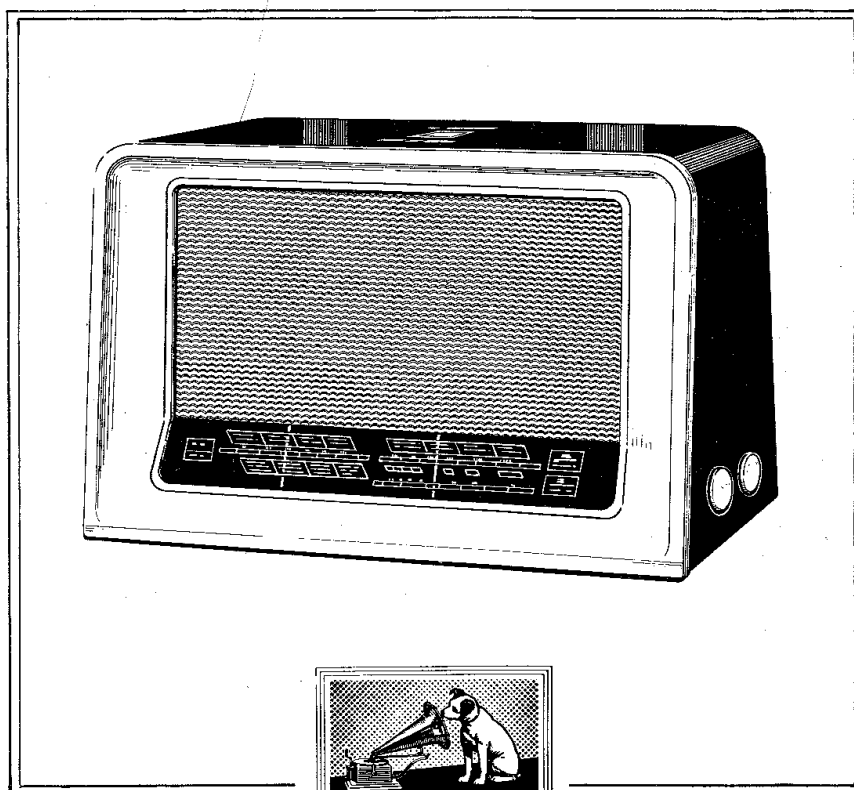


“His Master’s Voice”



The Hallmark of Quality

SERVICE MANUAL

Model 1125

5-valve Superhet Table Receiver
for A.C. Mains

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JULY, 1953

MODEL 1125

SPECIFICATION

Physical			
Height	12½ inches	Approx. Overall.
Depth	.. .. .	10 inches
Width	.. .. .	20½ inches
Weight	.. .. .	19½ lbs.

Mains Supply.

195—255 volts, 50—100 cycles.

Consumption.

40 watts.

Wave Ranges.

S.W.	.. .. .	16.3—51.7 metres.
M.W.	.. .. .	187—575 metres.
L.W.	.. .. .	900—2,000 metres.

Intermediate Frequency.

470 kc/s.

Rated Output.

4 watts maximum.

Valves.

V1	X78	Frequency Changer.
V2	W77	I.F. Amplifier.
V3	DH77	Detector, A.G.C. and A.F. Amplifier.
V4	N78	Output.
V5	U78	Rectifier.

Lamps and Fuses.

Two Lamps—6.8 volt, 0.3 amp.

Two Fuses—1.0 amp., Cartridge type.

Loudspeaker.

The loudspeaker is a dust-proof, 10½-inch elliptical cone permanent magnet moving coil loudspeaker. The speech coil has a D.C. resistance of 3 ohms and an impedance of 5 ohms at 1,000 cycles.

Switch sockets are provided for the connection of an external loudspeaker.

Connection of Pick-up.

A pick-up or record player may be connected to the sockets provided. The Volume and Tone controls are operative on gramophone.

CIRCUIT DESCRIPTION

Frequency Changer.

The aerial is inductively coupled to tuned coils in the grid circuit of the triode hexode frequency changer V1 (X78).

The tuned grid coils are adjusted by iron dust-cores and parallel trimmer capacitors.

The local oscillator circuit also has tuned coils adjustable by means of iron-dust cores and parallel trimmer capacitors the tuned windings being in the anode circuit.

Capacity coupling C6 is used on the long wave band.

The first iron-dust cored I.F. transformer (IFT1) couples this valve to the I.F. amplifier.

I.F. Amplifier.

The I.F. amplifier V2 (W77) amplifies at the intermediate frequency of 470 kc/s. The second I.F. transformer (IFT2) couples this valve to the detector.

Detector, A.G.C. and A.F. Amplifier.

