

**BATTERY** transistor portable with full coverage of M and L waves. Seven-transistor plus two diode circuit. On/off and wavechange effected by pushbuttons.

**Battery.** Ever Ready PP6, Vidor VT6, Drydex DT6 or equivalent.

**Consumption.** No signal 9-13mA, 50mW approximately 24mA, 200mW approximately 45mA.

**Wavebands.** MW 185-565m (1620-530kc/s), LW 1120-2025m (268-148kc/s).

**Transistors.** AF117 mixer/oscillator, AF117 first IF amplifier, AF117 second IF amplifier, OC71 (or AC155) audio amplifier, OC81D (or AC113) audio driver, OC81 (or AC154) and AC127 (or AC157) complementary push-pull output.

**Diodes.** OA70 detector and AGC, AA120 bias stabiliser.

**IF.** 475kc/s.

**Speaker.** 3 3/8 in. circular 15ohms.

**Aerial.** 7 in. ferrite rod covering MW and LW. Socket for car radio aerial.

**Output.** 300mW.

**Outlet.** Jack for personal phone or tape recorder. Internal speaker automatically cut out when jack plug inserted.

**Dimensions.** 5 1/2 in high (excluding handle), 9 3/4 in wide, 2 1/2 in deep.

**Manufacturer.** British Radio Corporation Ltd.

**Service departments.** British Radio Corporation Ltd., Eley's Estate, Angel Road, London N18. Tel.: Edmonton 3060. Also depots at 24 Sheepcote Street, Birmingham 15. Tel.: Midland 5291. 160-162 Battlefield Road, Glasgow C2. Tel.: Langside 9251-4.

**DISMANTLING**

Remove battery, take out handle fixing screws then gently ease the scale and printed board assembly from the case. Two screws and washers secure the speaker to the printed board.

**SERVICE NOTES**

Check battery voltage on load before attempting any fault tracing. A milliammeter,

connected in series with the power supply, provides a current check during fault tracing.

**Oscillator.** To check oscillator operation connect a DC voltmeter across R3. If the oscillator is functioning properly, the voltage should drop slightly when the oscillator section of the gang is short-circuited.

**Voltages.** Figures given in circuit diagram are readings taken with 20,000ohms/volt meter and are negative with respect to positive rail.

**Modifications.** In a few receivers R24 is not fitted, R22 is 12ohms and is shorted by a link which should be removed only when quiescent current of output transistors falls below 8.5mA.

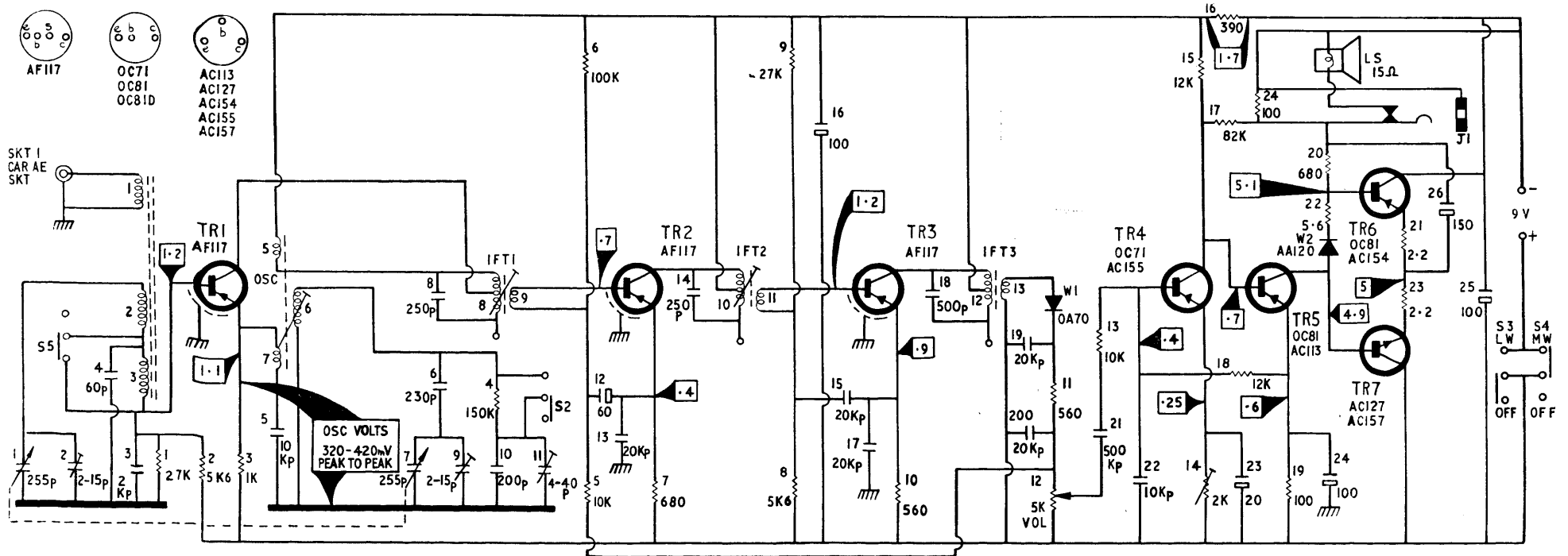
**Output transistors.** The complementary power output transistors are a matched pair; if one becomes faulty, both must be replaced by a new matched pair.

