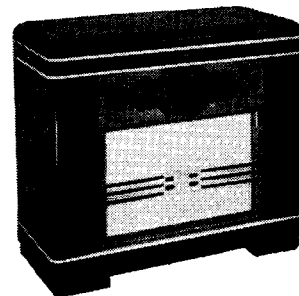




MULLARD MASTER RADIO DUO PLAYER GRAND MODEL MAS1150



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	De Luxe Combination
Gramo. Unit	Eight 10" or 12" Mixed Record Changer

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	V11 & 12	6.3V 0.32A tubular screw							
Gramo. Floodlight	V10	6.3V 0.64A globular 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.

There are two methods by which the chassis may be removed from the cabinet.

METHOD 1: Remove the power plug from the mains socket. Remove the four top control knobs and secure the pick-up arm. Lie the cabinet face downwards on some protective material, remove the cabinet back, the side control knob, the speaker, pick-up and dial lamps plugs from their respective sockets, and the earthing lug, located near the 6X5GT socket. Release the dial pointer assembly from the dial cord. Removal of the four chassis mounting nuts permits the chassis to be withdrawn from the cabinet.

METHOD 2: Remove the power plug from the mains socket. Remove the four top control knobs and the four screws mounting the radio control panel. Remove the cabinet back, the side control knob, the speaker, pick-up and dial lamp plugs from their respective sockets, and the earthing lug located near the 6X5GT socket. Release the dial pointer assembly from the dial cord. Remove the dial lamp holders from their mounting brackets and lift the control panel from the cabinet. Removal of the four chassis mounting nuts permits the chassis to be lifted through the top of the cabinet.

In each case the chassis is replaced by a reversal of the removal procedure.

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 top edge of the chassis, alignment is facilitated. With the tuning gang fully closed, set the auxiliary pointer to the letter "S" mark on the calibrated scale.

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

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.

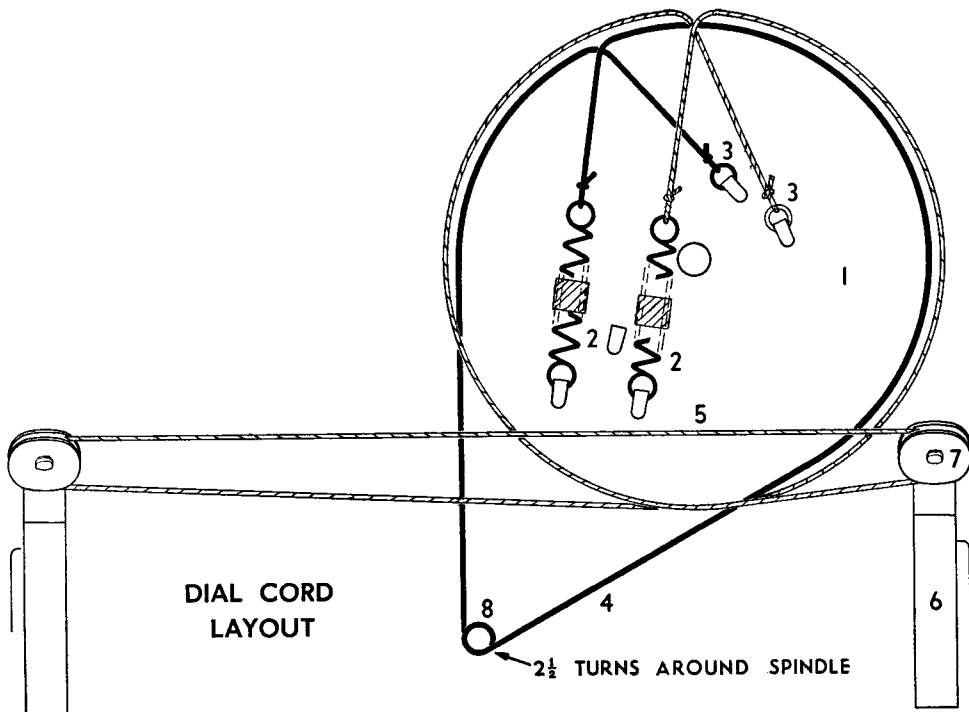
GRAMO UNIT.

