

**E·M·I SERVICE LTD.**

**“HIS MASTER'S VOICE” 1500**  
**MARCONIPHONE 890**

# **SERVICE MANUAL**

## **6 Valve A.F.C. Push-Button Radiogram**

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## SPECIFICATION

The radio chassis for this model is similar to that used in the Table models (1102/874—see Supplementary Manual) with the addition of a radiogram-switch.  
For Preliminary Tests, H.F. Tests and Ganging, Valve Table, Continuity Checks and Component Diagrams, see Supplementary Service Manual models 1102/874.

### PHYSICAL.

	Model 1500	Model 890
Height ... ..	40 $\frac{1}{4}$ inches	40 $\frac{1}{4}$ inches
Width ... ..	24 $\frac{1}{4}$ inches	24 $\frac{1}{8}$ inches
Depth ... ..	16 $\frac{3}{4}$ inches	16 $\frac{1}{2}$ inches
Net weight ... ..	93 lb.	92 lb.
Gross weight ... ..	164 lb.	163 lb.

### SUPPLY.

195 to 255 volts 50 cycles only.  
Consumption : 80 volt/amps 70 watts radio  
                  92 volt/amps 82 watts gramophone } at 225 volts  
Connect only to supply points protected with 2 ampere fuses.

### FUSES.

This model does not incorporate a visual tuning indicator, otherwise the valves are as the table model, i.e.,

Marconi X65 (V1)	Frequency changer.
„ KTW63 (V2)	I.F. Amplifier.
„ D63(met) (V3)	Discriminator diode.
„ DH63 (V4)	Second Detector, A.V.C., L.F., and A.F.C. Amplifier.
„ KT61 (V5)	Output Valve.
„ U50 (V6)	H.T. Rectifier.

Pilot Lamps, 2 at 6·5

Part No. 22704H.

### RATED OUTPUT AND WAVE-RANGES.

See Table model.

### LOUDSPEAKER.

No. 24460N.

The elliptical cone loudspeaker with an energised field is used. For resistance data see circuit on page 3. One or two extra low resistance loudspeakers may be connected to the sockets provided, and should be adjusted to a total impedance of approximately 5 ohms.

To silence the receiver loudspeaker remove the plug from the third E.L.S. socket.

### PICK-UP.

No. 28060AK.

D.C. resistance 7,500 ohms.

### AUTO-BRAKE.

No. 230G, standard friction-feed type.

### MOTOR.

No. 26200G, hysteresis motor is fitted to this model.

D.C. resistance across terminals 1 and 4, 1170 ohms approx. (disconnect motor from mains transformer). For full service data see Motor Service Manual.

As this motor is wired to the 224—225 tapping on the receiver mains transformer a consistent voltage is maintained and no other voltage adjustment is necessary.

## CIRCUIT DESCRIPTION

The circuit follows the general lines of the table model. The pick-up is connected into circuit by means of S2, which also disconnects the H.T. supply to the screens of V1 and V2 to silence radio.

A resistance filter (R39) is wired across the pick-up.

## VALVE TABLE

(VOLTAGE, CURRENT AND RESISTANCE TESTS.)

Voltage and current values  $\pm$  20 per cent.

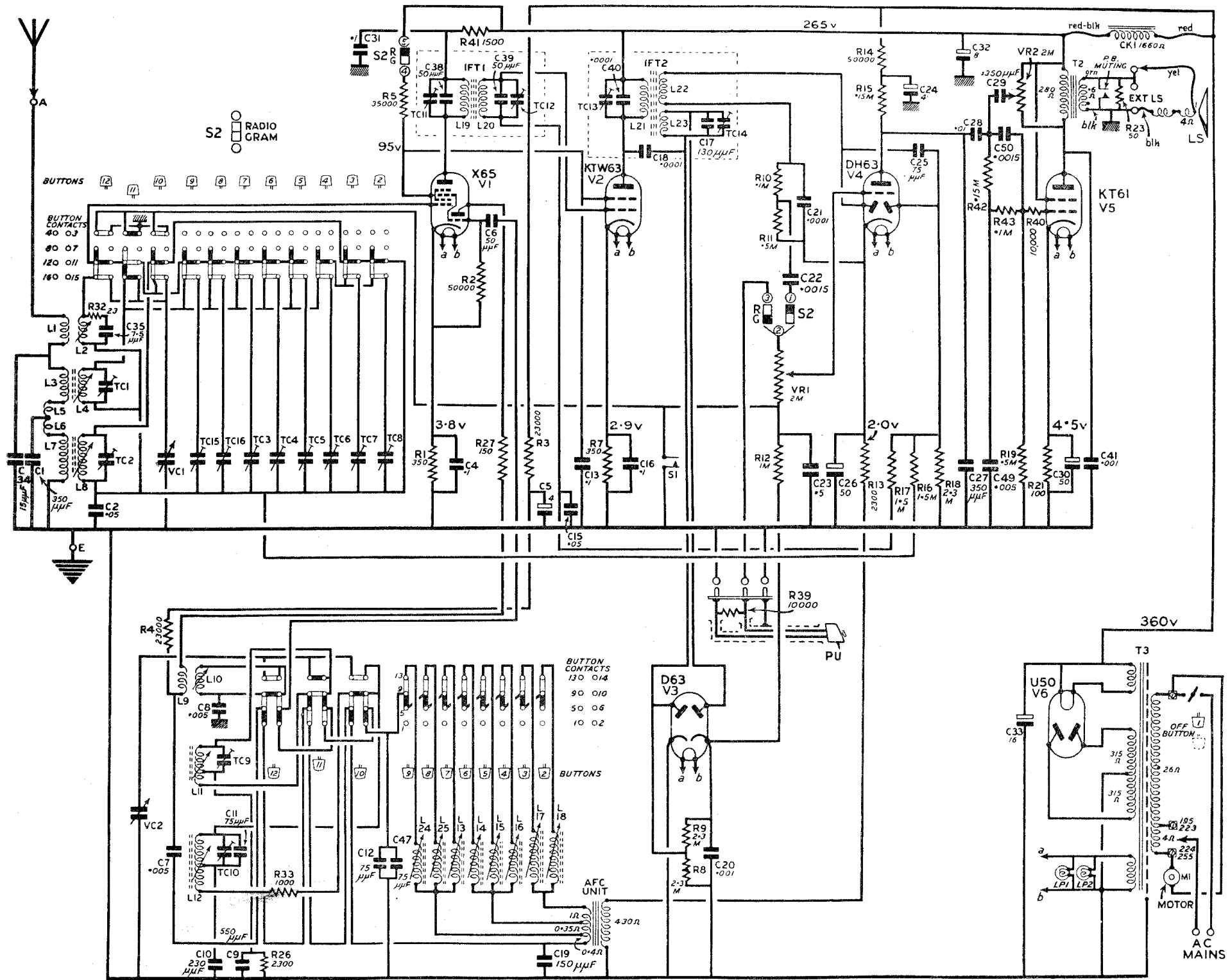
Resistance values approximate. S = short circuit,  $\infty$  = open circuit

The following readings were taken on receiver operating on 220 volt mains (195—223 tap) switched to M.W. and aerial disconnected.

