



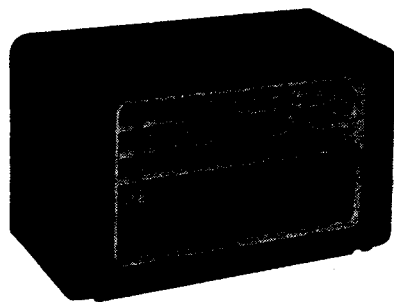
# MULLARD MASTER RADIO

## MODEL MBS1112

### SPECIFICATIONS

(Subject to alteration without notice)

Tuning Ranges .....	530-1620 kc/s 5.9-18.4 Mc/s
Intermediate Frequency .....	455 kc/s
Cabinet .....	Bakelite table
Battery Equipment .....	2 x 45V heavy duty, plug-in type, dry batteries. 1 x 1.5V plug-in type dry battery.
Battery Consumption .....	"A" 0.3A "B" 15 mA



NOTE: In some chassis the oscillator grid leak R2 is returned to A+. In these cases the connection should be changed to chassis.

### VALVE EQUIPMENT AND VOLTAGE ANALYSIS

Valve Function	Valve No.	Valve Type	Plate Volts	Screen Volts	Bias Volts
R.F. Amplifier	V1	1T4	83	35	0
Frequency Converter	V2	1R5	83	35	0
I.F. Amplifier	V3	1T4	83	35	-0.6
Demodulator, A.V.C. and 1st Audio	V4	1S5	*26	*20	0
Power Amplifier	V5	3V4	81	83	-6.3

NOTE: These voltages are measured with an "1,000 ohms per volt" meter, except those marked with an asterisk, which are measured with a V.T.V.M., and they may vary  $\pm$  10% from the figures quoted. They are measured from the socket points listed to chassis.

#### TO REMOVE CHASSIS FROM CABINET.

Remove the plugs from the batteries, or if the receiver is vibrator unit operated, remove the battery clips from the battery terminals. Remove the four control knobs (a firm pull is all that is necessary) and the cabinet back. The chassis is held to the cabinet by three screws in the baffle—two along the top and one on the right-hand side—and four screws through the bottom of the cabinet. Removal of these seven screws allows the chassis to be withdrawn from the cabinet. If the receiver is vibrator unit operated, it is necessary to remove the vibrator unit from the chassis before attempting to remove the baffle securing screws.

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

#### ALIGNMENT.

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

Broadcast band alignment frequencies are 1,420 kc/s and 600 kc/s, short wave alignment frequencies are 18.4 Mc/s (oscillator trimmer), 17.8 Mc/s (aerial trimmer) and 6 Mc/s (oscillator coil slug). The short wave neutralising capacitor C13 is adjusted for maximum signal at 17.8 Mc/s, whilst rocking the tuning gang. **Do not attempt to adjust the slugs of the aerial and R.F. coils.** Before commencing alignment, set the dial cursor, with the tuning gang fully closed, to the letter "S" mark on the extreme R.H. end of the calibration marks on the bottom of the dial scale.

#### DIAL CALIBRATION.

If it is required to correct dial calibrations for an equal error on all stations, the cursor assembly can be moved on the dial cord. Loosen the clamping screw, make the necessary adjustment to the cursor position, and securely re-tighten the clamping screw.

#### VIBRATOR UNIT OPERATION.

Model MBS1112 may be operated from a 6 volt accumulator by means of vibrator unit Model M118.

Provision is made on the receiver chassis for fitting the vibrator unit. The receiver battery leads should be plugged into the vibrator unit sockets, the surplus cable being neatly stowed in the cabinet. It is also necessary to fit the two-pin plug from the vibrator unit to the socket provided on the receiver chassis.

A separate service sheet covers the Model M118 unit.

#### 32 VOLT D.C. OPERATION.

Model MBS1112 may be operated from 32 volt D.C. mains by means of vibrator unit Model M118 and 32 volt converter unit Model M137.

