



RADIO CORPORATION PTY. LTD.

DIVISION OF ELECTRONIC INDUSTRIES LTD.
126-130 GRANT STREET, SOUTH MELBOURNE, S.C.A.

TECHNICAL BULLETIN

BULLETIN: RQ-1
File: Receivers Portable.
Date: 15/11/55.
Page: 1.

MODEL "RQ" MIDGET PORTABLE

4-VALVE SUPERHETERODYNE

FOR OPERATION FROM:

1.5 Volts "A" battery (two 1.5 volt torch cells in parallel) and 67.5 Volts "B" battery.

POWER CONSUMPTION:

"A" Battery 250mA. "B" Battery. 10mA.

TUNING RANGE:

535 to 1610 Kilocycles. 560.7 to 186.3 Metres.

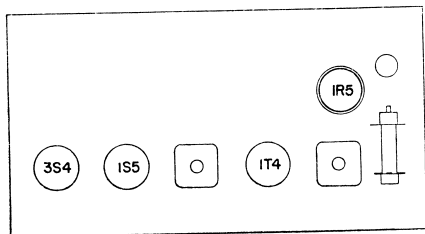
POWER OUTPUT:

180 milliwatts (max.).
100 milliwatts (undistorted).

THIS BULLETIN CONTAINS:

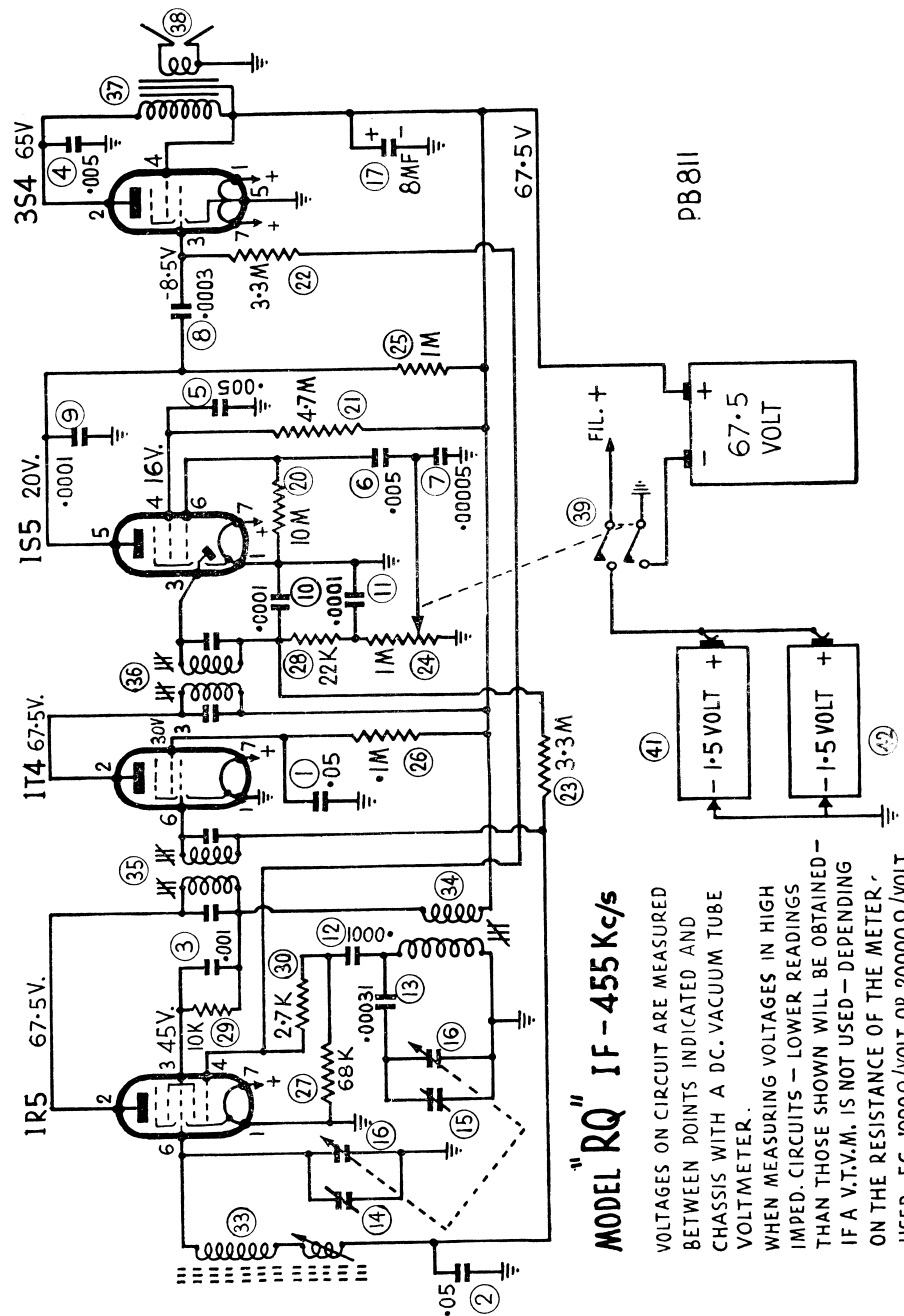
Technical Data.
Alignment Procedure.
Circuit Diagram.

I.F. Transformer Connections.



VALVE PLACEMENT DIAGRAM

1127/279



MODEL RQ" IF - 455 Kc/s

VOLTAGES ON CIRCUIT ARE MEASURED BETWEEN POINTS INDICATED AND CHASSIS WITH A D.C. VACUUM TUBE VOLTMETER.
WHEN MEASURING VOLTAGES IN HIGH IMPED. CIRCUITS - LOWER READINGS THAN THOSE SHOWN WILL BE OBTAINED - IF A V.T.V.M. IS NOT USED - DEPENDING ON THE RESISTANCE OF THE METER. USED. EG. 1000Ω/VOLT OR 20000Ω/VOLT.

