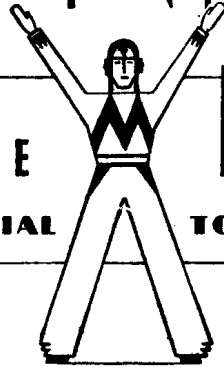


# MARCONI PHONE

## SERVICE MANUAL

PRIVATE AND CONFIDENTIAL

TO THE TRADE ONLY



### MODEL 375 3 - VALVE ALL-WAVE BATTERY RECEIVER

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SEPT.  
1936  
1937 SERIES  
NUMBER THREE  
PART NO. 26041

# MODEL 375

## BRIEF SPECIFICATION

### WAVELENGTH RANGE

Short Waves	...	...	...	...	...	...	...	18 to 50 metres.
Medium Waves	...	...	...	...	...	...	...	195 to 560 metres.
Long Waves	...	...	...	...	...	...	...	785 to 2,000 metres.

### DIMENSIONS

Height	...	...	...	...	...	15 $\frac{1}{4}$ inches.
Width	...	...	...	...	...	22 $\frac{1}{2}$ inches.
Depth	...	...	...	...	...	9 $\frac{1}{4}$ inches.

### WEIGHT

32 lb. nett.  
40 lb. gross.

### BATTERY SPECIFICATION

High Tension ... .. 175-volt, with incorporated grid bias, Marconiphone Cat. No. 550A.  
Low Tension ... .. 2-volt, 45 A.H. accumulator, Exide type DFG.

### CONSUMPTION

L.T.—0.6 ampere (approximately).  
H.T.—5.5 to 7.5 milliamps on medium and long waves (average).  
7.5 milliamps on short waves (average).

### VALVES

Marconi VS24 (met.), H.F. amplifier.  
,, VS24 (met.), Detector.  
,, PT2, Pentode output.

## CIRCUIT DESCRIPTION

Three aerial tapplings are provided, A1 incorporating a Droitwich filter. Tapping A3 incorporates this same filter and a resistance R11 for use in areas close to a powerful station and subject to interference from Droitwich. Tapping A3 should not be used for short wave reception.

On medium and long waves the grid circuit of the H.F. amplifier is tuned in the conventional way, and volume control is by means of VRI, a potentiometer which is arranged to vary the aerial coupling and the grid bias of V1 at the same time. On short waves the grid circuit of V1 is choke (L2) fed, and the bias is fixed. Volume control is achieved by means of the reaction condenser VC3.

The screen-grid valve V2 acts as a leaky grid detector and has a pre-set reaction circuit (C8, R3, L10, VR2, TC7) for medium and long waves. The coupling between the H.F. stage and the detector is tuned H.F. anode capacity for all wave-bands. An H.F. filter (R7, C9, C13) is included in the anode circuit of the detector which is resistance capacity transformer coupled to the output pentodes. On short waves the ratio of the inter-valve transformer is increased to 1 : 7 by means of the contacts 1, 2, 3, and 4 of S1.

### LOUDSPEAKER

Type No. 16000AQ.

This loudspeaker has the latest type of high flux density magnet. D.C. resistance of speech coil, 4 ohms. Impedance at 800 cycles, 5 ohms.

### PICK-UP

Sockets are provided for connexion of a pick-up which must be disconnected when using the instrument on radio. Marconiphone No. 25 type pick-up is specially recommended. The pick-up should be used in conjunction with a 100,000 ohm volume control for this receiver.

Set the wave-change switch to S.W., remove aerial lead, and turn the volume control to minimum for gramophone reproduction.

# DISMANTLING

## TRANSIT BOLTS

The four red-headed transit screws must be removed from the underside of the cabinet before the instrument is finally installed.

## REMOVAL OF CHASSIS

1. Remove back and knobs.
2. Unsolder loudspeaker leads from loudspeaker panel.
3. Remove the four fixing screws from underside of Cabinet. The chassis is now free.

NOTE.—The loudspeaker leads are sufficiently long to allow the chassis to be withdrawn for examination.

## REMOVAL OF LOUDSPEAKER

1. Remove the two screws holding loudspeaker support bar and remove speaker.

# PRELIMINARY TESTS

## 1. BATTERY VOLTAGE

The accumulator must read at least 2 volts *on load*, and the H.T. battery should be replaced if its total voltage on load is less than 100. See Voltage Tapping Table for adjustment of grid bias. Examine all battery leads, and if necessary clean or replace plugs or tags to ensure good contact. Apply vaseline to the accumulator spade tags to prevent corrosion.

## 2. L.F. TEST

Switch on, and touch the right-hand pick-up socket with a wetted finger. This should produce a definite click from the loudspeaker. If no sound is heard try replacing V3 (PT2) or examine loudspeaker leads or speech coil for discontinuity. See Continuity Checks, page 5.

## 3. DETECTOR TEST

Connect the aerial via a small condenser (about 0.0003 mfd.) to the anode of V1. If the detector is operating correctly signals should be obtained from a medium wave local station with very flat tuning.

