

*"Runs Rings  
around them all"*

**RCS**

**RADIO**

**SYDNEY**

# RCS

LABORATORIES AND  
FACTORY

RADIO

'PHONE  
MA4276



## A SECTION OF THE LABORATORY

WHERE RESEARCH AND SERVICE WORK IS CARRIED OUT

All test oscillators and other workshop equipment is checked up on  
the standards kept in this room.

## Interpretation of R.C.S. Kit Code

# X

Means the kit is suitable for use with—Stromberg, Airzone, Efco  
Condensers (Standard or Midget).

# Y

Means the kit is suitable for use with—Saxon Condenser (Standard  
or Midget).

# H

Means the kit is 460 Kilo-Cycles, and contains an Oscillator Coil  
and can.

### TECHNICAL INFORMATION ABOUT VALVES

For technical information about all valves  
and their applications get a copy of the

### MULLARD VALVE GUIDE

### IT'S FREE!

Send stamp to cover postage to:—

**MULLARD RADIO CO.  
(AUST.) LTD.**

35 CLARENCE STREET, SYDNEY

*or Victorian Distributors:*

**Homecrafts Pty. Ltd.**

211-213 Swanston Street, Melbourne.

### IMPORTANT

A TABLE SHOWING THE CORRECT  
TYPES OF VALVES TO USE FOR EACH  
CIRCUIT IN THIS CATALOGUE WILL  
BE FOUND NEXT TO PAGE 6. PRICE  
OF EACH VALVE IS ALSO SHOWN.

### FREE Technical Query Service!

Use the Mullard FREE technical query  
service for all your valve and radio  
problems. Address queries to Technical  
Dept., Mullard Radio Co. (Aust.) Ltd.

# RR

Means the kit contains two Radio Frequency Coils and cans.

When making up a code word, start from the letter X and select  
figures or letters required from top to bottom

The correct Padder is always provided with each kit.

Therefore a kit with a code word X/K2AR would contain:—

- 1 Aerial Coil and can
- 1 R.F. Coil and can
- 1 175 Oscillator Coil and can
- 2 Intermediate Transformers.

The kit would be 175 Kilo-Cycles, and would be suitable for use  
with a Stromberg Carlson Condenser.

The correct Padder is always supplied in the kit.

*Always state Oscillator Valve used*

# J. C. PRICE (A.M.I.E. Aust.)

## Manufacturers Representative

---

### Queensland Distributor of:—

R.C.S. Radio Products

Commonwealth Moulding Co. Potentiometers Knobs etc.

Lewcos Winding, Hook-up, Aerial and Resistance Wires

Alpha Rotary and Snap Switches

Pollock Resistors and Voltage Dividers

Ducon Condensers Electrolytic and Fixed

Henderson Power Transformers, Chokes, and Voltage Reducers

I.R.C. Potentiometers and Resistors

T.C.C. Condensers

### Also Wholesale Distributor for all makes of:

Valves, Batteries, Speakers

Eclipse, Lekmek and Radiokes Products

Resin Solder, Spaghetti Tubing (1 to 10mm) Empire Cloth

Oiled Silk, Former Tubing, Bakelite Sheet

Battery Clips, Electric Soldering Irons, Lugs

Banana Plugs and Sockets, Rivets, Busbar

Bakelite Washers, Bushes, S.P.D.T. and D.P.D.T Switches

and all miscellaneous Radio Requirements

Phone: B 7635

**Perry House, Elizabeth Street,  
Brisbane**

# R.C.S. Radio Frequency Chokes



### R.C.S. Low Wave Choke (56 Megacycle)

This is the ideal choke for high frequency work, such as frequencies of 56 megacycles, it being glass enclosed and air wound. It is also suitable for 56 megacycle transmitters, and has a carrying capacity of approximately 500 M.A.

Item No. 4



### R.C.S. LOW WAVE CHOKE— 90 M.H.

A special low wave universal choke wound on glass tubing, with three duolateral coils accurately spaced, with a total inductance of 90 M.H. It has a very low distributed capacity, and is designed for total elimination of hand capacity, as is now found in all high frequency reception.

Item No. 5

### R.C.S. RADIO FREQUENCY CHOKES—HONEYCOMB TYPE

This type of choke is wound with double silk wire and is manufactured in various sizes. It is of the single hole mounting type with solder lugs attached so as to facilitate wiring. We also manufacture a Honeycomb Choke wound with double cotton wire.

**SILK.**

- 30 M.H. ....
  - 40 M.H. ....
  - 90 M.H. ....
- (Universal Low Wave.)

**COTTON.**

- 25 M.H. ....

Item No. 6, Silk

Item No. 7, Cotton



### R.C.S. RADIO FREQUENCY CHOKES— SLOT WOUND

These are wound on five groove formers with a total of 1,200 turns and are of the manufacturers' type, fitted with pins for soldering direct to the plate contact of the socket.

RETAIL PRICE ..... 10d. each.

Item No. 8

Consistent Quality



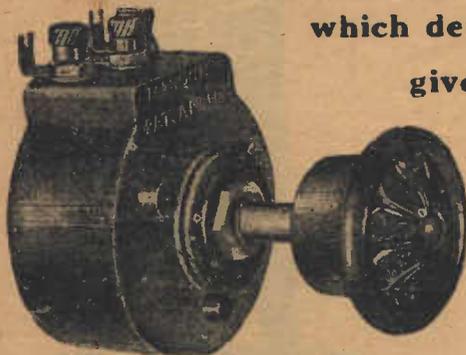
# Marquis Mouldings of Merit

## When a maker uses Marquis

He has a foundation on which to build efficient components!

This headline tells a story of Quality which reflects an unusual condition—it shows that manufacturers are relying on Marquis

### Here is a Potentiometer



which definitely gives better Results and Longer Life!

The Marquis Wire-Wound Vernier Drive Potentiometer offers you better results and greater durability. More and more set manufacturers throughout Australia and New Zealand are turning to Marquis—the Potentiometer which is definitely giving better results and longer life. And yet, with all these big advantages, the Marquis Potentiometer costs no more. The perfect rolling contact eliminates all wear and tear on the wire winding, and there are no loose metal parts to get out of alignment. All leading service men have adopted Marquis as the Standard Replacement Potentiometer. MPP8 all resistances up to 20,000 ohms, and the price is only . . . . .

**4/9**

### MARQUIS Moulded Cabinet Knobs



Marquis Standard Range of Moulded Knobs, fitted with case-hardened grub screw, are all made to go over 1/4-inch shaft. The wide range offers a choice to harmonise with various styles of cabinets and escutcheon plates, and the selection of the right types will definitely enhance the appearance of your radio cabinet.

For illustrations and Prices ask for — Catalogue

Moulded Products to ensure the quality of theirs. It will pay you to follow the lead of the experienced manufacturer and place your confidence in Marquis Products—you will find them faithful servants to better radio.

### Marquis (Approved Pattern) Lightning Arrestor FOR YOUR PROTECTION



**1/9**  
Each

This safety device, so necessary for the protection of your valves, is specially designed for Australian and tropical conditions. Built to the exacting Marquis standard of high quality, this lightning arrester is totally enclosed and weather-proof.

When buying ask for Marquis Lightning Arrestor MLA2 (in carton with two fixing screws). The price is only . . . . . 1/9 each

### A Chassis Plug designed for safety



Developed along the latest and most efficient lines known to modern Radio—the Marquis Polarised chassis Plug is the perfect safety device for the power inlet.

Only the best quality Bakelite is used in its moulding, and its insulating properties are of the highest quality. Perfect connection is assured by reason of the heavy Marquis metal parts, and the two-hole

mounting, combined with the rectangular design of the male portion, assures absolute rigidity when fitted to the Chassis. MCP1 Retail Price . . . . .

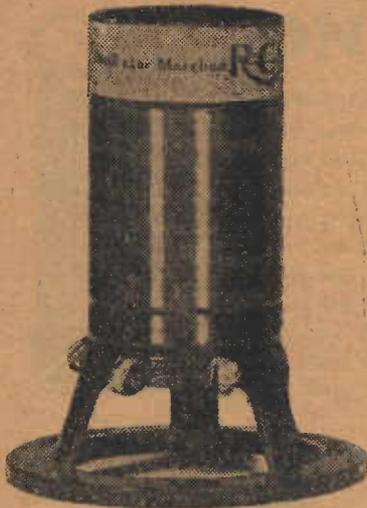
**1/9**

WATCH FUTURE MARQUIS ADVERTISEMENTS FOR FULL PARTICULARS OF NEW LINES!

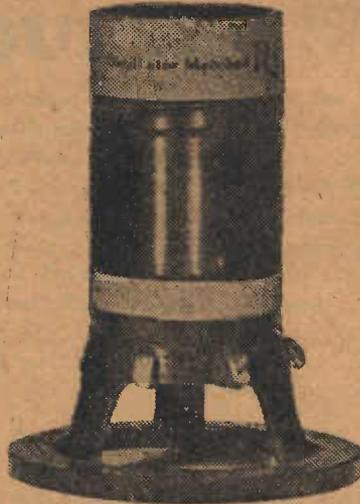
Marquis Mouldings of Merit are Made in Australia, by

**COMMONWEALTH MOULDING Co., Ltd., Arncliffe, Sydney, N.S.W.**  
DISTRIBUTORS IN ALL STATES AND NEW ZEALAND

# R.C.S. Renowned Coils



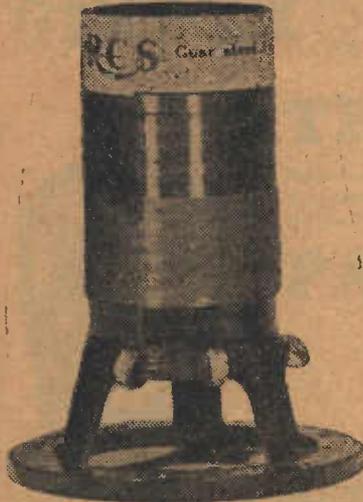
Item No. 9...Aerial



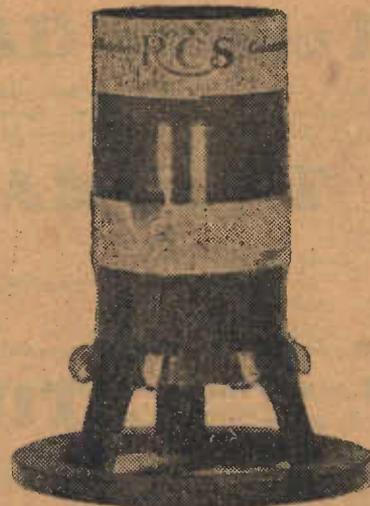
Item No. 12...Oscillator  
2A7 Valve  
6A7 Valve



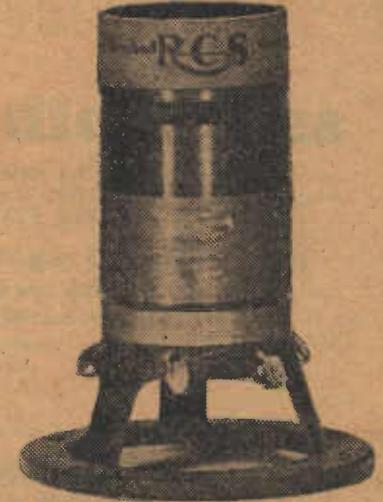
Item No. 14...Reinartz



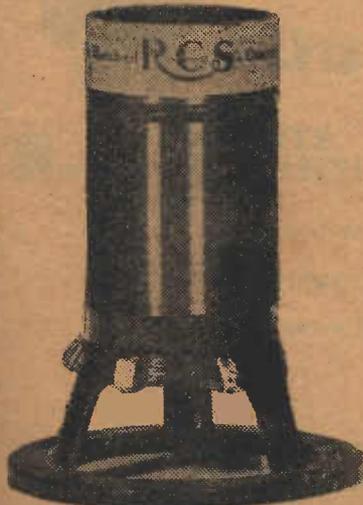
Item No. 10...Radio Frequency



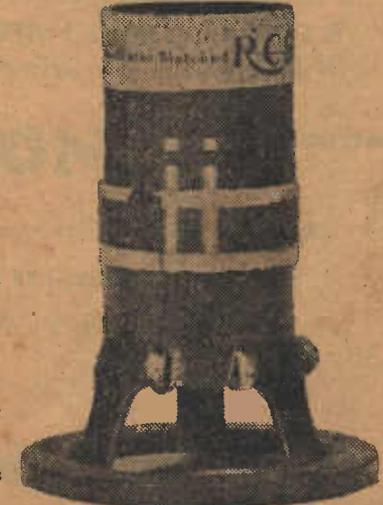
Item No. 13...Oscillator  
15 Valve Autodyne with  
57 Cathode Tap



Item No. 15...Radio Frequency with Reaction



Item No. 11...Preselector



Item No. 16...Oscillator  
Tuned Plate. Tuned Grid

R.C.S. Coils are wound to suit two groups of  
Condensers, as under :

**BLUE LABEL COILS**, for Saxon (Standard  
or Midget Condensers)

**GREEN LABEL COILS**, for Stromberg, Airzone,  
or Efeo (Standard or Midget Condensers)

Any of the Coils shown can be produced in either  
460 Kilo-Cycles, 175 Kilo-Cycles or T.R.F.

All R.C.S. Coils are wound with enamel wire so as  
to give maximum gain

# Parts of Undoubted Quality



## CONCOURSE ELECTROLYTIC and WAX CONDENSERS

The Highest Grade Condenser Made Anywhere in the World—Electrolytic Type.

- UV8 Corrugated Can, 600 volt Peak, 450 volt Working . . . . . 5/-
- UT8 Plain Can, 600 volt Peak, 450 volt Working . . . . . 4/-
- C8 Plain Can, Hex Nut Type, 600 volt Peak, 450 volt Working . . . . . 4/-

Extremely easy for Amateurs to mount. Just drill three  $\frac{1}{8}$  holes, or will mount in  $\frac{3}{4}$  hole manufacturer's type chassis.

- P8 Cardboard Type, 500 Peak, 450 Working . . . . . 4/-
- TP8 Dual Cardboard Type, 500 Peak, 450 Working . . . . . 8/-
- PTW10 Bias Type, 10 mf., 35 volt Working . . . . . 2/-
- PTW25 Bias Type, 25 mf., 35 volt Working . . . . . 2/6
- PTW25 Bias Type, 25 mf., 75 volt Working . . . . . 3/6



- .001 Wax Imp. (peewee) Type, 400 volt Working . . . . . 10d.
- .01 Wax Imp. (peewee) Type, 400 volt Working . . . . . 1/-
- .1 Wax Imp. (peewee) Type, 400 volt Working . . . . . 1/-
- .5 Wax Imp. (peewee) Type, 400 volt Working . . . . . 1/8

## SIMPEX

- Mica Condensers 00005 to 002—11d., 1/-, 1/1
- 1500 V Test 01—1/10, 2/-; 02—3/6, 3/9
- Metal, Moulded and Small Moulded.
- Rotary Tone Controls . . . . . 5/-
- Padders, 0 to 7 and 9 plate, 465 K.C. 1/8
- Padders, 9 to 13 plate, 175 K.C. . . 1/8



## TRIAD World Famous Radio Tubes

Noiseless, specially recommended for short wave and small sets; maximum sensitivity, consistent emission, never fade, doubly anchored elements, RCA Licensed. All types stocked, even old types 226, 227, 171, 250, 210, 281, 224, 235, 247.

## PARAMOUNT Voltage Dividers and Wirewound Resistors

Milliamps guaranteed

	500 ohms.	1000 ohms.	1001 to 3000 ohms.
25 Milliamps, up to . . . . .	—	10d.	11d.
50 " " " " . . . . .	10d.	11d.	—
80 " " " " . . . . .	11d.	1/-	—

Voltage Dividers—15,000, 2/3; 20,000, 3/-; 25,000, 3/6.

## OHMITE Dual Scale Resistance Testers 23/3 Carbon 1 Watt Resistances 1/-

Wirewatts, 1 Watt, non-inductive, wirewound resistances, 1/- upwards.  
Wireohm, 10 Watt, cement-coated resistances, 2/- upwards.

## Dutch Boy American ROSIN CORED SOLDER in 1-lb & 5lb reels, easy to use 4/6 lb

## R.C.S. KITS, COMPONENTS, OSCILLATORS, Etc. CETRON Photo Electric Cells

All of the above components we can thoroughly recommend to give greater efficiency and satisfaction.

COUNTRY AND INTERSTATE ORDERS PROMPTLY ATTENDED.

For above lines also SAXON, ESSANAY, MARQUIS, KELVIN, AMPLION.

Prices subject to change without notice.

Telegrams  
Hengsmall  
Melbourne

# HENRY G. SMALL & Co.,

Phone

374 POST OFFICE PLACE

MELBOURNE, C1.

(Between Elizabeth and Queen Streets),

C 11455

# R.C.S. Voltage Dividers, Wire Wound Resistors and Line Filters



**R.C.S. WIRE WOUND RESISTORS**



All Resistors are of the same mechanical dimensions, viz., 2 inches long and  $\frac{3}{8}$  inches in diameter, and are supplied complete with pigtailed. They are wound with highest grade nichrome wire heavily lacquered, and are subjected to test under load, and their carrying capacity is under-rated so that they will definitely carry the load specified.

## R.C.S. VOLTAGE DIVIDERS

These are wound on Glass Tubing  $\frac{3}{4}$  in. in diameter, and the highest grade nichrome wire is used in the winding of same. Their current-carrying capacity is 50 M.A. The contact clips are of a special flat type which, while making perfect contact do not damage the wire, as the indented clips do. The total length of the 15,000 ohm Divider is 5 in., and it has two clips. The 25,000 ohm Divider has three clips and is  $7\frac{1}{2}$  in. long. Special Dividers of any resistance and carrying capacity can be manufactured to order.

### Retail Prices

9000 ohm ....	15000 ohm ....
18000 " ....	25000 " ....

### Specials quoted.

Item 18		9000 Ohm 18000 "		Item 26 " 27		15000 Ohm 25000 "		Item 28 " 29	
M.A.	Ohms.	M.A.	Ohms.	M.A.	Ohms.	M.A.	Ohms.	M.A.	Ohms.
100	100	25	2,750	50	100	50	1,000		
"	150	25	3,000	"	150	"	1,250		
"	200	"	3,500	"	200	"	1,500		
"	250	"	4,000	"	250	"	1,750		
"	300	"	4,500	"	300	"	2,000		No 22
"	350	"	5,000	"	350	"			
"	400	"	5,500	"	400	"			
"	450	"	6,000	"	450	"			
"	500	"	6,500	"	500	"			
"	550	"	7,000	"	550	"	2,250		No 23
"	600	"	7,500	"	600	"	2,500		
"	650	"	8,000	"	650	"			
"	700	"	8,500	"	700	"			
"	750	"	9,000	"	750	"			
"	800	"	9,500	"	800	"			
"	850	"	10,000	"	850	"			
"	900	"		"	900	"			
"	950	"		"	950	"			
"	1,000	"							
"	1,250	"							

## R.C.S. CENTRE TAPPED RESISTORS

The dimensions of these Resistors are length 1 in., diameter three eighths inch. They are made so as to fit directly across the filament contacts of the valve socket, thus eliminating the need for long pigtailed

20 Ohm	Green	50 Ohm	Yellow	Item 24
--------	-------	--------	--------	---------

## THE NEW R.C.S. LINE FILTER

This filter, the latest product of our factory, eliminates all noises which occur by reason of feed-back from power mains, and also electrical disturbances caused by such things as electric motors, refrigerators, elevators, sub-stations, high tension lines, violet ray plants, etc.

### Instructions for Installation of

### R.C.S. Line Filter

When House Wiring is fitted with 3 Pin Points simply plug the Filter into Power Point, & then plug the Radio Set into the Filter. When 2 Pin Power Points are installed, fit the 3 Pin Plug supplied with the Filter to the power line from the Radio Set, & plug into Filter. In this case a separate Earth Wire must be taken from the Earth Terminal in the Filter to a good Earth, such as a water pipe. THIS IS IMPORTANT.

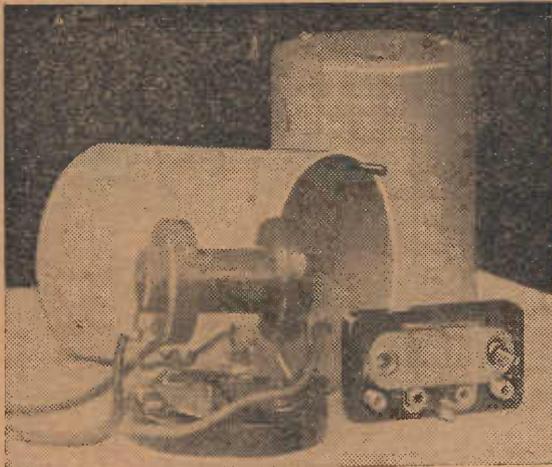
Green wire in power flex on Filter is earth wire, and when 2 pin plug is used, simply cut this wire back, & bind with insulation tape.



Item 25

# R.C.S. Intermediate Frequency Transformers

## New Air Supported Type

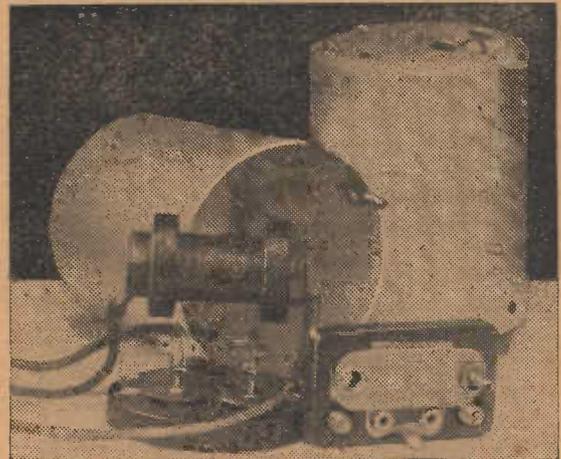


175 K.C. (Large Coils)

Item No. 30...Standard 175 K.C.

.. .. 31...175 K.C. Centre Tapped

.. .. 32...175 K.C. with Reaction

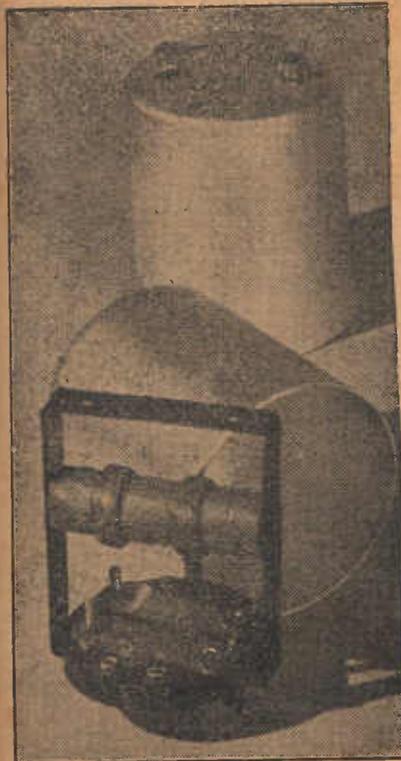


460 K.C. (High Gain) (Medium Coils)

Item No. 33...Standard 460 K.C.

.. .. 34...460 K.C. Centre Tapped

.. .. 35...460 K.C. with Reaction



Item 38...Bracket Type Standard 175 K.C.  
465 K.C.

Item 39...Special Centre Tapped  
175 and 460 K.C.  
460 K.C. with Reaction

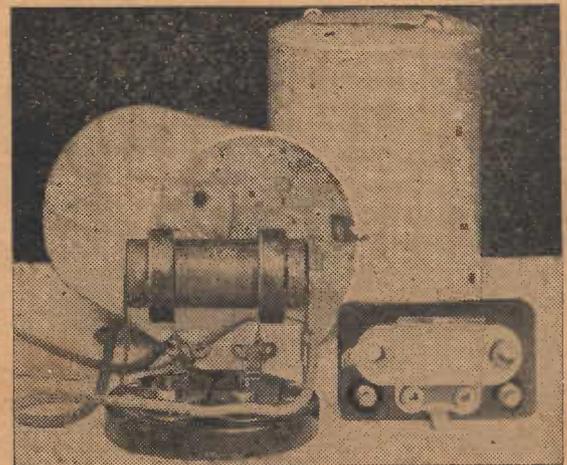
Item 40...585 K.C. Standard

### IMPORTANT

When 175 K.C. Intermediates are used, they can be used in any position or with any valve 57 or 2A7, Etc

460 K.C. Intermediates are made in two types, High gain & low gain; therefore one low gain & one high gain intermediate MUST BE USED when a 57 or 2A Autodyne Valve is used

When a 6A7, 2A7, 1A6, etc. Pentagrid Valve is used then two high gain intermediates can be used these two of course being identical



460 K.C. Low Gain (Small Coils)

Item No. 36...Standard 460 K.C.

Item No. 37...Split Primary 460 K.C.

Bracket Type,

### R.C.S. INTERMEDIATE FREQUENCY TRANSFORMERS

The Coils used in this component are of the Honeycomb type, wound on  $\frac{3}{8}$  in. dowel, and are spaced to give maximum selectivity and gain. They are made in the understated frequencies and can be lined to any specified frequency. All frequencies are guaranteed accurate.

The bases are of genuine moulded bakelite, being non-hydroscopic. To ensure low loss pure Indian Ruby Mica is also used in the base.

RETAIL PRICE (in Cartons)—

# WESTERN AUSTRALIA

---

## Carlyle and Company,

### 915-917 HAY ST., PERTH

---

Have pioneered the supply of the latest and best  
in Radio for the past nine years

---

RADIO in the West is synonymous with the  
name Carlyle

---

### Inquiries always welcomed

Our warehouse consists of 13,500 square feet of floor space crammed  
with all the good things in Radio

---

**Telegrams "LYLECAR", Perth**

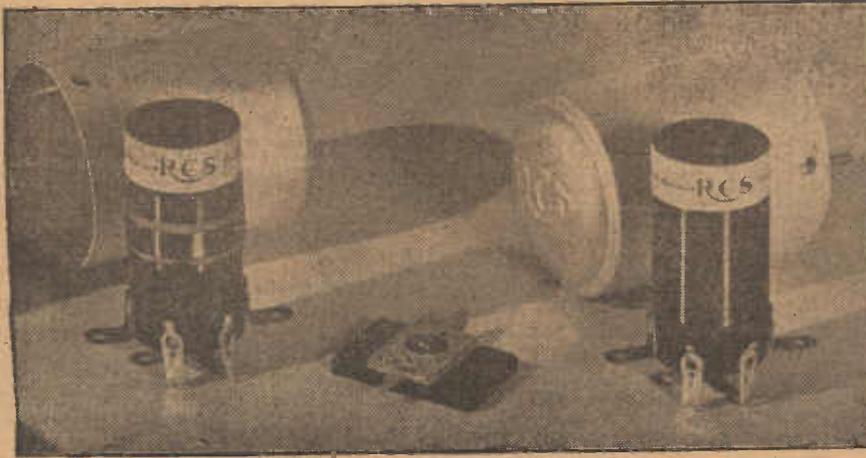
**'Phones : B 9371 [3 Lines]**

# R.C.S. Standard 4/5 Super Het. 460 K.C.

57 Valve, Tune B Piat Circuit

## MANUFACTURERS' TYPE KIT

These Kits can be made to suit any Valve or Condenser



Blue Label  
Coils for Saxon  
(Standard or Mid-  
get Condensers)

Green Label  
Coils  
for Stromberg,  
Airzone or  
Efc  
(Standard or Mid-  
get Condensers)

**IMPORTANT :** Use .0015 Condenser and 5000 resistor for Cathode Circuit.

The two Intermediates in this kit are not identical, & cannot be used in any position

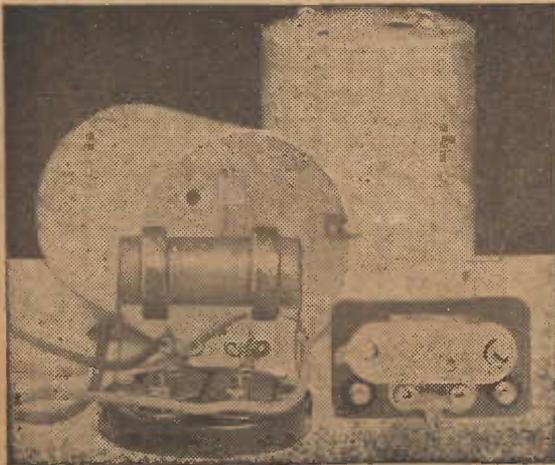
This kit is sold not for home set building, but for manufacturers who have oscillators & testing equipment

The intermediate transformers in this kit are only roughly aligned to 460 K.C., and tested to find a peak

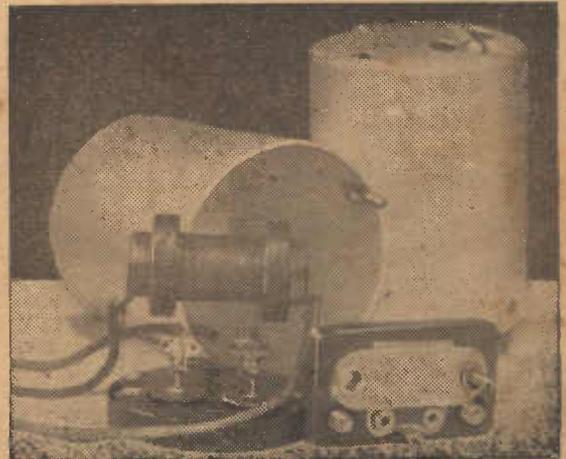
The padder supplied with this kit does not require a shunt condenser, and should be mounted up off chassis by fitting fibre washers between the padder and chassis

The coils in this kit are matched against our standard and are accurate, and are impregnated in paraffin to stop any possibility of moisture

The Intermediate with the small coils must be used in the Autodyne stage. The high gain in the second detector



*Low Gain... Small Coils*



*High Gain... Large Coils*

**Sold in Quantities, only — Special quotes on Application**

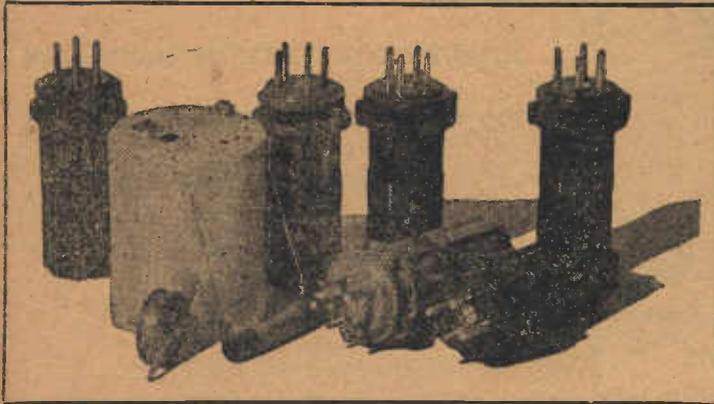
# R.C.S. RENOWNED SHORT WAVE COMPONENTS

## R.C.S. SHORT WAVE COIL KITS

We have set ourselves the task of manufacturing a comprehensive range of short wave components, with the object of catering for the needs of the many experimenters who are not at present supplied by manufacturers with the latest in this important phase of radio work. The kit depicted below is the Short Wave Superheterodyne Converter Kit. It is the answer to those seeking the means of all-wave reception without having to go to the expense of buying a new receiver of the all-wave type. It is designed to work with any all-electric receiver having reasonable sensitivity. If your broadcast receiver has at least one stage of tuned R.F. amplification, then this kit will be found to be ideal.