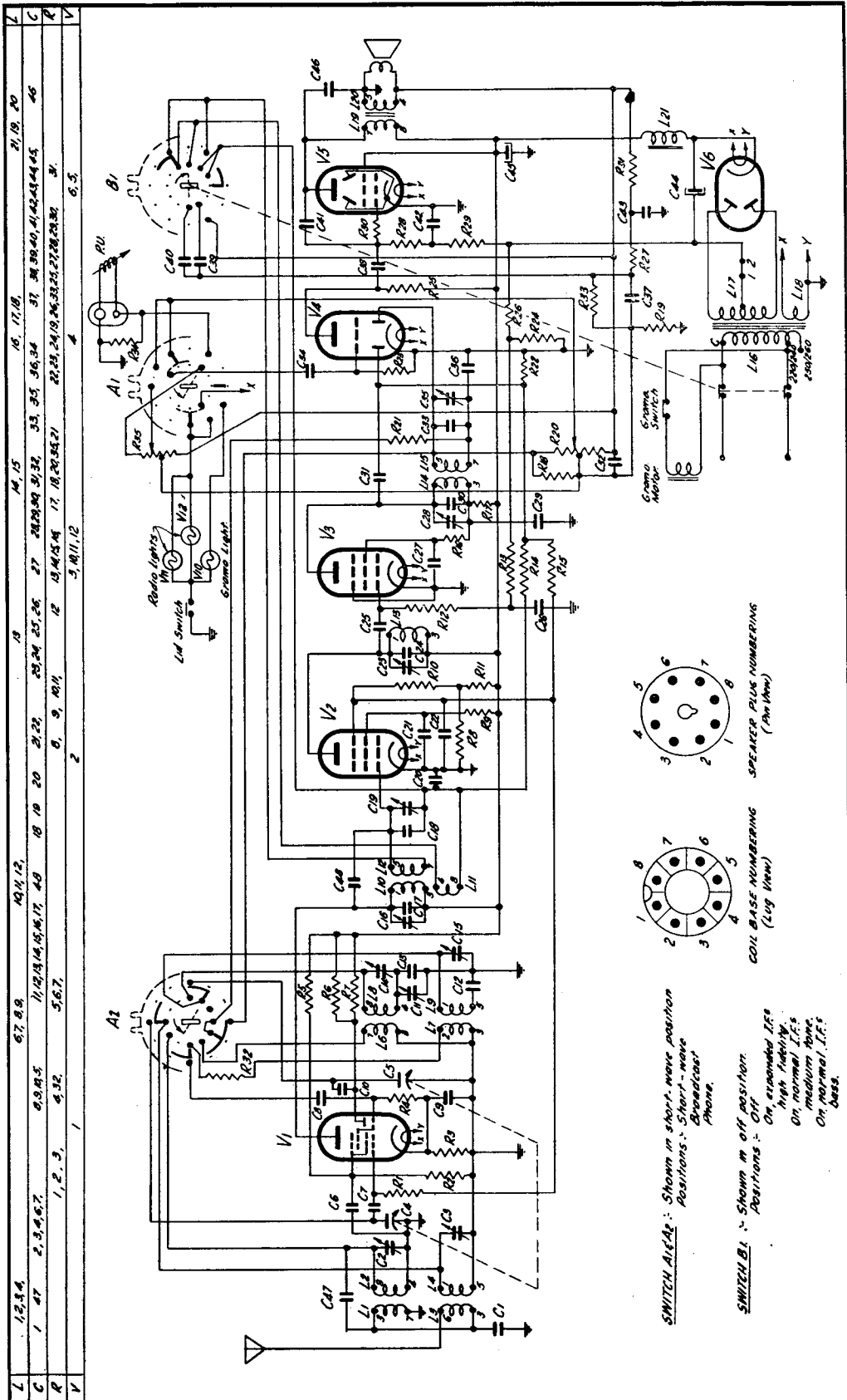
For information on the gramophone unit, consult the booklet enclosed with the receiver.