## 4. H.F. VALVE TEST

Connect aerial to the fixed vanes of VCI. If signals are now heard on medium and long waves the fault must lie in the coupling circuits L2, L3, C3, C18, etc.

## 5. H.T. CONSUMPTION TESTS

The following values were taken with a new H.T. battery. If the battery voltage is low a proportional reduction in consumption should be expected :—

	Volume Minimum.	Volume Maximum and S.W.
Feed at Red Lead ... ..	5.5 mA.	6.75 mA.
„ Red/Black Lead ... ..	0.5 mA.	0.5 mA.
„ Yellow Lead ... ..	0.5 mA.	1.2 mA.
Total feed at Black Lead ... ..	6.5 mA.	8.5 mA.

## VOLTAGE TAPPING TABLE

As the H.T. battery runs down an adjustment of the battery tappings may be necessary to maintain good quality reproduction. The table on the right gives a guide to these adjustments.

Voltage at red lead with receiver switched on.	Position for Yellow lead.	Position for Yellow-Black lead.
150-166	72	6
140-150	72	4½
130-140	72 or 80	3
100-130	80	3

# H.F. TESTS AND ADJUSTMENTS

## ADJUSTMENT OF PRE-SET REACTION

If at any time it is necessary to replace the detector valve (VS24) it may be necessary to reset the pre-set reaction controls VR2 and TC7. Proceed as follows :—

1. Switch receiver on and turn volume control fully up. Connect an aerial and earth, preferably those on which the receiver will normally operate.
2. Adjust TC7 just short of oscillation point on wavelengths between 200 and 250 metres.
3. Adjust VR2 just short of oscillation point on all wavelengths over 250 metres, including long waves.
4. Check adjustments 2 and 3.

## CIRCUIT ALIGNMENT

Instability, insensitivity or poor selectivity indicate that the alignment of the tuned circuits is not correct. If a coil or other component associated with the H.F. side of the receiver has been replaced or repaired, or if wiring has been disarranged, the circuits must be realigned.

To do this the following apparatus is required. An oscillator or signal generator capable of tuning from 18 to 1,500 metres suitably screened and with an attenuator, and an output meter. The E.M.I. Service equipment is eminently suitable. Alternatively an 0 to 2 A.C. voltmeter may be used as an output meter.

In carrying out the following operations it is important that the input to the receiver from the oscillator should be kept low, and progressively reduced as the circuits are brought into line, so that the reading on the output meter does not exceed approximately 50 mW. or 0.5 volt. The output meter should be connected to Anode V3 (PT2) and chassis. The 0 to 2 voltmeter must only be connected across the speech coil of the loudspeaker.

## POSITIONING THE POINTER

Before proceeding with the ganging it is essential first to check the position of the pointer and the scale. The pointer should be horizontal at both maximum and minimum of the gang condenser, and the scale should be so positioned that the 800-metre calibration mark is exactly  $\frac{1}{8}$ -inch above the pointer with the condenser at minimum.

## Medium Waves

1. Set TC7 to minimum, VR2 to mid-position and volume control to maximum.
2. Set receiver to 250 metres by the scale and couple oscillator to A2 and earth sockets via a standard dummy aerial consisting of an inductance, a capacity and a resistance.
3. Tune oscillator to 250 metres and adjust TC2 and TC5 in that order for maximum output.
4. Tune receiver to 200 metres and screw up TC7 to just short of oscillation point, rocking gang condenser between minimum and 250 metres.
5. Tune receiver to 350 metres and adjust VR2 for maximum output without oscillation.
6. Tune receiver to 250 metres (by the scale) and readjust TC2 and TC5 for maximum output on a 250-metre signal from the oscillator.
7. Ensure that the receiver does not oscillate at any point in the MW range, particularly below 250 metres.

## Long Waves

1. Tune receiver (by the scale) and oscillator to 1,500 metres.
2. Adjust TC3 and TC6 in that order for maximum output.
3. Check adjustment of TC3 and TC6.

NOTE.—If it is found that a peak reading cannot be obtained when ganging on MW or LW, TC8 should be adjusted. If TC2 and/or TC3 are fully unscrewed and TC5 and/or TC6 nearly at maximum capacity reduce (unscrew) TC8 a little and regang throughout. If, on the other hand, TC2 and/or TC3 are fully screwed up and TC5 and/or TC6 are at minimum, increase TC8 and regang as above.

## Adjustment of Droitwich Rejector.

This may be done either on a 1,500 metre signal from the oscillator or by using the signal from the Droitwich transmitter.

