

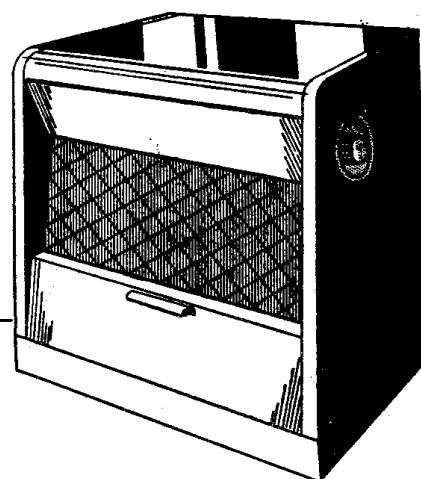
MODEL 1618A

1618B

SERVICE MANUAL



**7 VALVE CONSOLE
3 SPEED AUTO-RADIOGRAM
FOR A.C. MAINS**



MODEL 1618A

1618B

MADE IN ENGLAND

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See Page 8 for Model 1618B

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MODEL 1618A & B

*MODEL 1618A ONLY. SEE PAGE 8 FOR MODEL 1618B.

SPECIFICATION

Physical.

Height	29 $\frac{1}{2}$ inches	} Approx. Overall.
Depth	..	..	..	..	18 $\frac{1}{2}$ inches
Width	..	..	..	..	27 $\frac{1}{4}$ inches

Mains Supply.

195-215, 216-235, 236-255 volts, 50 c.p.s., A.C. only.

Consumption.

Radio	..	..	..	..	69 watts approx.
Gram	..	..	..	..	90 watts approx.

Rated Output.

7 watts maximum.

Intermediate Frequency.

470 kc/s.

Wave Ranges.

L.W.	..	901-2,000 metres (333-150 kc/s.)
M.W.	..	187.5-575 metres (1602-522 kc/s.)
S.W.	..	16.3-51.7 metres (18.4-5.8 Mc/s.)

Scale Lamps, Floodlight and Fuses.

Three scale lamps, 6.8v., 0.3 amp.
Floodlight 6.8v., 0.3 amp.
Two mains fuses, 1.5 amp. (cartridge type).

Valves.

V1	X78	Frequency Changer.
V2	W77	I.F. Amplifier.
V3	DH77	Detector, A.G.C. Rectifier and A.F. Amplifier.
V4	DH77	Phase Splitter.
V5	N78	} Push-pull output stage.
V6	N78	
V7	U709	H.T. rectifier.

* Loudspeaker.

10 $\frac{1}{2}$ -inch permanent magnet elliptical cone moving coil loudspeaker. The speech coil has a D.C. resistance of 4 ohms and an impedance of 5 ohms at 1,000 cycles. The flux density is 8,000 lines/sq. cm.

External Loudspeaker.

An additional loudspeaker may be connected to the external loudspeaker sockets at the rear of the instrument; the loudspeaker used should have an impedance of approximately 5 ohms. The sockets are so arranged that both the internal and external loudspeakers may be used together or selected individually.

* Auto. Mechanism.

Three-speed auto-mechanism type 48700A. Capable of handling up to eight 10-inch or 12-inch 78 r.p.m. records mixed, up to eight 10-inch or 12-inch 33 $\frac{1}{4}$ r.p.m. records mixed and eight 7 inch- 45 r.p.m. records.

The relevant matching circuit is chosen by a switch ganged to the speed change control.

For full information, see Service Data for three-speed Automatic Record Changer, Basic Type 48700.

* Pick-Up.

High impedance crystal type employing replaceable sapphire-tipped stylus. Two separate plug-in heads for 33/45 r.p.m. and 78 r.p.m. records. Weight of stylus tip 11-13 grammes approximately for 33/45 r.p.m. records and 15-18 grammes for 78 r.p.m. records.

* Styli.

"His Master's Voice" Multiplay 78 Stylus for 78 r.p.m. pick-up head.

"His Master's Voice" Multiplay 33/45 stylus for 33/45 r.p.m. pick-up head.

* Motor.

Shaded pole induction type.

INSTALLING

Aerial.

The instrument should be connected to an adequate aerial installation. A lightning arrester on switch should be provided.

Earth.

