TMY	Payne, D. W., 204 Rutland Street, Christchurch 8005
ZL3TN	Andrew, E. D. B., 448b Harewood Road, Bishopdale, Christchurch 8005
ZL3TNE	Egan, P. D., see overseas members
ZL3TNG	Hulston, G. F., 4 Kaitangata Crescent, Kelso, Lower Hutt 6301
ZL3TNH	Drowley, C. A., 15 Moonstone Grove, Upper Hutt 6401
ZL3TNI	Sinclair, L. C., 28 Palmside Street, Spreydon, 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., 55 McBeath Avenue, Christchurch 8002
ZL3TNN	Hughes, G. A. (Mrs), 10 Bainton Street, Christchurch 8005
ZL3TNO	Anlman, B. L., 1/21 England Street, Linwood, Christchurch 8001
ZL3TNS	Clay, P. D., 5 Appleby Highway, Richmond, Nelson 7002
ZL3TNT	Fraser, A. L. (Mrs), P.O. Box 48, Waipara 8270
ZL3TNV	King, J. H., 33 Eversham Crescent, Spreydon, Christchurch 8002
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., Peter 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 Wittys 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	Fordyne, 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
ZL3TOK	Wilds, J., 32 Bay View Road, Cass Bay, Lyttelton 8033
ZL3TOM	Moates, C. M. G., Private Bag, Parakao, Whangarei 0250
ZL3TON	Roy, E., 106 Hills Road, Christchurch 8001
ZL3TOO	Sullivan, C. D., 14 Blidwell 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
ZL3TP1	Parry, D. G., 18 Sunvale Terrace, Cashmere, Christchurch 8002
ZL3TP0	Turnbull, P. D., 21 Earl Street, Johnsonville, Wellington 6004
ZL3TPQ	Whittam, J. S., 8 Bevington Street, Avonhead, Christchurch 8004
ZL3TP1	Thompson, B. N., 172 Kilmore Street, Christchurch 8001
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, Naenae, 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	Greatbanks, 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
ZL3TQN	Strachan, J. W., 13 Rimu Street, Timaru 8601
ZL3TQX	Slater, S. E., 135 Summervale Drive, Christchurch 8008
ZL3TRB	Brace, A. J., 14 Queen Street, Westport 7601
ZL3TRC	McLaughlin, P. T., 42 Domett Street, Westport 7601
ZL3TRG	Genet, R., c/- NZ Post, Kaniere, Hokitika 7950
ZL3TRH	Anderson, B. M., House 3, Seaview Hospital, Hokitika 7900
ZL3TRI	Beckmann, L., 3 Coups Terrace, Kaiapoi 8252
ZL3TRJ	Spurdle, 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
ZL3TRT	Sawyers, T., Cape Road, R.D. 2, Westport 7621
ZL3TRW	Powell, J., 7a Keir Street, Rangiora 8254
ZL3TRX	Hadler, D. J., 11 De Havilland Street, Christchurch 8004
ZL3TRY	Calvert, I., 17a Highstead Road, Christchurch 8005
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
ZL3TVA	Orchard, A. P., 18 Palmerston Street, Greymouth 7801
ZL3TVA	Orchard, J. (Mrs), 15 Palmerston Street, Greymouth 7801
ZL3TVP	Petersen, V. A. (Mrs), 51 Derby Street, Westport 7601
ZL3VAS	Stephens, L. C., 78 Brougham Street, Westport 7601
ZL3VAT	Boyes, J. B., 217 Main South Road, Greymouth 7801

ZL4 Callsigns

- ZL4AA** Otago Branch NZART (Inc.), see Branch Directory
ZL4AB Gray, H. A., 102 Brownston Street, Wanaka 9192
ZL4AC Lowe, A. F., 267 Barrow Street, Bluff 9503
ZL4AD Telford, M. M., 10 Chapman Street, Invercargill 9501
ZL4AE Wesley, I. C., 34 Truby King Street, Merrilands, New Plymouth 4601
ZL4AF Falconer, A. E., Whiterig, No. 1 R.D., Gore, P.O. Box 214, Gore 9700
ZL4AG Boshier, R. F., 30 Ayton Drive, Glenfield, Auckland 1310
ZL4AI Shore, K. H., 1 Upland Street, Dunedin 9001
ZL4AJ Agnew, A. C., 105 Cavell Street, Dunedin 9001
ZL4AK Dowman, W. F., 99 Aln Street, Oamaru 8901
ZL4AL Eastern Southland Branch NZART (Inc.), see Branch Directory
ZL4AN Shaw, M. Y., 1 Ednam Street, Roxburgh 9156
ZL4AO Allan, A. N., Charlton, No. 4 R.D., Gore 9700
ZL4AP Smith, R. C., Pine Bush, No 1 R.D., Wyndham 9758
ZL4AQ Whyte, R. A., Waimumu, R.D. 4, Gore 9700
ZL4AR Cole, R. S., 46 Walton Park Avenue, Fairfield, Dunedin 9006
ZL4AS Gray, L. C., 16 Linc. cln Terrace, Balclutha 9200
ZL4AT TrewEEK, C. A. (Mrs), 576 Herbert Street, Invercargill 9501
ZL4AU Ernst, R. W., 'Hollypine', Roslyn Bush Road, R.D.2, Invercargill 9521
ZL4AV Christie, G. A., 37 Garnet Street, Gore 9700
ZL4AW Pickford, W. J., Black Road, 9 R.D., Invercargill, P.O. Box 491, Invercargill 9500
ZL4AX Sandford, H. D., 130 MacAndrew Road, Dunedin 9001
ZL4AY McLeod, J. H., 53 Rakiura Parade, Otatara, Invercargill 9501
ZL4AZ Sidey, T. K. S., 16 Tolcarne Avenue, Dunedin 9001
ZL4BA Jones, G. L., 8 Yare Lane, Balclutha 9200
ZL4BC Ferris, J. L., 7 Peterson Place, Bridge Hill, Alexandra 9181
ZL4BD Helean, F. P., 3 Passmore Crescent, Maori Hill, Dunedin 9001
ZL4BE Whiteley, F., 31 Maybank Street, Opho, Dunedin 9001
ZL4BF Smith, L. K., 1a Wycherley Drive, Bucklands Beach, Auckland 1704
ZL4BG Mitchell, J. R., 49 McKerrow Street, Dunedin 9001
ZL4BH East Otago High School Radio Club, (Trustee: ZL4FI), P. O. Box 58, Palmerston, Otago 9161
ZL4BI Caldwell, J., Seaward Road, Edendale, Invercargill 9752
ZL4BJ Wickens, J. R., 9 Fleet Street, Masterton 5901
ZL4BK McDonald, N. M., 3 Kinloch Street, Blenheim 7301
ZL4BL Millar, T. E., 37 Young Street, Dunedin 9001
ZL4BM McCallum, R. H., Ashley Downs, R.D., Clinton 9252
ZL4BN Collett, D. K., 8d Ayr Street, Mosgiel 9007
ZL4BO Jackson, V. R., Milton Park, R. D. 1, Invercargill 9521
ZL4BP Collett, W. G., 35 Wharfside Street, Macandrew Bay, Dunedin 9003
ZL4BR Thompson, H. G., 47 Forth Street, Mataura 9753
ZL4BS Aldridge, J. T., 87 Trevors Road, Ashburton 8300
ZL4BT McKenzie, J. D., 268 Wai-iti Road, Timaru 8601
ZL4BU Stephens, R. D., 72 Wilfrid Street, Invercargill 9501
ZL4BV McConnell, J. R., 73 Banks Street, Invercargill 9501
ZL4BW Williamson, B. C., Horrace Street, Cromwell 9191
ZL4BX Anderson, J. L., 757 Brighton Road, Brighton, Dunedin 9151
ZL4BY Jenner, M. G., 40 Murano Street, Dunedin 9001
ZL4BZ Eve, C. R., 181 Fairway Drive, Kamo, Northland 0101
ZL4CA Williamson, A. E., Leicester Street, Hampden 8950
ZL4CB Costigan, L. J., 48 Bayne Street, Invercargill 9501
ZL4CC Checketts, C. V. (Mrs), 21 Highfield Terrace, Invercargill 9501
ZL4CD Dimmock, C., 92 Exmouth Street, Invercargill 9501
ZL4CF McLaren, A. D., 16 Melbourne Street, South Dunedin 9001
ZL4CG Bathurst, C. F., P.O. Box 247, Invercargill 9500
ZL4CH Spry, W. D., 6 Clementine Lane, Christchurch 8008
ZL4CI Stronach, N., 78 View Street, Manapouri 9680
ZL4CJ O'Cain, P. J., 394 Nees Street, Invercargill 9501
ZL4CK Wark, A. J., 1 Sutcliffe Street, Dunedin 9001
ZL4CM Martin, A. J. T., 8 Lark Street, Oamaru 8901
ZL4CN Peterson, A. McN., 26 Aotea Street, Dunedin 9001
ZL4CP Baird, O. L., 131 Nelson Street, Invercargill 9501
ZL4CR Middleton, C. E., 36 Green Street, Mosgiel 9007
ZL4CT Southland Boys High School Radio Club, (Trustee: ZL4LX), 215 Herbert Street, Invercargill 9501
ZL4CU Dudley, G. J., Pomona Road, R. D. 11, Invercargill 9521
ZL4CV McKenzie, J., 2/126 Rugby Street, Christchurch 8001
ZL4CW Barker, W. G., 30 Kowhai Avenue, Invercargill 9501
ZL4CY Shaw, W., c/- Railway Hotel, Invercargill 9501
ZL4CZ Brain, E. H., 38 Cranley Street, Dunedin 9001
ZL4DA Harman, I. A., 49 Alexander Street, Abbotsford, Green Island 9006
ZL4DB Cahill, E., Earnscleugh Road, Alexandra 9181
ZL4DC Cambridge, D. A. H., R. D. 1, Cromwell 9191
ZL4DD Van Veen, H. M. G., 161 Evans Street, Opho, Dunedin 9001
ZL4DE Magon, T. E., see overseas members
ZL4DF MacDonald, V. E., 5 Perth Street, Mosgiel 9007
ZL4DG Wolf, W. G. W., 1 Freyberg Road, Fairfield, Dunedin 9006
ZL4DI Bain, C. R., 24 McKerrow Street, Waverley, Dunedin 9001
ZL4DJ Baird, R. A., 87 Ventry Street, Alexandra 9181
ZL4DK Mulder, D. J., 60 Ashworth Street, Alexandra 9181
ZL4DL Leslie, A. J., 8 Stanley Street, Mornington, Dunedin 9001
ZL4DN Sharp, J. R., 41 Greenhill Avenue, Wakari, Dunedin 9001
ZL4DO Sutton, R. J., 4a Crompton Road, Massey, Auckland 1208
ZL4DP Ewens, W. S., 215 Broughton Street, Gore 9700
ZL4DQ Maslen, I. A., 62 Chambers Street, Dunedin 9001
ZL4DR Irving, J. T., 28 King Street, Mosgiel 9007
ZL4DS Carr, D. W., 46 Saunders Street, Dunedin 9001
ZL4DT Preddy, S. G., 105 Glenross St., Dunedin 9001
ZL4DU Stiglisch, C. A., 58 Argyle Street, Mornington, Dunedin 9001
ZL4DV Richards, P. D., 18 Holylead Street, Outram 9155
ZL4DW Babington, A. M., 45 Thomson Street, Invercargill 9501
ZL4DX Anstice, S. R., 293 York Place, Dunedin 9001
ZL4DY Daniel, E. H., 4 Reddecliffe Crescent, Ashburton 8300
ZL4DZ Willetts, N. E., 23 Yarmouth Street, Balclutha 9200
ZL4FA Spittle, B. J., 17 Pioneer Crescent, Helensburgh, Dunedin 9001
ZL4FC Dominey, R. J., 67 King Street, Timaru 8601
ZL4FD Hedge, H. G., 1/6 Sunnymoak Road, Forrest Hill, Takapuna, Auckland 1310
ZL4FE McConnachie, M. J., Joseph Street, Taieri Mouth 9150
ZL4FF Gilles, I. B., 7 Dunraig Street, Invercargill 9501
ZL4FG Russell, W. J., 255 Yarrow Street, Invercargill 9501
ZL4FH Hall, J. N., 8 Watkin Street, Pine Hill, Dunedin 9001
ZL4FI Askin, M. G., Moeraki, R. D. 2, Palmerston, Otago 9161
ZL4FJ Austin, F. J., 8 Dunblane Street, Dunedin 9001
ZL4FK Fisher, K. G., 7 Nepal Place, Christchurch 8005
ZL4FL Farquharson, D. A., 134 Martin Road, Fairfield 9006
ZL4FP McLeod, R. J., 134 Bay View Road, Dunedin 9001
ZL4FR Jeromson, W. J., 196 Highcliff Road, Dunedin 9001
ZL4FS Faulkner, D. N., 11 Parkdale Drive, Wanganui 5001
ZL4FT Mitchell, G. L., 7a Tudor Lane, Mosgiel 9007
ZL4FV Willoughby, J. R., 708 Tweed Street, Invercargill 9501
ZL4FW Watson, P. J., Curio Bay, No. 1 R.D., Tokanui, Invercargill 9671
ZL4FX O'Reilly, P. R., 60 Surrey Street, Dunedin 9001
ZL4FY Pert, P. E., 104 Hall Road, Sawyers Bay, Dunedin 9008
ZL4FZ Smart, R. G., 26 Olivine Street, Christchurch 8001
ZL4GA Homer, G. C., 5 Conway Street, Macandrew Bay, Dunedin 9003
ZL4GB Carter, D. J., 60 Antrim Street, Invercargill 9501
ZL4GC Shand, T. J., 52 Bremner Road, Fairfield, Dunedin 9006
ZL4GD Wilkey, T. G., 68 Marine Parade, Bluff 9503
ZL4GE Hurring, C. J., 1a Belmont Lane, Dunedin 9001
ZL4GF Balan, S. C., 45a Brandon Road, Glen Eden, Auckland 1207
ZL4GG Boddy, K. H., 47 Newcastle Street, Clyde 9180
ZL4GJ Service, T. R., 5 Bremridge Place, Hamilton 2001
ZL4GK Colvin, L. J., 6 Grant Road, Gisborne 3801
ZL4GL Gilder, N. J., 37 Pomona Street, Gore 9700
ZL4GM Ellis, D. N., 82 Rocks Highway, Riverton 9654
ZL4GN Lodge, S. F., 35 Graham Street, Mosgiel 9007
ZL4GO Thomas, M. E., 27 Stirling Crescent, Mosgiel 9007
ZL4GQ Southland Branch NZART (Inc.), see Branch Directory
ZL4GR Walsh, T., 17 McKinnon Terrace, Sunshine Bay, Queenstown 9692
ZL4GT Skinner, L. C., 201 Surrey Street, Dunedin 9001
ZL4GU Brentwood, P. L., 39a Greenstone Place, Fernhill, Queenstown 9692
ZL4GV Wilkey, D. G., 68 Marine Parade, Bluff 9503
ZL4GW McDonald, B. N., 45 Goodman Street, Windsor, Christchurch 8006
ZL4GX Collie, D. B., 48 Thurso Street, Invercargill 9501
ZL4GY Wils, M. E., 48 Purdue Street, Invercargill 9501
ZL4HA Young, B. S., 9 Crescent Street, Purakanui, R.D. 1, Port Chalmers 9030
ZL4HB Rolton, G. L., 8 Worcester Street, Hampden, Otago 8950
ZL4HC Waters, M. J., 6 Barling Street, MacAndrew Bay, Dunedin 9001
ZL4HD Findlater, J. L. L., 37 Gormack Street, Balclutha 9200
ZL4HE Montgomery, A. M., 4 Hoylake Street, Outram 9255
ZL4HF Kindon, H. A. R., 53 Montague Street, Dunedin 9001
ZL4HG McNeill, S. J. E., 86 Waddington Drive, Lower Hutt 6301
ZL4HI Bruce, F., 1 Croydon Place, Kamo, Whangarei 0101
ZL4HJ Bulger, J. W. P., 8 Sherwood Street, Portobello, Dunedin 9004

- 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
 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., 482 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., 39 Links View Drive, Omokoroa R.D. 2, Tauranga 3021
 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, Pukerau, Southland 9750
 ZL4IN Faulkner, W. E., 12a Frank Street, Gore 9700
 ZL4IO Malkin, M. J. (Mrs), 4/412 West Avenue Road, Hastings 4201
 ZL4IQ Knowles, D. C., 29 Tasman Road, Otematata 8950
 ZL4IS Smirk, B. A., 68 Cannington Road, Maori Hill, Dunedin 9001
 ZL4IT Sawers, R. N., 70 Preston Crescent, Dunedin 9001
 ZL4IU Swale, C. S., 13/60 Stirrat Street, Invercargill 9501
 ZL4IV Loosier, 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 Marlbourn Crescent, Christchurch 8005
 ZL4JC McLennan, E. J. (Mrs), 11 Emerson Street, Concord, Dunedin 9006
 ZL4JD Dudley, J. T., 11 Fraser Street, Waikiwi, Invercargill 9501
 ZL4JE Elliot, J., 36 Grange Street, Dunedin 9001
 ZL4JF South Otago Branch NZART (Inc.), see Branch Directory
 ZL4JH Harrow, J. C., 529 Tweed Street, Invercargill 9501
 ZL4JI Woods, J. R., Taepa Road, Otatara, R.D. 9, Invercargill 9521
 ZL4JJ Ferris, R. J., 269 Stokes Valley Road, Stokes Valley 6306
 ZL4JK Stanton, M. G., 44 Koia 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., Waiparui, 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., Little Road, R.D. 1, Queenstown 9692
 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
 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 Cochrane, 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
 ZL4LH Milson, P. S., 20 Lanark Street, Mosgiel 9007
 ZL4LI Amor, 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
 ZL4LX Evans, R. W., 558 Tay Street, Invercargill 9501
 ZL4LY Macaskill, D. J., 34 Stirling Street, Invercargill 9501
 ZL4LZ Telford, B., Ruru Avenue, Otatara, 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., 34 Harlech Street, Oamaru 8901
 ZL4MD Hayes, K. J., Ripponvale, 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., 37 Franklin Street, Dalmore, Dunedin 9001
 ZL4MS Dalliesi, P. J. C., Chertsey Court, 217d Ruahine Street, Terrace End, Palmerston North 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., 14b Ravelston 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 Cunningham, P. J., 63 High Street, Mosgiel 9007
 ZL4NF Fox, R., 26 Sarajevo Place, Ranui, Auckland 1230
 ZL4NH McRodden, 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 Dilton 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

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 Eteveneaux, D. H., 46 Greenock Street, Dunedin 9001
ZL4NZ Reid, K. W., 7 Skye Street, Invercargill 9501
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, Opho, 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., 77 Weka Street, Invercargill 9501
ZL4OK McGlinn, A. J., 82 Victory Crescent, Tawa 6203
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 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., Waiwherua, R.D. 9, Hastings 4221
ZL4OU North Otago Branch NZART, see Branch Directory
ZL4OV Major, L. H., 16 Maybank Street, Opho, Dunedin 9001
ZL4OW Vlnc.ent, 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 Prnc.es Street, Invercargill 9501
ZL4PB Christie, D. A., 2 Merlewood Avenue, Cashmere,
Christchurch 8002
ZL4PD Neill, K. G., 38 Teignmouth Street, Green Island,
Dunedin 9006
ZL4PE Blyth, B. W., 2 De Courcy Place, Avondale,
Christchurch 8006
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 Skeel, 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., 1 Norman Street, Tainui, Dunedin 9001
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 Wharf Street, Oamaru 8901
ZL4QI McDiarmid, K. G., 41 Towey Street, Oamaru 8901
ZL4QJ Burtenshaw, J. S., 69 Galloway Street, Hamilton 2001
ZL4QK Gross, A., 11 Ryehill Street, Calton Hill, Dunedin 9001
ZL4QL Smithies, R. B., 167 Halswell Road, Christchurch 8003
ZL4QM McLaren, J. B., 8 Marlborough Crescent, Richmond,
Nelson 7002
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
ZL4QZ Kingswell High School, Invercargill 9501
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., 8 St Cuthbert Place, Omarama 8950
ZL4RD Perrin, L. 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 Prince Street, Waikiwi, Invercargill 9501
ZL4RL Chimside, A. J., Flat 13, Dorset Towers, 110 Park Terrace,
Christchurch 8001
ZL4RM Wijkstra, E., 28 White Street, Invercargill 9501
ZL4RN Donoghue, A. M., 63 Totara Street, Ravensbourne,
Dunedin 9002
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 Hollyhead Street, Outram 9155
ZL4SF Watt, B. F., 91 Weston Road, Oamaru 8901
ZL4SH Orr, N. A., 3/4 Coronation Road, Glenfield, Auckland 1310
ZL4SJ Bromley, I. J., c/- 153 Benmore Avenue, Palmerston
North 5301
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 Janet 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 Ellanden, E., 37 Carron 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 Surn, 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, Libertor, Dunedin 9001
ZL4FOX Kindt, B., R.D. 2, Waitati, Dunedin 9160
ZL4MCM McCutcheon, M. C., Littles Road, R.D. 1, Queenstown 9692
ZL4NB Clapham, E. S., 31 Ronaldsay Street, Palmerston 9161
ZL4NAI Waikiri Scout Group, Waikiwi, Invercargill 9501
ZL4NAJ Johnston, N. A., Blue Cliff Station, R.D. 24, St Andrews,
Dunedin 8621
ZL4NAK O'Connor, M. J. F., 64 Moa Street, Invercargill 9501
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 Larnach 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., Waianiwia, R.D. 4, Invercargill 9521
ZL4TAK	Bowen, D. J., 9c Ravelston Street, Dunedin 9001
ZL4TAL	Russell, N., 3/156 Salford Street, Invercargill 9501
ZL4TAM	Mamadjianian, A. P., 413 Centre Street, Invercargill 9501
ZL4TAN	Kramer, K. H., 82 Russley 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, D. C., 31 Maitland Street, Dunedin 9001
ZL4TAV	Gordon, G. P. C., 9 Salmonid 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., 17 Andrew Street, Timaru 8601
ZL4TBC	Fischer, F. J., 133 Marama Avenue North, Otatara, R.D. 9, Invercargill 9521
ZL4TBD	Puklowski, N. A., 127 North Street, Ashhurst 5451
ZL4TBE	Hurley, D. J., 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., 24 Jensen Street, Green Island, Dunedin 9006
ZL4TBO	Stewart, E. A., Main Road, Kuri Bush, Brighton 9151
ZL4TBP	Staite, 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
ZL4TBY	Reid, D. R., 8 Manse Street, Waimate 8791
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, Pinmai, Napier 4001
ZL4TCD	Todd, R. J., Naurnai 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, Kaitaia 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
ZL4TCO	Mooney, W. J., 21 Greenhill Avenue, Dunedin 9001
ZL4TCP	Tarlton, A. I. G. (Ms), 8 North Road, Kaitaia 0500
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., 10 Dulles Place, Papanui, Christchurch 8005
ZL4TCW	Smith, A., 64 Dorne 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 Gilkison Street, Dunedin 9001
ZL4TDK	Dwyer, W. A., 21 Summertime 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 Salmonid Street, Dunedin 9001
ZL4TDP	Aronson, 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 Eam Street, Oamaru 8901
ZL4TFG	Neill, P. G., 38 Teignmouth Street, Green Island, Dunedin 9006
ZL4TFH	Allen, M. F., 36 Barclay Street, Dalmore, Dunedin 9001
ZL4TFI	Brodie, J. T., 99 Bowmunt Street, Invercargill 9501
ZL4TFJ	Shireffs, 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, Kaitaia 0500
ZL4TFY	Craighead, G., 162 Balmacewen Road, Dunedin 9001
ZL4TGA	Scott, P. R., 99 Gilkinson Street, Dunedin 9001
ZL4TGB	Grant, W. A., 7 Lochend Street, Dunedin 9001
ZL4TGC	Bowie, D. R., 25 Northfield Avenue, Opho, Dunedin 9001
ZL4TGD	Downey, B. T., Portobello Road, Vauxhall, Dunedin 9001
ZL4TGF	Williams, G. B., 64 Forfar Crescent, Invercargill 9501
ZL4TGG	Keen, R. G., 274 Highclif Road, Andersons Bay, Dunedin 9001
ZL4TGH	Connolly, R. C., Blueskin Road, R.D. 1, Port Chalmers 9005
ZL4TGY	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., 149 Cargill Street, Dunedin 9001
ZL4TGN	Nisbet, R. A., 3/360 Madras Street, Christchurch 8001
ZL4TGP	Watson, R. M., 21 Arcus Street, Whangarei 0101
ZL4TGO	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
ZL4TGU	Paterson, S. L. (Mrs), "Waianaia", 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 Korematu Street, Green Island, Dunedin 9006
ZL4THJ	Rabbidge, M. J., "Crayburn Farm", Graham Road, R.D. 1, Tokanui 9671
ZL4THK	Sinclair, D. H., 8 Argyle Street, Weston, Oamaru 8901
ZL4THL	Davidson, R. J., Earnsleugh 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., 2/130 Victoria Road, Dunedin 9001
ZL4THQ	Crimp, G. R., 31 Davies Road, New Plymouth 4601
ZL4THR	Spence-Ord, K. D., 18 Ash Street, Oamaru 8901
ZL4HTH	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, Mataura 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
ZL4TII	Pierson, W. E., 16 Naish Street, Balclutha 9200
ZL4TIK	Curline, A. J., 151 Tennyson Street, Dunedin 9001
ZL4TIL	Drage, I. J., 171 Morton Street, Invercargill 9501
ZL4TIM	Watson, N. R., 59 Rountree Street, Christchurch 8004
ZL4TIN	Murdoch, G. N., 7 Kelso Place, Invercargill 9501
ZL4TIO	Moore, J. S., 10 Dalrymple Street, Dunedin 9001
ZL4TIP	Dupont, C. C., 6 Lothian Crescent, Invercargill 9501
ZL4TIQ	McLaren, G. D., 12 Douglas Street, Wakatipu 9690
ZL4TIR	Woodrow, P. J., 32 Baker Street, Stirling, South Otago 9256
ZL4TIS	Williams, A. R., 26 Centre Street, Invercargill 9501
ZL4TIW	King, D. J., 14 Inglis Street, Mosgiel 9007
ZL4TIY	Larooy, G. M., 617 York Street, Hastings 4201

ZL4TIZ

ZL4TIZ Thomson, A. A., 3 Shirley Place, Dunedin 9001
 ZL4TJA Boshier, S. W., 14 Petihg 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
 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., 18 Pitt Street, Dunedin 9001
 ZL4TJO Blair, J. G. H., 5 Merrie Creek Road, Clinton 9251
 ZL4TJP Askin, F. A., Moeraki, R.D. 2, Palmerston 9161
 ZL4TJR Smither, M. E., 1/38 Begg Street, St Kilda, 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., 9 Werneth Street, Atawhai, Nelson 7001
 ZL4TJZ Taylor, A. J., 74 Stamford Street, Balclutha 9200
 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., 8 Manitoba Place, Kingston, Wellington 6002
 ZL4TKH Turner, K. F. M., "Waimatuku", 8 R.D., Invercargill 9521
 ZL4TKK Spence, R. W., 34 Watt Road, Otatara, No. 9 R.D., Invercargill 9501

ZL4TKM Mitchell, G. D., 19 Ascog Road, Ravensbourne, Dunedin 9002

ZL4TKN Harvey, B. J., 26 Carson Street, Mornington, 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 Salmon Street, Dunedin 9001
 ZL4TLB Rae, B. G., P.O. Box 10-019, Halfway Bush, Dunedin 9030
 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
 ZL4TLC McConechy, G. S., 71 Heywood Street, Invercargill 9501
 ZL4TLI Wright, D. W., 309 Talbot Street, Invercargill 9501
 ZL4TLK Matthews, T. L., Main Road, Mokotua R.D. 1, Invercargill 9521
 ZL4TLL Blair, R. C. W., Taumata, R.D., Clinton 9251
 ZL4TLN Taylor, B. H. (Mrs), 74 Stamford Street, Balclutha 9200
 ZL4VAA Smith, J. D., Merrie Creek Road, Clinton 9181
 ZL4VAB Lambert, M. G., 99 Main South Road, East Taieri, Mosgiel 9007
 ZL4VAC Bootsma, D., 185 Eden Street, Oamaru 8901
 ZL4VAD Meikle, J. W., 46 Brinkburn Street, Oamaru 8901
 ZL4VAE Lambeth, F. R., 24 Marslin Street, Alexandra 9181
 ZL4VAG Brown, P. N., 25 Baxter Street, Balclutha 9200
 ZL4VAQ Needham, J. W., 65 Ward Street, Invercargill 9501

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 licensed, 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 Defense 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.

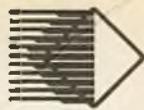
Where do I get more information?

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, PO Box 40-525, Upper Hutt.



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ZL5, 6, 7, 8, 9 0

ZL5 Antarctica

ZL5ATP Pringle, A. T., c/- DSIR, Scott Base, Antarctica.
ZL5UPI Gee, J. B., 19 Ben Alder Crescent, Tokoroa 2392.

ZL8

Kermadec Islands

ZL6 NZART

ZL6A New Zealand Association of Radio Transmitters (Inc.),
PO Box 40-525, Upper Hutt.
ZL6E AREC Master Station.
ZL6IW NZART Monitoring Service.

ZL9

Auckland and Campbell Islands

ZL7 Chatham Islands

ZL7BJE Day, S. M., P.O. Box 175, Waitangi.
ZL7NAA Tuauui, J., "Waihi", Chatham Islands.
ZL7TKI Sanson, I. M., P.O. Box 65, Waitangi.
ZL7TPP Locke, S., Radio Station, Waitangi.

ZL0

Overseas Visitors

ZL0...

South Pacific Amateur Radio Listings

Tonga

A35AA Straw, C. M., Paradise Hotel, Vava'u.
 A35AG Phillips, Karla E., Yacht Amazing Grace.
 A35AI Macgillivray, Alastair, P.O. Box 15, Nuku'alofa.
 A35AO Otaki, Akira, Nuku'alofa.
 A35AQ Horniak, Wally W., Yacht Mysticeti.
 A35AR Doi, Y., Kimiko Guest House.
 A35BG Tapio, B. R., Phoenix Motel.
 A35CE Moehringer, H., Beach House.
 A35CH Hohenwallner, Ing., C, Kimiko Guest House, Nuku'alofa.
 A35CN Smoot, Cheresse N., Yacht Pegasus.
 A35CX Johnson, W. A., P.O. Box 263, Nuku'alofa.
 A35DM Martens, D., Yacht Hic.
 A35DM Marcel, Debonin, Dateline Hotel.
 A35DP Nakamata, T., Kimiko Guest House.
 A35DR Ratner, David, Yacht Incantation.
 A35DX Peter, H., Beach House, Nuku'alofa.
 A35EK Kusterer, M. E., MV Doulos.
 A35EM Toyofuku, S., Kimiko Guest House.
 A35FI Amateur Radio Club of Tonga.
 A35FT Lea Cate, James Jr., Yacht Instable.
 A35GK Bojorquez, Bonnie E. M., Yacht Windrose.
 A35HK Kitayama, H., Kimiko Guest House.
 A35HN Hama Na'ati, (President), P.O. Box 46, Nuku'alofa.
 A35IC Miyazaki, J., Kimiko Guest House.
 A35IG Yoshitani, Yuji, Dateline Hotel.
 A35JZ Zinsmeyer, J. M., Yacht Menehune.
 A35KB Burke, K., Longolome, P.O. Box 1.
 A35KD Orlosky, K. T., Nuku'alofa.
 A35KG Gerhard, K., Sopu, Nuku'alofa.
 A35KH Klaas, H., MV Doulos.
 A35KP Piltz, Karl W., Yacht Tamar.
 A35LF Lemeki, Malu, P.O. Box 46, Nuku'alofa.
 A35LM Macmillan, L. A., 15 Golden Crescent, Mission Bay, Auckland.
 A35MA Chester, Richard, Nuku'alofa.
 A35MB Burch, M. A., Yacht Ngaio.
 A35ML Lehtosaari, M., Ramanial Hotel.
 A35MP Potts, M. D., P.O. 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.
 A35QA Yekken, Ann, Yacht Annies Song.
 A35RP Pichel, Ruth C., Yacht Beleza.
 A35RV Munt, Robert B., Nuku'alofa.
 A35RW Weaver, R. G., Dateline Hotel, Nuku'alofa.
 A35SA Moore, R. J., (Treasurer), Nuku'alofa.
 A35SB Browne, Stuart P., Vava'u.
 A35SK Thunstrom, Alf R., Neiafu, Vava'u.
 A35ST Thompson, S. J., Yacht Cannile.
 A35U Schmidt, U., Beach House.
 A35VB Ilmari, N. V., Phoenix Motel.
 A35VM Madison, Vernon K., Yacht Tainui.
 A35VT Hyde, Judi M., Yacht Ayesha.
 A35VZ Zinsmeyer, V. J., Yacht Manehure.

A35WI Cartwright, C. C., Nuku'alofa.
 A35WR Rogan, Warren R., Vessel Antares.
 A35XK Doyle, Kenneth J., Yacht Atol.
 A35XV Crosby, Ronald V., Friendly Islander Hotel.
 A35XX Brenner, W., Friendly Island Motel.
 A35YO Hashimoto, Yoji, Kimiko Guest House.
 A35ZO Schilian, Gerald, Yacht J. D.

Cook Islands

ZK1AA Kingan, S., P.O. Box 66, Rarotonga.
 ZK1AD Dean, A., P.O. Box 259, Rarotonga.
 ZK1AH Hosking, A. V., P.O. Box 459, Rarotonga.
 ZK1AK Thomson, A., Rarotonga.
 ZK1AN Davis, Sir Thomas, P.O. Box 116, Rarotonga.
 ZK1AP Asselin, P., P.O. Box 494, Rarotonga.
 ZK1AQ Malcolm, R., Atiu Island.
 ZK1AR Darling, R. S., Rarotonga.
 ZK1BB Cook Islands Boys Brigade, C/- ZK1AD, P.O. Box 259, Rarotonga.
 ZK1BK Allen, N., P.O. Box 1032, Rarotonga.
 ZK1BP Savage, H., P.O. Box 188, Rarotonga.
 ZK1BS Cook Islands Boy Scouts Assn, Rarotonga.
 ZK1BW Walters, B., Tupapa, Rarotonga.
 ZK1CG Rivera, V., P.O. Box 618, Rarotonga.
 ZK1CI Cook Islands Amateur Radio Club, Rarotonga.
 ZK1CK Schutter, K., Rarotonga.
 ZK1CP Utanga, T., P.O. Box 98, Rarotonga.
 ZK1CS Swaboda, W., P.O. Box 19, Rarotonga.
 ZK1CT Guinea, Dr A., Mauke Island, Cl.
 ZL1CX Pearson, N., P.O. Box 15, Rarotonga.
 ZK1DB Gibbons, A., P.O. Box 277, Rarotonga.
 ZK1DD Clarke, D. J., Aitutaki Island, Cl.
 ZK1DG Godger, J., VK2JO, Australia.
 ZK1MA Tupou, T., P.O. Box 209, Rarotonga.
 ZK1MG Gladding, M., P.O. Box 709, Rarotonga.
 ZK1TB Wilhelm, L. L., W7TB, USA.
 ZK1TS Simmons, T., P.O. Box 80, Rarotonga.
 ZK1TW Wichman, T., P.O. Box 129, Rarotonga.
 ZK1WL Latham, W., Penrhyn Island, Cl.

Fiji

3D2AA Aisake, A., P.O. Box 4969, Lautoka, Fiji.
 3D2AG de Ramon, A., P.O. Box 14-633, Suva.
 3D2AJ McIssac, A. J., P.O. Box 425, Suva.
 3D2AN Wooler, M. J., St Johns College, Cawaci, Levuka.
 3D2BC Caldwell, B. K., P.O. Box 15-349, Suva.
 3D2CC Carter, T. F., Muscat Cove Resort.
 3D2CM Northcott, R. L., P.O. Box 1168, Suva.
 3D2CS Broadbridge, E. K., P.O. Box 1046, Suva.
 3D2CT Jinenez, C. T., P.O. Box 567, Suva.
 3D2DB Banks, D. D., P.O. Box 13-884, Suva.
 3D2DM Meyers, D. D., P.O. Box 184, Suva.
 3D2DW Olley, D. W. W., P.O. Box 238, Suva.
 3D2EC Corner, R. E., Wakaya Island.

3D2ER Singh, Raj, P.O. Box 184, Suva.
 3D2ES Saphore, E., UN Mineral Res. Dept., Suva.
 3D2GH George, J. H., P.O. Box 3126, Lami.
 3D2GR Clark, G. R., Private Mailbag, Nadi Airport.
 3D2JC Caldwell, J. D., P.O. Box 184, Suva.
 3D2JO Turaganivalu, J., 14 Alexander Street, Suva.
 3D2JN Nicol, J. W., Westpac, Suva.
 3D2MP Prakash, M., P.O. Box 5324, Raiwaqa.
 3D2MR Mar, G., P.O. Box 271, Suva.
 3D2NB Harding, F. W., Carpenters Shipping, Suva.
 3D2PO Doncaster, N. I. C., c/- Air Pacific Nadi Airport, Nadi Airport, Nadi.
 3D2PS Schulz, A. F. P., P.O. Box 5372, Raiwaqa.
 3D2RA Allan, P. R., P.O. Box 631, Suva.
 3D2RP Prasad, R., P.O. Box 1267, Labasa, Fiji Islands.
 3D2SS First Suva Scout Group, Government Buildings, Suva.
 3D2UR USP Amateur Radio Club, Suva.
 3D2XV Crosby, R. N., G.P.O. Box 184, Suva.

Niue

ZK2GJ Jackson, G., P.O. Box 37, Niue Island.
 ZK2JD Duncan, J., P.O. Box 37, Niue Island.

Vanuatu (no update received for 1991)

YJ8AA Palmer, Frank, Box 629, Port Vila.
 YJ8AB Scantlin, John R., Box 10, Port Vila.
 YJ8BA Armstrong, Bret, Box 873, Port Vila.
 YJ8CW Joly, Colling W. B., Box 342, Port Vila.
 YJ8DE Discombe, Reece, Box 56, Port Vila.
 YJ8DX VARS, Port Vila.
 YJ8EK Kumon, Etsuko, Box 1016, Port Vila.
 YJ8FB Beardsley, Frank, Box 604, Port Vila.
 YJ8GG Gimault, Gaby Des F., Prv. Pltn, Norsup Malekula.
 YJ8GK Kumon, Goro, Box 1016, Port Vila.
 YJ8GP Pearl, Simon G., Box 665, Port Vila.
 YJ8MB Bladowski, Marek, Box 217, Port Vila.
 YJ8MC Marielot, Michel C., Box 731, Port Vila.
 YJ8NAC Scantlin, Modrea, Box 10, Port Vila.
 YJ8NJW Watson, Junia E., Box 683, Port Vila.
 YJ8NKB Barlow, A. Keith, Box 730, Port Vila.
 YJ8NKS Kersley, Rex S., Box 188, Port Vila.
 YJ8NPB Bianchessi, Pietro, Box 162, Santo.
 YJ8NRM Holmes, Russell L., Lorne, Nduindui Ambae.
 YJ8NRL Leong, Robert, Box 50, Port Vila.
 YJ8NRM MacDonald, Roy, Box 535, Port Vila.
 YJ8NTT Taiwu Touasi, Customs, PMB 12, Port Vila.
 YJ8OK Watson, Tex L., Box 683, Port Vila.
 YJ8PE Poulet, Achilles E., Box 520, Port Vila.
 YJ8RN Newell, Rod S., Box 905, Port Vila.
 YJ8VDL Lum, David, Box 65, Santo.
 YJ8VKK Kumon, Kazusa, Box 1016, Port Vila.
 YJ8VOB O'Brian, Clarence, Box 743, Port Vila.
 YJ8VOT Tsuchiya, Omasu, Box 86, Port Vila.
 YJ8YS Sato, Yatuka, Box 19, Santo.
 YJ8IND YJ10IND, VARS, Box 665, Port Vila, (Independence special call).
 YJ8JOA VARS, Port Vila, (Jamboree on the air special call).

Solomon Islands

H44AP Pearce, A., P.O. Box 11, Honiara.
 H44GP Pearson, G., P.O. Box 292, Honiara.
 H44GR Richardson, G., P.O. Box 127, Honiara.
 H44MB Bowman (Capt.), M., P.O. Box G32, Honiara.
 H44RA Alexander, R., P.O. Box 332, Honiara.
 H44SI Solomon Island Radio Society, Honiara.