1. Connect to A1 socket and adjust TC1 for *minimum* output.

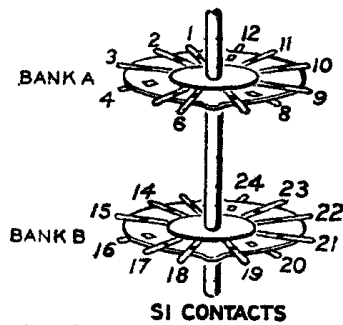
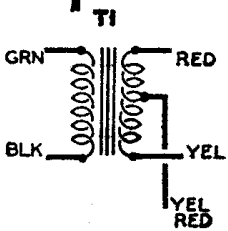
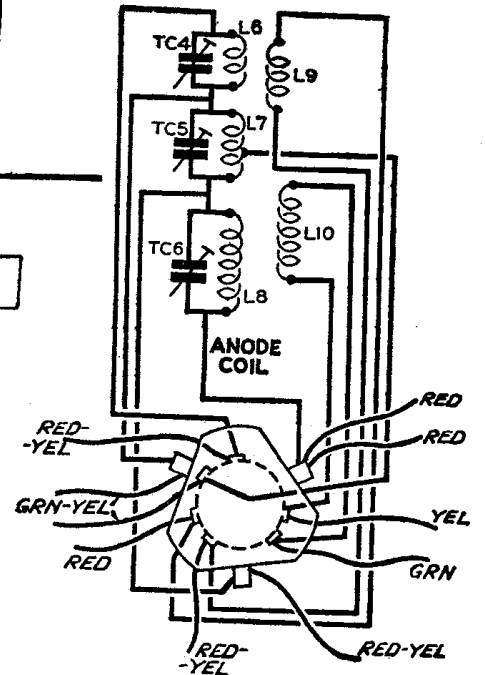
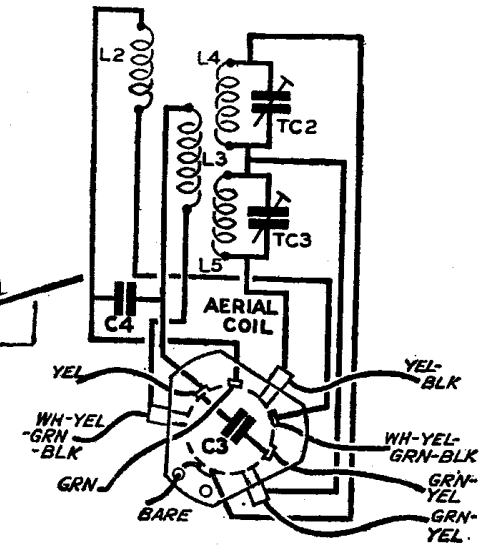
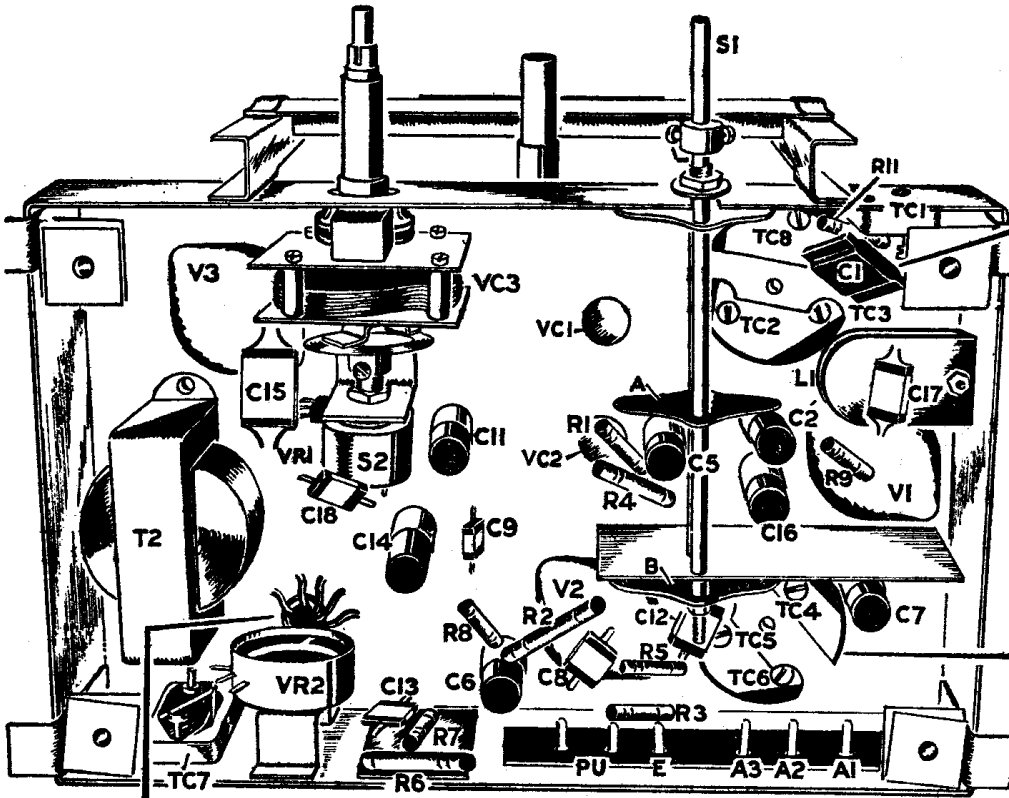
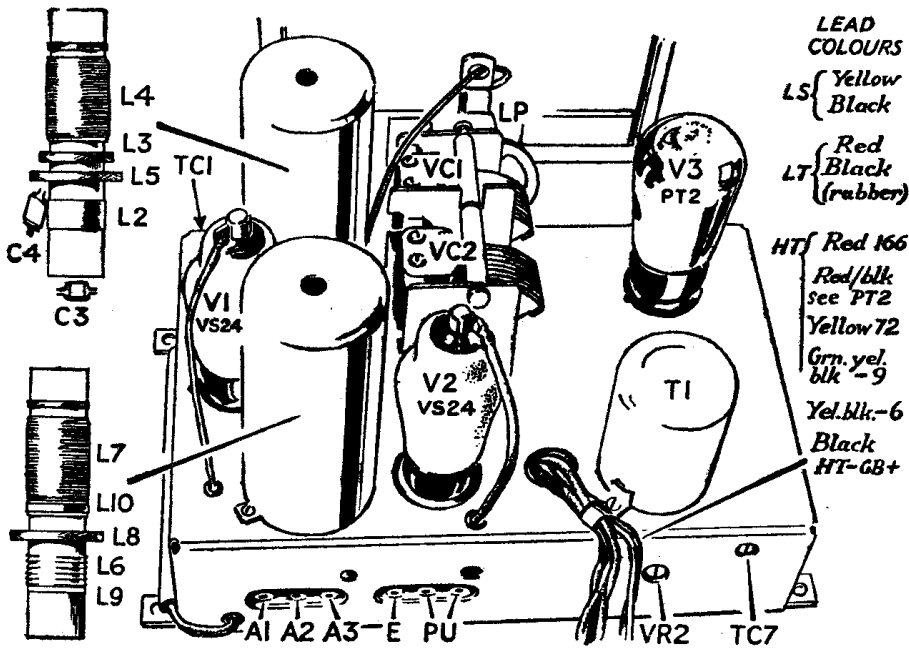
## Short Waves