Resistance readings taken with valves and pilot lamps removed.

	ANODE.			SCREEN.			CATHODE.		GRID.
	Volts.	Milliamps.	Resistance to chassis.	Volts.	Milliamps.	Resistance to chassis.	Volts.	Resistance to chassis.	Resistance to chassis.
V1 (X65) ... ..	Mxr. 260 Osc. 120	1·25 5·5	$\infty$ $\infty$	95	4·0	$\infty$	3·8	350	3·8M
V2 (KTW63) ... ..	265	7·0	$\infty$	95	1·4	$\infty$	2·9	350	3·8M
V3 (D63) ... ..	—	—	2·3M (both)	—	—	—	—	S and 4·6M	—
V4 (DH63) ... ..	133	0·8	$\infty$	—	—	—	2·0	2,730	6M
V5 (KT61) ... ..	245	38	$\infty$	265	7·0	$\infty$	4·5	100	·5M
V6 (U50) ... ..	360 A.C.	—	315 (both)	—	—	—	360	$\infty$	—

Feed through L.S. field (at tag) ... .. 59·5 mA  
Osc. anode feed ... .. 5·5 mA } Total 65 mA.



# SPARE PARTS LIST

# MODELS 1500 & 890

Part No.	Description.	Parts per Inst.	Finish.	Retail List Price.	Per.
<b>PARTS OF RADIO UNIT</b>					
(For complete radio unit see pages 12 & 13.)					
				£ s. d.	
29820B	H.F. Unit ... ..	1	—	4 6 0	Each.
29817B	Panel and coil assembly ... ..	1	—	0 8 10	"
29817A	Panel with five tags ... ..	1	—	0 0 4	"
29838A	L1 and L2 ... ..	1	—	0 1 3	"
20653	Bush	1	—	0 0 6	Doz.
20652	Clip } securing L1—L2 to panel ... ..	1	—	0 0 6	"
20654	Nut				
20666C	L3 and L4 ... ..	1	—	0 1 0	Each.
20662	Coil stem ... ..	1	—	0 0 7	"
20664	Screw, securing coil stem to panel	1	—	0 0 7	Doz.
20672	Cores ... ..	2	—	0 0 6	Each.
20667	Insulating washer, between the cores	1	—	0 0 2	Doz.
20659	Felt washer	1	—	0 0 6	"
20668	Insulating washer } securing coils and cores to stem ... ..	1	—	0 0 1	Each.
20669	Screw ... ..				
20661D	L7 and L8 ... ..	1	—	0 1 9	"
20729	Coil stem	1	—	0 0 2	"
20727	Spacer } securing L7 and L8 ... ..	1	—	0 0 1	"
20728	Screw				
20542	Core screw, for L7—L8 ... ..	1	—	0 0 6	"
8777	Screw, PK, securing panel and coil assembly	4	—	0 0 6	Doz.
29825A	Panel and coil assembly ... ..	1	—	1 3 0	Each.
20657Y	L9 and L10 ... ..	1	—	0 1 6	"
20653	Bush	1	—	0 0 6	Doz.
20652	Clip } securing L9—L10 to panel	1	—	0 0 6	"
20654	Nut				
29827C	L11 ... ..	1	—	0 1 3	Each.
29827D	L12 ... ..	1	—	0 1 3	"
29827J	L13 ... ..	1	—	0 1 10	"
29827K	L14 ... ..	1	—	0 1 10	"
29827K	L15 ... ..	1	—	0 1 10	"
29827K	L16 ... ..	1	—	0 1 10	"
29827L	L17 ... ..	1	—	0 1 0	"
29827L	L18 ... ..	1	—	0 1 0	"
29827J	L24 ... ..	1	—	0 1 10	"
29827J	L25 ... ..	1	—	0 1 10	"
29826A & B	Coil stem and core	10	—	0 0 9	"
29839	Spring clip ... ..	10	—	0 0 1	Doz.
8777	Screw, PK, securing panel	5	—	0 0 6	"
24150C	R26—2,300 ohms	1	—	0 0 6	Each.
24150V	R32—23 ohms. ... ..	1	—	0 0 6	"
19202B	R33—1,000 ohms ... ..	1	—	0 0 6	"
24900W	C2—0.05 mfd. ... ..	1	—	0 1 3	"
24900J	C7—0.005 mfd. ... ..	1	—	0 1 0	"
22005A	C8—0.005 mfd. ... ..	1	—	0 1 6	"
22330CS	C9—550 mmfd. ± 2 per cent.	1	—	0 1 6	"
22330BJ	C10—230 mmfd. ± 2 per cent.	1	—	0 1 6	"
22164K	C11—75 mmfd. ... ..	1	—	0 0 9	"
28444F	C12—75 mmfd. ± 2 per cent.	1	—	0 1 0	"
28444C	C19—150 mmfd. ± 2 per cent.	1	—	0 1 0	"
22164D	C34—15 mmfd. ... ..	1	—	0 0 9	"
22164C	C35—10 mmfd. ... ..	1	—	0 0 9	"
28381B	C47—75 mmfd. ... ..	1	—	0 1 0	"
29890C	Twelve push button switch, with mains on/off and muting switch	1	—	0 19 6	"
19050	Screw	2	WN	0 0 4	Doz.
3166	Washer, SP } securing switch	2	—	0 0 2	"
11628	Nut				
26350BE	TC1 and TC2 ... ..	1	WN	0 0 4	"
26350BF	TC3 and TC4 ... ..	1	—	0 8 9	Each.
26350AZ	TC5 and TC6 ... ..	1	—	0 10 3	"
26350AZ	TC7 and TC8 ... ..	1	—	0 9 6	"
26350BE	TC9 and TC10 ... ..	1	—	0 9 6	"
26350AX	TC15 and TC16 ... ..	1	—	0 8 9	"
29863	Adjusting screw ... ..	12	AcD	0 6 9	"
				0 1 3	Doz.

