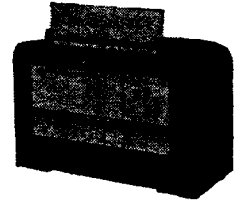




MULLARD MASTER RADIO

MODELS MAS1151, MAS1151A



SPECIFICATIONS

Subject to alteration without notice.

Power Supply	220-260 volts, 40/60 c/s.
Tuning Ranges	B/C Band, 530-1,620 Kc/s. S/W Band, 5.9-18.4 Mc/s.
Intermediate Frequency	455 Kc/s.
Cabinet	Deluxe wooden table.

VALVE EQUIPMENT AND VOLTAGE ANALYSIS.

Valve Function	Valve No.	Valve Type	Plate Volts	Screen Volts	Osc. P. Volts	Cathode Volts	Bias Volts	Bias Resistor
Frequency Converter	V1	ECH35	255	44	100	1.0	—	R3
1st I.F. Amplifier	V2	6K7GT	255	69	—	0	—	—
2nd I.F. Amplifier	V3	6K7GT	245	83	—	0	-2.5	R24
Demodulator, A.V.C. and 1st Audio	V4	6SQ7GT	90	—	—	0	—	—
Power Amplifier	V5	6V6GT	230	255	—	0	-13	R24 & 26
Rectifier	V6	6X5GT	Unfiltered B+ to B- 305 volts					
Dial Lamps	6.3V 0.32A tubular screw							

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

TO REMOVE CHASSIS FROM CABINET.

Remove the power plug from socket. Remove the four control knobs, cabinet back, speaker and dial lamp plugs from their respective sockets. Release the dial pointer from the dial drive cord. Removal of the four chassis mounting bolts allows the chassis to be withdrawn from the cabinet.

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

DIAL GLASS REMOVAL.

Raise the dial glass into its maximum forward position. This allows access to the dial glass clamping screws in the dial assembly end housing. Loosen the clamping screws (it is not necessary that they be completely removed) and withdraw the dial glass from the assembly. When the dial glass is replaced make sure that it is securely clamped.

REMOVAL OF INCLINATOR DIAL ASSEMBLY.

This operation can be carried out with the chassis in position in the cabinet, but is facilitated if it is first removed — see "To Remove Chassis from Cabinet." In order to prevent possible damage to the dial glass it is well to remove it also — see "Dial Glass Removal."

The inclinor dial assembly is held in place by means of two mounting brackets located at the ends. Removal of these brackets from within the cabinet permits the assembly to be lifted clear of the cabinet. If the operation is performed with the chassis in position, make sure that the dial lamp plug is removed from its socket, and the dial pointer is released from the dial cord before proceeding.

ALIGNMENT.

Alignment should be carried out with the tone switch in the third position clockwise, i.e., "normal I.F., medium tone." When I.F. channel alignment is complete turn the tone switch one position anti-clockwise—"expanded I.F., high fidelity"—and check that maximum response is within 2 Kc/s of the frequency of alignment.

By using an auxiliary pointer—easily made up from workshop materials—in conjunction with the calibrated scale on the gantry top member, alignment is facilitated. With the tuning gang fully closed, set the auxiliary pointer to the letter "S" mark on the extreme right of the scale.

On the short wave band, the receiver oscillator operates at a frequency higher than signal frequency.

DIAL LAMP REPLACEMENT.

This operation is carried out from outside the cabinet. The dial lamps are located, one at each end of the dial glass, in the end housing. The covers are a clip fit and are easily removed.

MAINS VOLTAGE ADJUSTMENT.

The power transformer is provided with two mains voltage tappings—220/240 volts and 250/260 volts. This receiver is adjusted at the Factory to the 220/240 volts tapping.