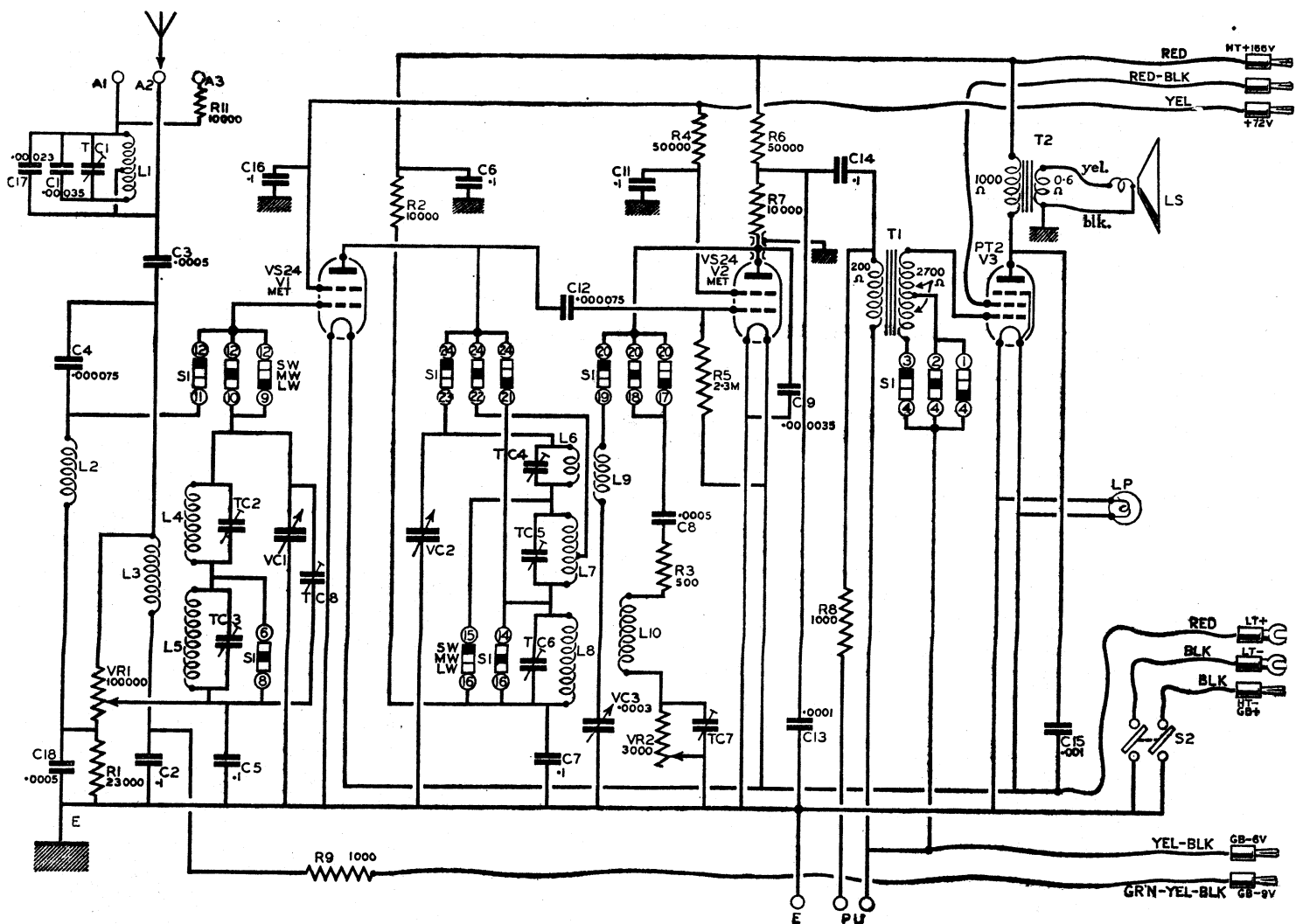
1. Couple oscillator to A2 socket via a 400 ohm. resistance.
2. Set receiver (by scale) and oscillator to 18 metres (16.5 megacycles) and trim TC4 for maximum output.