A diode of the double diode triode V3 (DH77) is used as a detector and A.G.C. rectifier. The Volume control

VR1 forms the diode load. The A.G.C. voltage is taken from the D.C. component of the speech voltage across VR1 and is applied to control the bias of the grid circuits of V1 and V2 which are decoupled by R7 and C13.

L.F. signals taken from VR1 are applied to the grid of the triode section of V3 and this section is resistance-capacity coupled to the grid of the output valve.

Output.

The output valve V4 (N78) has its cathode biased by R16. Tone correction is given by C24 and variable tone control by C23 and VR2. This valve supplies the loudspeaker via an Output Transformer (T1).

H.T. and Heater Supplies.

H.T. is supplied from the mains transformer T2 and the full wave rectifier V5 (U78). Smoothing is obtained by C26, R17 and C25.

The heater supplies are taken from separate windings on the mains transformer. Two scales lamps LP1 and LP2 are connected across one of these windings.

INSTALLATION

The Aerial and Earth.

INTERNAL AERIAL—The receiver is equipped with an internal plate aerial for use on the Medium and Long wavebands ; no external aerial will be needed to obtain a reception from a selection of stations on these bands.

Plug the lead from the " PLATE AERIAL " socket into the " AERIAL " socket.

EXTERNAL AERIAL To receive a selection of stations on the Short waveband or in difficult reception circumstances, *i.e.*, in areas of strong electrical interference or in a steel framed or heavily screened building, and wherever it is desired to obtain maximum sensitivity from the receiver an efficient external aerial must be fitted.

A lightning arrester or switch should be fitted and the aerial must be insulated from all grounded objects.

Plug the external aerial into the socket marked " AERIAL " and see that the lead from the " PLATE AERIAL " is plugged into the " PLATE AERIAL OFF " socket.

EARTH An efficient earth should be provided ; never use a telephone earth or a hot water or gas pipe as an earth.

Mains Supply.

The receiver may be adjusted to operate on A.C. mains supplies of 195—255 volts, 50—100 cycles.

Insert the voltage adjustment plug into the appropriate sockets.

DISMANTLING

Complete access to the chassis can be gained by simply removing the card back.

To withdraw the chassis, remove the four control knobs

(spring fixing) unscrew the four chassis fixing bolts, remove the earth connection from the chassis and unsolder the loudspeaker leads.

I.F. AND R.F. ALIGNMENT

General.

If the I.F. circuits have been disturbed, complete I.F. and R.F. alignment must follow. Either S.W., M.W., or L.W. bands can be re-aligned without affecting the other bands.

The oscillator tracks at a higher frequency than the signal on all wavebands.

Whilst aligning, the input to the receiver must be progressively reduced as the circuits are brought into line so that the output does not exceed 500mW. (1.4v. across the speech coil).

R.F. Alignment.

Short Waves.

Set Volume and Tone controls fully clockwise and Waveband switch as required. Inject test signal into aerial and earth sockets via a S.W. dummy aerial.

An A.C. voltmeter (rectifier type) connected across the loudspeaker speech coil may be used as an output meter.

I.F. Alignment.

