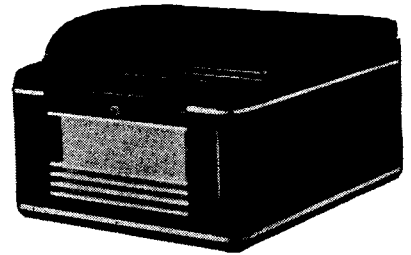




MULLARD MASTER RADIO

DUO-PLAYER MODEL MAS1104



SPECIFICATIONS

(Subject to alteration without notice)

Power Supply	220-260 volts 40-60 c/s
Tuning Range	530-1,620 Kc/s
Intermediate Frequency	455 Kc/s
Cabinet	De Luxe Wooden Table

VALVE EQUIPMENT AND VOLTAGE ANALYSIS

Valve Function	Valve No.	Valve Type	Plate Volts	Screen Volts	Osc. P. Volts	Bias Volts	Bias Resistor	
Frequency Converter	V1	ECH35	217	74	94	-1.25	R5	
I.F. Amplifier	V2	6SK7GT	217	74	—	-1.25	R5	
Demodulator, A.V.C. and 1st Audio	V3	6SQ7GT	72	—	—	0	—	
Power Amplifier	V4	6V6GT	205	217	—	-11.8	R4 & 5	
Rectifier	V5	6X5GT	V5 Cathode — L9 C.T. — 252 volts					
Dial Lamps	6.3v 0.32a Tubular Screw							

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

REMOVAL OF CHASSIS FROM CABINET.

This receiver incorporates removable chassis bottom covers, which feature allows for much service work being carried out without recourse to taking the chassis from the cabinet. If chassis removal is necessary, proceed as follows.

Remove the plug from power socket. Remove the dial glass—see "Dial Glass Removal"—and the wooden panel underneath the dial glass, and release the dial pointer from the dial cord. Take care to position the cord under the dial pointer so that it will not catch during removal of the chassis. Loosen speaker clamping bracket.

Tie the pick-up arm to its rest and turn the cabinet on its back. Remove the control knobs, cabinet bottom covers, and free the chassis bottom cover shield earthing lug. Remove the dial lamps and pick-up plugs from their respective sockets, free the aerial and earth wires, and power flex, and disconnect the power cord from the gramo motor. With the unscrewing of the four chassis mounting bolts, the chassis may be withdrawn.

The chassis may be refitted by a reversal of the above procedure. When replacing the chassis bottom cover, make sure that the shield earthing lug is in position.

DIAL GLASS REMOVAL.

The dial glass is held in position by springs housed in the cabinet at the left hand end of the glass. Apply pressure to these springs, by way of the dial glass until it is clear of the cabinet at the right hand end, then lift the glass from the cabinet.

MAINS VOLTAGE ADJUSTMENT.

The power transformer is provided with two primary winding tapplings, 220/240 volts and 250/260 volts, for adjustment to the supply mains voltage at the point of installation. The receiver is adjusted at the Factory to the 220/240 volts tapping.

ALIGNMENT.

