

# LAMPHOUSE

*Anniversary Issue*

1929

20 YEARS

COMMEMORATING

OF SERVICE



1949



THE LAMPHOUSE 1949-50 ANNUAL



**CLEANER HOMES WITH LESS LABOUR**

No polishing, pulling, or lifting of heavy furniture, no stopping, no climbing, straining, or back-breaking, beating, no taking down of draperies or curtains if you own a "DOME" ELECTRIC CLEANER.

**Complete Equipment Includes:** 7in. Oval Brush; 8½in. Nozzle; "Norie Parker"; Curved and Straight Extension Tubes; 5ft. 6in. Covered Flexible Metallic Hose; Flexible cord with plug.

Electric cleaning is now within the reach of every home. The "DOME" is a thoroughly efficient, high-grade cleaner—a marvel of beauty, simplicity and SAFETY—yet you get it at about half the usual cost because of our modern buying and selling policy.—

BUY IN BULK—SELL FOR CASH!

*The Lowest Priced Vacuum Cleaner in New Zealand!*

**The "DOME" All English VACUUM CLEANER**

Completely manufactured and assembled in England by leading Vacuum Cleaner manufacturers the "DOME" is the acme of lower priced Household Cleaners.

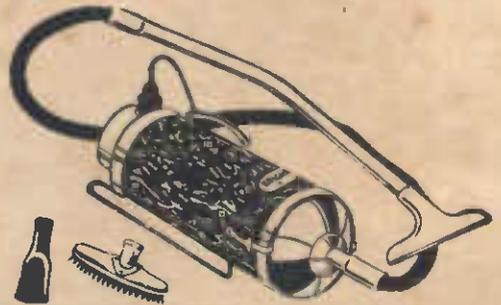
**THE GREATEST VALUE ON THE MARKET!**

BACKED BY A 12 MONTHS' GUARANTEE

USE A "DOME"

And the home will be cleaner, freer from dust. The enormous suction power of the "Dome" extracts every particle of dust, grit, fluff, animal hairs, etc., from carpets, upholstered furniture, bookcases, stairs, cupboards, etc.

Don't be a slave—let the "Dome" do the work. Send for one today. Can be used both on AC or DC 230-volt supply.



Cat. No. AE205—

**£12/10/-**

**FREE 7-DAY OFFER**

**Try it at Our Risk!**

Send for one of these cleaners today; try it in your own home for 7 days. If at the end of that time you are not thoroughly satisfied with it return it, and we will refund your money in full.

**"REGAL" ELECTRIC WATER HEATER**

**FULLY AUTOMATIC**

**Hot Water Instantly! At the Turn of A Tap. Continuous Filling.**

IDEAL FOR PRIVATE HOMES, RESTAURANTS, HOTELS, PRIVATE HOSPITALS, ETC.

**5 BIG FEATURES:**

1. The "REGAL" is constructed entirely of non-ferrous metals, therefore, rust resisting 100 per cent.
2. The manufacturers fully guarantee the workmanship.
3. The "REGAL" is absolutely fool-proof, cannot be boiled dry, thermostatically controlled, is self filling, and can be run from any power socket. An injection nipple supplied with the "REGAL" ensures proper displacement of water to maintain a steady flow.
4. All fittings are brass or copper heavily plated with a gleaming chromium plate.
5. The "REGAL" Water Heater is fully guaranteed and operating cost reduced to a minimum.

**NO HOME IS COMPLETE WITHOUT A "REGAL"**

Guarantee: 5 YEARS GUARANTEE against faulty workmanship. 1 YEAR GUARANTEE against faulty components.

Capacity: 2½ GALLONS.

Complete unit with Flexible Cable and all necessary plumbing attachments for fitting over wash basin or sink.

Cat. No. AE125

**£17/8/9**

Complete Unit with flexible cable without copper piping, taps, etc.—Cat. No. AE124

**£14/19/-**



# THE LAMPHOUSE ANNUAL

1949-1950



## FOREWORD

IN celebrating our 20th Anniversary we take the opportunity of again re-iterating our thanks to you, our customers, for your kind patronage over the years.

With your assistance, through times which have not always been as pleasant as they are at present, and our own policy of honest trading and "square dealing," our business has built up from a small shop using butter boxes for shelves to the leading Radio and Electrical House in the Dominion.

As the firm has grown so also has our buying power increased and through the pages of this Annual you will find dozens of bargain lines that we have been able to buy in bulk, at figures much below normal costs, and these savings are passed on to you.

This year has shown a marked settling down in industry, and prices and supplies are remaining more constant than in the past few years. With regard to prices we would like to stress that prices given in this Catalogue are not binding. If a line has been reduced in price since the Annual was prepared, you get the benefit of that reduction when your order is executed. All orders are executed at the rate ruling at the date of supply.

As always, through all times, every item we sell is covered by our MONEY BACK GUARANTEE which always remains:—

### OUR GUARANTEE

"Any goods that prove in any way unsuitable may be returned within seven days from receipt and your money will be refunded in full."

# ELECTRIC LAMPHOUSE LTD.

11 MANNERS STREET

WELLINGTON, C.I.

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## R.C.A. VALVE CHART

**13 PAGES** giving the characteristics of all American manufactured types of Radio Valves. This is one of the most up-to-date Charts of receiving tubes published.

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## THE "EASY-BUILT" RECEIVERS

Details of a 3-Valve and a 5-Valve Broadcast Receiver and of a 4-Valve Portable Radio constructed by our new numbered components system. No previous set construction is necessary. These sets can be made by anyone able to use a soldering iron.

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# GENERAL INFORMATION

**PRICES:**—The prices in this Catalogue should be taken as an indication only. Prices are fluctuating rapidly and all orders will be executed at the prices ruling at the date of supply.

**TERMS OF BUSINESS.**—Our terms are cash with order. We buy for cash and sell for cash—that's why our prices are lower. If it is desired we will hold any moneys of regular customers in a deposit account for future purchases, otherwise any balance due will be returned with the goods.

**HOW TO ORDER.**—Order forms are always available for your convenience. It is only necessary to quote the catalogue number and short description when ordering, such as AE415—Iron Element.

**CATALOGUE NUMBERS.**—The first letter (A) of the number is for our reference. The balance of the catalogue number will always remain the same for the same article.

**FREIGHT.**—We pay freight on all retail orders over £1 value. Please include sufficient cash for postage on small orders.

**GUARANTEE.**—Any goods that prove in any way unsuitable may be returned undamaged within seven days from receipt and your money will be refunded in full.

**REFERENCE.**—Our Bankers are the National Bank of New Zealand, Ltd., Courtenay Place, Wellington.

**RETURNS.**—Should it be necessary to return goods, always put in a slip of paper with your name and address. When returning goods for credit or exchange, state invoice number in covering letter to ensure prompt attention.

**TELEGRAMS.**—Address telegrams to "Lamphouse," Wellington.

**REMITTANCES.**—Enclose cheque, pound notes, postal note, or money order to the full amount of your order. If you send coin or bank notes, be sure to register the latter. Make cheque and postal notes payable to the "Electric Lamphouse, Ltd.," and keep numbers for reference.

**DELIVERY.**—We endeavour to maintain a same day dispatch service. This is not always possible as at times goods have to be specially procured, and at times exceptional rushes take place. It is very seldom, however, that an order is held for more than one day after receipt.

**SUBSTITUTES.**—As at times we may be out of stock of the exact article you require we suggest that you indicate on your order whether or not you wish us to substitute with similar articles in the event of the goods ordered being out of stock.

**POSTAL ADDRESS.**—All orders and general correspondence should be addressed to—

## The Electric Lamp House Limited

11 MANNERS STREET - - - WELLINGTON, C.1.

Telephones 43-015 and 43-016

### A SUGGESTION

As it is much easier for us to make a refund along with your receipt than for you to get stamps or postal notes to remit a small balance that may be left owing when your receipt is sent, would it not save you inconvenience if you were always to send ample cash to allow for freight, etc.? We will refund the difference, or place it to your credit, according to your instructions. Do as hundreds of our customers do, send a blank cheque, which we will fill in when we have totalled your order. You can write across the top of the cheque "Not to exceed £5"—or £10, or £20, as the case may be.

# THE LAMPHOUSE CATALOGUE

## 1949 - 50 ANNIVERSARY ISSUE

### The NEW DE LUXE VICTORY AMPLIFIERS



NEW ZEALAND'S  
GREATEST AMPLIFIER  
VALUE!

"VICTORY" AMPLIFIERS are ideal for use in Dance-halls, Cafeterias, Factories, Church Meetings, Office Systems, Auditoriums, etc.

These high quality, low cost Amplifiers incorporate all the latest in circuit design. Because of their excellent fidelity of tone and the wide range bass and treble boost controls, we have no hesitation in recommending these Amplifiers for use in the reproduction of recorded music of all types.

#### "VICTORY" SENIOR DE-LUXE

Beam Power Output—  
Full Tone Control

Look at these Features!

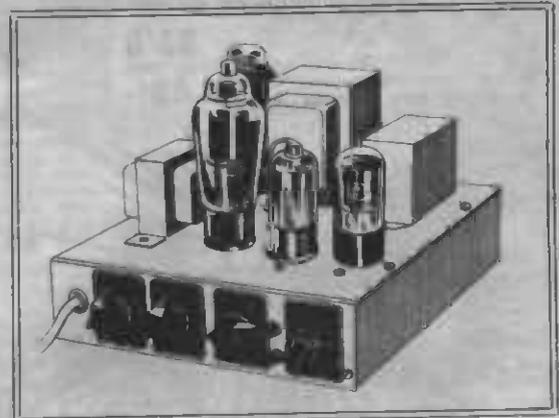
Dual channel Microphone and Gramophone input with individual volume controls. Beam power output and incorporating negative feedback.

Full 10 Watts  
Undistorted Output!

Fitted with multi-match output transformer allowing for correct matching to any Speaker.

VALVES: 5Z3, 807, 6J7, 6N7.

HERE IT IS!



Variable tone controls are provided to accentuate bass or treble as desired and in aid in compensating for varying acoustical conditions.  
Cat. No. AR854

£12/19/6

A suitable speaker for the above Amplifier is the ROLA Model 12-0 12in. P.M. (Extra), or the ROLA G12 12in. Heavy Duty (Extra).

#### 15 WATT DE-LUXE

Has all the above features but uses two additional valves giving 15 watts undistorted output and incorporates extra Pre-amp stage.  
VALVES: 5Z3, (2) 6SJ7, (2) 807, 6J7, 6SN7.

Cat. No. AR855 .. .. . £18/12/6

Suitable Speaker for above. ROLA Model 12-0 12in. P.M. Speaker. or the ROLA Model G12 12in. Heavy Duty. (Both extra.)



#### "VICTORY" JUNIOR AMPLIFIER

A small Amplifier which will give outstanding reproduction. 5 Watt Output. Compact and attractive, suitable for Velocity, Crystal and Dynamic Microphones, continuously Variable Tone Control. Wide range frequency response, Hi-Fidelity Phone Reproduction.

##### TECHNICAL SPECIFICATIONS:

Rated Output, 5 watts; Input, Microphone and Gramophone; Gramophone gain, 76 D.B.; Hum Level, 55; Variable Tone Control; Output Impedance, 5,000 ohms to Speaker Transformer.

Control is provided for compensation of acoustics when using in various locations.

The Victory Junior Amplifier offers for the first time an intermediate Power Amplifier with every feature usually found in units selling at double the price. Splendid for use in Meeting Halls, Office Systems, Night Clubs, Auction Rooms, etc.

Cat. No. AR851 .. .. . £8/19/6

Suitable Speaker for the above Amplifier is ROLA Model 8M 8in. P.M. (Extra.)

# LATE ARRIVALS — NEW LINES

The goods on these two pages arrived too late to be included in their correct sections in the Catalogue.

## WHITE PLASTIC RADIO KNOBS

Moulded Ivory Plastic Knobs  
Knurled edge for easy grip. 1/2 in.  
diameter. Fits 1/4 in. shaft.

Cat. No. AD75 ... 9D. each



## MOVABLE ARM LAMP



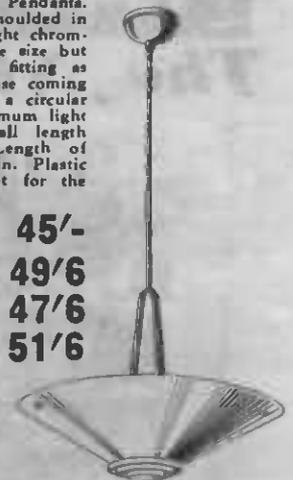
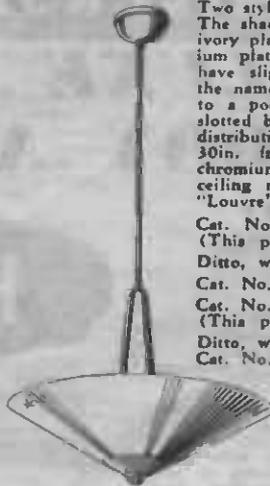
A Bracket Lamp, ball jointed at base, centre and head to allow the light to be directed at any angle. May be swivelled up, down, sideways—just wherever you want it. Bracket is manufactured in heavy chromium rod 1/2 in. diam. and will project over any length up to 30 in. Circular flange at base for screwing bracket to wall. Can be supplied with or without flex and lamp-holder, etc., as priced below.

Cat. No. AF891—Bracket only without fittings **33/6**  
Cat. No. AF892—Bracket complete with 10ft. flexible cord, lampholder with switch and light adaptor **43/-**

## PLASTIC PENDANT FITTINGS

Two styles of attractive Ivory Plastic Lighting Pendants. The shades proper and the ceiling cup are moulded in ivory plastic and the centre columns are bright chromium plated tubes. Both fittings are the same size but have slightly different bases. The "Cone" fitting as the name implies is shaped as a cone the base coming to a point, while the "Louvre" fitting has a circular slotted base as illustrated to allow for maximum light distribution. Dimensions of fittings: Overall length 30 in. from ceiling mounting to base. Length of chromium tube 14 in. Width of Bowl 14 in. Plastic ceiling mount 6 in. diam. The slotted inset for the "Louvre" fitting measures 4 1/2 in. diameter.

Cat. No. AF708—"CONE" FITTING **45/-**  
(This price does not include wiring.)  
Ditto, wired ready to plug in. **49/6**  
Cat. No. AF708A  
Cat. No. AF709—"LOUVRE" FITTING **47/6**  
(This price does not include wiring.)  
Ditto, wired ready to plug in. **51/6**  
Cat. No. AF709A



# VALVE BARGAINS!

## 6 TYPES OF TUBES

Another Bulk Purchase of Radio Valves enables us to sell these tubes at a fraction of their true cost. ALL BRAND NEW! There are no catches—all tubes are 100 per cent. brand new.

- 1K5G—2-volt R.F. Amplifier Pentode Octal Base
- 1K7G—2-volt Duplex Diode Pentode Octal Base
- 1L5G—2-volt Power Amplifier Pentode Octal Base
- 1LD5—1.4-volt Diode Pentode Octal Base
- 1LN5—1.4-volt R.F. Amplifier Pentode Octal Base
- 3D6/1299—1.4 volt U.H.F. Tetrode Octal Base

ALL  
**2/6**  
EACH

## USED P. & T. TELEPHONE PIECES

Used Ear Pieces and Hand Sets removed from old type Post & Telegraph Telephone sets. All in good working order.

### HANDSET

Comprises Microphone and Earphone, short length of flexible cord attached to each set.

Cat. No. AX118—  
**5/11** each



### EARPIECES

Heavy Bakelite Earpieces low impedance winding with strong magnets. Complete with diaphragm—without cord.



Cat. No. AX119 ... **3/11**

### MICROPHONES

Microphone portion only as used in the above P. & T. Handset. Unit mounted in circular plated metal casing as shown on handset illustration. **1/11** each  
Cat. No. AX116—Without flexible Cord.

## AUTO AERIALS—3 TYPES

"WALBAR" Australian made Motor Car Aerials. Gleaming Chromium plating—Guaranteed Rustless. 3 different models.

### 3 PIECE DE-LUXE SIDE MOUNTING

A really finished article. Extends in three pieces to 5ft. 6in. First section 2ft.; second section to 4ft. and third section to 5ft. 6in. Heavy rubber and chromium mounting plate for side mounting. We can recommend this as a first class De-luxe Aerial.

Cat. No. AA324 **52/6**

### 3 PIECE STANDARD SIDE MOUNTING

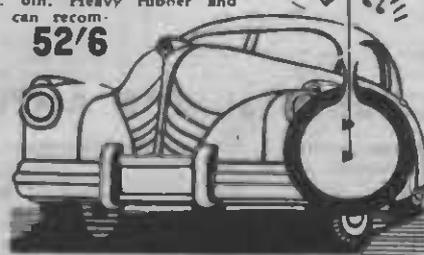
Extends the same as the De-luxe model to 5ft. 6in. in three sections. Has two sliding plastic cups for firm mounting to side of car.

Cat. No. AA325 **42/6**

### 2 PIECE WINDSCREEN MOUNTING

Extends in two pieces to 3ft. 9in. First section 2ft., second section 1ft. 9in. Provided with fastening bolt and clip to attach to centre metal strip on windscreen.

Cat. No. AA326 **32/6**



## 6 VOLT 6-PIN VIBRATORS

Another great buy "Oak" 6-pin 6-volt Synchronous Vibrators. These have been stored for some time and it is possible that some may need adjusting on the points. Because there are a small percentage like this we offer the lot at the Special Price of **9/11**



## LAMPHOUSE GUARANTEE

Any goods that prove in any way unsuitable may be returned undamaged within seven days from receipt and your money will be refunded in full.

**NEW LINES**

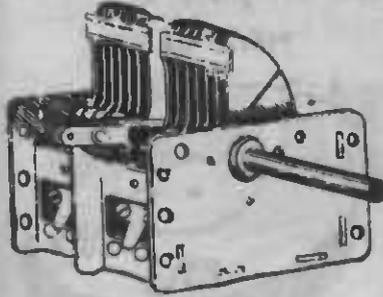
**LATE ARRIVALS**

**EVEREADY BATTERIES**

Cat. No. AB270—U14 Gas lighter cells to fit "Eveready" Gaslighters ... **5/8**

Cat. No. AB223—Type 409 6-volt Battery. Height 3 1/2 in., width 2 1/2 in., depth 2 1/2 in. Constructed for Hand Lanterns, etc ... **6/6**

**SPECIAL PURCHASE  
2 Gang Condensers**



A large quantity of two gang variable condensers, new, but bearing solder marks. Capacity .000385 mfd.; complete with mounting brackets, etc. 1 in. shaft. Bulk buying enables us to pass these on at **7/11** each. Cat. No. AX111

**"TURNER CX" CRYSTAL MICROPHONES**



A good sturdy Microphone at low cost. Attractive chrome type finished case. Fitted with Amphenol connector, and 7ft. flexible cord. 9/16 in. threaded hole to allow unit to be mounted on stand. Crystal clear—gives natural life like reproduction. Level—55DB. Range 50-7000 cycles. Diameter of Microphone approximately 2 1/2 in. Stocks are limited and as these are American manufacture we cannot tell if and when further supplies will be available (Without Stand). **£5/10/-** Cat. No. AM155

**"HOOVER" 1 H.P. MOTORS**

Just landed. Famous "Hoover" brand Electric Motors 1 h.p. Sleeve Bearings. Excellent for saw benches, planes, etc.

**NEW LOW PRICE! £7/16/-**  
Cat. No. AM384

**OUR GUARANTEE!**

The Lamphouse 7-DAY MONEY BACK GUARANTEE protects your every purchase.

**"ULTIMATE" IMITATION COAL FIRES**



A well made 2000 watt Radiator incorporating the imitation "heaped-coal" effect. Switch on side enables elements to be controlled individually. The fire is finished in a light crackle finished grey or cream colour while all the trimmings are in chromium. Dimensions: Height 26 in., Width 20 in., Depth 8 in. Cat. No. AE381 ... **£14/15/9**

**WHY WASTE MATCHES?**

The "Firefly" Gas-lighter is operated by simply pressing the bottom, which connects a self-contained torch battery to the lighting filament. Ordinary torch battery used as a refill, costs 9d., lasts approx. 6 months. N.Z. made and patented.



Cat. No. AE39 ... **5/-**  
Spare Filament Tips—Cat. No. AE40 ... **2/-**

**PERLUX "PHOSPHO-GLO" TORCHES**



Just the latest thing in torches. The plastic body is moulded with a luminescent material which causes it to glow in the dark. It's not only a novelty but a very practical idea. Length of torch 7 in. Fitted with pre-focus bulb. Uses two standard size torch cells. Supplied complete with globe and battery. **12/6** Cat. No. AT814

**"PERLUX" UNBREAKABLE TORCHES**

Similar size, etc., to the above but moulded in a heavy yet flexible plastic for rough usage such as garages, factories, tramping, etc. NOT LUMINOUS. Supplied complete with batteries and globe. **12/6** Cat. No. AT818

**WAR SURPLUS BARGAIN PARCELS!**

**No. 1 VALVE PARCEL**

- Comprises SIX VALVES  
2 Type 6X5GT  
2 Type 6U7G  
2 Type 6Q7GT

Separately these valves would total £1/10/4 but supplied as a BARGAIN PARCEL

Cat. No. AX121 ... **22/6** Lot

**No. 2 ASSORTED PARCEL**

- 2 IK5G Valves  
6 Oral Water Valve Sockets  
4 1/2 Link Plastic Insulators  
2 Small Pointer Knobs  
10 Assorted Tubular Condensers  
10 Assorted 1-watt Resistors  
2 dozen Assorted Terminal Strips

Items priced individually would total £1/1/3 but supplied as a BARGAIN PARCEL

Cat. No. AX122 ... **15/-** Lot

**No. 3 DE-LUXE PARCEL**

- 4 6U7G Valves  
1 6X5GT Valve  
1 6Q7GT Valve  
1 IK5G Valve  
1 1LD5 Valve  
12 Oral Water Valve Sockets  
1 0-300 M.A. Micro-Amp. Meter  
4 Small Pointer Knobs  
1 Complete Aerial Stay Set  
24 Assorted Terminal Strips  
10 Assorted 1-watt Resistors  
10 Assorted Tubular Condensers  
2 I.F. Transformers  
3 S.C. Jacks  
1 Meter Rectifier

Items priced individually would total £6/3/8 but supplied as a BARGAIN PARCEL

Cat. No. AX123 ... **£4/10/-** Lot

**No. 4 METER PARCEL**

- Comprises THREE METERS  
"WESTON" 0-100 M.A. 2 1/2 in. Round R.F. Milliammeter. Flush mounting—Plastic case. Manufactured in the United States by the Western Electrical Instrument Corporation, and still packed in original sealed carton.  
"FERRANTI" 0-300 Micro-Amp. 2 in. Round Meter. Flush mounting—Plastic case. Luminised dial. Brand new in sealed cartons.  
"DE-JUR" 0-1 M.A. 3 in. Round Moving Coil D.C. Meter. Flush mounting—Plastic case 1000 ohms. per volt; internal resistance 60 ohms. Manufactured in the United States. Cartoned brand new.

The true value of these Meters would be in the vicinity of £10 but as a BARGAIN PARCEL ... **£5/1/-** Lot  
Cat. No. AX124

**MAIL YOUR ORDER NOW TO THE ELECTRIC LAMPHOUSE**  
11 MANNERS ST., WELLINGTON

# CABLE PRICES SLASHED!

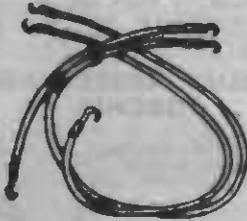
Special purchases enable us to make slashing reductions in certain types of wires and cables. These cables will sell quickly. Order Early.

## AEROPLANE CABLE

Primarily designed for use in planes, the following cables can be used for any purpose requiring a well insulated, water and oilproof flexible cable. Cables consist of multi-stranded flexible copper wire heavily insulated with rubber and covered overall with a glazed fabric to make it oil and water proof. Selling at a fraction of its original cost—Ideal for Motor Car and Boat Wiring.—HUGE REDUCTIONS!

AX1465—44/012 19 amp. Single	20/-	per 100 yd. Coil.	4 <sup>D</sup> .	per yd. or	3/-	doz. yds.
AX1469—44/012 19 amp. Twin	30/-	per 100 yd. Coil.	5 <sup>D</sup> .	per yd. or	4/4	doz. yds.
AX1466—135/012 37 amp. Single	25/-	per 100 yd. Coil.	4 <sup>D</sup> .	per yd. or	3/6	doz. yds.
AX1470—135/012 37 amp. Twin	36/-	per 100 yd. Coil.	6 <sup>D</sup> .	per yd. or	5/3	doz. yd.

## POWER LEADS



Comprises 3 pieces of Single, Heavy Core Rubber Flex in lengths of 3ft., 3ft., and 1ft. The 4 ends finish off with heavy spade lugs.

Cat. No. AX1097 1/- set

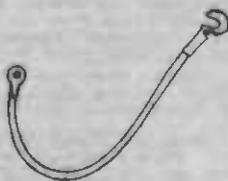
## SPEAKER CABLE

WIRES SUITABLE FOR SPEAKER EXTENSIONS, TALK BACK SYSTEMS, BELL INSTALLATIONS AND SIMILAR PURPOSES.

2-Wire Twin Twisted P.V.C. Flexible Stranded Copper Wire. 6<sup>D</sup>. Yard  
Cat. No. AW87A

2-Wire Rubber-Covered Flexible Wire, covered overall with a waterproof beaid. 6<sup>D</sup>. Yard  
Cat. No. AW87

## RUBBER-COVERED EARTH LEADS



These consist of two 2ft. leads of Single Heavy Core, Rubber covered flex with eyelet type lugs (1/2 in. diam.) on one end and heavy spade lugs on the other. 11 1/2<sup>D</sup>. Pair  
Cat. No. AX1074

## UNIPROOF CABLES

Flexible cable, Copper core insulated with rubber and braided overall with yellow proofing. Ideal for lead in wires, set connectors, etc.

Cat. No. AX1456—16/012 Single 7 Amp. 12/6 per 100 yd. coil, 3d. yd. or 2/- doz. yds.

Cat. No. AX1455—44/012 Single 19 Amp. 15/- per 100 yd. coil, 3d. yd. or 2/4 doz. yds.

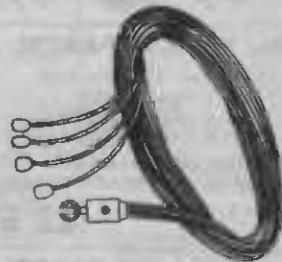
## HIGH TENSION CABLE

Very flexible insulated cable. Ideal for any purpose requiring a very flexible insulated cable, the heavy rubber insulation makes it suitable for high tension. Copper flexible core (16/012) Rubber insulated.

Cat. No. AX1458—7 M/M. 25/- per 100 yards or 4<sup>D</sup>. yard.

Cat. No. AX1458A—7 M/M. 25/- per 100 yards or 4<sup>D</sup>. yard.

## COUNTERPOISE LEADS



This counterpoise is made up of four 12ft. lengths of rubber-covered flex terminating in a spade lug type junction box. 2/11 set  
Cat. No. AX1072

## BARE WIRES

### BRASS WIRE

Bare Brass Wire in coils of about 40ft. 17 S.W.G. Many useful purposes. 9<sup>D</sup>. each  
Cat. No. AX1488

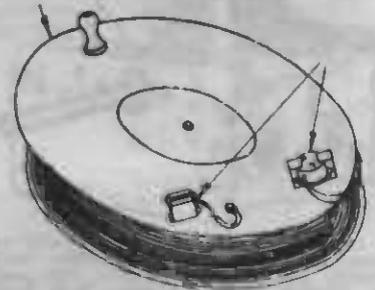
### TINNED COPPER WIRE

50ft. Coils 23 S.W.G. Bare Copper wire for set wiring, etc. 1/- coil  
Cat. No. AX1105  
2ft. Coils 18 S.W.G. Tinned Copper Wire. 1/- coil  
Cat. No. AX1101

## DUPLEX 37

Extra heavy 2 Wire Flexible Cable 136/012 stranded copper core insulated with rubber padded with cotton and braided overall. Excellent for heavy duty appliances. 37 amp. Cat. No. AX1453 Worth 3/- yard but now 1/6 yd. or £5/0/0 per 100 yds.

## FIELD CABLE



Metal Reels, containing approx. 60 yds. Twin Twisted Yellow and Black stranded (6 Iron 1 Copper) flexible Cable. Insulated with plastic P.V.C. Excellent for telephones, bells, etc., etc. Cat. No. AX1189 18/6 each

Metal Reels only: 8 1/2 in. diam. 1/6 each  
Cat. No. AX1082

## MICROPHONE CORDS

Surplus from Army Microphones. 6ft. in length: 3 wires terminating in neatly formed rings at each end. Each lead is individually coloured. Cotton braiding overall. Many other purposes can be found for these high quality 3 wire cords. Would cost twice the price to manufacture. 1/- each  
Cat. No. AX1236

## SHORT LENGTH WIRES

Four single lengths of rubber or braided cord twisted together. Each piece 2ft. 6in. in length. General purpose connecting wire. Because these are in cut lengths it reduces their value—so out they go. 4<sup>D</sup>. Set  
Cat. No. AX1181

## ZC1 2 WIRE POWER LEADS

Heavy Power Leads. Rubber insulation over heavy conductors. Leads are 4ft. in length and terminate in right angle spade lugs. Two leads to a set. 1/3 Set  
Cat. No. AX1186

## RUBBER LEADS

6in. Tough Rubber Leads. Stranded single wire with galvanised spade lugs on one end and ring lug on other. Handy little lead with many uses. 6<sup>D</sup>. each  
Cat. No. AX1351  
Similar to above 16in. in length. 9<sup>D</sup>. each  
Cat. No. AX1352

## WINDING WIRE

27 S.W.G. Single Cotton Covered copper wire in approx. 7lb. reels. Worth 6/- lb. but special buying enables us to offer— 2/9 lb.  
Cat. No. AX1487 (Reel lots only)

PROSPECTIVE BUYER — ALL GOODS LISTED IN THIS CATALOGUE ARE COVERED BY OUR 7 DAY MONEY — BACK GUARANTEE



# GREAT VALUE IN ELECTRIC CLOCKS!

## Exchange Off ——— Reduced Prices!

### "SMITH" ELECTRIC CLOCKS

MANUFACTURED BY ENGLAND'S LEADING CLOCK DESIGNERS.

The illustrations below show four of the many Electric Clocks produced by Smith's, England. The designs are very attractive and the workmanship the best.

#### THE "SOVEREIGN"



Beautifully designed in an ivory plastic case. Height 6in.; width, 7 1/2in.; depth 2 1/2in. Gilt Bezel—Striking figures. Ideal as mantel clock for Dining Room.

WERE 14/3/- NOW **59/11**  
Cat. No. AE891

#### THE "EXMOOR"



An attractively designed clock in Chrome end Plastic that would be an added beauty to any room. 6in. diameter circular dial is easily read with bold black numerals on a silvered background. Height 6 1/2in. Plastic Base 7in. x 1 1/2in. The plastic is toned in walnut and the trimmings are chromium. A clock we can recommend for your lounge, dining room, sitting room, etc. NORMALLY 15/17/6.  
Cat. No. AE882— NOW **79/11**

#### THE "RAMSAY"



A small clock for the bedroom, office, etc. Walnut Plastic Case. Height 5 1/2in.; width, 5 1/2in.; depth, 2 1/2in. Two tone dial face with gilt trimmings. GREAT VALUE!  
WERE 13/17/- NOW **55/11**  
Cat. No. AE883

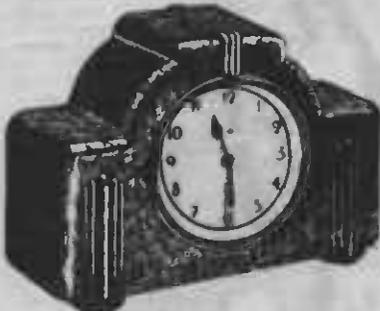


#### THE "RADLEY"

Another small mantel model for any room in the house. A neat and attractive shape. Height, 5in. Width, 5in.; Depth, 2 1/2in.  
WERE 14/3/- NOW **55/11**  
Cat. No. AE892

Take advantage of this Great Offer while stocks Last.

### "ELCO" ELECTRIC CLOCKS



#### LIMITED QUANTITIES!

Another well-known make of English Clock. Attractively designed in a Walnut moulded plastic case measuring: Length 8in.; Height, 6in.; Depth, 2 1/2in. The dial face is silvered with the figures and hands in black for easy reading. Supplied complete with flex and plug already to plug into your nearest light socket or hotpoint. WERE 95/- NOW **55/11**  
Cat. No. AE878

#### Smaller Model

The mechanism of this clock is similar to the model described above but mounted in a smaller rectangular case—Walnut plastic 5 1/2in. x 4 1/2in. x 2in. The dial on this model is silvered while the hands and indications are a luminous green colour.

Supplied complete with flexible silk covered cord already to plug in. NOW **45/11**  
Cat. No. AE877— WERE 72/6

## REMINGTON SHAVERS

### HOW TO BE LAZY

15 MINUTES LONGER EACH MORNING.



Let the "Remington Foursome" Four Head Electric Shaver cut your Shaving Time to Seconds!

Gives a smooth, clean shave without the use of soap and water. Fitted with the famous "BLUE STREAK" 2 in 1 CUTTING HEAD!

The complete unit is enclosed in a beautiful Ivory Plastic Case and is fitted with a snapfit, lucite head-guard to protect the heads when not in use. Manufactured by a subsidiary company in England for the well-known American firm. Supplied complete with 6ft. rubber flex all ready to plug-in to your light socket or hotpoint. 230 v. AC/DC.  
NEW LOW PRICE! **£8/10/-**  
Cat. No. AE490—

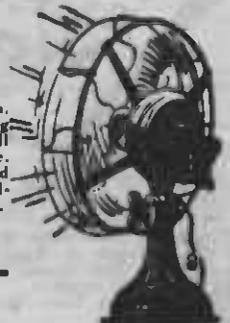
Shave the MODERN WAY

### ELECTROWAY HEATING PADS

Recommended for people confined to bed these Heating Pads are plugged into a hotpoint or light socket and give a comfortable warmth without any attention whatsoever. The pad is 20 1/2in. long and 15in. wide allowing it to be placed over or wrapped around different parts of the body. Switch in lead allows it to be switched on and off without moving from the bed. English manufacture. **57/6**  
Cat. No. AE83

### "HAWKINS" FANS

English made 12in. Hawkins Oscillating Electric Fans. All metal. Heavy base. Fan facilitates to and fro and can be adjusted to any angle.



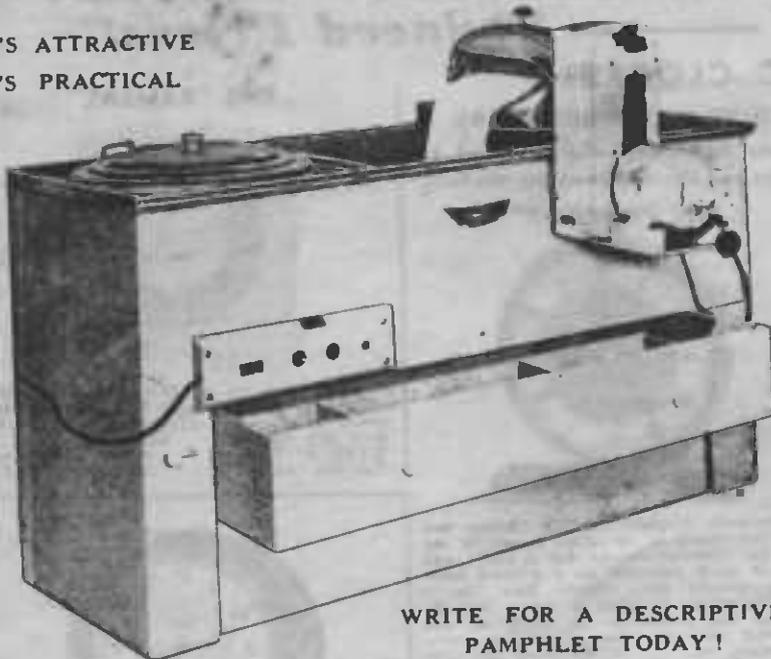
Cat. No. AE121— **£5/5-**

Try any line in this Catalogue at OUR RISK!

Any goods that prove in any way unsuitable may be returned undamaged within seven days from receipt and your money will be refunded in full.

**A COMPLETE LAUNDRY IN ONE UNIT!**

IT'S ATTRACTIVE  
IT'S PRACTICAL



WRITE FOR A DESCRIPTIVE  
PAMPHLET TODAY!

**The "Hayman"  
PATENT COMBINATION  
ELECTRIC LAUNDRY UNIT**

Incorporates all of the following: 14-gallon Electric Washer Boiler, 2 large everlasting shining Metal Tubs, Built-in Ironing Point, Ironing Table Top, Ironing Skirt Board, Spacious Drawer, simple and easy hand-operated attachment for woollens and coloureds, convenient Soiled Clothes Bin. AND IT'S FITTED WITH AN ELECTRIC WRINGER!

This "Housewife's Delight" is supplied with a Motor-Driven Wringer which will slide as shown to any desired position over tubs and boiler. When not in use the Wringer slides up to the end of the Unit and the Ironing Top is fitted in place.

Actual Dimensions of Unit: Length 5ft. 1in., width 2ft., height 2ft. 9in. Uses a new type of electric washer that boils and washes clothes snow-white without labour and at trifling cost by the scientific and hygienic method of the boiling water process.

BANISH THE HARDEST WORK OF WASH DAY!  
Cat. No. AE70—  
WITH ELECTRIC WRINGER **£97/11/6**

*Boiled Clothes  
are Cleanest*

A very popular handsome model of modern design. Efficiently lagged. Attractive nickel-plated rim, spun lid, 2-heat switch. Red Pilot Lamp, drain tap, 2yds. flex cord. A very sturdily built washer for a lifetime of service.

Diameter 21in., height 2ft. 8in. Elements, 2,200 watts, 230 volts. 14 gallon capacity. Plugs into standard 3-pin plug socket.



THE



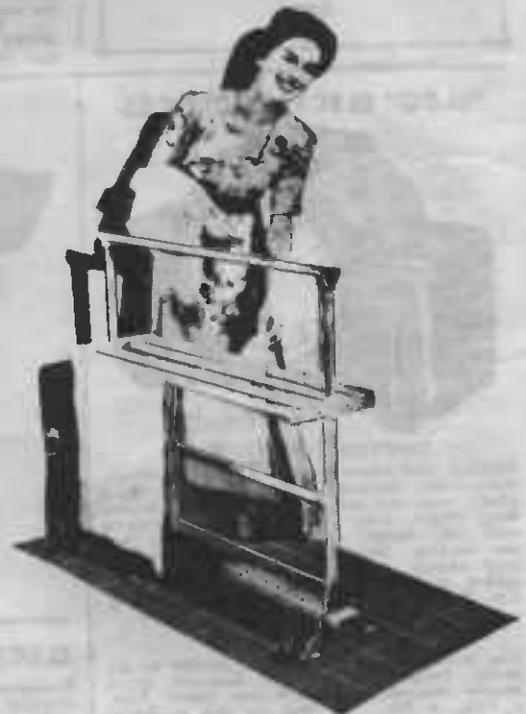
Complete  
Cat. No. AE65— **£17/11/-**

NOTE THESE UNIQUE FEATURES:

Boils Electrically.  
Hygienic, Snow-white Wash.  
No Damaged or Torn Garments.  
Ideal for New Homes (no chimney or Hearth needed).  
Low Running Cost (less than 3d. wash).

Everlasting—Copper throughout.  
Fast Boiling.  
Washes Woollen and Coloured Garments.  
Reasonably Priced.  
Wonderful for Bottling Fruit, etc.

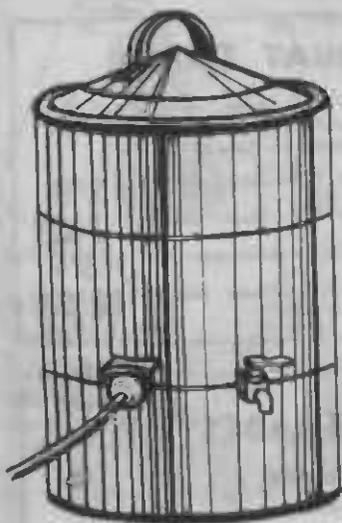
**"HAYMAN" CLOTHES DRYER**



THE SOLUTION TO WET WEATHER WASH DAYS:

An electrically heated Airing and Drying Rack with 18ft. of Drying Rods in a floor space of 3ft. x 1ft. Children's Clothing, Bed Linen, Towels, Socks, Napkins—anything from a Bib to a Blanket made bone dry indoors, Day or Night, Wet or Fine. Operates for 3 hours for 1d. Gives a constant stream of warm, dry air, rising through the garments. 12 months' guarantee. Fitted with 6ft. flex and 3-pin plug top. **£6/15/-**  
Cat. No. AE288

# AIDS TO EASIER HOUSEKEEPING!



## The Copper

### The "Oxford" 14 Gallon Electric Copper

That Doesn't Smoke!  
That You Don't Have to Stoke!  
That You Don't Have to Clean!  
That is so Economical!

Just plug into a hotpoint. The ideal means of electric washing. Copper is supported in a robust outer iron casing as illustrated. Filled with water and clothes takes approximately 1 hour to boil at summer temperatures, in winter a little longer. The 3000-watt heating element is housed in special circulating chamber under the copper, which ensures maximum efficiency quick heating and fast continuous movement of water right through the clothes as though worked by a motor-driven pump. By this means the clothes are washed quicker and cleaner than in a washing machine.

Circulating chamber well lagged for greatest efficiency. Standard finishes dark green, ivory, special colours to order.

Electric coppers save the cost of a chimney: they are quicker, cleaner, and mean a lot less work. Height 29in., diameter 19in.

Cat. No. AE64

£17/10/-



## ELECTRIC CUPBOARD HEATERS

Keep your Household Linen dry and free from dampness. Here is a Cupboard Heater that will operate at almost negligible cost; can be mounted on the floor or screwed to the wall in a vertical or horizontal position. Emits warm, dry air from a large low temperature heating surface.

Operates for seven hours for One Penny!

Size actual unit: Length 2ft., Diameter 2in.; protecting Gauze Surround, 4in. high x 5in. wide; 230 v.—150 watts. Supplied without flex.—Cat. No. AE289

43/6

6ft. Cord and 3-pin Plug fitted at 6/- extra.

SAFE—RELIABLE—MODERN

## "SPEEDEE" TABLE STOVES



This compact, sturdy, reliable Table Stove has countless uses in every home. Living up to the motto that "Speedee" appliances are definitely faster, it has its most useful moments when making the bowl of hot soup for cold winter afternoons, or when making that "last cup" before bedtime.

12 MONTHS' GUARANTEE!

Cat. No. AE459—2 heat . . . . . 37/6

Cat. No. AE458—Single heat . . . . . 27/6

## America's Finest Pressure Cooker is here . . . . Hawkin's Universal Pressure Cookers



Available in 5 sizes—7 pints; 8 1/2 pints; 10 1/2 pints the latter size has specially ground base for use on Electric Ranges.

Look at these Features!

● **SAFE T - SEAL COVER** is sealed by cooking pressure and cannot be opened until pressure is lowered and it is safe to open.

- **VENT-WEIGHT** maintains correct cooking pressure automatically.
- **'OVER-TEMPERATURE' PLUG** provides complete safety by releasing pressure automatically if, through serious inadvertance, simple instructions are not followed.
- **COVER LOCKING DEVICE** permits single-handed operation. Handles are made of bakelite, always cool to the touch.

Pressure Cooking gives Perfect and more Nutritious Cooking.

Illustrated booklet giving full cooking details supplied with each unit.

The Hawkins Universal is built under License from Landers, Frary and Clark, of New Britain, U.S.A., by L. G. Hawkins & Co. Ltd., London.

Cat. No. AE54—7 Pint . . . . . £5/7/6

Cat. No. AE55—8 1/2 Pint . . . . . £5/10/-

Cat. No. AE56—10 1/2 Pint . . . . . £6/16/-

# Parchment & Plastic Lamp Shades

## COLOURS

All shades on this page can be supplied in the following colours. Red, Pink, Orange, Lemon, Pale Green, Pale Blue, as well as plain White. Please state colour when ordering.

### SMALL EMPIRE

Small shades for bracket lights or hanging lights in small rooms.  
Diameter 5in.  
Height 4in.

Cat. No. 7/P/R—Parchment **2/9** each

Cat. No. 7/P/Z—Plastic **4/6** each

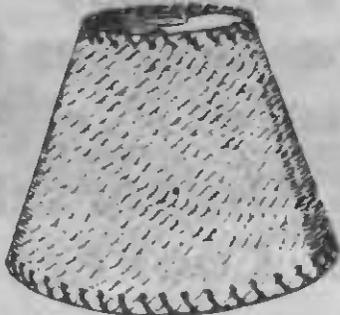


Shades similar to above but supplied with clip for clipping directly on to upright lamp bulbs.  
Cat. No. 7A/P/R—Parchment **2/9** each

Cat. No. 7A/P/Z—Plastic **4/6** each

### EMPIRE SHAPE 8in.

Height 8in. Diameter 8in. Laced with Rayon.



Cat. No. 3/P/R—Parchment **3/6** each

Cat. No. 3/P/Z—Plastic **6/-** each

### EMPIRE SHAPE 10in.

Height 7in. Diameter 10in. Laced with Rayon.



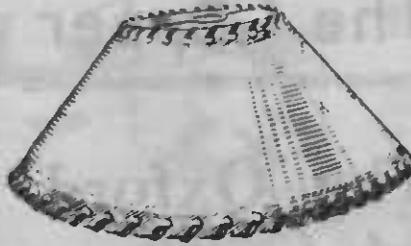
Cat. No. 1/P/R—Parchment **3/9** each

Cat. No. 1/P/Z—Plastic **7/11** each

### CLIP FITTINGS

All shades up to 14in. diameter can be supplied with clip fitting for use with table lamps at no extra cost.

### SQUAT EMPIRE



Low and wide shape which allows for maximum of light. Available in 10 and 14in. diameters as follows.

Cat. No. 15/P/R—Parchment 10in. **3/9**

Cat. No. 15/P/Z—Plastic 10in. **7/6**

Cat. No. 6/P/R—Parchment 14in. **6/-**

Cat. No. 6/P/Z—Plastic 14in. **12/6**

### PLASTIC WAVED SHADES

Modern Gleaming Plastic



Made in six soft pastel colours and its "chic" shape makes it universally popular for lounge, breakfast room, or Milady's Boudoir. The fine tinting on the translucent plastic enables you to obtain the maximum, yet a soft light. Bound with rayon to match.

Cat. No. 36/P/R—12in. diameter **13/6** each

Cat. No. 49/P/R—10in. diameter **12/6** each

Cat. No. 48/P/R—9in. diameter **7/6** each

### FLOOR LAMP SHADES



Two sizes available. Especially suitable for floor standards but can also be used as hanging shades in large rooms, halls, etc. Rayon braid.

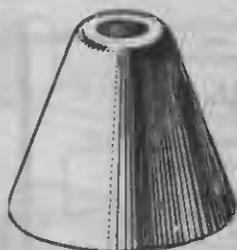
Cat. No. 32/P/R—20in. Diameter Parchment **21/-** each

Cat. No. 32/P/Z—20in. Diameter Plastic **29/6** each

Cat. No. 30/P/R—24in. Diameter Parchment **30/6** each

Cat. No. 30/P/Z—24in. Diameter Plastic **44/-** each

# LAMPSHADES — METAL AND PLASTIC



## PLASTIC SHADES

Cat. No. AF661—  
4 1/2 in. high, 5 1/2 in.  
diam. Green, Ivory  
and Pink.

**2/1** each

## TERRACED PLASTIC SHADES

4 1/2 in. high, 4 1/2 in. dia-  
meter, available in  
Ivory, Pink, and  
Green.

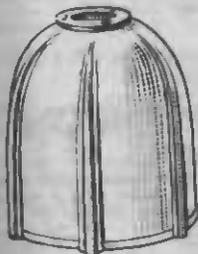
Cat. No. AF662—  
**1/10** each



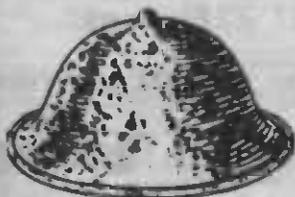
## "TULIP" PLASTIC SHADES

5 in. high, 4 1/2 in. dia-  
meter. Moulded in  
attractive pastel ton-  
ings, pink, green, or  
white.

Cat. No. AF663—  
**3/10** each

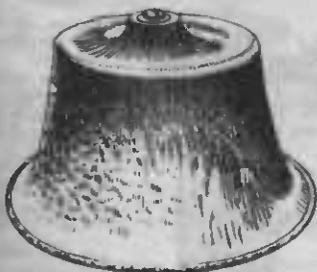


## "NIPPY" LAMPSHADES



Made of translucent plastic, these shades are  
fitted with a wire clip which clamps direct on  
to the lamp bulb, making them ideal for adjust-  
able table lamps, etc. Available in most popular  
colours. Diam. 5 1/2 in. **2/-** each  
Cat. No. AF255

## "CLIP-ON" SHADES



Another fancy shape in Plastic Shades. Several  
pastel tonings. Provided with clip for attach-  
ing to Reading Lamp bulb, etc. Dimensions:  
Diameter, 6 in.; height, 3 1/2 in. **2/11**  
Cat. No. AF256

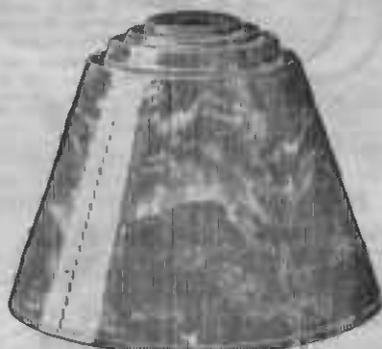
## "BELL" SHADES



A novel shape in Plastic Shades. Tinted in a  
Pink Pastel toning. Very strong yet light.  
Dimensions: Diameter, 6 1/2 in.; height, 5 in.

Cat. No. AF257 ... **3/6** each

## BEAUTIFUL SHADES



Attractive translucent Plastic Lamp Shades in  
the following colours: Pink, Mauve, White,  
Green, Blue, Yellow. Size 7 in. diameter, 5 in.  
high.

Cat. No. AF259 ... **2/3** each

## OPAL TYPE SHADE



Moulded in New Zealand these Plastic shades  
take the place of the old glass opal shades.  
Very strong and light. Supplied in plain white  
and pastel tints.

White—Cat. No. AF560 ... **1/8** each  
Tinted—Cat. No. AF561 ... **1/9** each

## THE "PLASTIC COOLICON"



"COOLICON" Lampshades are ideal for all  
lighting, whether in the home, warehouse or  
factory. There are two types in these fittings;  
one plastic and the other vitreous enamelled  
steel. The plastic type shown above is ready  
to fit on to the standard lampholder—no acces-  
sories are necessary. The plastic is strong,  
and will not discolour with the heat.

9 in. Type—Takes 40/75 watt **8/9** each  
globes. Cat. No. AF950

11 in. Type—Takes 100/150 watt **10/6** each  
globe. Cat. No. AF951

## THE "METAL COOLICON"



This shade is similar to the plastic version,  
except that the framework is of a grain vitreous  
enamelled sheet steel. The inside is coloured  
white to give the maximum in lighting efficiency.

9 in. Size—Takes 40/75 watt **9/9**  
lamp—Cat. No. AF952

11 in. Size—Takes 100/150 watt **11/9**  
lamp—Cat. No. AF953

MAIL ALL ORDERS TO . . .

**THE  
ELECTRIC LAMPHOUSE  
LIMITED.**

11 Manners Street, Wellington, C.I.

## BULK PURCHASE IN SHADES!

### 10in. ENAMELLED LAMPSHADES

10in Lampshades, white enamelled interior and blue  
enamelled outside. This type of shade is very popular  
for general use in the home, office, factory, warehouse,  
etc.

A Bulk Purchase of over ten thousand of these  
shades enables us to sell them to you at  
approximately half the price they cost to  
manufacture.

Cat. No. AF600—  
**GREAT VALUE!**  
**1/7** each or **16/11** dozen



# LAMP FITTINGS

# BRACKETS

## GALLERIES FOR GLASS LAMP SHADES

All the following have a standard 1 1/2 in. hole for fitting on to standard size lamp-holders.

Brown Bakelite Moulded Gallery 2 1/2 in.—  
Cat. No. AF350—  
1/3 each



Cat. No. AF351—Ditto, 3 1/2 in. .. 3/9  
Cat. No. AF352—Ditto, 4 1/2 in. .. 4/-  
Cat. No. AF356—Ditto, 4 1/2 in. white .. 4/3

## METAL GALLERIES AS ABOVE Oxidised Copper

Cat. No. AF353—2 1/2 in. .. 1/3  
Cat. No. AF354—3 1/2 in. .. 3/6  
Cat. No. AF355—4 1/2 in. .. 4/9  
Cat. No. AF379—Ditto, with hook .. 6/-

## CHROME FINISH

Cat. No. AF357—2 1/2 in. .. 1/9  
Cat. No. AF358—3 1/2 in. .. 4/9  
Cat. No. AF359—4 1/2 in. .. 5/3

## CHROME CEILING GALLERIES

Cat. No. AF360—3 1/2 in. .. 7/6  
Cat. No. AF361—4 1/2 in. .. 8/9

## FITTING ACCESSORIES

### DEEP 3-HOOK CEILING CANOPIES

Has three hooks for hanging bowl fittings, etc. Deep enough to fit right over the ceiling rose, thus saving the expense and trouble of removing the ceiling rose and block to fit a special connecting block. Oxidised copper finished.

Cat. No. AF310 .. 4/3

### SHALLOW 3-HOOK CEILING PLATES

Serves same purpose as the Deep 3-Hook Canopy described above. The mounting plate is flat, which necessitates the removal of the ceiling rose. Diameter 3 in. Oxidised Copper Finish.

Cat. No. AF309 .. 3/10

Similar type of plate but with Single Hook. Nickel Finish.—Cat. No. AF313 .. 3/9 each

## CHROME CHAIN

For Hanging Bowl Fittings, etc., 1 1/2 in. x 1 in. Cross Links. Also ideal for Hanging Mirrors.  
Cat. No. AF316 .. 3/3 yard

## HOOKS AND BUTTONS

3 in. Nickel Plated Hooks, complete with washers and nut.—Cat. No. AF323 .. 1/9 ea.

## BOWL BUTTONS

Oxidised. Complete with washers and nuts.  
Cat. No. AF325 .. 5 D. each

Prices for other Fitting Accessories on application.

## SHADE HOLDERS

Shade Holders for table lamps. Oxidised finish. Hinged in the centre so that the shade can be tilted.

Cat. No. AG36 .. 2/3 ea.

Similar to the above, but chrome plated.

Cat. No. AG37 .. 3/3 ea.



## SHADE HOLDERS

For fixing Shades to table lamps. Non adjustable type.

Cat. No. AG38 .. 2/3 each

## SHADE CLIPS



Can be attached to any Lamphade. By using this Clip an ordinary lamphade can be converted to fit a reading lamp without the usual shade carrier.

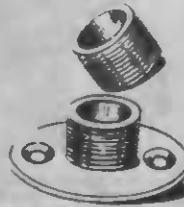
Just clips straight on to the globe.

Cat. No. AF381 .. 6 D. each

## NIPPLES

Threaded Brass Tube for making tabs lamps, etc. Fit standard 3 in. lamp-holders.

Cat. No. AG300—  
6 D. each



## FLANGES

Cat. No. AG306—1 in. .. 9 D. each

## FLANGES

Metal Conduit Flanges to fit 2 in. Conduit.

Cat. No. AN1—w/male thread .. 4 D. each

Cat. No. AN2—w/female thread .. 4 D. each

## "COYLROD" TANK HEATERS



Water Heater for permanent installation in Tanks, Water Cylinders, etc.

Cat. No. AE540—750 watt .. 22/- each

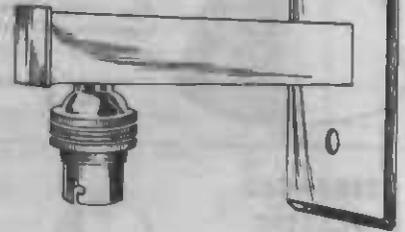
Cat. No. AE541—1000 watt .. 22/- each

Cat. No. AE547—1500 watt, 3 heat type .. 37/6 each

Brass Flanges for fixing above.  
Cat. No. AE543 .. 5/9 set

## WALL BRACKET

Square type. Back Plate 4 1/2 in. x 2 1/2 in. Length of arm 5 in. Complete with lampholder. All chrome.  
Cat. No. AF803—14/- each



## WALL BRACKETS



Chrome 9 in. Wall Brackets, complete with Lampholder. Best quality.  
Cat. No. AF801 .. 12/- each

Cat. No. AF802—Ditto 6 in. size complete with Lampholder. .. 11/- each

## Well-Glass Watertight Fittings

### For OUTSIDE LIGHTING

Cat. No. AE842—  
60 watt size. Complete with holder.  
14/- each

Cat. No. AE841—  
150 watt size. Complete with holder.  
16/- each

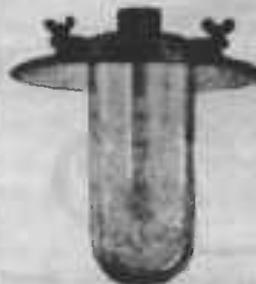


Similar to above, but with enamelled reflector.

Cat. No. AE847—  
150 watt size. Complete 17/3

SPARE GLASSES  
Cat. No. AE844—  
60 watt size 5/9

Cat. No. AE843—  
150 watt size. 6/9



# FLUORESCENT — READING LAMPS

*Something Better*

**has come to light!**



## "NEON" FLUORESCENT FITTINGS

This new modern lighting is becoming increasingly popular both for commercial and household use. The high output and low current consumption makes Fluorescent Lighting economical as well as attractive. Gives approximately three times as much light as an ordinary globe using the same amount of current. A double 40-watt unit would produce as much light as a 200-watt electric light globe. Ideal for the home, office, warehouse, shop, factory, schoolroom, restaurant, etc.

**THERE'S NO GLARE—AND PRACTICALLY NO HEAT!**

### SINGLE 4ft. 40-WATT FITTING

The top illustration shows a single tube fitting with an output of 40 watts, suitable for medium size rooms, offices, shop windows lighting, counter lighting, etc. All the accessories are wired into the channel and terminate in a length of ordinary flexible cord to plug into your light socket or hotpoint.

**NO WIRING NECESSARY!**

Plugs straight in and is ready for use. Specifications: Length, 48in.; Depth, 3½in.; Width, 3in.; Weight, 9½lb.  
Cat. No. AL710 .. **£5/12/6**

### DOUBLE 4ft. 40-WATT FITTING

This fitting uses two 40-watt tubes and is ideal for large rooms, offices, warehouses, shops, showrooms, etc. The tubes are mounted in plastic holders on two chromium rods. All accessories are mounted in the ivory coloured unit box which fastens the whole fitting to the ceiling.

As is the case with the single unit the fitting is already wired to be plugged straight into your hotpoint or light socket. Specifications: Length, 48in.; Depth, 7½in.; Width, 4½in.; Weight, 11½lb.  
Cat. No. AL713 .. **£11/17/6**

**BOTH UNITS DESCRIBED ABOVE ARE QUOTED COMPLETE WITH TUBES**

### Tube Colouring

Tubes can be supplied in three different tonings—Daylight, Warm-white or White. Give your preference when ordering.

### Spare Tubes

Cat. No. AL700—4ft. 40-watt Tubes **14/8**

### Spare Starters

Cat. No. AL720—For 40-watt Tubes **5/-**

## ASH-TRAY CHROME STANDARD LAMP



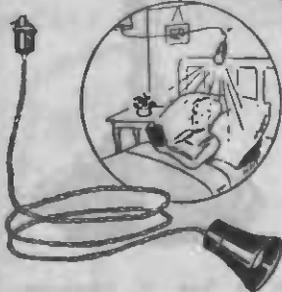
A distinctively designed Standard Lamp 3ft. in height for use as a Reading Lamp beside armchairs, settees, etc. Designed to meet the demand for a bantam size Standard these Lamps would make an attractive addition to any well furnished room.

Chrome tubing measures 3ft. from floor to lampholder; black coloured wooden base is 8½in. diameter. The Lamp is supplied complete with 6ft. flexible cord, switch on lampholder, globe and waved shade. (State colour preference when ordering.)

Cat. No. AF715—  
**COMPLETE £4/12/6**

## Lighting EXTENSION CORDS

**Read in Comfort!**



For taking the light where you want it. Ten feet long and supplied with an insulated shock-proof lampholder. Extra long lengths can be made up at 9d. yard extra.

Cat. No. AE51 .. **5/9**  
Cat. No. AE52 (with switch holder) **9/6**

## LAMPHOUSE GUARANTEE

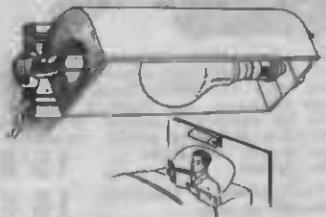
Any goods that prove in any way unsuitable may be returned undamaged within seven days from receipt and your money will be refunded in full.

## CHROME PENDANT RODS

Chromium plated Rods for supporting glass fittings. Supplied in several different lengths as given below. Each Rod is fitted with a lampholder, attachment for mounting to the ceiling and a chromium metal cup to slide up the rod, covering the ceiling mount and giving a finished appearance. Rods ¼in. diameter.

Cat. No. AF500—18in. Rod .. 17/4  
Cat. No. AF501—24in. Rod .. 18/10  
Cat. No. AF502—30in. Rod .. 20/4  
Cat. No. AF503—36in. Rod .. 21/10

## "BARONESS" PLASTIC LAMPS



Moulded in Plastic the "Baroness" is a new dual-purpose Reading Lamp to meet every need. Two rubber covered clips (covered so as not to mark your furniture) enable the "Baroness" to clip on the bed-head while special grooves in back plate of the lamp allow also for wall mounting. Standing the "Baroness" on a table gives an excellent bedside or desk-lamp.

**ATTRACTIVE—YET VERSATILE!**

The shade is swivel mounted to allow you to concentrate the light just where you want it. Lamp measures: Length, 9½in.; Width, 3½in.; Height, 6in. ON-OFF Switch mounted in base. Supplied complete with 9ft. flexible cord. Moulded in three Colours: Pink, Green, White.

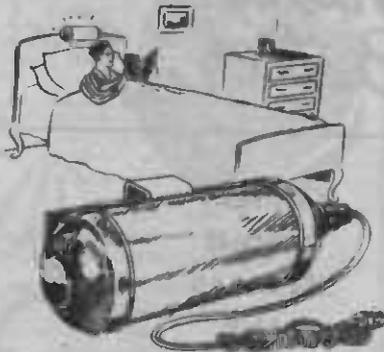
Cat. No. AF912 .. **38/6**  
(Without Globe.)

40-watt Globe .. **1/9 extra**

**PLEASE INDICATE ON ALL ORDERS WHETHER WE MAY SUBSTITUTE IN THE EVENT OF THE LINE ORDERED BEING OUT OF STOCK OR UNPROCURABLE.**

# A READING LAMP FOR EVERY PURPOSE!

## "LORAIN" TUBULAR PLASTIC BED LAMP



A superior quality Tubular Bedlamp of attractive and pleasing design. Comprises two circular end pieces of glittering chrome, a pastel tone plastic shade measuring 9in. in length, 4in. in diameter, with a heavy plastic back and clip for attaching to bed-rail. Switch is incorporated on the cord set fitting at one end of lamp. Each lamp is supplied complete with 10ft. flexible cord, light adaptor end globe.

Utility and Attractiveness Combined!

Cat. No. AF899 .. ONLY **39/6** each

## "NIPPY" CLIP-ON LAMPS



An excellent little Clip-on Lamp for the back of the bed—or any other situation—table, bookcase, etc. Adjustable Plastic Shade throws the light wherever you want it. Shades are available in numerous mottled colours, while the bracket is chromium plated. Complete with 5ft. flex, switch and globe.

Cat. No. AF906 .. **15/6** ea.  
Cat. No. AF906A Complete with adaptor or plug .. **16/6** ea.

## "PERLUX" DUAL PURPOSE LAMPS

A really handy reading Lamp which will clip on the bed rail or stand on a table. The shade is on a swivel and may be turned up or down. Finished in mottled colours. Complete with switch, lamp-holder, shade and globe, with approx. 6 feet flex. Moulded in plastic.



Cat. No. AF909—

**17/6**

Cat. No. AF909A—

Complete with adaptor or plug

**18/6**

## "DIAMOND SHAPED" READING LAMPS



A neat Wall Lamp. Has "Diamond" shape wooden base with switch and lampholder mounted. Attractive Parchment Shade can be supplied in different colour tonings. Nine feet flexible cord, globe and adaptor on each Lamp.

Cat. No. AF910 .. **32/6** ea.

## "SWAN NECK" READING LAMPS

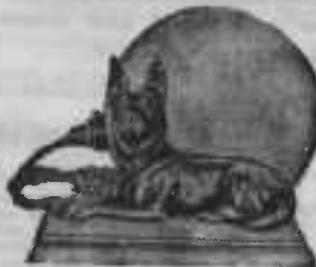


WALL LAMP, supplied with 3 yards flexible cord. Polished wood base, 3in. diam. Bracket extends 9in. Parchment shade. Switch mounted flush in base.

Cat. No. AF902 .. **35/-** each

Ditto, but using smaller 6in. Chrome-plated Bracket.—Cat. No. AF901 .. **33/6**

## "ORNAMENTAL DOG" READING LAMP



Here's the last word in a novel yet practical type of ORNAMENTAL READING LAMP. A highly polished casting of a dog is mounted on a wooden varnished base 8 1/2in. x 3in. x 1in. with a background of circular frosted glass. The globe fits on to a clip at the back of the glass and gives a beautiful effect when lighted. Supplied complete with 10ft. flex, holder with switch, globe and adaptor.

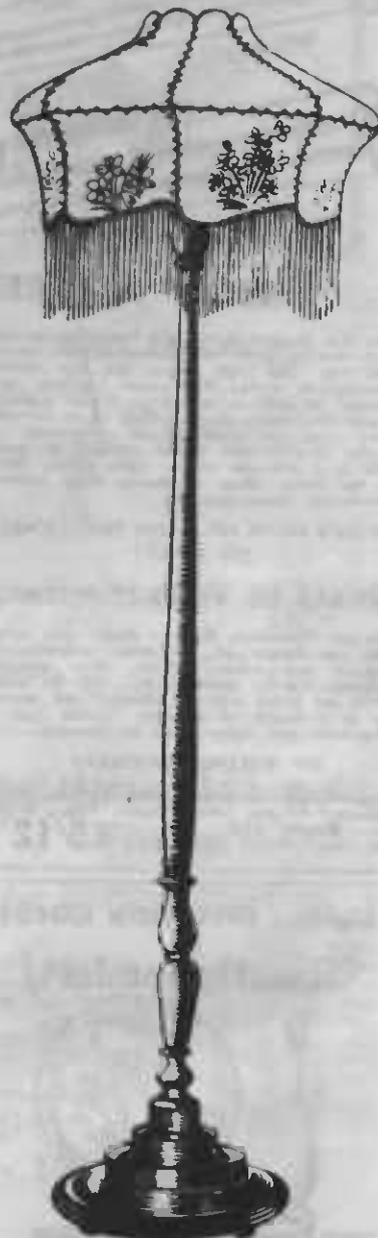
Cat. No. AF904 .. **45/-** each

Similar to above except with lion ornament in place of dog.

Cat. No. AF905 .. **45/-** each

## FLOOR STANDARDS

TURNED IN NEW ZEALAND FROM NEW ZEALAND WOOD



Height to base of Lampholder, 61in.; diameter of base, 14in. Supplied complete with 12ft. flexible cord. Lampholders with switch and shade holder.

The Lamp Shades are NOT included in the price. Refer to page 12 for suitable shades.

VARNISHED—HIGHLY POLISHED  
Cat. No. AF920 .. **£4/19/6**

## UNSTAINED FLOOR LAMPS

Similar to above but unstained.—

Cat. No. AF 919, Plain Turned .. **59/6**

Cat. No. AF918 Jacobean Twist (Spiral) .. **79/6**

# "ENSIGN" Chrome and Plastic Reading Lamps



Here is a DUAL-PURPOSE READING LAMP for use either on a Bedside-Dressing Table, or for hanging on the wall over the bed.

The PASTEL TINTED PLASTIC SHADE is mounted on a swivel so that you may have the light just where you want it.

Plastic Shades in all Colour Tonings

## AEROPLANE LAMP



Black wood base 6in. diam. Glass Ball 6in. diam. Plane mounted on chrome support. Supplied complete with 9ft. flexible cord. A novel decorative lamp.

Cat. No. AF903 .. .. **67/6** each

An Ivory-topped ON-OFF Switch is mounted in the base in an easily accessible position. Each Lamp is fitted with 9ft. of flexible cord and a plug for either the light or hot-point—whichever you desire. The glittering reflection from the combination of CHROME and PLASTIC make this lamp a

**BEAUTIFUL ADDITION TO ANY ROOM.**

Cat. No. AF921 - - New Reduced Price **49/11**

# The "ENSIGN" Flexible Arm Reading Lamp

A popular general purpose Flexible Arm Reading Lamp. Consists of a heavy cast base with a 15in. Chrome adjustable arm which may be moved or set to any angle

required. Its flexibility makes it ideal as a Desk Lamp for the student, the reader and business man or any engaged in close work at the office or in the home

## ASH TRAY READING LAMP



Chromium tube fitted to black, wooden base 7 1/2 in. diam. Chrome ash tray and flush ivory push switch mounted. Supplied complete with 9ft. silk covered flex, parchment shade, globe and adaptor.—Cat. No. AF923 .. **35/.**

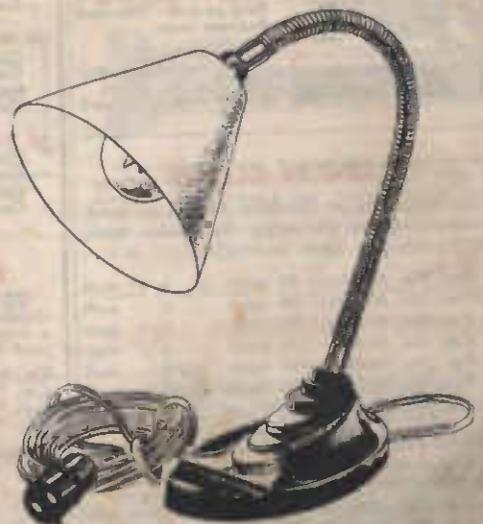
STATE YOUR SHADE COLOUR PREFERENCE WHEN ORDERING.

All lamps have Chrome Arms, but bases are in different colours, including antique, black and silver, flecked gold, etc. Supplied complete with 9ft. cord, adaptor, shade and globe. Switch is mounted on lamp holder.

**PRACTICAL AND NEAT!**

Cat. No. AF900

**29/6**



# Don't Grope in the Dark

# USE Mazda Lamps



## MAZDA GAS-FILLED GLOBES

Clear or Frosted. 240 v.

A gas-filled globe suitable for every purpose. Clear types as used for ordinary house lighting in sizes to sufficiently illuminate any room, no matter how large or small. Used extensively in shops, stores, and factories. The pearl type is used mainly in confined spaces, where a large amount of close work is done, or where work under artificial light for long periods is necessary. Frosted just sufficiently not to impair the efficiency of the Lamp, but to keep the sharp glare from the eyes. Ideal for Reading Lamps, Desk Lights, Offices, etc. STANDARD BAYONET BASE.



- Cat. No. AL215— 40 watt .. at 1/11 each
- Cat. No. AL216— 60 watt .. at 2/- each
- Cat. No. AL217— 75 watt .. at 2/9 each
- Cat. No. AL218—100 watt .. at 3/6 each
- Cat. No. AL219—150 watt .. at 6/- each
- Cat. No. AL220—200 watt .. at 9/- each

## MAZDA STANDARD VACUUM BULBS

Clear or Frosted. 240 v.



Low intensity, small consumption lamps for passages, halls, etc., or where it is necessary to have a small lamp burning over a long period. Standard Bayonet base.

- Cat. No. AL201— 15 watt 1/11 each
- Cat. No. AL202— 25 watt 1/11 each

## SCREW-IN GLOBES

The same type of Gas-filled Globes as previously described, but using the Edison Screw (E/S) Standard Screw base.

- Cat. No. AL602— 40 watts .. 1/11 each
- Cat. No. AL603— 60 watts .. 2/- each
- Cat. No. AL604— 75 watts .. 2/9 each
- Cat. No. AL605—100 watts .. 3/6 each
- Cat. No. AL606—150 watts .. 6/- each
- Cat. No. AL607—200 watts .. 9/- each
- Cat. No. AL608—300 watts .. 14/8 each

G.E.S. (GOLIATH) LARGE SCREW BASE  
Globes fitted with this special base for use in halls, factories, floodlights, etc.

- Cat. No. AL211— 300 watt .. 13/- each
- Cat. No. AL212— 500 watt .. 18/9 each
- Cat. No. AL180—1000 watt .. 30/3 each

## VACUUM SCREW-IN GLOBES

Similar type of Vacuum Bulb as described in first column but using the Edison Screw (E/S) Standard Screw base.

- Cat. No. AL600—240 volts, 15 watts 1/11 each
- Cat. No. AL601—240 volts, 25 watts 1/11 each

## Lamps for House Lighting Plants

Low voltage globes with Standard bayonet cap base. Used mainly for house lighting plants in country districts. The 6 and 12 volt types can be used from a car battery for tant lighting, or in conjunction with wind-charger installations.



### 6 VOLTS.

- Cat. No. AL500—10 watt .. 2/10 each
- Cat. No. AL501—15 watt .. 2/10 each
- Cat. No. AL502—25 watt .. 2/10 each
- Cat. No. AL503—40 watt .. 2/10 each

### 12 VOLTS.

- Cat. No. AL504—10 watt .. 2/10 each
- Cat. No. AL505—15 watt .. 2/10 each
- Cat. No. AL506—25 watt .. 2/10 each
- Cat. No. AL507—40 watt .. 2/10 each
- Cat. No. AL511—60 watt .. 2/10 each

### 25 VOLTS.

- Cat. No. AL550—15 watt .. 2/- each
- Cat. No. AL551—25 watt .. 2/- each
- Cat. No. AL552—40 watt .. 1/9 each
- Cat. No. AL553—60 watt .. 1/10 each

### 32 VOLTS.

- Cat. No. AL560—15 watt .. 2/- each
- Cat. No. AL561—25 watt .. 2/- each
- Cat. No. AL562—40 watt .. 1/9 each
- Cat. No. AL563—60 watt .. 1/10 each

### 50 VOLTS.

- Cat. No. AL570—15 watt .. 2/- each
- Cat. No. AL571—25 watt .. 2/- each
- Cat. No. AL572—40 watt .. 1/9 each
- Cat. No. AL573—60 watt .. 1/10 each

## ROUGH SERVICE LAMPS

These lamps with special reinforced filaments, are used in places where ordinary lamps have a short life, due to excessive vibration. Mainly used in garage hand-lamps, or machine lights.

- Cat. No. AL237—40 watt B/C Base 2/3 each
- Cat. No. AL238—60 watt B/C Base 2/3 each
- Cat. No. AL609—40 watt E/S Base 2/3 each
- Cat. No. AL610—60 watt E/S Base 2/3 each

## RADIO DIAL LAMPS

See Page 40.

## Mazda Gas-Filled 110 Volt Lamps

Low voltage globes as used on ships. Several districts not converted to the 240 volt supply still use this voltage. Available in B/C or E/S Base.

### 110 VOLTS.

- Cat. No. AL580— 15 watt .. 1/11 each
- Cat. No. AL581— 25 watt .. 1/11 each
- Cat. No. AL582— 40 watt .. 1/11 each
- Cat. No. AL583— 60 watt .. 2/- each
- Cat. No. AL584— 75 watt .. 2/9 each
- Cat. No. AL585—100 watt .. 3/6 each
- Cat. No. AL586—150 watt .. 6/- each
- Cat. No. AL587—200 watt .. 9/- each

### 110 VOLTS. Special G.E.S. ("Goliath") Base.

- Cat. No. AL588—300 watt .. 13/- each
- Cat. No. AL589—500 watt .. 18/9 each
- Cat. No. AL590—1000 watt .. 30/3 each

## Pigmy (Pilot Lamps)

15 WATT; SMALL SIZE BULB.

- Cat. No. AL200—Bayonet Cap Base 1/9 each
- Cat. No. AL599—Screw-in Base 1/9 each



## TORCH LAMPS

Standard Types  
Best Quality

- Cat. No. AL112—2.5 volts .. 9d. each
- Cat. No. AL113—Focus 3.5 volts 9d. each
- Cat. No. AL109—Focus 6 volts .. 1/- each
- Cat. No. AL99—2.5 volts, pre-Focus type (American Fixed Focus) 1/9 each
- Cat. No. AL1—6 volt 3 watt Cycle Dynamo Lamps .. 1/7 each
- Cat. No. AL2—6 volt 1.8 watt Cycle Dynamo Lamps .. 1/7 each

## 19 VOLT LAMPS

- Cat. No. AL126—Ideal for Christmas light strings. Standard Torch globe base. M.B.S. .. 1/6 each

# TORCHES — BATTERIES — LAMPS

## "PIFCO" PLASTIC PENLITE TORCHES



A Small Torch with a Big Light!

An English made Plastic Pen Torch that will clip into a man's coat pocket or slip into a lady's handbag. Small. CONVENIENT!  
Supplied complete with Globe and (915) Eveready Batteries. Cases in Assorted Colours.

Cat. No. AT813A—  
NEW LOW PRICE! .. **6/11** complete

## "COMMANDO" TORCHES

Something new in the way of a Torch. Novelty and usefulness combined. The base of the Torch slides back, leaving a space for Cigarettas or, for the Ladies, a neat Powder-puff Container. Uses the Standard Eveready Bijou Battery (type 712). Measurements of Torch, Length 4 1/2 in., Depth 4 in.



Available in several different colours, complete with Bulb and Battery.

Cat. No. AT816 .. .. **7/6**

## THE "STARLITE" DYNAMO OUTFIT



A well-designed, black sprayed 6-volt Dynamo Set. 3 1/2 in. diameter, highly polished Reflector to give maximum efficiency. Incorporates space and switching arrangement to convert headlamp for stationary Battery operation. Complete with Ruby Tail Lamp, connecting leads, globe and fixing brackets. A first rate English product.

Cat. No. AT807 .. .. **42/6**

## QUALITY CYCLE LAMPS

Metal-cased English Cycle Lamp. A well-constructed job, with a 2 1/2 in. diameter highly polished, nickel-plated reflector; case coloured black. Fixing bracket and carrying handle provided. Complete with Battery and globe.



Cat. No. AT804—

**8/11**

## PERLUX "CHIC" TORCHES



Here's a super little Torch for a Ladies' Handbag or a Gent's pocket. Designed in attractively coloured plastic and using the "Eveready" 712 Battery the "Chic" measures only 4 1/2 in. x 1 in. Excellent value at the price. Complete with battery and globe.

Cat. No. AT817— **3/10** each

## "PERLUX" PLASTIC TORCH

A really streamlined Plastic Torch at a really good price; moulded from Plastic, and in several different colour tonings. Fitted with the American Fixed Pre-focus Bulb. Firm, quick-acting Switch. Length of Torch, 7 in. Uses two standard size Torch Cells (Eveready 950). Complete with Batteries and Globe.



Cat. No. AT815—

**9/6** each

## TORCH LAMPS

Standard Types.

Best Quality.

- Cat. No. AL112—2.5 volts .. 9d. each
- Cat. No. AL113—Focus 3.5 volts 9d. each
- Cat. No. AL109—Focus 6 volts .. 1/- each
- Cat. No. AL99—2.5 volts, pre-Focus type (American Fixed Focus) 1/9 each
- Cat. No. AL1—6 volt 3 watt Cycle Dynamo Lamps .. 1/7 each
- Cat. No. AL2—6 volt 1.8 watt Cycle Dynamo Lamps .. 1/7 each

ALL PRICES IN THIS CATALOGUE ARE SUBJECT TO ALTERATION WITHOUT NOTICE.

## BIG OFFER!

4.5 VOLT TORCH GLOBES. We have purchased a large quantity of AMERICAN MADE "MATCHLESS" 4.5 volt .3 amp. Standard M.E.S. Base Torch Globes.

These globes are slightly rusted on the base (which in no way affects their operation) and we managed to get them at a greatly reduced price.

NOW YOU TAKE ADVANTAGE OF IT!

Cat. No. AL103—Normally 11d. each. NOW **6D.** each

OR 4/- BOX OF 10.

## 3 CELL LONG RANGE TORCHES



Very popular with hunters and fishermen and general outdoor use, where powerful light is needed. Will focus broad spreadlights or long penetrating beams. 3-Cell Focus Torch, 800ft. range. Complete with globe and batteries.

Cat. No. AT840 .. .. **14/6**

## 2 CELL FOCUSING TORCHES



A good heavy standard 2 cell torch finished in bright nickel plate, with carrying clip and decisive action switch. Special focussing clip in head. Highly plated reflector.

Cat. No. AT835 .. .. **8/-** complete

## EVEREADY

### EVEREADY TORCH BATTERIES

Always keep spares on hand.



- Cat. No. AB200—Standard Unit Cells (950) .. **9D.** each
- Cat. No. AB201—Baby Unit Cells (935) .. **8 1/2D.** each
- Cat. No. AB203—Bijou Midget Two Cell (712) .. **11D.** each
- Cat. No. AB204—Flat Pocket Torch Battery (703) .. **2/-** each
- Cat. No. AB205—Cycle Lamp Battery (701) .. **1/11** each
- Cat. No. AB202—Penlite Unit Cells (915) .. **9D.** each

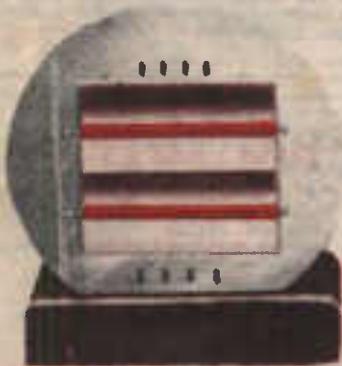
# MAKE THE HOME COSIER!

## ELECTROWAY, MODEL 72



A superior 2 kw. fire with large welded steel frame and 15 amp. switch.  
Cat. No. AE369 .. **77/6**

## ELECTROWAY "PLINTH" FIRE, 2000 watts.



Chromed brass disc, 15in. diam. x 18g., on coloured steel plinth, with chromed relief. With two reflector elements as illustrated. Switch and two yards 3-core flexible fitted to each fire.  
Cat. No. AE368 .. **£6/4/6**

## ELECTROWAY "BEAM" FIRE

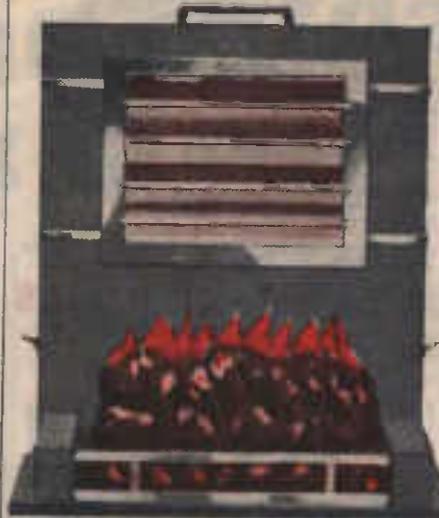


Concentrates the radiation in one direction. High radiant efficiency. 2 kw., with switch controlling one bar.  
Cat. No. AE370 .. **112/-**

### PERMIT

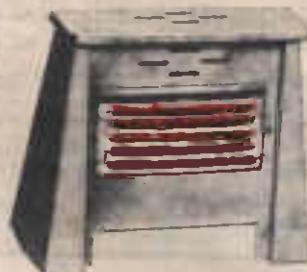
A permit to purchase a Radiator is necessary for some provinces in New Zealand. Consult your local power board before ordering.

## ELECTROWAY IMITATION COAL FIRE



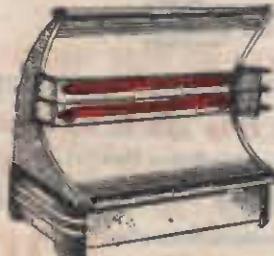
Provided with 2 super elements, each of 1000 watts, which can be operated independently by means of the high-grade English switches incorporated. Gives realistic impression of coal fire. Finished in sprayed silver with chromium-plated reflectors and trimmings. Small fan revolving inside red coals gives "smoke" effect.  
Cat. No. AE367 .. **£14/5/-**

## "ELECTROWAY" TILE RADIATOR



A well constructed, serviceable, Radiator that will give years of trouble-free comfort. 1000 watt Tile Element. Finished in a wide range of speckled colours, including Red, Slate, Green, Cream, etc. Complete with 4 feet flexible 3 core cord.  
Cat. No. AE371 .. **45/9**

## "ST. MARTINS" RADIATOR



A gracefully designed Radiator incorporating the maximum reflector surface for greatest heat radiation. Chrome reflector and trimmings. Base crackle finished. 2000 watts. Complete with 5ft. flex.  
Cat. No. AE352 .. **58/-**

## ELECTROWAY WALL INSET FIRE



This inset fire with its flush-fitting chromium-plated front panel adapted to accommodate an opening in standard tile slabbing, is most suitable for the modern type of building. The chromium-plated reflector and the pencil rod elements complete the handsome design, entirely obviating that "flatness" of appearance so customary with many wall heaters. The dimensions for the two types are as follows: 1kw., Overall 16in. x 5in., Back Box 16in. x 4in.; 2kw., Overall 16½in. x 16½in.; Back Box 16in. x 16in.

Cat. No. AE365—1kw. type .. **63/-**  
Cat. No. AE366—2 kw. type .. **120/-**

The fires above are not supplied with heater flex, as they are designed for permanent building-in.

## "ULTIMATE" DE LUXE RADIATOR



Chrome reflector. 2000-watt. Fire of attractive appearance. Frame finished in black. Has two elements, each of 1000 watts, and switch so that one element can be turned off if not required. Complete with 3-wire flex.

Cat. No. AE375—Two Elements **90/6** each  
Cat. No. AE376—1 Element .. **78/-** each

### SWITCHES

All our Two Element Radiators are fitted with a switch so that either one or two elements can be used.

**MAKE IRONING A PLEASURE!**

Ironing Day can be an **EASY** Day  
IF YOU USE AN **"IRONETTE"**  
**ELECTRIC IRONER**



With the "IRONETTE" any woman can easily cut one or two hours off her usual ironing time; can iron from 50 to 200 lbs. of laundry each week without the least bit of fatigue.  
You, like thousands of other housewives, can dispense with the ironing day "lame back," sore feet, and that "all in" feeling, by investing in an "IRONETTE."

Here are **5** FEATURES of the **HOUSEWIFE'S DELIGHT**:-

1. It irons everything—sheets, shirts, ruffled curtains, cottons, silks, woollens, etc.
2. It's portable. Dimensions: Length 29in., height 10in., width 15in. Plugs into an ordinary Hotpoint.
3. It's Safe; it's easy to Operate.
4. It's Economical—uses the same amount of electricity as the ordinary household iron.
5. Each "Ironette" is covered by a 12 months' guarantee.

Iron at Leisure—Have More Time for Pleasure with an "IRONETTE" Cat. No. AE280  
**£29**

**30/- English Irons 30/-**

5lb. BRITISH-MADE IRONS, complete with 6ft. best Cord and Appliance Plug. **REDUCED FROM 42/- BECAUSE OF A FEW RUST SPOTS.** This small damage in no way affects the efficiency of the iron but it saves you 12/-.