## CONTINUITY CHECKS

Resistance values  $\pm 20$  per cent. Disconnect batteries before making any resistance measurements.

Components.	Measured.	Switch.	Resistance.
L1 ... ..	A1 and A2 sockets ... .. Across ends ... ..	S.W. —	3 ohms. (half). 6 ohms.
L1, R1 ... ..	Grid V1 (VS24) and Chassis ... ..	S.W.	23,000 ohms. (L2, 4 ohms.).
L3, L4, L5, R9, VRI ...	Green-yellow-black battery lead and grid V1 (VS24)	L.W.	1,100 to 101,000 ohms., according to position of VRI. L3, 7.0 ohms. L4, 2.0 " L5, 16.0 "
L6, L7, L8 ... ..	Fixed vanes VC2 and contact 16 of S1 ... ..	S.W. M.W. L.W.	L6, 0.1 ohm. L7, 2.0 ohms. L8, 16.5 "
L9 ... ..	Anode V2 (VS24) and VC3 ... ..	S.W.	0.5 ohms.
L10 ... ..	Across ends ... ..	—	1.5 ohm.
T1 Primary and R8... ..	P.U. sockets ... ..	—	1,200 ohms.
Secondary ... ..	Yellow-black battery lead and grid V3 (PT2) ...	S.W. M.W. or L.W.	5,500 ohms. 2,700 "
T2 Primary ... ..	Anode V3 (PT2) red battery lead ... ..	—	1,000 ohms.
Secondary ... ..	Across ends (disconnect speech coil) ... ..	—	0.6 ohm.
L.S. speech coil ... ..	Across ends ... ..	—	4 ohms.





### VALVE TABLE

NOTE—The following values were taken with an H.T. battery reading 160 volts between maximum and H.T.—

	V1 (VS24)	V2 (VS24)	V3 (PT2)
Anode/Chassis, volts	150–135* 135 S.W.	65–95* 65 S.W.	155
Screen/Chassis, volts	70	35	132–162 according to valve letter
Anode feed, mA	0.5–2.0*	1.0–0.75*	4.0
Screen feed, mA	Nil–0.7*	0.5	0.5

\* According to the position of VRI, first reading for minimum.