**SPARE PARTS LIST—continued**

Part No.	Description.	Parts per Inst.	Finish.	Retail List Price.	Per.
<b>PARTS OF RADIO UNIT—continued</b>					
29356	Washer	12	WN	£ 0 0 6	Doz.
10710	Screw 4BA	6	"	0 0 2	"
3166	Washer, SP	6	"	0 0 2	"
11628	Nut	6	WN	0 0 4	"
11231	Screw	6	"	0 0 2	"
3165	Washer, SP	6	"	0 0 2	"
19893	Tag	2	"	0 0 4	"
20334A	Insulated tag and bracket	1	"	0 0 3	Each.
27490A	Screen assembly	1	"	0 0 4	"
29374	Rubber ring (indicator)	8	"	0 0 1	Doz.
29987	Rubber sleeve	2	"	0 0 6	"
11805	Screw, P.K.	4	"	0 0 6	"
8777	Screw, P.K.	2	"	0 0 6	"
29869A	Indicator plate, printed	1	"	0 0 6	Each.
11237	Screw	3	WN	0 0 4	Doz.
11630	Nut	3	"	0 0 6	"
29861A	L5 and L6	1	"	0 1 3	Each.
27085A	Panel, with four tags	1	"	0 0 2	"
10400	Tag	4	"	0 0 1	Doz.
29805	Bracket	1	CdP	0 0 6	"
11223	Screw	2	WN	0 0 2	"
3166	Washer, S.P.	1	"	0 0 2	"
11628	Nut	2	WN	0 0 4	"
8777	Screw, P.K., securing bracket to chassis	1	"	0 0 6	"
—	L19 and L20 in IFT1	—	—	—	—
—	L21, L22 and L23—in IFT2	—	—	—	—
26330BE	IFT1—1st I.F. transformer, complete with L19, L20, C38, C39, TC11 and TC12	1	—	0 8 9	Each.
26330BF	IFT2—2nd I.F. transformer, complete with L21, L22, L23, C17, C18, C40, TC13 and TC14	1	—	0 10 3	"
12619	Screw, P.K., $\frac{3}{16}$ in.	2	—	0 0 6	Doz.
8777	Screw, P.K., $\frac{1}{4}$ in.	2	—	0 0 6	"
29970B	A.F.C. Unit	1	—	0 8 6	Each.
8777	Screw, P.K., securing A.F.C. Unit	2	—	0 0 6	Doz.
22624AE	T2—Output transformer	1	—	0 5 6	Each.
10606	Screw, P.K., securing T2	2	—	0 0 6	Doz.
26120S	T3—Mains transformer	1	—	0 17 0	Each.
26124G	Terminal panel, with four tags	1	—	0 0 6	"
14512	Tag	4	—	0 0 2	Doz.
14511	Nut	4	—	0 0 4	"
11228	Terminal screw	4	WN	0 0 1 $\frac{1}{2}$	"
8777	Screw, P.K., securing terminal panel	2	—	0 0 6	"
11627	Nut	4	WN	0 0 3	"
3167	Washer, S.P.	4	—	0 0 1	"
—	CK1—see under loudspeaker	—	—	—	—
<b>RESISTANCES.</b>					
24150AD	R1—350 ohms	1	—	0 0 6	Each.
24150J	R2—50,000 ohms	1	—	0 0 6	"
19104P	R3—23,000 ohms	1	—	0 1 0	"
19104P	R4—23,000 ohms	1	—	0 1 0	"
19105C	R5—35,000 ohms	1	—	0 2 0	"
24150AD	R7—350 ohms	1	—	0 0 6	"
24150AM	R8—2.3 megohms	1	—	0 0 6	"
24150AM	R9—2.3 megohms	1	—	0 0 6	"
24150L	R10—0.1 megohms	1	—	0 0 6	"
24150N	R11—0.5 megohms	1	—	0 0 6	"
24150P	R12—1 megohm	1	—	0 0 6	"
19541AZ	R13—23,000 ohms, special limit	1	—	0 0 9	"
24150BL	R14—50,000 ohms, special limit	1	—	0 0 9	"
24150BP	R15—0.15 megohm, special limit	1	—	0 0 9	"
24150Q	R16—1.5 megohm	1	—	0 0 6	"
24150Q	R17—1.5 megohm	1	—	0 0 6	"
24150AM	R18—2.3 megohms	1	—	0 0 6	"
24150N	R19—0.5 megohm	1	—	0 0 6	"