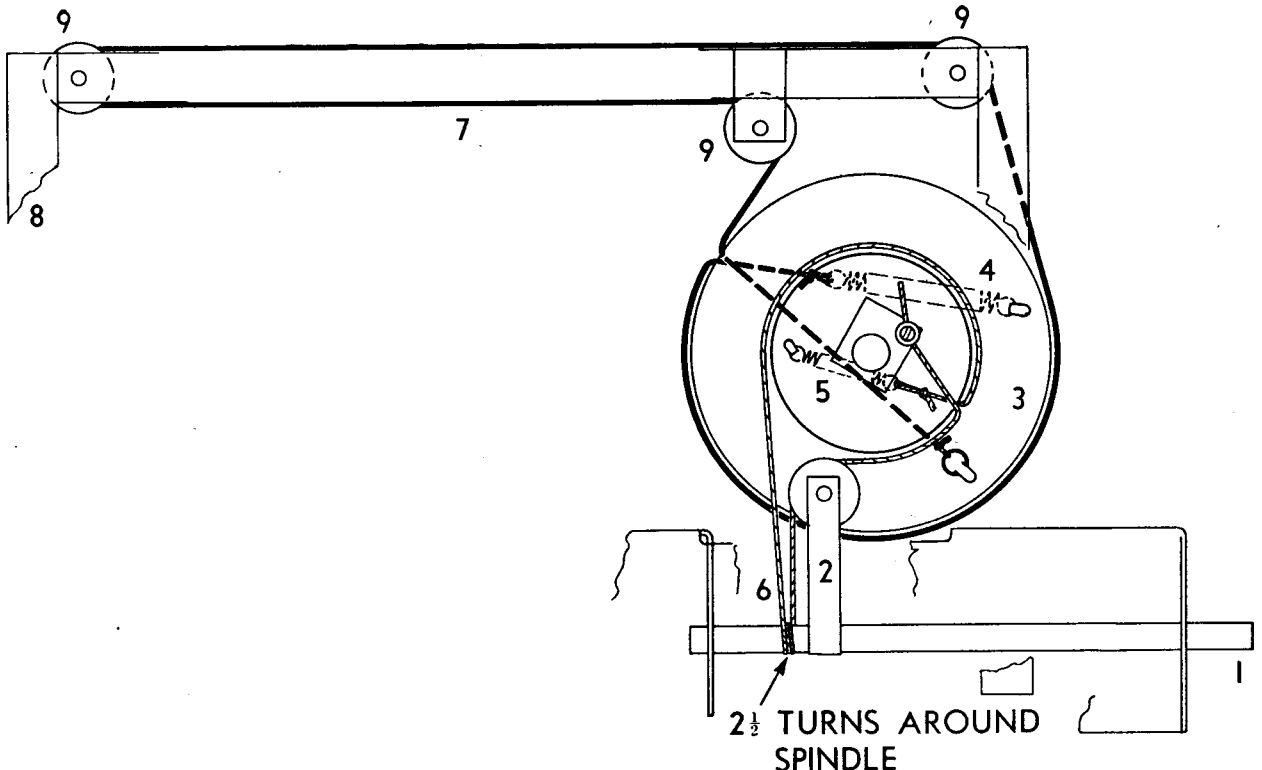
Removal of the chassis bottom cover permits access to all alignment trimming condensers.

With the tuning gang fully closed, fix an auxiliary pointer, which can be easily made up from workshop materials, to the top string of the dial cord, and set to "S" on the calibrated scale on the top member of the gantry assembly. If alignment is undertaken with the chassis in position in the cabinet, the auxiliary pointer can be fitted after removal of the dial glass—see "Dial Glass Removal"—and the wooden panel beneath it.