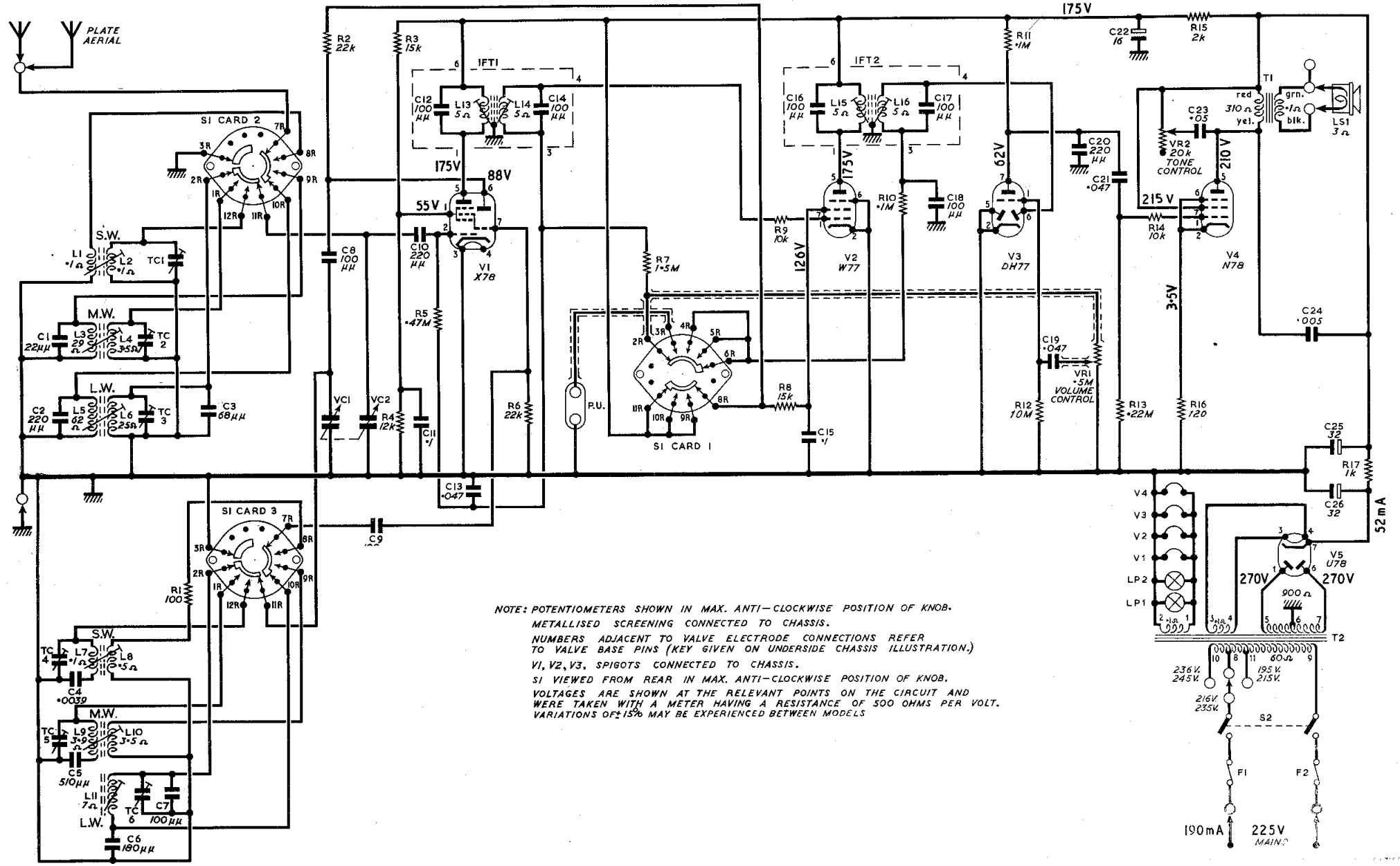
Set the Waveband switch to M.W., the Volume and Tone controls fully clockwise and the gang capacitor to minimum capacity (plates fully disengaged).

1. Inject a modulated signal 470 kc/s into the hexode control grid of V1.
2. Adjust cores L16, L15, L14 and L13 in that order for maximum output.
3. Repeat operations 1 and 2 for optimum results.