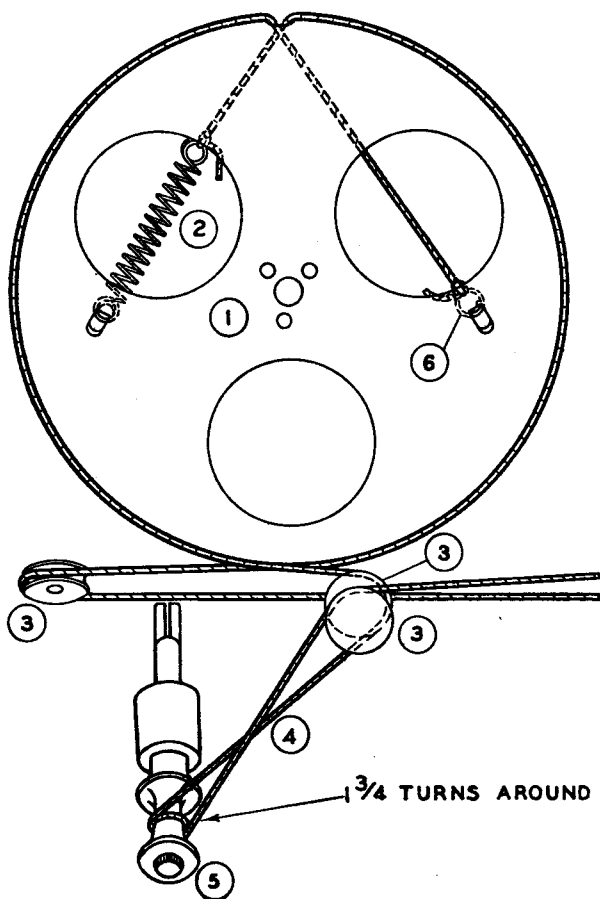
The Model M118 unit connects to Model MBS1112 as outlined in "Vibrator Unit Operation" and the Model M137 unit connects between the Model M118 unit and the 32 volt mains. When connecting up the Model M137 unit, connect the negative lead of the Model M118 unit to the negative terminal of the Model M137 unit. The positive lead of the Model M118 unit is split—the wire carrying the fuse connects to the terminal marked "V1B," the other wire to the terminal marked "FIL."

When the Model MBS1112 is used on 32 volt D.C. mains, leave the receiver switch in the "on" position and control it from the mains switch.



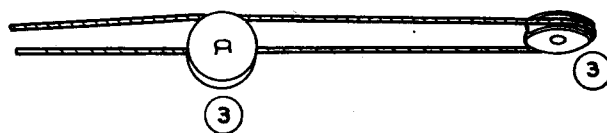
## MISCELLANEOUS COMPONENTS

No. on Dial Parts Diagram	Description	Code No.	No. on Dial Parts Diagram	Description	Code No.
—	Assembly, baffle	CR.005.260	—	Bracket, T/C switch mtg.	CS.224.607
—	Assembly, cursor	CR.480.638	—	Cabinet	CS.460.506
—	Assembly, pulley spindle	CR.436.211	—	Clip, coil can mounting	CS.235.833
—	Assembly, pulley spindle	CR.265.208	4	Cord, dial	CS.361.831
—	Assembly, pulley spindle	CR.436.210	1	Drum, dial	CS.360.007
—	Assembly, pulley spindle bracket	CR.265.209	—	Knob, control	CS.432.620
—	Assembly, T/C — on/off switch	CZ.200.419	—	Nipple, slide rod adj.	CS.274.603
—	Assembly, T/C clicker	CR.450.043	—	Plug, 2 pin polarised	CZ.365.108
—	Assembly, terminal	CZ.376.200	—	Plug, 3 pin polarised	CZ.365.204
5	Assembly, tuning spindle	CR.371.322	3	Pulley, dial	CS.359.602
—	Assembly, W/C switch	CZ.201.001	—	Ring, C (tuning spindle)	CS.281.802
—	Assembly, W/C clicker	CR.450.042	6	Ring, dial cord	CS.281.807
—	Back, cabinet	CS.462.149	—	Rod, dial slide	CS.382.213
—	Badge, Mullard	CS.436.413	—	Scale, dial	CS.412.335
—	Bank, T/C switch	CZ.200.047	—	Socket, 2 pin polarised	CZ.370.107
—	Bank, W/C switch (A1)	CZ.200.045	—	Socket, valve	CZ.369.318
—	Bank, W/C switch (A2)	CZ.200.046	2	Spring, dial drum	CS.210.010
—	Bracket, cabinet back mtg.	CS.244.602	—	Strip, masking	CS.050.408
—	Bracket, gang mounting	CS.224.609	—	Washer, felt (knobs)	CS.424.056



### DIAL CORD LAYOUT

VIEW FROM REAR OF CHASSIS.