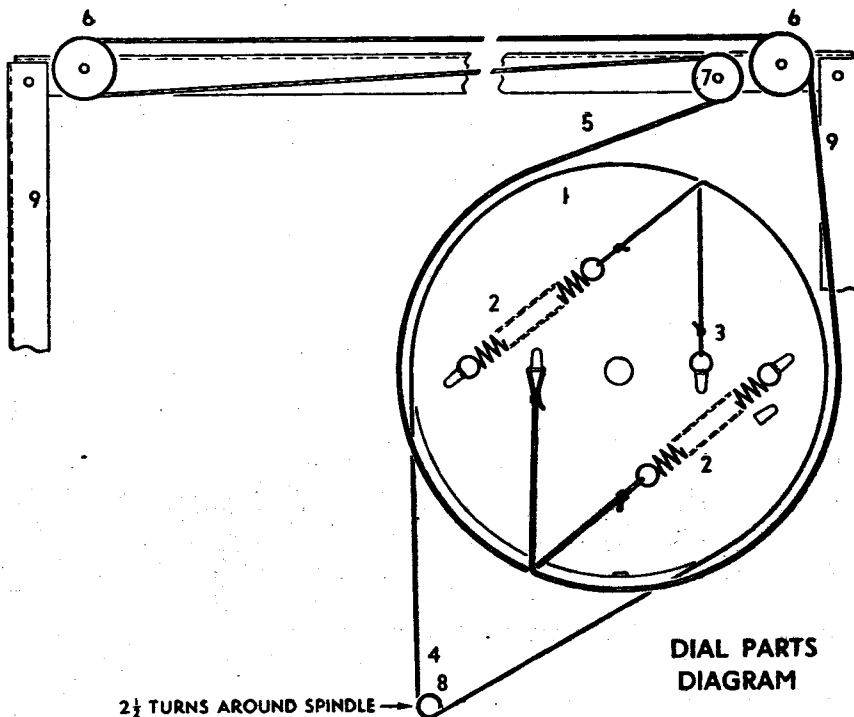
MAS1151 MAS1151A

SERVICE DATA



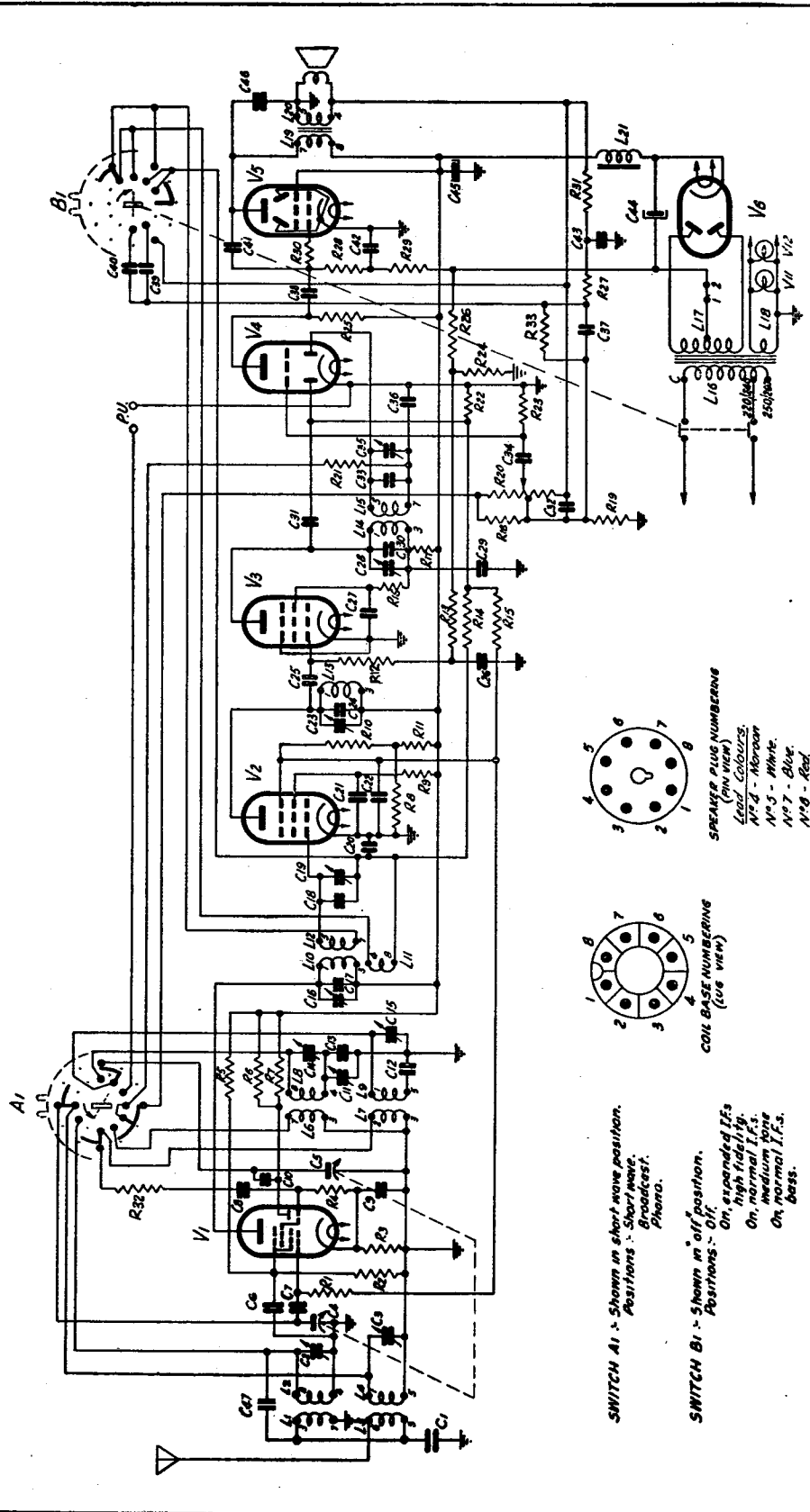
COMPONENTS NOT SHOWN ON CIRCUIT DIAGRAM.