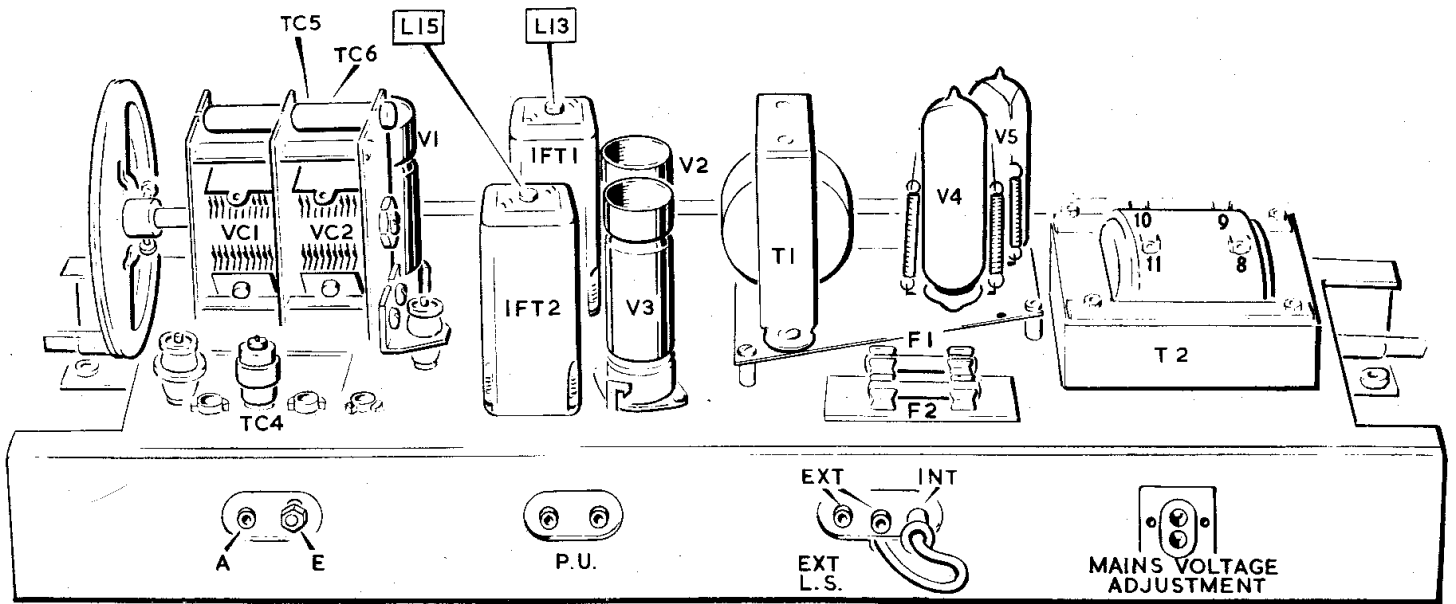
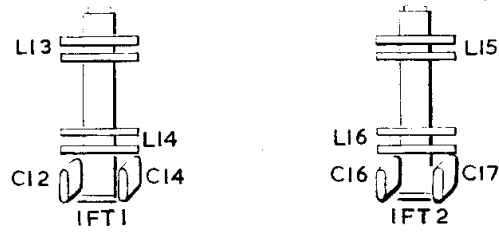
Waveband Switch	Op. No.	Set Gang	Tune Signal Generator to		Operation
			m	Mc/s	
S.W.	1	Maximum	51.7	5.8	Adjust L7 for maximum output.
	2	Minimum	16.3	18.4	Adjust TC4 for maximum output.
	3	Tune in	50	6	Adjust L2 for maximum output.
	4	Tune in	16.8	17.8	Adjust TC1 for maximum output.
	5	—	—	—	Repeat operations 1 to 4.

If, when adjusting TC4, it is found that two peaks occur, then the first peak from the fully "screwed in" position should be taken as being the correct one. **LOOKING FROM ABOVE CHASSIS.**

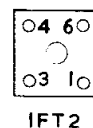
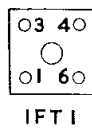
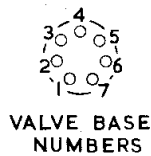
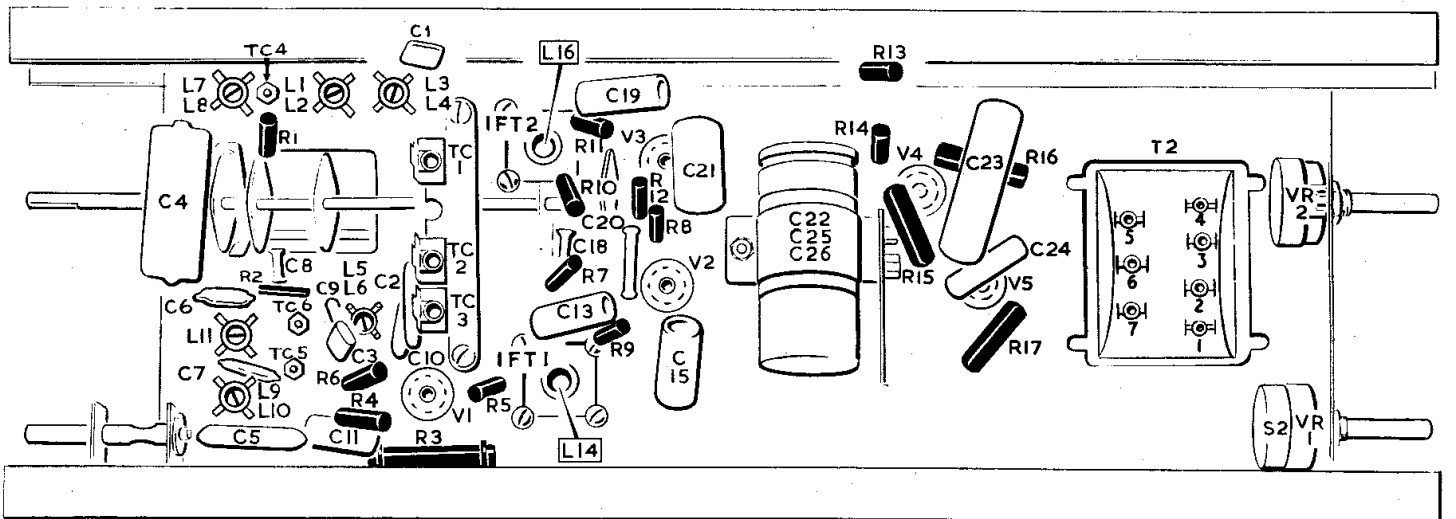
C	2	1	4,5	6	7	3	8	9	10,12,13	14	16	15	17	18	19	20,21,22	23	24	25,26	C			
R	MISC. TC4, TC5			L1 TO L11 TC1,2,3,6			VC1	VC2	L13 V1, FT1 L14		P.U.	L15, V2 IFT 2		L16	V3	VR1	LPI, LP2, VR2	V4, F1	S2, T1	F2	LS1, V5	T2	MISC.