**SPARE PARTS LIST—continued**

Part No.	Description.	Parts per Inst.	Finish.	Retail List Price.	Per.
<b>RESISTANCES—continued</b>					
				<b>£ s. d.</b>	
30020BU	R21—100 ohms, special limit ...	1	—	0 1 3	Each.
19104AA	R23—50 ohms ...	1	—	0 1 0	"
24150C	R26—2,300 ohms (in H.F. unit)	1	—	0 0 6	"
24150AB	R27—150 ohms ...	1	—	0 0 6	"
24150V	R32—23 ohms (in H.F. unit)	1	—	0 0 6	"
19202B	R33—1,000 ohms (in H.F. unit)	1	—	0 0 6	"
24150AH	R39—15,000 ohms ...	1	—	0 0 6	"
24150F	R40—10,000 ohms ...	1	—	0 0 6	"
19202AF	R41—1,500 ohms ...	1	—	0 0 6	"
24150AJ	R42—0.15 megohm ...	1	—	0 0 6	"
24150L	R43—0.1 megohm ...	1	—	0 0 6	"
28403E	VRI and VR2—Volume and tone control, with nut	1	—	0 7 6	"
1061	Washer ...	1	WN	0 0 3	Doz.
5673	Washer, S.P. ...	1	—	0 0 3	"
<b>CONDENSERS.</b>					
22001AE	C1—350 mmfd. ...	1	—	0 0 9	Each.
24900W	C2—0.05 mfd. (in H.F. unit) ...	1	—	0 1 3	"
24900AA	C4—0.1 mfd. ...	1	—	0 1 0	"
29981A	C5—4 mfd. electrolytic condenser block, with C24, C32 and C33	1	—	0 9 6	"
12619	Screw, P.K., securing electrolytic condenser block	4	—	0 0 6	Doz.
22164J	C6—50 mmfd. ...	1	—	0 0 9	Each.
24900J	C7—0.005 mfd. (in H.F. unit) ...	1	—	0 1 0	"
22005A	C8—0.005 mfd. (in H.F. unit) ...	1	—	0 1 6	"
22330CS	C9—550 mmfd. ± 2 per cent. (in H.F. unit)	1	—	0 1 6	"
22330BJ	C10—230 mmfd. ± 2 per cent. (in H.F. unit)	1	—	0 1 6	"
22164K	C11—75 mmfd. (in H.F. unit) ...	1	—	0 0 9	"
28444F	C12—75 mmfd. ± 2 per cent. (in H.F. unit)	1	—	0 1 0	"
24900AA	C13—0.1 mfd. ...	1	—	0 1 0	"
24900W	C15—0.05 mfd. ...	1	—	0 1 3	"
24900AA	C16—0.1 mfd. ...	1	—	0 1 0	"
28444E	C17—130 mmfd. ± 2 per cent. (in IFT2)	1	—	0 1 0	"
22164L	C18—0.0001 (in IFT2)	1	—	0 0 9	"
28444C	C19—150 mmfd. ± 2 per cent. (in H.F. unit)	1	—	0 1 0	"
26300A	C20—0.001 mfd. ...	1	—	0 1 0	"
22164L	C21—0.0001 mfd. ...	1	—	0 0 9	"
26300C	C22—0.0015 mfd. ...	1	—	0 1 0	"
24900AJ	C23—0.5 mfd. ...	1	—	0 0 9	"
19810	Clip	1	OB	0 0 1	"
11228	Screw	1	WN	0 0 1½	Doz.
3165	Washer, S.P. } securing S23	1	—	0 0 2	"
11629	Nut	1	WN	0 0 3	"
—	C24—4 mfd. electrolytic, with C5	1	—	—	—
22164K	C25—75 mmfd. ...	1	—	0 0 9	Each.
17250F	C26—50 mfd., electrolytic ...	1	—	0 2 6	"
22001AE	C27—350 mmfd. ...	1	—	0 0 9	"
26300AA	C28—0.1 mfd. ...	1	—	0 1 6	"
22330BM	C29—350 mmfd. ...	1	—	0 1 6	"
17250F	C30—50 mfd., electrolytic ...	1	—	0 2 6	"
24900AA	C31—0.1 mfd. ...	1	—	0 1 0	"
—	C32—8 mfd., electrolytic, with C5	1	—	—	—
—	C33—16 mfd., electrolytic, with C5	1	—	—	—
22164D	C34—15 mmfd. (in H.F. unit) ...	1	—	0 0 9	Each.
22164B	C35—7.5 mmfd. (in H.F. unit) ...	1	—	0 0 9	"
28444A	C38—50 mmfd. ± 2 per cent. (in IFT1)	1	—	0 1 0	"
28444A	C39—50 mmfd. ± 2 per cent. (in IFT1)	1	—	0 1 0	"
28444D	C40—100 mmfd. ± 2 per cent. (in IFT2)	1	—	0 1 0	"
26300A	C41—0.001 mfd. ...	1	—	0 1 0	"
28381B	C47—75 mmfd. ± 2 per cent. (in H.F. unit)	1	—	0 1 0	"
24900W	C48—0.05 mfd. ...	1	—	0 1 3	"
24900J	C49—0.005 mfd. ...	1	—	0 1 0	"
49000	C50—0.0015 mfd. ...	1	—	0 1 0	"
—	TC1—TC10 and TC15—TC16—see under H.F. unit	1	—	—	—
26350AP	TC11 and TC12—in IFT1 ...	1	—	0 1 6	Each.

**SPARE PARTS LIST—continued**

Part No.	Description	Parts per Inst.	Finish.	Retail List Price.	Per.
<b>CONDENSERS—continued</b>					
26350A	TC13 and TC14—in IFT2	1	—	£ 0 1 6	Each
20280G	VCI and VC2—Two gang condenser	1	—	0 13 0	"
28021E	Rear bracket and stud	1	AISp	0 0 3	"
10606	Screw, P.K., securing rear bracket	2	—	0 0 6	Doz.
29841	Front bracket	1	AISp	0 0 3	Each.
11219	Screw	2	WN	0 0 3	Doz.
3166	Washer, S.P. } securing front brackets		—	0 0 2	"
21236	Rubber bush	2	—	0 0 1	Each.
21236A	Rubber bush		—	0 0 1	"
6305	Washer		WN	0 0 1	Doz.
3167	Washer, S.P.		—	0 0 1	"
11627	Nut	3	WN	0 0 3	"
<b>CONDENSER DRIVE AND TUNING DETAILS.</b>					
28441C	Condenser drive drum	1	—	0 0 9	Each.
13387	Screw, securing drum to condenser spindle	2	WN	0 0 3	Doz.
29860A	Slow motion drive assembly	1	—	0 2 3	Each.
29856	Spindle	1	WN	0 0 3	"
29868	Sleeve	1	—	0 0 1	"
29919	Spring	1	—	0 0 1	"
1048	Washer	1	WN	0 0 2	Doz.
11629	Nut	2	"	0 0 3	"
20954	Circlip	2	"	0 0 2	"
16755	Rubber bush	1	—	0 0 6	"
8777	Screw, P.K., securing drive assembly to front bracket of condenser	2	—	0 0 6	"
29850A	Bracket, with pulley (to left of tuning scale)	1	AISp	0 0 4	Each.
8777	Screw, P.K., securing bracket to chassis	2	—	0 0 6	Doz.
29813A	Scale upright, R.H., with lamp bracket	1	CdP	0 0 9	Each.
29813B	Scale upright, L.H., with lamp bracket and vernier brackets	1	"	0 0 9	"
10606	Screw, P.K., securing scale uprights	4	—	0 0 6	Doz.
20963E	Vernier disc, printed	1	CrEn	0 0 9	Each.
20944A	Pin, with pointer	1	BElocal	0 0 3	"
3166	Washer, S.P. } securing vernier disc to bracket		—	0 0 2	Doz.
11628	Nut		WN	0 0 4	"
30023	Cursor bar	1	CdP	0 0 3	Each.
14987	Spacer	2	WN	0 0 1	Doz.
8777	Screw, P.K. } securing cursor bar to scale upright	2	—	0 0 6	"
28433B	Cursor and pointer	1	WCelEn	0 0 4½	Each.
11705	Nut plate	1	WN	0 0 6	Doz.
11228	Screw } securing cursor to wire		—	0 0 1½	"
—	Wire, S2447, 390/04001	51"	"	0 0 4	Per Yd.
13290	Spring, for wire	1	—	0 0 1	Each.
29866	Scale backing plate	1	BMEnlocal	0 1 0	"
29999	Scale backing paper	1	—	0 0 3	"
—	Tuning scale—see pages	—	—	—	—
29745	Scale holder, rubber, bottom R.H. and top L.H.	2	—	0 0 1	Each.
29746	Scale holder, rubber, bottom L.H. and top R.H.	2	—	0 0 1	"
27730A	Lampholder	2	—	0 0 3	"
27734	Spring	2	—	0 0 1	"
27735A	Insulating washer and eyelet	2	—	0 0 6	Doz.
22704H	Lamp	2	—	0 0 6	Each.
29882A	Volume Control indicator	1	CrEn	0 0 1	"
29884	Spring, for volume control indicator	1	—	0 0 1	"
30641A	Collar and pin, for cord	1	WN	0 0 4	"
13387	Screw, securing collar to volume control spindle	1	"	0 0 3	Doz.
—	Cord, S2403, 222/90088	17"	—	0 0 1	Per Yd.
<b>SWITCH.</b>					
24092C	S2—Radiogram switch, with nut	1	—	0 2 6	Each.
<b>VALVE-HOLDERS, SCREENS, PANELS, ETC.</b>					
26005A	Valve holder	5	—	0 0 6	Each.
28935	Valve holder screen base	3	—	0 0 1½	"