Cat. No. AE254—  
Were 42/- **NOW 30/-**

**MAJESTIC LAUNDRY IRONS**  
10 1/2 lb. Heavy Irons for Tailors, Laundries, etc. Supplied Complete with cord.  
Cat. No. AE264 .. **70/-** each

**"SPEEDEE" GEM**



Gleaming white tableware immaculately smooth, linen crisp clothes without a wrinkle, reward the housewife who chooses the "Gem." Easier to use, too, because of its chromium-plated mirror surface. Perfect balance makes ironing easy. Rapid heating does the work better and quicker. Cat. No. AE250—  
Complete with 5ft. flex. **50/-**

**NEECO "MODERNE" IRON**



You take the "drudge" right out of ironing when you use a NEECO "MODERNE" IRON. Beautifully finished in glittering chrome and fitted with a black streamlined plastic handle. Supplied complete with 5ft. flexible cord and a 3-pin plug cap—already to plug in. We can really recommend this Iron as being a first class "Neeco" product and the pride of every user. Guaranteed 12 Months.  
Cat. No. AE255 .. **77/9**

**MORPHY RICHARDS  
AUTOMATIC IRON**

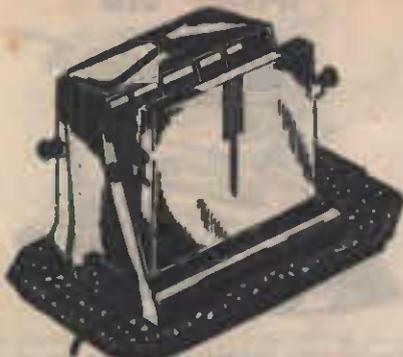


Make ironing a pleasure with one of these DE LUXE AUTOMATIC ELECTRIC IRONS. Thermostatically controlled, this Iron can be set to the correct temperature for the material you are ironing. Five different settings: for Rayon, Silk, Cotton, etc. Beautifully moulded Plastic handle with Indicator Light insetted. Highly polished chromium base. Complete with 5ft. flex.  
Cat. No. AE265—  
With Chrome Body .. **£4/12/6**  
Cat. No. AE266—  
With Pastel coloured body .. **£4/4/6**

**MAIL YOUR ORDER NOW TO THE ELECTRIC LAMPHOUSE**  
11 MANNERS ST. WELLINGTON

**TOAST THE MODERN WAY!**

**"SPEEDEE" HOSTESS TOASTER**



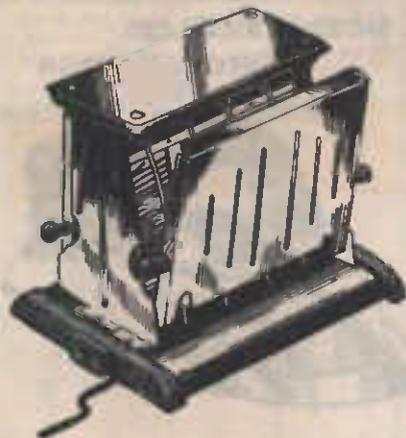
Another attractive and practical Speedee Toaster. Its moulded base in the form of a tray is designed to prevent the crumbs which collect on the table when using other toasters. The body of the Toaster, beautifully streamlined and chromium plated, conserves all the heat and supplies crisp golden brown toast in a minimum of time. Complete with 5ft. of flexible cord. Cat. No. AE301 .. **43/6**

**"SPEEDEE" TIFFIN TOASTER**



Two-slice Chrome Toaster, with plastic tray and toast rack. Complete with 5ft. flexible cord. Cat. No. AE302 .. **52/6**

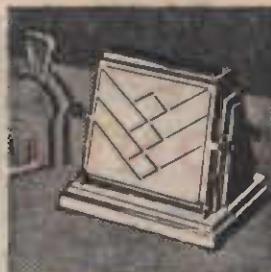
**"SPEEDEE" TABLE TOASTER**



A beautifully finished two-slice Toaster of the turnover type, constructed of heavy-gauge metal, nickel-plated, and provided with four bakelite knobs for turning bread. Moulded plynths are provided to prevent scratching of highly polished table surfaces. Complete with five feet three-core Heater Flex and 3 pin plug. Cat. No. AE300 .. **31/6**

THE 3 "SPEEDEE" TOASTERS ILLUSTRATED ABOVE EACH CARRY A GUARANTEE OF ONE YEAR.

**"NEECO" CHEVRON TOASTER**



Two-slice Toaster of latest design and finished in gleaming chrome. Crisp brown toast is yours with a flip of the holder. Guaranteed 12 months. Supplied complete with 5ft. flexible cord and plug. **55/3** each  
Cat. No. AE311 ..

**"ULTIMATE" DE-LUXE TOASTER**



The acme in Electric Toasters, the "Ultimate" is a beautifully designed toaster, the body being glittering chrome while the base and trimmings are in black plastic. The doors are fitted with streamlined handgrip handles which make for easy opening and closing. Each Toaster is supplied complete with flexible cord and carries a 12 months guarantee.

We can recommend this for both its service ability and attractive design. **63/-**  
Cat. No. AE310 ..

**TOASTER TRAYS**



Made of Moulded plastic in following colours: Red, Cream, Black, Green. For standing under toasters to catch crumbs, etc.—as well as many other home uses. Size (overall) 10 1/2 in. x 7 in. Cat. No. AE304 **5/3**

Special Trays (drilled) for Speedee Hostess Toasters.—Cat. No. AE303 .. **5/3**

Special Trays (drilled) for "Speedee" Tiffin Toasters.—Cat. No. AE305 .. **7/6**

**TOASTER SPARES**

Refer page 29 for a full range of Toaster Spares.

**"KITCHEN TIDY"**



The modern version of a small hygienic rubbish bin. Outside metal container sprayed either Cream or Green. A handy sized galvanised bin (8 1/2 in. x 9 in.) complete with handle, slips inside this container and can be removed and emptied at frequent intervals. Just press the metal lever as illustrated and the lid swings open. So attractive, clean and convenient. Height 13 1/2 in., diameter 9 in. **25/9**  
Cat. No. AU391 ..

**Poker Sets**



**THE "HOMECRAFT" POKER WORK SET**

For use from standard 230-volt light socket or power point. Tip gets very hot and by changing leads on to different terminals heat can be varied for different classes of work. Metal box measures 3 1/2 in. x 3 in. x 4 1/2 in.

The introduction of the Homecraft Poker Machine will undoubtedly advance this art in New Zealand. By using this machine the artist can concentrate all his or her attention on the pokerwork itself, as, when the heat is regulated to the required strength it automatically remains at the same heat. This enables the work to be executed at great speed. Homecraft Machines are perfectly safe in use. Cat. No. AE90; .. **70/-**

Cat. No. AE91—Spare Tips for above **4D.** each  
Cat. No. AE92—Spare Handles (complete with flex) **12/-** each

**ELECTRIC JUGS ARE DEFINITELY FASTER!**

**"SPEEDEE" CHROMIUM-PLATED JUG**



Beauty is much more than skin deep with the **SPEEDEE "PREMIER"** all chrome electric jug. An attractively designed jug that will be the envy of all your friends. The trimmings, such as handle, base, and knob, etc., are moulded in coloured plastics while the body is finished in glittering chromium.

Capacity 3 pints. Guaranteed 12 months. Boils in approximately 3 minutes. Supplied complete with 5ft. flexible cord and plug.

**NEW LOW PRICE!**

Cat. No. AE170 . . . . . **59/6**

**"ULTIMATE" CHROME JUG**



A highly plated, attractively finished electric jug. Spun from heavy gauge copper and fitted with a solid plastic handle, base and knob. Holds 3 pints. Supplied complete with 4ft. flexible cord. Quick boiling element. 12 months guarantee.

Cat. No. AE173 . . . . . **78/-**

**"DEBUTANTE" CHROME JUG**



A modern aristocratic design of chromium jug that combines both beauty and utility. You will quickly become enamoured with its graceful design and swift efficient service. Boils 3 pints in 3 minutes. Handle, knob and base are moulded from coloured plastics. Guaranteed 12 months and supplied complete with flexible cord and plug.

Cat. No. AE171 . . . . . **75/-**

**IMPORTANT!**

Owing to existing conditions prices in this book are given as a guide only. All orders will be executed at the rate ruling at the date of supply.

**"SPEEDEE" ENAMELLED ELECTRIC JUG**



This pioneer in the unbreakable jug field is still one of the most popular jugs on the market. Fast-boiling—economical—unbreakable, this "Speedee" Jug is great value for a household boiling utensil. Each jug is complete with six feet Asbestos Flex and Appliance Plug. Current consumption 1,500 watts. Available in either Brown or Green enamel. Guaranteed 12 months. Capacity 3 pints.

Cat. No. AE167 . . . . . **39/6**

**"SPEEDEE" ELECTRIC KETTLE**



Fast boiling. Built of extra heavy gauge copper and finished in gleaming everlasting chromium plate. It is the aristocrat of kettles. The "Speedee" Kettle will save you money and steps. Used right on the afternoon tea table, it is at home in a setting of dainty china and beautiful linen—at once the admiration and envy of your friends. Keeping the water hot as it does for some time after switching off it obviates the need for the hostess to rise and prepare that "second cup."

Cat. No. AE192—5-pint, 1500 watt **85/-**

Cat. No. AE191—3-pint . . . . . **65/-**

**"ULTIMATE" ELECTRIC KETTLES**



These highly plated Electric Kettles are fast-boiling, and are made in accordance with "Ultimate" usual high manufacturing standards. Chromium plated with black plastic handle and knob. Capacity 3 pints. A robust and pleasing design. Supplied complete with flexible cord and plug.

Cat. No. AE190 . . . . . **75/-**

**NEECO PORCELAIN JUGS**



These Porcelain Jugs are well known for their high quality. Made of strong porcelain and attractively glazed. Hold 3 pints. Supplied complete with Plug and Cord. Note new reduced price.

Cat. No. AE160 . . . . . **29/6** each

*Boils 1 pint in about 2½ minutes*

**"SPEEDEE" IMMERSION HEATERS**



A real boon to the housewife. Fast, safe, dependable and economical. Can be used in any class of vessel containing water—either glass, porcelain, aluminium or other metals. Length, 10in. Rating 1000 watts. **12/6** ea. Cat. No. AE150

Complete with 3ft. Flex.

**Large Type**

Special type giving heavy wattage rating 2000 watts. Length 20in. Boils 4½ gallons water (summer temp.), in 1 hour, winter approx. 4 gallons. **37/-** ea. Cat. No. AE152

**ELECTRIC URNS**  
SEE PAGE 37.

**"CHROMOLUX" COFFEE PERCOLATORS**



An attractive gleaming chromium plated Coffee Percolator that will give you several tempting cups of coffee in a "jiffy." Holding 3 pints—measures 11in. in height and 5in. diameter. Is fitted with a special element. Guaranteed 12 months. Complete with 5ft. flexible cord and plug. **£6/17/6** Cat. No. AE188

# ELECTRICAL ACCESSORIES

## SWITCHES—INSULATED ELECTRIC



**BEST QUALITY ENGLISH**

- Cat. No. AG232—5-amp., 1-way .. 2/9
- Cat. No. AG235—10-amp., 1-way .. 4/6
- Cat. No. AG239—15-amp., 1-way .. 9/6
- Cat. No. AG230—5/10-amp., 2-way "Titegrip" 3/-

## CEILING SWITCHES

- CRABTREE-SPERRY. **BEST QUALITY.**
- Cat. No. AG245—1-way .. **7/6** each
- Cat. No. AG246—2-way .. **8/9** each



**CORDS FOR CEILING SWITCHES**

Spare Cords for Ceiling Switches.  
Cat. No. AG116 **8D.** each.

## LINE CORD SWITCHES



For through connection. Made of bakelite. This is a useful switch for fitting on the cords of vacuum cleaners, appliances, etc., to save walking to and fro from your hotpoint.

- Cat. No. AG131 .. **3/-** each
- Cat. No. AG133—"Torpedo" Shaped Small Cord Switches. Assorted Colours. **3/6** ea.

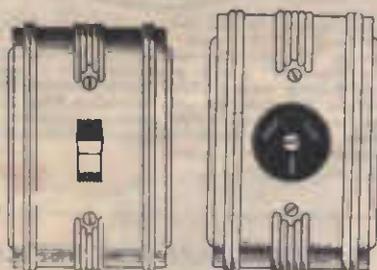
## FLUSH SWITCHES AND PLUGS

### SWITCHES ONLY.

- Cat. No. AG172—3/10-amp. Brown .. 2/3
- Cat. No. AG173—5/10-amp. Ivory (luminous) .. 2/10
- Cat. No. AG174—5/10-amp. Brown, 2-way .. 3/-
- Cat. No. AG175—5/10-amp. Ivory (luminous) 2-way 3/9

### PLUG BASES ONLY.

- Cat. No. AG177—3-pin, Brown Bases .. 2/3
- Cat. No. AG178—3-pin, Ivory Bases .. 2/8



### PLATES FOR SWITCHES AND PLUGS.

- Cat. No. AG186—Ivory Bakelite, Classic type, for 1 switch .. 1/4
- AG187—Ivory Bakelite, Classic type, for 2 switches .. 2/7
- AG189—Ivory Bakelite, Classic type, for 1 switch and 1 plug .. 2/7
- AG194—Ivory Bakelite, Classic type, for 1 plug .. 1/4
- AG195—Brown Bakelite, for 1 switch, Classic type .. 1/2
- AG196—Brown Bakelite, for 2 switches, Classic type .. 1/9
- AG193—Brown Plate for 1 plug .. 1/2
- AG185—Brown Plate for 1 switch and 1 plug .. 1/9
- AG197—Brown Fancy Screws .. 3d. each
- AG198—Ivory Fancy Screws .. 4½d. each

## METAL MOUNTING BOXES

- AG190—Single Gang Boxes .. 1/9
- AG191—Double Gang Boxes .. 3/-

## TABLE LAMP SWITCH

Small Push Button Switch for mounting in the base of table lamps, etc. Single hole mounting. 230 volts—2/3 amp.

- Cat. No. AG117—**2/8** each



## EGG CORD SWITCH

Switch (230 volt, 2 amp.) for hanging on end of cord. Handy for sick rooms, etc. British. Made of black bakelite.

- Cat. No. AG132—**3/1** each



## MINIATURE SWITCHES

Here's a handy little switch suitable for radio and motor-car work and general low voltage electrical circuits. Positive action. Nicely finished (nickel plated). British made.



- Cat. No. AG118 **2/4**

## 3-HEAT SWITCH

Flush Range Switch, suitable for Neeco and other ranges, grillers, etc., employing 3 heat flush switches. Dimensions 1½in. x 1½in. Complete with lock nut and black pointer knob.

- Cat. No. AG133 .. **17/-** each

See diagram in Reference Section on how to connect a Three-Heat Switch.

## RADIATOR REPLACEMENT SWITCH

Flush mounting switch for "Speedee" Radiators.

- Cat. No. AG138 .. **3/9** each

## CEILING ROSES



Bakelite Ceiling Roses for electric light pendants.

- Cat. No. AG32 .. **1/6** each

## CONVERSION ADAPTORS



These conversion Adaptors will be found useful to the general public, besides appliance salesmen, etc. They enable a radio set with a three-pin plug to be used from a two-pin socket, etc.

Cat. No.	Fits into.	Taken.	Price.
AG500	3-pin	2-pin Tee	—
AG501	3-pin	2-pin Prll.	3/9
AG502	3-pin	Lamp Socket	3/-
AG503	2-pin Tee	2-pin Prll.	3/9
AG504	2-pin Tee	3-pin	4/-
AG505	2-pin Tee	Lamp Socket	3/9
AG506	2-pin Parallel	3-pin	4/-
AG507	2-pin Parallel	2-pin Tee	—
AG508	2-pin Parallel	Lamp Socket	3/9
AG509	Lamp Socket	2-pin Tee	—
AG510	Lamp Socket	2-pin Prll.	4/-
AG511	Lamp Socket	3-pin	4/-

**ADAPTORS**

For end of cords to fit into light socket for extensions, etc.  
Cat. No. AG210 ... 10d. each



**2-LIGHT ADAPTORS**

Two-light Bakelite Adaptors.  
Cat. No. AG218

2/11 each



**SWITCH TYPE**

Enables an extension to be taken from a lamp-holder. Provided with a switch so that the centre light can be switched off, leaving the extension going.

Light Where You Want It!



Cat. No. AG220 ... 3/11 each

Cat. No. AG221—Heavier type 5/11 each

**LAMP HOLDERS**

CORDGRIP TYPE. BAKELITE—

Cat. No. AG250—With skirt Each 1/11

AG251—Without skirt 1/6

AG252—With switch, with skirt 3/6

AG253—With switch, without skirt 4/11

BATTEN TYPE—

AG254—With skirt 2/11

AG256—Without skirt 2/2

Cat. No. AG260—With switch, without skirt 5/6

ANGLE TYPE BATTEN HOLDERS—  
Cat. No. AG258 ... 2/6

THREADED TYPE—  
Cat. No. AG261—lin. Bakelite type 2/7

Cat. No. AG263—lin. N. Plated Metal type 2/9

Cat. No. AG268—lin. conduit thread metal 2/9

Cat. No. AG269—lin. bakelite type 2/9

Cat. No. AG264—lin. with switch 5/9

E.S. HOLDERS—  
Cat. No. AG273—Batten type ... 3/6

Cat. No. AG274—Cordgrip type ... 3/9

Cat. No. AG275—lin. Bakelite ... 3/6

Cat. No. AG278—Goliath screw type ... 5/6

**CORD CONNECTORS (3-Wire)**



Cord Connectors for joining three-wire cord. Moulded in bakelite. Titegrip. N.Z.-made  
Cat. No. AG25/414—Complete 3/- each

Cat. No. AG25—Body only 2/- each

Cat. No. AG414—Side Entry Plug Top 1/- each

**INDUSTRIAL CONNECTORS**

Consisting of all-rubber three-pin Plug and rubber-covered Connector body.  
Cat. No. AG26 ... 7/6

**CONNECTORS FOR A.C. MAINS**



This two-piece Connector gets over the difficulty of joining two power leads, etc. Made of best bakelite, they are strong and easy to pull apart.  
Cat. No. AG18—Complete 3/-

**CONNECTORS—2-WIRE BLOCK**



Porcelain Insulated Connector for joining wires, etc.

Cat. No. AG29—Single Wire 8d. each

Cat. No. AG28—Two Wire 1/- each

Cat. No. AG27—Three Wire 1/3 each

**CONNECTOR STRIPS**

These constitute 12 connectors (similar to above) moulded in bakelite on long, narrow Strip. Strips can be subdivided to give any number between one and twelve connectors. We can break strips to whatever number of connectors you require.

5/- STRIP OF 12 OR 5d. per connector

**PLUG TOPS FOR APPLIANCES**

Plug top that fits on to the cord of appliance for plugging into the wall.

Cat. No. AG412—2 Pin Tee Plug 9d. ea.

Cat. No. AG410—2 Pin Parallel Plug 10d. ea.

Cat. No. AG415—3-pin Handgrip Plug Cap 9d. ea.

Cat. No. AG414—3 Pin Side Entry Plug 1/- ea.

Cat. No. AG425—3 Pin Side Entry Plug with rubber protecting cap 1/11 ea.

Cat. No. AG428—Heavy 3 Pin Rubber Plug Top 3/6 ea.

Cat. No. AG429—Light 3 Pin completely rubber enclosed Plug Top 2/6 ea.

Cat. No. AG421—Heavy duty Bakelite moulded "Amalite" 3 Pin Plug Top 3/1 ea.

Cat. No. AG420—Ditto, Moulded in Ivory Colour 3/6 ea.



**WALL PLUGS AND BASES**

3 pin Side Entry Bakelite Plug Top and 10/15 amp. 3 pin Wall Base.

Cat. No. AG414/402 2/6 each

T Pin Top entry Plug Top and 10/15 amp. T pin Wall Base.

Cat. No. AG412/400 2/3 each



**WALL BASES**

TITEGRIP 10/15 amp. 3-pin PLUG BASES.

Cat. No. AG402 1/6 each

"AMALITE" 15 amp 3-pin PLUG BASES. Heavy Job. Cat. No. AG403 2/6 each

TITEGRIP "TEE" 2-pin PLUG BASES. Cat. No. AG400 1/6 each

PARALLEL 2-pin PLUG BASES. Cat. No. AG401 2/- each

**CABLE CLIPS, BUCKLES**

Cat. No. AG514 ... 1D. each, 8D. doz.

**PLUGS, DOUBLE THREE-PIN**



A useful plug where it is desired to take two leads from one three-pin socket. The plug illustrated is fitted to the appliance or radio cord. A standard 3-pin plug can then be inserted into the top of it.

Cat. No. AG433 ... 1/11

**LAMPHOUSE 2-WAY ADAPTORS**

Enables two appliances with 3-pin plugs to be used from a wall-plug.

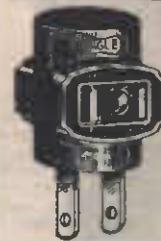


Cat. No. AG103 6/- each

Similar to above but for two pin (Tee) plugs

Cat. No. AG104 ... 6/-

**PLUG CUBE**



Tripla Plug Cube with parallel pins. Enables 3 separate leads to be taken from one point.

Cat. No. AG102—

10D. each

**LAMPHOUSE GUARANTEE**

Any goods that prove in any way unsuitable may be returned undamaged within seven days from receipt and your money will be refunded in full.

**INSULATED SCREW EYES**

The wiring regulations state that all flexible cords running along walls and ceilings must be supported by an insulated screw eye every 12 inches. Well, here they are, moulded in plastic. Clear, Cream, and Amber colours.  
Cat. No. AS352 ... 4D. each



**INSULATING BEADS**

Fishline white Insulating Beads. Suitable for insulating elements, lead-ins, grillars, irons, soldering irons, etc.  
Cat. No. AE410 ... 2D. dozen

# ELECTRICAL ACCESSORIES, ETC.

## APPLIANCE PLUGS

Best English quality Appliance Plugs to fit practically every type of Iron, Toaster, Jug and other electrical appliances.

Cat. No. AG457  
Unearthed type .. **2/4**

Cat. No. AG458  
Earthed type .. **2/7**  
for use with 3-pin plug tops.



## HEAVY DUTY ENGLISH APPLIANCE PLUGS

A robust, well-made English Appliance Plug, for Kettles, Toasters, Jugs, Vacuum Cleaners, etc. Fitted with strong Earthing Clip.

Cat. No. AG452 .. **4/6**

## SWITCH APPLIANCE PLUGS

Used in many of the leading vacuum cleaners, such as the "KNIGHT." Push bar switch allows current to be turned off at appliance instead of going to and fro from the hotpoint.

Cat. No. AG465—  
**6/-** each

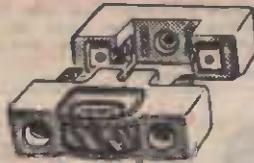


## FUSE WIRE CARDS & REELS



AG46—5 amp., on card ..	3d. each
AG47—10 amp., on card ..	3d. "
AG48—15 amp., on card ..	3d. "
AG350—3 amp. (1lb. reels) ..	1/7 "
AG351—5 amp. (1lb. reels) ..	1/7 "
AG352—10 amp. (1lb. reels) ..	1/8 "
AG353—25 amp. (1lb. reels) ..	4/6 "
AG353A—25 amp. (1lb. reels) ..	2/3 "
AG354—50 amp. (1lb. reels) ..	4/5 "

## Fuses for Switchboards, Etc.



2-piece Fuse Blocks.  
Cat. No. AG160—5-amp. .. **2/3** each  
Cat. No. AG161—10-amp. .. **2/3** each

## FUSES, ELECTRIC RANGE



Screw Type Fuses are used on nearly all makes of electric ranges and other electrical appliances.  
Cat. No.  
AG40—5 amp.  
AG41—10 amp.  
AG42—15 amp.  
AG43—20 amp.  
GLASS TYPE—  
**8 D.** each

Set of Five costs .. **3/-**

## WOODEN ERA BLOCKS

Cat. No. AG78—Era Blocks, with connectors .. **3/-**

## PRICE FLUCTUATIONS

Now that Exchange has been dropped price reductions are being manifested daily. **ALL ORDERS WILL BE EXECUTED AT THE LATEST PRICE AT THE TIME OF ORDERING.**

## WOOD BLOCKS

ROUND AND RECTANGULAR WOOD BLOCKS, for mounting switches, ceiling plates, etc. Carefully made and well finished. Recessed. (Made in N.Z.)



Cat. No. AG79—3 1/2 in. Round .. **5 D.** each  
Cat. No. AG83—3 1/2 x 3 1/2 square .. **8 D.** each  
Cat. No. AG80—6 x 3 rectangular .. **9 D.** each  
Cat. No. AG81—9 x 3 rectangular .. **1/-** each  
Cat. No. AG82—6 x 6 square .. **1/6** each

## Lighting EXTENSION CORDS

**Read in Comfort!**



For taking the light where you want it. Ten feet long and supplied with an insulated shock-proof lampholder. Extra long lengths can be made up at 9d. yard extra.

Cat. No. AE51 .. **5/9**  
Cat. No. AE52 (with switch holder) .. **9/6**

# The "Ensign" Battery Welder

## SAVE TIME! — LABOUR! — MONEY!

Works from any 6 to 12 volt storage battery providing instant and even heat. Do your own soldering, welding, brazing, with this useful tool.

The welder is of rugged construction. Battery leads are of heavy rubber-covered low-potential cable, giving maximum transfer of power to the welder.

This Welder is especially applicable for auto repairs, mudguards, radiators, etc., and also light inside work—for the farm it is invaluable for mending buckets, cans, and light farm implements. Battery firms use it for lead burning; especially useful for battery repairs on the roadside. Supplied with full instructions.

Cat. No. AE8 .. **39/6** complete

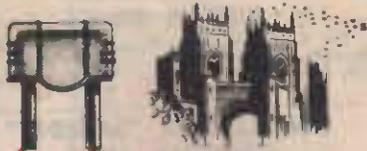
### Spares:

Cat. No. AE9—Carbon Electrodes .. 2/6  
Cat. No. AE10—Brass Electrodes .. 6d.  
Cat. No. AE11—Steel Electrodes .. 6d.  
Cat. No. AE12—Packets of Flux .. 6d.



# BELLS — BELL MATERIAL

## DING-DONG!



### CATHEDRAL ELECTRIC DOOR CHIMES

Here's the latest thing in Door-Calls. Instead of the usual clacker of a door knocker or the clang of a bell the "CATHEDRAL" DOOR CHIME gives a clear and mellow two-tone chime, sounding once for a back door caller and twice for the front door. The head-piece is beautifully moulded in translucent plastic in three colours

—Walnut, Cream, and Brown—to blend with all interior finishes. The two tubes are of a polished gleaming, brass, lacquered to withstand tarnishing, machined to provide resonant tones. The unit works in conjunction with a 6 Volt supply (4 No. 6 Cells) and two bell pushes. Full instructions with each set.

Say Goodbye now to all that noise and clutter and invest in a "CATHEDRAL" DOOR CHIME. Cat. No. AG323 .. **67/6**

Supplied complete with batteries Cat. No. AG323A and two bell pushes **87/-**

Supplied complete with Transformer for use from the ordinary 230 volt mains. With two bell pushes. Cat. No. AG323B .. **95/-**

### Best British BELL

British. Pressed iron frame. Silver contact points. Terminals under cover. Nickel-plated steel gong, 2 1/2 in. diameter. Bakelite case. For battery or 4-volt A.C. operation.

Cat. No. AG320 **11/-**



### BRITISH BUZZER

British good quality Buzzer in bakelite case.

Cat. No. AG319 **5/9** each

**BELL BATTERIES**  
See Page 39

### SQUARE BELL PUSH

Attractively designed in moulded Bakelite. Size, 2in. square. Cat. No. AG333 **2/3**



### "ROUND" BELL PUSH



Good quality Brown Bakelite Push; 1 1/2 in. diameter.

Cat. No. AG334 **1/11** each

### "Cubist" BELL PUSH

Bell Push of exceptionally attractive appearance, suitable for inside or outside use. Moulded Bakelite. Size 2 1/2 in. x 2 in.



Cat. No. AG332 **1/11** each

### BAKELITE PEAR PUSHES



Bell Pear Push for cord suspension. Attractively finished in moulded bakelite. The plunger is of polished bone.

Cat. No. AG335 **1/11** each

### BELL TRANSFORMERS



Bell Transformers for 230-volt supply. Output 3 1/2/8 volts. Moulded into an attractive bakelite case. British.

Cat. No. AG339 .. **17/9** each

### BELL WIRE

Best quality British Bell Wire. Well Insulated Waxed Covering. Single Strand.

Cat. No. AW113—1/22 S.W.G. .. **2** D. yd.

Cat. No. AW113A—1/22 S.W.G. **2 1/3** coil 60ft. coil

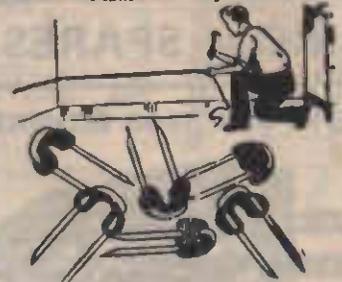
### PLASTIC BELL WIRE

Single strand Plastic covered English Bell Wire. Several colours. In 60ft. coils only

Cat. No. AW108 .. **2/-** coil

### BELL STAPLES INSULATED STAPLES

Make a Neat Job!



Insulated Staples for tacking up bell wire. Cat. No. AS118 .. **2 1/2** D. doz.

Packets of 50 .. **9** D. packet

### ELECTRIC URNS



Highly polished Nickel-plated Electric Urns, for use in factories, schools, restaurants, hotels, boarding houses, social clubs, etc.

Fast Boiling. Operate from standard hotpoint. Prices are quoted without flexible lead. Add 2/- per yard for length of flex required.

Two, three, and four gallon urns are fitted with 3-heat switches.

### "SPEEDEE" URNS

Cat. No. AE130—1 gallon, **£5/17/6**  
1500 watts

Cat. No. AE131—2 gallon, **£8/6/6**  
2000 watts

Cat. No. AE132—3 gallon, **£8/14/-**  
2000 watts

Cat. No. AE133—4 gallon, **£9/15/-**  
2000 watts

Cat. No. AE134—"Speedee" Replacement Elements 2000 watts. **29/3**

Cat. No. AE135—"Speedee" Replacement Elements. 1500 watts. **29/3**

### PRICES ARE SUBJECT TO ALTERATION

All Prices in this book must be regarded as an indication only— all orders will be executed at ruling prices.

**THE ELECTRIC LAMP HOUSE LIMITED,**  
11 MANNERS STREET,  
WELLINGTON, C.1.

# ELEMENTS AND SPARES

## IRON SPARES

### "EVEN-GLO" IRON ELEMENTS



The Element in the iron is the part that does all the work and practically the only part that goes wrong. These Elements are specially constructed for long service, and will fit all standard makes of irons.

#### FITALL TYPE IRON ELEMENTS.

- Cat. No. AE415 . . . . . **6/9** each
- Iron Elements, 110v.—  
Cat. No. AE420 . . . . . **8/8** each
- "HOTPOINT" IRON ELEMENTS, 240v.  
Cat. No. AE417 . . . . . **7/9** each
- "WESTINGHOUSE" AUTOMATIC IRON  
ELEMENTS  
Cat. No. AE416 . . . . . **9/6** each

## APPLIANCE TERMINALS



Appliance Terminals, for fitting in the back of electric irons, etc. Supplied complete with nuts. Cat. No. AE400 . . . . . **8<sup>D</sup>** each

## ELECTRIC IRON HANDLES

Wooden handles for electric irons—will fit practically all makes.  
Cat. No. AE405 . . . . . **1/9** each

## "MAJESTIC" BAKELITE IRON HANDLES

Plastic streamlined handle for "Majestic" and "Dalbro" irons.  
Cat. No. AE406 . . . . . **11/9**

## INSULATING BEADS

Fishline white Insulating Beads. Suitable for insulating elements, lead-ins, grillers, irons, soldering irons, etc.  
Cat. No. AE410 . . . . . **2<sup>D</sup>** dozen

## APPLIANCE PLUGS

Appliance plugs and plug tops. See Page 26.

## VACUUM CLEANER SPARES

- Cat. No. AE238—Carbon Brushes . . . **1/3**
- Cat. No. AE239—Springs for Carbon Brushes . . . . . **1/-** ea.
- Cat. No. AE233—Rubber rings for "Knight" Cleaner Dust bags . . . . . **2/3** ea.

## JUG SPARES

### THE "WIRELESS" JUG ELEMENT



The Element that can't burn out even if the jug is boiled dry. No spiral windings, etc. Can be easily fitted to any make of porcelain jug. Instructions with each element. Patented principle.  
Cat. No. AE1181 . . . . . **10/-** each

## ELECTRIC JUG ELEMENTS

- Spiral Windings for Electric Jugs, 230 volt.  
Cat. No. AE1171—  
**1/-**
- Porcelain Bobbins for Jug Elements.  
Cat. No. AE1174—  
**1/3**
- Complete Jug Elements, consisting of winding on bobbin and connecting rods.  
Cat. No. AE1175 . . . . . **4/3** each

## TERMINAL PINS

Contact Pins as used on the "Neecco" and similar makes of Porcelain Jugs. Comprises 1 1/2 in. Brass Bolt with Contact Stud and two Brass Washers.  
Cat. No. AE1189 . . . . . **1/-** each

## ELECTRIC JUG LIDS

Bakelite lids as used on "Neecco" Jugs.  
Cat. No. AE1188 . . . . . **6/6**

## "SPEEDEE" JUG ELEMENTS

Coiled Copper Elements, for Enamelled or Chrome Jugs, "Speedee" Kettles, etc.  
Cat. No. AE1176 . . . . . **12/6** each



## JUG ELEMENTS

Similar to above.  
2 Years' guarantee.  
Cat. No. AE1177—  
**14/6** each

## PRICES ARE SUBJECT TO ALTERATION

All prices in this book must be regarded as an indication only—all orders will be executed at ruling prices.

## RUBBER RINGS

For fixing Elements in metal jugs, such as Speedee, Ultimate, etc.  
Cat. No. AE1170 . . . . . **6<sup>D</sup>** each

## SPARES FOR "SPEEDEE" CHROME JUGS

- Cat. No. AE1195—Spare Lid Knobs for "Premier" Model . . . . . 7d.
- Cat. No. AE1196—Spare Plastic Handles for "Premier" Model . . . . . 4/-
- Cat. No. AE1197—Spare Plastic Bases for "Premier" Model . . . . . 4/-
- Cat. No. AE1195—Spare Lid Knobs for "Debutante" Model . . . . . 7d.
- Cat. No. AE1198—Spare Plastic Handles for "Debutante" Model . . . . . 4/9
- Cat. No. AE1199—Spare Plastic Bases for "Debutante" Model . . . . . 4/9

## APPLIANCE CORDS

Cords for electrical appliances, irons, toasters, jugs, etc., etc. Fitted with "Fitall" type appliance plug on one end and a wall plug on the other end.



- Cat. No. AE800—Cord with 2-pin parallel Cap **6/3**
  - AE801—With two-pin tee cap . . . . . **6/3**
  - AE803—With three-pin cap . . . . . **7/-**
  - AE804—With part Rubber enclosed three-pin Cap . . . . . **8/-**
- (Note.—The above are fitted with 6 feet best cord. Extra long cords can be supplied. Add 1/6 for each yard required.)

## RANGE SPARES

### "FITZALL" RANGE ELEMENTS

- Electric Range Hot Plates. Elements that will fit all makes of ranges. Speedee to fit any make of range, 5in. to 1 1/2 in. diameter, 1750 watts.  
Cat. No. AE1220 . . . . . **46/6**
- Ditto, 6in. to 8in. diameter, 900 watts.  
Cat. No. AE1221 . . . . . **36/6**

### "ULTIMATE" ELEMENTS FOR RANGETTES

- OVEN FLAT ELEMENT.  
Cat. No. AE1226 . . . . . **23/9**
- HOTPLATES FOR RANGETTES.  
Cat. No. AE1222—Ultimate 6in. . . . . **28/3**
- Cat. No. AE1223—Ultimate 8in. . . . . **39/6**

## KETTLE ELEMENTS

### "HECLA" KETTLE STRIPS

Most kettles are fitted with two of these strips and several are fitted with three.  
Cat. No. AE1030 . . . . . **8/6** each

## CARBONS FOR HEALTH LAMPS

Spare Carbons for Pifco and other Arc type Health and Sun-tan lamps.  
Cat. No. AE599 . . . . . **4/-** pair

**TOASTER SPARES**



**"EVEN-GLO" TOASTER ELEMENTS**

- There's an "EVEN-GLO" ELEMENT to fit every make of Toaster. Made with good quality mica and English Nichrome Ribbon, these elements are a first grade production.
- Cat. No. AE1003—Speedee type 9/11 ea.
  - Cat. No. AE1004—Hotpoint Type 8/11 ea.
  - Cat. No. AE1005—"Dismix" Type 8/11 ea.
  - Cat. No. AE1006—Hi-Speed Type 8/11 ea.
  - Cat. No. AE1007—Magnet Type 9/11 ea.
  - Cat. No. AE1008—Hecla Type 8/11 ea.
  - Cat. No. AE1009—Universal 4-Strip 9/11 ea.
  - Cat. No. AE1010—Westinghouse Type 8/11 ea.
  - Cat. No. AE1011—Eflasca 8/11 ea.
  - Cat. No. AE1012—Servex 8/11 ea.
  - Cat. No. AE1013—Ultimate 8/11 ea.
  - Cat. No. AE1014—Majestic Type 8/11 ea.
  - Cat. No. AE1015—Monarch Type (2-Strip) 8/11 ea.
  - Cat. No. AE1017—"Neecco Chevron" Type 13/- ea.
  - Cat. No. AE1018—Electroway Type 8/11 ea.

**TOASTER TRAYS**

- Cat. No. AE303—For "Speedee" Toasters 5/3 each
  - Cat. No. AE305—For "Speedee Tiffin" Toasters 7/6 each
- See Page 22 for measurements.

**TOASTER SPRINGS**

- Coiled Springs. Suitable for practically all makes of Toasters.
- Cat. No. AE985 7D. each

**TOASTER KNOBS**

- ROUND KNOB. Suitable for Toaster Doors, Kettle Lids, Saucepan lids, etc.
- Cat. No. AE984 5D. each
- FLAT KNOB. For "Speedee" Toaster Doors.
- Cat. No. AE983 6D. each

**SPARES**

We have only listed on these pages spares for the more popular type of appliances. If you need a spare part for any electrical appliances please write. WE MAY BE ABLE TO HELP YOU!

**SPARE SHAVER HEADS**

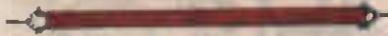
- Cat. No. AE579—Remington Blue Streak Twin Cutters 31/-
- Cat. No. AE580—Remington Oval 5U Head 21/5
- Cat. No. AE581—Schick Heads 40/-

**RADIATOR SPARES**

**SPIRAL ELEMENT WINDINGS**

- Spiral Element Windings for re-winding Radiator, Stove, and Hotplate Elements, etc. Made of first grade English Resistance Wire.
- Cat. No. AE1111—230 volt, 600 watt 2/-
  - Cat. No. AE1112—230 volt, 750 watt 2/3
  - Cat. No. AE1113—230 volt, 1000 watt 2/6

**PENCIL ROD ELEMENTS**



**"Even-Glo"**

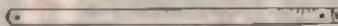
- 8 1/2in. Element, 800 watt with end cap and Fixing Screws Cat. No. AE1118 8/6
- 10in. Element, 1000 watt, with end caps and fixing screws.—Cat. No. AE1117 8/6
- 12in. Element, 1000 watts. Cat. No. AE1119 12/6

**"OXFORD"**



- 9 1/2in. Replacement Element, without end caps. Heavy twisted end leads for secure contact. Made for "Speedee" and similar Radiators. 1000 watts.—Cat. No. AE1116 5/6 each

**PORCELAIN ELEMENT BARS**



- Round Porcelain Bars for Radiator Elements, etc. Unwound. Size 9 1/2in. x 1/2in. diam.
- Cat. No. AE1101 2/3 each
  - Cat. No. AE1100—8 1/2in. x 1/2in. 2/3 each

**METAL END CAPS**

- Metal End Caps for Radiator Elements. The small cup measures 1/2in. diameter with a depth of 1/4in. Holes either side of lip and main centre hole to take holding bolt.
- Cat. No. AE1102 5d. ea.



**ELEMENT FORMERS**

- CONE TYPE. Heavy porcelain cone type radiator formers. Height 4in., diameter 2in. wide recess to take standard 1000 watt wire element. No base or supports provided. Porcelain drilled at both bottom and top to simplify the attaching of spiral.
- Cat. No. AE1108— 4/3
  - Cat. No. AE1109—Similar to above but slightly smaller. Height 3in., Diam. 1 1/2in. 4/3



**BOWL FIRE ELEMENTS**

**"FITZALL" BOWL FIRE ELEMENTS**

This type of Element can be adapted to numerous makes of Bowl Fire Radiators. Radiators with elements using the plug-in or screw-in base may, with slight adaption, take this type of element. Distances between screw holes on legs of former 1 1/2in. 750 watt spiral.



- Cat. No. AE1104— 7/9 each
- Similar to above but fitted with a screw-in base. Cat. No. AE1105 8/3

**RADIATOR ELEMENTS**



- Large tile, 9 1/2 x 3 1/2, 1000 watts. Complets. Cat. No. AE1133 14/6
- Small tile, 7 1/2 x 3, 1000 watts. Cat. No. AE1134 12/3

**ELECTROWAY RADIATOR ELEMENTS**

- Short tubular Pencil Element 8in. x 1/2in. Cat. No. AE1120 9/6
- Long tubular Pencil Element 11in. x 1/2in. Cat. No. AE1121 10/6
- Small Tile Element 7 1/2in. x 3in. Cat. No. AE1136 11/-
- Large Tile Element 9 1/2in. x 3in. Cat. No. AE1137 12/6

**"COYLROD" TANK HEATERS**



- Water Heaters for permanent installation in Tanks, Water Cylinders, etc.
- Cat. No. AE540—750 watt 22/- each
  - Cat. No. AE541—1000 watt 22/- each
  - Cat. No. AE547—1500 watt, 3 heat type 37/6 each
  - Brass Flanges for fixing above. 5/9 set
  - Cat. No. AE543

**"UNIVERSAL" MIXER BOWLS**

- Spare Bowls, cream coloured glass, for "Universal Cake Mixers.
- Cat. No. AE823—Large 30/-
  - Cat. No. AE824—Small 18/6

**"DORMEYER" MIXER BOWLS**

- Spare Bowls, Clear Glass for Dormeyer Electric Mixers.
- Cat. No. AE821—Large 19/6
  - Cat. No. AE822—Small 10/6

MAIL YOUR ORDER NOW TO THE ELECTRIC LAMPHOUSE  
11 MANNERS ST. WELLINGTON

# MOTOR CAR LAMPS

# MOTOR CAR BATTERIES



We can supply Lamps for any type of car, including types with special caps, and if you are in doubt about the type to order, send a sample.

### 6/8 VOLT SINGLE CONTACT SINGLE FILAMENT LAMPS.

Cat. No.	Candle Power.	Equivalent Wattage.	Location.	Price.
AL300	6	5	Tail	1/6
AL302	15	12	Stop	2/11
AL303	21	20	Head	2/11
AL304	32	25	Head	2/11
AL305	50	35	Head	2/11

### 6/8 VOLT DOUBLE CONTACT SINGLE FILAMENT LAMPS.

Cat. No.	Candle Power.	Equivalent Wattage.	Location.	Price.
AL306	6	5	Tail	1/6
AL308	15	12	Stop	2/11
AL309	21	20	Head	2/11
AL310	32	25	Head	2/11
AL311	50	35	Head	2/11

### 12/16 VOLT SINGLE FILAMENT SINGLE CONTACT LAMPS.

Cat. No.	Candle Power.	Equivalent Wattage.	Location.	Price.
AL312	6	5	Tail	1/6
AL314	15	12	Stop	2/11
AL315	21	20	Head	2/11
AL316	32	25	Head	2/11
AL317	50	35	Head	2/11

### 12/16 VOLT SINGLE FILAMENT DOUBLE CONTACT LAMPS.

Cat. No.	Candle Power.	Equivalent Wattage.	Location.	Price.
AL313A	6	5	Tail	1/6
AL315A	15	12	Stop	2/11
AL316A	21	20	Head	2/11
AL317A	32	25	Head	2/11
AL318	50	35	Head	2/11

### 6/8 VOLT DOUBLE FILAMENT HEAD LAMPS WITH STANDARD DOUBLE CONTACT CAP.

Cat. No.	Candle Power.	Equivalent Wattage.	Price.
AL319	21/3 (Ford)	20/3	3/2
AL320	32/6	25/5	3/2
AL321	21/21	20/20	3/7
AL322	32/32	25/25	3/7
AL323	50/50	35/35	3/7

### 12/16 VOLT DOUBLE FILAMENT HEAD LAMP WITH STANDARD DOUBLE CONTACT CAP.

Cat. No.	Candle Power.	Equivalent Wattage.	Price.
AL327	21/3	20/3	3/2
AL328	32/6	25/5	3/2
AL329	21/21	20/20	3/7
AL330	32/32	25/25	3/7
AL331	50/50	35/35	3/7

## Motor Car Lamps!



### 6/8 VOLT LAMPS WITH SPECIAL CAPS.

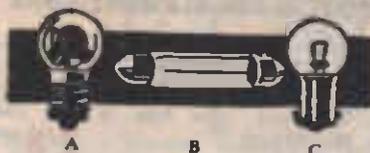
Cat. No.	Location.	Wattage.	Cap. Price.
AL350	Head	25/25 Prefocus 836	5/1
AL351	Head	35/35 Prefocus 836	5/1

For Most American Cars.

### 12/16 VOLT LAMPS WITH SPECIAL CAPS.

Cat. No.	Location.	Wattage.	Cap. Price.
AL373	Head	25/25 Prefocus 836	5/1
AL374	Head	35/35 Prefocus 836	5/1

### SPECIAL INTERIOR LAMPS, Etc.



- A—Ignition Indicator Min. Screw.
- B—Trafficator.
- C—Ignition Indicator Min. Bayonet Cap.

### 6/8 Volts

Cap. No.	Location.	Size, M.M.	Cap.	Price.
AL335—Trafficator	..	38 x 7 1/2	B	2/11
AL336—Festoon	..	43 x 15	B	2/7
AL337—Festoon	..	32 x 15	B	2/7
AL338—Ignition Indicator	—	—	A	1/5
AL339—Ignition Indicator	—	—	B	1/5
AL340—Dash Board Dial	—	—	C	1/5

### 12/16 Volts

Cap. No.	Location.	Size, M.M.	Cap.	Price.
AL341—Trafficator	..	38 x 7 1/2	B	2/11
AL342—Festoon	..	43 x 15	B	2/7
AL343—Festoon	..	32 x 15	B	2/7
AL344—Ignition Indicator	—	—	A	1/5
AL345—Ignition Indicator	—	—	C	1/5
AL346—Dash Board Dial	—	—	C	1/5

Mail all Orders to:—  
**THE LAMPHOUSE,**  
 11 MANNERS STREET,  
 WELLINGTON, C.I.

## OXFORD MOTOR CAR BATTERIES



Eighteen month's unconditional guarantee. Solidly built H.D. leak-proof Batteries. Thick plates, built in New Zealand for N.Z. conditions.

**CAREFULLY SEALED CELLS**  
**THICK PLATES**  
**LONG LIFE GUARANTEED**

Cat. No.	Description	Price.
AA40	6-volt, 9-plate. Width 7in. x length 7in. x height 9in.	£4/12/-
AA41	6-volt, 11-plate. English. 7in. x 7 1/2in. x 9in.	£5/9/9
AA42	6-volt, 11-plate. Squat. 7in. x 7 1/2in. x 7 1/2in.	£4/17/-
AA43	6-volt, 13-plate. 7in. x 9 1/2in. x 9in.	£5/19/6
AA44	6-volt, 13-plate. Squat. 7in. x 9 1/2in. x 7 1/2in.	£5/12/6
AA45	6-volt, 15-plate. 7in. x 10 1/2in. x 9in.	£7/2/-
AA46	6-volt, 15-plate. Squat. 7in. x 10 1/2in. x 7 1/2in.	£6/5/-
AA47	6-volt, 17-plate. 7in. x 11 1/2in. x 9in.	£8/6/6
AA48	6-volt, 17-plate. Squat. 7in. x 11 1/2in. x 7 1/2in.	£7/8/6
AA49	6-volt, 19-plate. 7in. x 12 1/2in. x 9in.	£9/11/-
AA50	12-volt, 7-plate. 7in. x 11 1/2in. x 9in.	£7/13/-
AA51	12-volt, 9-plate. 7in. x 12 1/2in. x 9in.	£8/9/-
AA52	12-volt, 11 plate. 7in. x 14 1/2in. x 9in.	£10/9/6
AA53	12-volt, 11-plate. Squat. 7in. x 14 1/2in. x 7 1/2in.	£9/7/9
AA54	6-volt, 7-plate. Motor Cycle, 3 1/2in. x 4 1/2in. x 6 1/2in.	£2/11/6

3/4 ALLOWANCE WILL BE MADE ON OLD BATTERIES RETURNED.

## AUTO LAMPHOLDERS AND ADAPTORS

MINIATURE ADAPTOR  
 M.B.C. Adaptor with Double Contact base.  
 Cat. No. AG212 .. .. . **1/4**

### MINIATURE CORDGRIP HOLDER

M.B.C. Bakelite Cord-grip Lampholders for making lighting connections in cars. Double Contact.  
 Cat. No. AG282—



**1/7**  
 MINIATURE BATTEN HOLDER  
 Similar to above but with a small round flange for easy mounting.  
 Cat. No. AG283 .. .. . **1/8**

# MOTOR CAR ACCESSORIES

## GARAGE HANDLAMPS



The ideal INSPECTION LAMP for work-shops, garages, factories, etc. Take the light where you want it most. Wooden handle, strong wire protective frame. Fitted with bakelite shockproof lampholder. Globe and Flex extra.  
Cat. No. AE95 .. .. . **19/6**

## MOTOR-CAR FUSES



Cat. No. AS200— 5 amp.  
Cat. No. AS201—10 amp.  
Cat. No. AS202—15 amp.  
Cat. No. AS203—20 amp. **5D.** each  
Length 1 1/2 in.

## "EAGLE" BATTERY TESTERS



"Eagle" American made Hydrometers for testing Car or Radio Batteries. Full size, glass tube type giving an instantaneous, accurate reading. Rubber bulb and nozzle. Don't be stuck—keep a check on your Car Battery yourself. Cat. No. AM300 .. .. . **7/6**

## MINIATURE SWITCHES

Here's a handy little switch suitable for radio and motor-car work. Positive action. Nicely finished (nickel plated). British made.



Cat. No. AG118 **2/4**

## MOTOR CAR RADIO SUPPRESSORS



Spark Plug Type (top illustration). A sturdy unit which meets the most exacting demands for spark plug suppression.  
Cat. No. AR229 .. .. . **1/8**

Distributor Type—Cat. No. AR228 **1/11**

The above suppressors will not affect power or petrol consumption of your engine.



"TAR-MAG"  
Battery Tonic!

Use "TARMAG" to give new life to old batteries, and added life to new ones. It dissolves the basic lead sulphate crystals which prevent electrolyte contact and helps your battery to give its best. For better lighting and better starting—TARMAG.

Cat. No. AA70  
6 volt charge, 1 bottle .. .. . **2/9**  
12 volt, 2 bottles .. .. . **5/6**

**LAMPHOUSE GUARANTEE**

Any goods that prove in any way unsuitable may be returned undamaged within seven days from receipt and your money will be refunded in full.

# GREAT AUTO CABLE OFFER!

LARGE QUANTITY, PURCHASED AT A SPECIAL PRICE, ENABLES US TO MAKE THIS OFFER. GENUINE IMPORTED, WITH HEAVY RUBBER INSULATION. COVERED OVERALL WITH A GLAZED OIL AND WATERPROOF BRAID.

## SINGLE OIL PROOF CABLE



9/012 (No. 18)—Single Flexible Oil Proof Cable. Approx. 4 M.M.  
Cat. No. AW300—  
Usually 9d. Yard. NOW **5D** YARD

16/012 (No. 16)—Single Flexible Oil Proof Cable. Approx. 5 M.M.  
Cat. No. AW301—  
Usually 1/- Yard. NOW **7D** YARD

## 7 M.M. HIGH TENSION CABLE



Rubber-covered Ignition Cable, multiple covers of high-grade Rubber. 7 M.M.

Cat. No. AW303—  
Usually 10d. ft. NOW **6D.** per ft.  
Cat. No. AX1374—9MM. **4D.** per ft.

**TWIN TWISTED P.V.C. CABLE**  
Twin twisted Yellow and Black flexible Cable. with latest P.V.C. Insulation. Ideal for extension lights, motor-car wiring, etc, etc.  
Cat. No. AW87A— .. **6D.** YARD

## TWIN OIL PROOF CABLE



9/012 (No. 18)—Twin Flexible Oil Proof Cable.

Cat. No. AW311—  
Usually 11d. yard. NOW **8D.** YARD

16/012 (No. 16)—Twin Flexible Oil Proof Cable.

Cat. No. AW312—  
Usually 1/- yard. NOW **9D.** YARD

THE BEST COSTS LESS AT THE "LAMPHOUSE" NEW ZEALAND'S LEADING RADIO & ELECTRICAL HOUSE

# A Woman's Crowning Glory!

**PERM. YOUR HAIR YOURSELF—AT HOME!**



Yes! Now you can cut out these tedious time-wasting hairdressing appointments!

All you need is—

## The "GLORIA" Home Permanent Wave Outfit

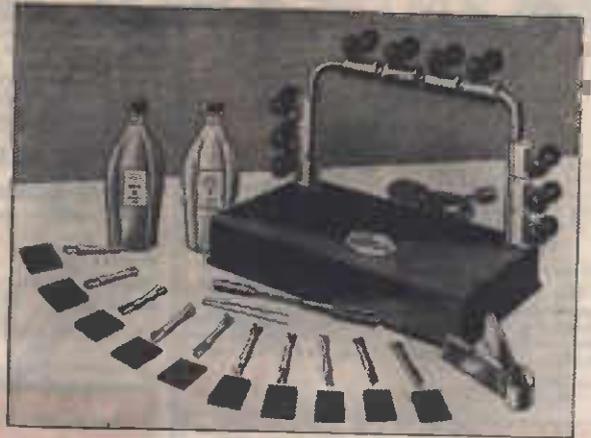
With the "GLORIA" Outfit you will be able to PERM YOUR OWN HAIR IN YOUR OWN HOME, easily obtaining a PERM OF PROFESSIONAL QUALITY—waves and curls of lasting loveliness, with self-setting ends. The "Gloria" is ready for service any time of the day or night. The parts of the "Gloria" Outfit are extremely easy to use, and by following the instructions you will immediately be able to "perm" your own hair and also that of other members of the family, if desired!

ASSURES A PERM OF PROFESSIONAL QUALITY. We illustrate the complete outfit above. It is, in principle, the same as used in any modern Beauty Salon. No experience or training is necessary with the "GLORIA" Permanent Wave Outfit. Those who live in the country will find this outfit will soon pay for itself by the saving of time and expense of going to town for perms.

**Complete Outfit**  
**Cat. No. AE105**

**£6/12/6 only.**

Includes 130-watt, 230-volt Permanent Waving Machine; 10 Heater Clamps; 10 Spring Winding Rods; 10 Rubber Pads; 1 bottle Waving Solution; 1 bottle Setting Lotion; 1 Damper; 1 Winder; 1 Instruction Book. Extra Parts and Refills of Waving and Setting Solutions can be bought separately.



Our Guarantee Protects You! **SEND FOR ONE NOW!**

**SPARES ALWAYS AVAILABLE.**

### GLORIA WAYER SPARES

Cat. No.	Description	Each.
AE106	Heating Clamps	3/9
AE107	Curling Rods	2/10
AE108	24oz. bottle of Waving Solution	3/9
AE109	10oz. bottle of Waving Solution	10/9
AE110	24oz. bottle of Setting Lotion	2/10
AE111	10oz. Bottle of Setting Lotion	9/3
AE112	Spare Dampers	4/6
AE113	Spare Winders	4/-
AE114	Rubber Pads	5/- doz.

### ENGLISH PLASTIC CASE HAIR DRIERS



These Hair Driers are moulded in finished plastic. They are British made, the fan being driven by a solidly constructed and trouble-free motor. A heating element is incorporated and a switch provided so that hot or cold air can be obtained as will. As a quick and efficient means of drying the hair, these electrical driers are ideal. Complete with 5ft. flexible cord.

Cat. No. AE215 **£6/7/6**

## Great Price Reduction!

**NO EXCHANGE! NO SALES TAX!**

Brings these English Sewing Machine Motors within the reach of every housewife. Transform that old-fashioned treadle or hand machine into a Modern Electrically Operated Unit by fitting this English motor. Fits all makes of household sewing machines and is supplied complete with a variable Foot Control for regulating the speed. Operates on 250 volts A.C. Pigmy light fitted on swivel bracket enables light to be thrown directly on to the work in hand. Plugs into either hotpoint or light socket and the current consumption is almost negligible. Complete with flexible cord already to go. Hundreds of these units have been sold throughout the country to satisfied users. **MEN!** This is a grand gift for wife or mother.

And Look at the **NEW LOW PRICE!**

Cat. No. AM663  
**NOW £5/17/6 complete**

Cat. No. AM664—Spare Foot Controls  
for above **30/-**



# FLEX — WIRE — CABLES

## CABTYRE RUBBER FLEX

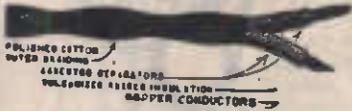


Heavy rubber-covered Circular Flex for extensions in workshop. Flexible. 11/.012.

Cat. No. AW150—2-wire	1/2 yd.
Cat. No. AW151—3-wire	1/9 yd.
Cat. No. AW153—j-wire 40/.0076 (extra heavy)	2/1 yd.

**MOTOR CAR CABLES. See Page 31**

## WIRES, HEATING



23/.0076 Rubber-insulated Asbestos-covered heating flexible. Covered overall with a glazed cotton braid. Used for toasters, and other appliance cords.

Cat. No. AW230—2-wire	1/3 yd.
Cat. No. AW231—3-wire	1/6 yd.
Cat. No. AW240—40/.0076, 2-wire	1/9 yd.
Cat. No. AW241—40/.0076, 3-wire	2/2 yd.
Cat. No. AW245—70/.0076, 3-wire	2/8 yd.

## FLEX for EXTENSIONS



For 230-volt supply. Handy for extending lights, etc. 23/.0076.

Twin Twisted Cotton-covered Eng. Rubber, Insulated.

Cat. No. AW270	8 D. yard
Ditto Plastic Insulated—	9 D. yard
Cat. No. AW273	

## TRU-RIP FLEX



Thin Plastic-covered Flex. Two wires laid flat. Handy for wiring Table Lamps, etc.

Colours: Brown, Black, Red, White, Clear.

Cat. No. AW272	7 1/2 D. yard
Cat. No. AW271—Similar to above but 3-wire	1/1 yd.

**RADIO WIRES**  
SEE PAGE 62.

## ART SILK FLEX

LIGHTING FLEX, 23/.0076. Twin wires enclosed in single braided casing. Available in Pink, Green, or Blue flecked. Ideal for ornamental fittings, reading lamps, etc.

Cat. No. AW274 ... 10 1/2 D. yard

## WIRE, FLEXIBLE

Two and three-wire. 23/.0076 P.V.C. Flexible for extensions, appliances, etc. Each core is P.V.C. insulated braided overall.

Cat. No. AW236—2-wire	1/1 yd.
Cat. No. AW237—3-wire	1/6 yd.

## WIRES, V.I.R. CABLE

Cat. No.	Yard.	100 yard coil.
AW77—1/.044 (1/18)	3d.	21/6
AW78—7/.029 (7/21)	6d.	44/6
AW79—3/.036 (3/20)	4 1/2 d.	31/
AW80—7/.036 (7/20)	8d.	59/6
AW81—7/.044 (7/18)	11d.	82/

## LAMPHOUSE GUARANTEE

Any goods that prove in any way unsuitable may be returned undamaged within seven days from receipt and your money will be refunded in full.

Your name mightn't be Eisenhower, Montgomery or McArthur but you too can organise and control masses of military material in this great fascinating game of . . .

# SUPREMACY

The Game for all the Family!

There's no element of luck in this game—the most skilful player wins. It's really great fun and excitement capturing Aeroplanes, Tanks, Air Bases, Forts, Infantry Divisions, winning Naval battles and controlling the English Channel.

Anyone can learn to play within a few minutes.

From 2 to 7 players.



Evenings filled with thrills and excitement for your family and friends. Complete with all equipment and printed instructions. Send for your "SUPREMACY" set to-day. The game that no one can resist.

Complete with all equipment and printed instructions.



Cat. No. AU100—  
Post free

**19/6**

Recognised Dealers who have not already obtained supplies should write at once for our terms.

# HEALTH FROM YOUR HOTPOINT!



## "NORWOOD" INFRA RED HEALTH LAMP



"CONSULT YOUR DOCTOR!"

Whatever your complaint, we suggest you consult your doctor before commencing Infra-Red treatment. While Infra-Red rays are perfectly safe, you may be wasting valuable time if this type of treatment is unsuitable for your particular complaint. Infra-Red Ray treatment is recommended for Rheumatism, Sciatica, Neuritis, Gout, Neuralgia, Lumbago, Toothache, Earache, Sprains, Insomnia, Chilblains, Boils, Septic Sores, and for healing open wounds and lacerations. Ask your doctor.

Supplied complete with table stand as illustrated. Reflector and handle is removable from base so that outfit can be held in hand.

Cat. No. AE88

£5/8/6 EACH

## INVIGORATING HEALTH

WHEN YOU USE THE NEW

## "PIFCO" Electric Massager VIBRATOR



MODERN BEAUTY  
TREATMENT  
IN YOUR OWN HOME!

The clear, fine textured youthful complexion that everyone admires and every woman envies originates deep in the tissues below the surface. Unless this tissue is constantly and healthily renewed by the blood stream the visible skin loses its fresh colour and vitality. Age lines develop and curves tend to sag. The Pifco Electric Massager stimulates a healthy circulation of the blood, invigorating the tissue, washing away waste products, keeping it vital and healthy. It tones up the underlying muscles, promotes the removal of fatigue poisons, and stimulates the dispersal of unwanted fatty accumulations. It loosens up tight, strained shoulder and neck muscles; sends relaxed waves over tired faces; tingles the scalp to a lively glow, makes the skin feel fresh and alive, and it is so simple and easy to use. Eases pain and acts as a tonic to the system.

An instruction booklet giving full details plus Two Charts on how and where to use for different ailments is supplied with each Vibrator.

FOR A.C. CURRENT—ON 200 to 250  
VOLTS INCLUSIVE.

## "ERGON" ULTRA VIOLET HEALTH LAMPS



The "Ergon" is a Carbon Arc Ultra Violet Lamp combined with Infra Red. The carbons, which are prepared from certain chemicals, emit Ultra Violet Rays. The Spiral emits simultaneously Infra Red. Ultra Violet Rays are invaluable in the treatment of various diseases and ills, but before buying for this purpose—CONSULT YOUR DOCTOR!

Daily sunbathes with this Lamp will not only keep you fit and raise your resistance to winter cold, but will also give you an enviable and healthy Suntan. Own your own sunshine—own an ERGON HEALTH LAMP

Cat. No. AE89

£10/18/4

### FOUR SPECIAL APPLICATORS:

#### FOR FACE MASSAGE.

The sponge rubber applicator for gentle massage. It sends soothing and relaxing waves over tired faces.

#### FOR NECK MASSAGE.

The flat rubber applicator loosens-up strained or tight shoulder and neck muscles, and is also used for bust development.

#### FOR BODY MASSAGE.

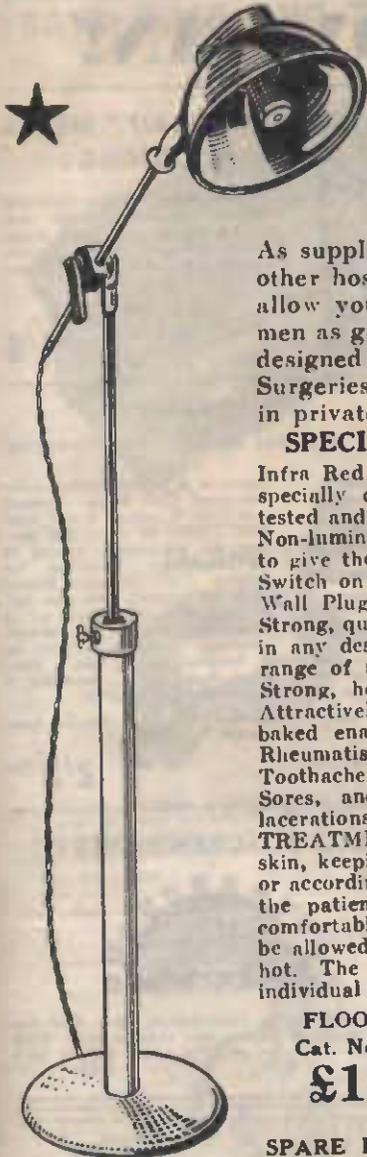
If your body is fatigued or your limbs ache, the hard applicator will drive away that lethargy and make the muscles supple and active.

#### FOR SCALP MASSAGE.

The spiked rubber applicator imparts strength and gives lustre to the hair. Dandruff is removed and the scalp made healthy. It lifts your head into the clouds.

Beautifully finished in Ivory Plastic  
Casing.  
Cat. No. AE79 . . . . . £5/5/6

# The "Hayman" Infra Red Health Lamps



As supplied to the Auckland Hospital Board and many other hospitals throughout New Zealand. These Lamps allow you to obtain exactly the same Infra Red Treatment as given in many of the leading hospitals. Specially designed for use in Hospital Massage Departments, Surgeries, Clinics, Convalescent Homes, Institutions, and in private homes.

### SPECIAL FEATURES INCORPORATED ARE:

Infra Red Radiating Element, emitting genuine Infra Red Rays, specially designed for heavy duty performance and long life; tested and proved by medical experts.

Non-luminous type Element. Special brightly polished reflector to give the right focus of rays to location under treatment.

Switch on bowl to control the Element without disconnection of Wall Plug or Light Socket.

Strong, quick-fixing swivel joints which hold the lamp down firmly in any desired position, vertical or horizontal, with a very wide range of movement.

Strong, heavy cast base prevents standard from falling over. Attractively finished in bright nickel-plating, and wrinkle-finish baked enamel. Infra Red Ray treatment is recommended for Rheumatism, Sciatica, Neuritis, Gout, Neuralgia, Lumbago, Toothache, Earache, Sprains, Insomnia, Chilblains, Boils, Septic Sores, and for healing open wounds and lacerations. Ask your doctor.

**TREATMENT:** Apply the Rays to the bare skin, keeping the bowl about 18 inches away, or according to the sensitiveness of the skin of the patient. The Rays should always be a comfortably strong warmth, and should never be allowed to be so close as to be unbearably hot. The Lamp should be adjusted to suit individual requirements.



Duration of treatment should be according to medical advice, but 20 to 30 minutes is usually long enough for the first treatment, 2 or 3 times daily, according to the ailment and measure of relief received. Longer treatments can be given when accustomed to the Rays.

Before commencing treatment, the patient should be made comfortable on a bed or chair so as not to be weary during the period of treatment.

#### FLOOR TYPE

Cat. No. AE85—

**£10/3/6**

Supplied complete with flexible cord.

#### TABLE TYPE

Cat. No. AE86—

**£5/6/9**

**SPARE ELEMENTS ARE AVAILABLE.**

Cat. No. AE87 .. .. .

**17/6**

### WHO'S GOT COLD FEET?



Warm comfort on cold days with a "Hayman" ELECTRIC FOOT WARMER. Gives warmth where it is wanted! Cold feet banished. Increases efficiency in Offices and Factories. Gives comfort in the Homes and to aged or infirm. Will dry wet shoes without damage to sole.

**POWER SAVER—OPERATES FOR 20 HOURS ON ONE UNIT of Electricity—uses less current than the average Lamp.**

**TWELVE MONTHS' GUARANTEE! NO PERMIT REQUIRED.**

Cat. No. AE291 .. .. . **45/-** each

## "MONARCH" Bed Comfort

This new electrical device dispenses with the old-fashioned hot-water bottle. To heat it you simply connect it to the power supply and leave it for three minutes. It is then disconnected, and will retain a comfortable heat under the bed clothes for a number of hours. May be taken in your motor-car to add comfort to travelling, or to the picture as a foot-warmer. Inexpensive to run, and, of course, invaluable in the sick room. It is extremely handy for people working at desks, tables, etc., who suffer from cold feet. Cost about 1d. per week for current. Can be bought without plug or cord or complete.



(The household iron or toaster cord set will fit the Monarch Bed Warmer.)

Cat. No. AE82—

**24/11**

Cat. No. AE82A—Monarch Bed Warmer, with 3-pin Plug and Cord Set .. .. .

**32/6**

**PROSPECTIVE BUYER — ALL GOODS LISTED IN THIS CATALOGUE ARE COVERED BY OUR 7 DAY MONEY—BACK GUARANTEE**

# AIDS FOR THE HANDYMAN!

## PLASTIC WOOD



The perfect moulding material. A plastic material which is easily worked. A high-class filler for all types of jobs. Used by Carpenters, Joiners, Painters, Mechanics, Farmers and Householders. Hardens very rapidly, and, like wood, can be cut, sawn, planed, filed, nailed or screwed. It can be varnished, stained, painted or polished. Grease-proof, waterproof, and weather-proof.

Cat. No. AU166—2 oz. Tin .. **1/11**  
 Cat. No. AU168—1 oz. Tube .. **1/7**

## LIQUID CASEIN GLUE— "ATAGLU"

Waterproof. A high-class, ready to use, casein liquid glue. "Ataglu" eliminates loss of time preparing hot glues. Does not stain. Gives a better spread than ordinary cold glues.

Cat. No. AU157 .. Tin **1/10 1/2**

## "3-IN-1" OIL

Motors, Lawnmowers, Vacuum Cleaners, etc., are all very hard to replace. Keep them in AI order with "3-in-1."

"3-in-1" also works miracles in brightening dull furniture and woodwork. A few drops on any soft cloth wrung out in water gives you a dusting and polishing cloth that not only polishes but also cleans and protects the finest finish.

Cat. No. AU151—3oz. Can .. **1/10 1/2**



## "QUICKMEND"

IS THE NEW SCIENTIFIC LIQUID MENDER



Specially prepared for mending Aluminium, Brass, Silver, Copper, White Metal, Iron, Pewter, Guttering, Enamel, Petrol Tanks, Carburettors, Water Tanks. Requires no HEAT, no SOLDERING IRON, no FLUX. Is not soluble in Spirits or Acids; withstands the action of hot or cold water.

Full instructions with each bottle.  
 Cat. No. AU167 .. Costs Only **1/7** Bottle

## Money Back Guarantee

Any goods that prove in any way unsuitable may be returned undamaged within seven days from receipt and your money will be refunded in full.

## HACK-SAW BLADES

BEST QUALITY.

Cat. No. AU300 .. **6D.** each

## "NEW GRIP" MENDS ANYTHING!



"NEW GRIP"—The Universal Cellulose Cement, mends anything: Slate, Glass, Paper, Ivory, Wood, Crockery, Canvas, etc. Recommended for Model Aeroplane building.

NEW PRICE!

Cat. No. AU156 .. **1/5**

## "INSUVARN"

QUICK DRYING INSULATING VARNISH



Insuvarn is a fast-drying moisture-proof Coil Dope. Painted over Coil Windings it will hold them rigidly in place and prevent the atmosphere getting at the windings. Excellent for coating Coil Formers before they are wound, and for impregnating wood panels so as to ensure they do not absorb moisture. Insuvarn can also be used for mending Speaker Cones, and a hundred and one other Radio jobs, requiring a first-class insulating varnish or cement.

Every experimenter or serviceman should keep a jar of "INSUVARN" on hand.

Cat. No. AU159 .. **2/3** Jar

## RADIO SCREWDRIVERS



Insulated Handle Screwdrivers. Best steel, fine points, moulded handle that remains fast. 5000 volt test.—Cat. No. AU314 .. **10D.** each

# The "Vibro-Tool" De Luxe

GIVES YOU POWER TO DO FAST WORK OF FINE QUALITY!

Writes on Watches, Glasware, Tools, Leather, Plastics, Jewellery, Pots and Pans, Sporting Equipment, etc., etc.



Engrave your name .. each letters or designs .. place permanent identification marks on anything with this unique hand tool. Carves Wood and linoleum, cuts cardboard and balsa, tools leather. Just plug in on any 230 volt A.C. line. No Workshop is complete without a Burgess Vibro-Tool.

For the first time, the simple principle of vibration is applied in a hand-tool that secures results never before accomplished so easily.

Amazingly versatile, the BURGESS VIBRO-TOOL enables many difficult industrial jobs, as well as the simplest home workshop tasks, to be carried out with speed and efficiency. For embossing thin gauge metals, frosting glass, designing on plastic, you can't beat the "VIBRO-TOOL" DE-LUXE.

The De-Luxe Kit is supplied complete with 19 attachments in a highly polished wooden case  
 Cat. No. AU360 .. ONLY **£5/9/-**

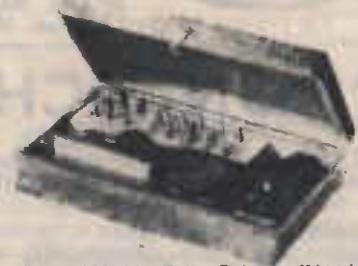
### STANDARD VIBRO-TOOL

The Standard model is similar to above but is supplied with a general purpose engraving point only.

Cat. No. AU361 .. ONLY **5/9**  
 Both Units Supplied Complete with Illustrated Booklet.

### SPARE ACCESSORIES SAME AS USED WITH DE-LUXE "VIBRO-TOOL"

Cat. No. AU362—Standard point (V5) for most types of engraving .. 8d. ea.  
 Cat. No. AU363—Hard Point (V3) for hardened metals, glass, etc. .. 6/3 ea.  
 Cat. No. AU364—Knives—Straight for gasket and stencil cutting .. 1/9 ea.  
 Cat. No. AU365—Knives—Curved (V24) for general purpose cutting .. 1/9 ea.



Cat. No. AU366—Ball Points (V44/48) assorted sizes for embossing metals, hammering, working leather, etc. SET OF 5 .. 2/10

Cat. No. AU367—Carving Chisels (V51/56) for wood carving, linu-block cutting, etc. SET OF 4 .. 6/10

Cat. No. AU368—Diamond Point (V80) Not supplied with De-Luxe Kit. This is actual diamond inseting for continuous glass work, fine engraving on jewellery, etc. .. 28/9

Cat. No. AU369—Abrasive Point (V81) for frosting glass, smoothing other surfaces .. 5/3

Cat. No. AU370—Leather Tools (V82/87) for all types leather work, includes slotter, punch, liner, deerfoot, spoon, combination double liner and cutter. Set of 6 .. 5/9 set

Cat. No. AU371—Foot Gauge (V101) for use with knives to regulate depth of cut. 4/9

# HANDYMAN'S ACCESSORIES

**SAVE TIME AND TEMPER!** Get one of these

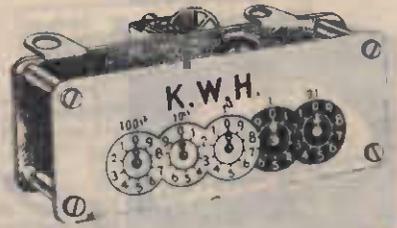


## ALL-STEEL Handy Tool Boxes

19in. long, 6in. wide, 6 1/2in. deep. Finished in green lacquer, solidly constructed, stout metal handle, and with a place for everything. Tools go in the bottom, and all the small things in the removable tray. It's a dandy job—good for a lifetime. Send for one today, and if you don't think it's just the thing and grand value—return it, and we will refund your money.  
Cat. No. AU141

40/-

## K.W.H. COUNTERS



An exceedingly useful unit, which can be put to a variety of uses by the average experimenter. Can be adapted to count turns when winding coils, chokes, transformers, etc. Will register up to 999 and 99/100th and down to 1/100th of a turn. Removed from electricity measuring meters.—Cat. No. AU140

2/6 each

## MAGNETS



Strong Magnets removed from old meters. Useful in every workshop, office, etc., for picking up nails, screws, pins, etc. Every youngster will find dozens of other uses.  
Cat. No. AU4

6D. each

## ELECTRIC MOTORS



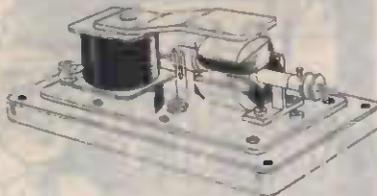
230 v. 50-cycle 1440 r.p.m. Fractional H.P. Motors. Ideal for saw benches, pumps, drills and many other purposes.

- Cat. No. AM571 "Westinghouse" 1/4 h.p. Split Phase £6/15/-
- Cat. No. AM572 "Westinghouse" 1/2 h.p. Split Phase £8/6/-
- Cat. No. AM560 "Hoover" 1/4 h.p. Split Phase £7/-
- Cat. No. AM561 "Hoover" 1/2 h.p. Split Phase £7/5/3

## MONEY BACK GUARANTEE

Any goods which prove in any way unsuitable may be returned within 7 days from receipt and your money will be refunded in Full!

## "ELECTRA" MODEL MOTOR



A well constructed 6.8 volt D.C. Model Electric Motor. Similar in construction to the full size motors this little chap is ideal for driving models such as "Meccano", "Triv", etc. The motor is mounted on a heavy plastic base measuring 5 1/2in. long by 2 1/2in. wide with holes already drilled for baseboard mounting. Operates from four torch cells or a "C" Battery.  
Cat. No. AM591

26/6

## MOTOR PULLEYS



Cast Aluminium Pulleys, 4in. diam. for "V" Belts.

- Cat. No. AM600 for 1/2in. shaft. ALL
- Cat. No. AM601 for 3/4in. shaft. 7/9 each
- Cat. No. AM602 for 1in. shaft. 7/9 each
- Cat. No. AM603 2in. diam. for 1/2in. shaft. 4/6 each
- Cat. No. AM604 2in. diam. for 3/4in. shaft. 4/6 each

## "C.M." WATER PUTTY



Ready for use, simply by mixing with water. Dries rock hard without shrinking. Easy to apply, and can be used on wood, plaster stone, and similar material. Can be coloured or varnished.

- Cat. No. AU163 (8 oz.) 1/6 per tin
- Cat. No. AU165—Large size (16 oz.) 2/4 per tin

## FREIGHT

We pay Freight on all retail orders over £1 value. Please include sufficient cash for postage on small orders.

## TELEPHONES

All Plastic "Magnet" brand wall pattern, hand-set, direct working Telephone, with buzzer and ring key.

Requires 4 1/2 volts per phone to energize. Connect with bell wire. Ideal for inter-office communication, between factory and office, shop and warehouse, etc. Plastic case of modern attractive appearance. Complete with wiring diagram.

Cat. No. AU50—£3/19/6 each

## SUITABLE BATTERIES FOR ABOVE

Cat. No. AB210—1 No. 6 Cells 3/10 each

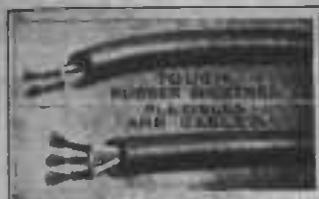
BELL WIRE  
Cat. No. AW113A—60ft. Coils Waxed Cotton covering 2/3 each

## PRICES

ALL PRICES IN THIS CATALOGUE ARE SUBJECT TO ALTERATION WITHOUT NOTICE.

# FLEX — WIRE — CABLES

## CABTYRE RUBBER FLEX



Heavy rubber-covered Circular Flex for extensions in workshop. Flexible. 11/012.  
 Cat. No. AW150—2-wire .. **1/2** yd.  
 Cat. No. AW151—3-wire .. **1/9** yd.  
 Cat. No. AW153—3-wire 40/0076 (extra heavy) .. **2/-** yd.

**MOTOR CAR CABLES. See Page 31**

## WIRES, HEATING



23/0076 Rubber-insulated Asbestos-covered heating flexible. Covered overall with a glazed cotton braid. Used for toasters, and other appliance cords.  
 Cat. No. AW230—2-wire .. **1/3** Yard.  
 Cat. No. AW231—3-wire .. **1/6**  
 Cat. No. AW240—40/0076, 2-wire .. **1/9**  
 Cat. No. AW241—40/0076, 3-wire .. **2/2**  
 Cat. No. AW245—70/0076, 3-wire .. **2/8**

## FLEX for EXTENSIONS



For 230-volt supply. Handy for extending lights, etc. 23/0076.  
 Twin Twisted Cotton-covered Eng. Rubber, Insulated. Cat. No. AW270 .. **8**D. yard  
 Ditto Plastic Insulated—Cat. No. AW273 .. **9**D. yard

## TRU-RIP FLEX



Thin Plastic-covered Flex. Two wires laid flat. Handy for wiring Table Lamps, etc. Colours: Brown, Black, Red, White, Clear.  
 Cat. No. AW272 .. **7 1/2**D. yard  
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SEE PAGE 62.

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LIGHTING FLEX, 23/0076. Twin wires enclosed in single braided casing. Available in Pink, Green, or Blue flecked. Ideal for ornamental fittings, reading lamps, etc.  
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Two and three-wire. 23/0076 P.V.C. Flexible for extensions, appliances, etc. Each core is P.V.C. insulated braided overall.  
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 Cat. No. AW237—3-wire .. **1/6** yard

## WIRES, V.I.R. CABLE

Cat. No.	Yard.	100 yard coil.
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AW78—7/.029 (7/21)	6d.	44/6
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Your name mightn't be Eisenhower, Montgomery or McArthur but you too can organise and control masses of military material in this great fascinating game of

## SUPREMACY

The Game for all the Family!

There's no element of luck in this game—the most skilful player wins. It's really great fun and excitement capturing Aeroplanes, Tanks, Air Bases, Forts, Infantry Divisions, winning Naval battles and controlling the English Channel.

Anyone can learn to play within a few minutes.

From 2 to 7 players.



Evenings filled with thrills and excitement for your family and friends. Complete with all equipment and printed instructions.

Send for your "SUPREMACY" set to-day. The game that no one can resist.

Complete with all equipment and printed instructions.



Cat. No. AU100—  
Post free

**19/6**

Recognised Dealers who have not already obtained supplies should write at once for our terms.

# HEALTH FROM YOUR HOTPOINT!



## "NORWOOD" INFRA RED HEALTH LAMP



"CONSULT YOUR DOCTOR!"

Whatever your complaint, we suggest you consult your doctor before commencing Infra-Red treatment. While Infra-Red rays are perfectly safe, you may be wasting valuable time if this type of treatment is unsuitable for your particular complaint.

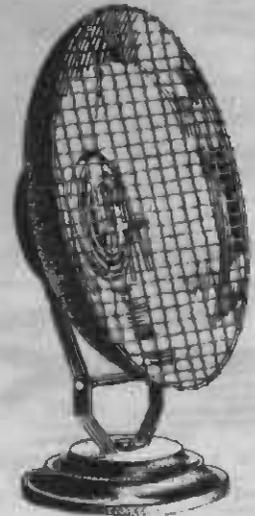
Infra-Red Ray treatment is recommended for Rheumatism, Sciatica, Neuritis, Gout, Neuralgia, Lumbago, Toothache, Earache, Sprains, Insomnia, Chilblains, Boils, Septic Sores, and for healing open wounds and lacerations. Ask your doctor.

Supplied complete with table stand as illustrated. Reflector and handle is removable from base so that outfit can be held in hand.

Cat. No. AE88

£5/8/6 EACH

## "ERGON" ULTRA VIOLET HEALTH LAMPS



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Daily sunbathes with this Lamp will not only keep you fit and raise your resistance to winter cold, but will also give you an enviable and healthy Suntan. Own your own sunshine—own an ERGON HEALTH LAMP

Cat. No. AE89

£10/18/4

## INVIGORATING HEALTH

WHEN YOU USE THE NEW

## "PIFCO" Electric Massager VIBRATOR



MODERN BEAUTY  
TREATMENT  
IN YOUR OWN HOME!

The clear, fine textured youthful complexion that everyone admires and every woman envies originates deep in the tissues below the surface. Unless this tissue is constantly and healthily renewed by the blood stream the visible skin loses its fresh colour and vitality. Age lines develop and curves tend to sag. The Pifco Electric Massager stimulates a healthy circulation of the blood, invigorating the tissue, washing away waste products, keeping it vital and healthy. It tones up the underlying muscles, promotes the removal of fatigue poisons, and stimulates the dispersal of unwanted fatty accumulations. It loosens up tight, strained shoulder and neck muscles; sends relaxed waves over tired faces; tingles the scalp to a lively glow, makes the skin feel fresh and alive, and it is so simple and easy to use. Eases pain and acts as a tonic to the system.

An instruction booklet giving full details plus Two Charts on how and where to use for different ailments is supplied with each Vibrator.

FOR A.C. CURRENT—ON 200 to 250  
VOLTS INCLUSIVE.

### FOUR SPECIAL APPLICATORS:



#### FOR FACE MASSAGE.

The sponge rubber applicator for gentle massage. It sends soothing and relaxing waves over tired faces.



#### FOR NECK MASSAGE.

The flat rubber applicator loosens up strained or tight shoulder and neck muscles, and is also used for bust development.



#### FOR BODY MASSAGE.

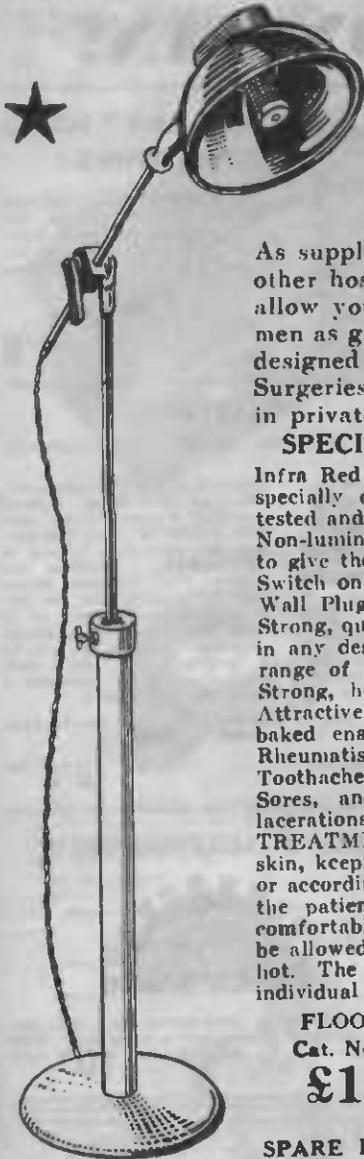
If your body is fatigued or your limbs ache, the hard applicator will drive away that lethargy and make the muscles supple and active.



#### FOR SCALP MASSAGE.

The spiked rubber applicator imparts strength and gives lustre to the hair. Dandruff is removed and the scalp made healthy. It lifts your head into the clouds.

Beautifully finished in Ivory Plastic  
Casing.  
Cat. No. AE79 . . . . . £5/5/6



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As supplied to the Auckland Hospital Board and many other hospitals throughout New Zealand. These Lamps allow you to obtain exactly the same Infra Red Treatment as given in many of the leading hospitals. Specially designed for use in Hospital Massage Departments, Surgeries, Clinics, Convalescent Homes, Institutions, and in private homes.

**SPECIAL FEATURES INCORPORATED ARE:**

Infra Red Radiating Element, emitting genuine Infra Red Rays, specially designed for heavy duty performance and long life; tested and proved by medical experts.

Non-luminous type Element. Special brightly polished reflector to give the right focus of rays to location under treatment.

Switch on bowl to control the Element without disconnection of Wall Plug or Light Socket.

Strong, quick-fixing swivel joints which hold the lamp down firmly in any desired position, vertical or horizontal, with a very wide range of movement.

Strong, heavy cast base prevents standard from falling over. Attractively finished in bright nickel-plating, and wrinkle-finish baked enamel. Infra Red Ray treatment is recommended for Rheumatism, Sciatica, Neuritis, Gout, Neuralgia, Lumbago, Toothache, Earache, Sprains, Insomnia, Chilblains, Boils, Septic Sores, and for healing open wounds and lacerations. Ask your doctor.

**TREATMENT:** Apply the Rays to the bare skin, keeping the bowl about 18 inches away, or according to the sensitiveness of the skin of the patient. The Rays should always be a comfortably strong warmth, and should never be allowed to be so close as to be unbearably hot. The Lamp should be adjusted to suit individual requirements.



Duration of treatment should be according to medical advice, but 20 to 30 minutes is usually long enough for the first treatment, 2 or 3 times daily, according to the ailment and measure of relief received. Longer treatments can be given when accustomed to the Rays.

Before commencing treatment, the patient should be made comfortable on a bed or chair so as not to be weary during the period of treatment.

**FLOOR TYPE**

Cat. No. AE85—

**£10/3/6**

**TABLE TYPE**

Cat. No. AE86—

**£5/6/9**

Supplied complete with flexible cord.

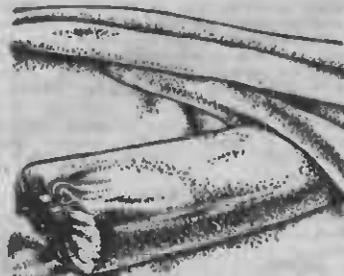
**SPARE ELEMENTS ARE AVAILABLE.**

Cat. No. AE87

**17/6**

## "MONARCH" Bed Comfort

This new electrical device dispenses with the old-fashioned hot-water bottle. To heat it you simply connect it to the power supply and leave it for three minutes. It is then disconnected, and will retain a comfortable heat under the bed clothes for a number of hours. May be taken in your motor-car to add comfort to travelling, or to the pictures as a foot-warmer. Inexpensive to run, and, of course, invaluable in the sick room. It is extremely handy for people working at desks, tables, etc., who suffer from cold feet. Cost about 1d. per week for current. Can be bought without plug or cord or complete.