All R.C.S. low-wave coils are oscillator matched in our own laboratories, and minutely calibrated for wave length cover; therefore will definitely tune the complete bands with a reasonable margin of overlap to ensure complete coverage. They are air wound on Marquis 8-ribbed formers with special pin bases.

RETAIL PRICES:



Item No. 42



### R.C.S. LOW WAVE CHOKE— 90 M.H.

A special low wave universal choke wound on glass tubing, with three duolateral coils accurately spaced, with a total inductance of 90 M.H. It has a very low distributed capacity, and is designed for total elimination of hand capacity, as is now found in all high frequency reception.

See Page 4



Item No. 44

### The R.C.S. Interrupter Frequency Unit (56 Megacycle)

These units were produced primarily for ultra short wave receivers in connection with the application of the super-regenerative principle in short wave reception, particularly in five metre work. Both coils are honey-comb wound, the larger being the grid coil and the other the plate; the grid coil is tuned by a mica .002 mfd. fixed condenser for general purposes.

### R.C.S. Short Wave Condensers

### R.C.S. Short Wave Coils

These are wound on Marquis eight-ribbed formers, and are supplied in various colours, corresponding to wave lengths, for easy determination of same, and are grouped in colour code, according to R.C.S. Standards, as enumerated below. The coils are designed and matched to ensure complete band coverage over the short wave spectrum.

Detector Coils.	Oscillator Coils.
14-28 m.	14-28 m.
28-50 m.	28-50 m.
48-100 m.	48-100 m.



Item No. 45

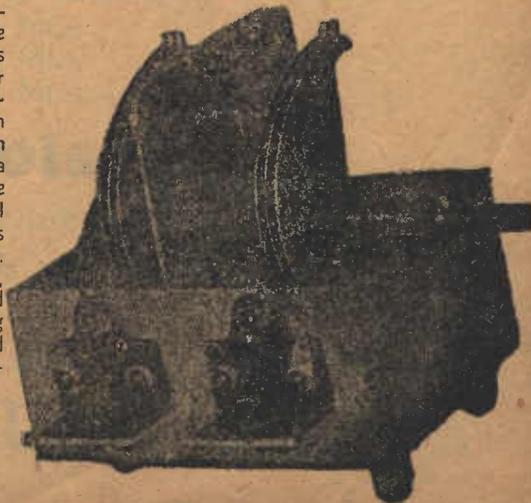
The variable condenser of a few years ago, with a capacity of .00015 mfd. approximately, with the exception of the experimental head-phone kind of receiver, is totally unsuitable for use in modern short-wave receivers. This is mainly because of the thinness of the rotor and stator plates, minute mechanical vibration setting up intense audio instability in the receiver. A receiver having very high R.F. gain is often required to deal with a very strong peak signal, and vibration-free variable condensers are essential. The model illustrated is the two-gang type, the sections having a maximum capacity of .000175 mfd. It is rigidly built and extremely well designed, with noiseless bearings and thick plates, and is available also in the single and three-gang type. Such variable condensers are destined to play an important part in the Australian-made all-wave receiver.

### R.C.S. Low Wave Choke (56 Megacycle)

This is the ideal choke for high frequency work, such as frequencies of 56 megacycles, it being glass enclosed and air wound.

See Page 4

- Single Gang .....
- Two-Gang .....
- Three-Gang .....

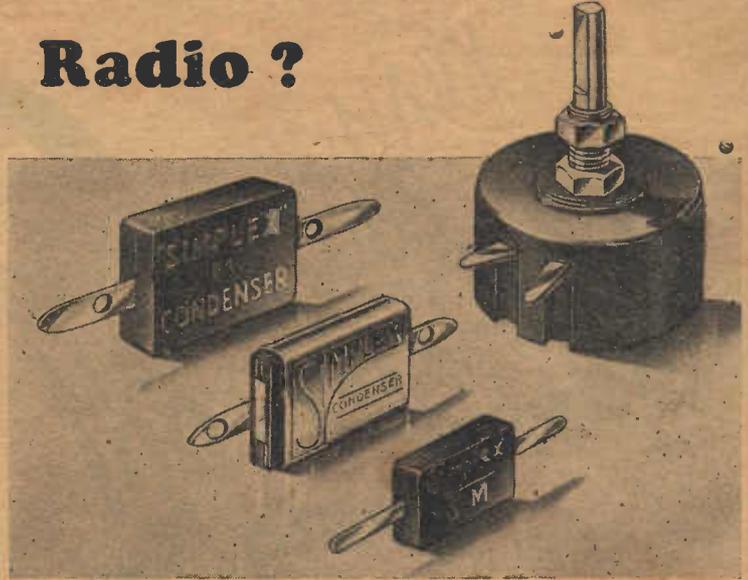


Item No. 46

# Which Circuit will you choose for your Radio ?



When this has been decided you must select components of proved quality in order to get maximum results.



FAVoured BY FAMOUS FACTORIES

**DON'T TAKE RISKS**

**USE**

## “Simplex” Condensers



“Simplex” Mica Products have been used exclusively by the most prominent Receiver Manufacturers for years, and the continued support these factories have given to “Simplex” Components is definite proof of their quality and reliability

### FIXED MICA CONDENSERS in 3 Types

Type “Metal Clad”	.00005 to	.02 Mfds
Type “Moulded”	.00005 to	.02 Mfds
Type “S/M”	.00005 to	.006 Mfds

### “Rotary” Tone Controls

A variable mica condenser designed for use in the grid circuit. This unit gives ideal control over all tones and will give you the best results

“Simplex Products are obtainable from all Reputable Radio Traders

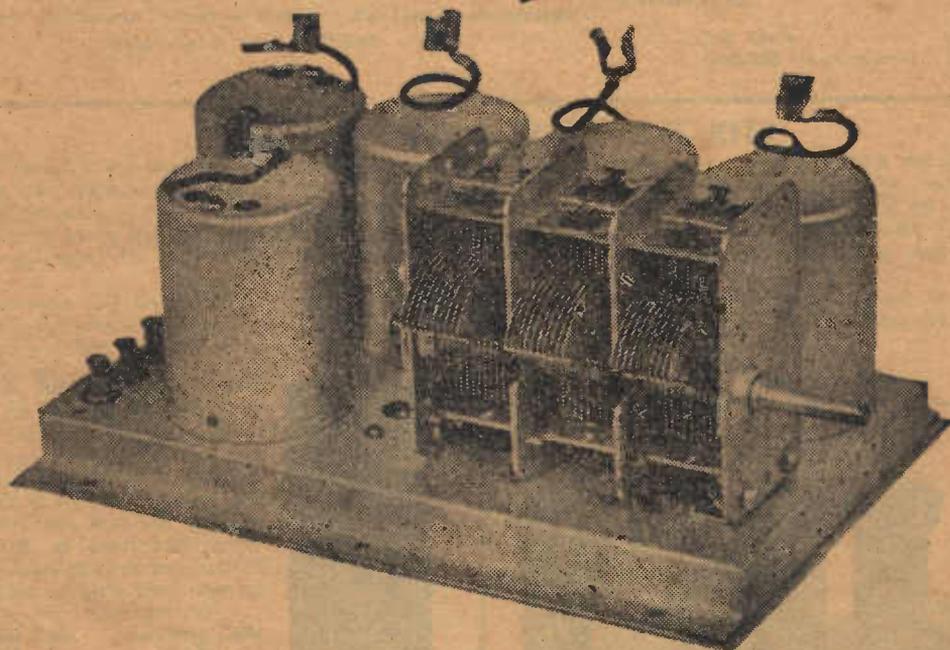
Manufactured by “SIMPLEX RADIO”,

Phone: Pet. 3100.

716 Parramatta Road, Petersham, N.S.W.



REVOLUTIONARY  
MARVELLOUS  
100% EFFICIENT  
HETROTUNER"  
Patent Pending



## THE R.C.S. HETROTUNER

is the heart of the modern superheterodyne—Coils, Condenser, Padder, Cathode Resistor and Bypass Condenser in one assembly—scientifically lined and tracked in the R.C.S. laboratories on a Standard Signal Generator, and sealed for your protection.

Never before have set builders been provided with such a certain and efficient method of superhet. construction. In other words,

**A COMPLETE TUNING UNIT  
THAT CANNOT FAIL TO OPERATE.**

Manufactured by **R. C. S. RADIO**, 12 CITY ROAD, SYDNEY.

Ask for the

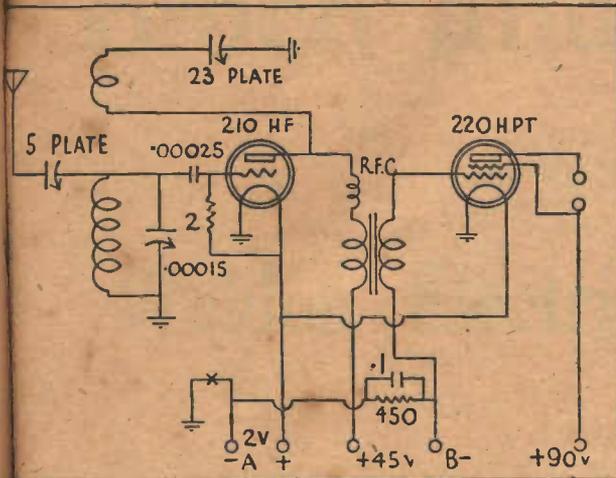
**R.C.S.  
HETROTUNER**

TYPE **H3A**

Price, £5 retail.

The Hetrotuner method requires no  
Radio Knowledge—easy as A.B.C.

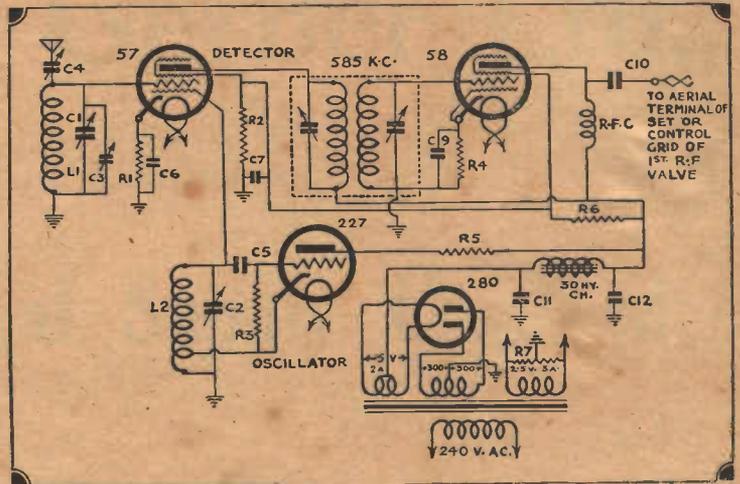
# R.C.S. Renowned Short Wave Components



Item 47

## Paris Two Valver

Reprint by courtesy "Wireless Weekly" For full constructional data refer to issue 21/7/1933



Item 48

Australian Radio News

## Short Wave Converter

Consisting of:

- Six Coils,
- One Resistor W. Wound
- One 585 Intermediate
- One Special Choke

### R.C.S. SHORT WAVE COIL KITS

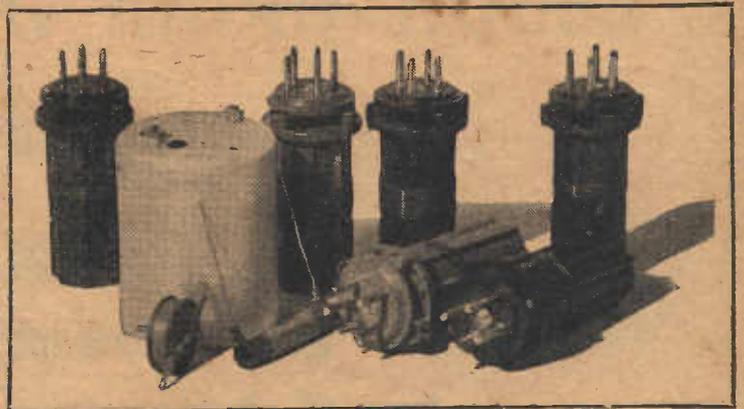
We have set ourselves the task of manufacturing a comprehensive range of short wave components, with the object of catering for the needs of the many experimenters who are not at present supplied by manufacturers with the latest in this important phase of radio work. The kit depicted below is the Short Wave Superheterodyne Converter Kit. It is the answer to those seeking the means of all-wave reception without having to go to the expense of buying a new receiver, of the all-wave type. It is designed to work with any all-electric receiver having reasonable sensitivity. If your broadcast receiver has at least one stage of tuned R.F. amplification, then this kit will be found to be ideal.

All R.C.S. low-wave coils are oscillator matched in our own laboratories, and minutely calibrated for wave length cover; therefore will definitely tune the complete bands with a reasonable margin of overlap to ensure complete coverage. They are air wound on Marquis 8-ribbed formers with special pin bases.

#### R.C.S. Short Wave Coils

These are wound on Marquis eight-ribbed formers, and are supplied in various colours, corresponding to wave lengths, for easy determination of same, and are grouped in colour code, according to R.C.S. Standards, as enumerated below. The coils are designed and matched to ensure complete band coverage over the short wave spectrum.

Detector Coils.	Oscillator Coils.
14-28 m.	14-28 m.
28-50 m.	28-50 m.
48-100 m.	48-100 m.



R.C.S. LOW WAVE CHOKE—  
90 M.H.

A special low wave universal choke wound on glass tubing, with three duolateral coils accurately spaced, with a total inductance of 90 M.H. It has a very low distributed capacity, and is designed for total elimination of hand capacity, as is now found in all high frequency reception.



R.C.S. Low Wave Choke  
(56 Megacycle)

This is the ideal choke for high frequency work, such as frequencies of 56 megacycles, it being glass enclosed and air wound. It is also suitable for 56 megacycle transmitters, and has a carrying capacity of approximately 500 M.A.

# Bloch and Gerber Ltd.,

with which is associated

## Weldon Electrical Supply Co., Ltd.

HOLT HOUSE

56 YORK STREET, SYDNEY

Phone : MA 6291 (9 Lines)

### THE LEADING RADIO HOUSE

Carry and Stock all R.C.S. Lines, comprising

**R.C.S. Coil Kits**

**R.C.S. Intermediates**

**R.C.S. Wirewound Resisters**

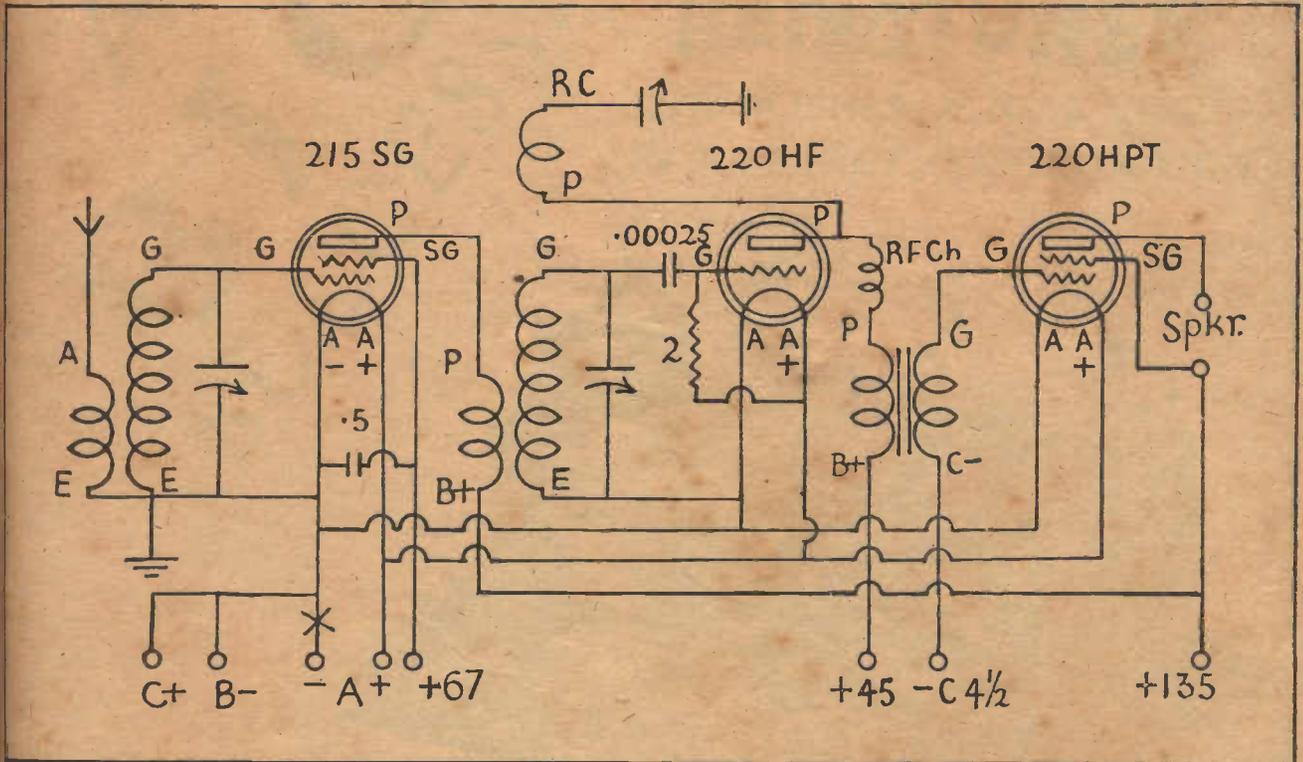
**R.C.S. Audio Transformers**

**R.C.S. Line Filters, Etc**

**SAME DAY SERVICE GUARANTEED**



# Straight Forward Battery Three



Reprint by courtesy of Wireless Weekly 9/6/33. For full constructional data refer to this issue

Straight Forward Battery Coil Code

**AERIAL COIL**

- 5...Grid & Gang
- 6...Earth
- 1...Aerial
- 2...Earth
- 3...Aerial Tap

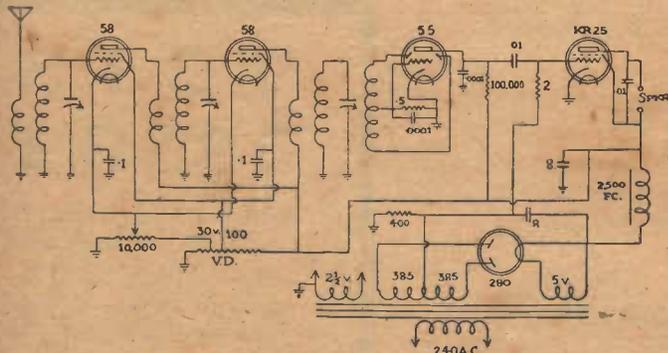
**R.F. COIL with Reaction**

- 5...Grid and Gang
- 6...Earth
- 2...Plate
- 1...B Pos.
- 3...Reaction Condenser
- 4...Detector Plate

An extra tap is provided on the plate winding, this tap is only to be used when the set is operated close to a broadcast station, by joining the high tension to this tap instead of the standard B. Positive lug, an extra tapping is also provided on Aerial Coil

**Item 52**

# Duplex Diode Kit (4/5 T.R.F.)



**AERIAL COIL**

- Blue...Earth
- Black...Grid & Gang
- Pink...Aerial

**DIODE COIL**

- Black...Gang
- Green...B Positive
- Blue...Earth
- Pink...Diodes
- Red...Plate
- Yellow...Grid

**R.F. COIL**

- Black...Grid and Gang
- Blue...Earth
- Red...Plate
- Green...B. Pos.

Reprint by courtesy of Wireless Weekly, 18/11/32

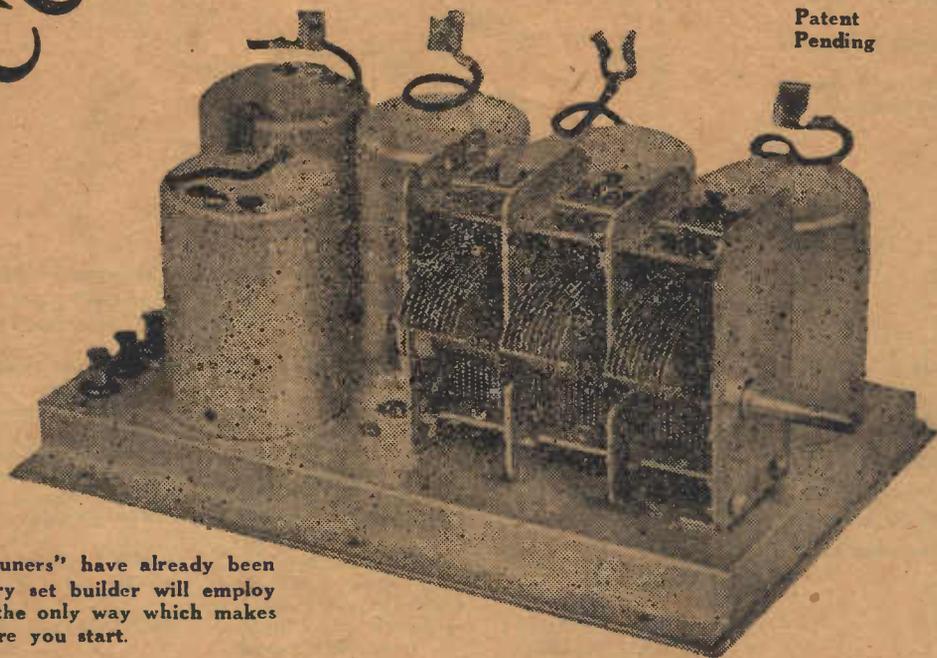
For full constructional data refer to this issue

**A  
BIG  
SUCCESS!**

**R.C.S.  
HETROTUNER**

ESTABLISHES A NEW VOGUE  
IN SUPERHET. CONSTRUCTION

Patent  
Pending



**T**HOUSANDS of "Hetrotuners" have already been sold. Ultimately every set builder will employ the "Hetrotuner" method the only way which makes a certainty of success before you start.

Coils, condenser, padder, cathode resistor and by-pass condenser come to you in one small compact assembly—A COMPLETE TUNING UNIT scientifically lined and tracked in the R.C.S. Laboratories—offered at a price no greater than the components themselves.

What could be easier?

Don't chance success—make a "Cert" of your set and use the R.C.S. "Hetrotuner."

*Ask for the*

**R.C.S.  
HETROTUNER  
TYPE H3A  
Price £5 Retail**

**STOP  
PRESS**

Winner in Amplifier  
Competition used :  
R.C.S. H.F. Chokes  
and Resistors through-  
out vital points.

*Just another  
Success*

Manufactured by

**R.C.S. RADIO** 12 CITY ROAD,  
SYDNEY.



A C O R D  
for



# SERVICE and QUALITY

---

Manufacturers of  
Radio Chassis,  
Valve Shields,  
Coil Cans,  
Laminations,  
Sockets,  
Metal Stampers  
Metal Spinners



Electroplaters,  
Chromium,  
Nickel,  
Cadmium,  
Copper  
Brass,  
Bronze,  
Dull or Highly Polished

---

## ACORN PRESSED METAL Co., Ltd.,

Phones : L 2977, L 2381

Phones : L 2977, L 2381

**4-6 Mathieson St., Camperdown**

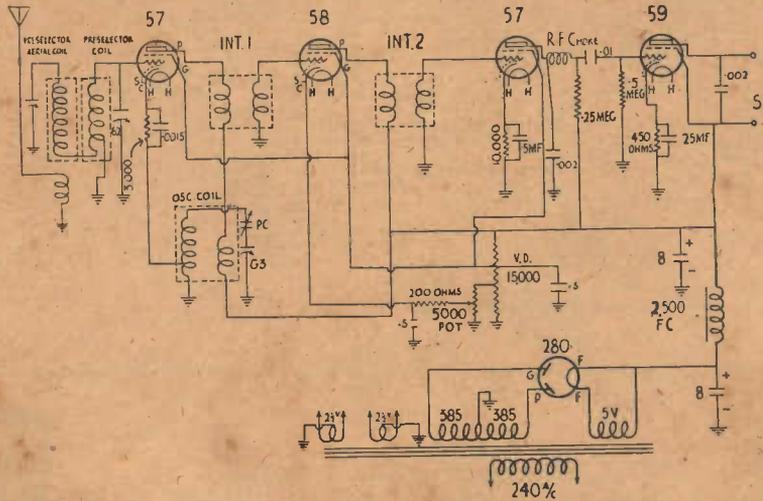
---

Phone or write and our Representative will call

# R.C.S. Preselector 4/5 460 K.C.

## R.C.S. KIT TYPE, H2AP

"R.C.S." PRE-SELECTOR 4/5 SUPER HET., 460 K.C.



Intermediate  
Color Code  
Blue Earth  
Yellow Grid  
Red Plate  
Green B Positive

Blue Label  
Coils for Saxon  
(Standard or Mid-  
get Condensers)

The two Inter-  
mediates in  
this kit are not  
identical, & can  
not be used in  
any position

The Intermediates  
with the small Coils  
(Low Gain) MUST  
BE USED IN THE  
A U D O DYNE  
STAGE, while the  
Intermediates with  
the large Coils  
(High Gain) MUST  
BE USED IN THE  
SECOND DETEC-  
TOR STAGE

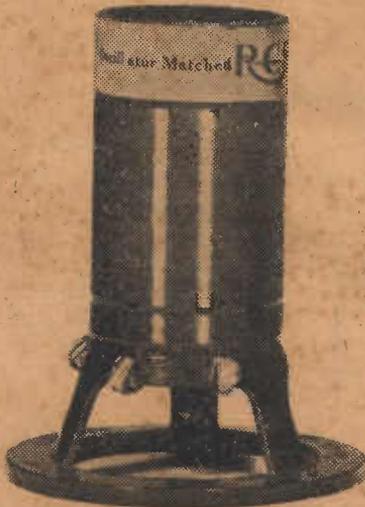
List of Parts Required for the "R.C.S." Pre-Selector 4/5 460 K.C. Super Het.

- |   |  |  |
|---|--|--|
| 1 Stromberg Carlson 3-Gang Condenser (New Type)                           | 1 .0015 Fixed Condenser (Simplex)          | 1 R.F. Choke (R.C.S.) Sockets 3-6 Pin, 2-4 Pin, 1-7 Pin (Marquis)  |
| 1 Chassis with Valve Cans (Acorn)   | 1 450 ohm. 100 M.A. W.W. Resistor (R.C.S.) | 4 Grid Clips, Wire, Screws, Nuts, etc.                             |
| 1 Superhet Coil Kit, R.C.S. Type, H2 A.P.                                 | 1 3000 ohm. 25 M.A. W.W. Resistor (R.C.S.) | Valves 1-58, 2-57, 1-59, 1 - 280, Radiotrons, National Union.      |
| 1 Suitable Dial (Efco)  | 1 15,000 ohm. Voltage Divider (R.C.S.)     | Speaker D.C. Dynamic, 2500 ohms. Field Coil, Penthode input Jensen |
| 1 Power Transformer, Morse, 385-385, 5V.3, 2 1/2 V.8, 2 1/2 V.4, 100 M.A. | 1 200 ohm. 50 M.A. Resistor (R.C.S.)       | 1 25 M.F. Dry Electro Condenser                                    |
| 2 Electrolytic Condensers, 8 mfd. 500 V. (Polymet)                        | 2 .002 Fixed Condensers (Simplex)          | 1 10,000 ohms. W.W. Resistor (R.C.S.)                              |
| 3 .5 M.F.D. Fixed Condensers  | 1 .25 Grid Leak (I.R.C.)                   |  |
| 1 .01 Fixed Condenser (Simplex)   | 1 .5 Meg. ohm. Grid Leak, 1 Watt (I.R.C.)  |  |
|   | 1 5000 ohm. Potentiometer (Marquis)        |  |

Green Label  
Coils  
for Stromberg.  
Airzone or  
Efco  
(Standard or Mid-  
get Condensers)

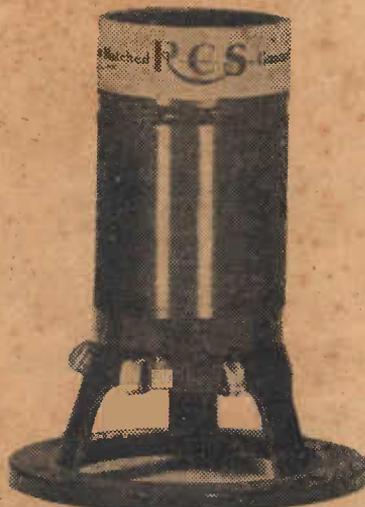
The Cathode Resistor shown in the Circuit as 3000 Ohms should read 5000 Ohms.

