

MODEL BRK.

GRAMO-RADIO COMBINATION

An Automatic 3 Speed Record Changer (78, 45, 33 r.p.m.) and an 8 Valve Superheterodyne Five Band Receiver incorporating Bandsreading of the 19 Metre, 25 Metre, 31 Metre and 49 Metre Shortwave Bands.

FOR OPERATION FROM:—

200-250 Volts 50 Cycle AC. Supply Mains.
 Power Trans. Primary Mains Taps: 200-220V. and 221-250V.

POWER CONSUMPTION:—

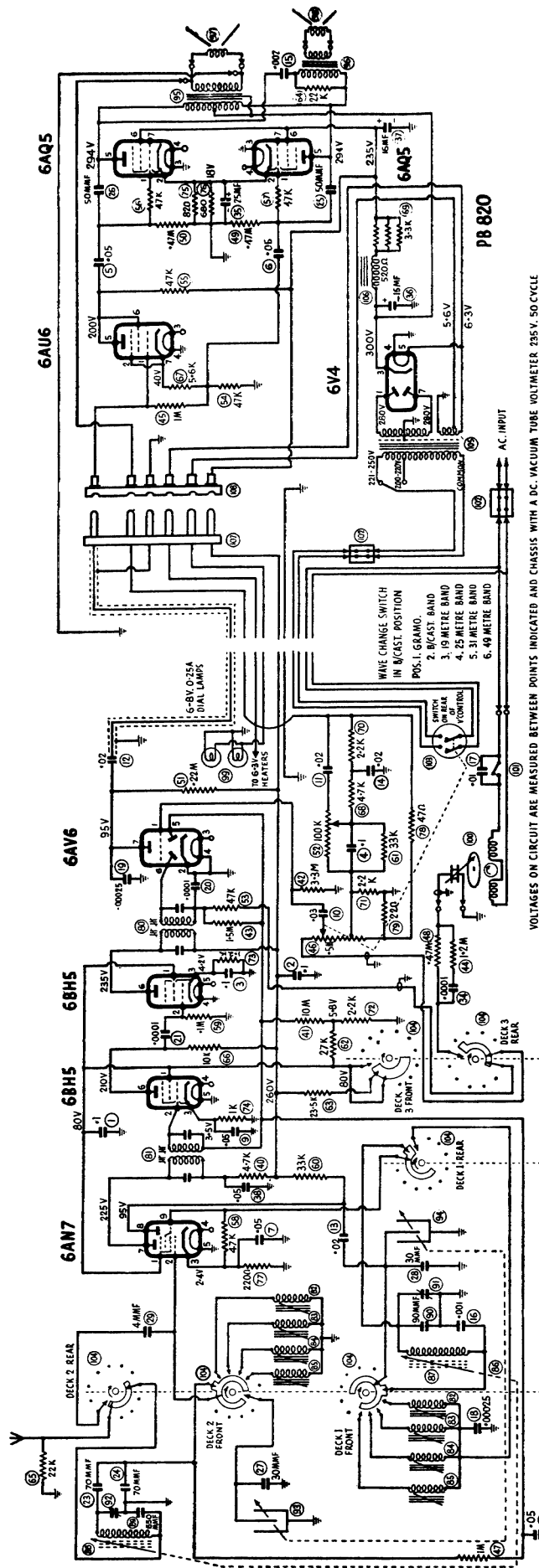
Radio Operation:— 55 Watts—approx.
 Gramo Operation:— 75 Watts—approx.

TUNING RANGES:—

Broadcast Band, 535-1610 Kc/s.
 19 Metre Band, 14.9-15.5 Mc/s. (Bandsread)
 25 Metre Band, 11.6-12.1 Mc/s. (Bandsread)
 31 Metre Band, 9.4-9.8 Mc/s. (Bandsread)
 49 Metre Band, 5.95-6.25 Mc/s. (Bandsread)

RECEIVER COVERAGE:—

560.7-186.3 Metres.
 20.13-19.29 Metres (approx.)
 25.86-24.79 Metres (approx.)
 31.91-30.61 Metres (approx.)
 50.42-48.0 Metres (approx.)