(The household iron or toaster cord set will fit the Monarch Bed Warmer.)  
Cat. No. AE82—

**24/11**

Cat. No. AE82A—Monarch Bed Warmer, with 3-pin Plug and Cord Set ..

**32/6**



**WHO'S GOT COLD FEET?**

Warm comfort on cold days with a "Hayman" **ELECTRIC FOOT WARMER**. Gives warmth where it is wanted! Cold feet banished. Increases efficiency in Offices and Factories. Gives comfort in the Homes and to aged or infirm. Will dry wet shoes without damage to sole.

**POWER SAVER—OPERATES FOR 20 HOURS ON ONE UNIT of Electricity—uses less current than the average Lamp.**

**TWELVE MONTHS' GUARANTEE! NO PERMIT REQUIRED.**

Cat. No. AE291 .. .. **45/-** each

# AIDS FOR THE HANDYMAN!

## PLASTIC WOOD



The perfect moulding material. A plastic material which is easily worked. A high-class filler for all types of jobs. Used by Carpenters, Joiners, Painters, Mechanics, Farmers and Householders. Hardens very rapidly, and, like wood, can be cut, sawn, planed, filed, nailed or screwed. It can be varnished, stained, painted or polished. Grease-proof, waterproof, and weather-proof.

Cat. No. AU166—2 oz. Tin .. **1/11**  
 Cat. No. AU168—1 oz. Tube .. **1/7**

## LIQUID CASEIN GLUE— "ATAGLU"

Waterproof. A high-class, ready to use, casein liquid glue. "Ataglu" eliminates loss of time preparing hot glues. Does not stain. Gives a better spread than ordinary cold glues.

Cat. No. AU157 .. .. Tin **1/10 1/2**

## "3-IN-1" OIL

Motors, Lawnmowers, Vacuum Cleaners, etc., are all very hard to replace. Keep them in AT order with "3-in-1."

"3-in-1" also works miracles in brightening dull furniture and woodwork. A few drops on any soft cloth wrung out in water gives you a dusting and polishing cloth that not only polishes but also cleans and protects the finest finish.

Cat. No. AU151—3oz. Can .. **1/10 1/2**



## "QUICKMEND"

IS THE NEW SCIENTIFIC LIQUID MENDER



Specially prepared for mending Aluminium, Brass, Silver, Copper, White Metal, Iron, Pewter, Guttering, Enamel, Petrol Tanks, Carburetors, Water Tanks. Requires no HEAT, no SOLDERING IRON, no FLUX. Is not soluble in Spirits or Acids; withstands the action of hot or cold water.

Full instructions with each bottle.

Cat. No. AU167 .. Costs Only **1/7** Bottle

## Money Back Guarantee

Any goods that prove in any way unsuitable may be returned undamaged within seven days from receipt and your money will be refunded in full.

## HACK-SAW BLADES BEST QUALITY.

Cat. No. AU300 .. **6D.** each

## "NEW GRIP" MENDS ANYTHING!



"NEW GRIP"—The Universal Cellulose Cement, mends anything: Slate, Glass, Paper, Ivory, Wood, Crockery, Canvas, etc. Recommended for Model Aeroplane building.

NEW PRICE!

Cat. No. AU156 .. **1/5**

## "INSUVARN"

QUICK DRYING INSULATING VARNISH



Insuvarn is a fast-drying moisture-proof Coil Dope. Painted over Coil Windings it will hold them rigidly in place and prevent the atmosphere getting at the windings. Excellent for coating Coil Formers before they are wound, and for impregnating wood panels so as to ensure they do not absorb moisture. Insuvarn can also be used for mending Speaker Cones, and a hundred and one other Radio jobs, requiring a first-class insulating varnish or cement.

Every experimenter or serviceman should keep a jar of "INSUVARN" on hand.

Cat. No. AU159 .. .. Jar **2/3**

## RADIO SCREWDRIVERS



Insulated Handle Screwdrivers. Best steel, fine points, moulded handle that remains fast. 5000 volt test.—Cat. No. AU314 .. **10D.** each

# The "Vibro-Tool" De Luxe

GIVES YOU POWER TO DO FAST WORK OF FINE QUALITY!

Writes on: Watches, Glassware, Tools, Leather, Plastics, Jewellery, Pots and Pans, Sporting Equipment, etc., etc.



Engrave your name .. etch letters or designs .. place permanent identification marks on anything with this unique hand tool. Carves Wood and linoleum, cuts cardboard and balsa, tools leather. Just plug in on any 230 volt A.C. line. No Workshop is complete without a Burgess Vibro-Tool.

For the first time, the simple principle of vibration is applied in a hand-tool that secures results never before accomplished so easily.

Amazingly versatile, the BURGESS VIBRO-TOOL enables many difficult industrial jobs, as well as the simplest home workshop tasks, to be carried out with speed and efficiency. For embossing thin gauge metals, frosting glass, designing on plastic, you can't beat the "VIBRO-TOOL" DE-LUXE.

The De-Luxe Kit is supplied complete with 19 attachments in a highly polished wooden case  
 Cat. No. AU360 .. ONLY **£5/9/-**

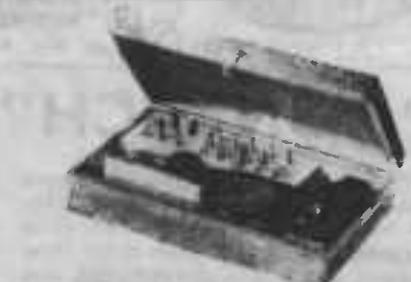
### STANDARD VIBRO-TOOL

The Standard model is similar to above but is supplied with a general purpose engraving point only.

Cat. No. AU361 .. ONLY **51/9**  
 Both Units Supplied Complete with Illustrated Booklet.

### SPARE ACCESSORIES SAME AS USED WITH DE-LUXE "VIBRO-TOOL"

Cat. No. AU362—Standard point (V5) for most types of engraving .. 8d. ea.  
 Cat. No. AU363—Hard Point (V3) for hardened metals, glass, etc. .. 6/3 ea.  
 Cat. No. AU364—Knives—Straight for gasket and stencil cutting .. 1/9 ea.  
 Cat. No. AU365—Knives—Curved (V24) for general purpose cutting .. 1/9 ea.



Cat. No. AU366—Ball Points (V44/48) assorted sizes for embossing metals, hammering, working leather, etc.  
 SET OF 5 .. 2/10

Cat. No. AU367—Carving Chisels (V51/56) for wood carving, lin-block cutting, etc.  
 SET OF 4 .. 6/10

Cat. No. AU368—Diamond Point (V80) Not supplied with De-Luxe Kit. This is actual diamond inseting for continuous glass work, fine engraving on jewellery, etc. .. 28/9

Cat. No. AU369—Abrasive Point (V81) for frosting glass, smoothing other surfaces .. 5/3

Cat. No. AU370—Leather Tools (V82/87) for all types leather work, includes slotter, punch, liner, deerfoot, spoon, combination double liner and cutter.  
 Set of 6 .. 5/9 set

Cat. No. AU371—Foot Gauge (V101) for use with knives to regulate depth of cut. 4/9

# HANDYMAN'S ACCESSORIES

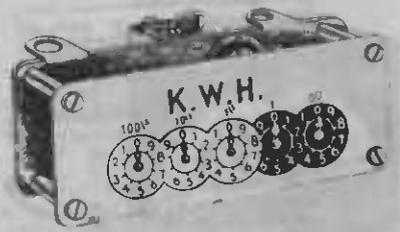
**SAVE TIME AND TEMPER!** Get one of these



## ALL-STEEL Handy Tool Boxes

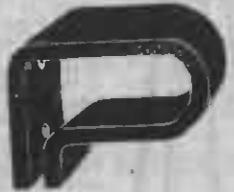
19in. long, 6in. wide, 6 1/2in. deep. Finished in green lacquer, solidly constructed, stout metal handle, and with a place for everything. Tools go in the bottom, and all the small things in the removable tray. It's a dandy job—good for a lifetime. Send for one today, and if you don't think it just the thing and grand value—return it, and we will refund your money.  
Cat. No. AU141 **40/-**

## K.W.H. COUNTERS



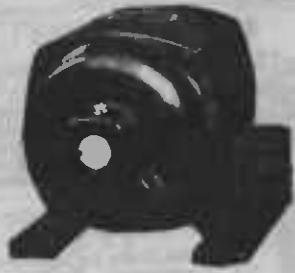
An exceedingly useful unit, which can be put to a variety of uses by the average experimenter. Can be adapted to count turns when winding coils, chokes, transformers, etc. Will register up to 999 and 99/100th and down to 1/100th of a turn. Removed from electricity measuring meters.—Cat. No. AU140 **2/6** each

## MAGNETS



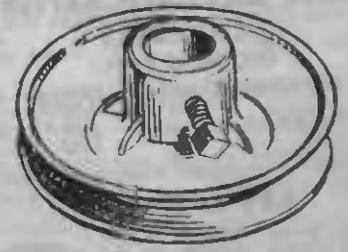
Strong Magnets removed from old meters. Useful in every workshop, office, etc., for picking up nails, screws, pins, etc. Every youngster will find dozens of other uses.  
Cat. No. AU4 **6D.** each

## ELECTRIC MOTORS



250 v. 50-cycle 1440 r.p.m. Fractional H.P. Motors. Ideal for saw benches, pumps, drills and many other purposes.  
Cat. No. AM571 "Westinghouse" 1/4 h.p. Split Phase **£6/15/-**  
Cat. No. AM572 "Westinghouse" 1/4 h.p. Split Phase **£8/6/-**  
Cat. No. AM560 "Hoover" 1/4 h.p. Split Phase **£7/-/6**  
Cat. No. AM561 "Hoover" 1/4 h.p. Split Phase **£7/5/3**

## MOTOR PULLEYS



Cast Aluminium Pulleys, 4in. diam. for "V" Belts.  
Cat. No. AM600 for 1/2in. shaft **ALL**  
Cat. No. AM601 for 3/4in. shaft **7/9** each  
Cat. No. AM602 for 1in. shaft **4/6** each  
Cat. No. AM603 2in. diam., for 3/4in. shaft **4/6** each  
Cat. No. AM604 2in. diam., for 1in. shaft **4/6** each

## "C.M." WATER PUTTY

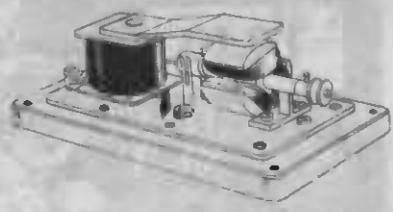


Ready for use, simply by mixing with water. Dries rock hard without shrinking. Easy to apply, and can be used on wood, plaster stone, and similar material. Can be coloured or varnished.  
Cat. No. AU163 (8 oz.) **1/6** per tin  
Cat. No. AU165—Large size (16 oz.) **2/4** per tin

## MONEY BACK GUARANTEE

Any goods which prove in any way unsuitable may be returned within 7 days from receipt and your money will be Refunded in Full!

## "ELECTRA" MODEL MOTOR



A well constructed 6.8 volt D.C. Model Electric Motor. Similar in construction to the full size motors this little chap is ideal for driving models such as "Meccano," "Trix," etc. The motor is mounted on a heavy plastic base already drilled for baseboard mounting. Operates from four torch cells or a "C" Battery.  
Cat. No. AM591 **26/6**

## TELEPHONES

All Plastic "Magnet" brand wall pattern, hand-set, direct working Telephone, with buzzer and ring key.

Requires 45 volts per phone to energize. Connect with bell wire. Ideal for inter-office communication, between factory and office, shop and warehouse, etc. Plastic case of modern attractive appearance. Complete with wiring diagram.

Cat. No. AU50— **£3/19/6** each

## SUITABLE BATTERIES FOR ABOVE

Cat. No. AB210— 5 No. 6 Cells **3/10** each

## BELL WIRE

Cat. No. AW1134— 60ft. Coils Waxed Cotton wiring **2/3** each



## FREIGHT

We pay Freight on all retail orders over £1 value. Please include sufficient cash for postage on small orders.

## PRICES

ALL PRICES IN THIS CATALOGUE ARE SUBJECT TO ALTERATION WITHOUT NOTICE.

# CHARGERS — RECTIFIERS — VIBRATORS

## THE "ENSIGN" 1/2 AMP CHARGER



You never need to be stuck with a run-down Car or Radio Battery. These units will charge all types of 6-volt Batteries. Operate from 230 volt A.C. Current. Connect direct to Battery. Uses 1 amp. Dry Metal Type Rectifier. Size of Sprayed Metal Case: Length 8in., Height, 3 1/2in.; depth, 4in. **£4/12/6**  
Cat. No. AA220

## SPARE BULBS FOR BATTERY CHARGERS (TUNGAR TYPE.)

- Cat. No. AA189—2 amp. . . . **32/6** each
- Cat. No. AA190—6 amp. . . . **50/-** each

## DRY RECTIFIERS

6-volt, 1-amp. METAL PLATE RECTIFIERS. Suitable for Resistance or Inductive loading and Battery Charging, etc. For use with C.T. Transformer. Voltage across Secondary, 19 volts. C.T. at 9.5 volts. Copper on Secondary carries .35 amp. continuous running.—Cat. No. AA175

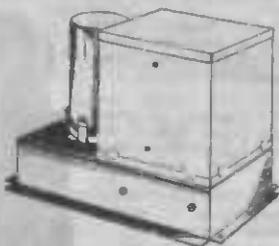


**18/6** each

6-volt, 2-amp. similar to above. Suitable for 2-amp. Battery Chargers. Copper on Secondary carries 1.4 amp. continuous use.  
Cat. No. AA176

**33/6** each

## WAR SURPLUS BARGAINS



### 12-Volt Vibrator Pack

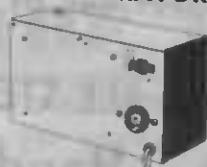
A real heavy duty Power supply for that vast field of battery operated multi-tube Receivers, medium power Public Address Systems and low power Transmitters. Completely enclosed in a heavy metal cadmium-plated box with mesh filter. They are ideal for short-wave Receivers. The dimensions are 6in. long by 4in. wide and 6in. deep. Although designed to operate from 12 volt D.C. they can be converted to 6v. The Output is 250 volts at 60 mills. The B Supply smoothing choke and filter condenser are supplied separately. (ZCI parts)  
**12 VOLT POWER PACK—**  
Cat. No. AX1001

**£3/-**

Spare Transformers for above, 12-volt to 300/180/0/180/300 volts.  
Cat. No. AX1088

**5/11**

## "OXFORD" VIBRATOR PACK



This pack has been designed specifically for the conversion of battery radio receivers to vibrator operation and contains the necessary high tension and low tension filtering.

**ELECTRICAL SPECIFICATIONS:** Input, 6 volts 1 amp.; Output, 135 volts 30 milliamp.; Reed, 3 pin synchronous.

**FILTERING:** Complete filtering is provided both for R.F. and Audio. This means to say that in addition to the normal R.F. chokes, there is included in the unit a high tension filter choke and a low tension filter choke.

**MECHANICAL ARRANGEMENT:** The reed, transformer and R.F. chokes are contained in a completely enclosed box which is rubber-mounted on to the base chassis. The rubber mounting eliminates mechanical noise due to the vibrator operation. Totally enclosed in a heavy aluminium case measuring 9in. x 5 1/2in x 3in.  
Cat. No. AA213

**£7/19/6**

## BARGAIN OFFER!

### 12 Volt 7-Pin Vibrators

Army Surplus stocks. Imported 12-VOLT 7-PIN SYNCHRONOUS VIBRATORS. Worth 27/6.

Cat. No. AB63

**OUR PRICE . . . 4/11** each

## VIBRATORS

Vibrator Units for replacements or for constructors. Positive starting long-life Vibrators. Low cost per hour. Trouble-free operation.



6-volt Non-synchronous 4-pin type.

Cat. No. AB60 . . . . . **25/-**

6-volt Synchronous 5-pin type (for special socket).  
Cat. No. AB61 . . . . . **27/6**

6-volt Synchronous 5-pin type (standard socket).  
Cat. No. AB62 . . . . . **27/6**

6-volt Synchronous 6-pin type  
Cat. No. AB64 . . . . . **27/6**

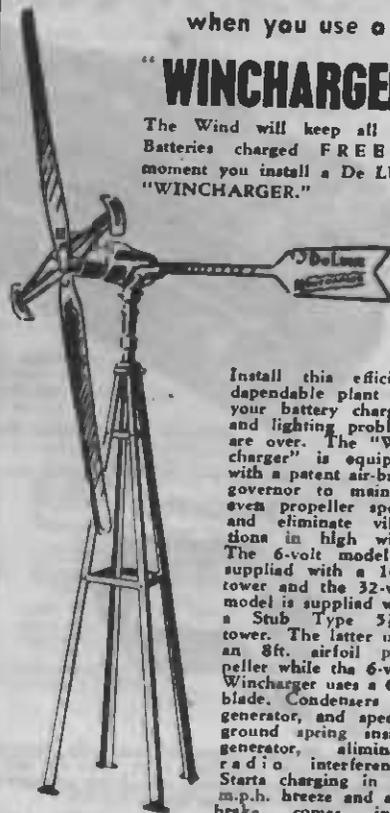
Sockets for Vibrators—3-pin special type.  
Cat. No. AB63 . . . . . **1/-** each

## YOU GET FREE POWER

when you use a

## "WINCHARGER"

The Wind will keep all your Batteries charged FREE the moment you install a De LUXE "WINCHARGER."



Install this efficient, dependable plant and your battery charging and lighting problems are over. The "Wincharger" is equipped with a patent air-brake governor to maintain even propeller speed, and eliminate vibrations in high wind. The 6-volt model is supplied with a 10ft. tower and the 32-volt model is supplied with a Stub Type 3 1/2ft. tower. The latter uses an 8ft. airfoil propeller while the 6-volt Wincharger uses a 6ft. blade. Condensers on generator, and special ground spring inside generator, eliminates radio interference. Starts charging in 7 1/2 m.p.h. breeze and air-brake comes into

action in a 20 m.p.h. wind. Insulated instrument panel completely wired with indicator showing amount of charge or discharge. Charging rate may be altered to suit charging conditions. Supplied complete in every detail as illustrated. The ideal installation for farms, beaches, etc. Manufactured in U.S.A.

Cat. No. AA206—6-volt model **£28/3/-**

Cat. No. AA203—32-volt De Luxe model **£75/-**

## SPARES

Cat. No. AA208—Spare blades for 6-volt model 6ft. . . . . **73/6**

Cat. No. AA209—Spare blades for 12-volt model 7ft. . . . . **115/-**

## BUNDLE OF BARGAINS!!



You get value at its best when you purchase your "1949 SURPRISE PACKET"—a package of all sorts of Radio and Electrical "odds and ends," new and used components of all descriptions.

Trust us with 5/- and if you are not more than satisfied we will refund your money.

THERE'S ONLY ONE JUDGE—YOURSELF!

TRY IT AT OUR RISK!

Order Your "1949 SURPRISE PACKET"

**5/-**

NOW!

# RENEW THOSE WORN BATTERIES!

## "A" BATTERIES

### No. 6 DRY CELLS

1½ volt IGNITION or BELL BATTERY.

Size 6½in. high; 2½in. Diam. Weight, 2lbs. 2oz.

Cat. No. AB210—

**3/10** each



## "A" BLOCK BATTERIES

1½ v. "A" Battery, for use in Portable Receivers. Eveready type (742). Size 3½in. x 2½in. x 2½in. Weight 1lb. 10oz.

Cat. No. AB211

**4/6** each

1½ v. "A" BATTERY, for large Portables, etc. Eveready type (741). Size 4½in. x 2½in. x 5½in. Weight 3lb. 2oz.

**8/9** each

1½ v. "A" BATTERY, for Home battery-operated Receivers. Eveready type (X250). Size 9½in. x 4½in. x 5½in. Weight 10lb. 12oz. Cat. No. AB214

**28/9**

## SPECIAL "A" BATTERIES



Designed especially for use with Portable Receivers. 1.4 volts. Weight 2lb. 12oz. Length 10½in. width 3½in., depth 1½in.

Eveready Type (No. 745). Cat. No. AB213

**9/1**

## "HOTSHOT" BATTERIES

6-volt "HOTSHOT" IGNITION BATTERIES. Eveready type (1461). Size 7½in. x 10½in. x 2½in. Weight 9lb. Complete with canvas carrying handle.

**£1/5/10**

Cat. No. AB224

## 108 VOLT PORTABLES

108-volt "B" BATTERIES. Constructed for use with the "Vidor" Portable Radios. Tapped at 3v., 1½v., GB, 6½, 108v. Eveready type (C29). Size 8in. x 5in. x 3½in. Weight 6½lb.

Cat. No. AB255

**42/-**

## TORCH BATTERIES

ALL TORCH BATTERIES ARE LISTED ON PAGE 19

## EVEREADY TORCH and RADIG BATTERIES

## "B" BATTERIES



"Superdync" 45-volt Heavy Duty "B" Batteries. For home receivers, etc. Extra long life. Eveready type (770).

Size 7½in. x 4½in. x 8½in. Weight 11½lb. Tapped at 2½ volts.

Cat. No. AB235

**26/10**

## The . . . "PORTABLE 45"

45-volt Light Duty "B" Batteries, for use in Portable Radios, etc. Eveready type (762). Size 5½in. x 2½in. x 4½in. Weight 2½lb.

Cat. No. AB237

**16/11**



## "MINIMAX" BATTERIES

45-volt SMALL "B" BATTERY. Used extensively in portable sets. (Eveready type 482).

Size 5½in. x 3½in. x 1½in.

Cat. No. AB238—

**15/5** each



45-VOLT MINIATURE MINIMAX BATTERIES. Used extensively in Deaf Aids. Eveready type (MP 45). Size 3½in. x 1½in. x 2½in. Weight. 9oz.

Cat. No. AB245

**12/3** each

67½ volt "MINIMAX" "B" BATTERIES. For Miniature Portable Receivers. Eveready type (467). Size 3½in. x 1½in. x 2½in. Weight 12oz.

Cat. No. AB250

**16/7** each

## "C" BATTERIES

(BIAS)

9-volt "C" BATTERY (793). Size 3½in. x 1in. x 5½in. Tapped at 1½, 3, 4½, 6, 9 volts. Cat. No. AB225

**4/10** each

4½ volt "C" BATTERY (761). Size 3½in. x 1½in. x 4in. Tapped at 1½, 3, and 4½ volts. Cat. No. AB220

**3/2** each

9-volt "C" BATTERY (739). Special type, now used in many modern portable sets. Size 8½in. x 3½in. x 1½in. Cat. No. AB226

**8/2** each

## DEAF AID BATTERIES

33-volt was Eveready Type MP33. Now Super-seeded by Eveready type 453P. Length 2 21/32in.; width 1in.; height 3 1/16in.; weight 6 1/3oz. Cat. No. AB231

**10/7** each

45-volt was Eveready type MP45. Now Super-seeded by Eveready type 455P. Length 2 21/32in.; width 1in.; height 3 29/32; weight 8 1/3oz. Cat. No. AB245

**8/2** each

1½-volt Eveready Type A1060P. Length 4 3/32in.; Diameter 1 15/16in. Cat. No. AB260

**1/8** each

1½-volt Eveready Type A1016B Height 2in.; depth 19/32in.; width 1 9/64in. Cat. No. AB261

**1 1/2** D. each

NEW LIFE

FOR OLD BATTERIES!



## TAR-MAG

TAR-MAG dissolves the gradual deposit of Basic Sulphate of Lead crystals which impregnate the active paste material on the plates, thus preventing the electrolyte contacting with it, with the result the battery ceases to function although there is still plenty of life and usefulness.

TAR-MAG dissolves the crystals and enables the battery to function as new. TAR-MAG will bring your old battery up to full strength—will increase life of new batteries up to 50 per cent. For Better Lighting Split Second Starting, try TAR-MAG.

TAR-MAG is a liquid which is simply poured into the cells. Completes with instructions. Cat. No. AA70— Charge for 6-volt Battery **2/9** Cat. No. AA70A— Charge for 12-volt Battery **5/6**

## "OXFORD" RADIO BATTERIES

'OXFORD' Non-Sulphating Special Type RADIO BATTERIES

Heavy duty solidly constructed leak-proof Batteries that deliver maximum power. Thick plates, carefully sealed cells; built for long, enduring, trouble-free service. With radio type terminals; 18 months' unconditional guarantee. Batteries are supplied dry unless specially requested otherwise. They can also be supplied charged and filled with acid, at no extra cost, but freight is payable by purchaser on all charged batteries.

Cat. No. AA20—2-volt, 100 amp., 4½ x 7 x 9½ **£2/6/-**  
 AA22—2-volt, 140 amp., 4½ x 7 x 9½ **£2/18/6**  
 AA23—6-volt, 100 amp., 7 x 9½ x 9½ **£5/19/-**  
 AA24—6-volt, 140 amp. Type for Vibrators— 7 x 11½ x 9½ **£7/13/-**  
 AA26—6-volt, 160 amp. Type for Vibrators— 7 x 12½ x 9½ **£8/14/6**



# LAMPHOUSE RADIO BOOKS

## "The Lamphouse" RADIO CIRCUIT BOOK

An 80-page booklet containing nearly 200 different Circuits. Circuits of all types, from Crystal Sets to a 26 Valve De Luxe Receiver. Amplifiers, power packs, electric fence units, testing equipment, short-wave converters, wave traps, oscillators, aerial systems—in short, a Circuit to meet every requirement. Schematic diagrams only are given and not constructional details. No claim is made that this book contains any new Circuits all having previously been published in Lamphouse Annuals or Radiograms.

Enthusiasts, whether beginners or experienced servicemen, will find this book invaluable as a reference medium. Your Radio Library will not be complete without a copy.

Cat. No. AB100—Radio Circuit Book.  
Priced at **2/6**

Postage 1d. extra.

## "The Lamphouse" RADIO DATA BOOK

A 96 Page Booklet containing a veritable gold mine of both Radio and Electrical Data, Facts, Figures, Tables and Charts gathered from various Radio and Electrical Text-books and Manuals, and placed between two covers to form the handiest reference guide an experimenter or serviceman could wish for. **BE SURE AND GET YOUR COPY.**

Cat. No. AB103—Lamphouse Data Book **3/6**

Postage, etc., 2d.

## All About RADIO



## "The Lamphouse" RADIO INSTRUCTION BOOK

This 48-page, attractively covered Booklet contains a simple yet most thorough Radio Course. Compiled from previous Lamphouse publications, revised and rewritten in simple, everyday language, for those enthusiasts starting out in Radio as a hobby or a career. Devoid of any deep technical terms as used by Radio veterans. Just a straight-out study in basic radio principles and theory. Questions set and answers given on each chapter.

Cat. No. AB101—Lamphouse Instruction Course **Price 2/6**

Postage 1d. extra.

## ELECTROTOR

The little chap with the big heart !

The illustrations give the actual size of the  
**AMAZING, WORLD STARTLING,  
LITTLE ELECTROTOR !**

ENGLAND'S LATEST IN MODEL MOTOR DESIGN.

Measures only  $\frac{7}{16}$ in. in diameter and  $\frac{1}{8}$ in. in width.

This ELECTROTOR is universally popular for model driving of all descriptions. Use it in your Meccano Units, Aeroplanes, Motor-Boats, and all other mechanised models.

Requires only 3 to  $4\frac{1}{2}$  volts to drive it, and consumes less than a Torch Bulb—operates efficiently on 2 Penlite Cells. **AND LOOK AT THE WEIGHT— $\frac{1}{4}$  oz.!** 4000 R.P.M. You won't believe it till you see it and use it.

The ELECTROTOR first came into prominence in the public eye when used throughout the tests conducted by the "Daily Mail" in England of the Radio Controlled Power Boat.

IT IS NOT ONLY STARTLING—BUT IT IS PROVEN, and the Price for all this—Look!

Cat. No. AM595

Trade enquiries invited



**7/-**

## Back Numbers of the LAMPHOUSE ANNUAL

A few copies of each:

The 1947/48 Lamphouse Annual.

The 1948/49 Lamphouse Annual.

are still available.

Veritable gold-mines of Radio and Electrical information, circuits, data, logs, etc., these Annuals

cost us double the selling price to produce.

**1/-**  
Copy

### BACK NUMBERS OF THE "RADIOGRAM"

32-Page Radio and Electrical Magazine.

BUNDLES OF 12 ASSORTED NUMBERS.

**1/6** Bundle

MAIL YOUR ORDER NOW TO THE ELECTRIC LAMPHOUSE  
11 MANNERS ST., WELLINGTON

# ENSIGN RADIOS

*Sets the pace  
for Value!*

IT'S AN

## "ENSIGN PACEMAKER"

POWERFUL QUALITY, PERFORMANCE, and REPRODUCTION throughout N.Z. Broadcast Band.

MODERN DESIGN — Incorporating Latest Features and Improvements in Radio Design. Latest Loctal Tubes. Uses full Automatic Volume Control preventing fading thus keeping volume uniform on all stations.

★ ★ ★

DEFINITELY UNEQUALLED BY ANY OTHER RADIO IN ITS CLASS!

BEAUTIFUL POLISHED PLASTIC CABINET in Mottled Brown, Green, Red; or Ivory. Dimensions: Height, 7in.; Length, 9½in.; Breadth, 6½in.

QUALITY CONSTRUCTION — Using only the finest standard components throughout.

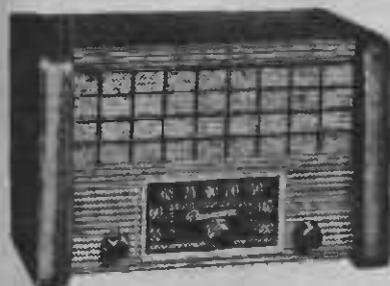
SUPERB TONE with a fine fidelity 5in. P.M. Speaker.

REASONABLE LOW PRICE

Cat. No. AR727— **£19/5/-**



## THE "PACEMAKER" BROADCAST VIBRATOR MODEL



A similar style of set to that described above but

**Operating from a  
6-Volt Battery**

(Either Car or Storage).

IDEAL FOR PEOPLE IN THE COUNTRY OR FOR TRAVELLING USE.

Uses five of the latest Miniature low-drain Valves — tone and volume controls — low battery drain only .75 amp.

★ ★ ★

Fitted with Special 5in. P.M. Speaker and mounted in attractive veneered Cabinet.

For **Studio Realism!** Cat. No. AR735— **£30/10/-**

# ENSIGN RADIOS



ARE ALWAYS

*At Your Command*



TO GIVE YOU WORLD-WIDE RECEPTION!

## The 7-VALVE BAND-SPREAD CONSOLE



Features the latest Band Spread Tuning—tuning that provides 20 times more space between dial calibrations, giving each foreign band a wider tuning range.

The "ENSIGN" BAND SPREAD has a world-wide coverage, enabling you to tune the overseas stations just like the locals. Features FULL ACTING A.V.C., MAGIC EYE INDICATOR, BEAUTIFUL SLIDE RULE DIAL, RICHLY VENEERED FLOOR MODEL CABINET

Bring the world right into your home with this 7-valve Super. Brings in New Zealand stations with amazing clarity.

Each is easy to tune, and the following ranges are covered: Regular broadcast band, 550-1600 KC.; Short-wave inter band, 6-19 MC. Spread band tuning for the following short-wave bands: 15.10 to 15.50 MC; 11.65 to 12.30 MC; 9.475 to 9.80 MC. Valve combination: 6U7G R.F., 6K8GT Mixer, 6U7G I.F., 6Q7GT 2nd Detector; 6V6GT Power Amplifier, 6X5GT Rectifier, 6U5 Tuning Indicator. Cabinet measures: Height 38in., width 32in., depth 17in. This is not only a world-wide receiver but a piece of furniture that would add to the charm of any room.

Cat. No. AR733

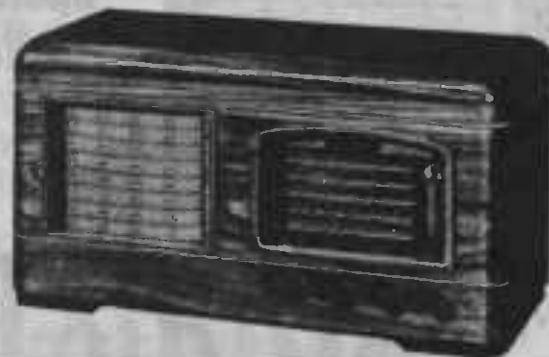
£66/5/-

## ENSIGN 7-VALVE BANDSPREAD MANTEL MODEL

This is a similar Set to the 7-VALVE BANDSPREAD CONSOLE described above but is mounted in a BEAUTIFUL MANTEL MODEL CABINET, exquisitely veneered and measuring: Length, 24in.; Height, 13in.; Width, 11in. Uses 8in. mellow-tone Speaker.

Cat. No. AR730

£49/15/-



ONCE AROUND THE DIAL, IS ONCE AROUND THE WORLD — ON AN "ENSIGN" RADIO

# ENSIGN RADIOS

## "Ensign" 6-Tube "Pacemaker" Broadcast



**2 Good Six-Valvers**

This is the fourth and latest addition to the "Pacemaker" Radio range—a range unequalled in New Zealand for their **STERLING PERFORMANCE, EXCEPTIONAL TONAL QUALITY, EXPERT WORKMANSHIP, & LOW COST.**

The 6-Valver is a right-up-to-the-minute Receiver giving amazing results

on the Broadcast band. A 6½in. Anisotropic Alnico "Rola" Speaker is used, giving an unsurpassed rich and mellow tone. As is usual with "Ensigns," the latest in components is used and the Valves are as follows: 6SG7, 6SA7, 6Q7G, 6U7G, 6V6GT, 6X5GT.

The distinguished Cabinet, measuring Length, 17in.; Width, 8½in.; Height, 11in., is of the highest quality veneer

and in keeping with the general standard of the set.

**NO AERIAL OR EARTH IS NECESSARY!** See the "ENSIGN" 6-VALVE RADIO described below.

**TUNING, VOLUME and TONE** Controls are mounted on the front of the Cabinet, as illustrated.

Cat. No. AR734 .. **£28/10/-**

## "Ensign" 6-Tube Broadcast Receiver



**AN EXPERTLY DESIGNED 6-VALVE RADIO OF PROVEN ABILITY!—A BROADCAST SET MADE STRICTLY TO SUIT NEW ZEALAND CONDITIONS!**

Six of the latest American Midget Valves built into a really grand circuit to give you **SUPERB "PULLING POWER"** and the usual **"ENSIGN" OUTSTANDING TONAL QUALITY.** Valves used are types 6X4, 6AQ5, 6ATG, 6BAG, 6BE6, 6BA6. 6½in. Anisotropic Alnico "Rola" P.M. Speaker.

**No Aerial or Earth necessary!** This and the 6-Valve "Pacemaker" described above are fitted with a special Built-in Aerial and Earth, alleviating the necessity of the customary outdoor leads.

Set is mounted in an attractively veneered Cabinet measuring: Height 10in., Length 19in., Width 9½in. Volume and Tuning Controls are mounted on the front of the Radio while the Tone Control is fitted to the side.

A Radio we are proud to add to our Range of **Cat. No. AR736 "ENSIGN" QUALITY RADIOS!** .. **£29/17/6**



# IT'S "TOPS"—IT'S AN ENSIGN!

# RADIO ACCESSORIES

## AERIAL SPECIAL!

### ARMY Z.C.I TRANSCEIVER AERIALS

#### 32ft. Mast! Excellent as House or Car Aerials

Comprises three 6ft. lengths  $\frac{1}{2}$ in. pipe, four 4ft. lengths metal tubing, size varying from  $\frac{1}{2}$ in. at one end to  $\frac{1}{4}$ in. at the other; set of aerial stays, reducer (for fitting thin section of aerial into heavy section), one rubber socket for heavy section, one rubber socket and insulating condenser for mounting thin (whip) section only. May be used as a vertical house type antenna, or whip section could be used as car or caravan aerial. Supplied complete with carrying bags. Price **£2'10/-**

**WHIP SECTION ONLY**  
Consists of four 4ft. sections Metal Tubing, varying from  $\frac{1}{2}$ in. to  $\frac{1}{4}$ in. diameter. These being approx. 16ft. long and light in weight make ideal elements for 10 metre rotary beam antennas, in addition to being suitable for auto, caravan and home use. Complete in canvas bag. Price **10'6**

## "NOISE MASTER" NOISE REDUCING AERIAL

For both Broadcast and Dual-wave Receivers. A complete Noise Reducing Aerial System incorporating a Aerial Coupler Interference Eliminator. No wiring or assembling necessary—the aerial system is supplied complete ready to put up. Includes everything necessary with the exception of the supports. A clear diagram is supplied with each unit. Comprises 50ft. aerial with 60ft. of twin lead-in feeder line; two sets of halyard ropes 24ft. each; Coupling Transformer; insulators, etc. Ideal for city, suburban and country use as it will combat interference from trams, trains, neon signs, electric motors and other man made static. ALSO, acts as a station booster giving extra volume to weak stations. Price **37'6**

## COPPER AERIAL WIRE



- Cat. No. AA503—7/22 Plain Copper, 100ft. Coil (7 strand) 5/11 coil
  - Cat. No. AA502—7/22 Plain Copper, 75ft. Coil (7 Strand) 4/9 coil
  - Cat. No. AA501—7/22 Plain Copper, 50ft. Coil (7 strand) 3/6 coil
  - Cat. No. AA499—7/23 Tinned Copper, 100ft. Coil (7 Strand) 5/11 coil
- This Wire is Recommended for Standard Aerial Systems.*
- Cat. No. AA510—7/029 Tinned Copper, 50ft. Coil (7 Strand) 3/6 coil
  - Cat. No. AA511—7/029 Tinned Copper 75ft. Coil (7 strand) 5/3 coil
  - Cat. No. AA512—7/029 Tinned Copper 100ft. Coil (7 strand) 6/11 coil
  - Cat. No. AA518—16 S.W.G. Solid Copper Wire, 100ft. coil 5/3 coil
  - Cat. No. AA517—16 S.W.G. Solid Copper Wire, 50ft. coil 2/9 coil

## ENSIGN LEAD IN WIRE

Heavy covered, insulated lead in wire. Will stand plenty of swaying and rough weather. Core is of pure copper stranded flexible wire. Ideal for lead-ins and also suitable for motor-car wiring and all other purposes requiring a well-insulated single flexible wire.



- Cat. No. AA504 .. .. . 13d. ft.
- Cat. No. AA505—25ft. Coils .. 2/7 ea.
- Cat. No. AA506—50ft. Coils .. 5/- ea.
- Cat. No. AA507—75ft. Coils .. 7/6 ea.
- Cat. No. AA508—100ft. Coils .. 9/- ea.

## AERIALITE AERIAL WIRE

Flexible Copper Wire, covered with waterproof braid. Excellent for indoor or outdoor aerials.

- Cat. No. AA513— 25ft. Coils .. 2/-
- Cat. No. AA514— 50ft. Coils .. 3/7
- Cat. No. AA515— 75ft. Coils .. 5/5
- Cat. No. AA516—100ft. Coils .. 7/-

## I.C.A. HOME ANTENNAS

12ft.; 4 Sections. Guaranteed Rust Proof Admiralty Brass. The latest type of home aerial! Eliminates unsightly wires. Very sturdy construction and supplied with a Universal Bracket for easy attachment to a drain pipe, chimney, roof gables, wall copings, etc.

Supplied complete with all fittings. Ready for erection. Clear, Noise-Free reception, with no power line interference.

- Cat. No. AA322 **54/-**



An indoor spring type aerial that will stretch out to about 12 feet across an ordinary room, and will remain in its spiral form. Made from pure copper wire.

- Cat. No. AA285 .. .. . **3/6** each

## MASTLESS AERIALS



A neat, compact Aerial designed for use in crowded areas, where it is impracticable to erect a pole or horizontal type Aerial. Ideal for flat dwellers, etc. Composed of several 12 gauge solid copper leads mounted in heavy service insulator. The insulator can be simply attached to any firm structure. Supplied with 25 feet lead-in wire. The Mastless Aerial can be erected in a space of 20 minutes. Price **19/-**

- Cat. No. AA296 **19/-**

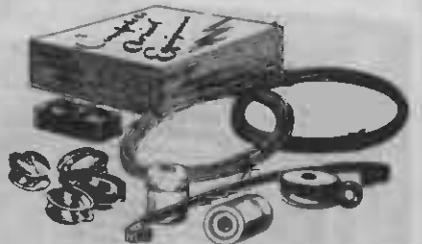
## THE "NOTENNA" AERIAL ELIMINATOR



Equally successful on both broadcast and shortwaves. Replaces aerials of all types. Very compact size. No lightning arrestor required. Reduces noise, interference and man-made static. Simply attached between aerial and earth terminals on your set and to earth wire. Money back if you are not more than satisfied. Dimensions 4in. x 2 1/2in. x 3in.

- Cat. No. AA10 .. .. . **8'5**

## The "LAMPHOUSE AERIAL KIT"



The "Everyman" Aerial Kit consists of standard equipment used in conjunction with all short-wave and broadcast receivers.

Contains: 100ft. 7/23 7-strand Aerial Wire, 4 Egg Insulators, 1 1in. Pulley, 1 Lightning Arrestor, 1 Lead-in Strip, 20ft. Lead-in-Wire, 2 Nail Knobs. Actual cost of components if purchased individually, 15/-.

- SPECIAL KIT PRICE—  
Cat. No. AA599 **13'11**

## "MARQUIS" LIGHTNING ARRESTORS



Prevention is better than cure. Make sure your aerial system has a lightning arrestor in it to safeguard your set should lightning strike the aerial wire. Australian made Bakelite cased with two connecting terminals. Instructions for fitting with each Arrestor.

- Cat. No. AA428 .. .. . **2/-**

# ESSENTIALS FOR YOUR AERIAL!

## LEAD-INS, EBONITE



Lead-ins are used for putting through the wall. Consists of brass rod insulated with ebonite. With a nut and washer on each end. Diameter 1/16 in. Ebonite Lead-in, 9in. long. **1/11** each  
Cat. No. AA404

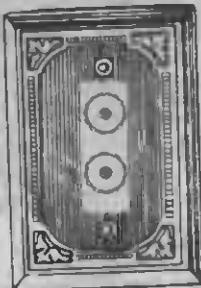
## FLEXIBLE LEAD-IN STRIPS



Flexible Lead-in Strips that can be fitted under windows, when it is not desired to bore a hole through the wall to install a permanent lead-in Tube. Length 9in. **1/3** each  
Cat. No. AA405

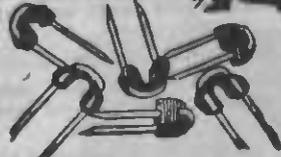
## AERIAL AND EARTH PLATES

Eliminate those unsightly wires leading to your set by having them concealed in the wall. This beautiful moulded plate is fitted with two terminals on to which the Aerial and Earth leads to your set connect. The Aerial and Earth proper are connected at the rear of the plate. Moulded in Ivory or Brown Plastic. Modern design.



Cat. No. AA460—Brown plastic **2/4**  
Cat. No. AA461—Ivory plastic **2/9**

## INSULATED STAPLES Make a Neat Job!



Insulated Staples are used by all who wish to make a neat job. The fibre insulation in these staples protects the wire and guards against loss of signal strength. British made.  
Cat. No. AS118 **2 1/2** D. doz. or **9** D. pkt. 50

## STAPLES

Coppered Staples (not insulated), for fastening earth wires, etc.

Cat. No. AS119—**1 1/2** D. doz.



## War Surplus

This Year's Annual features hundreds of War Surplus Bargains. Look for them—they're 1949's greatest buy.

## EGG INSULATORS



Cat. No. AA600 **5** D. each

Egg Insulators are almost universally used in N.Z. To secure good results you should put two or three on each end of the aerial. N.Z. made.

## LARGE EGG INSULATORS

2in. long and 1 1/2in. diameter. Brown glazed.  
Cat. No. AA606 **10** D. each

## SIZZLING WAR SURPLUS BARGAIN



## 3 Link Plastic Chain INSULATORS

as used in Army Radio aeriels.

Very effective insulators. Put one chain on each end of your aerial. Worth 2/6 each but because they are surplus war stocks, to be sold for a song. Length of 3 links, 9 inches. Weight 3 ozs. only.

Cat. No. AA601—  
ONLY **5** D. SET

## "BUTTON" INSULATORS

For use on Electric Fence installations and for installing wires run along walls, etc. N.Z. made. Brown glazed.

1 1/2 x 1 1/2—Cat. No. AA604  
4d. ea., 3/10 doz.  
(Screws not included)

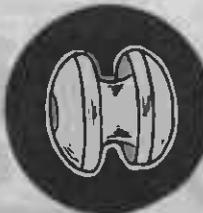
Cat. No. AT588 2in. x  
11 wood screws for use  
with above **8d.** doz.



## SHACKLE INSULATORS

Used for corner insulators on Electric Fence Units and for other purposes requiring a substantial insulator. Size: 2 1/2in. diam., 1 1/2in. high, 2in. hole.  
Cat. No. AA607

**1 1/2** each



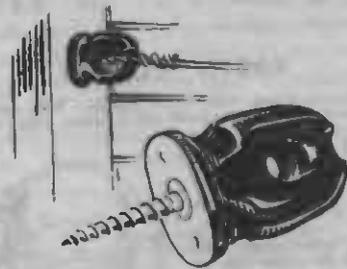
## CLAMP INSULATORS



Used for taking wires along outside walls, etc. Made in two pieces, and when screwed up, grip the wire and make a neat and efficient job. 1 1/2in. high, 1 1/2in. diameter.

Cat. No. AA603 **7** D. each

## HOUSE INSULATOR



Used for insulating electrical equipment from the house. Very solidly constructed; has a screw of 2in. length and the porcelain portion measures 3in x 2 1/2in.

Cat. No. AA602 **2 1/2** each

## PULLEYS— GALVANISED



Cat. No. AA412—  
1-inch Galvanised Pulleys **1/-** each  
Cat. No. AA413—  
1 1/2-inch Galvanised Pulleys **2/3** each

## KNIFE SWITCHES

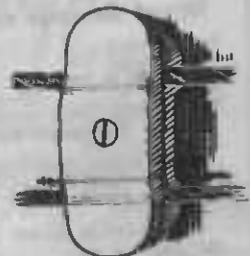


Single Pole Double Throw Aerial-Earth Switches. Bakelite base. British.  
Cat. No. AS490 **1/6**

## "CLEAT" INSULATORS

Cleat Insulators for running two wires along walls, etc. 2 1/2in. long, 1 1/2in. wide, 1in. high.

Cat. No. AA605  
**7** D. pair



## War Surplus

This Year's Annual features hundreds of War Surplus Bargains. Look for them—they're 1949's greatest buy.

# EVERYTHING FOR YOUR EARTH SYSTEMS

## WIRE. TINNED EARTH



7/.029 (7 Strand) Bare Tinned Copper Earth or Aerial Wire. Cat. No. AA509 .. **1 1/2** D ft.

## EARTH CLAMPS

Heavy brass type, N.Z. made. Will ensure a good permanent earth on a water pipe, etc., (will fit pipes up to 1 1/2 in. outside diameter).

Cat. No. AA436—**10** D. each



3/4 in. water pipe size (will fit pipes up to 1 in. outside diameter).

Cat. No. AA437—**1 1/2** each

1 in. water pipe size (will fit pipe up to 1 1/2 in. outside diameter).

Cat. No. AA438—**1 1/3**

## EARTH CLIPS



Light adjustable pattern. Has a number of holes so that screw can be shifted. Fits practically all sizes of pipes.

Cat. No. AA434 .. **5** D. each

## WAR SURPLUS BARGAINS

### MORSE KEYS

Cat. No. AX1075A .. **5/11** each

### Great Savings on Valves!

Type 6Q7GT .. 6/11 each  
 Type 6K8GT .. 7/11 each  
 Type 6U7G .. 3/6 each  
 Type 6X5GT .. 4/11 each

All Brand New.

### 3-WIRE MICROPHONE CORDS

Cat. No. AX1236 .. **1 1/2** each

### AERIAL STAY SETS

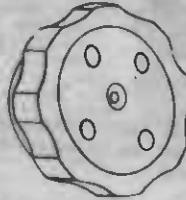
Cat. No. AX1067 .. **3/11** each

### 465Kc. I.F. TRANSFORMERS

Cat. No. AX1006/7 .. **7/11** each

THESE ARE JUST A FEW WAR SURPLUS BARGAINS DESCRIBED ELSEWHERE IN THIS ISSUE. THERE'S HUNDREDS OF SPECIALS LISTED—DON'T MISS THEM!

## SURPLUS INSTRUMENT KNOBS



Black Handgrip Bakelite Instrument Knobs as used with Army Equipment during wartime. Has 1/2 in. brass insert in centre but has no grub screw. 4 other brass inserts 1/4 in. tapped with thread also on rear of knob allow for firm attachment to a metal or plastic disc. **BULK BUYING ENABLES US TO PASS THESE ON TO YOU AT**

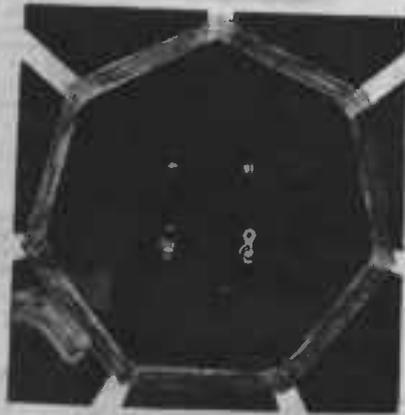
Cat. No. AX1107—**6** D. each or **5/6** doz.

## HI-Q PORTABLE AERIAL

Another first class Portable Radio Aerial. Oval in appearance, measuring 7 in. in length with a width of 3 1/2 in. A highly efficient diamond weave wound on a linen bonded insulating board, tropicalised and incorporating a primary winding so that an external Aerial and Earth can be added if wanted. Wound for 440 mmfd. gangs.

Cat. No. AA303 .. **10/6**

## AERIAL FOR PORTABLES



Loop Aerial for portable receivers, matched for standard Ensign Coils and fitted with primary winding for use with ordinary aerial when required. Physical dimensions 8 in. x 7 1/2 in. Cat. No. AA300 .. **12/-**

## Coils to Match

Cat. No. AC306—Ensign Oscillator Coil .. **8/11**  
 Cat. No. AC340—Iron Core I.F. Transformers .. **15/6** each

## HERE'S 5 GOOD REASONS why you should use an

# "AERITROL"

A Truly Marvellous "Aid to Better Reception"

1. It will separate interfering stations.
2. It will reduce noise level and interference.
3. It will increase volume of weak stations.
4. It will eliminate outdoor and indoor aeriels. Acting as a perfect aerial eliminator.
5. It controls volume from powerful local stations.

INSTALLED IN A FEW MINUTES, WITHOUT TOOLS!

IT'S SAFE!

IT USES NO ELECTRICITY!  
 IT COSTS NOTHING TO RUN!

Works on all types of Receivers, battery or electric—old and new. Constructed in strong metal case 4 in. x 4 in. x 4 1/2 in. high. Black crackle finish.

Cat. No. AA1 .. **37/6** only



FULL DIRECTIONS SUPPLIED WITH EACH UNIT

# FREE 7-DAY OFFER

## Try it at Our Risk!

Send for an "AERITROL" today; try it in your own home for 7 days. If at the end of that time you are not thoroughly satisfied with it return it, and we will refund your money in full.

# Cut Out Interference!

## The "ENSIGN" LINE FILTER



The best place to stop interference is at its source and if you have a small motor or other Appliance which causes interference in your own or anyone else's Radio, it may be successfully cured by installing an Ensign Filter. The Filter is plugged in to the Power Point and the offending appliance plugged into the Filter. No other installation is required. It can be used on any appliance not exceeding 750 watts. Should it be impracticable to stop the trouble at its source, we must try and stop it from entering the Receiver.

We must decide whether the man-made static, which is proving so troublesome, is being picked up by the aerial or is coming over the power lines or both. A good test is to tune the set to a point where the noise is particularly bad and turn the volume control well up. Now remove the aerial wire and attach it to the earth terminal, but do not remove the earth wire. The effect will be to reduce the noise level, but if the man-made static continues to be very severe you will at once know that at least a portion of the interference is coming over the A.C. power mains, and you will at least need an Ensign Line Filter before you can overcome the trouble. On the other hand, if the noise is entirely eliminated you will know that the noise is being picked up by the aerial and some form of noise-reducing aerial will be required.

Designed for use with electrically operated radio receivers. Simply fits between the receiver and the wall plug. It will definitely stop all man-made static entering through either A.C. or D.C. Mains. Particularly successful in D.C. and on ships with D.C. generators.

Cat. No. AA5 . . . . . 25/6

Try this "Policeman of the Airways" of our Risk!

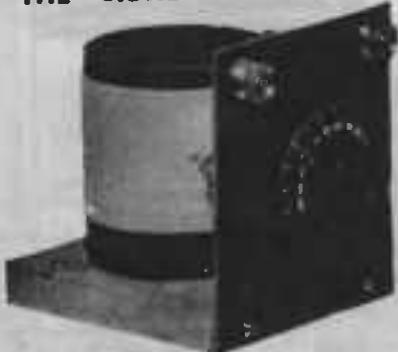
These useful Units have two distinct purposes:

1. To stop interference entering the A. C. Mains at the source of the trouble.
2. To stop interference coming over the Mains from entering the Receiver.

### MONEY BACK OFFER

There is no risk in this purchase. Send for the "ENSIGN" LINE FILTER now and try it out. If you are not completely satisfied (You're the Judge) return it within 7 DAYS and we will refund your MONEY IN FULL!

### THE "SIDNEY" WAVE TRAP



Used to separate stations which interfere or overlap each other. Gives sharper tuning to all size Receivers from Crystal Sets onwards. Will also act as a booster for strengthening weak stations.

Components mounted on a 4in. x 3 1/2in. wooden baseboard. Front panel of light bakelite. Neat appearance. Printed instructions with every set. Price 15/11

### WAR SURPLUS BARGAINS

There's dozens throughout this catalogue. DON'T MISS OUT ON THEM . . . ORDER NOW!

## The 3 in 1 RADIO TUNER

### SERVES 3 BIG PURPOSES

1. Aerial Eliminator.
2. Station Booster.
3. Separates Interfering Stations.

Besides making an excellent variable Coil for Crystal Sets., etc. Depending on the manner it is connected, this useful piece of apparatus serves any of the above functions. Operates on any make or model of radio receiver, greatly enhancing the performance. As an aerial tuner it will improve the reception of weak stations.

As a wave trap it will prevent interference between stations and improve selectivity. As an aerial eliminator it makes an outdoor aerial unnecessary. The tuner can also be used as the tuning coil of a crystal or other small set. Supplied complete with instructions and can be fitted by anyone in a few minutes. Size 5in. long x 2 1/2in. high and 1 1/2in. wide. Printed details with each Tuner.



BUY UNDER OUR 7 DAY MONEY BACK GUARANTEE!

DE-LUXE MODEL  
Cat. No. AC300— ONLY 6/11

# GIVE YOUR SET "THE NEW LOOK!"



## THE "SKY-KING" BROADCAST DIAL

A really first-class Broadcast Dial, ideal for the smaller class of set, such as a Portable or small Electric, or Battery Radio. Logged in Kilocycles between 550 and 1700. Station markings also given. Tracks with a 420/480 gang lin. shaft; anti-clockwise rotation. Size: 4in. x 4in.

**COLOURING:** Brown background, White figures, Red station markings, Gold trimmings, Escutcheon in Brown. Two Dial Light Holders for Flood Lighting.

AN ATTRACTIVE AND WELL DESIGNED DIAL.

Cat. No. AD115 ..... **24/6**

## WAR BARGAINS!

### Z.C.1 TRANSCIVER DIALS

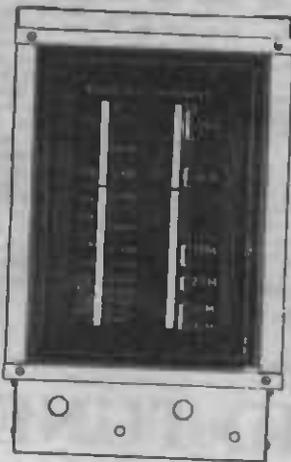


Dials as used in the sender and receiver sections of Z.C.1's. Can be set for two preset frequencies, with flick tuning mechanism. Diameter of dial, 4in.; diameter of hand-grip instrument knob, 2 1/2in.

Cat. No. AX1090/4 ..... **2/11** each

## "HALLMARK" 3 COLOUR DIALS

Another Addition to our Dial Range!



THREE COLOURS—Yellow, Green, White.

### DUAL WAVE — VERTICAL MOUNTING.

Dimensions—

Overall .. .. 10 1/2in. x 6 1/2in.  
Face .. .. 7 1/2in. x 5 1/2in.  
Escutcheon Inside .. 6 1/2in. x 4 1/2in.

Spin Drive. Details given with each Dial simplify mounting. The whole job is Cadmium plated and is really a finished article.

This is the same Dial as is used on the popular "EASY BUILT 5" RECEIVER.

Cat. No. AD102 ..... **42/6**

THEY'RE REAL VALUE AT THE PRICE!

## PRICES ARE SUBJECT TO ALTERATION

All Prices in this book must be regarded as an indication only—all orders will be executed at ruling prices.

## SPARE DIAL SCALES

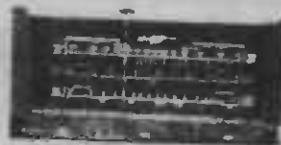
Spare Glass Faces for Dials.

"SKY-KING" BROADCAST ANTI-CLOCKWISE. Facing Glass, 550 kc., on left-hand side.  
Cat. No. AD116 ..... **6/-**

"OXFORD" BROADCAST ANTI-CLOCKWISE ROTATION. Facing glass, 550 kc., left-hand side.  
Cat. No. AD111 ..... **3/9**

CLOCKWISE ROTATION. Facing glass, 1800 k.c., left-hand side.  
Cat. No. AD112 ..... **3/9**

## "HI-Q" SLIDE RULE DIALS



### DUAL WAVE.

A handsome and well-constructed horizontal slide-rule dual-wave Dial, finished in crackle black and radium plate. The Dial is fitted with FLY-WHEEL type SPIN TUNING and is edge lit. Approximate outside dimensions 1 1/2in. x 6in. The Dial Glass is printed in two colours and calibrated to match the Plessey type 1842/11 Condensers (440 to 480 Mmfd.).  
Cat. No. AD106 ..... **58/4**

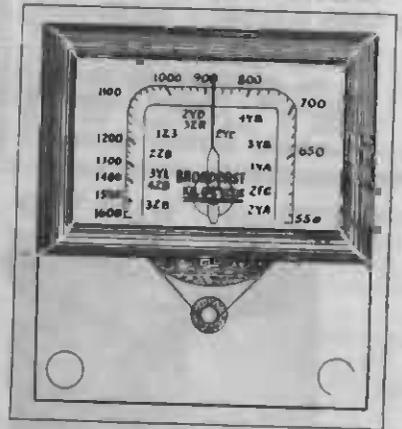
### TRIPLE WAVE.

Similar description to above but fitted with Triple-Wave Scale. Dial Glass is printed in three colours.  
Cat. No. AD107 ..... **58/9**

### BROADCAST.

A small Dial of similar design and construction to the Dual Wave type described above but not incorporating SPIN TUNING. Outside measurements: 6 1/2in. x 5in. The Dial Glass is single colour. Calibrated to match the Plessey type 9372/L27 Condenser.  
Cat. No. AD105 ..... **47/2**

## "OXFORD" BROADCAST DIALS



Small Broadcast Dials; ideal for Portables and small receivers. Marked in Kilo Cycles 550-1600. Station markings are also given. Lettering in green colouring and scale in red.

1/2in. Bushing for Condenser. Bracket for Dial Lamp. Size 3 1/2in. by 2in. For Clockwise Rotation.

Cat. No. AD103 ..... **17/6** each

## PUSH BUTTON UNITS

"OAK" English manufactured 7 way Push Button Units. A nicely constructed unit for inter-con. work, push button unit for radios, etc. Body of unit measures 6 1/2in. x 1 1/2in. with 7 protruding arms 3/4in. long. Finished with red plastic knobs.

NEW REDUCED PRICE—  
Cat. No. AD53 ..... **15/11** each

# BIG DIAL VALUES!



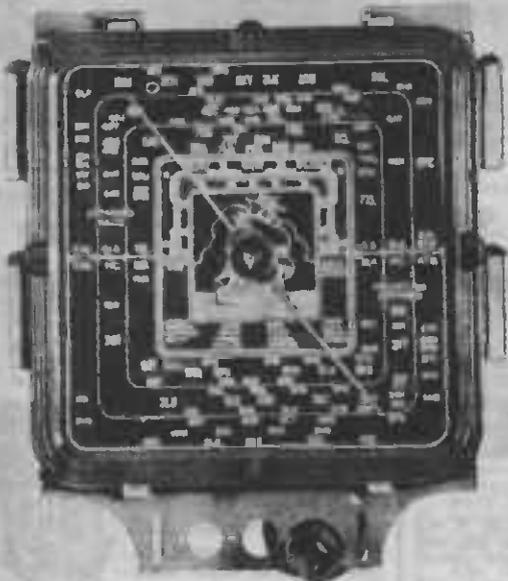
A BEAUTIFULLY MANUFACTURED DIAL WITH A LINED, MOTTLED BROWN PLASTIC ESCUTCHEON.

Glass scale is mounted against a brown background and coloured as follows:—Orange, designing colour; White and Yellow, station markings.

2 Dial Light Holders for Edge Lighting are mounted.

Visual Dial face measures: Length, 10in.; Depth, 5in. Overall Dimensions of Frame: Length, 12in. Depth, 8in.

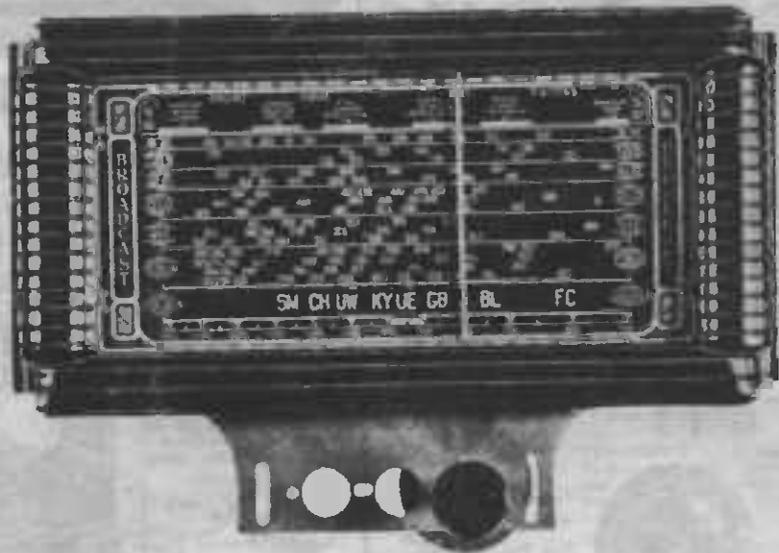
Cat. No. AD122—  
NEW LOW PRICE ... **64/11**



Three high quality Dials, designed by Australia's leading Dial manufacturers for those who want a first-class article at a reasonable price. All are calibrated for New Zealand, Australian and Shortwave Stations and matched to the Plessey type "K" 3-gang condenser (440 mmfd.) Dial Shaft, 3/8in.

A popular size for 5 or 6 valvers. Attractive colour toning. Glass scale is mounted against a black background. Station markings are in Green and Orange with Ivory trimmings. Fancy brown mottled Escutcheons, two Dial Lightholders for edge lighting. Maximum measurements for Visual Dial face. Length, 8in.; Depth, 6½in. Overall dimensions of frame: Length, 10in.; Depth, 9½in.

Cat. No. AD120—NEW LOW PRICE ... **49/11**



A DE LUXE SPECIAL FOR A CONSOLE CABINET  
ITS SIZE WOULD MAKE IT AN ADMIRABLE DESIGN  
FOR THE LARGER CLASS OF RADIO

Visual Dial face measures 8in. x 8in. Overall dimensions are: Length, 10½in.; Depth, 11½in.

Colour scheme is as follows: Background—Black. Station markings—Green, Orange and Ivory. Trimmings in Orange and Ivory.

Grooved brown mottled bakelite Escutcheon. Space for Four Dial Lights.

Cat. No. AD121—NEW LOW PRICE ... **64/11**

## OUR GUARANTEE

Any goods that prove in any way unsuitable may be returned undamaged within seven days from receipt and your money will be refunded in full.

# DIAL ACCESSORIES — KNOBS

## BIG VALUE! IN POINTER KNOBS



Small Pointer Knobs. Black bakelite indicator type Knobs. Hole for 1/4 in. shaft. Brass inset. Cat. No. AD66—Small Pointer.

9D. each

## BAKELITE POINTER KNOBS

Ideal knobs for test equipment, all types of transceivers, and electrical and radio test equipment. Hole for 1/4 in. diam. shafts. Black finish with engraved white line through centre of pointer.



Cat. No. AD68—2 1/2 in. . . . . 1/9 each

Cat. No. AD67—1 1/2 in. . . . . 9D. each

## FANCY BROWN PLASTIC KNOBS

The Knobs illustrated are neat designs on plastic, with hole for 1/4 in. shaft. Best make, with brass inset.

Round Knob, 1 in. diam., walnut finish. Cat. No. AD72—

1/2 each

Similar Knob, smaller diameter.

Cat. No. AD73— 1/1 each



Floral Knob, mahogany colour.

Cat. No. AD71— 1/1 each

## HEXAGONAL SHAPE KNOB

Walnut finish.

Cat. No. AD70—

11D.



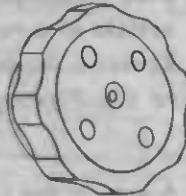
## INSTRUMENT KNOB



Black Moulded Instrument Knob, fits 1/4 in. shaft. Metal inset. (Knobs are slightly damaged.) Fixed by grub screw. Diam. 2 in.

Cat. No. AD40 . . . . . 2/9 each

## SURPLUS INSTRUMENT KNOBS



Black Handgrip Bakelite Instrument Knobs as used with Army Equipment during wartime. Has 1/4 in. brass insert in centre but has no grub screw. 4 other brass inserts 1/4 in. tapped with thread also on rear of knob allow for firm attachment to a metal or plastic disc. BULK BUYING ENABLES US TO PASS THESE ON TO YOU AT

Cat. No. AX1107— 6D. each or 5/6 doz.



## DIAL PLATE

Indicator Plates, engraved from 0 to 10 degrees. Diameter 1 1/2 in., hole 1/4 in. Cat. No. AD30

2/3

(Suitable Pointer Knobs are—Cat. No. AD67—9d. each.)

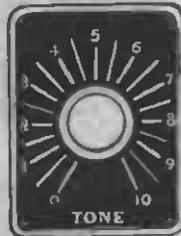
## OVERSTOCKED! OBLONG INDICATOR PLATES

Metal indicator Plates marked 0—10 with 20 divisions. Size 1 1/2 in. x 2 1/4 in. Background black with all markings in white. These plates are normally priced at 2s. each but because we are at present overstocked—down comes the price.

Cat. No. AD33—

NOW 1/- each

(Suitable Pointer Knobs are Cat. No. AD66, 9d. each.)



## "MARQUIS" MAGIC EYE ESCUTCHEON



Moulded in brown plastic. Neat design. Fit into 1 1/4 in. diam. hole. Give that finished look to your set.

Cat. No. AS507— 9D. each

## MAGIC EYE ESCUTCHEONS



Moulded in beautifully finished plastic it will finish off any radio cabinet. Made for use with "Magic Eye" Tuning Indicator. Size overall 4 1/4 in. x 1 1/2 in.

Cat. No. AS506 . . . . . 9D. each

## Forty-Niner Special!

### DIAL ESCUTCHEONS

Prices slashed as an Anniversary special. Oval shape. Black plastic.

Outside measurements 8 1/2 in. x 7 1/2 in.

Inside measurements 6 1/2 in. x 5 1/2 in.

Cat. No. AD200 . . . . . NOW 11 1/2 D. each

Glasses for above. Cat. No. AD201 1/- ea.



Round shape. Black plastic. Outside diameter 5 1/2 in. Inside 4 1/2 in.

Cat. No. AD206— 11 1/2 D. each

### OCTAGONAL ESCUTCHEONS

Square Brown Bakelite type, with Octagonal opening. Overall dimensions: 4 1/2 in. x 4 1/2 in. Opening is 3 1/2 in.

Cat. No. AD218 . . . . . 11 1/2 D. each

### KNOB FELTS

Felt Circles, for fitting between control knobs and cabinet of Radio Sets. Outside diameter 1/2 in. with 1/4 in. hole.

Cat. No. AD25 . . . . . 1 D. each

### DIAL CORD

Glazed Cord, suitable for dial restringing.

Cat. No. AD26 . . . . . 2 D. yard

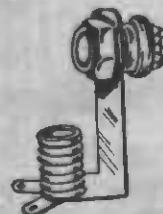
### TUNING SCALE PLATES



Tuning Scale Plates, 6 in. x 2 1/2 in. Brown plate with white markings. 1/4 in. Control holes.

Cat. No. AD34 . . . . . 1/- each

### PILOT LIGHT BRACKET



Red ruby jewel. Two legs insulated from bracket. Jewel fits into 7/16 in. panel hole.

Cat. No. AD500— 2/- each

### RUBY WINDOW BRACKET FITTING

An inexpensive accessory, comprising nickel-plated bezel with ruby lens and bulb-holder. Fixed by 3 screws provided. Takes all M.E.S. bulbs.

Cat. No. AD501 5/6 each



# CRYSTAL SETS AND HEADPHONES

**LOGGING  
D.X.**



## BROWN'S ENGLISH HEAD- PHONES

A really first-class pair of Headphones; comfortable and easily adjustable. All bakelite headpieces. Total impedance 2000 ohms. Fitted with 3ft. flexible cord. Excellent quality reproducers.

Cat. No. AC245 .. **23/6** pair

## "SUPERIOR" AMERICAN HEADPHONES

Cannon Ball "Superior" American first class Headsets. Units encased in metal shells with screw-on plastic caps. Total impedance of phones 4000 ohms. Ideal for Crystal Sets, One Valvers, and all receivers, etc., requiring a sensitive pair of phones. Supplied complete with 5 feet cord.

Cat. No. AC244 .. **19/6** pair

## ARMY PHONES



This dynamic Headset is the last word in phones. In reality 2 miniature loud speakers, 80 ohms. Necessitates the use of a matching transformer to use with ordinary radio or small receivers. Would make a good quality Dynamic Microphone, giving fairly flat response, for the amateur. Pre-amp would be required for this purpose. Supplied complete with flexible cord.

Cat. No. AX1065—  
**GREAT VALUE! 9/11** pair

Suitable matching Output Transformer.  
Cat. No. AX1012 .. **10/6**

## SPARES FOR "BRANDES" HEADPHONES

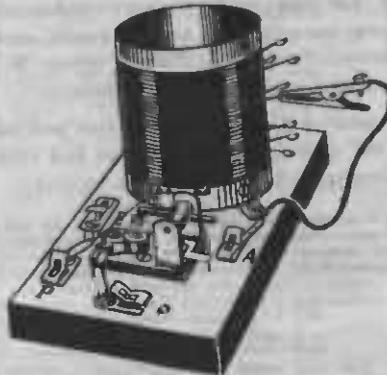
Spare Caps for Brandes Phones. .. 3/6 each  
Cat. No. AC206 ..  
Spare Diaphragms for Brandes Phones.  
Cat. No. AC207 .. 1/3 each

## WAR SURPLUS HEADPHONE CORDS

6ft. Headphone Cords. Two lots of 2 leads for connecting to phones and terminating at other end in two leads for attaching to set. Plastic wires, braided and cotton braided overall.

**GREAT VALUE!**  
Cat. No. AC203 .. **2/11**

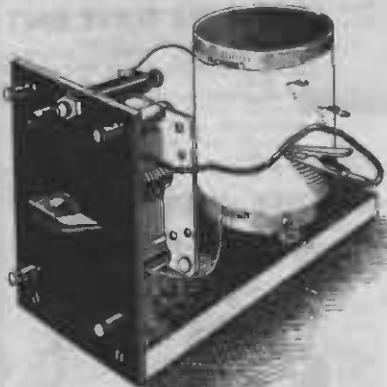
## "ECONOMY" CRYSTAL SET



A very simple and inexpensively designed but efficient Crystal Set, comprising a multi-tapped Coil and Catswhisker type Crystal Detector mounted with Fahnestock Clips on wooden base-board. Simple in operation. Full instructions enclosed with each.

Price does not include Headphones.  
Cat. No. AC290 .. **14/6** each

## "DIAMOND" CRYSTAL SET



Originally designed for areas where the ability to separate local stations was a prime consideration, these Crystal Sets will be found quite suitable for use in districts at a considerable distance from powerful broadcast stations. Our test model worked well 100 miles away from 2YA's aerial. Complete with instructions.

Cat. No. AC293 .. **28/6**

(Price does not include headphones.)

## ANOTHER BARGAIN! HEADPHONE CUSHIONS

Another bargain from WAR SURPLUS. Spongy Rubber Cushions to fit over Army Headphones and other headphones using a headpiece with a diameter of approximately 3in. Worth twice the price to manufacture.

Cat. No. AC205 **NOW 1/-** pair

## "RED DIAMOND" DETECTORS



Red Diamond Detectors are the semi-permanent type. Can be adjusted by moving the plunger. Sensitive, and give good results.

Cat. No. AC270 .. **6/9**

Spare Pairs of Crystals for Red Diamond Detectors—

Cat. No. AC271 .. **3/6**

## BIG REDUCTION!

### "WAVEMASTER" DETECTORS



Semi-Permanent Crystal Detectors, mounted on small black bakelite base. Not enclosed. An English-made Detector that will give excellent reception.—Cat. No. AC273—

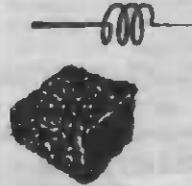
**NOW 2/6** each

### Catswhisker Type

Similar to those described above but using ordinary catswhisker and crystal.

Cat. No. AC272 .. **NOW 1/11** each

## CRYSTALS



"LUCERNE" Crystals. Packed in small packets and supplied complete with Catswhisker. British manufacture.

Cat. No. AC286—  
**NEW LOW PRICE!**  
**8D.** packet

Galena Crystals, in packets.

Cat. No. AC287 .. **6D.**

## CRYSTAL SET COILS



Coils for Crystal Sets. Consist of 70 turns, 24-gauge D.C.C. Wire on 3in. diam. bakelite former. Tapped every tenth turn.

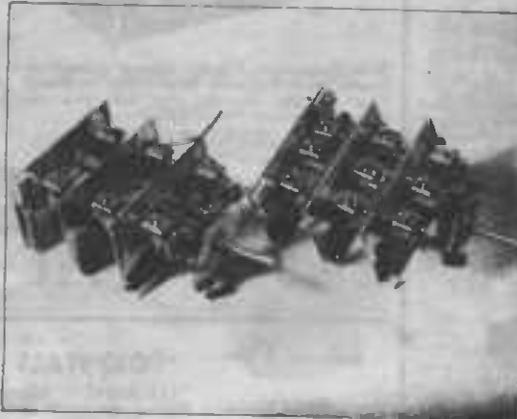
Cat. No. AC266 .. **4/-** each



All ENSIGN Coils are designed by experts and are accurately tested and matched. ENSIGN Coils are designed for use with tuning condensers (measured without trimmers) of maximum capacity 440 to 480 mmfd. and minimum capacity 9 to 15 mmfd. and especially for the Plessey types "K" and "E", tuning condensers for which our dial scales are calibrated.

All coils other than those specified are wound on 1/2 in. ext. dia. former and all broadcast coils are wound with seven or ten strand Litz secondaries and high impedance primaries. Broadcast Band Coverage, 535 to 1700 k.c.

**"ENSIGN" TUNING UNITS**



Completely wired and assembled unit for use in 5-valve receivers. Consists of serial and oscillator sections and has a coverage on short wave from 19/50 metres and broadcast 540 to 1600 k.c. for use with Plessey Type K. 1842-11. Condenser and 6K8 Converter Tube. Price includes all coils, wave change switch already assembled, padders, bypass condensers, and trimmers. Air tested and aligned. Full instructions. **£4/3/11**  
Cat. No. AC350

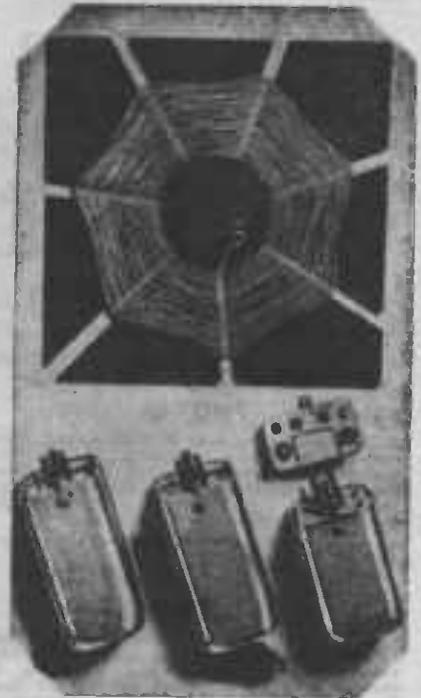
**DUAL WAVE UNIT**

Dual Wave, assembled similar to the above, but containing Aerial R.F. and Oscillator Sections. **£6/2/8**  
Cat. No. AC351

**TRIPLE WAVE UNIT**

Similar to above, containing Aerial, R.F. and Oscillator sections. **£6/13/9**  
Cat. No. AC352

**"ENSIGN" PORTABLE COIL KIT**



Special Coil Kit for portable sets. Consists of "Ensign" Loop Aerial, 8in. x 8in. (matched to standard "Ensign" coils and fitted with primary windings for use with outdoor aerial when required); "Ensign" Oscillator Coil; 2 "Ensign" I.F. Transformers and Padder. **49/6** each  
Cat. No. AC449  
Aerial only. Cat. No. AA300 **12/-**

**"ENSIGN" SHORT WAVE COILS**

Unshielded, wound on 1/2 in. Formers, 19/50 Metres. **5/6** ea.  
Cat. No. AC320—Aerial  
**5/6** ea.  
Cat. No. AC321—R.F.  
**5/6** ea.  
Cat. No. AC322—465 K.C. Oscillator

**AIR CORE TYPE**

Air Core Litz Wound, mounted in 1 1/2 in. square by 1 1/2 in. cans. Broadcast.

**8/11**  
Cat. No. AC303—Aerial  
**8/11**  
Cat. No. AC304—R.F.  
**8/11**  
Cat. No. AC306—Oscillator, 465 KC  
**8/11**



**IRON CORE TYPE**

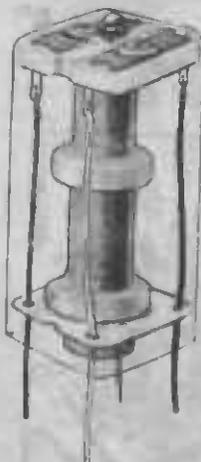
Iron Core Adjustable Permeability Litz Wound in 1 1/2 in. square by 1 1/2 in. cans. Broadcast.

**11/6**  
Cat. No. AC301—Aerial  
**11/6**  
Cat. No. AC302—R.F.  
**11/6**  
Suitable Oscillator Coils for above (air core).  
Cat. No. AC306—465 K.C. **8/11**

**UNSHIELDED TYPE**

Air Core Litz Wound Broadcast 1/2 in. Former.  
**5/10**  
Cat. No. AC311—Aerial  
**5/10**  
Cat. No. AC312—R.F.  
**5/10**  
Cat. No. AC313—Oscillator, 465 k.c. **5/10**

**"ENSIGN" INTERMEDIATE FREQUENCY TRANSFORMERS**



have been carefully designed by experts to give maximum results. Types suitable for midget, commercial or high fidelity receivers are available. These factors allow the experimenter and home constructor more scope than before when designing a receiver.

Cat. No. AC340—Iron Core, Litz wound in 1 1/2 in. square by 3 1/2 in. high can, 465 k.c. **15/6** each

Cat. No. AC341—Air Core Ditto **14/6**

**ANOTHER WAR SPECIAL!**

**I.F. Transformers**



Each Transformer tested under rigid army supervision. The finest money can buy, and only half the price of ordinary I.F.S. 465 k.c. Iron Cored.

Cat. No. AX1006—No. 1 I.F. **7/11** ea.  
Cat. No. AX1007—No. 2 I.F.

All prices in this Catalogue are subject to alteration without notice.

# COILS, COIL FORMERS, ETC.

## "ENSIGN" UNIVERSAL REPLACEMENT COILS

Universal replacement coils adjustable in inductance to suit gang condenser capacities from 360 to 480 mmfd. Will replace existing coil. Unshielded.

- Cat. No. AC330—Aerial Type .. 7/11
- Cat. No. AC331—R.F. Type .. 7/11
- Cat. No. AC332—Oscillator Type .. 7/9

FULL DETAILS WITH EACH COIL.

## MIDGET I.F. TRANSFORMERS

Measuring only 2in. high x 1 1/2in. diameter, the "Ensign" Midget I.F. is ideal for the miniature portable receiver. Permeability tuned. Wound on Polystyrene Former; 2 pyc; 465 k.c. Noise to signal ratio excellent. Aluminium can.



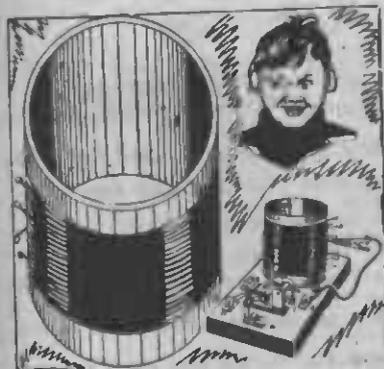
Cat. No. AC324 .. 15/6 each

## "ECONOMY" I.F. BOBBINS



Cat. No. AC527—465 K.C. Air Core 4/6

## CRYSTAL SET COILS



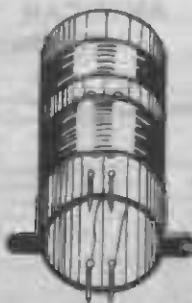
Coils for Crystal Sets. Consist of 70 turns, 24-gauge D.C.C. Wire on 3in. diam. bakelite former. Tapped every tenth turn.

Cat. No. AC266 .. 4/- each

## "OXFORD" T.R.F. COILS

These Coils have been developed for constructors wanting low-priced yet well-made T.R.F. Coils. Wound with enamelled wire on bakelite former 1 1/2in. diam.

- Cat. No. AC530—Aerial 3/3
- AC531—R.F. 3/3
- AC532—R.F. With Reaction. 3/9



## HIKER'S ONE COILS

Ready wound coils for the famous Hiker's One sets. Wound on Coil Former 1 1/2in. diam. x 3 1/2in. **3/9** each

## WAR SURPLUS BARGAINS!

I.F. Transformers and Coils, removed from NEW ZC1 Army Transceivers. In perfect working order. Never used.

### I.F. TRANSFORMERS

Best I.F.S. ever made. Made under strict supervision. 465 k.c. Iron Core Type. In cans, complete with slug type Trimmers. Dimensions of cans: 3 1/2in. high x 1 1/2in. x 1 1/2in. **7/11** ea.  
Cat. No. AX1006—1st I.F. **7/11** ea.  
Cat. No. AX1007—2nd I.F. **7/11** ea.

### SHORT WAVE RECEIVING COILS — AERIAL

Wound on 3in. diam. former. 465 k.c. Iron Core. Fitted on to mounting terminal base. Lug connections. Shielded in can. Dimensions: 3in. high x 1 1/2in. x 1 1/2in. 4 to 8 M.C. **1/6** each  
Cat. No. AX1003 .. 1/6 each

### OSCILLATOR COILS

Similar description to above mounted in can 2in. high x 1 1/2in. x 1 1/2in. Air Core. **1/6** each  
Cat. No. AX1005 .. 1/6 each

### R.F. INTERSTAGE COILS

Similar details to above Aerial coils. **1/6** each  
Cat. No. AX1004 .. 1/6 each

### B.F.O. COILS

For use with 465 I.F. Transformers and complete with .001 and .005 mfd. 5 per cent. Tolerance Mica Condensers. Shielded in can. Dimensions: 2in. high x 1 1/2in. x 1 1/2in. **3/6** each  
Cat. No. AX1002 .. 3/6 each

### P.A. TANK COILS

Unshielded Coils covering approximately 2 to 4 megs. (Low frequency) 40 Turns of 26 S.W.G. Enamelled Copper Wire. Wound on 1in. former. **11 1/2** D. each  
Cat. No. AX1034 .. 11 1/2 D. each

Ditto. High Frequency. Covering approximately 4 to 8 megs. 18 Turns of 22 S.W.G. C. and E. Copper Wire. **11 1/2** D. each  
Cat. No. AX1035 .. 11 1/2 D. each

### DRIVER TUNING COILS

Driver Tuning Coils. Constitute 103 turns of 7/46 S.W.G. Litz wire dual-lateral wound on 3in. former and tapped at 30 turns from start of winding. Mounted in metal can 3in. x 1 1/2in. x 1 1/2in. **2/6** each  
Cat. No. AX1087 .. 2/6 each

### AERIAL LOADING COILS

Wound on 4 1/2in. long x 2in. diameter ribbed ebonite former. **1/6** each  
Cat. No. AX1092 .. 1/6 each

### AERIAL TUNING COILS

Two windings on 3 1/2in. long x 2in. diameter former. First winding constitutes 60 Turns 22 S.W.G. Tinned Copper wire tapped every 6 turns. Second winding is 10 turns same wire tapped every turn. Spacing between two windings 1/2in. **2/-** each  
Cat. No. AX1249 .. 2/- each

### MASTER OSCILLATOR COILS

Coverage 2.2 to 6.3 megs. Windings incorporate .00005 mfd. mica condenser and a 50,000 ohm. resistor. Mounted in can 3in. x 1 1/2in. x 1 1/2in. **2/6** each  
Cat. No. AX1176 .. 2/6 each

## BULK PURCHASE!

### BAKELITE COIL BASES



Used for finishing Coil Windings and for connecting to the wiring of the Set. Provided with 4 lug Terminals mounted on bakelite strip. Mounting holes 1 1/2in. apart. Bulk purchase enables to sell these at a fraction of their true cost!

Cat. No. AC529—2 D. each **1/3** doz.

## "PLUG-IN" COIL FORMERS

Coil Formers for winding short-wave plug-in coils. Eight-ribbed bakelite. Well made. 1 1/2in. diameter.

Cat. No. AF55—4-pin Plug-in-Former **2/1** ea.

Cat. No. AF56—5-pin Plug-in-Former **2/1** ea.

Cat. No. AF57—6-pin Plug-in-Former **2/1** ea.



## "COIL FORMER"



This Former Tube for coil winding has very high insulating properties, the surface being made of pure bakelite.

Cat. No.	Each
AF78—1/2in. dia., 6in. lengths	1/-
AF80—1in. dia., 6in. lengths	1/3
AF81—1 1/2in. dia., 6in. lengths	1/10
AF81A—1 1/2in. dia., 3in. lengths	1/-
AF83—1 1/2in. dia., 6in. lengths (valve base size)	2/3
AF86—2in. dia., 6in. lengths	2/3
AF87—2 1/2in. dia., 6in. lengths	2/4
TF88—3in. dia., 5in. lengths	2/1

## WAR SURPLUS PAPER TUBING

3/8in. Outside Diameter, 2ft. lengths.  
Cat. No. AX1207 .. 2/- piece

## ENSIGN COILS Colour Code

AERIAL & R.F.		
Grid	..	Green
Plate or Aerial	..	Yellow
Earth or B +	..	Red
Earth or A.V.C.	..	Black
OSCILLATOR		
Grid	..	Green
Plate	..	Yellow
B +	..	Red
Padder	..	Black
INTERMEDIATE FREQUENCY TRANSFORMERS		
Plate	..	Blue
B +	..	Red
Grid or Diode Plate	..	Green
A.V.C. or Diode Load	..	Black

# TESTING INSTRUMENTS

## 0-1 M.A. METERS

### "PALEC" 4in. SQUARE METERS

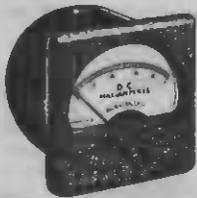
"Palc" (Australian) 4in. Square Cased 0-1 m.a. D.C. Meters. Well damped. Easy action. 1000 ohms per volt. 100 ohms internal resistance.



Mounted in moulded plastic case. Accurate and durable. **ANOTHER ANNUAL REDUCTION!** Cat. No. AM38—

Worth 45 . . . NOW **69/6**

### "BURLINGTON" 0-1 m.a. Meters



3in. Square Bakelite Case "Burlington" (U.S.A.) Meters, 0.1 m.a. D.C. 85 ohms internal resistance; 1000 ohms per volt.