IMPORTANT: Use .0015 Condenser and 5000 resistor for Autodyne Cathode Circuit. Padding condenser must be spaced out at least one eighth inch from Chassis by bakelite washers  
Padder Condenser does not require a shunt Condenser



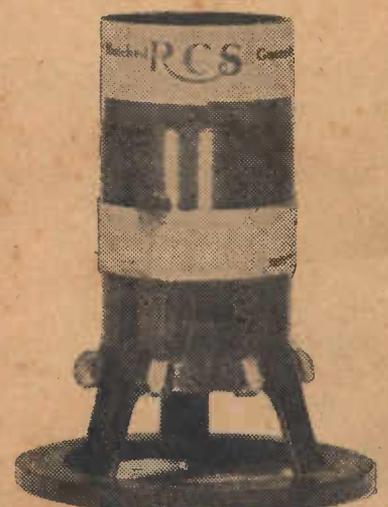
AERIAL COIL

- 2...Aerial 5...1st Gang  
1...Earth 6...No. 1 Preselector Coil



PRESELECTOR COIL

- 6...Earth 5...Grid & Gang  
1...to lug 6 of Aerial Coil



OSCILLATOR 57 Valve

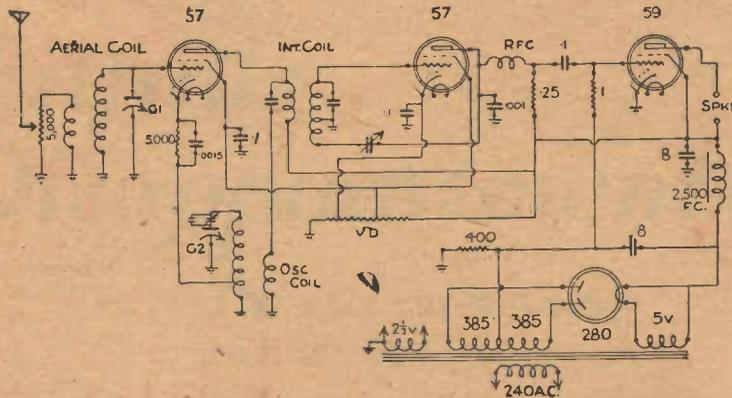
- 1...H.T. Positive 2...Plate via Intermediate  
5...Padder 6...Earth  
3...Cathode Resistor

The numbers shown in the above refer to the small figures moulded on the base of the coil former directly under the connection lugs

# 3/4 Simplicity Super—R.C.S. Kit Type HSA

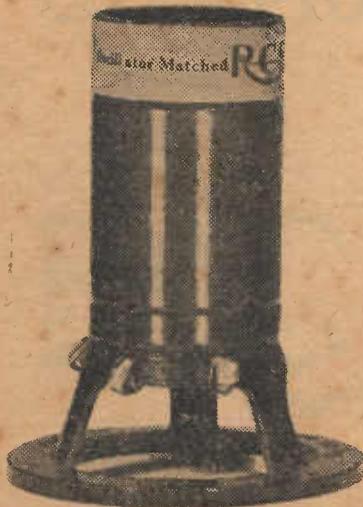
Item

No. 55



Blue Label  
Coils for Saxon  
(Standard or Midget Condensers)  
Green Label  
Coils  
for Stromberg,  
Airzone or  
Efco  
(Standard or Midget Condensers)

Reprint by-courtesy of Wireless Weekly 10/2/33. For full constructional data refer to this issue



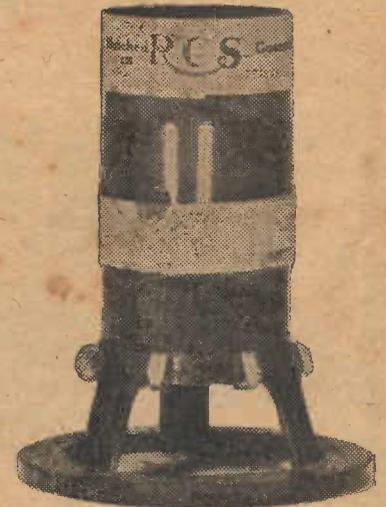
AERIAL COIL

- 2...Aerial
- 1...Earth
- 5...Grid & Gang
- 6...Earth

Intermediate Colour Code  
Yellow Grid Blue Earth  
Red Plate Green B Positive  
Orange Oscillator Coil  
Black Reaction Condenser

*The Intermediates are of a special high gain type, and CANNOT be used with any other valve, other than those specified*

Padder Condenser does not require a shunt Condenser



OSCILLATOR 57 Valve

- 1...Earth
- 3...Cathode Resistor
- 6...Earth
- 2...Orange of Intermediate
- 5...Padder

The numbers shown in the above refer to the small figures moulded on the base of the coil former directly under the connection lugs

## R.C.S. Preselector 3/4 T.R.F.

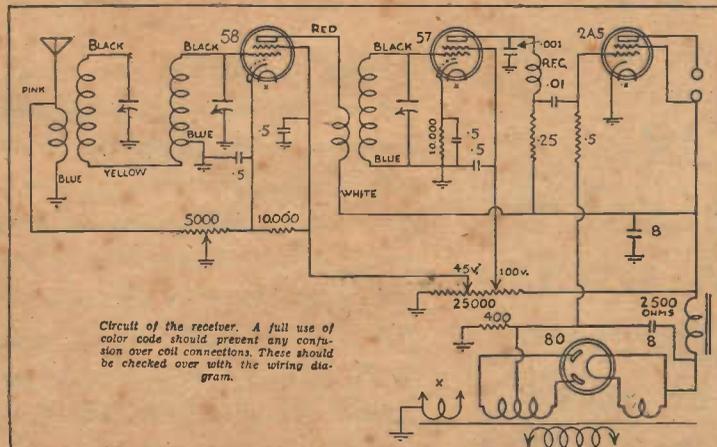
Item No. 55a

### AERIAL COIL

- 2...Pink or Aerial
- 1...Blue or Earth
- 5...Black or Gang
- 6...Yellow or No. 1 of Preselector Coil

### PRESELEKTOR COIL

- 5...Black or Grid and Gang
- 6...Blue or Earth
- 1...To lug 6 of Aerial coil



*Circuit of the receiver. A full use of color code should prevent any confusion over coil connections. These should be checked over with the wiring diagram.*

### RADIO FREQUENCY COIL

- 5...Black or Grid & Gang
- 6...Blue or Earth
- 2...Red or Plate
- 1...White or H.T. Positive

The lead shown connected to the 45 volt clip of the divider, should be connected to the 100 volt, while the 100 volt lead should be connected to the 45 volt clip

BLUE LABEL COILS, for Saxon (Standard or Midget Condensers)  
GREEN LABEL COILS, for Stromberg, Airzone, or Efco (Standard or Midget Condensers)

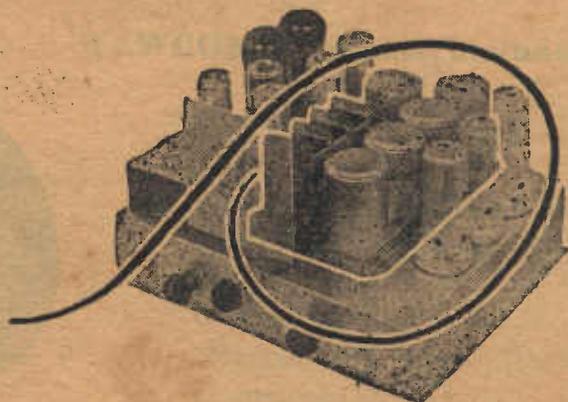
*No "Snags"*  
*No Pitfalls*  
*No Disappointments!*

The only certain way  
 to build the

**CHAMPION SUPERHETERODYNE**

is to use the . . .

**RCS**



**HETROTUNER**

The "Hetrotuner" drops into position as easy as winking—no uncertain adjustments to be made—coils, condenser, padder, etc., all scientifically aligned and tracked so that your set works right away. Not only WORKS but gives you results that will positively astound you with their excellence. Of course, if you want to assemble your own coils, RCS provides a complete coil kit assembly. Ask for RCS Kit, Type XK 2AR (for Stromberg, Airzone or Efco Gang). Price, 33/6 retail. And type YK 2AR (Saxon Gang). Price, 41/8 retail.

*Ask your Radio Dealer  
 for the  
 RCS  
 HETROTUNER  
 Type K2AR*

Specified by Technical Editor "Wireless Weekly."

**Price, £5 Retail**

Manufactured by RCS Radio,  
 12 City Road, Sydney.

# Winding Wires

## Resistance Wires

## Connecting Wires



**Wires, Cables and Flexibles**  
**for every Radio and Electrical Purpose**



“LEWCOS” Products, include

- Bare Copper and Enamelled Aerials
- Battery Cables
- Headphone and Speaker Cords
- Twin & 3 Core Miniature Flexibles
- Litz Wire, Bell Wires
- Copper Shielding Braid
- “Stayput” and “Rapid” (Pushback) Connecting Wires
- “Lewcoflex”, Pick-up Flex
- Transformer Lead-Out Wire
- Heat and Fire Resisting Wires
- Bare Copper Braids and Twists
- Bare or Tinned Soft Copper Wires
- “Livaflex” Non-Kinking Flexible Cord
- Etc., Etc.

LEWCOS Winding Wires in Cotton, Silk, Enamel, Cotton-Enamel, Silk-Enamel, etc. are consistently used by R.C.S. Radio and other leading Radio & Electrical Manufacturers throughout Australia

**When ordering Radio Wires, specify “LEWCOS”. If your local dealer cannot supply, communicate direct with**

Telephone  
 Sydney

**The Liverpool Electric Cable Co., Ltd.,**

Telephone  
 Melbourne

MA 6001  
 (3 Lines)

Head Office in Australia  
 LEWCOS HOUSE, 233 CLARENCE STREET, SYDNEY  
 MELBOURNE OFFICE : : 586 BOURKE STREET

J 4966

AGENTS:

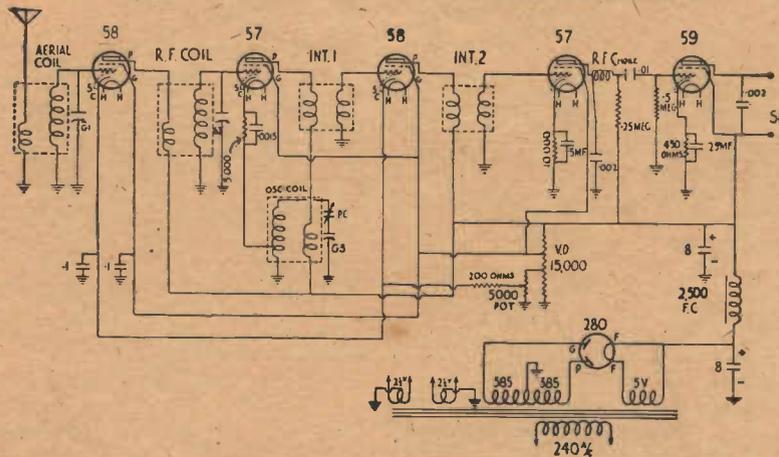
Adelaide—Robert C. Forbes & Co., 37A Currie St.  
 Brisbane—(Industrial) - Intercolonial Boring Co. Ltd, Ann St.  
 Brisbane—(Radio) J. C. Price, Perry House, Elizabeth St.

Hobart—Wm. L. Buckland Pty. Ltd. 57 Liverpool St.  
 Newcastle—Martin de Launay, Ltd., Cnr. King & Bolton Sts  
 Perth—Carlyle & Co., 915 Hay Street

# R.C.S. Standard 5/6 460 K.C.

R.C.S. KIT TYPE, H2AR

"R.C.S." STANDARD 5/6 SUPER HET., 460 K.C.



Intermediate  
Color Code  
Blue Earth  
Yellow Grid  
Red Plate  
Green B Positive

Blue Label  
Coils for Saxon  
(Standard or Mid-  
get Condensers)

The two Inter-  
mediates in  
this kit are not  
identical, & can  
not be used in  
any position

The Intermediates  
with the small Coils  
(Low Gain) MUST  
BE USED IN THE  
AUDIODYNE  
STAGE, while the  
Intermediates with  
the large Coils  
(High Gain) MUST  
BE USED IN THE  
SECONDDETE-  
CTOR STAGE

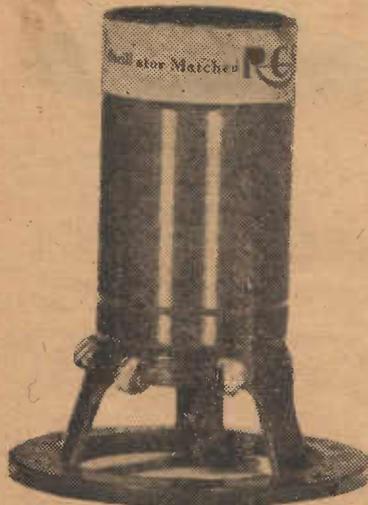
List of Parts Required for the "R.C.S." Standard 5/6 460 K.C. Super Het.

- |   |  |  |
|---|--|--|
| 1 Stromberg Carlson 3-Gang Condenser (New Type)                   | 1 .0015 Fixed Condenser (Simplex)          | 1 5000 ohm. Potentiometer (Marquis)                                |
| 1 Chassis with Valve Cans (Acorn)                                 | 1 .01 Fixed Condenser (Simplex)            | 1 R.F. Choke (R.C.S.)  |
| 1 Superhet Coil Kit, R.C.S. Type, H2 A.R.                         | 1 450 ohm. 100 M.A. W.W. Resistor (R.C.S.) | Sockets 4-6 Pin, 2-4 Pin, 1-7 Pin (Marquis)                        |
| 1 Suitable Dial (Efco)  | 1 3000 ohm. 25 M.A. W.W. Resistor (R.C.S.) | 4 Grid Clips, Wire, Screws, Nuts, etc.                             |
| 1 Power Transformer, Morse, 385-385, 5V.3, 2½V.8, 2½V.4, 100 M.A. | 1 15,000 ohm. Voltage Divider (R.C.S.)     | Valves 2-58, 2-57, 1-59, 1 - 280, Radiotrons, National Union       |
| 2 Electrolytic Condensers, 8 mfd. 500 V. (Polymet)                | 1 200 ohm. 50 M.A. Resistor (R.C.S.)       | Speaker D.C. Dynamic, 2500 ohms. Field Coil, Penthode input Jensen |
| 2 .1 M.F.D. Fixed Condensers                                      | 2 .002 Fixed Condensers (Simplex)          | 1 25 M.F. Dry Electro Condenser                                    |
| 1 .5 M.F.D. Fixed Condenser                                       | 1 .25 Grid Leak (I.R.C.)                   | 1 10,000 ohms. W.W. Resistor (R.C.S.)                              |
|   | 1 .5 Meg. ohm. Grid Leak, 1 Watt (I.R.C.)  |  |

Green Label  
Coils  
for Stromberg,  
Airzone or  
Efco  
(Standard or Mid-  
get Condensers)

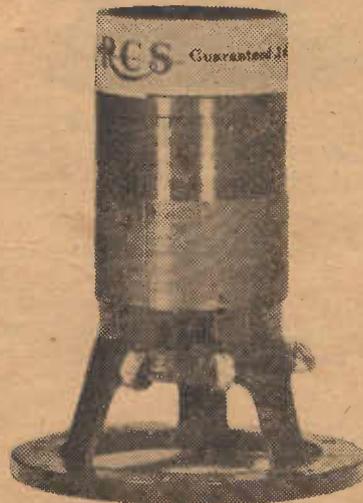
The Cathode Resistor shown in the Circuit as 3000 Ohms should read 5000 Ohms.

IMPORTANT: Use .0015 Condenser and 5000 resistor for Autodyne Cathode Circuit. Padding condenser must be spaced out at least one eighth inch from Chassis by bakelite washers  
Padder Condenser does not require a shunt Condenser



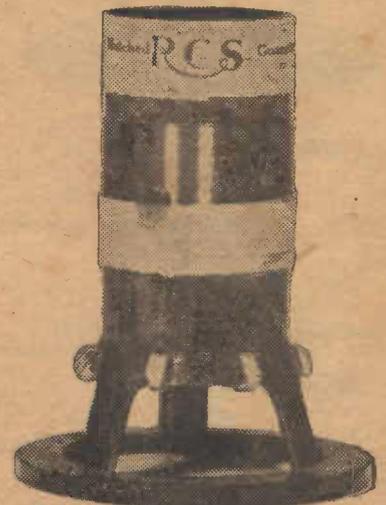
AERIAL COIL

- 2...Aerial  
1...Earth  
5...Grid & Gang  
6...Earth



RADIO FREQUENCY COIL

- 1...H.T. Positive  
2...Plate  
5...Grid & Gang  
6...Earth



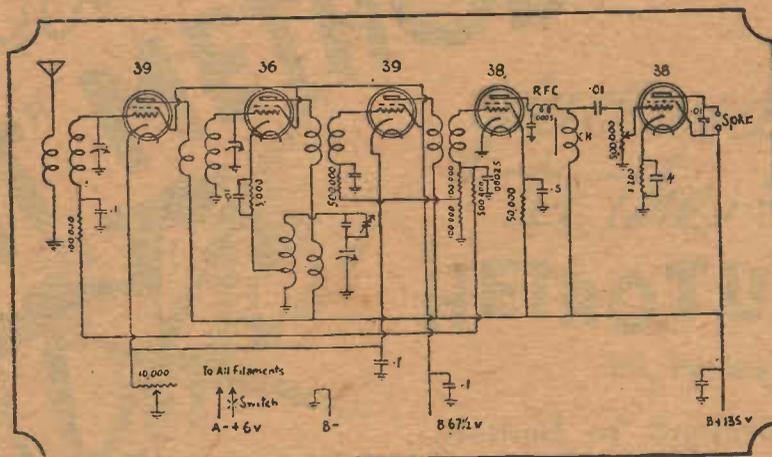
OSCILLATOR 57 Valve

- 1...H.T. Positive  
5...Padder  
3...Cathode Resistor  
2...Plate via Intermediate  
6...Earth

The numbers shown in the above refer to the small figures moulded on the base of the coil former directly under the connection lugs



# Universal Battery. Super Het. with A.V.C. 175 K.C. R.C.S. KIT TYPE, K2AR

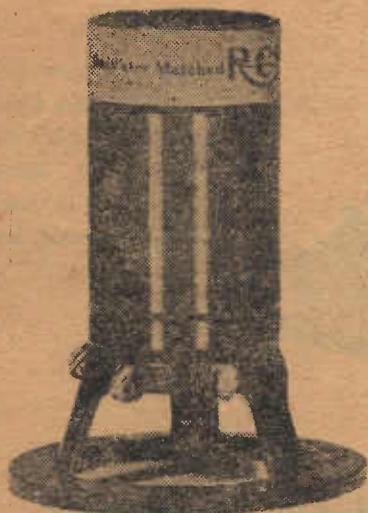


Reprint by courtesy of Wireless Weekly 9/12/'32. For full constructional data refer to this issue

The Cathode Resistor shown in the Circuit as 3000 Ohms should read 5000 Ohms, while .01 should read .0015  
The two Intermediates in this kit are identical, and can be used in any position

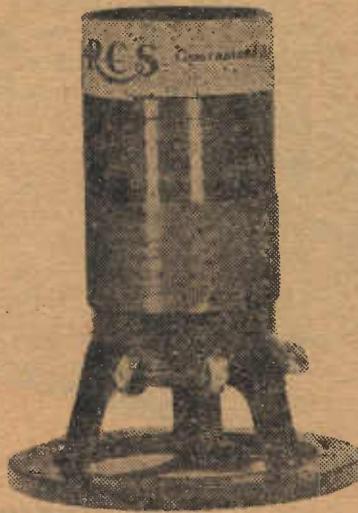
### Intermediate Color Code

Yellow Grid Red Plate Blue to Resistor & Condenser Green B Positive



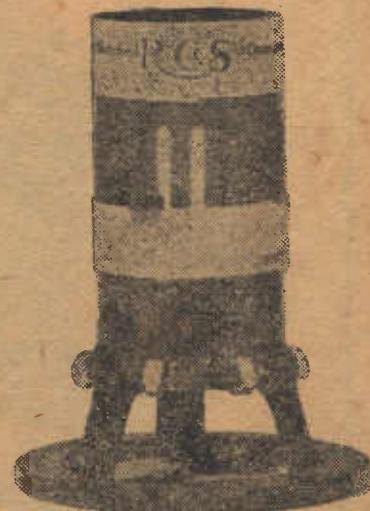
**AERIAL COIL**

2...Aerial  
1...Earth



**RADIO FREQUENCY**

1...H.T. Positive  
2...Plate  
5...Grid & Gang  
6...Earth



**OSCILLATOR 57 Valve**

1...H.T. Positive  
2...Plate via Intermediate  
3...Cathode Resistor  
5...Padder  
6...Earth

The numbers shown in the above refer to the small figures moulded on the base of the coil former directly under the connection lugs

**IMPORTANT:** Use .0015 Condenser and 5000 resistor for Autodyne Cathode Circuit. Padder condenser must be spaced out at least one eighth inch from Chassis by bakelite washers

Blue Label Coils for Saxon  
(Standard or Midget Condensers)

Green Label Coils for Stromberg, Airzone or Efco  
(Standard or Midget Condensers)

Padder Condenser does not require a shunt Condenser

*The Absolute*  
**"KIT" METHOD**

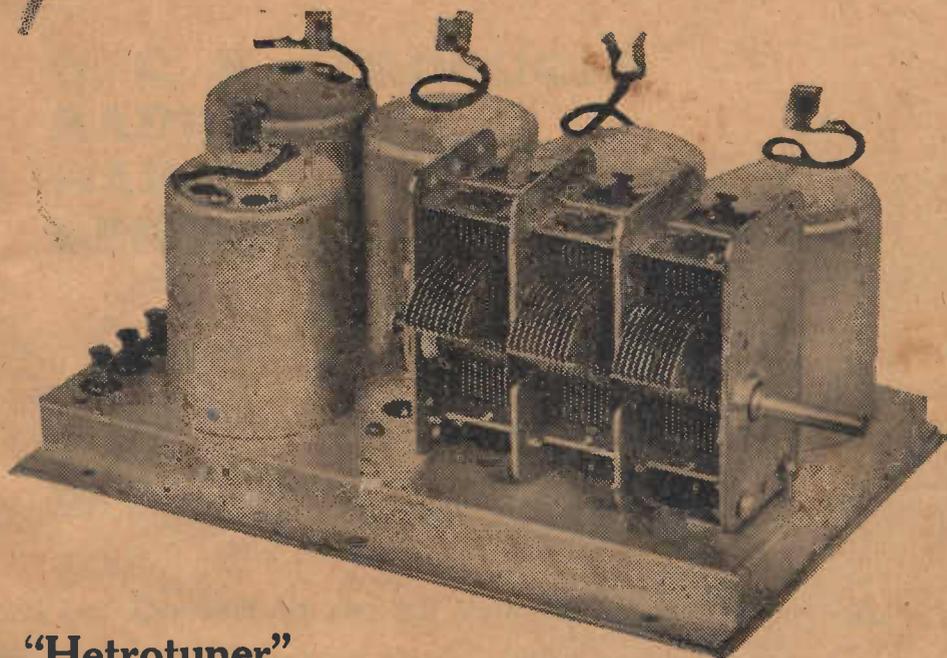


*gives way*  
*to the -*  
**HETROTUNER**

Pat. Pending

Method of Superheterodyne  
 Construction

No more tangled  
 wires, doubtful  
 leads, damaged  
 coils and un-  
 matched untrack-  
 ed intermediates.



**The R.C.S. "Hetrotuner"**

provides a COMPLETE TUNING UNIT,  
 lined, tracked and tested on a Standard  
 Signal Generator, sealed and ready for  
 instant "hook-up."

No gambling with results with YOUR  
 Set! Use the "Hetrotuner" and your  
 Set becomes an accomplished fact in a  
 matter of minutes.

The R.C.S. "Hetrotuner" makes the ordinary  
 Kit Method of assembly as ancient as last year's  
 car.

Be up to the minute —

Ask for the

**R.C.S. HETROTUNER**

**Type H3A — Price £5 Retail**

No greater in cost than separate components.  
 Coils, Condenser, By-pass Condenser, Cathode  
 Resistor and Padder in one small assembly,  
 aligned, tested and sealed.

Manufactured by : **R.C.S. RADIO,**

**SYDNEY.**

**RADIO — — SPECIALISTS**

# HEALINGS

FOR

**Radio Component Parts**

AND

**Accessories**

---

STOCKISTS OF :-

**R. C. S. PRODUCTS**

**RADIOKES**            "

**MARQUIS**           "

**GENERAL RADIO PARTS**

Phillips, Radiotron and Mullard Valves

Everready, Diamond and Impex Batteries

Complete Stocks of Meters and Testing Equipment

Write or call for Quotations for all your Radio requirements

You can do no better than purchase from

**A. G. HEALING Ltd.,**

151-159 PIRIE STREET

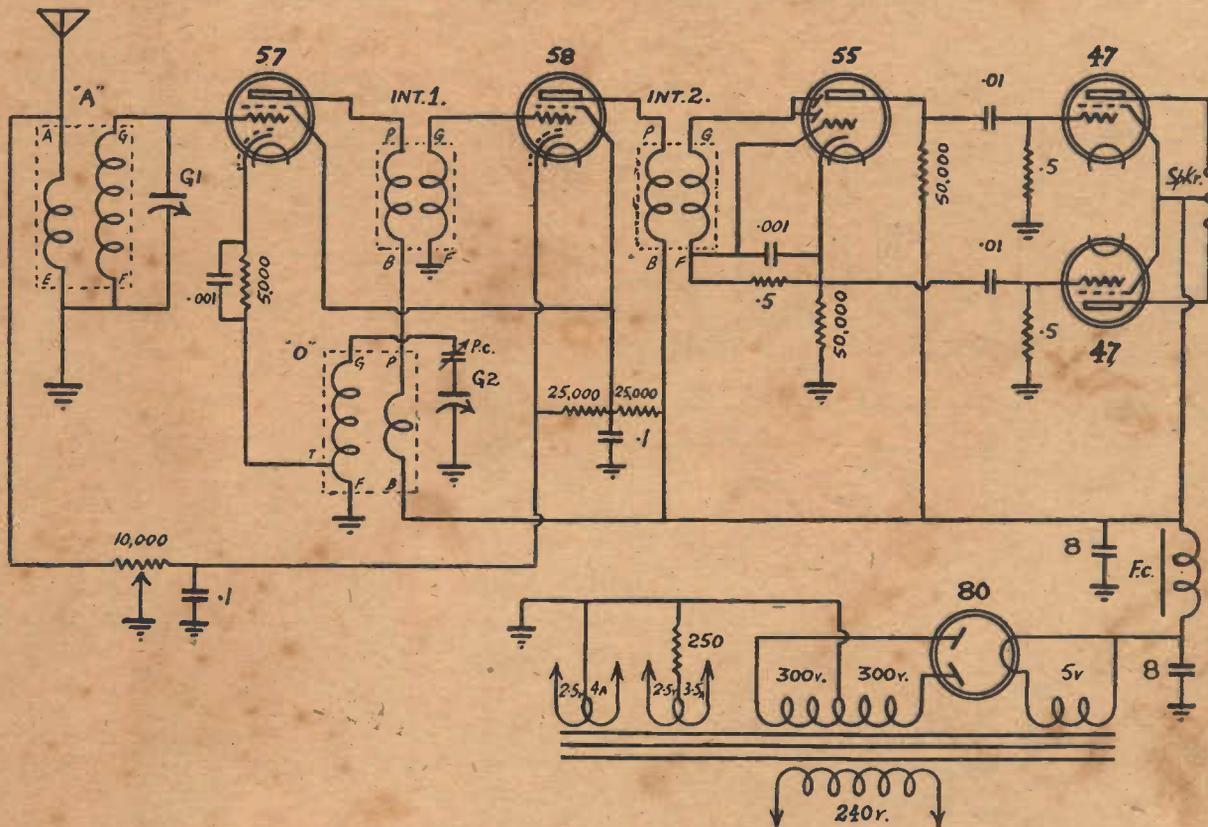
Adelaide

Manufacturers and Distributors of

**Healing Golden-Voiced Radio**

# Simplified Standard

## R.C.S. KIT TYPE ZA2



Reprint by the courtesy of "Wireless Weekly." 7/9/34. For full constructional data refer to this issue.

**INTERMEDIATE COLOUR CODE.**—Yellow, Grid; Blue, Earth; Green, B. Pos.; Red, Plate.

The two Intermediates in this Kit are not identical, and cannot be used in any position.

The Intermediates with the small Coils (Low Gain) MUST BE USED IN THE AUDIODYNE STAGE, while the Intermediates with the large Coils (High Gain) MUST BE USED IN THE SECOND DETECTOR STAGE.

Blue label Coils for Saxon.

Green label Coils for Stromberg, Airzone or Efco.

Standard or Midget Condenser.

Standard or Midget Condenser.