VOLTAGES ON CIRCUIT ARE MEASURED BETWEEN POINTS INDICATED AND CHASSIS WITH A DC VACUUM TUBE VOLTMETER 235V. 50 CYCLE AC. INPUT TO POWER TRANS. 221-250V. PRI. TAP. WHEN MEASURING VOLTAGES IN HIGH IMPED. CIRCUITS - LOWER READINGS THAN THOSE SHOWN WILL BE OBTAINED - IF A V.T.M. IS NOT USED - DEPENDING ON THE RESISTANCE OF THE METER USED. EG. 1000Ω/VOLT OR 20000Ω/VOLT

MODEL - BRK - IF - 455 Kc/s

ALIGNMENT PROCEDURE

B/CAST AND S/WAVE ALIGNMENT

EQUIPMENT	ALIGNMENT CONDITIONS
Signal Generator:	Load Impedance: 2 Ohms (output meter connected across sec. of 10,000-2 Ohm Imped. trans. circuit No. 95)
Output Meter:	Output Level: Vol. Control: Max. Vol. fully clockwise
Mica Capacitor:	0.01MF (for IF-trans. alignment)
Dummy Antenna:	200MMF Mica capacitor
Dummy Antenna:	400 Ohm non-inductive resistor
Alignment Tools:	Type M195 and PM581
	Tone Control: Treble position

IF. TRANS. ALIGNMENT

- | Operation No. | Generator Connection | Generator Frequency | Dummy Antenna | Instructions |
|---------------|---|---------------------|--|---|
| 1. | Remove receiver power supply chassis and tuning unit chassis from cabinet as detailed on page 11. | | | |
| 2. | Remove dial back plate from tuning unit chassis:- | | | |
| | A. Loosen off grub screws in tone control gear wheel hub, then pull gear wheel straight upward off the control spindle. | | | |
| | B. Unscrew large nut fastening small metal gear plate to bush on tone control. | | | |
| | C. From volume control shaft remove small gear plate with gears attached by pulling it straight upward. | | | |
| | D. Remove dial pointer by prising up centre clip which fastens it to dial cord at rear of pointer carriage. | | | |
| | E. Remove from each end of dial plate the large lock nut fastening dial plate to chassis. | | | |
| 3. | Connect speaker leads and leads from tuning unit chassis to power supply chassis. | | | |
| 4. | To control grid of 6BH5 2nd IF. valve pin No. 2 | 455 Kc/s. | 0.01MF Mica capacitor in series with generator | Turn wave change switch to b/cast band. Leave grid wire attached to valve socket. Peak 2nd IF. trans. pri. and sec. for max. output. |
| 5. | To control grid of 6AN7 valve, pin No. 2 | 455 Kc/s. | 0.01MF Mica capacitor in series with generator | Leave grid wire attached to valve socket. Turn perm. tuner so that iron cores are out of windings on coil formers. Peak 1st IF. trans. pri. and sec. for max. output. |
| 6. | Refit dial back plate and dial pointer, then gear wheel and plate assy. to volume control shaft, also gear wheel to tone control shaft. Make sure that the gear wheel teeth mesh correctly. | | | |

- | Operation No. | Generator Connection | Generator Frequency | Dummy Antenna | Instructions |
|---------------|--|---------------------|---|--|
| 1. | DIAL POINTER SETTING. Turn tuning spindle so that perm. tuner iron cores are out of the windings on the coil formers and the unit is hard against the stop. Set the centre of the dial pointer on the dial near 1700 Kc/s. Travel spot on the dial near 1700 Kc/s. | | | |
| 2. | To antenna lead | 1000 Kc/s. | 200MMF mica capacitor in series with generator | Turn tuning control and perm. tuner until centre of dial pointer aligns with centre of spot on dial reading at 1000 Kc/s. Peak b/cast oscil. coil trimmer cond., then peak b/cast antenna coil trim. cond. for max. output. Re-peak oscil. coil trim. condenser. |
| 3. | | | | Tuning range after alignment 535-1610 Kc/s. Check logging at each end of the dial. |
| 4. | | | | |
| 5. | Turn wave change switch to 49 metre band (this band must be aligned before the 31, 25 and 19 metre bands). | 6.08 Mc/s. | 400 Ohm non-inductive resistor in series with generator | Turn wave change switch to 49 metre band. Turn tuning spindle and perm. tuner until dial pointer aligns with the 6.08 Mc/s. mark on the dial. Adjust 49 metre band oscil. coil ind. trimmer (iron core) for logging, then peak 49 metre antenna coil ind. trimmer (iron core) for max. output. |
| 6. | To antenna lead | 9.6 Mc/s. | 400 Ohm non-inductive resistor in series with generator | Turn wave change switch to 31 metre band. Turn tuning spindle and perm. tuner until dial pointer aligns with 9.6 Mc/s. mark on dial. Adjust 31 metre oscil. coil ind. trimmer (iron core) for logging, then peak 31 metre antenna coil ind. trim. (iron core) for max. output. |
| 7. | To antenna lead | 11.8 Mc/s. | 400 Ohm non-inductive resistor in series with generator | Turn wave change switch to 25 metre band. Turn tuning spindle and perm. tuner until dial pointer aligns with the 11.8 Mc/s. mark on the dial. Adjust 25 metre band oscil. coil ind. trim. (iron core) for logging, then peak 25 metre antenna coil ind. trim. (iron core) for max. output. |
| 8. | To antenna lead | 11.8 Mc/s. | 400 Ohm non-inductive resistor in series with generator | |