An earth terminal is fitted adjacent to the aerial socket at the rear of the instrument and this should be connected to an efficient earth. Do not use a gas pipe, hot water pipe or telephone earth for this purpose.

A special eyelet is provided for connection of the earth lead to the terminal.

* Transit Packing.

The two pick-up heads, records, aerial plug and earth lead eyelet and mechanism securing screws are packed in a carton situated inside the cabinet.

1. Remove the back panel (6 screws).
2. Slacken off the four wing nuts underneath the mechanism plate and remove the four red-painted wooden blocks.
3. Remove the four red-headed screws and washers from the corners of the mechanism board and replace with bronze screws.

NOTE.—The transit packing should be kept in case the instrument is to be transported at some future occasion.

Mains Supply.

The receiver may be adjusted to operate on A.C. mains supply of 195–215, 216–235, 236–255 volts, 50 cycles only. To adjust the mains input, ensure that the instrument is completely disconnected from the supply and proceed as follows:—

- (a) Remove the back panel.
- (b) Attach the mains adjustment lead to the terminal nearest to the supply voltage.

Do not connect the mains supply until the remaining adjustments have been completed.

Final Connections.

Make sure that the valves are firmly inserted in their correct positions and the fuses firmly held in their clips.

NOTE. When removing or refitting a valve, always use a vertical movement and on no account use force. As these valves have glass bases, any excessive sideways movement or rough handling may fracture the glass surrounding the pins and the valve will fail.

Replace the back panel; insert the Aerial plug and connect an earth to the terminal provided.

Ensure that the loudspeaker plug is in the “Int” position. Connect a suitable plug to the mains lead and plug in to the supply socket.

DISMANTLING

Before attempting any dismantling, ensure that the instrument is completely disconnected from the mains supply.

Removal of Power/Output Chassis.

1. Remove back panel (6 screws).
2. Slacken screws on mains transformer panel terminals and disconnect all six leads and unclasp these leads from floor of cabinet.
3. Remove two loudspeaker plugs and the five pin plug from front of chassis.
4. Unplug aerial and earth leads from rear of R.F. Chassis and unclasp these leads from cabinet partition.
5. Remove chassis securing screws and withdraw chassis.

Removal of R.F. Chassis.

1. Remove three top control knobs and one side control knob.
2. Remove two wood screws securing top panel and lift out panel.

3. Unclip floodlamp from bracket.
4. Unplug aerial, earth and pick-up leads from sockets at rear of chassis.
5. Remove 4 chassis fixing screws and lift out chassis.

* *Removal of Auto-Mechanism.*

1. Unclip motor leads from mains transformer panel.
2. Unplug pick-up leads from rear of R.F. chassis.
3. Remove both these leads from cabinet securing cleats.
4. Remove the four screws from the corners of the mechanism board.
5. Lift out mechanism.
6. By removing the four screws from the corners of the mechanism plate, and the two wood screws securing the matching unit and the wood screw securing the “common earth” solder tag, the complete mechanism can be released from the motor board.

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 reganged without affecting the other bands. The oscillator tracks at the higher frequency than the signal on all wavebands.

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

the speech coil).

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

I.F. or R.F. Cores.

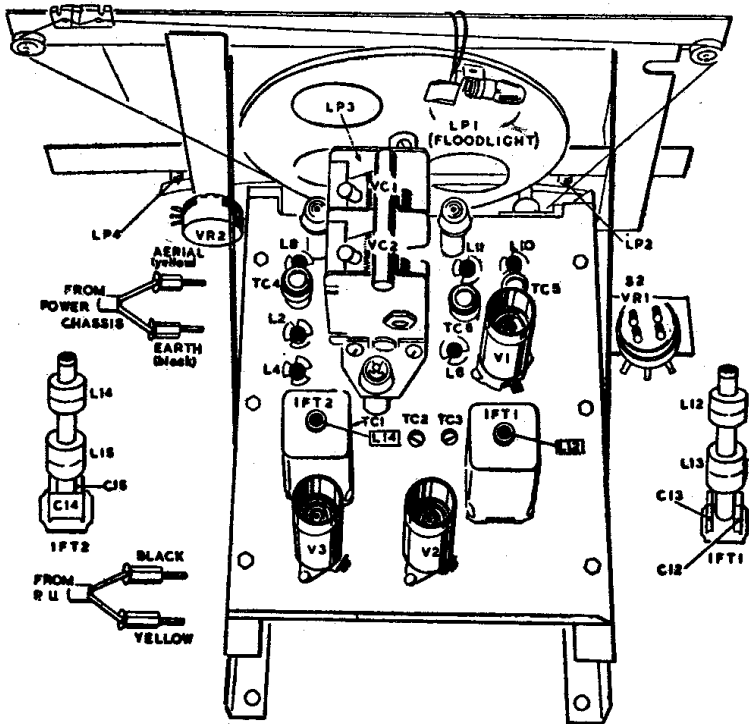
If it is found that the iron-dust cores in the I.F. and R.F.