**SPARE PARTS LIST—continued**

Part No.	Description.	Parts per Inst.	Finish.	Retail List Price.	Per.
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**VALVE-HOLDERS, SCREENS, PANELS, ETC.—continued**

				£	s.	d.	
16358	Rivet, securing valve holders and valve screen bases	6	—	0	0	1	Doz.
16353	Rivet, securing valve holders alone	4	—	0	0	1	"
28936	Valve screen	3	—	0	0	6	Each.
29852A	Bracket, with valve holder for V6	1	—	0	0	9	"
26005A	Valve holder	1	—	0	0	6	"
16353	Rivet, securing valve holder to bracket	2	—	0	0	1	Doz.
8777	Screw, P.K., securing bracket to chassis	2	—	0	0	6	"
24038	Valve top clip	2	—	0	0	1	Each.
11531E	A. and E. panel, with two sockets and tags	1	—	0	0	3	"
11531C	P.U. panel, with three sockets and tags	1	—	0	0	3	"
11531C	Ext. L.S. panel, with three sockets and tags	1	—	0	0	3	"
16352	Rivet, securing panels	6	—	0	0	1	Doz.
22677D	Resistance panel, with eight tags	1	—	0	0	6	Each.
10439	Tag	8	—	0	0	2	Doz.
26139	Backing panel	1	—	0	0	6	"
8777	Screw, P.K., securing panels	2	—	0	0	6	"
24020A	Tag panel, with three tags	3	—	0	0	2	Each.
25174B	Tag panel, with seven tags	1	—	0	0	4	"
25513B	Tag panel, with ten tags	1	—	0	0	6	"
12619	Screw, P.K., securing tag panels	7	—	0	0	6	Doz.
27231A	Bracket, R.H., for P.B. escutcheon, with bracket for trimmer screwdriver	1	CdP	0	0	3	Each.
12619	Screw, P.K., $\frac{3}{16}$ in. } securing bracket	1	—	0	0	6	Doz.
8777	Screw, P.K., $\frac{1}{4}$ in. }	1	—	0	0	6	"
8777	Screw, P.K., securing L.H. bracket	2	—	0	0	6	"
16756	Rubber bush	1	—	0	0	6	"
16755	Rubber bush, small	1	—	0	0	6	"
16757	Rubber bush, large	6	—	0	0	6	"
27319	Bracket, from condenser block to chassis	1	CdP	0	0	2	Each.
8777	Screw, P.K., securing bracket to condenser block	1	—	0	0	6	Doz.
27320A	Chassis mounting strap	2	—	0	1	3	Each.
11211	Screw } securing straps to chassis	4	WN	0	0	2	Doz.
3167	Washer, S.P. }	4	—	0	0	1	"
29994C	Mains lead, with two tags	1	—	0	2	3	Each.
19829	Tag	2	—	0	0	2	Doz.
11802	Tag, slotted	2	—	0	0	4	"
4681	Cleat	1	—	0	0	1	Each.
12619	Screw, P.K., securing cleat	1	—	0	0	6	Doz.
27225B	Loudspeaker lead	1	—	0	1	0	Each.
27492A	Radio-gram switch lead	1	—	0	2	6	"

**RADIO UNIT FIXING.**

29942	Screw	4	WN	0	0	1 $\frac{1}{2}$	Each.
28769	Washer plate	4	"	0	0	6	Doz.
10173B	Spring washer	4	—	0	0	2 $\frac{1}{2}$	"
8697	Screw	2	WN	0	0	2	"
27470	Transit bolt	2	Red.hd	0	0	2	Each.
10173	Spring washer	2	—	0	0	3	Doz.
24778	Washer plate	2	CdP	0	0	7	"

**WINDOW, CABINET BACK, LEADS, ETC.**

27218	Window	1	—	0	0	3	Each.
26107	Clamp	4	ParB	0	0	4 $\frac{1}{2}$	Doz.
14791	Screw } securing window to tuning escutcheon	4	"	0	0	4	"
27247	Backing strip, for station name strip	1	—	0	0	2	Each.
27248	Retainer, for station name strip	1	CdP	0	0	2	"
11227	Screw } securing retainer to P.B. escutcheon	2	WN	0	0	6	Doz.
3165	Washer, S.P. }	2	—	0	0	2	"
27339	Nut, securing P.B. escutcheon	2	BzP	0	0	2	Each.
27338A	Plate and stud, for P.B. escutcheon	2	CdP	0	0	2	"
8697	Screw	4	WN	0	0	2	Doz.
20936	Felt washer	4	—	0	0	1	"
6461	Washer	4	WN	0	0	1	"