MODEL 375

SPARE PART LIST

Part No.	Description.	Parts per Inst.	Finish.	Retail List Price.	Per
				£ s. d.	
	<b>Instructions.</b>				
80217	Cabinet label ... ..	1	—	0 0 6	Doz.
24882	Battery label ... ..	1	—	0 0 6	"
24792	Instruction card ... ..	1	—	0 0 6	Each.
24392	Short wave guide ... ..	1	—	0 0 6	"
	<b>CABINET PARTS AND FITTINGS.</b>				
Z1205	<b>Cabinet</b> ... ..	1	Pol.	2 19 0	Each.
—	Battery shelf ... ..	1	Black	0 2 0	"
9525	Screws—securing battery shelf ... ..	4	—	0 0 2	Doz.
14922	Insert nut for battery stop ... ..	1	C.B.	0 1 4	"
12775	Insert nut for speaker fixing ... ..	2	C.B.	0 0 1	Each.
—	Baffle board ... ..	1	Black	0 1 9	"
15830	Screw, securing baffle board ... ..	9	—	0 0 2	Doz.
24883	Wire mesh ... ..	1	AnBr	0 4 0	Each.
9772	Screw, securing wire mesh to baffle board ... ..	4	—	0 0 2	Doz.
80286	Felt for wire mesh, top and bottom, front ... ..	2	—	0 0 6	"
80287	Felt for wire mesh, top and bottom, back ... ..	2	—	0 0 2	Each.
80288	Felt for wire mesh, sides, front ... ..	2	—	0 0 3	Doz.
80289	Felts for wire mesh, sides, back ... ..	2	—	0 0 1	Each.
8195	Rubber feet ... ..	4	—	0 0 8	Doz.
24873	Bracket, for cabinet, back ... ..	4	CdP	0 0 1	Each.
13268	Bracket for cabinet, back ... ..	1	CdP	0 0 1	"
8602	Screw, securing bracket ... ..	8	—	0 0 2	Doz.
24793A	Cabinet back ... ..	1	—	0 2 6	Each.
19896	Screw } securing cabinet back ... ..	5	ParB	0 0 1	"
19895	Spring washer } ... ..	5	ParB	0 0 4	Doz.
18934	Battery strap ... ..	1	ParB	0 0 2	Each.
18907	Screw } securing battery strap to cabinet back ... ..	2	ParB	0 0 8	Doz.
14997	Washer } ... ..	3	ParB	0 0 2	"
11627	Nut } ... ..	1	ParB	0 0 6	"
16289J	Aerial plug ... ..	1	—	0 0 2	Each.
16289B	Earth plug ... ..	1	—	0 0 2	"
24780A	Tuning escutcheon, with felt ... ..	1	—	0 1 3	"
24783	Felt, short ... ..	2	—	0 0 2	Doz.
24784	Felt, long ... ..	2	—	0 0 2	"
23065	Clip } securing tuning escutcheon ... ..	2	—	0 0 9	"
8692	Screw } ... ..	4	WN	0 0 2	"
	<b>CONTROLS.</b>				
24781	Knob, switch ... ..	1	—	0 0 7	Each.
24782	Knob, volume and tuning, large ... ..	2	—	0 0 7	"
21495	Knob, volume and tuning, small ... ..	2	—	0 0 7	"
16564	Screw, P.K., securing switch knob ... ..	1	—	0 0 7	Doz.
11773	Grub screw, securing small knobs ... ..	2	WN	0 0 5	"
	<b>LOUDSPEAKER.</b>				
24760B	<b>Loudspeaker</b> ... ..	1	—	1 0 0	Each.
24760A	Cone chassis, with two studs ... ..	1	CdP	0 1 8	"
24763A	Magnet ... ..	1	—	0 12 0	"
24765	Stud } securing cone chassis to magnet ... ..	4	AcD	0 0 1	"
11627	Nut } ... ..	4	WN	0 0 6	Doz.
16410D	Speech coil and cone ... ..	1	—	0 4 0	Each.
16010	Cone mounting ring, inner ... ..	1	—	0 0 3	"
16011	Cone mounting ring, outer ... ..	1	—	0 0 1	"
16012	Felt ... ..	1	—	0 0 2	"



SPARE PART LIST—continued.

Part No.	Description.	Parts per Inst.	Finish.	Retail List Price.	Per
11636	Nut	2	AcD	£ 0 0 4	Doz.
1035	Washer	2	AcD	0 0 1	"
16007	Card washer	2	—	0 0 1	"
12568A	Terminal panel, with two tags	1	—	0 0 4	Each.
11806	Tag	2	—	0 0 7	Doz.
211	Screw, P.K., securing panel to cone chassis	2	—	0 0 6	"
23280	Dust bag	1	—	0 0 6	Each.
24798A	Loudspeaker, support strap	1	CdP	0 0 9	"
22759	Bolt	1	WN	0 0 1 $\frac{1}{4}$	Doz.
21890	Washer	1	WN	0 0 1 $\frac{1}{4}$	"
11206	Screw	2	WN	0 0 2	"
1308	Washer	2	WN	0 0 6	"
<b>RADIO UNIT</b>					
<b>RADIO UNIT.</b>					
24700C	Radio Unit	1	—	6 0 0	Each.
25631	Screw	4	WN	0 0 9	Doz.
10173	Spring washer	4	—	0 0 2	"
14997	Washer	4	WN	0 0 2	"
11206	Bolt	4	RedHd	0 0 2	"
21328	Washer	4	WN	0 0 3	"
10173	Spring washer	4	—	0 0 2	"
<b>INDUCTANCES.</b>					
24785A	L1, wave trap coil	1	—	0 2 9	Each.
19050	Screw	2	WN	0 0 3	Doz.
3166	Washer, S.P.	2	—	0 0 2	"
24788A	L 2—S.W. choke L 3—M.W. and L.W. coupling coil L 4—M.W. grid coil L 5—L.W. grid coil L 6—S.W. anode coil L 7—M.W. anode coil	1	—	0 4 0	Each.
24789A	L 8—L.W. anode coil L 9—S.W. reaction coil L10—M.W. and L.W. reaction coil	1	—	0 4 3	"
24768	Spacer, for above coil assemblies	2	—	0 0 5	Doz.
21337A	Coil screen	2	—	0 1 0	Each.
8777	Screw, P.K. securing coil screens	4	—	0 0 6	Doz.
13416J	T1—intervalve transformer	1	—	0 8 6	Each.
10606	Screw, P.K., securing T1	2	—	0 0 7	Doz.
24355A	T2 output transformer	1	—	0 4 6	Each.
10606	Screw, P.K., securing T2	2	—	0 0 7	Doz.
<b>RESISTANCES.</b>					
19202BJ	R1 —23,000 ohms	1	—	0 1 0	Each.
17541B	R2 —10,000 ohms	1	—	0 0 9	"
19202A	R3 — 500 ohms	1	—	0 0 9	"
17541P	R4 —50,000 ohms	1	—	0 0 9	"
19202AM	R5 — 2.3 megohms	1	—	0 0 9	"
17541P	R6 —50,000 ohms	1	—	0 0 9	"
17541B	R7 —10,000 ohms	1	—	0 0 9	"
19202B	R8 — 1,000 ohms	1	—	0 0 9	"
19202B	R9 — 1,000 ohms	1	—	0 0 9	"
19202F	R11—10,000 ohms	1	—	0 0 9	"
24750B	VR1, VC3 and S2—Volume reaction and switch ganged together, complete with drive mechanism	1	—	0 15 0	"
24752A	VR1 and S2	1	—	0 5 0	"

SPARE PART LIST—continued.