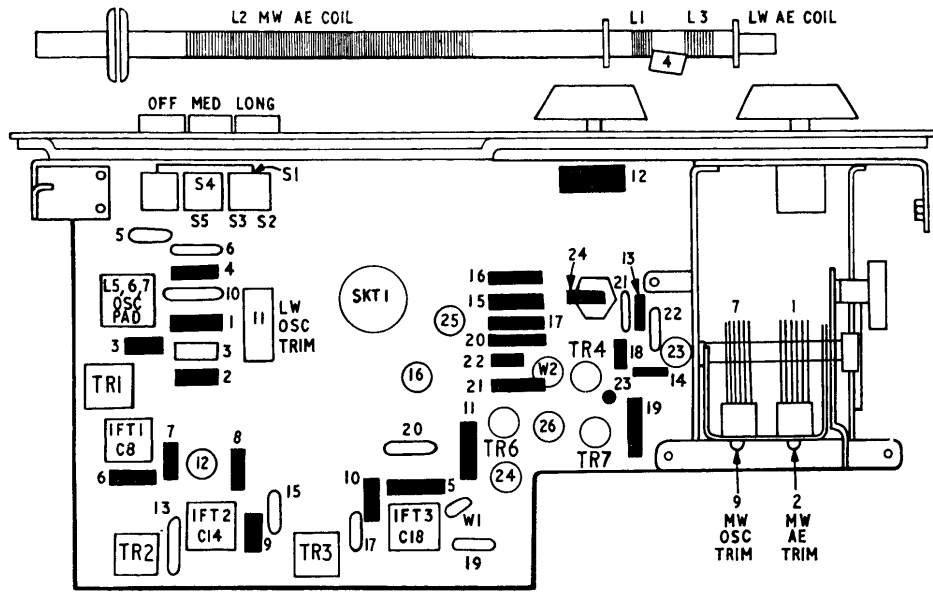
**Tuning gang.** The tuning gang is of special construction and no attempt should be made to clean or repair it.

**Balance adjustment.** Output transistors TR6



and TR7 are series connected across the 9V battery supply. To ensure a balanced voltage to each, R14 variable is incorporated in the





emitter circuit of TR4. Correct balance is obtained when potential at junction of R21 and R23 is 5V with respect to battery positive line.

**ALIGNMENT**

**Equipment required.** Modulated signal generator covering 148-1620kc/s, 15ohms output meter (or Avo 8), trimming tools, 100Kp capacitor.

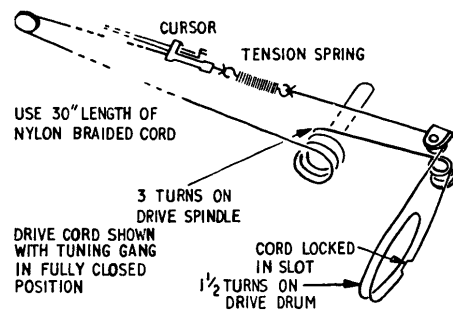
Remove printed circuit board from its case as described. Connect output meter in place of speaker or, alternatively, connect Avo 8 on 10V AC range across the speaker speech coil. During alignment adjust signal input level to keep audio output at 50mW.

**IF.** Switch receiver to MW and turn gang to maximum capacitance. Apply modulated 475kc/s signal via 100Kp capacitor across C1, aerial section of gang. Adjust IFT3, IFT2 and IFT1 in that order for maximum output. Repeat in same order until no further improvement results.

**RF MW.** Switch receiver to MW and turn gang to maximum. Check that pointer is just hidden by extreme righthand edge of scale window. If incorrect slide pointer along drive cord. Tune receiver to centre of 500m calibration mark and adjust L6 for maximum output.

Set generator to 1500kc/s and tune receiver to centre of 200m calibration mark. Adjust C9 on gang for maximum output. Repeat last

Above, component layout and alignment points. Below, tuning drive cord arrangement



two operations until no further improvement results. Set generator to 600kc/s, tune receiver to this signal, then peak aerial coil L2 by sliding along ferrite rod.

Inject 1500kc/s from generator and tune receiver to this signal. Adjust C2 aerial trimmer for maximum output. Repeat last two operations until no further improvement is obtained.

**RF LW.** Switch receiver to LW and tune to centre of 1500m calibration mark. Set generator to 200kc/s and adjust C11 and L3 for maximum output.

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