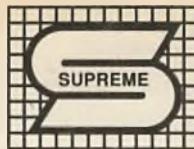
New Caledonia

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, QSL to F6BHX.
 FK0BN Bernard, Philippe, Gendarmerie, Box 257, La Foa.
 FK0BO Cazenave, Bernard, Box 12, Noumea.
 FK1RF Chardota, Jean-Claude, Box 3111, Noumea.
 FK1RI Kryger, Monique, 12 rue Charbonneau, Noumea.
 FK1RK Amat, Gerard, 30 rue E. Sphar, Noumea.
 FK1RM Comet, Michel, Lot Porte Dore, Mont Dore.
 FK1RN Hervais, Francisque, 36 Lot Lafleur Nondoue, Dumbea.
 FK1RO Szymanski, Pascal, Box 8159, Noumea.
 FK1RP Rousset, Jean-Yves, 2 rue Sirius, Noumea.
 FK1RR Miossec, Gill, 34 rue P. Cane, Noumea.
 FK1RS Gallois, Jean-Pierre, 7 rue Calimbre, Noumea.
 FK1RU Mignot, Jean-Pierre, Box 90, Bourail.
 FK1RX Oliivaud, Jean-Yves, 59 rue G. Laroque, Noumea.
 FK1RY Devaut, Christian, Box 1260, Noumea.
 FK1SA Chevalier, Jacques, Box 2125, Noumea.
 FK1SC Fere, Gaetane, 8 rue du Jura, Noumea.

FK1SF Limousin, Claude, Box 3047, Noumea.
 FK1SG Forzy, Michael, Box 2793, Noumea.
 FK1SU Esposito, Eric, Box 4480, Noumea.
 FK1TG Roussel, Odile, 40bis Hauts Val Plaisance, Noumea.
 FK1TK Rainer, Henri, 190 rue Boulmy, Box 4608, Noumea.
 FK1TV Flotat, Leon, Box 3690, Noumea.
 FK8AF Guerlain, Georges, Ouenghi, Bouclapuri.
 FK8AH Garbe, Robert, Box 4490, Noumea.
 FK8AL Garbe, Jean, Box 3994, Noumea.
 FK8AV Schuppe, Henri, Papeete, Tahiti.
 FK8AX Lesueur, Henri, Box 541, Noumea.
 FK8AY Thomas, Daniel, Box 1960, Noumea.
 FK8BC Thomas, Henry, Box 637, Noumea.
 FK8BG Cullel, Gilbert, QSL to F6EWK.
 FK8BK Houdart, Louis, Box G 5, Noumea, Cedex.
 FK8BR Ynet-Mine, Maurice, Pouembout.
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FULL 5 W OUTPUT POWER

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

UP TO 80 MEMORY CHANNELS AND 2 PROGRAMMABLE CALL CHANNELS—A VARIETY OF SCAN FUNCTIONS

An advanced CPU in the transceiver provides excellent scan functions.

OTHER FEATURES

- PTT lock function to prevent accidental transmission.
- Beep tone on/off during key entry can be turned on or off.
- Memory masking function hides seldom-used memory channels.
- Memory or call channel contents can be transferred into the VFO.
- Optional tone squelch function.
- Selectable scan resume conditions: timer or pause function.
- Durable in challenging outdoor environments.

PRIORITY WATCH

While you operate on a VFO frequency the IC-24AT/ET receives either of the following channels every five seconds:

- Another band VFO frequency
- A memory channel
- Memory channels
- A call channel



IC-R100 Mobile/Base Receiver

For the enthusiast who prefers a more permanent installation the IC-R100 is ideal giving full frequency coverage of 500 kHz–1800 MHz 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
- Infrared Remote Control (Optional)
- Variable Scan speed and Delay
- Noise Blanker
- DC Kit for Portable Operation (Optional)
- Voice Synthesizer (Optional)
- Six Scanning Functions

IC-2400A

TWO TRANSCEIVERS IN ONE

Convenient dual band capability. Icom's new IC-2400A is a sophisticated mobile transceiver equipped with both 144 and 440 MHz bands. Enjoy the freedom of the open road and experience the advantages of simultaneous dual-band operation.

Simultaneous dual band watch

The IC-2400A is capable of receiving on both the MAIN and SUB bands at the same time. While operating on one band, you can monitor a second band for scheduled QSO calls. Also, it's very easy to switch between the SUB and MAIN bands, allowing you to reply immediately to calls received on either band.

Full duplex operation

Capable of full duplex operation, the IC-2400A lets you transmit on one band while receiving on the other for telephone-style QSOs.

Sub band mute and sub band beep functions

The SUB band audio level can be reduced automatically when signals are received on both the MAIN and SUB bands simultaneously. This function allows you to listen to the MAIN band audio clearly. To distinguish between the MAIN and SUB band audio, the SUB band beep function emits a beep tone when the SUB band squelch closes.

Dual band ready with independent controls

The state-of-the-art function display provides simultaneous readout of the MAIN and SUB band operating frequencies. And each band can be independently regulated using separate volume and squelch controls.

Sub Band Off Function

Use this function to deactivate the SUB band when you prefer single band operation using the MAIN band.

40 memory channels plus two call channels

The IC-2400A incorporates 20 memory channels and a call channel for each band. These channels store all the information needed for repeater operation.

Scan Isolation and priority watch

The CPU provides programmed and memory scan functions, while priority watch monitors a designated station for calls while you're in contact with another station.

Packet beep function*

A 30 second alarm is generated when a subaudible tone identical to the pre-programmed tone is received. This function can be set separately in the MAIN and SUB bands to limit reception to stations you want to hear.

*This function requires an optional UT-40 TONE SQUELCH UNIT.



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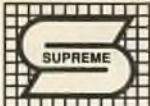


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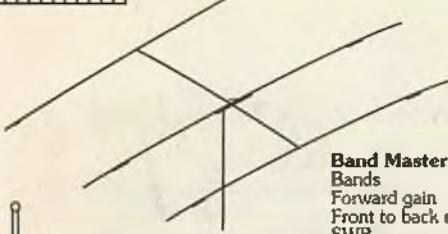
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SUPREME BANDMASTER



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	50Ω RG.8/u
Feedline length	13.700m (45') or more
Mast diameter	45mm (1 1/4") OD

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—or 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.

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Polarisation Vertical
Rating 1KW PEP
Impedance 50Ω
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Fraser, B. H., ZL3FZ, P.O. Box 297, Corning, CA 96021, USA.

Gaizatu, M., P.O. Box 5498, Tokyo International, 100-31, Japan.
Garrod, J., VK2EHM, ZL2BMO, P.O. Box 5229, Bundaberg, Queensland 4670, Australia.
Gibbons, A., ZK1DB, P.O. Box 277, Rarotonga, Cook Islands.
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 Hawkstone, N. Chingford, London E4 7PF, England.
Harms, D., VK3XDJ, R.M.B. 64B3, Everton, Upper Victoria 3746, Australia.
Hathaway, R. L. S., G3JHI, 30 Berkley Drive, Hornchurch, Essex RM11 3PY, England.
Hinchcliff, R. G., VK2GIX, ZL2JP, 2/211 Wigram Road, Glebe, Sydney 2037, 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, "Moorilynn", 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., K0GWI, 3654 Polk, NE Minneapolis, Minnesota 55418, USA.

Kelly, B. (Mrs), VE7CBK, 8700 Minler Road, Richmond, BC V7C 3T9, Canada.

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., VK2IC, ZL4DE, 3/38 Chapel Street, Rockdale, NSW 2216, 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.
McCall, D. A., YB8ASX, Y.M.S.T., P.O. Box 145, Ambon Maluku 97001, Indonesia.
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.
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.

O'Shea, J. R., VK2ATU, 1 Fletcher Street, Revesby, NSW 2212, Australia.

Rankin, P. M., P29PA, ZL1CBU, c/- S.D.A. Mission, P.O. Box 11, Tari, S.H.P., Papua New Guinea.
Reid, D. D., W9RWD, P.O. Box 773, Tremont, Illinois 61568, USA.
Rogers, G. L., VK6RO, 22 Grace Street, Ferndale, WA 6155, Australia.

Sainsbury, J. R. D., GW8HV, ZL1WJ, 4 St Johns Place, Rhoose, Vale of Glamorgan, Wales CF6 9EB, United Kingdom.
Samsu, B. S., YBOEBS, P.O. Box 286/KBY, Jakarta 10002, Indonesia.
Sheley, J. W., KA6DXY, 5849 Hansen Drive, Pleasanton, CA 94566, USA.
Sloane, C., VK2EEC, 2 Lancelot Street, Blacktown, NSW 2148, Australia.
Switzer, G. E., VK2SR, 53 Turf Street, Grafton, NSW 2460, Australia.

Thurlow, P., G4YUP, 41 Kings Way, Billericay, Essex CM11 2QF, England.
Tittsler, J., A18A, c/- Atari, No.7 Koike Bldg 6f, 2-3-6 Minami-Shinagawa, Shinagawa-KU, Tokyo 140, Japan.
Tutton, J. K., VK3ZC, 11 Cooloongatta Road, Camberwell, Vic 3124, Australia.

Walker, R. W., VK2YRX, P.O. Box 279, Drummoyne, NSW 2047, Australia.
Wallis, B. S., P29AS, ZL1ARF, P.O. Box 759, Broko, NCD, Papua New Guinea.
Wardlaw, D., VK3ADW, 21 Tormey Street, North Baldwin, VIC 3104, Australia.
Watkins, W. A., VK4DO, 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, 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.

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 857, Wanganui 5000.**

QSL cards should not exceed normal postcard dimensions (140x90 mm). The callsign 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 callsign order, USA call areas, Australian call areas and all others into alphabetical order. Please keep all cards for a country together: eg, ES-ER-UA-YL together for the USSR; AA-K-N-W-1, 2, 3 etc for the USA. Please do not separate countries with paper, rubber bands etc. 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 ZL5, ZL6, ZL7, ZL8, ZL9, ZM5, ZM6, ZM7, ZM8, ZM9, ZK1, ZK2 or ZK3 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".

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 weighs approximately 280gm. Please check your zone rate with NZ Post and send a cheque for the correct amount with your requests.

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
Fifteen and 60 minutes. General information and public relations material for Amateur Radio. A little dated now but good general information. ARRL Production.

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

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. Supply your particular QSL Sub-Bureau listed below with stamped self-addressed envelopes (of size not less than 170x170 mm).

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

ZL2—A. H. Marr ZL2AGY, 3 Crown Hill, Titahi Bay 6202.

ZL3—G. Halliburton ZL3GI, 6 Barlow Street, Christchurch 8004.

ZL4—D. A. Adams ZL4OZ, 47 Wray Street, Dunedin 9001.

ZL9—B. E. Stewart ZL2RR, PO Box 857, Wanganui 5000.

ZL/ZM5 to ZL/ZM9—B. E. Stewart ZL2RR.

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 200 g", etc.

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

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 thousands of 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 857 Wanganui. All such requests should be accompanied by a stamped self-addressed envelope.

*4. The Aerial Circus with Dud Charman G6CJ

Forty-five minutes. Verification of the theory of operation of a variety of VHF and HF antennas. See the theory confirmed by means of scale model antennas.

5. Amateur Radio's Newest Frontier

Thirty 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

One hundred and thirty-five 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
Twenty-eight 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 III Association Conference 1985—RSGB*.
 14. *IARU Region III 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.

Monitoring Service

The "EMM" column on the report form (page 79) 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
- 1.2 Emission in which the main carrier is amplitude modulated, including angle-modulated sub-carriers—
 - 1.2.1 Double-sideband
 - 1.2.2 Single-sideband, full carrier
 - 1.2.3 Single-sideband, reduced or variable carrier
 - 1.2.4 Single-sideband, suppressed carrier
 - 1.2.5 Independent sidebands
 - 1.2.6. Vestigial sideband
- 1.3 Emission in which the main carrier is angle-modulated—
 - 1.3.1 Frequency modulation
 - 1.3.2 Phase modulation
- 1.4 Emission in which the main carrier is amplitude and angle-modulated either simultaneously or in a pre-established sequence
- 1.5 Emission of pulses—
 - 1.5.1 Sequence of unmodulated pulses
 - 1.5.2 A sequence of pulses—
 - 1.5.2.1 Modulated in amplitude
 - 1.5.2.2 Modulated in width/duration
 - 1.5.2.3 Modulated in position/phase

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 80 wpm. 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".

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Amateur Radio Service Examination Syllabus

General

1. The amateur radio service is defined as a radiocommunication service for the purpose of self training, intercommunication and technical investigations carried out by amateurs, that is, by duly authorized persons interested in radio technique solely with a personal aim and without pecuniary interest.

2. Amateur operators are required by provisions of the Radio Regulations 1982 to hold an appropriate qualification before they may be issued with an amateur radio station licence.

3. The examination for an Amateur Operator's Certificate is specified in the Radio Regulations (Second Schedule).

Examination procedures

4. There are three grades of Amateur Operator's Certificate as follows:

General Grade; Limited Grade; Novice Grade.

4.1 The elements of the examination, and the standard to be achieved, for each grade of certificate are shown in the following table:

	Section A.	Section B.	Section C.
General Grade	50%	50%	12 wpm
Limited Grade	50%	50%	—
Novice Grade	30%	50%	6 wpm

4.2 Section A comprises a written examination in the principles of electricity, radiotelegraphy, and radiotelephony, and in the adjustment and operation of radio apparatus used in a typical amateur station.

4.3 A detailed description of the matters covered in Section A is contained in Appendix 1.

4.4 Section B comprises a written examination in such of the Radio Regulations, operating procedures, service codes and abbreviations as are applicable to the amateur service.

4.5 Section C is a morse operating test, both sending and receiving.

4.6 The examinations for Section A and Section B are conducted on behalf of the NZ Radio Frequency Service by the Examination Division of NZART. The Morse testing is conducted by the Radio Frequency Service.

Date of examination

5.1 Examinations for Sections A and B of the Amateur Operator's Certificate are conducted on the first Saturday in March and September between the hours of 9.00 a.m. and 12.10 p.m.

5.2 Tests for Section C are held during the mornings of the first Wednesday of every month.

Applications for examination

6. Application forms for Section A and Section B are available from any New Zealand Radio Frequency Service Office, or from the secretary of any Branch of NZART. Examination application forms must reach NZART Examination Division, P.O.Box 40-525 Upper Hutt not later than 5.00 p.m. on the February 1 for the March examination and not later than 5.00 p.m. on the August 1 for the September examination. No entries will be accepted after these dates. Applications for morse testing should be made directly to the nearest New Zealand Radio Frequency Office.

Examination fees

7. Examination entry fees must accompany the application:

Section A. \$11.00 inc GST
Section B. \$9.90 inc GST
Section C. Set by NZRFS.

Partial passes

8. Section A and B may be taken together at the scheduled March or September examination dates. Alternatively, Sections A and B may be taken separately at those time, in either order.

8.1 A Partial Pass is granted if a pass has been recorded in either Section A or Section B, but not both. A partial pass is valid for 13 months from the date it was granted.

8.2 Section C may only be attempted when pass in both Sections A and B have been recorded either at the Novice or at Limited Grade level.

8.3 Partial passes will not be granted for section C only. That is, a pass in Section C cannot subsist without a supporting pass in Sections A and B.

8.4 A Full pass is recorded when a partial pass in one section is held and a pass in the other section is recorded.

Examination result notifications

9. Following an examination each candidate will receive direct from the Examination Division an Examination Result Notification which will indicate the sections taken, the result obtained in each section, and a positive statement as to whether a full pass has been obtained in a particular certificate. Where a partial pass has been obtained, a positive statement will be made indicating when the partial pass lapses.

9.1 Formal Amateur Operator's Certificates will not be issued automatically to those persons who obtain a full pass in any grade.

9.2 Formal certificates will only be issued on request to the New Zealand Radio Frequency Service and upon payment of the appropriate fee.

9.3 It should be noted, however, that an examination result notification which carries a statement that a full pass has been obtained in any of the three certificates will be sufficient evidence on which an application for an amateur radio licence for the appropriate grade can be made.

Examination format

10. Section A of the examination is in the form of a multiple-choice question paper of 80 questions, each question having four possible given answers, of which only one is correct.

10.1 Forty correct answers are required to obtain a pass for the General and Limited certificates, and 24 correct answers are necessary to obtain a pass at Novice grade.

10.3 Section B comprises 30 multiple-choice questions, each question having four possible given answers, of which only one is correct.

10.4 Fifteen correct answers are required to obtain a pass in all grades.

10.5 The time allowed for the written portion of the examination is three hours, with a reading time of ten minutes, irrespective of whether one section or two sections are being taken.

11. Section C is a morse operating test, both sending and receiving. Each element will last for three minutes, and will contain both letters and figures. A figure is equivalent to two letters, and a word is equivalent to five letters.

11.1 The sending test is to be by hand, and the receiving test is to be written.

11.2 Two blemishes are allowed in each element of the test, with three blemishes in the received copy being counted as an error. A blemish is regarded as any patched or otherwise imperfect character resulting from guesswork or bad writing.

Examination recounts

12. Applications for recounts of the marks awarded in Sections A or B must be made to the NZART Examination Division no later than one month after the examination in respect of which the mark in question was awarded.

12.1 The prescribed fee must accompany the application for recount.

Copies of answer scripts

13. Copies of candidate's answer scripts will be provided on request, made to the NZART Examination Division. There is no cost for this service, but a self-addressed post paid envelope of suitable size must be enclosed with the request.

13.1 Specimen answers are available to candidates on the same conditions as set out in paragraph 13.

Previous examination papers

14. Copies of previous examination papers may be obtained from the NZART Examination Division at a cost of \$3.30 per set.

Exemptions

15. The holders of the New Zealand First or Second Class Radiotelegraph Operator's Certificate or their equivalent are granted full exemption. Holders of other Radio certificates may be granted exemption from Section A. Applications for exemption must be made to the NZART Examination Division.

Licensing of Amateur Stations

16. Applications for licences to operate amateur radio stations should be made to the nearest New Zealand Radio Frequency Service Office, accompanied by evidence of the certificate held, in the form of either an examination result notification or a formal certificate.

Study material

17. The following text books are suggested for study purposes:

Radio Communication Handbook. Published by RSGB.

Hamology Amateur Radio Course.

Basic Radio Training Manual. An NZART publication.

A Guide to Amateur Radio. Published by RSGB.

The above books are available from:

NZART Publication Department

P.O. Box 40-525

Upper Hutt.

The Radio Regulations and amendments. Available from the Government Printing Office.

Study courses

NZART branches often conduct courses of study for the amateur operator's certificate. Contact the nearest NZART branch secretary for details.

The NZ Open Polytechnic has a correspondence study course for the amateur operator's certificate. The address is:

The Open Polytechnic of New Zealand

Private Bag

Lower Hutt

Appendix 1

Examination Syllabus

Electrical principles

Sources of EMF. Physical and electrical properties of resistors, capacitors and inductors. Electrical properties of resistors, capacitors and inductors both individually and in combination when connected to a source of alternating or direct voltage and the effect of varying the frequency of the alternating voltage on these properties. The relationship between peak, rms and mean values of a waveform.

The use of Ohm's Law to relate to current flowing through an impedance and the determination of power dissipated in that impedance. The electrical properties of resonant circuits both coupled and individual.

Thermionic valves and semi-conductor devices

General construction, operation and electrical characteristics of valves and semi-conductor devices. Biasing methods. Basic circuit configurations and variations involving input impedance, output impedance and gain. Amplifier classification. Positive feedback and oscillator types. Frequency synthesis. Gates and diode switching. Power rectification, smoothing and voltage regulation. Distortion, harmonics, negative feedback, push-pull operation.

Receivers

Principles of operation and factors influencing the performance of receivers intended to receive the permitted modes of emission on any frequency available to the amateur operator.

Propagation

The means of propagating radio waves of any frequency available to the amateur operator. Factors which influence propagation conditions.

Antennas

Characteristics of common types of antenna both directional and nondirectional. Transmission lines. Standing wave patterns and standing wave ratios. Coupling of transmitters to transmission lines and transmission lines to antennas.

Transmitters

Methods of generating and increasing the level of radio frequency energy using any of the permitted modes of emission on any frequency available to the amateur. Technical characteristics of various modes of emission available to the amateur operator. Transmitter adjustments. Microphones.

Interference

Frequency stability. Means of preventing or reducing to acceptable levels unwanted emissions. Means of eliminating or reducing interference to nearby electronic equipment.

Measurements

Measuring instruments. Measurement of frequency, power, alternating and direct current and voltage, resistance, standing waves. Use of the oscilloscope.

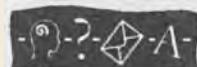
Safety

Safety precautions and resuscitation practices.

Amateur Radio Tuition

Tuition is available to those wishing to sit the Amateur Radio Examinations. The course covers the theoretical requirements of the exam. The cost of the course is currently \$140.00 which includes an administration fee.

For further information please contact:



Tony McCall

The Open Polytechnic of New Zealand

Private Bag, Lower Hutt

Tel (04) 666-189

Fax (04) 665-633

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Kaihauora o Aotearoa

THE OPEN
POLYTECHNIC
OF NEW ZEALAND

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 January 17.
By June, nine licences had been issued.
First amateur radio contact with Australia on April 26, 1923, between Frank Bell 4AA and Chas McClurcan 2CM on 160 metres.
- 1924 May 22, Ivan O'Meara 2AC in Gisborne, contacted C. Braggio CB8 in Argentina.
September 21, 4AA made first two-way contact with 6BCB in North America, on 118 metres.
October 18 6 pm, 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 April 18, with 23 countries represented. Z4AA Member of Executive Committee. Number of licences reached 100.
- 1926 In Auckland on August 16, 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 September 23, 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 March 11, 9 pm, ZL1AA made contact with F8AW for first 10 metre contact between New Zealand and Europe.
Myrtle Earland ZL3AG, first YL operator.
- 1931 February 3, Napier Earthquake—the genesis of AREC.
QSL Bureau handling outward cards at ½d each within New Zealand and 1d each overseas.
- 1932 March 6, first AREC Field Day.
Radio regulations gazetted, increase in morse test speed to 12 wpm.
- 1933 NZART log book available at 1/6d.
Official broadcasts resumed at 15 wpm.
- 1934 Two-way aeronautical mobile contact made on 5 metres (60 MHz) 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 December 8, 7.30 p.m. "H' Night". Amateur radio in New Zealand resumed on 3.5 to 3.96 MHz and 58.5 to 60 MHz only.
Morse test 15 wpm.
- 1946 Memorial Contest started.
50 to 54 MHz 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 50 MHz, 50M Hz record made by ZL1HY and ZL4BK at 635 miles.
- 1948 First article on SSSC (SSB) in *Break-In*.
First contacts on 2400 MHz, by ZL4BP and ZL4DH.
First two-way trans-Tasman contacts on 50 MHz.
- 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 148 MHz made available.
144MHz record contact by ZL3AQ and ZL3JX at 54 miles.
World record 50 MHz contact between ZL4GY and USA.
- 1951 ZL2ACB and ZL3LE make the first inter-district contact on 144 MHz.
World record 144 MHz 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 21.45 MHz available.
Examination became 50 multi-choice questions.
- 1953 420 MHz 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 January 31, 50 to 51 MHz withdrawn for use for Channel 1 TV.
- 1960 ZL2GX achieves world first 300 DXCC.
- 1961 OSCAR-1 launched December 14, first heard by ZL2HP on December 17.
- 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 144 MHz 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 144 MHz, 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 1215 MHz 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 144 MHz.
2M 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 2 m 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 7.3 MHz on a non-interference basis.
Fourth IARU Region III conference, in Bangkok.
Wellington ATV repeater operational.
First two-way contact on 24 GHz, 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 50.15 MHz sharing arrangement introduced.
First Cook Strait crossing by two-way ATV, by ZL2TWM and ZL2ASF.
First 432 MHz E-M-E contact with USA by ZL2BCG, and K5JL.
432 MHz E-M-E record contact between ZL2BCG and 15MSH.
Tasman Sea crossed on 432 MHz, by ZL1TAB and VK2BQJ.
- 1980 World record E-M-E contact between ZL3AAD and DL9KR on 432 MHz.
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.
ZL0 prefix introduced for visitors to New Zealand.
Random 5-letter groups approved for morse broadcasts from approved stations.
144 MHz bandplan changes to 600 kHz offset for FM repeaters.
First 2 m linear repeater, Dunedin, ZL1BTB and ZL4DO.
- 1982 Licence fee raised to \$13.
10.1 MHz band made available.
Non-morse operators permitted on 51 to 53 MHz band.
Fifth IARU Region III Association Conference, at Manila.
AREC 50th Birthday celebrations.
Tasman Sea crossed on 1296 MHz 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 1.8 MHz, and new bands above 47 GHz, Grade II and Novice Bands at 28 MHz. 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 ZL1AOX, ZL1WN, ZL1UFK.
World record for packet radio by ZL1AOX and W3IWI on 28 MHz band.
First New Zealand to Chatham Islands contacts on 144 MHz band by ZL4OY/C and ZL3AR.
- 1984 First ZL-ZL moon bounce contact between ZL3AAD and ZL2AQE on the 432 MHz 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.
- 1985 18.068 MHz 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 144 MHz, by ZL2TPY and FK8EM.
- 1986 NZART Official Broadcast simulcasted on 3900 kHz and on Amateur TV for the first time.
Amendment to Radio Regulations from July 21 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 6 m packet radio contact with VK, ZL2BKC and VK2YME.
- 1987 Examination became all multi-choice questions.
Official Broadcast networking on 3900 kHz and VHF repeaters commenced.
New Zealand Post Office replaced on April 1 1987 by the New Zealand Radio Frequency Service as Administration for New Zealand. Licence Fee made \$35 plus GST.
24.89 to 24.99 MHz band available.
610-620 MHz band extended to 622 MHz.
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 2304 MHz E-M-E contact, ZL2AQE and W3IWI, world record.
- 1988 New Radio Regulations from January 1 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.
80 m Novice band extended to 3.625 MHz.
14-year age limit for Amateur Licence dropped.
April 23, first North Island South Island contact on 610 MHz band, ZL2AJI Mt Robert, ZL2UGR Mt Taranki.
Seventh IARU Region III Association Conference, Seoul.
First southern hemisphere to northern hemisphere 6 m E-M-E contact, ZL2BGJ and W6JKV.
World record 6 m 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. (Radiocommunications Bill).

**ARTICLE WANTED
FOR "BREAK-IN"
NOW!**

International Amateur Radio Union

As a radio amateur you should know about the two international bodies related to amateur radio. They are:

1. The International Telecommunication Union (ITU), and
2. The International Amateur Radio Union (IARU).

International Telecommunication Union

The ITU is the highest authority for the regulation of all radio services. It is recognized by the United Nations as the specialized 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 New Zealand Radio Frequency Service (NZRFS) represents New Zealand in ITU affairs as the NZ administration.

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 efficient operation of telecommunications services; and harmonizes 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. The next World Administrative Radio Conference is to be held in 1992.

All radio services within the borders of New Zealand are controlled by the New Zealand Radio Regulations which reflect the ITU Radio Regulations.

International Amateur Radio Union

The IARU is a voluntary union of amateur radio societies and was founded in 1925. NZART has been a member since 1925. More than 125 other societies are members now. 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:

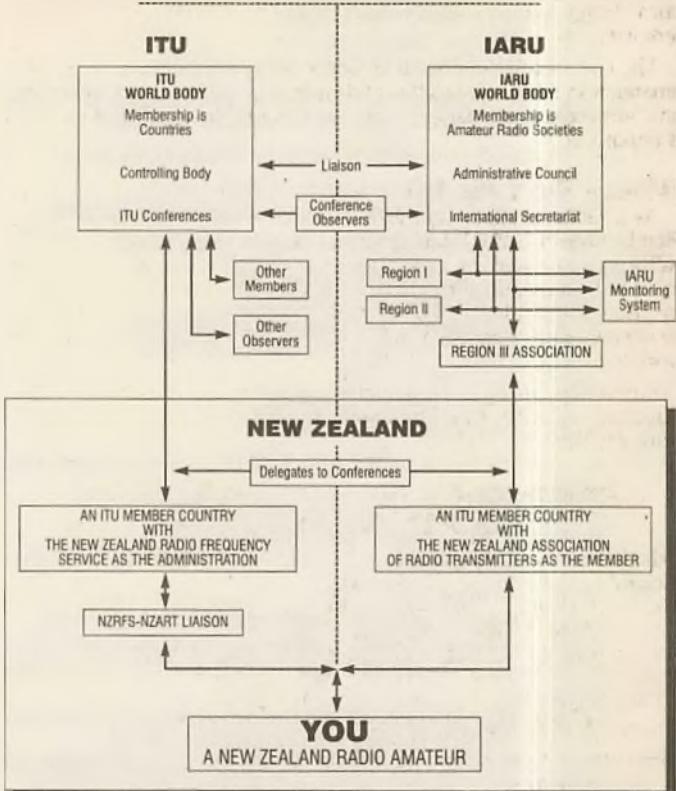
1. Region I is Europe, the USSR and Africa,
2. Region II is the Americas, and
3. Region III is the rest of the world.

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.

STRUCTURE OF THE ITU, IARU, AND YOU AS A NEW ZEALAND RADIO AMATEUR



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 world-wide.

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

For some important conferences (for example, 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 the next conference in 1992. The training of suitable people had already commenced and budgeting is planned.

NZART has access to the New Zealand administration, the New Zealand Radio Frequency Service, 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, 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-NZRPS 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 (as at 12 November 1990)

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 1 Division

John Allaway G3FKM—Secretary, IARU Region 1 Division

Alberto Shaio HK3DEU—President, IARU Region 2

Thomas B. J. Atkins, VE3CMD—Secretary, IARU Region 2

David Rankin, 9V1RH—Chairman, IARU Region 3 Association
D. D. Devan, 9M2DD—Director IARU Region 3 Association

(Region 3 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: Matsuoka 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 JMIUXU

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
KeigoKomuro, 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, Onehero, R.D. 2, Tuakau, New Zealand

Region I: Ronald Roden, G4GKO/4X8RR, 27 Wilmington Close, Hassocks, West Sussex BN6 8QB, Great Britain

Region II: M. L. Gibson W7JIE, 1215 N. 28th Place, Renton, WA 98056, U.S.A.

Region III: Bill Martin VK2COP, 33 Somerville Road, Hornsby Heights NSW 2077, Australia

International Beacon Project

Coordinator: Alan Taylor, G3DME, "Altadena", South View Road, Crowborough, East Sussex TN6 1HF, United Kingdom

Assistant Coordinator: John G. Troster, W6ISQ, 82 Belbrook Way, Atherton, CA 94025, USA



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The NZART Reciprocal Licensing 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 an 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 Licensing Bureau
Russ Garlick, ZL3AAA
23 Lydia Street, Greymouth
New Zealand 7801.

Visitors are also advised to obtain a copy of the NZART Callbook, which contains amateur frequencies, band plans, repeater locations, branch information and much other information. Callbook 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 any 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: Visiting amateur radio operators from countries not having formal reciprocal agreements with New Zealand.

Application may be made to operate in New Zealand on all bands for 12 months. Conditions of this change of policy is available from this bureau and a two month lead time is required by the Radio Frequency Service to consider this class of licence.

Reciprocal Agreement

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

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

CHANGE OF ADDRESS

To ensure your details are correct for Call Book 1992 please complete this form.

Name _____ Callsign _____ Membership Number _____

Old Address _____ **New Station address** _____

Page 1 of 1

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

Postcode _____

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

NZART MONITORING SERVICE REPORT FORM

Reported by (callsign) _____

**Send to: NZART MONITORING SERVICE ZL6IW
C/- Rowan Wahrlich ZL1CVK
Whangamarino Road, RD2
Te Kauwhata**

Frequency in kiloHertz _____

Location of station (where known), species, herpetofauna

Callsign of station (where known) causing harmful interference or the Amateur Service.

Print Clearly: Differentiate between zero (0) and O in callsigns. Send to Co-ordinator on last day of month.

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Alan

ZL2AJI

Steve

ZL2TCG

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(es), 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 400 watts 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 7.0–7.1 MHz; 14.0–14.25 MHz; 21.00–21.45 MHz, 24.890–24.990 MHz; 28.0–29.7 MHz; 144–146 MHz; 435–438 MHz; 1260–1270 MHz (earth-to-space direction only); 2.4–2.45 GHz; 3.40–3.41 GHz; 5.65–5.67 GHz (earth-to-space direction only); 5.83–5.85 GHz (space-to-earth direction only); 10.45–10.5 GHz; 24.0–24.05 GHz; 47.0–47.2 GHz; 75.5–81 GHz; 142–149 GHz; and 241–250 GHz 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 27.12 MHz (\pm 163 kHz), 925 MHz (\pm 4 MHz), 2.40–2.45 GHz, 5.8 GHz (\pm 75 MHz); and 24.125 GHz (\pm 125 MHz) are designated for industrial, scientific and medical (ISM) purposes. Amateur licensees operating telecontrol within these limits must accept interference from ISM equipment.
5. Allocated for use by amateur licensees on a temporary basis until further notice.
6. Until further notice the following spot frequencies may not be used: 1800 kHz (\pm 3 kHz); 1860 kHz (\pm 3 kHz); 10.130 MHz (\pm 3 kHz). 1850–1950 kHz 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 5 W mean power.
8. The band 50–50.15 MHz is allocated for temporary use. Operation is only permitted outside television programme hours.
9. 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.
10. Services particularly sensitive to other RF energy sources operate in adjacent frequency bands. Amateur licensees will be required to immediately cease transmission in the event of complaints of amateur interference to these services.
11. Power output is not to exceed 25 watts EIRP.

10. Amateur Frequency Allocation Chart.

Frequency Band	Notes	Use Restricted to Certificate holders of
1800–1950 kHz	3 and 6	General
3.50–3.90 MHz	1 and 3	General
3.525–3.625 MHz	1 and 3	Novice
7.00–7.10 MHz	1 and 2	General
7.10–7.30 MHz	3 and 9	General
10.10–10.15 MHz	1, 3, 6 and 9	General
14.00–14.35 MHz	1 and 2	General
18.068–18.168 MHz	1	General
21.00–21.45 MHz	1 and 2	General
21.10–21.20 MHz	1 and 2	Novice, General
24.890–24.990 MHz	1 and 2	General
27.12 MHz	4 and 7	All Grades
28.00–29.70 MHz	2	General
28.10–28.60 MHz	2	Novice
50.00–50.15 MHz	3 and 8	Limited & General
51.00–53.00 MHz	3	Limited & General
144.0–146.0 MHz	1 and 2	All Grades
146.0–148.0 MHz	3	
430–449.75 MHz	2, 3 and 9	Limited & General
614–622 MHz	3 and 9	Limited & General
922 to 927 MHz	3, 4, 5, 10 and 11	Limited & General
1.24–1.30 GHz	2, 3 and 9	Limited & General
2.396–2.45 GHz	2, 3, 4 and 9	Limited & General
3.30–3.50 GHz	2, 3 and 9	Limited & General
5.65–5.85 GHz	2, 3, 4 and 9	Limited & General
10.0–10.5 GHz	2, 3 and 9	Limited & General
24.00–24.05 GHz	2 and 4	Limited & General
24.05–24.25 GHz	3, 4 and 9	Limited & General
47.0–47.2 GHz	2	Limited & General
75.5–76.0 GHz	2	Limited & General
76.0–81 GHz	2 and 3	Limited & General
119.98–120.02 GHz	3 and 9	Limited & General
142–144 GHz	2	Limited & General
144–149 GHz	2, 3 and 9	Limited & General
241–248 GHz	2, 3 and 9	Limited & General
248–250 GHz	2	Limited & General
275–400 GHz	3 and 5	Limited & General

Amateur Radio Band Usage—March 1991

Regulations

All radio amateurs must pass the *Examination for Amateur Radio Operators Certificate*. There are two parts, *Theory* and *Regulations*. Time allowed three hours. General and Novice licencees must pass a Morse test. A pass of 50 per cent Theory plus 50 per cent *Regulations* plus 12 words/minute Morse qualifies for a *General Licence (G)*. A pass of 30 per cent Theory plus 50 per cent *Regulations* plus 6 words/minute Morse qualifies for a *Novice Licence (N)*. A pass of 50 per cent Theory plus 50 per cent *Regulations* without the Morse test qualifies for a *Limited Licence (L)*. After passing the exam it is necessary to obtain an *Amateur Radio Station Licence*, pay the appropriate fee and obtain a *Callsign* from the Radio Frequency Service of the Ministry of Commerce. *Limited* and *Novice* licences can be held concurrently.

The power limit for General and Limited Grade licencees is 400 W PEP or 120 W mean power output. The power limit for Novice licencees is 30 W PEP or 10 W mean power output.

Amateur radio operation is for personal enjoyment only. Pecuniary gain is not permitted. Third party traffic of a brief personal nature is permitted within New Zealand.

In an emergency situation any frequency or mode may be used to attract attention.

Amateur radio theory exams are organized by NZART and are held in March and September. Classes are run throughout the country. Contact local NZART branches for more details. The theory syllabus is described in RFS pamphlet RT4.

Morse tests are conducted by the RFS. You must be able to send and receive for three minutes, letters and numbers essentially error free.

Useful books for more details are:

Hamology, Brian Oliver
ARRL Handbook, ARRL

Both are available from NZART Headquarters.

Band Plans

The following band plans are recommendations by FMTAG. They are the combination of agreements at IARU meetings, as well as agreements reached and common usage by New Zealand amateurs. They have yet to be approved by NZART Council. FMTAG co-ordinate frequencies of repeaters and beacons for NZART Council and advises them on technical issues.

Table 1: Technical Standards for Repeaters and Beacons

System	Polarization	Mode	Bands
FM voice or data	V	16K0F3EJN	29 MHz up
Digipeaters	V	16K0/any	29 MHz up
ATV	H	CCIR system B	70 cm up
Beacons	any	less than 1 kHz	28 MHz up
		A1A preferred	

165

190 kHz

G

1800 Metres

RFS permit required. Power limited to 5 W EIRP.

1800

1810

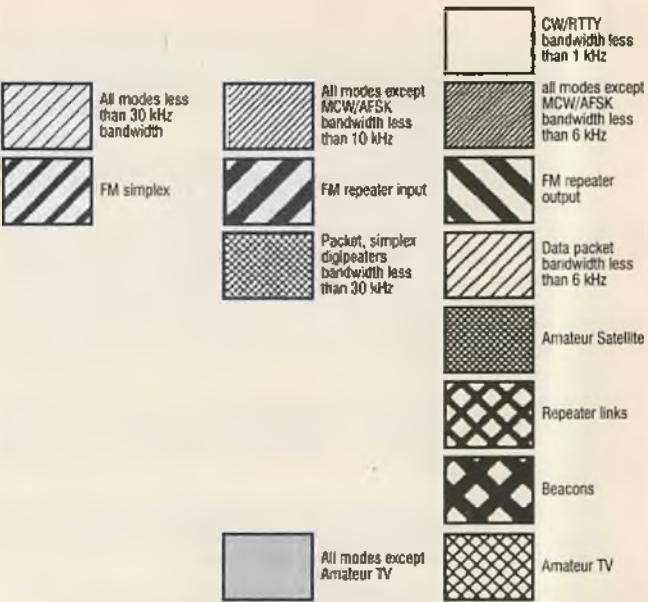
1815

1950 kHz

G

160 Metres

Key to Usage



N=Novice grade L=Limited grade G=General grade
(Note: N and L grades may be held concurrently)
Prepared for FMTAG by ZL2TAX and ZL2TQT

3500 3525 3550 3620 3640

3900 kHz

N

G

80 Metres

7000 7030 7040

7300 kHz

G

40 Metres

The Amateur Satellite Service is permitted in the band 7.0 to 7.1 MHz.

10100

10150 kHz

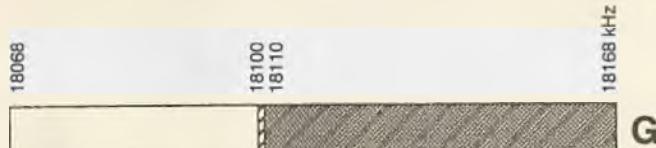
G

30 Metres

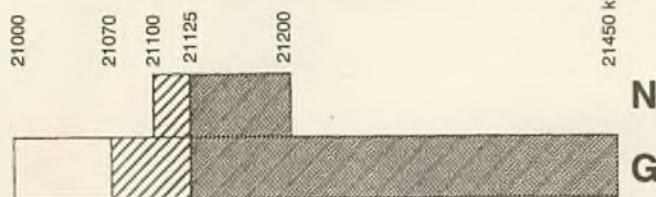


20 Metres

The amateur satellite service is permitted in the band 14.00 to 14.25 MHz.