NOTE: POTENTIOMETERS SHOWN IN MAX. ANTI-CLOCKWISE POSITION OF KNOB.
 METALLISED SCREENING CONNECTED TO CHASSIS.
 NUMBERS ADJACENT TO VALVE ELECTRODE CONNECTIONS REFER TO VALVE BASE PINS (KEY GIVEN ON UNDERSIDE CHASSIS ILLUSTRATION.)
 V1, V2, V3, SPIGOTS CONNECTED TO CHASSIS.
 SI VIEWED FROM REAR IN MAX. ANTI-CLOCKWISE POSITION OF KNOB.
 VOLTAGES ARE SHOWN AT THE RELEVANT POINTS ON THE CIRCUIT AND WERE TAKEN WITH A METER HAVING A RESISTANCE OF 500 OHMS PER VOLT. VARIATIONS OF ±15% MAY BE EXPERIENCED BETWEEN MODELS.



TOP-SIDE CHASSIS



UNDER-SIDE CHASSIS

Medium Waves

Controls as before, but with M.W. dummy aerial.

Waveband Switch	Op No.	Set Gang	Tune Signal Generator to		Operation
			m	Kc/s	
M.W... ..	1	Maximum	575	522	Adjust L9 for maximum output.
	2	Minimum	186.9	1,605	Adjust TC5 for maximum output.
	3	Tune in	510	588	Adjust L4 for maximum output.
	4	Tune in	210	1,427	Adjust TC2 for maximum output.
	5	—	—	—	Repeat operations 1 to 4.

Long Waves

Controls as before, but with L.W. dummy aerial.

Waveband Switch	Op. No.	Set Gang	Tune Signal Generator to		Operation
			m	kc/s.	
L.W.	1	Maximum	2,000	150	Adjust L11 for maximum output.
	2	Minimum	901	333	Adjust TC6 for maximum output.
	3	Tune in	1,850	162	Adjust L6 for maximum output.
	4	Tune in	1,000	300	Adjust TC3 for maximum output.
	5				Repeat operations 1 to 4.

CORD DRIVE

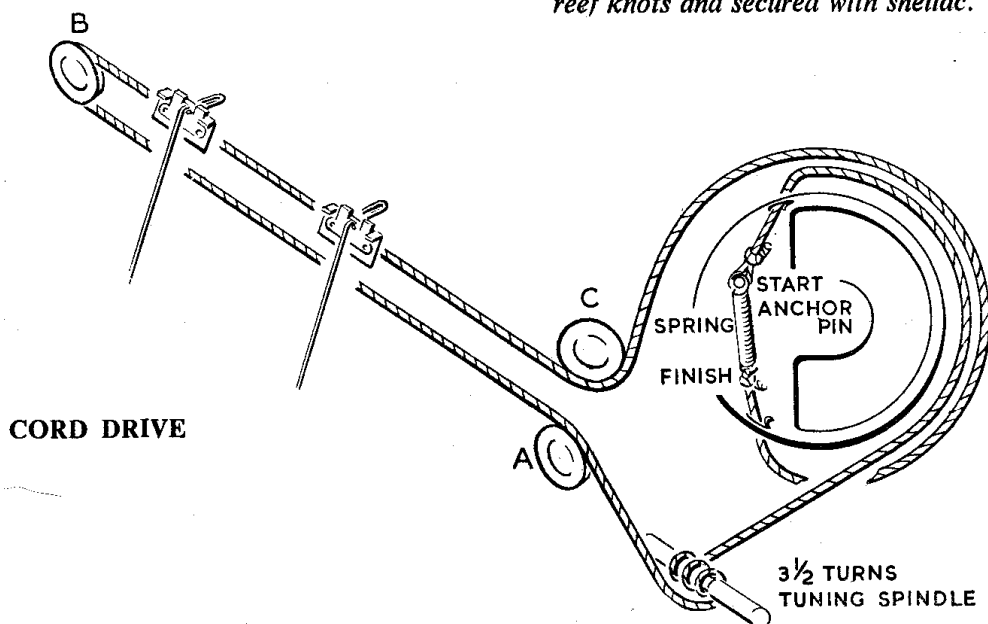
Use only correct nylon cord 6370 × 0012; approximately 72 inches of cord is used.

