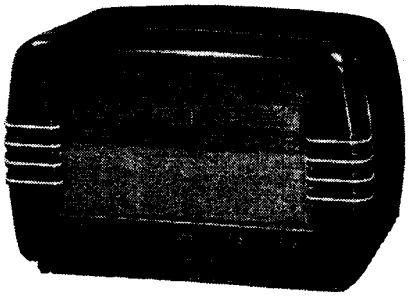
SERVICE DATA

MAS 1111

MULLARD MASTER RADIO



MODEL MAS 1111

SPECIFICATIONS

(Subject to alteration without notice)

Power Supply	220-260V, 40-60 c/s.
Tuning Ranges	530-1620 kc/s. 5.9-18.4 Mc/s.
S/W Expander Ranges	9.4-10.0 Mc/s (31 M band). 11.4-12.0 Mc/s (25 M band).
Intermediate Frequency	455 kc/s.
Cabinet	De luxe bakelite table.

VALVE EQUIPMENT AND VOLTAGE ANALYSIS

Valve Function	Valve No.	Valve Type	Plate Volts	Screen Volts	Osc. P. Volts
Frequency Converter	V1	6AN7	230	72	78
I.F. Amplifier	V2	6N8	230	70	—
Demodulator and A.V.C. 1st Audio	V3	6N8	46	11	—
Power Amplifier	V4	6M5	211	230	—
Rectifier	V5	6X5GT	V5 Cathode — L10C.T., 267V.		
Dial Lamps	V11, V12	6.3V. 0.32A. tubular screw			
Voltage across R8, –2.1V.; across R7 and 8, –6.7V.					

NOTE: These voltages are measured with an "1,000 ohms per volt" meter and may vary ± 10% from the figures quoted. They are measured from the socket points indicated to chassis or across the resistors listed. The receiver should be in a "no signal" condition.

TO REMOVE CHASSIS FROM CABINET.

Remove the power plug from the mains outlet socket. Remove the cabinet back. The chassis is held to the cabinet by four screws in the base of the chassis and two screws at the top of the baffle. Removal of the screws permits the chassis to be withdrawn from the cabinet.

The chassis may be replaced by a reversal of the above procedure.

MAINS VOLTAGE ADJUSTMENT.

The power transformer is provided with two mains voltage tappings—220/240 volts and 250/260 volts—for adjustment of the receiver to the supply voltage at the point of installation. The receiver is adjusted at the factory to the 220/240 volts tapping.

DIAL CALIBRATION ADJUSTMENT.

If station calibrations are incorrect by an equal amount over the length of the scale, the condition may be corrected by loosening the cursor to dial cord clamping screw, making the necessary adjustment, and firmly retightening the screw.

ALIGNMENT.

Before commencing alignment set the dial cursor with the tuning gang fully closed to the letter "S" mark on the calibration scale on the top edge of the dial scale.

The iron cores for the secondaries of the I.F. transformers are in the top of the cans; those for the primaries are in the bottom.

Because of the interdependence of trimmers, it is essential that expanded band alignment be carried out only after broadcast and continuous short-wave bands have been aligned.

Alignment frequencies are:—

Broadcast band	1,420 and 600 kc/s.
Continuous S/W band	18.4, 17.8 and 6 Mc/s.
Expanded band	11.8 Mc/s.

Capacitive trimmer adjustments are used at all frequencies except 600 kc/s., where the B/C oscillator iron core is used; and 6 Mc/s where the S/W oscillator iron core is used. **Do not attempt to adjust the iron cores of the aerial coils.**

The expanded band oscillator trimmer should not be finally adjusted until the chassis is refitted to the cabinet.

In the event of replacement of oscillator coils, make a preliminary adjustment before carrying out normal alignment, of the iron core at 600 kc/s. for B/C band, and with the dial cursor set at 6 Mc/s. on the continuous S/W band, adjust the iron core until a 6 Mc/s. signal is received.

Oscillator/signal frequency relationships are:—

Continuous S/W band — oscillator frequency higher than signal frequency.

31 meters expanded band — oscillator frequency higher than signal frequency.

25 metres expanded band — oscillator frequency lower than signal frequency.

Refer to circuit diagram overleaf for trimmer layout drawing.