17 Metres



15 Metres

The amateur satellite service is permitted in the entire band.



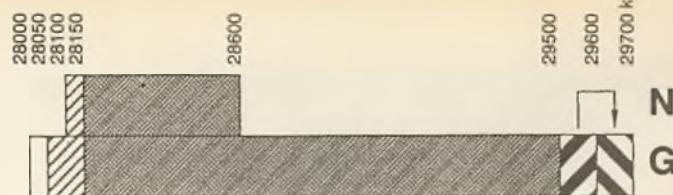
12 Metres

The amateur satellite service is permitted in the entire band.



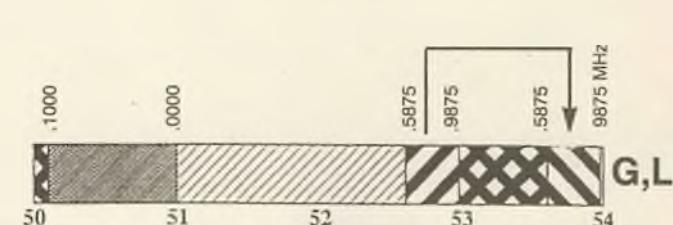
11 Metres

Telemetry or telecontrol only. Five watts mean power maximum.



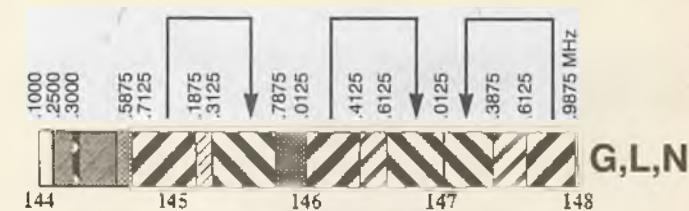
10 Metres

The amateur satellite service is permitted in the entire band.



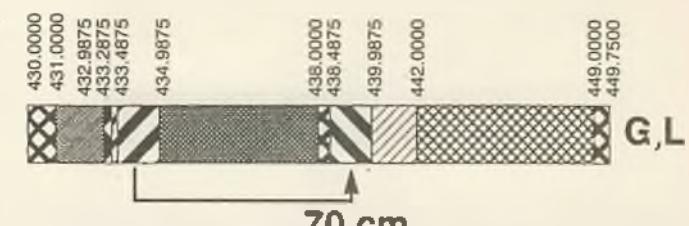
6 Metres

SSB/CW international calling 50.11 MHz, Oceania 52.05 MHz. FM calling 52.525 MHz. Beacons 50 to 50.1 MHz. RFS permit required for operation below 51 MHz (or 51.3 MHz in NICAM areas) in Channel 1 TV areas. Operation outside TV transmission times allowed without prior RFS approval. The band 53 to 54 MHz is only available for fixed station transmitters with RFS approval.



2 Metres

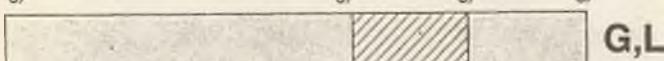
SSB calling Oceania 144.1 MHz, ZL 144.2 MHz. FM calling 146.475 MHz. Primary local packet/digipeater 144.65 MHz. Beacon frequencies according to geographic plan. The amateur satellite service is permitted in the band 144 to 146 MHz.



SSB calling 432.2 MHz. FM calling 433.3 MHz. Beacons 433.0 to 433.3 MHz. Local packet/digipeater 432.65 MHz. The amateur satellite service is permitted in the band 435 to 438 MHz.

**50 cm**

SSB calling 621.55 MHz. FM calling 621.6 MHz. Packet/Data 621.7 MHz. ATV vision carrier 615.25 MHz, CCIRR system B.

621.55
621.6 MHz**G,L****32 cm**

Standard 1 MHz narrow band segment. SSB/CW calling 925.2. FM Calling 925.4. Beacons 925.25 to 925.35 xtal, frequencies according to geographic plan. Local packet/digipeater 925.65. RFS permit required. Power limited to 25 W EIRP.

925.25
925.35
927 MHz**G,L****23 cm**

SSB calling 1270.2 MHz and 1296.2 MHz. FM calling 1270.3 MHz and 1296.3 MHz. Beacons 1297.0 to 1297.3 MHz. ATV video carriers 1244.25 MHz, 1251.25 MHz, 1277.25 MHz, 1284.25 MHz, CCIRR system B. The amateur satellite service is permitted in the band 1260 to 1270 MHz (uplink only).

G,L**12 cm**

Standard 1 MHz narrow band segment. SSB/CW calling 2399.2. FM calling 2399.4. Beacons 2399.25 to 2399.3 xtal controlled, frequencies according to geographic plan. Local packet/digipeater 2399.65. The amateur satellite service is permitted in the band 2400 to 2450 MHz.

2450 MHz

G,L

F 25 30

**Microwave**

Standard 1 MHz narrow band segment. SSB/CW calling F+0.2. FM calling F+0.4. Beacons F+0.25 to F+0.30 xtal controlled, frequencies according to geographic plan. Local packet/digipeater F+0.65. The amateur satellite service is permitted in the following bands: 3400 to 3410 MHz, 5650 to 5670 MHz (uplink only), 5830 to 5850 MHz (downlink only), 10.45 to 10.50 GHz, 24 to 24.05 GHz, 47 to 47.2 GHz, 75.5 to 81 GHz, 142 to 149 GHz, and 241 to 250 GHz. F=2399, 3456, 5760, 10386.

F+1 MHz

G,LW:
W:
W:**Application for Repeater or Beacon**

Application date :
 Originating branch and number :
 Trustees (1) Name and Call:
 Address:
 Phone H:
 (2) Name and Call:
 Address:
 Phone H: W:
 W:
 W:

SITE DETAILS

QTH from NZMSI or 260 series :
 Equipment building owner :
 Name of site on map :
 Desired Call Book name for station :

RF EQUIPMENT DETAILS

Type of Station :
 Desired Callsign (if needed) :
 Antenna configuration :
 Power output :
 Intended commissioning date :

DIAGRAM OF SYSTEM IF REPEATER IS PART OF A NETWORK

This is FMTAG form number 10. Send to "The Secretary FMTAG, 54 Brooker Grove, Newlands, Wellington". We will advise frequencies. Provide site location from NZMSI or metric 260 series maps good enough to locate equipment building from others that may be on the same hill top. We also need a letter from the Secretary of the originating Branch telling us the date this project was approved by the branch membership at a general meeting.

for FMTAG use

Transmit frequency Receiver frequency

Latitude Longitude

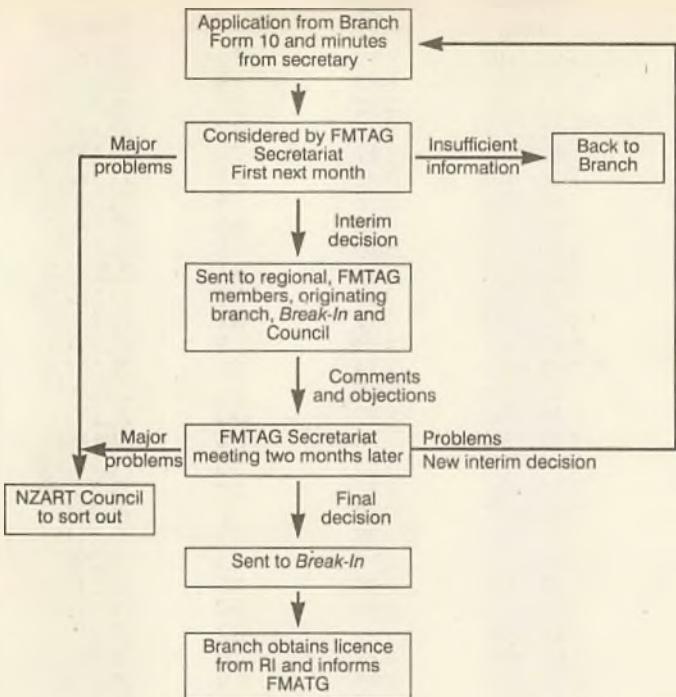
Date of approval at branch meeting Date interim in Break-In

Date final Break-In

Date details last updated by branch F10.

v5a

Procedure to be used to establish a beacon or repeater



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amateur radio ... the course

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New Zealand Radio Frequency Service Offices

6

Office	Delivery Address	Postal Address	Telephone No.	Fax No.
Head Office Wellington	Ministry of Commerce Building, 33 Bowen Street Wellington	PO Box 2847	(04) 732-200	(04) 732-489
Whangarei	105 Lower Cameron Street, Whangarei	PO Box 449	(089) 488-491	(089) 488-663
Auckland	Altos House, Cnr Newton Road and Abbey Street Newton, Auckland	PO Box 68-217 Newton	(09) 788-537	(09) 788-344
Auckland Laboratory Services	47 MacKelvie Street, Grey Lynn, Newton, Auckland	PO Box 68-307 Newton	(09) 360-0862	(09) 360-0861
Hamilton	512 Grey Street, Hamilton	PO Box 982	(071) 342-958 (071) 342-960	(071) 342-961
Rotorua	Government Life Building, 9 Haupapa Street, Rotorua	PO Box 847	(073) 460-370	(073) 460-372
Tauranga	Departmental Building, McLean Street, Tauranga	PO Box 846	(075) 779-229	(075) 776-750
Gisborne	Post Building, Grey Street, Gisborne	PO Box 339	(06) 867-8424	(06) 867-8079
Napier	First Floor, Manchester Unity Building Cnr Kennedy Road and Nuffield Avenue, Marewa, Napier	PO Box 4162 Marewa	(06) 843-5829	(06) 843-5827
New Plymouth	Cnr Liardet and Pendarves Street, New Plymouth	PO Box 217	(067) 88-139	(067) 88-137
Palmerston North	1st Floor, 328-330 Broadway Avenue, Palmerston North	PO Box 5063	(063) 66-710	(063) 69-110
Wellington	70 Bloomfield Terrace, Lower Hutt	PO Box 31433	(04) 665-537	(04) 665-853
Lower Hutt Laboratory Services	66 Bloomfield Terrace, Lower Hutt	PO Box 31-319 Wellington	(04) 665-537	(04) 665-853
Nelson	1st Floor, Farm Products, 42 Halifax Street, Nelson	PO Box 997	(054) 82-446	(054) 69-293
Greymouth	Post Office Building, Tainui Street, Greymouth	PO Box 442	(03) 768-0312	(03) 768-0346
Christchurch	St Elmo Courts, 47 Hereford Street, Christchurch	PO Box 1800	(03) 654-401	(03) 654-156
Timaru	Room 102, 1st Floor, Railway Station, Station Street, Timaru	PO Box 589	(03) 684-8120	(03) 684-8121
Dunedin	12 Hanover Street, Dunedin	PO Box 5647 Moray Place	(03) 477-1125	(03) 474-0450
Invercargill	Post Office Building, 13 Esk Street, Invercargill	PO Box 247	(03) 214-4952	(03) 218-4582

Two Metre Band—FM Repeaters

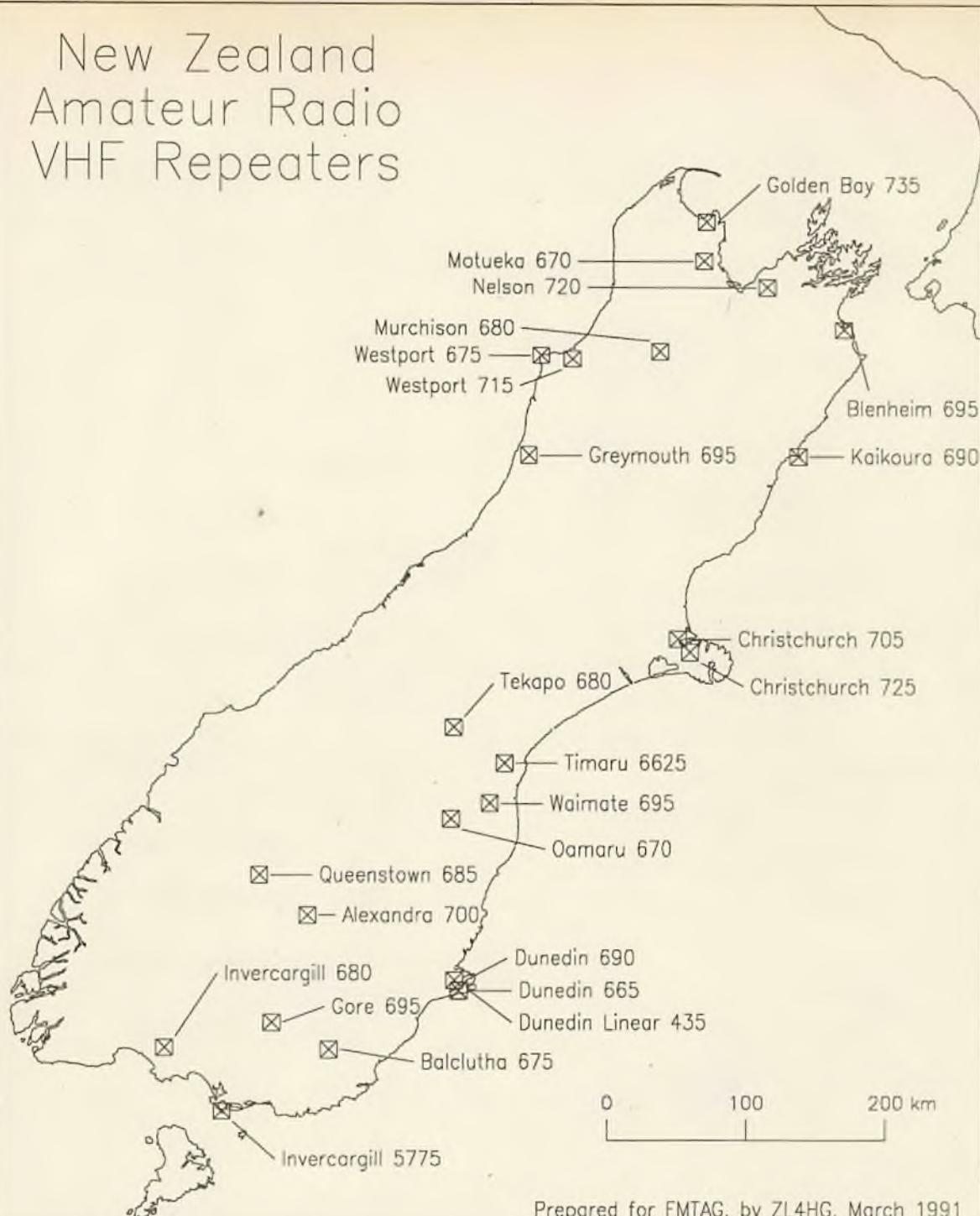
Name	Site	Output Freq.	Height mASL	Branch	Trustee
Far North	710 Mount Mangataureia	147.100	513	78	ZL1ALU
Kaikohe	715 Browns Hill	147.150	388	78	ZL1UBQ
Whangarei	720 Parakiore	147.200	392	28	ZL1AF
Dargaville	7175 Pukewharariki	147.175	320	73	ZL1TVP
Rodney	730 Dome	147.300	341	71	ZL1TBG
Auckland	690 Ruaotewhenua	146.900	391	66	ZL1ASV
Bombay	670 Mount Puketutu	146.700	376	66	ZL1ASV
Auckland	6625 Port Waikato	146.625	403	66	ZL1ASV
Tairua	6975 Tairua	146.975	349	81	ZL1THG
Waikato	695 Mount Te Aroha	146.950	944	81	ZL1TNT
Tauranga	680 Mount Minden Te Puna	146.800	286	39	ZL1BOM
Edgecumbe	700 Mount Edgecumbe	147.000	777	81	ZL1BGE
Waitomo	7375 Rangitoto Range	147.375	869	55	ZL1TUL
Tokoroa	7025 Whakamar	147.025	743	57	ZL1TDV
Rotorua	735 Mt Ngongotaha	147.350	869	33	ZL1PK
Taupo	675 Maroanui	146.750	897	60	ZL1TJA
Tauraruni	715 Hikurangi	147.150	770	38	ZL1UJA
Kakaramea	7275 Kakaramea	147.275	1313	38	ZL1UJA
Poverty Bay	680 Kaiti Hill	146.800	122	11	ZL2TNP
Gisborne	690 Whakapunake	146.900	950	11	ZL2TNP
Napier	725 Taraponui	147.250	1308	25	ZL2TIS
Hawkes Bay	670 Kahuranaki	146.700	652	13	ZL2BPU
New Plymouth	720 Power Station Chimney	147.200	190	27	ZL2TSH
Egmont	705 East Mount Taranaki	147.050	1559	54	ZL2TLF
Opunake	540 Opunake	145.400	—	32	ZL2ADU
Wanganui	690 Maewa	146.900	658	48	ZL2BGE
Taihape	6775 Mount Mataroa	146.775	799	23	ZL2UDJ
Southern Hawkes Bay	665 Mount Wharite	146.650	915	06	ZL2VL
Manawatu	7125 Pahiatua Track	147.125	488	20	ZL2BFR
Masterton	680 Mount Rangitumau	146.800	604	46	ZL2FZ
Rewa	735 Mount Rewa	147.350	604	46	ZL2FZ
Holdsworth	7175 Mount Holdsworth (Solar powered)	147.175	1470	46	ZL2FZ
Barton	7325 Mount Barton (Solar powered)	147.325	1300	46	ZL2FZ
Southern Wairarapa	715 Warrens Airstrip	147.150	500	82	ZL2UDT
Kapiti	685 Mount Field	146.850	615	69	ZL2TFP
Climie	730 Mount Climie	147.300	867	63	ZL2TJT
Titahi Bay	675 Onepoto Reservoir	146.750	90	42	ZL2TCF
Belmont	710 Mount Belmont	147.100	450	74	ZL2ARW
Lower Hutt	700 Mount Fitzherbert	147.000	377	18	ZL2QZ
Golden Bay	735 Richmond Hill	147.350	620	24	ZL2BCG
Motueka	670 Mount Campbell	146.700	1328	24	ZL2BCG
Nelson	720 Saddle Hill	147.200	1215	26	ZL2BCA
Blenheim	695 Jamies Knob	146.950	277	22	ZL2BK
Murchison	680 Mount Murchison	146.800	1469	26	ZL2BCA
Westport	675 Cape Foulwind Lighthouse	146.750	91	62	ZL3AFN
Westport	715 Mount Rochfort	147.150	1041	62	ZL3AFN
Kaikoura	690 Kaikoura Peninsula	146.900	91	76	ZL3PZ
Greymouth	695 Sewell Peak	146.950	834	49	ZL3ADH
Christchurch	705 Marley Hill	147.050	488	05	ZL3RW
Christchurch	725 Herbert Peak	147.250	926	05	ZL3RW
Tekapo	680 Mount Rollesby	146.800	1341	34	ZL3MN
Timaru	6625 Mount Horrible	146.625	332	34	ZL3MN
Waimate	695 Mount Studholme	146.950	1088	34	ZL3MN
Oamaru	670 Station Peak	146.700	886	64	ZL4SF
Alexandra	700 Fruitlands	147.000	1478	61	ZL4THT
Queenstown	685 Double Cone	146.850	2286	75	ZL4JW
Dunedin	665 Highcliffe	146.650	310	30	ZL4MK
Dunedin	690 Mount Cargill	146.900	674	30	ZL4MK
Balclutha	675 Kuriwao	146.750	638	35	ZL4AO
Gore	695 McLeod's Hill	146.950	640	37	ZL4OX
Invercargill	680 Bald Hill, Otautau	146.800	798	37	ZL4OX
Invercargill	680 Bluff Hill	145.775	265	37	ZL4OX

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. 16K0F3EJN 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

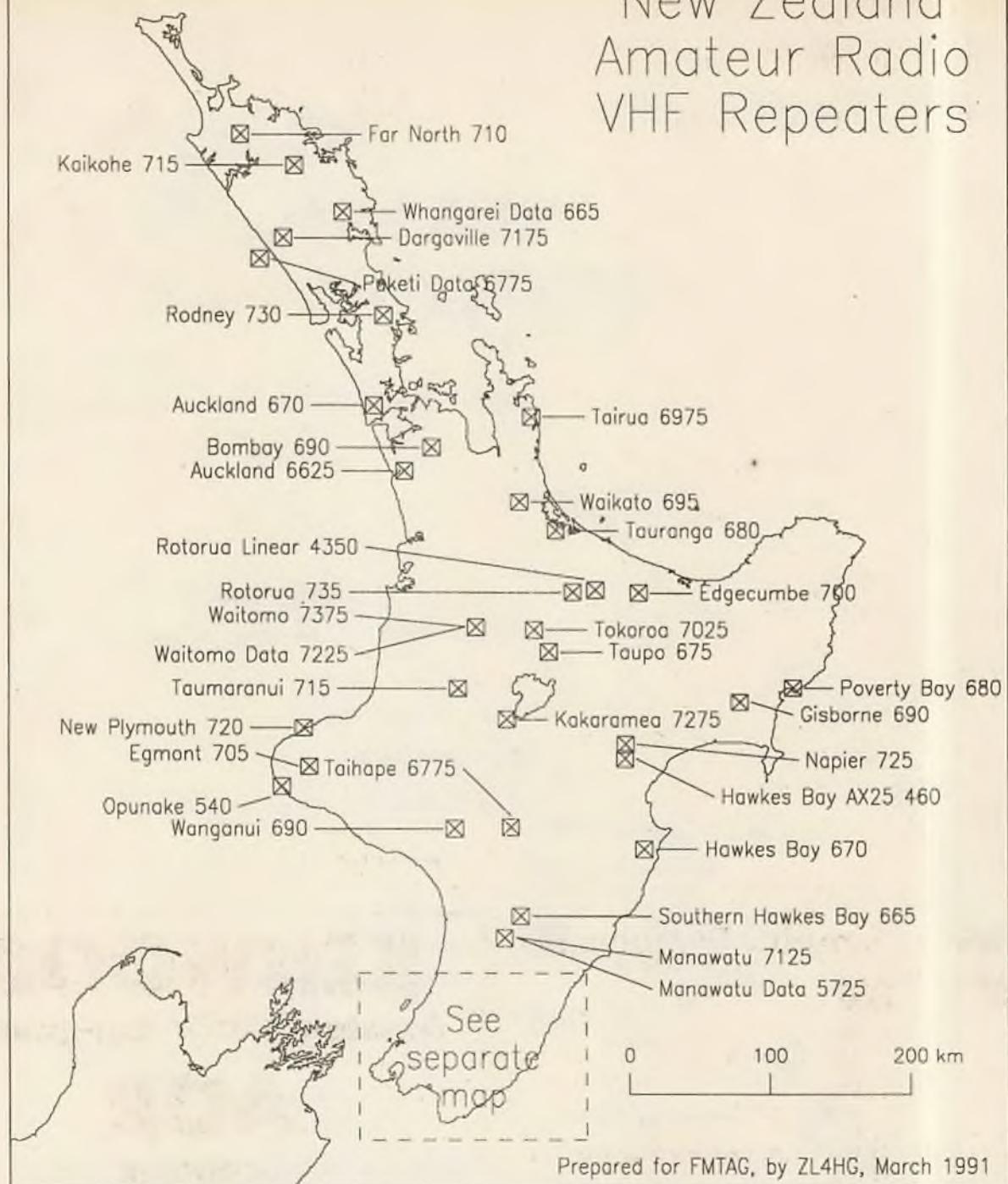


Prepared for FMTAG, by ZL4HG, March 1991

Linear Repeaters

Name	Site	Input Freq	Output Freq	Height mASL	Branch	Trustee
Rotorua Linear	Moerangi	144.950	144.350	685	33	ZL1BTB
Dunedin Linear	Highcliff	144.950	144.350	210	30	ZL4MK

New Zealand Amateur Radio VHF Repeaters



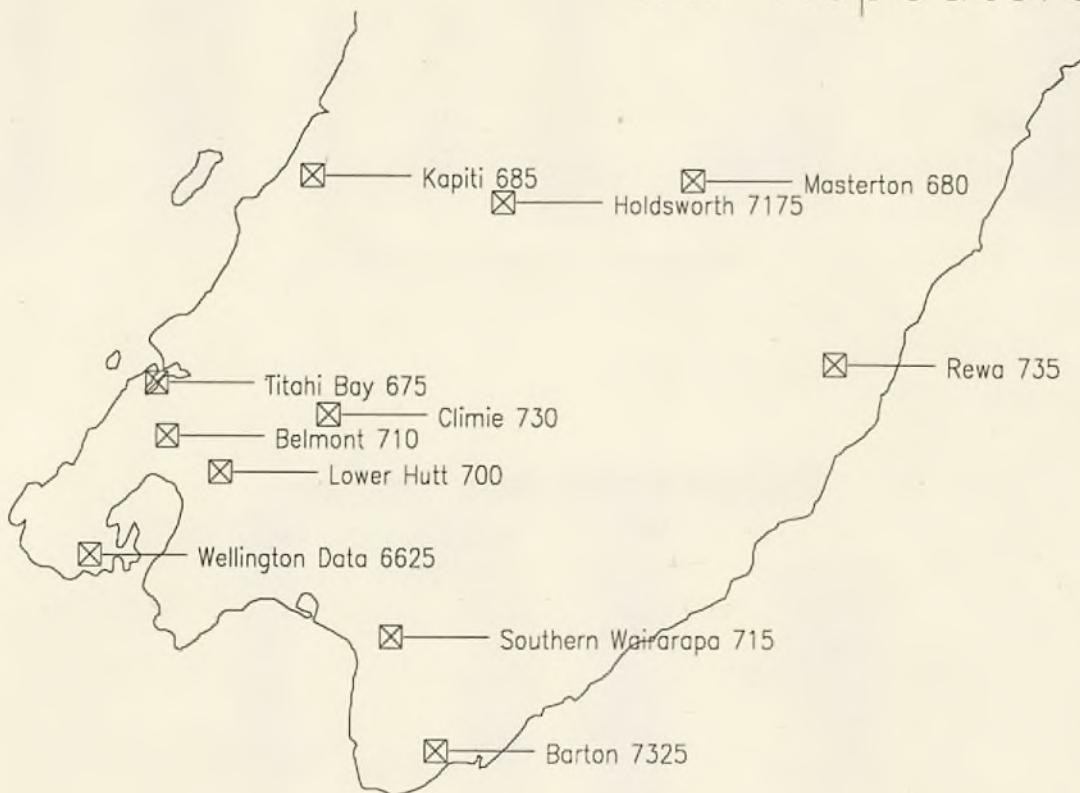
Prepared for FMTAG, by ZL4HG, March 1991

Data Repeaters Standard Repeater primarily used for Digital Modes

Name	Site	Output Freq.	Height mASL	Branch	Trustee
Pukoti Data	Manginangina	146.775	378	78	ZL1AUI
Whangarei Data	Parakiore	146.650	392	28	ZL1TFK
Waitomo Data	Rangitoto Range	147.225	869	55	ZL1AMW
Manawatu Data	Pahiatua Track	145.725	488	20	ZL2BFR
Wellington Data	Hawkins Hill	146.625	533	74	ZL2BAC

0 10 20 30 40 50km

New Zealand Amateur Radio VHF Repeaters



Prepared for FMTAG, by ZL4HG, March 1991

Two Metre Simplex Frequencies

Simplex Name	Frequency (MHz)	
6425	146.425	
6475	146.475	calling
6525	146.525	
6575	146.575	
7400	147.400	ATV liaison
7425	147.425	
7450	147.450	ATV repeater sound input
7475	147.475	
7525	147.525	
7575	147.575	

Remember
When operating on a repeater
LEAVE A THREE SECOND BREAK
to check for any priority traffic

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Digipeaters—Single Frequency Store and Forward (AX.25)

Name	Site	Freq.	Height mASL	Branch	Digipeater Call	Alias
Northland	—	144.65	—	28	ZL1AM-6	—
Klondyke	Port Waikato	144.65	403	—	ZL1BQ-1	*
Rangitoto	Rangitoto Range	144.65	869	55	ZL1Z-1	OTO
Tauranga	Papamoa	144.65	224	39	ZL1TP-1	BOP
Whakatane	—	144.65	—	—	ZL1AIU-1	N/A
Rotorua	—	144.65	—	—	ZL2QS-2	ROT
Gisborne	Hikirangi	144.65	1444	11	ZL2GIS-1	GIS
Manawatu	Mt Wharite	144.65	915	20	ZL2IB-1	PMR
Kapiti	Mt Field	144.65	615	69	ZL2KB-1	KAP
Nelson	—	144.65	—	—	ZL2ARG-1	—
Christchurch	Marley Hill	144.65	488	05	ZL3CHC-1	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
Gore	—	144.65	—	—	ZL4AL-1	GOR

*ROSE system, not NetRom compatible.

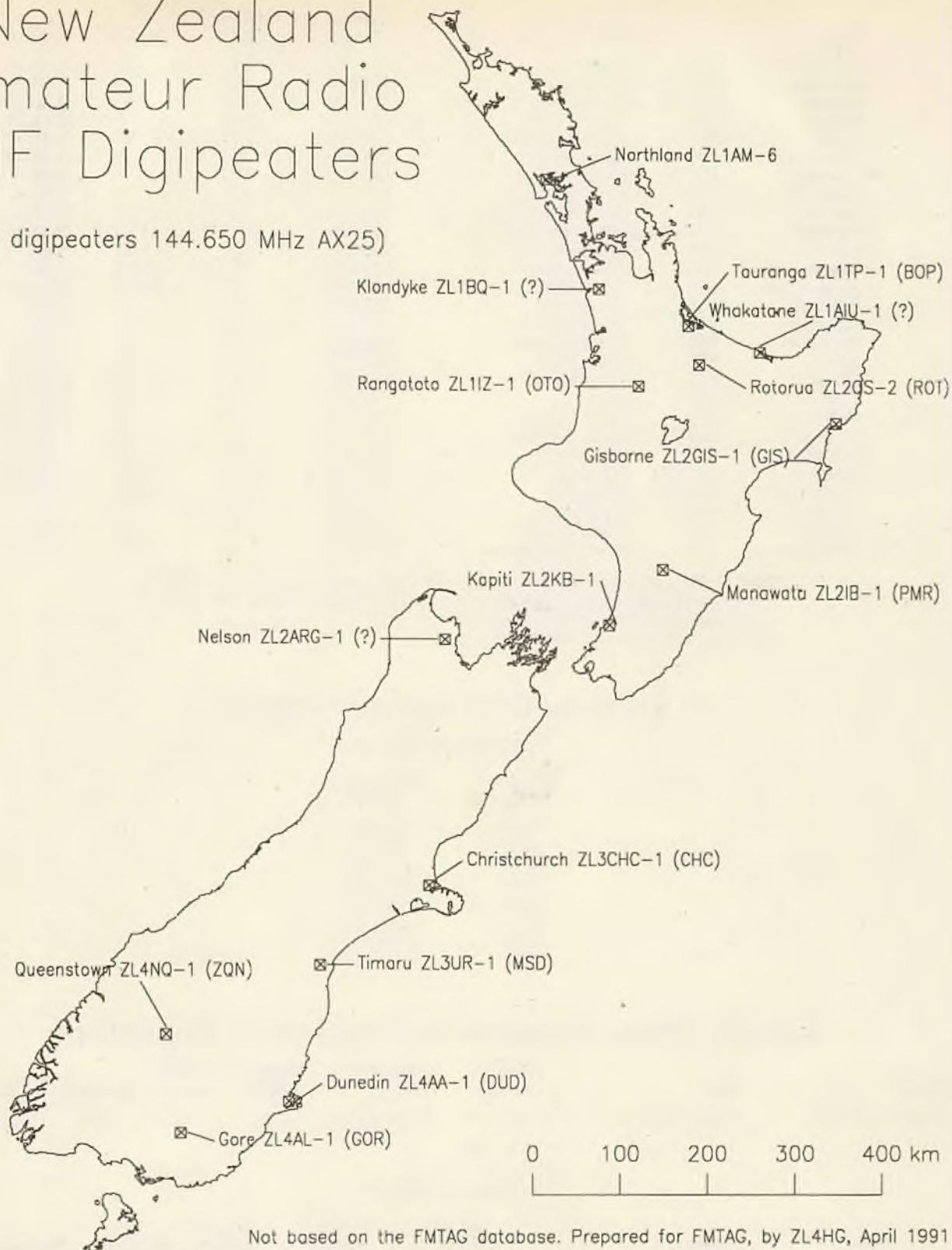
Packet Radio BBS Stations:

	Callsign	Local Frequency	Data Rate
Whangarei	ZL2TMQ	144.65/432.65	1200
Auckland	ZL1AB*	144.65	1200
Hamilton	ZL1UX*	144.65	1200
Tauranga	ZL1BSN	144.65	1200
New Plymouth	ZL2AB*	144.65	1200
Gisborne	ZL2GIS*	144.65	1200
Napier	ZL2BQK*	144.65	1200
Levin	ZL2TCX	144.65	1200
Wellington	ZL2WA*	144.65 (data rptr)	1200/2400
Picton	ZL2AHK	144.65	1200
Christchurch	ZL3AC*	144.65	1200
Dunedin	ZL4AA*	144.65	1200
Invercargil	ZL4TAY	144.65	1200

* Branch operated BBS

New Zealand Amateur Radio VHF Digipeaters

(All digipeaters 144.650 MHz AX25)



Not based on the FMTAG database. Prepared for FMTAG, by ZL4HG, April 1991

**See the "Digital Modes" column of Break-In
for regular and additional information**

Seventy Centimetre Band—FM Repeaters

Name		Site	Output Freq.	Height mASL	Branch	Trustee
Whangarei	870	Parahaki	438.700	240	28	ZL1UOH
Auckland	850	Mt. Eden	438.500	200	66	ZL1ASV
Auckland	900 (L)	Port Waikato	439.000	403	66	ZL1ASV
Hunua	895	Clements Hill	438.950	300	65	ZL1AKX
Waikato	860	Mount Te Aroha	438.600	944	81	ZL1TNT
Tauranga	885	Mount Minden	438.850	286	39	ZL1BOM
Tokorua	865	Whakamaru	438.650	793	57	ZL1TDV
Waitomo	870	Rangitoto Range	438.700	869	55	ZL1TUL
Rotorua	855	Mount Ngongotaha	438.550	757	33	ZL1PK
Egmont	4025 (L)	East Mount Egmont	434.025	1509	74	ZL2ARW
Egmont	880	East Mount Egmont	438.800	1559	54	ZL2TLF
Hawkes Bay	900	Te Mata Peak	439.000	389	25/13	ZL2TSX
Hawkes Bay	870	Te Mata Peak	438.700	389	25/13	ZL2TSX
Taihape	865	Cleavers Hill	438.650	822	23	ZL4FS
Wharite	910 (L)	Mount Wharite	439.100	915	06	ZL2VL
Manawatu	8525	Pahiatua Track	438.525	488	20	ZL2BFR
Kapiti	885	Mount Field	438.850	615	69	ZL2TFP
Climie	860	Mount Climie	438.600	867	63	ZL2TVT
Tawa	895	Tawa	438.950	70	74	ZL2ARW
Wellington	850	Mount Victoria	438.500	195	74	ZL2BAC
Wellington	900 (L)	Mount Belmont	439.000	450	74	ZL2ARW
Nelson	890	Fringed Hill	438.900	793	26	ZL2BCA
Blue Duck	3975 (L)	Blue Duck	433.975	1021	74	ZL2ARW
Christchurch	900 (L)	Marley Hill	439.000	488	74/05	ZL3RW
Hornby	850	Cass Peak	438.500	522	56	ZL3GI
Dunedin	850	Mount Cargill	438.500	674	30	ZL4MK
Invercargill	870	Invercargill City	438.700	45	37	ZL4MX

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

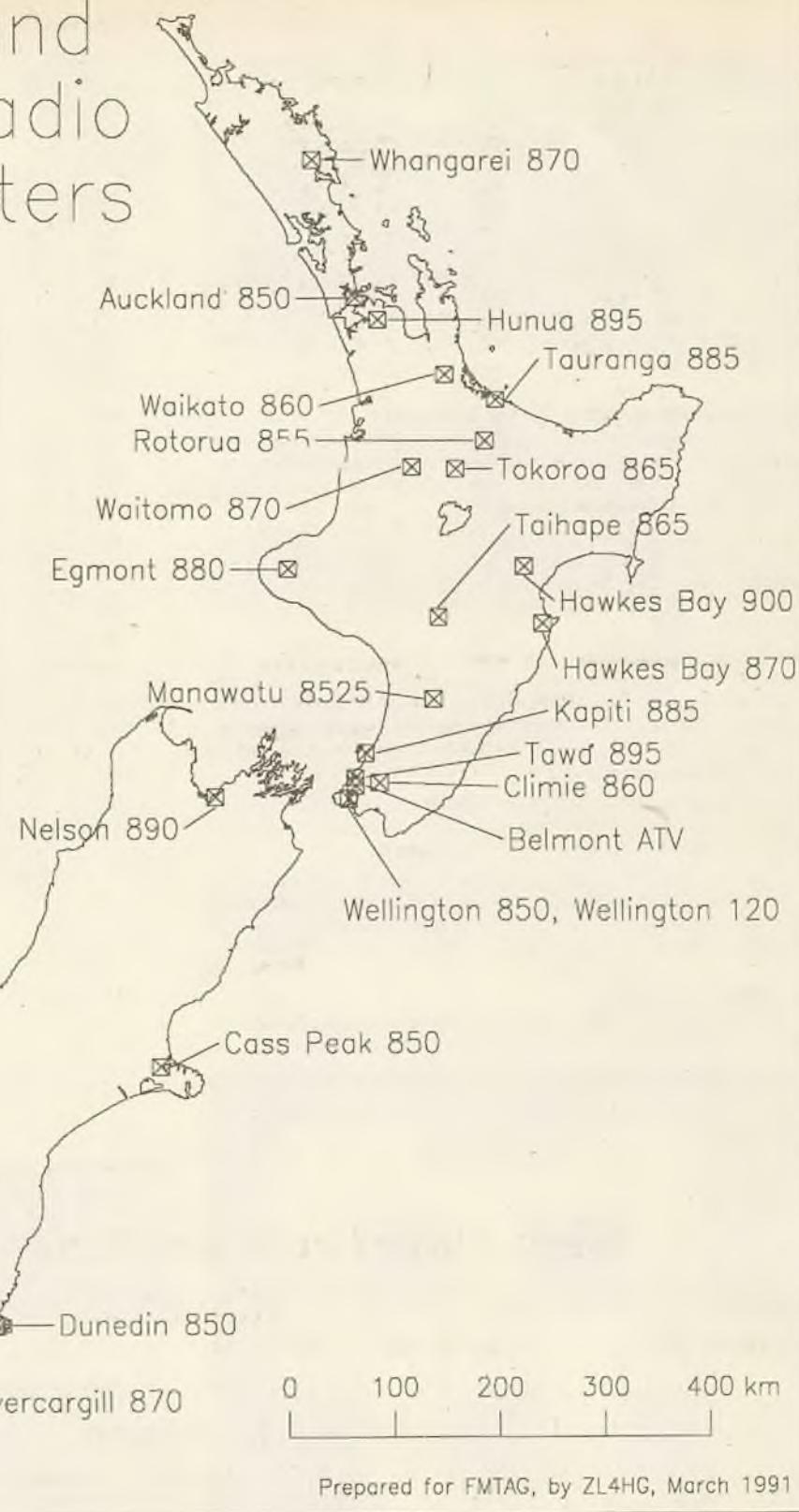
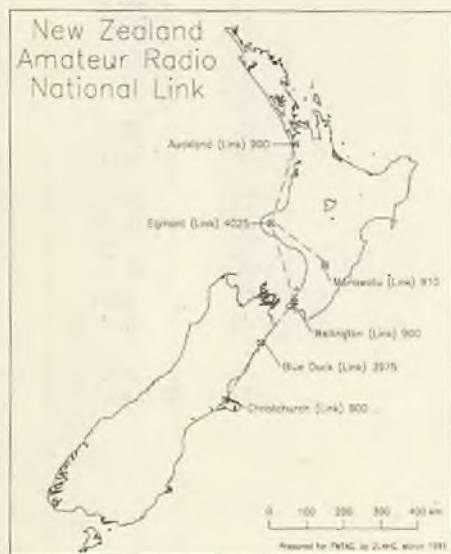
Name	Site	Input Freq.	Output Freq.	Height mASL	EIRP watts	Branch	Trustee
Wellington 120	Mount Victoria	1291.200	1271.200	195	13	74	ZL2ARW

Television

Name	Site	Input Freq.	Output Freq.	Height mASL	Branch	Trustee
Auckland ATV	(Temporary)	443.25	615.250	—	66	ZL1ASV
Wellington ATV	Mt Belmont	443.25	615.250	450	74	ZL2ARW
Tasman Bay ATV	Saddle Hill	615.25	443.250	1215	24	ZL2ASF
Albany ATV	Albany	615.25	443.250	66	66	ZL1ASV

ATV repeater input 443.25 MHz vision, 449.75 MHz sound, output 615.25 MHz vision, 620.75 sound.