Cat. No. AM17— **59/6** each

### "WESTON" 0-1 M.A. METERS

3in. Square Bakelite cased "Weston" Meters. 0-1 M.A.; D.C.; 105 ohms internal resistance; 1000 ohms per volt.

Cat. No. AM10 . . . **62/6** each

### 0-1 M.A. METERS



0-1 M.A. Moving Coil D.C. Meters. 1000 ohms per volt. Internal resistance 60 ohms.

DE JUR (U.S.A.), 2 1/2in. Round Scale, 3 1/2in. Outside Diameter.

Cat. No. AM15 . . . **£2/10/-**

PALEC (Australian), 2 1/2in. Round Scale, 3 1/2in. Outside Diameter. Internal resistance 100 ohms.

Cat. No. AM16 . . . **£3/15/-**

### "PALEC" UNIVERSAL SCALE METERS

"PALEC" 0-1 m.a. 2 1/2in. round face Meters, fitted with SPECIAL "UNIVERSAL SCALE". Internal Resistance 100 ohms; 1000 ohms per volt. Reading M.A. and Volts in the following ranges: 0-1, 0-10, 0-100, 0-500, 0-1000; low ohms, 0-500; high ohms, 0-100,000.

Cat. No. AM16A . . . **£3/19/6**

## Smashing War BARGAIN!

### METER SPECIAL!

"WESTON" 0-100 M.A. 2 1/2in. Round R.F. Thermo-coupled. Flush mounting—plastic case Milliammeter. WORTH £8.

Cat. No. AM23— **GREAT VALUE! 29/11** each

"FERRANTI" 0-100 M.A. D.C. 2 1/2in. Round Meter with luminous Dial.

Cat. No. AM22 . . . **35/11** each

"SIMPSON" 0-15 volts A.C. 3in. Square meters.

Cat. No. AM55 . . . **55/-** each

Same as above but with Illuminated Dial.

Cat. No. AM56 . . . **67/6** each

"TRIPLETT" 0-50 amp. A.C. 3in. Square Meter.

Cat. No. AM57 . . . **55/-**



"BURLINGTON" 0-25 volts A.C. 3in. Square Meter.

Cat. No. AM58 . . . **47/6**

"G.E." 0-1500 volts D.C. Volt-meter. Flush Mounting with External Multiplier.

Cat. No. AM59 . . . **95/-**

**METER VALUES THAT ARE HARD TO BEAT!**

Prices as Low and Even Lower Than Pre-War!

### MAGIC EYE ASSEMBLY



For 6-prong Tubes. An easy method of adapting a Magic Eye or Electron Ray Tube to any standard radio receiver having a.v.c., or any Frequency Modulated receiver. Also used extensively for installing Magic Eyes as indicators in test instruments such as signal tracers, condenser testers, etc.

The metal encased socket is completely wired with a 5-wire colour-coded cable 22in. in length. The necessary 1-megohm target-to-plate resistor is concealed and protected by the socket's metal shell.

Complete set of parts, without valve.

Cat. No. AS500 . . . **10/6**

### NEW LINE

### "STEMCO" 6 AMP. CHARGERS

Heavy Duty 6-volt 6 amp. Stemco Chargers. Will charge all types of 6-volt Wet Batteries. Operates from 230-volt A.C. Connect direct to battery. Uses a 6 amp. "Westinghouse" Dry Rectifier. Mounted in crackle finished metal case, length 6 1/2in., height 6 1/2in., width 4 1/2in.

Cat. No. AA235 . . . **£6/10/-**



### "NE-O-LITES"

**Every Experimenter and Serviceman should have one!**

Neon Indicator attached to prods.

Here's what it does:

1. Will test any current from 110 v. to 550 v., and will indicate the voltage.
2. Will tell instantly whether A.C. or D.C. current.
3. Will detect live and earth wires.
4. Will give a temporary pilot light on any electrical apparatus.

Cat. No. AM254 . . . **4/6** each

### AMERICAN "EAGLE" HYDROMETERS



We have no further license to import from the States, so once our existing stock is sold we will not be able to repeat. Eagle full size glass tube type, with non-sticking float. Test your own batteries.

Cat. No. AM300 . . . **7/6**

SPARE FLOATS—Cat. No. AM301 **2/3**

# QUALITY TEST EQUIPMENT

SHERLOCK HOLMES SAYS..

*"Don't guess at the trouble TEST WITH PIFCO RADIOMETER"*



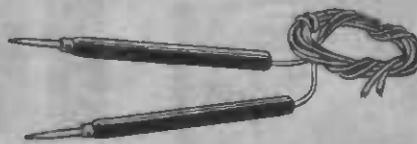
Pifco goes straight to the heart of the trouble, testing sets and components with equal ease and speed. Any radio set can be tested, either A.C. or D.C. Mains or Battery operated. Solidly constructed in a fine bakelite case 4in. x 2½in. overall. The Pifco Radiometer has readings for high and low voltage, milliamperes, ohms, continuity test, etc.

The "ALL-IN-ONE" RADIOMETER for A.C. or D.C.—For testing electric or battery radio sets. Anybody can trace faults with this wonder instrument. Finished in black bakelite. Size of dial 1½in. by ¾in., complete with leads.

Amazing Value at the New Low Price!

Cat. No. AM103 .. **37/-**

## "OXFORD" TEST PRODS



Polished Ebonite Handles and complete with flexible leads. **7/-** pair  
Cat. No. AM1 ..

## METER SHUNTS

Meter Shunts wound for use with 0.1 M.A. Meters, with internal resistance of 100 ohms. Bobbin wound. Accurately adjusted. Length 1½in., Diameter ½in.

Cat. No. AM70—25 milliamp } **5/-**  
Cat. No. AM71—50 milliamp } each  
Cat. No. AM72—100 milliamp }  
Cat. No. AM73—250 milliamp }

Special sizes may be made to order.

## "MARQUIS" TEST PRODS

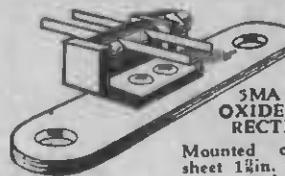


Plastic handled Test Prods. Coloured Red and Black. Length 4in. Diameter ½in. Supplied without leads. **2/9** pair  
Cat. No. AM5 ..

Suitable flexible leads would be Cat. No. AW300 Gellulose Covered Lead .. 5d. yard

## WAR SURPLUS BARGAINS!

### METER RECTIFIERS



SMA COPPER OXIDE METER RECTIFIERS.

Mounted on plastic sheet 1½in. x ¾in. Ex Army stocks, at a

fraction of their true value. **5/-** each  
Cat. No. AM45 ..

## The "RADAMETA" VALVE-TESTER and MULTI-METER

Another Great Value in Test Equipment the "RADAMETA" Mutual Conductance VALVE TESTER and MULTI-METER

This Tester is a modern instrument, featuring a Roller-Chart Dial.

Tests modern Octal-based Tubes. Multi-Meter reads over 21 ranges.

IT'S PORTABLE! WEIGHS ONLY 13lb.

Four ranges milliamperes 0/1, 0/10, 0/50, 0/250. Three ranges ohms 0/500, 0/50,000 0/10 megohms. Five ranges D.C. volts (1000 O.P.V.), 0/10, 0/50, 0/250, 0/500, 0/1000. Five ranges A.C. volts (1000 O.P.V.) 0/10, 0/50, 0/250, 0/500, 0/1000, (all at 50 cycles). Five ranges output volts at 400 cycles, 0/10, 0/50, 0/250, 0/500, 0/1000. Three

ranges electrolytic and paper condenser tests. Line check for 240 volts A.C., 50 cycles.

Inter-element shorts test on all valves. Trans-conductance tests on valves direct reading in MA/V. Emission test on rectifier and diode valves. Gas test on all types of valves tested by trans-conductance method. Current consumption 240 v. 50 cycle 40 watts. 6 volt D.C., 2 amps.

NEW "NO EXCHANGE" PRICE!

Cat. No. AM405 .. **£34/6/-**



THE BEST COSTS LESS AT THE "LAMPHOUSE" NEW ZEALAND'S LEADING RADIO & ELECTRICAL HOUSE

GET THE "NEW TONE" IN YOUR SET



# Rola

THE WORLD'S FINEST  
SOUND REPRODUCERS

## Electro-Magnetic SPEAKERS

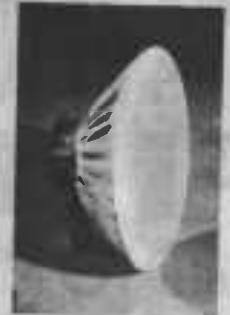


We have not listed the usual range of Electro-dynamic Speakers this year as supplies are becoming increasingly difficult to procure.

Anisotropic Alnico magnets have so greatly improved the performance of the Rola permanent magnet speakers as to make this type far more efficient than the electro-dynamic types with the result that the latter are rapidly becoming obsolete. We do however get a few occasionally, so if you especially want an Electro-dynamic speaker let us have your order and we will do our best to execute it for you.

THE SPEAKER GROUP OF THE YEAR  
MADE BY ROLA

Our Cat. No.	Rola No.	Overall Diam. (in.)	Voice Coil Diam. (in.)	Voice Coil Impedance (ohms)	Power Handling Capacity (watts)	Weight with Transformer lb. oz.	Price
AS962	12U	12 1/16	1 1/2	8.4	15	12 12 0	
AS963	G12	12 1/16	1 1/2	15	15	11	8 8 0
AS964	12-0	12 1/16	1 1/2	2.3	7	5	4 7 1
AS965	12-M	12 1/16	1	2.3	7	3 12	3 4 8
AS966	10-42	10 1/16	1	2.3	7	5	4 7 1
AS967	10-M	10 1/16	1	2.3	7	3 12	2 19 0
AS968	8-M	8 1/16	1	2.3	7	2 13	2 14 0
AS969	8K	8 1/16	1	2.3	5 1/2	2 11	2 4 10
AS970	8H	8 1/16	1	3.7	4	1 14	1 19 0
AS971	6K	6 9/16	1	3.7	5	2 6	2 11 0
AS972	6J	6 9/16	1	3.7	4 1/2	2 2	2 3 0
AS973	6H	6 9/16	1	3.7	4	1 12	1 17 1
AS974	5H	5	1	3.7	3 1/2	1 10	1 14 0
AS975	5C	5	1	3.7	2 1/2	1	1 9 9
AS978	3C	3 9/16	1	3.7	1 1/2	8 1/2	1 9 9



### PHILIPS "TICONAL" P.M. SPEAKERS

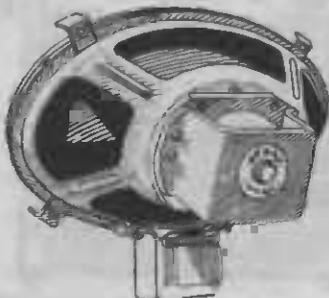
**6 3/4 in. SPEAKER:** A medium sensitivity light weight Speaker with good rigidity. Voice Coil impedance, 5 ohms at 1000 cycles per second. Baffle aperture 6in. Without Output Transformer. Cat. No. AS938 ... **23/3** each

**8 1/2 in. SPEAKER:** A high quality 8 1/2 in. standard Speaker of recognised quality. Already used in many commercial made receivers. Voice Coil impedance, 5 ohms at 1000 cycles per second. Baffle aperture 7 1/2 in. Without Output Transformer.—Cat. No. AS939 ... **31/6** each

**Suitable Transformer.**  
A suitable Transformer for use with any of the above "Philips" Speakers would be the "Minor" 3-watt Universal Output Transformer. Cat. No. AT603 ... **14/-**

## 1949's BIG BUY!

### OVAL E.M. SPEAKERS



A GREAT FORTY-NINER BARGAIN!

Elliptical Electro-magnetic Speakers. The equivalent of the 8in. or 10in. recognised shape. A thorough test proves these speakers to give an excellent tonal quality under ordinary conditions and also at a high volume—both undistorted and perfect clarity. 1500 ohm Field. 5000 ohm Transformer. Measurements: Length, 10 1/2 in. Width at deepest point, 6 1/2 in.

A Large Quantity Purchase Direct from the Distributors Gives YOU a BIG REDUCTION IN PRICE.

Cat. No. AS917 ... **35/-**

### "ACOS" PILLOW SPEAKER

Don't disturb the rest of the household when listening to the BIG INTERNATIONAL TESTS this year!

The Pillow-Speaker is a high quality reproducer designed to replace the loud-speaker or headphones and it is intended to be placed under a pillow or cushion to provide individual personal listening to radio programmes, etc., without causing disturbance or annoyance to others in the near vicinity. The smartly styled black and chrome disc-shaped plastic case (4 3/16in. diam. x 1 1/16in. thick) causes no uncomfortable lump beneath the pillow head. Cumbersome head attachments are entirely eliminated. There are no moving parts on the Pillow-Speaker, nothing to loosen or wear out. Hermetically sealed, it can be dipped into disinfecting solutions with temperatures not exceeding 120 degrees F. Weight Box. 6ft. cord attached. Connects to any Superhet receiver. Full connecting details supplied with each unit.

Cat. No. AS913 ... **64/-**

**MAKE EVERY ROOM  
A RECEPTION ROOM**

with an

**ENSIGN  
EXTENSION SPEAKER**



■ ATTRACTIVE MAGNET SPEAKER WITH 5½in. CONE.

■ ATTRACTIVE CABINET, 8½in. high, 11in. wide, 5½in. deep. In Dark Brown richly veneered wood.

■ FITTED WITH 10,000 OHM VOLUME CONTROL.

■ Type of Speaker permits connections to all types of Receivers, whether mains or battery, having high impedance output.

Cat. No. AS996— **£3/19/6**

■ Cat. No. AS995—As above but incorporating an 8in. Speaker instead of a 5½in.

**£4/9/6**

**AN  
'ENSIGN'  
EXTENSION  
SPEAKER  
ADAPTOR**

Enables you to fit an Extension Speaker to any Electric set in the matter of a few minutes.

(SEE BELOW)

**EXTENSION SPEAKER CABINETS**

Richly veneered well made Speaker Cabinets. Dimensions: 12in. wide, 10in. high, 6½in. deep. Finished in Honey-Coloured Trimmings. (Similar to illustration of "Ensign" Extension Speaker.)

Cat. No. AC151 .. .. **39/6** each

**SPEAKER FLEX.**

Thin Twin Transmission Cable, for extension Speakers, Speaker Systems or for double doublet and similar Aerial Systems. Standard Flexible 2-Core Wire, rubber-covered and covered over all in a Waterproof Braid. Flexible and long-lasting.

Cat. No. AW87 .. .. **6D.** per yard

**MULTI-WIRE SPEAKER CABLE**



5-wire Speaker Cable, insulated with P.V.C. in distinctive colours and bound over all in cotton braid.

Cat. No. AW101 .. .. **6D.** ft.

8-wire Ditto cotton braided over rubber insulated wires. Special bulk purchase enables us to sell at .. ..

Cat. No. AW102 .. .. **6D.** ft.

**OUR GUARANTEE!**

The Lamphouse 7-DAY MONEY BACK GUARANTEE protects your every purchase.

**"ENSIGN" SPEAKER EXTENSION ADAPTORS**



Extension Speaker Adaptors. The problem of fitting an extension speaker to your electric set has been solved! All you do is remove the output valve, plug in the adaptor, then put back the valve on top of the adaptor. The adaptor can also be used as a tone improver.

Can be used in conjunction with all P.M. speakers which have output transformers fitted.

Cat. No. AS80—4-pin .. **7/6** each

Cat. No. AS81—5-pin .. **7/6** each

Cat. No. AS82—6-pin .. **7/6** each

Cat. No. AS83—Octal .. **8/6** each

**SPEAKER SILK**

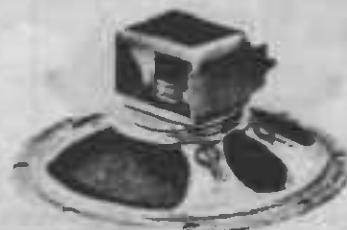
Special Fabric for putting in front of Speakers in cabinets, etc.

Cat. No. AS90—12in. x 12in. **1/5** each

Cat. No. AS901—16in. x 16in. **2/6** each

**5-inch AMERICAN P.M. SPEAKERS**

**THE LOWEST PRICE 5in. SPEAKER ON THE MARKET!**



Complete with separate  
**MIDGET OUTPUT TRANSFORMER**

5,000 ohms.

FEATURING:

**The Famous "ALNICO 5" MAGNET**

The magnet that combines LARGE CAPACITY with Exceptionally LIGHT WEIGHT.

We bought a big quantity at a good price, so now you take advantage of it!

**IT'S ANOTHER LAMPHOUSE BARGAIN!**

**DEPENDABILITY,  
PERFORMANCE,  
APPEARANCE!**

Cadmium Plated Overall.

**LOOK—**  
each (Complete)

Cat. No. AS950.

**24/11**

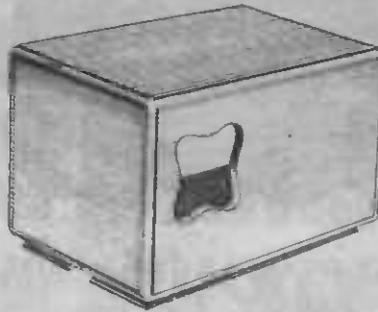
# CABINETS — RADIOGRAM UNITS

## "COVENTRY" MANTEL CABINET



A modern Mantel Cabinet to take a small broadcast or shortwave receiver. Richly veneered. Well made. Takes 5in. speaker.  
 Dimensions: Length 16in., depth 7½in., height 10in. Cat. No. AC152 .. **70/-**

## "ECONOMY" CABINET



An attractively designed low price cabinet to take small electric or battery sets of 3 or 4-valve size. Finished in a glistening ivory enamel and with a cut-out to take a 5in. Speaker. Cabinet measures 10½in. long, 6½in. high, and 7½in. wide. Similar cabinet to that used with our New "Easy Built Bedroom 3."  
 Cat. No. AC156 .. **27/6**

## "CLASSIC" SPEAKER CABINETS

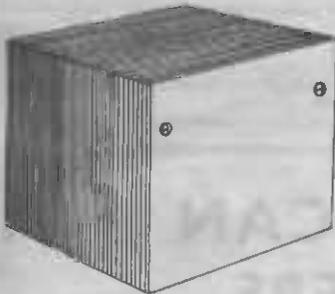


The "Classic" is a well-made, richly-veneered cabinet made for extension speakers or for cal-systems which are being used so extensively at present. Will take an 8in. or a 5in. Speaker and are supplied with fawn speaker cloth. Honey coloured trimmings. Dimensions: Length 12in., depth 6½in., height 10in. **39/6** each  
 Cat. No. AC151 ..

## "SUPERIOR" MANTEL CABINET

Similar in construction to the "Coventry" but made slightly larger to take a 6-valve or similar class of set. Space for 5in. to 8in. Speaker. Dimensions: Length 18in., depth 8½in., height 12½in. Cat. No. AC150 .. **75/-**

## "HIKERS ONE" CABINET



A neat compact little Wooden Cabinet to take the "Hikers One" or sets of a similar nature. Measurements: Width 7½in., height 7in., depth 6½in. Gives your little receiver that finished look.  
 Cat. No. AC154 .. **14/6**

## MUSIC HOW YOU LIKE IT!



GRAMOPHONE PICK-UP

Arrange your own programmes and have "music as you like it" with a "GOLD-RING" Magnetic Pick-up—The Pick-up that gives Studio-like reproduction to all recordings. Can be connected to practically every make of multi-valve Radio and attached to either a hand-wound or Electric type Gramophone Motor.  
 Cat. No. AP306 .. **43/-**

## PICK-UP NEEDLES

"Songster" brand Bronze Pick-up Needles. Play approximately 8 records per needle: Packed in tins of 100.  
 Cat. No. AP330 .. **1/8 tin**



## "ACOS" CRYSTAL PICK-UPS

Another top line Cosmocord Crystal Pick-up. Gives crystal clear reproduction to all recordings. Play the records you like when you like through your own radio by using the "Acos." Crystal cartridge is fitted in a streamlined plastic arm. Needle pressure 35 gms. English manufacture.

NEW LOW PRICE!  
 Cat. No. AP308 .. **48/6**

## EXCHANGE OFF!

## PRICES DOWN!

### "GARRARD" RADIOGRAM UNITS

### "GARRARD" AUTOMATIC RECORD CHANGERS



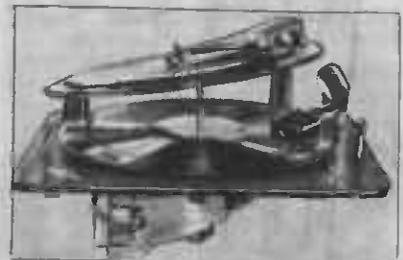
Model A.C.6

Consisting of an ELECTRIC GRAMOPHONE MOTOR with a Magnetic Pick-up mounted. On-off switch is incorporated in the tone arm and a variable speed regulator is attached to the frame. 230 volt A.C.: 10in. Turntable; Induction Motor. Just plug it into a light socket or power point, connect to your Radio and you play the music you like.  
 Cat. No. AP299 .. **£6/4/6**

Model "S"

Similar in most ways to the A.C.6 described above but using a drum drive motor. Maintains a speed of 78 R.P.M. with ample torque to play the heaviest recordings. Automatic stop. Magnetic Pick-up. A simple, inexpensive unit maintaining the well known Garrard standard of quality and reliability.

NEW LOW COST!  
 Cat. No. AP298 .. **£4/17/9**



Model A.C.65

"GARRARD" Units and Changers are recognised throughout the world as the peak in Radiogram Units. The Electric Motor, Magnetic Pick-up and Automatic Record Changer combined (as illustrated) will take 8 records, either 10in. or 12 in., and play them through from start to finish without any attention whatsoever. Automatic devices lift the arm from record when finished and place the next disc in position. Induction motor 230 volts A.C. Complete with full details.  
 Cat. No. AP301 .. **£15/1/3**

Model R.C.71

Similar to the AC65 model described above but using the new Garrard Drum Drive Motor and maintaining a constant speed of 78 R.P.M. Plays up to 10 recordings either 10in. or 12in. Will not stack mixed recording! No electrical interference when motor is running.

GREAT VALUE!  
 Cat. No. AP302 .. **£9/16/9**

# SOLDERING ACCESSORIES — KEYS

## "SOLON" ELECTRIC SOLDERING IRONS



**Improved Bit.**—Oval shaped tinned copper bit allows work to be done in a narrow space. It is designed to provide the maximum amount of heat at the working end with a minimum of heat loss due to radiation, as the heating element is totally enclosed in the bit.

**Constant Heat.**—Four minutes to heat up and the "Empire" Model SOLON is ready for continuous use if required.

**Flexible Lead.**—Six feet of Tough Rubber-Sheathed 3-core Flex.

Cat. No. AS375—Solon Domestic or Radio Soldering Iron .. **28/1**

Cat. No. AS395—Spare Bit for Standard "Solon" Iron .. **5/7** each

Cat. No. AS394—Spare Elements for "Solon" Soldering Irons .. **7/4** each

Cat. No. AS376—"Solon" Pencil Bit Soldering Iron. This Iron has a Pencil Tip for fine work and general Radio Soldering. .. **30/2**

Cat. No. AS393—Spare Bit for "Solon" Pencil Bit Iron .. **1/7**

Cat. No. AS377—"Solon" Heavy Duty Soldering Iron. This is the 1lb. Iron for all heavy work. .. **54/9**

## FOR THE HANDYMAN!

### "SPEEDEE" ELECTRIC SOLDERING IRONS



Consumes 100 watts—no more than a small light bulb. Indispensable to the handy man in workshop or home.

Cat. No. AS406 .. **16/7** each

#### SPARE ELEMENTS FOR ABOVE—

Cat. No. AS407 .. **6/-** pair

#### SPARE COPPER BITS—

Cat. No. AS408 .. **3/-** each

### "SPEEDEE" HEAVY DUTY IRONS

Designed for commercial use requiring a heavy iron for long periods. Watts, 180. Weight, 3 1/2 lb.

Cat. No. AS396 .. **47/6** each

Spare Elements for above. .. **19/-** each

Cat. No. AS397 ..

## 6-VOLT SOLDERING IRONS

It's been a long time since we were able to offer a low voltage iron like the "PYROBIT INSTRUMENT." Works from a 6-volt storage or Car Battery and consumes only 45 watts. Fine point, and can be manipulated like a pencil. High bit temperature 300 deg. C. Supplied complete with 3ft. flexible cord.—Cat. No. AS383 **33/-**

## "ERSIN" MULTICORE SOLDER

The New English Solder



"ERSIN" Multicore Solder is recommended for the home constructor. It looks like wire and is filled with a resin preparation which eliminates the necessity for using flux or spirits of salts, etc.

#### Instructions for Using:

1. The joints to be soldered should be thoroughly cleaned and free from acid or grease. On plated parts (nickel or chromium) the "plate" should be filed away where the joint is to be made.
2. Heat the soldering iron just enough to melt the solder. "Tin" the copper bit by first filing lightly and then rubbing with the cored solder until coated.
3. Heat again for working, but not to red heat.
4. Apply the bit and the cored solder to the work, rubbing the bit well down to transmit the heat. It is important that the bit, cored solder and joint should come into contact simultaneously.

Cat. No. AS411—Small Reel measuring approx. 27in. .. **7<sup>D</sup>** reel

Cat. No. AS412—Large Packet (12oz.) .. **6/9** pkt.

## SOLDERING PASTE

Super Soldering Paste. An ideal paste for use instead of flux or resin. Can be used on all metals except aluminium.

Cat. No. AS423—2oz. tins .. **1/5**

Cat. No. AS424—4oz. tins .. **2/1**

## SOLDER STICKS

Full size sticks of 34/66 Solder. Each stick ways about 1 1/2 lb.

Cat. No. AS418 .. **2/-** stick

## STRIP SOLDER

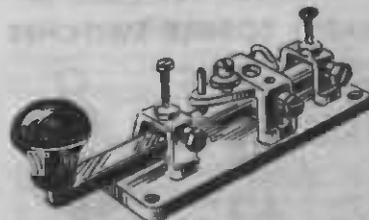
Small strips of 45/55 top grade Solder. Each strip measures approx. 27in. long 1/4in. wide.

Cat. No. AS416 .. **7<sup>d</sup>** strip

## BIG BARGAINS IN MORSE KEYS

### War Special!

#### ARMY KEYS



This key is very compactly constructed on a bakelite base measuring 3 1/2in. x 1 1/2in. Very efficient for sending Morse at a high speed, and is complete with fine adjusting screw. As used by the Army and other services.

WORTH 30/- BUT NOW Cat. No. AX1075A— **5/11**

### Price Chopped!

#### "ULTIMATE" MORSE KEYS



Heavy brass arm and bridge. Fine adjustment of spacing and tension provided. Wooden knob, and finger rest flange, ensuring comfortable operation grip. Mounted on wooden base, finished in varnish. Measures 6in. long, 3in. wide, 3in. high (overall).

Cat. No. AH111— NOW **4/11** each

## BIG BARGAIN! MORSE PRACTICE SETS



British-made Morse Practice Set, has Morse Code embossed on base. Stroke of key can be adjusted to individual requirements. Terminals are provided so that the Set can be used in conjunction with another set. Containing Key and Buzzer on One Base. Light Pattern. Measurements 4 1/2in. long, 2 1/2in. wide, 1 1/2in. high. Cat. No. AH110

Reduced from **8/9** TO **5/11** each

## ALUMINIUM SOLDER

For repairs in aluminium ware and die cast metals. No soldering iron or flux necessary. Recommended for aluminium saucepans, kettles. Full instructions supplied with each stick.

Cat. No. AS420—Small stick, 5in. x 3in. **1/8**

# SWITCHES — MICROPHONES

## MINIATURE SWITCHES

Here's a handy little switch, suitable for radio and motor-car work. Positive action. Nicely finished (nickel plated). British made.  
Cat. No. AG118 **2/4**



## RADIO TOGGLE SWITCHES

British, quick make-and-break Toggle Switches. Rating 250 v., 3 amp.

Cat. No. AS441—S.P. On-off **2/8** each

Cat. No. AS442—D.P. On-off **4/3** each

Cat. No. AS443—S.P. Change-over **3/3** ea.

Cat. No. AS444—D.P. Change-over **4/6** ea.



## NAME PLATES FOR TOGGLE SWITCHES



On-off Plates to fit standard toggle switch. Cat. No. AX1210 **3** D. each

## ROTARY RADIO SWITCHES



Rated 250 volt, 2 amp. These are the rotating type of switches and are supplied with 1/2 in. shaft, so that a knob can be fitted to match the other controls on the set. One hole fixing. Switch mounted in hermetically sealed

cases, perfectly reliable contact, durable construction. Cat. No. AS445—S.P., on-off **4/9** each

## METER PUSH SWITCH



Designed for one-hole fixing to panels between 1/16 in. and 7/32 in. thick. With highly polished nickel-plated bush-nose and coloured insulated plunger. Silver-contacts make sure of trouble-free contact. With terminal screws, one pole live to bush. Rating: 1 amp. at 10 volts or 100 ma. at 100 volts.

Cat. No. AS482 **2/9** each

## PUSH PULL SWITCHES

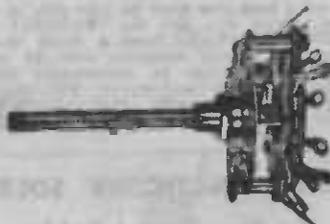
RELIABLE PUSH PULL BATTERY SWITCHES TELSEN (4-point D.P. On/Off) SWITCHES, for panel mounting.

We're overstocked in this line so make another great Anniversary Offer!

Cat. No. AS428—NORMALLY **3/5** NOW! **1/11** each



## WAVE-CHANGE SWITCHES



Switches suitable for band changing, and for use with test equipment, etc. Best imported manufacture. Made from laminated bakelite. All 1/2 in. diam. shaft. Phosphor bronze points for sure contact.

10 position, Single Bank Switch: 2 1/2 in. shaft.—Cat. No. AS450 **4/-** each

3 position, 2 Bank, 3 pole. 5/11 each  
3 1/2 in. shaft.—Cat. No. AS471

3 position, 3 Bank, 3 pole. 1 1/2 in. Shaft length from mounting bush 5 1/2 in. **6/11** each  
Cat. No. AS476

2 position, 1 Bank, 6 pole, 2 1/2 in. Shaft.—Cat. No. AS470 **6/6** each

Single Bank, 3-pole, 2-position Switches. Cat. No. AS454 **4/-** each

Single Bank, 2-Pole, 2-position Switches. Cat. No. AS455 **4/-** each

Single Bank, 2-Pole, 3-Position Switches. Cat. No. AS456 **4/-** each

## WAR SURPLUS

These Switches have been removed from ZC1 Army Transceivers. All are brand new, although some may have solder marks.

### FLUSH MOUNTING SWITCHES

10 amp., 240 volt Flush Mounting Switches. Can be used for ordinary house lighting circuits or for any other purpose where an on-off switch is required.—Cat. No. AX1019 **1/-** each

### PUSH-TO-TALK SWITCHES

D.P.D.T. Push Switch. Excellent for a meter push switch or for inter-communication work. Depth 3 in., width 3 in.

Cat. No. AX1021 **2/-** each

### S.P.S.T. TOGGLE SWITCHES

Standard type S.P.S.T. 250-volt 3 amp. Toggle Switch. **2/3** each  
Cat. No. AX1020

### WAVE CHANGE SWITCHES

3-Bank, 2-Position, 9-Pole Wave Change Switches as used in these Transceivers for Receiver/Band/C.W. Switch. Cat. No. AX1016 **4/6** each

2-Bank, 3-Position, 4-Pole Wave Change Switches as used for normal/net/remote Switch. Cat. No. AX1017 **3/-** each

3-Bank, 3-Position, 6-Pole Wave Change Switches. Cat. No. AX1018 **4/6** each

## "SHURE" CRYSTAL MICROPHONES

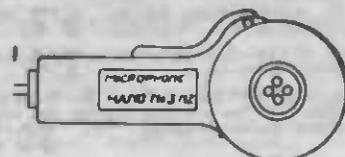


A good sturdy Microphone at low cost. Attractive, modern die cast case, finished in iridescent grey, with chrome plated trimmings. Gives natural life-like reproduction. Complete with 7ft. cable and spring connector: 3 in. female thread: diameter 2 1/2 in. Without stand.

Cat. No. AM150 **£6**

## WAR SURPLUS BARGAINS!

### CARBON HAND MICROPHONES



A solidly constructed Hand Type Microphone, featuring a press switch mounted in the handle. Complete with 6ft. flex and heavy line plug (Phone Plug). Unit is enclosed in a heavy bakelite case. This Microphone is suitable for telephone amateur radio work and any similar purpose requiring a sturdy mike. Cat. No. AX1063 **10/-** each

### DYNAMIC HAND MICROPHONES

Similar in physical construction and appearance to the above (No. AX1063). Has lower output than the Carbon type and therefore requires the use of the Microphone Input Transformer listed below. This "Mike" gives better response than the Carbon type. Cat. No. AX1064 **15/11**

MICROPHONE TRANSFORMERS, for use with above. **10/6** each  
Cat. No. AX1013

### HIGH QUALITY LEVER SWITCHES

D.P.D.T. Lever switches with low loss trifilar mounting. Spring relay contacts give positive connection. Ideal for intercom. or radiogram switching. Flush mounting. Overall Measurements: length 3 in.; depth, 1 1/2 in.; width 1 in. Superbly constructed switch. Cat. No. AX1313

OUR PRICE **3/6**

4-Pole Double Throw Lever Switch similar in construction to above. Can be described as a double set of D.P.D.T. switches. Centre position of lever is "off," "up" position closes first circuit; "down" position closes second circuit. There's many uses for a high quality switch such as this. Overall Measurements: length, 3 in.; depth, 1 1/2 in.; width, 1 in.

Cat. No. AX1314—OUR PRICE **4/6**

# VALVE SOCKETS — CHOKES

## WAFER SOCKETS

Ruggedly constructed. Certain connection with three points contacting each of the valve pins. Standard mounting centers.



- Cat. No. AS631—4-pin ... ALL
- Cat. No. AS632—5-pin ... 8D.
- Cat. No. AS633—6-pin ... EACH
- Cat. No. AS635—8-pin (Octal) ... 1/-
- Cat. No. AS636—Loctal ... 1/3 each
- Cat. No. AS637—Sockets for Midget Valves (154 series) ... 3/9
- English 5-pin Special Wafer Sockets (for PM22A Valves). Cat. No. AS602 ... 3/9

## AMPHENOL VALVE SOCKETS



Amphenol Valve Sockets, complete with metal mounting plates

- Cat. No. AS614—4-pin ... ALL
- Cat. No. AS615—5-pin ... 10D.
- Cat. No. AS616—6-pin ... EACH
- Cat. No. AS617—7-pin ... EACH
- Cat. No. AS618—7-pin Large ... EACH
- Cat. No. AS619—8-pin ... 8D. each
- Cat. No. AS619A—8-pin Clip Mounting Type, without Flange ... 8D. each

## MOUNTING FLANGES FOR AMPHENOL VALVE SOCKETS

Metal Mounting plate similar to that illustrated on Amphenol socket above. Converts ring mounting socket to flange type.

- Cat. No. AS612 ... 4D. each

## BASEBOARD MOUNTING VALVE SOCKETS



Amphenol Sockets mounted on raised metal shield to enable the sockets to be screwed on wooden baseboards, etc.

- Cat. No. AS620—4-pin ... 2/3 each
- Cat. No. AS621—5-pin ... 2/3 each
- Cat. No. AS624—8-pin Octal

## WAR BARGAINS!

### OCTAL WAFER VALVE SOCKETS

Eby Wafer Octal Valve Sockets to take all the modern types of tubes with the octal base. These sockets have the mounting holes spaced 1in. further apart than the standard type but otherwise are exactly the same as the standard wafer socket selling at 8d.

**GREAT BARGAIN!**

- Cat. No. AS630— 4 1/2 D. each or 3/9 doz

## 7-PIN VALVE SOCKETS

Eby wafer 7-pin Valve Sockets. Standard size. Big stocks mean reduced price.

- Cat. No. AS634 4 1/2 D. each or 3/9 doz.

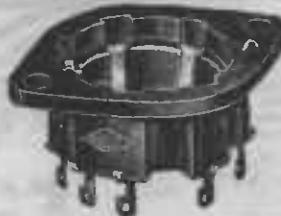
## "STEATITE SOCKETS"



Made from entirely new dielectric, ultra low loss. Phosphor bronze silver-plated contacts. Steatite Sockets are particularly recommended for high frequency work and where high temperatures are encountered. Ideal for Transmitters and Amplifiers and other apparatus in excess of 20 watts.

- Cat. No. AS641—4-pin ... ALL
- Cat. No. AS642—5-pin ... 5/-
- Cat. No. AS643—6-pin ... EACH
- Cat. No. AS644—7-pin ... EACH
- Cat. No. AS645—8-pin ... EACH

## SIDE-CONTACT CHASSIS VALVE-HOLDERS.



8-CONTACT.

Moulded bakelite chassis valve holders for the side-contact valves. Fitted with eight leaf contacts and integral solder tags. Very efficient and reliable contact is made with valves of the type concerned.

- Cat. No. AS601 ... 1/7

## H.F. CHOKES



Honeycomb wound H.F. Chokes. 10M.H. Cat. No. AC140— 2/9 each



H.F. CHOKES. 2.5 M.H. Pye Wound (4-pye) Chokes, wound on Isolantite Former. We have overbought this line and are therefore prepared to sell them at a greatly reduced price. Usually 4/6 each. Cat. No. AC138 ... 1/9

Similar to above but with connecting leads cut rather short. Removed from New ZC1 Receivers. Cat. No. AX1047A ... 1/3

## L.F. CHOKES

- 30 hv. 50 M.A. Filter Chokes. Cat. No. AC141 ... 14/6
- 30 hv. 100 M.A. ditto. Cat. No. AC142 ... 19/6
- 30 hv. 150 M.A. ditto. Cat. No. AC143 ... 32/6

## WAR BARGAINS!

### CHOKES REMOVED FROM ZC1 TRANSCEIVERS

#### 30 Henry 100 MA Filter Chokes

Mounted in metal containers 2in. high x 3in. between mounting holes. Lug type connection. Cat. No. AX1010 ... 17/6

#### Modulation Chokes

Small Heavy Duty Modulation Chokes. Similar dimensions and description to above. Suitable for plate circuits of 6V6GT or similar valve. Cat. No. AX1011 ... 10/6 each

#### Parasitic Chokes

The ideal Unit for preventing parasites in low and medium power Transmitters. 3 1/2in. x 1in. Cat. No. AX1047 ... 1/- each

#### Vibrator Chokes

Low tension Hash Chokes for use with Vibrator Packs and Motor Car Sets, etc. Size: 1 1/2in. long, 3in. diameter. Wax coating. Cat. No. AX1141 ... 1/9 each

Cat. No. AX1155—High Tension R.F. ... 1/9 each

#### Low Tension R.F. Chokes

Good Hash Choke as used in ZC1 Vibrator Unit. 1 1/2in. long wound on 1in bakelite former. Cat. No. AX1200 ... 6D. each

#### 650 Micro Henry Choke

Cylindrical 1 1/2in. long x 1in. with solder lug mounting. Might be used as a crystal set coil or for line filter work. Cat. No. AX1246 ... 9D. each

## WAR BARGAINS!

### METAL REELS

8 1/2in. Diameter Metal Reels complete with small winding handle and anchoring brackets. Will hold approximately 70 to 100 yards single wire cable. Many uses can be found for these reels such as garden hose winders, clothes line winders, boys hoops and dozens of other uses.

Another bulk purchase from War Assets enables us to sell these at 1/6 each. Cat. No. AX1082

### "ANDY" LIGHT

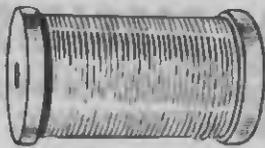


This Unit consists of an insulated socket and plug collar, 3in. flexible Swan Neck and Torch Bulb type Lampholder.

- Cat. No. AX1042 ... 2/11 each

# WIRE — CABLE — CLIPS

## INSTRUMENT WIRES



Only the Best British Wire  
Stocked.

### PRICES PER REEL.

Prices given below were correct at the time of going to press.

Further shipments covering various sizes are anticipated during the current season and all orders will be executed at the ruling price.

### ENAMELLED WIRE.

1lb. Reels.			1lb. Reels		
Cat. No.	Gauge	Price	Cat. No.	Gauge	Price
AW400	16	2/2	AW480	16	6/6
AW402	18	1/4	AW482	18	—
AW403	19	2/3	AW483	19	7/-
AW404	20	2/4	AW484	20	7/3
AW405	21	2/5	AW485	21	7/6
AW406	22	1/11	AW486	22	—
AW407	23	2/5	AW487	23	7/7
AW408	24	2/-	AW488	24	—
AW409	25	2/6	AW489	25	8/-
AW410	26	2/7	AW490	26	8/4
AW411	27	2/7	AW491	27	8/6
AW412	28	2/2	AW492	28	—
AW414	30	2/10	AW494	30	9/9
AW416	32	3/1	AW496	32	10/6
AW418	34	2/4	AW498	34	10/9
AW420	36	—	AW500	36	11/9
AW422	38	2/9	AW502	38	13/-
AW424	40	—	AW504	40	—

### D.C.C. WIRE

1lb. Reels.			1lb. Reels.		
Cat. No.	Gauge	Price	Cat. No.	Gauge	Price
AW432	16	2/4	AW510	16	6/9
AW434	18	2/5	AW512	18	8/9
AW436	20	2/8	AW514	20	—
AW438	22	3/1	AW516	22	11/6
AW440	24	3/6	AW518	24	—
AW442	26	4/4	AW520	26	—
AW444	28	4/8	AW522	28	—
AW446	30	—	AW524	30	—
AW448	32	—	AW526	32	—
AW450	34	—	AW528	34	—
AW452	36	—	AW530	36	—

## CONNECTING WIRE



### ENSIGN PUSH BACK WIRE

Best quality solid push back wire in assorted colours. 10ft. coils. Cat. No. AW157 ... **1/-** coil

Stranded push back wire in assorted colours. 10ft. coils. Cat. No. AW156 ... **1/-** coil

(Any length of push back wire can be supplied at the rate of 1/- for 10 feet.)

**Motor Car Cables.**  
See Page 31.

## Special Purchase

WIRES SUITABLE FOR SPEAKER EXTENSIONS, TALK BACK SYSTEMS, BELL INSTALLATIONS AND SIMILAR PURPOSES.

2.Wire Twin Twisted P.V.C. Flexible Stranded Copper Wire. ... **6** D. Yard  
Cat. No. AW87A

2 Wire Rubber-Covered Flexible Wire, covered overall with a waterproof braid. Cat. No. AW87 ... **6** D. Yard

## METALLIC SHIELDED WIRE

Metal shielded wire. Suitable for grid leads, input leads on Amplifiers, Microphones, Electric String Instruments, etc. Cat. No. AW15B ... **5 1/2** D. per ft.

## BULK PURCHASE BATTERY CABLE



5 wire Battery Cable, rubber insulated and in distinctive colours. Covered overall in cotton braid. Bulk buying again chops the price down to as low as the 1939 price.

Cat. No. AW101 ... **6** D. ft.

8 Wire Battery Cable. Cat. No. AW102 ... **6** D. ft.

## MICROPHONE CABLE

Insulated and shielded Microphone Cable for connecting Pickups, Microphones, Speakers, etc.

Cat. No. AW160—Single ... **7** D. ft.

Cat. No. AW162 Twin ... **1/-** ft.

**230 Volt Power Flex.**  
Refer Page 33.

## PLASTIC CONNECTING WIRE

10/.010 P.V.C. Insulated Flex, suitable for battery connections, indoor aertials and for any other purpose requiring a light, thin, stranded insulated flexible wire. Assorted Colours.

Cat. No. AW159—10ft. Coil ... **1/-** coil

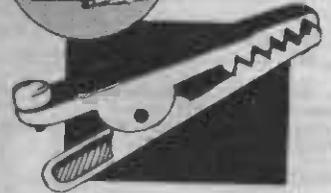
Any length can be supplied at a rate of 1/- for every 10ft.

## 36 GAUGE ENAMELLED WIRE—Large Reels

36 gauge Enamelled Copper Wire. We have several reels averaging between 2 and 3lb. each. There is not a great call for this gauge on big reels so we cut the price and make them a bargain offering.

Cat. No. AX1377 ... **6/6** lb.

## ALLIGATOR CLIPS



Here's a Handy Clip for coil and battery connections. The strong spring ensures a good connection.

Cat. No. AC19 ... **5** D. each

## INSULATED CROCODILE CLIPS



Insulated Crocodile Clip. Useful for servicemen, experimenters, etc., when dealing with high voltages. Wire passes through insulator to grip sleeve and screw. Nickel-plated. Red and black insulated.

Cat. No. AC18 ... **1/7** each

## UNIVERSAL BATTERY CLIPS



British made, these Clips have good strong springs that make a sure contact.

Cat. No. AC120—5 amp. (Pee Wee) 8d. each

Cat. No. AC121—10/25 amps. ... **1/-** each

Cat. No. AC122—50 amp. ... **1/1** each

## RUBBER COVERED GRID CLIPS

Screen Grid Clips to fit Octal based, glass or metal Valves. Rubber protecting cap moulded over clip. 6in. length of pushback wire attached.—Cat. No. AX1043 ... **3** D. each

## CLIPS, SCREEN GRID

For attaching leads to the top of screen grid valves, etc.

Cat. No. AC23 ... **1** D. each

Cat. No. AC24—

Screen Grid Caps for Metal valves ... **1** D.



**PLUGS**

**JACKS**

**PANELS**

**SURPLUS WAR STOCKS**

**Jacks**



Single Key Jacks (S.C.), Single-pole double-contact insulated jack mounted on 2 1/2 in. x 3 in. bakelite panel.

Cat. No. AX1038—**1/-** each

Double Phone Jacks (D.C.) mounted on 2 1/2 in. x 3 in. panel.

Cat. No. AX1039—**1/6** each

Line-Microphone Jacks. A double outlet 3-contact insulated Jack. **2/-** each  
Cat. No. AX1040

**JACKS**



Belgin S.C. Jacks—Cat. No. AJ22 **1/8** each



Belgin Single Closed Circuit Jacks.

Cat. No. AJ23—**2/-** each

**TWIN TIP JACK UNITS**

A strong spring firmly makes contact to any tip inserted within its grip. Mounted on bakelite strip. Metal parts are nickelplated.



Jacks fit any standard 'phone tip.  
Cat. No. AJ8 .. **7D.** each

**SPEAKER CORD TIPS**



Nickel-plated tips for speaker and 'phone cords. Cat. No. AT28 .. **2D.** each

**DE-LUXE CORD TIPS**

A nickel plated, stepped phono or speaker tip. Finished article.  
Cat. No. AT26 .. **6D.** each

**SHIELDED BRAID**

Metal Screening Tubing, for slipping over insulated wires, etc., for shielding. In many modern A.C. circuits it is essential to screen grid and plate leads to prevent pick-up on these leads. Flexible.

Cat. No. AW163—1 in. **7D.** ft.

Cat. No. AW164—3/16 in. **4D.** ft.



**SPEAKER PLUGS**

For use with Speakers, Battery Cables, etc. Metal top clips on to a bakelite base. Deep metal casing enables plug to be removed easily from socket and also allows good space for internal wiring.



Cat. No. AP240—4-pin .. **1/-** each  
Cat. No. AP242—5-pin .. **1/-** each  
Cat. No. AP248—8-pin .. **1/-** each

Black Bakelite Amphenol Type.  
Cat. No. AP244—6-pin .. **1/-** each  
Cat. No. AP246—7-pin .. **10d.** each

**BIG REDUCTION! PHONE PLUGS**



A Jack Plug with strong brass contacts. Heavy black bakelite moulding.  
Cat. No. AP269 WERE 4/6 NOW **2/-**

**DIAL LIGHT HOLDERS**



With clip style bracket, made to clip over condenser, etc. To take screw globe.  
Cat. No. AD504—**1/-** each

As above, but without clip—AD506 **9D.** each

DIAL LAMP HOLDERS, similar to above, but to take miniature bayonet type Dial Lamps. With clip.  
Cat. No. AD505 .. **1/-** each

**CORD GRIP DIAL LAMP HOLDERS**

Take the standard screw base panel lamp. Cord mounting with no fastening bracket. Apart from their use as dial lampholders they can also be used with decoration strings, etc. **9D.** each  
Cat. No. AD509 .. **9D.** each

**MINIATURE SCREW HOLDERS**

Bakelite Lampholders, miniature screw thread which takes torch and similar lamps.

Cat. No. AS223—**11D.** each



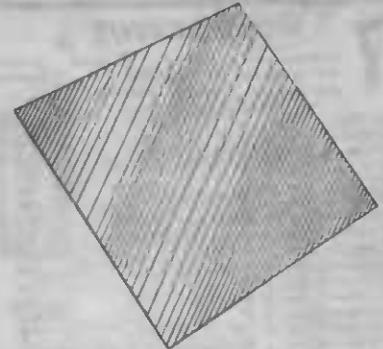
**Anniversary Special! BAKELITE PANELLING**

A beautifully finished Radio Panelling. Linen bonded, with a very shiny surface. Coloured brown. You can find many uses for panelling such as this at a price like this.

Cat. No. AP526—6 in. x 6 in. x 1/16 in. .. **9D.** sheet  
Cat. No. AP525—12 in. x 12 in. x 1/16 in. .. **2/-** sheet  
Cat. No. AP524—12 in. x 24 in. x 1/16 in. .. **4/-** sheet  
Cat. No. AP523—24 in. x 24 in. x 1/16 in. .. **8/-** sheet

**RADIO PANELS**

**"PANICA" RADIO PANELS**



Panica Radio Panelling is practically indestructible. It has high insulating properties, is non-hydroscopic, and has great tensile strength. Panica is easily worked and can be cut, sawn and drilled, has a high polished black mirror finish on both sides, suitable for panels of Radio Sets, test instruments and other apparatus. The sizes given below are approximate, but each panel supplied will cut to size stated.

Cat. No. AP510—5 1/2 in. x 6 1/2 in. x 1/16 in. **2/-**  
Cat. No. AP511—8 1/2 in. x 6 1/2 in. x 1/16 in. **3/-**  
Cat. No. AP512—11 1/2 in. x 6 1/2 in. x 1/16 in. **4/-**  
Cat. No. AP513—5 1/2 in. x 6 in. x 1/16 in. **4/-**  
Cat. No. AP514—8 1/2 in. x 6 1/2 in. x 1/16 in. **6/-**  
Cat. No. AP515—11 1/2 in. x 6 1/2 in. x 1/16 in. **8/-**  
Cat. No. AP516—5 1/2 in. x 6 1/2 in. x 3/16 in. **6/-**  
Cat. No. AP517—8 1/2 in. x 6 1/2 in. x 3/16 in. **9/-**  
Cat. No. AP518—11 1/2 in. x 6 1/2 in. x 3/16 in. **12/-**

**BAKELITE SHEETS**

Thin Bakelite Sheets for all insulating purposes.  
Cat. No. AP532—12 in x 12 in. x 1/32 in. **2/10**  
Cat. No. AP533—6 in. x 6 in. x 1/32 in. **10d.**  
Cat. No. AP535—6 in. x 3 1/2 in. x 1/32 in. **6d.**

**INSULATING MATERIAL**

**Ebonite Rod**

Cat. No.	Diameter	Ebonite Rod	per ft.
AX1438	2 1/2 in.		15/6
AX1437	2 1/4 in.		14/-
AX1432	1 1/2 in.		12/6
AX1431	1 1/4 in.		10/6
AX1436	1 in.		3/8
AX1435	3/4 in.		3/-
AX1434	3/8 in.		2/8
AS148	3/8 in.		2/3
AX1433	3/8 in.		1/9
AS149	— 1 in.		1/3
AS151	Rod, 6 in. x 1 in.		8d.
AS153	Rod, 6 in. x 1 in.		1/3

**Ebonite Tubing**

Cat. No.	Outside Diameter (in.)	Hole (in.)	Price (ft.)
AX1443	1	1/8	3/9
AX1444	1	1/4	2/4
AX1445	1	1/2	1/9
AX1446	1	3/4	1/3
AX1447	3/16	1/16	11d.
AX1448	3/16	1/32	11d.
AX1449	.090	.037	4d.
AS155	Tube, 6 in. x 1 in.		1/2
AS157	Tube, 6 in. x 1 in.		1/-

# RADIO HARDWARE

## ANOTHER BIG SPECIAL!

**1/2 in. Wood Screws**  
 1/2 in. x 8 gauge Wood Screws. Big purchase from War Surplus Stock enables us to sell at this unbeatable price.  
 Cat. No. AT556 .. **1/6 gross**



## WOOD SCREWS

Counter-sunk heads. Gimlet points. All sizes can be supplied. The following are in most popular demand:  
 Bright Mild Steel.

Cat. No.	Size	Dozen
AT550	1/2 in. x 1	3d.
AT552	1/2 in. x 2	3d.
AT554	1/2 in. x 3	3d.
AT558	1/2 in. x 4	3d.
AT560	1/2 in. x 6	4d.
AT562	1/2 in. x 8	4d.
AT564	1/2 in. x 10	4d.
AT566	1/2 in. x 12	5d.
AT568	1 in. x 4	5d.
AT570	1 in. x 6	5d.
AT572	1 in. x 8	6d.
AT574	1 in. x 10	6d.
AT576	1 in. x 12	7d.
AT578	1 1/2 in. x 6	7d.
AT580	1 1/2 in. x 9	8d.

## HANDYMANS



ASSORTED

## WOOD SCREWS

An assortment of 50 wood screws, various sizes. All with countersunk heads. All popular types. Don't be "caught out"! Keep a jar of these screws always on your work bench.  
 Cat. No. AT590 .. **1/9 jar**

## SELF-TAPPING SCREWS

For mounting components on radio chassis, etc. 1/2 in. long. No. 6 Gauge.  
 Cat. No. AT400 **5 D. per dozen**  
**4/9 per gross**



## SCREWS AND NUTS

Best English quality. All Brass.

Cat. No.	Size	Dozen
AT428	1/2 in. x 6BA Screws and Nuts	9d.
AT430	1 in. x 6BA Ditto	10 1/2 d.
AT424	1/2 in. x 4BA Ditto	1/1
AT426	1 in. x 4BA Ditto	1/1
AT421	1/2 in. x 2BA Ditto	1/7
AT423	1 in. x 2BA Ditto	1/6
AT433	6BA Brass Hex. Nuts	5 1/2 d.
AT432	4BA Ditto	6d.
AT431	2BA Ditto	8 1/2 d.
AT436	6BA Washers	4d.
AT435	4BA Washers	4 1/2 d.
AT434	2BA Washers	6d.

## NUTS AND BOLTS

### General Assortment

Here's a list of a few types of which limited stocks only are available.

Cat. No.	Size	dozen
AX1162	6/32 in. Cadmium plated bolts. Mixture of lengths varying between 1/2 in. and 1 in.	5d.
AX1164	3/16 in. Cadmium plated bolts. Mixture of lengths varying between 1/2 in. and 1 in.	5d.
AX1169	10/32 in. Cadmium plated Hex. Nuts	3d.
AX1171	1/2 in. Whitworth Hex. Nuts both brass and Cadmium plated	3d.
AT451	3/16 in. Brass Nuts	4d.

## RODS, THREADED—BRASS

Threaded Rod is useful for many odd jobs. 6 in. lengths, each with four nuts.  
 Cat. No. AS125—5/32 **8 D. each**

## DOME NUTS

Give that finished look to a job.  
 Cat. No. AT419—4BA Dome nuts **1 D. each**  
 Cat. No. AT418—2BA Dome nuts **2 D. each**



## WASHERS

Cat. No.	Size	dozen
AX1119	1/2 in. hole; 1/2 in. O.D. Cadmium plated	4d.
AX1120	3/16 in. hole; 5/16 in. O.D. Cadmium plated	4d.
AX1121	1/2 in. hole; 1/2 in. O.D. Steel	4d.
AX1227	3/16 in. hole; 3/8 in. O.D. Cadmium plated	4d.
AX1228	Locking washers, 1/2 in. hole; Cadmium plated	3d.

## FLAT GLASS PLATES

Nickel plated 1/2 in. Glass Plates. Designed for attaching to the back of pictures, mirrors, etc., but also serving dozens of uses to the radio man. Bracket may be bent in centre giving a heavy coil mounting base. Length 1 1/2 in. Width 1 in.  
 Cat. No. AT30 .. **3 D. each**



## RIGHT ANGLE BRACKETS

Height 1 in., turned over base 1/2 in. Width 1/2 in. Copper plated. Two holes drilled as illustrated. Real Value.  
 Cat. No. AT33— **1 D. each**



## FIBRE INSULATING WASHERS

Insulating Washers for insulating potentiometers and other components from metal panels, etc. 1/2 in. diam. x 1/2 in. diam. hole x 1-16 in. thick.  
 Cat. No. AS302 **9 D. dozen**



Ditto, 1/2 in. x 1/2 in. x 1/16 in.  
 Cat. No. AS305—Fibre **9 D. dozen**

Cat. No. AS308—1/2 in. diam. x 1/2 in. diam. hole x 1/16 in. thick. **9 D. dozen**

## THICK RUBBER WASHERS

Dimensions:

Diameter 1 1/2 in.; diameter of hole, 1 in., thickness 1/2 in.  
 Cat. No. AS250— **1 D. each; 9 D. dozen**



## PORCELAIN INSULATING WASHERS

High Insulating Properties. Size: Overall Diam. 1 1/2 in. Diam. of hole 1 in. Thickness, 3-32 in.  
 Cat. No. AS320— **6 D. dozen**



## LEATHER WASHERS

Insulating leatheroid washers. Size: Outside diam. 9/16 in.; hole 3/16 in.; 1/16 in. thick.  
 Cat. No. AS309 .. **6 D. dozen**

## RUBBER GROMMETS

Made of good quality black vulcanised rubber. For fitting in holes in chassis, etc., to insulate and protect cables. To fit 3/8 in. holes. Inside diameter 1/2 in.  
 Cat. No. AS244 .. **2 D. each**



Fit 3-16 in. diam. hole. Inside diam. 1/2 in.  
 Cat. No. AS243 .. **2 D. each**

## BULK PURCHASE!

### RUBBER GROMMETS

Fit 1/2 in. diam. hole. Inside diam. 3/8 in. Bulk buying enables us to give you a great reduction. Normally 3d. each.

Cat. No. AS245—  
**NOW! 2 D. each or 1/6 dozen**

## SPAGHETTI INSULATING TUBING

Cat. No.	Size	length	Each
AS1	1 mil.	1 yd.	4 1/2 d.
AS2	2 mil.	1 yd.	5d.
AS3	3 mil.	1 yd.	7d.
AS4	4 mil.	1 yd.	10d.
AS6	5 mil.	1 yd.	10d.
AS5	6 mil.	1 yd.	1/-
AS7	8 mil.	1 yd.	1/-
AS8	10 mil.	1 yd.	1/-

## "GOAT" VALVE SHIELDS

Form fitting Valve Shields, complete with split ring and base mounting clips.

Cat. No. AS20— **1/3 complete**

Metal Shields for G.T. Type Valves.  
 Cat. No. AS21 **9 D. each**



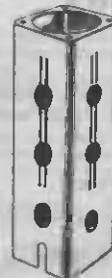
## VALVE SHIELDS

Cadmium plated Valve Shields for glass Octal based Tubes, 4 1/2 in. x 1 1/2 in. Complete with flush mounting base.

Cat. No. AX1052— **1/2 complete**

Similar Shield to above but made from heavy metal and reinforced.

Cat. No. AX1054— **1/3 complete**



## WING SCREWS AND NUTS



Wing screws 1/2 in. length. 1/2 in. Whitworth thread.

Cat. No. AX1127— **1 D. each**

Wing nuts 1/2 in. Whitworth thread.  
 Cat. No. AX1222— **1 D. each**



# LUGS

# CONNECTORS

# TERMINALS

## SOLDERING LUGS.

4 B.A. Double Ended Soldering Lugs (tinned).

Cat. No. AT7 **3** D. doz.



## PEAR-SHAPED LUGS

Small, 1/2 in. long, 5/32 in. hole.

Cat. No. AT2 **3** D. doz.

Large, 1/2 in. long, 5/32 in. hole.

Cat. No. AT3 **3** D. doz.



## DROP-SHAPED LUGS

1/2 in. long, 7/32 in. hole.

Cat. No. AT4 **3** D. doz.



Large N.P. Terminal Spade Lugs.

Cat. No. AT5—

**2** D. each



Small N.P. Terminal Spade Lugs.

Cat. No. AT17—

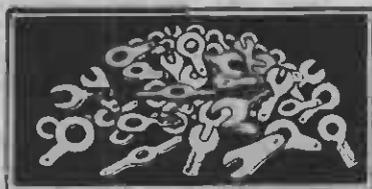
**1** D. each, **11** D. doz.

Ring Type Small N.P. Lugs. Cat. No. AT18—

**1** D. each, **9** D. doz.



## SOLDERING LUG ASSORTMENT



A miscellaneous selection of 100 Assorted Solder Lugs.

Cat. No. AT1 **1/9** Packet

## SPADE ANCHOR LUGS



Steel cadmium plated for mounting coils, condensers, shield cans, etc., 6/32 thread. Hole in flat portion fits 9/64 in. diameter eyelets and 6/32 screws.

Cat. No. AT40 **2** D. each

## BANANA PLUGS AND SOCKETS



Banana Plugs and Sockets have all sorts of uses, such as for aerial and earth connections, coil tapping, battery connections, etc. Red and Black. Insulated.

Cat. No. AT23—Banana Plugs only **6** D. each

Cat. No. AT24—Sockets for above **6** D. each

## INSULATED SPADE TERMINALS



Insulated Spade Terminals are useful for easy connection of wires under terminals, etc. Colours: Red and Black. Cat. No. AT15 **4** D. each



## R.C.S. TERMINAL BOARDS

### BAKELITE TERMINAL BOARDS.

for neat assembling of Resistors and Condensers. Lugs are eye-letted on to the bakelite. Mounting holes provided.

23 LUG STRIP.

Neatness is a big factor in any job!

Cat. No. AT145 **4/.**

## AMPHENOL MICROPHONE CONNECTORS



Shielded Connectors for Microphones, Pick-ups, Speakers, etc., etc.

Cat. No.		
AC5	—Male 1-wire Connector	B 4—
AC6	—Female 1-wire Connector	A 4/—
AC9	—Female 2-wire Connector	A 5/—
AC8	—Male 2-wire Connector	B 5/—
AC12	—Female 3-wire Connector	A 4/9
AC11	—Male 3-wire Connector	B 4/9
AC16	—Female 4-wire Connector	A 5—
AC15	—Male 4-wire Connector	B 6/—
AC17	—Male 1-wire-B Chassis mounting	2/6

## CONDENSER COUPLINGS

1/2 in. Bakelite and Metal Flexible Condenser Couplings for ganging two variable condensers. Flexible brass connector on bakelite mount.

Cat. No. AC901—**2/3** each



## SHAFT CONNECTORS

Solid Brass Shaft Connector, with two set screws each end for joining 2 1/2 in. shafts.

Cat. No. AC902 **8** D. each



№250

THE BEST COSTS LESS AT THE LAMPHOUSE!

## MICROPHONE CONNECTORS

AC5—Female 1-wire Chassis mounting Socket C 2—

AC7—Female 2-wire Chassis Mounting Socket C 4—

AC10—Female 3-wire Chassis mounting Socket C 3—



## MICROPHONE CONNECTORS



Cat. No. AC2—Chassis Mounting Socket 2—  
Cat. No. AC3—Cord Connector Plug 4—  
Cat. No. AC1—Cord Connector Socket 4—

## CONNECTORS—SINGLE



Small Brass Connector Size 1/2 in. x 1/4 in.

Cat. No. AC194—**3** D. each

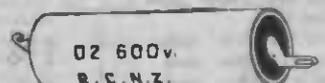
## CHASSIS PLUGS AND SOCKETS



Miniature 3-pin Socket mounts on to chassis. Extremely useful unit for connecting external units such as microphones, pickups, etc.

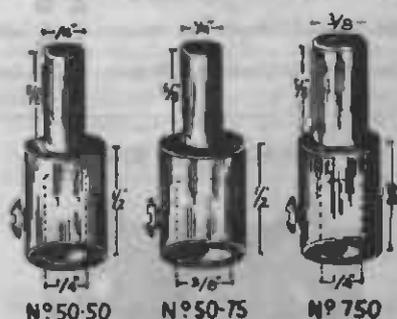
Cat. No. AP290 **1/3** pair

## TUBULAR CONDENSERS



.02 mfd. 400 volt Tubular Condensers. FORTY-NINER BARGAIN Cat. No. AX1027 **6** D. ea. or **5/.** doz.

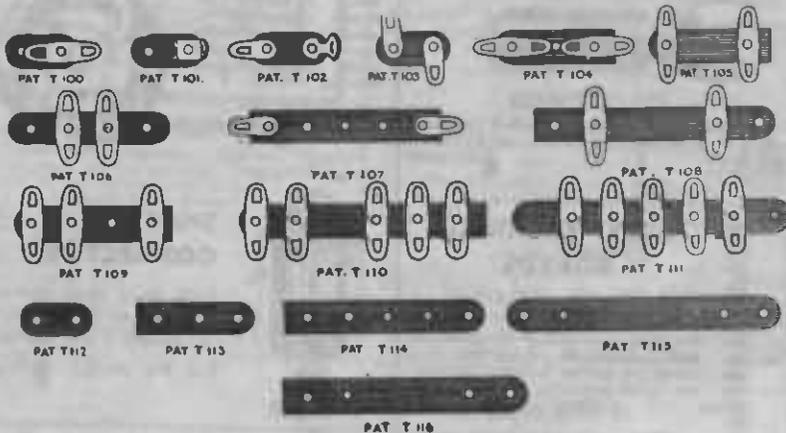
## SHAFT ADAPTORS



For Condenser or Volume control shafts, etc.  
1/2 in. to 1/2 in. shaft extender (50-50)—  
Cat. No. AS111 1/6 each  
1/2 in. to 1/2 in. shaft reducers (50-75)—  
Cat. No. AS135 1/6 each  
1/2 in. to 1/2 in. shaft reducers (750)—  
Cat. No. AS133 1/6 each  
1/2 in. Diam. 1 bonite Rod for insulated condenser shaft; 6 in. lengths—Cat. No. AS151 8d each

# GREAT VALUE!

## TERMINAL STRIPS FOR EVERY PURPOSE!



A complete range constituting 16 different patterns.

BAKELITE STRIP. 1/2 in. wide.

Cat. No.			
AT100	1 lug Straight	1d.	each
AT101	1 lug R/angle	1d.	"
AT102	2 lug 1 R/angle 1 Straight	2d.	"
AT103	2 lug R/angles	2d.	"
AT104	2 lug Straight	2d.	"
AT105	2 lug R/angles	2d.	"
AT106	2 lug R/angles	2d.	"
AT107	2 lug Straight	2d.	"
AT108	2 lug R/angles	2d.	"

Cat. No.			
AT109	3 lug R/angles	3d.	each
AT110	5 lug R/angles	6d.	"
AT111	5 lug R/angles	6d.	"
AT112	2 Hole Blanks		
AT113	"		
AT114	"		
AT115	"		
AT116	"		

6d. doz.

### ASSORTED PACKET Another Anniversary Bargain!

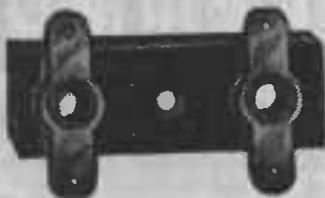
We offer a packet of 40 assorted strips of all types listed above at the Special Price of **5/-** pkt.  
Cat. No. AT120

### TERMINAL STRIPS

Bakelite Terminal Strips, fitted with double ended lugs. Ideal for the neat assembling of small components, such as resistors and condensers. Lugs eyeleted on to strip.

Cat. No. AT135	24 lug Strip	2/6	each
Cat. No. AT136	12 lug Strip	1/5	each
Cat. No. AT137	6 lug Strip	9D.	each

### ANCHORING STRIPS



Used for supporting condensers, resistors, etc., above earth or chassis. Fixed by bolt through centre hole.  
Cat. No. AT134 ... **2 1/2** D. each

### TERMINAL STRIPS



Terminal Screws mounted on insulated strips.  
Cat. No. AT127 ... **7D.** each

### TERMINAL PANELS



Terminal Panel 2 1/2 in. x 1 1/2 in., fitted with 2 N.P. heavy type screw-down terminals. Ideal for Aerial and Earth, Pick-up Connections or similar purposes. We bought them cheaply—you take advantage of it.  
Cat. No. AX271 ... **6D.** each

### BINDING POSTS

Nickel-plated binding posts complete with nut and washer. 4BA stud.  
Cat. No. AT50 ... **6D.** each

### FAHNSTOCK CLIPS



Spring Brass.  
5/16 in. x 1 in.  
Cat. No. AT41 **2D.** ea.

### Amberlite Screwdrivers

Pocket sizes in Amberlite Screwdrivers all with pocket clips.

Cat. No.		ALL
AU316	1 in. stem	<b>1/4</b>
AU317	2 in. stem	
AU318	3 in. stem	

### N.P. TERMINALS



4 B.A. nickel-plated terminals with hole. Complete with nut. Cat. No. AT55 **5D.** each

### SMALL INSULATED TERMINALS, 4BA.



The illustration is approximately full size. These terminals fill the want of many who seek a small, inexpensive type. The heads are removable and have inserts. In two colours, red and black.

Cat. No. AT70 ... **11D.** each

### INSULATED BAKELITE TERMINALS



Insulated type supplied in either red or black. Spring grip makes easy connection or disconnection. Designed so that when fitted they are insulated from metal chassis. Finished job.  
Cat. No. AT65 ... **8D.** each

### BRASS TERMINALS



Brass Binding Posts complete with three nuts and two washers. Length of threaded stem 2 in. Thread 4BA. Excellent heavy Duty Terminal.  
Cat. No. AT60 ... BARGAIN **3D.** each

### ALL-METAL TERMINALS

Non-insulated, all-metal oxidised Radio Terminals. Threaded headpiece and washer screwing down on to base washer makes for sure connection. 4BA x 1/2 in. stem allows ample room for attaching insulated washers if terminal is required to be insulated.  
Cat. No. AX1051 **6D.** each



### WAR SURPLUS SPECIAL! Heavy Duty Insulated Terminals

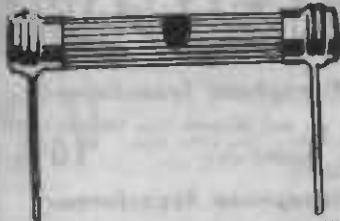
These Terminals were used for Aerial connections on Transceivers and are an extremely robust and well-insulated job. Overall dimensions of terminal assembly 2 1/2 in. high, 3/4 in. diameter bakelite top. Heavy rubber insulating washers over steel stem.



Cat. No. AX1050—**1/3**  
Similar to above but small size (1 1/2 in. x 3/4 in.) and not insulated.  
Cat. No. AX1050A **1/-**

# RESISTORS, FIXED AND VARIABLE

## COLOUR CODED RESISTORS



Conservatively rated at 1 watt. They will stand up to 50 per cent. overload without injury. Colour coded to the R.M.A. standard. They are accurate to within 5 per cent. of stated values, which remain constant whether in use or in stock. Perfectly noiseless and completely free from hand capacity effects. All one watt size.

### 1-WATT RESISTORS

Cat. No.	Ohms.
AR210	100
AR211	200
AR212	250
AR213	300
AR214	400
AR215	500
AR216	750
AR182	1,000
AR183	2,000
AR184	3,000
AR185	4,000
AR186	5,000
AR187	7,500
AR188	10,000
AR189	15,000
AR190	20,000
AR191	25,000
AR192	30,000
AR193	50,000
AR194	75,000
AR195	100,000
AR196	150,000
AR197	200,000
AR198	250,000
AR199	300,000
AR200	500,000
AR201	1 megohm
AR202	2 megohm
AR203	3 megohm
AR204	4 megohm
AR205	5 megohm
AR206	6 megohm
AR207	7 megohm
AR208	8 megohm
AR209	10 megohm

ALL  
9D. each.

## R.C.S. WIREWOUND RESISTORS



AR3	100-ohm, 100 MA
AR7	200 " 100 "
AR8	250 " 100 "
AR9	300 " 100 "
AR11	400 " 100 "
AR13	450 " 100 "
AR14	500 " 100 "
AR15	750 " 100 "
AR16	1000 " 100 "
AR18	1500 " 100 "
AR19	2000 " 50 "
AR23	5000 " 50 "

each  
1/2  
1/3

## RESISTANCE WIRE

100 yard Reels of Nichrome Resistance Wire for winding your own Resistors, etc.  
Cat. No. AW380—37 S.W.G. (45 ohms per yard) .. 1/6  
Cat. No. AW383—40 S.W.G. (200 ohms per yard) .. 1/6  
Cat. No. AW377—33 S.W.G. (19.5 ohm. per yd.) 100ft. reel .. 1/6

## GREAT BARGAIN OFFER!

### 24 ASSORTED RESISTORS

Another great 1949 bargain. An assortment of two dozen 1/2 watt resistors valued at three times the price. Offered in a parcel lot for only 5/-. Values include: 200, 600, 2000, 10,000, and 150,000 ohms. Should we run out of any of the above we will substitute with an equally popular size.

WHAT GREATER OFFER?  
Cat. No. AR308 .. 5/- LOT

### 1/2-WATT RESISTORS

AR310	50
AR319	750
AR325	1,000
AR335	5,000
AR339	10,000
AR341	15,000
AR343	20,000
AR345	25,000
AR349	50,000
AR351	100,000
AR359	200,000
AR361	250,000
AR363	300,000
AR365	500,000
AR367	1 megohm
AR369	2 megohm
AR371	3 megohm
AR381	5 megohm
AR389	10 megohm

8D. each

### 2-WATT RESISTORS

Cat. No.	20 ohm wire wound (centre tap)	3/6
AR100	30 ohm wire wound (centre tap)	3/6
AR101	50 ohm wire wound (centre tap)	3/6
AR102	100 ohm wire wound (centre tap)	1/2
AR110	20 ohm wire wound	1/2
AR114	200 ohm wire wound	1/6
AR118	5,000 ohm wire wound	1/6
AR125	10,000 ohm wire wound	9d.
AR130	20 ohm carbon	9d.
AR135	5,000 ohm carbon	9d.

### 5-WATT RESISTORS

Cat. No.	20 ohm wire wound	2/-
AR250	1500 ohm wire wound	2/3
AR255	5000 ohm wire wound	2/3

### 10-WATT RESISTORS

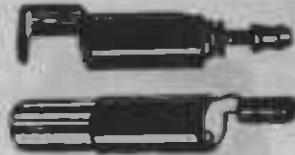
Cat. No.	250 ohm wire wound	3/4
AR266	300 ohm wire wound	3/4
AR267	400 ohm wire wound	3/4
AR268	500 ohm wire wound	3/4
AR269	750 ohm wire wound	3/4
AR270	5,000 ohm 8/10 watts wire wound	3/6
AR281	10,000 ohm wire wound	3/6

## Another Resistor Special!

Because we are overstocked with the following 1/2 watt resistors we have chopped the price almost in half to reduce our stock. Get your order away now!

Cat. No.	ohms watts	ALL
AR312	200 1/2	5D. each or 4/6 doz.
AR317	600 1/2	
AR327	2,000 1/2	
AR320	3,000 1/2	
AR355	150,000 1/2	

## MOTOR RADIO SUPPRESSORS



Spark Plug Type (top illustration). A sturdy unit which meets the most exacting demands for spark plug suppression.

Cat. No. AR229 .. 1/8  
Distributor Type—Cat. No. AR228 .. 1/11

The above suppressors will not affect power or petrol consumption of your engine.

## R.C.S. VOLTAGE DIVIDERS



These are wound on tubing 1/2 in. in diameter, and the highest grade nichrome wire is used in their winding. The current capacity is 50 M/A. The contact clips are of a special flat type, which, while making perfect contact, do not damage the wire. The total length of the Divider is 4 1/2 in., and has two clips.

Cat. No. AR82—15,000 ohms .. 4/9  
Cat. No. AR83—25,000 ohms .. 4/9

## R.C.S. RHEOSTATS



R.C.S. Rheostats, made from moulded bakelite with brass spindles, 1/2 in. diam. shaft. Nickel-silver contacting ring ensures smooth action.

Cat. No. AR507—6 ohm .25 amp. 4/9 ea.  
Cat. No. AR508—10 ohm .25 amp. 4/9 ea.  
Cat. No. AR509—20 ohm .25 amp. 4/9 ea.  
Cat. No. AR510—30 ohm .25 amp. 4/9 ea.

## R.C.S. WIRE-WOUND POTENTIOMETERS

Made from moulded bakelite with brass-spindles. Nickel-silver contacting ring ensures smooth action, 1/2 in. diameter shaft.

Cat. No. AP29—200 ohm, 50 M.A. .. 5/6  
Cat. No. AP30—400 ohm, 50 M.A. .. 6/9  
Cat. No. AP31—1,000 ohm, 35 M.A. .. 6/9  
Cat. No. AP32—2,500 ohm, 30 M.A. .. 6/9  
Cat. No. AP33—5,000 ohm, 30 M.A. .. 6/9  
Cat. No. AP34—10,000 ohm .. 6/9  
Cat. No. AP37—25,000 ohm .. 8/11  
Cat. No. AP40—50,000 ohm .. 10/2

# "ENSIGN" HIGH QUALITY TRANSFORMERS

## POWER TRANSFORMERS



WELL MADE, FIRST GRADE TRANSFORMERS. 230 VOLT PRIMARY WINDINGS. FLAT MOUNTING.

- Secondary Windings:*  
 280/280 volts, 60 M.A.; 6.3 volt, 2 amp; 6.3 volt, 2 amp.—Cat. No. AT649 **31/6**  
 350 350 volts, 60 M.A.; 5 volt, 2 amp; 6.3 volt, 2 amp.—Cat. No. AT650 **34/9**  
 385 385 volts, 80 M.A.; 5 volt, 2 amp; 6.3 volt, 3 amp.—Cat. No. AT651 **38/-**  
 485 385 volts, 100 M.A.; 5 volt, 2 amp; 6.3 volt, 4 amp.—Cat. No. AT652 **55/-**  
 400 400 volts, 150 M.A.; 5 volt, 3 amp; 6.3 volt, 4 amp.—Cat. No. AT654 **72/6**  
 350 350 volt, 60 M.A.; 5 volt, 2 amp; 2.5 volt, 5 amp.—Cat. No. AT656 **38/-**  
 385 385 volt, 80 M.A.; 5 volt, 2 amp; 2.5 volt, 8 amp.—Cat. No. AT657 **43/6**  
 385/385 volt, 100 M.A.; 5 volt, 2 amp; 2.5 volt, 10 amp.—Cat. No. AT658 **55/-**

### UPRIGHT MOUNTING.

- Similar Transformers to the above but constructed for vertical mounting.  
 60 M.A., 6.3 volts. Cat. No. AT650A **34/9**  
 80 M.A., 6.3 volts. Cat. No. AT651A **38/-**  
 100 M.A., 6.3 volts. Cat. No. AT652A **55/-**  
 125 M.A., 6.3 volts. Cat. No. AT653A **57/6**

### Special 150 M.A. Transformers

6.3 volt, 150 M.A. Upright Mounting Power Transformers. Suitable for use with receivers and amplifiers requiring 2 separate 6.3 v. windings. 5 volt, 3 amp. Rectifier winding. Mounted in crackle finished case. Wire lead connections. Cat. No. AT655 **£3/19/6**

### ELECTRIC HIKERS' POWER TRANSFORMER

Power Transformers wound especially for use with the "Electric Hikers" and "Eaglet Two" Kits. Cat. No. AT695 **40/-** each

### FILAMENT TRANSFORMERS

Cat. No. AT632—6.3 volts 2 amp. **25/-**

### "ENSIGN" ELECTRIC SHAVER TRANSFORMERS

Stepdown from 230 to 110 volts at 15 watts. Specially constructed for use with 110 volt Electric Shavers. Dimensions: Length 2 1/2 in., Height, 2 in., weight 1 lb. 3 oz. Cat. No. AT621 **24/6** each

## 230/110v. TRANSFORMERS



Stepdown from 230 to 110 volts. Rating 60-80 watts. Cat. No. AT622 **37/6**  
 Larger or special stepdown transformers can be made to order.

## 240 6 VOLT TRANSFORMERS

This reducer supplies 6 volts 5 amps. from the 240-volt light or power. A 2-pin plug outlet is provided. Cat. No. AT623 **39/6**

## TRANSFORMERS FOR VALVE TESTERS

In response to many enquiries we have now available a special transformer for valve testers, experimenters, etc. It has a 230-volt primary and secondary windings of 2 amps., as follows—1.5 volts, 2 volts, 2.5 volts, 4 volts, 5 volts, 6.3 volts, 7.5 volts, 12.5 volts, 25 volts and 30 volts. Cat. No. AT616 **47/6**

## "ENSIGN" UNIVERSAL OUTPUT TRANSFORMER

These Transformers have been designed to meet the needs of engineers, experimenters, and servicemen, for a single unit so constructed as to provide the correct impedance matching between various types of Audio Output Tubes in a single Push-Pull, Parallel, or Class B Circuit, and any Dynamic Speaker. Full instructions are given with each Transformer. Rating 6 watts. Cat. No. AT602 **17/6**

Cat. No. AT601—10 Watt Size **25/-**

## "MINOR" UNIVERSAL OUTPUT TRANSFORMERS

Similar Transformer to above but rated at 3 watts. Replacement Transformer for 3 in. and 5 in. Speakers, as used in small receivers, etc. Dimensions: Length, 1 1/2 in.; height, 1 1/2 in. Small size makes this ideal where cabinet space is limited. Instructions with each Transformer.—Cat. No. AT603 **14/-**

## 20 WATT UNIVERSAL OUTPUT TRANSFORMERS

Designed specially for Power Amplifier Systems, etc.: 12 in. Speakers. PRIMARY tapped at 5000, 6000, 8000, 10,000 ohms; SECONDARY to suit 1.5, 3, 8, 15, or 500 ohms. Good Quality Transformer at low cost. Cat. No. A1604 **57/6**

### IMPORTANT!

Owing to existing conditions prices in this book are given as a guide only. All orders will be executed at the rate ruling at the date of supply.

## WAR BARGAINS!

### Microphone Transformers

For use with Dynamic type Microphones. Size 1 1/2 in. x 1 1/2 in. x 2 in. high. Cat. No. AX1013 **10/6**

### Headphone Transformers

For matching Dynamic Headphones. Size 1 1/2 in. x 1 1/2 in. x 2 in. high. Cat. No. AX1012 **10/6**

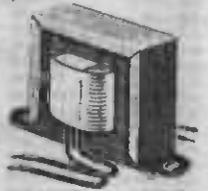
### ZC1 Vibrator Transformers

Power Transformers from ZC1 Transformers. Input 12 volts. Two Output windings, 180/0, 180 volts and 300/0/300 volts. "Hams" have many uses for these useful transformers. **5/11** each Cat. No. AX1088

## "ENSIGN" SPEAKER TRANSFORMERS

Made from the best alloy steel and wire and under strict supervision these transformers are ideal for replacement, etc.

- Cat. No. AT714—Single Pentode
- Cat. No. AT715—Push Pull Pentode
- Cat. No. AT716—Single Triode
- Cat. No. AT717—Push Pull Triode



**15/6** each

## "ENSIGN" SPEAKER TRANSFORMER COILS

Will fit practically all types of Speaker Transformers, thus doing away with the necessity of replacing the complete transformer. Cat. No. AT730—Single Pentode **6/10**

Cat. No. AT731—Single Triode **7/6**

Cat. No. AT732—P.P. Pentode **7/6**

Cat. No. AT733—P.P. Triode **7/6**

## "ENSIGN" AUDIO TRANSFORMER

Vacuum Sealed Interstage Audio Transformer. Wound on first grade core using best quality copper wire flexible leads to ensure higher efficiency. Ratio 3 to 1. Size, 2 1/2 in. high, 3 in. wide and 2 in. deep.



Cat. No. AT610—**17/-** each

## "ENSIGN" VIBRATOR POWER TRANSFORMERS

Manufactured from the best grade material. 150 volt, 25 M.A.—6 volt. Cat. No. AT625 **17/6**



THE "LAMPHOUSE" carries a full range of all types of valves. Numerous brands are usually available but owing to Import Restrictions we cannot guarantee being able to supply a specific brand. Always state your first and second preference when ordering. Do not hesitate to write us for any special types not listed—we will probably be able to quote.

Prices Subject to Alteration.

Type.	Price.	Type.	Price.	Type.	Price.	Type.	Price.	Type.	Price.
01A	9/6	2A7	11/1	6F8G	12/11	6X5G	10/6	25Y5	19/6
0A3/VR7B	16/3	2B7	12/2	6G6G	13/11	6X5GT	10/6	25Z5	9/8
0A4G	19/5	2E5	12/-	6G8G	—	6Y6G	13/6	25Z6	11/11
0C3/VR10S	19/10	3Q4	13/3	6H6	10/-	6Z7G	13/6	25Z6G	9/6
0D3/VR150	19/7	3Q5GT	14/10	6H6G	8/6	6ZY5G	14/4	25Z6GT	10/7
0Z4	13/3	3S4	18/-	6H6GT	9/6	7A4	15/6	26	7/-
0Z4G	12/8	3V4	18/-	6J5	9/10	7A5	13/-	27	7/1
1A4P	13/10	5R4GY	21/6	6J5G	8/3	7A6	14/-	30	7/11
1A5G	14/2	5T4	16/2	6J5GT	9/2	7A7	14/-	31	8/6
1A5GT	14/2	5U4G	9/7	6J6	18/5	7A8	14/-	32	12/10
1A8	13/2	5V4G	15/1	6J7	11/9	7B4	13/-	33	11/6
1A7G	14/3	5W4	10/3	6J7G	10/6	7B5LT	14/-	34	15/-
1A7GT	13/1	5X4GT	10/-	6J8G	10/10	7B6	14/-	35	10/2
1B4P	14/6	5Y3GT	9/1	6K5GT	12/-	7B7	14/-	35A5	15/6
1B5/25S	12/7	5Y4G	7/4	6K6G	10/3	7B8	13/-	35L6GT	10/9
1C4	13/11	5Z3	7/3	6K6GT	9/4	7C5	14/-	35Z3	14/10
1C6G	15/-	5Z4	8/11	6K7	10/6	7C6	14/-	35Z4GT	10/5
1C5GT	—	5Z4	13/6	6K7G	11/7	7C7	15/6	35Z5GT	10/7
1C8	—	6A3	10/2	6K7GT	9/11	7F8	—	36	10/1
1C5GT	—	6A3	16/6	6K8	10/2	7G7	23/-	37	11/9
1C8	—	6A4	11/6	6K8G	13/6	7H7	23/-	38	10/2
1C7G	—	6A6	12/11	6K8GT	14/4	7J7	—	39/44	10/4
1D4	—	6A7	11/3	6L5G	13/6	7Q7	—	41	9/8
1D5GP	14/-	6A8	13/6	6L5GT	9/6	7Y4	15/6	42	9/8
1D7G	13/1	6A8G	11/1	6L6	19/-	10	25/11	43	10/5
1D8GT	20/5	6A8GT	13/6	6L6G	18/4	12A6	20/-	45	7/9
1E5GP	12/6	6AB5/6N5	19/2	6L7	13/7	12A6GT	10/9	45Z5GT	10/6
1E7GV	18/6	6AB7/1853	10/-	6L7G	13/-	12A7	16/9	46	11/9
1F4	13/7	6AC5G	20/-	6N6G	18/-	12A8GT	10/10	47	10/10
1F5G	14/6	6AC7/1852	11/4	6N7G	13/6	12B8GT	13/9	48	11/2
1F8	14/7	6AF6G	18/5	6N7GT	11/6	12C8	14/1	49	20/9
1F7GV	14/4	6AG5	18/5	6Q7	13/1	12F5GT	10/3	50L6GT	12/3
1G4GT	13/2	6AG7	18/-	6Q7GT	12/4	12J8GT	9/9	50Y6GT	9/8
1G5G	11/6	6AK5	37/8	6Q7G	10/-	12J8T	11/8	51	14/6
1G6GT	13/3	6AK6	17/-	6Q7GT	10/7	12K7GT	10/7	55	9/8
1H4G	8/5	6AL3	18/6	6R7	12/9	12K8	17/-	56	7/6
1H5G	13/5	6AQ5	13/9	6R7G	10/4	12Q7GT	11/6	57	9/8
1H5GT	11/9	6AQ6	15/5	6R7GT	10/-	12SA7	11/3	58	9/8
1H6G	13/1	6AT6	10/11	6S7	12/-	12SA7GT	12/6	59	9/8
1J6G	12/5	6AU6	12/6	6S7G	11/10	12SC7	11/8	70L7GT	14/11
1K4	—	6AV6	—	6SA7	10/7	12SF5	9/6	71A	18/3
1K5G	—	6B4G	19/6	6SA7GT	11/8	12SG7	—	75	9/10
1K6	—	6B5	17/6	6SB7	15/11	12SH7	—	76	7/3
1K7G	—	6B6G	11/6	6SC7	12/6	12SJ7	10/7	77	9/11
1L4	9/6	6B7	12/8	6SF8	10/6	12SK7	10/6	78	10/3
1L5G	—	6B7S	—	6SF7	12/-	12SN7GT	15/6	79	11/2
1L4A	—	6B8	14/10	6SG7	11/9	12SQ7	16/6	80	6/4
1L6	22/3	6B8G	12/10	6S7GT	10/10	12SR7	13/6	81	18/8
1LD5	19/6	6BA6	13/7	6S7	12/9	12SS7	—	82	12/-
1LH4	27/-	6BE6	12/9	6S7GT	10/7	12Z3	11/10	83	11/-
1LN8	19/3	6C4	12/9	6SK7	11/1	15	18/4	83V	14/6
1M5G	—	6C5	10/8	6SK7GT	11/1	19	10/11	84/6Z4	11/-
1M5GT	12/6	6C5G	10/-	6SL7GT	14/3	24A	10/11	85	9/6
1N5G	14/-	6C5GT	10/-	6SN7GT	13/7	25A6	13/10	85	9/11
1N5GT	14/10	6C6	10/4	6SQ7	11/8	25A6GT	10/9	89	9/6
1Q5GT	13/-	6C6G	14/3	6SQ7GT	11/-	25A7G	13/6	112A	16/6
1R5	13/11	6D6	10/1	6SS7	9/6	25A7GT	12/6	117Z3	16/6
1S4	13/11	6D8G	12/7	6T7G	12/1	25B6G	12/6	117Z6GT	16/3
1S5	13/11	6E5	12/10	6U5/6G5	12/7	25L6	12/6	117L7GT	20/6
1T4	13/11	6F5	11/7	6U7G	9/10	25L6G	10/-	117N7GT	19/4
1T5GT	18/-	6F5G	9/4	6V6	14/9	25L6GT	11/11	117P7GT	—
1U5	18/6	6F5GT	9/6	6V6G	10/6				
1V	8/8	6F6	11/8	6V6GT	10/-				
2A3	16/1	6F6G	10/2	6W7G	12/6				
2A5	9/11	6F8G	9/-	6X4	11/6				
2A6	10/2	6F8GT	14/5	6X5	12/5				
		6F7	—						

Transmitting and Special Types (PRICES ON APPLICATION)

# MULLARD VALVES

LATEST PRICE LIST WITH EXCHANGE OFF!