1. Form a loop in one end of cord with an opening of approximately $\frac{1}{8}$ -inch in diameter and assemble on anchor pin.

2. Wind cord round pulleys as shown in diagram.

3. Secure cord to tension spring and assemble spring.

NOTE.—The knots, to prevent slipping, should be tied as reef knots and secured with shellac.



SPARE PARTS LIST

PART NO.	DESCRIPTION	No. INST.	PER	FIN-ISH	PART NO.	DESCRIPTION	No. INST.	PER	FIN-ISH
INSTRUCTIONS					RADIO UNIT (Continued)				
+9314	Instruction Card	1	-	-	91332	Chassis Fixing Bar (Front)	1	689	-
49315	Cabinet Label	1	-	-	91334B	Chassis Fixing Bar complete (Rear)	1	689	-
42963	Transit Label	1	-	-					
CABINET PARTS & FITTINGS					VALVES				
418601	Cabinet complete	1	-	-	V1	X78	Frequency Changer		
91325B	Escutcheon	1	-	-	V2	W77	I.F. Amplifier		
200020N	Screw) securing	6	689	-	V3	DH77	Detector, A.G.C. & A.F. Amplifier		
201302	Washer) Escutcheon to	6	689	-	V4	N78	Output		
201502	Washer) Cabinet	6	689	-	V5	U78	Rectifier		
418602B	Baffle Board with Grille	1	-	-					
200020N	Screw) securing	4	689	-					
40562	Washer) Baffle to	4	689	-					
201504	Spring Washer) Cabinet	4	-	-					
91330A	Cabinet Back complete	1	-	-					
9559	Screw) securing	8	689	-					
40562	Washer) Back to	8	689	-					
49930	Clamp Washer) Cabinet	4	689	-					
200040K	Screw) securing	4	689	-					
201504	Washer) Back to	4	-	-					
49930	Clamp Washer) Chassis	4	689	-					
1950	Transfer Trade Mark	1	-	-					
91326A	TUNING SCALE	1	-	-					
91449	Felt Strip	1	-	-					
91450	Felt Strip	2	-	-					
91327	Clip) securing	4	-	-					
47142	Rubber Tube) Scale to	4	-	-					
200040F	Screw) Cabinet	4	689	-					
91284A	FEET (RUBBER)	4	-	-					
91328	Packing for Feet) securing	4	-	-					
91329	Shouldered screw) Feet	4	689	-					
CONTROLS					INDUCTORS				
35432Q	Knob "TONE"	1	-	-	40970G	L1. L2. Aerial Coil S.W.	1	-	-
35432R	Knob "G-S-M-L"	1	-	-	40970H	L3. L4. Aerial Coil M.W.	1	-	-
35432S	Knob "VOLUME ON/OFF"	1	-	-	40970J	L5. L6. Aerial Coil L.W.	1	-	-
35432T	Knob "TUNING"	1	-	-	40970A	L7. L8. Osc. Coil S.W.	1	-	-
35418	Springs for Knobs	4	-	-	40970B	L9. L10. Osc. Coil M.W.	1	-	-
					40970K	L11. Osc. Coil L.W.	1	-	-
					See IFT1	L13. L14.			
					See IFT2	L15. L16.			
					46553	Coil Trimmer for L1 - L11	6	-	-
					46551J	IFT1 1st I.F. Transformer complete with L13, L14, C12, C14.	1	-	-
					46551J	IFT2 2nd I.F. Transformer complete with L15, L16, C16, C17	1	-	-
					46553	Dust Core for IFT's	4	-	-
					46552	Can for IFT's	2	-	-
					13517	P.K. Screw securing IFT's	4	-	-
					22628BS	T1 Output Transformer	1	-	-
					10606	P.K. Screw securing T1	2	-	-
					44490F	T2 Mains Transformer	1	-	-
					200404	Nut	4	689	-
					201304	Washer) securing T2	4	689	-
					201804	S.P. Washer	4	-	-
LOUDSPEAKER					RESISTORS				
46570Q	Loudspeaker complete	1	-	-	37811G	R1 100 Ω 5%	1	-	-
46575	Dustcover for Magnet	1	-	-	33363DW	R2 20000 Ω	1	-	-
200025H	Screw) securing	4	689	-	33373V	R3 15000 Ω 5%	1	-	-
201302	Washer) Loudspeaker	4	689	-	37810PM	R4 12000 Ω 5%	1	-	-
					33363EE	R5 0.47 MΩ 20%	1	-	-
					33360DW	R6 22000 Ω	1	-	-
					33363EH	R7 1.5 MΩ 20%	1	-	-
					37811V	R8 15000 Ω 5%	1	-	-
					33360DU	R9 10000 Ω	1	-	-
					33363EA	R10 0.1 MΩ 20%	1	-	-
					33363EA	R11 0.1 MΩ 20%	1	-	-
					33363EN	R12 10 MΩ 20%	1	-	-
					33360EC	R13 0.22 MΩ	1	-	-
					33360DU	R14 10000 Ω	1	-	-
					37870FP	R15 2000 Ω 5% 6w	1	-	-
					37810JG	R16 120 Ω 5%	1	-	-
					37870N	R17 1000 Ω 5% 6w	1	-	-
					37941FJ	VR1 & S2 5 MΩ Volume Control and Switch	1	-	-
					37945FJ ^{or}				
					37941GJ	VR2 20000 Ω Tone Control	1	-	-
RADIO UNIT									
47000Q	Radio Unit complete	1	-	-					
200025P	Screw) securing	4	689	-					
201302	Washer) Radio	4	689	-					
201502	Spring Washer) Unit	4	-	-					