coils have become locked and are unadjustable, they should be freed by the very careful application of one or two drops of high grade penetrating oil. The use of a small pointed brush or instrument to direct the oil on to the core will prevent the oil spreading to unwanted places.

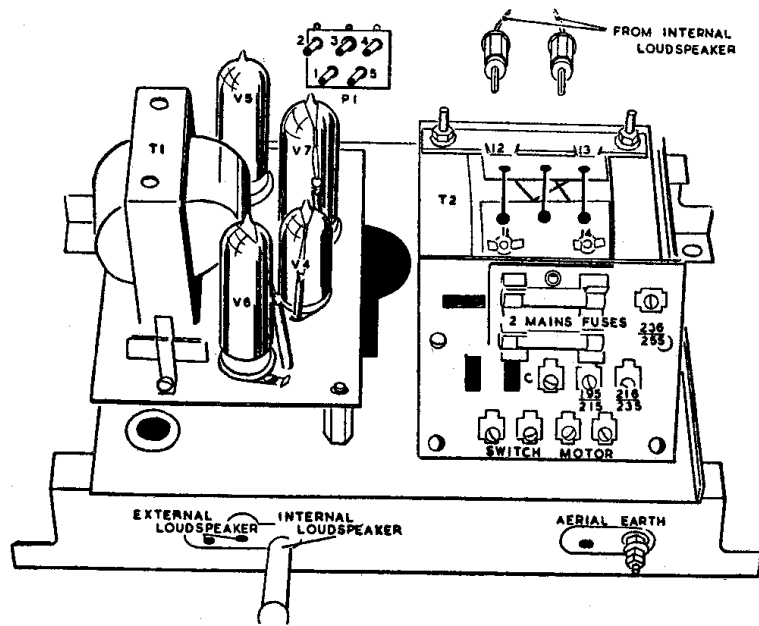
I.F. Alignment.

Set the waveband switch to M.W., the volume and tone controls fully clockwise and the gang capacitor to minimum capacity (plate fully disengaged).

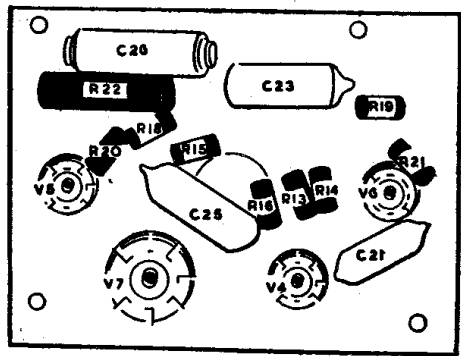
1. Inject a modulated signal at 470 kc/s. into the hexode control grid (pin 2) of V1.
2. Adjust cores L15, L14, L13 and L12 in that order for maximum output.