Type.	Base.	Price.	Type.	Base.	Price.	Type.	Base.	Price.	Type.	Base.	Price.
ABC1	P	14/1	CL2/CL4	P	14/5	DW2	A	9/6	EBL1	P	15/9
ACO44	A	16/-	CY1	P	9/11	DW4/350	A	9/6	EBL31	K	13/9
AF3	P	17/7	CY31	K	9/11	EAC91	B7G	20/-	EC31	K	11/9
AL3/AL4	P	13/6	DAC32	K	10/9	EAF41	B8A	12/2	EC52	B9G	11/9
AZ1	P	7/8	DAF91	K	12/2	EB32	K	—	EC91	B7G	22/6
AZ1	K	7/8	DF33	B7G	10/9	EB4	P	10/3	ECC32	K	15/3
AZ31	B8A	9/-	DF91	K	13/-	EB41	B8A	10/3	ECC34	K	15/3
CBL1	P	13/6	DK32	B7G	10/9	EB91	B7G	17/9	ECC35	K	18/3
CBL31	K	16/1	DK40	D8A	15/6	EBC3	P	13/9	ECC91	B7G	18/4
CCH35	K	14/11	DK91	B7G	9/6	EBC33	P	11/2	ECH2	P	16/3
CL2	P	14/5	DL33	K	12/2	EBF2	K	11/2	ECH3	K	16/3
CL33	K	12/7	DL35	K	12/2	EBF32	P	14/5	ECH35	K	14/5
			DL92	B7G	10/2		K	13/6	ECH41	B8A	13/6

Continued overleaf

**MULLARD VALVES - Continued**

Type.	Base.	Price.	Type.	Base.	Price.	Type.	Base.	Price.	Type.	Base.	Price.
ECH42	B8A	14/5	EL91	B7G	18/-	PEN4DD	M	15/9	URIC	O	10/5
EF36	K	12/2	EM1	P	12/2	PEN4ODD	M	17/-	VP13C	M	15/3
EF37	K	12/2	EM34	K	12/2	PEN4VA	M	13/9	VP2	M	15/3
EF39	K	9/11	EM4	P	13/3	PEN4Z8	M	14/5	VP2B	M	17/-
EF41	B8A	11/9	EY91	B7G	18/-	PM1HF	A	12/3	VP4	M/O	17/9
EF42	B8A	16/6	EZ40	B8A	10/4	PM12M	A	14/6	VP4A	M/O	17/9
EF50	B9G	10/-	EZ41	M	16/-	PM2A	A	8/9	VP4B	M	14/5
EF64	B9C	16/6	FC13C	M	17/9	PM2HL	A	12/2	2D4A	O	10/-
EF6	P	13/3	FC2	M	17/9	PM22A	O	8/6	2D4B	M	10/6
EF9	P	11/3	FC2A	M	16/-	PM24A	O	12/2	354V	O	10/9
EF91	B7C	22/-	FC4	A	10/6	PM24M	O	13/9			
EF92	B7G	20/-	EW4/500	A	10/3	QV04-7	B9G	27/-			
EFF81	B9G	42/-	IW4/850	A	10/3	QV04-20	K	—			
EK2	P	15/3	IW4/850	A	10/3	QV05-25	K	34/6			
EK3	P	15/3	KBC1	K	17/9	SP13C	M	12/-			
EK32	K	17/1	KBC32	P	12/2	SP2	M	15/9			
EL2	P	16/1	KF3	K	18/1	SP4	O/M	17/9			
EL3	P	13/6	KF36	K	13/3	TDD13C	M	15/3			
EL32	K	15/3	KK2	P	14/6	TDD2A	M	12/2			
EL33	K	13/6	KK32	K	15/9	TDD4	O	13/9			
EL35	K	13/6	KL35	K	12/7	TH21C	M	19/9			
EL47	K	21/-	KL4	P	12/2	TH30C	M	19/9			
EL31	B8A	13/3	PENA4	M	12/2	TH4B	M	19/9			
ELA2	B8A	16/2	PEN36C	M	14/5						

**DEFINITION OF BASES**

- A = 4-pin English
- K = Octal
- M = 7-pin English
- O = 5-pin English
- P = Side Contact
- B7C = 7-pin Amer. miniature
- B8A = 8-pin Rimlock
- B9C = 9-pin

**PHILIPS VALVES**

(NOTE: Where type numbers are bracketed the types are direct equivalents or substitutes.)

On some of the special types prices are not available at present. These may be had on application.

A425—4-pin American	11/9
A609—4-pin American	8/7
A615—4-pin American	9/0
A642—4-pin American	13/9
AB1 (2D4A)—5-pin Eng. substitute	10/-
AB2—Small side contact "v"	12/4
ABC1 (TDD4)—7-pin Eng. substitute	13/9
ABC1—Side contact 8-pin "P"	14/1
ABL1 (Pen4DD)—7-pin English substitute	15/9
AF2 (VP4A)—5-pin Eng. substitute	17/9
AF3—Side contact 8-pin "P"	17/7
AF6 (VP4B)—7-pin Eng. substitute	14/5
AK2 (FC4)—7-pin Eng. substitute	16/-
AK2—Side contact 8-pin "P"	15/9
AL2 (4682)—Side contact 8-pin "P"	18/6
AL3 (AL4)—Side contact 8-pin "P"	13/6
AF4 (PenA4)—7-pin Eng. substitute	12/2
AK50—4-pin English substitute	30/-
AZ1—Side contact 8-pin "P"	7/8
AZ3 (AZ4)—Side contact 8-pin "P"	14/3
AZ31—American octal	7/8
AZ41—Rimlock B8A	9/-
AZ50—4-pin English	30/-
B405—4-pin American	10/9
B406—4-pin American	10/9
B442—4-pin American	13/6
B443 (PM24)—4-pin Eng. substitute	13/9
B443 (C443)—5-pin Eng. substitute	14/9
B605—4-pin American	10/9
DF70—Wire-in Deaf Aid	13/-
DL71—Wire-in Deaf Aid	13/-
DL72—Wire-in Deaf Aid	13/-
CL—Side contact 8-pin "P"	17/-
C1C—4-pin English	17/-
C8—Side contact 8-pin "P"	15/9
C10—Side contact 8-pin "P"	15/9
C12—Side contact 8-pin "P"	19/6
C243N—5-pin American	13/9
C443—5-pin English	14/9
CBL1—Side contact 8-pin "P"	13/6
CBL31—American Octal	16/1
CC1—Side contact 8-pin "P"	11/9
CCH35—American octal	14/11
CF2 (VP13A)—Side contact 8-pin "P"	15/3
CK1 (FC13)—Side contact 8-pin "P"	16/-
CL2 (CL4)—Side contact 8-pin "P"	14/5
CL3—American octal	12/7
CY1—Side contact 8-pin "P"	9/11
CY2—Side contact 8-pin "P"	16/3
CY31—American octal	9/11
CY32—American octal	13/6
DAC21—American octal	10/9
DAC32 (1H5)—American octal	10/9
DAF91 (156)—B7G American min.	10/9
DDR100—American octal	13/6
DF21—American octal	12/2
DF33 (1N5)—American octal	10/9
DF91 (174)—B7G American min.	10/9
DF92 (1L4)—B7G American min.	15/3
DK21—American octal	13/-
DK32 (1A7)—American octal	15/6
DK40—Rimlock B8A	9/6
DK91 (1R5)—B7G American min.	13/6
DL21—American octal	12/2
DL33 (3Q5)—American octal	12/2
DL35 (1C5)—American octal	12/2
DL36 (1Q5)—American octal	12/2
DL41—Rimlock B8A	13/3

DL91 (154)—B7G American min.	13/3
DL92 (354)—B7G American min.	10/2
DL93 (3A4)—B7G American min.	12/2
DL94 (3V4)—B7G American min.	12/2
DL95 (3Q4)—B7G American min.	20/-
DLL21—American octal	11/9
E415 (164V)—5-pin Eng. substitute	14/11
E424—5-pin English substitute	11/9
E438 (904V)—5-pin Eng. substitute	17/9
442 (SP4)—5-pin Eng. substitute	15/3
E443H (PM24M)—5-pin English substitute	17/9
E446 (SP4)—5-pin Eng. substitute	17/9
E452T (SP4)—5-pin Eng. substitute	17/9
E463 (Pen4VA)—7-pin English substitute	13/9
E499 (4657)—5-pin Eng. substitute	18/4
E707 (4624)—4-pin Amer. substitute	70/2
EA40—Rimlock B8A	28/-
EA50—Wire-in	11/9
EAB1 (EB4)—8-pin side contact "P"	10/3
EAC91—B7G American miniature	20/-
EAF41—Rimlock B8A	12/2
EAF42—Rimlock B8A	12/6
EB4—8-pin side contact "P"	10/3
EB34 (6H6)—American octal	46/-
EB40—Rimlock B8A	17/9
EB41—Rimlock B8A	13/9
EB91 (6AL5)—B7G American min.	11/2
EBC3—Side contact 8-pin "P"	11/2
EBC33 (6Q7)—American octal	11/2
EBC41—Rimlock B8A	14/5
EBF2—Side contact 8-pin "P"	13/6
EBF32 (6B8)—American octal	15/9
EBF35—American octal	18/-
EBL1—Side contact 8-pin "P"	13/9
EBL21—American octal	11/9
EBL31—American octal	40/6
EC31—American octal	11/9
EC50—Side contact 8-pin "P"	40/6
EC52—9-pin B9C	11/9
EC53—9-pin B9C	17/9
EC54—9-pin B9C	13/3
EC80 (6Q4)—9-pin American novel	50/-
EC81 (6R4)—9-pin American novel	22/6
EC91—B7G American miniature	16/6
ECC31—American octal	15/3
ECC32—American octal	19/-
ECC33 (6SN7)—American octal	15/3
ECC34—American octal	18/3
ECC35 (6SL7)—American octal	18/3
ECC40—Rimlock B8A	18/3
ECC91 (6J6)—B7G American min.	16/3
ECH3—Side contact 8-pin "P"	14/5
ECH21 (757)—American octal	14/5
ECH35 (6K8)—American octal	13/6
ECH41—Rimlock B8A	14/5
ECH42—Rimlock B8A	14/5
EEL1—Side contact 8-pin "P"	48/3
EFS (EF9)—Side contact 8-pin "P"	11/3
EF6—Side contact 8-pin "P"	13/3
EF8—Side contact 8-pin "P"	11/3
EF22 (7B7)—American octal	13/3
EF36—American octal	12/2
EF37 (6J7)—American octal	12/2
EF39 (6K7)—American octal	9/11
EF40—Rimlock B8A	11/9
EF41—Rimlock B8A	16/8
EF42—Rimlock B8A	16/8
EF50—9-pin B9C	16/8
EF54—9-pin B9C	16/8
EF55—9-pin B9C	22/-
EF91—7-pin B7C American min.	20/-
EF92—7-pin B7C American min.	42/-
EFF51—9-pin B9C	15/3
EK2—Side contact 8-pin "P"	15/3

EK32 (6A8)—American octal	17/1
EL2—Side contact 8-pin "P"	16/1
EL3—Side contact 8-pin "P"	13/6
EL32—American octal	15/3
EL33 (6V6)—American octal	13/6
EL34 (6L6)—	19/10
EL35—American octal	21/-
EL36—American octal	23/-
EL41—Rimlock B8A	13/3
EL42—Rimlock B8A	15/2
EL51—Side contact 8-pin	92/6
EL60—8-pin B9C	58/6
EL91—7-pin B7C American min.	18/-
EM1—Side contact 8-pin "P"	12/2
EM4—Side contact 8-pin "P"	13/3
EM34—American octal	12/2
EN31—American octal	26/-
EW60—9-pin B9G	56/9
EY51—Wire-in	25/-
EY91—7-pin B7C American min.	18/-
EZ2—Side contact 8-pin "P"	9/-
EZ3—Side contact 8-pin "P"	9/-
EZ22—American octal	10/4
EZ35 (6X5)—American octal	10/4
EZ40—Rimlock B8A	11/9
EZ41—Rimlock B8A	10/4
GZ32 (5V4)—American octal	11/9
FW4-800—4-pin English	14/-
HVR2—4-pin English	25/-
KBC1—Side contact 8-pin "P"	17/9
KBC32—American octal	12/2
KC3 (PM2HL)—4-pin English	9/6
KDD1 (PM2B)—7-pin English	12/2
KF3—Side contact 8-pin "P"	18/1
KF36—American octal	13/3
KK2—Side contact 8-pin "P"	14/5
KK32 (1C7)—American octal	15/9
KL4—Side contact 8-pin "P"	12/2
KL38 (1F6)—American octal	12/7
KLL32—American octal	18/6
LSD2—Edison screw	
LSD3—4-pin American	
LSD4—	
LSD7—4-pin American	
UAF41—Rimlock B8A	12/6
UAF42—Rimlock B8A	12/6
UBL21—American octal	18/4
UCH21—American octal	18/4
UCH41—Rimlock B8A	13/6
UCH42—Rimlock B8A	14/5
UF21—American octal	17/-
UF41—Rimlock B8A	12/7
UL41—Rimlock B8A	13/3
UM4—American octal	15/3
UY1 (N)—American octal	10/4
UY41—Rimlock B8A	9/-
5Y3—American octal	
80—4-pin American	
806 (DW2)—4-pin English	9/6
1861—4-pin English	14/5
1808 (506)—4-pin English	10/4
1875—Side contact 8-pin "P"	50/-
1876—Side contact 8-pin "P"	26/6
1877—4-pin English	26/6
1904—4-pin English	16/9
1909—3-pin "H"	15/3
1914—Edison screw	18/7
1941—Edison screw	14/5
3510—P.E. cell (Vac) 4-pin English	95/8
3512—P.E. cell (Vac) 4-pin English	87/9
3530—P.E. cell (Gas) 2-pin Special	64/10
3533—P.E. cell (Gas) 4-pin English	64/10
3534—P.E. cell (Gas) 4-pin Special	64/10
3538—P.E. cell (Gas) 2-pin Special	69/4
3541—P.E. cell (Gas) 4-pin English	64/10

**PHILIPS VALVES - Continued**

3543—P.E. cell (Gas) wire in	71/7
3546—P.E. cell (Gas)	64/10
* Also available without base.	
20AV—P.E. cell (Vac) Amer. loctal	
20CG—P.E. cell (Gas) Amer. loctal	
20CV—P.E. cell (Vac) Am. loctal	
55CG—P.E. cell (Gas) Am. Pee-wee	
56CG(918)—P.E. cell (Gas) 4-pin Amer.	
90AV—P.E. cell (Vac) Am. Min B7G	
90CG—P.E. cell (Gas) Am. Min B7G	
90CV—P.E. cell (Vac) Am. Min B7G	
4080—3-pin "H"	179/2
4613(E406)—4-pin English	39/2

4624(E707)—4-pin special	80/2
4654—Side contact 8-pin "P"	24/3
4657—8-pin English	22/6
4673—Side contact 8-pin "P"	18/-
4682(AL2)—Side contact 8-pin "P"	18/6
4689—Side contact 8-pin "P"	30/-
4690—Side contact 8-pin "P"	44/7
4699—Side contact 8-pin "P"	25/3
4687—Stabilizer neon	14/-
7475—Stabilizer neon	21/2
85A1—Stabilizer neon	19/10
100E1—Stabilizer neon	88/-
13201—Stabilizer neon	46/10
150A1—Stabilizer neon	26/10
180C1	32/5

DB7-2—Cathode ray tube	
DB9-3—Cathode ray tube	
DG4-2—Cathode ray tube	
DG7-1—Cathode ray tube	
DC7-2—Cathode ray tube	
DG9-3—Cathode ray tube	
DN7-2—Cathode ray tube	
DN9-3—Cathode ray tube	
DN9-5—Cathode ray tube	
TH1—Vacuum thermocouple	
TH2—Vacuum thermocouple	
TH3—Vacuum thermocouple	
TH4—Vacuum thermocouple	
TH5—Vacuum thermocouple	
4383—Rare gas fuse	

Substitute Type	Phillips Type	Base Description	Price	Substitute Type	Phillips Type	Base Description	Price
DW2	806	4-pin English	9 8	SP4	E452T	8-pin English	17 9
FC2A	KK2	7-pin English	17 9	KBC1	E452T	5-pin English	12 2
FC4	AK2	7-pin English	16 0	ABC1	E452T	7-pin English	13 9
FC13	CK1	Side contact 8-pin "P"	18 0	CY2	E452T	7-pin English	16 0
PenA4	AL4	7-pin English	12 2	KF3	E452T	7-pin English	17 9
Pen4VA	E463	7-pin English	13 9	E447	E452T	7-pin English	17 9
Pen4DD	ABL1	7-pin English	15 9	AF2	E452T	5-pin English	14 8
PM2B	KDD1	4-pin English	12 2	AF6	E452T	7-pin English	15 3
PM2HL	KC3	4-pin English	9 6	CF2	E452T	Side contact 8-pin "P"	10 3
PM22A	KL4	8-pin English	12 2	AB1	E452T	4-pin English	10 9
PM24M	E443H	8-pin English	15 3	E424	E452T	5-pin English	9 0
SP4	AF7	7-pin English	17 9	E22	E452T	Side contact 8-pin "P"	9 0
SP4	E446	5-pin English	17 9	E23	E452T	Side contact 8-pin "P"	11 9
SP4	E442	5-pin English	17 9	904V	E452T	8-pin English	

**POTENTIOMETERS**

**CARBON POTENTIOMETERS**

Carbon type employs a full wiping contact between the movable contact member and the hard smooth composition resistance element.



Cat. No.	Ohms
AP110—	1,000
AP111—	2,000
AP112—	2,500
AP113—	5,000
AP117—	10,000
AP118—	15,000
AP120—	25,000
AP122—	50,000
AP125—	100,000
AP126—	250,000
AP128—	500,000
AP130—	1 megohm
AP132—	2 megohm

ALL  
4/6 EACH

**POTENTIOMETERS with Switch**



Cat. No. AP145—  
500,000 ohm with  
S.P.S.T. Switch.

6/6

Cat. No. AP146—  
500,000 ohm with  
D.P.S.T. Switch.

7/-

**1/2 MEG POTENTIOMETERS  
(FROM WAR TRANSCIVERS)**

500,000 ohm Carbon Potentiometers.  
1 1/2 in. diameter—length of shaft 1 in.

Cat. No. AX1041 .. 3/6 each

**RADIO PANEL LAMPS**

AL300—6 volt, with S/C large bayonet base for Colombus and similar sets .. 1/6 each

RADIO PANEL LAMPS. Tubular Type, screw base.

- Cat. No. AL119—2 volt, .05 amp. (special low consumption for battery set) .. 1/3 each
- Cat. No. AL120—2.5 volt 1/3 each
- Cat. No. AL121—3.8 volt 1/3 each
- Cat. No. AL122—6 volt 1/3 each
- Cat. No. AL124—6 volt, screw base, round bulb .. 1/3 each



- Cat. No. AL123—6 volt, with small bayonet base .. 1/3 each
- Cat. No. AL118—2 volt Battery Set type with small bayonet base .. 1/3 each

**BLACK INSULATING TAPE**



Has many uses, such as binding hockey sticks, axes, etc., besides being an excellent means of insulation.

- Cat. No. AS235—5yd. rolls x 1/2 in. roll 8D.
- Cat. No. AS237—10yd. rolls x 1/2 in. 10D.
- Cat. No. AS238—8oz. coils x 1/2 in. 2/7

**CHASSIS**

Metal chassis are available for the following Kits. Details as to whether battery or A.C. powered and chassis dimensions are given below.

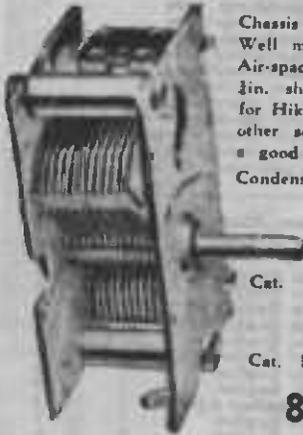
Cat. No.	Price
AC1100—6in x 6in x 2 1/2 in. Hikers Two Valve (Battery)	9/-
AC1105—5in. x 4 1/2 in. x 1 1/2 in. with 3in. x 3in. Panel. Mighty Midget 1 Valve (Battery)	9/-
AC1106—10 1/2 in. x 6 1/2 in. x 2 1/2 in. Easy Built Five Valve (A.C.)	14/6
AC1109—9in. x 9in. x 2in. Outdoor Portable 3 Valve (Battery)	10/9
AC1113—9in. x 8 1/2 in. x 2in. Popular Skywiper 4 Valve (A.C.)	10/9
AC1115—9 1/2 in. x 4 1/2 in. x 2 1/2 in. Versatile-Radiotron Amplifier 3 Valve (A.C.)	9/-
AC1116—9in. x 6 1/2 in. x 2in. T.R.F. Tuner 3 Valve	9/-
AC1120—10in. x 9in. with Bracket Simplex Valve Tester Panel	15/-
AC1125—12in. x 5 1/2 in. x 2 1/2 in. Defiant 5 Valve (Battery)	14/6
AC1127—10 1/2 in. x 8 1/2 in. x 2 1/2 in. Sky-Hawk 4 Valve (A.C.)	10/9
AC1128—7in. x 6in. x 2in. Scout (Battery)	10/9
AC1131—13 1/2 in. x 6in. x 2 1/2 in. Bell Tone Amplifier (A.C.)	14/6
AC1132—15in. x 9 1/2 in. x 3in. D/W Super Six (A.C.)	15/-
AC1134—11 1/2 in. x 4 1/2 in. x 2 1/2 in. Easy Built 4 Valve Clipper (Battery)	10/9

**RADIO FUNDAMENTALS EXPLAINED**

Another excellent booklet for the Radio beginner: "DRULEIGH RADIO FUNDAMENTALS EXPLAINED" is a 70-page book produced for Radio students who want a simple, yet practical, explanation of radio principles before proceeding with more advanced theory required for most examinations. Contains Radio Dictionary, schematic diagrams, tables, etc. Limited number of copies available. 2/- copy plus 2d. postage, etc.

# VARIABLE CONDENSERS

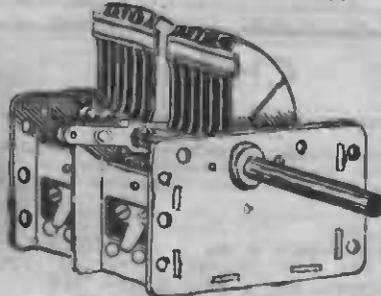
## "ENSIGN" CONDENSERS



Chassis Mounting Well made. British. Air-spaced vanes. 1/2 in. shaft. Suitable for Hiker's One and other sets requiring a good single gang Condenser.

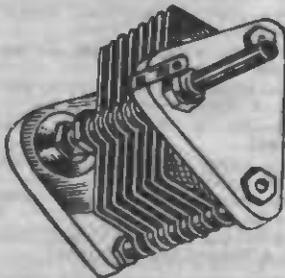
Cat. No. AC914 .0003 **8/4** each  
 Cat. No. AC915 .0005 **8/10** each

## GANGED CONDENSERS



British-made reliable Condensers will match up with Ensign Coil Kits. 1/2 in. shafts, anti-clockwise rotation. Capacity .00042.  
 Cat. No. AC922—2-gang .. **16/-**  
 Cat. No. AC923—3-gang .. **18/6**

## "ENSIGN" MIDGET CONDENSERS



Midget Variable Condensers. Ideal for short-wave work. British make.  
 Cat. No. AC808—.0001 mfd. **6/6** each

## INTERFERENCE SUPPRESSION CONDENSERS

Specially constructed Condensers to alleviate radio interference set up by electrical units such as motors, etc. Fits direct to the motor or other such unit.  
 Cat. No. AC595—Tubular Pack. .1 mfd. .1mfd. + .01 mfd. 250 volt A.C. .. **5/6**  
 Cat. No. AC596—Oblong Metal Can. 1 1/2 in. x 1 1/2 in. with mounting bracket. .01 mfd. + .01 mfd. + .02 mfd. 250 volt A.C. .. **5/6**

## "ENSIGN" MIDGET CONDENSERS

Ideal Gang Condensers for miniature portables, etc. Overall dimensions only. Height 1 1/2 in., Width 1 1/2 in., Depth 1 1/2 in.; 1 gang section 1/2 in. Capacity, .000365 max., 14 p.f.d. min. Ceramic insulation. Nickel silver contacts.



Cat. No. AC924—2 gang .. **18/6**  
 Cat. No. AC925—3 gang .. **27/6**

## MIDGET VARIABLE CONDENSERS

Vary compact Condensers for constructing small receivers, wave traps, and other apparatus. Solid dielectric type. 1/2 in. diam. shaft. Overall dimensions, 1 1/2 in. x 1 1/2 in. x 1/2 in. thick. Shaft assembly 1/2 in. long.



AC918, .0003— **5/3**  
 Cat. No. AC919—.0005 .. **5/3**  
 Cat. No. AC917—.0001 .. **5/3** each

## MIDGET CONDENSERS, R.C.S.

Midget Condensers with high voltage trolitul insulation end pieces, single bearing type.

Cat. No.	Max. Cap.	Min. Cap.	Plates	Price
AC809	Mmfd.10	Mmfd.3	3	5/-
AC810	Mmfd.25	Mmfd.3.5	4	5/4
AC811	Mmfd.50	Mmfd.4	7	6/3
AC812	Mmfd.100	Mmfd.6	14	7/9

## R.C.S. MIDGET CONDENSERS

Trolitul high voltage insulation end pieces and double bearing, suitable for ganging.



Cat. No.	Max. Cap.	Min. Cap.	Plates	Price
AC814	Mmfd.10	Mmfd.3	2	6/6
AC815	Mmfd.25	Mmfd.3.5	4	6/6
AC816	Mmfd.50	Mmfd.4	7	7/6
AC817	Mmfd.100	Mmfd.6	14	8/11

## GENERATOR CONDENSERS



Special Condensers for noise suppression on motor car radio installations, etc. .5mfd. Metal case.  
 Cat. No. AC657 .. **4/3** each

# BIG REDUCTIONS!

## "WAVEMASTER" SHORTWAVE MIDGET CONDENSERS

A line of highly efficient variable condensers suitable for all purposes requiring a midget robust condenser. High voltage isolantite insulation. Single bearing mounting with provision for ganging. Unique design of plates ensures straight line frequency tuning and

low minimum capacity. Plates are manufactured from best quality brass.

MEASUREMENTS: 1/2 in. shaft, 1/2 in. mounting hole, 2 in. wide, 1 1/2 in. high and projects 1 1/2 in. behind panel.

Cat. No.	Max. Cap.	Min. Cap.	Plates	Spacing	Price
AC830	10 mmfd.	1 mmfd.	3	.057 in.	4/11
AC834	100 "	5 "	13	.057 in.	8/3
AC842	110 "	5 "	13	.073 in.	9/6

NOTE.—Cat. No. AC842 does not have the straight line frequency feature and spacing is greater than other models.

## "Wavemaster" Double Spaced Midget Transmitting Condensers

Similar to the midget variety in all respects except in spacing. This line is ideally suited for use in low power stages of transmitters, etc. An excellent condenser for V.H.F. work.

Cat. No.	Max. Cap.	Min. Cap.	Plates	Spacing	Price
AC835	8 mmfd.	1 mmfd.	3	.150 in.	4/11
AC838	30 "	3 "	11	.150 in.	4/11

NOTE.—Cat. No. AC840 does not have the straight line frequency feature and spacing is slightly less than the other models.

## "Wavemaster" Transmitting Condenser

A reasonably priced condenser having both single bearing mounting and rigidity of construction. Plate spacing (.150 in.) enables this condenser to be used for a variety of purposes in medium power transmitters. It is admirably suited for ganging, resulting in a

popularly priced split stator condenser. Available in one size only (.5-50 mmfd.) 13 plate, 1/2 in. shaft, 1/2 in. Mounting Hole. Measures 2 in. wide, 1 1/2 in. high and projects 2 1/2 in. behind panel.  
 PRICE **9/10** each  
 Cat. No. ACR41 ..

# CONDENSERS are Cheaper at "LAMPHOUSE!"

## TUBULAR CONDENSERS



Non-inductive Condensers with wire ends.

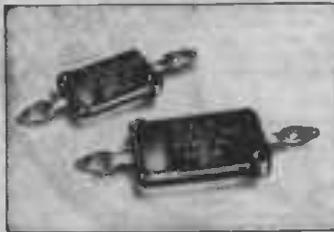
350 VOLTS (WORKING).		
Cat. No.		each
AC672—.01mfd.		9d.
AC674—.1 mfd.		9d.
AC676—.25 mfd.		9d.

500/600 VOLT WORKING		
Cat. No.		each
AC700—.0001		1/-
AC701—.0002		1/-
AC702—.00025		1/-
AC703—.0003		1/-
AC704—.0005		1/-
AC705—.001		1/-
AC706—.002		1/-
AC707—.003		1/-
AC709—.005		1/-
AC710—.006		1/-
AC711—.01		1/-
AC712—.02		1/2
AC712A—.03		1/2
AC713—.05		1/3
AC714—.1		1/3
AC715—.25		1/9
AC716—.5		1/9

## HIGH VOLTAGE TUBULAR CONDENSERS

Cat. No. AC645—.5 mfd, 2000 volts **2/9**

## MICA FIXED CONDENSERS



Cat. No.		each
AC750—.00005		1/-
AC751—.0001		1/-
AC753—.00025		1/-
AC755—.0005		1/3
AC756—.001		1/3
AC757—.002		1/3
AC758—.003		1/3
AC759—.004		1/3
AC760—.005		2/-
AC766—.01		2/-
AC767—.02		2/6

## HIGH VOLTAGE CONDENSERS LOW PRICED

Cat. No.		each
AC650—.0005mfd., 1800 volts test, mica		1/9
AC653—.001 " 1800 " " " "		2/6
AC652—.002 " 1800 " " " "		2/6
AC651—.003 " 1800 " " " "		2/6
AC654—.01 " 1800 " " " "		2/6
AC655—.001 " 2500 " " " "		2/9

## Another Condenser Bargain CERAMIC FIXED CONDENSERS

Cat. No. AC660—.5 pfd  
Cat. No. AC662—.15 pfd **5 ALL D each**

## ELECTROLYTIC CONDENSERS



## ELECTROLYTIC CONDENSERS IN ROUND CARDBOARD CONTAINERS.

Tubular Type—Dry.

Cat. No.		each
AC600—8 mfd.		2/11
AC614—16 mfd.		3/11
AC636—50 mfd., 25 volt		3/2
AC625—25 mfd., 35 volt		2/6
AC619—10 mfd., 40 volt		2/3
AC640—12 v. 500 mfd.		7/6
AC635—50 mfd., 350 volt		8/6

## ELECTROLYTIC CONDENSERS IN METAL CASES.

Cat. No.		each
AC601—8 mfd. Upright Mounting		5/-
AC613—16 mfd. " " "		6 1/11
AC620—10 x 10 mfd. " " "		7/6

## PADDERS AND TRIMMERS

Single bank Trimming Condensers, capacity 30 mmfd.

Bakelite Mounted.  
Cat. No. AC876—**7D.** each



2 Bank Trimming Condensers Capacity 30 mmfd. Bakelite mounted. **1/5** each  
Cat. No. AC877

Single Hole MOUNTING PADDERS, 600 mmfd. Isolantite mounting. **3/-** each  
Cat. No. AC880

Cat. No. AC878—Ditto 1200mmfd. **2/-** each

Cat. No. AC879—Ditto 1600 mmfd. **2/-** each

I.F. BASES Double Padders. 120/120. 1 1/2 in. x 1 1/2 in. Isolantite mounting. **1/3** each  
Cat. No. AC882

## WAR BARGAINS!

### CONDENSERS

The following Condensers have been removed from brand new ZCI Transceivers—

Cat. No. AX1025—10 x 10 mfd. Electrolytics	<b>5/11</b>
Cat. No. AX1026—10 x 10 mfd. Insulated	<b>5/11</b>

### Tubular Condensers

AX1027—.02 mfd. 400 volt Tubular Condensers **6D.** each or **5/-** doz.

AX1028—.1 mfd. 400 volt Tubular Condensers	<b>9D.</b> each
AX1029—.25 mfd. 400 volt Tubular Condensers	<b>1/3</b> each
AX1030—.25 mfd. 25 volt Electrolytic Condensers	<b>1/9</b> each

### Padders and Trimmers

465 K.C. Single Hole mounting type Padders. 1in. square. **2/-** each

Cat. No. AX1031  
Double Trimmers: Philips make. Low-loss air spaced type, with mounting piece 2in. x 1in. **2/-** each

Cat. No. AX1032  
Aerial Trimmer Condensers: An air-spaced midjet variable condenser with a capacity of 25 mmfd. **3/-** each

### Ganged Condensers

Standard 3-gang Condensers, as used in ZCI Transceivers, 1in. shaft, complete with mounting brackets and connections. Brand new. Capacity .000385 **9/6** each  
Cat. No. AX1095

3-gang Condenser complete with ZCI dial. Half of moving plates of condensers have been removed, making them ideal for short wave work. Approx. capacity .000175 mmfd.—Cat. No. AX1008 **9/11**

3 Gang Variable Condensers. Some of the plates have been removed giving them the approximate capacity of .00018 mfd. per section. Grid clip and leads attached to the second and third sections. Complete with mounting brackets. **2/11**  
Cat. No. AX1225—Great Value!

### Plessey Split Stator Condensers

2 GANG: 2 identical sections with 2 sets of stators and corresponding rotors in each; larger capacity set in each section has a max. of 195 mmfd., min. 9. Smaller capacity in each section max. 155 mmfd., min. 7.5. **5/11**  
Cat. No. AC926

3 GANG: 2 sets of stators and rotors in each section. Middle and rear sections identical. Larger capacity set max. 258 mmfd., min 10. Smaller set max. 40 mmfd., min. 6. Front section: Larger capacity set 275, min. 10. Smaller capacity set max. 100, min. 7.5. **7/11**  
Cat. No. AC927

## BARGAIN CONDENSER PARCEL!

10 Assorted Condensers offered in a parcel lot at a great reduction off their listed value.

### EACH PARCEL CONTAINS:

- 2 .002 mfd. Mica;
  - 2 15 pfd. Ceramic;
  - 2 .25 mfd. 350/400 volt Tubular;
  - 2 .02 mfd. 350 400 volt Tubular;
  - 2 .1 mfd. 350 400 volt Tubular.
- CONDENSERS**

Because we are overstocked we have chopped the price to give you this BIG BARGAIN!

### COMPLETE PARCEL OF 10 ASSORTED CONDENSERS

Cat. No. AX120— **5/-** LOT

If we should perchance sell out of any of the above sizes we will substitute with another popular size.

# BIG "FORTY-NINER" NEWS!

Introducing the latest  
**"EASY-BUILT"**  
**KIT-SET!**  
**THE 3 VALVE**  
**Bedroom RADIO**



THE NEW

*"Easy Built  
 Electric 3"*

A new addition to our range of Radio Kitsets designed on the "EASY BUILT" system—the new radio construction method made famous by The Lamphouse.

"EASY-BUILT" KITS are just what the name implies; radio kitsets that can be easily built by anyone with a knowledge of how to solder and who can count up to 30.

Instead of constructing the set by following a schematic circuit of radio symbols, all items and connections are numbered, and its just a matter of soldering one to seven—four to eighteen and so on.

**SOUND SIMPLE ? IT IS SIMPLE !**

Any boy from 9 to 90 can make a Radio under the "Easy-Built" system.



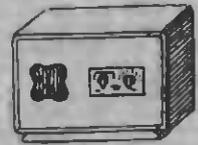
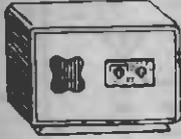
**ANOTHER GREAT FEATURE—  
 THE LOW COST!**

**£7.15.0**

Without Cabinet.

Complete with Attractive Ivory Coloured  
 Cabinet .. .. . **£8/19/6**

# The EASY BUILT BEDROOM A.C.3



**T**HIS year we present a new arrival in our family of "Easybuilt" receivers. After a great deal of thought and burning of the midnight oil we decided to produce a receiver which we felt would have even greater appeal than our two previous efforts. This receiver is a simple A/C set which is designed to bring in the local stations at good speaker strength which is all we intend to claim for it, although in localities away from powerful stations reasonable distance reception may be expected.

A point well worth stressing here is the importance of aerial length with a set of this type. You will be well repaid if you spend a little time trying the effect of various aerial lengths on the receiver. As too long an aerial may cause an annoying "cross talk" effect between the locals and too short of course will prevent the reception of the weaker stations at full volume.

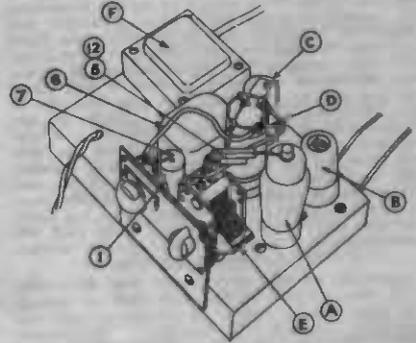
A glance at the circuit will show a receiver which is in essence similar in design to sets which have given outstanding results since the early days of radio. This then is our modern version of an old friend and we feel sure you will give him the welcome he deserves. The low cost and modest size of this receiver make it the answer to the "second set" problem for although we do not claim it will perform up to "superhet" standards it will definitely give satisfactory listening on any of the local stations. The simplicity of construction and the fact that there are no trimmers and padder condensers to be lined up as in a super-heterodyne receiver, makes this receiver an ideal one for the beginner in set construction to make a start with. Without further ado we will now get weaving on the actual business of having this fine little set transformed from a magazine article into a working model.

First check off the various parts against the list. Having done this the next thing is to mount the various parts. Now if you will look through this article you will notice that not only have we provided the conventional circuit diagram but also for the benefit of the less experienced we have also included our "Easybuilt" method. By using this method the new chum can check and cross check his every connection against the list and be sure his wiring up is O.K.

Now you will see list one sets out the various components that mount by means of nuts and bolts. That is the tuning condenser, valve sockets, volume control, etc. The small components which are the condensers and resistors all of which are soldered to the various points are set out in list number 2. So if you are not too good on circuit diagrams you can wire the set entirely from these lists. As you come to each component check it off the list and when the wiring is complete you can easily check up by seeing that the lists are completely ticked off.

Take a look at diagram "B." This gives you the actual placement of parts. Now the first thing to do is to mount the valve sockets, etc. When mounting the valve sockets A, B, and C, see that the key or notched hole points in the same direction as indicated in the diagram also place a solder lug under the securing nuts of each. One lug should go under the front nut of "A," another under the nut nearest the chassis edge in the case of "B," and the nut nearest the front of the chassis with "C." The rest of the parts may now be bolted down. That is the power transformer "F," power choke "G," tuning condenser "E," volume control "I," and under the chassis the speaker transformer "H." Do not mount the coil "D" yet as it may be knocked about when the chassis is turned over. Let us proceed now with the job of soldering up the valve sockets and various components. So make sure your soldered joints are good as a badly soldered connection can cause a lot of trouble in the way of noisy operation or poor reception.

Having got your iron heated and the various parts close handy, cut about 4in. off your coil of hook-up wire and strip off the insulation. Now solder one end to one of the 6.3v. lugs of power transformer "F," then lead the wire across to the C.T. lug and solder to this point then lead the wire on to the lug under the nut securing socket "C" and solder securely. Take care this bare wire contacts no other points than those mentioned. Check these connections off your list. Cut a 3 1/2 in. length of hook-up wire now and solder one end to the other 6.3v. lug of transformer "F." Now cut a 4 1/2 in. length of hook-up wire and solder one end together with the free end of the previous length on to pin No. 7 of socket "C." Lead



TOP OF CHASSIS (DIAGRAM A)

the 4 1/2 in. length over to pin No. 7 of socket "B" and solder it on to this pin together with another 2in. length of wire, the free end this time connecting to pin No. 7 of socket "A."

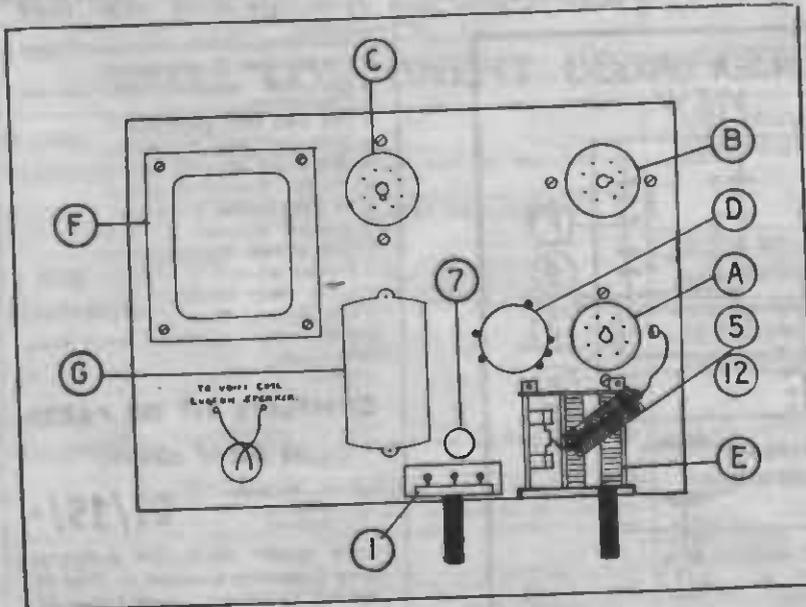
Run a short length of bare wire to Pins No. 1 and 2 of socket "C" and earth to the lug under the nut securing the socket. Do the same with Pins No. 1 and 2 of socket "B." Now with socket "A" a bare length of wire soldered to Pins 2, 1, 8, and 5 and earthed to the lug under the nut securing the socket. This completes all the earthing of the various sockets. Check all of these connections off your list.

Solder a short length of wire to one of the 280v. lugs on transformer "F" and solder the other end on to Pin No. 3 of "C." Now another length on to the other 280v. lug, the free end this time solders on to Pin No. 5 of "C." Check this off. Still on socket "C" solder one end of a 3in. length of wire on to Pin No. 8 and the other end on to the nearest lug of filter choke "G."

Look now at No. 9 on your list which is a 300 ohm. resistor. Actually you will receive two 600 ohm. resistors which are twisted together to make 300 ohms. Now No. 3 is a 10 mfd. condenser and this also has its ends twisted together with the 300 ohm. unit. Run a little solder along the twisted ends to make a good joint. The positive end of this unit is now soldered to pin No. 8 of "B." The negative end is earthed by soldering it to Pin No. 1 of "C."

Let us get the other two electrolytics wired up now. That is 1 and 2 on the list. Twist the two negative leads together and earth by soldering on to the earthed 6.3v. lug on transformer "F." The positive ends now. One to each lug of filter choke "G." Cut a 5in. length of wire now and solder one end on to pin No. 4 of socket "B." Now pick up 10 the 50,000 ohm. resistor and 13 the .25 meg. resistor, solder one end of these together with the free end of the 5in. length of wire and one of the covered leads of speaker transformer "H" on to "G" the filter choke, use the lug nearest the front of the chassis. Twist the free end of 13 with one end of 8 the .01 condenser and one end of 6 the .0025 condenser and solder on to pin No. 3 of socket "A." Earth the free end of 6.

Now the free end of 8 is soldered together with one end of 11 the 500,000 ohm resistor on to pin No. 5 of socket "B." Solder the free end of 11 on to pin No. 2 of socket "C" which is or should be earthed. Have a glance at diagram "C" once in a while as this will help you in placing the various parts all of which have been arranged with an eye to easy wiring. Speaker transformer "H" has a covered lead lying round loose so let us get rid of it by soldering a length of wire on to it and run this over to pin No. 3 of socket "B." Before soldering, however, slip a length of spaghetti



TOP OF CHASSIS VIEW (DIAGRAM B).

over the end and slide it down over the soldered joint of the wire, this will eliminate any chance of shorting on to the chassis. You may now solder on to pin No. 3 of socket "R" and while you are about it solder one end of 4 the .004 mica condenser on to this pin also. Earth the other end of 4 to the chassis.

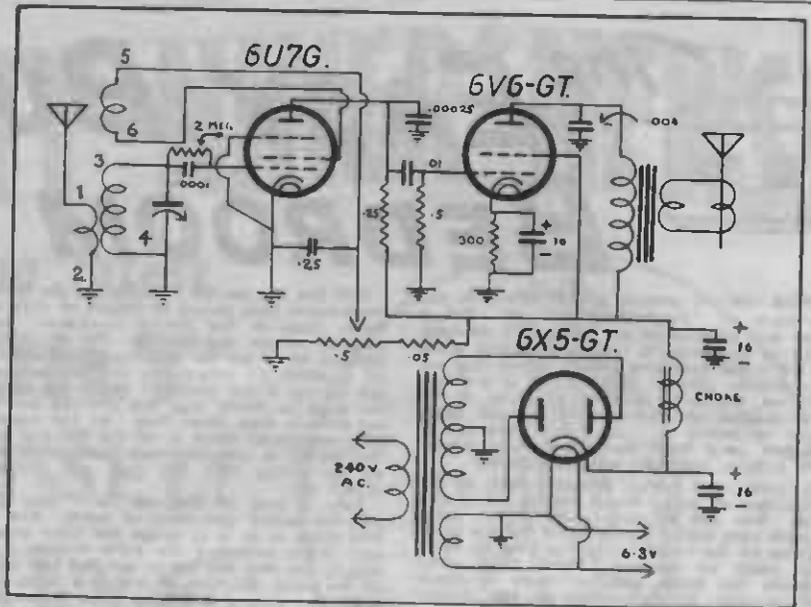
This does not complete the under chassis wiring but let us have a look at the top section for a change. Stand 7 the .25 condenser on its end poking the bottom pigtail through the hole provided in the chassis. The top pigtail is soldered together with 2in. of hook-up wire on to the centre lug of "I" the .5 meg. volume control. Don't worry about a few stray ends just now; we will catch up all in good time.

Take 5 the .0001 condenser and 12 the 2 meg. resistor and twist together, solder one set of ends on to the fixed plates of tuning condenser "E." Now plug the 6U7G into its socket and gauge the length of wire needed to come from the other twisted ends of 5 and 12 to reach the grid cap. Remove the valve, solder the necessary length on to the twisted ends and finish the job off by soldering the grid clip on to the other end of the wire. Look at the volume control again, solder about 5in. of wire on to the left hand lug and thread the free end through the hole in the chassis. Another lead is soldered on to the right hand lug and also threaded through the chassis. To be clear on which is right hand and left hand lug these are the lugs which are on the right and left when you look at the back of the volume control and the lugs point upwards.

Turn the chassis over again now and complete one or two of the odd bits of wiring. The free end of 7 the .25 condenser and the lead from the left hand lug of "I" the volume control may be twisted together and earthed to a convenient solder lug. This leaves the lead from the right hand lug of "I" which connects to the free end of 10 the 50,000 ohm. resistor, the lead from this resistor should be cut short so that the bare wire will not touch the chassis.

Have a look now at speaker transformer "H" and we find a couple of enamelled leads going nowhere in particular. Solder a 3in. length of hook-up wire on to each of these, slip a length of spaghetti over the joint of each lead and push the two leads through the hole provided in the chassis, these two leads later solder on to the two lugs mounted on the speaker.

Turn the chassis right side up again and position the coil "D" and bolt down in place. Look at the top of the coil and you will see it has six lugs all of which are numbered. Now number one is the aerial lug so solder about 15in. of wire on to this lug lead it down through the hole in the chassis. At the rear of the chassis is another hole but before pushing the wire through tie a knot in it so that any strain is taken up by the knot against the chassis and not by the lug. Now lugs No. 2 and 4 are earthed so connect these two lugs together and earth to a suitable point on the chassis. Solder now a short lead between lug No. 3 and the fixed plates of



CIRCUIT DIAGRAM.

tuning condenser "E." Lug No. 5 now is connected to the centre lug of "I" the volume control. All that is left now is lug No. 6. A lead is soldered on to this lug and fed down through the hole in the chassis and is soldered on to pin No. 4 of "A." Solder a suitable length of wire on to one of the earthing lugs and feed through the same hole as the aerial wire. Wire up the power flex on to the 230v. lugs on the power transformer, solder your speaker on to the two leads projecting through the top of the chassis and your wiring is complete. Satisfy yourself your connections are correct and then fit the valves into their respective sockets and fit the grid lead on to the 6U7G. Now plug the set in and keep a wary eye on the tubes especially the 6X5GT. If there is no sign of trouble attach the aerial and earth, advance the volume control a little and turn the condenser knob. You should now be able to tune in a station or two. Should you set up a loud squeal back the control off until the station can be tuned in clearly. A little practice will enable you to tune in quite distant stations at good volume. All that remains now is to fit this grand little receiver into the cabinet which we have specially designed for you.

We would like to state here that should you have any difficulty whatever in getting this set

to operate do not hesitate to call on our technical staff for assistance. They are only too happy to set the new chum on the right track if they can. In conclusion let us say we feel confident the set will prove a great success and will reward the builder with many hours of happy listening.

PARTS LIST

"Easy Built" Bedroom 3

- 1 Chassis.
- 1 "Easy Built" Coil.
- 1 .0005 mfd. Air Spaced Condenser.
- 1 60 M.A. 6.3v. Power Transformer.
- 1 Filter Choke.
- 2 16 mfd Electrolytics.
- 1 10 mfd Electrolytic.
- 1 each Type 6X5GT, 6U7G, 6V6GT Valves.
- 3 Octal Valve Sockets for above Valves.
- 1 500,000 ohm Potentiometer.
- 1 5in. P.M. Speaker with separate Transformer.
- 1 .004 mfd Mica Condenser.
- 1 .0001 mfd Mica Condenser.
- 1 .00025 mfd Mica Condenser.
- 1 .25 mfd Tubular Condenser.
- 1 .01 mfd Tubular Condenser.
- 7 Assorted Resistors.
- 1 Special Dial Plate.
- 2 Pointer Knobs.
- 2 yards Power Flex.
- 1 coil Hook-up Wire.
- Sundries: Nuts and Bolts, Solder Lugs, Grid Clips.

COMPLETE KIT OF PARTS

as listed above.

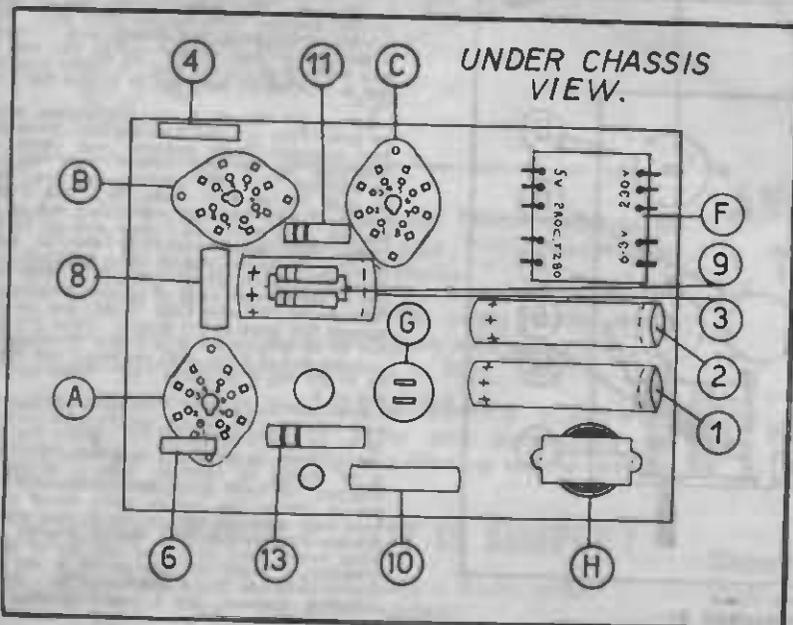
Cat. No. AK2060—  
Without Cabinet

£7/15/-

WITH IVORY COLLOURED CABINET.  
Same Cabinet as described on Page 58.

Cat. No. AK2060A—

£8/15/-



(DIAGRAM C.)

## CONNECTIONS TO BE MADE

<b>6U7G SOCKET</b>	<b>A</b>	Pin No. 1 Earthed to Chassis.		<b>R.F. COIL WITH REACTION</b> (CONTINUED)	<b>D</b>	Lug 4 Earthed to Chassis.
		Pin No. 2 Earthed to Chassis.				Lug 5 To centre lug of vol. control "I."
		Pin No. 3 To one end of 6, 8, and 13.				Lug 6 To pin No. 4 of "A."
		Pin No. 4 To Lug No. 6 of "D."				
		Pin No. 5 Earthed to Chassis.				
		Pin No. 6 No connection.				
		Pin No. 7 Filament connection (See text).				
		Pin No. 8 Earthed to Chassis.				
<b>6V6GT SOCKET</b>	<b>B</b>	Pin No. 1 Earthed to Chassis.		<b>TUNING CONDENSER</b>	<b>E</b>	Fixed plates to No. 3 lug of coil "D" and one end of 5 and 12
		Pin No. 2 Earthed to Chassis.				
		Pin No. 3 To 4 and one lead of "H."				
		Pin. No. 4 To lug of "G" nearest front of Chassis.				
		Pin No. 5 To 8 and 11.				
		Pin No. 6 No connection.				
		Pin No. 7 Filament connection (see text).				
		Pin No. 8 To Positive end (+) of 3 and to 9.				
<b>6X5GT SOCKET</b>	<b>C</b>	Pin No. 1 Earthed to Chassis.		<b>POWER TRANSFORMER</b>	<b>F</b>	230V. LUGS WIRED TO POWER FLEX
		Pin No. 2 Earthed to Chassis.				
		Pin No. 3 To one 280v. lug of "F."	6.3v. lugs: One lug is earthed to chassis and also used as earthing point for 1 and 2. The other 6.3v. lug is connected to Pin No. 7 of "A," "B," and "C."			
		Pin No. 4 No connection.				
		Pin No. 5 To other 280v. lug of "F."	280v. C.T. The 280v. lugs wire up to pins No. 3 and 5 of "C." The C.T. lug is earthed. Do not use the 5v. lugs.			
		Pin No. 6 No connection.				
		Pin No. 7 To one 6.3v. lug on "F."				
		Pin No. 8 To lug of "G" nearest back of chassis.				
<b>R.F. COIL WITH REACTION</b>	<b>D</b>	Lug 1 To aerial.		<b>FILTER CHOKE</b>	<b>G</b>	Lug nearest front of Chassis has the following connections made to it. One end of 10 and 13, also one covered lead of "H," positive end of 1 and Pin No. 4 of "B."
		Lug 2 Earthed to Chassis.				
		Lug 3 To fixed plates of tuning condenser "E."	Other lug connects to Pin No. 8 of "C" and positive (+) end of 2.			
<b>SPEAKER TRANSFORMER</b>	<b>H</b>	One covered lead to front lug of "G," other covered lead to Pin No. 3 of "B."		<b>.5 MEG. VOLUME CONTROL</b>	<b>I</b>	Left hand lug earthed to Chassis.
		Enamelled leads feed through Chassis and connect to two voice coil lugs on side of speaker frame.				
			Centre lug to one end of 7, also to lug No. 5 on coil "D."			
		Right hand lug to one end of 10.				

## SMALL COMPONENT CONNECTIONS TO BE MADE

<b>16 Mfd Electrolytic</b>	<b>1</b>	(+) Positive end to one lug of "G."		<b>.0001 Mica condenser</b>	<b>5</b>	One end to fixed plates of tuning condenser.
		(-) Negative end earthed to Chassis.				Other end to grid cap on 6U7G valve.
<b>16 Mfd Electrolytic</b>	<b>2</b>	(+) Positive end to other lug of "G."		<b>.00025 Mica condenser</b>	<b>6</b>	One end to Pin No. 3 of "A."
		(-) Negative end earthed to Chassis.	Other end earthed to Chassis.			
<b>10 Mfd Electrolytic</b>	<b>3</b>	(+) Positive end to Pin No. 8 of "B."		<b>.25 Tubular condenser</b>	<b>7</b>	One end to centre lug of vol. control "I."
		(-) Negative end to Pin No. 1 of "C" which is earthed to Chassis.	Other end earthed to Chassis.			
<b>.004 Mica condenser</b>	<b>4</b>	One end to Pin No. 3 of "B."		<b>.01 Tubular condenser</b>	<b>8</b>	One end to Pin No. 3 of "A."
		Other end earthed to Chassis.	Other end to Pin No. 5 of "B."			
<b>300 Ohm Resistor (See Text)</b>	<b>9</b>	One end to Pin No. 8 of "B."		<b>.5 MEG. VOLUME CONTROL</b>	<b>I</b>	One end to Pin No. 8 of "B."
		Other end to Pin No. 1 of "C" which is earthed to Chassis.	Other end to Pin No. 1 of "C" which is earthed to Chassis.			

50,000 Ohm Resistor	10	One end to lug of "G" nearest front of Chassis.	2 Megohm Resistor	12	One end to grid cap of 6U7G valve.
		Other end to right hand lug of vol. control "I."			Other end to fixed plates of tuning condenser.
500,000 Ohm Resistor	11	One end to Pin No. 5 of "B."	.25 Meg Resistor	13	One end to Pin No. 3 of "A."
		Other end to Pin No. 2 of "C" which is earthed to Chassis.			Other end to lug of "G" nearest front of Chassis.

# THE R.C.A. VALVE CHART

Giving full characteristics of all receiving tubes has been printed in our Annual by the kind permission of the R.C.A. representatives for New Zealand . . . The National Electrical and Engineering Co., Wellington.



## STANDARD RESISTOR COLOUR CODE

In the R.M.A. (American) standard coding, ten colours are assigned to the figures as shown in the following table:—

Figure	Colour	Figure	Colour
0	Black	5	Green
1	Brown	6	Blue
2	Red	7	Violet
3	Orange	8	Grey
4	Yellow	9	White

The body of the Resistor is coloured to represent the first figure of the resistance value. One end of the resistor is coloured to represent the second figure. A band or dot of colour, representing the number of ciphers following the first two figures, is located within the body colour.

Ohms.	Body	End.	Dot.	Ohms.	Body	End.	Dot.
100	Brown	Black	Brown	15,000	Brown	Green	Orange
150	Brown	Green	Brown	20,000	Red	Black	Black
200	Red	Black	Brown	25,000	Red	Green	Orange
250	Red	Green	Brown	30,000	Orange	Black	Orange
300	Orange	Black	Brown	40,000	Yellow	Black	Orange
350	Orange	Green	Brown	50,000	Green	Black	Orange
400	Yellow	Black	Brown	60,000	Blue	Black	Orange
450	Yellow	Green	Brown	75,000	Violet	Green	Orange
500	Green	Black	Brown	100,000	Brown	Black	Yellow
750	Violet	Green	Brown	150,000	Brown	Green	Yellow
1,000	Brown	Black	Red	200,000	Red	Black	Yellow
2,000	Red	Black	Red	250,000	Red	Green	Yellow
3,000	Orange	Black	Red	300,000	Orange	Black	Yellow
4,000	Yellow	Black	Red	500,000	Green	Black	Yellow
5,000	Green	Black	Red	750,000	Violet	Green	Yellow
6,000	Blue	Black	Red	1,000,000	Brown	Black	Green
10,000	Brown	Black	Orange	2,000,000	Red	Black	Green

## LATEST AMERICAN RESISTOR CODING

When using 1RC or similar type resistors the colour code is the same though shown in a different manner. The resistor has four bands of colour at one end. To find out the resistance hold the resistor with the colours on the left and read from left to right.

The first band is (Body), second band is (End), third is (Dot). The fourth band denotes the tolerance, i.e.

Silver = 10% +/-  
Gold = 5% +/-

# The "10 Range Meter"

An excellent piece of Test Equipment for the Radio enthusiast.

Considerable time and thought have been devoted to producing a meter kit set which would be simple and inexpensive to build, yet giving reasonably accurate readings. Here is the result.

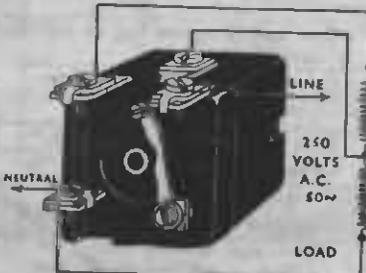
The circuit is built around a 3in. 0.1 m.a. 100 ohm internal resistance, Palec Meter fitted with an easily read Universal scale. The complete unit is housed in a wooden cabinet measuring 9in. x 7in. x 2in.

### DIAGRAM OF CONNECTIONS

#### NEECO

3 HEAT RANGE SWITCH TYPE AR43 FOR ALTERNATING CURRENT ONLY

CAPACITY: 10 AMPERES, 250 VOLTS



### PARTS LIST

- 1 Palec 0-1 Ma. Meter (with Universal Scale).
  - 1 12 Contact 2 bank Switch.
  - 2 Pointer Knobs.
  - 1 9 x 7 1/2 in. Bakelite Panel.
  - 4 Shunts.
  - 5 Resistors.
  - 1 1000 ohm Volume Control.
  - 3 Banana Sockets.
  - 1 Special Wooden Box.
  - 3ft. Single Strand Wire.
  - 1 4 1/2 volt Battery.
- SUNDRIES: Solder Lugs, Nuts, and Bolts, etc.

COMPLETE KIT OF PARTS AS ABOVE

Cat. No. AK2041— **£5/12/6**

FULL CONSTRUCTIONAL DETAILS WITH EACH KIT.



Type	Name	Tube Dimensions and Socket Connections		Cathode Type and Rating		Use <small>Values in right give operating conditions and characteristics for indicated typical use</small>	Plate Supply Volts	Grid Bias Volts	Screen Supply Volts	Screen Current Ma.	Plate Current Ma.	AC Plate Resistance Ohms	Trans-Conductance (Gd plate) $\mu$ ms	Amplification Factor	Load for Stated Power Output Ohms	Power Output Watts	Type	
		Dim.	S.C.	S.T.	Volts													amp.
00-A	Detector Triode	D11	4D	D.C. P	5.0	0.25	Grid-Leak Detector	45			1.5	30000	666	20			00-A	
01-A	Detector & Amplifier	D12	4D	D.C. P	5.0	0.25	Class A Amplifier	135	- 4.5 - 9.0		2.3 3.0	11000 10000	735 800	8.0 5.0			01-A	
02A	Full-Wave Gas Rectifier	D8	4R	Cold			Rectifier										02A	
02A-G	Full-Wave Gas Rectifier	D1	0-4R	Cold			Rectifier										02A-G	
1A3	HF Diode	D6	5AP1	H	1.4	0.15	Detector Rectifier										1A3	
1A4-P	Supercontrol RF Amplifier Pentode	D8	6M	D.C. P	2.0	0.06	Amplifier										1A4-P	
1A5-GT	Power Amplifier Pentode	C3	0-4X	D.C. P	1.4	0.05	Class A Amplifier	85 90	- 4.5 - 4.5	85 90	0.7 0.8	3.5 4.0	30000 300000	800 850	25000 25000	0.100 0.115	1A5-GT	
1A6	Pentagrid Converter a	D8	6L	D.C. P	2.0	0.06	Converter	135 180	- 3.0 min.	67.5 67.5	2.5 2.4	1.2 1.3	400000 500000	Anode-Grid (#2): 180 $\mu$ max. volts, 2.3 ma. Oscillator-Grid (#1) Resistor a. Conversion Transcond., 300 micromhos.			1A6	
1A7-GT	Pentagrid Converter a	C3	07-72K	D.C. P	1.4	0.05	Converter	90	0	45 $\phi$	0.7	0.5	600000	Anode-Grid (#2): 90 max. volts, 1.8 ma. Oscillator-Grid (#1) Resistor, 0.2 meg. Conversion Transcond., 250 micromhos.			1A7-GT	
1B3-GT/8016	Half-Wave Rectifier	D1a	80	P	1.25	0.2	Half-Wave Rectifier										1B3-GT/8016	
1B4-P	RF Amplifier Pentode	D8	6M	D.C. P	2.0	0.06	Amplifier										1B4-P	
1B5/25S	Duplex-Diode Triode	D6	6M	D.C. P	2.0	0.06	Triode Unit as Amplifier										1B5/25S	
1B7-GT	Pentagrid Converter	C3	07-72K	D.C. P	1.4	0.10	Converter	90	0	45 $\phi$	1.3	1.5	350000	Anode-Grid (#2): 90 max. volts, 1.8 ma. Oscillator-Grid (#1) Resistor, 0.2 meg. Conversion Transcond., 350 micromhos.			1B7-GT	
1C5-GT	Power Amplifier Pentode	C3	0-4X	D.C. P	1.4	0.10	Class A Amplifier	83 90	- 7.0 - 7.5	83 90	1.6 1.6	7.0 7.5	110000 115000	1500 1550	9000 8000	0.20 0.24	1C5-GT	
1C6	Pentagrid Converter a	D8	6L	D.C. P	2.0	0.12	Converter										1C6	
1C7-G	Pentagrid Converter b	D8	0-7Z	D.C. P	2.0	0.12	Converter	135 180	- 3.0 - 3.0	67.5 67.5	2.5 2.0	1.3 1.5	600000 700000	Anode-Grid (#2): 180 $\mu$ max. volts, 4.0 ma. Oscillator-Grid (#1) Resistor a. Conversion Transcond., 325 micromhos.			1C7-G	
1D5-GP	Supercontrol RF Amplifier Pentode	D8	0-5Y	D.C. P	2.0	0.06	Class A Amplifier	90 180	- 3.0 min.	67.5 67.5	0.8 0.8	2.2 2.3	600000 1.0 $\phi$	730 750			1D5-GP	
1D5-GT	Supercontrol RF Amplifier Tetrode	D8	0-4M	D.C. P	2.0	0.06	Class A Amplifier	180	- 3.0	67.5	0.7	2.2	600000				1D5-GT	
1D7-G	Pentagrid Converter a	D8	0-7Z	D.C. P	2.0	0.06	Converter										1D7-G	
1D8-GT	Diode-Triode-Power Amplifier Pentode	C3	0-4A1	D.C. P	1.4	0.10	Pentode Unit as Class A Amplifier Triode Unit as Class A Amplifier	45 90	- 4.5 - 9.0	45 90	0.3 1.0	1.6 5.0	300000 300000	650 925	20000 18000	0.035 0.200	1D8-GT	
1E5-GP	RF Amplifier Pentode	D8	0-5Y	D.C. P	2.0	0.06	Class A Amplifier	90 180	- 3.0 - 3.0	67.5 67.5	0.7 0.4	1.7 1.3	1.0 $\phi$ 1.3 $\phi$	600 650			1E5-GP	
1E7-G	Twin-Pentode Power Amplifier	D3	0-8C	D.C. P	2.0	0.24	Class A Amplifier	135	- 7.5	135							1E7-G	
1F4	Power Amplifier Pentode	D12	1K	D.C. P	2.0	0.12	Amplifier										1F4	
1F5-G	Power Amplifier Pentode	D10	0-4K	D.C. P	2.0	0.12	Class A Amplifier	90 135	- 3.0 - 4.5	90 135	1.1 2.4	4.0 8.0	240000 200000	1400 1700	20000 16000	0.11 0.31	1F5-G	
1F6	Duplex-Diode Pentode	D6	6M	D.C. P	2.0	0.06	Pentode Unit as Amplifier										1F6	
1F7-G	Duplex-Diode Pentode	D8	0-7AF	D.C. P	2.0	0.06	Pentode Unit as RF Amplifier Pentode Unit as AF Amplifier	180 155 $\mu$	- 1.5 - 2.0	67.5	0.7	7.2	1.0 $\phi$	650			1F7-G	
1G4-GT	Detector Amplifier Triode	C3	0-8B	D.C. P	1.4	0.05	Class A Amplifier	90	- 6.0			3.3	10700	825	8.0		1G4-GT	
1G5-G	Power Amplifier Pentode	D10	0-4K	D.C. P	2.0	0.12	Class A Amplifier	90 135	- 6.0 - 13.5	90 135	2.5 2.5	0.5 0.7	133000 160000	1500 1550	8500 9000	0.35 0.55	1G5-G	
1G6-GT	Twin-Triode Amplifier	C3	0-7AB	D.C. P	1.4	0.10	Class B Amplifier	90	0								1G6-GT	
1H4-G	Detector & Amplifier	D8	0-66	D.C. P	2.0	0.06	Class A Amplifier Class B Amplifier	90 135 180	- 4.5 - 9.0 - 13.5				2.5 3.0 3.1	11000 10300 10300	850 900 900	9.3 9.3		1H4-G
1H5-GT	Diode High-Mu Triode	C3	07-42K	D.C. P	1.4	0.05	Triode Unit as Class A Amplifier	90	0			0.15	240000	275	65		1H5-GT	
1H6-G	Duplex-Diode Triode	D6	0-7AA	D.C. P	2.0	0.06	Triode Unit as Class A Amplifier	135	- 3.0			0.8	35000	575	20		1H6-G	
1J5-G	Power Amplifier Pentode	D14	0-4K	D.C. P	2.0	0.12	Class A Amplifier	135	- 16.5	135	2.0	7.0	105000	950	13500	0.45	1J5-G	
1J6-G	Twin-Triode Amplifier	D3	0-7AB	D.C. P	2.0	0.24	Class B Amplifier	135 135	0 - 3.0								1J6-G	
1L4	RF Amplifier Pentode	D8	6AR	D.C. P	1.4	0.05	Class A Amplifier	90 90	0 0	67.5 90	1.2 2.0	2.9 4.5	600000 260000	925 1025			1L4	
1LA4	Power Amplifier Pentode	D8	6AD1	D.C. P	1.4	0.05	Amplifier										1LA4	
1LA6	Pentagrid Converter	D8	7AK	D.C. P	1.4	0.05	Converter	90	0	65 $\phi$	0.5	0.55	750000	Anode-Grid (#2): 90 max. volts, 1.2 ma. Oscillator Grid (#1) Resistor, 0.2 meg. Conversion Transcond., 250 micromhos.			1LA6	
1LB4	Power Amplifier Pentode	D8	6AD1	D.C. P	1.4	0.05	Class A Amplifier										1LB4	
1LE3	Detector Amplifier Triode	D8	6AA	P	1.4	0.05	Class A Amplifier	90 90	0 - 3			4.5 1.4	11700 19000	1300 760	14.5 14.5		1LE3	

PROSPECTIVE BUYER — ALL GOODS LISTED IN THIS CATALOGUE ARE COVERED BY OUR 7 DAY MONEY-BACK GUARANTEE

Type	Name	Tube Dimensions and Socket Connections		Cathode Type and Rating		Use Values in right plus operating conditions and characteristics for indicated typical use	Plate Supply Volts	Grid Bias Volts	Screen Supply Volts	Screen Current Ma	Plate Current Ma	AC Plate Resistance Ohms	Trans-Conductance (Grid-plate) $\mu$ mhos	Amplification Factor	Load Impedance Ohms	Power Output Watts	Type
		Dim.	S.C.	C.T.	Volts												
1LH4	Diode High-Mu Triode RF Amplifier Pentode	80	8AQ	D.C. P	1.4	0.05	Triode Unit as Class A Amplifier										1LH4
1LN5	RF Amplifier Pentode	80	7AO	D.C. P	1.4	0.05	Class A Amplifier	90	0	90	0.35	1.6	1.15	800			1LN5
1N5-GT	RF Amplifier Pentode	83	QT-5YK	D.C. P	1.4	0.05	Class A Amplifier	90	0	90	0.3	1.2	1.55	750			1N5-GT
1N6-G	Diode-Power Amplifier Pentode	D1	Q-7AM	D.C. P	1.4	0.05	Pentode Unit as Class A Amplifier	90	- 4.5	90	0.7	3.4	300000	800	25000	0.1	1N6-G
1P5-GT	Supercurrent RF Amplifier Pentode	83	QT-4YK	D.C. P	1.4	0.05	Class A Amplifier	90	0	90	0.7	2.3	800000	750			1P5-GT
1Q5-GT	Beam Power Amplifier	83	Q-5AF	D.C. P	1.4	0.1	Class A Amplifier	110	- 6.6	110	1.4	10.0	100000	2200	8000	0.40	1Q5-GT
1R5	Pentagrid Converter	80	7AY	D.C. P	1.4	0.05	Converter	45 90	0 0	45 90	1.9 3.2	0.7	600000	Grid #1 Resistor, 100000 ohms. Conversion Transcond., 300 micromhos.			1R5
1R4	Power Amplifier Pentode	80	7AV	D.C. P	1.4	0.1	Class A Amplifier	45 90	- 4.5 - 7.0	45 90	0.8 1.4	3.8	100000	1250	8000	0.065	1R4
1S5	Diode-Pentode	80	6AU	D.C. P	1.4	0.05	Pentode Unit as AF Amplifier	Plate Supply, 90 volts applied through 1 meg. resistor. Grid Bias, 0 volts. Screen Supply, 90 volts applied through 1 meg. resistor. Grid Resistor, 10 megohms. Voltage Gain, 50 approx.									1S5
1T4	Super-Control RF Amplifier Pentode	80	6AR	D.C. P	1.4	0.05	Class A Amplifier	45 90	0 0	45 90	1.7 3.5	1.7	350000	700 900			1T4
1T5-GT	Beam Power Amplifier	83	Q-5Z	D.C. P	1.4	0.05	Class A Amplifier	90	- 6.0	90	0.8	6.5	500000	1150	14000	0.17	1T5-GT
1U4	RF Amplifier Pentode	80	6AB	D.C. P	1.4	0.05	Class A Amplifier	90	0	90	0.45	1.6	1.55	900			1U4
1-V	Half-Wave Rectifier	D8	4Q	H	6.3	0.3	With Capacitive-Input Filter	Max. A-C Plate Volts (RMS), 325 Max. D.C. Output Ma., 45									1-V
2A3	Power Amplifier Triode	83	4D	F	2.5	2.5	Class A Amplifier	350	- 45.0	300	60.0	800	5750	4.2	5000	10.07	2A3
2A4-G	Gas-Triode	D8	Q-80Y	F	2.5	2.5	Class AB <sub>1</sub> Amplifier	300 300	Cath. Bias, 780 ohms $\pm$ 62 volts, fixed bias	80.0 $\pm$					5000	15.07	2A4-G
2A5	Power Amplifier Pentode	D12	6B	H	3.5	1.75	Relay Service Amplifier										2A5
2A6	Duplex-Diode High-Mu Triode	D9	5Q	H	3.5	0.8	Triode Unit as Amplifier										2A6
2A7	Pentagrid Converter	D8	7C	H	2.5	0.8	Converter										2A7
2B7	Duplex-Diode Pentode	D9	7D	H	2.5	0.8	Pentode Unit as Amplifier										2B7
2E5	Electron-Ray Tube	D6	8H	H	2.5	0.8	Visual Indicator										2E5
3A8-GT	Diode-Triode RF Amplifier Pentode	83a	8A3	D.C. P	1.4	0.1	Triode Unit as Class A Amplifier	90	0		0.2	300000	325	65			3A8-GT
3Q4	Power Amplifier Pentode	80	7BA	D.C. P	1.4	0.1	Pentode Unit as Class A Amplifier	90	0	90	0.5	1.5	800000	750			3Q4
3Q5-GT	Beam Power Amplifier	83	Q-7AP	D.C. P	1.4	0.1	Class A Amplifier	110 110	- 6.6 - 6.6	110 110	1.4 1.7	10.0	100000	2200	8000	0.40	3Q5-GT
3S4	Power Amplifier Pentode	80	7BA	D.C. P	1.4	0.1	Class A Amplifier	90 90	- 7 - 7	67.5 67.5	1.4 1.1	7.4	100000	1375	8000	0.27	3S4
3V4	Power Amplifier Pentode	80	8B3	D.C. P	1.4	0.1	Class A Amplifier	90 90	- 4.5 - 4.5	90 90	2.1 1.7	9.5	100000	2150	10000	0.27	3V4
5T4	Full-Wave Rectifier	D7	5T	F	5.0	3.0	With Capacitive-Input Filter	Max. A-C Volts per Plate (RMS), 450 Max. Peak Inverse Volts, 1550									5T4
5T6	Projection Kinescope	H1	12C	H	6.3	0.6	With Inductive-Input Filter	Max. A-C Volts per Plate (RMS), 550 Max. Peak Inverse Volts, 1550									5T6
5U4-G	Full-Wave Rectifier	D2	Q-4T1	F	5.0	3.0	With Capacitive-Input Filter	Max. A-C Volts per Plate (RMS), 450 Max. Peak Inverse Volts, 1550									5U4-G
5V4-G	Full-Wave Rectifier	D10	Q-4L1	H	5.0	2.0	With Inductive-Input Filter	Max. A-C Volts per Plate (RMS), 550 Max. Peak Inverse Volts, 1550									5V4-G
5W4	Full-Wave Rectifier	C2	5T	F	5.0	1.5	With Capacitive-Input Filter	Max. A-C Volts per Plate (RMS), 375 Max. Peak Inverse Volts, 1400									5W4
5W4-GT	Full-Wave Rectifier	C7	Q-4T3	F	5.0	1.5	With Inductive-Input Filter	Max. A-C Volts per Plate (RMS), 350 Max. Peak Inverse Volts, 1400									5W4-GT
5X4-G	Full-Wave Rectifier	D2	Q-4Q	F	5.0	3.0	With Capacitive-Input Filter	Max. A-C Volts per Plate (RMS), 500 Max. Peak Inverse Volts, 1400									5X4-G
5Y3-GT	Full-Wave Rectifier	C7	Q-4T1	F	5.0	2.0	With Capacitive-Input Filter	Max. A-C Volts per Plate (RMS), 350 Max. Peak Inverse Volts, 1400									5Y3-GT
5Y4-G	Full-Wave Rectifier	D10	Q-4Q	F	5.0	2.0	With Inductive-Input Filter	Max. A-C Volts per Plate (RMS), 500 Max. Peak Inverse Volts, 1400									5Y4-G
5Z3	Full-Wave Rectifier	C3	4C	F	6.0	3.0	With Capacitive-Input Filter	Max. A-C Volts per Plate (RMS), 350 Max. Peak Inverse Volts, 1400									5Z3
5Z4	Full-Wave Rectifier	C2	4L	H	5.0	2.0	With Inductive-Input Filter	Max. A-C Volts per Plate (RMS), 500 Max. Peak Inverse Volts, 1400									5Z4
6A3	Power Amplifier Triode	83	4D	F	6.3	1.0	Amplifier										6A3
6A4/LA	Power Amplifier Pentode	D12	8B	F	6.3	0.3	Class A Amplifier	100 180	- 6.5 - 12.0	100 180	1.6 3.9	22.0	83250	1200	11000	0.31	6A4/LA
6A6	Twin-Triode Amplifier	D12	7B	H	6.3	0.8	Amplifier										6A6
6A7	Pentagrid Converter	D8	7C	H	6.3	0.3	Converter										6A7
6A7S	Pentagrid Converter	D8	7C	H	6.3	0.3	Converter										6A7S

LAMPHOUSE RADIO BOOKLETS ARE INTERESTING AND INSTRUCTIVE  
 CIRCUIT BOOK 2/6 — INSTRUCTION COURSE 2/6 — DATA BOOK 3/6

Type	Name	Tube Dimensions and Socket Connections		Cathode Type and Rating		Use Values to right give operating conditions and characteristics for indicated typical use	Plate Supply Volts	Grid Bias Volts	Screen Supply Volts	Screen Current Ma.	Plate Current Ma.	AC Plate Resistance Ohms	Trans-Conductance (Grid-plate) $\mu$ mmhos	Amplification Factor	Load Res. Ohms	Power Output Watts	Type	
		Diag.	S.E.	E.T.	Volts													Amper.
6A8	Pentagrid Converter $\phi$	C1	8A	M	6.3	0.3	100	- 1.5	50	1.3	1.1	600000					6A8	
6A8-G	Pentagrid Converter $\phi$	D8	D-8A1	M	6.3	0.3	250	- 3.0	100	2.7	3.3	360000					6A8-G	
6A8-GT	Pentagrid Converter $\phi$	C8	GT-8A1	M	6.3	0.3											6A8-GT	
6A8S/6N5	Electron-Ray Tube	D4	8N	M	6.3	0.15											6A8S/6N5	
6A8T/18S3	Television Amplifier Pentode	88	8N	M	6.3	0.45	300	- 3.0	200	3.2	13.5	700000	5000				6A8T/18S3	
6AC3-GT	High-Mu Power Amplifier Triode	C3	0-4Q1	M	6.3	0.4	250										6AC3-GT	
6AC7/18E2	Television Amplifier Pentode	88	8N	M	6.3	0.45	300										6AC7/18E2	
6AD6-G	Electron-Ray Tube Twin Indicator Type	88b	7AD	M	6.3	0.15											6AD6-G	
6AD7-G	Triode-Power Amplifier Pentode	D10	8AV	M	6.3	0.85	250	- 23.0			3.7	19000	355	8			6AD7-G	
							250	- 16.5	250	6.5	34.0	80000	9200	7000	3.2			
							375	Cath. Bias	250	6.7 $\phi$	41.0 $\phi$		Cathode-Bias Resistor, 470 ohms $\phi$	16000	9.01			
6AE5-GT	Amplifier Triode	C3	0-4Q1	M	6.3	0.3	85	- 15.0			7.0	3500	1200	4.2			6AE5-GT	
6AE6-G	Twin-Plate Control Tube	D8	7AM	M	6.3	0.15	250	- 1.5			6.5	25000	1000	25			6AE6-G	
							250	- 35.0			0.01							
							250	- 1.5			4.3	35000	950	33				
6AE7-GT	Twin-Input Triode Amplifier	C3	0-7A1	M	6.3	0.5	250	- 13.5			10.0	4650	3000	14			6AE7-GT	
							250								10000	9.5		
6AF6-G	Electron-Ray Tube Twin Indicator Type	88	7AD	M	6.3	0.15											6AF6-G	
6AG5	RF Amplifier Pentode	D8	780	M	6.3	0.3	100	Cath. Bias	100	1.4	5.5	300000	4750	Cath. Bias Res., 100 ohms			6AG5	
							250	Bias	150	2.0	7.0	800000	5000	Cath. Bias Res., 200 ohms				
							180	Cath. Bias			7.0	7900	5700	Cath. Bias Res., 350 ohms				
6AG7	Video Power Amplifier Pentode	82	8Y	M	6.3	0.65	300	Cath. Bias - 2.6	125	7.0	38.0		Cathode Bias Resistor, 57 ohms. Peak-to-Peak Volts Output, 140 approx.			6AG7		
6AK6	Power Amplifier Pentode	D8	78K	M	6.3	0.15	180	- 9.0	180	2.5	15	200000	2300		10000	1.1	6AK6	
6AL5	HF Twin Diode	A1	6BT	M	6.3	0.3											6AL5	
6AQ5	Beam Power Amplifier	D8	78Z	M	6.3	0.45	180	- 6.5	180	3.0	29.0	58000	3700		5500	4.0	6AQ5	
							250	- 12.5	250	4.3	45.0	52000	4100		5000	3.5		
6AQ6	Duplex-Diode High-Mu Triode	D8	78T	M	6.3	0.15	100	- 1.0			0.6	61000	1150	70			6AQ6	
							250	- 3.0			1.0	58000	1300	70				
6AT6	Duplex-Diode High-Mu Triode	D8	78T	M	6.3	0.3	100	- 1.0			0.8	54000	1300	70			6AT6	
							250	- 3.0			1.0	58000	1200	70				
6AU6	RF Amplifier Pentode	D8	78K1	M	6.3	0.3	100	- 1.0	100	2.0	5.2	500000	3900				6AU6	
							250	- 1.0	150	4.3	10.8	1.01	5200					
6B4-G	Power Amplifier Triode	D2	0-6B4	F	6.3	1.0	325	Cath. Bias, 850 ohms $\phi$			80.0 $\phi$				4.2	2500	3.30	6B4-G
							325	Cath. Bias, 850 ohms $\phi$			80.0 $\phi$			5000	10.01			
6B5	Direct-Coupled Power Amplifier	D12	8A8	M	6.3	0.8											6B5	
6B6-G	Duplex-Diode High-Mu Triode	D8	0-7V1	M	6.3	0.3											6B6-G	
6B7	Duplex-Diode Pentode	D8	7D	M	6.3	0.3											6B7	
6B7S	Duplex-Diode Pentode	D8	7D	M	6.3	0.3											6B7S	
6B8	Duplex-Diode Pentode	C1	8E	M	6.3	0.3											6B8	
6B8-G	Duplex-Diode Pentode	D8	0-8E1	M	6.3	0.3	100	- 3.0	100	1.7	3.8	300000	950				6B8-G	
							250	- 3.0	125	2.3	9.0	600000	1125					
6BA6	RF Amplifier Pentode	D8	78K1	M	6.3	0.3	90	Cath. Bias, 3500 ohms. Screen Resistor = 1.1 meg. Grid Resistor = 0.5 megohm. Gain per stage = 55									6BA6	
							200	Cath. Bias, 1600 ohms. Screen Resistor = 1.2 meg. Grid Resistor = 0.5 megohm. Gain per stage = 29										
6BE6	Pentagrid Converter	D8	7CH	M	6.3	0.3	100	- 1.5	100	7.3	2.8	500000	4300	Cath. Bias Res., 68 ohms			6BE6	
6BF6	Duplex-Diode Triode	D8	78T	M	6.3	0.3	250	- 1.3	100	7.1	3.0	1.01	4400	Cath. Bias Res., 68 ohms			6BF6	
6BG6-G	Beam Power Amplifier	F1a	8Y	M	6.3	0.9											6BG6-G	
6C4	HF Power Triode	88	680	M	6.3	0.15	100	0			11.6	6250	3100	19.5			6C4	
							250	- 8.5			10.5	7700	2290	17				

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Type	Name	Tube Dimensions and Socket Connections		Cathode Type and Rating			Use <small>Values to give operating conditions and characteristics for indicated typical use</small>	Plate Supply Volts	Grid Bias Volts	Screen Supply Volts	Screen Current Ma.	Plate Current Ma.	AC Plate Resistance Ohms	Trans-Conductance (Grid-plate) $\mu$ mhos	Amplification Factor	Load for Stated Output Ohms	Power Output Watts	Type	
		Diam.	S.C.	E.T.	Wts.	Imp.													
6C5	Detector* Amplifier Triode	82	8Q	M	6.3	0.3	Class A Amplifier	250	- 8.0	—	—	8.0	10000	2000	20	—	—	6C5	
6C5-GT	Detector* Amplifier Triode	63	GT-40A	M	6.3	0.3	Bias Detector	300	—	—	—	—	—	—	—	—	—	6C5-GT	
6C6	Triple-Grid Detector Amplifier	D13	8P	M	6.3	0.3	Amplifier Detector	—	—	—	—	—	—	—	—	—	—	6C6	
6C7	Duplex-Diode Triode	D9	7D	M	6.3	0.3	Triode Unit as Class A Amplifier	250	- 9.0	—	—	4.5	16000	1250	30	—	—	6C7	
6C8-G	Twin-Triode Amplifier	D0	0-80	M	6.3	0.3	Each Unit as Amplifier	250	- 4.5	—	—	3.3	32500	1600	36	—	—	6C8-G	
6D6	Triple-Grid Supercontrol Amplifier	D12	8P	M	6.3	0.3	Amplifier Mixer	—	—	—	—	—	—	—	—	—	—	6D6	
6D7	Triple-Grid Detector Amplifier	D12	7H	M	6.3	0.3	Amplifier Detector	—	—	—	—	—	—	—	—	—	—	6D7	
6D8-G	Pentagrid Converter	D0	0-8A1	M	6.3	0.15	Converter	135 250	- 3.0 - 3.0	67.5 100	1.7 2.6	1.5 3.5	600000 400000	Anode-Grid (#2): 250 $\mu$ max. volts, 4.3 ma. Oscillator-Grid (#1) Resistor = 5000 ohms. Conversion Transcond. = 550 micromhos.	—	—	—	6D8-G	
6E5	Electron-Ray Tube	D4	8R	M	6.3	0.3	Visual Indicator	—	—	—	—	—	—	—	—	—	—	6E5	
6E6	Twin-Triode Power Amplifier	D12	7D	M	6.3	0.6	Push-Pull Class A Amplifier	180 250	- 20.0 - 27.5	—	—	—	—	—	—	—	15000 14000	0.75 1.00	6E6
6E7	Triple-Grid Supercontrol Amplifier	D12	7H	M	6.3	0.3	Amplifier	—	—	—	—	—	—	—	—	—	—	6E7	
6F5	High-Mu Triode	C1	8M	M	6.3	0.3	Amplifier	—	—	—	—	—	—	—	—	—	—	6F5	
6F5-GT	High-Mu Triode	C3	0-8M1	M	6.3	0.3	Amplifier	—	—	—	—	—	—	—	—	—	—	6F5-GT	
6F6	Power Amplifier Pentode	C2	7E	M	6.5	0.7	Amplifier	—	—	—	—	—	—	—	—	—	—	6F6	
6F6-G	Power Amplifier Pentode	D10	0-7G1	M	6.5	0.7	Pentode Class A Amplifier Triode Unit as Class A Amplifier Pentode Push-Pull Class A Amplifier Pentode Push-Pull Class AB <sub>2</sub> Amplifier Triode Push-Pull Class AB <sub>2</sub> Amplifier	250 285 250 315 315 375 375 350 350	- 18.5 - 20.0 - 20.0 - 24.0 - 26.0	150 285 285 285 250	0.5 7.0 — 12.0 $\phi$ 12.0 $\phi$	34.0 38.0 — 62.0 $\phi$ 62.0 $\phi$	80000 78000 — Cath. Bias Resistor, 320 ohms $\phi$ Cath. Bias Resistor, 340 ohms $\phi$	2500 2550 — — —	0.0 — — — —	7000 7000 — 10000 10000	3.2 4.0 — 10.5 $\phi$ 11.0 $\phi$ 10.0 $\phi$ 10.5 $\phi$	6F6-G	
6F6-GT	Power Amplifier Pentode	C2	0-7G1	M	6.3	0.7	Amplifier	—	—	—	—	—	—	—	—	—	—	6F6-GT	
6F7	Triode-Pentode	D8	7E	M	6.3	0.3	Triode Unit as Class A Amplifier Pentode Unit as Class A Amplifier Pentode Unit as Mixer	100 100 250	- 3.0 - 3.0 - 10.0	— — 100	— — 1.4 1.5	3.5 6.3 6.3	15000 290000 850000	500 1050 1180	8 — —	— — —	— — —	6F7	
6F8-G	Twin-Triode Amplifier	D8	0-8D	M	6.3	0.6	Each Unit as Amplifier	—	—	—	—	—	—	—	—	—	—	6F8-G	
6G6-G	Power Amplifier Pentode	D0	0-7G1	M	6.3	0.15	Pentode Class A Amplifier Triode Unit as Class A Amplifier	135 180 180	- 6.0 - 9.0 - 12.0	135 180 —	2.0 2.5 —	11.5 15.0 11.0	170000 175000 4750	2100 2300 2600	— — 0.5	12000 10000 12000	6.6 1.1 0.25	6G6-G	
6H6	Twin-Diode	A16	7Q	M	6.3	0.3	Voltage Doubler Half-Wave Rectifier	—	—	—	—	—	—	—	—	—	—	—	6H6
6H6-GT	Twin Diode	C3	0-7Q11	M	6.3	0.3	Detector Rectifier	—	—	—	—	—	—	—	—	—	—	—	6H6-GT
6J5	Detector Amplifier Triode	B9	8Q	M	6.3	0.3	Class A Amplifier	80 250	0 - 8.0	—	—	10.0 9.0	6700 7700	5000 2600	20 20	—	—	6J5	
6J5-GT	Detector Amplifier Triode	C3	GT-40B	M	6.3	0.3	Amplifier	—	—	—	—	—	—	—	—	—	—	6J5-GT	
6J6	Twin Triode	B8	78P	M	6.3	0.45	Each Unit as Class A Amplifier Push-Pull Class C Amplifier	100 150	— - 10.0	—	—	0.5 30.0	7100 —	5300 —	38 —	—	—	—	6J6
6J7	Triple-Grid Detector Amplifier	C1	78	M	6.3	0.3	Pentode Class A HF Amplifier Pentode Class A AF Amplifier Pentode Bias Detector Triode Unit as Class A Amplifier	100 250 350 180 250	- 3.0 - 5.0 - 4.3 - 5.3 - 8.0	100 100 100	0.5 0.5 — 5.3 —	3.0 3.0 — — —	1.0 $\phi$ 1.6 + 1 — — —	1185 1225 — — —	— — — — —	— — — — —	6J7		
6J7-G	Triple-Grid Detector Amplifier	D0	0-7R11	M	6.3	0.3	Amplifier Detector	—	—	—	—	—	—	—	—	—	—	6J7-G	
6J7-GT	Triple-Grid Detector Amplifier	C3	GT-78B	M	6.3	0.3	Amplifier	—	—	—	—	—	—	—	—	—	—	6J7-GT	
6J8-G	Triode-Heptode Converter	D8	0-8H	M	6.5	0.3	Triode Unit as Oscillator Heptode Unit as Mixer	100 250	— - 3.0 - 3.0	— 100 100	— 3.0 2.9	4.0 1.4 1.3	— 900000 4.0 $\phi$	— — —	— — —	— — —	— — —	6J8-G	
6K5-GT	High-Mu Triode	D0	GT-4H	M	6.3	0.3	Class A Amplifier	100 250	- 1.5 - 3.0	—	—	0.35 1.1	78000 50000	900 1400	70 70	—	—	6K5-GT	

Discontinued types are shown in light face. Metal and miniature tubes are identified respectively by a narrow or a wide riser preceding or following the type designation.