**AERIAL COIL**  
 Aerial...Blue  
 Grid & Gang...Pink  
 Earth...Black  
 Earth...Black

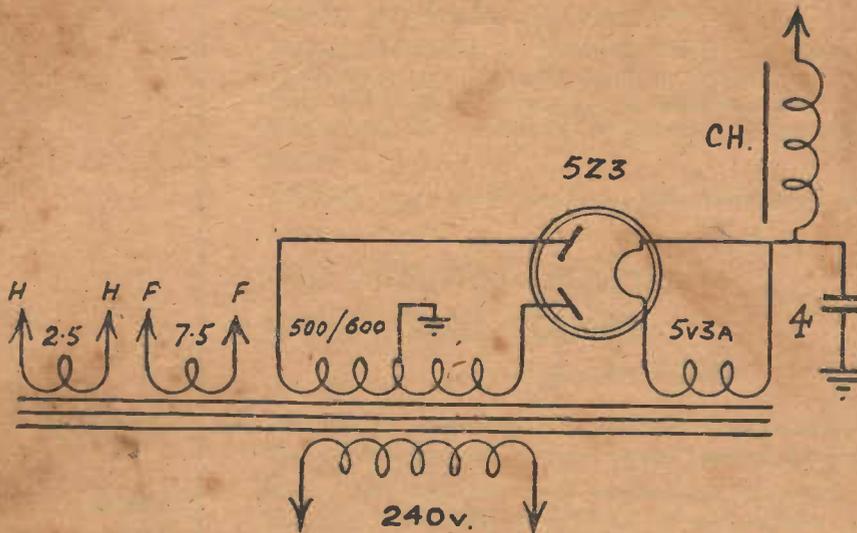
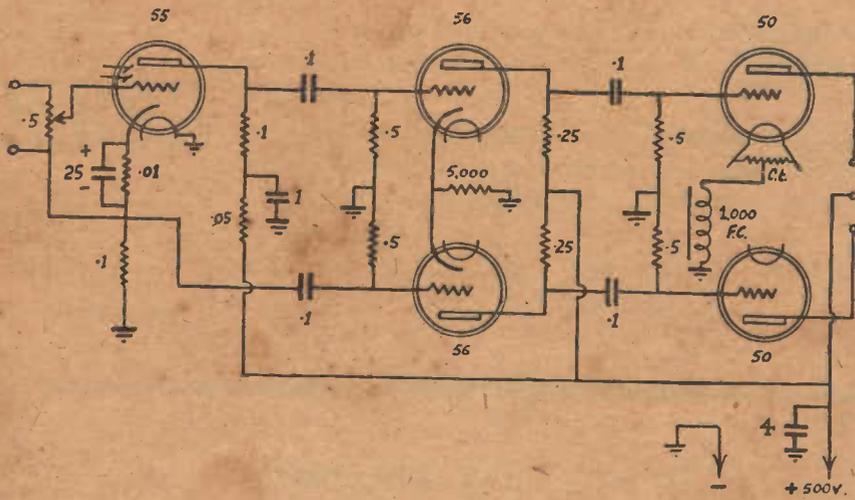
**COIL COLOUR CODE**  
 Plate via Intermediate...Red  
 Earth...Black

**OSCILLATOR COIL**  
 High Tension Pos....Green  
 Cathode Resistor...Blue  
 Padder...Pink

Shielded braid must not be used on any leads.

Padder Condenser does not require a Shunt Condenser, and must be mounted up off the chassis at least 1/4 in. by Bakelite washers.

# High Fidelity Amplifier



Reprint by courtesy of Wireless Weekly 16/11/34. For full constructional data refer to this issue

A high powered Amplifier requiring high class, high powered Resistors

**DEMAND R.C.S.**

This Amplifier is ideal for use in conjunction with our Hetrotuner as described in the previous pages

# SET BUILDERS!

Here's **QUALITY  
SERVICE  
& SATISFACTION**

You are doubly assured of satisfaction when you purchase components through Fox & MacGillycuddy Limited.

We offer components from trustworthy makers only, and guarantee them true to the manufacturers' specifications. In addition we guarantee you service and satisfaction.

Use an R.C.S. Coil Kit for all Wireless Weekly Hookups.

## COMPLETE KITS FOR ALL CIRCUITS IN THIS CATALOGUE!

Complete Kits for any of the circuits described in this Catalogue can be had from Fox & MacGillycuddy at the lowest possible cost for guaranteed quality components.

To-day set-builders are becoming more and more critical of where they buy their radio supplies. That is why so many of them buy exclusively from Fox & MacGillycuddy. They know that service and satisfaction are assured them by this reputable house.

All trade components can be supplied immediately from stock.

## USE "KESTER" PLASTIC RESIN-CORED SOLDER

And Minimise Trouble.

Soldering is a vital factor in the radio and electrical business. The use of poor quality solder means constant servicing.

Don't YOU lose time and money this way—USE KESTER PLASTIC RESIN CORED SOLDER—it will eliminate all of those fiddling little service calls—for Kester stays stuck.

Minimise trouble—use Kester Plastic Resin Cored Solder.

Available in ½oz. Stick, 16oz. Reels, 5lb. Reels, 20lb. Reels.

## Mail Orders

We specialise in Mail Orders, and all goods are carefully packed for safe and speedy transport. Write to us or 'phone your enquiry to B2409—2410.

# Fox & MacGillycuddy Ltd.,

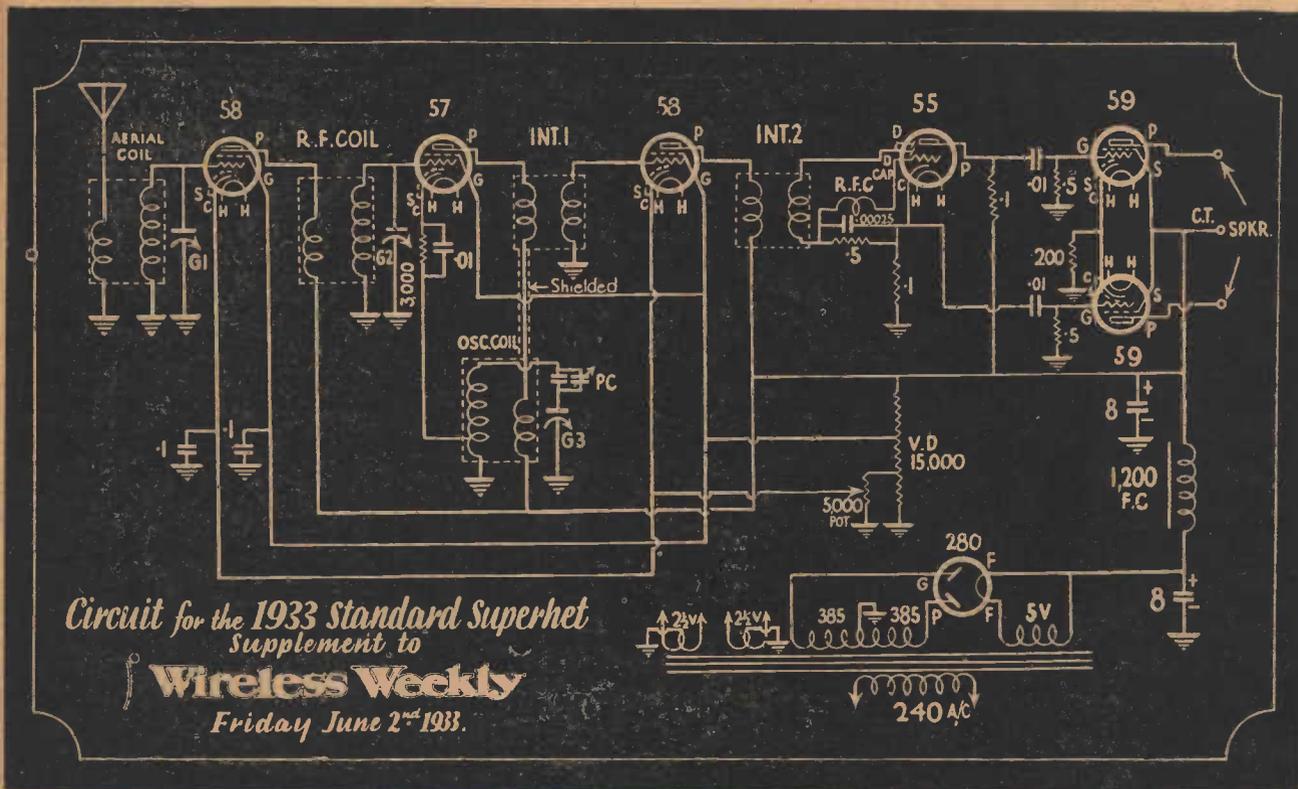
Wholesale Radio Suppliers,

Merino House, 57 York St., Sydney, N.S.W.

Telegrams: FOXRADIO, SYDNEY

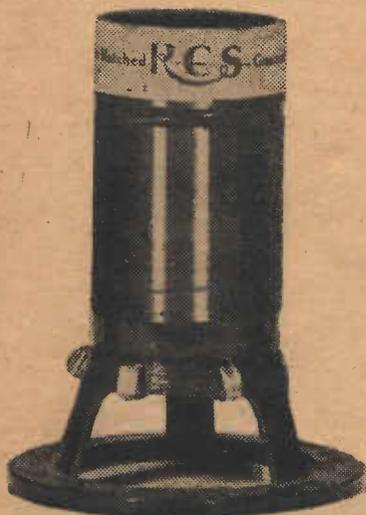
# 1933 Standard Super Het., 175 K.C.

R.C.S. KIT TYPE K2AR



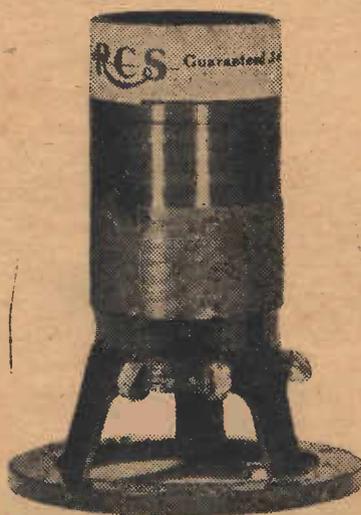
Reprint by the courtesy of "Wireless Weekly." 2/6 '33. For full constructional data refer to this issue.  
The two Intermediates in this Kit are identical, and can be used in any position.

Yellow Grid      Red Intermediate      Blue Earth      Green B Positive  
Plate



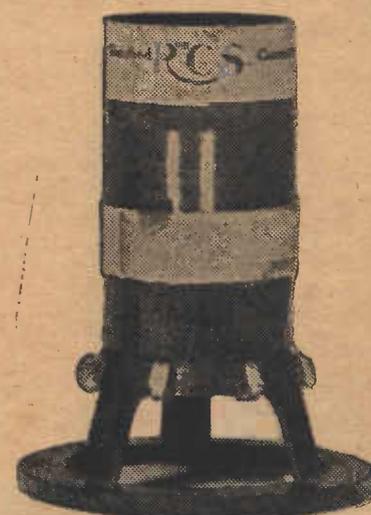
AERIAL COIL

- 5...Grid
- 1...Earth
- 2...Aerial
- 6...Earth



RADIO FREQUENCY

- 1...H.T. Positive
- 5...Grid & Gang
- 2...Plate
- 6...Earth



OSCILLATOR 57 Valve

- 1...H.T. Positive
- 5...Padder
- 2...Plate via Intermediate
- 6...Earth
- 3...Cathode Resistor

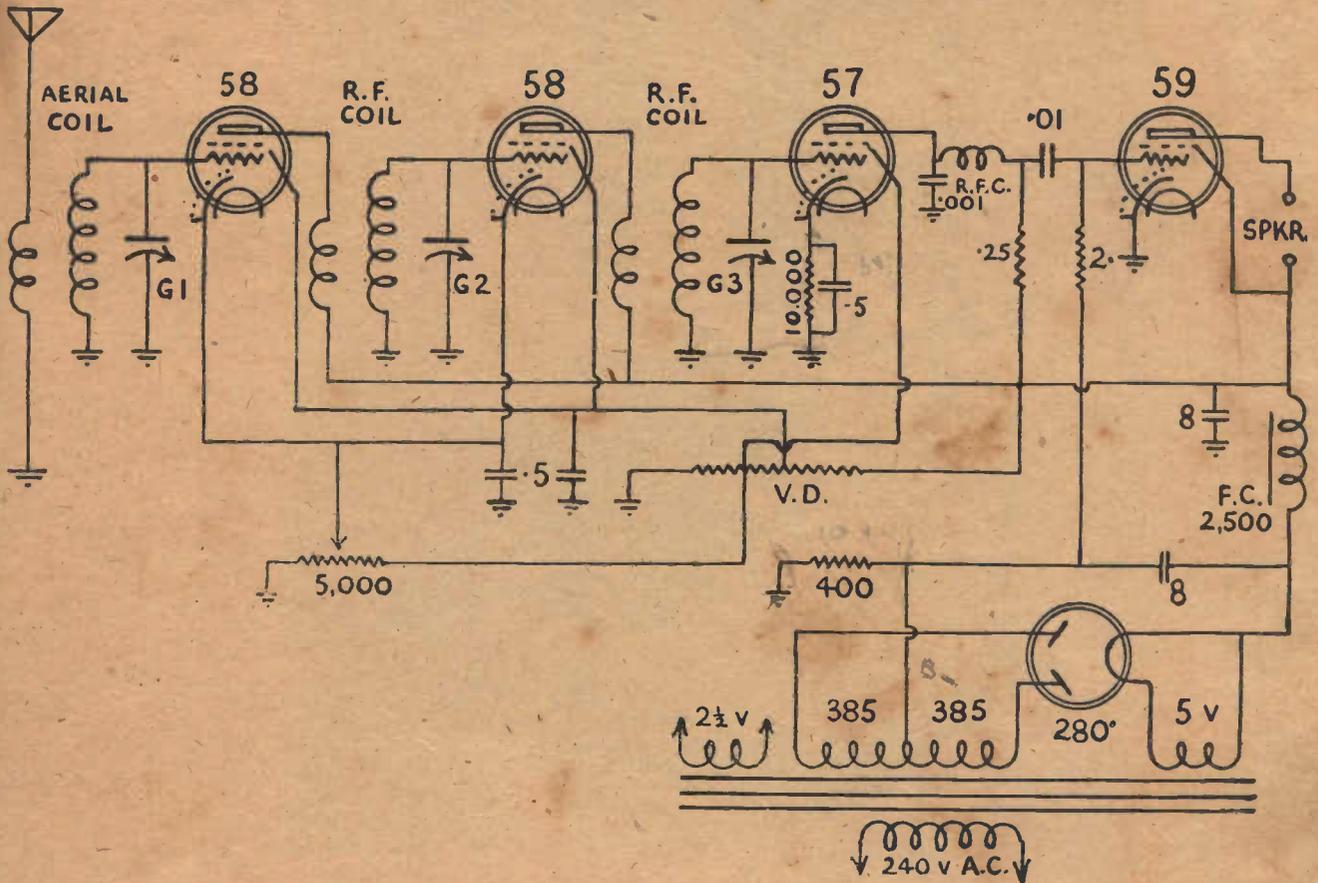
The numbers shown in the above refer to the small figures moulded on the base of the coil former directly under the connection lugs.

**IMPORTANT.**—When using R.C.S. Kits a 5000 o.h.m. Cathode Resistor with a .0015 fixed condenser must be used in the Audiodyne stage.

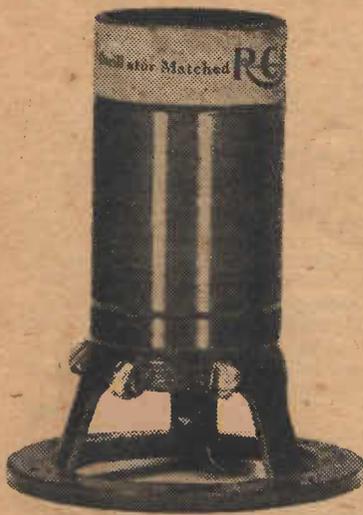
Padder Condenser does not require a Shunt Condenser, and must be mounted up off the chassis at least 1/4 in. by Bakelite washers.

# The 4/5 Standard Midget

R.C.S. Kit Type T.R.F. 4/5

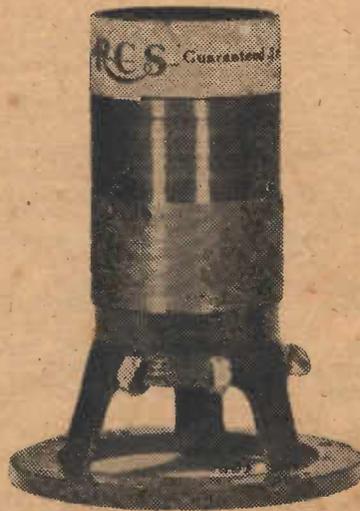


Reprint by the courtesy of "Wireless Weekly." 14/4/'33 For full constructional data refer to this issue.



AERIAL COIL

- 5...Grid
- 1...Earth
- 2...Aerial
- 6...Earth



RADIO FREQUENCY

- 1...H.T. Positive
- 2...Plate
- 5...Grid & Gang
- 6...Earth



RADIO FREQUENCY

- 1...H.T. Positive
- 2...Plate
- 2...Grid and Gang
- 6...Earth

The numbers shown in the above refer to the small figures moulded on the base of the coil former directly under the connection lugs.

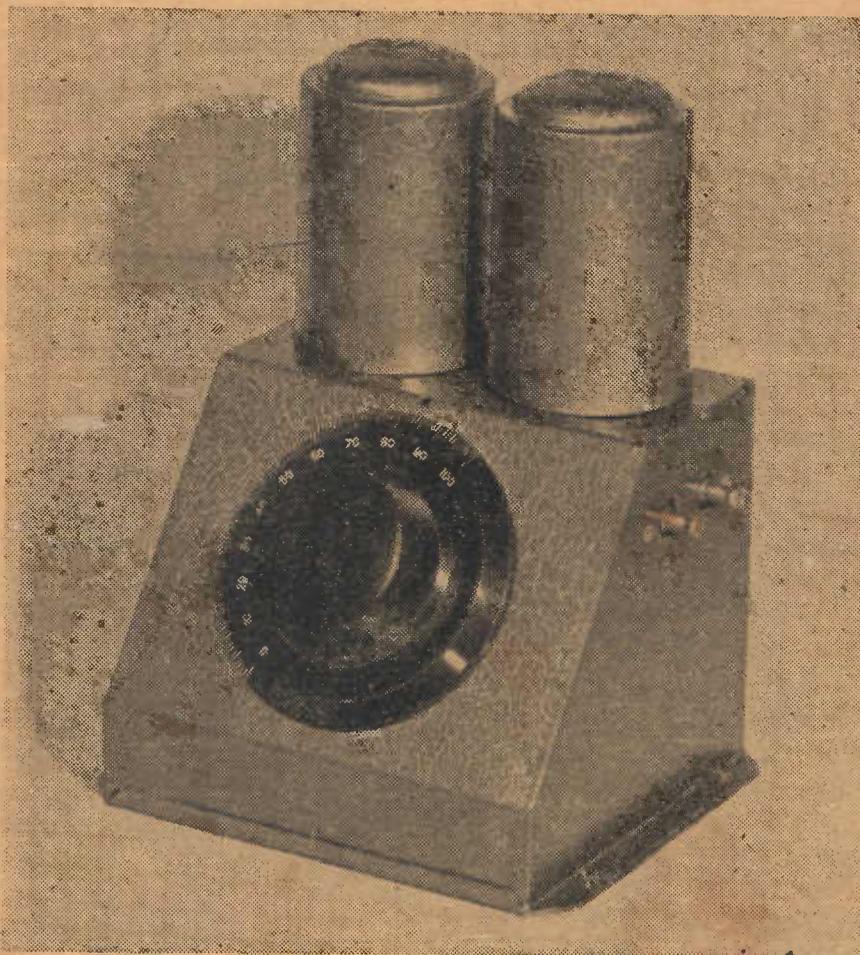
Blue label Coils for Saxon.

Green label Coils for Stromberg, Airzone or Efco.

Standard or Midget Condenser.

Standard or Midget Condenser.

## R.C.S. Service Oscillator



### OPERATING INSTRUCTIONS FOR R.C.S. OSCILLATOR

First place a 56 valve in the five pin socket.

#### LEFT HAND SIDE OF OSCILLATOR—

1. Connect 2 volts positive to the red terminal.
2. Connect the negative side of the 2 volts to the unmarked or earth terminal.
3. Connect the positive 45 volts to the black terminal.
4. Connect the negative 45 volts to the same earth or unmarked terminal as the 2 volts negative.

A.C. can be used on the filament (2 volts); if used connect either side of transformer to red terminal.

#### RIGHT HAND SIDE OF OSCILLATOR—

1. Connect a length of single core shielded wire to the blue terminal.
2. Connect shield or braid to earth, or unmarked terminal.
3. The yellow terminal should be left spare, and is only to be used when sufficient gain cannot be obtained from the blue terminal, such as when lining 3/4 valve sets, or smaller sets. Therefore, the blue terminal will be the low gain, while the yellow terminal will be the high gain output.

The other end of this shielded lead will connect direct to the aerial terminal of the set, while the shielding will connect to the earth terminal of the set. This applies only when aligning the gang condenser or padder.

When aligning Intermediate, this lead will connect to a screen grid clip, which will connect to the grid of the Oscillator valve; the shielding will connect to earth as usual.

If the set is 175 K.C. and the Intermediates are to be aligned, then place the red coil in the 6 pin valve socket, and set the dial to the frequency required, as shown on the chart by the ink numbers.

If 460 K.C. Intermediates are to be aligned, then plug the green coil into the 6 pin socket, and proceed as above.

To align the gang condenser or padder, it will be necessary to fit the brown coil and connect the shielded wire to the aerial, and earth terminal of the set instead of the grid of the Oscillator, and earth as when aligning Intermediates.

**IMPORTANT:** Connect the Oscillator direct to earth with a lead taken from either of the earth terminals; select the frequency required by the dial number. Set the dial to this number and make sure that the correct coloured coil is in the socket.

When the rotor plates come to rest against the fixed plates the dial should read 0.

Two coil cans are supplied, and the coil and valve must be shielded with these shields, or the calibration will be incorrect.

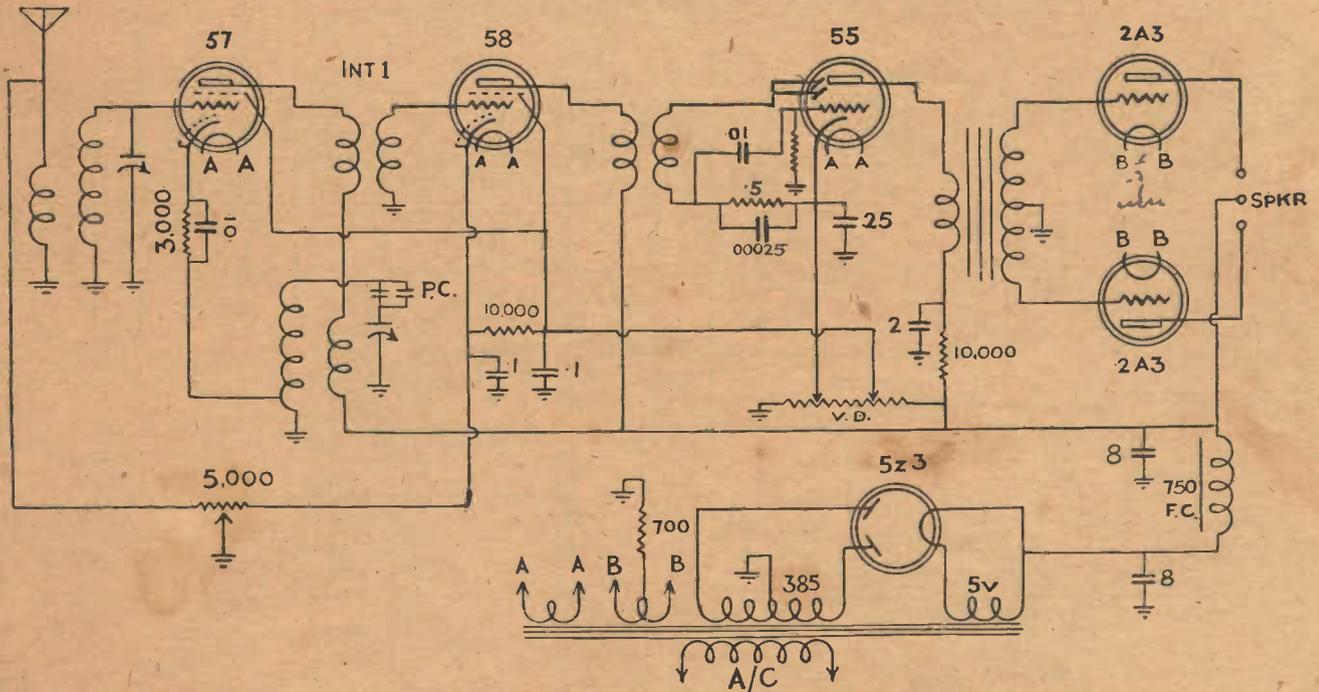
Five calibrations are supplied with each coil. Further calibrations can be obtained at a nominal charge.

When lining the padder it will be necessary to swing the tuning dial of the chassis being aligned backwards and forwards over the Oscillator signal.

When aligning a chassis keep the volume control on the set turned down as low as possible. Do not turn the set up full, as this will overload the second detector, and will give false reading, and the chassis will not be aligned correctly.

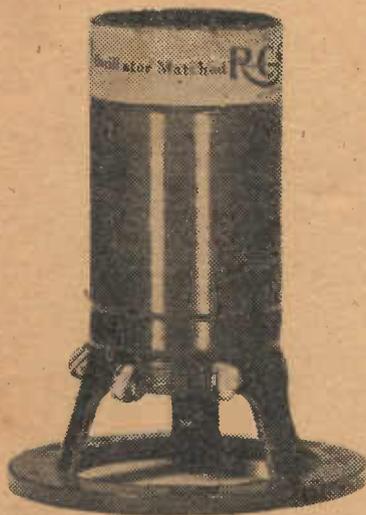
# Supertone Six

R.C.S. KIT TYPE H2A, 57 Valve Cathode Tap



Reprint by the courtesy of "Wireless Weekly." 27/10/33. For full constructional data refer to this issue.

Padder Condenser does not require a Shunt Condenser, and must be mounted up off the chassis at least 1/4 in. by Bakelite washers.



AERIAL COIL

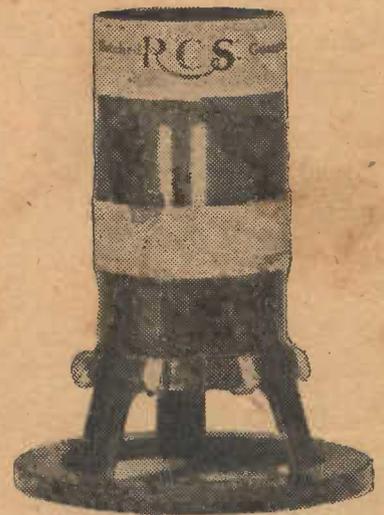
- 2...Aerial
- 1...Earth
- 5...Grid & Gang
- 6...Earth

### Intermediate Color Code

Blue Earth Green B Positive  
 Yellow Grid Red Plate

*The two Intermediates in this kit are not identical and cannot be used in any position*

The Intermediates with the small Coils (Low Gain) MUST BE USED IN THE AUDIODYNE STAGE, while the Intermediates with the large Coils (High Gain) MUST BE USED IN THE SECOND DETECTOR STAGE.



OSCILLATOR COIL 57 Valve

- 1...H.T Pos.
- 5...Padder
- 3...Cathode Resistor
- 2...Plate
- 6...Earth

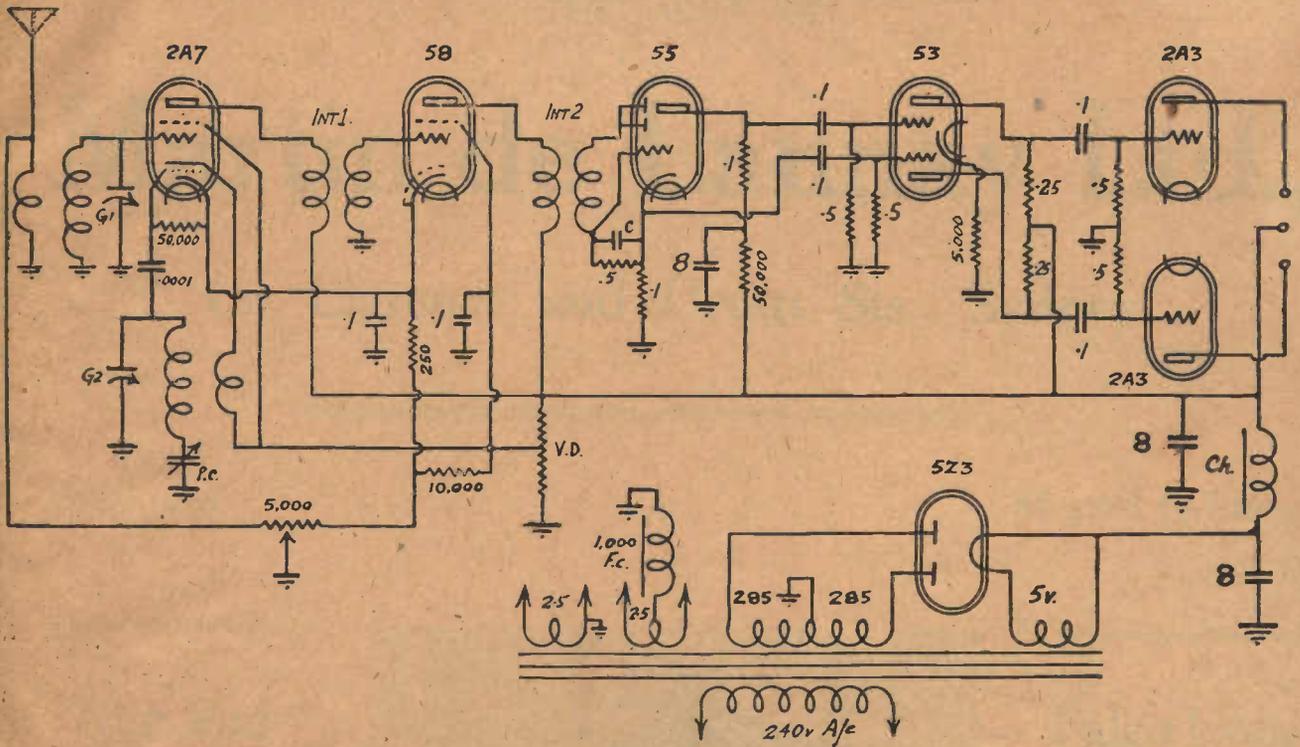
The numbers shown in the above refer to the small figures moulded on the base of the coil former directly under the connection lugs.

**IMPORTANT.**—When using R.C.S. Kits a 5000 o.h.m. Cathode Resistor with a .0015 fixed condenser must be used in the Audiodyne stage.