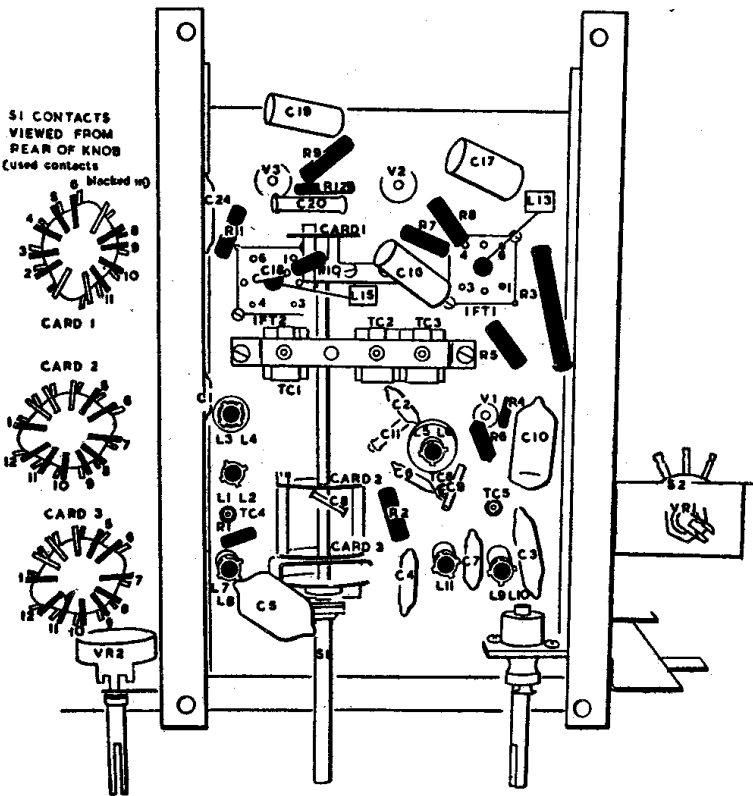
TOPSIDE VIEW OF R.F. CHASSIS



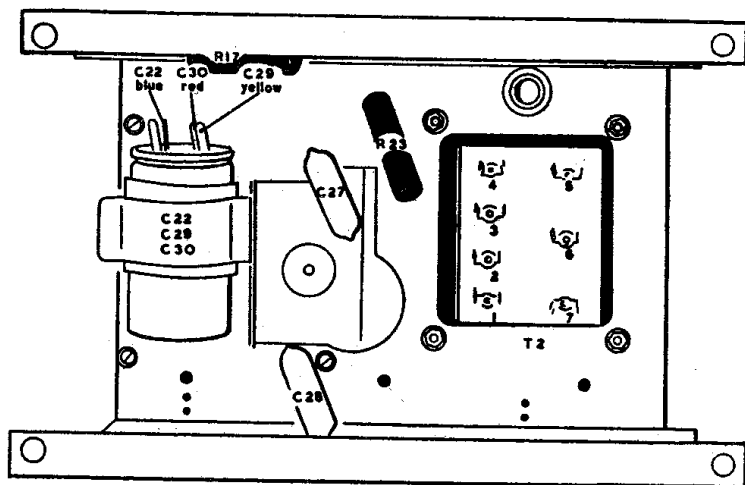
TOPSIDE VIEW OF POWER CHASSIS



UNDERSIDE VIEW OF SUB-CHASSIS

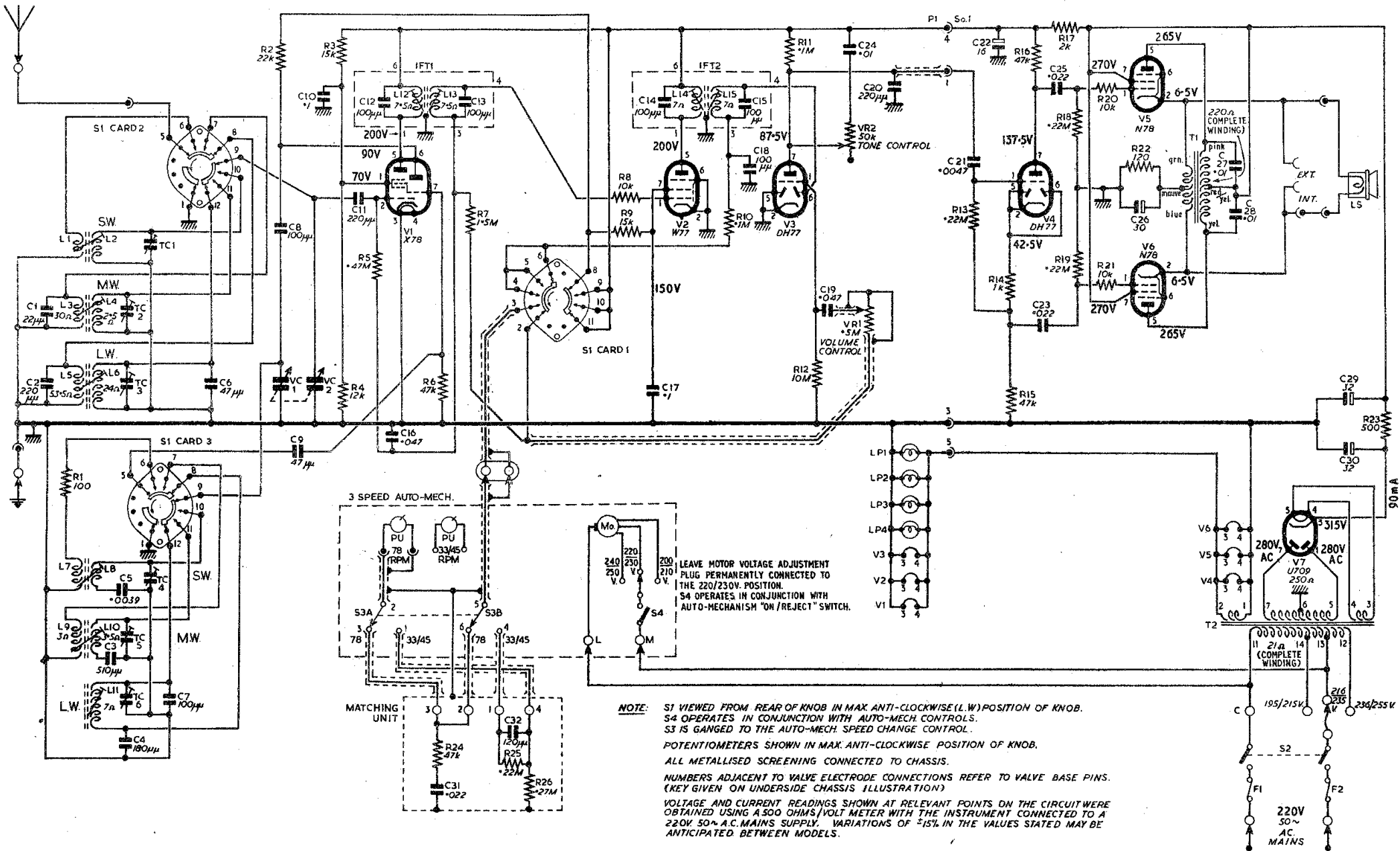


UNDERSIDE VIEW OF R.F. CHASSIS



UNDERSIDE VIEW OF POWER CHASSIS

C	1,2	3	5	4	7	6	8	10	11	12	16	13	15	17	18	19	20	21	22	23	25	26	27	28	29	30
R	1																									
MISC.	L1 TOLH	S1 CARD2, TC1 TO 6, S1 CARD3	VC1	VC2	S3A, L12, PU, VI, IFT1, L13, PU	S3B	S1 CARD 1, M	S4	L14, V2, IFT2, L15	V3	VR1, VR2, LP1 TO 4	P1	So, I	V4	V5, V6	T1	T2	F1	S2	V7	LS	MISC.				



CIRCUIT DIAGRAM FOR MODEL 1618A

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.

Waveband Switch	Op. No.	Set Gang	Tune Signal Generator to		Operation
			m	Mc/s	
S.W. ..	1	Maximum	51.7	5.8	Adjust L8 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.

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 L10 for maximum output.
	2	Minimum	187.5	1,602	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.

Ganging Tools.

A 4BA non-metallic box spanner, together with a small non-metallic screwdriver inserted through the spanner, should be used for adjusting the coil cores. A special box spanner (Stock No. Q/D 5021) is required for adjusting the oscillator circuit trimmer capacitors. Write for particulars to E.M.I. Sales and Service Ltd., Dealers Service Development Division, 100 Blyth Road, Hayes, Middlesex.

CALIBRATION

Replace chassis in cabinet and check calibration at about the middle of the tuning scale on a station of known

wavelength. Adjust pointer to give best compromise on all wavebands, if necessary.

CAPACITOR AND POINTER DRIVE

Use only the specified nylon cord 6370 x 0012 approximately 68 inches of cord is used.