PART NO.	DESCRIPTION	No. PER INST.	FIN-ISH	PART NO.	DESCRIPTION	No. PER INST.	FIN-ISH
CAPACITORS				TUNING DETAILS (Continued)			
38050DC	C1 220 μF 500V	1	-	6250	Washer } securing	1	689
38001J	C2 220 μF 350V 5%	1	-	2856	Circlip } Tuning Spindle	1	689
38004YC	C3 68 μF 350V 2%	1	-	47007A	Pulley Assy (2 pulleys)	1	-
38001WF	C4 3900 μF 350V 2%	1	-	47007B	Pulley Assy (1 pulley)	1	-
38001VQ	C5 510 μF 350V 2%	1	-	8777	P.K.Screw securing Pulley Assys	4	-
38000VE	C6 180 μF 350V 2%	1	-	91338	Scale Backing Plate Assy	1	-
38004TF	C7 100 μF 350V 2%	1	-	91335	Lamp Bracket R.H.	1	689
38100A	C8 100 μF Ceramicon	1	-	91336	Lamp Bracket L.H.	1	689
38100A	C9 100 μF Ceramicon	1	-	91337	Spacer }	2	689
38100M	C10 220 μF Ceramicon	1	-	200062N	Screws } securing	2	689
38210EA	C11 0.1 μF 150V	1	-	201806	Washer } Lamp Brackets	2	-
See IFT1	C12			200406	Nut }	2	689
38210DY	C13 0.047 μF 150V	1	-	91326A	TUNING SCALE	1	-
See IFT1	C14			91327	Clip }	4	689
38210EA	C15 0.1 μF 150V	1	-	47142	Rubber Tube } Scale to	4	-
See IFT2	C16			200040F	Screw } Cabinet	4	689
See IFT2	C17			91427A	Cursor & Pointer Assy	1	-
38100A	C18 100 μF Ceramicon	1	-	6370 x 0012	Nylon Cord Drive (in bulk)	55"	-
38210DY	C19 0.047 μF 150V	1	-	46954	Spring for Cord Drive	1	-
38100M	C20 220 μF Ceramicon	1	-	44615A	Lampholder	2	-
38210DY	C21 0.047 μF 150V	1	-	35421D	Scale Lamps	2	-
38150N	C22 (with C25 & C26) 16 μF Electrolytic	1	-	91420	Light Seal (Rubber)	2	-
38190B	Capacitor Clip	1	-	SWITCHES			
47019	Insulating Strip	1	-	47002A	S1 Waveband Switch complete with Card 2 & Card 3 (less Card 1)	1	-
200040F	Screw } securing	2	689	201322	Washer for S1 fixing	1	689
201804	S.P.Washer } Capacitor	2	-	47020	Switch Card No. 1 only	1	-
200404	Nut } Clip	2	689	47015	Switch Card Bracket	1	689
200040M	Screw } securing	1	689	12619	P.K.Screw securing Bracket	1	-
201804	S.P.Washer } Capacitor	1	-	47016	Spacer }	2	-
200404	Nut } in Clip	1	689	47021	Insulating Washer } securing S.W. Card	2	-
38214H	C23 .05 μF 1000V	1	-	200060Q	Screw } No. 1 to	2	689
38214E	C24 .005 μF 1000V	1	-	200406	Nut } Bracket	2	689
See C22	C25 32 μF Electrolytic	1	-	201806	Washer }	2	-
See C22	C26 32 μF Electrolytic	1	-	See VRL	S2 On/Off Switch	1	-
39653A	TC1, TC2, TC3 Three bank Trimmer Assembly	1	-	R.F. UNIT			
47017	Pillar }	2	-	47000X	R.F.Unit complete	1	-
200040R	Screw } securing	2	689	47031	P.K.Screw securing R.F.Unit to Chassis Fixing Bars	6	-
17362	Insulating Washer } Trimmer Assembly	2	-	41674A	Valveholder (type B7G) for V1, V2 & V3	3	-
201304	Washer } Assembly	2	689	59119AB	Rivet securing Valveholders	6	-
201804	S.P.Washer }	2	-	37095BB	Tag Panel Assy	1	-
200404	Nut }	2	689	12619	P.K.Screws securing Tag Panel	1	-
35480B	TC4 Trimmer Assy (3.30 μF)	1	-	40029A	Insulated Tag (small)	3	-
35480B	TC5 Trimmer Assy (3.30 μF)	1	-	59007CD	Rivet securing tags	3	-
35480B	TC6 Trimmer Assy (3.30 μF)	1	-	20334A	Insulated Tag (large)	1	-
37101H	VC1, VC2 Twin Gang Capacitor	1	-	12619	P.K.Screw securing Tag	1	-
46958	Rubber Bush } securing	3	-	36489	Tag	1	104
6250	Washer } VC1, VC2	3	03	10606	P.K.Screw securing Tag	1	-
2856	Circlip }	3	03	16755	Rubber Grommet	1	-
TUNING DETAILS				16576	Tag on Trimmer Assy	1	454
28441H	Tuning Drum Assy	1	689				
13387	Screw securing Tuning Drum Assy	1	03				
47008	Tuning Spindle	1	03				
47009	Tuning Spindle Bracket	1	689				
8777	P.K.Screw securing Bracket	2	-				

