

AC. OPERATION:

<u>POWER CONSUMPTION</u>	
200 Volt 50 cycle AC. mains input to trans. (T137)	200 Volt tap. 37ma.
230 " " " " " " " "	" " " " 32ma.
240 " " " " " " " "	" " " " 32ma.
230 Volt 40 cycle AC. mains input to trans. (T145)	230 Volt tap. 34ma.
250 " " " " " " " "	" " " " 32ma.

BATTERY OPERATION:

Function Switch "Save" Position:	"A" Battery 250 ma.
" " " " " " " "	"B" Battery 7 ma. (no signal)
Function Switch "Full" Position:	"A" Battery 250 ma.
" " " " " " " "	"B" Battery 10 ma (no signal)

ALIGNMENT INSTRUCTIONSALIGNMENT CONDITIONSEQUIPMENT

Signal Generator:	Load impedance: 5,000 ohms.
Output meter:	Output level: 6 milliwatts.
Mica Capacitor: 0.01 MF (P/No. PC145)	Volume control: Max. volume (fully for IFT Alignment).
Straight Alignment Tool P/No. PM581.	"A" battery 1.5 volts.
Flexible Alignment Tool P/No. 48/712.	"B" battery 67.5 volts.
	I.F. frequency 455 Kc/s.

I.F. TRANS. ALIGNMENT

The receiver chassis has to be removed from the leather case to align the I.F. transformers.

- Remove tuning, volume and mains/battery/on-off push-on type knobs (a piece of thin cord in the form of a loop slid under the knob and pulled from the front is a convenient means of removing push-on type knobs).
- Unclip press stud fasteners at rear of leather case.
- Turn tuning condenser shaft until condenser plates are fully meshed.
- Lift leather case flap and remove moulded back panel.
- From beneath leather case remove screw and nut fastening chassis bracket to base of leather case.
- Remove two self tapping screws fastening chassis mount brackets to the metal plate at top corners of the leather case
- Lift end of chassis furthest from speaker then withdraw chassis from leather case.
- Remove "A" batteries, prize up lugs fastening battery box, then lift off battery box.

- Remove nut fastening corner of mount plate, then lift off mount plate.
- Refit "A" batteries into battery box.

Oper. No.	Generator Connection	Generator Frequency	Dummy Antenna	Instructions
1.	To signal grid of IFT4 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 IFT5 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 & 2.

BROADCAST ALIGNMENT:

- Refit receiver chassis to leather case.
 - Refit tuning knob.
 - TUNING KNOB POINTER SETTING:** Fully mesh condenser gang plates and set centre of tuning knob pointer on centre of end of travel spot on the leather case escutcheon beneath the numerals "55." Three screws on the front of the chassis and which fasten the chassis to the front of the condenser gang when loosened off allow the cond. gang to be moved to align the dial knob pointer to the end of travel spot. The receiver chassis has to be removed from the leather case to loosen the screws and move the cond. gang.
 - 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.
 - 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 tuning knob until centre of tuning knob pointer aligns with centre of 600 Kc/s. spot on dial. Leave cond. gang and tuning knob pointer set in this position, then peak the oscil. coil ind. trim. (iron core) for max. output. Also peak the movable winding on the ferrite rod for max. output. |

2. Refer para. D. and E.

1470 Kc/s.

Turn cond. gang and tuning knob until centre of tuning knob pointer is on 1470 Kc/s. dial mark. Adjust osc. trim. cond. for logging and peak ferrite rod aerial trimmer condenser for max. output.

3. Refer para. D. and E.

600 Kc/s.

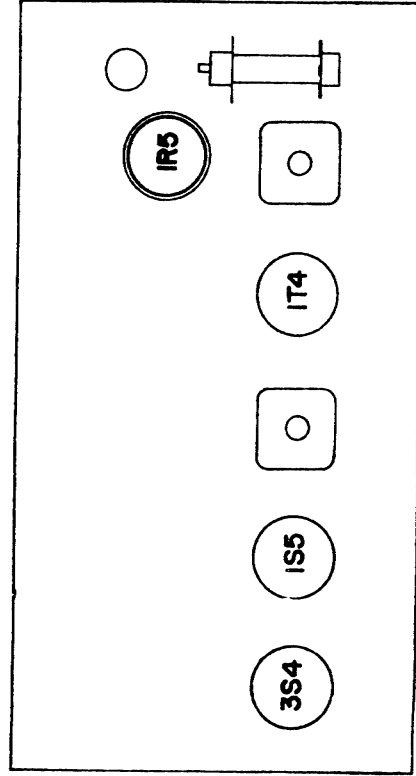
Turn cond. gang and tuning knob until centre of tuning knob pointer is on 600 Kc/s. dial mark. Leave the cond. gang and tuning knob pointer set in this position. Repeat osc. coil ind. trim. (iron core) and the movable winding on the ferrite rod. Do not rock cond. gang to and fro through the signal while adjusting or move the tuning knob pointer off 600 Kc/s. dial mark until after the trimmers have been adjusted for max. output.