ROD AERIAL CONNECTIONS:

Fixed Winding: Lead from end turn furthest from movable winding—GRID.

Movable Winding: Lead from end turn furthest from fixed winding—AVC.

The adjacent end turn leads of both windings are joined together as shown on the circuit diagram.

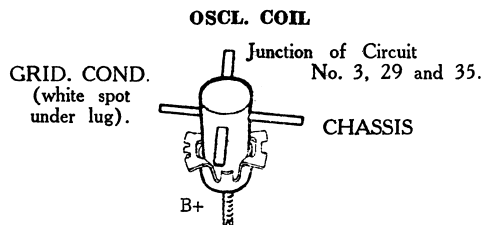
ALIGNMENT INSTRUCTIONS

EQUIPMENT

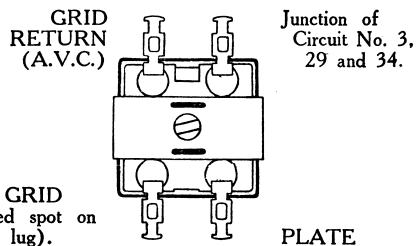
Signal Generator.
Output meter:
Mica Capacitor: 0.01 MF (P/No. PC145) for IFT Alignment.
Alignment tools: PM581 and M399.

ALIGNMENT CONDITIONS

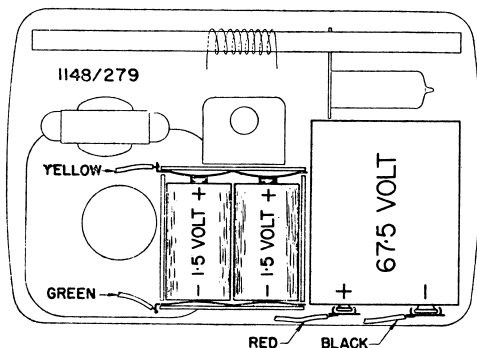
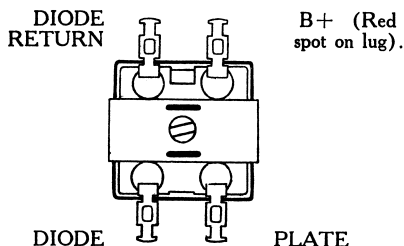
Load impedance: 5,000 ohms.
Output level: 6 milliwatts.
Volume control: Max. volume (fully clockwise).
"A" battery 1.5 volts.
"B" battery 67.5 volts.
I.F. frequency 455 Kc/s.



No. 1 I.F. TRANS.



No. 2 I.F. TRANS.



I.F. TRANS. ALIGNMENT:

The receiver chassis has to be removed from the cabinet to align the I.F. Transformers.

- A. Remove push-on volume knob and push-on clear dial cover knob.
- B. Place receiver so that carrying handle is uppermost.
- C. Gently press on top of cabinet near rear edge and prise top rear section away from front section.
- D. Remove "B" battery and "A" battery box.
- E. Remove battery box mount plate by unfastening screw fastening it in position.
- F. Using a pair of long nose pliers, remove three speed nuts fastening chassis to cabinet by turning the speed nuts 90 deg. to their fastened positions.
- G. Unsolder leads connected to speaker.
- H. Lift up end of chassis furthest from speaker and withdraw chassis from cabinet.
- I. Extend and reconnect leads to speaker.

Oper. No.	Generator Connection	Generator Frequency	Dummy Antenna	Instructions
1.	To signal grid of 1T4 valve (pin No. 6).	455 Kc/s.	0.01 MF Mica capacitor in series with generator.	Leave grid wire attached to valve socket. Peak 2nd IFT pri. and sec. for max. output.
2.	To signal grid of 1R5 valve (pin No. 6).	455 Kc/s.	0.01 MF Mica capacitor in series with generator.	Leave grid wire attached to valve socket. Peak 1st IFT pri. and sec. for max. output.
3.				Repeat operations Nos. 1 and 2.

BROADCAST ALIGNMENT:

- A. Refit receiver chassis to front section of cabinet.
- B. Refit dial reading and dial cover pointer knob.
- C. **DIAL POINTER SETTING:** Fully mesh cond. gang plates and set centre of dial pointer on centre of end of travel spot on dial reading near 540 Kc/s. (The three screws which fasten the cond. gang to the chassis when loosened off allow the cond. gang to be moved to align the dial knob pointer to the end of travel spot on the dial.)
- D. To inject a signal into the receiver rod aerial, connect to the active terminal of the signal generator approximately 2 ft. of aerial wire, then fashion the wire into a vertical position.
- E. Place receiver chassis so that ferrite rod aerial is uppermost and horizontal, and so that the fixed secondary winding end of the ferrite rod points to the 2 ft. of vertical aerial wire. A distance of not less than 1 ft. is to be between the end of the ferrite rod and the 2 ft. of vertical aerial wire attached to the signal generator.

Oper. No.	Generator Connection	Generator Frequency	Instructions
1.	Refer para. D. and E.	600 Kc/s.	Turn cond. gang and dial pointer until centre of dial pointer aligns with centre of 600 Kc/s. spot on dial reading. Leave cond. gang and dial pointer set in this position, then peak the oscl. coil ind. trim. (iron core) for max. output. Also peak the movable winding on the ferrite rod for max. output.