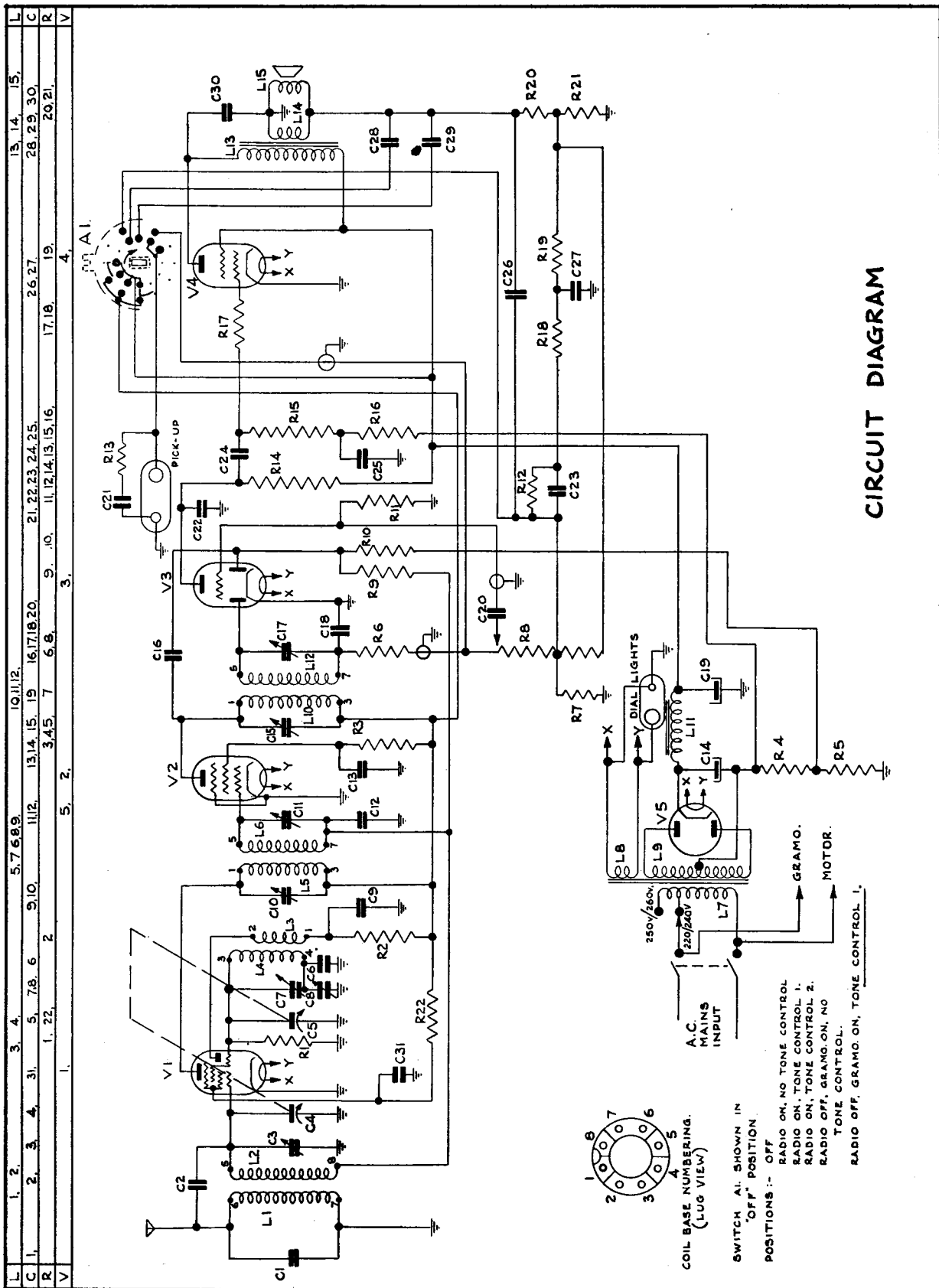


COMPONENTS NOT SHOWN ON CIRCUIT DIAGRAM

No. on Dial Parts Diagram	Description	Code No.	No. on Dial Parts Diagram	Description	Code No.
—	Assembly, baffle	CR.005.217	—	Glass, dial printed	CS.412.234
—	Assembly, cursor	CR.480.616	—	Grommet, power cord	CS.422.414
3	Assembly, dial drum	CR.382.200	—	Knob, control	CR.523.648
8	Assembly, gantry	CR.304.613	—	Nut, Tee (chassis mounting)	CS.271.014
—	Assembly, lampholder	CZ.367.911	—	Plug, 2-pin polarised	CR.102.200
2	Assembly, Pulley Spindle	CR.436.203	9	Pulley, wooden	CS.360.201
—	Assembly, T/C clicker	CR.450.018	—	Ring "C" (pulley & tun. spindles)	CS.281.801
—	Assembly, T/C—On/Off Switch (Complete)	CZ.200.501	—	Rod, dial slide	CS.382.208
—	Badge, Mullard	CR.531.409	—	Socket, 2-pin polarised	CR.102.401
—	Bank, T/C switch	CZ.200.502	—	Socket, octal wafer	CZ.369.507
—	Bracket, lampholder mounting	CS.228.458	1	Spindle tuning	CS.351.308
—	Bracket, potentiometer mounting	CS.230.602	4	Spring, dial drum (long)	CS.210.008
—	Bracket, slide rod mounting	CS.228.459	5	Spring, dial drum (short)	CS.210.011
—	Clamp, speaker	CS.234.600	—	Spring, dial glass mounting	CS.211.007
—	Cloth, speaker baffle	CE.081.14	—	Switch, mains On/Off	CZ.220.001
7	Cord, dial	CR.384.809			
6	Cord, drum	CS.361.816			