New Zealand Amateur Radio UHF Repeaters



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 $2^\circ \times 1^\circ$ rectangles designated by the third and fourth characters into smaller rectangles that are $5' \times 2.5'$ of arc in size. The letters A through X are used to specify each coordinate of these $5' \times 2.5'$ 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.

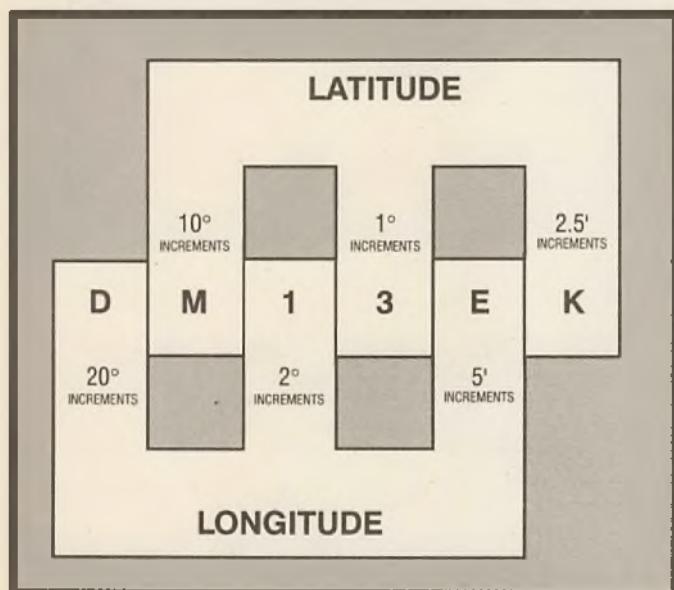


Figure 1.

Table 1
1st Longitude
Character

Degrees
Longitude

-180	A
-160	B
-140	C
-120	D
-100	E
-80	F
-60	G
-40	H
-20	I
0	J
+20	K
+40	L
+60	M
+80	N
+100	O
+120	P
+140	Q
+160	R
+180	

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

Table 3
3rd Longitude
Character

Minutes
Longitude

-120	0	0
-115	A	+5
-110	B	+10
-105	C	+15
-100	D	+20
-95	E	+25
-90	F	+30
-85	G	+35
-80	H	+40
-75	I	+45
-70	J	+50
-65	K	+55
-60	L	+60
-55	M	+65
-50	N	+70
-45	O	+75
-40	P	+80
-35	Q	+85
-30	R	+90
-25	S	+95
-20	T	+100
-15	U	+105
-10	V	+110
-5	W	+115
0	X	+120

Number
Letter

Converting Latitude and Longitude to Grid Locators

Example: The location of an observatory at $105^\circ 44.0'$ W longitude and $32^\circ 58.8'$ 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; $+20^\circ$ 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, $-5^\circ 44.0'$. Because $-5^\circ 44.0'$ 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	
-80	A
-70	B
-60	C
-50	D
-40	E
-30	F
-20	G
-10	H
0	I
+10	J
+20	K
+30	L
+40	M
+50	N
+60	O
+70	P
+80	Q
+90	R

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	0	+10

Number

Table 6
3rd Latitude
Character
Minutes
Latitude

-60.0		0.0
-57.5	A	+2.5
-55.0	B	+5.0
-52.5	C	+7.5
-50.0	D	+10.0
-47.5	E	+12.5
-45.0	F	+15.0
-42.5	G	+17.5
-40.0	H	+20.0
-37.5	I	+22.5
-35.0	J	+25.0
-32.5	K	+27.5
-30.0	L	+30.0
-27.5	M	+32.5
-25.0	N	+35.0
-22.5	O	+37.5
-20.0	P	+40.0
-17.5	Q	+42.5
-15.0	R	+45.0
-12.5	S	+47.5
-10.0	T	+50.0
-7.5	U	+52.5
-5.0	V	+55.0
-2.5	W	+57.5
-0.0	X	+60.0

Letter

of the observatory's latitude. Find the second latitude character by referring to Table 5 for the number corresponding to the latitude remainder, $+2^{\circ} 58.8'$. Because $+2^{\circ} 58.8'$ falls in the $+2^{\circ}$ to $+3^{\circ}$ 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 $+32^{\circ} 58.8'$ 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	=	$-1^{\circ} 35'$
Round	=	$0^{\circ} 2.5'$

Sum = $-117^{\circ} 37.5'$, or $117^{\circ} 37.5' \text{ W}$

The rounding term is used to compute the longitude of the centre of the specified region—a region $5' \times 2.5'$ (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	=	$+30^{\circ}$
3	=	$+3^{\circ}$
K	=	$+0^{\circ} 25'$
Round	=	$0^{\circ} 1.25'$

Sum = $+33^{\circ} 26.25'$, or $33^{\circ} 26.25' \text{ N}$ 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 $2^{\circ} \times 1^{\circ}$ (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 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.

Thanks to QST for permission to reprint this article.

Table 7
Sample Grid Locators

City	Longitude	Latitude	Locator
Munich	$11^{\circ} 32.5' \text{ E}$	$48^{\circ} 8.8' \text{ N}$	JN58TD
Montevideo	$56^{\circ} 12.7' \text{ W}$	$38^{\circ} 54.6' \text{ S}$	GF15VC
Washington DC	$77^{\circ} 3.9' \text{ W}$	$38^{\circ} 55.2' \text{ N}$	FM18LW
Wellington	$174^{\circ} 44.7' \text{ E}$	$41^{\circ} 17.0' \text{ S}$	RE78IR

Remember: West longitudes and south latitudes are treated as negative values in the grid locator system; east longitudes and north latitudes are positive.

Now we have accounted for exactly 104° of the observatory's $-105^{\circ} 44.0'$ longitude. Use Table 3 to find the letter that corresponds to the remaining $-1^{\circ} 44.0'$ of longitude. Expressed in minutes $-1^{\circ} 44.0' = -60' + 44.0'$, 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 $32^{\circ} 58.8' \text{ N}$. 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 $+30^{\circ}$ and $+40^{\circ}$. We now have four grid characters:

DM7 — D —

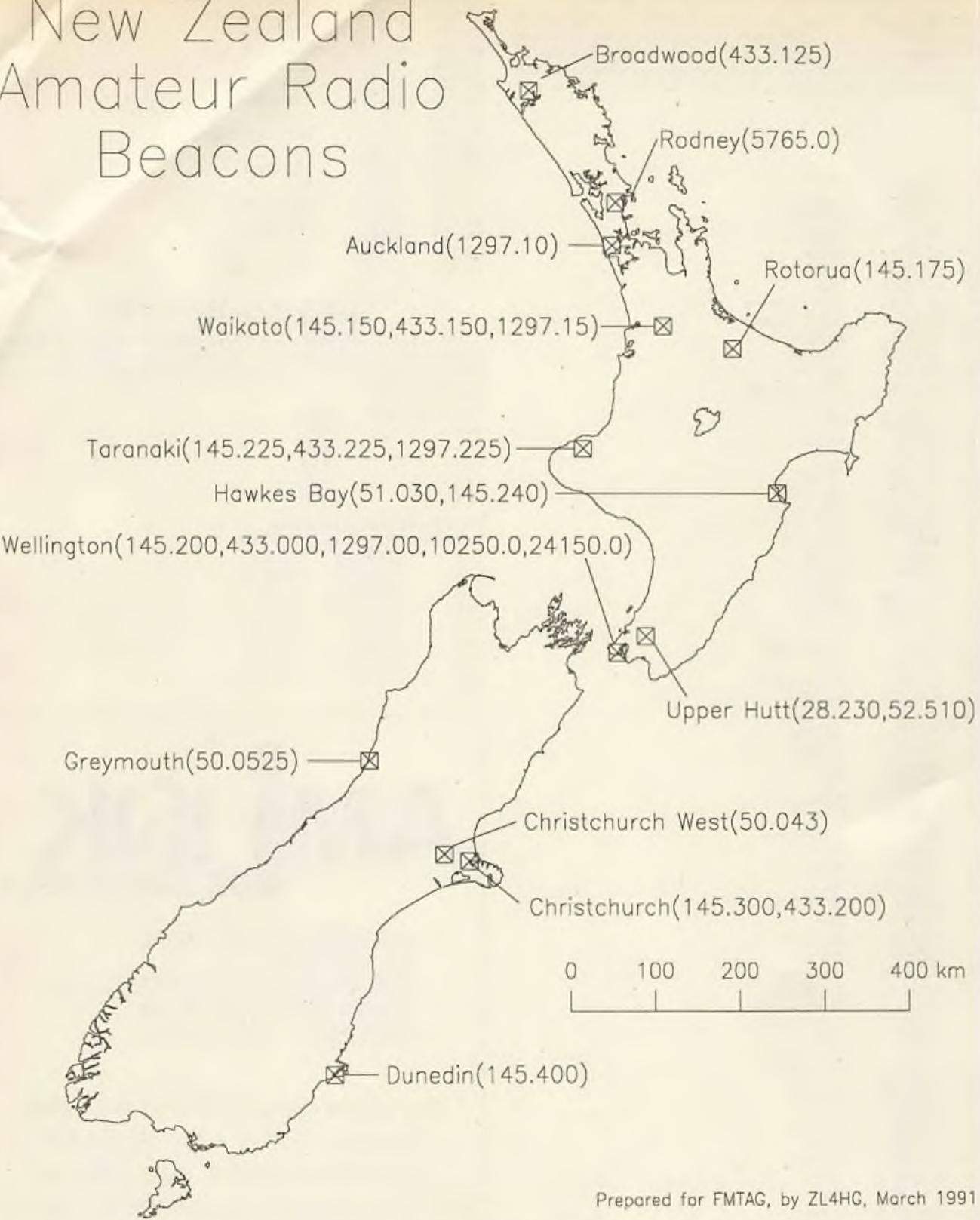
The most significant latitude character, M, accounts for exactly 30°

*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	QF19	QF19	QF29	QF39	QF49	QF59	QF69	QF79	QF89	QF99	RF09	RF19	RF29	RF39	RF49	RF59	RF69	RF79	RF89	RF99	
-31	WESTERN AUST.	SOUTH AUSTRALIA	-30																												
-32	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	
-33	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	
-34	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	
-35	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	
-36	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	
-37	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	
-38	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	
-39	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	
-40	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	
-41	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	
-42	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	
-43	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	
-44	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	
-45	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	
-46	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	
-47	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	
-48	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	
-49	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	
-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	
-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	
-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	
-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	
-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	
-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	
-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	
-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	
-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	
-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	

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	50.043	A1	110	50.0	56
Greymouth 6 m	Greymouth	ZL3MHB	50.0525	A1	50	30.0	49
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	ZL4VHII	145.425	A1	25	5.0	37
Broadwood 70cm	Ngatlieke #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 6cm	Dome	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 1991

28 MHz Beacon Project

This project is sponsored and encouraged by IARU and organized 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. Unfortunately some are privately owned and do not operate continuously.

ZL3ND

Freq MHz	Call	QTH
28.175	VE3TEN	Canada
28.191	VE6YF	Canada
28.195	IY4M	Canada
28.202	KE5GY	Texas
28.2085	ZS5VHF	Natal
28.204	WA4SZE	USA
28.204	DL0IGI	West Germany
28.206	KJ4X	South Carolina
28.2075	W8FKL	Florida
28.208	5Z4ERR	Kiambu
28.2085	NX2O	New York
28.210	KC4DPC	North Carolina
28.212	LU1UG	Argentina
28.213	EA6RCM	Mallorca
28.214	G0MUL	England
28.214	AL7KV	USA
28.215	GB3RAL	Slough
28.215	LU1DZ	Argentina
28.217	WB9VMY	Oklahoma
28.217	KK4UC	USA
28.218	W8UR	Michigan
28.219	PT8AA	Brazil
28.220	5B4CY	Cyprus
28.222	W9UXO	Illinois
28.2227	HG5GEW	Hungary
28.225	PY2AMI	Brazil
28.225	KW7Y	Washington
28.2255	N6TWX	USA
28.226	EA6AU	Baleairic Isles
28.227	FX5TEN	Toulouse
28.230	ZL2MHF	Mt Climie
28.232	W7JPI	Arizona
28.232	KD4EC	Florida
28.233	N4LMZ	Alabama
28.237	NV6A	USA
28.2375	LA5TEN	Norway
28.240	KB8JVH	USA
28.240	KF9N	Tennessee
29.240	KB9DJA	USA
28.243	EA1AW	Spain
28.243	EA2HB	Spain
28.246	WT8D	South Carolina
28.247	NB7C	USA
28.249	EA3JA	Barcelona
28.2495	K0HTF	Iowa
28.250	Z21ANB	Zimbabwe
28.250	4N3ZHk	Yugoslavia
28.250	KA0DEM	Pennsylvania
28.250	W3SV	Pennsylvania
28.251	WJ9Z	USA
28.252	WJ7X	Washington
28.2525	OH2TEN	Finland
28.253	WB4JHS	Missouri
28.259	WB9FVR	Florida
28.259	VK5WI	Adelaide
28.260	KA1NSV	Maine
28.2615	VK2RSY	Sydney
28.264	KC6BSJ	USA
28.264	VK2RWA	Perth
28.266	VK6RTW	Albany
28.267	KB4UPI	Alabama
28.268	VK8VF	Darwin
28.270	VK4RTL	Townsville
28.270	ZS6PW	Pretoria
28.2745	ZS1LA	Cape Town
28.275	AL7GQ	Colorado
28.2775	DF0AAB	West Germany

28.2825	VE2HOT	Montreal
28.2825	OK0EG	Czechoslovakia
28.284	VP8ADE	Adelaide Island
28.285	KA4WPH	Tennessee
28.286	KA1YE	New York
28.286	KK4M	Nevada
28.286	KE2DI	New York
28.290	VS6TEN	Hong Kong
28.290	SK5TEN	Sweden
28.292	ZD8HF	Ascension Island
28.294	WC8E	Ohio
28.295	W3VD	Maryland
28.295	KE8UL	USA
29.295	LU2FFV	Argentina
28.295	KM4GS	USA
28.297	WA4DJS	Florida
28.300	N7OGN	USA
28.300	PI7ETE	Netherlands

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
• • —	010W
• • • —	001W
• • • • —	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	4X6TU/B	Tel Aviv
T+5	OH2B	Espoo
T+6	CT3B	Funchal
T+7	ZS6DN/B	Pretoria
T+8	LU4AA	Santa Cruz
T+9		



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MANAGER — Peter ZL2BJP

Six Metre Beacons

Frequency	Callsign	Location	Locator	ERPW	Mode	Source	Date	
50.000	G3BUX	Buxton	IO93BF	40	A1A	AR	12/90	
50.005	ZS2SIK	Port Elizabeth	KF25	10	A1A	AR	12/90	
50.007	DX1HB	Philippines	Under construction			N16E/KH6	24/11/90	
50.010	JA2IGY	Mie	PM84JK	10	A1A	ZL3AAU	28/4/91	
50.013	P29BPL	Port Moresby	QI30	30	A1A	ARA	12/90	
50.015	S22DH	Athens	KM18MM	10	A1A	AR	12/90	
50.017	J46YBR	Miyazaki Univ.	PM51RT	50/1	A1A	ZL3AAU	7/4/91	
50.020	GB3SDX	Anglesey	IO73TJ	100	F1A	AR	12/90	
50.020	CX1CCC	Uruguay		5		AR	12/90	
50.0225	FR5SIX	Reunion Is	LG58	2		Rad Com	1/90	
50.025	OH1SDX	Finland	KP11QU	50	A1A	Rad Com	7/90	
50.025	6V5RC	Kingston	FK17MX	40	F1A	AR	12/90	
50.0275	JA72MA	Fukushima City	QM07	50	A1A	ZL3AAU	30/4/91	
50.030	CT0WW	Portugal	IN61GE	40	F1A	AR	12/90	
50.032	ZS5SDX	South Africa	KG50			AR	12/90	
50.033	ZD8VHF	Ascension Is	II22TB	50	A1A	AR	12/90	
50.035	ZB2VHF	Gibraltar	IM76HE	100	A1A	ARA	4/91*	
50.035	VS1VHF	Namibia	JG87			AR	5/90	
50.0375	VO1MUN	St Johns Newfld	GN37	10	F1A	Rad Com	10/90	
50.038	FY7THF	French Guiana	GJ35	100	F1A	AR	12/90	
50.0425	GB3CTC	St Austell	IO70OJ			Rad Com	3/90*	
50.043	ZL3MHF	Aylesbury	RE66DK	80	A1A	ZL3AAU	30/4/91	
50.044	JR6YAG	Okinawa	PL36		A1A	ZL3AAU	6/2/91	
50.045	OX3VHF	Greenland	GP60QQ	20	A1A	AR	12/90*	
50.045	VV5ZZ/B	Venezuela				Rad Com	5/90†	
50.046	VK8RAS	Alice Springs	PG66		F1A	ARA	3/91	
50.0475	ZL2???	New Plymouth	RF70			FMTAG	11/11/90*	
50.048	TG4BFK	Guatemala	IO91			AR	12/90	
50.050	F05DR/B	Tahiti	BH52	50	A1A	ZL3AAU	27/4/91	
50.050	GB3NHQ	Potters Bar	IO91VQ	15	F1A	AR	12/90	
50.050	Z56DN	Pretoria	KG44		A1A	AR	12/90	
50.0525	ZL3MHB	Greymouth	RE57 Under construction	30	A1	FMTAG	4/91*	
50.054	JA5FFJ	Japan	PM63	1		ZL3AAU	21/12/90	
50.056	VR8VF	Darwin	PH57			AR	Cbk/91	
50.0575	TE3SDX	Iceland	HP94CC	50	A1A	AR	12/90	
50.062	PY2AA	Seo Paulo	GG66	25	A1A	AR	12/90	
50.062	KH6HME	Hawaii Big Is	BK29	19	A1A	ZL3AAU	6/4/91	
50.065	GB3IOJ	Jersey	IN89WE	10	F1A	Rad Com	1/90	
50.065	NB3O/1	Rhode Is	FN41	100		AR	12/90	
50.066	AL7C	Anchorage		22		QST	1/90†	
50.066	VK6RPR	Perth	OF78	10	A1A	AR	Cbk/91	
50.066	WD7Z/B	Arizona	EL59	75	A1A	ZL3AAU	5/1/91	
50.068	W7US	Arizona			A1A	ZL3AAU	28/3/91	
50.069	K6FV/B	Woodside CA	CM87UL	100	A1A	ZL3AAU	28/4/91	
50.073	KH1HII	Hawaii	BL01	80/10	A1A	ZL3AAU	6/4/91	
50.075	VS6SIX	Hong Kong	OL72	30		AR	12/90	
50.078	PT7AAC	Brasil	HI06RF	5		Rad Com	5/90	
50.078	T12NA	Costa Rica	EK70	20	A1A	AR	12/90	
50.080	HC8SIK	Galapagos Is	EI59	10	A1A	AR	12/90	
50.080	KH6IJK	Hawaii	RL11	5		AR	12/90	
50.080	SK6SIX	Heino	JO57QJ	1/10		@ZL3AC	24/3/91	
50.085	9H1SIX	Malta	JM75FV	25	A1A	AR	12/90	
50.086	VP2MO	Montserrat	FK86	10	A1A	AR	12/90	
50.088	VE1SIX	New Brunswick	FM65	50	A1A	AR	12/90	
50.090	KJ6BZ	Johnston Is	AK56	10		AR	12/90	
50.091	9L1US	Sierra Leone				Rad Com	4/90	
50.091	TR8CA	Gabon				Rad Com	4/90†	
50.092	W5GTP	Louisiana	EM40	30	A1A	AR	12/90	
50.098	KG6DX	Guam	QK23KL	40	A1A	ZL3AAU	29/3/91	
50.099	KP4EKG	Puerto Rico	FK68			AR	12/90	
50.100	HC2FG/B	Mt Animas Ecuador	FI07	50	A1A	AR	12/90	
50.100	SH1HK	Tanzania				AR	12/90	
50.101	V51E	Namibia	JG87			Rad Com	5/90	
50.110	A61XL	U.Arab Emir	LL74	50		AR	12/90	
50.120	4S7EA	Sri Lanka	MJ97	50		AR	12/90	
50.321	ZS5SIX	South Africa	KG50			AR	12/90	
50.490	JG1ZGW	Tokyo	PM95VP	10	A1A	ZL3AAU	22/4/91	
50.499	5B4CY	Ziyi	KM54PS	15	F1A	Rad Com	8/90*	
51.020	ZL1UHF	Nihotupu	RF73HD	25	F1	ZL3AAU	8/3/91	
51.028	ZL2MHB	Napier	RF80	10	F2	ZL3AAU	24/1/91	
52.100	ZK2SIX	Niue	AH50		F1A	AR	12/90	
52.200	VK8VF	Darwin	PH57	15	F1A	ZL3TY	21/4/91	
52.300	VK2RBH	Broken Hill	QF08			Planned	Cbk/91*	
52.320	VK6RTT	Wickham	OG89			F1A	Cbk/91	
52.325	VK2RHV	Newcastle	QF57			F1A	ZL3AAU	6/2/91
52.330	VK3RGL	Geelong	QF22	4	F1A	AR	Cbk/91	
52.345	VK4ABP	Longreach	QG26	10	F1A	ZL3AAU	28/12/90	
52.350	VK6RTU	Kalgoorlie	PF09		F1A	AR	Cbk/91	
52.370	VK7RST	Hobart	QE37		F1A	ZL3AAU	6/2/91	
52.410	VK1RCC	Mt Majura	QE14			AR	Cbk/91	
52.420	VK2RSY	Sydney	QF56		F1A	ZL3AAU	30/3/91	
52.425	VK2RGB	Gunnedah	QF59		F1A	ZL3TY	25/11/90	
52.440	VK4RTL	Townsville	QH30		F1A	ZL3AAU	2/1/91	
52.445	VK4RIK	Cairns	QH23		F1A	ZL3AAU	10/4/91	
52.450	VK5VF	Mount Lofty	PF95		A1A	ZL3AAU	28/12/90	
52.460	VK6RPB	Perth	OF78		A1A	AR	Cbk/91*	
52.465	VK6RTW	Albany	OF84		F1A	AR	Cbk/91	
52.470	VK7RNT	Launceston	QE38		F1A	ZL3AAU	14/1/91	
52.510	ZL2MHF	Mt Clime	RE78BU	4	F1	ZL2CD	18/3/91	

*Not Operational †Status Unknown "Source" callsigns indicate beacons heard in ZL
Updated 30-04-91. Compiled by ZL3AAU

Australian Beacons

Key to Status codes: A=licence application pending. O=operating. L=licensed but not on air. T=testing. P=planning/development stage.

Band	Frequency	Callsign	Service Area	Locator square	Status	Notes
2 m Band	144.022	VK6RBS	Busselton	OF76	O	
	144.400	VK4RTT	Toowoomba	QG62	O	
	144.410	VK1RCC	Canberra	QF44	O	
	144.420	VK2RSY	Sydney	QF56	O	
	144.430	VK3RTG	Melbourne	QF22	O	
	144.435	VK3RMV	Hamilton	QF12	?	
	144.445	VK4RIK	Cairns	QH23	O	
	144.445	VK4RTL	Townsville	QH30	O	
	144.450	VK5VF	Adelaide	PF95	P	(1)
	144.465	VK6RTW	Albany	OF84	O	
	144.470	VK7RMC	Launceston	QE38	O	
	144.480	VK8VF	Darwin	PH57	O	
	144.485	VK8RAS	Alice Springs	PG66	O	
	144.530	VK3RGG	Geelong	QF22	?	
	144.535	VK3RGI	Gippsland	L		
	144.550	VK5RSE	Mt Gambier	QF02	O	
	144.600	VK6RTT	Wickham	OG89	?	
	144.800	VK5VF	Adelaide	PF95	O	(1)
	144.950	VK2RCW	Sydney	QF56	O	(2)
	144.950	VK3RCW	Melbourne	QF22	O	(2)
	145.000	VK6RPH	Perth	OF78	O	
70cm and above	432.066	VK6RBS	Busselton	OF76	?	
	432.160	VK6RPR	Perth	OF78	O	
	432.410	VK1RBC	Canberra	QF44	O	
	432.410	VK6RTT	Wickham	OG89	?	
	432.420	VK2RSY	Sydney	QF56	O	
	432.430	VK3RTG	Melbourne	QF22	L	
	432.435	VK3RMV	Hamilton	QF12	?	
	432.440	VK4RSD	Brisbane	QG62	O	
	432.445	VK4RIK	Cairns	QH23	O	
	432.445	VK4RTL	Townsville	QH30	O	
	432.450	VK3RAJ	Melbourne	QF22	O	
	432.465	VK6RTW	Albany	OF84	?	
	432.530	VK3RGL	Geelong	QF22	T	
	432.535	VK3RMB	Ballarat	QF12	O	
	432.545	VK4RAR	Rockhampton	OG56	O	
	432.565	VK6RTU	Kalgoorlie	PF09	?	
	1296.198	VK6RBS	Busselton	OF76	O	
	1296.410	VK1RBC	Canberra	QF44	O	
	1296.420	VK2RSY	Sydney	QF56	O	
	1296.440	VK4RSD	Brisbane	QG62	O	
	1296.445	VK4RIK	Cairns	QH23	O	
	1296.480	VK6RPR	Perth	OF78	O	
	2304.420	VK2RSY	Sydney	QF56	P	
	2304.445	VK4RIK	Cairns	QH23	O	
	2306.440	VK4RSD	Brisbane	QG62	O	
	10300.000	VK6RUF	Perth	OF78	?	
	10368.000	VK3RGZ	Melbourne	QF22	T	
	10445.000	VK4RIK	Cairns	QH23	O	

Notes: (1) To move from 144.800 to 144.450 in late 1990. (2) CW practise beacons—FM mode.

WIA RTTY Repeaters

The columns at the right show ERP in watts, height above sea level in metres, timeout time in minutes, and operating status. Key to STATUS codes: A=licence application pending. O=operating. L=licensed but not on air. T=testing. P=planning/development stage.

Output Frequency	Input Frequency	Callsign	Site	Service Area	Status	ERP	HASL	Time Out
146.675	146.075	VK2RTY	Blacktown	Sydney	O	40	72	10
146.975	146.375	VK2RAN	Mt Sugarloaf	Newcastle	O	10	300	5.0
147.275	147.875	VK2RIL	Sublime Point	Wollongong	O	25	398	4.0
439.325	434.325	VK2RTY	Blacktown	Sydney	P	40	72	10
147.325	147.925	VK3RBB	Mt Tassie	Gippsland	O	40	600	10
147.350	147.950	VK3RTY	Olinda	Melbourne	O			
147.650	147.050	VK4RBT	Mt Cotton	Brisbane	O	50	233	
147.675	147.075	VK4RBT	Mt Cotton	Brisbane	O	50	233	4.5
146.675	146.075	VK5RSV	O'Halloran Hill	Adelaide	O	25	200	10
147.050	147.650	VK6RTG	Roleystone	Perth	O	15	360	10
146.625	146.025	VK7RAD	Mt Duncan	NW Tasmania	O	30	600	5.0

WIA Voice Repeaters

The columns at the right show ERP in watts, height above sea level in metres, timeout time in minutes, and operating status.

Key to Status (ST) codes:

A = licence application pending. O = operating. L = licensed but not on air. T = testing. P = planning/development stage.

State	Output Freq.	Input Freq.	Callsign	Site	Service Area	ST	ERP	HASL	Time Out
10 m Band									
New South Wales	29.620	29.520	VK2RAH	Mt Dandenong	Wollongong	O			
Victoria	29.640	29.540	VK3RHF		Melbourne	O		600	2.5
Queensland	29.660	29.560	VK4R??		Brisbane	P			
South Australia	29.620	29.520	VK5RLZ	Elizabeth	Adelaide	L	50	82	
Western Australia	29.680	29.580	VK6RHF		Perth	P			
6 m Band									
New South Wales	53.575	52.575	VK2RJB	Sanctuary Point	Jervis Bay	P			
	53.575	52.575	VK2RTM	Tamworth	Tamworth	P			
	53.625	52.625	VK2RSN	Mt Sugarloaf	Newcastle	O		400	
	53.675	52.675	VK2RMB	Terrey Hills	Sydney	P			
Victoria	53.850	52.850	VK2RWI	Dural	Sydney	O	10	420	3.5
	53.550	52.550	VK3RMH	Wattle Glen	Melbourne	O			
	53.575	52.575	VK3RDD	Dandenong	Dandenong	O			
	53.675	52.675	VK3RTN	Lake Mountain	Melbourne	O	25	1500	2.5
Queensland	53.900	52.900	VK3RMS	Mt Dandenong	Melbourne	O	60	600	2.5
	53.975	52.975	VK3RGM	Mt Buller	Mansfield	O	25	1800	2.5
	53.725	52.725	VK4RGA	Army's Peak	Gladstone	O	25	920	
	53.725	53.125	VK4RIK	Mt Haren	Cairns	P		480	
Western Australia	53.775	52.775	VK4R??		Mackay	P			
Tasmania	53.800	52.800	VK6RTH	Tic Hill	Perth	O	10	230	
2 m Band	53.825	52.825	VK7RMD	Mt Duncan	NW Tasmania	T	30	600	5.0
144 m Band									
ACT	146.900	146.300	VK1RAC	Black Hill	Canberra	O	60	870	4.0
	146.950	146.350	VK1RGI	Mt Ginnini	SE NSW	O	50	1770	3.0
New South Wales	146.625	146.025	VK2RBB	Byron Bay	Lismore	O	10	150	3.0
	146.625	146.025	VK2RLD	Liverpool	Liverpool	O	10	330	4.5
	146.650	146.050	VK2RCH	Mt Corambla	Coffs Harbour	O		300	3.0
	146.650	146.050	VK2RDX	Mt Bindo	Penshurst	O	50	1362	3.5
	146.650	146.050	VK2RMI	Terry Hi Hi	Inverell	O	10	660	4.0
	146.675	146.075	VK2RCV	Sith Grafton	Lismore	P	30	110	3.0
	146.675	146.075	VK2RFT	Forster	Forster	P	10	65	3.0
	146.700	146.100	VK2RAO	Mt Canobolas	Orange	O	50	1417	3.0
	146.700	146.100	VK2RMU	Little Forest	Ulladulla	O	35	152	2.5
	146.700	146.100	VK2RPM	Middle Brother	Port Macquarie	O	50	552	3.5
	146.725	146.125	VK2RAG	Somersby	Gosford	O	40	318	3.0
	146.750	146.150	VK2RFS	Mt Mumbulla	Merimbula	O	10	870	3.5
	146.750	146.150	VK2RTM	Mt Crawnay	Tamworth	O	20	1430	3.0
	146.750	146.150	VK2RWG	Mt Flackney	Wagga	O	25	490	3.0
	146.775	146.175	VK2RTZ	Sugarloaf Ra	Port Macquarie	O	10	400	3.0
	146.800	146.200	VK2RCC	Needle Mtn	Coonabarabran	O	80	1100	3.5
	146.800	146.200	VK2RIC	Goonellabah	Lismore	O	15	85	3.0
	146.800	146.200	VK2RLE	Heathcote	Sydney	O	100	240	3.5
	146.800	146.200	VK2RTD	Mt Kendall	Tumut	O	36	930	4.0
	146.825	146.225	VK2RET	Bundook Mtn	Taree	O	25	435	3.0
	146.825	146.225	VK2RHR	Mt Gibraltar	Southern Highlands	P	10	862	3.0
	146.850	146.250	VK2RAB	Mt Kaputar	Gunnedah	O	10	1225	4.0
	146.850	146.250	VK2RAW	Mt Murray	Wollongong	O	100	769	4.0
	146.850	146.250	VK2RGF	Mt Bingar	Griffith	O	15	450	2.5
	146.875	146.275	VK2RMB	Terrey Hills	Sydney	O	50	150	3.0
	146.900	146.300	VK2RAN	Mt Sugarloaf	Newcastle	O	70	300	5.0
	146.900	146.300	VK2RRT	Boona Mount	Condobolin	O	10	441	5.0
	146.925	146.325	VK2RGR	North Ryde	Gladesville	O	10	30	2.5
	146.950	146.350	VK2RNE	Mt Rumbee	Glen Innes	O	10	1503	4.0
	146.975	146.375	VK2RAN	Mt Sugarloaf	Newcastle	O	10	300	5.0
	147.000	146.400	VK2RWI	Parramatta	Sydney	O	120	240	3.5
	147.025	147.625	VK2ROT	Paddington	Sydney	O	20	90	3.0
	147.050	147.650	VK2RBM	Mt Druitt	Blue Mts/Nepean	O	20	900	3.5
	147.075	147.675	VK2RCZ	Mt Druitt	West Sydney	A	20	150	3.0
	147.075	147.675	VK2RPW	Nowendoc	Walcha	A	25	1450	2.0
	147.100	147.700	VK2RWM	Grenfell	Grenfell	O	70	575	3.0
	147.100	147.700	VK2RZL	Mt Arthur	Teralba	L	10	800	3.0
	147.125	147.725	VK2RWS	Portable	Statewide	O			
	147.150	147.750	VK2RWS	St Leonards	Sydney	O	10	140	0.5
	147.175	147.775	VK2RWS	St Leonards	Sydney	O			
	147.200	147.800	VK2RSD	Mt Cambewarra	Nowra	O	10	600	4.0
	147.200	147.800	VK2RWH	Warner Bay	Hunter-New England	O			

State	Output Freq.	Input Freq.	Callsign	Site	Service Area	ST	ERP	HASL	Time Out
Victoria	147.225	147.825	VK2RST	Lane Cove	Sydney	O	10	25	4.0
	147.250	147.850	VK2RNS	Hornsby Heights	Sydney	O	50	225	3.5
	147.275	147.875	VK2RL	Sublime Point	Wollongong	O	10	398	4.0
	147.275	147.875	VK2RMO	Tamworth	Tamworth	A			
	147.300	147.900	VK2RTS	Winnallee	Blue Mountains	O	25	370	5.0
	147.375	147.975	VK2RGL	Cabbage Tree	Tuncurry	O	25	650	3.0
	147.925	147.325	VK2RGN	Mt Gray	Goulburn	O	20	750	3.0
	146.650	146.050	VK3REG	Donald's Knob	East Gippsland	O	40	560	2.5
	146.650	146.050	VK3RGV	Mt Wombat	Shepparton	O	80	800	3.5
	146.700	146.100	VK3RML	Mt Dandenong	Melbourne	O	100	600	2.5
	146.700	146.100	VK3RNC	Mt Mitta Mitta	Corryong	O	40		2.5
	146.700	146.100	VK3RON	Ouyen	Ouyen	O	40		2.5
	146.750	146.150	VK3RBA	Mt Buninyong	Ballarat	O	15	750	3.0
	146.775	146.175	VK3RUG	Mt Eildon	Alexandra	O	50	650	2.5
	146.800	146.200	VK3RLV	Mt Tassle	Latrobe Valley	O	80	730	2.5
	146.800	146.200	VK3RMA	Mildura	Mildura	O	50	50	2.5
	146.850	146.250	VK3RMN	Kinglake	Melbourne	P			
	146.850	146.250	VK3RSB	Chesney Vale	Benalla	T	80		2.5
	146.900	146.300	VK3REB	Smeaton's Hill	Ballarat Nth	O	30		2.5
	146.900	146.300	VK3RSH	Nungunyer	Bairnsdale	O	30		2.5
	146.950	146.350	VK3RWZ	Swan Hill	Swan Hill	O	80	60	2.5
	146.975	146.375	VK3RSR	Mt William	Grampians	O	50	1170	2.5
	147.000	146.400	VK3RGL	Portable	Statewide	O			
	147.000	146.400	VK3RNE	Mt Anakie	Geelong	O	160	400	2.5
	147.025	147.625	VK3RGS	Mt Big Ben	Wodonga	O	100	1158	2.5
	147.025	147.625	VK3RMK	Mt Fatigue	Toora	O	60		2.5
	147.050	147.650	VK3RCG	Mt Kerang	Charlton	P			
	147.050	147.650	VK3RCO	Camberwell	Eastern suburbs	P			
	147.050	147.650	VK3RVL	Mt Livingstone	Omeo	O	40		2.5
	147.050	147.650	VK3RWL	Robinvale	Robinvale	O	20		2.5
	147.050	147.650	VK3RWR	Mt Warmambool	Warrnambool	O	40		0.5
	147.075	147.675	VK3RCR	Montrose	Melbourne	O			
	147.100	147.700	VK3RPB	Mt Porepunkah	Bright	O	5		2.5
	147.100	147.700	VK3RSG	Bass Hill	South Gippsland	O	40		3.0
	147.100	147.700	VK3RWA	Ben Nevis	Ararat	P	30		2.5
	147.125	147.725	VK3RGC	Montpelier	Geelong	O	40		2.5
	147.150	147.750	VK3RCV	Mt Alexander	Bendigo	O	40	730	3.0
	147.150	147.750	VK3REM	Marimingo Hill	Mallacoota	P			
	147.175	147.775	VK3REC	Olinda	Melbourne	O	40	600	2.5
	147.225	147.825	VK3RWG	Mt Baw Baw	West Gippsland	O	20		2.5
	147.250	147.850	VK3RMM	Mt Macedon	Melbourne	O	100	1011	2.5
	147.275	147.875	VK3ROW	Mt Cowley	Otway Ranges	O			
	147.300	147.900	VK3RWP	Portable	Statewide	O	20		
Queensland	146.625	146.025	VK4RGT	Mt Maurice	Gladstone	O	10	225	
	146.650	146.050	VK4ROM	Grafton Range	Roma	O	30	550	
	146.675	146.075	VK4RET	Bunya Mtns	Darling Downs	O		1140	
	146.675	146.075	VK4RTA	Longlands Gap	Atherton	O	75	1170	
	146.700	146.100	VK4RAR	Mt Archer	Rockhampton	O	50	608	4.0
	146.700	146.100	VK4RAT	Mt Stuart	Townsville	O	100	584	2.5
	146.700	146.100	VK4RGC	Springbrook	Gold Coast	O	50	1040	
	146.700	146.100	VK4RMI	Four Mile Hill	Mt Isa	O	20	500	3.5
	146.725	146.125	VK4RSB	Mt Gordon	Bowen	O	50	20	
	146.750	146.150	VK4RDD	Mt Lofty	Toowoomba	O	30	715	4.5
	146.775	146.175	VK4RDY	Mt Dryander	Mackay/Bowen	O		820	
	146.800	146.200	VK4RBU	Mt Goonaneman	Bundaberg	O	20	620	4.0
	146.800	146.200	VK4RTI	Thursday Is	Thursday Is	?			
	146.800	146.200	VK4RWP	Weipa	Cape York	?			
	146.825	146.225	VK4RDT	Gabbinbah	Toowoomba	P	20	723	
	146.850	146.250	VK4RSC	Buderim	Sunshine Coast	O	40	450	
	146.875	146.275	VK4RCH	Red Hill	Chinchilla	O	150	340	
	146.900	146.300	VK4RAI	Mt Stradbroke	Ipswich	O	70	120	4.5
	146.900	146.300	VK4RGA	Amy's Peak	Gladstone	O	100	1010	4.0
	146.925	146.325	VK4RRC	Mount Mee	Redcliffe	O	25	520	
	146.950	146.350	VK4RBD	Blackdown T'ld	Blackwater	O	25		
	146.950	146.350	VK4RCA	Bellenden Ker	Cairns	O	100	1650	4.0
	146.975	146.375	VK4RRR	Blue Mtn	Sarina	O	50	600	3.0
	147.000	146.400	VK4RBN	Mt Glorious	Brisbane	O	60	630	2.0
	147.000	146.400	VK4RMK	Black Mtn	Mackay	O	25	60	5.0
	147.100	147.700	VK4RGY	Mt Boulder	Gympie	O	20	496	4.0
	147.150	147.750	VK4RAG	Spring Hill	Brisbane	O	80	90	3.5
	147.150	147.750	VK4RWI	portable	statewide	O	50		
	147.300	147.900	VK4RQT	Mt Glorious	Brisbane	O	50	630	3.5
	147.650	147.050	VK4RBT	Mt Cotton	Brisbane	O	50	233	4.5
	147.675	147.075	VK4RBT	Mt Cotton	Brisbane	O	50	233	4.5