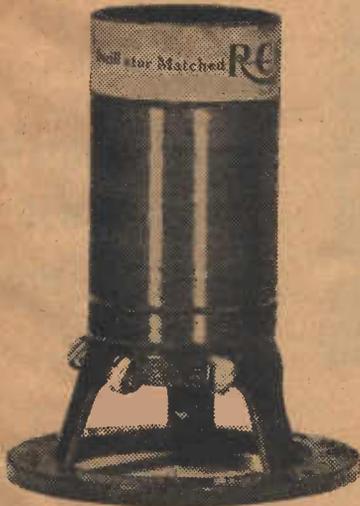


# Extended Tone Receiver

R.C.S. Kit Type H2A, 2A7 Valve



Reprint by the courtesy of "Wireless Weekly." 30/11/34 For full constructional data refer to this issue.



**AERIAL**

2...Aerial 1...Earth 5...Grid 6...Earth

### Intermediate Color Code

Blue Earth Green B Positive  
Yellow Grid Red Plate

*When a diode 2nd detector is used, the yellow will be the diodes and the blue the grid*

*The two Intermediates in this kit are identical, & can be used in any position*

*These Intermediates are of special high gain type and cannot be used with any other valve other than those specified*

*2A7, 6A7 or CK1*

**Blue Label**  
Coils for Saxon  
(Standard or Mid-  
get Condensers)

**Green Label**  
Coils  
for Stromberg,  
Airzone or  
Efco  
(Standard or Mid-  
get Condensers)



**OSCILLATOR COIL**

1...H.T. Positive 5...Gang 6...Padder 2...Plate or Anode

The numbers shown in the above refer to the small figures moulded on the base of the coil former directly under the connection lugs.

Padder Condenser does not require a Shunt Condenser, and must be mounted up off the chassis at least 1/4 in. by Bakelite washers.

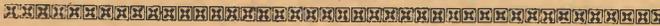
Shielded braid must not be used on any leads.

# MARDEL HOUSE

THE HOME OF

## Martin de Launay Ltd.,

Cr. Clarence and Druitt Sts., Sydney.



Estb. 1916

M 4268 [3 Lines]

---

### Ken-Rad

The Fine  
Valve of Radio



---

### Falco Irons

Outstanding  
Value

---

Mardel Radio  
New Models  
Now Available

---

---

Neon  
Display Signs  
CATALOGUE  
NOW READY

---

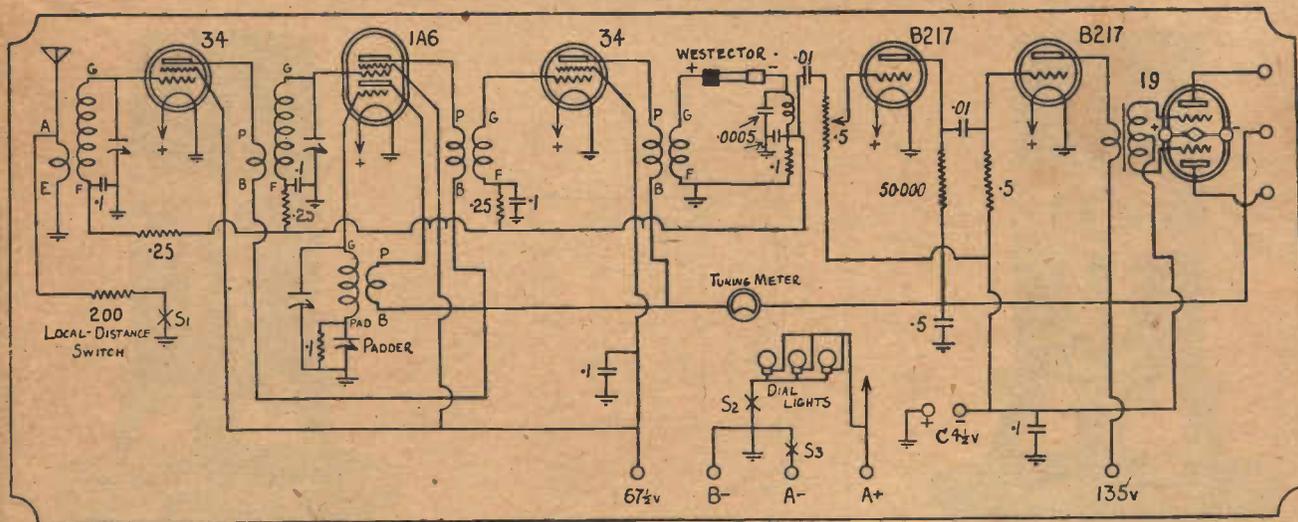
This warehouse is full of Up-to-date Radio and Electrical stocks for your convenience. Our Price list forwarded on request.

Also at Newcastle, corner King and Bolton Streets.

We also stock complete Kits of parts for Circuits in this book including a full range of R.C.S. Coil Kits, etc.

# De Luxe Pentagrid Six

R.C.S. Kit Type No. B.P. 6



Reprint by courtesy of "Wireless Weekly" 12/10/1934. For full constructional data refer to this issue

**AERIAL COIL**

- 2...Aerial
- 1...Earth
- 6...To .1 Resistor
- 5...Grid and Gang

**R.F. COIL**

- 1...B Positive
- 2...Plate
- 6...To .25 Resistor
- 5...Grid and Gang

**OSCILLATOR COIL**

- 1...B Positive 135 Volts
- 2...Anode
- 6...Padder
- 5...Grid and Gang

The numbers shown in the above refer to the small figures moulded on the base of the coil former directly under the connection lugs.

**INTERMEDIATE COLOUR CODE.**—Yellow, Grid; Blue, Earth; Green, B. Pos.; Red, Plate.

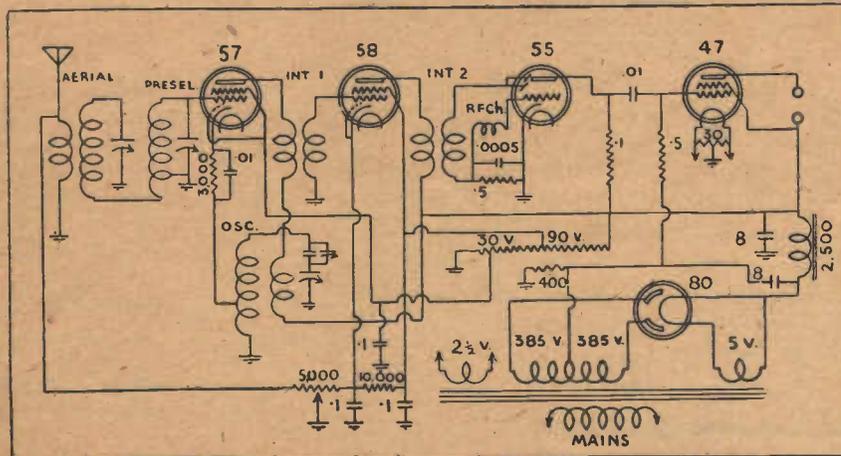
*When a diode 2nd detector is used, the yellow will be the diodes and the blue the grid*

Item No. 66a

(K2AP) 57 Valve

# 1933 Advance Super Het.

R.C.S. Kit Type K2AP, 57 Valve



**Preselector Aerial Coil**

- 5...Cond. Gang First Section.
- 6...No. 1 Lug of Preselector Coil
- 2...Earth
- 1...Aerial

**Preselector Coil**

- 5...Grid
- 6...Earth
- 1...To lug 6 of Preselector Aerial Coil

**R.F. Coil**

- 5...Grid
- 6...Earth
- 2...Plate
- 1...B Pos.

When using an R.C.S. Kit a 5000 Ohm Resistor with a .0015 Condenser must be used in the Autodyne Cathode Circuit

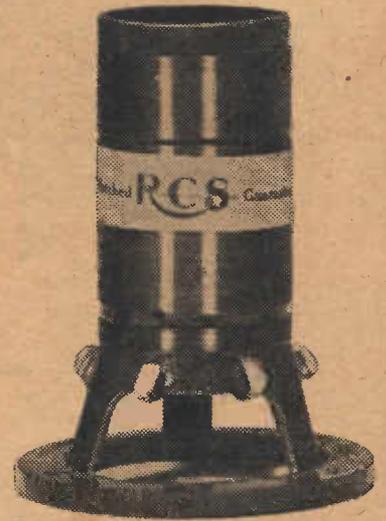
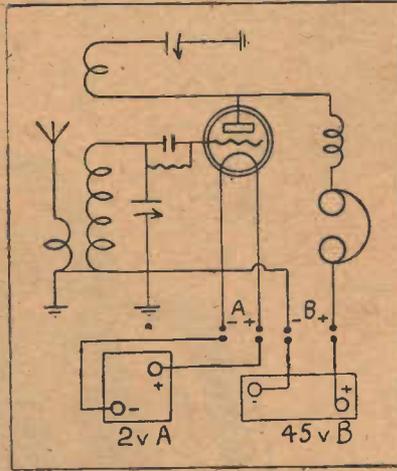
Reprint by courtesy of "Wireless Weekly" 1/9/'33 For full constructional data refer to this issue

The two Intermediates in this Kit are identical, and can be used in any position.

Padder Condenser does not require a Shunt Condenser, and must be mounted up off the chassis at least 1/4 in. by Bakelite washers.

# One Valve Battery Set

R.C.S. Reinartz Coil Unshielded



Reprint by the courtesy of "Wireless Weekly." 18/10/33. For full constructional data refer to this issue.

- 1...Aerial
- 2...Earth
- 6...Grid
- 5...Earth
- 3...Plate
- 4...Reaction Condenser

- 1...Aerial
- 2...Earth
- 6...Grid
- 5...Earth
- 3...Plate
- 4...Reaction Condenser

Blue label Coils for Saxon.  
Standard or Midget Condenser.

Green label Coils for Stromberg, Airzone or Efco.  
Standard or Midget Condenser.

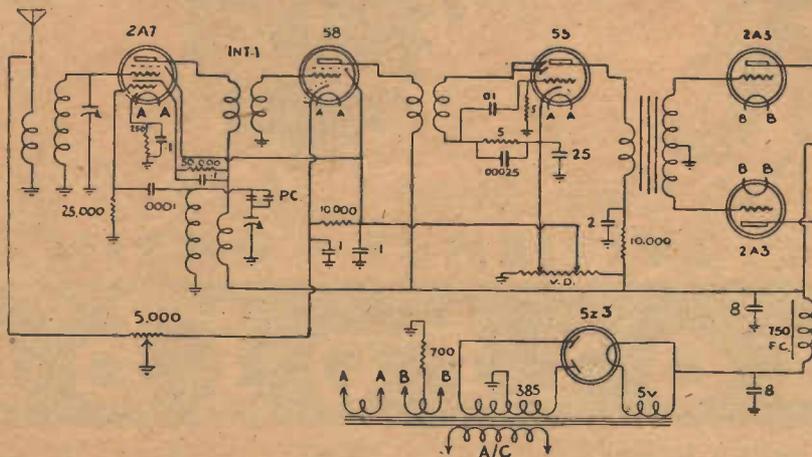
IMPORTANT—All R.C.S. Reinartz Coils are wound so as to be used without coil cans, if coil cans are used the coils will not cover the band

## Item No. 68

# Supertone Superhet 2A7 Valve

Blue Label Coils for Saxon (Standard or Midget Condensers)

Green Label Coils for Stromberg, Airzone or Efco (Standard or Midget Condensers)



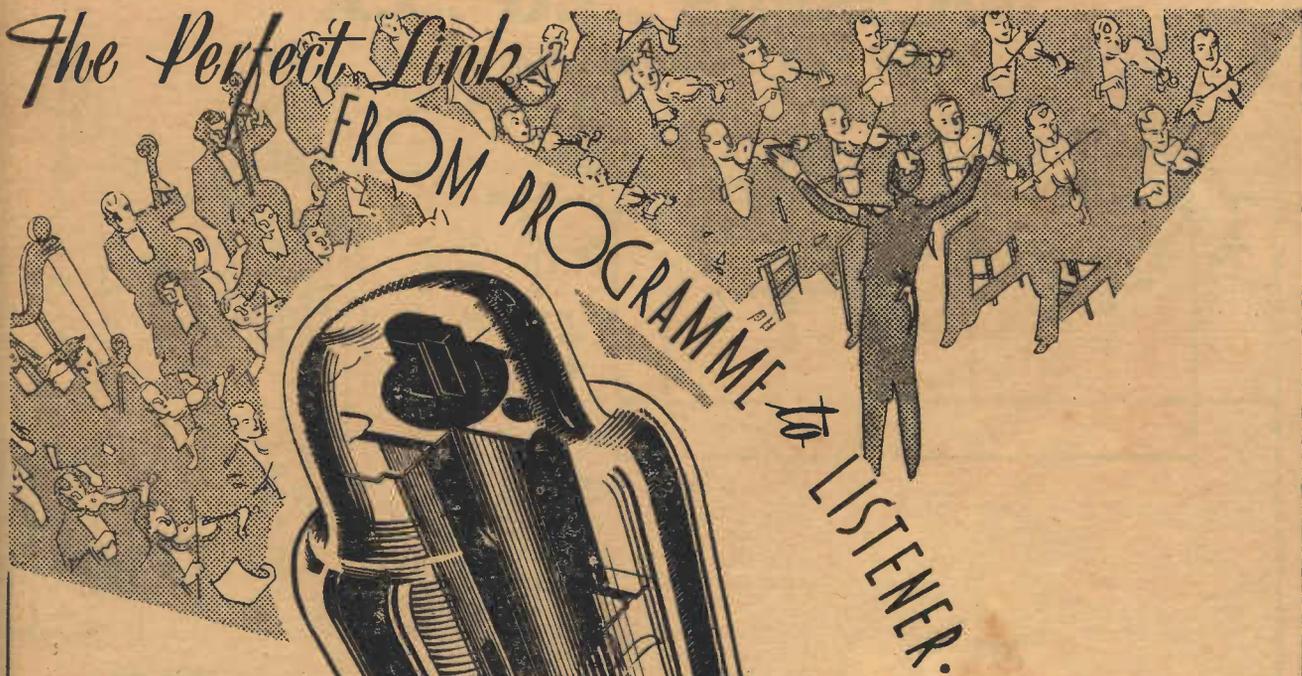
- Intermediate Colour Code
- Blue Earth
  - Yellow Grid
  - Red Plate
  - Green B Positive

Reprint by the courtesy of "Wireless Weekly." 3/11/33 For full constructional data refer to this issue.

The two Intermediates in this Kit are identical, and can be used in any position.

Shielded braid must not be used on any leads.

Padder Condenser does not require a Shunt Condenser, and must be mounted up off the chassis at least 1/4 in. by Bakelite washers.



*The Perfect Link*  
**FROM PROGRAMME to LISTENER...**



**RADIOTRONS**

*for*  
 • BETTER TONE  
 • GREATER VOLUME



*Be sure to* **REPLACE** *your worn out valves*  
*with* **MICRO - SENSITIVE**

**R a d i o t r o n s**

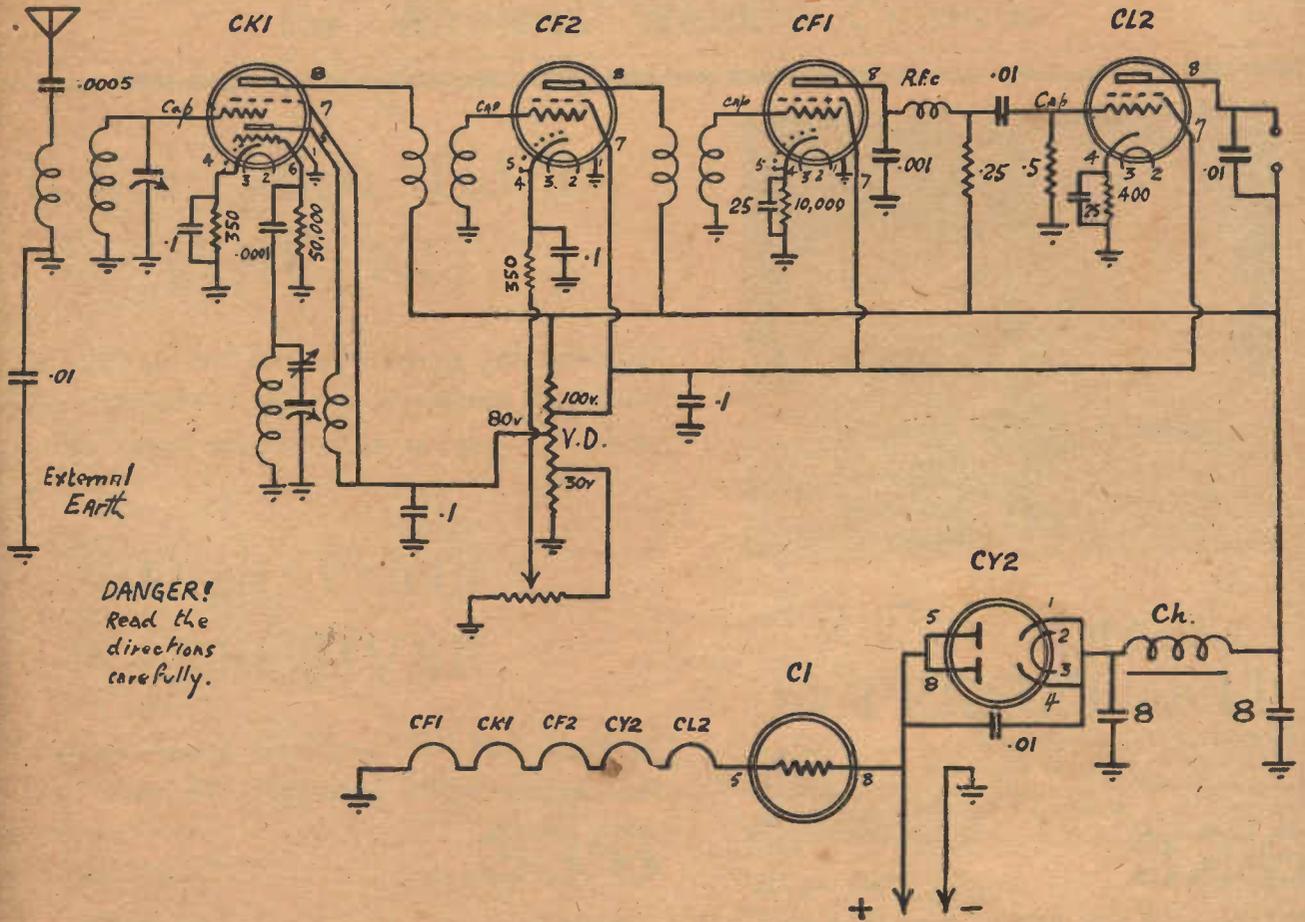
AMALGAMATED WIRELESS (AUSTRALASIA) LIMITED  
 47 YORK STREET, SYDNEY  
 167/9 QUEEN STREET, MELBOURNE

ASSOCIATED GENERAL ELECTRIC INDUSTRIES LTD.  
 93-5 CLARENCE STREET, SYDNEY  
 Cnr. QUEEN & LITTLE COLLINS ST., MELBOURNE, C.I.

*(Advertisement of Amalgamated Wireless Valve Company Ltd.)*

# A.C. D.C. Super Het.

R.C.S. Kit Type H2A, 2A7 Valve



**DANGER!**  
Read the directions carefully.

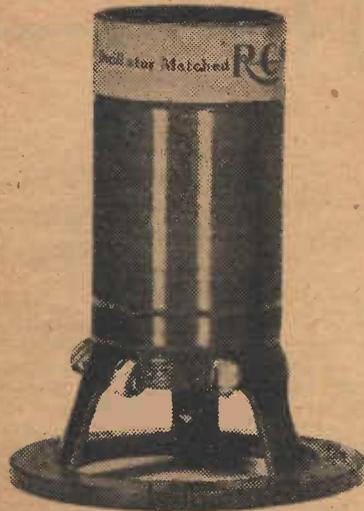
Reprint by the courtesy of "Wireless Weekly." 9/11/34 For full constructional data refer to this issue.

### Intermediate Color Code

Blue Earth Green B Positive  
Yellow Grid Red Plate

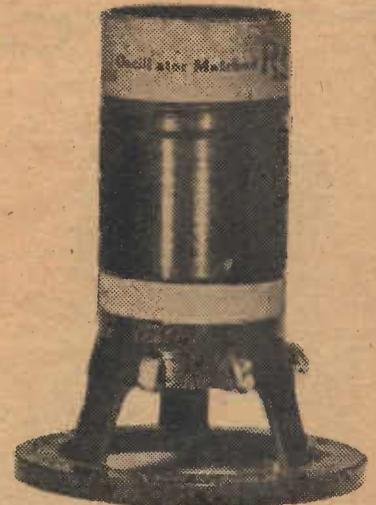
When a diode 2nd detector is used, the yellow will be the diodes and the blue the grid  
The two Intermediates in this kit are identical, & can be used in any position

These Intermediates are of special high gain type and cannot be used with any other valve other than those specified  
2A7, 6A7 or GK1



**AERIAL**

2...Aerial 1...Earth 5...Grid 6...Earth



**OSCILLATOR COIL**

1...H.T. Positive 6...Karth 5...Padder 2...Plate or Anode

The numbers shown in the above refer to the small figures moulded on the base of the coil former directly under the connection lugs.

Padder Condenser does not require a Shunt Condenser, and must be mounted up off the chassis at least 1/4 in. by Bakelite washers.

Shielded braid must not be used on any leads.

Blue Label  
Coils for Saxon  
(Standard or Mid-  
get Condensers)

Green Label  
Coils  
for Stromberg,  
Airzone or  
Efc  
(Standard or Mid-  
get Condensers)

# Specially Designed

## for Wireless Weekly Circuits

### R.C.S. High Fidelity COIL KIT

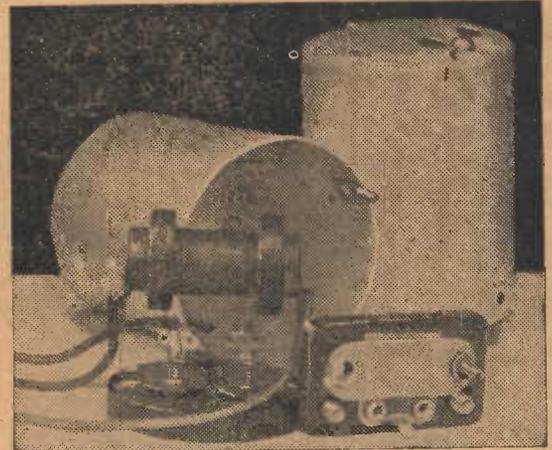
The ultra perfect kit, every single unit scientifically matched to a micrometric degree, also made to the exact specifications of the "Wireless Weekly"

### High Fidelity RECEIVER

Contains Aerial, Oscillator, and R.F. Coils in Cans, Two Air Supported Intermediates, and Padder.

RETAIL PRICE . . . . . **33'6**

Type K2AR-6A7 can be used with any condenser.



### R.C.S. Portable SUPERHET KIT

Air tested, carefully designed for extreme sensitivity for special use in portable receivers. With Aerial, Oscillator, Two Air Supported Intermediates (one special high gain and one special low gain) and Padder. Complete in Cans.

RETAIL PRICE . . . . . **32'6**

Type ATK-4 can be used with any condenser

# HERE IT IS

For  
SERVICE MEN  
SET BUILDERS  
DEALERS  
RADIO ENGINEERS  
EXPERIMENTERS

The  
R. C. S.  
Modulated  
OSCILLATOR

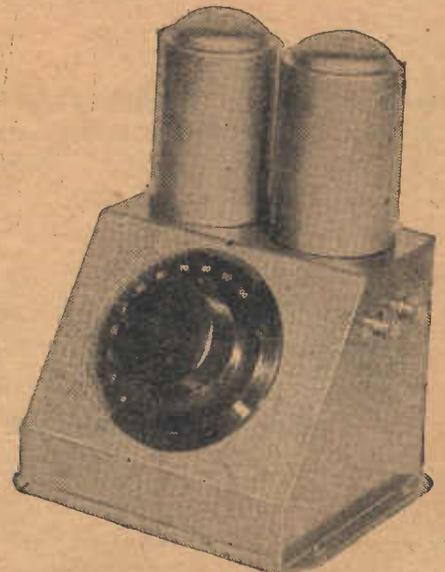
Practically every Radio Man has an oscillator. But there are oscillators and oscillators . . . . . and one out of calibration is useless. Here is a compact little instrument that should prove a boon to every person interested in Radio. Individually calibrated in 5 positions on a Standard Signal Generator, and measuring only 6in. x 5in. x 9in. high, the R.C.S. Oscillator will align any make or type of Radio Receiver, Intermediate Transformers, etc., as accurately as any instrument costing ten times the price.

Operating on a power supply of 45 volts D.C. and 2 volts A.C. or D.C., this Oscillator can quite easily be made portable by the use of a 45 volt B battery and a 2 volt cell. Three coils are supplied, 175 K.C. (red), 460 K.C. (green), and Broadcast (brown), and the whole is completely shielded and finished with a special crackle finish.

Full instructions are supplied with each oscillator.

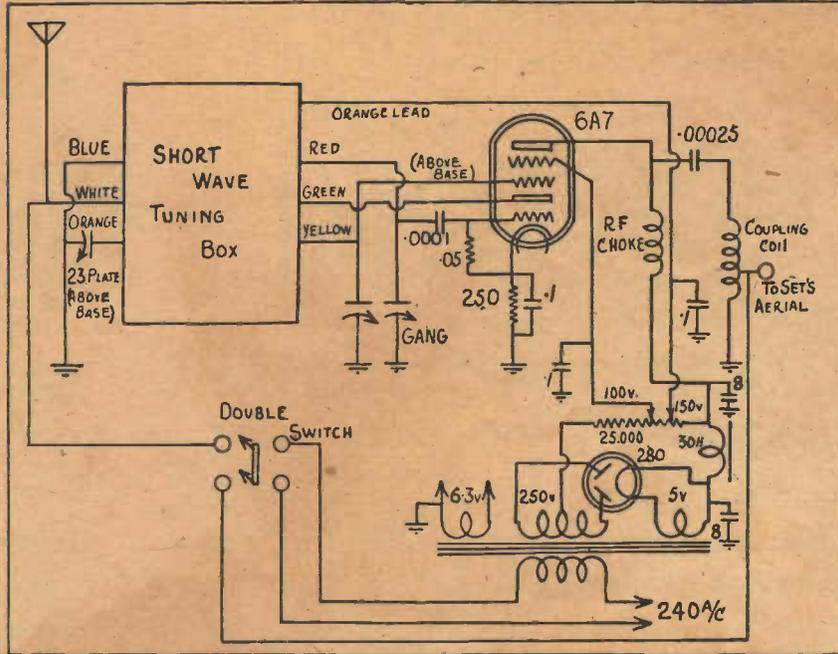
PRICE . . . . .

**£3'10'-**



# Short Wave Converter

R.C.S. Kit Type S/W4



Reprint by the courtesy of "Wireless Weekly." 14/12/34 For full constructional data refer to this issue.

The R.C.S. Short Wave Converter Kit consists of the following:

- 1 Short Wave Tuning Box
- 1 Three Section 90 M/H Coke
- 1 Indicator Plate and Knob
- 1 Special Aluminium Frame, 2 Gang Condenser
- 1 Special Coupling Coil

**IMPORTANT** The Orange lead shown connected to the 150 volt tap will now be the black lead protruding from the can. Use only T.C.C. 0001 and 00025 Condensers. Make sure that the coupling coil is connected correctly

### COUPLING COIL CONNECTIONS

Red connections to the 00025 Condenser

Green connections to the Aerial Terminal of the set

Black connections to earth

A LARGE OUTDOOR AERIAL must be used with this Kit to get good results

# VALVE GUIDE AND PRICE LIST

FOR ALL CIRCUITS IN THIS CATALOGUE

THESE ARE THE CORRECT Mullard Valves TO BE USED IN FOR THE CIRCUITS IN THIS CATALOGUE FOR 100% EFFICIENCY

CIRCUIT	Page	VALVES REQUIRED	Total Price
PENTAGRID SIX	1	2-34 (17/6), 1-1A6 (18/-), 1-PM1HL (14/6), 1-PM2DX (14/6), 1-PM2B (17/6).	£4-19-6
PENTAGRID FOUR	3	1-1A6 (18/-), 1-32 (16/6), 1-PM1HL (14/6), 1-PM22A (17/6).	£3-6-6
PARIS TWO	11	1-PM1HL (14/6), 1-PM22A (17/6).	£1-12-0
S.W. CONVERTER	11	1-57 (16/-), 1-58 (16/-), 1-27 (14/-).	£2-6-0
R.C.S. 4/5 SUPERHET.	12	2-57 (16/-), 1-58 (16/-), 1-59 (18/6), 1-80 (13/-).	£3-19-6
STRAIGHT FORWARD THREE	13	1-PM12A (16/6), 1-PM1HL (14/6), 1-PM22A (17/6).	£2-8-6
DUPLEX DIODE 4/5 T.R.F.	13	2-58 (16/-), 1-55 (16/-), 1-2A5 (16/6), 1-80 (13/-).	£3-17-6
R.C.S. PRESELECTOR 4/5 SUPER	15, 16	2-57 (16/-), 1-58 (16/-), 1-59 (18/6), 1-80 (13/-).	£3-19-6
3/4 SIMPLICITY SUPERHET.	17	2-57 (16/-), 1-59 (18/6), 1-80 (13/-).	£3-3-6
R.C.S. PRESELECTOR 3/4 T.R.F.	17	1-58 (16/-), 1-57 (16/-), 1-2A5 (16/6), 1-80 (13/-).	£3-1-6
R.C.S. STANDARD 5/6 SUPER	19, 21	2-58 (16/-), 2-57 (16/-), 1-59 (18/6), 1-80 (13/-).	£4-15-6
UNIVERSAL BATT SUPERHET.	21	2-39 (17/-), 1-36 (16/6), 2-38 (17/-).	£4-4-6
SIMPLIFIED STANDARD	23	1-57 (16/-), 1-58 (16/-), 1-55 (16/-), 2-47 (16/6), 1-80 (13/-).	£4-14-0
HIGH FIDELITY AMPLIFIER	24	1-55 (16/-), 2-56 (15/-), 2-50 (28/-), 1-5Z3 (16/-).	£5-18-0
1933 STANDARD SUPERHET.	25	2-58 (16/-), 1-57 (16/-), 1-55 (16/-), 2-59 (18/6), 1-80 (13/-).	£5-14-0
4/5 STANDARD MIDGET	26	2-58 (16/-), 1-57 (16/-), 1-59 (18/6), 1-80 (13/-).	£3-19-6
SUPERTONE SIX	28	1-57 (16/-), 1-58 (16/-), 1-55 (16/-), 2-2A3 (24/-), 1-5Z3 (16/-).	£5-12-0
MIDGET SUPERHET.	29	1-57 (16/-), 1-58 (16/-), 1-2A6 (16/6), 1-2A5 (16/6), 1-80 (13/-).	£3-18-0
EXTENDED TONE SUPER.	30	1-2A7 (18/6), 1-58 (16/-), 1-55 (16/-), 1-53 (17/6), 2-2A3 (24/-), 1-5Z3 (16/-).	£6-12-0
DE LUXE PENTAGRID SIX	31	2-34 (17/6), 1-1A6 (18/-), 1-PM1HL (14/6), 1-PM2DX (14/6), 1-PM2B (17/6).	£4-19-6
1933 ADVANCE SUPERHET.	31	1-57 (16/-), 1-58 (16/-), 1-55 (16/-), 1-47 (16/6), 1-80 (13/-).	£3-17-6
ONE VALVE BATTERY SET	32	1-PM1HL (14/6).	14/6
SUPERTONE SUPERHET.	32	1-2A7 (18/6), 1-58 (16/-), 1-55 (16/-), 2-2A3 (24/-), 1-5Z3 (16/-).	£5-14-6
A.C./D.C. SUPERHET.	33	1-FC13 (18/6), 1-VP13A (16/-), 1-SP13 (16/-), 1-Pen26 (17/6), 1-UR2 (17/-), 1-B13 (14/6).	£4-19-6
SHORT WAVE CONVERTER	35	1-6A7 (18/6).	18/6
HIGH FIDELITY SUPER	36	2-78 (16/6), 1-6A7 (18/6), 1-85 (17/-), 2-76 (15/-), 2-50 (28/-), 1-5Z3 (16/-).	£8-10-6
BATTERY PORTABLE	37	2-32 (16/6), 1-1A6 (18/-), 1-PM2DX (14/6), 1-PM22A (17/6).	£4-3-0
ONE VALVE BATTERY SET	39	PM1HL (14/6).	14/6
TWO VALVE BATTERY SET	39	PM1HL (14/6), PM2DX (14/6).	£1-9-0
TWO VALVE A.C. SET	39	1-56 (15/-), 1-2A5 (16/6), 1-80 (13/-).	£2-4-6
DUAL WAVE SUPER.	40	2-6D6 (16/-), 1-6A7 (18/6), 1-75 (16/6), 1-42 (16/6), 1-80 (13/-).	£4-16-6
BATTERY S.W. CONVERTER	40	2-32 (16/6), 1-30 (14/6).	£2-7-6

## ● BE SURE...

Specify MULLARD

Radio Valves as used by the Navy, Air Force and other essential services.