No. on Dial Parts Diagram	Description	Code No.	No. on Dial Parts Diagram	Description	Code No.
—	Arm, side (W/C switch)	CS.218.011	—	Clamp, speaker mounting	CS.234.813
—	Assembly, baffle	CR.005.214	—	Clamp, incl. dial mounting to cab.	CS.235.205
—	Assembly, clicker, T/C	CR.450.012	—	Cloth, baffle	CE.081.14
—	Assembly, clicker, W/C	CR.450.015	5	Cord, dial drive	CS.361.811
—	Assembly, cursor	CR.480.614	4	Cord, drum drive	CS.361.812
1	Assembly, dial drum	CR.382.804	—	Cover, front (Incl. Dial Assy.)	CS.430.828
—	Assembly, dial housing R.H. (Incl. Dial Assy.)	CR.272.604	—	Cover, rear (Incl. Dial Assy.)	CS.430.827
—	Assembly, dial housing L.H. (Incl. Dial Assy.)	CR.272.605	—	Glass, dial, printed MAS 1151	CS.412.242
9	Assembly, gantry MAS 1151	CR.304.612	—	Glass, dial, printed MAS 1151A	CS.412.227
9	Assembly, gantry MAS 1151A	CR.304.614	—	Grommet, chassis mounting	CS.422.421
—	Assembly, inclinator dial (complete)	CR.483.005	—	Grommet, power cord	CS.422.414
—	Assembly, lamp cover R.H. (Incl. Dial Assy.)	CR.272.401	—	Key, W/C clicker	CS.365.805
—	Assembly, lamp cover L.H. (Incl. Dial Assy.)	CR.272.400	—	Knob, control	CR.523.656
—	Assembly, lamp holder	CZ.367.906	—	Mount, bakelite (incl. dial to cabinet)	CS.235.813
—	Assembly, pressure plate (Incl. Dial Assy.)	CR.391.207	—	Nut, tee (chassis mounting)	CH.603.214
—	Assembly, slider hinge	CR.432.200	—	Plate, clamping (incl. dial to mount.)	CS.235.200
—	Assembly, T/C ON/OFF switch (complete)	CZ.200.210	—	Plate, friction (Incl. Dial Assy.)	CS.366.200
—	Assembly W/C switch (comp.)	CZ.200.213	—	Plug, 2-pin polarised	CR.102.200
—	Assembly, terminal	CZ.376.201	6	Pulley, wooden, large	CS.360.202
—	Back, cabinet	CS.462.026	7	Pulley, wooden, small	CS.360.201
—	Badge, Mullard	CR.531.409	3	Ring, dial cord	CS.281.807
—	Bank, T/C switch	CZ.200.211	—	Rod, dial slide	CS.382.202
—	Bank, W/C switch	CZ.200.212	—	Shield, valve	CS.117.616
—	Brace, end (W/C switch)	CS.219.000	—	Socket, octal wafer	CZ.369.507
—	Bracket, cover attach. R.H. (Incl. Dial Assy.)	CS.229.803	—	Socket, 2-pin polarised	CR.102.401
—	Bracket, cover attach. L.H. (Incl. Dial Assy.)	CS.229.802	—	Spindle, pulley	CS.382.811
—	Bracket, tuning spindle	CS.224.603	8	Spindle, tuning	CS.351.409
—	Clamp, baffle mounting	CS.235.826	—	Spring, compression (Incl. Dial Assy.)	CS.281.806
			2	Spring, dial drum	CS.210.010
			—	Spring, tuning spindle	CS.212.001
			—	Spring, return (Incl. Dial Assy.)	CS.212.201
			—	Spring, W/C clicker key	CS.211.802
			—	Switch, mains on/off	CZ.220.001
			—	Washer, friction (Incl. Dial Assy.)	CS.366.201