State	Output Freq.	Input Freq.	Callsign	Site	Service Area	ST	ERP	HASL	Time Out
South Australia	147.825	147.225	VK4RDT	Gabbinbah	Toowoomba	P	20	723	
	147.825	147.225	VK4REG	Manly West	Brisbane	O	50		
	147.850	147.250	VK4RCB	Mt Devlin	Collinsville	O			
	147.950	147.350	VK4RII	Mt Inkerman	Burdekin	O	30	218	
	147.975	147.375	VK4RWB	Mt Murchison	Biloela	O	25		
	146.650	146.050	VK5RNC	Naracoorte	Naracoorte	O	25	80	2.5
	146.700	146.100	VK5RMN	The Bluff	Port Pirie	O	55	730	5.0
	146.750	146.150	VK5RAC	Williams Hill	Port Lincoln	O			
	146.800	146.200	VK5REP	Coolarie	Cowell-Eyre Pen	O	60	500	4.0
	146.825	146.225	VK5RBV	Angaston	Barossa Valley	O	100	400	3.5
	146.850	146.250	VK5RHO	Houghton	Adelaide	O	50	410	3.5
	146.900	146.300	VK5RMG	The Bluff	Mt Gambier	O	25	100	5.0
Western Australia	147.000	146.400	VK5RAD	Crafers	Adelaide	O	50	610	3.5
	147.925	147.325	VK5RLD	Berri	Riverland	O	25	86	5.0
	146.625	146.025	VK6R??		Stirling	P			
	146.625	146.025	VK6RAT	Forbs Hill	Rottnest Island	P			
	146.650	146.050	VK6RBY	Bunbury	Bunbury	O	25	20	5.0
	146.675	146.075	VK6RCA	Whim Creek	Whim Creek	O			
	146.675	146.075	VK6RNR	Hudgeah	Northampton	O	25	280	4.0
	146.700	146.100	VK6RAP	Roleystone	Perth	O	40	360	4.0
	146.725	146.125	VK6RAL	Albany	Albany	O			
	146.750	146.150	VK6RES	Esperance	Esperance	P			
	146.750	146.150	VK6RKI	Koolan Island	Koolan Island	O	40	300	5.0
	146.750	146.150	VK6RLM	Lesmurdie	Perth	O	20	340	4.0
Tasmania	146.800	146.200	VK6RTH	Tic Hill	Perth	O	60	230	4.0
	146.800	146.200	VK6RWP	Karratha	Karratha	O			
	146.825	146.225	VK6RAA	Mt Barker	Albany	O	40	430	3.0
	146.850	146.250	VK6REX	Exmouth	Exmouth	O	25	385	3.0
	146.850	146.250	VK6RKB	Kambalda	Kambalda	O	30		
	146.875	146.275	VK6RSR	O'Connor	Perth-Fremantle	P			
	146.900	146.300	VK6RMW	Mt William	Bunbury	O	20	520	4.0
	146.950	146.350	VK6RPD	Fremantle	Fremantle	O	45	65	3.0
	146.950	146.350	VK6RSG	Shay Gap	Shay Gap	O			
	146.975	146.375	VK6REE	Portable (sec)	Statewide	O	20		4.0
	147.000	146.400	VK6RAK	Kalgoorlie	Kalgoorlie	O	40	400	5.0
	147.000	146.400	VK6RAW	Fairfield	Katanning	O	25		5.0
	147.000	146.400	VK6REE	Portable (pri)	Statewide	O	20		4.0
	147.000	146.400	VK6RGN		Geraldton	O	16	400	5.0
	147.000	146.400	VK6RNW	Pt Hedland	Port Hedland	O			
	147.100	147.700	VK6RWC	Millendon	Perth	O			
	147.125	147.725	VK6RHB	Gin Gin	Gin Gin	P			
	147.150	147.750	VK6RMJ		Manjimup	P			
	147.175	147.675	VK6RIC	Portable emerg.	Statewide	O			
Northern Territory	147.200	147.800	VK6RCT	Cataby	Cataby	O	10	200	4.0
	147.225	147.825	VK6RHW	Hoddywell	Toodyay	O	30	450	3.0
	147.250	147.850	VK6RMS	Saddleback	Boddington	O	20	630	4.0
	147.275	147.875	VK6RWM	Wyalkatchem	Wyalkatchem	O	20	400	4.0
	147.300	147.900	VK6REN	Eneabba	Eneabba	P			
	147.350	147.950	VK6RBN	Busselton	Busselton	O	10	130	4.0
	146.625	146.025	VK7RAD	Mt Duncan	NW Tas	O	3	600	
	146.700	146.100	VK7RHT	Mt Wellington	Hobart	O	70	1310	3.0
	146.750	146.150	VK7RNW	Lonah	NW Tasmania	O	30	160	5.0
	146.900	146.300	VK7REC	Snow Hill	East Coast	O	10	970	
	147.000	146.400	VK7RAA	Mt Barrow	Launceston	O	60	1400	
	147.075	147.675	VK7RWC	Mt Reid	West Coast	O	10	1200	3.0
70cm Band	147.250	147.850	VK7RAF	Mt Faulkner	Hobart	O	25		
	146.650	146.050	VK8RMS	Nhulunbuy	Gove	O	25	150	
	146.700	146.100	VK8RDA	Karama	Darwin	O	15	200	8.5
	146.950	146.350	VK8RCA	Alice Springs	Alice Springs	O	25	300	3.0
	147.000	146.400	VK8RTE	Palmerston	Darwin	O	15	350	8.5
ACT	438.375	433.375	VK1RIR	Isaacs Ridge	Canberra	O	60	790	3.5
New South Wales	438.525	433.525	VK1RGI	Mt Ginini	SE NSW	O	60	1770	3.5
	438.025	433.025	VK2RTK	High Range	Southern Highlands	O	40	827	2.0
	438.075	433.075	VK2RAG	Somersby	Gosford-Wyong	O	120	323	3.0
	438.125	433.125	VK2RMU	Little Forest	Milton	L	18	330	3.0
	438.175	433.175	VK2RMB	Terrey Hills	Sydney	O	5	150	3.0
	438.175	433.175	VK2RNT	Doughboy Mtn	Armidale	O			
	438.225	433.225	VK2RPW	Nowendoc	Walcha	A	25	1450	2.0
	438.225	433.225	VK2RUW	Port Kembla	Wollongong	O	40	100	4.0
	438.275	433.275	VK2RWS	Chatswood	Sydney	O	2	140	0.5
	438.325	433.325	VK2REE	Mt Marie	Taree	O	4	930	3.0
	438.325	433.325	VK2RGN	Mt Gray	Goulburn	L	10	750	3.5
	438.325	433.325	VK2RWM	Grenfell	Grenfell	P	25	575	3.0

State	Output Freq.	Input Freq.	Callsign	Site	Service Area	ST	ERP	HASL	Time Out
Victoria	438.375	433.375	VK2RUT	Kurrajong	Springwood	O	15	500	3.0
	438.425	433.425	VK2RUH	Hurstville	Sydney	O	25	100	4.0
	438.475	433.475	VK2RRS	Chatswood	Gladesville	O	10	50	4.0
	438.525	433.525	VK2RPM	Middle Brother	Pt Macquarie	L	10	552	3.0
	438.525	433.525	VK2RWI	Dural	Sydney	O	48	240	3.5
	438.625	433.625	VK2RUM	New Lambton	Newcastle	O	5	50	3.0
	438.675	433.675	VK2RAN	Mt Sugarloaf	Newcastle	O	80	300	5.0
	438.675	433.675	VK2RSC	Mt Nardi	Lismore	O	10	300	3.0
	438.675	433.675	VK2RTW	Willans Hill	Wagga	?	10		
	438.725	433.725	VK2RIL	Sublime Point	Wollongong	O	10	398	4.0
	439.275	434.275	VK2RSD	Mt Cambewarra	Nowra	P		600	
	439.375	434.375	VK2RTM	Tamworth	Tamworth	P			
	439.425	434.425	VK2RCZ	Mt Druitt	West Sydney	L	20	150	3.0
	439.575	434.575	VK2RJB	Sanctuary Point	Jervis Bay	A			
	438.025	433.025	VK3R??		Melbourne City	P			
	438.075	433.075	VK3RMU	Mt St Leonard	Melbourne	O	200	1028	2.5
	438.175	433.175	VK3RUG	Mt Buller	Alexandra	O	80	650	2.5
	438.225	433.225	VK3ROU	Mt Dandenong	Melbourne	O	100	600	2.6
	438.275	433.275	VK3RWE	Portable	Statewide	O			
	438.375	433.375	VK3RGU	Carrajung	Gippsland	O	60		4.0
	438.425	433.425	VK3RCU	Mt Mollagul	Bendigo	O			
	438.475	433.475	VK3RBU	Mt Hollowback	Ballarat	T	40		2.5
	438.525	433.525	VK3RAD	Mitcham	Melbourne	O	80	100	2.5
	438.525	433.525	VK3RNU	Mt Stanley	Wangaratta	O	60	1051	2.5
	438.525	433.525	VK3RRU	Merbein	Mildura	O	20		2.5
	438.625	433.625	VK3RWI	Portable	Statewide	O	5		
	438.675	433.675	VK3RWU	Mt William	Grampians	O	100	1170	3.0
	438.750	433.750	VK3RHF	Mt Dandenong	Melbourne	O		600	2.5
	439.275	434.275	VK3RMM	Mt Macedon	Melbourne	O	100	1011	3.0
	439.375	434.375	VK3RSE	Glen Waverley	Melbourne	O			
	439.425	434.425	VK3RDU	Mt Wombat	NE Victoria	O		800	
	439.575	434.575	VK3RGL	Mt Anakie	Geelong	O	60		2.5
	439.675	434.675	VK3RZU	Mt Buller	Mansfield	T		1800	2.5
	439.725	434.725	VK3RPV	Arthur's Seat	Melbourne	O	40		
	439.875	434.875	VK3RSU	Mt Major	Shepparton	L			
Queensland	438.025	433.025	VK4RTQ	Mt Tambourine	Brisbane	O	50	500	
	438.075	433.075	VK4RSC	Buderim	Sunshine Coast	O	20	450	
	438.225	433.225	VK4RAT	Mt Stuart	Townsville	O	10	584	
	438.225	433.225	VK4RDG	Mt Archer	Rockhampton	O	25	608	
	438.225	433.225	VK4RGC	Springbrook	Gold Coast	O	50	500	3.5
	438.375	433.375	VK4RWM	Ipswich	Ipswich	O	5	60	
	438.425	433.425	VK4RMU	Mt Dryander	Mackay/Bowen	O		820	
	438.475	433.475	VK4RXX	Maleny	SE Qld	O			
	438.500	433.500	VK4RHR	Drummond Range	Clermont	O	50	520	
	438.525	433.525	VK4RBC	Mt Coot-tha	Brisbane	O	20	560	2.0
	438.625	433.625	VK4RAG	Spring Hill	Brisbane	O	20	90	
	438.625	433.625	VK4RWI	Portable	statewide	O	50		
	438.675	433.675	VK4RBU	Mt Goonaneman	Bundaberg	O	10	620	
	438.700	433.700	VK4RET	Bunya Mtns	Darling Downs	O	75	1000	5.0
	438.825	433.825	VK4RGY	Mt Boulder	Gympie	O	20	496	
South Australia	438.875	433.875	VK4RMC	Mt Corella	Gympie	O			
	438.950	433.950	VK4RBA	Redbank Plains	Redbank	O	10	180	
	439.275	434.275	VK4RDU	Picnic Point	Toowoomba	O		710	
	439.350	433.350	VK4RIK	Mt Haren	Cairns	O	5	480	
	439.900	433.900	VK4REX	Darlington Ra	Beenleigh	O	20		
	439.950	433.950	VK4RIY	Mt Kynoch	Toowoomba	O			
	438.325	433.325	VK5ROH	Mt Gambier	Mt Gambier	O	15	135	3.5
	438.425	433.425	VK5RBV	Angaston	Barossa Valley	O	100	400	3.5
	438.525	433.525	VK5RVP	Crafers	Adelaide	O	30	590	3.0
Western Australia	438.225	433.225	VK6RTH	Tic Hill	Perth	O		230	
	438.525	433.525	VK6RUF	Roleystone	Perth	O	20	360	
	438.675	433.675	VK6RBN	Busselton	Busselton	P	130		
	438.500	433.500	VK7RIN	Barren Tier	Central Tas	O	25	1200	
Tasmania	438.550	433.550	VK7RAB	Mt Arthur	NE Tasmania	O	8	1190	
	438.600	433.600	VK7RTC	Mt Nelson	Hobart	O	8		
	438.650	433.650	VK7RAC	Ridgeley	NW Tasmania	O	3	250	5.0
	438.275	433.275	VK8RDU	Darwin	Darwin	O	8	200	3.0
23cm Band									
New South Wales	1281.100	1293.100	VK2RJB	Sanctuary Point	Jervis Bay	A			
	1281.750	1293.750	VK2RWI	Dural	Sydney	O	10	240	3.0
Victoria	1281.???		VK3RMU	Mt St Leonard	Melbourne	P		1028	
Queensland	1281.650	1293.650	VK4REX	Darlington Ra	Beenleigh	O	10		
South Australia	1282.???		VK5RWH		Adelaide	O	25	200	3.0

WIA ATV Repeaters

The columns at the right show ERP in watts, height above sea level in metres, timeout time in minutes, and operating status.

Key to STATUS codes: A = licence application pending. O = operating. L = licensed but not on air. T = testing. P = planning/development stage

Output Frequency	Input Frequency	Callsign	Site	Service Area	Status	ERP	HASL	Time Out
426.250	444.250	VK2RWI	Parramatta	Sydney	P			
426.250	426.250	VK2RTW	Willans Hill	Wagga	O	10	300	30
579.250	426.250	VK2RPM	Middle Brother	Port Macquarie	L			
579.250	444.250	VK2RTG	Kariong	Gosford	O	90	220	
579.250	426.250	VK2RTN	Sugarloaf Ra	Newcastle	O			
579.250	426.250	VK2RTS	Springwood	Springwood	O	300	370	
579.250	444.250	VK2RTV	Lane Cove	Sydney	O	100	60	3.0
1246.000		VK2RAG	Somersby	Gosford	O			
579.250	426.250	VK3REX		Swan Hill	?			
579.250	426.250	VK3RMZ	Mt Alexander	Bendigo	O			
579.250	444.250	VK3RNE	Mt Big Ben	Wodonga	O			
579.250	444.250	VK3RTV	Mt Dandenong	Melbourne	O			
579.250	426.250	VK4RTV	Spring Hill	Brisbane	O	100	140	
444.250	426.250	VK5RCN	Barunga Range	Central North	O	10	400	30
579.250	426.250	VK5RTV	O'Halloran Hill	Adelaide	O	200	200	30
1246.250	444.250	VK5RWH	Willunga Hill	Southern Vales	O	40	200	30
579.250	444.250	VK6RAP		Perth	T			
426.250	444.250	VK7RTV	Mt Duncan	NW Tasmania	O	5	600	30
579.250	444.250	VK7RAE	Kelcy Tiers	NE Tasmania	O	5	220	30

Packet Radio Repeaters and BBS Systems

The columns at the right show ERP in watts, height above sea level in metres, timeout time in minutes, and operating status.

Key to Status codes: A=licence application pending. O=operating. L=licensed but not on air. T=testing. P=planning/development stage

Note: In New South Wales, many systems are to move from 147 MHz to 144 MHz. The proposed 144 MHz frequencies are shown, marked P in the Status column.

State	Frequency	Callsign	Site	Service Area	Status	ERP	HASL	Time Out
ACT	144.800	VK1RGI	Mt Ginini	SE NSW	O	60	1770	
New South Wales	144.700	VK2RAB	Mt Kaputar	Tamworth-Narrabri	P			
	144.700	VK2RAG	Somersby	Gosford-Wyong	P	50	313	3.0
	144.700	VK2RAY	Albury	Albury	P			
	144.725	VK2RDX	Mt Bindo	Blue Mtns West	O	20	1362	3.5
	144.750	VK2RAB	Mt Kaputar	Tamworth-Narrabri	P			
	144.750	VK2RGN		Goulburn	P			
	144.750	VK2RTM	Mt Crawney	Tamworth	O			
	144.775	VK2RAW	Mt Murray	Wollongong	P	50	769	1.0
	144.775	VK2RPW	Nowendoc	Walcha	A			
	144.775	VK2RWG		Wagga	P			
	144.800	VK2RMB	Terrey Hills	Sydney	O	25	150	10s
	144.825	VK2R??		Bathurst	O			
	144.825	VK2RFS		Bega	P			
	144.825	VK2RGF	Mt Bingar	Griffith	P			
	144.825	VK2RPN	Teralba	Newcastle	P	10	400	
	144.850	VK2RLO		Mt Lookout	P			
	144.850	VK2RPT	Mt Tumorrarna	Tumut	P	20	1231	5.0
	144.850	VK2RWI	Dural	Sydney	O	10	240	0.5
	144.875	VK2RAO	Mt Canobolas	Orange	P	20	1417	0.5
	144.875	VK2RPL	Mt Nardi	Lismore	P	25	85	3.0
	144.875	VK2RPM	Middle Brother	Port Macquarie	O			
	144.875	VK2RSD	Mt Cambewarra	Nowra	O			
	144.900	VK2RCC	Needle Mtn	Beaucubbin	O			
	144.900	VK2RCH	Mt Coramba	Coffs Harbour	P			
	144.900	VK2RMU	Little Forest	Milton	P			
	144.900	VK2RPH	Hornsby	Sydney	O	10	200	
	144.925	VK2RET	Taree	Taree	O			
	144.925	VK2RPS	High Range	Mittagong	P	50	827	
	145.050	VK2RPL	Mt Nardi	Lismore	O	25	85	3.0
	147.575	VK2RAB	Mt Kaputar	Tamworth-Narrabri	O			
	147.575	VK2RAO	Mt Canobolas	Orange	O	20	1417	0.5
	147.575	VK2RAW	Mt Murray	Wollongong	O	50	769	1.0
	147.575	VK2RCH	Mt Coramba	Coffs Harbour	O			

State	Frequency	Callsign	Site	Service Area	Status	ERP	HASL	Time Out
Victoria	147.575	VK2RDX	Mt Bindo	Blue Mtns West	O	20	1362	3.5
	147.575	VK2RET	Taree	Taree	P			
	147.575	VK2RGF	Mt Bingar	Griffith	O		450	
	147.575	VK2RLO		Mt Lookout	O			
	147.575	VK2RMU	Little Forest	Milton	O			
	147.575	VK2RPL	Mt Nardi	Lismore	O	25	85	3.0
	147.575	VK2RPN	Teralba	Newcastle	O	10	400	
	147.575	VK2RPS	High Range	Bowral	O	50	827	
	147.575	VK2RPT	Mt Tumutrama	Tumut	O	20	1231	5.0
	147.575	VK2RPW	Mt Grundy	Walcha	O			
	147.575	VK2RSD	Mt Cambewarra	Nowra	O		600	
	147.575	VK2RTM	Mt Crawney	Tamworth	O			
	147.600	VK2RAG	Somersby	Gosford-Wyong	O	50	313	3.0
	438.875	VK2RPL	Mt Nardi	Lismore	?	25	85	3.0
	439.075	VK2RAG	Somersby	Gosford	O			
	144.800	VK3RPK	Red Hill	Melbourne	L	25	240	
	144.900	VK3RPP	Lysterfield	Melbourne	O	25	100	
	147.525	VK3RBB	Mt Tassie	Gippsland	T	20	730	
	147.575	VK3RCU	Mt Moliagul	Bendigo	O			
	147.575	VK3RGU	Carrajung	East Gippsland	T			
	147.575	VK3RGV	Mt Wombat	Shepparton	O	25	800	
	147.575	VK3RMU	Mt St Leonard	Melbourne	O	25	1028	
	147.575	VK3RNU	Mt Stanley	Wodonga	O	25	1051	
	147.575	VK3RPA	St Albans	Melbourne	O	10	83	
	147.575	VK3RPC	Mt Warrenheip	Ballarat	O	20	741	
	147.575	VK3RPG	Mt William	Grampians	O		1170	
	147.575	VK3RPM	Specimen Hill	Bendigo	O	25	240	
	147.575	VK3RPN	Mt McKay	NE Vic	O		1840	
	147.575	VK3RPS	Mt Holden	Melbourne	O	25	320	
	147.575	VK3RRU	Merbein	Mildura	T	25		
	147.600	VK3RPA	St Albans	Melbourne	O	45	83	
	147.600	VK3RPC	Mt Warrenheip	Ballarat	O	20	741	
	147.600	VK3RPS	Mt Holden	Melbourne	O	25	320	
	430.075	VK3RPP	Lysterfield	Melbourne	L	25	100	
	439.050	VK3RPA	St Albans	Melbourne	L		83	
	439.050	VK3RPS	Mt Holden	Melbourne	L	25	320	
Queensland	144.850	VK4RZB	Constitution H	Brisbane	O	20	230	
	144.900	VK4RAR	Mt Archer	Rockhampton	O		600	
	144.900	VK4RBD	Blackdown T'ld	Blackwater	O			
	144.900	VK4RBS	Mt Goonaneman	Bundaberg	O		650	
	144.900	VK4RGA	Amy's Peak	Gladstone	O	25	1010	
	144.900	VK4RIK	Mt Haren	Cairns	O	10	480	
	144.900	VK4RZC	Wilkes Knob	Sunshine Coast	O	20	470	
	144.900	VK4RZE	Mt Mowbullan	Darling Downs	O	25		
	145.050	VK4RBT	Mt Cotton	Brisbane	O	50	233	
	147.600	VK4RSA	Maleny	Maleny	?			
	147.600	VK4RZA	Springbrook	Gold Coast	O	20	940	
	147.600	VK4RZB	Constitution H	Brisbane	O	20	230	
	147.600	VK4RZC	Wilkes Knob	Sunshine Coast	O	20	470	
	147.600	VK4RZD	Mt Perseverance	Toowoomba	O	20	700	
	147.600	VK4RZE	Mt Mowbullan	Darling Downs	O	25		
South Australia	144.900	VK5RSV	O'Halloran Hill	Adelaide	O			
	147.575	VK5LZ	Izabeth	Adelaide	O			
	147.575	VK5RBP	Roseworthy	Barossa Valley	O			
	147.575	VK5RMN	The Bluff	Port Pirie	O		730	
	147.575	VK5RPM	Mt Graham	Millicent	O	100	225	
Western Australia	147.575	VK5ZLW	Crafers	Adelaide	O			
	147.600	VK5RPG	Collinswood	Adelaide	O			
	144.850	VK6BBS	Roleystone	Perth	O		360	
	144.850	VK6R??		Busselton	P			
	144.850	VK6RAA	Mt Barker	Albany	O		430	
	144.850	VK6RAP	Roleystone	Perth	O		360	
	144.850	VK6RAW	Fairfield	Katanning	O			
Tasmania	144.850	VK6RDT	Tic Hill	Perth	P		230	
	144.850	VK6RMS	Saddleback	Boddington	O		630	
	147.575	VK7RED	Snow Hill	East Coast	?		970	
	147.575	VK7RIT	Mt Nelson	Hobart	O			
Northern Territory	147.575	VK7RTY	Mt Barrow	Northern Tasmania	O		1400	
	147.600	VK8BBS	Alice Springs	Alice Springs	O			



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NZ's LARGEST AMATEUR EQUIPMENT EMPORIUM

WE BUY, SELL, TRADE . . .

Because of the variety of second hand equipment we see every day, we at Com-Centre are able accurately to assess the real value of any item of gear.

Accordingly, we will trade it, or sell it on your behalf, whichever is the most convenient to you. Clearly a rig that is worth \$200 won't be as good as one worth \$400, but every honest endeavour will be made to ensure the price will reflect its real value.

WHY BUY PRIVATELY WHEN COM-CENTRE OFFERS THESE ADVANTAGES:

- All sales of second hand equipment have a money back guarantee. We assure you of an absolutely honest appraisal but if on receipt of the gear you feel they have not been fairly represented, send them back and we will happily refund your money.
- All second hand equipment is tested and if necessary will be realigned before being put on display.
- Every visitor to the Display Centre can test gear on air.
- We fully support and service what we sell.

Our reputation depends upon your complete satisfaction. We know the amateur fraternity respect and appreciate our honest, fair trading and that is a reputation we are proud to maintain.

This is why so many people buy and sell through Com-Centre.

Selling on behalf is better, because

- Com-Centre has become the focal point for trading communication equipment
- Com-Centre circularises all branches with a

comprehensive stock list

- Com-Centre carries a computer list of prospective purchasers
- Com-Centre is contactable. Display Centre is open 5 days a week, 24 hour telephone.
- Com-Centre advertises, displays, demonstrates, and delivers your equipment.
- Com-Centre may offer cash without other constraints or considerations.
- Com-Centre's commission is only 15%

COM-CENTRE'S FOUR FIGURE VALUATION:

It is the basis of our business to know the return you can expect. Upon viewing the equipment, COM-CENTRE provides all vendors with FOUR FIRM FIGURES:-

1. Our considered RETAIL VALUE of the equipment
2. Our DIRECT CASH trade offer on the equipment
3. An anticipated return if left for SALE ON BEHALF.
4. A Traded DIFFERENCE on any current stock item.

Remember, whether you are buying or selling communication equipment, **Contact us FIRST!**

THE BRANCH BULLETIN:

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!



Jan ZL1TOK
Company Secretary

Serving you, and the interests of Amateur Radio

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.

As you can see, each of us is a Licensed Operator (and that even includes our Commercial Typesetter!). Each has a genuine interest in Amateur Radio, and each is proud to help maintain the high standard of service and expertise that is our hallmark.



Richard ZL1BOK

We stand by everything we sell, and our modern, well equipped Service Department is available to meet every need.

We can, and do, service equipment bought elsewhere. Naturally we must give priority to that which was supplied by us, so it takes a little longer for other gear to be returned.

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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.



YAESU FT1000: State-of-the Art: five direct synthesisers. Fully flexible front end with broad dynamic range; unlimited dual frequency reception. Multiple QRM rejection systems; Optimised digital communication modes; 200 W transmitter output.



YAESU FT736: 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.

YAESU FT990: Same rig, same features, made affordable by having only a single receiver.

VERSATILE AND POPULAR H.F. EQUIPMENT



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 microprocessors, 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 - 30m Hz. Compact and versatile



KENWOOD TS440S: A most versatile rig. Again, not sparing the extras - automatic ATU built in, P/S req for constent base use. Very compact, this little rig is MUCH more than a mobile

VHF/UHF MOBILE/BASE MULTI MODE TRANSCEIVERS



YAESU FT 212 / 712RH

Yaesu's prestigious 45 Watt compact CPU controlled FM Base-Mobile transceiver, for two metres and 70cm.



YAESU FT290RH:

Most versatile 2m transceiver. A full 25 Watt multimode, doubles as a 5 Watt shoulder pack. Perfect for AREC or Search & Rescue.



YAESU FT5200: Ultimate versatility in a dualbander. CTCSS, DTMF and Persoal Paging. 32 memories 50W o/p. Professional operation on Amateur Radio!

EVER POPULAR OFTEN ESSENTIAL AMATEUR HANDHELDS



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. C/w all essentials



YAESU FT26/76: Ultra-compact, incorporates the latest paging feature. 53 tunable programmable memories, independent TX/RX, output variable up to 5 Watts.



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 Band (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 Rcvrs & Monitors:
BJ200 Black Jaguar
AOR2002, AOR3000
FRG9600 Standard AX700
Yupiteru:
MVT 6000 & 7000

EXTRAS

ANCILLARY EQUIPMENT:
PK232 Data Terminal
Tokyo HiPower
VHF/UHF Linear The
Curtis Keyer
Power Supplies

Extras, Accessories, Bits & Pieces

A big range of all sorts of ATU's, SWR Bridges, Dummy Loads, Coax, Switches, Clocks, Speakers, Coax Cable, 450 Ohm ladder line, Plugs, Connectors, Adaptors. We can usually supply just about any station accessory right off the shelf. Of course, you'll need much more information, especially on those fancy rigs above, so don't hesitate to ask. We're always pleased to provide the best in advice and assistance, so remember, when it comes to amateur equipment of any sort,

RING COM-CENTRE FIRST

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**STARTING OR
UPGRADING
HF**

WITH SUCH AN ARRAY of sophisticated equipment available, getting your feet wet can be a daunting prospect. 'Where do I start?' 'I can't afford an arm and a leg too...' 'How little do I need initially?' are cries we hear regularly. Whatever way you wish to go about it, you require power, transmitter, receiver and antenna. Here are some suggestions, with an enormous range of variations, divided into three categories based loosely on cost. Whether you are exploring the possibilities of upgrading your present station, or about to take the plunge into your first rig, these selections (or any variations you care to choose) will achieve that end. The range of used equipment is huge, and constantly changing - but we always have quality gear that will suit.

GIVE US A CALL — WE'RE HERE TO HELP.

ECONOMY HF: Ideal for your first HF station - reliability at moderate cost

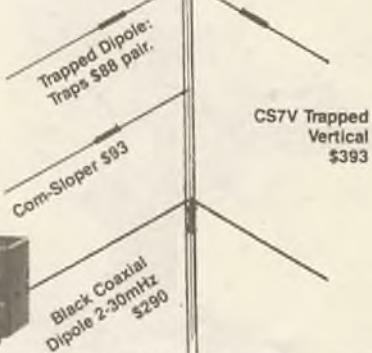
PRE-OWNED TRANSCEIVERS



VALVE FINALS:	Average Price
FT400	\$285
FT101	\$350
FT101B	\$550
TS520	\$550
TS820	\$750
TS830	\$820
FT901	\$875
SOLID STATE:	
TS120	\$600
TS130	\$700
IC701	\$650
IC720	\$950
TS180	\$1200
FT707	\$800
IC740	\$950

ANTENNAS

SWR/ATU
\$200-\$400



SOLID STATE VERSATILITY: Your first serious station, or back-up gear

NEW DIGITAL SOLID STATE OR PRE-OWNED PRESTIGE TRANSCEIVERS

Suitable for Base or Mobile applications



PRE-OWNED:

TS930
TS940
IC735
IC745
IC751
FT767
FT757
TS140
TS430
TS680

Prices usually range from \$700 to about \$2500

BASE OR MOBILE

BRAND NEW:

FT757	\$2535	EAT300	\$430
FT747	\$1785	EAT300A	\$594
TS140	\$2085	FC757AT	\$975
TS680	\$2290	FC1000	\$1095

Versatile SWR/ATU

EAT300 \$430
EAT300A \$594



or
Matching
Automatic
ATU



CO-AX
from
\$2.50/m

ANTENNAS:

Trident Mobile
Whip
\$170

CS3Y
Triband Beam
\$497

Medium
Duty Rotator
Q400 \$495
G600 \$765



ULTIMATE ON HF: State-of-the-Art Multimode, etc.

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FT767: The ultimate for the serious multi-mode multi-band operator. Basic HF Bands only: \$4775 With 2m, 70cm & 6m options, \$6100

FT1000: As high as you can go in HF transceivers. Built to last a lifetime \$7978.



NEW: FL7000
S/State, Automatic \$4570.

ANTENNAS:

EMTRON BEAMS
From \$700



Heavy
Duty
Rotator
G1000
\$995

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Don't take chances when setting up or upgrading your station.



Com-Centre can outfit you from mike to antenna with gear that is fully supported by our Service Department, and at a cost to suit most budgets. You may be surprised at how little you need to outlay. Check out these two recent ads in Break-In and look at the enormous range of options we can offer in both new and used equipment. Or send for copies of

our Branch Bulletin - it's all in there.

If you are updating, we'll trade in your existing gear, or sell it on your behalf, and you don't have to buy new equipment to do this! There's no gamble when you buy from Com-Centre.

Nobody handles a wider range or volume of Amateur Radio Equipment than we do, and this diversity gives us a depth of experience second to none. So, whether you are just recently qualified, bursting

to try out your new callsign, or a seasoned operator with hours of DX behind you, our advice and assistance is freely available and willing given. After all, Communication is the name of our game . . .

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ECONOMICAL VHF / UHF: Ideal for your first venture into VHF

VERSATILITY ON VHF / UHF: Base, Mobile, Portable, Multi-mode

STATE-OF-THE-ART VHF / UHF — Satellites etc.

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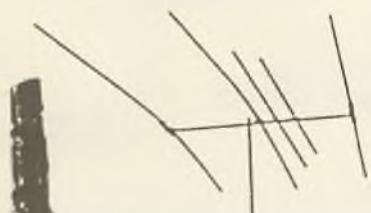
GETTING OUT —That's what it's all about!

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:	PL259 0.30mHz 1:1 & 4:1	\$72



TET EMTRON YAGIS:
EASY DXing with the HB35C



◀ TRIDENT MOBILE:
A Top performer, this
convenient mobile whip covers
80-10 metres, tunable over
80m, and comes complete
with mount

\$169

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!

★ 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 1/2 whip. No radials req. Complete with SO239 mount	\$ 59
D	HOT ROD: Hi Gain telescopic wh handhelds	\$ 59

Latest COMET antennas from Japan:

High Gain Dual Band Verticals	from \$260
High Gain Dual Band Mobiles	from \$ 96

★ UHF ANTENNAS:

E	CS7C 70cm Mobile Collinear	from \$ 27
CSUY	12 element 70cm Yagi	from \$112
CS6Y	6 element 70cm Yagi	from \$ 82

★ SCANNER ANTENNAS:

DIAMOND ACTIVE ANTENNA:	500kHz - 1500MHz 20dB gain. Perfect for AOR2002/3000.
O505 (mobile)	\$199
D707 (base)	\$279
D130 WIDEBAND DISCONE	25 - 1300 mHz. 200 Watt, 50 Ohm.
	\$218

★ 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/boat	\$ 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	\$ 18

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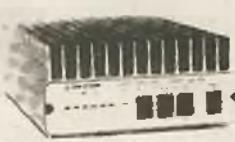
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Amateur Satellites

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 26 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 Organizations 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.

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 1260 MHz bands, plus the 2.4, 3.4, 5.6, 10, 24, 47, 75, 142 and 240 GHz allocations. However, so far operation has only been seen in the following bands:

Band	Frequencies	Remarks
15 m	21.25 to 21.30 MHz	Uplink frequency used
10 m	29.30 to 29.50 MHz	Downlinks frequency used
2 m	145.80 to 146.00 MHz	Both up and downlinks
70 cm	435.00 to 438.00 MHz	Both up and downlinks
23 cm	1260 to 1270 MHz	Uplink only permitted
13 cm	2401 to 2402 MHz	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 authorization of the administration of the specific country. Usage at local level is generally by "gentleman's agreement" observing "bandplans" laid down by specific Amateur Organizations 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". UoSATs 2 and 3 (University of Surrey Satellites) are identified as UoSAT OSCARs 11, and 14 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 imple-

mented 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 0000 UTC. 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 III 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 11.5 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 organizations 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° 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° 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, W3IWI'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 air-mail 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 bul-

lets 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 7.103 MHz simultaneously on Saturdays 2200 hours. 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 at 2015 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.

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; 2401.5 MHz

Data and Bulletins at 1200 bps. FSK NBFM. Digital Communication Experiment (DCE) in use between Gateway ground stations in many countries.

FUJI-OSCAR-20 (FO-20): Cat. 20480

Inclination 99 degrees. Apogee 1740km. Perigee 912 km.

Transponders: JA (SSB/CW). Uplink: 145.900–146.00 MHz. Downlink: 435.900–435.800. CW Beacon: 100 mW 435.795 MHz;

JD (Digital BBS). Uplink: four channels 145.85, 145.87, 145.89 and 145.91 MHz. Modulation 1200 bps Manchester Encoded NBFM. Downlink: 435.91 MHz 1W 1200 bps 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: 145.860–145.900 MHz and/or 21.160–21.200 MHz. Downlink: 29.360–29.400 MHz and/or 145.860–145.900 MHz. Beacon: 29.357/145.857/145.903 MHz depending on Mode(s). Robot uplink: 21.120/145.820 MHz. Downlink: 29.403 MHz.

RS-11: Uplink: 145.910–145.950 MHz and/or 21.210–21.250 MHz. Downlink: 29.410–29.450 MHz and/or 145.910–145.950 MHz. Beacon 29.407/145.907/145.953 MHz depending on Mode(s). Robot uplink: 21.170/145.870 MHz. Downlink: 29.453 MHz.

OSCAR-10: Cat 14129

Elliptical Orbit 26°. Long Period 11.5 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: 435.027–435.179 MHz equates with Downlink: 145.977–145.825 MHz (inverting).

General (145.810 MHz) and Engineering (145.987 MHz) 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 IIIC): Cat. 19216

Elliptical orbit. Period 686.70 minutes.

Four Modes: B; JL; L and S:

1. Mode-B: General Beacon 145.812; Engineering Beacon 145.985 MHz. Uplink passband 435.423–435.573 MHz equates with downlink 145.975–145.825 MHz (inverting).
2. Mode-L: General beacon 435.651 MHz. Uplink passband 1269.351–1269.641 MHz equates with downlink 436.005–435.715 MHz (inverting).
3. Mode-J: Uplink passband 144.423–144.473 MHz equates to downlink 435.990–435.940 MHz (inverting).

4. Mode-S: Beacon 2400.325 MHz. Uplink passband 435.601–435.637 MHz equates to downlink 2400.747–2400.711 MHz (inverting).

UoSAT-3 (UO-14): Cat. 20437

Inclination 98.7°. Altitude 825 km.

Mode-J Pacsat using 9600 bps FSK. Uplink: 145.975 MHz. Downlink: 435.070 MHz.

Experiments to study Cosmic Particles and total radiation dosage are also carried.

Microsat PACSAT-OSCAR-16 (AO-16): Cat 20439

Inclination 98.7°. Altitude 825 km.

AMSAT-NA's Mode-J PACSAT. Using FO-12 communications format. Uplinks: 145.900; 145.920; 145.940; 145.960 MHz. Manchester Encoded FM. Downlink: 437.025 MHz. BPSK or 437.050 MHz. BPSK using Raised Cosine Modulation. A Mode-S Downlink is also present, on 2401.142 MHz. transmitting the same format as on 70cm when commanded on.

Microsat DO-17: Cat 20440

Inclination 98.7°. Altitude 825 km.

BRAMSAT's DOVE (Digital Orbiting Voice Encoding Satellite). Downlink: 145.825 MHz. NBFM. Educational spacecraft transmitting messages and telemetry as speech or as standard AX.25 packets at 1200bps. An additional downlink uses S-Band on 2401.220 MHz.

Microsat WO-18: Cat 20441

Inclination 98.7°. Altitude 825km.

Weber State College's WEBERSAT. A facility for video data collection from CCD Camera and transmission by packet radio techniques. Uplink: TBA. Downlink: 437.075 MHz. BPSK or 437.100 MHz. BPSK Raised Cosine Modulation. A range of other experiments also have telemetry on same frequency. Will also receive and retransmit ATV uplinked on 23 cm and has PACSAT capability as well if required.

Microsat LO-19: Cat 20442

Inclination 98.7°. Altitude 825 km.

AMSAT-Australia's LUSAT. A Mode-J PACSAT. Uplinks: 145.900;

145.880; 145.860; 145.840 MHz. Manchester Encoded 1200 bps NBFM. Downlink: 437.150 MHz. BPSK (as per FO-12 format).

Secondary Payload: CW Beacon on 437.125 MHz. Transmitting limited range of telemetry at 12 wpm. Intended to bring satellite operations to Argentinian Amateurs who don't have packet capability.

RS-12/13:(COSMOS 2123):Cat. 21089

Launched on February 5, 1991 into 83° inclination, 1000 km high orbit.

Similar to RS-10/11, this dual system was also carried on a host spacecraft

Cosmos 2123.

Note—the two systems are separate but carried on and using power from 2123.

Both RS-12 and 13 can operate under modes K, KA, T, KT.

RS-12: Uplink: 145.910–145.950 MHz, and/or 21.210–21.250 MHz. Downlink: 29.410–29.450 MHz, and/or 145.910–145.950 MHz. Beacon: 29.408/145.908 MHz, depending on Mode(s). Robot uplink: 21.129/145.831 MHz. Downlink: 29.454 MHz.