4. Refer para. D. and E.

1470 Kc/s.

Turn cond. gang and tuning knob until centre of tuning knob pointer is on 1470 Kc/s. dial mark. Adjust osc. coil trim. cond. for logging and peak ferrite rod aerial trim. condenser for max. output.

Tuning range after alignment 535 to 1610 Kc/s.



VALVE PLACEMENT DIAGRAM



RADIO CORPORATION PTY. LTD.

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

A23a.

TECHNICAL BULLETIN

MODEL--BRQ--"SPORTSTER" PORTABLE

4 VALVE SUPERHETERODYNE PORTABLE RECEIVER WITH BATTERY REACTIVATION
FOR OPERATION FROM:

AC. MAINS 50 CYCLE. 200 Volt, 230 Volt or 240 Volt (Power trans. T137)
Trans. Primary Tap - red - common
" " " -green- 200 Volt mains
" " " -black- 230 Volt mains
" " " -yellow-240 Volt mains

AC. MAINS 40 CYCLE: 230 Volt or 250 Volt (Power trans. T145)
Trans Primary Tap - red - common
" " " -green- 230 Volt mains
" " " -black- 250 Volt mains

BATTERY OPERATION. 1.5 Volts 'A' Battery (two 1.5 volt torch cells in parallel) and 67.5 volts 'B' Battery.

POWER CONSUMPTION - Refer page 2.

FUNCTION SWITCH POSITIONS: Left to right (clockwise)

- Position 1. SAVE - internal battery operation
- " 2. FULL - internal battery operation
- " 3. OFF - receiver switched "off"
- " 4. MAINS - operation from AC. mains.
- " 5. RE-ACT - battery reactivation

TUNING RANGE: 535 to 1610 Kc/s - 560.7 to 186.3 Metres.

POWER OUTPUT: 180 milliwatts (max.)
100 milliwatts (undistorted)

THIS BULLETIN CONTAINS:

- 1. Technical Data.
- 2. Alignment Procedure.
- 3. Circuit Diagram.

TRANSFORMER CONNECTIONS.

POWER TRANS. (T 137) 50 CYCLE	POWER TRANS. (T 145) 40 CYCLE
Pri. red lead - common	Pr1. red lead - common
" green lead - 200V.	" green lead - 250V.
" black lead - 250V.	" black lead - 250V.
" yellow lead - 240V.	" "
H.T. Sec.	H.T. Sec.
yellow lead - start	yellow lead - start
blue lead - finish	blue lead - finish
LT. Sec.	LT. Sec.
orange lead - start	Orange lead - start
brown lead - centre tap	brown lead - centre tap
orange lead - finish	orange lead - finish

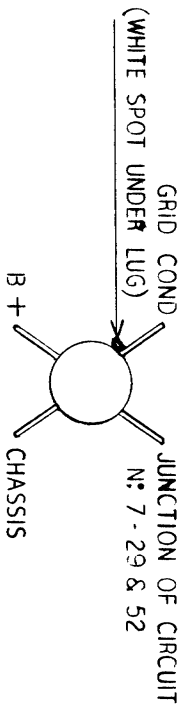
ROD AERIAL CONNECTIONS:

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

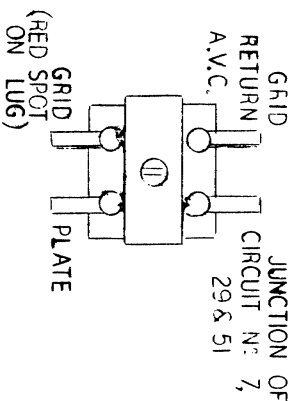
Movable Winding: Lead from end turn furthest from fixed winding-AVC.

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

OSCILLATOR COIL
LUG VIEW OF COIL



1ST I.F. TRANS.



2ND I.F. TRANS.