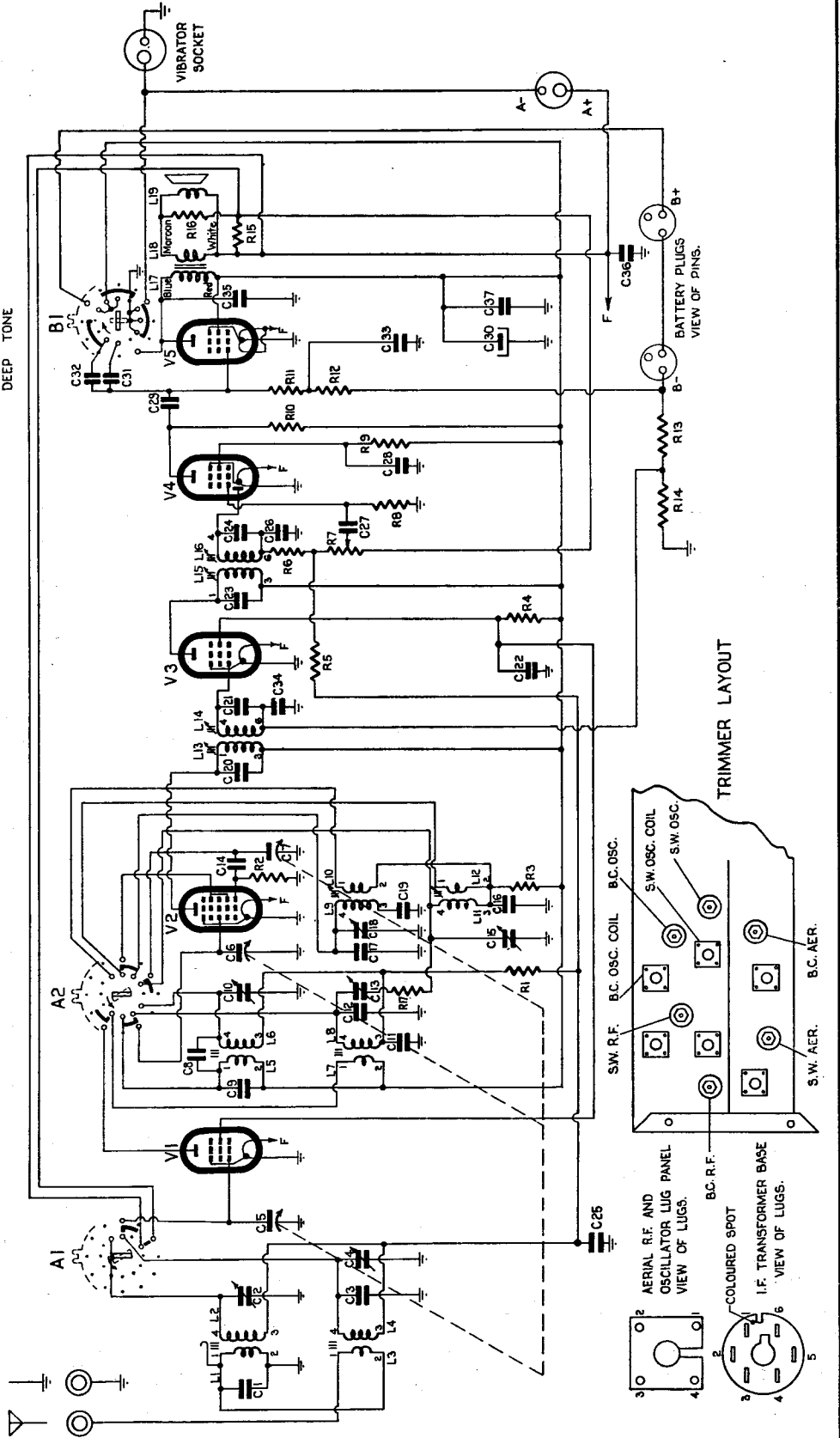




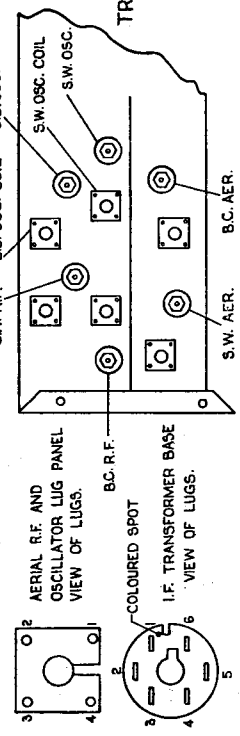
L	1,3,2,4	2,3	4,25,5	5,7,6,8	9,11,10,12	13,14	15,16	17,18	19
C	1	9,9,11	12,10	13,16,17,18,19,16	14,7	20	21,3,4,22	23	24,26,27
R		17,1	3,2	5,4	6,7,14,8,13	9,10	11,12	15,16	
V				3	4		5		

SWITCH 'A1', 'A2' SHOWN IN 'S.W.' POSITION  
 POSITIONS : BROADCAST,  
 SHORT WAVES.

SWITCH 'B1' SHOWN IN 'OFF' POSITION  
 POSITIONS : OFF  
 MEDIUM TONE,  
 DEEP TONE.



TRIMMER LAYOUT





**PARTS LISTS**

**COILS**

**RESISTORS**

**CAPACITORS**

No.	Description	Ohms	Code No.
L1	B/C aerial coil	23	CZ.323.015
L2	(1 blue and 1 yellow spots)	2	
L3	S/W aerial coil	1	CZ.323.016
L4	(1 blue and 1 black spots)	<0.5	
L5	B/C R.F. coil	45	CZ.323.230
L6	(1 blue and 1 green spots)	2	
L7	S/W R.F. coil	<0.5	CZ.323.229
L8	(1 green and 1 yellow spots)	<0.5	
L9	B/C oscillator coil	3	CZ.330.602
L10	(1 blue spot)	1	
L11	S/W oscillator coil	<0.5	CZ.330.607
L12	(1 green and 1 white spots)	<0.5	
L13	1st I.F. transformer	12	CZ.320.423
L14		12	
L15	2nd I.F. transformer	12	CZ.320.424
L16		12	
L17	Speaker and transformer	230	CZ.161.122
L18	9,000 ohms	<0.5	
L19		3	

No.	Description	Code No.