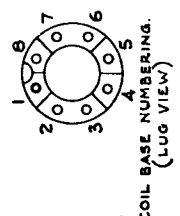


DIAL CORD LAYOUT



CIRCUIT DIAGRAM

L	1, 2, 3, 4, 5, 7, 6, 8, 9	10, 11, 12	13, 14, 15, 16, 17, 18, 20	21, 22, 23, 24, 25	26, 27	13, 14, 15
C	1, 2, 3, 4, 5, 7, 8, 6	9, 10	11, 12, 13, 14, 15, 16	17, 18, 19	20, 21	28, 29, 30
R	1, 2, 3, 4, 5, 7, 8, 6	2	3, 4, 5, 7, 6, 8	9, 10, 11, 12, 13, 14, 15, 16	17, 18, 19	20, 21
V	1, 2, 3, 4, 5, 7, 8, 6	2	3, 4, 5, 7, 6, 8	9, 10, 11, 12, 13, 14, 15, 16	17, 18, 19	20, 21



SWITCH A1 SHOWN IN "OFF" POSITION
 POSITIONS :-
 OFF
 RADIO ON, NO TONE CONTROL
 RADIO ON, TONE CONTROL 1
 RADIO ON, TONE CONTROL 2
 RADIO OFF, GRAMO. ON, NO TONE CONTROL
 RADIO OFF, GRAMO. ON, TONE CONTROL 1



PARTS LISTS

CAPACITORS

No.	Description	Code No.
C1	150 pfd mica	
C2	5 pfd glass	CZ.102.303
C3	30 pfd glass trimmer	CZ.117.600
C4-5	2 gang tuning	CZ.107.734
C6	380 pfd mica	
C7	30 pfd air trimmer	CZ.113.700
C8-10-11-15-17	125 pfd ceramic trimmer	CZ.118.200
C9-13-30-31	0.01 mfd 600v. paper	
C12-23-25	0.1 mfd 200v. paper	
C14-19	24 mfd 350v. electrolytic	
C16	33 pfd ceramic	CZ.096.605
C18-22	100 pfd ceramic	CZ.096.602
C20-21-27	0.02 mfd 400v. paper	
C24-28	0.002 mfd 600v. paper	
C26	600 pfd mica	
C29	0.006 mfd 600v. paper	

RESISTORS

No.	Description	Code No.
R1-12-17	50,000 ohms 1/2W carbon	
R2	30,000 ohms 1W carbon	
R3	60,000 ohms 1W carbon	
R4	200 ohms 1W W/W	
R5	25 ohms 1W W/W	
R6-16	100,000 ohms 1/2W carbon	
R7	25,000 ohms 1/2W carbon	
R8	0.5 megohm tapped potentiometer	CZ.029.006
R9-10	1 megohm 1/2W carbon	
R11	5 megohm 1W carbon	
R13	5,000 ohms 1/2W carbon	
R14	250,000 ohms 1W carbon	
R15	0.5 megohm 1/2W carbon	
R18	10,000 ohms 1/2W carbon	
R19	1,000 ohms 1/2W carbon	
R20	100 ohms 1/2W carbon	
R21	50 ohms 1/2W carbon	
R22	50,000 ohms 1W carbon	

COILS

No.	Description	Code No.
L1	Aerial and Oscillator Coil	21
L2		4
L3		2.5
L4		5
L5	1st I.F.	4.5
L6		4.5
L7	Power Transformer	50
L8		700
L9		<0.5
L10	2nd I.F.	4.5
L12		4.5
L11	Filter Choke	450
L13	Speaker and Transformer	500
L14		1.0
L15		3.5

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.