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11 MANNERS ST. WELLINGTON

RCA Type	Name	Tube Dimensions and Socket Connections		Cathode Type and Rating		Use Values in right give operating conditions and characteristics for indicated typical use	Plate Supply Volts	Grid Bias in Volts	Screen Supply Volts	Screen Current Ma	Plate Current Ma	AC Plate Resistance Ohms	Trans-Conductance (Grid-plate) $\mu$ mmhos	Amplification Factor	Load for Rated Power Output Ohms	Power Output Watts	RCA Type
		Dims.	S.C.	E.T.	Volts												
6K6-GT	Power Amplifier Pentode	C8	G-78	M	6.3	0.4	100	- 7.0	100	1.0	9.0	104000	1500	—	12000	0.35	6K6-GT
							250	-10.0	250	5.3	32.0	48000	2200	—	7800	3.40	
6K7	Triple-Grid Supercontrol Amplifier	C1	70	M	6.3	0.3	285	-15.5	285	9.0	55.0	—	—	—	12000	10.5	6K7
							315	-21.0	350	4.0	25.3	75000	2100	—	9000	4.50	
6K7-G	Triple-Grid Supercontrol Amplifier	C8	G-78	M	6.3	0.3	100	- 1.0	100	2.7	9.5	150000	1650	—	—	—	6K7-G
							250	- 3.0	125	2.6	10.5	600000	1650	—	—	—	
6K7-GT	Triple-Grid Supercontrol Amplifier	C8	GT-78	M	6.3	0.3	—	—	—	—	—	—	—	—	—	—	6K7-GT
6K8	Triode-Hexode Converter	C1	8K	M	6.3	0.3	100	—	—	—	3.0	—	—	—	—	—	6K8
							250	- 3.0	100	6.2	2.3	400000	—	—	—	—	
6K8-G	Triode-Hexode Converter	D8	G-8K	M	6.3	0.3	—	—	—	—	—	—	—	—	—	—	6K8-G
6K8-GT	Triode-Hexode Converter	C7A	GT-8K	M	6.3	0.3	—	—	—	—	—	—	—	—	—	—	6K8-GT
6L5-G	Detector Amplifier Triode	C8	G-8Q1	M	6.3	0.15	135	- 5.0	—	—	3.3	11300	1500	17	—	—	6L5-G
							250	- 9.0	—	—	8.0	9000	1900	17	—	—	
6L6	Beam Power Amplifier	D7	7A0	M	6.3	0.0	250	-14.0	250	5.0	72.0	—	—	—	2500	6.5	6L6
							250	Cath. Bias	250	5.4	75.0	—	—	—	1500	6.3	
							270	-17.5	270	11.0	124.0	—	—	—	5000	17.5	
							270	Cath. Bias	270	11.0	134.0	—	—	—	5000	18.0	
							360	-22.5	270	5.0	88.0	—	—	—	6000	26.5	
							360	Cath. Bias	270	3.0	88.0	—	—	—	9000	24.3	
6L6-G	Beam Power Amplifier	E2	G-7A01	M	6.3	0.0	250	- 10.0	—	—	—	—	—	—	—	—	6L6-G
							250	Cath. Bias	—	—	—	—	—	—	—	—	
							—	—	—	—	—	—	—	—	—	—	
							—	—	—	—	—	—	—	—	—	—	
6L7	Pentagrid Mixer A Amplifier	C1	7T	M	6.3	0.3	250	- 3.0	100	7.1	2.4	—	—	—	—	—	6L7
							250	- 3.0	100	6.5	5.3	60000	1100	—	—	—	
6L7-G	Pentagrid Mixer A Amplifier	D8	G-7T1	M	6.3	0.3	—	—	—	—	—	—	—	—	—	6L7-G	
6N6-G	Direct-Coupled Power Amplifier	D19	G-7AU	M	6.3	0.0	—	—	—	—	—	—	—	—	—	—	6N6-G
6N7	Twin-Triode Amplifier	C2	8D	M	6.3	0.6	250	- 5.0	—	—	6.0	11500	3100	35	20000	exceeds	6N7
							294	- 6.0	—	—	7.0	11000	3200	35	or more	0.4	
6N7-GT	Twin-Triode Amplifier	D8	G-8D1	M	6.3	0.6	—	—	—	—	—	—	—	—	—	—	6N7-GT
6P5-GT	Detector Amplifier Triode	C2	G-8Q1	M	6.3	0.3	—	—	—	—	—	—	—	—	—	—	6P5-GT
6P7-G	Triode-Pentode	D8	G-7U	M	6.3	0.3	—	—	—	—	—	—	—	—	—	—	6P7-G
6Q7	Duplex-Diode High-Mu Triode	C1	7V	M	6.3	0.3	100	- 1.0	—	—	0.0	58000	1200	70	—	—	6Q7
							250	- 3.0	—	—	1.0	58000	1200	70	—	—	
6Q7-G	Duplex-Diode High-Mu Triode	D8	G-7V1	M	6.3	0.3	—	—	—	—	—	—	—	—	—	—	6Q7-G
6Q7-GT	Duplex-Diode High-Mu Triode	C2	GT-7V2	M	6.3	0.3	—	—	—	—	—	—	—	—	—	—	6Q7-GT
6R7	Duplex-Diode Triode	C1	7V	M	6.3	0.3	250	- 9.0	—	—	9.5	8500	1900	10	—	—	6R7
							90	Cath. Bias, 4400 ohms.	—	—	—	—	—	—	—	—	
6R7-G	Duplex-Diode Triode	D8	G-7V2	M	6.3	0.3	—	—	—	—	—	—	—	—	—	—	6R7-G
6R7-GT	Duplex-Diode Triode	C2	G-7V1	M	6.3	0.3	—	—	—	—	—	—	—	—	—	—	6R7-GT
6S7	Triple-Grid Supercontrol Amplifier	C1	7R	M	6.3	0.15	135	- 3.0	67.5	0.0	3.7	1.0	1350	—	—	—	6S7
							250	- 3.0	100	3.0	8.5	1.0	1750	—	—	—	
6S7-G	Triple-Grid Supercontrol Amplifier	D8	G-7R1	M	6.3	0.15	—	—	—	—	—	—	—	—	—	—	6S7-G
6SA7	Pentagrid Converter	C8	8R	M	6.3	0.3	100	Self-Excited	100	8.5	3.3	500000	Grid #1 Resistor, 20000 ohms.	—	—	—	6SA7
							250	—	100	8.5	3.5	1.0	—	—	—	—	
6SA7-GT	Pentagrid Converter	C2	G-8AD	M	6.3	0.3	—	—	—	—	—	—	—	—	—	—	6SA7-GT
6SB7-Y	Pentagrid Converter	D8	8R	M	6.3	0.3	100	- 1.0	100	10.7	3.6	500000	Grid #1 Resistor, 20000 ohms.	—	—	—	6SB7-Y
							250	- 1.0	100	10.0	3.8	1.0	—	—	—	—	
6SC7	Twin-Triode Amplifier	D8	8B	M	6.3	0.3	—	—	—	—	—	—	—	—	—	—	6SC7
6SF5	High-Mu Triode	D3	8AB	M	6.3	0.3	100	- 1.0	—	—	0.4	85000	1150	100	—	—	6SF5
							250	- 2.0	—	—	0.9	65000	1500	100	—	—	
6SF5-GT	High-Mu Triode	C2	G-8AB1	M	6.3	0.3	—	—	—	—	—	—	—	—	—	—	6SF5-GT
6SF7	Diode Supercontrol Amplifier Pentode	D8	7A2	M	6.3	0.3	100	- 1.0	100	4.3	13.5	200000	1975	—	—	—	6SF7
							250	- 1.0	100	4.1	13.9	700000	2050	—	—	—	
6SQ7	IFT Amplifier Pentode	D8	88K	M	6.3	0.3	100	- 1.0	100	3.2	0.2	250000	4190	—	—	—	6SQ7
							250	- 1.0	125	4.4	11.8	900000	4700	—	—	—	

Type	Name	Tube Dimensions and Socket Connections		Cathode Type and Rating		Use <small>Values in right give operating conditions and characteristics for indicated typical use</small>	Plate Supply Volts	Grid Bias Vols	Screen Supply Volts	Screen Current Ma	Plate Current Ma	AC Plate Resistance Ohms	Trans-Conductance (Bolt-plate) $\mu$ hos	Amplification Factor	Load for Rated Power Output Ohms	Power Output Wals	Type	
		Dim.	S.C.	C.T.	Wals													Ang.
6SM7	HF Amplifier Pentode	9S	9SK	M	6.3	0.3	Class A Amplifier	100 250	- 1.0 - 1.0	100 150	2.1 4.1	5.3 10.0	350000 900000	4000 4900			6SM7	
6SJ7	Triple-Grid Detector Amplifier	9S	9M	M	6.3	0.3	Class A Amplifier	100 250	- 3.0 - 3.0	100 100	0.9 0.8	2.9 3.0	700000 1.0 + j	1575 1650			6SJ7	
6SJ7-GT	Triple-Grid Detector Amplifier	9S	GT-9M	M	6.3	0.3	Amplifier	90 $\mu$ 300 $\mu$	Cath. Bias, 1700 ohms. Cath. Bias, 860 ohms.			Grid Resistor, ** 0.5 megohm.		Gain per stage = 83 Gain per stage = 167			6SJ7-GT	
6SK7	Triple-Grid Supercurrent Amplifier	9S	9M	M	6.3	0.3	Class A Amplifier	100 250	- 1.0 - 3.0	100 100	4.0 2.6	13.0 9.2	120000 800000	2350 2000			6SK7	
6SK7-GT	Triple-Grid Supercurrent Amplifier	9S	GT-9M	M	6.3	0.3	Amplifier										6SK7-GT	
6SL7-GT	Twin-Triode Amplifier	9S	9SD	M	6.3	0.3	Each Unit as Amplifier	250	- 2.0			2.3	44000	1600	70			6SL7-GT
6SN7-GT	Twin-Triode Amplifier	9S	9SD	M	6.3	0.6	Each Unit as Amplifier											6SN7-GT
6SQ7	Duplex-Diode High-Mu Triode	9S	9Q	M	6.3	0.3	Triode Unit as Class A Amplifier	100 250	- 1.0 - 2.0			0.4 0.9	110000 91000	900 1100	100 100			6SQ7
6SQ7-GT	Duplex-Diode High-Mu Triode	9S	GT-9Q	M	6.3	0.3	Triode Unit as Amplifier	90 $\mu$ 300 $\mu$	Cath. Bias, 11000 ohms. Cath. Bias, 3900 ohms.			Grid Resistor, ** 0.5 megohm.		Gain per stage = 40 Gain per stage = 53			6SQ7-GT	
6SR7	Triple-Grid Supercurrent Amplifier	9S	9Q	M	6.3	0.3	Triode Unit as Class A Amplifier	250	- 0.0			9.5	8500	1900	16	10000	0.3	6SR7
6SS7	Triple-Grid Supercurrent Amplifier	9S	9M	M	6.3	0.15	Class A Amplifier	100 250	- 1.0 - 3.0	100 100	3.1 2.0	12.2 9.0	120000 1.0 j	1930 1850				6SS7
6ST7	Duplex-Diode Triode	9S	9Q	M	6.3	0.15	Triode Unit as Amplifier											6ST7
6SZ7	Duplex-Diode High-Mu Triode	9S	9Q	M	6.3	0.15	Triode Unit as Class A Amplifier	100 250	- 1.0 - 3.0			0.8 1.0	61000 58000	1150 1200	70 70			6SZ7
6T7-G	Duplex-Diode High-Mu Triode	9S	GT-9V	M	6.3	0.15	Triode Unit as Class A Amplifier	135 250	- 1.5 - 3.0			0.9 1.2	65000 82800	1000 1050	65 65			6T7-G
6U5/6G5	Electron-Ray Tube	D4	9R	M	6.3	0.3	Visual Indicator	90 $\mu$ 300 $\mu$	Cath. Bias, 8300 ohms. Cath. Bias, 4580 ohms.			Grid Resistor, ** 0.5 megohm.		Gain per stage = 30 Gain per stage = 40			6U5/6G5	
6U7-G	Triple-Grid Supercurrent Amplifier	D12a	GT-9R	M	6.3	0.3	Class A Amplifier	100 250	- 3.0 - 3.0	100 100	2.1 2.0	8.0 8.2	250000 800000	1500 1600				6U7-G
6V6	Beam Power Amplifier	9C	7AC	M	6.3	0.45	Mixer in Superheterodyne	250	- 10.0	100								6V6
6V6-GT	Beam Power Amplifier	9C	GT-7AC	M	6.3	0.45	Amplifier											6V6-GT
6V7-G	Duplex-Diode Triode	9D	GT-9V	M	6.3	0.3	Single-Tube Class A Amplifier	180 250 315	- 8.5 - 12.5 - 15.0	180 250 225	3.0 4.5 2.2	29.0 45.0 34.0	58000 32000 77000	3700 4100 3750		\$500 5000 8500	3.0 4.5 5.5	6V6-GT
6V7-G	Duplex-Diode Triode	9D	GT-9V	M	6.3	0.3	Push-Pull Class AB <sub>1</sub> Amplifier	250 285	- 15.0 - 19.0	250 285	5.0 $\phi$ 4.0 $\phi$	70.0 $\phi$ 70.0 $\phi$				10000 8000	10.0 $\phi$ 14.0 $\phi$	6V6-GT
6V7-G	Triple-Grid Detector Amplifier	9D	GT-9R	M	6.3	0.15	Triode Unit as Amplifier											6V7-G
6W7-G	Triple-Grid Detector Amplifier	9D	GT-9R	M	6.3	0.15	Class A Amplifier	250	- 3.0	100	0.5	2.0	1.5 j	1225				6W7-G
6X4	Full-Wave Rectifier	9F	9BS	M	6.3	0.6	With Capacitive-Input Filter											6X4
6X5	Full-Wave Rectifier	9C	9B	M	6.3	0.6	With Inductive-Input Filter											6X5
6X5-GT	Full-Wave Rectifier	9C	GT-9B	M	6.3	0.6	With Capacitive-Input Filter											6X5-GT
6Y5	Full-Wave Rectifier	9B	9J	M	6.3	0.6	With Inductive-Input Filter											6X5
6Y6-G	Beam Power Amplifier	D10	GT-7AC	M	6.3	1.25	With Capacitive-Input Filter											6Y5
6Y7-G	Twin-Triode Amplifier	9D	GT-9R	M	6.3	0.6	Single-Tube Class A Amplifier	135 200	- 13.5 - 14.0	135 185	3.5 2.1	58.0 61.0	9300 18300	7000 7100		2000 2500	3.6 6.0	6Y6-G
6Z5	Full-Wave Rectifier	9D	9K	M	6.3	0.8	Class B Amplifier											6Y7-G
6Z7-G	Twin-Triode Amplifier	9D	GT-9R	M	6.3	0.3	With Inductive-Input Filter											6Z5
6ZY6-G	Full-Wave Rectifier	9D	GT-9R	M	6.3	0.3	With Capacitive-Input Filter											6Z7-G
7A4	Detector Amplifier Triode	9B	9AC	M	6.3	0.3	With Inductive-Input Filter											6ZY6-G
7A5	Beam Power Amplifier	9B	9AA	M	6.3	0.75	Class A Amplifier	110 125	- 7.5 - 9.0	110 125	3.0 3.3	40.0 44.0	14000 17000	5800 6000		2500 2700	1.3 2.2	7A4
7A6	Twin Diode	9B	7AJ	M	6.3	0.15	Detector Rectifier											7A5
7A7	Triple-Grid Supercurrent Amplifier	9B	9V	M	6.3	0.3	Class A Amplifier											7A6
7A8	Octode Converter	9B	9U	M	6.3	0.15	Converter	100 250	- 3.0 - 3.0	75 100	2.7 3.2	1.8 3.0	650000 700000					7A7
7B4	High-Mu Triode	9B	9AC	M	6.3	0.3	Amplifier											7A8

Discontinued types are shown in light face. Metal and miniature tubes are identified respectively by a narrow or a wide rim preceding or following the type designation.

Type	Name	Tube Dimensions and Socket Connections		Cathode Type and Rating			Use <small>Values in right give operating conditions and characteristics for indicated typical use</small>	Plate Supply Volts	Grid Bias Volts	Screen Supply Volts	Screen Current Ma.	Plate Current Ma.	AC Plate Resistance Ohms	Trans-Conductance (Grid-Plate) $\mu$ mhos	Amplification Factor	Load for Rated Power Output Ohms	Power Output Watts	Type	
		Dim.	S. E.	C. T.	Volts	Ampl.													
7B5	Power Amplifier Pentode	08	6AE	H	6.3	0.4	Class A Amplifier	For other characteristics, refer to Type 6X6-GT.										7B5	
7B6	Duplex-Diode High-Mu Triode	08	6W	H	6.3	0.3	Triode Unit as Amplifier	For other characteristics, refer to Type 6SQ7.										7B6	
7B7	Triple-Grid Supercontrol Amplifier	08	6V	H	6.3	0.15	Class A Amplifier	250	- 3.0	100	1.7	8.5	750000	1750	—	—	—	7B7	
7B8	Pentagrid Converter	08	6X	H	6.3	0.3	Converter	For other characteristics, refer to Type 6AB.										7B8	
7C5	Beam Power Amplifier	08	6AA	H	6.3	0.45	Class A Amplifier	For other characteristics, refer to Type 6V6-GT.										7C5	
7C6	Duplex-Diode High-Mu Triode	08	6W	H	6.3	0.15	Triode Unit as Class A Amplifier	250	- 1.0	—	—	1.3	100000	1000	100	—	—	7C6	
7C7	Triple-Grid Detector Amplifier	08	6V	H	6.3	0.15	Class A Amplifier	100 250	- 3.0 - 3.0	100 100	0.4 0.5	1.8 2.0	1.25 2.05	1225 1300	—	—	—	7C7	
7DP4	Directly Viewed Kinescope	11	10C	H	6.3	0.6	For Picture Reproduction	Electrostatic Focus, Magnetic Deflection Minimum Useful Screen Diameter, 6 in. Phosphor: White Fluorescence, Medium Persistence Max. Anode—No. 2 Volts, 8000										7DP4	
7E6	Duplex-Diode Triode	08	6W	H	6.3	0.3	Triode Unit as Amplifier	For other characteristics, refer to Type 6R7.										7E6	
7E7	Duplex-Diode Pentode	08	6AE	H	6.3	0.3	Pentode Unit as Class A Amplifier	100 250	- 1.0 - 3.0	100 100	2.7 1.6	10.0 7.5	150000 700000	1600 1300	—	—	—	7E7	
7F7	Twin-Triode Amplifier	08	6AC	H	6.3	0.3	Each Unit as Amplifier	For other characteristics, refer to Type 6SL7-GT.										7F7	
7G7/1232	Television Amplifier Pentode	08	6V	H	6.3	0.45	Class A Amplifier	250	- 2.0	100	2.0	6.0	800000	4500	—	—	—	7G7/1232	
7GP4	Directly Viewed Kinescope	11a	14Q	H	6.3	0.6	For Picture Reproduction	Electrostatic Focus, Electrostatic Deflection Minimum Useful Screen Diameter, 5 in. Phosphor: White Fluorescence, Medium Persistence Max. Anode—No. 1 Volts, 4000										7GP4	
7H7	Triple-Grid Supercontrol Amplifier	08	6V	H	6.3	0.3	Class A Amplifier	100 250	- 1.0 - 3.5	100 150	3.3 3.5	8.2 9.5	250000 800000	3800 3800	—	—	—	7H7	
7J7	Triode-Heptode Converter	08	6BL	H	6.3	0.3	Triode Unit as Oscillator Heptode Unit as Mixer	100 250 a	- 3.0 - 3.0	100 100	3.1 2.9	1.1 1.3	300000 1.54	Triode-Grid & Heptode-Grid Current, 0.3 ma. Conversion Transcond., 260 micromhos. Conversion Transcond., 100 micromhos.			7J7		
7Q7	Pentagrid Converter	08	6AL	H	6.3	0.3	Converter	100 250	- 2.0 - 2.0	100 100	8.5 6.5	3.3 3.5	500000 1.01	Grid #1 Resistor, 20000 ohms. Conversion Transcond., 550 micromhos.			7Q7		
7Y4	Full-Wave Rectifier	08	6AB	H	6.3	0.5	With Capacitive-Input Filter With Inductive-Input Filter	Max. A-C Volts per Plate (RMS), 325 Max. Peak Inverse Volts, 1250 Max. A-C Volts per Plate (RMS), 450 Max. Peak Inverse Volts, 1250 Max. D-C Output Ma., 60 Max. Peak Plate Ma., 180 Mm. Total Effect. Supply Imped. per Plate, 150 ohms. Max. D-C Output Ma., 60 Max. Peak Plate Ma., 180 Mm. Value of Input Choke, 10 henries										7Y4	
9AP4	Directly Viewed Kinescope	K1	6AL	H	2.5	2.1	For Picture Reproduction	Electrostatic Focus, Magnetic Deflection Minimum Useful Screen Diameter, 7 1/4 in. Phosphor: White Fluorescence, Medium Persistence Max. Anode—No. 2 Volts, 7000										9AP4	
10	Power Amplifier Triode	03	4D	F	7.5	1.25	Class A Amplifier	350 425	- 32.0 - 40.0	—	—	16.0 18.0	5150 5000	1550 1600	8.0 8.0	11000 10200	0.9 1.6	—	10
10BP4	Directly Viewed Kinescope	J1	12Q	H	6.3	0.6	For Picture Reproduction	Magnetic Focus and Deflection Minimum Useful Screen Diameter, 9 in. Phosphor: White Fluorescence, Medium Persistence Max. Anode—No. 2 Volts, 10000										10BP4	
11 12	Detector & Amplifier Triode	D2 D11	4F 4D	D.C. F	1.1	0.25	Class A Amplifier	90 135	- 4.5 - 10.5	—	—	2.5 5.0	15500 15000	425 440	6.6 6.6	—	—	—	11 12
12A5	Power Amplifier Pentode	08	7F	H	6.3 12.6	0.6 0.3	Class A Amplifier	100 180	- 15.0 - 25.0	100 180	3.0 8.0	17.0 45.0	50000 35000	1700 2400	—	4500 3300	0.8 3.4	—	12A5
12A7	Rectifier-Pentode	08	7K	H	12.6	0.3	Pentode Unit as Class A Amplifier Half-Wave Rectifier	135	- 23.5	135	2.5	9.0	102000	975	—	13500	0.55	—	12A7
12A8-GT	Pentagrid Converter	03	GT-4A8	H	12.6	0.15	Converter	For other characteristics, refer to Type 6AB.										12A8-GT	
12AH7-GT	Twin Triode	08	6BE	H	12.6	0.15	Each Unit as Class A Amplifier	100 180	- 3.6 - 6.5	—	—	3.7 7.6	10300 8400	1530 1800	16 16	—	—	12AH7-GT	
12AP4	Directly Viewed Kinescope	L1	6AL	H	3.5	2.1	For Picture Reproduction	Electrostatic Focus, Magnetic Deflection Minimum Useful Screen Diameter, 10 1/4 in. Phosphor: White Fluorescence, Medium Persistence Max. Anode—No. 2 Volts, 7000										12AP4	
12AT6	Duplex-Diode High-Mu Triode	08	7BT	H	12.6	0.15	Triode Unit as Class A Amplifier	For other characteristics, refer to Type 6AT6										12AT6	
12AU7	Twin-Triode Amplifier	08a	6A	H	6.3 12.6	0.3 0.15	Each Unit as Class A Amplifier	100 250	0 - 0.5	—	—	11.8 10.5	6250 7700	3100 2200	19.5 17	—	—	12AU7	
12B8-GT	Triode-Pentode	07a	8T	H	12.6	0.3	Triode Unit as Class A Amplifier Pentode Unit as Class A Amplifier	90	- 3.0	90	2.0	7.0	200000	1800	—	—	—	12B8-GT	
12BA6	RF Amplifier Pentode	08	7BK	H	12.6	0.15	Class A Amplifier	For other characteristics, refer to Type 6BA6										12BA6	
12BE6	Pentagrid Converter	08	7CH	H	12.6	0.15	Converter	For other characteristics, refer to Type 6BE6										12BE6	
12C8	Duplex-Diode Pentode	C1	8K	H	12.6	0.15	Pentode Unit as RF Amplifier Pentode Unit as AF Amplifier	250	- 3.0	125	2.3	10.0	600000	1925	—	—	—	12C8	
12F5-GT	High-Mu Triode	03	Q-6M1	H	12.6	0.15	Amplifier	For other characteristics, refer to Type 6SF5.										12F5-GT	
12H6	Twin-Diode	A1	7Q	H	12.6	0.15	Detector Rectifier	For other ratings, refer to Type 6H6.										12H6	
12J5-GT	Detector Amplifier Triode	03	GT-4Q1	H	12.6	0.15	Amplifier	For other characteristics, refer to Type 6J5.										12J5-GT	
12J7-GT	Triple-Grid Detector Amplifier	03	GT-7B8	H	12.6	0.15	Amplifier	For other characteristics, refer to Type 6J7.										12J7-GT	
12K7-GT	Triple-Grid Supercontrol Amplifier	03	GT-7B8	H	12.6	0.15	Amplifier	For other characteristics, refer to Type 6K7.										12K7-GT	
12K8	Triode-Heptode Converter	C1	8K	H	12.6	0.15	Oscillator Mixer	For other characteristics, refer to Type 6K8.										12K8	
12Q7-GT	Duplex-Diode High-Mu Triode	03	GT-7B8	H	12.6	0.15	Triode Unit as Amplifier	For other characteristics, refer to Type 6Q7.										12Q7-GT	
12SA7	Pentagrid Converter	03	8A	H	12.6	0.15	Mixer	For other characteristics, refer to Type 6SA7.										12SA7	
12SA7-GT	Pentagrid Converter	03	Q-8AD	H	12.6	0.15	Mixer	For other characteristics, refer to Type 6SA7.										12SA7-GT	

Metal and miniature tubes including the 12AU7 (9-pin, T-6 1/4 bulb type), are identified respectively by a narrow or a wide rim preceding or following the type designation.

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RCA Type	Name	Tube Dimensions and Socket Connections		Cathode Type and Rating		Use <small>Values in right give operating conditions and characteristics for indicated typical use</small>	Plate Supply Volts	Grid Bias Volts	Screen Supply Volts	Screen Current Ma.	Plate Current Ma.	AC Plate Resistance Ohms	Trans-Conductance (1st-plate) $\mu$ mhos	Amplification Factor	Load for Stated Power Output Ohms	Power Output Watts	RCA Type
		Dim.	S.C.	C.T.	Volts												
128C7	Twin-Triode Amplifier	B3	B3	M	12.6	0.13											128C7
128F5	High-Mu Triode	B3	6AB	M	12.6	0.15											128F5
128F5-GT	High-Mu Triode	C3	6-6AB1	M	12.6	0.15											128F5-GT
128F7	Diode Supercontrol Pentode	B6	7A2	M	12.6	0.15											128F7
128G7	HF Amplifier Pentode	B6	88K	M	12.6	0.15											128G7
128H7	HF Amplifier Pentode	B6	88K	M	12.6	0.15											128H7
128J7	Triode-Grid Detector Amplifier	B3	98	M	12.6	0.15											128J7
128J7-GT	Triode-Grid Detector Amplifier	C3	GT-98A	M	12.6	0.15											128J7-GT
128K7	Triode-Grid Supercontrol Amplifier	B6	88	M	12.6	0.15											128K7
128K7-GT	Triode-Grid Supercontrol Amplifier	C3	GT-88A	M	12.6	0.15											128K7-GT
128L7-GT	Twin-Triode Amplifier	C3	88D	M	12.6	0.15											128L7-GT
128M7-GT	Twin-Triode Amplifier	C3	88D	M	12.6	0.3											128M7-GT
128Q7	Duplex-Diode High-Mu Triode	B3	8Q	M	12.6	0.15											128Q7
128Q7-GT	Duplex-Diode High-Mu Triode	C3	GT-8Q	M	12.6	0.15											128Q7-GT
128R7	Duplex-Diode Triode	B3	8Q	M	12.6	0.15											128R7
128R7-GT	Duplex-Diode Triode	C3	GT-8Q	M	12.6	0.15											128R7-GT
12Z3	Half-Wave Rectifier	Q5	40	M	12.6	0.5											12Z3
14A7/12B7	Triode-Grid Supercontrol Amplifier	B6	8V	M	12.6	0.15											14A7/12B7
15	RF Amplifier Pentode	D0	8P	B.S. H	2.0	0.22											15
19	Twin-Triode Amplifier	D4	88	B.S. P	3.0	0.26											19
20	Power Amplifier Triode	D1	40	B.S. P	3.3	0.133											20
22	RF Amplifier Tetrode	E1	4K	B.S. P	5.3	0.133											22
24-A	RF Amplifier Tetrode	E1	8E	M	3.5	1.75											24-A
25A6	Power Amplifier Pentode	C3	75	M	25.0	0.3											25A6
25A6-GT	Power Amplifier Pentode	C3	6-751	M	25.0	0.3											25A6-GT
25A7-GT	Rectifier Pentode	C3	8P	M	25.0	0.3											25A7-GT
25AC5-GT	High-Mu Power Amplifier Triode	B6	6-801	M	25.0	0.3											25AC5-GT
25B5	Direct-Coupled Power Amplifier	D0a	8D	M	25.0	0.3											25B5
25B6-G	Power Amplifier Pentode	D10	6-751	M	25.0	0.3											25B6-G
25B8-GT	Triode-Pentode	C3	8T	M	25.0	0.15											25B8-GT
25C6-G	Beam Power Amplifier	D10	6-7AC1	M	25.0	0.3											25C6-G
25L6	Beam Power Amplifier	C3	7AC	M	25.0	0.3											25L6
25L6-GT	Beam Power Amplifier	C3	6-7AC1	M	25.0	0.3											25L6-GT
25N6-G	Direct-Coupled Power Amplifier	B6	6-7W	M	25.0	0.3											25N6-G
25Y5	Rectifier-Doubler	D6	8E	M	25.0	0.3											25Y5
26Z5	Rectifier-Doubler	D6	8E	M	25.0	0.3											26Z5
26Z6	Rectifier-Doubler	C3	7Q	M	25.0	0.3											26Z6
26Z6-GT	Rectifier-Doubler Triode	C3	6-7Q1	M	25.0	0.3											26Z6-GT
26	Detector Amplifier Triode	D6	8A	M	2.5	1.75											26
27	Detector Amplifier Triode	D6	8A	M	2.5	1.75											27

Discontinued types are shown in light face. Metal and miniature tubes are identified respectively by a narrow or a wide rim preceding or following the type designation.

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RCA Type	Name	Tube Dimensions and Socket Connections		Cathode Type and Rating		Use <small>Values to right give operating conditions and characteristics for indicated typical use</small>	Plate Supply Volts	Grid Bias in Volts	Screen Supply Volts	Screen Current Ma.	Plate Current Ma.	AC Plate Resistance Ohms	Trans-Conductance (Grid-Plate) $\mu$ mhos	Amplification Factor	Lead in Grid Power Output Ohms	Power Output Watts	RCA Type
		Base	S.C.	E.T.	Volts												
30	Detector Amplifier Triode	D6	4D	D.C. F	2.0	0.06											30
For other characteristics, refer to Type 1H4-G.																	
31	Power Amplifier Triode	D6	4D	D.C. F	3.0	0.13	135 180	-21.5 -30.0			8.0 12.3	4100 5600	925 1050	3.8 3.8	7000 5700	0.185 0.375	31
32	RF Amplifier Tetrode	E1	4K	D.C. F	2.0	0.06	135 180	-3.0 -3.0	67.5	0.4	1.7 1.7	650000 1.0+4	640 650				32
Plate current to be adjusted to 0.1 milliamperes with no signal.																	
32L7-GT	Rectifier-Beam Power Amplifier	C3	6E	H	32.5	0.3	90 90	-5.0 -7.0	90	3.0 2.0	38.0 27.0	15000 17000	6000 4800		2600 2600	0.6 1.0	32L7-GT
Minimum A.C. Plate Voltage: 175 Volts, R.M.S. Maximum D-C Output Current: 60 Milliamperes.																	
33	Power Amplifier Pentode	D12	6K	D.C. F	3.0	0.26	180	-18.0	180	5.0	23.0	55000	1700		6000	1.5	33
34	Supercathode RF Amplifier Pentode	E1	6M	D.C. F	2.0	0.06	135 180	-3.0 -3.0	67.5	1.8	2.8	600000 1.01	680 620				34
35	Supercathode RF Amplifier Tetrode	E1	6E	H	2.5	1.75	180 250	-3.0 -3.0	90	2.5 <sup>o</sup> 2.5 <sup>o</sup>	6.3	300000 400000	1020 1050				35
35A5	Beam Power Amplifier	D6	6AA	H	35.0	6.15											35A5
For other characteristics, refer to Type 35L6-GT.																	
35B5	Beam Power Amplifier	E1a	7M2	H	35.0	0.15	110	-7.5	110	3.0	40		5800		2500	1.5	35B5
35L6-GT	Beam Power Amplifier	C3	6-7AC1	H	35.0	0.15	110 200	-7.5 -6.0	110	3.0 2.0	40.0 41.0	14000 40000	5800 5900		2500 4500	1.5 3.3	35L6-GT
Max. A-C Plate Volts (R.M.S.), 117 Min. Total Effect. Plate-Supply Impedance, 15 ohms Max. D-C Output Ma.: With Pilot and No Shunt Res., 60; With Pilot and Shunt Res., 90; Without Pilot, 100																	
35W4	Half-Wave Rectifier Heater Tap for Pilot	D1a	10Q4	H	35.0	0.15											35W4
With Capacitive-Input Filter																	
35Z3	Half-Wave Rectifier	D6	4E	H	35.0	0.15											35Z3
With Capacitive-Input Filter																	
35Z4-GT	Half-Wave Rectifier	C3	6-4AA	H	35.0	0.15											35Z4-GT
Max. A-C Plate Volts (R.M.S.), 235 Min. Total Effect. Plate-Supply Impedance: Up to 117 volts, 15 ohms; at 235 volts, 100 ohms.																	
35Z5-GT	Half-Wave Rectifier Heater Tap for Pilot	C3	6-4AB4	H	35.0	0.15											35Z5-GT
With Capacitive-Input Filter																	
36	RF Amplifier Tetrode	D6	6E	H	0.3	6.3	100 250	-1.5 -3.0	55 90	1.7 <sup>o</sup>	1.8	550000 550000	450 1000				36
Grid-bias values are approximate. Plate current to be adjusted to 0.1 milliamperes with no signal.																	
37	Detector Amplifier Triode	D6	6A1	H	6.3	0.3	90 250	-6.0 -18.0			2.5 7.5	11500 8400	800 1100	9.3 9.3			37
Grid-bias values are approximate. Plate current to be adjusted to 0.2 milliamperes with no signal.																	
38	Power Amplifier Pentode	D6	6F	H	6.3	0.3	100 250	-9.0 -25.0	100 250	1.2 3.8	7.0	140000 100000	875 1200		15000 10000	0.17 2.50	38
39/44	Supercathode RF Amplifier Pentode	D6	6F	H	6.3	0.3	90 250	-3.0 -3.0	90	1.6 1.4	5.6 5.0	400000 1.05	1000 1050				39/44
40	Voltage Amplifier Triode	D12	4D	D.C. F	5.0	0.25	125M 160M	-1.5 -3.0			0.2	150000 150000	200 200	30 30			40
41	Power Amplifier Pentode	D6	6H	H	6.3	0.4											41
For other characteristics, refer to Type 6K6-GT.																	
42	Power Amplifier Pentode	D12	6H	H	6.3	0.7											42
For other characteristics, refer to Type 6P6-Q.																	
43	Power Amplifier Pentode	D12	6H	H	25.0	0.3											43
For other characteristics, refer to Type 25A6-GT.																	
44	Power Amplifier Triode	D12	4D	F	2.5	1.5	180 275	-31.5 -56.0			31.6 36.0	1850 1700	2125 2050	3.5 3.5	3700 4600	0.82 2.00	44
Push-Pull Class AB <sub>2</sub> Amplifier Cath. Bias, 775 ohms $\phi$ fixed bias 36.0 $\phi$ 28.0 $\phi$																	
45Z3	Half-Wave Rectifier	D6	6AM	H	45.0	0.075									5060	12.0 <sup>o</sup>	45Z3
Max. A-C Plate Volts (R.M.S.), 117 Max. D-C Output Ma., 65 Min. Total Effect. Plate-Supply Imped., 15 ohms. Max. Peak Inverse Volts, 350 Max. Peak Plate Ma., 390																	
45Z5-GT	Half-Wave Rectifier Heater Tap for Pilot	C3	6-4AD4	H	45.0	0.15											45Z5-GT
For other ratings, refer to Type 35Z3-GT.																	
46	Dual-Grid Power Amplifier	E3	6C	F	2.5	1.75	250 400	-33.0 0			22.0 0.0 $\phi$ 12.0 $\phi$	2380 —	2350 —	5.6 —	6400 5200 5800	1.25 16.0 <sup>o</sup> 20.0 <sup>o</sup>	46
47	Power Amplifier Pentode	E3	6C	F	2.5	1.75	250	-18.5	250	6.0	31.0	60000	2500		7000	3.7	47
48	Power Amplifier Tetrode	E3	6A	D.C. H	30.0	0.4	96 125	-18.0 -20.0	96 100	0.8 0.5	52.0 56.0		3800 3900		1500 1500	2.0 2.5	48
Tetrode Push-Pull Class A Amplifier 125 - 20.0 100 - 100.0 $\phi$																	
49	Dual-Grid Power Amplifier	D12	6C	D.C. F	2.0	0.13	125 180	-20.0 0			0.0 4.0 $\phi$	4175 —	1125 —	4.7 —	11000 12000	0.17 3.3 <sup>o</sup>	49
50	Power Amplifier Triode	F1	4D	F	7.5	1.25	300 400 450	-54.0 -70.0 -84.0			35.0 55.0 55.0	2000 1800 1800	1900 2100 2100	3.8 3.8 3.8	4600 3670 4350	1.6 5.4 4.6	50
50B5	Beam Power Amplifier	E1a	7M2	H	50.0	0.15	110	-7.5	110	4	49	10000	7500		2500	1.9	50B5
50L6-GT	Beam Power Amplifier	C3	6-7AC1	H	50.0	0.15	110 200	-7.5 -8.0	110 110	4.0 2.0	49.0 50.0	13000 30000	9000 9500		2000 3000	2.1 4.3	50L6-GT
50Y6-GT	Rectifier-Doubler	C3	6-7Q1	H	50.0	0.15											50Y6-GT
For other ratings, refer to Type 25Z6.																	
50Z7-G	Rectifier-Doubler Heater Tap for Pilot	D6	6-6AA4	H	50.0	0.15											50Z7-G
Voltage Doubler Max. A-C Volts per Plate (R.M.S.), 117 Min. Total Effective Plate-Supply Impedance: 15 ohms. Half-Wave Rectifier Max. A-C Volts per Plate (R.M.S.), 235 Min. Total Effective Plate-Supply Impedance per Plate: Up to 117 volts, 15 ohms; at 235 volts, 100 ohms. Max. D-C Output Ma. per Plate, 65																	
53	Twin-Triode Amplifier	D12	7B	H	2.5	2.0											53
For other characteristics, refer to Type 6N7-GT.																	
55	Duplex-Diode Triode	D6	6D	H	2.5	1.0											55
For other characteristics, refer to Type 85.																	
56	Detector Amplifier Triode	D6	6A1	H	2.5	1.0											56
For other characteristics, refer to Type 76.																	
57	Triode-Grid Detector Amplifier	D12	6F	H	2.5	1.0											57
For other characteristics, refer to Type 6J7.																	

RCA Type	Name	Tube Dimensions and Socket Connections		Cathode Type and Rating		Use Values in right place operating conditions and characteristics for indicated typical use	Plate Supply Volts	Grid Bias in Volts	Screen Supply Volts	Screen Current ma.	Plate Current ma.	AC Plate Resistance Ohms	Trans-Conductance (50-plate) $\mu$ mhos	Amplification Factor	Load for Rated Power Output Ohms	Power Output Watts	RCA Type
		Min.	I.C.	E.T.	Volts												
58	Triple-Grid Supercontrol Amplifier	D13	6P	H	2.5	1.0											58
59	Triple-Grid Power Amplifier	E3	7A	H	2.5	3.0	250	-28.0	—	—	26.0	2300	2600	6.0	5000	1.25	59
							250	-18.0	250	9.0	35.0	55000	2500	—	6000	3.0	
							300	0	—	—	26.0 $\phi$	—	—	—	4600	15.0 $\phi$	
70L7-GT	Rectifier-Beam Power Amplifier	C8b	8AA	H	70.0	0.15	400	0	—	—	26.0 $\phi$	—	—	—	4600	15.0 $\phi$	70L7-GT
							110	-7.5	110	3.0	40.0	15000	7500	—	2000	1.8	
71-A	Power Amplifier Triode	D12	4D	F	5.0	0.25	90	-16.5	—	—	10.8	2170	1400	3.0	3000	0.125	71-A
75	Duplex-Diode High-Mu Triode	D8	8D	H	6.3	0.3	180	-40.5	—	—	20.0	1750	1700	3.0	4800	0.790	
76	Detector Amplifier Triode*	D8	8A <sub>2</sub>	H	6.3	0.3	250	-13.5	—	—	5.0	9500	1450	13.8	—	—	76
							250	-20.0 approx.	—	—	—	—	—	—	—	—	
77	Triple-Grid Detector Amplifier	D8	8P	H	6.3	0.3	100	-1.5	60	0.4	1.7	600000	1100	—	—	—	77
							250	-3.0	100	0.5	2.3	1.0+ $\phi$	1250	—	—	—	
78	Triode-Grid Supercontrol Amplifier	D8	8P	H	6.3	0.3	250	-1.95	50	Cathode current 0.65 ma.	—	—	—	—	—	—	78
														Plate Resistor, 250000 ohms. Grid Resistor, 250000 ohms.			
79	Full-Wave Rectifier	D12	4C	F	5.0	2.0	180	0	—	—	—	—	—	—	7000	5.5	79
							250	0	—	—	—	—	—	—	14000	8.0	
80	Half-Wave Rectifier	F1	4B	F	7.5	1.25	For other ratings, refer to Type 5Y3-GT.										80
							Max. A-C Plate Volts (RMS), 700 Max. Peak Inverse Volts, 2000 Max. D-C Output Ma., 85 Max. Peak Plate Ma., 500										
81	Full-Wave Rectifier	D12	4C	F	7.3	3.0	For other ratings, refer to Type 5Y3-GT.										81
							Max. A-C Volts per Plate (RMS), 450 Max. Peak Inverse Volts, 1550 Max. D-C Output Ma., 113 Max. Peak Plate Ma., 600 Min. Total Effect. Supply Imped. per Plate, 50 ohms.										
82	Full-Wave Rectifier	D3	4G	F	5.0	3.0	For other ratings, refer to Type 5Y3-GT.										82
							Max. A-C Volts per Plate (RMS), 550 Max. Peak Inverse Volts, 1550 Max. D-C Output Ma., 113 Max. Peak Plate Ma., 600 Min. Value of Input Choke, 6 henries										
83-V	Full-Wave Rectifier	D12	4AD	H	5.0	2.0	For other ratings, refer to Type 5V4-G.										83-V
							Max. A-C Volts per Plate (RMS), 385 Max. Peak Inverse Volts, 1250 Max. D-C Output Ma., 60 Max. Peak Plate Ma., 180 Min. Total Effect. Supply Imped. per Plate, 150 ohms.										
84/824	Duplex-Diode Triode	D8	8D	H	6.3	0.3	For other ratings, refer to Type 5V4-G.										84/824
							Max. A-C Volts per Plate (RMS), 450 Max. Peak Inverse Volts, 1250 Max. D-C Output Ma., 60 Max. Peak Plate Ma., 180 Min. Value of Input Choke, 10 henries										
85	Triple-Grid Power Amplifier	D8	8P	H	6.3	0.4	135	-10.5	—	—	3.7	11000	750	8.3	25000	0.075	85
							250	-20.0	—	—	8.0	7500	1100	8.3	20000	0.350	
							160	-20.0	—	—	17.0	3300	1425	4.7	7000	0.30	
							250	-31.0	—	—	32.0	2600	1800	4.7	5500	0.90	
							100	-10.0	100	1.6	9.5	104000	1200	—	10700	0.33	
							250	-25.0	250	5.0	32.0	70000	1800	—	6750	3.40	
							180	0	—	—	6.0 $\phi$	—	—	—	13600	2.50 $\phi$	
														—	9400	8.50 $\phi$	

(Chart II continued on next page.)  
Discontinued types are shown in light face. Metal and miniature tubes are identified respectively by a narrow or a wide riser preceding or following the type designation.

- \* For Grid-leak Detection—plate volts 45, grid return to + filament or to cathode.
- Either A, C, or D, C. may be used on filament or heater, except as specifically noted. For use of D.C. on A-C filament types, decrease stated grid volts by 1/2 (approx.) of filament voltage.
- ▷ Supply voltage applied through 20000-ohm voltage-dropping resistor.
- ▷ Mercury-Vapor Type.
- Grid #1 is control grid. Grid #2 is screen. Grid #3 tied to cathode.
- † Grid #1 is control grid. Grid #2 and #3 tied to plate.
- Grids #1 and #2 connected together. Grid #3 tied to plate.
- Grids #3 and #5 are screen. Grid #4 is signal-input control grid.
- ▲ Grids #2 and #4 are screen. Grid #4 is signal-input control grid.
- For grid of following tube.
- Both grids connected together; likewise, both plates.
- † Power output is for two tubes at stated plate-to-plate load.
- † For two tubes.
- † This diagram is like the one having the same designation without the prefix G, except that Pin No. 1 has no connection.
- Obtained preferably by using 70000-ohm voltage-dropping resistor in series with a 90-volt supply
- This diagram is like the one having the same designation with the prefix G, except that base sleeve is connected to Pin No. 1.
- †† This diagram is like the one having the same designation without the prefix G, except that Pin No. 1 is connected to internal shield.
- † Panel lamp section is between pins 2 and 3.

- Grids #2 and #3 tied to plate.
- AA Both grids connected together; likewise both cathodes.
- This diagram is like the one having the same designation without the prefix GT, except that the base sleeve is connected to Pin No. 1.
- Applied through plate resistor of 250000 ohms or 500-henry choke shunted by 0.25-megohm resistor.
- Applied through plate resistor of 100000 ohms.
- Applied through plate resistor of 250000 ohms.
- 50000 ohms. \*Maximum. †Megohms.
- Requires different socket from small 7-pin.
- Grid #2 tied to plate.
- † Grids #1 and #2 tied together.
- † Plate voltages greater than 125 volts RMS require 100-ohm (minimum) series-plate resistor.
- Applied through plate resistor of 150000 ohms.
- † For signal-input control-grid (#1); control-grid #3 bias, -3 volts.
- Applied through 200000-ohm plate resistor.
- ▲ Grids #2 and #4 are screen. Grid #3 is signal-input control grid.
- Note 1: Types with octal bases have *Miniature Cap.*; all others have *Small Cap.*
- Note 2: Subscript 1 on class of amplifier service (as AB<sub>1</sub>) indicates that grid current does not flow during any part of input cycle.
- Subscript 2 on class of amplifier service (as AB<sub>2</sub>) indicates that grid current flows during some part of the input cycle.

KEY TO TUBE DIMENSIONS

Symbol	Minimum Overall Length • Diameter								
A1	1 1/2" x 1 1/8"	B5a	3 1/2" x 1 1/8"	C7a	3 1/2" x 1 1/8"	D8	4 1/2" x 1 1/8"	E3	3 1/2" x 2 1/8"
A1a	1 1/2" x 1 1/8"	C0	3 1/2" x 1 1/8"	C8	3 1/2" x 1 1/8"	D9	4 1/2" x 1 1/8"	F1	6 1/2" x 2 1/8"
B0	3 1/2" x 1 1/8"	C1	3 1/2" x 1 1/8"	D1	4" x 1 1/8"	D9a	4 1/2" x 1 1/8"	F1a	6 1/2" x 2 1/8"
B0a	3 1/2" x 1 1/8"	C2	3 1/2" x 1 1/8"	D1a	4 1/2" x 1 1/8"	D10	4 1/2" x 1 1/8"	G1	8" x 2 1/8"
B1	3 1/2" x 1 1/8"	C3	3 1/2" x 1 1/8"	D2	4 1/2" x 1 1/8"	D11	4 1/2" x 1 1/8"	H1	12 1/2" x 5 1/8"
B1a	3 1/2" x 1 1/8"	C4	3 1/2" x 1 1/8"	D3	4 1/2" x 1 1/8"	D12	4 1/2" x 1 1/8"	H	14 1/2" x 7 1/8"
B2	3 1/2" x 1 1/8"	C5a	3 1/2" x 1 1/8"	D4	4 1/2" x 1 1/8"	D12a	4 1/2" x 1 1/8"	I1a	14 1/2" x 7 1/8"
B3	3 1/2" x 1 1/8"	C5b	3 1/2" x 1 1/8"	D5	4 1/2" x 1 1/8"	D13	4 1/2" x 1 1/8"	J1	18" x 10 1/8"
B4	3 1/2" x 1 1/8"	C6	3 1/2" x 1 1/8"	D6	4 1/2" x 1 1/8"	E1	5 1/2" x 1 1/8"	K1	21 1/2" x 9 1/8"
B5	2 1/2" x 1 1/8"	C7	3 1/2" x 1 1/8"	D7	4 1/2" x 1 1/8"	E2	5 1/2" x 2 1/8"	L1	25 1/2" x 12 1/8"

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RCA Type	Name	Tube Dimensions and Socket Connections		Cathode Type and Rating		Use <small>Values to right give operating conditions and characteristics for indicated typical use</small>	Plate Supply Volts	Grid Bias Volts	Screen Supply Volts	Screen Current Ma.	Plate Current Ma.	AC Plate Resistance Ohms	Trans-Conductance (200-plate) $\mu$ mmhos	Amplification Factor	Load for Rated Power Output Ohms	Power Output Watts	RCA Type	
		Dim.	Socket	E.T.	Volts													Aug.
V-99 X-99	Detector Amplifier Triode	C4	4E 4D	D.C. F	3.3	0.063	Class A Amplifier	90	- 4.5	—	—	2.5	15500	425	6.6	—	V-99 X-99	
112-A	Detector Amplifier Triode	D12	4D	D.C. F	5.0	0.25	Class A Amplifier	90 180	- 4.5 -13.5	—	—	5.0 7.7	5400 4700	1575 1800	8.5 8.5	—	112-A	
117L/M7-GT	Rectifier-Beam Power Amplifier	C2B	6A0	H	117	0.09	Amplifier Unit as Class A Amplifier Half-Wave Rectifier	105	- 5.2	105	4.0	43.0	17000	5300	—	4000	0.65	117L/M7-GT
117N7-GT	Rectifier-Beam Power Amplifier	C2B	6AV	H	117	0.09	Amplifier Unit as Class A Amplifier Half-Wave Rectifier	100	- 6.0	100	5.0	51.0	16000	7000	—	3000	1.2	117N7-GT
117P7-GT	Rectifier-Beam Power Amplifier	C2B	6AV	H	117	0.09	Amplifier Unit as Class A Amplifier Half-Wave Rectifier	For other characteristics, refer to Type 117L/M7-GT.									117P7-GT	
117Z3	Half-Wave Rectifier	B14	40B	H	117	0.04	With Capacitive-Input Filter	For other ratings, refer to Type 117L/M7-GT.									117Z3	
117Z6-GT	Rectifier-Doubler	C3	0-701	H	117	0.075	Voltage Doubler Half-Wave Rectifier	For other ratings, refer to Type 117L/M7-GT.									117Z6-GT	
183/ 483	Power Amplifier Triode	D12	4D	F	5.0	1.25	Class A Amplifier	250	-60.0	—	—	30.0	1750	1700	3.0	5000	1.8	183/ 483
485	Detector Amplifier Triode	D6	6A1	H	3.0	1.25	Class A Amplifier	180	- 9.0	—	—	5.4	8900	1400	12.5	—	485	
876	Current Regulator	G1	—	F	—	—	Voltage Range _____ 40 to 60 Volts									Operating Current _____ 1.7 Amperes	876	
886	Current Regulator	G1	—	F	—	—	Voltage Range _____ 40 to 60 Volts									Operating Current _____ 2.05 Amperes	886	

Discontinued types are shown in light face. Metal and miniature tubes are identified respectively by a narrow or a wide riser preceding the type designation.

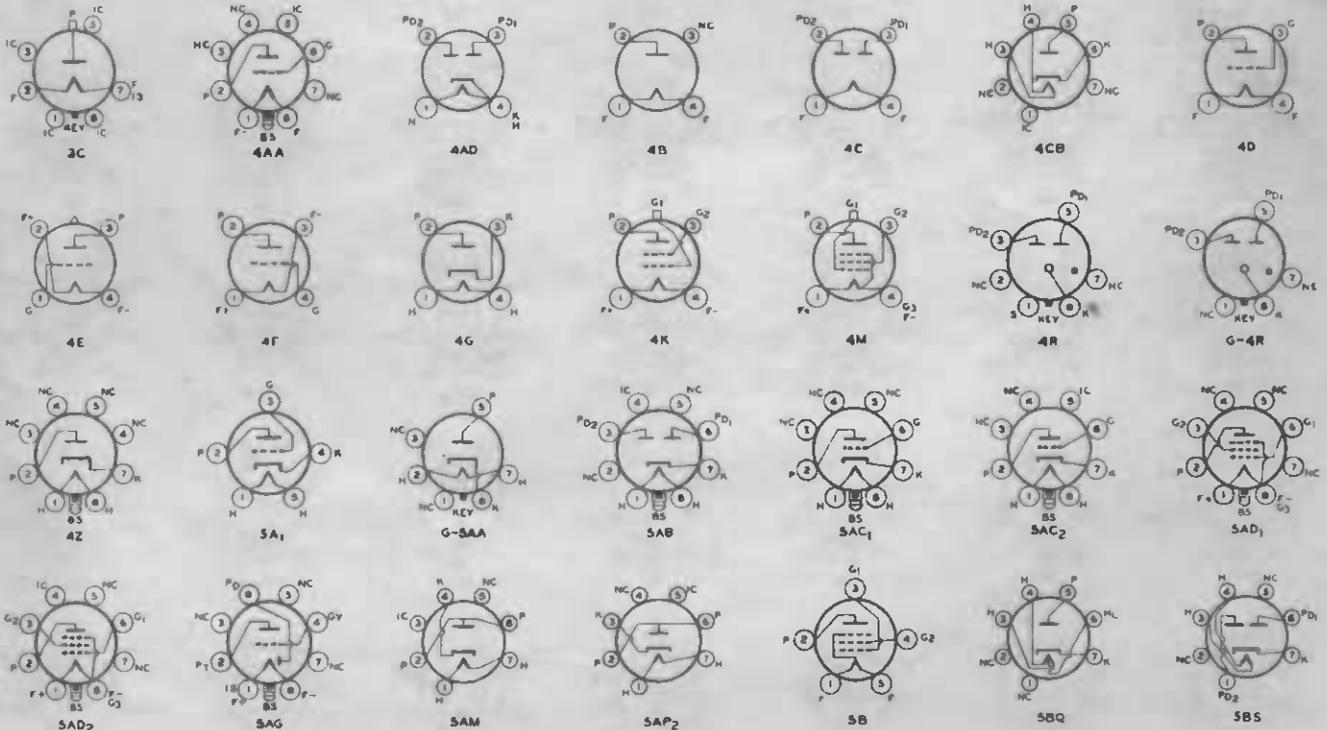
### Socket Connections

Bottom Views

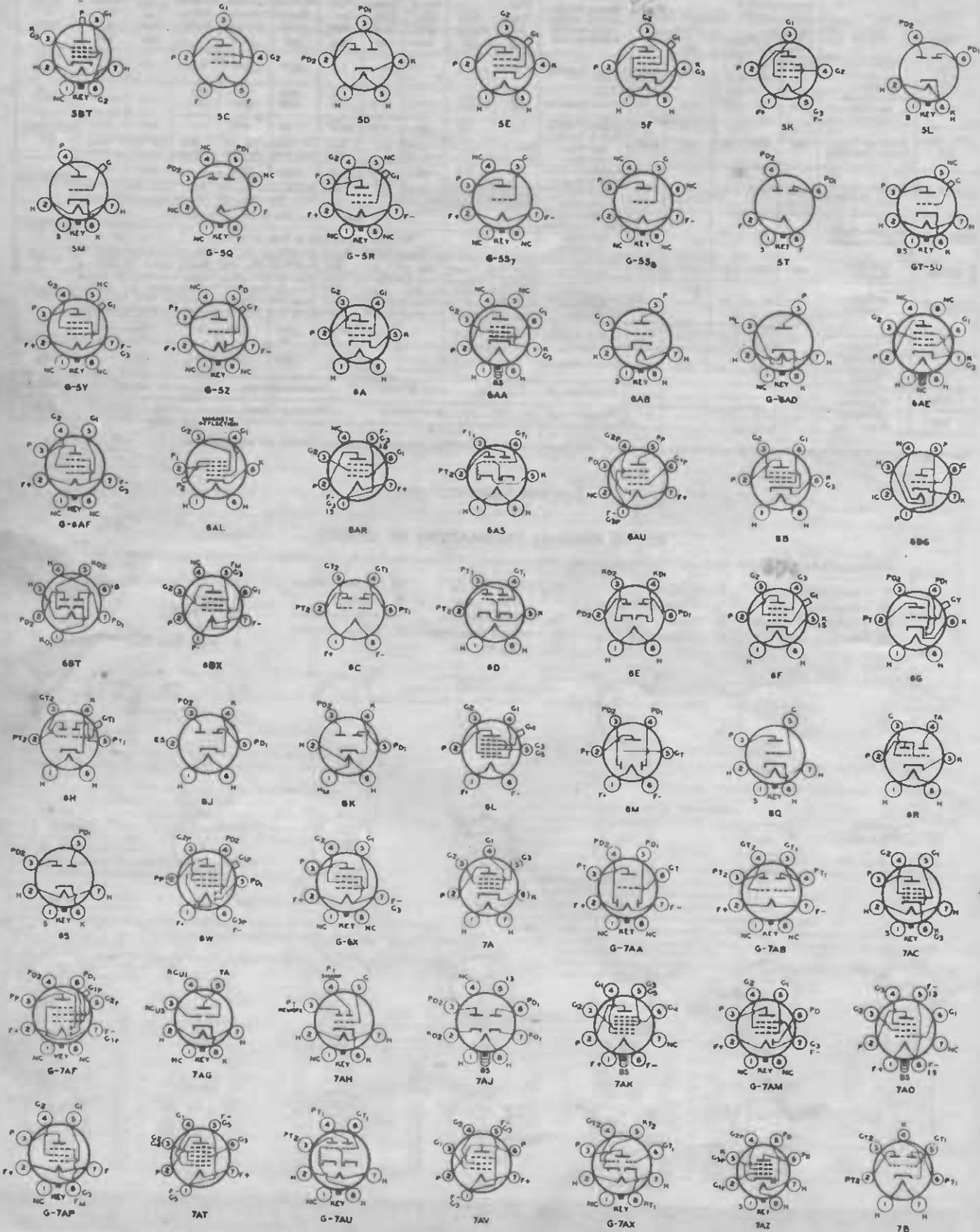
#### KEY TO TERMINAL DESIGNATIONS OF SOCKETS

Alphabetical Subscripts B, D, HP, HX, P, and T indicate, respectively, beam unit, diode unit, heptode unit, hexode unit, pentode unit, and triode unit, in multi-unit types.

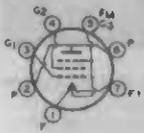
- BC = Base Sleeve
- F = Filament
- HL = Heater Tap for
- IS = Internal Shield
- RC = Ray-Control Electrode
- BS = Base Shell
- F<sub>M</sub> = Filament Mid-Tap
- K = Cathode
- S = Shell
- DJ = Deflecting Electrode
- G = Grid
- H<sub>M</sub> = Heater Mid Tap
- NC = No Connection
- TA = Target
- ES = External Shield
- H = Heater
- IC = Internal Connection—  
Do Not Use
- P = Plate (Anode)
- U = Unit
- = Gas-Type Tube



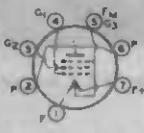
Socket Connections



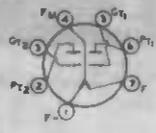
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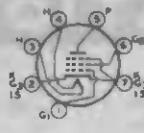
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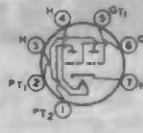
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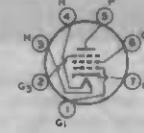
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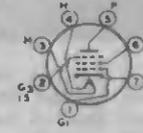
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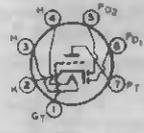
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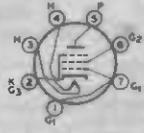
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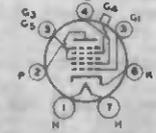
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78T



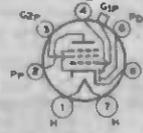
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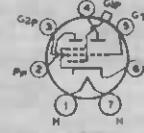
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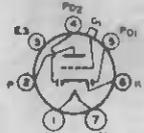
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7E



7F



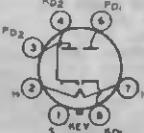
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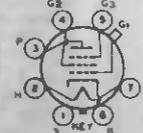
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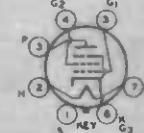
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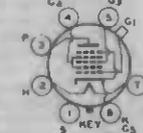
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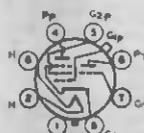
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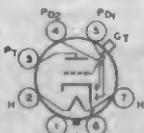
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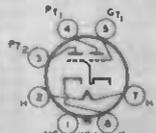
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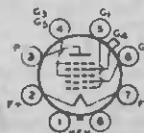
G-7U



7V



G-7W



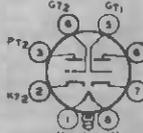
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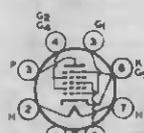
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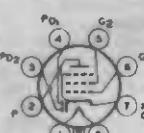
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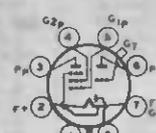
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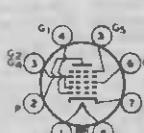
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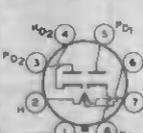
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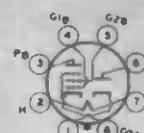
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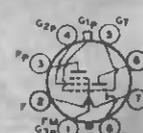
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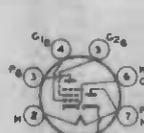
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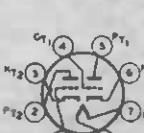
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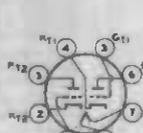
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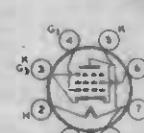
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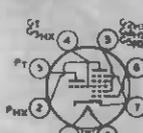
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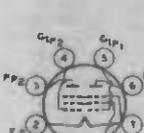
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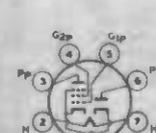
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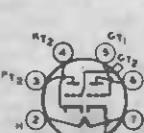
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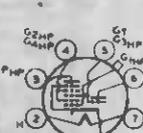
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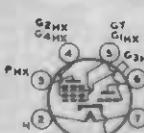
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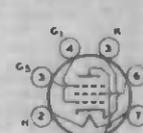
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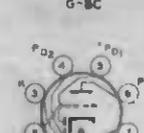
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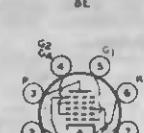
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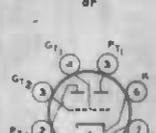
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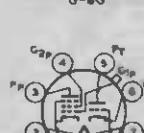
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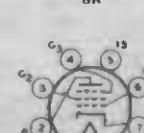
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8T



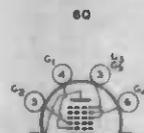
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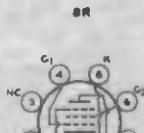
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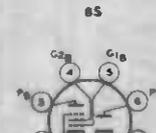
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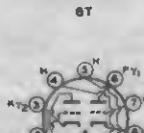
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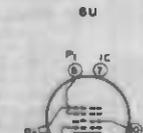
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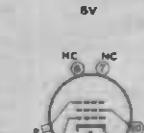
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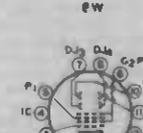
9A



12C



12D



14G



Call and Location.	Power in Watts.	Zone
<b>730 Kilocycles (Continued)—</b>		
KWOA—Worthington, Minn.	1,000	C
KTRY—Bastrop, La.		C
KWRE—Warrenton, Mo.		C
WACE—Chicopee Falls, Mass.	250	E
WCIF—Madisonville, Ky.	250	C
WDIA—Memphis, Tenn.	250	C
WFAK—Charleston, S.C.	1,000	E
WHWL—Nanticoke, Pa.	1,000	E
WIHL—Hammond, La.		C
WKSR—Pulaski, Tenn.	250	C
WKTG—Thomasville, Ga.	1,000	C
WLIN—Merrill, Wis.	1,000	E
WMTC—Vanceville, Ky.	1,000	E
*WOHS—Shelby, N.C.	250	E
*WPIK—Alexandria, Va.	1,000	E
WTK—Durham, N.C.	250	E
WPIT—Pittsburg, Pa.	1,000	E
XEX—Mexico City, Mex.	150,000	C

740 Kilocycles—	Power in Watts.	Zone
CBL—Toronto, Ont.	50,000	E
CLIK—San Diego, Calif.	5,000	P
KSFO—San Francisco, Cal.	50,000	P
KTRH—Houston, Texas	50,000	C
KWIN—Des Moines, Iowa	250	C
WBS—San Juan, P.R.	10,000	A
WIRJ—Humboldt, Tenn.	250	C
WJG—Tullahoma, Tenn.	250	C
WMBL—Morehead City, N.C.	1,000	E
WNOF—Newport, Ky.	1,000	E
WORZ—Orlando, Fla.	250	E
WPAQ—Mt. Airy, N.C.	250	E
WTAO—Cambridge, Mass.	250	E
WVCH—Chester, Pa.	250	E
WVLN—Olney, Ill.	250	C
WXGI—Richmond, Va.	1,000	E

750 Kilocycles—	Power in Watts.	Zone
KMMJ—Grand Island, Nebr.	1,000	C
KSEO—Durant, Okla.	250	C
KBST—Davenport, Iowa	250	C
KSTT—Davenport, Iowa	1,050	P
KXL—Portland, Ore.	10,000	E
WBMD—Baltimore, Md.	1,000	E
WHEB—Portsmouth, N.H.	1,000	E
WKOP—Binghamton, N.Y.	1,000	E
WPDN—Clarksburg, W.Va.	1,000	E
WSB—Atlanta, Ga.	50,000	E

760 Kilocycles—	Power in Watts.	Zone
KGU—Honolulu, Hawaii	2,500	—
WCPS—Tarboro, N.C.	1,000	E
WJR—Detroit, Mich.	50,000	E

770 Kilocycles—	Power in Watts.	Zone
KOB—Albuquerque, N.M.	50,000	M
KUOM—Minneapolis, Minn.	5,000	C
KXA—Seattle, Wash.	1,000	C
WCAL—Northfield, Minn.	5,000	C
WEW—St. Louis, Mo.	1,000	E
WJZ—New York, N.Y.	50,000	E

780 Kilocycles—	Power in Watts.	Zone
KSPI—Stillwater, Okla.	250	C
WBBO—Forest City, N.C.	1,000	E
WARR—Arlington, Va.	1,000	E
WBBM—Chicago, Ill.	50,000	E
WCKB—Dunn, N.C.	1,000	E
WJAG—Norfolk, Nebr.	1,000	C

790 Kilocycles—	Power in Watts.	Zone
CKSO—Sudbury, Ont.	5,000	E
KECA—Los Angeles, Calif.	5,000	P
KFGO—Fargo, N.D.	5,000	C
KFGD—Anchorage, Alaska	5,000	P
KGHL—Billings, Mont.	5,000	M
KTET—Houston, Texas	5,000	C
KVLU—Lubbock, Texas	1,000	C
KVOS—Bellingham, Wash.	1,000	C
KXXX—Kolby, Kansas	5,000	E
WEAN—Providence, R.I.	5,000	E
WEAB—Allentown, Pa.	500	E
WEAU—Eau Claire, Wisc.	1,000	E
WETB—Johnson City, Tenn.	1,000	E
WEUB—Eustis, Fla.	1,000	E
WGRC—Louisville, Ky.	5,000	E
WMC—Memphis, Tenn.	5,000	E
WPIK—Sharon, Penn.	1,000	E
WQXI—Buckhead, Ga.	1,000	E
WTAR—Norfolk, Va.	5,000	E
WTNC—Thomasville, N.C.	1,000	E
WVNY—Watertown, N.Y.	1,000	E
XERC—Mexico City, Mex.	1,000	C

800 Kilocycles—	Power in Watts.	Zone
CHAB—Moose Jaw, Sask.	5,000	M
CHRC—Quebec, Que.	5,000	E
*CJAD—Montreal, Que.	1,000	E
CKLW—Windsor, Ont.	5,000	E
KDD—Dumas, Texas	250	C
KPDQ—Portland, Ore.	1,000	P
KTOW—Oklahoma City, Okla.	250	M
KUBH—Brigham City, Utah	250	M
KXIC—Iowa City, Iowa	1,000	C
WCCM—Lawrence, Mass.	1,000	E
WCHA—Chambersburg, Penn.	1,000	E
WDSC—Dillon, S.C.	1,000	E
WROS—Decatur, Ala.	1,000	E
WHTN—Huntington, W.V.	10,000	C
WIBK—Knoxville, Tenn.	1,000	F
WKYB—Paducah, Ky.	1,000	F
WLAD—Dadbury, Conn.	250	E
WMBM—Miami Beach, Fla.	1,000	E
WMOY—Montgomery, Ala.	1,000	C

Call and Location.	Power in Watts.	Zone
<b>800 Kilocycles (Continued)—</b>		
WWPF—Palatka, Fla.	250	E
XELO—Ciudad Juarez, Mex.	150,000	C
<b>810 Kilocycles—</b>		
*KCMO—Kansas City, Mo.	10,000	C
KGO—San Francisco, Calif.	50,000	P
KTBI—Tacoma, Wash.	1,000	P
WASL—Annapolis, Md.	500	E
WEDO—McKeesport, Penn.	1,000	E
WCCE—Rocky Mt. N.C.	1,000	E
WGY—Schenectady, N.Y.	50,000	E
WJPG—Green Bay, Wisc.	1,000	C
WKBC—N. Wilkesboro, N.C.	1,000	E
XEFW—Tampico, Mex.	5,000	C

820 Kilocycles—	Power in Watts.	Zone
WAIT—Chicago, Ill.	5,000	C
WBAP—Fort Worth, Texas	50,000	C
WCBD—Chicago, Ill.	5,000	C
WFAA—Dallas, Texas	50,000	C
WKY—Evansville, Ind.	1,250	C
WOST—Columbus, Ohio	5,000	E

830 Kilocycles—	Power in Watts.	Zone
KBOA—Kennett, Mo.	1,000	C
WCCO—Minneapolis, Minn.	50,000	C
WNYC—New York, N.Y.	1,000	E

840 Kilocycles—	Power in Watts.	Zone
KOAG—Stillwater, Okla.	10,000	C
WHAB—Stroudsburg, Pa.	250	E
WHAS—Louisville, Ky.	50,000	C
WKAB—Mobile, Ala.	1,000	C

850 Kilocycles—	Power in Watts.	Zone
KFUO—Clayton, Mo.	5,000	C
KOA—Denver, Colo.	50,000	M
WEEU—Reading, Pa.	1,000	E
WHDH—Boston, Mass.	5,000	E
WJW—Cleveland, Ohio	5,000	E
WKBB—Muskegon, Mich.	1,000	E
WMAR—Baltimore, Md.	1,000	E
WNAO—Raleigh, N.C.	5,000	E
WRUP—Gainesville, Fla.	5,000	E
WTNB—Birmingham, Ala.	5,000	C
WXXW—Albany, N.Y.	1,000	F

860 Kilocycles—	Power in Watts.	Zone
CJBC—Toronto, Ont.	50,000	E
KOAM—Pittsburg, Kansas	5,000	C
KONO—San Antonio, Texas	5,000	C
KPAN—Hersford, Tex.	250	C
KSFA—Nacogdoches, Tex.	1,000	C
KTRB—Modesto, Calif.	1,000	P
KWPC—Muscatine, Iowa	250	C
WCAV—Norfolk, Va.	1,000	E
WDMG—Douglas, Ga.	1,000	E
WERD—Atlanta, Ga.	1,000	E
WFOK—Milwaukee, Wisc.	250	C
WFBC—Bristol, Va.	1,000	E
WHOD—Homestead, Pa.	250	E
WKOB—Nth. Adams, Mass.	250	E
WLBG—Laurens, S.C.	250	E
*WNEL—San Juan, P.R.	5,000	A
WOAY—Oak Hill, W. Va.	250	E
WSON—Henderson, Ky.	500	E
XEMO—Tijuana, Mex.	5,000	P

870 Kilocycles—	Power in Watts.	Zone
KCNC—Fort Worth, Texas	250	C
KIEV—Glendale, Calif.	250	P
WFLO—Farmville, Va.	250	E
WGTL—Kannapolis, N.C.	1,000	E
WHCU—Ithaca, N.Y.	1,000	E
WKAR—East Lansing, Mich.	5,000	E
WWL—New Orleans, La.	50,000	C

880 Kilocycles—	Power in Watts.	Zone
WCBS—New York, N.Y.	50,000	E
WRFD—Worthington, Ohio	5,000	E
WRZ—Clinton, N.C.	1,000	E

890 Kilocycles—	Power in Watts.	Zone
KBYE—Oklahoma City, Okla.	1,000	C
WENR—Chicago, Ill.	50,000	C
WHNC—Henderson, N.C.	250	E
WLS—Chicago, Ill.	50,000	C

900 Kilocycles—	Power in Watts.	Zone
CHLT—Sherbrooke, Ont.	1,000	E
CHML—Hamilton, Ont.	5,000	E
CJBR—Rimouski, Que.	5,000	E
CJVI—Victoria, B.C.	1,000	P
CKBI—Prince Albert, Sask.	5,000	M
KCLW—Hamilton, Texas	250	C
KJSK—Columbus, Nebr.	1,000	C
KVNI—Fargo, N.D.	1,000	C
KLCN—Blytheville, Ark.	1,000	C
KSGN—Centerville, Cal.	1,000	P
WAND—Canton, Ohio	250	E
WATK—Antigo, Wisc.	250	C
WAYN—Rockingham, N.C.	1,000	E
WCPA—Clearfield, Pa.	1,000	E
WKAN—Birmingham, Ala.	1,000	C
WKYW—Louisville, Ky.	1,000	C
WOTW—Nashua, N.H.	1,000	E
WBSA—York, Pa.	1,000	E
WSLI—Pikeville, Ky.	1,000	E
WSWN—Belle Glade, Fla.	1,000	E
XEW—Mexico City, Mex.	100,000	C

910 Kilocycles—	Power in Watts.	Zone
CBQ—Ottawa, Ont.	1,000	E
CFJC—Kamloops, B.C.	1,000	P
KALI—Salt Lake City, U.T.	1,000	M
KJAN—Opelousas, La.	1,000	C

Call and Location.	Power in Watts.	Zone
<b>910 Kilocycles (Continued)—</b>		
KGLC—Miami, Florida	1,000	C
KLX—Oakland, Cal.	1,000	P
KPOF—Denver, Col.	5,000	M
KRIO—McAllen, Texas	1,000	C
KRRV—Sherman, Texas	1,000	C
KVAN—Vancouver	1,000	P
KVNE—Oxnard, Calif.	1,000	P
WABI—Bangor, Me.	5,000	E
WAVL—Apollo, Pa.	1,000	E
WCCO—Meridian, Minn.	5,000	C
WDFD—Flint, Mich.	1,000	E
WGBI—Scranton, Pa.	500	E
WHAY—New Britain, Conn.	5,000	E
WJHL—Johnson City, Tenn.	5,000	E
WPFM—Middletown, Ohio	1,000	E
WPRP—Pounce, P.R.	5,000	A
WPTN—Paris, Tenn.	1,000	C
WQAN—Scranton, Pa.	500	E
WRNL—Richmond, Va.	5,000	E
WSUI—Iowa City, Iowa	5,000	C

920 Kilocycles—	Power in Watts.	Zone
*CJCH—Halifax, N.S.	5,000	A
CKNX—Wingham, Ont.	1,000	E
KECK—Odessa, Texas	1,000	C
KARK—Little Rock, Ark.	5,000	C
KUBD—Vermillion, S. Dak.	1,500	C
KELP—El Paso, Texas	1,000	C
KDHL—Faribault, Minn.	1,000	P
KOLO—Reno, Nev.	1,000	C
KFNH—Shenandoah, Iowa	500	C
KFXJ—Grand Junction, Colo.	500	M
KRAM—Las Vegas, Nev.	1,000	P
KTLW—Texas City, Texas	1,000	C
KVEC—San Luis Obispo, Calif.	1,000	P
KWAD—Wadena, Minn.	1,000	C
KXLY—Spokane, Wash.	5,000	P
WBAA—W. Lafayette, Ind.	1,000	C
WBBB—Burlington, N.C.	5,000	E
WJAR—Providence, R.I.	5,000	E
WKRT—Corland, N.Y.	1,000	E
WMMN—Fairmont, W.Va.	5,000	E
WQER—Atlanta, Ga.	1,000	E
WTTM—Trenton, N.J.	1,000	E
XEBH—Hermosillo, Mex.	5,000	C

930 Kilocycles—	Power in Watts.	Zone
CFBC—St. Johns, N.B.	5,000	A
CJCA—Edmonton, Alb.	1,000	M
CKRO—Woodland, Cal.	1,000	P
KHJ—Los Angeles, Cal.	5,000	P
KITE—San Antonio, Tex.	1,000	C
KROM—Pueblo, Col.	5,000	M
KSEI—Pocatello, Idaho	5,000	M
KSDN—Aberdeen, S.D.	1,000	C
KTKN—Ketchikan, Alaska	1,000	—
WBEN—Buffalo, New York	5,000	E
WBCK—Battle Creek, Mich.	1,000	E
WCNR—Blountsburg, Pa.	500	E
WEOL—Elyria, Ohio	1,000	E
WPMD—Frederick, Md.	500	E
WJAX—Jacksonville, Fla.	1,000	E
WKCT—Bowling Green, Ky.	1,000	C
WKY—Oklahoma City, Okla.	5,000	C
WLBL—Stevens Pt., Wisc.	5,000	E
WPAT—Paterson, N.J.	1,000	E
WRRF—Washington, N.C.	1,000	E
WSAZ—Huntington, W.Va.	5,000	C
WRLI—Jackson, Miss.	5,000	C
WTAD—Quincy, Ill.	1,000	C
WWNH—Rochester, N.H.	1,000	E

940 Kilocycles—	Power in Watts.	Zone
CBM—Montreal, Que.	5,000	E
CJGX—Yornton, Sask.	1,000	M
CJJE—Vernon, B.C.	1,000	P
HOX—Panama City, Pan.	1,000	C
KIOA—Des Moines, Iowa	10,000	C
KVAL—Amarillo, Texas	5,000	C