R1, 6, 12	100,000 ohms ½W carbon	
R2	25,000 ohms ½W carbon	
R3	20,000 ohms ½W carbon	
R4	30,000 ohms ½W carbon	
R5, 11	1 megohm ½W carbon	
R7	0.5 megohm carbon potentiometer	CZ.029.138
R8	10 megohms 1W carbon	
R9	3 megohms ½W carbon	
R10	0.5 megohm ½W carbon	
R13	400 ohms ½W carbon 10%	
R14	50 ohms ½W carbon 10%	
R15	25 ohms ½W carbon	
R16	100 ohms ½W carbon	

No.	Description	Code No.
C1, 14, 26	100 pF mica	
C2, 4, 10, 15, 18	30 pF air trimmer	CZ.113.700
C3	20 pF mica	
C5, 6, 7	3 gang tuning	CZ.108.204
C8, 12	5 pF mica	
C9	80 pF mica 10%	
C11	0.05 mF 200V paper	
C12	5 pF mica :0%	
C13	8 pF air trimmer	CZ.113.500
C16	0.0055 mF mica 10%	CZ.068.116
C17	10 pF mica	
C19	475 pF mica 2%	CZ.066.119
C20, 21	Part of 1st I.F. transformer	
C22, 25, 33, 34, 37	0.1 mF 200V paper	
C23, 24	Part of 2nd I.F. transformer	
C27, 28, 29, 35	0.01 mF 600V paper	
C30	24 mF 350V electrolytic	
C31	80 pF mica	
C32	250 pF mica	
C36	0.5 mF 200V paper	

**IMPORTANT! In ordering spare parts, quote CODE NUMBER of part and MODEL NUMBER of Receiver. In claiming free replacement under GUARANTEE, return defective part PROMPTLY and quote MODEL and SERIAL NUMBER of Receiver and DATE OF PURCHASE.**