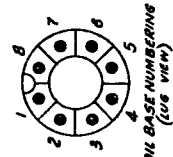
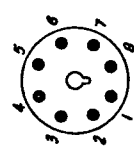


L	4,2,3,4	6,7,8,9	10,11,12	13	14,15	16,17,18	19,20	21,19,20
C	1,47	2,3,4,6,7	8,9,10,5	11,12,13,14,15,16,17	18,19,20	21,22,23,24,25,26,27,28,29,30,31,32,33,34,35	36	37,38,39,40,41,42,43,44,45,46
R	1,2,3	32,4	5,6,7	8,9,10,11	12	13,14,15,16,17,18,19,20,21	22,23	24,25,26,27,28,29,30,31
V		1	2	3	4	5,6	7	8,9,10,11,12,13,14,15,16



SWITCH A1 - Shown in short wave position.
Positions - Short wave, Broadcast, Phono.

SWITCH B1 - Shown in air position.
Positions - Off, expanded I.F.s, high fidelity, normal I.F.s, medium tone, normal I.F.s, Bass.



NOTE:

- Some chasses may be found with —
- (a) R32 (100 ohms) connected between lug 2 of osc. coil winding L7 and the W/C switch bank, instead of the position shown.
 - (b) A 2 pfd glass capacitor connected between lugs 1 and 5 of the 1st I.F. transformer.



SERVICE DATA

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PARTS LISTS

CAPACITORS

No.	Description	Code No.
C1-17-18- 24-30-33	150 pfd mica	
C2-3-15	30 pfd glass trimmer	CZ.117.600
C4-5	2 gang tuning — MAS 1151 MAS 1151A	2H CZ.107.730
C6-9-27- 29	0.01 mfd 600v. paper	
C7-8-10- 25-36-41	100 pfd ceramic	CZ.096.602
C11-16-19- 23-28-35	125 pfd ceramic trimmer	CZ.118.200
C12	0.0045 mfd mica	
C13	400 pfd mica	
C14	30 pfd air trimmer	CZ.113.700
C20-22-26- 34-37-42	0.1 mfd 200v. paper	
C21	0.1 mfd 400v. paper	
C31	33 pfd ceramic	CZ.096.605
C32	0.001 mfd 600v. paper	
C38	0.004 mfd 600v. paper	
C39-46	0.006 mfd 600v. paper	
C40-43	0.05 mfd 200v. paper	
C44-45	24 mfd 350v. electrolytic	
C47	5 pfd glass	

RESISTORS

No.	Description	Code No
R1	0.5 megohm 1/2W carbon	
R2-8	50,000 ohms 1W carbon	
R3	150 ohms 1W W/W	
R4-30-33	50,000 ohms 1/2W carbon	
R5-9-16	100,000 ohms 1W carbon	
R6-7	60,000 ohms 1W carbon	
R10-23	5 megohms 1W carbon	
R11-25	250,000 ohms 1W carbon	
R12-21- 22-28	250,000 ohms 1/2W carbon	
R13-14	1 megohm 1/2W carbon	
R15	2 megohms 1/2W carbon	
R17	1,000 ohms 1W carbon	
R18	150,000 ohms 1/2W carbon	
R19	2,500 ohms 1/2W carbon	
R20	0.5 megohm tapped potentiometer	CZ.029.112
R24	35 ohms 1W W/W	
R26	150 ohms 3W W/W	
R27	5,000 ohms 1/2W carbon	
R29	100,000 ohms 1/2W carbon	
R31	1,000 ohms 1/2W carbon	
R32	100 ohms 1/2W carbon	

COILS

No.	Ohms	Description	Code No.
L1	22	Aerial Coil	CZ.320.015
L2	4		
L3	1.5		
L4	<0.5		
L6	2.3	Oscillator Coil	CZ.321.006
L7	0.5		
L8	5		
L9	<0.5		
L10	5	1st I.F. Transformer	CZ.320.414
L11	0.7		
L12	5		
L13	7.5	2nd I.F. Choke	CZ.326.200
L14	6.0	3rd I.F. Transformer	CZ.326.201
L15	6.0		
L16	30	Power Transformer	CZ.344.210
L17	300		
L18	<0.5		
L19	650	Speaker and Transformer	CZ.161.204
L20	0.5		
L21	450	Filter Choke	CZ.340.406

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.