Call and Location.	Power in Watts.	Zone
<b>Call and Location. (Continued)</b>		
KMA—Shenandoah, Iowa	5,000	C
KFYB—Cape Girardeau, Mo.	1,000	C
KOKL—San Angelo, Tex.	1,000	C
KIMP—Mt. Pleasant, Tex.	1,000	C
KOOL—Phoenix, Ariz.	5,000	M
KOVO—Provo, Utah	1,000	M
KROP—Abbsville, La.	1,000	C
KROW—Oakland, Cal.	1,000	C
KYRV—Victorville, Cal.	5,000	P
WBOC—Salisbury, Md.	1,000	C
WBRC—Birmingham, Ala.	5,000	C
WCBM—Lemoine, Pa.	1,000	C
WDBJ—Roanoke, Va.	5,000	E
WELI—New Haven, Conn.	1,000	E
WHAK—Rogers City, Mich.	1,000	E
WMFF—Plattsburg, N.Y.	1,000	E
WRFC—Athens, Ga.	1,000	E
WSBT—South Bend, Ind.	1,000	E
WTCH—Shawane, Wisc.	1,000	E
WWST—Wooster, Ohio	500	E
<b>97 Kilocycles</b>		
CKCH—Hull, Que.	1,000	E
KHBC—Hilo, Hawaii	1,000	E
KLER—Rochester, Minn.	1,000	C
KNEB—Scottsbluff, Neb.	1,000	C
KOIN—Portland, Ore.	5,000	C
KPDR—Alexandria, La.	1,000	C
KTKC—Fresno, Calif.	50,000	C
KWBC—Fort Worth, Texas	1,000	C
WAAT—Newark, N.J.	1,000	C
WAVE—Louisville, Ky.	5,000	C
WCSH—Portland, Me.	5,000	C
WDAY—Fargo, N.D.	5,000	C
WEBR—Buffalo, N.Y.	5,000	C
WFLA—Tampa, Fla.	5,000	C
WHA—Madison, Wis.	5,000	C
WICA—Ashtabula, Ohio	1,000	E
WJMX—Florence, S.C.	5,000	E
WMMI—Marquette, Mich.	1,000	E
WRSC—Ahoskie, N.C.	1,000	E
WWSW—Pittsburg, Pa.	5,000	E
WVVO—Pineville, W.Va.	1,000	E
<b>98 Kilocycles</b>		
CBV—Quebec, Que.	1,000	E
CKRM—Regina, Sask.	1,000	E
CKVL—Verdun, Que.	1,000	E
CKWX—Vancouver, B.C.	5,000	E
KCIJ—Shreveport, La.	5,000	E
KFRD—Rosenburg, Texas	500	C
KFWB—Los Angeles, Cal.	5,000	C
KMBC—Kansas City, Mo.	5,000	C
WGBG—Greensboro, N.C.	1,000	C
WKLF—Clanton, Ala.	1,000	E
WKLY—Hartwell, Ga.	1,000	E
WPLT—Dayton, Ohio	5,000	E
WRC—Washington, D.C.	5,000	E
WSIX—Nashville, Tenn.	5,000	E
WTRY—Troy, N.Y.	1,000	E
XECA—Tampico, Tama, Mex.	1,000	C
<b>99 Kilocycles</b>		
CBW—Cerman, Man.	50,000	C
KBKX—San Antonio, Tex.	1,000	C
KCOB—Storm Lake, Iowa	250	C
KFDX—Wichita Falls, Tex.	5,000	C
KTRM—Danver, Col.	1,000	C
KTRM—Beaumont, Tex.	250	C
KWEM—West Memphis, Ark.	1,000	C
WBET—Brocton, Mass.	250	C
WCAZ—Carthage, Ill.	1,000	E
WLCE—Torrington, Conn.	1,000	E
WDDW—Dawson, Ga.	1,000	E
WHOO—Orlando, Fla.	5,000	E
WIBG—Glenside, Pa.	10,000	E
WJBA—Sparta, Wisc.	250	E
WJMR—New Orleans, La.	250	C
WNOX—Knoxville, Tenn.	10,000	C
WORA—Mayaguez, P. Rico	1,000	A
WSTS—Southern Pines, N.C.	250	C
XECL—Mexicali, B.C.	5,000	P
<b>100 Kilocycles</b>		
CKBW—Bridgewater, N.S.	1,000	A
KGRI—Henderson, Texas	250	C
KOMO—Seattle, Wash.	50,000	C
KSTA—Coleman, Tex.	250	C
KTOK—Oklahoma City, Okla.	1,000	C
WCFL—Chicago, Ill.	50,000	C
WHLW—Rutland, Va.	1,000	E
WKNS—Kinston, N.C.	1,000	E
WSCR—Scranton, Pa.	1,000	E
XEOY—Mexico City, Mex.	10,000	C
<b>101 Kilocycles</b>		
CBX—Edmonton, Alta.	50,000	M
CFRB—Toronto, Ont.	10,000	E
CMX—Havana, Cuba	25,000	E
KAMQ—Amarillo, Texas	1,000	C
KIND—Independence, Mo.	250	C
KLRA—Little Rock, Ark.	50,000	C
KSNM—Mason City, Iowa	1,000	C
WABZ—Albemarle, N.C.	1,000	E
WAFP—McComb, Ill.	250	C
WCNU—Cressville, Fla.	1,000	E
WEAS—Decatur, Ga.	1,000	E
WHIN—Gillette, Tenn.	1,000	E
WINS—New York, N.Y.	10,000	E
WJMW—Athens, Ga.	250	E
WJVB—Jacksonville Beach, Fla.	250	E
WMEV—Marion, Va.	1,000	E
WSUA—Bloomington, Ind.	1,000	C
WTWT—Stevens Point, Wisc.	250	C

Call and Location.	Power in Watts.	Zone
<b>102 Kilocycles</b>		
KDKA—Pittsburgh, Pa.	50,000	E
KFVD—Los Angeles, Cal.	5,000	P
WCIL—Carbondale, Ill.	1,000	C
WMMJ—Peoria, Ill.	1,000	C
<b>103 Kilocycles</b>		
KWBU—Corpus Christi, Tex.	50,000	C
WBZ—Boston, Mass.	50,000	E
WBZA—Boston, Mass.	1,000	E
XEGR—Mexico City, Mex.	1,000	C
<b>104 Kilocycles</b>		
KIXL—Dallas, Texas	1,000	C
WHO—Des Moines, Iowa	50,000	C
<b>105 Kilocycles</b>		
CFQP—Grand Prairie, Alta.	1,000	M
CHUM—Toronto, Ont.	1,000	E
KPMJ—Tulsa, Okla.	1,000	C
KGAR—Garden City, Kansas	1,000	C
KRKL—Kirkland, Wash.	250	P
KROK—Crookston, Minn.	1,000	C
KVSM—North Little Rock, Ark.	1,000	C
KVSM—San Mateo, Calif.	250	P
WACR—Starkville, Miss.	250	C
WATJ—Antigo, Wisc.	250	C
WDE—Tuscola, Ill.	1,000	C
WGAY—Silver Springs, Md.	1,000	C
WBOB—Sulphur Springs, Fla.	250	E
WIVY—Jacksonville, Fla.	1,000	E
WKTU—Mayfield, Ky.	250	C
WLJP—Kenosha, Wisc.	250	C
WMGM—New York, N.Y.	50,000	E
WMMB—Melbourne, Fla.	250	E
WPAG—Ann Arbor, Mich.	250	E
WRFS—Alexander, C.Ala.	1,000	C
WRFP—Eau Claire, Wisc.	1,000	C
WRYO—Rochester, Pa.	250	C
WTVN—Johnson City, Tenn.	1,000	E
WVEC—Hampton, Va.	250	E
WWGP—Sanford, N.C.	1,000	E
WZIP—Covington, Ky.	250	C
XED—Mexicali, B. Calif.	5,000	P
XEG—Monterey, N.L.	150,000	C
<b>106 Kilocycles</b>		
CFCN—Calgary, Alta.	10,000	M
KYW—Philadelphia, Pa.	50,000	E
WCMW—Canton, Ohio	1,000	E
WBFB—Benton Harbour, Mich.	1,000	E
WIBV—Bellefonte, Ill.	1,000	E
WMAP—Munroe, N.C.	250	E
WNOE—New Orleans, La.	50,000	C
<b>107 Kilocycles</b>		
CBA—Sackville, N.B.	50,000	E
CHOK—Sorel, Ont.	1,000	E
KBKJ—Alice, Texas	1,000	C
KFBJ—Wichita, Kansas	1,000	C
KHMO—Hannibal, Mon.	5,000	C
KNX—Los Angeles, Cal.	50,000	C
WAPI—Birmingham, Ala.	5,000	C
WHPE—High Point, N.C.	1,000	E
WIKO—Indianapolis, Ind.	5,000	C
WKOW—Madison, Wisc.	10,000	C
WKVM—Arcadio, P.R.	10,000	A
WVCG—Coral Gables, Fla.	1,000	E
<b>108 Kilocycles</b>		
CKY—Winnipeg, Man.	15,000	C
KRLD—Dallas, Texas	50,000	C
KSCO—Santa Cruz, Calif.	1,000	P
KWJJ—Portland, Ore.	1,000	P
WEWO—Laurensburg, N.C.	1,000	E
WKLO—Louisville, Ky.	1,000	E
WOAP—Owosso, Mich.	250	E
WPOH—Pittsburg, Pa.	1,000	E
WREX—Deluth, Minn.	10,000	C
WTIC—Hartford, Conn.	50,000	E
WXRA—Kenmore, N.Y.	1,000	E
<b>109 Kilocycles</b>		
KAYX—Waterloo, Iowa	1,000	C
KING—Seattle, Wash.	10,000	P
KTHE—Hot Springs, Ark.	5,000	E
WBAL—Baltimore, Md.	50,000	E
WBMS—Boston, Mass.	1,000	E
WCRA—Effingham, Ill.	1,000	C
WFTW—Fort Wayne, Ind.	1,000	C
WMUS—Muskegon, Mich.	1,000	E
XERB—Tijuana, Mex.	50,000	P
<b>110 Kilocycles</b>		
KJBS—San Francisco, Cal.	1,000	P
WGPA—Bethlehem, Penna.	250	E
WLBB—Carrollton, Ga.	250	E
WLHI—Hamptead, N.Y.	250	E
WTAM—Cleveland, Ohio	50,000	E
<b>111 Kilocycles</b>		
KFAB—Omaha, Nebr.	50,000	C
WHIM—Providence, R.I.	1,000	E
KIPA—Hilo, Hawaii	1,000	E
KXLA—Pasadena, Calif.	10,000	P
WALT—Tampa, Fla.	1,000	E
WBT—Charlotte, N.C.	50,000	E
WBT—Shelby, N.C. (booster)	1,000	E
WNAR—Norristown, Penna.	500	E
WONO—Oneonta, N.Y.	250	E
WVJP—Caglus, P.R.	250	E
<b>112 Kilocycles</b>		
KCLE—Cieburne, Tex.	250	C
KMOX—St. Louis, Mo.	50,000	C
WBCC—Bethesda, Md.	250	E
WWOL—Lackawanna, N.Y.	1,000	E

Call and Location.	Power in Watts.	Zone
<b>113 Kilocycles</b>		
CBR—Vancouver, B.C.	5,000	P
KRDU—Dinuba, Cal.	250	P
KWKH—Shreveport, La.	50,000	C
KYOR—San Diego, Calif.	250	P
WCAR—Pontiac, Mich.	1,000	E
WDGY—Minneapolis, Minn.	500	C
WNEW—New York, N.Y.	10,000	E
<b>114 Kilocycles</b>		
CJCI—Calgary, Alta.	1,000	M
KGDM—Stockton, Calif.	5,000	M
KGEM—Boise, Idaho	10,000	M
KLPR—Oklahoma City, Okla.	1,000	C
KORC—Mineral Wells, Tex.	250	C
KSOO—Sioux Falls, S.D.	5,000	C
WMIE—Miami, Florida	5,000	E
WRVA—Richmond, Va.	50,000	E
WSIV—Pekin, Ill.	250	C
<b>115 Kilocycles</b>		
CHSJ—St. John, N.B.	5,000	E
CKOC—Hamilton, Ont.	5,000	E
CKX—Brandon, Man.	1,000	C
KCKY—Coolidge, Ariz.	1,000	M
KGFM—Great Falls, Mont.	5,000	M
KFII—Klamath Falls, Ore.	1,000	P
KFSG—Los Angeles, Cal.	1,000	P
KRKD—Los Angeles, Cal.	1,000	P
KRSC—Seattle, Wash.	1,000	P
KRAL—Salina, Kansas	1,000	P
KWDM—Des Moines, Iowa	1,000	P
KXOC—Chico, Calif.	1,000	P
WAPC—Chattanooga, Tenn.	1,000	C
WCOP—Boston, Mass.	500	E
WCNX—Middleton, Con.	500	E
WDEL—Wilmington, Del.	5,000	E
WFNS—Burlington, N.C.	1,000	E
WIMB—Lima, Ohio	1,000	E
WISN—Milwaukee, Wis.	5,000	E
WJBO—Baton Rouge, La.	5,000	C
WJRD—Tuscaloosa, Ala.	1,000	C
WKPA—New Kensington, Pa.	250	E
WNEB—Dayton Beach, Fla.	1,000	E
WORA—Mayaguez, P.R.	1,000	A
WRUN—Utica, N.Y.	5,000	E
WSNW—Seeca, S.C.	1,000	E
WTAW—College Station, Tex.	1,000	C
WTCU—Campbellville, Ky.	1,000	C
WTYC—Rock Hills, S.C.	1,000	C
<b>116 Kilocycles</b>		
KSL—Salt Lake City, Utah	50,000	M
WJJD—Chicago, Ill.	50,000	C
<b>117 Kilocycles</b>		
H13T—Trujillo, Dominica	10,000	—
KPUG—Bellingham, Wash.	1,000	P
KLOK—San Jose, Calif.	5,000	P
KSDI—San Diego, Calif.	5,000	P
KYOO—Tulsa, Okla.	50,000	C
WJJJ—Montgomery, Ala.	1,000	C
WLBH—Mattoon, Ill.	250	C
WVVA—Wheeling, W.Va.	50,000	E
<b>118 Kilocycles</b>		
WHAM—Rochester, N.Y.	50,000	E
WLDS—Jacksonville, Ill.	1,000	C
<b>119 Kilocycles</b>		
KEX—Portland, Ore.	50,000	P
KGYW—Vallejo, Calif.	250	P
KLIF—Oak Cliff, Texas	1,000	C
KWHK—Hutchinson, Kans.	1,000	C
KYSC—Yuma, Ariz.	1,000	M
WANN—Annapolis, Md.	1,000	E
WKOX—Framingham, Mass.	1,000	E
WLBI—New York, N.Y.	1,000	E
WOWO—Fort Wayne, Ind.	10,000	C
<b>120 Kilocycles</b>		
WOAI—San Antonio, Texas	50,000	C
<b>121 Kilocycles</b>		
WADE—Wadesboro, N.C.	1,000	E
WCNT—Centralla, Ill.	1,000	C
WCAU—Philadelphia, Pa.	50,000	E
WKNX—Saginaw, Mich.	1,000	E
WWSO—Springfield, Ohio	250	E
<b>122 Kilocycles</b>		
CJOC—Lethbridge, Alta.	5,000	M
*CKCW—Moncton, N.B.	5,000	A
CJRL—Kenora, Ont.	1,000	C
KDSX—Denison, Texas	1,000	C
KXRN—Renton, Wash.	250	P
WCLA—Baton Rouge, La.	250	C
WFAX—Mills Church, Va.	250	E
WFEC—Miami, Florida	250	E
WGAR—Cleveland, Ohio	5,000	E
WHSY—Hattiesburg, Miss.	250	E
WGNV—Newburgh, N.Y.	1,000	E
XEB—Mexico City, Mex.	20,000	C
WLPO—La Salle, Ill.	250	C
WLYK—Lake Oak, Fla.	250	E
WRIB—Providence, R.I.	250	E
WSPT—Thomasston, Ga.	250	E
<b>123 Kilocycles</b>		
CKBL—Matane, Que.	1,000	E
CKSB—St. Boniface, Man.	1,000	C
KFKU—Lawrence, Kansas	1,000	C
KGHI—Little Rock, Ark.	1,000	C
KPAC—Port Arthur, Texas	1,000	C
KTMS—Santa Barbara, Cal.	1,000	P
KTW—Seattle, Wash.	1,000	P
KWBC—Pullman, Wash.	5,000	P

Call and Location.	Power in Watts.	Zone
<b>1200 Kilocycles (Continued)—</b>		
WCAE—Pittsburg, Pa.	5,000	E
WDAE—Tampa, Fla.	5,000	E
WDVA—Danville, Va.	5,000	E
WGL—Fort Wayne, Ind.	1,000	C
WMAW—Milwaukee, Wisc.	5,000	E
WMTR—Morristown, N.J.	5,000	E
WNOV—York, Pa.	1,000	E
WREN—Topeka, Kans.	5,000	E
WRMB—Ware, Mass.	500	E
WSKB—McComb, Miss.	5,000	E
WTMA—Charleston, S.C.	1,000	E

<b>1205 Kilocycles—</b>		
CFRN—Edmonton, Alta.	5,000	M
KFGQ—Boone, Iowa	250	C
KGBX—Springfield, Mo.	5,000	E
KGLL—San Fernando, Calif.	1,000	P
KPOW—Powell, Wyo.	1,000	M
KSMI—Seminole, Okla.	500	C
KTAE—Taylor, Texas	1,000	C
KVNW—Grand Forks, N.D.	1,000	C
KVSB—Santa Fe, N.M.	1,000	M
KYA—San Francisco, Cal.	1,000	P
WAYZ—New Haven, Conn.	1,000	E
WFBM—Indianapolis, Ind.	5,000	E
WGWR—Ashboro, N.C.	1,000	E
WNAC—Boston, Mass.	5,000	E
WNDR—Syracuse, N.Y.	5,000	E
WOL—Washington, D.C.	1,000	E

<b>1270 Kilocycles—</b>		
CHAT—Medicine Hat, Alta.	1,000	M
CJCB—Sydney, N.S.	1,000	A
KFJZ—Fort Worth, Texas	5,000	C
KIMO—Sioux Falls, S.D.	1,000	C
KIOX—Bay City, Texas	1,000	C
KPBC—Phoenix, Ariz.	5,000	M
KSCB—Liberal, Kansas	1,000	C
KTFI—Twin Falls, Idaho	5,000	M
KGCU—Mandan, N.D.	500	M
KCOK—Tulare, Calif.	1,000	P
WHBF—Rock Island, Ill.	5,000	E
WLBR—Lebanon, Penn.	1,000	C
WPDQ—Jacksonville, Fla.	5,000	E
WHYN—Newport News, Va.	1,000	E
WILE—Cambridge, Ohio	1,000	E
WSPR—Springfield, Mass.	5,000	E
WTAL—Tallahassee, Fla.	5,000	E
WTND—Orangeburg, S.C.	1,000	E
WXYZ—Detroit, Mich.	5,000	E

<b>1280 Kilocycles—</b>		
CKCV—Quebec	1,000	E
KFOX—Long Beach, Calif.	1,000	P
KIT—Yakima, Wash.	1,000	P
KLTI—Longview, Texas	1,000	C
KNAK—Salt Lake City, Utah	1,000	M
KSFT—Trinidad, Colorado	500	M
KSOK—Arkansas City, Kan.	250	C
KWHI—Brenham, Tex.	1,000	C
KXOB—Stockton, Calif.	1,000	P
WANS—Anderson, S.C.	1,000	E
WCMN—Arcibo, P.R.	1,000	A
WDBU—New Orleans, La.	5,000	C
WFCY—Alma, Mich.	1,000	E
WGBF—Evansville, Ind.	1,000	C
WHBI—Newark, N.J.	1,000	E
WIBB—Macon, Ga.	1,000	E
WKST—New Castle, Pa.	1,000	E
WMRO—Aurora, Ill.	250	C
WNAM—Neenah, Wis.	1,000	C
WOV—New York, N.Y.	5,000	E
WBAT—Salisbury, N.C.	1,000	E
WTCN—Minneapolis, Minn.	1,000	C
WVET—Rochester, N.Y.	5,000	E

<b>1290 Kilocycles—</b>		
KBKO—Portland, Ore.	1,000	P
KFRB—Fairbanks, Alaska	1,000	—
KGVO—Missoula, Mont.	1,000	M
KHSL—Chico, Calif.	1,000	P
KITO—San Bernardino, Calif.	1,000	P
KOHL—Omaha, Neb.	5,000	C
KRGV—Waco, Texas	1,000	C
KTRN—Wichita Falls, Texas	1,000	C
KUGA—Siloam Springs, Ark.	5,000	C
KVOA—Tucson, Ariz.	1,000	M
WCCO—Hartford, Conn.	500	E
WHIO—Dayton, Ohio	5,000	E
WHKY—Hickory, N.C.	1,000	E
WHLD—Niagara Falls, N.Y.	1,000	E
WIRK—West Palm Beach, Fla.	1,000	E
WIRL—Peoria, Ill.	5,000	C
WJSW—Altoona, Pa.	500	E
WKNE—Keene, N.H.	5,000	E
WMLO—Milwaukee, Wisc.	1,000	C
WNBP—Binghamton, N.Y.	5,000	E
WMLS—Sylacauga, Ala.	1,000	C
WNAF—Providence, R.I.	500	E
WTRF—Bellair, Ohio	1,000	E
WTUX—Wilmington, Del.	500	E
WTOC—Savannah, Ga.	5,000	E
XEDA—Mexico City, Mex.	1,000	C

<b>1300 Kilocycles—</b>		
KAGP—Pasadena, Calif.	1,000	P
KGLO—Mason City, Iowa	5,000	C
KOL—Seattle, Wash.	5,000	P
KOME—Tulsa, Okla.	1,000	C
KROP—Brawley, Calif.	1,000	P
KVOR—Colorado Springs, Colo.	1,000	M
KVIT—Austin, Texas	1,000	C
KYNO—Fresno, Calif.	1,000	P

Call and Location.	Power in Watts.	Zone
<b>1300 Kilocycles (Continued)—</b>		
WERE—Cleveland, Ohio	5,000	E
WFBR—Baltimore, Md.	5,000	E
WJDA—Quincy, Mass.	1,000	E
WJDX—Jackson, Miss.	1,000	C
WKIX—Lexington, Ky.	1,000	C
WLIZ—Bridgeport, Conn.	1,000	E
WLNR—Lawrenceville, Ill.	1,000	C
WMAK—Nashville, Tenn.	5,000	C
WOOD—Grand Rapids, Mich.	6,000	E

<b>1305 Kilocycles—</b>		
CKCO—Ottawa, Ont.	1,000	E
KFBB—Great Falls, Mont.	5,000	M
KPKA—Greeley, Col.	1,000	M
KFSB—Joplin, Mo.	5,000	C
KOKX—Keokuk, Iowa	250	C
KTKR—Taft, Calif.	500	P
KWBR—Oakland, Calif.	1,000	P
WCAM—Camden, N.J.	500	E
WCAP—Ashbury Park, N.J.	500	E
WDOU—Chattanooga, Tenn.	5,000	C
WDUK—Durham, N.C.	1,000	E
WDXI—Jackson, Tenn.	1,000	E
WGAT—Utica, N.Y.	1,000	E
WGH—Newport News, Va.	5,000	E
WKMH—Dearborn, Mich.	1,000	E
WIBA—Madison, Wisc.	5,000	C
WIBH—Indianapolis, Ind.	1,000	E
WMLO—Milwaukee, Wis.	1,000	C
WNAE—Warren, Pa.	1,000	E
WORC—Worcester, Mass.	1,000	E
WRR—Dallas, Texas	5,000	C
WTNJ—Trenton, N.J.	500	E

<b>1320 Kilocycles—</b>		
CHEF—Granby, Q.	1,000	E
KCRA—Sacramento, Calif.	1,000	P
KDYI—Salt Lake City, Utah	5,000	M
KELO—Sioux Falls, S.D.	5,000	C
KOLT—Scottsbluff, Neb.	1,000	M
KWOB—Clinton, Okla.	1,000	C
KWHN—Pl. Smith, Arkansas	5,000	C
KWWL—Waterloo, Iowa	1,000	C
KXLW—Clayton, Mo.	1,000	C
KXYZ—Houston, Texas	5,000	C
WAGF—Dothan, Ala.	1,000	C
WATE—Waterbury, Conn.	1,000	E
WCOG—Greenboro, N.C.	1,000	E
WDAV—Auburn, Me.	500	E
WDBS—Duluth, Minn.	5,000	C
WBBB—San Juan, P.R.	5,000	A
WHOK—Lancaster, Pa.	500	E
WJAS—Pittsburg, Pa.	5,000	E
WJEP—Jacksonville, Fla.	5,000	E
WKAN—Kankakee, Ill.	1,000	C
WKIX—Columbia, S.C.	1,000	E
WLAN—Lancaster, Penn.	1,000	E
WLEA—Hornell, N.Y.	1,000	E
WNGC—Mayfield, Ky.	1,000	C

<b>1330 Kilocycles—</b>		
KFAC—Los Angeles, Cal.	5,000	P
KFH—Wichita, Kansas	5,000	C
KINE—Kingsville, Tex.	1,000	P
KPOJ—Portland, Ore.	5,000	P
KSWA—Graham, Texas	500	C
WBBC—Flint, Mich.	1,000	E
WBRR—New York, N.Y.	1,000	E
WBTM—Danville, Va.	5,000	E
WBTR—Waltham, Mass.	5,000	E
WEVD—New York, N.Y.	5,000	E
WFBC—Greenville, S.C.	5,000	E
WFIN—Findlay, Ohio	1,000	E
WFHZ—Troy, N.Y.	1,000	E
WBHL—Sheboygan, Wisc.	250	C
WIKK—Erie, Pa.	5,000	E
WJPS—Evansville, Ind.	1,000	C
WLOL—Minneapolis, Minn.	5,000	C

<b>1340 Kilocycles—</b>		
CHQB—Ste. Anne de la Po- catters, Que.	1,000	E
CHOV—Pembroke, Ont.	1,000	E
CJDC—Dawson Creek, Yukon	1,000	M
KCOR—San Antonio, Texas	1,000	C
KGNF—Pueblo, Colo.	500	M
KCSB—San Bernardino, Cal.	500	P
KID—Idaho Falls, Idaho	500	M
KREI—Farmington, Miss.	1,000	C
KRRD—Duncan, Okla.	100	C
KRNT—Des Moines, Iowa	5,000	C
WADC—Akron, Ohio	5,000	E
WEEK—Peoria, Ill.	1,000	C
WGAD—Gadsden, Ala.	1,000	C
WIOU—Kokomo, Ind.	1,000	C
WLou—Louisville, Ky.	1,000	C
WNLE—Norwalk, Conn.	500	E
WORK—York, Pa.	1,000	E
WMBB—New Orleans, La.	5,000	C
WVOP—Stroudsburg, Pa.	1,000	E

<b>1350 Kilocycles—</b>		
KFAA—Hones, Ark.	1,000	C
KGB—San Diego, Calif.	1,000	P
KIMP—El Dorado, Kans.	1,000	C
KMO—Tacoma, Wash.	5,000	P
KREL—Baytown, Texas	1,000	C
KRIS—Corpus Christi, Texas	1,000	C
KSCI—Sioux City, Iowa	5,000	C
KVRS—Rock Springs, Wyo.	1,000	M
KXGI—Fort Madison, Iowa	500	C
KXOL—Fort Worth, Texas	1,000	C
WDRG—Hartford, Conn.	5,000	E

Call and Location.	Power in Watts.	Zone
<b>1360 Kilocycles (Continued)—</b>		
WEEB—Southern Pines, N.C.	1,000	E
WGFG—Kalamazoo, Mich.	1,000	E
WKAT—Miami Beach, Fla.	1,000	E
WLBK—De Kalb, Ill.	500	E
WLYN—Lynn, Mass.	500	E
WMCK—McKeesport, Pa.	1,000	E
WOBBS—Jacksonville, Fla.	1,000	E
WPPA—Pottsville, Pa.	500	E
WBAI—Cincinnati, Ohio	5,000	E
WTAQ—Green Bay, Wis.	5,000	E
WTHH—Port Huron, Mich.	1,000	E
WVVC—Mt. Carmel, Ill.	500	E
WVVB—Vineland, N.J.	250	E

<b>1370 Kilocycles—</b>		
KBUC—Corona, Calif.	500	P
KDTH—Dubuque, Iowa	1,000	P
KEEN—San Jose, Calif.	1,000	P
KPRO—Longview, Texas	1,000	C
KGNO—Dodge City, Kansas	250	C
KBUM—Fairmont, Minn.	500	C
KTXN—Austin, Texas	1,000	C
KXLF—Butte, Mont.	5,000	M
WCOA—Pensacola, Fla.	500	C
WDEF—Chattanooga, Tenn.	1,000	C
WFEE—Manchester, N.H.	5,000	C
WLTC—Gastonia, N.C.	1,000	E
WMAC—Pottstown, Pa.	1,000	E
WPAB—Ponce Puerto Rico	1,000	A
WSAY—Rochester, N.Y.	1,000	E
WSPD—Toledo, Ohio	5,000	E
WTTB—Bloomington, Ind.	1,000	C

<b>1380 Kilocycles—</b>		
CKPC—Branford, Ont.	1,000	E
KBWD—Brownwood, Texas	500	C
KHON—Honolulu, Hawaii	5,000	—
KIDO—Boise, Idaho	1,000	M
KMBU—Muskege, Okla.	1,000	C
KOTA—Rapid City, S.D.	5,000	M
KPBX—Boumont, Texas	1,000	C
KBBW—Salinas, Calif.	1,000	P
KSWO—Lawton, Okla.	1,000	C
KTSM—El Paso, Texas	500	M
KWK—St. Louis, Mo.	1,000	C
WAMS—Wilmington, Del.	1,000	K
WBEL—Beloit, Wisc.	500	C
WATL—Atlanta, Ga.	5,000	E
WAWZ—Zarepath, N.Y.	1,000	E
WBNX—New York, N.J.	1,000	E
WKJG—Fort Wayne, Ind.	5,000	E
WLOS—Ashville, N.C.	5,000	E
WMBG—Richmond, Va.	5,000	E
WSTB—Rutland, Vt.	1,000	E
WTSF—St. Petersburg, Fla.	500	E

<b>1390 Kilocycles—</b>		
KCBC—Des Moines, Iowa	1,000	C
KCCB—Eind, Okla.	1,000	C
KGER—Long Beach, Calif.	5,000	P
KLFM—Minot, N.D.	5,000	P
KSLM—Salem, Ore.	1,000	P
KULP—El Campo, Texas	500	C
WCSC—Charleston, S.C.	1,000	E
WEAM—Arlington, Va.	1,000	E
WFBI—Syracuse, N.Y.	5,000	E
WFMS—Youngstown, Ohio	5,000	E
WGES—Chicago, Ill.	5,000	E
WLAN—Lancaster, Pa.	1,000	E
WTJS—Jackson, Tenn.	1,000	E
WVOD—Lynchburg, Va.	1,000	E

<b>1410 Kilocycles—</b>		
CHLP—Montreal, Que.	1,000	R
CKMO—Vancouver, B.C.	1,000	P
KBUD—Athens, Texas	250	C
KCLO—Leavenworth, Kansas	500	P
KERN—Bakerfield, Cal.	1,000	E
KQV—Pittsburgh, Pa.	1,000	E
KRIG—Odessa, Texas	5,000	C
KWYO—Sheridan, Wyo.	1,000	M
KXIT—Dalhart, Texas	500	C
WALA—Mobile, Ala.	5,000	C
WDOV—Dover, Del.	1,000	E
WEGC—Concord, N.C.	1,000	E
WGRD—Grand Rapids, Mich.	1,000	E
WING—Dayton, Ohio.	5,000	E
WKBH—La Crosse, Wis.	5,000	C
WONS—Hartford, Conn.	5,000	E

<b>1420 Kilocycles—</b>		
KABR—Aberdeen, S.D.	5,000	C
KFYN—Bonham, Texas	250	C
KSTN—Stockton, Calif.	1,000	P
KTJS—Hobart, Okla.	250	C
KTRE—Lufkin, Texas	1,000	C
KUJ—Walla Walla, Wash.	1,000	P
KWBB—Wichita, Kansas	500	E
WCSR—Cobbleskill, N.Y.	1,000	E
WFCI—Nantucket, R.I.	1,000	E
WBK—Cleveland, Ohio	5,000	E
WIMB—Hornell, N.Y.	1,000	E
WIMS—Michigan City, Ind.	1,000	E
WLNA—Peerskill, N.Y.	500	C
WOC—Davenport, Iowa	5,000	A
WPRP—Ponce, Puerto Rico	250	C
WQBC—Vicksburg, Miss.	1,000	E
WRBL—Columbus, Ga.	5,000	E
WVJS—Owensboro, Ky.	1,000	E
WVOT—Wilson, N.C.	1,000	E
WWBR—St. Albans, Vt.	1,000	E
XEXX—Tijuana, B. Cal.	5,000	P

Call and Location.	Power in Watts.	Zone
CHEX—Peterborough, Ont.	1,000	E
KARM—Fresno, Calif.	5,000	P
KASI—Ames, Iowa	1,000	P
KBRC—Mt. Vernon, Wash.	500	C
KCOH—Houston, Texas	1,000	P
KLMI—Denver, Col.	1,000	M
KLO—Ogden, Utah	5,000	M
KLW—Spokane, Wash.	5,000	P
KSB—Breckenridge, Texas	500	C
KTUL—Tulsa, Okla.	5,000	C
KWKW—Pasadena, Calif.	1,000	P
WBYN—Newark, N.J.	5,000	E
WEXT—Milwaukee, Wisc.	1,000	C
WIL—St. Louis, Mo.	5,000	C
WIRE—Indianapolis, Ind.	5,000	C
WILS—Lansing, Mich.	500	C
WLAK—Lakeland, Fla.	1,000	E
WNJR—Newark, N.J.	5,000	E
WRXO—Roxboro, N.C.	1,000	E
WVAM—Altoona, Pa.	1,000	E
<b>1440 Kilocycles—</b>		
CHNO—Sudbury, Ont.	1,000	E
KEIO—Pocatello, Idaho	1,000	M
KEYD—Minneapolis, Minn.	5,000	C
KEYS—Corpus Christi, Tex.	1,000	C
KFJM—Grand Forks, N.D.	500	C
KFDA—Amarillo, Texas	5,000	C
KILO—Grand Forks, N.D.	1,000	C
KJAY—Topeka, Kansas	5,000	C
KMED—Medford, Ore.	1,000	P
KMLB—Monroe, La.	1,000	C
KPRO—Riverside, Calif.	1,000	P
KVON—Napa, Calif.	500	P
WAAB—Worcester, Mass.	5,000	P
WBIS—Bristol, Conn.	500	E
WBCM—Bay City, Mich.	500	E
WGEM—Quincy, Ill.	1,000	C
WHIS—Bluefield, W. Va.	500	E
WJIL—Niagara Falls, N.Y.	1,000	E
WROK—Rockford, Ill.	500	E
WRRN—Warren, Ohio	5,000	E
WSPA—Mobile, Ala.	1,000	C
<b>1460 Kilocycles—</b>		
KINY—Juneau, Alaska	5,000	—
KIMA—Yakima, Wash.	1,000	P
KRUZ—Santa Cruz, Calif.	1,000	P
KSO—Des Moines, Iowa	5,000	C
WACO—Waco, Texas	1,000	C
WAFB—Baton Rouge, La.	1,000	C
WBNS—Columbus, Ohio	1,000	E
WMBR—Jacksonville, Fla.	5,000	E
WHBC—Rochester, N.Y.	500	E
WHP—Harrisburg, Pa.	1,000	E
WOKO—Albany, N.Y.	500	E
WROY—Carmi, Ill.	1,000	C
WYAC—Columbus, Ga.	1,000	E
XETU—Tampico, Mex.	1,000	C
<b>1470 Kilocycles—</b>		
*CFOB—Owen Sound, Ont.	1,000	E
KCOI—Coalinga, Calif.	500	P
KCNV—San Marcos, Texas	250	C
KDFN—Casper, Wyo.	1,000	P
KELA—Centralia, Wash.	1,000	P
KPLC—Lake Charles, La.	5,000	C
KRBC—Ablene, Texas	5,000	C
KTRI—Sioux City, Iowa	5,000	C
KVAK—Atchison, Kansas	1,000	C
KVLH—Pauls Valley, Okla.	250	C
KXOA—Sacramento, Calif.	1,000	P
WBIG—Greensboro, N.C.	5,000	E
WCBC—Anderson, Ind.	1,000	C
WJOC—Jamestown, N.Y.	1,000	E
WLAM—Lewiston, Me.	5,000	E
WMBD—Peoria, Ill.	1,000	C
WMMW—Meriden, Conn.	1,000	E
WRGA—Rome, Ga.	5,000	E
WSAN—Allentown, Pa.	5,000	E
WWOK—Flint, Mich.	1,000	E

Call and Location.	Power in Watts.	Zone
1470 Kilocycles (Continued)—		
XEAU—Tijuana, B.C.	5,000	P
XESM—Mexico City, D.F.	5,000	C
<b>1480 Kilocycles—</b>		
CHGS—Summerside, P.E.I.	100	C
KANS—Wichita, Kansas	5,000	C
KAUS—Austin, Minn.	1,000	C
KGCX—Sydney, Mont.	1,000	M
KGLU—Stafford, Ariz.	1,000	M
KIEM—Eureka, Calif.	1,000	P
KLMS—Lincoln, Nebr.	1,000	C
KTBS—Shreveport, La.	1,000	C
KVOB—Santa Ana, Calif.	1,000	P
KYOS—Merced, Calif.	5,000	P
WABB—Mobile, Ala.	5,000	C
WBBC—Canton, Ohio	1,000	C
WHOM—Jersey City, N.J.	500	E
WISC—Madison, Wisc.	1,000	E
WISL—Shamokin, Pa.	1,000	E
WORM—Easton, Md.	1,000	E
WRDW—Augusta, Ga.	5,000	E
WSAR—Fall River, Mass.	1,000	E
WTHI—Terre Haute, Ind.	1,000	C
XETZ—Taxiutan, Mex.	5,000	C
<b>1500 Kilocycles—</b>		
KSTP—St. Paul, Minn.	50,000	C
KTAN—Sherman, Texas	250	P
KXRX—San Jose, Calif.	1,000	P
WABJ—Adrian, Mich.	250	E
WTOP—Washington, D.C.	50,000	E
XERH—Mexico City, Mex.	2,000	C
<b>1510 Kilocycles—</b>		
KCTX—Childress, Texas	250	C
KGA—Spokane, Wash.	10,000	P
KIMO—Independence, Miss.	1,000	C
KOSC—Ontario, Calif.	250	P
KSTV—Stephenville, Texas	250	C
KTIM—San Rafael, Calif.	1,000	P
KUSN—San Diego, Calif.	5,000	P
WAUX—Waukesha, Wisc.	250	C
WKAI—Mascout, Ill.	250	C
WLAC—Nashville, Tenn.	50,000	C
WMEX—Boston, Mass.	5,000	E
WMRP—Flint, Mich.	250	E
<b>1250 Kilocycles—</b>		
KSIB—Cretion, Iowa	1,000	C
KOMA—Oklahoma City, Okla.	50,000	C
TGWC—Guatemala City, Ga.	1,000	C
WHOW—Clinton, Ill.	1,000	C
WKBS—Oyster Bay, L.I.N.Y.	250	E
WKBW—Buffalo, N.Y.	50,000	E
WWWV—Rio Piedras, P.R.	250	A
<b>1530 Kilocycles—</b>		
KFBK—Sacramento, Calif.	10,000	P
KRST—Tyler, Texas	1,000	C
KSQX—Harlingen, Texas	50,000	C
WCKY—Cincinnati, Ohio	50,000	E
WJMJ—Philadelphia, Penn.	10,000	E
<b>1540 Kilocycles—</b>		
KCUL—Fort Worth, Texas	5,000	C
KGBC—Galveston, Texas	1,000	C
KGIE—Bremerton, Wash.	1,000	P
KLKC—Parsons, Kansas	250	C
KKEL—Waterloo, Iowa	50,000	C
WTMO—Cleveland, Ohio	1,000	E
WKMH—Dearborn, Mich.	1,000	E
WLOI—La Porte, Ind.	250	C
WPTR—Albany, N.Y.	10,000	E
<b>1550 Kilocycles—</b>		
CKOK—Fenticton, B.C.	250	P
CKTE—St. Catharines, Ont.	1,000	E
KENT—Shreveport, La.	1,000	C
KSMO—San Mateo, Calif.	250	C
WBBW—Indianapolis, Ind.	250	C
WLOA—Braddock, Pa.	1,000	E
WPKM—Atlanta, Ga.	10,000	E
XEBG—Tijuana, Mex.	1,000	P
XEML—Mexico City, Mex.	5,000	C

Call and Location.	Power in Watts.	Zone
<b>1560 Kilocycles—</b>		
KHBR—Hillsboro, Texas	250	C
KPMC—Bakersfield, Calif.	1,000	P
KSWI—Council Bluffs, Iowa	500	C
KWCO—Chickasha, Okla.	250	C
WBYC—Canton, Ill.	250	C
WENA—Bayamon, P.R.	250	A
WQXR—New York, N.Y.	10,000	E
WTNS—Coshocton, Ohio	1,000	E
WTOD—Toledo, Ohio	1,000	E
<b>1570 Kilocycles—</b>		
CFPL—London, Ont.	5,000	E
KAKC—Tulsa, Okla.	1,000	C
KIVY—Crockett, Texas	250	C
KCVR—Lodi, Calif.	250	P
WBUX—Doylestown, Pa.	250	E
WFGN—Gaffney, S.C.	250	E
WFRL—Freeport, Ill.	1,000	E
WFUR—Grand Rapids, Mich.	1,000	E
WLIO—East Liverpool, Ohio	1,000	E
WOKZ—Alton, Ill.	1,000	E
WPTW—Piqua, Ohio	250	E
WSID—Essex, Md.	1,000	E
KERF—Villa Acuna, Mex.	50,000	C
<b>1580 Kilocycles—</b>		
CBJ—Chicoutimi, Que.	10,000	E
KCHA—Charles City, Iowa	250	C
KGAF—Gainesville, Texas	250	C
KLOU—Lake Charles, La.	1,000	C
KOWL—Santa Monica, Calif.	5,000	P
KWED—Seguin, Texas	250	C
WCNB—Connersville, Ind.	250	C
WJVA—South Bend, Ind.	250	C
WKAP—Allenton, Penn.	1,000	E
WKID—Urbana, Ill.	250	C
WLSL—Fort Lauderdale, Fla.	250	E
<b>1590 Kilocycles—</b>		
KATL—Houston, Texas	1,000	C
KCBP—Lubbock, Tex.	1,000	C
KCHE—El Reno, Okla.	500	C
KSJO—San Jose, Cal.	1,000	P
KTIL—Tillamook, Ore.	250	P
KVGB—Great Bend, Kansas	5,000	P
KVVC—Ventura, Calif.	1,000	P
WACA—Camden, N.J.	500	E
WAKR—Akron, Ohio	5,000	E
WALE—Albany, Ga.	1,000	E
WBRV—Waterbury, Conn.	1,000	E
WBHT—Durham, N.C.	1,000	E
WLOW—Norfolk, Va.	1,000	E
WNMP—Evanston, Ill.	1,000	E
WOKP—Silver Springs, Md.	1,000	E
WPWA—Chester, Pa.	1,000	E
WWXI—Peoria, Ill.	1,000	C
WXYL—Indianapolis, Ind.	1,000	C
WXRK—Guayama, P.R.	1,000	A
XEMC—Mexico City, Mex.	5,000	C
<b>1600 Kilocycles—</b>		
KCKV—Niagara Falls, Ont.	1,000	E
KASH—Eugene, Ore.	1,000	P
KCFB—Cuero, Texas	500	C
KCRG—Cedar Rapids, Iowa	5,000	C
KMAE—McKinney, Texas	500	C
KOGT—Orange, Texas	1,000	C
KPMO—Pomona, Calif.	500	P
KUBA—Yuba City, Calif.	500	P
WASA—Havre de Grace, Md.	500	E
WAPX—Montgomery, Ala.	1,000	C
WBAT—Marion, Ind.	500	C
WFRG—Reidsville, N.C.	1,000	E
WGIV—Charlotte, N.C.	1,000	E
WHRV—Ann Arbor, Mich.	1,000	E
WKWF—Key West, Fla.	500	E
WJEL—Springfield, Ohio	500	E
WKIN—Kittanning, Pa.	1,000	E
WKNK—Muskegon, Mich.	1,000	E
WYOM—Brookline, Mass.	5,000	E
WWRL—Woodside, N.Y.	250	E
XELC—La Piedad, Mex.	1,000	C

# THE HOBBY OF DX-ING

The DX hobby has come to be regarded as one of the most interesting and educational hobbies in existence, and in this short article some points about it are covered.

DX organisations and Clubs are established throughout the world, and in New Zealand the most active one is the New Zealand Radio DX League. This organisation, composed of the foremost listeners in the Dominion and overseas, can do much to help the many listeners who show interest in this grand hobby.

Reports on reception of stations throughout the world are appreciated by the station engineers as they wonder how far their signals cover and how strongly they are being received. Cards are called verifications and these, or letters, verifying the reception as reported by the listener are forwarded by the station. These verifications are the basis of the DX hobby. They show clearly that the report submitted has been checked with the station log, and verified as broadcast by the station.

At each session at the dials, write in your "rough" note pad the day, date and time, and when a new signal is picked up jot down

the frequency and particulars of items and advertisements heard.

List the time of each item and see your watch is correct. Other details to be noted are the strength and quality of the signal and any fading or interference present.

When writing your report put your name, address and the date at the top of the page. Give the time in New Zealand Daylight Saving time (12 hours ahead of G.M.T.) and also convert into the station's local time and date. Fiji has the only stations on the same time belt as New Zealand. Several countries observe Summer Time, so if in doubt quote their Standard Time, or G.M.T. Volume can be graded as exceptionally loud, loud, moderately loud, fair or weak. Or the "R" and "QA" code given in this article may be used, as it is internationally known.

### AUDIBILITY.

- R1—Faint Signals.
- R2—Weak Signals.
- R3—Can be copied.
- R4—Fair Signals.
- R5—Moderately Strong.
- R6—Good.
- R7—Strong Signal.
- R8—Very Strong.
- R9—Overloading.

### READABILITY.

- QSA1—Unreadable.
- QSA2—Readable Occasionally.
- QSA3—Readable with Difficulty.
- QSA4—Readable.
- QSA5—Perfectly Readable.

It is important to give details of your receiver, aerial and earth systems, and weather conditions during receptions. Other facts to be stated are fading (steady, light, severe, rhythmic, irregular, or nil), also note the depth and duration of fades. Or if from another station try to name the offender. Tone, (say whether good and clear, harsh or mellow, rough and garbled, deep, or high). Give particulars of any peculiarity such as gongs sounding, clocks chiming, interval signal, whether man or lady announcer, etc. Write clearly and don't exaggerate by saying volume was "great" when you had almost to sit in the speaker to hear anything. Perhaps someone else may write and give a reverse report to your own, hence your first disappointment when no verification is forthcoming.

FOR FURTHER DETAILS  
Write: N.Z. RADIO DX LEAGUE,  
15 Plunket Street, Dunedin, S.Z.



# THE "Easy Built" SUPER 5



## Modern Radio Set Construction



Beautifully Veneered Cabinet



"The LAMPHOUSE" LEADS AGAIN IN THE KITSET FIELD!

IF YOU CAN COUNT UP TO 30 YOU CAN BUILD THE "EASY BUILT" SUPER 5.



Features 3-Colour Dial.

ALL THAT IS NECESSARY IS A SOLDERING IRON, SCREWDRIVER & PLIERS.

Described elsewhere in this issue is the "Easy Built" Clipper 4 Valve Portable, another outstanding receiver built on our latest number system.

The "Clipper" is an excellent 4 valve portable radio—a good station puller as well as a set of superb tonal quality.

As is the case with the Easy Built Super 5 the "Clipper" can be constructed by anybody without previous experience and the Lamphouse Kit is supplied right down to the last nut and bolt.

IT SOUNDS EASY      IT IS EASY      IT LOOKS EASY

## "EASY BUILT" SUPER 5

### Complete Kit of Parts

(EXCLUDING SPEAKER & CABINET)

Cat. No. AK2050

**£11/10/-**

With 8in. Speaker

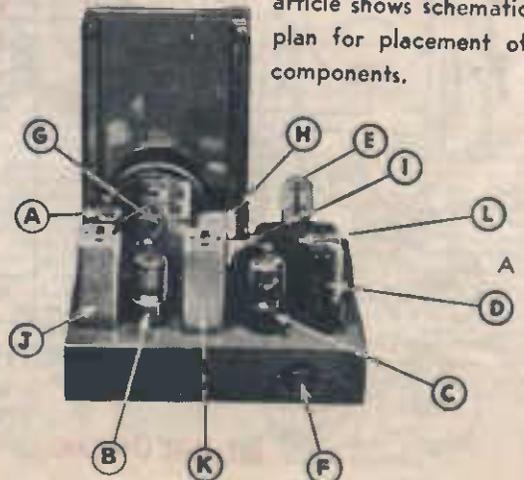
**£14/2/6**

(For Converting Circuits to use P.M. Speakers see Page 112.)

With Veneered Cabinet and 8in. Speaker

**£16/19/6**

Out-of-Cabinet illustration shows placement of all components. Diagram (B) included in following article shows schematic plan for placement of components.



# THE "Easy Built" SUPER FIVE

*IT'S popular and proven not only as a set that can be constructed by a novice, but an excellent receiver you will be proud to have in your home. Full information is given in the following article but any small points you are not quite sure on, just drop us a line and we will be only too pleased to advise you.*

WE present here a first-class 5-valve superhetrodyne receiver which will compare favourably in performance with most factory-built jobs of similar size. Although we have never been too keen on the idea of a beginner in set construction starting off on a full blown superhet, we know from past experience there are many who just refuse to start from one or two valves and gradually build up from that. This then is our endeavour to give to you a set which can be built by the veriest beginner and yet not be sneezed at by the more experienced set builders.

Long and learned discussions as to the reason the designer used iron cored IF transformers or used a pentagrid converter instead of a triode hexode are no doubt very interesting to those who have a stomach for such things but is of little value to the man who merely wants to build a set which will give good results, and does not wish to delve too deeply into technicalities. Let us stick then to the purely practical.

You will notice that we have prepared two lists: one with various parts listed alphabetically, A, B and so on. The other numerically, 1 to 24. The first list refers to all those components mounted by means of nuts and bolts on to the chassis. The second list refers to the various condensers and resistors which mount underneath the chassis. Having checked off the various parts (and be sure you do know them properly) the next move is to mount some of them. Take a look at diagram "B." This gives you the placement of the various parts on the chassis. Let us then mount the valve sockets for a start. Note that A, B, C, D and E are all octal sockets and F is the odd 4-pin socket for the speaker. Be sure that the key or notched hole points the same way as in Diagram B. With your kit you receive some solder lugs. These are mounted at suitable points under the chassis to enable the earthing of the various parts. Now the most suitable way of securing these is to place them under some of the nuts which hold the sockets and coils, etc., in place. So when mounting socket "A" place a lug on the bolt nearest the edge of the chassis before you put on the nut and tighten it up. Now socket "B" a lug under the nut nearest the chassis edge here. Mount the next sockets without any solder lugs until you come to the 4-pin socket "F" where a lug is placed under the nut, which goes on the bolt nearest the two small pins.

Now with all the sockets mounted look at the tuning condenser "G" on the diagram. You will see it has two sections also each section

has two sets of plates, one set which moves and one set which is fixed. Near the bottom of the fixed plates project two small lugs; one from each section. To each of these lugs solder a 4in. length of push back wire. Do not use the top lugs. Now thread these wires through their respective holes in the chassis and screw down the condenser. Place a solder lug under the right hand rear nut before tightening up.

Carry on mounting the rest of the parts now. Notice that "J," the first I.F. transformer, has a green lead coming out of the top of the can. "K" has all four leads from the bottom. When mounting "H," the aerial coil, and "I," the oscillator coil, see that solder lugs are placed under the securing nuts. The power transformer "L" should be mounted so the 230 v. lugs are in the position nearest the hole in the chassis through which the power cord is fed, i.e., the left-hand corner. Potentiometers 23 and 24 may also be fitted on at this stage.

Have now a trial fit of the dial and see that the tuning action is O.K. Having set this to your liking, remove the dial from the scene of operations and turn the chassis over. Before going any further ask yourself one question: Do you want a set which will give trouble-free performance or a job which develops crackles and obscure faults. Poorly soldered joints are the cause of more trouble and disappointment in a set's performance than all other constructional errors put together, so please be careful with your soldering. Keep your iron properly tinned and not too hot and use your solder sparingly. A great blob of solder does not necessarily mean a good joint. The wire to be soldered should be pushed through the hole in the lug and twisted to hold before the iron and solder are applied. In other words the connection should be mechanically secure, the solder being used to ensure a good electrical contact and not to hold the various parts together. Where you are dealing with several wires twist them together firmly, then solder. Do not try to solder dirty leads or lugs. Scrape them clean first.

Take a look now at diagram "C." This is an under chassis view of the receiver showing the approximate position of the various parts. We

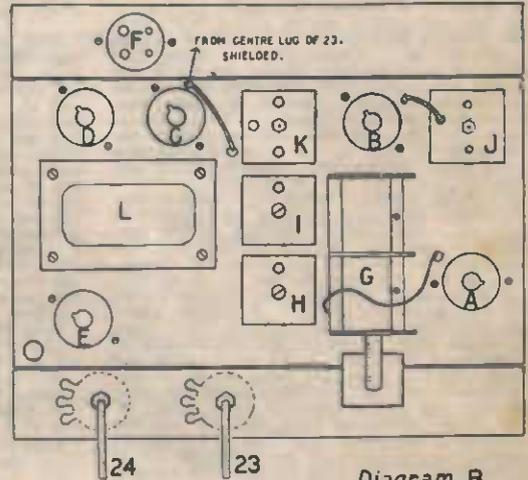


Diagram B.

have shown no wiring except the earthing connections on the power transformer "L" as it was felt that the number of wires and connections would be more confusing than helpful. You will notice that we have given you a list of connections to be made. The various sockets, coils resistors all have a detailed list of connections. Let us take "A." No. 3 pin, you will see, goes to the yellow lead of "J," and referring to "J" you will see here it states that the yellow lead goes to No. 3 pin of "A." This enables you to cross check any connections you make. The idea now is that any connections you make you tick off on the list. When you have ticked off all the connections you can be sure that the wiring is complete. By this list you can easily keep an eye on the correctness of your wiring. Before going any further with this, however, let us get the heaters of the valves wired up.

From your coil of push back wire cut three lengths, 4in., 5in. and 8in. respectively and bare the ends about a 1/4in. Twist one set of ends together and push through or hook round the 6.3 v. lug on "L." Solder firmly. The other end of the "4" lead is soldered to pin No. 2 of socket "E." Tick this off against the list. Now cut two more lengths 5in. and 8in. and solder one set of ends together with the stray end of the previous 5in. length on to No. 7 pin of socket "A." Do not forget the list. Thread the loose 8in. length through a hole in the chassis near the tuning condenser. This will be wired to the dial lights later.

Now cut a 4in. length of wire and solder one end together with the spare wire from socket "A" on to No. 7 pin of Socket "B." Cut a 2 1/2in. length of wire now and solder it together with the lead from socket "B" and the remaining lead from the 6.3 v. lug of "L" on to No. 7 pin of socket "C." Solder now the free end of the 2 1/2in. lead from socket C on to No. 7 pin of socket "D." You have now wired up one side of your heaters. Keep these leads flat against the chassis.

From one of the 350 v. lugs of "L" take a lead on to pin No. 3 of "E." From the other 350 v. lug a lead goes to No. 5 pin of E. Make sure to check those off as you do them. Now with the bare wire solder one end on to pin No. 7 of E. Take the wire to the 2A lug on "L" then across to the C.T. lug and finally to the 2A lug next to the 5 v. lug. Note this 5 v. lug must not be used for any purpose.

Take care this bare wire contacts only the points given and no other parts unless they are insulated.

Solder now a bare wire on to the C.T. lug and take it across to pins Nos. 1 and 2 and on socket "C" and finish up the job by soldering it on to the solder lug fixed to

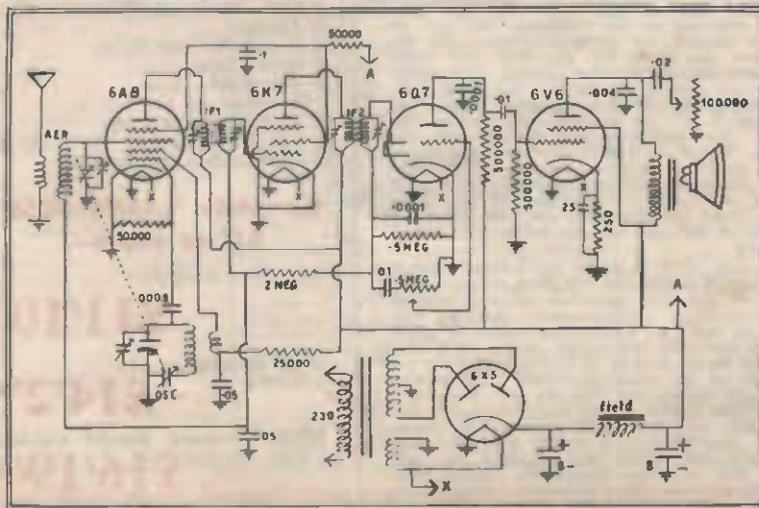


Diagram A.

socket "E." No. 2 pin of socket "D" may also be earthed at this point but use covered wire in this case as the lead must run near the speaker socket lugs which have a fairly high voltage on them.

Socket "A"—Pins No. 1, 2 and 3 are all earthed to the solder lug which you have, we hope, bolted down right there for that purpose. Do the same exactly with socket "B." This completes the entire heater circuit and earthing of the sockets.

Take now 23, which according to our list is a 500,000 ohm control. The right-hand lug (that is, the lug on the right when you look at the back and the lugs point upwards) goes to 8, and 8 you will find by your list is a .01 condenser. Clip the pigtails fairly short and solder one end to the appropriate lug. Looking at 23 again we see that the centre lead is connected by means of a shielded wire on to the cap of the 6Q7 valve which fits in socket "C." Bare the shielding back about an inch or so so that it will not make contact with the centre wire when you tune the dial. Solder the bared end to the centre lug. Take the wire now across the chassis and feed through the hole near socket "D." Estimate length of wire needed to reach cap of valve and cut off. Bend the remaining lug of 23 against its metal cover and solder firmly. All the connections for 23 are now complete.

Now cut another length of shielded wire about 4 1/2 in. long, pushing back the braid from ends as before. Solder one end to the free end of 8 and run the lead parallel with the other piece of shielded wire along the chassis, bringing the wire close to pin No. 6 of "C." Solder the metal screening to a suitable lug on the way across the chassis. A spot of solder will keep the two leads together. Now take No. 6 pin of C. There are five connections to be made at this point so let us do it in one jump. To this point we solder 6, 18, 19, the black lead from "K" and the shielded lead from 8. The ends of 6, 18 and 19 which solder to this pin should be cut fairly short so that the components are reasonably close to the pin to which they are soldered. An occasional glance at diagram "C" will help you with the gauging of the length of lead required and the placement of parts which is a source of worry to many.

Earth the free ends of 6 and 19 on to the solder lug attached to socket "B." Cut a 7 in. length of push back wire. Now solder one end together with the positive end of 13 on to No. 8 pin of "E." Solder the free end of the wire on to No. 4 pin of "F." Earth the negative end of 13 on to the 2A lug of "L." Now solder a short lead across pins Nos. 1 and 2 of "F."

Go now to socket "D," pin No. 3. Solder one end of 10 and a short length of push back wire to this lug. Earth the other end of 10 to C.T. lug on "L." Solder the spare end of the push back wire on to No. 3 pin of F, plus another length of push back wire which is led along the side of the chassis to the front corner. Pick up 11 now and cut its leads short. Solder one end to the push back wire and the other end to centre lug of 24. The right hand lug of 24 is bent back on to its metal cover and soldered firmly which effectively earths this lug. The third lug is not used.

Socket "D" again. No. 4 pin will have three leads, the red lead from "K" and two 2 1/2 in. lengths of push back wire. Solder the free end of one length on to No. 4 pin of "F." Do not touch the other lead yet. No. 5 pin of socket "D" has two connections, 9 and 21. Earth the other end of 21 to the 2A lug of "L." The last pin on this socket, No. 8 pin, has 22 and the positive end of 12 attached to it. Twist the other ends of these two together and earth on to the 2A lug of "L."

Do not worry that there is a loose end or two about as we will catch up on these in due course. Socket "G" now comes up for attention. Solder to No. 3 pin 7, 20 and also the free end of 9 the other end of which is already soldered to No. 5 pin of socket D. Now earth the free end of 7 to the solder lug bolted to the oscillator coil "C."

Take now the green lead from "K" and bare the wire sufficiently to bridge both 4 and 5 pins of socket "G" and solder firmly. You have now completed this socket and we feel sure you are not finding the construction terribly difficult. It is all a matter of doing one thing at a time and not letting yourself worry about anything else but the immediate connections to be made and checking them against the lists as you go.

Solder a length of wire to pin No. 2 of F. Lead it along the side of the chassis to pin No. 8 of socket "B" but do not solder it to this pin yet. Socket "B" may now be tackled, taking No. 3 pin first. To this pin solder the yellow lead from "K." To No. 4 pin solder a 2 1/2 in. length of push back wire and one end of 18. No. 5 pin is earthed to a handy

solder lug. No. 6 pin, although actually a spare one, is used as a connecting point for the following. The positive end of 14, the free end of 18, the red lead from "J" and the end of hook up wire the other end of which is already soldered to pin No. 2 of "E." Having connected all these leads together carry on and earth the negative end of 14 to the solder lug under socket "A." To socket "A" now solder No. 3 pin. Connect the yellow lead from "J" to this. To No. 4 pin solder the lead from No. 4 pin of socket B and one end of 5. No. 5 pin has leads from 2 and 15 soldered to it. To No. 6 pin solder a length of push back wire and solder the other end to the yellow lug of "I."

That completes the wiring of the valve sockets but there is still much to do, so let us carry on. To the red lug of "I" solder one end of 3 and 17. Earth the other end of 3 to a handy solder lug. Now take the free end of 17 plus the free end of 20 and solder to the short length of push back wire coming from No. 4 pin of socket "D." To the green lug of "I" connect the spare end of 2 and the free end of the wire which is connected to the rear section of the tuning condenser. Connect a short lead to the black lug of "I" and the other end to the fixed plates of "One." Earth the other lug of "One" to a suitable lug. The free ends of 5 and 15 should now be twisted together and earthed to a solder lug. Take the lead from the front section of the tuning condenser and solder it to the green lug of "H." Earth the Red Lug to a near-by solder lug. Solder to the black lug one end of 4 and a 4 1/2 in. length of push back wire. Earth the other end of 4.

Take the 4 1/2 in. length of wire now and solder it to the free end of 16 and the black lead from "J."

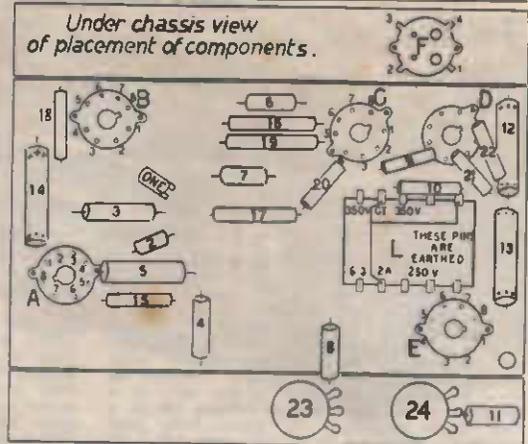
Solder about a foot of push back wire on to the yellow lug of "H." This is the aerial lead. Before feeding this wire through a convenient hole in the chassis tie a knot in the wire. If any strain is put on the wire it will then pull the knot against the chassis and will not cause any strain on the coil lug. An earth wire may also be soldered to one of the solder lugs, knot the same as with the aerial wire and feed it through one of the holes at the rear of the chassis.

Now wire up your power flex to the transformer 230 v. lugs. Be sure to use a rubber grommet in the hole where the flex comes through the chassis. All that remains now are a few above chassis connections. To the shielded wire coming through the chassis near socket "C" solder a grid clip. See that the braid is kept back from the clip or the set will not operate. Also try the valves in place so that the leads are no longer than necessary. Solder a grid clip to the green wire coming from the top of "J" now and finally solder a piece of push back wire to the top lug of the fixed plates of the front section of the 2-gang condenser "G." The other end has soldered to it the grid clip which fits on to the cap of the 6ASGT valve. Do not make the lead longer than necessary and do not solder the grid clips when they are on the valves or you may be in the market for some new ones. Fit the dial now and solder the dial light wire which you have already threaded through from underneath the chassis on to the dial light lugs. Plug the valves into their respective sockets and be sure to fit the speaker and connect the aerial. You may now plug the set into the mains. Watch the 6X5 valve closely and should there be any sparking or the whole tube glows red switch off immediately. Check your wiring and rectify the fault. If you have wired your set correctly you will have no trouble of this sort and the valves will glow a dull red.

The next job is to adjust the various trimmer and padder condensers for best results. This is a most important operation and must be done very carefully. Built-in-gate methods are definitely out. All adjustments should be made with a non-metal instrument such as a broken knitting needle filed to fit the adjusting screws.

First, of all screw in "One," the padder condenser, tightly and then slacken off about a turn. Then tighten up the screws on top of the condenser gang and slacken off two or three turns. Now tune in a station near the high frequency end of the dial. That is the end where the condenser plates are almost fully unmeshed. Keep the volume well down either with a small temporary aerial or by using the volume control. Now adjust the trimmer on the

Under chassis view  
of placement of components.



front section of the gang for best volume, using the volume control if it becomes too strong. Should you require to screw the trimmer right out you must then screw the rear trimmer in about one turn and then adjust the front trimmer again. On the other hand if you find it necessary to screw the front trimmer right in then you must screw the rear trimmer out one turn and adjust the front trimmer once again for best results. Rock the condenser slowly back and forth while making these

adjustments. Put the set in a position now so that you will be able to adjust the padder condenser under the chassis. Now tune in a station round about 1YA or 2YA and rock the dial slowly back and forth at the same time adjusting the screw of the padder condenser for the best results. Having satisfied yourself this is adjusted for maximum volume, tune back to the first station at the high frequency end of the dial again and make a final adjustment to the front condenser trimmer. With

everything running well, adjustment of the two 1F transformers may be undertaken although they should require very little adjustment and must be treated with the greatest care. Do not turn any one of the screws more than a quarter of a turn either way. To get the very best out of the set it would be advisable to have the whole thing aligned by a serviceman.

You have no more to do now but to fit the set in the cabinet and you now have a receiver of which anyone may be proud.

## CONNECTIONS TO BE MADE

<b>6A8 Socket</b>	<b>A</b>	Pin 1—Earthed to chassis and used as earth connection for 14.	<b>6X5 Socket</b>	<b>E</b>	Pin 1—No connection.
		Pin 2—Filament connection, earthed to chassis.			Pin 2—To 6.3 v. lug of "L."
		Pin 3—To yellow lead of "J."			Pin 3—To 350v. lug of "L."
		Pin 4—To pin 4 of "B" and to 5.			Pin 4—No connection.
		Pin 5—To 2 and 15.			Pin 5—To other 350v. lug of "L."
		Pin 6—To yellow lug of "L."			Pin 6—No connection.
		Pin 7—Filament connection (see text).			Pin 7—To 2A lug on "L" and earth.
		Pin 8—Earthed to chassis.			Pin 8—To positive end of 13 and to No. 4 pin of "F."
<b>6K7 Socket</b>	<b>B</b>	Pin 1—Earthed to chassis.	<b>4-pin Speaker Socket</b>	<b>F</b>	Pin 1—Tied to pin 2.
		Pin 2—Filament connection earthed to chassis.			Pin 2—To No. 6 pin of "B" and pin 4 of "D."
		Pin 3—To yellow lead of "K."			Pin 3—To No. 3 pin of "D" and to 11.
		Pin 4—To 18 and pin 4 of "A."			Pin 4—To pin No. 8 of "E" and positive end of 13.
		Pin 5—Earthed to chassis.			
		Pin 6—To pin 2 of "F;" also positive end of 14 and to 18 and red lead of "J."			
		Pin 7—Filament connection (see text).			
		Pin 8—Earthed to chassis.			
<b>6Q7 Socket</b>	<b>C</b>	Pin 1—Earthed to chassis.	<b>2-Gang Tuning Condenser</b>	<b>G</b>	Lead taken from top lug on fixed plates of section nearest dial to top cap of 6A8GT valve, also from bottom lug of same section a lead is taken to green lug of "H."
		Pin 2—Earthed to chassis.			Lead taken from bottom lug on fixed plates of rear section to green lug of "L."
		Pin 3—To 7, 9, and 20.			
		Pin 4—To green lead of "K."			
		Pin 5—Tied to pin 4.			
		Pin 6—Used as junction for 16, 19, 6, 8, and black lead of "K."			
		Pin 7—Filament connection (see text).			
		Pin 8—Earthed to chassis.			
<b>6V6 Socket</b>	<b>D</b>	Pin 1—No connection.	<b>Aerial Coil</b>	<b>H</b>	Lead from yellow lug for aerial connection.
		Pin 2—Earthed to chassis.			Lead from green lug to bottom lug of first section of "G."
		Pin 3—To pin No. 3 of "F" and 10.			Red lug earthed to chassis.
		Pin 4—To pin No. 1 of "F," 17, 20 and red lead of "K."			Black lug to black lead of "J" and to 4 and 16.
		Pin 5—To 9 and 21.			
		Pin 6—No connection.			
		Pin 7—Filament connection (see text).			
		Pin 8—To positive end of 12 and to 22.			
			<b>Oscillator Coil</b>	<b>I</b>	Green lug to bottom lug of second section of "G" and to 2.
					Black lug to fixed plates of "One."
			<b>1st I.F.</b>	<b>J</b>	Red lug to 3 and 17.
					Yellow lug to No. 6 pin of "A."
					Green lead from top of can to cap of 6K7GT valve.
					Black lead to black lug of "H" and to 4 and 16.
					Red lead to No. 6 pin of "B."
					Yellow lead to No. 3 pin of "A."

2nd I.F.	K	Green lead to pin No. 4 of "C."	.01 Tubular	No. 8	To No. 6 pin of "C." To right hand lug of 23.			
		Black lead to pin No. 6 of "C."						
		Red lead to pin No. 7 of "D."						
		Yellow lead to pin No. 3 of "B."						
Power Transformer	L	230 v. lugs wired to power flex.	.01 Tubular	9	To No. 3 pin of "C." To No. 5 pin of "D."			
		6.3 v. 2A lugs. The 2A lug is connected to pin No. 7 of "E" by means of a bare wire, also to the C.T. lug of the 350 v. CT 350 v. winding and pins Nos. 1, 2 and 8 of "C." This is a useful earthing point for any components nearby that need earthing. The 6.3 v. lug is connected to pin No. 2 of "E." Also a lead is taken to pin No. 7 of "A," "B," "C" and "D" respectively.	.004 Tubular	10	To No. 3 pin of "D." Earthed to chassis.			
			.02 Tubular	11	To centre lug of 24. To No. 3 pin of "F."			
The two 350 v. lugs are wired to "E" pins No. 3 and 5 respectively. The 5 v. 2A winding is not used, but one lug only may be earthed and used as an anchoring point for 12, 13, 21, 22 and earth wire of power flex. Do not touch the second lug, otherwise you may burn out the winding.			25 mfd. Electrolytic	12	Positive end to No. 8 pin of "D." Negative end earthed to chassis.			
			8 mfd. Electrolytic	13	Positive end to No. 8 pin of "E." Negative end earthed to chassis.			
			8 mfd. Electrolytic	14	Positive end to No. 6 pin of "B." Negative end earthed to chassis.			
			50,000 ohm Resistor	15	To No. 5 pin of "A." Earthed to chassis.			
			2 meg Resistor	16	To No. 6 pin of "C." To black lead of "J."			
			25,000 ohm Resistor	17	To No. 4 pin of "D." To red lug of "I."			
50,000 ohm Resistor	18	To No. 4 pin of "B." To No. 6 pin of "B."	500,000 ohm Resistor	19	To No. 6 pin of "C." Earthed to chassis.			
						500,000 ohm Resistor	20	To No. 3 pin of "C." To No. 4 pin of "D."
250 ohm Resistor	22	To No. 8 pin of "D." Earthed to chassis.						
			500,000 ohm Vol. Control	23	Right hand lug to 8. Centre lug through shielded wire to top cap of "C." Left lug earthed to chassis.			
100,000 ohm Tone Control	24	Right hand lug earthed to chassis. Centre lug to 11. Left hand lug not connected.						

**SMALL COMPONENT CONNECTIONS TO BE MADE**

Padder	No. 1	
.0001 Mica	2	Fixed plates to black lug of "I." Moving plates earthed to chassis.
		To green lug of "I." To No. 5 pin of "A."
.05 Tubular	3	To red lug of "I." Earthed to chassis.
		.05 Tubular
.1 Tubular	5	
		.0001 Mica
.0001 Mica	7	

500,000 ohm Resistor	20	To No. 3 pin of "C." To No. 4 pin of "D."		
		500,000 ohm Resistor	21	To No. 5 pin of "D." Earthed to chassis.
250 ohm Resistor	22			To No. 8 pin of "D." Earthed to chassis.
		500,000 ohm Vol. Control	23	Right hand lug to 8. Centre lug through shielded wire to top cap of "C." Left lug earthed to chassis.
100,000 ohm Tone Control	24			Right hand lug earthed to chassis. Centre lug to 11. Left hand lug not connected.

**PROSPECTIVE BUYER — ALL GOODS LISTED IN THIS CATALOGUE ARE COVERED BY OUR 7 DAY MONEY — BACK GUARANTEE**

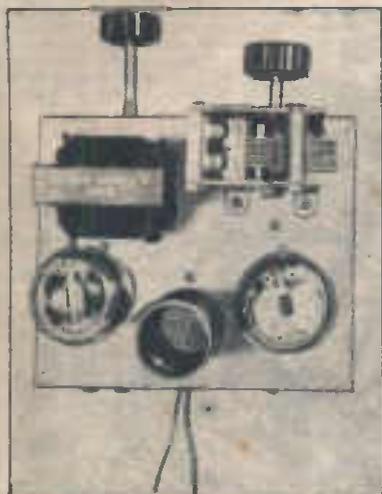
# "THE OCTAL HIKER'S TWO"

So popular last year that we've just had to repeat it again in this year's "ANNUAL"! This Set is actually a combination of the Hiker's One and Amplifier and is a proven circuit.

### DESCRIPTION

THIS set, which will bring in the more powerful stations at speaker strength, is primarily intended for those who have previously made a 1-valve receiver, such as the Hiker's One and now seek new worlds to conquer. The Octal Hiker's Two provides a very neat little set on a metal chassis. It gives a taste of set building in the more advanced manner with all the wiring underneath the chassis.

The circuit actually represents the Octal Hiker's One and Amplifier as one unit and makes use of the metal of the chassis for most of the earth connections.



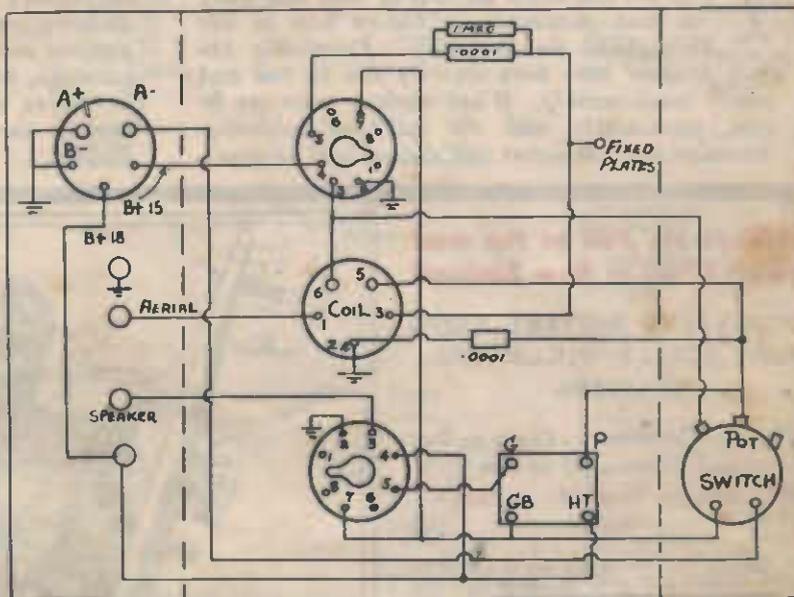
The chassis is made of 20g. steel plate 11in. x 6in. The front and back are 2½in. deep, so that when they are bent over the top measures 5in. x 6in. A ready-drilled chassis is supplied with each of our kits.

One and a-half inch holes are cut for the four sockets, while the size of the hole for the grommet washer—through which the aerial and earth wires come, the potentiometer spindle, tip jack, etc.—depends upon the size of the components that are used.

### WIRING DETAILS

The wiring is not at all difficult and is commenced after all the components are bolted down on the chassis and the necessary holes drilled to take the wires through the chassis to the transformer and condenser.

Two colours of pushback wire are supplied with the Kit Set, one can be used as the aerial



lead and one as the earth. The wire selected for the earth lead should be soldered direct to the chassis. To do this, first scrape the chassis clean at the point at which the wire is to be attached, apply a little flux and then hold the iron against the metal until it is hot enough to take the solder. Once the solder flows and "tins" the metal, the iron is removed, leaving a small "blob" of solder. It is essential that the metal be properly tinned so that there is a satisfactory earth.

The red wire is soldered to No. 1 on the coil socket.

A soldering lug is bolted tightly under each valve socket to provide an earth connection to which the No. 2 clip is soldered in the case of each valve. There are no connections made to Pins Nos. 1 and 8 on either valve socket. A + and B — on the battery socket are joined together and then connected to the earth lug, while the isolated prong on the coil socket, to which No. 2 and No. 4 coil ends are attached, is connected to the earth lug on this socket.

A — on the battery socket is connected to one side of the switch, the other being connected to Clip No. 7 on each valve socket. B + 15 goes to No. 4 on the detector valve socket and B + 18 to one speaker terminal and thence to H.T. on the transformer, also to pin No. 4 on amplifier socket. The audio trans-

former is connected to the nearest earthed solder lug. The left-hand lug on the potentiometer is connected to No. 3 on the detector valve, which clip is also connected to No. 6 on the coil.

The 1 meg. resistor and remaining .0001 mfd. mica condenser have their pigtails twisted together and soldered, and are connected between No. 5 on the detector valve and No. 3 on the coil socket, which is also connected to the fixed plates of the condenser. It will probably be easier to solder the wire to the terminal on the condenser before it is bolted to the chassis, and then to cut the wire to length and solder it to the coil clip. The remaining speaker terminal is connected to No. 3 on the amplifier socket. This completes the wiring.

In connection with the Coil, the ends of the coil windings are threaded through the appropriate prong on the former, and the enamel scraped off and a touch of solder used to secure the wire to the prong.

(Continued on Page 105.)

### PARTS LIST

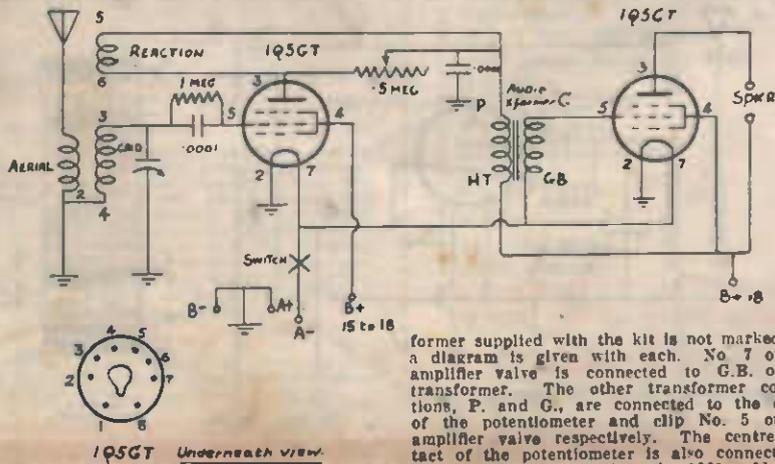
- 1 Chassis
- 1 3-1 Audio Transformer
- 1 Single Gang Tuning Condenser
- 2 1Q5GT Valves
- 4 Valve Sockets
- 1oz. 32 gauge Wire
- 1 5-pin Plug-in Coil Former
- 1 ¼ meg. Potentiometer with Switch
- 1yd. 5-wire Battery Cable
- 1 5-pin Battery Plug
- 2 .0001 Mfd. Mica Condensers
- 1 1 megohm Carbon Resistor
- 1 Twin Tip Jack
- 1 Coil Hook-up Wire
- 2 Knobs
- 2 9v. ("B" Batteries)
- 1 1½v. No. 6 Cell ("A" Battery)
- SUNDRIES: Nuts, Bolts, Solder Lugs, Grommet, etc.

Complete Kit of Parts as above—

Cat. No. AK2031 **£4/12/6**

### SPEAKER

A suitable speaker for use with the "Hiker's Two" would be CAT. NO. A8960 "Rola" 5c sin. PERMANENT MAGNET SPEAKER WITH TRANSFORMER **29/9**



former supplied with the kit is not marked, but a diagram is given with each. No 7 on the amplifier valve is connected to G.B. on the transformer. The other transformer connections, P. and G., are connected to the centre of the potentiometer and clip No. 5 on the amplifier valve respectively. The centre contact of the potentiometer is also connected to No. 5 coil clip and through .0001 mfd. mica

# THE "IMPROVED HIKER'S ONE" KITSET

**T**HIS set has stood the test of time and there are now thousands of Hikers Sets in use throughout the Dominion. Practically the only failures have been entirely due to bad and untidy workmanship. When making your set be neat, particularly with the coil and soldering. Attention to these points and success will be yours.

In country districts (away from powerful local stations) reception of all the main New Zealand stations and many Australians can be had in the evenings; whilst your nearest YA station will come in during daylight even in summer, and all this without the need of a large and expensive "B" Battery.

**Still Tops the Poll as the most popular Kitset in New Zealand!**

**A ONE-VALVE BATTERY RADIO THAT REALLY "PULLS" THE STATIONS.**

**It's Easy to Construct — Cheap to Buy — and Economical to Run!**

**The ideal little Radio for a "boy's" room.**

The Hiker's One Set, which we described in our 1937 Annual, proved to be one of the most popular of our Kit Sets. Hundreds of these little "Battery Misers" are in use every day all over New Zealand, in cities and bush countries and in backblocks where power is not available, and the average battery receiver expensive to run.

It was originally described to run off torch cells, and the components used were such as to cut down the weight as much as possible. The set was then used by hikers, trampers, and others, who have carried their Hiker's One from one end of New Zealand to the other.

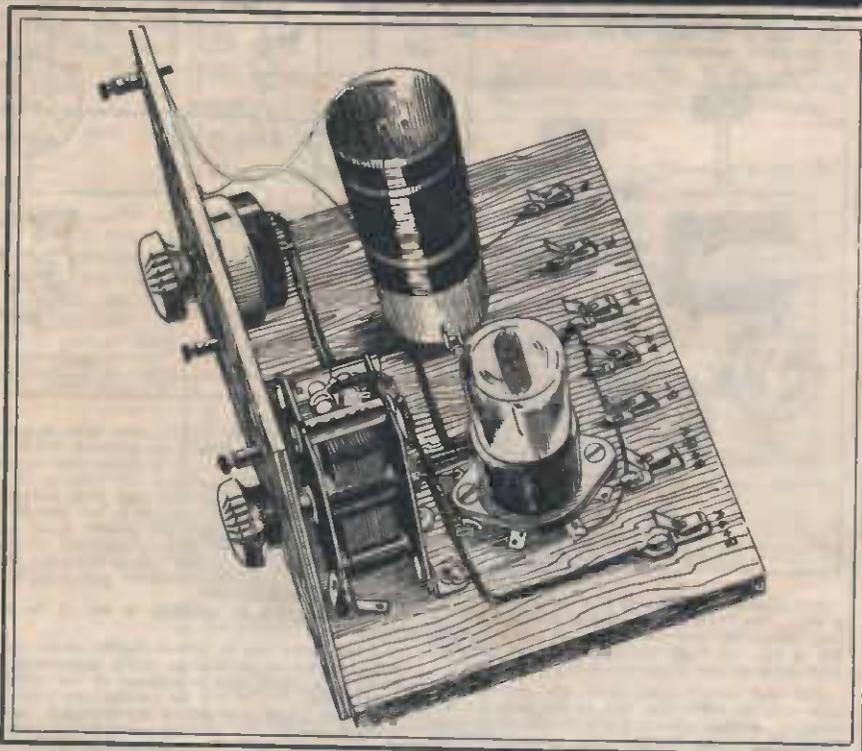
We recommend using the batteries listed for more satisfactory operation and life-lasting economy. In country districts (away from powerful "local" stations) reception of all the main New Zealand stations and many Australian can be had in the evening, whilst your nearest YA station will come in during daylight even in summer; and all this without the need of a large and expensive B battery.

**CONSTRUCTIONAL DETAILS**

First, screw the panel to the baseboard. Then slide the condenser up to the panel and mark the position for the hole to take the shaft. Now mark another hole on the opposite side of the panel in the same relative position for the potentiometer. Make both of these holes large enough to take the threaded bush on the condenser and the potentiometer. You can now mount these two, fastening them to the panel by means of the mounting nuts provided. Now mount the two terminals for the phones, making sure that the one nearest the tuning condenser does not touch the tuning condenser frame. This finishes the panel.

Next, drill seven holes through the baseboard and mount the Fahstock clips. Looking at the back of the set, mark these clips from left to right as follows:— B+9V B+1½V B— A+, A—, R, A. Screw down the valve socket behind the condenser.

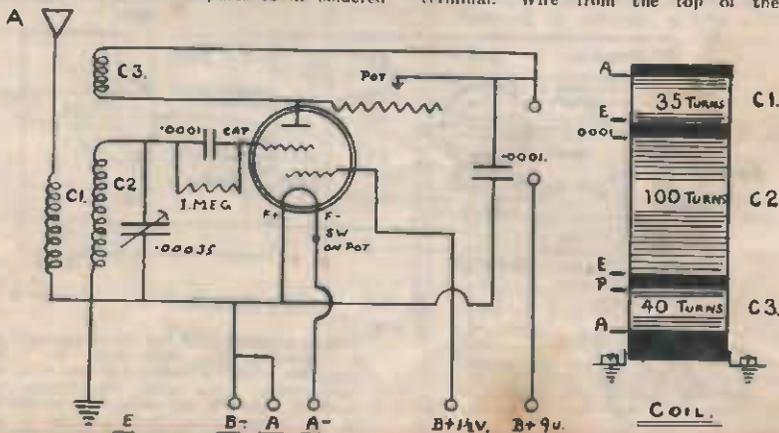
Now the coil. It is essential that a neat job be made of this, otherwise tuning will be erratic and oscillation awkward to avoid. All three windings must be in the same direction and spaced ¼in. apart. Make a small hole ¼in. away from one end of the former and pass the wire through this twice, looping it the last time and leaving about 6in. to connect up to the A terminal afterwards. Wind on closely and neatly 35 turns, finishing the end off by passing the wire through two small holes in the former spaced about ¼in. apart and leaving about 6in. of wire for connecting up. ¼in. below this winding make two more small holes and commence the next winding of 100 turns.



finishing off the same as the first winding. The third winding is put on the same way ¼in. below the second winding and has 40 turns. You should now have about 1in. former left below this winding to which the coil feet are attached. Do not mount the coil yet, but commence the wiring. All joints should be soldered—and not liquid solder or spirits of flux—use resin core solder for a good electrical joint and make sure that parts to be soldered

are clean, preferably sand papered clean. The following is a complete wiring list:—

All wires should be laid flat on the baseboard and be as short as possible. Neatness here will count a lot. Wire from the A— clip to one side of the switch on the potentiometer. Wire from the other side of the switch on potentiometer to F— on valve socket. Wire from centre contact on potentiometer to nearest phone terminal. Wire from the top of the third



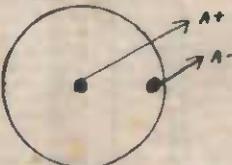
winding on coil, to centre contact of the potentiometer.

One side of .0001 mica condenser to frame of tuning condenser—the coil should now be mounted—and the other side also to the centre contact of potentiometer. Wire other phone terminal to clip marked B+9V. Wire 8 on valve socket to terminal marked B+1½V. Wire from tuning condenser frame to F+ clip on valve socket and on to clip marked B—, on to A+ and thence on to E. The bottom of both the first and second coils are now also wired to E. Bottom of third coil to P connection on valve socket. Wire from left lug on potentiometer also to P on valve socket. Note that right lug on potentiometer is not used. Top of first coil to clip marked A. Top of second coil to fixed plate terminal on tuning condenser. Place resistor and remaining .0001 condenser side by side, and twist together the pigtails of these and run the soldering iron along them. Connect one side of this combination to G connection on valve socket. Connect other side to fixed plate terminal on tuning condenser.

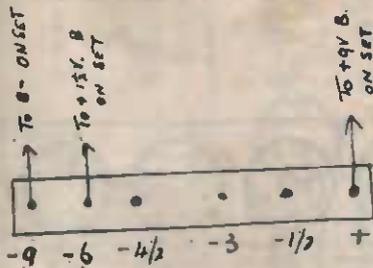
The wiring is now finished, all but the checking. It is important to check the wiring, as a mistake might mean burning out the valve. Put the knobs on the two shafts protruding from the front of the panel, and connect the phones to the phone terminals. Now connect the aerial (which must be a good one) and the earth (which also must be good) to the clips marked A and E respectively.

**BATTERY CONNECTIONS**

- Clip A— goes to side terminal on No. 6 Cell.
- Clip A+ goes to the centre terminal on No. 6 Cell.
- Clip B— goes to the -9 volt socket on the C Battery.
- Clip B+1½V goes to the -8 volt socket on the C Battery.
- Clip B+9V goes to the + socket on the C Battery.



No 6 1½ Volt Battery  
Wires go to A+ + A - ON SET



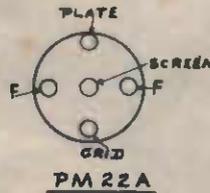
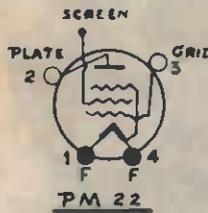
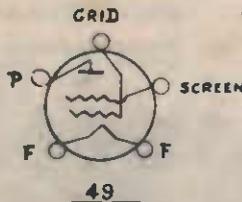
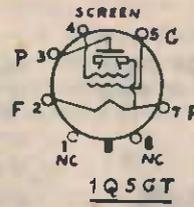
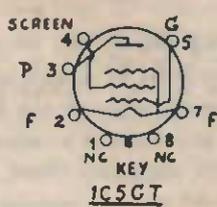
9 Volt Battery.  
Diagram showing Battery Connections to Hiker's One

The last three connections may seem wrong, but you must remember a C battery is usually used for giving negative bias to valves, and consequently, marked with one + socket and tapped - sockets. Actually the -9 socket gives us -0V; the -7½V socket gives us +1½V and the +0V socket gives us +9V. In operation it might be found necessary to increase B+1½V to 3V or 4½V to obtain satisfactory oscillation. If this is so, move the connection from -7½V to -8 or -4½ sockets.