## ● FREE VALVE QUERY SERVICE

For all information about valves and valve circuits use the Mullard free postal technical query service. Have you a copy of the 1935 Valve Guide? If not, write for one to-day—send only stamp for postage. It contains a wealth of information on radio valves.

# Mullard

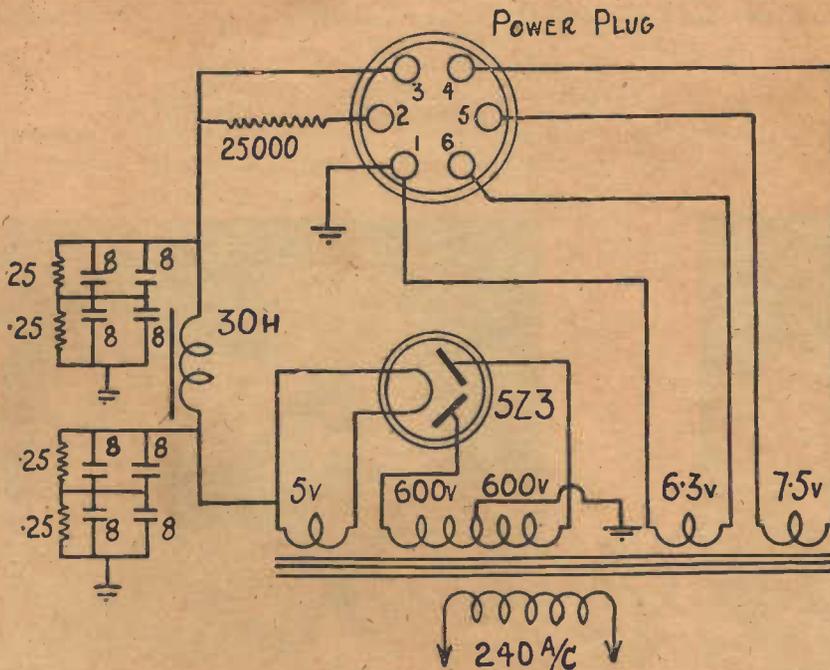
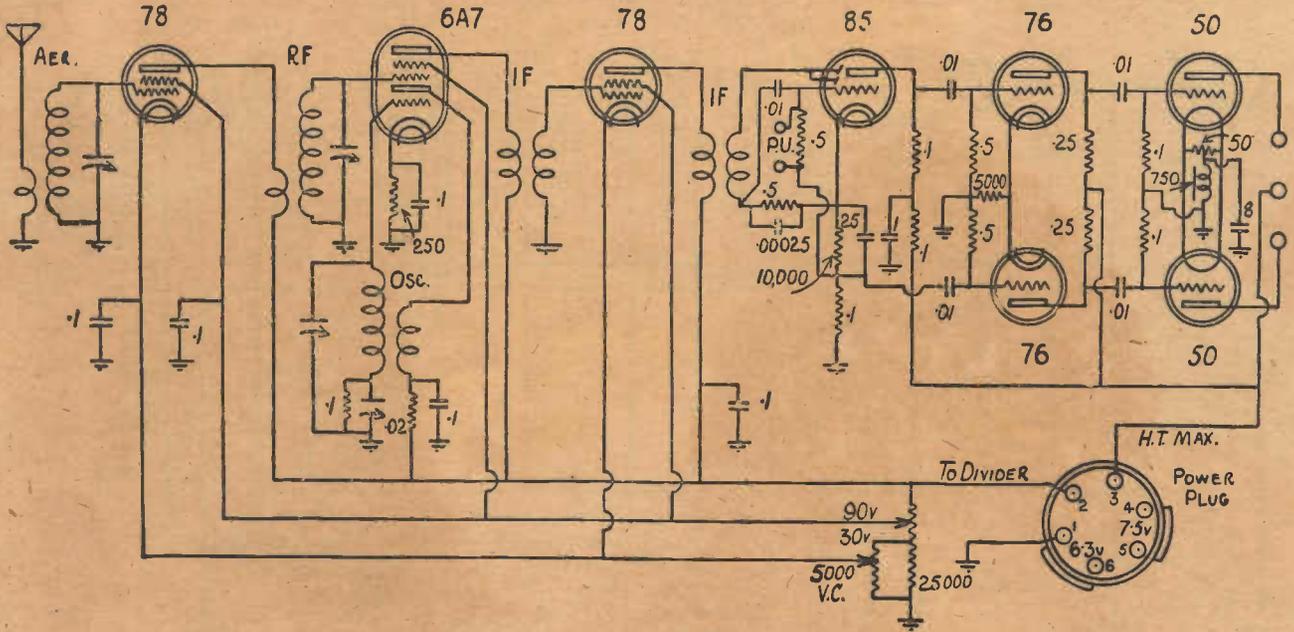
## RADIOVALVES

Product of England

THE MULLARD RADIO CO. (Aust.) LTD., 35 CLARENCE STREET, SYDNEY  
Victorian Distributors: Homecrafts Pty. Ltd., 211-213 Swanston Street, Melbourne

# High Fidelity Receiver

R.C.S. Kit Type K2AR, 6A7



**Colour Code**  
 Blue Earth  
 Yellow Grid  
 Red Plate  
 Green B Positive

*The two Intermediates in this kit are identical and can be used in any position*

**Blue Label**  
 Coils for Saxon  
 (Standard or Mid-gert Condensers)

**Green Label**  
 Coils for Stromberg,  
 Airzone or Efc  
 (Standard or Mid-gert Condensers)

Reprint by the courtesy of "Wireless Weekly." 14/12/34 For full constructional data refer to this issue.

**AERIAL COIL**

- 5...Grid
- 1...Earth

- 2...Aerial
- 6...Earth

**RADIO FREQUENCY**

- 1...H.T. Positive
- 2...Plate

- 5...Grid & Gang
- 6...Earth

**OSCILLATOR 6A7**

- 1...Resistor & .1 Condenser
- 5...Grid & Gang Condenser

- 2...Anode
- 6...Padder & Resistor

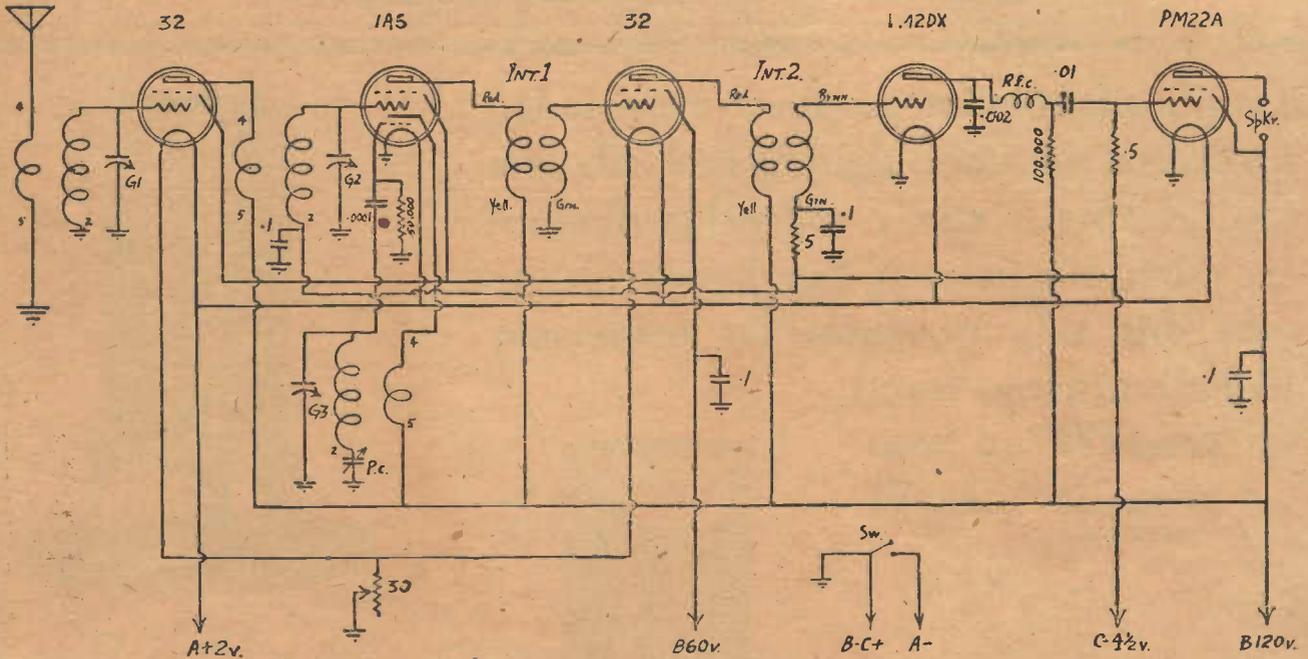
The numbers shown in the above refer to the small figures moulded on the base of the coil former directly under the connection lugs.

Shielded braid must not be used on any leads.

Padder Condenser does not require a Shunt Condenser, and must be mounted up off the chassis at least 1/4 in. by Bakelite washers.

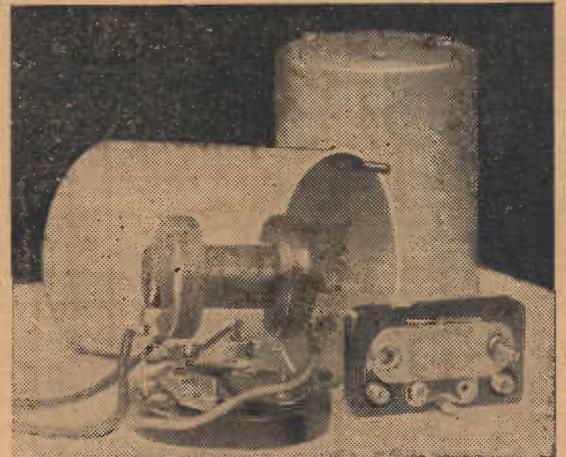
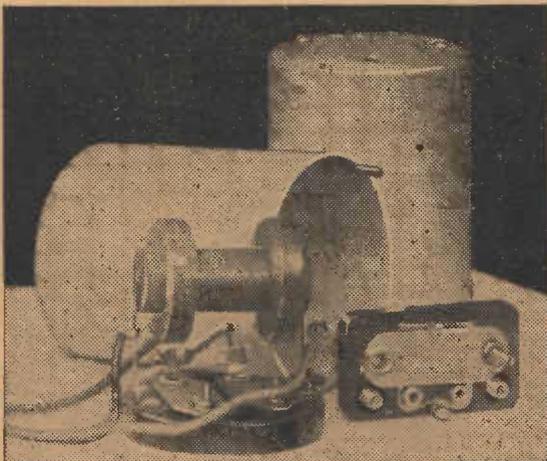
# The Battery Portable

R.C.S. KIT TYPE K2AR, 1A6 Valve [Midget]



Reprint by the courtesy of "Wireless Weekly." 14/12/'34. For full constructional data refer to this issue.

AERIAL COIL		R.F. COIL		OSCILLATOR COIL		
Red...Aerial	Yellow Grid & Gang	Green . B Positive	Red...Plate	Green...B Pos. 120 Volts	Red...Anode	
Blue Earth	Blue Earth	Blue...To .1 Condenser	Yellow.. Grid & Gang	Blue...Padder	Yellow...Gang	



**INTERMEDIATE COLOUR CODE.**—Yellow, Grid; Blue, Earth; Green, B. Pos.; Red, Plate.

Blue label Coils for Saxon.  
Standard or Midget Condenser.

Green label Coils for Stromberg, Airzone or Efso.  
Standard or Midget Condenser.

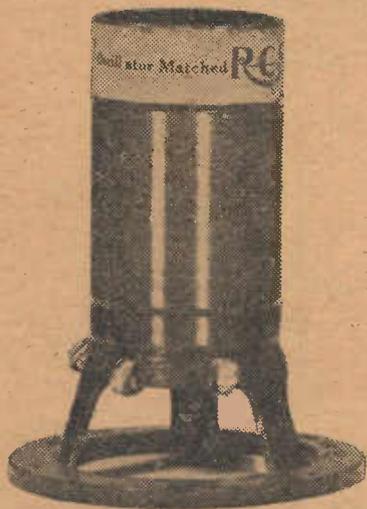
Padder Condenser does not require a Shunt Condenser, and must be mounted up off the chassis at least 1/4 in. by Bakelite washers.

The two Intermediates in this Kit are identical, and can be used in any position.

Shielded braid must not be used on any leads.

# These are the Coils

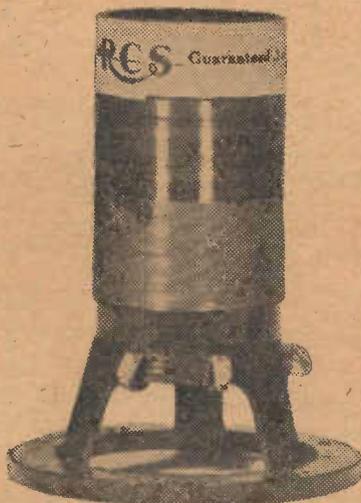
Manufactured by R.C.S.



## R.C.S. Short Wave Coil Assembly

A perfectly matched coil kit manufactured specially to suit the 100 per cent. requirements of the "Wireless Weekly" Short Wave Converter. Complete with one special coupling coil and one special three section Short Wave Honeycomb Choke, and one special Short Wave two-gang All Aluminium condenser. NOT A CONVERTER BROADCAST GANG. Covers four bands or the complete short wave spectrum.

Laboratory products, individually aligned and checked to high precision standards for highest fidelity results. All R.C.S. Coils are air tested and guaranteed under replacement warranty to give the very finest operation when used in "Wireless Weekly" Circuits.

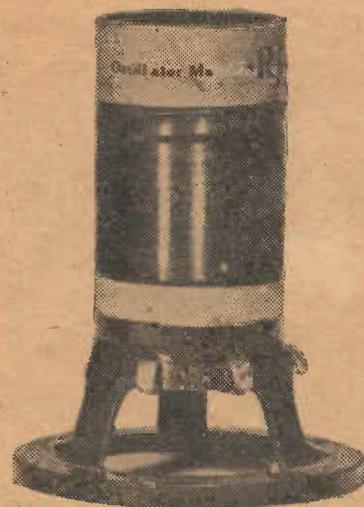


RETAIL PRICE,

**£3'15'-**

COMPLETE.

Ask for type S-W4



# RCS

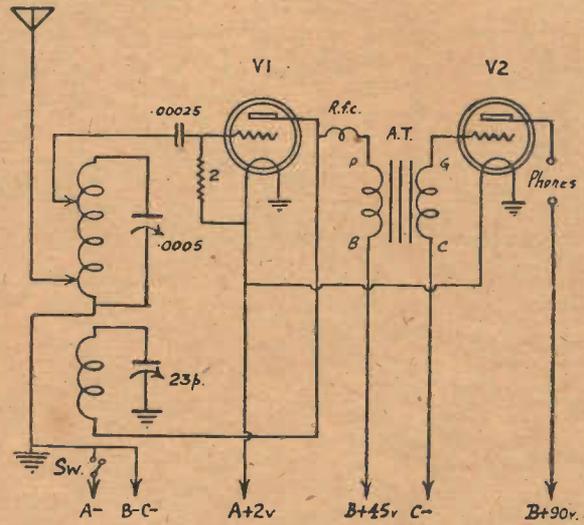
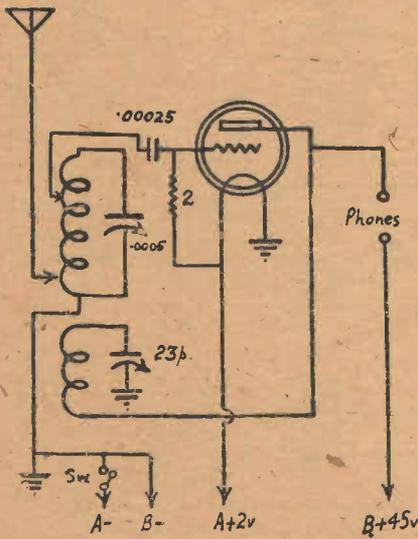
## RADIO

LABORATORIES :  
21 IVY STREET, DARLINGTON  
SYDNEY

Agents in all States

# R.C.S. Reinartz Coils

For use without Coil Cans



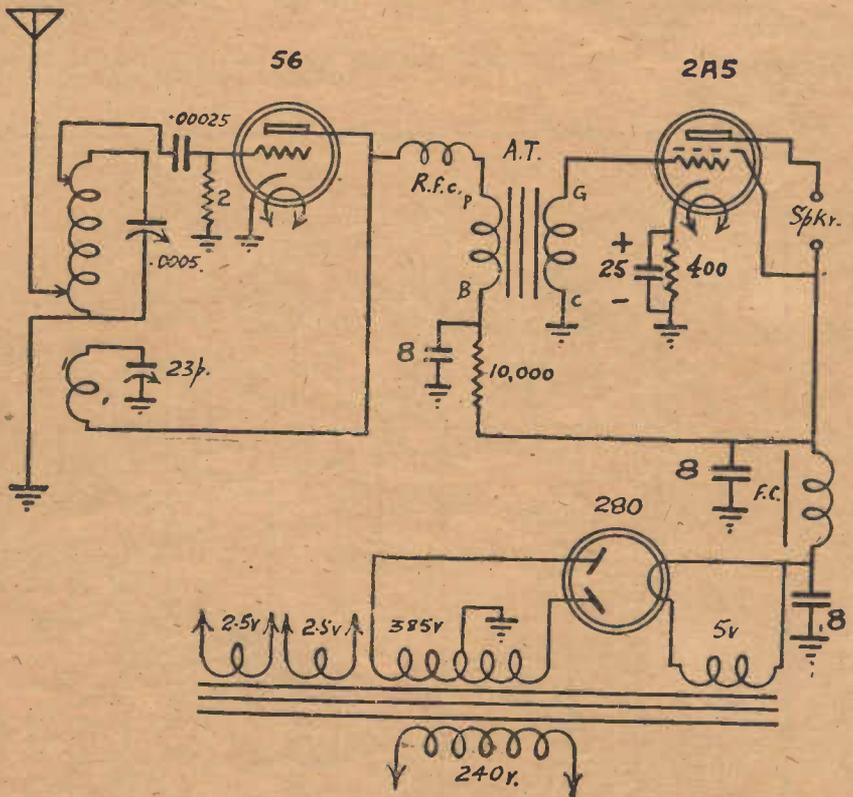
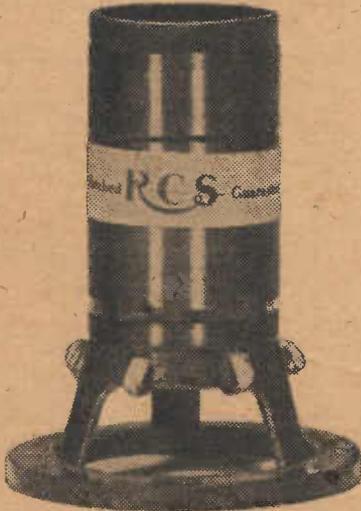
Reprint by the courtesy of "Wireless Weekly." 17/8/34.  
For full constructional data refer to this issue.

Reprint by the courtesy of "Wireless Weekly." 24/8/33  
For full constructional data refer to this issue.

## One Valve Battery Set

## Two Valve Battery Set

The R.C.S. Reinartz Coil is not tapped like coil in circuit, but is supplied with a separate Aerial winding so as to give maximum selectivity



- 1...Aerial
- 2...Earth
- 6...Grid
- 5...Earth
- 3...Plate
- 4...Reaction Cond.

Green Label  
Coils  
for Stromberg,  
Airzone or  
Efco  
(Standard or Mid-  
get Condensers)

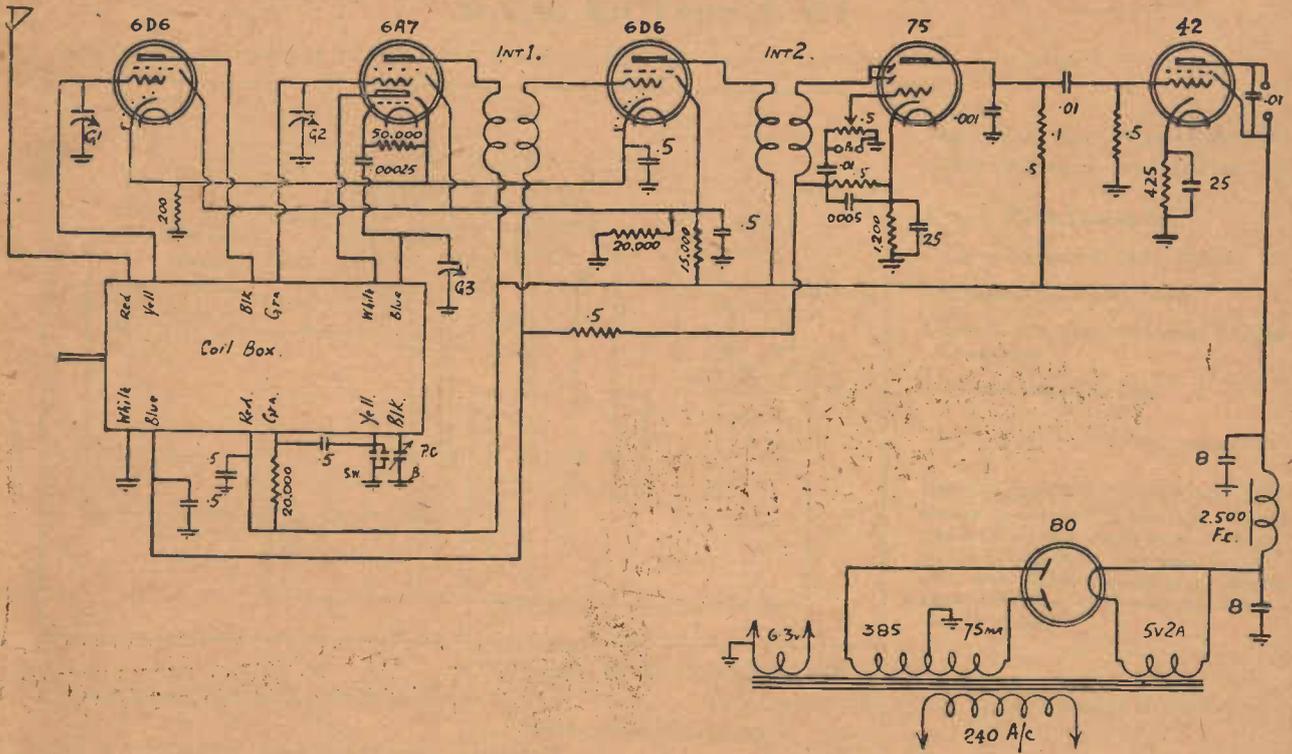
Blue Label  
Coils for Saxon  
(Standard or Mid-  
get Condensers)

Reprint by courtesy "Wireless Weekly" For full constructional data refer to issue 31/8/1934

## Two Valve Electric Set

The numbers shown in the above refer to the small figures moulded on the base of the coil former directly under the connection lugs.

# Dual Wave and Battery Converter Circuits



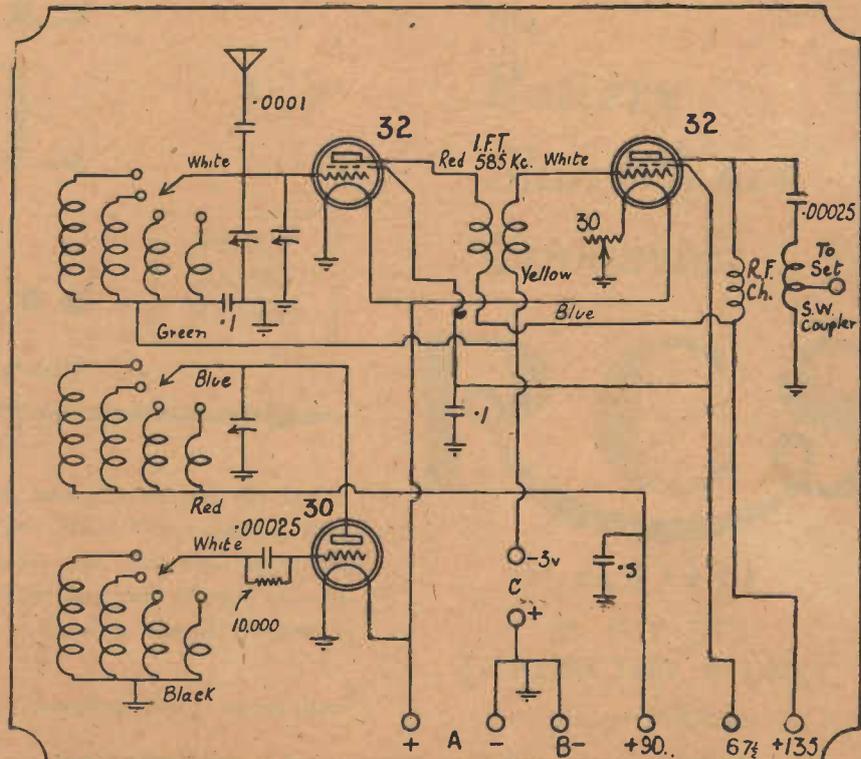
Reprint by the courtesy of "Wireless Weekly." 14/12/34. For full constructional data refer to this issue.

We have included these two circuits for the convenience of dealers and agents, but up to the present we have not as yet manufactured kits to suit

**Green Label**  
Coils  
for Stromberg,  
Airzone or  
Efco  
(Standard or Mid-  
get Condensers)

**Blue Label**  
Coils for Saxon  
(Standard or Mid-  
get Condensers)

**Intermediate  
Colour Code**  
Blue Earth  
Yellow Grid  
Red Plate  
Green  
B Positive

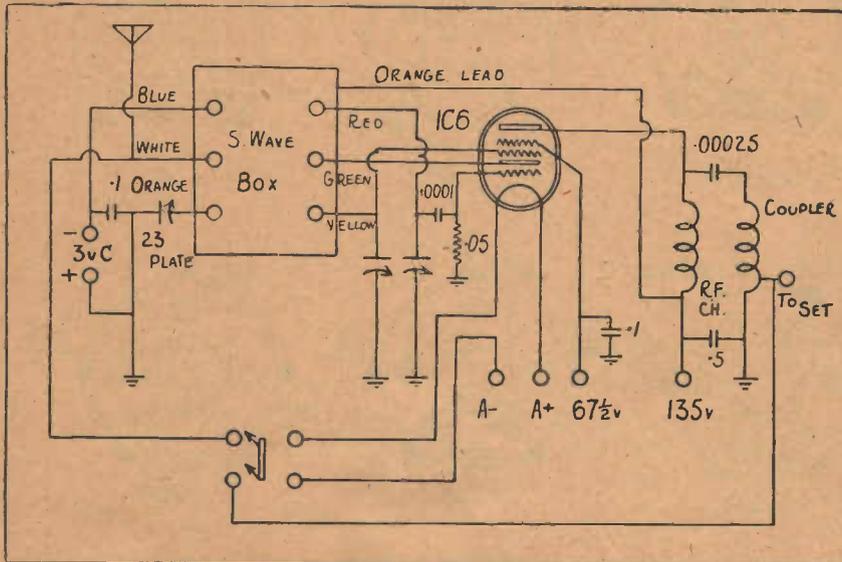


Reprint by the courtesy of "Wireless Weekly." 23/2/34 For full constructional data refer to this issue.