Part No.	Description.	Parts per Inst.	Finish.	Retail List Price.	Per
				£ s. d.	
13387	Screw, securing VR1 and S2	2	—	0 0 3	Doz.
24833F	Drive mechanism	1	—		
25003	Screw	2	WN	0 0 2	"
3166	Washer, S.P. } securing drive mechanism	2	—	0 0 2	"
14791	Screw	2	WN	0 0 4	"
3166	Washer, S.P. } securing VR1, VC3 and S2 to chassis	2	—	0 0 2	"
6000CJ	VR2—3,000 ohms variable resistance	1	—	0 5 0	Each.
23083	Bracket	1	CdP	0 0 1½	"
12874	Washer } securing VR2 to bracket	1	WN	0 0 1	Doz.
4400	Nut } securing VR2 to bracket	1	WN	0 0 2	Each.
8777	Screw, P.K., securing bracket to chassis	2	—	0 0 6	Doz.
<b>CONDENSERS.</b>					
22330AL	C1 —0.00035 mfd., S.L.	1	—	0 2 6	Each.
18318C	C2 —0.1 mfd.	1	—	0 0 9	"
22001E	C3 —0.0005 mfd.	1	—	0 0 9	"
22001AB	C4 —0.00075 mfd.	1	—	0 0 9	"
18318C	C5 —0.1 mfd.	1	—	0 0 9	"
18318C	C6 —0.1 mfd.	1	—	0 0 9	"
18318C	C7 —0.1 mfd.	1	—	0 0 9	"
22001E	C8 —0.0005 mfd.	1	—	0 0 9	"
22164F	C9 —0.00035 mfd.	1	—	0 0 9	"
18318C	C11—0.1 mfd.	1	—	0 0 9	"
22001AB	C12—0.00075 mfd.	1	—	0 0 9	"
22001B	C13—0.0001 mfd.	1	—	0 0 9	"
18318C	C14—0.1 mfd.	1	—	0 0 9	"
22005Q	C15—0.001 mfd.	1	—	0 1 6	"
18318C	C16—0.1 mfd.	1	—	0 0 9	"
22001AD	C17—0.00023 mfd....	1	—	0 0 9	"
22001E	C18—0.0005 mfd.	1	—	0 0 9	"
16240D	TC1, Pre-set condenser	1	—	0 1 2	"
11229	Screw	2	WN	0 0 3	Doz.
3165	Washer, S.P. } securing TC1	2	—	0 0 2	"
11629	Nut	2	WN	0 0 6	"
23922B	TC2, TC3 and TC8—triple pre-set condenser	1	—	0 2 6	Each.
23922B	TC4, TC5 and TC6—triple pre-set condenser	1	—	0 2 6	"
24027	Adjusting screw	6	—	0 0 3	Doz.
11219	Screw	2	WN	0 0 3	"
3166	Washer, S.P. } securing triple pre-set condensers	2	—	0 0 2	"
16240D	TC7—pre-set condenser	1	—	0 1 2	Each.
11743	Adjusting screw (for TC1 or TC7)	2	—	0 0 8	Doz.
11229	Screw	2	WN	0 0 3	"
3165	Washer, S.P. } securing TC7	2	—	0 0 2	"
11629	Nut	2	WN	0 0 6	"
24710C	VC1 and VC2—two-gang condenser, complete with drive mechanism	1	—	0 15 0	Each.
24050B	Drive mechanism	1	—	0 2 0	"
8777	Screw, P.K. } securing drive mechanism to bracket	2	—	0 0 6	Doz.
3166	Washer, S.P. } securing drive mechanism to bracket	2	—	0 0 2	"
24717	Bracket	1	CdP	0 0 3	Each.
14791	Screw	2	WN	0 0 4	Doz.
3166	Washer, S.P. } securing bracket to condenser gang	2	—	0 0 2	"
24718	Distance piece	1	WN	0 0 4	"
11223	Screw	1	WN	0 0 3	"
3166	Washer, S.P. } securing distance piece	1	—	0 0 2	"
24720A	Spring gear assembly	1	—	0 0 9	Each.
24045	Spring	2	—	0 0 6	Doz.
24725	Pin, securing spring gear assembly to spindle of gang condenser	1	—	0 0 6	"
11219	Screw	3	WN	0 0 3	"
3166	Washer, S.P. } securing two gang condenser to chassis	3	—	0 0 2	"
	VC3—See under VR1, VC3 and S2.				