RS-13—Uplink: 145.960–146.000 MHz, and/or 21.260–21.300 MHz. Downlink: 29.460–29.500 MHz, and/or 145.960–146.000 MHz. Beacon: 29.458/145.958 MHz.

depending on Mode(s). Robot uplink: 21.138/145.840 MHz. Downlink: 29.504 MHz.

RS-14/AO-21:(GEOS): Cat. 21087.

Launched on January 29, 1991 into 82.9° inclination, 1000 km high orbit.

This satellite was carried on board a host spacecraft called GEOS and carries a Mode-B transponder and a very sophisticated Digital Package called RUDAK-2. There are three beacons, but only one on 145.818 MHz, is operational at present, transmitting CW telemetry. The spacecraft has encountered some problems which the ground command are having difficulty remedying. More details on progress will be covered regularly in Break-In.

Further details on any of these satellites see Break-In or contact ZL1MO with SASE for further technical information.

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 worldwide 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 Scout Districts have District JOTA Organizers to arrange for Scouts and Guides to take part in JOTA by visiting local amateur

stations. 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.

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 October 19 and 20, which is the weekend before Labour Weekend. There is no reason why stations should not also operate on Monday October 21 if a longer period for contacting countries on the other side of the International Date Line is desired.

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Digital Modes

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 digital modes, but it is far from standardized itself. While many use the term Baudot Code, others use the term Murray Code. These two names acknowledge two important telegraph pioneers, both of whom made major contributions in this field, however the correct term is CCITT International Alphabet No. 2. The differences between in practical systems is apparent 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 60 wpm 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.

ASCII

This is used to a very 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, encourages this mode, however there are much more practical ways to use a computer on the air. Transmission 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 error checking 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 ZL1AMW which monitor 7045 kHz in Baudot, and VK2AGE who monitors 7045 kHz in AMTOR ARQ.

Packet Radio

Packet Radio is another error-free mode, which has added advantages of higher speed (if good radio signal is available) and increased economy of spectrum by time-sharing a channel with other users.

Transmitted text is collected into "packets" before sending. Within this packet is the callsign of the packet destination, the source (i.e. sender's) callsign, control information on the type of packet being sent (control, acknowledgement, information), data (where applicable), and a CRC (Cyclic 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, a commercial computer communications 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 3545 kHz
40 metres 7045 kHz

International Operating Frequencies:

80 metres	3610-3640 kHz
40 metres	7040-7060 kHz
20 metres	14080-14100 kHz
10 metres	28080-28100 kHz

Packet Radio:

ZL operating frequencies:

2 metres—most operation on 144.65 MHz, 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 xxxx" 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.

SP ZL1XYZ—"Send a personal message to station callsign 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 "/EX" 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 table of current main-centre bulletin boards is included in the "Operating Information" section of callbook. To send a message to a distant amateur, note the callsign 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.:

SP 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.

Many BBS 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 is difficult to maintain. A number of Branches of NZART have set up BBS, using Club resources. By their nature these stations are somewhat more permanent, so they are indicated in the table.

Forwarding mail overseas

To send mail overseas, you must know the destination operator's local BBS, then simply insert the destination BBS as usual. For example, to send a message to G3ABC at the G7XYZ BBS, simply enter this into your local BBS as:

SP G3ABC @ G7XYZ

Your local BBS will automatically forward this to the current overseas gateway, and from there the overseas HF forwarding networks will carry the message.

Digipeaters

A number of networking digipeaters have been installed on hilltops. These consist of standard TNCs operating special software, providing a store and forward packet repeater.

The most common software being operated currently is "TheNet", which provides a form of networking based on "Nodes". Each digipeater 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". While Rose is very widespread in Australia, its incompatibility (for automatic routine) with the more established "TheNet" means we are unlikely to see much of this system in New Zealand.

A number of home-station and BBS systems directly communicate with "TheNet" digipeaters, and announce themselves as "nodes" on the digipeater list. This allows simple direct connection to a far end user from your local digipeater. For example Hamilton ZL1UX BBS uses G8BPQ networking software, so appears in the nodes list of local digipeaters as "HAMBBS:ZL1UX". Hence all that is needed to connect with the BBS from away from Hamilton is to connect to your local digipeater, and enter a command to connect to HAMBBS, e.g.:

C HAMBBS

As ZL1UX is known to the digipeater, it will automatically provide the intermediate connections through the network to the BBS for you. As a cautionary point, the BBS software is usually set up to ensure its identity is passed on to only a limited number of digipeaters away from home location, to discourage DX BBS operation, which unnecessarily ties up the digipeater network.

Current Information

A regular weekly news broadcast on ZL digital mode happenings is broadcast on 7045kHz, Sunday mornings at 0930 hours (local time), and Sunday evenings at 1930hrs, first in Baudot, then repeated in AMTOR FEC. It is also available as a bulletin on the VHF packet network throughout the country. This provides updates on digipeater and BBS happenings, also RTTY and AMTOR mailbox and operating information.

WARO NZ Women Amateur Radio Operators

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.

Object

To promote and encourage interest in Amateur Radio amongst women.

SUPPORT NZART—GET A FRIEND TO JOIN!

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, R. S. (Bob) Banks ZL1AUI

Taupo Bay
Rural Delivery
Mangonui, Northland 0557.

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
7120 ±kHz AM.

Should conditions on 40m be unsatisfactory, the Net Controller may decide that the Net will QSY to 80m,
3820 kHz (SSB etc.)
3850 kHz (AM)

Please check these frequencies if in doubt.

Office Bearers

Patron: L. Spackman ZL1AC

Grand Old Man: Keith Lane ZL2BU

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*: C/- Bob Banks ZL1AUI.

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 organization 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 3900 kHz 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 fol-

lowing 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: Stem 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 recognized. 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 "SAYCU-RITAY") 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 callsign 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

2 m 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 14 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 memorize 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

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 5×5 (\$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 fulfills 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.

Five Band WAP

Contact any 30 eligible Pacific Countries (as counting 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. AWARD: 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 kits 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.

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.

- The operator on a "County DXpedition" whether Mobile or Fixed Portable may claim that County for his own NZC credit.
- 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.
- 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;

F08; 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.

Ziki 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 40 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 December 31 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

- The award is available to licensed amateurs and SWLs.
- Contacts made after April 5 1982 are eligible.
- QSL cards NOT required. Send certified list of eligible contacts from Log Book.
- Cost is \$1.00 (surface) \$2.00 (airmail) for postage charges only.
- 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 (F08 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.

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.

Alexandra Blossom Festival Award

The award is to be held by the Central Otago Club (Branch 61) in September each year to coincide with the local festivities. The award certificate partly consists of scenes from the festival. The award is on any band, and is available to all amateurs. Cost \$5.00. Five contacts required by ZLs, three from overseas, to Branch 61 stations. All correspondence to Club Secretary.

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, Otumoetai, Tauranga.

Simplex contacts only.

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.

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.

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.

Hutt Valley Award

One point for contacts dating after March 1 1976, with members of Branch 18. Any band/mode but no repeater contacts eligible; two points for any YL contact; two points for contact with club station ZL2HV and two extra points if applicant uses equipment operated by power generated on the site from natural sources (wind, solar, water, etc). ZLs require total of ten points; overseas stations five points.

Endorsements for additional five points and merit for single band operation or when all contacts are on CW. Applications with details of equipment used, etc., and fee of \$5.00 to Awards Manager, Box 30-519, Lower Hutt, New Zealand.

Kapiti

Details March 1990 Break-In page 39. Enquiries to Awards Manager, ZL2AWI, PO Box 166, Paraparaumu.

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.

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, PO Box 397, Papakura.

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.

"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.

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.

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 June 1 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 January 1 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 January 1 1979. List full log details with callsigns 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 June 1 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 once only.
3. Contacts made via repeaters and in nets will qualify and contest contacts made after June 1 1990 will be accepted.
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. Basic award is available for list of 30 contacts with endorsement seals for each further five contacts up to the full 60 required. Applicants submitting a list of the full 60 valid contacts will receive a special endorsement making the award distinctive from those gained for the lesser number of contacts.
3. 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 25 km radius of the centre of the town claimed.
4. Contacts made via repeaters, in nets and in contests will qualify and the same WARO members may be contacted in any number of towns.
5. Award dates from January 1 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.
5. A different series of endorsement seals is available for each further ten contacts (after the basic 60) 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. Kaikohoe
11. Kaitaia
12. Masterton
13. Matamata
14. Morrisville
15. Napier
16. New Plymouth
17. Opotiki
18. Orewa
19. Otaki
20. Paihia

South Island

21. 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. Waikato
36. Wanganui
37. Wellington
38. Wellsford
39. Whakatane
40. Whangarei
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

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), CW, Phone, SSTV, RTTY, FAX, Satellite and 5-band. In addition, the following endorsement stickers are available: QRP, 1.8 MHz, 3.5 MHz, 50 MHz, 144 MHz, 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 (10 W 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.

DXCC Countries List

Current Countries Total 322—Revised March 1991—Reproduced courtesy ARRL

PREFIX	COUNTRY	Continent	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 ¹³	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 ¹⁴	Comoros	AF	53	39
DA-DL/Y2-Y9 ¹⁵	Germany	EU	28	14
DU-DZ	Philippines	OC	50	27
EA-EH	Spain	EU	37	14
EA6-EH6	Balearic 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	46	37
F	France	EU	27	14
FT8W	Crozel	AF	68	39
FT8X	Kerguelen Is.	AF	68	39
FT8Z	Amsterdam & St. Paul Is.	AF	68	39
FG	Guadeloupe	NA	11	08
FJ, FS ¹⁶	Saint Martin	NA	11	08
FH ¹⁷	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 ¹⁸	Glorioso Is.	AF	53	39
FR/J, E ¹⁹	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	Continent	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
HO-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
IS, IMO	Sardinia	EU	28	15
J1	Abu Ali, Jabal at Tair	AS	39	21
J2	Djibouti	AF	48	37
J3	Grenada	NA	11	08
J5	Guinea-Bissau	AF	46	35
J6	St. Lucia	NA	11	08
J7	Dominica	NA	11	08
J8	St. Vincent & Dep.	NA	11	08
JA-JS	Japan	AS	45	25
JD1 ¹⁵	Minami Torishima	OC	45	27
JD1 ¹⁶	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 ¹³ (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 ¹⁷	Desecheo Is.	NA	11	08
KO6	Marshall Is.	OC	65	31
LA-LN	Norway	EU	18	14
LO-LW	Argentina	SA	14, 16	13

PREFIX	COUNTRY	Continent	ITU	CO	ZONE
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-01	Finland	EU	18	15	
OHØ	Aland Is.	EU	18	15	
OJØ	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'	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	
PP0-PY0	Fernando de Noronha	SA	13	11	
PP0-PY0	St Peters & St Paul Rocks	SA	13	11	
PP0-PY0	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 ²²	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'	Tuvalu	OC	65	31	
T3	W. Kiribati (Gilbert & Ocn 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	Cameroun	AF	47	36	
TK	Corsica	EU	28	15	
TL ⁸	Central African Republic	AF	47	36	
TN ¹	Congo	AF	52	36	
TR ¹²	Gabon	AF	52	36	
TT ¹¹	Chad	AF	47	36	
TU ¹²	Ivory Coast	AF	46	35	
TY ¹³	Benin	AF	46	35	
TZ ¹⁴	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	
UF	Georgia	AS	29	21	

PREFIX	COUNTRY	Continent	ITU	CO	ZONE
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 ¹⁵	St. Christopher & Nevis	NA	11	08	
V5	Namibia	AF	57	38	
V6 ¹⁶	Micronesia	OC	65	27	
V7	Marshall Islands	OC	65	31	
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 ¹⁵	Anguila	NA	11	08	
VP2M ¹⁵	Montserrat	NA	11	08	
VP2V ¹⁵	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	
VPG	Bermuda	NA	11	05	
VO9	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 Gigedo	NA	10	06	
XT ¹⁷	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	
YA	Afghanistan	AS	40	21	
YB-YH ²¹	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	28	15	
YV-YY	Venezuela	SA	12	09	
YVØ	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	

PREFIX	COUNTRY	Continent	ZONE	
			ITU	CQ
ZD7	St. Helen	AF	66	36
ZD8	Ascension Is.	AF	66	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
ZS8	Prince Edward & Marion Is.	AF	57	38
ZS9 ²	Walvis Bay	AF	57	38
1A0 ¹	Sovereign Mil. Order of Malta	EU	28	15
1S ¹	Spratly 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	Rotuma 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	Malyi 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
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 ¹⁰	Mauritania	AF	46	35
5U ¹⁰	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 ²⁰	Senegal	AF	46	35
6Y	Jamaica	NA	11	08
70	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 ²²	Ghana	AF	46	35
9H	Malta	EU	28	15
9I-9J	Zambia	AF	53	36
9K	Kuwait	AS	39	21
9L	Sierra Leone	AF	46	35
9M2, 4 ²³	West Malaysia	AS	54	28
9M6, 8 ²³	East Malaysia	OC	54	28

PREFIX	COUNTRY	Continent	ITU	ZONE
9N	Nepal	AS	42	22
9Q-9T	Zaire	AF	52	36
9U ²⁴	Burundi	AF	52	36
9V ²⁵	Singapore	AS	54	28
9X ²⁴	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) Contacts made after October 1, 1990 now count as Germany. These two countries are now amalgamated.

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. (ST) 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. (V6, 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 Total: 52

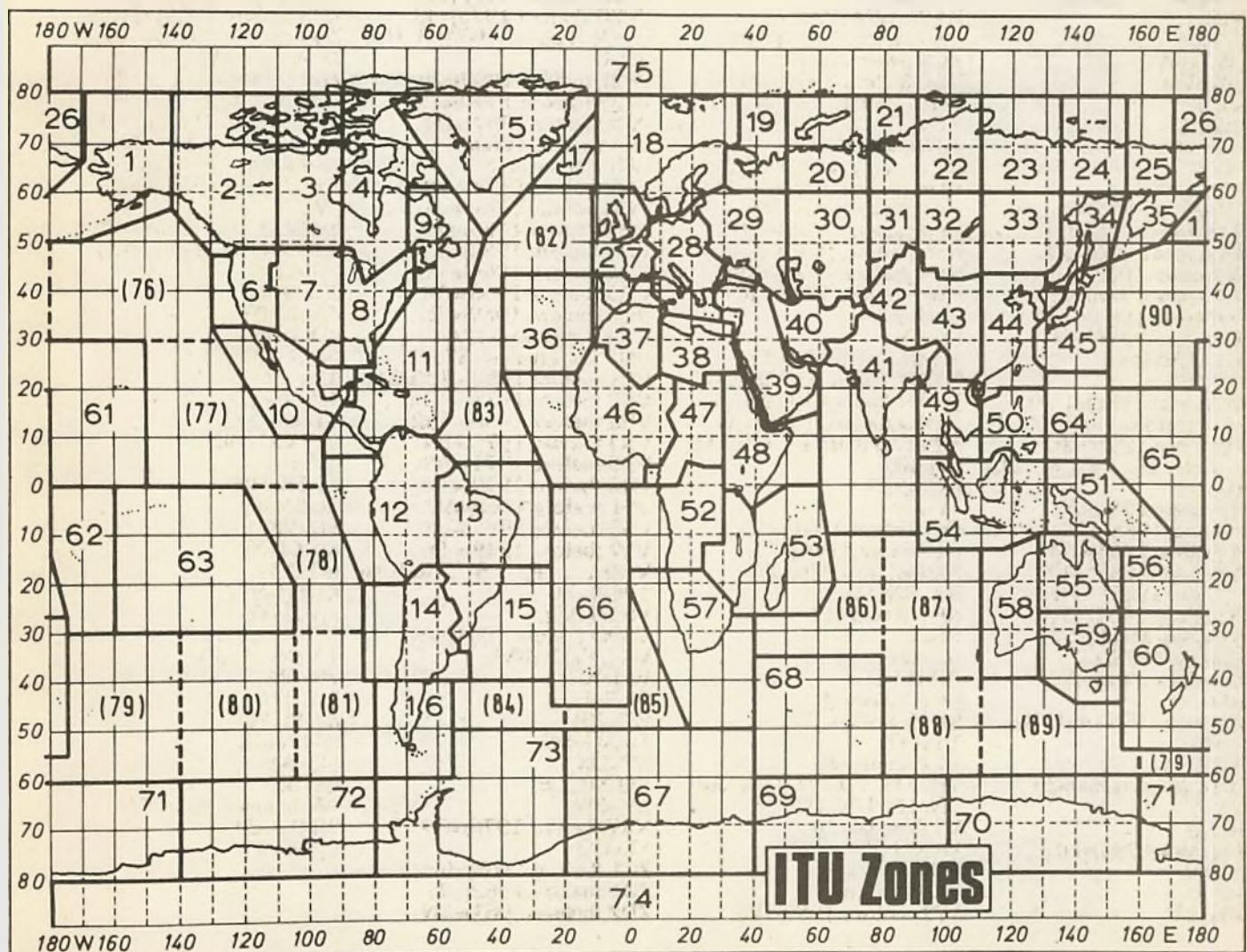
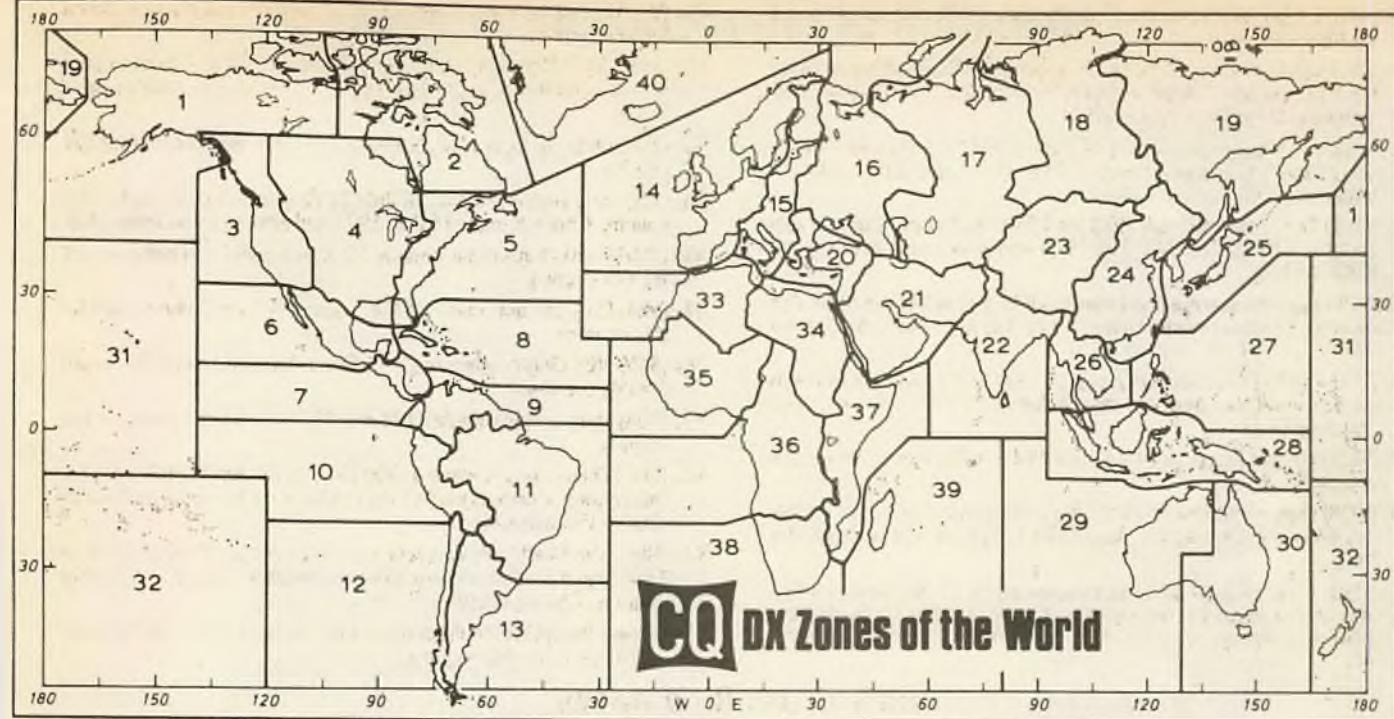
Credit for any of these countries can be given if the date of contact with the country in question agrees with the date(s) shown in the corresponding footnote.

PREFIX	COUNTRY	Continent	ZONE	
			ITU	CC
AC3 ^{1,2}	Sikkim	AS	41	22
AC4 ^{3,4}	Tibet	AS	41	23
C9 ⁵	Manchuria	AS	33	24
CN2 ⁶	Tangier	AF	37	33
CR8 ⁷	Damao, Diu	AS	41	22
CR8 ⁸	Goa	AS	41	22
CR8, CR10/ ⁹	Portuguese Timor	OC	54	28
DA-DM ¹⁰	Germany	EU	28	14
EA9 ¹¹	Ilni	AF	37	33
ET2 ¹²	Eritrea	AF	48	37
FF ¹³	French West Africa	AF	46	35
FH, FB8 ¹⁴	Comoros	AF	53	39
FI8 ¹⁵	French Indo-China	AS	49	26
FN8 ¹⁶	French India	AS	41	22
FQ8 ¹⁷	French Equatorial Africa	AF	47, 52	36
HK0 ¹⁸	Bajo Nuevo	NA	11	08
HK0, KP3, KS4 ¹⁹	Serrana Bank and Roncador Cay	NA	11	07
I1 ²⁰	Trieste	EU	28	15
I5 ²¹	Italian Somaliland	AF	48	37
JD1/7J1 ²²	Oking Tori-shima	AS	45	27
JZ0 ²³	Netherlands New Guinea	OC	51	28
KR6, 8, JR6, KA6 ²⁴	(Ryukyu Islands) Okinawa	AS	45	25
KS4 ²⁵	Swan Islands	NA	11	07
KZ5 ²⁶	Canal Zone	NA	11	07
P2, VK9 ²⁷	Papua Territory	OC	51	28
P2, VK9 ²⁸	Territorial New Guinea	OC	51	28
PK1, 2, 3 ²⁹	Java	OC	54	28
PK4 ³⁰	Sumatra	OC	54	28
PK5 ³¹	Netherlands Borneo	OC	54	28
PK6 ³²	Celebe & Molucca Is.	OC	54	28
UN1 ³³	Karelo-Finnish Republic	EU	19	16
VO ³⁴	Newfoundland, Labrador	NA	09	02, 05
VO1, 5H1 ³⁵	Zanzibar	AF	53	37
VQ6 ³⁶	British Somaliland	AF	48	37
VQ9 ³⁷	Aldabra	AF	53	39
VQ9 ³⁸	Desroches	AF	53	39
VQ9 ³⁹	Farquhar	AF	53	39
VS2, 9M2 ⁴⁰	Malaya	AS	54	28
VS4 ⁴¹	Sarawak	OC	54	28
VS9H ⁴²	Kuria Muria Is.	AS	39	21
ZC5 ⁴³	British North Borneo	OC	54	28
ZC6, 4X1 ⁴⁴	Palestine	AS	39	20
ZD4 ⁴⁵	Gold Coast, Togoland	AF	46	35
1M ⁴⁶	Minerva Reef	OC	62	32
4W	Yemen	AS	39	21
70VS9K ⁴⁷	Kamaran Is.	AS	39	21
8Z4 ⁴⁸	Saudi Arabia/Iraq Neutral Zone	AS	39	21
8Z5, 9K3 ⁴⁹	Kuwait/Saudi Arabia Neutral Zone	AS	39	21
9S4 ⁵⁰	Saar	EU	28	14
9U5 ⁵¹	Ruanda-Urundi	AF	52	36
41	Blenheim Reef	AF	41	39
42	Geyser Reef	AF	53	39

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, SH1) 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. (IM) Only contacts made 15 July 1972 and before count for this country. Contacts made 16 July 1972 and after count as Tonga (A3).
36. (7O/VS9K) 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. (Blenheim 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	ZD3 (before 1966)=C5
AC (before 1972)=A5	KA1=JD1	VP2D (before 1979)=J7	ZD4 (before 1958)=9G
AH-KH	KA2AA-KA8ZZ=JA	VP2G (before 1975)=J3	ZD5 (before 1969)=3DA
AL7=KL7	KB6 (before 1979)=KH1	VP2K (before 1984)=V4 or VP2E	ZD6 (before 1965)=7Q
AM-AO=EA	KC4 (Navassa)=KP1	VP2L (before 1980)=J6	ZE (before 1981)=ZZ-9
AT-AW=VU	KG6 (before 1979)=KH2	VP2S (before 1980)=J8	ZK9 (1983)=ZK2
AX-VK	KG61 (before 1970)=JD1	VP3 (before 1967)=8R	ZM6 (before 1963)=5W
AY-AZ=LU	KG6R, S, T, (before 1979)=KH0	VP4 (before 1963)=9Y	ZM7 (before 1984)=ZK3
CF-CK=VE	KJ6 (before 1979)=KH3	VP5 (Jamaica)=6Y	ZS7 (before 1969)=3D6
CL-CO	KM6 (before 1979)=KH4	VP6 (before 1967)=8P	ZS8 (before 1967)=7P
CQ-CS=CT	KP4 (Desecheo)=KP5	VP7 (before 1974)=C6	ZS9 (before 1967)=A2
CR3 (before 1974)=J5	KP6 (before 1979)=KH5	VQ2 (before 1965)=9J	ZV-ZZ=PY
CR4 (before 1976)=D4	KS6 (before 1979)=KH8	VQ3 (before 1962)=5H	3B-3C (before 1968)=VE
CR5 (before 1976)=S9	KV4 (before 1979)=KP2	VQ4 (before 1964)=5Z	3D6 (before 1988)=3DA
CR6 (before 1976)=D2	KW6 (before 1979)=KH9	VQ5 (before 1963)=5X	3G=CE
CR7 (before 1976)=C9	L2-9=LU	VQ8 (before 1969)=3B	3Z=SP
CR9 (before 1985)=XX9	LY=UP	VQ9 (Chagos)=VQ9	4A-4C=XE
CT2 (before 1986)=CU	M1 (before 1984)=T7	VQ9 (Seychelles)=S7	4D-4I=DU
CX0=CE9/VP8	MP4B (before 1972)=A9	VR1 (before 1980)=T30/31	4J-4L=U
CY-CZ=VE	MP4M (before 1972)=A4	VR2 (before 1971)=3D2	4M=YV
CY0 (before 1985)=CY9	MP4Q (before 1972)=A7	VR3 (before 1980)=T32	4N-4O=YU
DM-DT (before 1980)=Y2-9	MP4T, D (before 1972)=A6	VR4 (before 1979)=H4	4T=OA
EA0 (before 1969)=3C	NH-KH	VR5 (before 1971)=A3	4U1VIC=OE
EK, EM-EO, ER-ES, EU- EZ=U	NL7=KL7	VR8 (before 1979)=T2	4V=HH
FA-FF (after 1983)=F	NP=KP	VS1 (before 1966)=9V	5J-5K=HK
FA (before 1963)=7X	OQ (before 1961)=9Q	VS5 (before 1985)=V8	5L-5M=EL
FB8 (before 1961)=5R	P4 (before 1986)=PJ	VS7 (before 1949)=4S	6C=YK
FB8 (before 1985)=FT	PX (before 1970)=C3	VS9A, P, S (before 1968)=7O	6D-6J=XE
FC (before 1985)=TK	RA, RN=UA	VS9M=8Q	6O=T5
FD8 (before 1961)=5V	RB-RR=UB-UR	VS9O (before 1961)=A4	6T-6U=ST
FE8 (before 1961)=TJ	RS=U	VX-VY=CY0/VE	7A-7I=YB
FL (before 1978)=J2	RT=UB	WH=KH	7G (before 1967)=3X
FU8 (before 1982)=YJ	RU-RZ=U	WL7=KL7	7J-7N=JA, JD
GB=G	S4 (Ciskei)=ZS	WP=KP	7S=SM
GC (before 1977)=GJ/GU	S8 (Transkei)=ZS	XJ-XO=VE	7Z=HZ
H2=5B	T4=CO	XP=OX	8A-8I=YB
H3=HP	T4 (Venda)=ZS	XQ-XR=CE	8J-8N=JA
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		



Allocation of International Callsigns

AAA-ALZ	United States of America	IAA-IZZ	Italy
AMA-AOZ	Spain	JAA-JSZ	Japan
APA-ASZ	Pakistan (Islamic Republic of)	JTA-JVC	Mongolian Peoples' Republic
ATA-AWZ	India	JWA-JXZ	Norway
AXA-AXZ	Australia	JYA-JYZ	Jordan (Hashemite Kingdom of)
AYA-AZZ	Argentine Republic	JZA-JZZ	Indonesia (Republic of)
A2A-A2Z	Botswana	J2A-J2Z	Djibouti (Republic of)
A3A-A3Z	Tonga (Kingdom of)	J3A-J3Z	Grenada
A4A-A4Z	Oman (Sultnate of)	J4A-J4Z	Greece
A5A-A5Z	Bhutan (Kingdom of)	J5A-J5Z	Guinea-Bissau (Republic of)
A6A-A6Z	United Arab Emirates	J6A-J6Z	Saint Lucia
A7A-A7Z	Qatar (State of)	J7A-J7Z	Dominica
A8A-A8Z	Liberia (Republic of)	J8A-J8Z	St. Vincent and Grenadines
A9A-A9Z	Bahrain (State of)		
BAA-BZZ	China (Peoples' Republic of)	KAA-KZZ	United States of America
CAA-CEZ	Chile	LAA-LNZ	Norway
CFA-CKZ	Canada	LOA-LWZ	Argentine Republic
CLA-CMZ	Cuba	IXA-LXZ	Luxembourg
CNA-CNZ	Morocco (Kingdom of)	LYA-LYZ	Union of Soviet Socialist Republics
COA-COZ	Cuba	LZA-LZZ	Bulgaria (Peoples' Republic of)
CPA-CPZ	Bolivia (Republic of)	L2A-L9Z	Argentine Republic
CQA-CUZ	Portugal	MAA-MZZ	Great Britain and Northern Ireland
CVA-CXZ	Uruguay (Oriental Republic of)	NAA-NAA	United States of America
CYA-CZZ	Canada	OAA-OCZ	Peru
C2A-C2Z	Nauru	ODA-ODZ	Lebanon
C3A-C3Z	Andorra (Principality of)	OEA-OEZ	Austria
C4A-C4Z	Cyprus	OFA-OJZ	Finland
C5A-C5Z	Gambia (Republic of the)	OKA-OMZ	Czechoslovakia Socialist Republic
C6A-C6Z	Bahamas (Commonwealth of the)	ONA-OTZ	Belgium
C7A-C7Z	World Meteorological Organisation	OUA-OZZ	Denmark
C8A-C97	Mozambique (Peoples' Republic of)	PAA-PIZ	Netherlands (Kingdom of the)
		PJA-PJZ	Netherlands Antilles
DAA-DRZ	Germany	PKA-POZ	Indonesia (Republic of)
DSA-DTZ	Korea (Republic of)	PPA-PYZ	Brazil (Federative Republic of)
DUA-DZZ	Philippines (Republic of the)	PZA-PZZ	Suriname (Republic of)
D2A-D3Z	Angol (People's Republic of)	P2A-P2Z	Papua New Guinea
D4A-D4Z	Cape Verde (Republic of)	P3A-P3Z	Cyprus
D5A-D5Z	Liberia (Republic of)	P4A-P4Z	Aruba
D6A-D6Z	Comoros (Federal and Islamic Republic)	P5A-P9Z	Korea (Democratic Peoples' Republic of)
D7A-D9Z	Korea (Republic of)	QAA-QZZ	(Service abbreviations)
EAA-EHZ	Spain	RAA-RZZ	Union of Soviet Socialist Republics
EIA-EJZ	Ireland	SAA-SMZ	Sweden
EKA-EKZ	Union of Soviet Socialist Republics	SNA-SRZ	Poland (Peoples' Republic of)
ELA-ELZ	Liberia (Republic of)	SSA-SSM	Egypt (Arab Republic of)
EMA-EOZ	Union of Soviet Socialist Republics	SSN-STZ	Sudan (Democratic Republic of the)
EPA-EQZ	Iran (Islamic Republic of)	SUA-SUZ	Egypt (Arab Republic of)
ERA-ESZ	Union of Soviet Socialist Republics	SVA-SZZ	Greece
ETA-ETZ	Ethiopia	S2A-S3Z	Bangladesh (People's Republic of)
EUA-EWZ	Byelorussian Soviet Socialist Republic	S6A-S6Z	Singapore (Republic of the)
EXA-EZZ	Union of Soviet Socialist Republics	S7A-S7Z	Seychelles
FAA-FZZ	France	S9A-SPZ	Sao Tome and Principe (Democratic Republic of)
GAA-GZZ	Great Britain and Northern Ireland	TAA-TCZ	Turkey
HAA-HAZ	Hungarian Peoples' Republic	TDA-TDZ	Guatemala (Republic of)
HBA-HBZ	Switzerland (Confederation of)	TEA-TEZ	Costa Rica
HCA-HDZ	Ecuador	TFA-TFZ	Iceland
HEA-HEZ	Switzerland (Confederation of)	TGA-TGZ	Guatemala (Republic of)
HFA-HFZ	Poland (Peoples' Republic of)	THA-THZ	France
HGA-HGZ	Hungarian Peoples' Republic	TIA-TIZ	Costa Rica
HHA-HHZ	Haiti (Republic of)	TJA-TJZ	Cameroon (United Republic of)
HIA-HIZ	Dominican Republic	TKA-TKZ	France
HJA-HKZ	Colombia (Republic of)	TLA-TLZ	Central African Republic
HLA-HLZ	Korea (Republic of)		
HMA-HMZ	Korea (Democratic Peoples' Republic of)		
HNA-HNZ	Iraq (Republic of)		
HOA-HPZ	Panama (Republic of)		
HQA-HRZ	Honduras (Republic of)		
HSA-HSZ	Thailand		
HTA-HTZ	Nicaragua		
HUA-HUZ	El Salvador (Republic of)		
HVA-HVZ	Vatican City State		
HWA-HYZ	France		
HZA-HZZ	Saudi Arabia (Kingdom of) H2A-H2Z Cyprus		
H3A-H3Z	Panama (Republic of)		
H4A-H4Z	Solomon Islands		
H6A-H7Z	Nicaragua		
H8A-H9Z	Panama (Republic of)		

TMA-TMZ	France	3XA-3XZ	Guinea (Revolutionary peoples' Republic of)
TNA-TN2	Congo (People's Republic of)	3YA-3YZ	Norway
TOA-TQ2	France	3ZA-3ZZ	Poland (Peoples' Republic of)
TRA-TRZ	Gabon Republic	4AA-4CZ	Mexico
TSA-TS2	Tunisia	4DA-4IZ	Philippines (Republic of the)
TTA-TT2	Chad (Republic of the)	4JA-4LZ	Union of Soviet Socialist Republics
TUA-TUZ	Ivory Coast (Republic of)	4MA-4M2	Venezuela (Republic of)
TVA-TX2	France	4NA-4OZ	Yugoslavia (Social Federal Republic of)
TYA-TY2	Benin (Peoples' Republic of)	4PA-4S2	Sri Lanka (Democratic Socialist Republic)
TZA-TZZ	Mali (Republic of)	4TA-4TZ	Peru
T2A-T2Z	Tuvalu	4UA-4UZ	United Nations Organisation
T3A-T3Z	Kiribati Republic	4VA-4VZ	Haiti (Republic of)
T4A-T4Z	Cuba	4WA-4WZ	Yemen
T5A-T5Z	Somali Democratic Republic	4XA-4XZ	Israel (State of)
T6A-T6Z	Afghanistan (Democratic Republic of)	4YA-4YZ	International Civil Aviation Organisation
T7A-T7Z	Republic of San Marino	4ZA-4ZZ	Israel (State of)
UAA-UQZ	Union of Soviet Socialist Republics	5AA-SAZ	Libya (Socialist Peoples' Libyan Arab Jamahiriya)
URA-UTZ	Ukrainian Soviet Socialist Republic	5BA-5BZ	Cyprus
UUA-UZZ	Union of Soviet Socialist Republics	5CA-5GZ	Morocco (Kingdom of)
VAA-VGZ	Canada	5HA-5IZ	Tanzania (United Republic of)
VHA-VNZ	Australia	5JA-5KZ	Colombia (Republic of)
VOA-VOZ	Canada	5LA-5MZ	Liberia (Republic of)
VPA-VS2	Great Britain and Northern Ireland	5NA-5OZ	Nigeria (Federal Republic of)
VTA-TWZ	India	5PA-5QZ	Denmark
VXA-VYZ	Canada	5RA-5SZ	Madagascar (Democratic Republic of)
VZA-VZZ	Australia	5TA-5TZ	Mauritania (Islamic Republic of)
V2A-V2Z	Antigua and Barbuda	5UA-5U2	Niger (Republic of the)
V3A-V3Z	Belize	5VA-5VZ	Togolese Republic
V4A-V4Z	St. Christopher and Nevis	5WA-5WZ	Western Samoa
V5A-V5Z	Namibia	5XA-5XZ	Uganda (Republic of)
V6A-V6Z	Micronesia (Federated States of)	5YA-5ZZ	Kenya (Republic of)
V7A-V7Z	Marshall Islands	6AA-6BZ	Egypt (Arab Republic of)
V8A-V8Z	Brunei	6CA-6CZ	Syrian Arab Republic
WAA-WZZ	United States of America	6DA-6JZ	Mexico
XAA-XIZ	Mexico	6KA-6NZ	Korea (Republic of)
XJA-XOZ	Canada	6OA-6OZ	Somali Democratic Republic
XPA-XPZ	Denmark	6PA-6SZ	Pakistan (Islamic Republic of)
XQA-XRZ	Chile	6TA-6UZ	Sudan (Democratic Republic of the)
XSA-XS2	China (Peoples' Republic of)	6VA-6WZ	Senegal (Republic of the)
XTA-XTZ	Burkina Faso	6XA-6X2	Madagascar (Democratic Republic of)
XUA-XUZ	Kampuchea (Democratic)	6YA-6YZ	Jamaica
XVA-XVZ	Vietnam (Socialist Republic of)	6ZA-6ZZ	Liberia (Republic of)
XWA-XWZ	Laos Peoples' Democratic Republic	7AA-712	Indonesia (Republic of)
XXA-XXZ2	Portugal	7JA-7NZ	Japan
XYA-XZZ	Burma (Socialist Republic of the Union of)	7OA-7OZ	Yemen
YAA-YAZ	Afghanistan (Democratic Republic of)	7PA-7PZ	Lesotho (Kingdom of)
YBA-YHZ	Indonesia (Republic of)	7QA-7QZ	Malawi (Republic of)
YIA-YIZ	Iraq (Republic of)	7RA-7RZ	Algeria (Algerian Democratic and Popular Republic)
YJA-YJZ	Vanuatu	7SA-7SZ	Sweden
YKA-YKZ	Syrian Arab Republic	7TA-7YZ	Algeria (Algerian Democratic and Popular Republic)
YLA-YLZ	Union of Soviet Socialist Republics	7ZA-7ZZ	Saudi Arabia (Kingdom of)
YMA-YMZ	Turkey	8AA-8IZ	Indonesia (Republic of)
YNA-YNZ	Nicaragua	8JA-8NZ	Japan
YOA-YRZ	Romania (Socialist Republic of)	8OA-8OZ	Botswana (Republic of)
YSA-YSZ	El Salvador (Republic of)	8PA-8PZ	Barbados
YTA-YUZ	Yugoslavia (Social Federal Republic of)	8QA-8QZ	Maldives (Republic of)
YVA-YYZ	Venezuela (Republic of)	8RA-8RZ	Guyana
YZA-YZZ	Yugoslavia (Socialist Federal Republic of)	8SA-8SZ	Sweden
YSA-Y9Z	Germany	8TA-8YZ	India
ZAA-ZAZ	Albania (Socialist Peoples' Republic of)	8ZA-8ZZ	Saudi Arabia (Kingdom of)
ZBA-ZJZ	Great Britain and Northern Ireland	9BA-9D2	Iran (Islamic Republic of)
ZKA-ZMZ	New Zealand	9EA-9FZ	Ethiopia
ZNA-ZOZ	Great Britain and Northern Ireland	9GA-9GZ	Ghana
ZPA-ZPZ	Paraguay (Republic of)	9HA-9HZ	Malta
ZQA-ZQZ	Great Britain and Northern Ireland	9IA-9JZ	Zambia (Republic of)
ZRA-ZUZ	South Africa (Republic of)	9KA-9KZ	Kuwait (State of)
ZVA-ZZZ	Brazil (Federative Republic of)	9LA-9LZ	Sierra Leone
ZZA-ZZZ	Republic of Zimbabwe	9MA-9MZ	Malaysia
2AA-2ZZ	Great Britain and Northern Ireland	9NA-9NZ	Nepal
3AA-3AZ	Monaco	9OA-9TZ	Zaire (Republic of)
3BA-3BZ	Mauritius	9UA-9UZ	Burundi (Republic of)
3CA-3CZ	Equatorial Guinea (Republic of)	9VA-9VZ	Singapore (Republic of)
3DN-3DZ	Swaziland (Kingdom of)	9WA-9WZ	Malaysia
3DN-3DZ	Fiji	9XA-9XZ	Rwanda (Republic of)
3EA-3FZ	Panama (Republic of)	9YA-9ZZ	Trinidad and Tobago
3GA-3GZ	Chile		
3HA-3UZ	China (People's Republic of)		
3VA-3VZ	Tunisia		
3WA-3WZ	Vietnam (Socialist Republic of)		