PART NO.	DESCRIPTION	No. PER INST.	FIN-ISH	PART NO.	DESCRIPTION	No. PER INST.	FIN-ISH
POWER UNIT				VALVEHOLDERS, PANELS, ETC.			
47014D	Power Unit complete	1	-	41674A	Valveholder (type B7G)	5	-
47031	P.K.Screw securing Power Unit to Chassis Fixing Bars	6	-	59119AB	Rivet securing Valveholders	10	-
47003	Control Panel for VR1 & VR2	1	689	44577A	Valve Screen for V1, V2, V3	3	-
12619	P.K.Screw securing Panel	3	-	44578	Valve Springs for Screen	3	-
47027	Deck Plate for T1 & T2 V5	1	689	20314K	Panel - Aerial/Earth	1	-
47028	Spacer	4	689	20314A	Panel - Record Player	1	-
200040N	Screw	4	689	36399A	Panel - Ext/Int L/S	1	-
201804	S.P.Washer	4	-	59119CC	Rivets securing Panels	6	-
200404	Nut	4	689	47006A	Voltage Adjustment Panel	1	-
41674A	Valveholder (type B7G) for V4 & V5	2	-	59119AC	Rivet securing Panel	4	-
59119AB	Rivet securing Valveholders	4	-	44562B	Voltage Adjusting Plug	1	-
46956A	Fuse Panel	1	-	16289J	Plug (Yellow)	2	-
7029	Spacer	2	689	20852B	Mains Lead	1	-
11805	P.K.Screw	2	-	4201 x 2300	Mains Lead (in bulk)	6	ft.
37095AA	Tag Panel Assy	1	-	40845C	Cleat securing Mains Lead	1	-
12619	P.K.Screw securing Panel	1	-	201304	Washer	1	689
40029A	Insulated Tag (small)	1	-	10606	P.K.Washer	1	-
69007CD	Rivet securing Tag	1	-	11802	Tag (open) for Earth Lead	1	104
16757	Rubber Grommet	3	-	15140	Tag	1	104
38825D	Fuse 1 amp.	2	-	38825D	Fuse 1 amp.	2	-
				27988C	Aerial Lead & Plug	1	-
				25061J	Screen Lead	1	-

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

1. Model and serial numbers (on plate beneath foot).
2. Spare part number and description.
3. Quantity required.

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

Order Spare Parts.

From:-

Or:-

E.M.I. SALES & SERVICE LIMITED,
SPARE PARTS DIVISION,
SHERATON WORKS,
WADSWORTH ROAD,
GREENFORD, MIDDLESEX.

Telephone: PERivale 6666
Telegraphic Address: Emiservice, Greenford,
Middlesex.

The Company reserves the right to make any modifications without notice.