# Battery Short Wave Converter

R.C.S. Kit Type S/W1

Reprint by the courtesy of "Wireless Weekly." 28/12/34 For full constructional data refer to this issue.



The R.C.S. Short Wave Converter Kit consists of the following :

- 1 Short Wave Tuning Box
- 1 Three Section 90 M/H Choke
- 1 Indicator Plate and Knob
- 1 Special Aluminium Frame, 2 Gang Condenser
- 1 Special Coupling Coil

**IMPORTANT :—**The Orange lead shown connected to the 150 volt tap will now be the black lead protruding from the can. Use only T.C.C. 0001 and 00025 Condensers. Make sure that the coupling coil is connected correctly

### COUPLING COIL CONNECTIONS

Red connections to the 00025 Condensor

Green connections to the Aerial Terminal of the set

Black connections to earth

A LARGE OUTDOOR AERIAL must be used with this Kit to get good results

# THE COIL KIT..

for

the  
Battery  
Short-Wave  
Converter

PRICE  
£3/15/-  
RETAIL

Specially designed by

Perfectly matched, air tested, and guaranteed, the R.C.S. Kit S/W1 is complete with one Short-Wave Tuning Box, one 3 section 90 M/H Choke, one indicator plate and knob, one special coupling coil, and one special aluminium frame 2 gang condenser—not a converted broadcast gang.

Kit covers four bands or the complete short wave spectrum.

Coil Kit Box only without gang. £2/19/6 retail.

# RCS

RADIO

21 IVY ST.,  
DARLINGTON, SYDNEY

'Phone MA2226

Agents in all States

# MULLARD VALVES—English Types

Item 78

Bottom Views of Socket Connections.

Page 42.

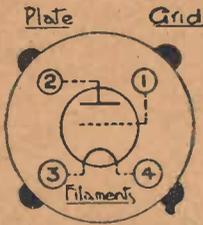


Fig. 1.

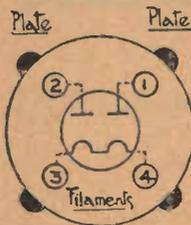


Fig. 2.

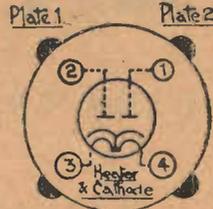


Fig. 2A.

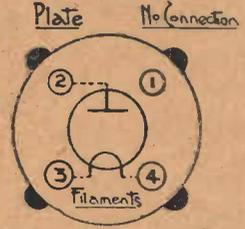


Fig. 3.

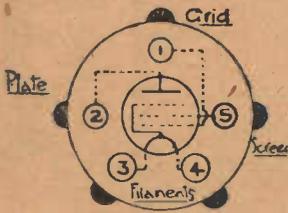


Fig. 4.

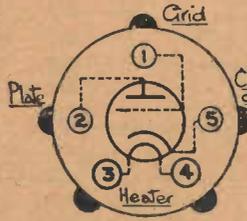


Fig. 5.

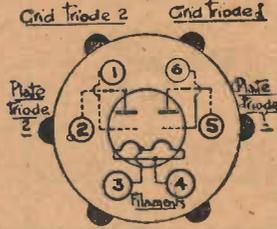


Fig. 6.

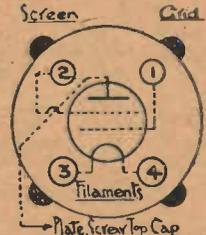


Fig. 7.

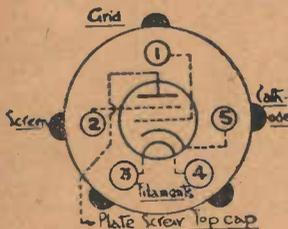


Fig. 8.

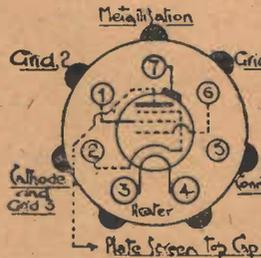


Fig. 9.

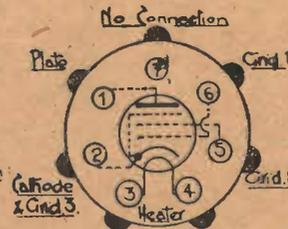


Fig. 10.

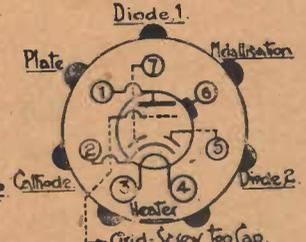


Fig. 11.

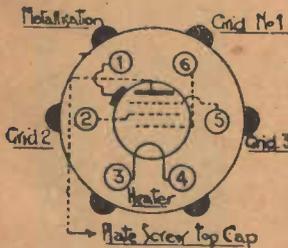


Fig. 12.

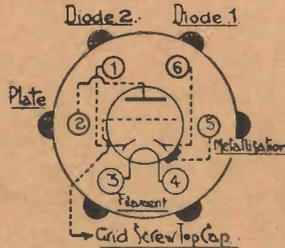


Fig. 13.

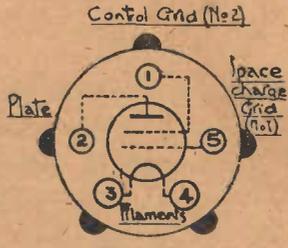


Fig. 14.

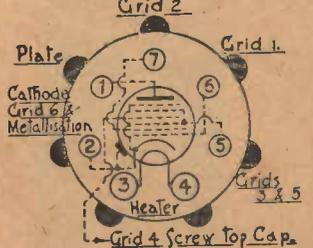


Fig. 15.

Valve Type.	Diagram No.						
ACO44	1	PM1LF	1	PM24M	4	SP4	9*
ACO64	1	PM12	7	PM26	4	TDD2	13†
AC104	1	PM12A	7	PM202	1	TDD2 (S)	13†
DU2	2	PM12M	7	PM252	1	TDD4	11*
DU10	3	PM12V	7	PM254	1	VM4V	8
DW3	2	PM14	7	PM256	1	VP2	12
DW4	2	PM16	7	PM3	1	VP4	9*
DW15	2	PM2	1	PM4	1	104V	5
FC4	15*	PM2A	1	PM4DX	1	164V	5
IW3	2A	PM2B	6	PM5B	1	244V	5
MM4V	8	PM2DX	1	PM5X	1	354V	5
Pen4VA	10*	PM22	4	PM6	1	904V	5
PM1A	1	PM22A	4	S4V	8		
PM1DG	14	PM24	4	S4VA	8		
PM1HF	1	PM24A	4	S4VB	8		
PM1HL	1	PM24B	4	SP2	12		

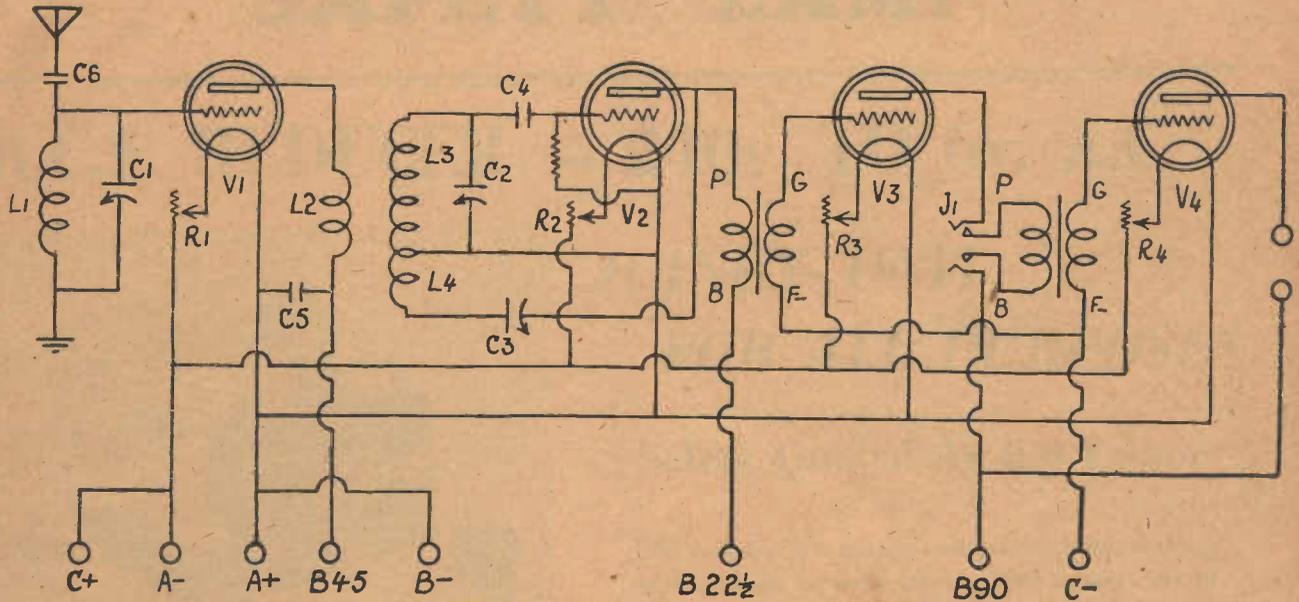
NOTES.

\*Medium 7-pin base (not small 7-pin).

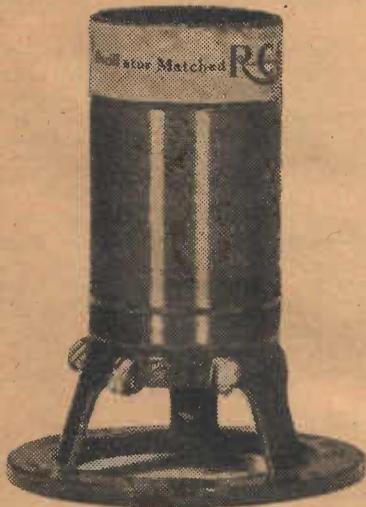
†Referring to Fig. 13, in the case of TDD2, socket connection No. 3 is negative filament, No. 4 positive filament, No. 1 A.V.C. diode, No. 6 detector diode. Type TDD2(S) has identical characteristics, but No. 1 socket contact is detector diode, and No. 6 A.V.C. diode.

# Marco Four

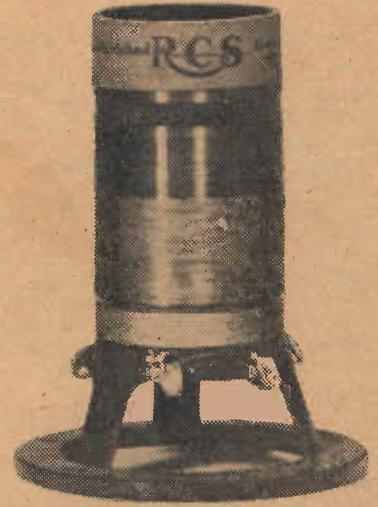
## R.C.S. Kit Type 3/4 T.R.F. with Reaction



Reprint by the courtesy of "Wireless Weekly." 25/1/35 For full constructional data refer to this issue.



Aerial



Radio Frequency with Reaction

- 1...Aerial
- 2...Earth
- 5...Grid and Gang
- 6...Earth

- 3...Earth
- 4...Reaction

- 5...Grid
- 6...Earth

- 1...B Positive
- 2...Plate

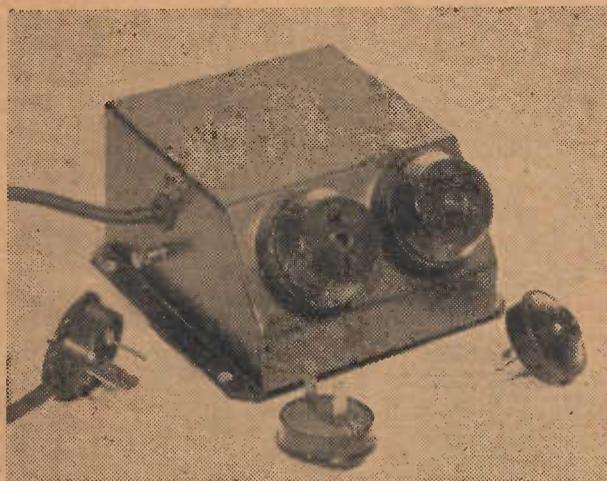
Blue label Coils for Saxon.  
Standard or Midget Condenser.

Green label Coils for Stromberg, Airzone or Efco.  
Standard or Midget Condenser.

# R.C.S. Voltage Reducer

## SAFETY LAMP

**R.C.S. REDUCER -- 240v. TO 6v. A.C.**



Showing the unit with two outlets for the 6-volt supply.

**HANDY UNIT**  
**FOR ALL PURPOSES**

**Safety Quoted As Big Factor**

*This reducer is a simple unit allowing low voltage apparatus to be used where there is any risk of danger from the A.C. lines. Such units are creating quite a bit of interest at the moment.*

**I**LLUSTRATED here is the latest R.C.S. production—a reduced unit, which breaks down the 240 A.C. voltage to 6 volts. The idea is that from 6 volts all manner of apparatus, particularly inspection lamps, can be safely operated, whereas there is always a certain amount of danger involved when portable apparatus of this kind is in use.

A garage inspection lamp, for instance, is always a likely

source of trouble. In time, cords become frayed, and it doesn't take much of a squeeze under a heavy metal object to cut through a lamp cord.

When this happens there is, of course, the danger of a nasty shock through a damp floor, to say nothing of blown fuses.

A similar happening with the 6 volt supply can do nothing more serious than to burn up a piece of the cord before there is a chance to switch

off, or blow the simple fuse which could no doubt be placed in circuit. There would be no danger at all of any shock.

Details supplied by R.C.S. are as under:—

This R.C.S. unit reduces the 240 volts A.C. to a safe and handy 6 volts.

Besides providing a 3-pin plug fitted with a 3-core circular flex, a direct earth terminal is fitted to the can, which should be connected direct to earth.

Two 6-volt outlets are fitted to the front end of the can, permitting two 6-volt lamps to be used at the same time.

This instrument may be used by children to operate toy motors, electric trains, etc., with perfect safety.

It is ideal for dentist, doctor, chemist, and all professional men for operating and inspection lamps. It does not contain any batteries, and therefore will not deteriorate with age.

### INSTRUCTIONS FOR INSTALLING REDUCER

**W**HEN house wiring is fitted with three-pin points, simply plug the voltage reducer into the power point, and then plug any 6-volt apparatus into either of the

two-pin plugs fitted to the front of the can.

If two-pin power points are installed, remove the three-pin plug supplied with the reducer, and connect the red

and black lead to a suitable two-pin plug.

The white wire in power flex is earth, and when two-pin plug is used simply cut this wire back and bind with

insulation tape. In this case separate earth wire must be taken from the earth terminal on the reducer to a good earth, such as a water pipe.

**With this R.C.S. Unit you work in safety, as it reduces the dangerous 240 volts to a harmless 6 volts**

Two 6 volt outlets are fitted to the front of can permitting two 6 volt lamps to be used at one time

**REDUCES YOUR ELECTRICITY BILL**

Reduces your LAMP BILL, as it permits the use of ordinary motor car globes with thick filament which are hard to burn out or damage

# Wire Tables

## B.E.S.A. Standard Sizes of Annealed Copper Wires

Gauge	Diameter	Calculated Sectional Area	Weight per 1,000 yds.	Standard Resistance at 60° F.		Fusing Current in amps.
				Ohms. Per 1,000 yds.	Ohms. Per lb.	
S.W.G.	Inch	Sq. Inch	Lbs.			
16	.064	.003217	37.20	7.463	.2006	165.8
17	.056	.002463	28.48	9.747	.3422	132.5
18	.048	.0018096	20.93	13.267	.6340	107.7
19	.040	.0012566	14.533	19.105	1.3146	81.5
20	.036	.0010179	11.772	23.59	2.004	70
21	.032	.0008042	9.301	29.85	3.209	58.6
22	.028	.0006158	7.121	38.99	5.475	48
23	.024	.0004524	5.232	53.07	10.144	38.1
24	.022	.0003801	4.396	63.16	14.366	33.4
25	.020	.0003142	3.633	76.42	21.03	29
26	.018	.0002545	2.943	94.35	32.06	24.7
27	.0164	.0002112	2.443	113.65	46.52	21.5
28	.0148	.00017203	1.9895	139.55	70.14	18.4
29	.0136	.00014527	1.6800	165.27	98.37	15.5
30	.0124	.00012076	1.3966	198.80	142.35	14.1
31	.0116	.00010568	1.2222	227.2	185.87	12.8
32	.0108	.00009161	1.0594	262.1	247.4	11.5
33	.0100	.00007854	.9083	305.7	336.5	10.2
34	.0092	.00006648	.7688	361.2	469.8	9.04
35	.0084	.00005542	.6409	433.2	676.0	7.88
36	.0076	.00004536	.5246	529.2	1008.7	6.79
37	.0068	.00003632	.4200	661.1	1574.0	5.74
38	.0060	.00002827	.3270	849.1	2597	4.76
39	.0052	.00002124	.2456	1130.5	4603	3.84
40	.0048	.000018096	.2093	1326.7	6340	3.41
41	.0044	.000015205	.17585	1578.9	8979	2.99
42	.0040	.000012566	.14533	1910.5	13146	2.59
43	.0036	.000010179	.11772	2359	20040	2.21
44	.0032	.000008042	.09301	2985	32090	1.85
45	.0028	.000006158	.07121	3899	54750	1.52
46	.0024	.000004524	.05232	5307	101440	1.25
47	.0020	.000003142	.03633	7642	210300	0.917
48	.0016	.000002011	.02325	11941	513500	0.655
49	.0012	.0000011310	.013079	21228	1623000	0.346
50	.0010	.0000007854	.009083	30568	3365000	0.324

The above tables supplied by The Liverpool Electric Cable Co. Ltd. show the dimensions and properties of copper conductors, gauges 16 SWG to 50 SWG, these being the sizes generally met with in radio coil winding practice.

Column 3 shows the sectional area in square inches and provides a basis for determining the correct gauge for any required current loading according to the permissible current density in amps (500, 1000, 2000, etc.) per sq. inch of area.

Columns 5 and 6, showing resistance per lb. and per 1000 yds., should prove of assistance in estimating the quantity or weights of wire required for any given resistance value, whilst column No. 7 shows the fusing current in amps for all standard gauges 16 SWG to 50 SWG.

# MORE R.C.S. LINES

## Inexpensive Attenuator

### SPEAKER TRANSFORMERS, TOO

*Believing that there is always a steady business in components, R.C.S. radio has steadily enlarged its list of manufactured parts. Here are two of the latest.*

**T**HE R.C.S. RADIO has been famous for tuning coils since first it put up its nameplate. Lately, Ron Bell has been giving his attention to other sidelines as well, such as oscillators, line filters and so on.

The latest addition is an Attenuator which he claims to be exceptionally accurate, and, at the same time, reasonable in price. It is specially suited for use with the oscillator he produced some little time ago.

Here is his own account of the Attenuator:—

Since the announcement of the R.C.S. Modulated Oscillator, two months ago, many inquiries have been received for a good quality Attenuator. In order to make it possible for all owners of oscillators and signal generators not now equipped with a reliable At-

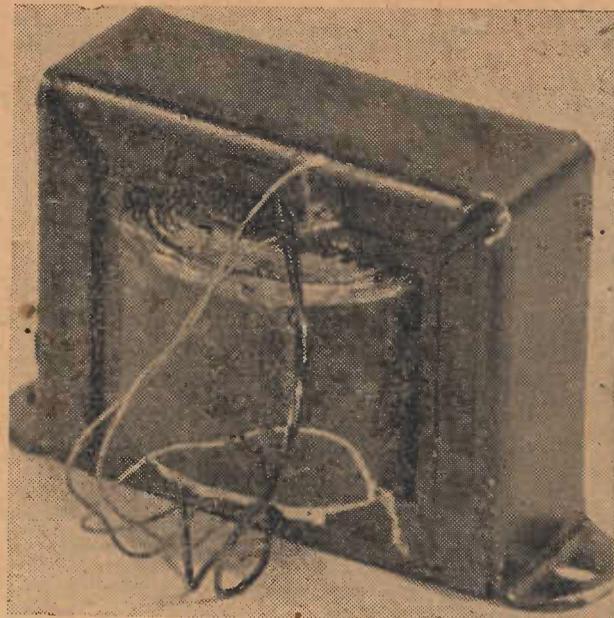
all be agreeably surprised to learn that it is possible to obtain this high quality R.C.S. instrument for only £1/15/-.

#### THE NEW R.C.S. ATTENUATOR NET WORK

This is a precision instrument, and is suitable for the divisions of the voltage output of a modulated oscillator or signal generator. It comprises six steps, the steps representing:—

20,000	Micro-volts.	
2,000	"	
200	"	
20	"	
5	"	
1	"	Output

This Attenuator consists of R.C.S. precision resistors, arranged in Ladder-type network. This instrument is so accurately calibrated that, provided one volt is fed into



The R.C.S. speaker transformer.

wound on new machines which have just been added to the factory, and Ron Bell can guarantee an accurate and reliable job. He is very anxious to see these new lines of his enjoy the same reception as his now famous coils, and invites trade communication regarding them.

Following is the official

pedance voice coils, and if the coils are required for replacement we would advise the quoting of the type of speaker that they are required for.

The low resistance secondaries are wound with heavy wire and are designed to carry heavy current. The cores for this speaker transformer are made of high grade Stalloy, and are composed of many laminations shaped E and I.

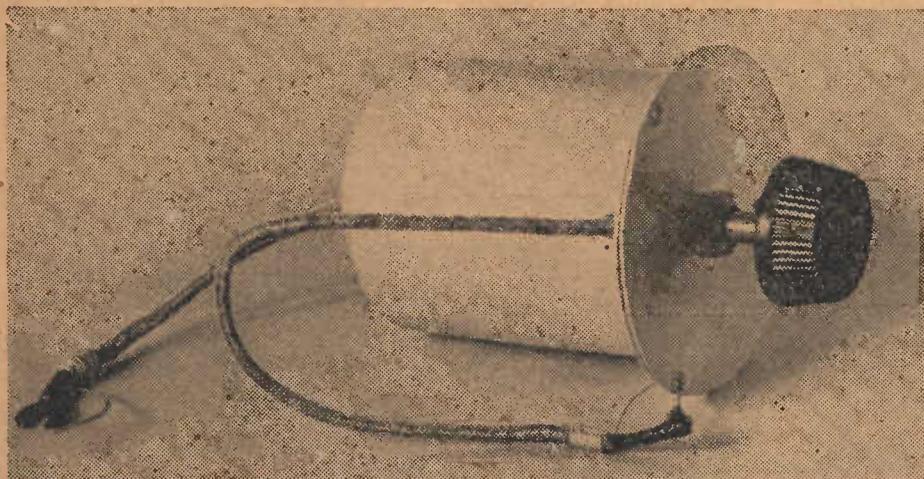
The core and coil complete is impregnated in a special compound so as to stop any rattle and also the effect of moisture and high humidities.

The core and coil are assembled in a complete bracket. This clamps the core tight, and provides a convenient method of mounting.

The bracket is sprayed silver, and several types of complete transformers and coils are made as per the code below:—

- T.S.1 Single (245 or Triode), Low imp. sec.
- T.S.2 Single (245 or Triode) High imp. sec.
- T.S.3 Push Pull (245 or Triode) Low imp. sec.
- T.S.4. Push Pull (245 or Triode) High imp. sec.
- T.S.5 Single (2A5 or Pentode) Low imp. sec.
- T.S.6 Single (2A5 or Pentode) High imp. sec.
- T.S.7 Push Pull (2A5 or Pentode) Low imp. sec.
- 2.S.8 Push Pull (2A5 or Pentode) High imp. sec.

These speaker transformers have been tested between primary and secondary, and primary and secondary to earth with a flash test of 1000 volts A.C. This voltage is three times that impressed on the coils when in operation in a radio receiver.



The attenuator graduated in six steps.

tenuator to obtain one, and at a reasonable price, the R.C.S. engineers immediately started work to design an instrument to fill these requirements. Constant work in the laboratory for the past six weeks has resulted in a precision built Attenuator which is accurate and reliable. Experimentors, service men, manufacturers and dealers will

the input leads, any one of the above divisions can be obtained from the output leads.

#### SPEAKER TRANSFORMERS

Another R.C.S. product which should prove popular is a speaker transformer of standard type, available in all resistances to suit modern valves. The transformers are

R.C.S. specifications of the transformers:—

The R.C.S. speaker transformers are made in two types, 1 (245 or Triode) or 2 (2A5 or Pentode).

The primaries are of a special matched impedance, and can be supplied, centre tapped, for push pull.

The secondaries are wound for both low and high im-

# Economy Short Wave Converter

R.C.S. Type D0/1

Type D0/1 R.C.S. Coil Unit specially designed and constructed for this circuit. Individually aligned and tested for extreme sensitivity

**Coil Kit only 15/-**

Complete Kit of Parts

Special Four volt Power Transformer

Special Shielded Coil

90 M/H Choke

One Wire Wound Resistor

One Special Aerial Coupling Condenser

One Two Gang Condenser

**Price 33/6**

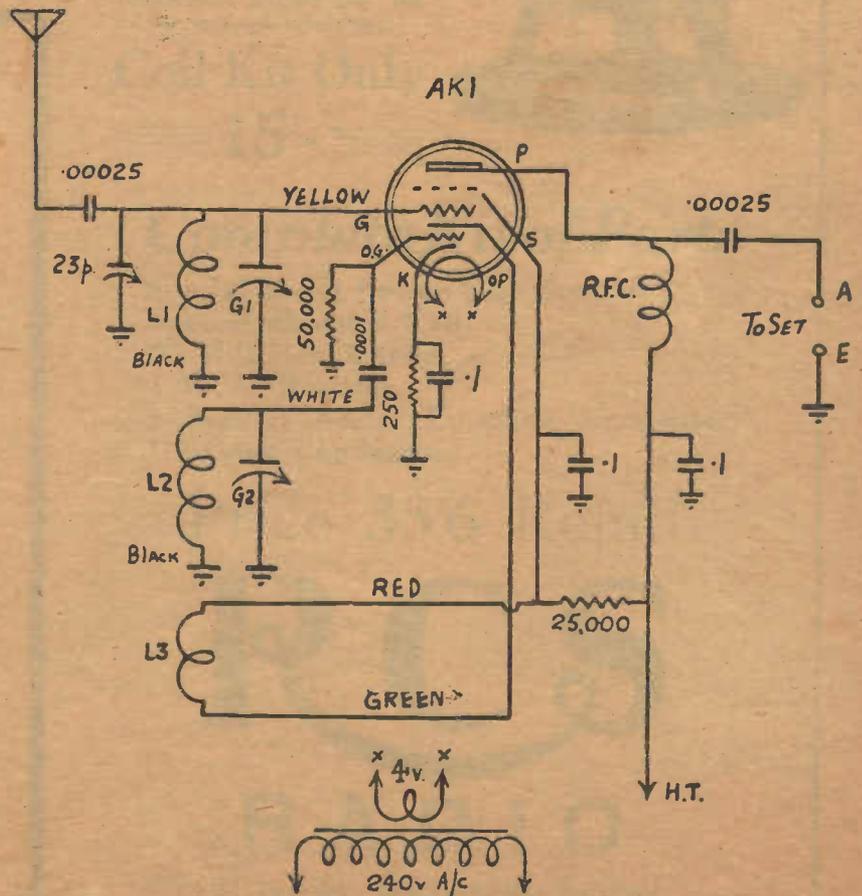
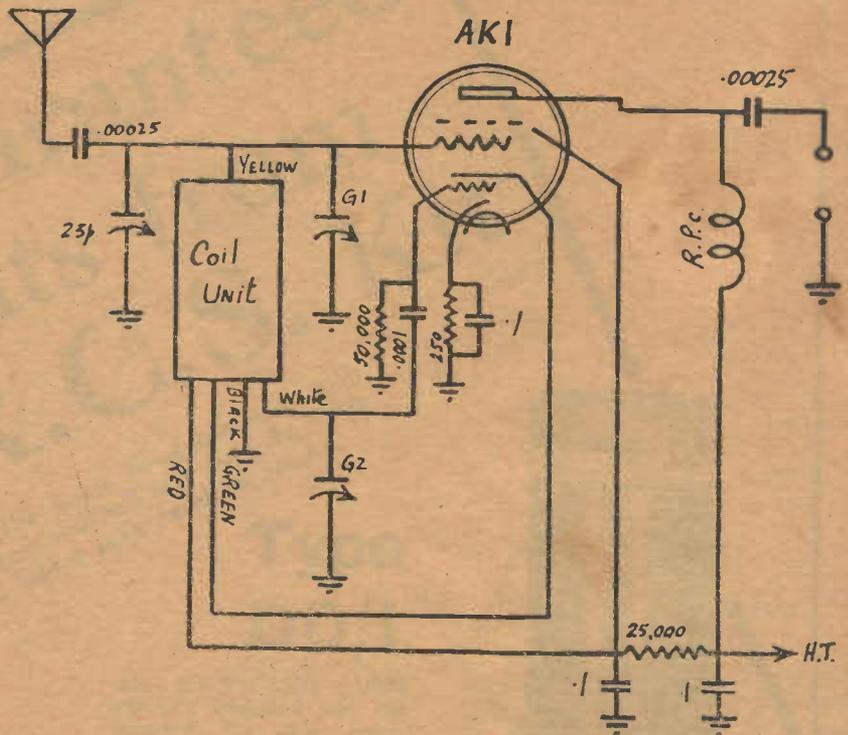
**COLOUR CODE**

Yellow to 23 Plate, Condenser & Gang  
 Red to Screen and 25,000 Resistor  
 Green to Anode  
 White to Gang Condenser  
 Yellow (at top of can) to control Grid  
 Black to Earth

If a special aerial coupling coil is used, increased gain will be obtained  
 Red to 00025 Condenser  
 Black to Earth  
 Green to Aerial of Set

**Coupling Coil  
 Type AC/1**

**Price 3/6**



# Get Guaranteed Results from the R.C.S. Kit

Build the single band converter with the same coil unit that gave the Technical Editor such excellent results.