SPARE PART LIST—continued.

Part No.	Description.	Parts per Inst.	Finish.	Retail List Price.	Per
				£ s. d.	
<b>TUNING DETAILS.</b>					
24730A	Scale frame assembly ... ..	1	—	0 1 9	Each.
8777	Screw, P.K., securing scale frame to chassis ... ..	4	—	0 0 6	Doz.
24728A	Pointer ... ..	1	CB local	0 0 2	Each.
13893	Screw, securing pointer to spindle of gang condenser ... ..	2	WN	0 0 8	Doz.
24740A	Tuning scale ... ..	1	—	0 3 0	Each.
24741	Glass ... ..	2	—	0 0 2	"
24742	Clamp ... ..	2	CdP	0 0 9	Doz.
24194	Rubber ... ..	2	—	0 0 3	"
24744	Clamp } securing tuning scale and glass ... ..	1	CdP	0 0 9	"
24745	Rubber } ... ..	1	—	0 0 6	"
211	Screw, P.K. } ... ..	4	—	0 0 6	"
11219	Screw ... ..	1	WN	0 0 3	"
23983	Washer ... ..	1	WN	0 0 3	"
3166	Washer, S.P. } securing bottom of scale ... ..	1	—	0 0 2	"
24739B	Wave band indicator assembly ... ..	1	—	0 0 6	Each.
24767	Indicator ... ..	1	—	0 0 3	"
21276	Eyelet ... ..	4	—	0 0 1	Doz.
24749A	Lever and bush, operating indicator ... ..	1	—	0 0 3	Each.
13387	Screw, securing bush to switch spindle ... ..	2	WN	0 0 3	Doz.
22238D	Lampholder ... ..	1	—	0 1 0	Each.
22704B	Lamp ... ..	1	—	0 0 9	"
<b>SWITCHES.</b>					
24779A	S1—Wave change switch ... ..	1	—	0 5 0	Each.
12619	Screw, P.K., securing S1 ... ..	2	—	0 0 6	Doz.
S2—See under VR1, VC3 and S2.					
<b>VALVE HOLDERS, PANELS, ETC.</b>					
18181	Valve panel ... ..	3	—	0 0 4	Each.
18180	Valve panel cover ... ..	3	—	0 0 1	"
17503	Valve leg clip ... ..	15	—	0 0 1	"
16357	Rivet securing valve holders ... ..	6	—	0 0 2	Doz.
24701A	Large panel, with six sockets ... ..	1	—	0 0 3	Each.
13810	Rivet, securing large panel ... ..	3	—	0 0 3	Doz.
22536A	Resistance and condenser panel, with 4 tags ... ..	1	—	0 0 3	Each.
10400	Tag ... ..	4	—	0 0 1	Doz.
22539	Insulation ... ..	1	—	0 0 1	Each.
13810	Rivet, securing panel ... ..	2	—	0 0 3	Doz.
24020A	Tag panel, with three tags ... ..	1	—	0 0 2	Each.
12619	Screw, P.K., securing tag panel ... ..	1	—	0 0 6	Doz.
24017A	Tag panel, with five tags ... ..	1	—	0 0 3	Each.
16352	Rivet, securing tag panel ... ..	2	—	0 0 1	Doz.
18381	Condenser holder for C2, C5, C6, C7, C11, C14 and C16 ... ..	7	—	0 0 3	Each.
24702	Aerial screen ... ..	1	CdP	0 0 2	"
8777	Screw, P.K., securing aerial screen to end of chassis ... ..	2	—	0 0 6	Doz.
19897	Anode clip ... ..	2	—	0 0 1	Each.
12613	Cleat ... ..	1	WN	0 0 1	"
10606	Screw, P.K., securing cleat ... ..	1	—	0 0 7	Doz.
15159	Tag ... ..	1	—	0 0 3	"
16576	Tag, long ... ..	1	—	0 0 3	"
16756	Insulating bush ... ..	1	—	0 0 1	Each.
24165	Insulating bush, large ... ..	1	—	0 0 1	"
16755	Insulating bush, small ... ..	5	—	0 0 1	"
24775	Rubber foot ... ..	4	—	0 0 3	"
24776	Tapped rivet ... ..	4	CdP	0 0 2	"
24777	Washer ... ..	4	CdP	0 0 1½	Doz.
24778	Plate ... ..	4	CdP	0 0 6	"
24880A	Battery lead, with 6 plugs and 2 tags ... ..	1	—	0 3 3	Each.
16288G	Plug ... ..	6	—	0 0 2	"
8519	Tag ... ..	2	—	0 0 1	"

## **“FINISH” CODE**

AcD ... ..	Acid Dip	Pol ... ..	Polished
AnBr ... ..	Antique Brass	ParB ... ..	Parkerised Black
CdP ... ..	Cadmium Plate	WN ... ..	White Nickel
CB ... ..	Camera Black		

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.

Order spare parts from :—

E.M.I. SERVICE, LTD.,  
SHERATON WORKS,  
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Telephone : Southall 2468.

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