**OPERATION**

Turn the volume control clockwise to the point just before the set goes into oscillation. Should you advance this control too far, a

**"THE IMPROVED HIKER'S ONE" was introduced to New Zealand by "THE LAMPHOUSE"**



**UNDER SOCKET VIEW.**

NC shown on 1Q5GT and 1C5GT Valves = No Connection

NELSON.

"I am getting wonderful results from the Improved Hiker's One. I have logged 18 different stations so far, and I am very pleased with it."—(Sgd.) P.H.

NELSON.

"Incidentally, the Hiker's One which I purchased from you in January for a friend is now going great guns, and he is well satisfied with it."—K.M.

RANGIPIO, National Park.

"I have to acknowledge receipt of the Hiker's One Radio Set recently sent to me, and desire to thank you for the prompt manner of delivery. Your official receipt with 9d. in stamps is also to hand. The set has been giving excellent results, considering the distance I am from main stations, the best reception being received from Auckland and 32B Christchurch.—(Sgd.) D.B.L.

whistle will be heard in the phones, which indicates the set is oscillating. To operate a set in this condition not only causes interference in near-by receiving sets, but is also an offence against the broadcasting regulations. In conclusion, may we wish you 365 days and nights of good reception with your "Hiker's One."

**Octal Hiker's Two—continued**

The Broadcast Coil is the same as that used in the Hiker's One: Aerial, 35 turns; Grid, 100 turns; Reaction, 40 turns. Wound on 1¼in. plug-in coil former with 32 gauge enamelled copper wire. All windings must be made in the same direction and must be spaced ¼in. apart. A short wave coil for this set may be made as follows:—1¼in. former, 26 gauge enamelled wire. C1, 4 turns; C2, 20 turns; C3, 15 turns. In a short wave coil, half a turn of wire will make a very big difference, so there is plenty of fun in store for those who have the urge to experiment in this direction and make up a few different coils.

A final word of warning to beginners. Don't forget that the position of connections is reversed when you change from the top view to the bottom view. This fact is liable to cause mistakes when connecting up the coil windings to the socket, and the battery cable to the plug. It is a good idea to make a sketch showing both top and bottom views and to have this handy when you are making the connections.

Recently I bought a "Hiker's Two" Kitset from you. Using 'phones I receive 1YA and 1ZB very clearly and quite loud during the daytime.

2YA and 2YH are loud enough to understand speech. At night, besides those mentioned which have to have volume reduced, I receive 2YA, 2ZB, 3YA, 3ZB, 2ZJ, and have received 2ZU Suva and 2NC Australia (Newcastle).

I have been using the set at Hicks Bay, 11 miles by road from Gisborne.—L.T., Gisborne.

I have already purchased your 1948/9 Annual and am very pleased with the size and quality as well as quantity of all the articles.

I have just completed building the Octal Hiker's Two as described and can use it as a portable using a Loop Antenna and I have heard Auckland and Christchurch on a speaker in daylight using the set as a portable.

In conclusion I wish to thank you for your prompt attention to my mail orders over the past year.—R.G., Wellington, C.S.

**Parts List**

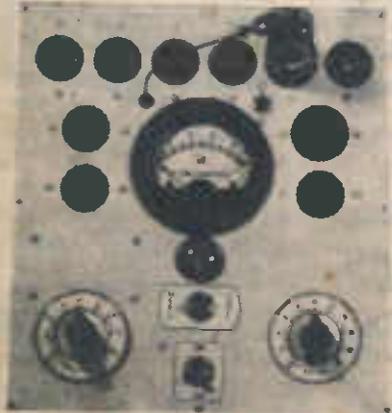
- 2 .0001 mfd. Mica Condensers
- 1 1 meg. Resistor
- 1 Variable Single Gang Condenser, .00035 or .0005 mfd.
- 1 500,000 Potentiometer with Switch
- 9 Fahnestock Clips or Terminals
- 1 Valve, 49, 1Q5GT, 1C5GT
- 1 Valve Socket
- 1 1¼in. x 3¼in. Coil Former
- 1oz. 32 gauge Enamelled Wire
- 2 Coil Feet
- 14 Wood Screws
- 2 Nuts and Bolts
- 1 Coil Pushback Wire
- 1 Baseboard
- 1 Panel
- 2 Knobs
- 1 1½v. Dry Cell
- 1 9v. C. Battery

**COMPLETE KIT OF PARTS WITH OCTAL TUBE AND BATTERIES—**  
Cat. No. AK2004 **£2/7/6**

# The "Simplex Universal" Valve Tester

GOROON W. READ

A simple circuit of a Valve Tester that has proven exceptionally popular since we first produced it some time ago.



The circuit is of standard design in that it tests valves on the principle of emission or electron activity of the cathode. Each valve is tested as a rectifier with 30 volts on the plate, and the load potentiometer is adjusted to a standard setting for that particular valve, and the electron flow is recorded directly on the meter. After a valve has been in use for a considerable length of time the active emitting salts on the cathode become exhausted and the efficiency of the valve and associated apparatus begins to fall. It is this fall of efficiency that causes the meter to read either good or bad when a constant plate voltage and load are applied by the tester. Incorporated in the instrument is an extremely sensitive neon test for leakage between filament and cathode. We cannot stress too strongly the need for a leakage test on tubes used in modern receivers using AVC, QAVC and other complex circuits.

In the designing of this versatile valve tester we have kept in mind that the circuit must be simple and inexpensive, yet capable of testing all the many types of valves on the New Zealand market. In the latter respect we are in an unfortunate position, as we have to deal with the standard American types, including Octal, Loctal, and miniature, the Philips range, also the Mullard and the standard English types. In this tester a total of eleven sockets is used to make it truly universal.



## "SIMPLEX UNIVERSAL VALVE TESTER"

### Suggested Chart

Type	Volts	Load	Type	Volts	Load
01A	5	8	25L6	25	1
1A4	2	6	27	2.5	4
1A6	2	11	30	2	7
1B4	2	6	32	2	6
1B5	2	20	37	6.3	3
1C4	2	4	39	6.3	5
1D4	2	4	41	6.3	4
1F4	2	4	42	6.3	2
1K4	2	4	43	25	1.5
1K6	2	5	46	2.5	4
2A3	2.5	2	46	2.6	4
2A5	2.5	3	47	2.5	6
2A6	2.5	2	49	2	7
2A7	2.5	3	50	7.5	6
5Z3	5	2	55	2.5	3
6A7	6.3	2	56	2.5	3
6A9	6.3	3	57	2.5	2
6B5	6.3	4	58	2.5	2
6B7	6.3	3	75	6.3	2
6C5	6.3	3	76	6.3	3
6C6	6.3	3	77	6.3	2
6D6	6.3	3	78	6.3	2
6F6	6.3	3	80	5	4
6F7	6.3	3	81	7.5	18
6H6	6.3	3	86	6.3	3
6J7	6.3	2	KBC1	2	7
6K7	6.3	3	KC3	2	2
6L6	6.3	2	AK2	4	2
6L7	6.3	20 1/2	AF3	4	2
6N7	6.3	1.5	AB2	4	2
6Q7	6.3	2	EBC3	6.3	2
6V6G	6.3	1.5	1561	4	3
6X6	6.3	1	EBL1	6.3	1
10	7.5	5	B240	2	2
19	2	2	AZ1	4	3
24A	2.5	5	506	4	3
25A6	25	3			

as the slightest leakage between the filament and cathode can cause hum noise, fading and either intermittent or permanent distortion. Note that this test is made on a hot cathode as many intermittent shorts are caused by thermal expansion and a cold check is of very little use.

The actual construction of the tester is not difficult, but be sure to use high quality components as any equipment is only as reliable as its component parts. The transformer is designed and specially wound for this instrument. The 1,000-ohm potentiometer must be wire wound for accurate calibration and the contact shoe must ride directly on the resistance element for accurate resetting of the calibration points.

The meter is a standard 5in. round type of 100 ohms internal resistance. Should a meter of a lower resistance be used additional resistance

(Continued on Page 110.)

## THE "SIMPLEX" UNIVERSAL VALVE TESTER

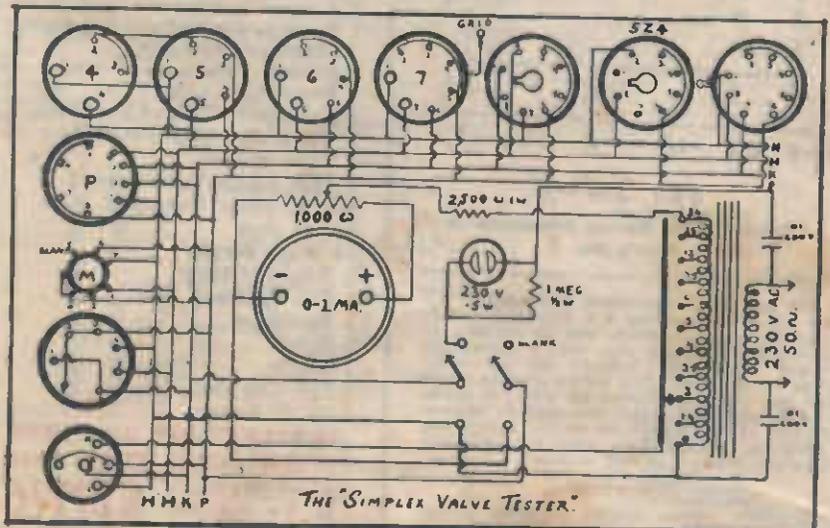
### PARTS LIST

- 1 Panel
- 1 each 4, 5, 6, 7, Loctal, Midget Valve Sockets
- 2 Octal Valve Sockets
- 1 each Philips (P), Squash 7-pin, 5-pin Valve Sockets
- 1 0-1 MA Meter
- 1 1000 ohm, W/W Potentiometer
- 1 1/2 watt Neon Indicator
- 1 Holder for same
- 1 Special Transformer
- 1 10-position Switch
- 2 .01 Condensers
- 1 D.P.D.T. Toggle Switch
- 1 S.P.S.T. Toggle Switch
- 2 Pointer Knobs
- 2 Resistors
- 1 yard 3-core Flex
- 1 Clip
- 1 yard Spaghetti Tubing
- SPINDRIES:**—Including Nuts and Bolts, Hook-up Wire, Connecting Wire, Ohmmeters, Indicator Markings, etc.

## A KIT OF PARTS

Supplied by

THE LAMPHOUSE



### RE ERROR IN "P" SOCKET CONNECTIONS:

An error occurs in the diagram, Pins 2 and 3 are both shown connected to the common cathode lead, whereas Pin 2 should go to common left-hand heater lead and Pin 3 to right-hand heater lead. Pin 4 is shown connected to right-hand heater lead, whereas this should be connected to common cathode lead.

Cat. No. AK2032 .. **£7/7/6**

# The "Easy Built" Clipper Portable

**W**E present again this year the now deservedly popular "Clipper 4." An ideal circuit for those wishing to build a portable set to take with them on their vacation as well as for use at weekend outings, tennis parties, tramping, motoring trips, etc. Four modern 1.4 volt valves give maximum operating efficiency as well as being a great little economiser as far as the battery drain is concerned.

**T**HIS receiver has many desirable features, including high gain iron cored I.F. transformers, a matched loop and self biased output stage. From the illustration you can see that the parts build up into quite a compact little job, the overall measurements being 11 1/2 in. x 4 in. x 5 in. high. The space on the chassis above the volume control gives clearance for the speaker when it is mounted in a cabinet.

Although this portable has proved one of our most popular kit sets to date we know that many more constructors would have liked to have built it, the one snag being they did not feel they had sufficient technical knowledge. It is for this reason we have decided to give it an "Easy Built" write-up.

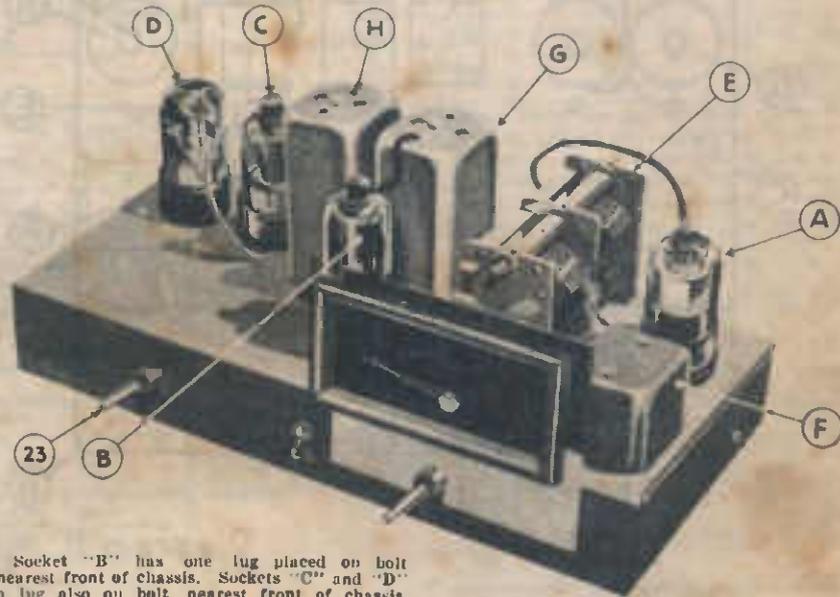
The system we intend to use is the same as was used with great success in the "Easy Built Five", so if you can use a soldering iron, and are capable of following simple point to point connections even though your knowledge of radio theory may be all you can build this receiver. This we say without fear of contradiction.

Do you know a resistor? Can you distinguish it from a valve socket? Can you count up to 23? You can! Good! You can build this grand little set.

Have a look at the various diagrams. "A" is the circuit diagram; "B" shows the position of the parts above the chassis, and "C" shows the placement of parts underneath the chassis. We have also prepared two lists. The first lists alphabetically the valve sockets and various parts that are mounted to the chassis by means of nuts and bolts. The second list numbers the condensers and resistors which are mounted underneath the chassis.

### CONSTRUCTIONAL DETAILS

Mount the four valve sockets and make sure the "key," or notch, points the same way as shown in the diagram. On each of the bolts that go through socket "A" place a solder lug before putting on the nuts.



Socket "B" has one lug placed on bolt nearest front of chassis. Sockets "C" and "D" a lug also on bolt nearest front of chassis. These lugs are used as earthing points for the various small parts, so make sure the bolts are contacting the metal of the chassis and not just resting on the paint. Now, before mounting the tuning condenser (E) solder a length of push back wire on to the bottom lugs coming from the fixed plates of each section of the

gang. Both of these lengths should be about 4 1/2 in. long. Thread these wires through their respective holes in the chassis and bolt the condenser in place. Also on to the top lug of the rear section of the condenser gang solder a 5 in. length of wire the other end of which has a grid clip soldered to it which goes on to the cap of the 1A7 GT valve. But don't worry about that yet. Mount now the rest of the parts. The oscillator coil (F) mounts on the front right hand corner and the two I.F. transformers (G and H) mount side by side. The transformer with the lead coming out the top of the can is known as the first I.F. (G) and mounts next to the condenser gang, and before bolting in place put a solder lug under the rear nut. When fitting the second I.F. transformer (H) put an additional nut on the mounting lug nearest the front of the chassis, place the one lug anchoring strip provided over this and secure it by means of a third nut. This strip is used later as a junction for the black lead of "H" which is the second I.F. transformer and also 6 which is a .0001 condenser 16 and 17 100,000 ohm and 2 megohm resistors respectively. Mount now the twin terminal strip which mounts at the rear of the chassis and almost directly below socket "A". Next mount the switch and volume control (23) but do not tighten up the nuts as you will want to solder leads on to the various contacts and may need to turn them to get at the lugs. Try the dial in place, now make sure it will turn smoothly, then remove it and replace later when all the wiring is done.

Now for some work under the chassis. First solder one end of your hook-up wire on to the appropriate lug on the switch (see diagram of switch connections) and allow enough wire to reach pin No. 2 of socket "B" and cut off.

Cut an 8 in. length of wire now and solder one end together with the lead from the switch on to pin No. 2 of socket "B". A 3 in. length of wire now and solder it with the free end of the 8 in. length on to pin No. 2 of socket "D." Another 8 in. length is cut now and soldered on to pin No. 2 of socket "C" with the spare end of the 3 in. length. We now should have only one free end left which is soldered on to pin No. 2 of socket "A." Now earth pin No. 7 of each of these sockets on to their respective solder lugs by means of short lengths of wire. Keep all of these leads flat on the chassis

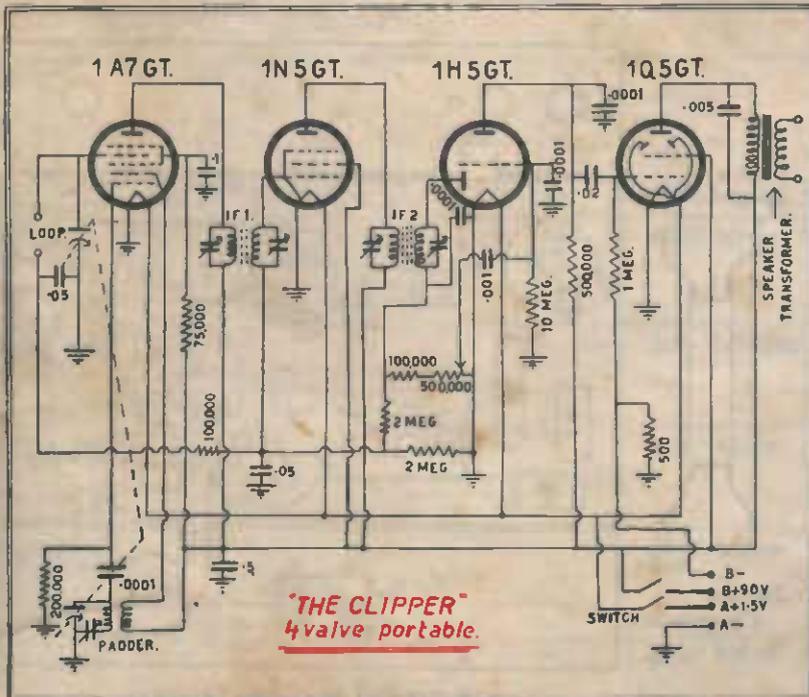


DIAGRAM "A"

HOLE FOR SPEAKER.  
AND BATTERY CABLES.

TWIN TERMINAL STRIP  
FOR CONNECTING  
LOOP  
AERIAL.

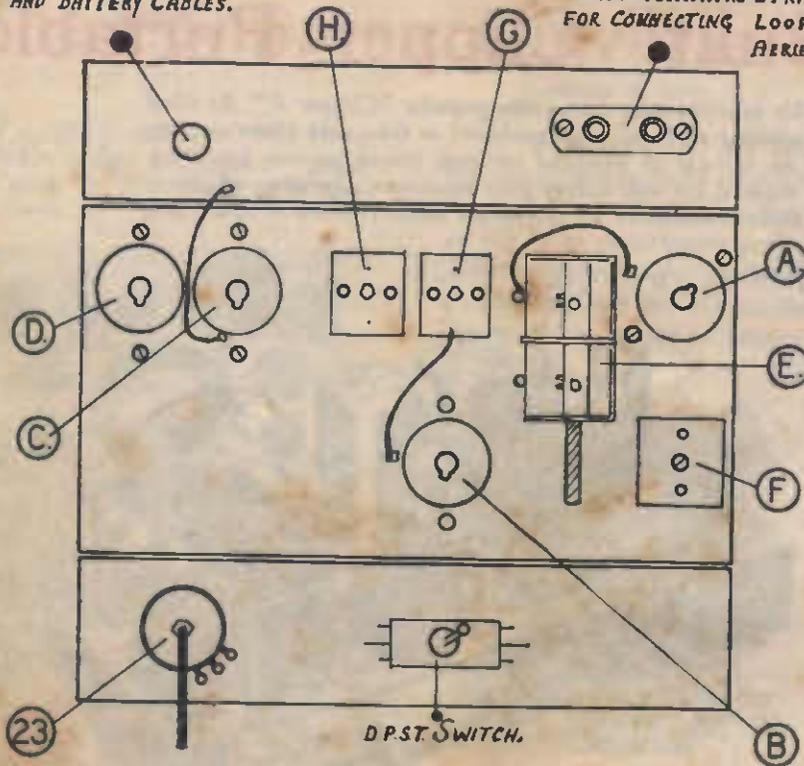


Diagram "B"

Now by referring to the various lists we feel sure you will have no trouble in wiring up the rest of the set. Wire up the leads from your tuning condenser and the I.F. transformers and then work round to the various small parts. By ticking off the individual connections on the lists as you go along you can be sure all the necessary joints have been made.

When all your wiring is done recheck against the list again. Wire up your speaker now to pins Nos. 3 and 4 of socket "D." Your battery cable also, the A+ and B- leads going to the switch (see diagram). The A- lead is earthed to a suitable lug and the B- lead goes on to pin No. 6 of "D." Your loop aerial leads go on to the two terminals at the back of the chassis. Having made sure your A and B batteries are connected correctly the time has arrived to try the set out. Let us stress, however, the importance of checking on your battery connections, as many a set of valves has been ruined by the over-confident hooking up of batteries without a proper check of connections. With all the valves in their correct sockets and grid leads in place tune in a station in the vicinity of 1500 kcs. and adjust the trimmers on the condenser gang for best results. Now, at the other end of the dial tune in a station and adjust the padder condenser for maximum signal. This is rather a rough and ready method and we strongly advise having the set aligned by a qualified serviceman. Remember your loop is highly directional and must be pointed toward the incoming signal for best results. Should any of the details be not quite clear to you our technical staff will willingly endeavour to clear up the points in question for you.

"EASY BUILT FIVE"

I received from you about this time last year, the kit for the easy built five, it took next to no time to construct it and it has been working well ever since.

The instructions in the 47/48 Annual were very simple and easy to follow. I can get 10 stations in the evening, and half as many in the day time. I wish to state that I am very pleased with it. A.W., Christchurch

"I have recently completed the assembly of the "Clipper" 4 valve portable kit which I got from you early this month. The results are excellent and exceed expectations."  
— H.F. Popham.

THE "EASY BUILT CLIPPER" PARTS LIST

- 1 Chassis.
- 1 2-gang Variable Condenser.
- 2 "Ensign" 465 K.C. I.F. Transformers.
- 1 "Ensign" Oscillator Coil (Shielded).
- 1 "Ensign" Loop Aerial.
- 1 6in. Speaker.
- 1 1A7GT Valve.
- 1 1N5GT Valve.
- 1 1E5GT Valve.
- 1 1Q5GT Valve.
- 4 Valve Sockets.
- 1 Dial.
- 1 500,000 ohm Volume Control.
- 1 D.P.S.T. Toggle Switch.
- 10 Resistors.
- 4 .0001 mfd. Mica Condensers.
- 1 .001 mfd. Tubular Condensers.
- 1 .005 mfd. Tubular Condensers.
- 1 .02 mfd. Tubular Condenser.
- 2 .05 mfd. Tubular Condensers.
- 1 .1 mfd. Tubular Condenser.
- 1 .8 mfd. Electrolytic Condenser.
- 2ft. Battery Cable.
- 2 pkts. Hook-up Wire.
- 18 Nuts and Bolts.
- 1 Terminal Strip.
- 18 Solder Lugs.
- 2 Knobs.
- 3 Grid Clips.
- 1 Grommet.
- 1 Padder Condenser.

Complete Kit of Parts as above—

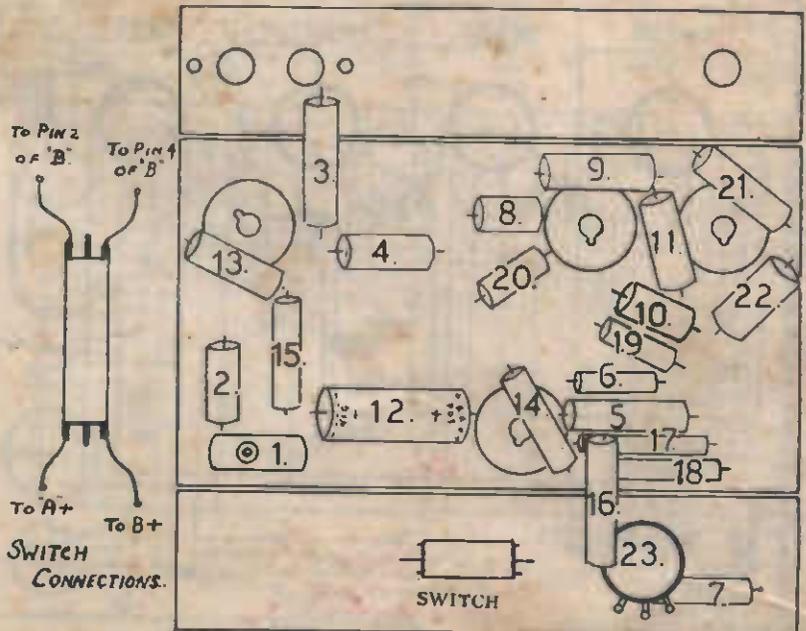
Cat. No. AK2040 **£9/19/6**

Batteries.

- 2 45-volt Portable Batteries.
- 1 1½-volt "A" Battery.

Complete Kit WITH BATTERIES—

Cat. No. AK2040A **£11/16/6**



— UNDER CHASSIS VIEW. —

— Diagram "C".

**CONNECTIONS TO BE MADE**

Socket	Label	Connections	Socket	Label	Connections
1A7GT Socket	"A"	Pin 1—No connection.	1Q5GT Socket	"D"	Pin 1—Earthed and used as earthing lug for 10, 19 and 22.
		Pin 2—Filament Pin (see Text).			Pin 2—Filament pin (see Text).
		Pin 3—To yellow lead of "G".			Pin 3—To 11 and one lead of speaker transformer.
		Pin 4—To 4 and 15.			Pin 4—To Pin 4 of "B", 11, and other lead of speaker transformer.
		Pin 5—To 2 and 13.			Pin 5—To 9 and 21.
		Pin 6—To yellow lug of "F".			Pin 6—To 21 and 22, also B— lead of battery cable.
		Pin 7—Filament pin earthed to chassis			Pin 7—Filament pin earthed to chassis.
		Pin 8—No connection.			Pin 8—No connection.
1N5GT Socket	"B"	Pin 1—No connection.	2 Gang Condenser	"E"	Lead from top lug on fixed plates of rear section goes to cap of 1A7GT valve. Lead from bottom lug of same section goes to left hand lug of the twin terminal strip. Lead from bottom lug of front section goes to green lug of "F."
		Pin 2—Filament pin (see Text).			
		Pin 3—To yellow lead of "H".			
		Pin 4—To positive end of 12 red lug of "F", Pin 4 of "D" and 20 red leads of "G" and "H."			
		Pin 5—To right hand lug on twin terminal strip.			
		Pin 6—Used as junction for 5, 14, 17, 18 and black lug of "G."			
		Pin 7—Filament pin earthed to chassis.			
		Pin 8—No connection.			
1H5GT Socket	"C"	Pin 1—No connection.	Oscillator Coil	"F"	Green lug to 2 and bottom lug of front section of "E."
		Pin 2—Filament pin (see Text).			Black lug to fixed plates of 1.
		Pin 3—To 8, 9 and 20.			Yellow lug to pin No. 6 of "A."
		Pin 4—No connection.			Red lug to pin No. 4 of "B."
		Pin 5—To green lead of "H."			
		Pin 6—No connection.			
		Pin 7—Filament pin earthed to chassis.			
		Pin 8—Used as junction for lead from grid cap of 1H5GT, also 7, 10, and 19.			
1H5GT Socket	"C"	Pin 1—No connection.	1st I.F. Transformer	"G"	Green lead from top of can goes to cap of 1N5GT valve.
		Pin 2—Filament pin (see Text).			Black lead to Pin No. 6 of "B."
		Pin 3—To 8, 9 and 20.			Yellow lead to Pin No. 3 of "A."
		Pin 4—No connection.			Red lead to Pin No. 4 of "B."
		Pin 5—To green lead of "H."			
		Pin 6—No connection.			
		Pin 7—Filament pin earthed to chassis.			
		Pin 8—Used as junction for lead from grid cap of 1H5GT, also 7, 10, and 19.			
1H5GT Socket	"C"	Pin 1—No connection.	2nd I.F. Transformer	"H"	Green lead to Pin No. 5 of "C."
		Pin 2—Filament pin (see Text).			Black lead to 6, 16 and 17.
		Pin 3—To 8, 9 and 20.			Yellow lead to Pin No. 3 of "B."
		Pin 4—No connection.			Red lead to Pin No. 4 of "B."
		Pin 5—To green lead of "H."			
		Pin 6—No connection.			
		Pin 7—Filament pin earthed to chassis.			
		Pin 8—Used as junction for lead from grid cap of 1H5GT, also 7, 10, and 19.			

**SMALL COMPONENT CONNECTIONS TO BE MADE**

Condensers	No.	Connections	Condensers	No.	Connections
Padder	1	Fixed Plates to black lug of "F".	.0001 Mica	6	To black lead of "H".
		Moving plates earthed.			Earthed to chassis.
.0001 Mica	2	To Pin No. 5 of "A".	.001 Tubular	7	To Pin No. 8 of "C".
		To green lug of "F".			To centre lug of 23.
.05 Tubular	3	Right hand lug of twin terminal strip.	.0001 Mica	8	To Pin No. 3 of "C".
		Earthed to chassis.			Earthed to chassis.
.1 Tubular	4	To Pin No. 4 of "A".	.02 Tubular	9	To Pin No. 3 of "C".
		Earthed to chassis.			To Pin No. 5 of "D".
.05 Tubular	5	To Pin No. 6 of "B".	.0001 Mica	10	To Pin No. 8 of "C".
		Earthed to chassis.			Earthed to chassis.

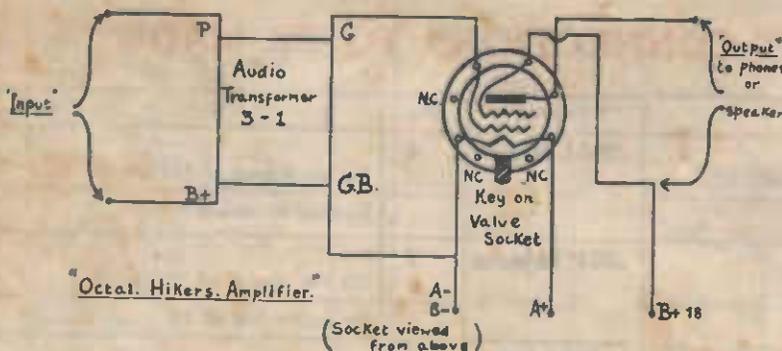
Condensers		No.	Resistors		No.
.005 Tubular	11	To Pin No. 3 of "D".	2 megohm	18	To Pin No. 6 of "B".
		To Pin No. 4 of "D".			Earthed to chassis.
8 mfd Electrolytic	12	Positive (+) end to Pin 4 of "B".	10 megohm	19	To Pin No. 8 of "C".
		Negative (-) end earthed to chassis.			Earthed to chassis.
<i>Resistors</i>					
200,000 ohm	13	To Pin No. 5 of "A".	500,000 ohm	20	To Pin No. 4 of "B".
		Earthed to chassis.			To Pin No. 3 of "C".
100,000 ohm	14	To Pin. No. 6 of "B".	1 megohm	21	To Pin No. 5 of "D".
		To Pin No. 5 of "B".			To Pin No. 6 of "D".
75,000 ohm	15	To Pin No. 4 of "A".	500 ohm	22	To Pin No. 6 of "D".
		To red lug of "F".			Earthed to chassis.
100,000 ohm	16	To black lead of "H".	.5 megohm	23	Right hand lug to 16.
		To right hand lug of 23.			Centre lug to 7.
2 megohm	17	To black lead of "H".	Vol. Control		Left hand lug earthed to chassis.
		To Pin No. 6 of "B".			

## THE "OCTAL HIKER'S" AMPLIFIER

Below is the circuit of an excellent Single Valve Amplifier using an Octal Type Tube. This amplifier may be used in conjunction with any of the Hiker's Series Sets, or for amplifying a crystal set or other small receivers. The input to the amplifier is simply connected to the headphone terminals of the Hiker's or crystal set, etc. A 3 : 1 audio transformer is shown in the diagram, but a 3½ : 1 or 5 : 1 Transformer would do equally as well.

To obtain satisfactory results it is recommended that 18 volts be used on the plate of the valve, although the amplifier may work on a lower voltage. Using the 22½ volt tappler of a 45 volt B battery would be quite satisfactory. The ideal Amplifier to hook on to your "Hiker's One" to operate a Speaker.

1C5C. or 1Q5C.



### PARTS LIST

- 1 1C5GT or 1Q5GT Valve.
- 1 Octal Baseboard Socket.
- 1 Audio Transformer.
- 7 Fahstock Clips.
- 1 Baseboard.
- 12 Wood Screws.
- Hook-up Wire.
- Solder Lugs.
- 1 No. 6 Dry Cell.
- 2 9-volt C Batteries.

**Complete KIT OF PARTS**  
as above.

Cat. No. AK2010

**39/6**

## THE "SIMPLEX" UNIVERSAL VALVE TESTER —

should be added to bring it up to 100 ohms. The meter as supplied with the kit of parts is 85 ohms internal resistance and a suitable 15 ohm resistor is supplied. A word of caution. Don't try to measure the resistance of a meter on the low ohms range of a multimeter, as the current through the meter can be as high as 100 M.A. with disastrous results to the meter under test.

The internal resistance of the meter is usually printed on the meter face. The filament selector switch must be of the non-shorting type otherwise a short would develop across the secondary as the switch arm is moved from one

point to the next. All the other parts are standard and need no special mention.

The actual testing of valves is very simple. All that is required is to place the valve in the right socket, and the correct load and filament voltage are applied as indicated on the chart. The short-circuit switch is moved to the short position and the power is turned on. Should the neon indicator show no leakage the switch is moved to the merit position and the meter reading noted. The meter scale should be graduated 0-100. From 0-50 is in the replace region, 50-80 doubtful, 80-100 good. To calibrate the instrument on types of valves not

(Continued from Page 106.)

shown on the chart, proceed as follows: Select the correct filament voltage and set the load potentiometer at zero. Allow sufficient time for the valve to reach a stable operating temperature and then slowly rotate the load pot. until the meter reads full scale.

The following rectifier values are tested in the socket marked 5Z4: 5Y4G, 5Y4C, 5W4, 5Y3G, 5Z4 and 5T4. This is because their filament terminals are Nos. 2 and 8 instead of Nos. 2 and 7 as is usual among the Octal range.

This concludes the description of a very simple yet versatile valve-tester that will fill the needs of all experimenters and servicemen.



**MOUNTING THE DIAL**

Lastly, the dial can be mounted and the dial lights wired up. To do this, run a pair of twisted leads from the heater lugs of the 6F6 socket to the lugs of the dial light sockets. A pair of leads is then run between the lugs on the two dial light sockets, and the wiring is complete.

**READY FOR OPERATION**

Take a final run over all connections, and then plug in the valves and speaker, and connect up the aerial and earth leads.

Invert the chassis and turn on the power, and at the same time watch and listen closely for any signs of sparking or power transformer overload. If a faint bubbling is heard from the transformer, for example, switch off immediately, as there is something radically wrong somewhere.

If everything seems O.K., however, and a faint hum is heard when an ear is placed close to the speaker, the volume control can be advanced and the tuning dial slowly rotated. A station should soon be picked up.

To align the receiver, set the two trimmers on top of the gang about half-way out, and tune in a station near the middle of the band—preferably one that requires a fair amount of reaction to bring it up to quiet room volume. Then adjust the trimmer on aerial section of the gang until volume is loudest.

**UNIT SHOULD NOT OSCILLATE**

When the unit is switched in or out of circuit, it may be necessary with some receivers to make a slight adjustment to the main tuning control.

It will be found that the booster operates best, giving greatest gain and selectivity, with the regeneration control set just below the oscillation point.

**"SKY HAWK FOUR" PARTS LIST**

- 1 Chassis
  - 1 Dial
  - 1 .0001 mfd Midget Condenser
  - 1 2-gang Variable Condenser
  - 1 Aerial and R.F. Coil
  - 1 each Type 6K7, 6C5, 6F6, 5Z4 Valves.
  - 5 Wafer Valve Sockets
  - 1 60 M.A. 6.3 Volt Power Transformer
  - 1 10,000 ohm Wire Wound Potentiometer
  - 1 R.F. Choke
  - 2 8 mfd Electrolytic Condensers
  - 1 25 mfd Electrolytic Condenser
  - 5 Fixed Condensers
  - 1 15,000 ohm Voltage Divider
  - 5 Resistors
- SUNDRIES: Hook-up Wire, Tip Jack, Grid Clips, Knobs, Solder Lugs, Nuts and Bolts, etc.

**Complete Kit of Parts as above—**

Cat. No. AK2054 .. **£9/7/6**

**Lamphouse Valve Equivalent Chart**

\*Socket change necessary.

All metal tubes are interchangeable with glass or G.T. tubes of the same type. Eg., 6K7 = 6K7G = 6K7GT.

A number of these equivalents are not intended for use in A.C.-D.C. sets due to difference in filament consumption.

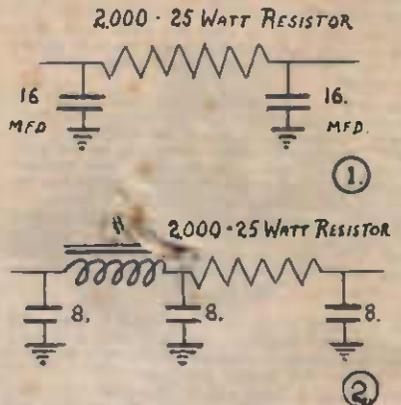
Type.	Equivalents.	Type.	Equivalents.
1A4P	1D5G*	30	1H4G*
1A6	1C6 1D7G*	31	20
1B4P	32 1E5G*	32	1B4P
1B5/25S	1H8G*	33	1D4
1C4	1A8G*	34	1A4
1C8	1A8 1C7G*	35	24A
1D4	1L30*	36	6C6* 77*
1F4	1F7G*	37	76
1F8	1F74*	38	6K6G* 41*
1K4	1K30*	39/44	6D6* 78*
1K5	1K4*	41	42 6K6G*
1K8	1K7G*	42	41 6F6G* KT63*
IV	6Z3	43	25L6* 25B8*
2A3	45	45	2A3
2A6	55	46	39*
5T4	5U4G	47	39*
5W4	5Z3* 5Z4 5Y3G	48	1C5G* 1Q5G*
5Z3	5Z4* 5W4* 80	55	2A6
5Z4	80* 5Y3G U50	56	27
6A3	6B4G*	57	24A*
6A6	6N7* 79*	58	35*
6A7	6A8*	59	47*
6A8	6A7* 6J8G	75	85
6B5	6C6*	76	37
6B7	6B6*	77	6C6
6B8	6B7*	78	6D6
6C5	6J5 76*	79	6A6*
6C6	77 36*	80	5Y3G* 5W4*
6D6	78 30/44*	83	5Z3
6E5	6L5 6G5	83V	80
6F5	6SF*	84	6Z4
6F6	6K6 6V6G KT63	85	75
6F7	6P7G*	89	41
6G5	6U5 6H5	1A5G	1T5G* 1C5G
6H6	D63	1A7G	1B7G
6J5	6C6* 76*	1C5G	1T5G 1A5G
6J7	6C6* 77*	1C7G	1C6*
6K7	6D6* 78*	1D5GP	1A41*
6K8	6A8	1D7G	1A6*
6L6	KT66	1E5GP	1A41* 1B4*
6L7	X64	1F5G	1F4*
6N7	6A6* 79* 6E8*	1F5GV	1F6*
6Q7	6K7 6T7G	1G4G	1E4G
6R7	6Q7 6T7G	1G5G	33*
6S7	6D6	1H4G	30*
6T5	6G5 6U5	1H6G	1B5 25S*
6U5	6G5 6T5	1J6G	19*
6V6	6F6 6K6G	1N5G	1D5G
6X5	84*	5U4G	5Z3* 5Y4G*
19	1J6G*	5V4G	83V*
20	31	5X4G	5U4G* 5Z3*
24A	35/51	5Y3G	5Y4G*
25A6	43*	5Y4G	5Y3G*
25L6	25C6G 25A6G	6B4G	6A3*
25Y5	24Z5	6B6G	75* 6Q7G
25Z5	25Y5	6C8G	6F8G
25Z6	25Z5*	6D8G	6A8G 6A7*
27	59	6F8G	6C8G

**CONVERTING CIRCUITS TO USE P.M. SPEAKERS**

It is really not a difficult task to convert a Radio Circuit incorporating an Electro Magnetic Speaker to use a Permanent Magnet type.

Manufacturers are now concentrating mainly on the Permanent Magnet type of speaker using the latest "Alnico" Anisotropic Magnet, and the day is not far away when the good old E.M.'s will be just a pleasant memory.

Below we give two Circuits showing the simplicity of the interchangeability of these two types.



The Field winding of the standard E.M. Speaker is replaced by a Heavy Duty Resistor. A 2,000 ohm. 25 watt type is suitable for the majority.

Figure 1 shows the alteration using 2-16 mfd. Electrolytic Condensers for filtering.

In case of hum where this filtering proves insufficient, Circuit 2 should be used. This incorporates a Filter Choke as well as the resistance.

8 mfd. Electrolytics are of a large enough capacity in this set-up.

Type.	Equivalents.
6G8G	6K6G 41*
6G8G	6D6G
6J8G	6K6G
6K5G	6F3G
6K6G	41*
6L5G	6C5G 76*
6N6G	6B5G*
6P5G	76*
6T7G	6Q7G 75*
6U7G	6D6* 6K7G
6W7G	6J7G 6C6*
6Y6G	6V6G 6L6G
6Z7G	6N7G 6A6*

# SHORT WAVE STATIONS OF THE WORLD

This list of short wave stations covering frequencies from 4500 to 18000 kilocycles, contains stations best received in New Zealand. Schedules are effective April, 1949, and times given are all N.Z.S.T., 12 hours ahead of G.M.T. Locations shown are those of studio location to which reports are addressed.

Compiled by Arthur T. Cushen, 212 Earn Street, Invercargill, Short Wave Editor of "New Zealand DX Times" the official organ of the New Zealand Radio DX League. Enquiries concerning unlisted stations,

addresses, and fuller details to the above address will be answered promptly.

ABBREVIATIONS: BBC's Pacific Service (6.00-7.45 p.m. daily), G.O.S. General Overseas Service, 24 hours a day. European Service. English periods are 5.15-5.30 p.m., 6.00-6.15 p.m., 6.45-7 p.m., 7.45-8.00 p.m., 11.15-11.45 p.m., 6.00-6.30 a.m., 8.30-8.45 a.m., 9.15-10.00 a.m. A.F.R.S. Armed Forces Radio Service, San Francisco and New York. A.F.R.N. Armed Forces Radio Network, Tokio, Japan.

Call and Location	Freq. Kilo-cycles.	Power in Watts.	Schedule, Slogan, English News, Periods, etc.
HCZAK—Guayaquil, Ecuador	4650	1,000	"Radio Ecuador," 11 a.m.-4.30 p.m.
HCZET—Guayaquil, Ecuador	4720	300	"Radio El Telegrafo," 10.30 a.m.-4.30 p.m.
YVMA—Maracaibo, Ven.	4705	300	"Ecos del Zulia," 11 a.m.-2.30 p.m.
YVKV—La Gualra, Ven.	4760	1,000	"Emisora Vargas," 11 a.m.-2.30 p.m.
HJGB—Bucaramanga, Colombia	4775	1,500	"Radio Santander," 11 a.m.-2.45 p.m.
YLVA—Valencia, Ven.	4780	300	"La Voz de Carabobo," 9.30 a.m.-2.30 p.m.
Radio Malaya, Singapore	4780	10,000	12.15-3.30 a.m. "Radio Malaya."
HJAB—Barranquilla, Colombia	4785	1,000	"La Voz de Barranquilla."
YVQC—Culdad, Bolivia, Ven.	4790	1,000	"Ecis del Orinoco," 10.30 a.m.-2.30 p.m.
Peshawar, Pakistan	4790	7,500	
HJDX—Medellin, Colombia	4795	750	"Ecos de la Montana," 10.30 a.m.-2.30 p.m.
YVME—Maracaibo, Ven.	4800	2,000	"Ondas del Lago," 10.30 a.m.-2.30 p.m.
HSDU—Medellin, Colombia	4805	750	"Emisora Cultural," 10 a.m.-3 p.m.
YVMG—Maracaibo, Ven.	4810	400	"Radio Popular," 11.30 a.m.-3.30 p.m.
HJBB—Cucuta, Colombia	4815	750	"La Voz de Cucuta," "La Voz del Norte."
Lahore, Pakistan	4818	7,500	
CRTBV—Lourenco Marquis, Mozambique	4820	7,500	4.00-9.00 a.m.
Singapore, Malaya	4825	10,000	10.30 p.m.-3.30 a.m.
HJED—Call, Colombia	4825	1,000	"La Voz del Valle," noon-3.32 p.m.
HJKE—Bogota, Colombia	4835	5,000	Noon-2.30 p.m., "Radio Continental."
VUC2—Calcutta, India	4840	10,000	1.00-5.30 a.m.
YVOI—Valera, Ven.	4840	300	"Radio Valera," 11 a.m.-2.40 p.m.
CSX2—Ponta Delgada, Azores	4845	1,000	9.00-11.00 a.m., "Emisora Regional."
YDP—Medan, Sumatra	4845	500	9.30 p.m.-2.35 a.m., "Radio Sumatra."
HJGF—Bucaramanga, Colombia	4845	1,000	"Radio Bucaramanga," 1-3 p.m.
VQG1—Nairobi, Kenya	4855	1,500	10-11 p.m., 3-7 a.m.
JKL—Tokio, Japan	4840	5,000	ARFN. 9.00 p.m.-2.05 a.m.
VUD3—Delhi, India	4860	5,000	
HJEX—Call, Colombia	4865	2,500	"Radio Pacifico," noon-3 p.m.
YDD2—Batavia, Java	4865	300	10.30 a.m.-12.30 p.m., 4.30-7.15, 9.30 p.m.-4 a.m.
—Peltermaritzburg, St. Af.	4875	1,000	4.45-6.30 p.m., 8.15-12.10 a.m., 2-9.05 a.m.
HJFH—Armenia, Colombia	4875	3,000	"La Voz de Armenia," 10.45 p.m.-3 p.m.
VUB2—Bombay, India	4880	10,000	2.00-5.30 a.m.
HJDF—Medellin, Colombia	4885	2,500	"Emisora Claridad," 11 a.m.-3 p.m.
Johannesburg, South Africa	4895	5,000	3.50-9.05 a.m.
Colombo, Ceylon	4900	7,500	5.00-8.30 p.m., 9.50 p.m.-4.45 a.m.
YDB2—Batavia, Java	4910	300	10.30 a.m.-1.30 p.m., 3.50-6.30 p.m., 7.30-3.30 a.m.
JKI—Tokio, Japan	4910	5,000	8.55-10.15 a.m., 7.55 p.m.-2.00 a.m.
Multan, Pakistan	4910	7,500	
ZOY—Accra, Gold Coast	4915	5,000	3.45-6.34 a.m., News 4.30, 6 a.m.
VUM2—Madras, India	4920	10,000	Midnight-5.00 a.m.
YVKR—Caracas, Ven.	4920	5,000	"Radio Caracas," 11 p.m.-5 a.m., 9 a.m.-3.30 p.m.

Call and Location	Freq. Kilo-cycles.	Power in Watts.	Schedule, Slogan, English News, Periods, etc.
HJAE—Cartagena, Colombia	4965	750	"Radio Colonial," 11 p.m.-6 a.m., noon-3 p.m.
CRTBV—Lourenco Marquis, Mozambique	4930	7,500	3.00-9.00 a.m. (English).
JKM—Tokio, Japan	4930	5,000	7.55 p.m.-2.00 a.m.
Karachi, Pakistan	4935	7,500	
YVMQ—Barquisimeto, Ven.	4940	4,000	11.30 p.m.-3.30 p.m., "Radio Barquisimeto."
HJCW—Bogota, Colombia	4945	1,000	"Emisora Sur America," 11.45 p.m.-4.15 p.m.
HJCQ—Bogota, Colombia	4955	1,000	"Radiodifusora Nacional," 10 a.m.-4 p.m.
VUD2—Delhi, India	4960	10,000	1.15-5.30 a.m.
HC3HC—Riobamba, Ecuador	4960	—	"Ondas del Chimboraz," 2-4 p.m.
HJAE—Cartagena, Colombia	4965	750	"Laboratories Fuentes," noon-3.30 p.m.
HJAG—Barranquilla, Colombia	4975	450	"Emisora Atlantica," noon-4.15 p.m.
HQCRX—Quito, Ecuador	4985	250	11.45 p.m.-1.45 p.m., "Radio Quito."
YVMO—Barquisimeto, Ven.	4990	650	9.30 a.m.-2.30 p.m., "Radio Occidental."
WWV—Washington, D.C.	5000	10,000	Frequency check station.
YDQ2—Macassar, Celebes	5030	500	10.00 a.m., 8.00-6.30 p.m., 9.00 p.m.-3.00 a.m.
Radio Djokjakarta, Java	5030	—	Dutch Forces service.
YVKM—Caracas, Ven.	5030	1,000	"Radio Continental."
PZX—Paramaribo, Surinam	5750	750	11 a.m.-1.45 p.m.
CE8AA—Santiago, Chile	5805	500	"Radio Soc. Nacional de Agricultura." Opens 11.30 p.m.
OAX1B—Piura, Peru	5840	500	11.00 a.m.-4.30 p.m., "Radio Piura."
CP15—La Paz, Bolivia	5855	300	Noon-5.00 p.m., "Radio el Condor."
TIGPH—San Jose, Costa Rica	5870	—	"Alma Tica," noon-4 p.m.
HRN—Tegucigalpa, Honduras	5875	750	"La Voz de Honduras," 1-3 a.m., 11 a.m.-4 p.m.
ZRK—Capetown, South Africa	5875	5,000	4.45-6.30 p.m., 4-9.05 a.m. 9 p.m.-3.5 a.m.
CP15—La Paz, Bolivia	5880	1,000	"Radio El Condor."
OAX4Z—Lima, Peru	5895	14,000	"Radio Nac. de Peru," 11 a.m.-4.30 p.m.
ZNB—Mafeking, Bechuanaland	5900	200	11 p.m.-1 a.m., 5-7.30 a.m.
OAX4V—Lima, Peru	5940	500	2.00-4.45 p.m., "Radio America."
HVJ—Vatican City, Vatican	5970	25,000	News for Britain, 7.15 a.m.
OAX4P—Huancayo, Peru	5990	250	"Radio Huancayo."
CBNX—St. Johns, Newfoundland, Canada	5985	300	1.30-7.00 a.m., 9.30 a.m.-2.00 p.m.
H14T—Ciudad Trujillo, D.R.	5985	500	Midnight-5.00 p.m., "La Voz de Dominicana."
HCJE—Quito, Ecuador	5990	500	English to 5 p.m.
Andorra, Andorra	5997	20,000	"Radio Andorra," 10 p.m.-10.30 a.m.
PR13—Belo Horizonte, Brazil	6000	5,000	"Radio Incoñdencia."
ZFY—Georgetown, Br. Guiana	6000	1,000	"Voice of Guiana," 10.40 p.m.-12.15 p.m.
YSW—Santa Ana, El Salvador	6000	1,000	12.30-4.00 p.m., "Radio del Pueblo."
HHYM—Port-au-Prince, Haiti	6000	—	5.00-7.00 a.m., 11.30 a.m.-2.00 p.m.
Radio Noumea, New Caledonia	6000	500	Noon-1.00 p.m., 7.30-9.00 p.m.
DZH4—Manila, Philippines	6000	—	10.30 p.m.-4.00 a.m., "The Voice of Manila."
OAX2A—Trujillo, Peru	6000	250	11.30 a.m.-4.30 p.m., "Radio Trujillo."
Damascus, Syria	6000	500	5-6 p.m., midnight-1 a.m., 4-9 a.m.



Call and Location.	Freq. Kilo-cycles.	Power in Watts.	Schedule, Slogan, English News, Periods, etc.
OAX4G—Lima, Peru .. ..	6410	300	"Radio Lima," closes 4.40 p.m.
COHI—Santa Clara, Cuba ..	6450	300	"RHC—Cadena Azul," midnight-6.02 p.m.
TGWB—Guatemala, Guatemala ..	6460	1,000	"La Voz de Guatemala," Sign off 4.00 p.m.
—Panama, Panama .. ..	6460		"Radio Mundial," 12.3 a.m.-5 p.m.
TG2—Guatemala City, Guatam.	6620	300	"Radio Morse," 10.00 a.m.-4.30 p.m.
OAX1A—Chiclayo, Peru .. ..	6710	150	French-English 6.30-6.50 a.m.
UN—Geneva, Switzerland ..	6675	7,500	Eng. 8.30-8.45 a.m.
Larissa, Greece .. ..	6740		"La Voz de Nicaragua," 10 a.m.-5 p.m.
YNPS—Managua, Nicaragua ..	6763	800	"Radio Municipal," 10.20 a.m.-2 p.m.
CP49—La Paz, Bolivia .. ..	6770	500	9.15 p.m.-4.30 a.m.
Singapore, Malaya .. ..	6770	7,500	British Far Eastern Broadcasting Service, 5.00-5.15 p.m., 2.30-5.30 a.m.
Radio Kol-Israel, Palestine ..	6835		"La Voz de la America Central,"
YNOW—Managua, Nicaragua ..	6850	1,000	"Radio Manta"; 1-4 p.m.
HC4EB—Manta, Ecuador .. ..	6870	375	Noon-3 p.m.
TGLH—Mazatenango, Guata.	6905		"La Voz de Victoria," 6 a.m.-4 p.m.
YNQW—Managua, Nicaragua ..	6917		"Radio Club de Tahiti," 3.30-4.30 p.m.
FO8AA—Papeete, Tahiti .. ..	6980	200	"La Voz de Boaco," 11 a.m.-3 p.m.
YNBO—Boaco, Nicaragua .. ..	6985	30	"Radio Panamerica," 11 a.m.-3.20 p.m.
YNBH—Managua, Nicaragua ..	7008	500	"Radio Sport," 6 a.m.-3 p.m.
YNWW—Granada, Nicaragua ..	7020		"Radio National," 7-10 a.m.
EAJ9—Malaga, Spain .. ..	7020	1,000	"Radio Mediterraneo," 6 a.m.-4 p.m.
Valencia, Spain .. ..	7037	300	6 a.m.-4 p.m.
Y81—San Salvador, El Salvador	7040	100	"Radiodifusora Iman," noon-4.15 p.m.
HC2CM—Guayaquil, Ecuador ..	7055	250	
GR8—London, England .. ..	7075	50,000	
Y15KG—Baghdad, Iraq .. ..	7090	50,000	Closes 7.30 a.m. All Arabic.
GRM—London, England .. ..	7120	50,000	
Hargelsha, Br. Somaliland ..	7125	1,000	"Radio Somali," 2.30-3.30 a.m.
HC4FA—Portoviejo, Ecuador ..	7140	100	"La Voz de Manabi," 11.45 p.m.-3.30 p.m.
YNFP—Managua, Nicaragua ..	7140	100	"La Voz del Tropico," noon-3.15 p.m.
GR7—London, England .. ..	7150	50,000	European Service.
HC1BP—Quito, Ecuador .. ..	7160	500	"Radio Commercial," 11.45 p.m.-4 p.m.
GRK—London, England .. ..	7185	50,000	European Service.
GW2—London, England .. ..	7200	100,000	8.00-9.30 a.m. "Voice of America,"
GW1—London, England .. ..	7205	50,000	North American service, 1.15-2 p.m.
H18Z—Santiago de los Caballero	7212	300	To 4 p.m. Sundays.
BD9—Taipei, Taiwan (Formosa)	7220	3,000	Closes 2.30 a.m.
YDP2—Medan, Sumatra .. ..	7210	350	9.30 p.m.-3.00 a.m.
Forces Broadcasting Service, Cyprus	7220		3.00 p.m.-8.00 a.m.
KZCA—Salzberg, Austria .. ..	7220	350	4.00 p.m.-10.00 a.m., Forces station.
GSW—London, England .. ..	7230	50,000	European service.
VUB2—Bombay, India .. ..	7240	10,000	English news, 12.30 a.m.
Vienna, Austria .. ..	7240	400	5-7 p.m., 11 p.m.-11.05 a.m.
*GW1—London, England .. ..	7250	50,000	8.25 a.m.-2.00 a.m.
JKF—Tokio, Japan .. ..	7257	5,000	4.45-7.15 p.m.; 11 p.m.-10 a.m.
GSU—London, England .. ..	7260	50,000	1.30-3.30 p.m., Mid-3.30 a.m.
VUM2—Madras, India .. ..	7260	10,000	11 p.m.-midnight, 4.15-5.15 a.m.
VUD5—Delhi, India .. ..	7270	100,000	8.45-10.45 a.m., 8.15 p.m.-12.45 a.m.
VLT5—Port Moresby, New Guinea	7280	2,000	European service, 5-8.15 p.m., 11 p.m.-2 a.m.
GWN—London, England .. ..	7280	50,000	9.25-11 a.m., 7.55 p.m.-2.00 a.m.
JKJ—Tokio, Japan .. ..	7285	5,000	4.30-5 a.m. daily.
ZQP—Lusaka, Sth. Rhodesia	7285		10.30 p.m.-midnight.
VUD3—Delhi, India .. ..	7290	10,000	4.00-10.00 a.m. "Voice of America,"
Munich, German .. ..	7290	85,000	2.00-3.15 p.m.
Moscow .. ..	7290		4.00 p.m.-10.05 a.m.
Hamburg, Germany .. ..	7295	25,000	"Nordwest sender,"
Athens, Greece .. ..	7300	7,000	Eng. 4.30 a.m., signs 9.30 a.m.
ZOY—Accra, Gold Coast .. ..	7300	5,000	Signs 6 a.m.
YSO—San Salvador, El Salvador	7312	1,000	"La Voz de Democracia," noon-4 p.m.
GRJ—London, England .. ..	7320	50,000	
Radio Muritius, Forest Side, Mur.	7345	1,500	3.30-5.15 a.m.

Call and Location.	Freq. Kilo-cycles.	Power in Watts.	Schedule, Slogan, English News, Periods, etc.
Monte Carlo, Monaco .. ..	7350	25,000	6.00-8.00 p.m.
HC2DC—Guayaquil, Ecuador ..	7350	250	11 a.m.-4.15 p.m. "Radio Cent."
TGDA—Quezaltenango, Guat.	7460		"La Voz de Occidente,"
YNFT—Granada, Nicaragua ..	7500	250	"La Voz de la Sultana," 10 a.m.-3 p.m.
YNLAT—Granada, Nicaragua ..	7615	300	English 1.00-1.11 a.m.
Sumatra, N.E.I. .. ..	7620		"La Voz de Leon," 11 a.m.-4 p.m.
YNDC—Leon, Nicaragua .. ..	7660	200	English news 8.30 a.m.
Sofia, Bulgaria .. ..	7670	5,000	Used irregularly.
ZM2AP—Apia, Samoa .. ..	7700	2,000	7.10 a.m. English 8.15 a.m.
ZAA—Tirane, Albania .. ..	7850	3,000	
SUX—Cairo, Egypt, .. ..	7860	10,000	5-9 a.m., News 6, 7 a.m.
HC1CG—Quito, Ecuador .. ..	7875	200	"Radio Ecuador Amazonico," 11.30 p.m.
HLKA—Seoul, Korea .. ..	7935	5,000	2.00-5.00 p.m., 8.30 p.m.-1.30 a.m., Eng. identification each ¼ hour.
CQM4—Bissau, Portugese Guinea	7945	1,000	9.30-11.00 a.m.
EAJ31—Alicante, Spain .. ..	7950	1,200	"Radio Falange,"
JJOY—Athens, Greece .. ..	8000	375	Saturdays 6.30-7.30 a.m.
JJY—Kemigawa, Japan .. ..	8000	2,000	Frequency Measurement.
KXE—Beirut, Syria .. ..	8035	3,000	5-6.15 p.m., 10.15 p.m.-1.10 a.m., 3.30-9 a.m.
*CNR—Rabat, Morocco .. ..	8035	12,000	"Radio Maroc,"
YNCS—Pontianak, Borneo, N.E.I.	8090	150	10.45 p.m.-1.30 a.m.
YNXW—Managua, Nicaragua ..	8195		"Radio America," noon-4 p.m.
COJK—Camaguey, Cuba .. ..	8656	1,000	1-5.30 p.m.
COCO—Havana, Cuba .. ..	8700	2,000	"Radio America," mid-night-4.30 p.m.
COCQ—Havana, Cuba .. ..	8825	5,000	10.30 p.m.-5.15 p.m.
CCKG—Santiago, Cuba .. ..	8955	500	"Cadena Oriental de Radio," 11 p.m.-5 p.m.
BCAF—Taiping, Taiwan .. ..	8990		English 11.00-11.45 p.m.
COBZ—Havana, Cuba .. ..	9026	250	"Radio Salas," midnight.
CNR3—Rabat, Morocco .. ..	9095	25,000	5-8 p.m., 6-10 a.m.
CR6RB—Luanda, Angola .. ..	9165		
Radio Congolia, Leopoldville, Congo	9210	250	5.00-6.30 a.m.
CR8AA—Macao, Portug. China	9235	500	11 p.m.-2.20 a.m.
COBQ—Havana, Cuba .. ..	9235		"La Voz de Cuba," 1-5 p.m. and later.
Radio Bucharest, Romania ..	9250	2,000	Eng. 9.00-9.25 a.m.
YSF—Salvador, El Salvador ..	9250	400	"Radio Vanguardia," 6-9 a.m., noon-4 p.m.
COCX—Havana, Cuba .. ..	9270	1,000	"Casa Levin," midnight-4 p.m.
Radio Rodina, Sofia, Bulgaria	9315	5,000	4-6 p.m., 10-midnight, 4-6.30 a.m., 7-8.40 a.m.
OAX4J—Lima, Peru .. ..	9330	1,000	"Radio International," 11 a.m.-5 p.m.
COBC—Havana, Cuba .. ..	9362	1,000	"Radio Progreso," mid-night-4 p.m.
Madrid, Spain .. ..	9370	50,000	"Radio Nat. de Espana," 3-8.30 a.m.
OTM2—Leopoldville, Bel. Congo	9380	50,000	3.45-9 a.m., 5-7 p.m.
GRI—London, England .. ..	9410	50,000	Latin American service, 11 a.m.-3.30 p.m.
CP21—Sucre, Bolivia .. ..	9430	270	"Radio La Pata," 2-4.45 a.m., 8-10 a.m.
COCH—Havana, Cuba .. ..	9440	1,000	11 p.m.-5 p.m. "Union Radio."
Brazzaville, Fr. Eq. Africa ..	9440	50,000	4 a.m.-1 p.m., News 6.45, 8.45 a.m.
*OAX4W—Lima, Peru .. ..	9440	1,500	"Radio America,"
LBV—Buenos Aires, Argentina	9450	15,000	Eng. 3.00-6.00 p.m.
TAP—Ankara, Turkey .. ..	9465	20,000	4.45 p.m.
CR6RA—Luanda, Angola .. ..	9470	250	7-8.30 a.m.
CP38—La Paz, Bolivia .. ..	9480	250	"Radio Nat. de Bolivia,"
Radio Monte Carlo, Monaco ..	9490	25,000	6.00-8.00 p.m., 11 p.m.-1.00 a.m.
*GWF—London, England .. ..	9490	50,000	
XEWV—Mexico City, Mexico ..	9500	10,000	"La Voz de America Latina," 12.30 a.m.-6.45 p.m.
VL13—Sydney, N.S.W. .. ..	9500	2,000	10.45 a.m.-8.15 p.m.
OIX2—Helsinki, Finland .. ..	9500	15,000	5.30-8.30 p.m., 10-mid-night, 3.30-8.45 a.m.
DZH3—Manila, Philippines ..	9500		9.30 a.m.-4 a.m.
HOLA—Colon, Panama .. ..	9505	7,500	8.25 p.m.-2 a.m.
JBD—Tokio, Japan .. ..	9505		Closes 3 p.m.
*YUC—Belgrade, Yugoslavia ..	9505	7,500	7.55 p.m.-2.00 a.m.
GSB—London, England .. ..	9507	10,000	
ZBW3—Hongkong, China .. ..	9510	50,000	5.45-10.45 a.m., 11 a.m.-8 p.m.
OZF—Copenhagen, Denmark	9520	50,000	4.30-6 p.m., 10.30 p.m.-3 a.m. BBC news 11 p.m., 1 a.m.
VLT7—Port Moresby New Guinea	9520	2,000	Testing to 7.00 a.m.
Paris, France .. ..	9520	2,000	2.00-4.00, 6.00-8.00 p.m.
OZF—Copenhagen, Denmark ..	9520	100,000	4.15-7 p.m., 7.15-9 p.m.
OZF—Copenhagen, Denmark ..	9520	100,000	3.00-5.25 p.m. (Eng. 5 p.m.)
H12L—Ciudad Trujillo, D.R. ..	9525	500	"La Voz de Tropico,"
GWJ—London, England .. ..	9525	50,000	European Service.

Call and Location.	Freq. Kilo-cycles.	Power in Watts.	Schedule, Slogan, English News, Periods, etc.	Call and Location.	Freq. Kilo-cycles.	Power in Watts.	Schedule, Slogan, English News, Periods, etc.
KGEI—San Francisco, Calif.	9530	100,000	A.F.R.S.	WRCA—New York, U.S.A.	9670	50,000	Noon-3.15 p.m. to South America.
WNBE—New York, U.S.A.	9530	100,000	Voice of America, 10 a.m.	GWT—London, England	9675	50,000	European Service, 7 p.m. 11 p.m.-4.30 a.m., 8.30-10.15 a.m., 4.30-4.45 p.m.
KRHO—Honolulu, Hawaii	9530	50,000	9.00 p.m.-2.15 a.m.	XEQQ—Mexico City, Mexico	9680	1,000	"Radio Panamericana," midnight-3.45 p.m.
WGEO—Schenectady, U.S.A.	9530	100,000	Noon-5 p.m.	EQC—Teheran, Iran	9680	14,000	"Radio Teheran," 5-7.30 a.m., news, 6.30 a.m.
VPD2—Suva, Fiji	9535	4,000	6.30-10 a.m.	VUD6—Delhi, India	9680	10,000	10 p.m., 2 a.m., 3-5 a.m.
SBU—Stockholm, Sweden	9535	12,000	1.30-3 p.m., 5.20-6.40 p.m., 8-10.15 a.m.	LRA1—Buenos Aires, Argentina	9683	7,000	"Radio del Estado."
HER4—Berne, Switzerland	9535	100,000	4.00-10.00 a.m. "Voice of America."	GRX—London, England	9690	50,000	Pacific Service.
Munich, Germany	9540	85,000		Singapore, Malaya	9690	7,500	10.30 p.m.-4.30 a.m.
Rangoon Radio, Rangoon, Burma	9540	7,500		DYHS—Manila, Philippines	9690	250	9.00 a.m.-5.00 a.m. (next day)
Paris, France	9540	100,000	1.55-3.45 p.m., 5-5.45 a.m.	JKM2—Tokyo, Japan	9695	5,000	9.45-11.00 a.m.
LKJ—Oslo, Norway	9540	5,000	7-7.15 p.m., 10.45-12.30 a.m., 4-10 a.m.	GWY—London, England	9700	100,000	"Voice of America" relays.
VE9A1—Edmonton, Canada	9540	—		KCBF—San Francisco, Calif.	9700	50,000	9 p.m.-2.30 a.m.
VLR—Melbourne, Aust.	9540	2,000	10.30 a.m.-7.15 p.m.	WLWS—Cincinnati, U.S.A.	9700	75,000	Noon-5 p.m.
XEFT—Vera Cruz, Mexico	9540	250	"La Voz de Vera Cruz," 6p.m. and later.	Fort-de-France, Martinique	9705	1,500	"Radio Martinique,"
ZL2—Wellington, N.Z.	9540	10,000	10 a.m.-noon, 3.00-6.30 p.m., 9 p.m.-3 a.m.	OAX4K—Lima, Peru	9712	250	"Radio Golcocha," 11 a.m.-3 p.m.
YDQ—Macassar, Celebes	9550	10,000	News 7.45 a.m. European service.	PRL7—Rio de Janeiro, Brazil	9720	50,000	"Radio Nacional,"
OLR3A—Prague, Czechoslovakia	9550	30,000	11 p.m.-1.00 a.m., 7.00 a.m.-2.00 p.m.	Radio Sarto, Mendado, Celebes	9720	800	10 p.m.-midnight
GWB—London, England	9550	50,000	5.15-9.15 p.m., 10-11.30 p.m., 10.30-11.15 a.m.	CS2MF—Lisbon, Portugal	9727	10,000	Noon-1.00 p.m. "Emissora Nacional."
ZYK3—Recife, Brazil	9565	—	Midnight-6.45 p.m.	CE970—Valparaiso, Chile	9728	1,000	11 p.m.-4 p.m., opens and signs in English.
Paris, France	9558	100,000	7.55 p.m.-2.00 a.m.	Chunking, China	9730	4,000	10.30 p.m.-3.15 a.m.; news 2 a.m.
XETT—Mexico City, Mexico	9558	500	3.15-8.45 p.m. A.F.R.S.	Leipzig, Germany	9730	12,000	3 p.m.-11 a.m.
JBD2—Tokyo, Japan	9560	7,500	Eastern Broadcasts 4.30 p.m.	HIST—Ciudad Trujillo, D.R.	9740	7,500	Midnight-5.00 p.m.
KWIX—San Francisco, Calif.	9570	50,000		CTC2—Leopoldville, B. Congo	9745	50,000	English to 4 p.m.
WRUA—Boston, U.S.A.	9570	50,000		KCBR—San Francisco, Calif.	9750	200,000	9 p.m.-3 a.m.
GSC—London, England	9580	50,000		CR7BE—Lourenco Marquis, Mos.	9755	10,000	English to 3.00 a.m.
GWX—London, England	9570	100,000		Khartoum, Sudan	9750	400	4.15-4.45 p.m., 4.30-6.00 a.m.
VLH-8—Melbourne, Aust.	9580	10,000	8.28 p.m.-2.00 a.m.	TGWA—Guatemala City, Guata.	9780	10,000	Spanish to 5.15 p.m.
VLA11—Melbourne, Aust.	9580	100,000	4.30-5.15 a.m. (Ger.).	Monte Carlo, Monaco	9785	25,000	6.00-8.00 p.m., 6.00-10.15 a.m.
VLB9—Melbourne, Aust.	9580	100,000	7.00-8.15 p.m.	HSSPD—Bangkok, Siam	9790	2,500	10.00-11.30 p.m. in Eng.
CE960—Santiago, Chile	9585	1,000	Neon-5.00 p.m. "Radio la Americana."	Budapest, Hungary	9815	500	4.00-10.00 a.m.
PCJ—Hilversum, Holland	9590	60,000	7-8 a.m. News 1 a.m.	GRH—London, England	9825	50,000	North American and Pacific Services.
VUD4—Delhi, India	9590	10,000	7-9.30 p.m., 10.30-11.30 p.m.	COBL—Havana, Cuba	9833	1,000	"Radio Cadena Suaritos," 7.15-8.30 p.m. to N.Z.
VUM2—Madras, India	9590	10,000		GRU—London, England	9915	50,000	
GRY—London, England	9600	50,000	African Service, news 8.45 a.m.; 6 p.m.	XDY—Mexico City, Mexico	9924	8,000	3-3.15 a.m.
WLWK—Cincinnati, Ohio, U.S.A.	9590	75,000	p.m.-1.00 a.m.	HCBJ—Quito, Ecuador	9980	1,000	English, 11.30 a.m.-5 p.m.
Athens, Greece	9605	7,500	5.30-7.35 p.m., 10.00 p.m.-1.00 a.m.	WWV—Washington, D.C., U.S.	10,000	10,000	Frequency check station.
XEYU—Mexico City, Panama	9605	250	"Radio Univ. Nacional," 2-5 p.m.	SUV—Cairo, Egypt	10055	10,000	
HP5J—Panama City, Panama	9605	380	"La Voz de Panama," 10 a.m.-3.30 p.m.	RR3W—Port-au-Prince, Haiti	10135	500	11.30 p.m.-7.30 a.m., 11 a.m.-3 p.m.
JKL2—Tokyo, Japan (AFRS)	9606	5,000	6.25-7.30 p.m., 4.00-9.00 a.m.	PSR—Rio de Janeiro, Brazil	10220	12,000	10-11 p.m., irregular.
LLG—Oslo, Norway	9610	100,000	8.00 a.m.-3.00 p.m.	PLB4—Batavia, Java	10380	3,000	10.30 a.m.-1.30 p.m., 3.30-6.30 p.m., 9.30 p.m.-4 a.m.
ZYCB—Rio de Janeiro, Brazil	9610	25,000	10.30 p.m.-4.00 a.m.	ZIK2—Belize, Br. Honduras	10600	200	2-2.15 a.m., 4-5.48 a.m.
VLW5—Perth, Western Aust.	9610	2,000	2.30-10.00 p.m.	Tananarive, Madagascar	10625	—	4.30-5.30 p.m., 8.30-10 p.m.
VLX3—Perth, West Aust.	9610	10,000	8.45-10.00 p.m., Sundays (to N.Z.)	BDB2—Stockholm, Sweden	10780	10,000	3-11 a.m.
CHLS—Montreal, Canada	9610	50,000		PLB9—Batavia, Java	11000	2,000	
XERQ—Mexico City, Mexico	9615	500	"Radio Continental," heard 6 p.m.	Ponta Delgada, Azores	11090	1,000	7-8 a.m., closes with clock chime.
VLB9—Melbourne, Aust.	9615	100,000	3.00-3.45 a.m.	CS2MK—Lisbon, Portugal	11040	10,000	5.30-8.30 a.m. "Emissora Nacional."
VP4RD—Port of Spain, Trinidad	9620	500	10.00 p.m.-1.00 a.m., 8.00 a.m.-3.00 p.m.; Local News 10 p.m., B.B.C. relay 11 p.m.	YDH2—Semarang, Java	11100	100	9.00 p.m.-3.00 a.m.
DUH4—Manila, Philippines	9620	400	News 10 p.m. "The People's Station."	GRG—London, England	11680	50,000	5-7.15 a.m., 7.30-9 a.m., Closes 4 p.m. "Radio Nacional."
Paris, France	9620	100,000	5.15-7 p.m.-7.15-9 a.m.	HJCT—Bogota, Colombia	11680	—	Eng. 11.00-11.45 p.m.
Radio Addis Ababa, Ethiopia	9620	1,900	1.45-4.10 a.m., English 3.15-4 a.m.	BCAF—Taipei, Taiwan	11688	25,000	Fridays, 8.30-8.45 a.m.
CXA6—Montevideo, Uruguay	9623	3,000	8.30 a.m.-2 p.m.	HP5A—Panama City, Panama	11695	1,000	"Radio Teatre Estrella," to 4 p.m.
QWO—London, England	9625	50,000	Eng. news 3.45 p.m., sign off 6 p.m.	Paris, France	11700	100,000	"Radio Bulnes."
XEBT—Mexico City, Mexico	9625	10,000	Sign off 5.00 p.m.	GVW—London, England	11700	50,000	North American service.
CBFX—Montreal, Canada	9630	7,500		SBP—Stockholm, Sweden	11705	12,000	7-1.45 a.m. (Sun. only).
CKLO—Sackville, N.B., Canada	9630	50,000		VLG3—Melbourne, Aust.	11710	10,000	9 p.m.-midnight.
"Radio Italiana," Turin, Italy	9635	50,000	Closes 10 a.m.	WLWR—Cincinnati, Ohio	11710	75,000	11 a.m.-noon, 1-5 p.m.
CXA8—Colonia, Uruguay	9640	3,000	4-6 a.m., 9 a.m.-2 p.m. (see 11840).	HE15—Berne, Switzerland	11715	25,000	
DZH2—Manila, Philippines	9640	1,000	9.00 a.m.-4.00 a.m.	Dakar, Fr. West Africa	11715	—	"Radio Dakar," 12.15-12.45 a.m.
CHMD—Sackville, N.B., Canada	9640	50,000		ZJM7—Limassol, Cyprus	11720	7,500	3.55-6.30 p.m., 10.30 p.m.-3.00 a.m.
COX—Havana, Cuba	9640	5,000	Signs 4 p.m.	CHOL—Montreal, Canada	11720	50,000	To N.Z. Sun 8.45-10.30 p.m.
GVZ—London, England	9640	50,000		Moscow, U.S.S.R.	11720	50,000	2.00-3.15 p.m. (Eng.)
HVJ—Vatican City, Europe	9645	25,000	4.00-4.30 a.m.	PRL8—Rio de Janeiro, Brazil	11720	50,000	Eng. 2.30-2.45 p.m.
VLB2—Melbourne, Aust.	9650	100,000	8.00-9.30 a.m.	GVV—London, England	11730	50,000	
KNBA—San Francisco, Calif.	9650	50,000	7.45-8.45 p.m.	EQE—Teheran, Iran	11730	14,000	"Radio Teheran."
HEB6—Schwarzenburg, Switzerland	9655	100,000		KOEX—San Francisco, Calif.	11730	100,000	9 p.m.-3 a.m.
WEIN3—Vienna, Austria	9664	250	4.45 p.m.-12.05 p.m.	PHI—Hilversum, Holland	11730	20,000	7-8 a.m.
LRX—Buenos Aires, Argentina	9660	7,500	"Radio el Mundo," 3 a.m.-2 a.m.	WRUL—Boston, Mass., U.S.A.	11730	50,000	Eng. to 9.30 a.m.
VLQ3—Brisbane, Aust.	9660	10,000		"LKQ—Oslo, Norway	11735	5,000	"R.H.C. Cadena Azul," 11 p.m.-6 p.m.
GWP—London, England	9660	50,000		COCY—Havana, Cuba	11740	1,000	4.00-5.15 a.m. (Ger.).
HVJ—Vatican City, Vatican	9660	25,000	News 6.15 a.m.	VLB10—Melbourne, Aust.	11740	100,000	Midnight-4 p.m. "Nuevo Mundo."
HIBM—Port-au-Prince, Haiti	9660	1,000	"Nac. Broadcasting Co.," 10 p.m.-1.30 a.m.	CE1174—Santiago, Chile	11740	—	
JKI2—Tokyo, Japan	9655	5,000	10.25 a.m.-7.45 p.m.	WRUX—Boston, Mass., U.S.A.	11740	50,000	Eng. to 9.30 a.m.
WNBI—New York, U.S.A.	9670	50,000					





# 10 MONSTER PAGES



GREAT Values!

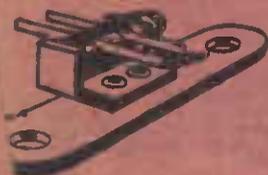
★★★

# WAR SURPLUS BARGAINS!

BARGAINS WE WON'T BE ABLE TO REPEAT!

## ★★ WAR BARGAINS! ★★

### METER RECTIFIERS



5MA C... Oxide  
METER RECTIFIERS

Mounted on plastic strip 1 1/2 in. x 1/2 in. E Army stocks, at a fraction of their true value.  
Cat. No. AM48—

5/- each

### METER SPECIAL!

"WON" 0-100 M.A. 2 1/2 in. R.F. Thermo-coupled Milimeter. Flush mounting — Do. case.

Cat. AM23—

BEST VALUE!

9/11 each



"FENTI" 0-100 M.A. D.C. Round Meter with luminous dial.  
Cat. AM22

35/11 each

### BUZZERS

Buzzers used in the Bureau Control Units of ECI Transmitters, solidly mounted high impedance buzzer suitable for Morse Code practice, etc. Made from 43 mils and has an adjusting screw in rear. No. AX

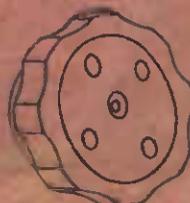
7/6

### WAR SURPLUS VALVES

6X5GT—6.3 volt Full Wave Rectifier, Octal Base	4/11
6Q7GT—6.3 volt Duplex Diode Hi-Mu Triode, Octal Base	5/11
6U7G—6.3 volt Triple Grid Super Control Amplifier, Octal Base	3/6
6V6GT—6.3 volt Beam Power Amplifier, Octal Base	7/11
6K8G—6.3 volt Triode-Hexode Converter, Octal Base	7/11
807—6.3 volt Transmitting Beam Power Amplifier, 5-pin Base	8/11
834—7.5 volt R.F. Power Amplifier, 4-pin Base	10/-
953—Acorn Base.	9/6
954—6.3 volt Detector Amplifier Pentode, Acorn Base	5/-
955—6.3 volt Detector, Amplifier, Oscillator, Acorn Base	7/6
9004—6.3 volt U.H.F. Diode, Acorn Base	3/6
1960—Adjustable Spark Gap, Bracket Mounting	2/6

### SURPLUS INSTRUMENT KNOBS

Black Flange Style Instrument Knobs, used with Army Transmitters during war years. Has 2 1/2 brass inserts in center that has no grub screw. 4 other brass inserts are tapered with rounded ends on rear of knob to allow for easy attachment to a metal or plastic disc.



BULK BUYING ENABLES US TO PASS THESE ON TO YOU AT

Cat. No. AX1107— 6 D. each or 5/6 doz.

### ARMY ZCI TRANSCIVER AERIALS

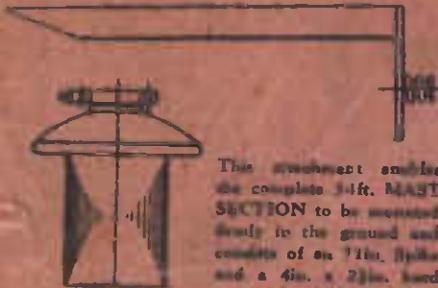
Excellent on House or Car Aerials

Complete three 4ft. lengths 2in. dia., four 4ft. lengths spiral tubing, also carrying four 1in. or 1 1/2in. or 2in. or the other set of aerial wires, includes the fitting (the section of spiral tube having number), one rubber socket for heavy section, one rubber socket and insulating cap for carrying thin (utility) section only. May be used as a normal house type antenna, or whip aerial. Could be used as car or house aerial. Simplified complete sets carrying bags.—Cat. No. AX1001 Price **\$2'16/6**

### Whip Section Only

Complete of four 4ft. sections Metal Tubing carrying four 1in. or 2in. diameter. These being approx. 12ft. long and right in weight make ideal chassis for 10 metre rotary beam antenna, or addition to any suitable antenna, car and house use. Complete in carrying bag.—Cat. No. AX1002 Price **12/9**

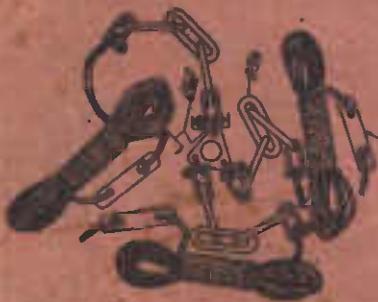
### HEAVY AERIAL MAST BASE



This attachment enables the complete 34ft. MAST SECTION to be mounted firmly to the ground and consists of six 7/16in. bolts and a 4in. x 2 1/2in. hard rubber insulated socket.

Cat. No. AX1003 Price **8/6**

### GREAT BARGAIN! AERIAL STAY SETS



Complete 3 cross Aerial Stay Set to give rigid support to your Aerial Mast. Construction 3 sets of painted galvanized pipes each 2 1/2ft. in length with a 3 Link Plastic Chain Insulator on end of each cross. Insulators fasten to centre mounting plate (as illustrated) by means of two U shaped shackles. A wooden rubberer is attached to each rope. These Aerial Stay Sets would be great value at 10/- but another bulk purchase from War Surplus enables us to sell at the gift price of **3/11**

### Sizzling War Surplus Bargain



### 3 Link Plastic Chain INSULATORS

as used in Army Radio Aerials. Very effective insulators. For use three on each end of wire aerial. Worth 2/6 each but because they are surplus war goods, to be sold for a mere length of 1-1/2in. 3 each. **ONLY 5/6** each only. Cat. No. AA002

### WAR BARGAINS!



### WHIP AERIAL BASE

This is the attachment for use with the Whip Aerial when mounting on your tracks, etc. Consists of a rubber-insulated socket and connector.—Cat. No. AX1002 Price **16/6**

### CANVAS SATCHELS

Strong canvas carrying bags with lace top. Measure 11in. length by 7in. diameter. Were used for gas bags with ZCI Aerials. A few in each aerial kit bundles, small tools. Cat. No. AX1250 Price **5/6**

### CANVAS HOLD-ALLS

Originally used as carrying caps on ZCI Aerials. Canvas Bag 3 1/2in. deep 2 1/2in. diameter with carrying loops riveted in. Would serve as a nail holder or screw holder for components, etc. Cat. No. AX1247 Price **6/6** or **2/6**

### METAL PEGS

9 1/2in. x 3/16in. Metal Pegs as used for Aerial stays on ZCI's. Make excellent tent pegs. Have small protruding flange for taking ropes. Cat. No. AX1252 Price **8/6** each

### LARGE STAND-OFF INSULATORS

Real extra heavy Stand-off Insulators. Socket on base for mounting. Project 3/16in. from mounting with a diameter of approximately 3/16in. Cat. No. AX1312 Price **2/6**

### SMALL STAND-OFF INSULATORS

Small Stand-off Insulators. Slightly curved takes from Radio equipment. Insulators measure 2in. diameter with a length of 1 1/2in. Projecting hub approximately 1/16in. from either end. **6/6** each Cat. No. AX1112

### SPLIT PINS

Cadmium plated Split Pins length 1in. spec. on diameter when closed 3/16in. Cat. No. AX1116 Price **1/6** each or **6/6** dozen

### RESISTORS

#### Carbon Resistors

Cat. No. AX1114—OH10MΩF 1.75 ohms 5 watt Carbon Resistors **6/6** each

Cat. No. AX1115—Carbon 2.800 ohm 5 watt Resistors **4/6** each or **3/6** dozen

#### 3 Watt Resistors

1 1/2in. 3 watt Resistors. Length 2 1/2in., 5in. diameter. Cat. No. AX1347 Price **1/6** each

#### 100 Watt Resistors

100 Watt 100 watt War Wound Resistors. Length 1 1/2in., diameter 1in. Enamelled exterior. Enamel manufacturer. Cat. No. AX1140 Price **10/6** each

### PAPER TUBING

En. Outside Diameter 2ft. lengths. Cat. No. AX1207 Price **2/6** piece

### SPECIAL CHASSIS AND PANEL

Complete Flood Radio Chassis, taken from discontinued Army ZCI Transmitter. Dimensions 20in. x 4in. x 3in. deep. 22 Valve and Coil units fitted. Space for Tuning Gang and Coil Assembly. Ideal chassis for a communication or a similar receiver. Cat. No. AX1016 Price **12/6**

### METAL PANELS

Front Metal Panels as used on ZCI's. Size, 20in. x 8in. Drilled for Dials, Controls, etc. Cat. No. AX1171 Price **1/6**

### MIDGET CHASSIS

Bright Cadmium Plated Chassis, measuring 4in. by 4 1/2in. with a 1/2in. fold at one end. Approx. 24 gauge metal. Two 1in. holes and two 1 3/16in. holes on the main flanges of the chassis but there are also several small mounting holes. This is just the thing for a Chassis for a miniature set. Cat. No. AX1193 Price **1/6** each

### METAL SCREENS

Metal Screens removed from the rear section of ZCI's. Consists of a Cadmium plate measuring Length 8 1/2in., width 5 1/2in. with 2in. between flange on one side and end. Metal approximately 1/16in. thick. Cat. No. AX1129/30 Price **6/6** each

### VALVE SCREENS

Similar to the Metal Screen described above but measuring 8in. x 5 1/2in. x 1/16in. thick. Small 1/2in. narrow flange on two sides. Would make excellent chassis for Midget Receiver. Cat. No. AX1131 Price **6/6** each

### METAL STAY PLATES

Metal plates triangular in shape 2in. x 2in. x 2in. with small rivets attached to each corner to take tops (As illustrated with Aerial Stay Set across page). Has 1in. hole in centre. Handy little insulator plates for Aerial systems. Cat. No. AX1299 Price **4/6** each

### BULK PURCHASE! Rubber Grommets

For ear phone, hole. Inside diam. 3/16in. Bulk buying enables us to give you a great reduction. Normally 3d. each. Cat. No. AS245—NOW! **2/6** each or **1/6** dozen



### LEATHER WASHERS

Insulating leatheroid washers. Size Outside diam. 9/16in.; hole 3/16in.; 1/16in. thick. Cat. No. AX109 Price **6/6** dozen

# VALUES IN SURPLUS WAR STOCKS