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	5	Cord, dial	CS.361.811
—	Assembly, contact (lid switch)	CZ.222.001	4	Cord, drum	CS.361.812
—	Assembly, cursor	CR.480.620	—	Cup, needle (with cover)	CR.571.001
1	Assembly, dial drum	CR.382.804	—	Cup, needle (without cover)	CS.461.001
—	Assembly, dial glass mount R.H.	CR.272.606	—	Glass, dial printed	CS.412.246
—	Assembly, dial glass mount L.H.	CR.272.607	—	Grommet, chassis mounting	CS.422.421
—	Assembly, diffuser	CR.004.000	—	Grommet, power cord	CS.422.414
—	Assembly, lampholder	CZ.367.911	—	Housing, floodlight	CS.026.000
6	Assembly, pulley spindle	CR.436.201	—	Key, W/C clicker	CS.365.805
—	Assembly, T/C—on/off switch (complete)	CZ.200.216	—	Knob, ext. vol. control	CR.523.649
—	Assembly, W/C switch (complete)	CZ.201.201	—	Knob, tuning, etc.	CR.523.651
—	Assembly, T/C clicker	CR.450.023	—	Nut, tee (chassis mounting)	CH.603.214
—	Assembly, W/C clicker	CR.450.022	—	Plug, polarised 2 pin	CR.102.200
—	Assembly, terminal	CZ.376.201	7	Pulley, wooden	CS.360.202
—	Badge, Mullard	CR.531.409	3	Ring, dial cord	CS.281.807
—	Bank, T/C switch	CZ.200.211	—	Rod, dial slide	CS.382.210
—	Bank, W/C switch A1	CZ.200.217	—	Shield, valve	CS.117.616
—	Bank, W/C switch A2	CZ.200.212	—	Socket, octal wafer	CZ.369.507
—	Brace, end (W/C switch)	CS.219.000	—	Socket, polarised 2 pin	CR.102.401
—	Bracket, dial slide rod mounting	CS.228.477	8	Spindle, tuning	CS.351.410
—	Bracket, lampholder	CS.228.475	2	Spring, dial drum	CS.210.010
—	Bracket, potentiometer mounting	CS.231.207	—	Spring, dial glass locating	CS.234.823
—	Bracket, tuning spindle	CS.224.603	—	Spring, lid support	CS.210.013
—	Clamp, speaker	CS.234.813	—	Spring, slide rod	CS.255.001
—	Cloth, baffle	CE.081.42	—	Spring, tuning spindle	CS.212.001
			—	Spring, W/C clicker key	CS.211.802
			—	Switch, mains on/off	CZ.220.001







SERVICE DATA

MAS1150

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	2H
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-		
26-37-42	0.1 mfd 200V paper	
C21	0.1 mfd 400V paper	
C31	33 pfd ceramic	CZ.096.605
C32	0.001 mfd 600V paper	
C34-40-		
43	0.05 mfd 200V paper	
C38	0.004 mfd 600V paper	
C39-46	0.006 mfd 600V paper	
C44-45	24 mfd 350V electrolytic	
C47	5 pfd glass	CZ.102.303
C48	2 pfd glass	CZ.102.304

RESISTORS

No.	Description	Code No.
R1	0.5 megohm ½W carbon	
R2-8	50,000 ohms 1W carbon	
R3	150 ohms 1W W/W	
R4-30-		
33-34	50,000 ohms ½W 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 ½W carbon	
R13-14	1 megohm ½W carbon	
R15	2 megohm ½W carbon	
R17	1,000 ohms 1W carbon	
R18	100,000 ohms ½W carbon	
R19	2,500 ohms ½W carbon	
R20	0.5 megohm tapped potentiometer	CZ.029.108
R24	35 ohms 1W W/W	
R26	150 ohms 3W W/W	
R27	5,000 ohms ½W carbon	
R29	150,000 ohms ½W carbon	
R31	1,000 ohms ½W carbon	
R32	100 ohms ½W carbon	
R35	0.5 megohm tapped potentiometer	CZ.029.120

COILS

No.	Ohms	Description	Code No.
L1	22	Aerial Coil	CZ.320.015
L2	4		
L3	1.5		
L4	<.5		
L6	2.3	Oscillator Coil	CZ.321.006
L7	.5		
L8	5		
L9	<.5		
L10	5	1st I.F. Transformer	CZ.320.414
L11	.8		
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.344.212
L17	300		
L18	0.5		
L19	600	Speaker and Transformer, 5,000 ohms	CZ.161.301
L20	0.6		
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.