## Type DO/I

AN R.C.S. COIL UNIT specially designed and constructed for this circuit. Individually aligned and tested for extreme sensitivity.

Coil Kit Only

≡≡≡ 15' - ≡≡≡



### ADDITIONAL AND PERFECTED LINES

from the R.C.S. Laboratories

Maintaining the R.C.S. reputation for quality and absolute dependability. All precision tested and fully guaranteed.

Replacement Speaker Transformers and Coils to suit any type of speaker.

Power Transformers

Filter Chokes

Audio Transformers

"B" Class Transformers

Line Filters

Fractional Motor Filters

Heavy Duty 5 amp. Motor Filters

Aerial Filters.

The ever popular R.C.S. Components are always the choice of the constructor desiring extreme efficiency and low initial cost.

COIL KITS, INTERMEDIATES, VOLTAGE DIVIDERS, PADDERS, RESISTORS AND SPECIAL COILS.

Guaranteed air tested and precision constructed.

### Complete Kit of Parts

Special 4 volt Power Transformer,  
Special Shielded Coil,  
90 Mill Hen. Choke,  
1 W.W. Resistor,  
1 Special Aerial Coupling Condenser,  
1 2 Gang Condenser.

Price 33'6 Retail.

# RCS

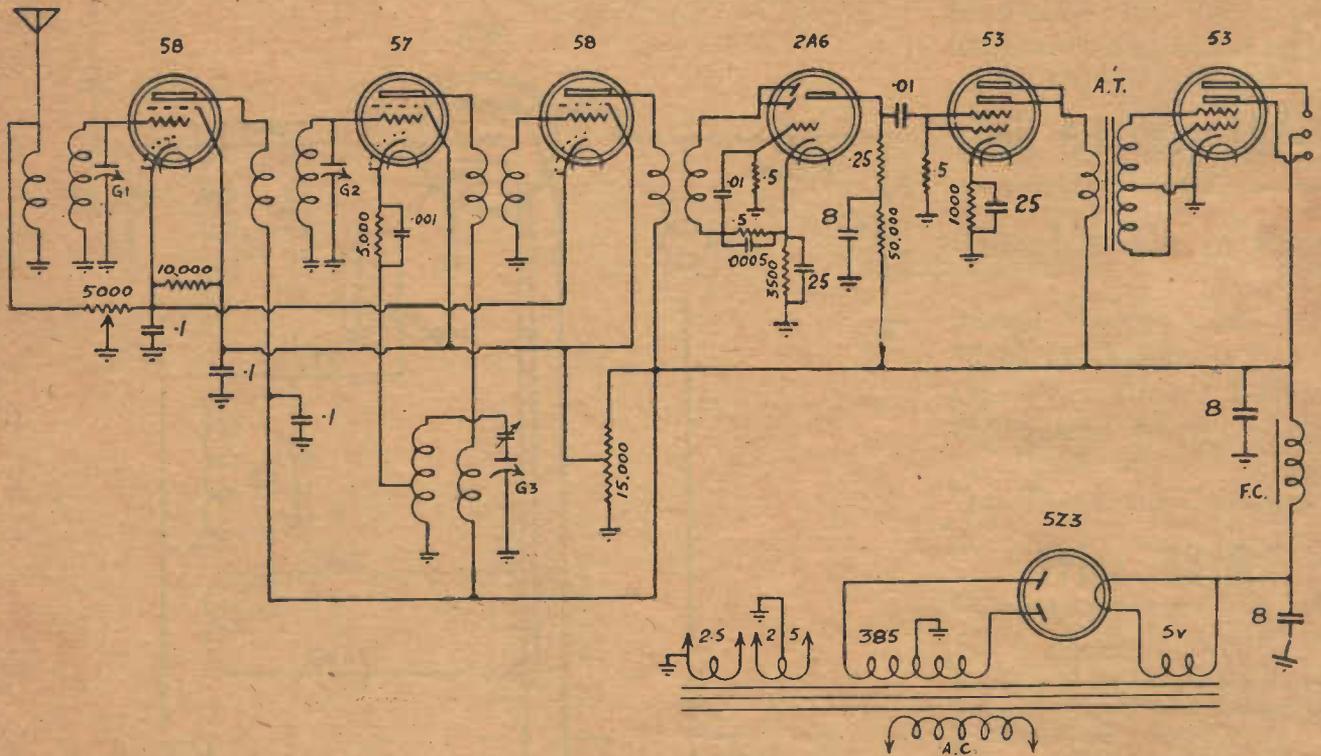
## RADIO

21 Ivy St., Darlington, Sydney.

'Phone MA2226.

# Straight Seven Super Het.

R.C.S. Kit Type K2AR

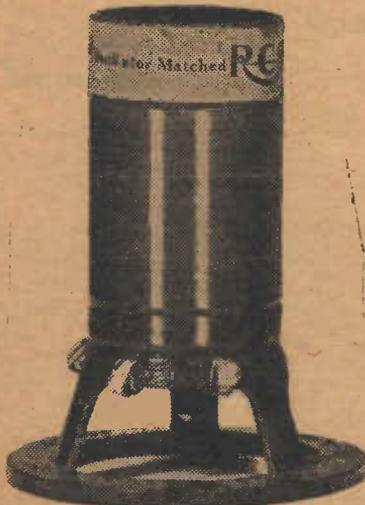


Reprint by the courtesy of "Wireless Weekly." 29/3/35 For full constructional data refer to this issue.

The two Intermediates in this Kit are identical, and can be used in any position.

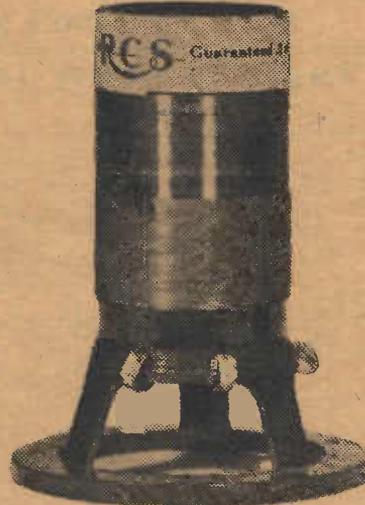
### Intermediate Color Code

Yellow Grid      Red Plate      Blue Earth      Green B Positive



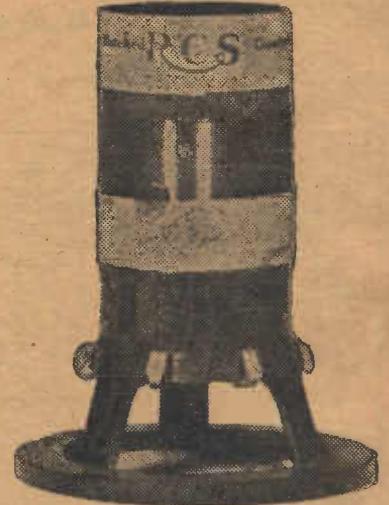
AERIAL COIL

5...Grid & Gang  
1...Earth



R.F. COIL

1...H.T. Positive  
5...Grid & Gang  
6...Earth



OSCILLATOR 57 Valve

1...H.T. Positive  
5...Padder 6...Earth 3...Cathode Resistor

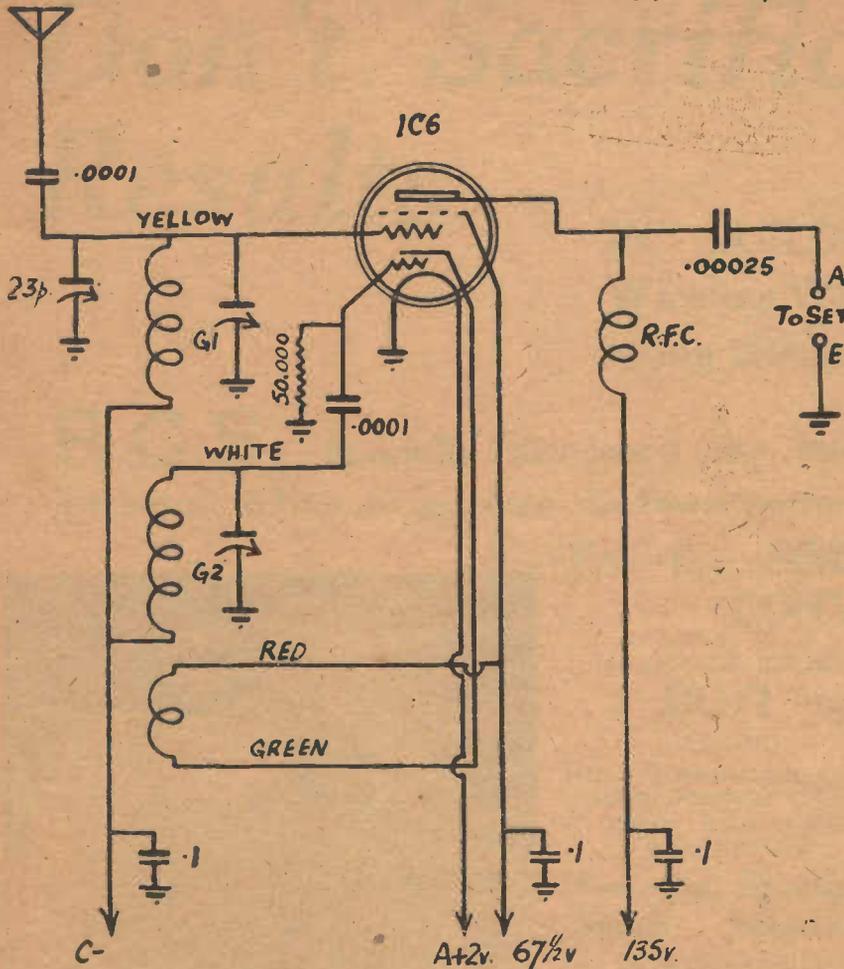
The numbers shown in the above refer to the small figures moulded on the base of the coil former directly under the connection lugs.

**IMPORTANT.**—When using R.C.S. Kits a 5000 o.h.m. Cathode Resistor with a .0015 fixed condenser must be used in the Audiodyne stage.

Padder Condenser does not require a Shunt Condenser, and must be mounted up off the chassis at least 1/4 in. by Bakelite washers.

# Battery Short Wave Converter

R.C.S. Type DO/1



Type DO/1 R.C.S. Coil Unit specially designed and constructed for this circuit Individually aligned and tested for extreme sensitivity

**Coil Kit only 15/-**

**Complete Kit of Parts**

- Special Shielded Coil
- 90 M/H Choke
- One Wire Wound Resistor
- One Special Aerial Coupling Condenser
- One Two Gang Condenser

**Price 33/6**

**COLOUR CODE**

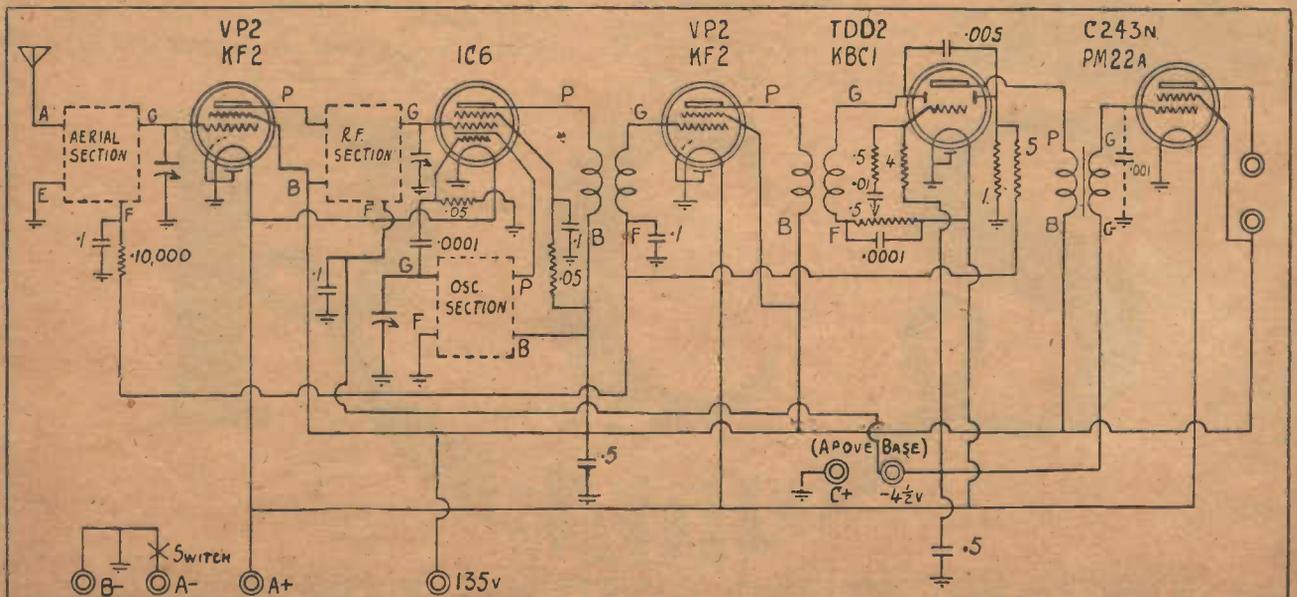
- Yellow to 23 Plate, Condenser & Gang
- Red to Screen and 25,000 Resistor
- Green to Anode
- White to Gang Condenser
- Yellow (at top of can) to control Grid
- Black to Earth

If a special aerial coupling coil is used, increased gain will be obtained  
 Red to .00025 Condenser      Black to Earth      Green to Aerial of Set

**Coupling Coil Type AC/1      Price 3/6**

**Item 88**

**DUAL WAVE BATTERY**

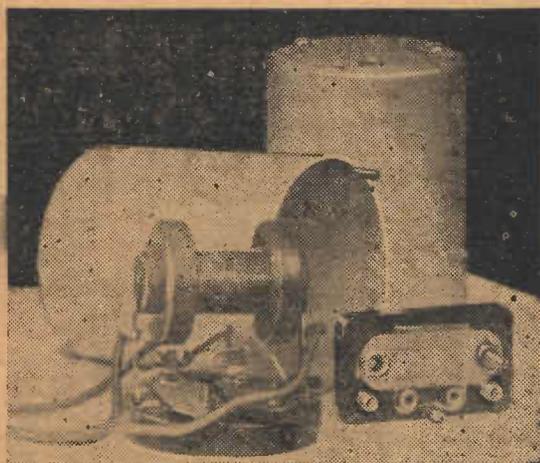


# Don't Sacrifice Results

IN BUILDING YOUR  
Wireless Weekly Circuits by  
using cheap Coil Kits.

**R.C.S.** Specially developed the kits USED by the  
Technical Editor to produce the finest performance.

## For the SIMPLE BATTERY CONVERTER



*R.C.S. Kits are aligned, tested and matched in  
conjunction with Radiotron Valves. Constructors  
are recommended to use Radiotrons for quality  
results.*

*R.C.S. also manufacture REPLACEMENT  
TRANSFORMERS for every type of Speaker.  
At All Radio Dealers.*

ask for R.C.S. Kit type

**DO/1**

(Coil Unit)

Also 1 Variable R.C.S. Aerial  
Coupling Condenser. Price 1/6

1 Special R.C.S. Coupling  
Choke. Price 3/6.

Price 15/-

## For the Straight Seven Superhet

use R.C.S. de Luxe Coil Kit  
type

**K2AR**

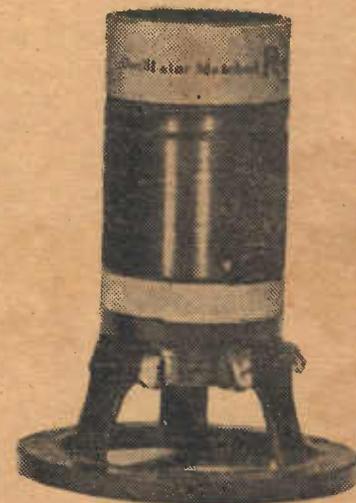
wound on Marquis Formers.

Price 33/6

Also R.C.S. Voltage Divider,  
15,000 Ohm. Price 2/6.

R.C.S. Special Wire Wound  
Resistors. 1000 Ohms. Price 8d

3500 Ohms. Price 1/6.



# RCS

RADIO

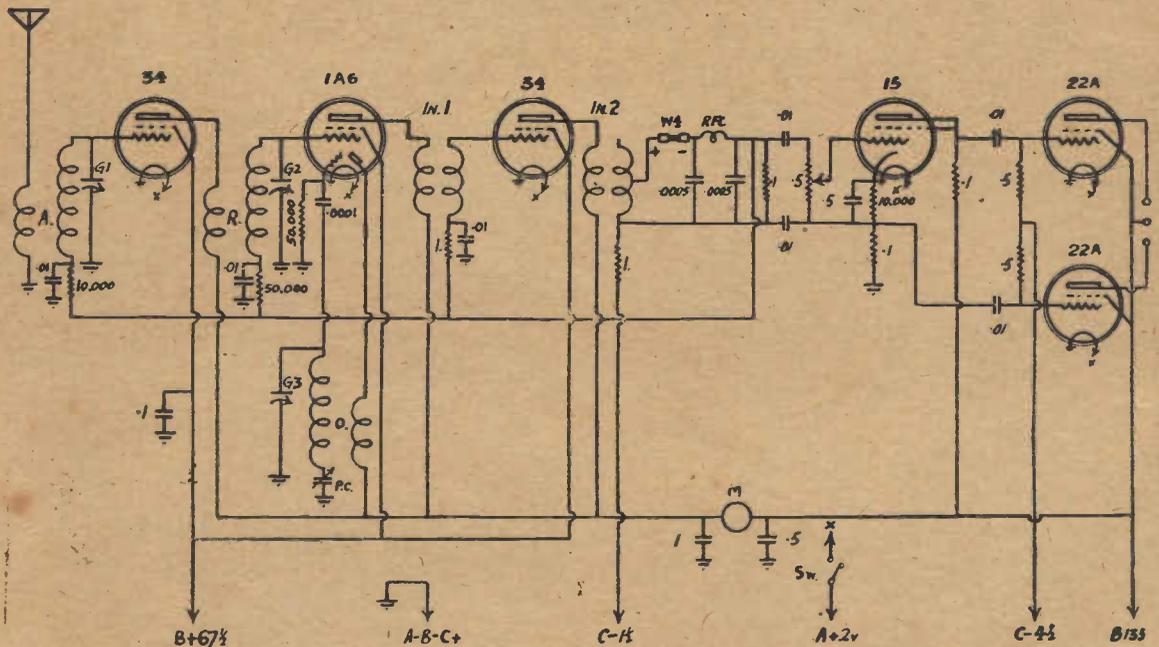
R.C.S. RADIO, 21 IVY STREET, DARLINGTON, SYDNEY



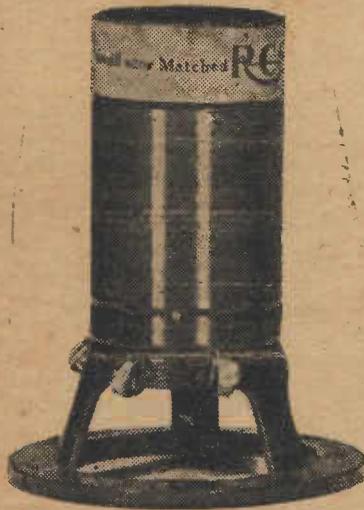
# Battery Receiver

## £20 Prize Winner

### R.C.S. Kit Type K1.F.A.R.



Reprint by the courtesy of "Wireless Weekly." 28/6/35 For full constructional data refer to this issue.

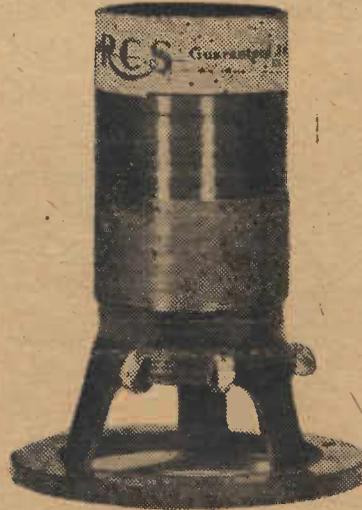


**AERIAL COIL**

2...Aerial  
1...Earth

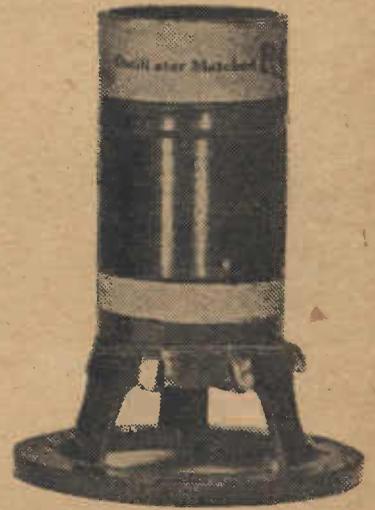
5...Grid  
6...To .01

1...H.T. Positive  
2...Plate



**R.F. COIL**

5...Grid & Gang  
6... .01



**OSCILLATOR COIL**

1...H.T. Positive  
6...Padder

2...Plate or Anode  
5...Gang Condenser

The numbers shown in the above refer to the small figures moulded on the base of the coil former directly under the connection lugs.

The two Intermediates in this Kit are not identical, and cannot be used in any position.

#### Intermediate Colour Code

1st I.F. — Yellow Grid  
2nd I.F. — Red Plate

Red Plate  
Green H.T.

Blue to .01 Condenser  
Blue 1. Resistor

Green H.T.  
Black -W4

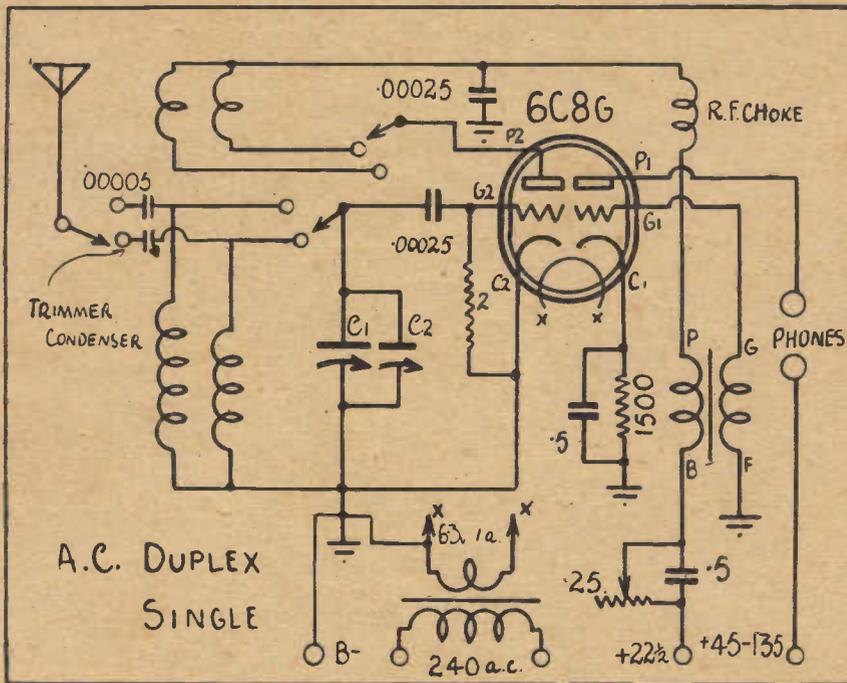
Green label Coils for Stromberg, Airzone or Efco.  
Standard or Midget Condenser.

Blue label Coils for Saxon.  
Standard or Midget Condenser.

Padder Condenser does not require a Shunt Condenser, and must be mounted up off the chassis at least 1/4 in. by Bakelite washers.

# 1938 Duplex Single

R.C.S. Coil Kit      Type K88      Price 5/6 Retail  
 R.C.S. Coil Assembly, ,, K89      ,, 14/6 Retail



Coil Color Codes

K88

Yellow	Grid
Blue	Earth
Pink	Plate
Black	H.T.

Assembly Color Code

K89

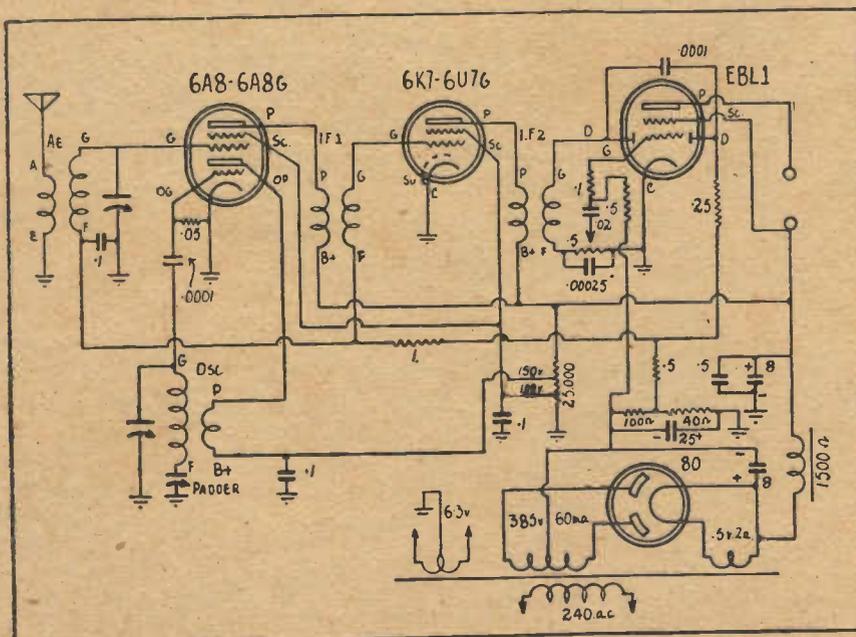
Pink	Aerial
Red	P.2.6C86
Yellow	Gang
Blue	Earth
Green	H.T.

Reprint by the courtesy of "Wireless Weekly." 9/9/38

Item 212

# 4/38 Mantel Receiver

R.C.S. Coil Kit,      Type K83      Price 28/- Retail



Coil Color Code

Midget Litz Coil Connections  
 embossed on bottom of can

I.F. Color Code

Red	Plate
Green	H.T.
Yellow	Grid
Blue	Earth



# Intermediate Transformers

This Intermediate Transformer is a Precision Product of R.C.S. Radio, and has been examined, tested and aligned at 175 or 460 K.C. by an entirely new process, the instruments used being the exclusive design and product of our Laboratory. However, after installation it will require slight alignment by a Signal Generator or R.C.S. Service Oscillator.

1. R.C.S. Intermediates are made for two frequencies, 175 and 460 K.C., and when used with R.C.S. Coils must be aligned to these frequencies.
2. All R.C.S. Intermediates are colour-coded the same—Red, to plate; Green, to H.T.; Yellow, to grid; Blue, to earth.
3. Intermediates of the 460 K.C. type are made in two types—low gain and high gain.
4. When a 57 first autodyne detector is used then a low gain Intermediate must always follow this valve with a high gain feeding the second detector.
5. When a 2A7, 6A7, AK2, 1A6 or Pentagrid Valve is used as first detector, then a high gain intermediate follows this valve, with another high gain feeding the second detector.
6. When three intermediates are used in the one set then three low gain intermediates should be used. This applies no matter what type of valves are used in the first detector.
7. The intermediate can should be mounted to the chassis so that it is not loose and makes good contact to its base.
8. The I.F. should be fitted so that the grid lead to the valve is as short as possible, not more than 2 to 3 inches.
9. Valve shields, with caps, should be used on all glass valves.
10. When used with a diodes the yellow lead connects to the diodes with the blue to the grid.
11. The four coloured leads should be spaced apart, and on no account be allowed to cross or get twisted together.
12. On no account should the leads (other than the high tension positive) supplied with the I.F.'s be lengthened, but they should be cut as short as possible.
13. Make direct point-to-point connections. Do not bend the I.F. wires into fancy shapes.
14. When a 57 first detector is used make sure that a low gain I.F. follows this valve, otherwise bad oscillation will result.
15. A limiting resistor of about 300 ohms. should be connected in the cathode leads of all the intermediate valves, so as to limit the bias on these valves.
16. When intermediate or R.F. gain control is used the resistors will connect between the volume control and the cathode, and when audio control is used they will connect between the cathode and earth.
17. All cathode or volume control by Pass Condensers must connect direct to the cathode terminal on the valve socket and the other end direct to earth.
18. Intermediate Oscillation is 90 per cent. of the troubles found in a superhet.
19. A set cannot be aligned while there is oscillation in any of the intermediate stages.
20. To find if an intermediate is oscillating, connect an aerial to the set, turn the volume control almost full on, now tune the dial from 0 to 100, and if the intermediates are oscillating a number of whistles will be heard. These whistles may be heard at every one or two degrees on the dial.
21. Intermediate oscillation can also be found by connecting the aerial to the set, tuning the dial to a position where no station will be received, preferably 1400 K.C. Now turn the volume control up slowly; the back ground noise will increase; then, as the volume control is turned more on, a light pop will be heard, and the noise will decrease or stop.
22. In very bad cases of intermediate oscillation it will be necessary to have about 5 volts fixed minimum bias on the cathode of the Intermediate Valves.
23. This voltage is read from the cathode contact on the valve socket to earth, with the volume control turned full on.
24. The maximum fixed cathode resistor to be used should not exceed 1000 ohms.

## Electrolytic Condensers

Electrolytic Condensers are made in two types—wet and semi-wet.

1. The wet type are usually in an aluminium can and the semi-wet in a cardboard container.
2. The terminal on a wet electrolytic is always the positive, while the can is always the negative.
3. On a semi-wet electrolytic the positive terminal is always marked with a coloured dot (usually red) or the label has a thin colour band around the positive end.
4. Supplied with a wet electrolytic are one metal washer and two fibre washers. These fibre washers should be discarded unless the circuit calls for insulation between the negative can and the chassis.
5. On no account must wet electrolytics be operated in any position but upright.
6. Make sure that the speaker is fitted to its socket before the power is turned on, or the electrolytic will be damaged.
7. Wet Electrolytic Condensers may sizzle or splutter after the power is turned on, but if this continues for more than 30 seconds or so then the set should be switched off and the trouble located.
8. If an Electrolytic Condenser should accidentally be connected wrongly—that is, the positive to the negative—then it will have to be replaced.