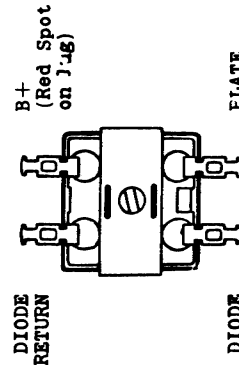
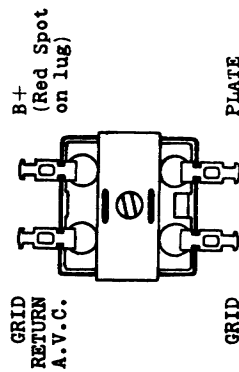
Operation No.	Generator Connection	Generator Frequency	Dummv Antenna	Instructions
9.	To antenna lead	15.2 Mc/s.	400 Ohm non-inductive resistor in series with generator	Turn wave change switch to 19 metre band. Turn tuning spindle and perm. tuner until dial pointer aligns with 15.2 Mc/s. mark on the dial. Adjust 19 metre band osci. coil ind. trim. (iron core) for logging, then peak 19 metre antenna coil ind. trim (iron core) for max. output. Check logging on 49, 31, 25 and 19 metre bands at each 100 Kc/s. mark on the dial.
10.	To antenna lead	Multi-vibrator		

NOTE: The iron cores in the perm. tuner coils and the s/w. conds. on the perm. tuner are set to an exact dimension. No adjustment to the dimensions is to be made if misalignment and incorrect logging are to be avoided.

COIL COLOUR CODE

- 49 Metre spreadband coil, YELLOW spot on iron core end of former.
- 31 Metre spreadband coil, RED spot on iron core end of former.
- 25 Metre spreadband coil, WHITE spot on iron core end of former.
- 19 Metre spreadband coil, BROWN spot on iron core end of former.

1st IF. TRANS.

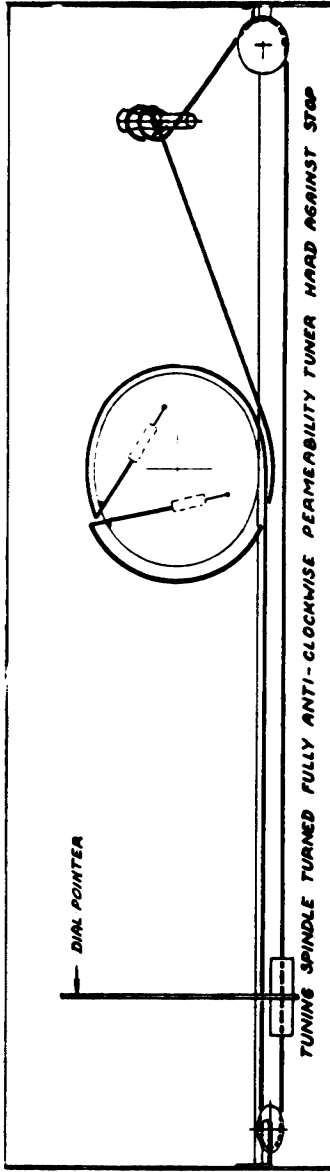


CIRCUIT ALTERATION (1-3-56)

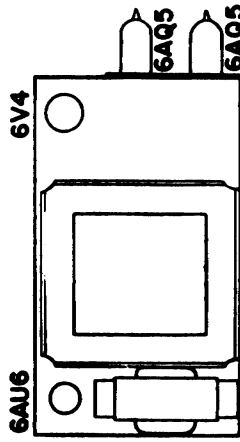
The 520 Ohm filter choke circuit No. part No. PT806 has been deleted from the circuit. No other changes are made to the circuit when this deletion is made.

CORING OF DIAL DRIVE

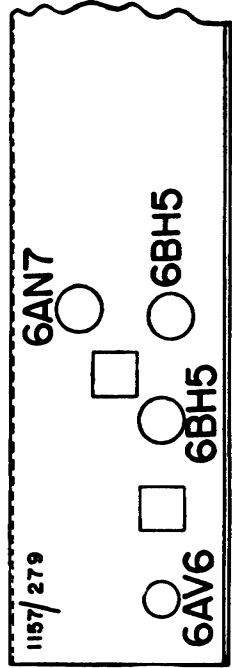
Length of cord required is 4 ft. 6 ins., which includes about 8 ins. to spare for tying to tension springs.
 Cord Part No. 34/754.
 Tension Spring (2) Part No. 508/30C.



PB 765



VALVE PLACEMENT DIAGRAM
1156/279



VALVE PLACEMENT DIAGRAM