**SPARE PARTS LIST—continued**

Part No.	Description	Parts per Inst.	Finish.	Retail List Price.	Per.
<b>WINDOW, CABINET BACK, LEADS, ETC.—continued</b>					
30001A	Cabinet back ... ..	1	—	£ 0 5 6	Each.
19896	Screw	6	ParB	0 0 1	"
19895	Spring washer } securing cabinet back	6	"	0 0 6	Doz.
21406C	A. and E. panel with two sockets and tags	1	—	0 1 0	Each.
9559	Screw, securing panel	2	—	0 0 2	Doz.
16787B	Ext. L./S. bracket, with panel with three sockets and tags	1	—	0 0 6	Each.
11531G	Panel with three sockets and tags	1	—	0 0 3	"
16352	Rivet, securing panel	2	—	0 0 1	Doz.
8651	Screw, securing bracket	2	WN	0 0 2	"
22287D	A. and E. lead, with two plugs	1	—	0 1 0	Each.
16289J	Plug, yellow	1	—	0 0 2	"
16289B	Plug, black	1	—	0 0 2	"
20259F	Motor and switch lead, with five tags and clip	1	—	0 1 2	"
19829	Tag ... ..	4	—	0 0 2	Doz.
11802	Tag, slotted	1	—	0 0 3	"
11892	Clip	1	—	0 0 6	"
8602	Screw, securing clip	1	WN	0 0 2	"
20778A	Motor link lead, with two tags	1	—	0 0 3	Each.
19829	Tag ... ..	1	—	0 0 2	Doz.
11802	Tag, slotted	1	—	0 0 3	"
25297D	Motor earth lead, with one tag	1	—	0 0 2	Each.
15140	Tag ... ..	1	—	0 0 1	Doz.
26179A	Panel, with three pins	1	—	0 0 4½	Each.
22287D	Ex. L.S. lead, with two plugs	1	—	0 1 0	"
16289J	Plug, yellow	1	—	0 0 2	"
16289B	Plug, black	1	—	0 0 2	"
3475G	Plug, yellow	1	—	0 0 1½	"
18888A	Carton, for mains lead and plugs	1	—	0 0 1	"
20988	Clip, for carton	1	ParB	0 0 1	"
16289J	Plug, yellow	2	—	0 0 2	"
16289B	Plug, black	2	—	0 0 2	"
29370A	Trimmer screwdriver	1	—	0 0 1	"

**MOTOR BOARD FITTINGS.**

1002	Clip, for turntable ... ..	1	ChP	0 0 2	Each.
28998B	Turntable, with felt	1	BzSp	0 5 0	"
3569	Felt	1	—	0 0 9	"
230G	<b>Auto Brake</b>	1	BzSp	0 8 8	"
28292A	Stop lever	1	WN	0 0 8	"
298	Friction washer, under stop lever	1	—	0 0 2	Doz.
245	Stop screw, limiting movement of stop lever	1	WN	0 0 1	Each.
297	Spring washer	1	"	0 0 1	"
20676	Isle of Man washer	1	"	0 0 6	Doz.
1552	Screw	1	"	0 0 4	"
15985A	Brake lever	1	BzSp	0 1 3	Each.
3084	Rubber sleeve, for brake lever	1	—	0 0 6	Doz.
299	Friction washer, under brake lever	1	—	0 0 3	"
11328	Adjusting screw	1	WN	0 0 4	"
11629	Nut	1	"	0 0 3	"
231A	Rocking lever	1	"	0 0 4	Each.
240	Rivet, securing rocking lever	1	"	0 0 4	Doz.
232	Switch operating lever	1	"	0 0 2	Each.
1022	Washer, between rocking lever and switch operating lever	1	WN	0 0 2	Doz.
241	Rivet, securing switch operating lever to base plate	1	WN	0 0 1	Each.
233	On/off lever	1	BzSp	0 0 7	"
6304	Spring washer } securing on/off lever	1	—	0 0 2	Doz.
5441	Rivet	1	WN	0 0 8	"
234A	Hand brake lever, with friction pad	1	BzSp	0 0 7	Each.
9403	Friction pad	1	—	0 0 6	Doz.
243	Pivot, for hand brake lever	1	WN	0 0 3	"
9040	Spring	1	—	0 0 2	Each.
10920	Spring (short)	1	—	0 0 1	"
8780C	Mains on/off switch	1	—	0 2 0	"
2753	Screw, securing switch to base plate	2	WN	0 0 6	Doz.
2418	Screw, securing auto brake	3	WN	0 0 3	"

**SPARE PARTS LIST—continued**

Part No.	Description.	Parts per Inst.	Finish.	Retail List Price.	Per.
<b>MOTOR BOARD FITTINGS—continued</b>					
				£ s. d.	
246	Auto brake on/off indicator plate ...	1	BzSp	0 0 4	Each.
2418	Screw, securing indicator plate ...	2	BzP	0 0 4	Doz.
18899	Needle box clip ...	1	BzSp	0 0 6	Each.
8692	Screw, securing needle box clip ...	2	BzP	0 0 3	Doz.
9430	Needle bowl ...	1	AcD	0 0 3	Each.
4369	Needle bowl cover ...	1	—	0 0 3	"
3484	Needle bowl support ...	1	WN	0 0 2	"
9932	Screw, securing support ...	3	"	0 0 2	Doz.
15969A	Pickup rest ...	1	BzSp	0 0 9	Each.
2418	Screw, securing rest ...	2	BzP	0 0 4	Doz.
28060AK	<b>Pickup</b> (state trade mark required)	1	—	1 2 7	Each.
28060	Pickup arm ...	1	—	0 1 6	"
28063C	Pickup head assembly ...	1	—	0 12 0	"
28063	Pickup head moulding ...	1	—	0 0 9	"
16101	Pole piece ...	2	CdP	0 1 9	"
16113	Screw, securing pole pieces ...	4	WN	0 0 8	Doz.
16109	Armature ...	1	CdP	0 0 6	Each.
10092	Armature pivot ...	2	—	0 0 3	Doz.
16102	Damping rubber clamp ...	1	—	0 0 1	Each.
16104	Damping rubber clamp ...	1	WN	0 0 1	"
16126	Screw, securing clamp ...	2	"	0 0 4	Doz.
17856	Needle screw ...	1	BzSp	0 0 11½	Each.
16110	Magnet ...	1	—	0 2 0	"
16111C	Energising coil ...	1	—	0 2 0	"
17902A	Hum coil ...	1	—	0 1 9	"
16118	Bracket, supporting lead cover ...	1	CB	0 0 1	"
21034	Bracket, supporting hum coil ...	1	CdP	0 0 10	Doz.
11238	Screw ...	1	BzP	0 0 5	"
21036	Fibre washer } securing brackets	2	—	0 0 2	"
11630	Nut } securing hum coils	1	WN	0 0 6	"
11286	Screw } securing hum coils	1	"	0 0 2	"
21035	Special nut } securing hum coils	1	"	0 0 2	Each.
16119	Sleeve, for coil leads ...	3	"	0 0 3	Doz.
16112	Screw, securing P.U. head to arm ...	1	WN	0 0 9	"
16115	Pad ...	2	—	0 0 6	"
18769	Bracket, for lead cover ...	1	BmEn	0 0 1½	Each.
11237	Screw, securing bracket ...	1	BzP	0 0 4	Doz.
16700	Lead cover ...	1	—	0 0 5	"
14983A	P.U. lead ...	1	—	0 1 6	Each.
16122	Support pillar ...	1	—	0 1 0	"
16121	Fixing base ...	1	—	0 1 2	"
16107A	Spring and anchor rings ...	1	OB	0 0 1	"
16108	Spring anchor ...	1	WN	0 0 4	Doz.
16114	Pivot screw, for P.U. arm ...	1	BzP	0 0 2	Each.
17001	Spacer, for balls ...	1	WN	0 0 3	"
3519	Ball ...	8	—	0 0 1½	Doz.
16128	Stop screw ...	1	BzP	0 0 8	"
16127A	Brake arm and pin ...	1	"	0 1 2	Each.
11228	Screw, securing brake arm ...	3	"	0 0 4	Doz.
9547	Screw } securing P.U. ...	2	"	0 0 4	"
8703	Screw } securing P.U. ...	1	"	0 0 5	"
28191	Bracket, for Radio-gram switch ...	1	CdP	0 0 3	Each.
8602	Screw, securing bracket ...	2	WN	0 0 2	Doz.
<b>MOTOR.</b>					
26200G	Motor ...	1	—	1 15 0	Each.
26200C	Motor body, with cover plate and 3 bushes ...	1	LtGyEn	0 7 0	"
26203	Screw } securing cover plate to body	3	WN	0 0 4	Doz.
12442	Washer, S.P. } securing cover plate to body	3	—	0 0 2	"
26208A	Turntable spindle and gear ...	1	BzP	0 5 9	Each.
26212	Circlip ...	1	WN	0 0 6	Doz.
26214	Thrust plate ...	1	"	0 0 1½	Each.
19050	Screw } securing thrust plate to cover plate	3	WN	0 0 4	Doz.
3166	Washer, S.P. } securing thrust plate to cover plate	3	—	0 0 2	"