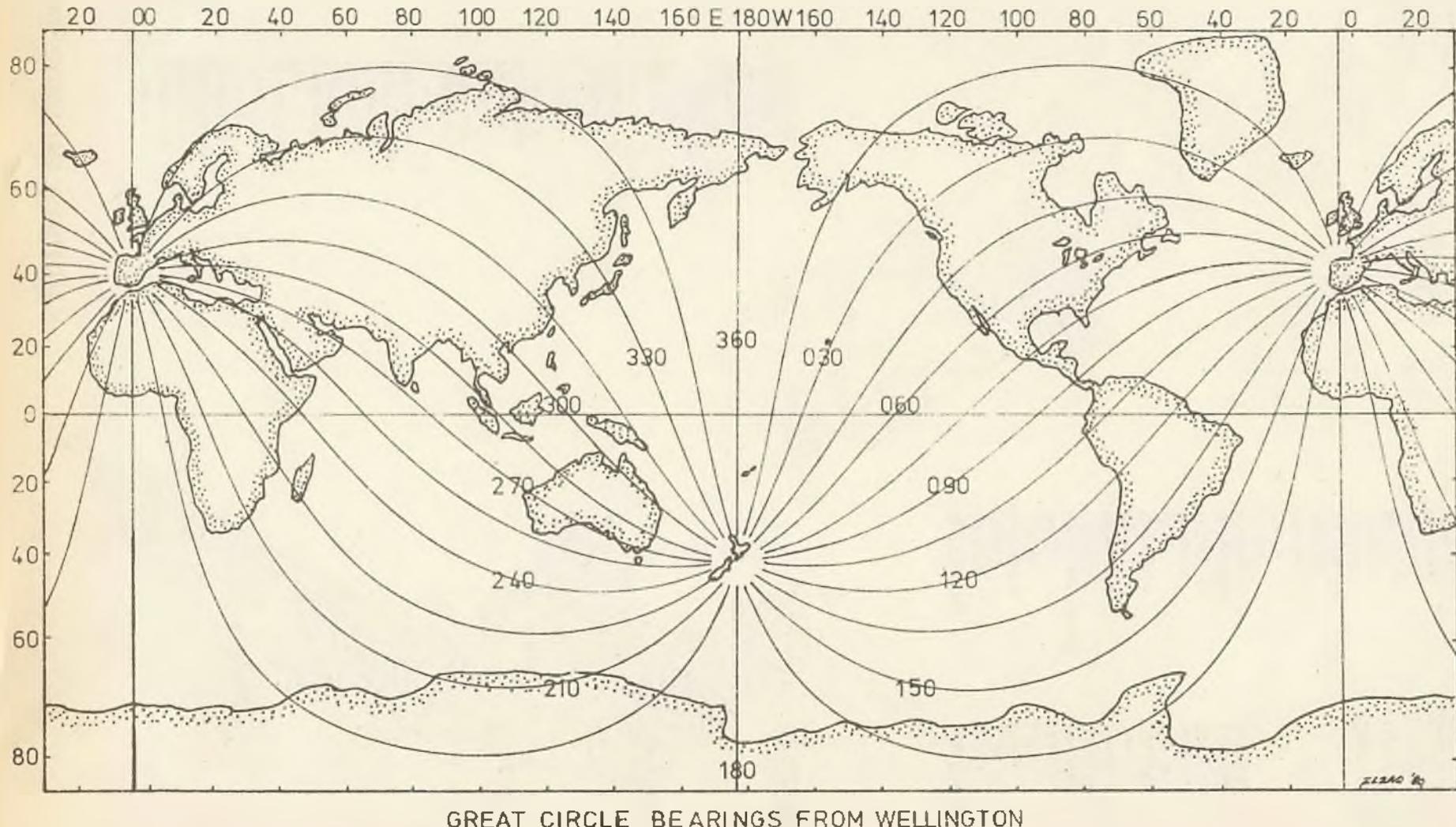
Great Circle DX Bearings Based on Wellington

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	KP1	90	TN	210	XW	295	4U/ITU	300
A3	20	FY	115	KP2	90	TR	200	XX	305	4U/UN	65
A4	270	G, GX	345	KP4	90	TT	220	XZ	290	4W	255
A5	295	GD, GT	5	KP5	90	TU	160	Y2-9	320	4X	265
A6	275	GI, GN	15	KX	350	TY	190	YA	290	4Z	265
A7	275	GJ, GH	345	LA	335	TZ	160	YB, YC, YD	300	5A	260
A9	275	GM, GS	N	LU	135	UA1, 3, 4, 6	320	YI	270	5B	270
A, K, N, W	60	GU, GP	345	LX	325	UA2	320	YJ	330	5H	230
AP	280	GW, GC	350	LY	320	UA9, Ø	330	YK	270	5N	195
BV	315	H4	335	LZ	285	UB	300	YL	320	5R	225
BY	315	HA	300	N, K, W, A	60	UC	310	YN	90	5T	160
C2	N	HB	300	OA	110	UD	290	YO	285	5U	175
C3	280	HBØ	300	OD	275	UF	290	YS	90	5V	175
C5	155	HC	100	OE	305	UG	290	YU	285	5W	20
C6	95	HC8	90	OH, OJ	330	UH	290	YV	100	5X	235
C9	230	HH	90	OK	310	UI	290	YVØ	100	5Z	235
CE	130	HI	90	ON	330	UJ	290	ZA	275	6O	245
CEØ	110, 120	HK	100	OX	20	UL	290	ZB	180	6W	150
CO	80	HKØ	90	OY	N	UM	290	ZC	270	6Y	90
CN	220	HL	325	OZ	330	UO	285	ZD7	180	7O	275
CP	125	HP	90	P2	310	UP, LY	320	ZD8	170	7P	220
CT	130	HR	90	P4	95	UQ, YL	320	ZD9	170	7Q	230
CT3	140	HS	285	P5	325	UR, ES	320	Z2	220	7X	240
CU2, CT2	90	HV	280	PA	330	V2	95	ZF	90	7Z, HZ	260
CX	140	HZ, TZ	260	PJ	95	V3	85	ZK1N	50	8P	90
CY9, Ø	65	I	280	PJ7	90	V4	95	ZK1S	60	8Q	275
D2, 3	210	IS	270	PY	140	V5	200	ZK2	N	8R	110
D4	150	J2	245	PYØ	125, 145	V6, 7	320	ZK3	30	9G	185
D6	230	J3	95	PZ	100	V85	290	ZL7	110	9H	250
DA to DR	320	J4, SV	270	RA	see UA	VE	50	ZL8	30	9J	220
DU	310	J5	155	SØ	140	VK	280	ZL9	190	9K	270
EA	260	J6	95	S2	290	VK9L	290	ZP	125	9L	165
EA6	250	J7	95	S7	240	VK9N	340	ZS	210	9M2, 4	285
EA8	140	J8	95	S9	205	VK9X	275	ZS8	210	9M6, 8	285
EA9	180	JA	335	SM, SK, SL	330	VK9Y	270	ZS9	200	9N	295
EJ	10	JD	335	SP	310	VK9Z	320	1AØ	280	9Q	230
EL	180	JT	325	ST, STØ	250	VKØH	220	1S	285	9U	230
EP	280	JW	5	SU	260	VKØM	210	3A	295	9V	285
ES	320	JX	5	SV, J4	270	VP2	95	3B6	235	9X	230
ET	245	JY	265	T2	N	VP5	95	3B7	235	9Y	100
F, FD, FE	310	K, N, A, W	60	T3Ø	N	VP8	150, 180	3B8	235		
FC	230	KC6	320	T31	20	VP9	80	3B9	230		
FG	100	KG4	90	T32	30	VQ9	265	3C	205		
FH	230	KH1	15	T33	N	VR6	90	3CØ	205		
FK	340	KH2	320	T5	245	VS6	305	3D2	N		
FM	95	KH3	20	T7	280	VU	270	3DAØ	220		
FO	60	KH4	N	TA	280	VU7A	285	3V	250		
FP	65	KH5, KH5K	30	TF	15	VU7L	275	3W, XV	295		
FR	235	KH6	25	TG	90	W, K, N, A	60	3X	155		
FS	100	KH7	N	TI	90	XE	70	3Y, Bouvet	185	Antarctica	180
FT5W	220	KH8	20	TI9	90	XF4	70	3Y, Peter I	155	Abu Ail	255
FT5X	225	KH9	350	TJ	205	XT	180	4J	330	Banaba	N
FT5Y	180	KHØ	320	TK	230	XU	295	4K2/FJL	N	Conway Reef	N
FT5Z	230	KL	15	TL	205	XV, 3W	295	4S	280	Jarvis Is.	30



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
Waimea
Waipawa
Wainukuwa

**Waipakaroro
Wairarapa South
Wairoa
Waitotara
Wanganui
Woodville**



Except for the 4 main centres, no Cities, Boroughs or Independent Town Districts are shown on this map.



Except for the 4 main counties, no Cities, Boroughs or independent Town Districts are shown on this map.

3rd District

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
Wiamate
Waipara
Wairewa
Westland

4th District

4th District
Bruce
Clutha
Fiord
Lake
Maniototo
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.

Slow Morse Transmissions

(Compiled from *Break-In ZL1AN*
"Morseman" Column)

3550 kHz Alf ZL4SD, Neville ZL4CI—Monday-Friday 0730-0930 NZST or 0800-0900 NZDT. (January/February 1990.)

3560 kHz Richard ZL1BOK—Monday-Thursday from 2030 hours. Starts at 6wpm increasing to 12 wpm over the next hour. Computer generated at 12 wpm rate. (July, November 1989. March 1990.)

3698 kHz 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 12 wpm. (May 1990.)

3755 kHz 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 13 wpm 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.

The only method that ensures success is one based on the aural rather than the visual senses and the set of introductory cassettes available from Premier Learning Systems does just this. Though not an official NZART project or activity Premier Learning Systems do offer NZART members an attractive discount upon proof of membership.

These tapes do not make learning CW easy or effortless but for the candidate forced to study alone or at inconvenient times the programme is undoubtedly the best value available in New Zealand.

The current range of tapes include:

Identity	Content	Normal	NZART
C-ONE	Introduction to Morse. Five cassettes covering the alphabet in 20 sessions with spoken accompaniment	\$25.00	\$20.00
C-TWO	Random 5-letter groups, 7-10 wpm	\$ 5.50	\$ 4.50
C-THREE	Random 5-letter groups, 10-15 wpm	\$ 5.50	\$ 4.50
C-FOUR	Plain language text in three minute segments, 8-12 wpm	\$ 5.50	\$ 4.50
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
C-NINE	Plain language text with figures and punctuation, 8-13 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	Walt	PSE;	Please
BCI	Broadcast interference	PWR	Power
BCL	Broadcast listener	R	Received as transmitted; are (sometimes also used as a decimal point, e.g. 1R5)
BK	Break; I wish to break-in (interrupt) a transmission in progress	RCVR; RX	Receiver
BN	All between; been	REF	Refer to; Referring to; Reference
BUG	Semi-automatic key	RFI	Radio frequency interference
B4	Before	RIG	Station equipment
C	Yes	RPRT, REPT	Report
CL	I am closing my station; call	RPT	Repeat; I repeat
CPI, CPY	Copy	RTT; RTTY	Radioteletype
CQ	Calling any station	RX; RCVR	Receiver
CUAGN	See you again	SA	Say
CUD	Could	SASE	Self-addressed, stamped envelope
CUL	See you later	SED	Said
CW	Continuous wave, i.e. radio telegraphy	SIG	Signal
DE	From	SKED	Schedule
DR	Dear	SRI	Sorry
DX	Distance, foreign countries	SSB	Single sideband
ER	Here	SUM	Some
ES	And; &	T	Zero (0)
FB	Fine business, excellent	THO	Though
FER	For	THRU; THRO	Through
FM	Frequency modulation; From	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	U	You
GUD	Good	UR	Your; You are (sometimes YR)
		URS	Yours (sometimes YRS)
HI	Laughter; High	VFO	Variable frequency oscillator
HPE	Hope	VY	Very
HR	Here; Hear; Hour	WID	With
HV: HVE	Have	WKD; WKG	Worked; Working
HW	How	WL	Well; Will
K	Go ahead	WUD	Would
KN	specific station go ahead	WX	Weather
MA:MILS	Milliamperes	XCVR	Transceiver
MNI	Many	XMTR; TX	Transmitter
MSG	Message	XTAL	Crystal
N	No; North	XYL; YF	Wife
NCS	Net control station	YL	Young lady
ND	Nothing doing	73	Best Regards
NIL	Nothing; I have nothing for you	88	Love and kisses
NR	Number		
NW	Now		

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The Q-Code

QRG	Will you tell me my exact frequency (or that of ...)?	QSB	Are my signals fading? Your signals are fading.
	Your exact frequency (or that of ...) is ...kHz.		
QRH	Does my frequency vary?	QSD	Are my signals mutilated? Your signals are mutilated.
	Your frequency varies.		
QRI	How is the tone of my transmission?	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.
	The tone of your transmission is ... (1. Good; 2. Variable; 3. Bad)		
QRK	What is the intelligibility of my signals (or those of ...)?	QSL	Can you acknowledge receipt? I am acknowledging receipt.
	The intelligibility of your signals (or those of ...) is ... (1. Bad; 2. Poor; 3. Fair; 4. Good; 5. Excellent)	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) ...]
QRL	Are you busy?	QSN	Did you hear me (or ...) on ...kHz? I did hear you (or ...) on ...kHz.
	I am busy (or I am busy with ...) Please do not interfere.	QSO	Can you communicate with ... direct or by relay? I can communicate with ... direct (or by relay through ...)
QRM	Is my transmission being interfered with?	QSP	Will you relay to ...? I will relay to ...
	Your transmission is being interfered with ... (1. Nil; 2. Slightly; 3. Moderately; 4. Severely; 5. Extremely)	QST	General call preceding a message addressed to all amateurs and ARRL members.
QRN	Are you troubled by static?	QSU	Shall I send or reply on this frequency (or ...kHz)? Send or reply on this frequency (or ...kHz).
	I am troubled by static ... (1-5 as under QRM)	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).
QRO	Shall I increase power?	QSW	Will you send on this frequency (or on ...kHz)? I am going to send on this frequency (or on ...kHz).
	Increase power.	QSX	Will you listen to ... on ...kHz? I am listening to ... on ...kHz.
QRP	Shall I decrease power?	QSY	Shall I change to transmission on another frequency? Change to transmission on another frequency (or on ...kHz).
	Decrease power.	QSZ	Shall I send each word or group more than once? Send each word or group twice (or ... times).
QRQ	Shall I send faster?	QTC	How many messages have you to send? I have ... messages for you (or for ...)
	Send faster (... wpm).	QTH	What is your location? My location is ...
QRS	Shall I send more slowly?		(QTHR—Location as per <i>Call Book</i>)
	Send more slowly (...wpm)	QTR	What is the correct time? The time is ...
QRT	Shall I stop sending?		
	Stop sending.		
QRU	Have you anything for me?		
	I have nothing for you.		
QRV	Are you ready?		
	I am ready.		
QRW	Shall I inform ... that you are calling him on ...kHz?		
	Please inform ... that I am calling on ...kHz.		
QRX	When will you call me again?		
	I will call you again at ... hours (on ...kHz).		
QRZ	Who is calling me?		
	You are being called by ... (on ...kHz)		
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)		

Morse Alphabet

A	• —	N	— •
B	— • •	O	— — —
C	— • — •	P	• — — —
D	— • •	Q	— — — •
E	•	R	• — •
F	• • — —	S	• • •
G	— — —	T	—
H	• • •	U	• • —
I	• •	V	• • • —
J	• — — —	W	• — —
K	— • —	X	— • — •
L	— • — •	Y	— — • —
M	— —	Z	— — — •

Numerals

1	• — — —	6	— • • •
2	— — — —	7	— — — •
3	• • — —	8	— — — — •
4	• • • —	9	— — — — —
5	• • • •	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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Essentially the same as the FT1000, but without the second receiver. Two VFO's to provide flexibility, ninety memory channels for convenience. Although based on the FT1000, the FT990 has several advanced features of its own, such as an "astonishing dual digital SCF audio filter", among others, resulting in a spectacular performer at a very reasonable price.



FT767:

The Ultimate base station. Solid state, multimode, and an amazing performer. With 6m, 2m and 70cm transverters added, this makes a one-rig station for significantly less than by other means. Built in Antenna Tuner, and many other electronic features.



FT757:

General coverage receiver, all band 100 Watt transmitter. Three microprocessors, twin VFO's, scanning and almost every other available feature included. Light, compact and nice to operate.



FT747:

A compact SSB/CW/AM transceiver, with an FM option. General coverage receiver and all band 100 Watt transmitter to 30MHz. 20 memories, split frequency. Only two knobs and 13 buttons, designed for ease of operation, especially as a mobile.



ACCESSORIES:

SP767: Extension Speaker Unit.

FC-757AT: Automatic Antenna Tuning Unit.

MD-1B8: Desk Microphone.

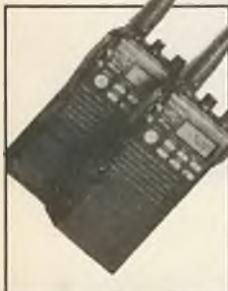
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FT26 / 76:

The very latest ultra-compact handhelds from Yaesu incorporates the latest paging facilities. 53 tunable, programmable memories; full scanning features; independent transmit/receive; user-variable power output up to 5 Watts.



FT411 / 811:

Very popular, top of the range single bander. 49 Memories, two VFO's, 16 button keypad. Full band and sub-band scanning features; detailed LCD panel display, power saving system, with many accessories available.



FT470 DUALBANDER:

Again a remarkable performer in a VERY compact body! Simultaneous reception on both bands, 2 VFO's and 21 memories for each band. 10 memory autodialler, up to 5 Watts output.



FT23 / 73:

Compact, and rugged, this pair are well sealed to withstand very rough conditions — this is the model we sent up Mt Everest! Wide range of features, including scanning, ten memory channels, and up to 5 Watts output.

MOBILE TRANSCEIVERS



FT212/712RH:

Proved on Mt Everest, this rugged compact 45 Watt rig has a

wide range of features for easy mobile operation, include 18 programmable memories, full scanning.



FT2400 Paging Transceiver:

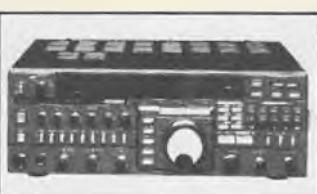
The very latest. Has 31 tunable, scanning, fully programmable

memories, with an enormous range of electronic features and facilities. Up to 50 Watts output.



FT290/690/790:

Portable or mobile, with the accent on versatility. 10 memories, with good range of scanning features, minimum of knobs and buttons, light and tough. 2.5 or 25 Watts output.



FT736R: The Ultimate Satellite Station. Designed to meet the needs of the most demanding VHF/UHF operators. Covers four of the 50mHz, 144mHz, 220mHz, 430mHz 440mHz and 1.2 gHz bands. 100 memory chan-

nels, ten cross band memories, fourteen VFO's, low noise, high sensitivity. 10 Watts on 50mHz and 1.2gHz, 25 Watts on the rest. Again, an enormous range of electronic features designed for the serious operator.

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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, DSIR, now DSIR Physical Sciences, 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 Global Positioning Satellite system which gives accuracies of better than 100 nanoseconds, and via the VLF Omega navigation system which provides time to within ten microseconds. The satellite system is also utilised to transfer the DSIR atomic time to the BIPM to be included in the ensemble of clocks used to calculate the international atomic time scale.

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

tors which are monitored against the DSIR 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 DSIR Physical Sciences.

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 DSIR. 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.

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.

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 1000 Hz 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.

WWV and WWVH

The National Institute of Standards and Technology (NIST) 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 20 MHz. Station WWVH is located at Kauai, Hawaii and broadcasts continuously on the radio frequencies of 2.5, 5, 10 and 15 MHz.

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 NIST 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 1000 Hz at WWV and 1200 Hz at WWVH. The first minute of the hour begins with an 800 millisecond tone of 1500 Hz 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 NIST.

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, 1990 of one second so that the atomic time scale now leads by 26 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 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 correction is 0.3 seconds. Or if the ninth, tenth, eleventh, twelfth, thirteenth and fourteenth second pulses are doubled, the correction is "minus" 0.6 seconds. The correction is also encoded in the IRIG-H BCD code.

Standard Audio Frequencies

Standard audio frequencies of 440 Hz, 500 Hz and 600 Hz are broadcast by the two stations. The duration of each transmitted tone is approx-

imately 45 seconds. A 600 Hz tone is broadcast by WWV during odd minutes and during even minutes by WWVH. A 500 Hz tone is broadcast during alternate periods unless voice announcements or silent periods are scheduled. The 440 Hz tone is broadcast beginning one minute after the hour at WWVH and two minutes after the hour at WWV. The 440 Hz 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 16 MHz. The users' group has thus far been unsuccessful in regaining the VNG frequencies of 4.5, 7.5 and 12 MHz which were lost when the original Overseas Telecommunication Commission station at Lyndhurst, Victoria, was closed.

A. C. Corney, Group Manager (Standards)
DSIR Physical Sciences.



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New Zealand Television Stations

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Station Name	Channels			Polarity	Power (ERP)			Coverage
	TV1	TV2	TV3		TV1	TV2	TV3	
Abbotsford	6	8	—	V	D	D	—	NW through NE
Acacia Bay	9	2	—	V	E	E	—	SW through NW
Ahipara	4	10	—	H	D	D	—	W-N-SE
Ahititi	6	—	—	VV	E	—	—	NW and SW
Ahuriri Valley	5	2	—	VH	E	—	—	SW through N
Aires Station	7	—	—	VV	D	—	—	SE
Akaroa	7	9	—	VV	D	—	—	NW through N
Akitio	6	—	—	VV	D	—	—	S-W-N
Aniwania	5	9	—	VV	E	—	—	E through SE
Autuhia	11	4	—	VV	E	—	—	SE-SW-NW
Aramoana Bay	6	8	10	VH	E	—	—	E through S
Aranga	8	—	—	H	—	—	—	W-NE-SW
Arno	9	—	—	H	—	—	—	NE through E
Aro Valley	3	8	—	H	—	—	—	W-N-E
Arrowtown	8	10	—	H	—	—	—	N through SE
Arthurs Pass	7	9	—	H	—	—	—	S
Arthurs Point	4	6	—	H	—	—	—	NW through NE
Ascot Park	7	9	—	H	—	—	—	E-SW-NW
Ashridge Station	7	—	—	H	—	—	—	NW
Athol	6	4	—	H	—	—	—	SW-NW-NE
Awakino	5	8	—	H	—	—	—	NW through E
Bainham	5	—	—	H	—	—	—	S-W-NE
Bald Hill	5	9	—	H	—	—	—	NE-SE-SW
Baylys Beach	8	—	—	H	—	—	—	W-NE-S
Beaumont Forestry	5	—	—	H	—	—	—	SW through W
Bells Junction	9	11	—	H	—	—	—	SW through NW
Benneydale	4	10	—	H	—	—	—	NW through NE
Bethells Beach	6	8	—	H	—	—	—	E through S
Birchville	7	9	—	H	—	—	—	SW-NW-NE
Blaketown	5	3	—	H	—	—	—	N-E-S
Blue Duck	7	9	—	H	—	—	—	S through SW
Blue Mountain	4	—	—	H	—	—	—	E through NE
Bowenvale Valley	4	10	—	H	—	—	—	S through W
Bridge Hill	7	2	—	H	—	—	—	SW-NW-NE
Broadwood	9	5	—	H	—	—	—	E-SW-NW
Burke Pass	8	—	—	H	—	—	—	NE-SE-S
Burnbrae	9	—	—	H	—	—	—	E through S
Cannons Creek	3	8	—	H	—	—	—	S-NW-NE
Canvastown	7	9	—	H	—	—	—	E-S-W
Cape Palliser	—	5	—	H	—	—	—	E through SE
Cape Runaway	4	—	—	H	—	—	—	E-S-SW
Cardrona Valley	7	2	—	H	—	—	—	W through N
Cass Bay	—	10	—	H	—	—	—	W through NW
Castle Hill Station	6	4	—	H	—	—	—	SE
Castle Hill Village	3	8	—	H	—	—	—	S through NW
Castlepoint	8	6	—	H	—	—	—	S through SW
Castlepoint Camp	8	6	—	H	—	—	—	S through W
Cat Hill Road	3	8	—	H	—	—	—	SW through W
Cave	5	—	—	H	—	—	—	SE through SW
Caversham	6	8	—	H	—	—	—	SE through S
Cheviot	4	10	—	H	—	—	—	SW-NW-NE
Churton Park	—	9	—	H	—	—	—	SW through W
Cloud Hill	8	10	—	H	—	—	—	OMNI
Cobb Hydro	8	10	—	H	—	—	—	NE through E
Cobb Lake	4	6	—	H	—	—	—	SW through W
Cockle Bay	—	11	—	H	—	—	—	SW-NW-E
Coromandel Harbour	6	8	—	H	—	—	—	W-E-SW
Coronet Peak	4	6	—	H	—	—	—	NE-SE-SW
Crichton Valley	—	5	—	H	—	—	—	SE through S
Cromwell	7	2	—	H	—	—	—	OMNI
Curious Cove	6	9	—	H	—	—	—	NE through E
Dansey Pass	7	—	—	H	—	—	—	NW
Days Bay	7	9	—	H	—	—	—	NW through N
Deep Stream	6	—	—	H	—	—	—	S
Delaware Bay	4	6	—	H	—	—	—	E through SW
Doctors Point	6	8	—	H	—	—	—	S through SW
Donnelly's Crossing	6	—	—	H	—	—	—	W-N-E
Dunback	8	6	—	H	—	—	—	SE-SW-NW

Station Name	Channels			Polarity	Power (ERP)	Coverage
	TV1	TV2	TV3			
Duncraig	4	6	-	H	V	V
Dunollie	5	-	2	V	V	NW,NE,SE
East Cape	9	-	4	E	E	W
Eskdale	4	2	8	E	E	E,SW,NW
Eskhead Station	3	8	5	E	E	NE through E
Eyre Creek	6	4	9	E	E	SE through S
Forest Range	5	9	8	S	S	S
Fox Glacier	6	4	8	SE	SE	through SW
Franz Josef Glacier	8	10	10	SW	SW	SE through SW
French Pass	10	5	-	W	W	S through SW
Garston	7	-	8	E	E	S-W-N
Gladbrook	6	8	10	D	D	NE through SE
Gladstone Road	6	8	8	E	E	NW through N
Glen Lyon Station	8	8	8	D	D	SE through N
Glen Road	6	8	4	E	E	SE through SW
Glenburn Station	6	4	-	E	E	SE
Glencairn	4	-	-	N	N	N through E
Glenfalls	5	7	8	SW	SW	SW
Glenhope	6	6	-	NW	NW	NW
Glenleith	-	-	-	N	N	NW through N
Glenmore Station	6	-	10	NE	NE	N through SE
Glenorchy	8	6	-	NE	NE	NE through E
Glenroy	4	4	-	W	W	W through N
Glynn Wye	3	8	9	E	E	E through SW
Golden Gate	5	5	9	E	E	W through NW
Goodger Road	8	3	8	E	E	NE
Goose Bay	3	3	9	B	B	OMNI
Gore Bay	6	6	-	E	E	E-S,NW
Gowan Valley	3	3	9	E	E	NE through E
Gramplains	4	4	-	NW	NW	NW
Grasmere	6	-	4	W	W	W through N
Grays Hill Station	6	-	10	S	S	S through W
Grove	8	-	3	W	W	W through NE
Haha Station	6	-	3	E	E	E through SW
Hair Street	8	-	6	E	E	NE-SE-SW
Hallam Cove	10	-	6	D	D	OMNI
Harpua Street	-	-	10	D	D	S-E,W-NE
Haruhari	8	-	10	C	C	S-NW,E
Harper Lodge	10	8	10	A	A	SW-NE
Harper Village	4	10	-	?	?	NW
Hataitai	7	9	3	D	D	E-SW,N
Havelock	8	3	10	D	D	E through SE
Heathcote	4	10	-	D	D	E-S,W
Hector	3	10	-	D	D	SE through SW
Hedgehope	1	3	7	D	D	NE through SE
Helensville	-	6	7	C	C	E-SW
Herbertville	7	10	6	A	A	E through SE
Herbisons Basin	6	8	10	E	E	SE through S
Herekino	9	5	8	E	E	N
Hickory Goughs Bay	7	-	5	B	B	OMNI
Hicks Bay	6	-	8	E	E	SW through N
Hikurangi	4	6	1	E	E	N-E,S
Hikurangi	3	1	1	E	E	SW through NW
Hillsborough Bay	6	8	5	E	E	NE-SE-SW
Hira	7	5	4	E	E	W through NW
Homestead Station	10	4	-	E	E	W through NW
Homewood	6	-	11	C	C	NE and SW
Horokaka	5	-	9	E	E	NE
Houghton Bay	7	9	8	E	E	OMNI
Hunihuni	6	8	10	E	E	SW through NW
Hunurnua Road	7	9	-	E	E	W through NW
Hungia	4	10	-	E	E	W through NW
Inangahua	7	-	-	E	E	NE
Invermay	6	9	2	D	D	OMNI
Island Point	4	2	11	E	E	E through SW
Jacobs Ridge	4	2	11	E	E	NE
Jerusalem	9	-	11	D	D	OMNI
Jordan	6	-	10	E	E	E through SW
Kaeo	4	10	-	E	E	NE
Kaihi	6	-	8	E	E	OMNI
Kairakau Beach	4	4	10	E	E	E through SW
Kaituna Valley	-	-	10	E	E	W

Station Name	Channels			Polarity	Power (ERP)			Coverage
	TV1	TV2	TV3		TV1	TV2	TV3	
Karaka Bay	7	9	—	H	E	E	—	N
Karamea	4	10	—	V	C	E	—	NE-SE-S
Karamu	5	11	—	H	E	E	—	NE
Karori South	3	8	—	H	E	E	—	N-E-S
Karoni West	7	9	—	V	D	A	—	OMNI
Kaukau	1	5	11	H	D	A	A	OMNI
Kawhia Harbour	6	8	—	V	D	A	—	E-S-NW
Keirunga Road	4	2	—	H	D	A	—	SE-SW-NW
Kenepuru Sound	6	9	—	V	D	D	—	OMNI
Kikiwa	8	—	—	H	—	—	—	W through NW
Kimbell	5	—	—	H	—	—	—	SE-SW-W
Kinloch	6	8	—	H	E	—	—	E through SE
Knobs Flat	8	—	—	H	—	—	—	N through NE
Kohatu	4	6	—	V	C	—	—	OMNI
Kokatahi	5	—	—	V	—	—	—	NE through SE
Konini Road	—	10	—	H	E	—	—	SW through NW
Kopukairua	—	—	7	V	—	B	—	W-NE-S
Koromiko	6	—	—	H	—	—	—	SW through S
Kowhai Drive	10	4	—	V	—	—	—	S through SW
Kuriwao	8	6	—	H	—	—	—	OMNI
Lake Middleton	6	4	—	V	—	—	—	W
Lake Okareka	4	10	—	H	—	—	—	SW through NW
Lake Tarawera	5	7	—	V	—	—	—	S through W
Lake Tekapo	8	10	—	H	—	—	—	SE through W
Lavericks Bay	4	10	—	V	—	—	—	W through NE
Lawrence	4	10	—	H	—	—	—	OMNI
Le Bons Bay	4	10	—	V	—	—	—	W-N-E
Leader Valley	4	10	—	H	—	—	—	SW through N
Lees Valley	4	10	—	V	—	—	—	NE-SE-W
Lewis Pass MWD Camp	3	8	—	H	—	—	—	S
Lindis Valley	3	1	—	V	—	—	—	N through NE
Little Mt Ida	8	6	—	H	B	—	—	E-SW-NW
Little River	4	10	—	V	D	—	—	OMNI
Lochinver Station	9	2	—	H	E	—	—	NW-NE-S
Long Bay	4	—	—	V	—	—	—	SE
Lowburn Valley	5	—	—	H	—	—	—	S
Ludley	4	2	—	V	C	—	—	OMNI
Lyttelton	4	10	—	H	D	—	—	W through N
Mahakipawa	7	—	—	V	—	—	—	W
Mahia	5	9	—	H	D	—	—	W through N
Mahoe	9	11	—	V	C	—	—	S through W
Mahoenui	7	10	—	H	E	—	—	SW-N-E
Maia Station	7	—	—	V	—	—	—	SW
Maitai	7	5	—	H	E	—	—	S through W
Maitai Reserve	4	—	—	V	—	—	—	E through SE
Makakaho Valley	6	8	—	H	—	—	—	SW
Makarika Valley	5	9	—	V	—	—	—	SE-W-N
Makarora	5	—	—	H	—	—	—	NE through SE
Mangakino	6	8	—	V	—	—	—	W
Mangaopara Valley	4	—	—	H	—	—	—	N through NE
Mangapehi	6	—	—	V	—	—	—	N through E
Mangatarata	2	7	—	H	C	—	—	OMNI
Mangatokerau	5	—	—	V	D	—	—	W
Mangawhai Heads	6	8	—	H	E	—	—	SE-SW-NW
Mangles Valley	7	—	—	V	—	—	—	E through SE
Mangonui	4	2	—	H	D	—	—	S through SW
Maraehara	8	—	—	V	—	—	—	SE through SW
Marokopa	5	—	—	H	—	—	—	NE-SE-SW
Marua	7	—	—	V	—	—	—	N-E-S
Matahina	4	10	—	H	E	—	—	W-N-E
Mataikona	2	4	—	V	—	—	—	S through W
Matakaoa	6	8	—	H	E	—	—	NW through N
Matakifaki	7	—	—	V	—	—	—	SW through W
Matapouri Bay	4	—	—	H	—	—	—	E-SW-NW
Mataawai	4	7	—	V	D	—	—	S-W-NW
Matiri Valley	8	—	—	H	E	—	—	N through NE
Maungataniwha	6	8	—	V	B	—	—	OMNI
Maungatawhiri	6	8	—	H	C	—	—	SE-W-NE
Minaret Station	9	—	—	V	—	—	—	NW
Miramar North	8	3	—	H	—	—	—	SW-NW-N
Moenui	6	9	—	V	—	—	—	S through SW
Mohakatino	6	—	—	H	—	—	—	SE through SW
Mohakatino East	6	—	—	V	—	—	—	SW through W

Station Name	Channels	Polarity	Power (ERP)	Coverage	
TV1	TV2	TV3	TV1	TV2	TV3
Mohakatino West	-	V	-	N	E through SW
Mokai	-	>	-	NE-S-W	NW through N
Monowai	-	H	-	NE	NE through SE
Motatapu	-	H	-	E-S-W	W
Moru	-	H	-	WONE-SW	OMNI
Motukarara	-	H	-	W	NW-E-S
Mt Aspiring Station	4	H	4	OMNI	OMNI
Mt Burnett	4	H	4	N-SE-W	OMNI
Mt Cargill	4	H	4	OMNI	OMNI
Mt Cook Village	2	H	2	OMNI	OMNI
Mt Egmont	8	H	8	OMNI	NW through N
Mt Erin	5	H	5	OMNI	NW-N-E
Mt Hercules	6	H	3	ESW-N	E through S
Mt Mary	6	H	4	SW-N-S	S through NW
Mt Maude	8	H	10	OMNI	SW-N
Mt Maunganui	5	H	6	OMNI	W-N-SE
Mt Messenger	6	H	1	S	SW through NW
Mt Murchison	6	H	1	SW	SE through SW
Mt Nicholas Station	4	H	1	SW	NW through N
Mt Pearce	1	H	5	OMNI	W through N
Mt Possession	1	H	6	OMNI	E through S
Mt Prospect	4	H	8	SW-W-N	S through NW
Mt Rochfort	6	H	1	SW	W through NW
Mt Studholme	7	H	7	OMNI	NE-SE-SW
Muriwai	4	H	4	OMNI	NE through E
Muriwai Beach	6	H	8	W	W through NE
Musselburgh	6	H	7	SW-NW-NE	SW-NW-NE
Naenae	7	H	7	WE-SW	WE-SW
Naseby	3	H	9	N	E through SE
Nelson Central	7	H	5	W,N-E	S through W
Nenthorn	9	H	5	N-E-S	NW through S
New Creek	10	H	8	SW-N-E	NW through NE
Newlands	9	H	5	N	W through NW
Ngakuta Bay	9	H	3	NE-S	S through NW
Ngapara	5	H	11	W,N-E	N through SE
Ngapuhi Road	9	H	3	S	W through SE
Ngarara	10	H	8	W	W through NW
Ngongotaha Valley	6	H	6	W	W through NW
Ngongotaha Valley North	8	H	6	W	W through NW
Ngunguru	1	H	3	W	W through NW
Nokomai Station	8	H	8	W	W through NW
North River	3	H	8	W	W through NW
Northland	6	H	8	W	W through NW
Oamaru	3	H	9	W	W through NW
Oaro	3	H	8	W	W through NW
Obelisk	5	H	8	W	W through NW
Ocean View Parade	6	H	10	W	W through NW
Ohakuri	4	H	4	W	W through NW
Ohope	5	H	9	W	W through NW
Ohura	7	H	9	W	W through NW
Okains Bay	9	H	6	W	W through NW
Okarawio	6	H	8	W	W through NW
Oktau	7	H	9	W	W through NW
Okiwi Bay	7	H	7	W	W through NW
Omahaki	6	H	6	W	W through NW
Omaha Ave	6	H	8	W	W through NW
Onapere	11	H	2	W	W through NW
Onetangi	6	H	8	W	W through NW
Orangarie Sub Station	5	H	9	W	W through NW
Opout Valley	6	H	4	W	W through NW
Opunake	5	H	3	W	W through NW
Orokouhi	7	H	7	W	W through NW
Orongorongo	2	H	8	W	W through NW
Orohaoua	2	H	9	W	W through NW
Orangiwi	2	H	9	W	W through NW
Orematahi	3	H	4	W	W through NW
Oreranga Bay	7	H	7	W	W through NW
Ourhiro Bay	7	H	4	W	W through NW
Paenqa	3	H	6	W	W through NW