**SPARE PARTS LIST—continued**

Part No.	Description.	Parts per Inst.	Finish.	Retail List Price.	Per.
<b>MOTOR—continued</b>					
26218C	Stator assembly	1	—	£ 0 14 3	Each.
11323	Screw	4	WN	0 0 8	Doz.
3166	Washer, S.P. } securing stator assembly	4	—	0 0 2	"
26215A	Rotor and spindle	1	—	0 5 9	Each.
249	Ball, for end bearings	2	—	0 0 1	Doz.
26204A	End bearing, large	1	—	0 2 9	Each.
11318	Screw	2	WN	0 0 1	Doz.
3166	Washer, S.P. } securing end bearing	2	—	0 0 9	Each.
26205A	End bearing, small	1	—	0 0 1	"
26206	Spring	1	—	0 0 1	"
27327	Bearing retainer	1	WN	0 0 3	Doz.
11805	Screw, P.K., securing bearing retainer	1	—	0 0 6	Each.
20703	Rubber bush, for leads	1	—	0 0 1	Each.
20710B	Condenser, 2 x 0.7 mfd.	1	—	0 3 3	"
11805	Screw, P.K. } securing condenser	2	—	0 0 6	Doz.
10250	Washer	2	—	0 0 3	"
15159	Tag	1	—	0 0 3	"
20708B	Motor connection panel, with four terminal screws and tags	1	—	0 0 6	Each.
14512	Tag	4	—	0 0 2	Doz.
14511	Nut	4	WN	0 0 4	"
11228	Terminal screw	4	"	0 0 1½	"
12619	Screw, P.K., securing panel	2	—	0 0 6	"
28785A	Sleeve and friction band	1	—	0 1 0	Each.
10674	Grub screw, securing sleeve to turntable spindle	1	WN	0 0 3	Doz.
28294	Rubber washer	1	—	0 0 3	Each.
20992	Washer	3	WN	0 0 1	"
26582	Rubber washer	6	—	0 0 7	Doz.
20991	Rubber sleeve	3	—	0 0 7	"
12094	Washer	3	WN	0 0 2	"
3531	Washer (larger hole)	3	"	0 0 2	"

**LOUDSPEAKER.**

24460N	Loudspeaker	1	—	1 7 6	Each.
11543Q	CKI—Field coil	1	—	0 7 6	"
26308	Hum coil	1	—	0 0 7½	"
21966B	Terminal panel, with eight tags	1	—	0 1 0	"
12947	Washer, felt	1	—	0 0 2	"
21456	Washer, presspan	3	—	0 0 4	Doz.
21968	Top plate	1	CdP	0 1 0	Each.
28055	Stud	4	WN	0 0 1	"
24460M	Cone chassis, with four studs	1	CdP	0 2 6	"
19687	Nut, securing magnet assembly to cone chassis	4	AcD	0 0 4½	Doz.
25224A	Panel, with two tags	1	—	0 0 1	Each.
7237	Tag	2	—	0 0 4	Doz.
13810	Rivet, securing panel to cone chassis	2	—	0 0 1	"
24461B	Speech coil and cone	1	—	0 3 0	Each.
19585	Card washer	2	—	0 0 1	Doz.
25205	Washer plate } securing spider of cone to studs on cone chassis	1	WN	0 0 1½	Each.
19687	Nut	2	AcD	0 0 4½	Doz.
25204	Felt	1	—	0 0 1½	Each.
26515	Stop	1	BME <sub>n</sub>	0 0 6	Doz.
25022	Sleeve	1	WN	0 0 6	"
25023	Screw, securing stop to magnet core	1	HdCB	0 0 6	"
11213	Screw	4	ParB	0 0 2	"
1021	Washer } securing loudspeaker to insert nuts in baffle	4	WN	0 0 3	"

**MODEL 890**

**Instructions.**

30554	Warning and Valve position label	1	—	0 0 1	Each.
27317	Instruction card...	1	—	0 0 6	"
27505	Installation label	1	—	0 0 1	"

**SPARE PARTS LIST—continued**

Part No.	Description.	Parts per Inst.	Finish.	Retail List Price.	Per.
<b>Instructions—continued</b>					
20855	Lubricating label ... ..	1	—	0 0 4½	Doz.
27471	Transit label ... ..	1	—	0 0 1	Each.
27183	Station name strip ... ..	1	—	0 0 4	Doz.
27184	Station name sheet ... ..	1	—	0 0 10	”
8936	Transfer “Close lid whilst playing” ... ..	1	—	0 0 1	Each.