Station Name	Channels			Polarity	Power (ERP)	Coverage
	TV1	TV2	TV3			
Paoera Range	4	10	-	H	H	OMNI
Pahaoa	6	-	11	H	H	NE and SW
Pahlia Road	-	5	9	V	V	SW through N
Pakira Station	Paparoa	4	6	H	H	NE through E
Paradise	Parahaki	4	2	V	V	OMNI
Parahaka Valley	Paraparaumu	4	7	H	H	NW through N
Paraparaumu	Paringa	7	9	V	V	E
Patea Hydro	Patea	6	8	H	H	NW-E-S
Paturau	Pawarenga	4	2	V	V	S
Pehu	Pelorus Bridge	6	10	H	H	W through N
Peninsula Hill	Peninsula Hill	8	10	V	V	SW-NE
Picton	Pihia	8	3	H	H	S
Pinehaven	Piopio	8	8	V	V	SE-SW-N
Piriaka	Piriaka	5	5	H	H	W-NW-NE
Pokororo	Pokororo	6	9	V	V	N-E-S
Porangahau	Porangahau Village	7	8	H	H	NE-S-N
Poronui Station	Poronui	6	2	V	V	E
Port Levy	Port Levy	10	10	H	H	S
Portland Road	Portland Road	4	10	V	V	W
Pouerere	Pouerere	-	7	H	H	SE-W-N
Poutoko	Poutoko	4	2	V	V	S through W
Prices Valley	Prices Valley	5	9	H	H	NW-NE-SE
Pukeiti	Pukepoto	7	5	V	V	NE-S-N
Puketitiri North	Puketitiri North	6	6	H	H	E
Puketitiri South	Puketitiri South	1	1	V	V	W
Punakaiki	Punakaiki	6	4	H	H	W
Puniwhakau	Puniwhakau	6	8	V	V	OMNI
Puponga	Puponga	6	8	H	H	NW
Putauaki	Putauaki	6	8	V	V	NE-SF-SW
Putorino	Putorino	3	1	H	H	NW-E-S
Quarry Hill	Quarry Hill	3	2	V	V	E-S-W
Queenstown	Queenstown	7	2	H	H	N-SE-W
Raetihi	Raetihi	3	11	V	V	SE through E
Rai Valley	Rai Valley	6	4	H	H	SE-SW-W
Rakaura	Rakaura	5	11	V	V	W through NW
Ranana	Ranana	9	8	H	H	W
Rangitata Gorge	Rangitata Gorge	10	8	V	V	SE
Rapahoe	Rapahoe	4	-	H	H	S
Rappahannock	Rappahannock	6	-	V	V	W through N
Raurimu North	Raurimu North	6	8	H	H	N-E-S
Ravensborne	Ravensborne	6	8	V	V	SE-SW-NW
Razorback	Razorback	3	8	H	H	S-W-N
Redwood	Redwood	4	2	V	V	NE through S
Reefton	Reefton	4	7	H	H	SE through SW
Reikorangi	Reikorangi	4	7	V	V	SE-SW-NW
Riversdale Beach	Riversdale Beach	9	7	H	H	W
Riwaka Valley	Riwaka Valley	7	-	V	V	W
Roa	Roa	5	-	H	H	W
Rototahi Station	Rototahi Station	5	4	V	V	SW through N
Round Top	Round Top	10	4	H	H	NW-NE-S
Roxburgh	Roxburgh	7	2	V	V	W
Ruatahuna East	Ruatahuna East	10	4	H	H	NE-SE-S
Ruatahuna West	Ruatahuna West	7	2	V	V	S through NW
Ruru	Ruru	-	4	H	H	E-SW-NW
Russell	Sailors Cutting	4	7	V	V	S through NW
Sandy Bay	Sandy Bay	5	-	H	H	SE through S
Seatoun	Seatoun	7	9	V	V	SW through N
Seddonville	Seddonville	7	8	H	H	SE-SW-NW
Selwyn Street	Selwyn Street	6	8	V	V	W through NW
Shenandoah	Shenandoah	7	8	H	H	SE-SW-NW
Siberia Station	Siberia Station	6	8	V	V	NE

Station Name	TV1	TV2	TV3	Power (ERP)	Coverage
Channels	TV1	TV2	TV3	Polarity	
Single Hill	7	8	—	H H H > V > V > H V V H V H H V V V H H V H H H H V H V > V H > V H > V H > V H > V H > V H > V	
Six Mile Valley	8	—	—		
Southshore	5	—	1		
Southshore UHF	50	—	5		
St Arnaud	5	—	—		
St Bathans	4	10	9		
St Martins Valley	5	5	9		
Strathmore North	5	3	8		
Sugarloaf	5	3	8		
Stokes Valley	5	7	8		
Stony Bay	4	3	8		
Strathmore North	4	4	8		
Sunny Grove	5	5	8		
Sunshine Bay	6	6	6		
Surrey Downs	4	4	5		
Taharoa	5	2	9		
Tahunanui Hills	4	4	6		
Tahape	6	6	8		
Tainua	5	9	4		
Tainua Heights	2	9	4		
Takahue	4	4	6		
Takaka Hill	4	4	6		
Tapuaeroa Valley	6	7	7		
Taringamotu Valley	6	7	7		
Tataraakina	6	7	7		
Tauamarunu	6	7	7		
Tauapu Bay	6	6	8		
Tauranga Bay	6	6	8		
Taylors Mistake	4	4	10		
Te Aroha	1	3	—		
Te Awaiti	6	6	8		
Te Kao	4	9	11		
Te Kouma	6	6	8		
Te Mamoe	5	3	8		
Te Marua	3	5	7		
Te Ngaire	7	5	9		
Te Oka Bay	5	5	8		
Te Pula	6	6	8		
Te Wharau	6	5	6		
Teal Bay	6	5	8		
Teesdale Station	8	9	9		
Tennyson Inlet	9	7	8		
The Neck	7	9	10		
Thordron	7	6	8		
Timahanga Station	6	7	9		
Titihi Bay	5	5	9		
Titirangi	6	6	8		
Toi Flat	4	6	10		
Tokomaru Bay	6	6	8		
Tongaporutu	—	—	42		
Towai	4	6	6		
Tuatapere	4	5	7		
Tuhingamata	5	7	8		
Tui	7	6	2		
Tunapo	6	8	10		
Turangi East	9	2	8		
Turiwhate	8	4	10		
Tutara	4	6	8		
Tuturumuri	6	6	8		
Upper Grey River	7	7	9		
Upper Rakaia	6	6	8		
Upper Wakamarina	7	7	8		
Urenui	6	6	10		
Vandeleur Ave	—	—	11		
Velma Road	4	10	8		
Victoria Valley	3	7	4		
Wadestown	4	10	4		
Walare	4	10	10		
Waiatarua	—	—	—		
Waihou Valley	—	—	—		
Waihi Beach	6	6	—		

Station Name	Channels			Polarity	Power (ERP)			Coverage
	TV1	TV2	TV3		TV1	TV2	TV3	
Waikawau	6	8	—	V	E	E	—	N through NE
Waikawau North	6	—	—	V	E	—	—	NE
Waikiti Downs	7	9	—	H	E	E	—	N through NE
Waikura Valley	5	—	—	V	E	—	—	SW-NW-NE
Waimamaku	5	9	—	H	E	—	—	W-N-E
Waimana	4	10	—	V	E	—	—	NW through NE
Waimarama	5	—	—	V	E	—	—	N-E-S
Waimarie	4	—	—	H	E	—	—	E through SE
Wainui Inlet	4	—	—	H	E	—	—	S through W
Walnuionata	7	9	—	V	E	—	—	S-W-N
Walouru	11	9	—	V	D	E	—	S through SW
Waipa Village	8	—	—	H	E	—	—	SE through SW
Waipari Station	6	4	—	H	E	—	—	SE
Waipiro Bay	4	—	—	V	E	—	—	NE
Waipori Falls	6	8	—	H	E	—	—	N through NE
Wairakei	9	2	—	H	E	—	—	S through SW
Wairata	6	8	—	H	E	—	—	S through NW
Waitaha Valley	4	—	—	V	D	—	—	NE-SE-W
Waitangi Station	—	4	—	V	E	—	—	W
Waitangirua	46	50	—	V	D	E	—	SW through N
Waitotara	6	8	—	V	E	—	—	NE through S
Waiwera	6	8	—	V	E	—	—	SE through S
Wakarara North	6	8	—	H	C	—	—	NW
Wallace Peak	5	1	—	H	C	—	—	N-E-S
Wanaka	4	6	—	H	C	—	—	NE through E
Wanaka West	3	—	—	H	C	—	—	S through W
Wanganui	6	8	—	V	C	—	—	E-SE-SW
Warkworth	6	8	—	H	D	—	—	S through SW
Western Hutt	3	8	—	H	D	—	—	NW through N
Whakaangiangi	7	—	—	H	D	—	—	SW-NW-N
Whakamaru	4	10	—	H	E	—	—	NW through N
Whakapunake	1	3	—	H	E	—	—	OMNI
Whangamata	4	10	—	V	E	—	—	S-W-NW
Whangamomona	6	—	—	V	E	—	—	SE
Whangaruru	6	8	—	V	D	—	—	N through E
Wharite	2	4	7	V	A	—	—	OMNI
Whenuai Bay	7	—	—	V	E	—	—	SW
Whitby	7	9	—	V	E	—	—	W through N
White Rock	9	—	—	H	E	—	—	W
Willow Bay	6	9	—	H	E	—	—	S through SW
Willow Flat	5	—	—	H	E	—	—	S through SW
Wimbledon	6	8	10	H	E	—	—	W through N
Wingatui	7	1	—	H	D	—	—	NW through NE
Wither Hills	9	—	—	H	D	—	—	SW-N-E
Woodhaugh	7	1	—	H	E	—	—	E through SE
Woodstock	8	—	—	H	E	—	—	N-SE-SW
Wye Street	7	9	—	V	E	—	—	W through N
Wynsdale	7	—	—	V	E	—	—	SW-NW-NE

Table of power subgroups:

- A Greater than 30 kW
- B 1 kW to 30 kW
- C 30 W to 1 kW
- D 3 W to 30 W
- E Less than 3 W

Channels

Channels 1 to 3 are VHF Low Band (Band I—44 to 68 MHz).

Channels 4 to 11 are VHF High Band (Band III—174 to 230 MHz).

Channels 27 to 62 are UHF Band (Band IV and V—518 to 806 MHz).

Transmissions conform to 625 line CCIR System B on VHF and System G on UHF with PAL colour.

The vision carrier frequency is nominally 1.25 MHz above the lower channel edge (an offset between -26 kHz and +26 kHz from the nominal may apply); the rest frequency of the analogue FM sound carrier is 5.4996 MHz above the vision carrier frequency; the centre frequency of the NICAM digital sound carrier (if transmitted) is 5.850 MHz above the vision carrier frequency. The B/G variant of 728 NICAM is used which has a total occupied band width of 510 kHz.

**PREVENT
INTRUDERS
SELL ONLY TO
LICENSED
AMATEURS**

Channel Number	Frequency Limits (MHz)	Vision Carrier (MHz)	FM Sound Carrier (MHz)	NICAM Sound Carrier (MHz)
VHF				
1	44 to 51	45.25	50.75	51.10
2	54 to 61	55.25	60.75	61.10
3	61 to 68	62.25	67.75	68.10
4	174 to 181	175.25	180.75	181.10
5	181 to 188	182.25	187.75	188.10
6	188 to 195	189.25	194.75	195.10
7	195 to 202	196.25	201.75	202.10
8	202 to 209	203.25	208.75	209.10
9	209 to 216	210.25	215.75	216.10
10	216 to 223	217.25	222.75	223.10
11	223 to 230	224.25	229.75	230.10
UHF				
27	518 to 526	519.25	524.75	525.10
28	526 to 534	527.25	532.75	533.10
29	534 to 542	535.25	540.75	541.10
30	542 to 550	543.25	548.75	549.10
31	550 to 558	551.25	556.75	557.10
32	558 to 566	559.25	564.75	565.10
33	566 to 574	567.25	572.75	573.10
34	574 to 582	575.25	580.75	581.10
35	582 to 590	283.25	588.75	589.10
36	590 to 598	591.25	596.75	597.10
37	598 to 606	599.25	604.75	605.10
38	606 to 614	607.25	612.75	613.10
39	614 to 622	615.25	620.75	621.10
40	622 to 630	623.25	628.75	629.10
41	630 to 638	631.25	636.75	637.10
42	638 to 646	639.25	644.75	645.10
43	646 to 654	647.25	652.75	653.10
44	654 to 662	655.25	660.75	661.10
45	662 to 670	663.25	668.75	669.10
46	670 to 678	671.25	676.75	677.10
47	678 to 686	679.25	674.75	685.10
48	686 to 694	687.25	692.75	693.10
49	694 to 702	695.25	700.75	701.10
50	702 to 710	703.25	708.75	709.10
51	710 to 718	711.25	716.75	717.10
52	718 to 726	719.25	724.75	725.10
53	726 to 734	727.25	732.75	733.10
54	734 to 742	735.25	740.75	741.10
55	742 to 750	743.25	748.75	749.10
56	750 to 758	751.25	756.75	757.10
57	758 to 766	759.25	764.75	765.10
58	766 to 774	767.25	772.75	773.10
59	774 to 782	775.25	780.75	781.10
60	782 to 790	783.25	788.75	789.10
61	790 to 798	781.25	796.75	797.10
62	798 to 806	799.25	804.75	805.10

The 20-year management rights for Channels 27 to 34 and 43 to 62 have been sold to a number of television broadcast companies.

Channels 35 to 38 are currently used for Aeronautical Radionavigation (radar).

Channel 39 is used for Amateur Television and Amateur Narrow Band Modes, see FMTAG band plan.

Channels 40 to 42 are used for low power television.

**QSL BUREAU
is a
FREE SERVICE
to MEMBERS**

Citizen Radio Service

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.

The following technical conditions apply:

Designation of Emission

2K80J3EJN SSB (Single-sideband, suppressed carrier)

2K80R3JN SSB (Single-sideband, reduced carrier)

6K00A3EJN DSB (Double-sideband)

Power (maximum)

SSB 12 W peak envelope power (pX)

DSB 4 W carrier power (pZ)

Subject to the conditions shown on the Certificate of Compliance.

Note

The following frequencies may not be used from March 31 1989:

26.425, 26.475, 26.525, 26.575, 26.625, 26.675, 26.725 MHz.

For further information obtain a copy of the "Citizen Radio Service" brochure from the RFS.

**PRINT
DISABLED
RADIO**

ZLXA 3935 kHz 1kW ERP

Simulcast with 2XA

PO Box 360 Levin 5500

ZL2GB Station Director

Radio Broadcasting Stations (No update received for 1991)

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	Wiltdown	N75/276012	Mast 55
1ZU	King Country Radio	Taumarunui	1512	1	Taumarunui	N101/773136	Tower 41
22G	Gisborne's Radio 2ZG	Gisborne	945	2	Wainui	N98/438335	Mast 53
22C	Bay City Radio	Napier	1278	2	Pakowhai	N134/285307	Tower 41
22P	Radio Taranaki	New Plymouth	1053	2	Bell Block	N109/704948	Mast 53
22H	Radio Taranaki	Hawera	1557	2	Normanby	N129/850350	Tower 41
22W	River City Radio	Wanganui	1197	2	Kaitoke	N138/616824	Mast 55
22A	Radio 2ZA	Palmerston North	927	2	Kairanga	N149/063366	Mast 53
22D	Radio Wairarapa	Masterton	846	2	Waingawa	N158/079613	Mast 55
22B	Wellington 2ZB	Wellington	1035	20	Titahi Bay	N160/403453	Mast 122
22E	Radio Marlborough	Blenheim	1539	1	Blenheim	S28/244984	Tower 41
22F	Radio Marlborough	Picton	1584	0.4	Picton	S22/303216	Tower 41
22N	Radio Nelson	Nelson	1341	2	Stoke	S20/570227	Mast 53
22T	Radio Nelson	Takaka	1269	0.4	Motupipi	S8/236834	Mast 45
32A	Radio Scenicland	Greymouth	747	2	Kumara	S51/680728	Mast 122
32R	Radio Scenicland	Reefton	1521	0.2	Reefton	S83/350279	Tower 61
32W	Radio Scenicland	Westport	1287	2	Cape Foulwind	S23/968731	Tower 41
32B	Christchurch 3ZB	Christchurch	1098	5	Ouruhiia	S76/035665	Mast 137
32E	Ashburton 3ZE	Ashburton	873	1	Winchmore	S92/180239	Mast 90
32C	Radio Caroline	Timaru	1152	5	Fairview	S111/690511	Mast 90
32O	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
1TP0-FM	Radio Lakeland	Taupo	96.7	0.6	Tuhingamata	N94/472350	Tower 61
1TP0-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	Wairoa	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	Waiatarua	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	0	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	Walatarua	N41/092512	Tower 122
	Concert Network	Waikato/BOP	91.4	40	Te Aroha	N57/23477	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
	Concert Network	Kapiti Coast	98.3	0.6	Forest Heights	N157/632759	Tower
2WCP-FM	Concert Network	Wellington	92.5	40	Kaukau	N164/338283	Tower 122
	Concert Network	Hutt Valley	95.6	0.6	Towai	N164/480288	Pole 20
	Concert Network	Nelson	91.4	3	Grampians	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
3CCP-FM	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 Walkato	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	Thiotonga	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	Thiotonga	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	2	Hamilton	N056/815524	Mast
2X?	Radio Rhema	Hawkes/Pov Bay	648	5	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	Kaitaia	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	Waiatarua	N41/092512	Tower 122
1STU-FM	Campus Radio BFM	Auckland	91.8	1	Waiatarua	N41/092512	Tower 122
1ROQ-FM	Triple M	Auckland	89.4	40	Waiatarua	N41/092512	Tower 122
1MJK-FM	91 FM	Auckland	91	40	Waiatarua	N41/092512	Tower 122
1KIW-FM	Kiwi FM	Warkworth	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	?
2XXS-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 Fifeshire FM	Nelson	93	3	Grampians	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

VHF Marine Service

Licensee	Ch	Location	Grid Reference
North Island:			
Far North Repeater Association	60	Mt Camel	N03 216101
Bay of Islands Marine Radio Association	63	Russell Heights	Q05 141591
Whangarei VHF Marine Repeater Association	64	Parua Bay	Q07 387049
Auckland Volunteer Coast Guard Service Inc	65	Northern Moehau	S10 218180
	88	Trig M2	S10 230167
	86	Auckland	R11 675807
Great Barrier Island SMCRA	1	Mt Te Ahumata	S09 286482
Telecom Networks and International	60	Quinns Road (MM)	R11 512718
PO Box 1092, Wellington	62	Deadman's Point	S11 273792
Whitianga Volunteer Coast Guard Radio Association Inc	61	Opito Bay	T10 613929
	84	Opito Bay	T10 613929
Lake Taupo Mariners Radio	61	Karangahape	T18 533638
	63	Karangahape	T18 533638
Rotorua VHF Marine Radio Association Inc	64	Whakaungakau	U16 068394
Tauranga Volunteer Coast Guard Association Inc	62	Mayor Island	U12 976305
	66	Mt Minden	U14 786831
Whakatane Coast Guard Association Inc	60	Whakatane Heads	W15 627542
Waihau Bay Volunteer Coast Guard	63	Cape Runaway	Y14 510936
East Cape Volunteer Coast Guard	61	Tawhiti	Z16 791336
Gisborne-Tatapouri Sports Fishing Club	60	Tatapouri Hill	Y18 574708
Mahia SMCRA	63	Mahia	Y20 378185
Napier Radio Communications Association Inc	62	Kahuranaki	V22 416494
Harvest Electronics Ltd	63	Mt Rewa	T27 628081
Port Nicholson Association Radio	62	Kaukau	R27 590955
Comtel Systems Ltd	64	Tauakira	S21 997658
Taranaki Volunteer Coast Guard Association	61	Puketū	P19 954230
Raglan VHF Group	62	Te Uku	R15 835684
Manukau Volunteer Coast Guard Inc	63	Manukau Head	Q11 486604
South Island:			
Mount Campbell/Nelson Marine Radio Association	60	Mt Campbell (MM)	N27 037927
Marlborough Marine Radio Association Inc	65	Kaimua	P27 976092
	63	Kahikatea	P27 793015
Lyttelton Maritime VHF Association	60	Blue Duck	P31 752892
	63	Herbert Peak	M36 892243
Timaru Maritime VHF Association	61	Mt Studholme (BCNZ)	J40 443164
Skippers Canyon Jet Ltd	60	Skippers Canyon	E41 690842
Otago Maritime VHF Association Inc	62	Hautai Hill	J44 336889
	64	Hinabina Hill	H47 507057
Southland Maritime VHF Users Association Inc	61	Bluff Hill	E47 531889
Mr Al Johnstone	63	Wednesday Peak No. 2	B46 346339
Westland Maritime VHF Association	63	Paparoa	K31 736657
Westport Fishermens Association	62	Mt Rochfort	K29 053358

Channel 16—The international distress, safety and calling frequency for the maritime mobile VHF radiotelephone service.

All ships licensed for operation in the authorized bands between 156 MHz and 174 MHz must be able to transmit and receive on this channel.

Channels 6, 9—For inter-ship working.

Channels 9, 10, 11, 12, 13, 14—For communication with harbour authority stations on port operation and ship movements.

Channel 21—For receiving automatic weather transmissions in the Auckland Area.

Channels 24, 25, 26, 27—For connection to the public telephone network.

Channel 28—For working with the Auckland Telecom coast station after communication has been established on Channel 16.

Channels 60, 61, 62, 63, 64, 65—Two frequency talk-through repeater channels.

Channel 68—For use nationally by rescue organisations. Also for communication with Wellington Radio.

Channels 71, 74—For working between coast stations and ship stations after communication has been established on channel 16.

Channel 73—For use in association with marina developments.

Channel 77—Available for aquatic events.

Channels 84, 86, 88—Repeater channel for Search and Rescue communications.

Ch 6-28 156 MHz + (Ch × 50) kHz
i.e. Ch 16 is 156.8 MHz

Ch 60-88 156.025 MHz + ((Ch-60) × 50) kHz
i.e. Ch 68 is 156.425 MHz

For further information obtain *Small Ships Radiotelephone Service* brochure from the Radio Frequency Service.

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 (cm³) = 1000mm³	= 0.6102 cubic inches
1 cubic metre (m³)	= 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
1 Weber (W)	= 10^8 Maxwell

Prefixes for Multiples and Sub-multiples of Quantities

Multiple or Sub-multiple	Name	Prefix
10^{12}	Tera	T
10^9	Giga-	G
10^6	Mega-	M
10^3	Kilo-	k
10^2	Hecto	h
10	Deca	da
10^{-1}	Deci	d
10^{-2}	Centi-	c
10^{-3}	Milli-	m
10^{-6}	Micro-	μ
10^{-9}	Nano-	n
10^{-12}	Pico-	p
10^{-15}	Femto	f
10^{-18}	Atto-	a

Useful Formulae

- Wavelength (in metres)
Free space = $300/f(\text{MHz})$
Half-wave wire dipole = $143/f(\text{MHz})$
- 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 = $31 A^2$ watts
where A = core cross-section in sq.in.
or Output = $4.8 A^2$ watts if A is in sq.cm.

Ohms Law

$$V = IR = W/I = \sqrt{WR}$$

$$I = V/R = W/V = \sqrt{W/R}$$

$$R = V/I = W^2/W = W/I^2$$

$$W = VI = I^2 R = V^2/R$$

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
Peak-Peak	0.32	0.3535	0.5	—

Colour Codes

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. 1% tolerance resistors have five bands. The first three give three digits of value, the rest as above.

2. 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

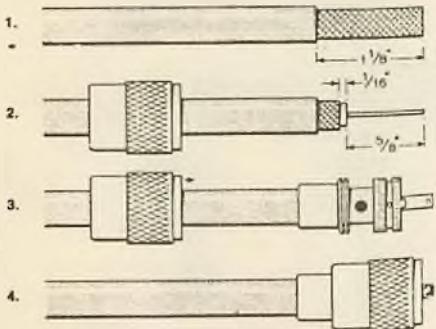
33 36 39 43 47 51 56 62 68 75 82 91

Coaxial Plug Assembly

RSGB VHF/UHF Manual

UHF type (soldered screen)—PL259

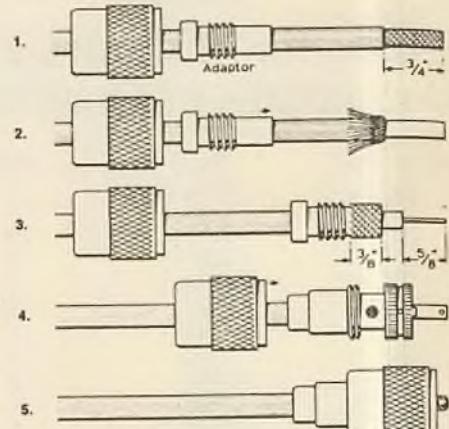
1. Cut end of cable even. Remove vinyl jacket $1\frac{1}{8}$ ".
2. Bare $\frac{5}{8}$ " of centre conductor. Trim braided shield. Slide coupling ring on cable. Tin exposed conductor and braid.
3. Screw the plug sub-assembly on cable. Solder assembly to braid through solder holes. Use enough heat to create bond of braid to shell. Solder centre conductor to contact.
4. For final assembly, screw coupling ring on plug sub-assembly.



UHF type (soldered screen)

UHF type (clamped screen)—PL259

1. Cut end of cable even. Remove vinyl jacket $\frac{3}{4}$ ". Slide coupling ring and adapter on cable.
2. Fan braid slightly and fold back as shown.
3. Position adapter to dimension shown. Press braid down over body of adapter and trim to $\frac{3}{8}$ ". Bare $\frac{5}{8}$ " of conductor. Tin exposed centre conductor.
4. Screw plug sub-assembly on adapter, 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.



UHF type (clamped screen)

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

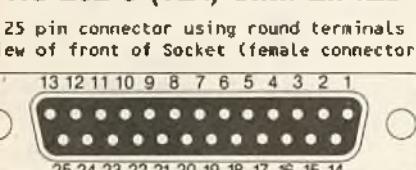
Don't forget to inform the FMTAG of any status change.

CODE CONVERSION TABLE

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	
00	000	0	NUL	Null	20	040	32		40	100	64	a	60	140	96	'	80	200	128		A0	240	160		
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
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
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
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
05	005	5	ENQ	Enquiry	25	045	37	x	45	105	69	E	65	145	101	e	85	205	133	A5	245	165	C5	305	197
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
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
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
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
0A	012	10	LF	Line Feed	2A	052	42	*	4A	112	74	J	6A	152	106	j	8A	212	138	A10	252	170	C10	312	202
0B	013	11	VT	Vertical Tab	2B	053	43	+	4B	113	75	K	6B	153	107	k	8B	213	139	A11	253	171	C11	313	203
0C	014	12	FF	Form Feed	2C	054	44	*	4C	114	76	L	6C	154	108	l	8C	214	140	A12	254	172	C12	314	204
0D	015	13	CR	Carriage Return	2D	055	45	-	4D	115	77	M	6D	155	109	m	8D	215	141	A13	255	173	C13	315	205
0E	016	14	SO	Shift-Out	2E	056	46	*	4E	116	78	N	6E	156	110	n	8E	216	142	A14	256	174	C14	316	206
0F	017	15	SI	Shift-In	2F	057	47	/	4F	117	79	O	6F	157	111	o	8F	217	143	A15	257	175	C15	317	207
10	020	16	DLE	Data Link Escape	30	060	48	0	50	120	80	P	70	160	112	p	90	220	144	B10	260	176	D10	320	208
11	021	17	DCL	X-DN	31	061	49	1	51	121	81	Q	71	161	113	q	91	221	145	B11	261	177	D11	321	209
12	022	18	DG2	Device Control 2	32	062	50	2	52	122	82	R	72	162	114	r	92	222	146	B12	262	178	D12	322	210
13	023	19	DG3	X-OFF	33	063	51	3	53	123	83	S	73	163	115	s	93	223	147	B13	263	179	D13	323	211
14	024	20	DG4	Device Control 4	34	064	52	4	54	124	84	T	74	164	116	t	94	224	148	B14	264	180	D14	324	212
15	025	21	NAK	Not Acknowledge	35	065	53	5	55	125	85	U	75	165	117	u	95	225	149	B15	265	181	D15	325	213
16	026	22	SYN	Synchronous Idle	36	066	54	6	56	126	86	V	76	166	118	v	96	226	150	B16	266	182	D16	326	214
17	027	23	ETB	End Trans. Block	37	067	55	7	57	127	87	W	77	167	119	w	97	227	151	B17	267	183	D17	327	215
18	030	24	CAN	Cancel	38	070	56	8	58	130	88	X	78	170	120	x	98	230	152	B18	270	184	D18	330	216
19	031	25	EM	End of Medium	39	071	57	9	59	131	89	Y	79	171	121	y	99	231	153	B19	271	185	D19	331	217
1A	032	26	SUB	Substitute Char	3A	072	58	:	5A	132	90	Z	7A	172	122	z	9A	232	154	B1A	272	186	D1A	332	218
1B	033	27	ESC	Escape	3B	073	59	;	5B	133	91	C	7B	173	123	c	9B	233	155	B1B	273	187	D1B	333	219
1C	034	28	FS	File Separator	3C	074	60	<	5C	134	92	\	7C	174	124	|	9C	234	156	B1C	274	188	D1C	334	220
1D	035	29	GS	Group Separator	3D	075	61	=	5D	135	93	]	7D	175	125	]	9D	235	157	B1D	275	189	D1D	335	221
1E	036	30	RS	Record Separator	3E	076	62	-	5E	136	94	-	7E	176	126	-	9E	236	158	B1E	276	190	D1E	336	222
1F	037	31	US	Unit Separator	3F	077	63	?	5F	137	95	-	7F	177	127	?	9F	237	159	B1F	277	191	D1F	337	223

To generate use Control Key <CTRL> with _



DTE = Data Terminal Eqpt (Printer, Modem port)

DCE = Data Communications Eqpt (Printer port, Modem)

OV GND- - - - -

+3 to - - - - -

15v - - - - -

-3 to - - - - -

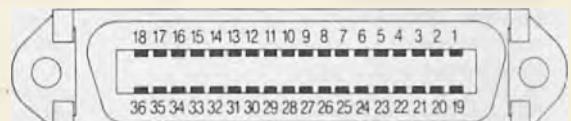
-15v - - - - -

Signal Voltage Idle Start Bit (LSB) Data Bits (7 or 8) Parity if used Stop Bits (1 or 2) Start Bit (next char) Logic State Signal Condition Control Function

Control signals must be on to allow data transfer

CENTRONICS PARALLEL INTERFACE

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 12-454 Auckland, Ph (09) 525-0980

Commonly Used Symbols and Abbreviations

A	ampere, amplification factor	ct	centre tap	G	gram
A	alternating current	CTCSS	continuous tone coded squelch system	g	giga (10^9)
AC	analogue-to-digital	CW	continuous wave (code); clockwise	G	conductance; magneto motive force
A/D	audio frequency	D		GaAs FET	gallium arsenide field-effect transistor
AF	automatic frequency control	D	electrostatic displacement; flux density	GDO	grid-dip or gate-dip oscillator
afc	audio frequency shift keying	D/A	digital-to-analogue	GHz	gigahertz
afsk	automatic gain control	dB	decibel	gnd	ground
agc	ampere hour	dBd	antenna gain referenced to a dipole	H	henry; magnetic field strength
Ah	automatic load (or level) control	DBDM	double-balance diode mixer	H	height above mean terrain
alc	amplitude modulation	dBi	antenna gain referenced to an isotropic, a dipole has a gain of 2.14 dBi	HAAT	high frequency (3–30 MHz)
AM	morning	dBm	decibel referred to 1 milliwatt	HF	heterodyne-frequency oscillator
a.m.	AMSAT	dBW	decibel referred to 1 watt	HFO	highest possible frequency;
AMSAT	Radio Amateur Satellite Corporation	DC	direct current	hp	high pass filter
AMTOR	Amateur Teleprinting Over Radio	det	detector	HT	high tension
anl	automatic noise limiter	DF	direction finder; direction finding	Hz	hertz
ant	antenna	DIP	dual-in-line package, 14 to 16 pins	I	current
AOS	acquisition of signal	dpdt	double-pole double-throw	IARU	International Amateur Radio Union
ARA	Amateur Radio Association	dpst	double-pole single-throw	IC	integrated circuit
ARC	Amateur Radio Club	dsb	double sideband	I-d	identification; identifier
AREC	Amateur Radio Emergency Corps	DTL	diode-transistor logic	ID	inside diameter
ARS	Amateur Radio Society; Amateur Radio Station	DTMF	dual tone multi-frequency	IF	intermediate frequency
ASCII	American National Standard Code for Information Interchange	DVM	digital voltmeter	IMD	inter-modulation distortion
ATV	amateur television	DX	long distance	I/O	input/output
avc	automatic volume control	DXCC	DX Century Club	IRC	international reply coupon
AWG	American wire gauge	E		ISB	independent sideband
az-el	azimuth-elevation	E	voltage	ITU	International Telecommunication Union
B		e	base of Napierian logs	IW	Intruder Watch (Monitoring Service)
B	flux density; susceptance	ECL	emitter-coupled logic	J	Joule
BASIC	Beginner's All-purpose Symbolic Instruction Code (computer language)	ECO	electron-coupled oscillator	J	Indicator for reactive component of an impedance; (+j inductive; -j capacitive); joule
b	byte (a group of bits or binary digits, usually eight)	EHF	extra high frequency (30–300 GHz)	JFET	junction field-effect transistor
bc	broadcast	EHT	extra high tension	K	kilo (1000)
BCD	binary-coded-decimal	eirp	effective isotropic radiated power	k	kilobyte; specific inductive capacity; Kelvin; dielectric constant
BCI	broadcast interference	EMC	electro-magnetic capability	K	kilogram
bcl	broadcast listener	E-M-E	earth-moon-earth (moonbounce)		kilohertz (10^3)
bd	baud (bits/sec)	emf	electromotive force (voltage)	kg	kilometre
ber	bit error rate	EMI	electro-magnetic interference	kHz	kilovolt
bit	binary digit	EMP	electromagnetic pulse	km	kilowatt
BFO	beat-frequency oscillator	EPROM	erasable programmable read-only memory	kV	kilowatt hour
bpf	band pass filter	EUV	extreme ultra-violet radiation	kW	
bw	bandwidth	EQX	equator crossing	kWh	
byte	computer word, 8 bits	erp	effective radiated power	L	self inductance
C		F		LC	inductance-capacitance
C	Celsius, capacity, Coulomb	f	frequency	LCD	liquid crystal display
c	velocity of EM waves	F	farad; Fahrenheit	LED	light-emitting diode
CATV	cable television	FAX	facsimile	LF	low frequency (30–300 kHz)
CB	citizens band	FCC	Federal Communications Commission	lhcp	left-hand circular polarisation
CCIR	International Radio Consultative Committee	FD	Field Day	LMO	linear master oscillator
CCIT	Consultative Committee for International Telegraph and Telephone (ITU)	FET	field-effect transistor	LO	local oscillator
CCS	constant current source	FF	flip-flop	loran	long-range navigation
cctv	closed circuit television	FM	frequency modulation	LOS	loss of signal
ccw	coherent CW;	FMT	frequency measuring test	lp	long periodic; long path
CD	counter-clockwise	FMTAG	Frequency Management Technical and Advisory Group	LSB	lower sideband; least significant bit
Ch	Civil Defence	fot	optimum working frequency	LSI	large-scale integration
cm	channel	fsd	full scale deflection	LT	low tension
CMOS	centimetre	FSK	frequency-shift keying	luf	lowest usable frequency
coax	(or COSMOS)—complimentary-symmetry metaloxide semiconductor			lw	longwave; long wire
COR	coaxial cable or connector				
CPU	carrier-operated relay				
CQ	central processing unit				
CRT	general call to all stations				
	cathode-ray tube				

M	metre (distance or band); milli (10 ⁻³); mass	PIN	positive intrinsic negative	T	time; temperature C
m	mega (10 ⁶); mutual inductance	PIV	peak inverse voltage	t	period; temperature K
M	milliampere (one-thousandth of an Amp)	pk	peak	T	technical adviser
mA	milliamper hour	pk-pk	peak to peak	TA	time of closest approach
MARS	Military Affiliate Radio System	PLL	phase-locked loop	TCA	trans-equatorial (propagation)
MATV	multi-access television	PM	phase modulation	TE	traffic
MF	medium frequency (300–3000 kHz)	p.m.	afternoon/night	tfc	terahertz (10 ¹²)
mH	millihenry	PMOS	p-channel MOS	THz	total harmonic distortion
MHz	megahertz (10 ⁶)	pnp	positive-negative-positive	THD	turns per inch
mike; mic	microphone	ppi	plan position indicator (radar)	tpi	transmit-receive
mini-DIP	dual-in-line package of 8 pins	pot	potentiometer	T-R	transistor-transistor logic
ml/h	miles per hour	PROM	programmable read-only memory	TTL; T ² L	teletypewriter (from Teletype, the
mi/s	miles per second	PRV	peak reverse voltage	TTY	trade mark of Teletype Corporation)
mix	mixer	PSK	phase-shift keying	TV	television
mm	millimetre	PTO	permeability-tuned oscillator	TVI	television interference
MO	master oscillator	PTT	push-to-talk	Tx	transmitter
MOS	metal oxide semiconductor	PSU	power supply unit		
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				
nbfm	nano (10 ⁻⁹)				
nbvm	narrow-band frequency				
n.c.	modulation				
NC	narrow-band voice modulation				
NF	no connection				
NiCad	normally closed				
NL	noise figure				
NMOS	nickel cadmium				
NO	noise limiter				
npn	n-channel MOS				
nS	normally open				
NZART	negative-positive-negative				
	nanosecond				
	New Zealand Association of Radio Transmitters				
O					
OD	outside diameter	S	second; magnetic reluctance; Siemens	W	watt; work
OM	old man	SAE	self-addressed envelope	WAC	Worked All Continents
op amp	operational amplifier	SASE	stamped SAE	WARC	World Administrative Radio Conference
osc	oscillator	SCR	silicon-controlled rectifier	WAS	Worked All States
OSCAR	Orbiting Satellite Carrying Amateur Radio	SHF	super-high frequency (3–30 GHz)	wbfm	wide-band FM
OTC	Old Timers' Club	SINAD	Ratio of Signal to Noise and Distortion	Wh	watt-hours
oz	ounce	SM	silver mica (capacitor)	wpm	words per minute
		SNR; S/N	signal-to-noise ratio	ww	wire wound; wire wrap
		spdt	single-pole double-throw	wx	weather
		spst	single-pole single-throw		
		SS	sweepstakes; spread spectrum		
		SSB	single sideband		
		SSC	AMSAT Phase III special service channels		
		SSI	small-scale integration	X	reactance; electrostatic field strength
		SSTV	slow-scan television	xcvr	transceiver
		STSP	short-term special purpose (FM repeaters)	XO	crystal oscillator
		SWL	shortwave listener	xfrm	transformer
		SWR	standing-wave ratio	xmit	transmitter
		sync	synchronous; synchronising	xtal	crystal
		SYNCART	synchronous satellite carrying Amateur Radio Transponder	XYL	wife
				Y	admittance
				YF	wife
				YL	young lady or lady operator
				Z	impedance; UTC time
				Z	

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 Executive Council 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 Membership 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 con-

tain 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 publication 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 Office 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 callsign (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 March 20, 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 callsigns 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 callsigns 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 callsigns 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 callsigns beginning with ZL4 are allocated at the time this Constitution comes into force.
- (b) Where a member resides in an area to which callsigns with a prefix other than ZL1, ZL2, ZL3 and ZL4 are allocated or an area otherwise having distinctive callsigns 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 1987]. 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.

The Radio Regulations 1987, being the corresponding regulations in force at the date of this reprint, have been substituted for the repealed Radio Regulations 1970.

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,
 - (ii) upon the member being removed from office by a Special General Meeting,
 - (iii) upon being absent from three meetings of Council in terms of Clause 12 (f) without leave of absence,
 - (iv) 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,
 - (v) in the event of the member leaving New Zealand permanently or for an indefinite period,
 - (vi) 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 therat 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 per-

cent 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 by 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.

This Constitution and its amendments have been registered with the Registrar of Incorporated Societies at Wellington, where the Association is registered under WIS 476480.

Branch Constitutions

A draft constitution suitable for branches which wish to incorporate is available from the General Secretary.

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 January 1 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 responsibilities 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.

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: December 1990, pages 6-10.

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.

Branches and Membership, August 1990, page 3.

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; October 1990, page 4.

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.

"ZL0" callsigns for visitors: December 1980, page 551.

The 170 kHz band, December 1990, page 10.

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.

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.

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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. \$1580

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. \$1190

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, 10dB S/N. See March 1989 Break-In.

\$1980

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.

\$2400

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.

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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.

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\$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

IC-R72—HF General Coverage—covers 25-1000 MHz and 1025-2000 MHz. Ninety-nine memory channels. AM, SSB, CW and FM mode in 100 kHz-30 MHz

\$1749

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 RC-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.

\$8640

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.

\$1089

VHF/UHF Antennas

Icom AH-32 dual band antenna. Complete with base.

\$189

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, \$48).

\$695

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.

\$541

The IC-AT100—Fully automatic tuner, auto-bandswitching with the IC-720A and IC-730, IC-740, IC-750.

\$1200

The IC-AT150—Fully automatic antenna tuner for the IC-735 and IC-725. Auto bandswitching, the latest technology.

\$1030

The IC-AT500—As per the AT100 but handles up to 1kW for use with the IC-2KL

\$1620

The IC-MN100—Passive antenna matcher provides less than 1.5 SWR with short dipoles, and random end feed wires from 1.5-30MHz.

\$440

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.

\$137

The IC-AH2B—Mobile whip and base unit.

\$50

Speech synthesisers available for the 751, R71, 27A, 27H, 271 and 471 models.

\$130

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
($1\frac{1}{2}$ – 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