**CABINET PARTS AND FITTINGS.**

86749B	Cabinet ... ..	1	Pol	11 10 0	Each.
9359	Dome, for base ... ..	4	”	0 0 1	”
—	Lid ... ..	1	”	2 10 0	”
30010	Lid hinge ... ..	2	BzP	0 0 10	”
8681	Lid hinge screw ... ..	12	”	0 0 4	Doz.
28960DC	Lid stay ... ..	1	”	0 6 6	Each.
9561	Lid stay screw ... ..	4	”	0 0 5	Doz.
86719A	Motor board ... ..	1	Pol	1 1 0	Each.
8684	Motor board screw ... ..	10	BzP	0 0 6	Doz.
14670	Motor board lifting knob ... ..	1	—	0 0 6	Each.
11214	Motor board lifting knob screw ... ..	1	WN	0 0 2	Doz.
—	Baffle board, with silk and insert nuts ... ..	1	Std	0 9 9	Each.
—	Silk, S2498, 225/31248 ... ..	—	—	0 8 2	Yard.
14922	Insert nut, for loudspeaker ... ..	4	CB	0 1 4	Doz.
8681	Screw, $\frac{5}{8}$ in. } securing baffle board ... ..	1	—	0 0 4	”
9525	Screw, $\frac{3}{4}$ in. } ... ..	7	—	0 0 2	”
24873	Bracket, for cabinet back ... ..	6	CdP	0 0 1	Each.
8602	Screw, securing brackets ... ..	12	—	0 0 2	Doz.
27476	Tuning escutcheon ... ..	1	—	0 1 4	Each.
2418	Screw, securing tuning escutcheon ... ..	4	BzP	0 0 4	Doz.
27474	Push button escutcheon ... ..	1	—	0 1 9	Each.

**RADIO UNIT.**

29800H	Radio unit ... ..	1	—	11 7 6	Each.
29824E	Tuning scale ... ..	1	—	0 2 6	”
29877C	SI Bracket with A.F.C. muting contacts ... ..	1	—	0 0 6	”

**CONTROLS.**

27479	Knob—“Volume” ... ..	1	ChF	0 0 9	Each.
27478	Knob—“Tone” ... ..	1	”	0 0 9	”
27477	Knob—“Tuner” ... ..	1	”	0 1 0	”
11773	Grub screw, securing knobs ... ..	3	WN	0 0 5	Doz.
30655	Felt washer ... ..	1	—	0 0 6	”
28740	Push button knob ... ..	11	—	0 0 3	Each.
28740C	Push button knob—off ... ..	1	—	0 0 3	”
28741	Spring, securing push button knobs ... ..	12	—	0 0 4	Doz.
23115J	Knob—“Radio Gram” ... ..	1	—	0 0 7	Each.

**MODEL 1500**

**Instructions.**

30555	Warning and valve position label ... ..	1	—	0 0 1	Each.
27318	Instruction card... ..	1	—	0 0 6	”
27505	Installation label ... ..	1	—	0 0 1	”
20855	Lubricating label ... ..	1	—	0 0 4½	Doz.
27471	Transit label ... ..	1	—	0 0 1	Each.
27183	Station name strip ... ..	1	—	0 0 4	Doz.
27184	Station name sheet ... ..	1	—	0 0 10	”
8936	Transfer “Close lid whilst playing” ... ..	1	—	0 0 1	Each.

**SPARE PARTS LIST—continued**

Part No.	Description.	Parts per Inst.	Finish.	Retail List Price.	Per.
<b>CABINET PARTS AND FITTINGS.</b>					
				£ s. d.	
86701C	Cabinet	1	Pol	11 15 0	Each.
9359	Dome, for base	4	"	0 0 1	"
—	Lid	1	"	2 10 0	"
30010	Lid hinge	2	BzP	0 0 10	"
8681	Lid hinge screw	12	"	0 0 4	Doz.
28960DC	Lid stay	1	"	0 6 6	Each.
9561	Lid stay screw	4	"	0 0 5	Doz.
86719A	Motor board	1	Pol	1 1 0	Each.
8684	Motor board screw	10	BzP	0 0 6	Doz.
14670	Motor board lifting knob	1	—	0 0 6	Each.
11214	Motor board lifting knob screw	1	WN	0 0 2	Doz.
—	Baffle board, with insert nuts and covering	1	Std	0 9 9	Each.
14922	Insert nut, for loudspeaker	4	CB	0 1 4	Doz.
—	Covering S2254, 299/00070	—	—	0 6 0	Yard.
9526	Screw, securing baffle board	8	—	0 0 2	Doz.
87063	Speaker opening bar	2	Pol	0 2 6	Each.
15830	Screw, securing speaker opening bars	4	—	0 0 1	"
24873	Bracket, for cabinet back	6	CdP	0 0 2	Doz.
8602	Screw, securing brackets	12	—	0 0 2	"
27476A	Tuning escutcheon	1	—	0 1 3	Each.
2418	Screw, securing tuning escutcheon	4	BzP	0 0 4	Doz.
27474A	Push button escutcheon	1	—	0 1 7	Each.
<b>Radio Unit.</b>					
29800J	Radio unit	1	—	11 7 6	Each.
29824F	Tuning scale	1	—	0 2 6	"
30804A	SI—Bracket with A.F.C. muting contacts	1	—	0 0 6	"
<b>Controls.</b>					
27162A	Knob—"Volume"	1	—	0 0 6	Each.
27161A	Knob—"Tone"	1	—	0 0 6	"
27163A	Knob—"Tuner"	1	—	0 0 9	"
11773	Grub screw, securing knobs	3	WN	0 0 5	Doz.
28740H	Push button knob	11	—	0 0 1	Each.
28740C	Push button knob—off	1	—	0 0 3	"
28741	Spring, securing push button knobs	12	—	0 0 4	Doz.
23115J	Knob—"Radio-Gram"	1	—	0 0 7	Each.

**"FINISH" CODE**

AcD	Acid Dip.	ChF	Chrome Filled.
BEEn	Black Enamel.	ChP	Chromium Plate.
BMEEn	Black Matt Enamel.	CeN	Cream Enamel.
BzP	Bronze Plate.	ParB	Parkerised Black.
BzSp	Bronze Spray.	Pol	Polished.
CB	Camera Black.	Std	Standard.
CdP	Cadmium Plate.	WN	White Nickel.

In order to expedite delivery of spare part orders, please quote :—

1. Model number and serial number.
2. Spare part number, description, and “ finish ” as given in the above list.
3. Quantity required.

Unless full particulars are quoted, delay in the execution of orders must inevitably result.

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