To replace cord proceed as follows:

1. Take 68 inches of the cord and form a loop at one end.

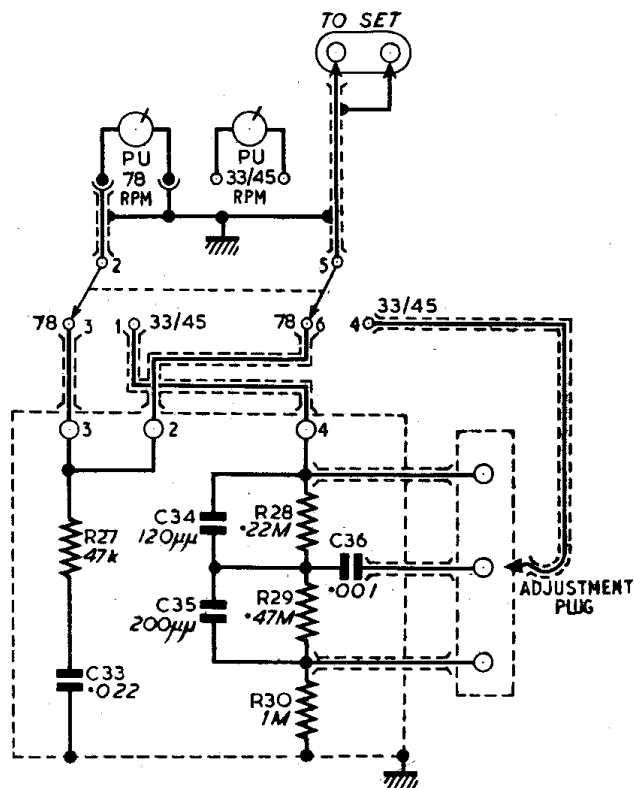
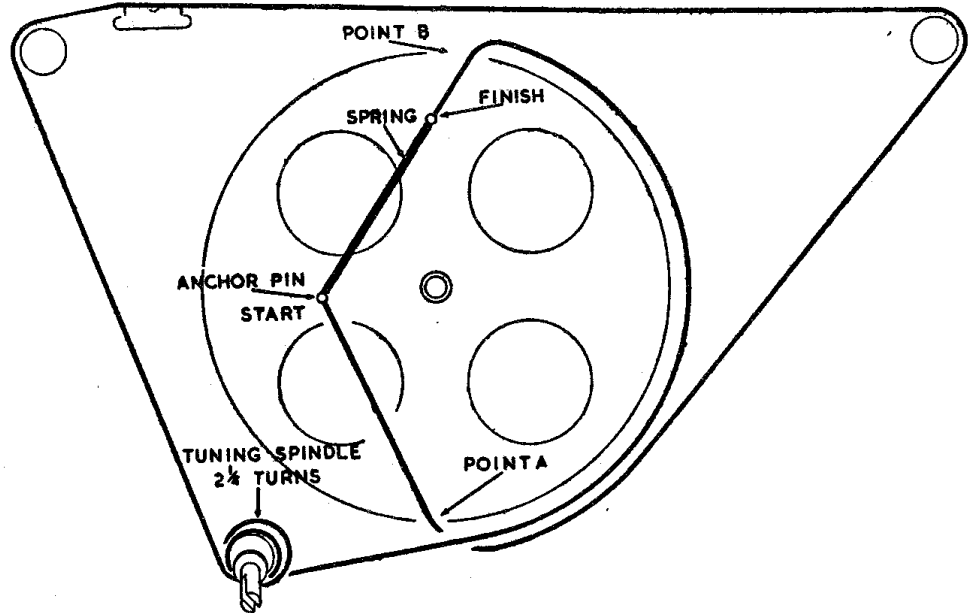
2. Attach loop to anchor pin and pass the other end of the cord through the hole in the periphery of the drum at point A in illustration.

3. Wind cord on to tuning spindle ($2\frac{1}{4}$ turns) and pulleys as shown in the illustration.

4. Pass end of cord through hole in periphery of drum at point B in illustration and attach cord to spring.

5. Attach free end of spring to anchor pin.

6. Secure all knots with a high grade shellac.



SUPPLEMENTARY INFORMATION (1618A)

In later production models a modified matching unit is fitted (Part No. 41411BR) whereby an input network is incorporated in the 33/45 r.p.m. pick-up circuit with 3 position adjustment panel for varying the output as required (see illustration).

On installation the plug should be inserted in the position that gives optimum results which will depend on the characteristics of the locality, viz: acoustics, temperature, humidity, etc. No further adjustment should be necessary unless the pick-up cartridge is exchanged.

The 3 position panel and plug will be found on the underside of the mechanism. If it is desired to make an alteration, move the plug to the left to increase the volume or to the right to decrease the volume. Select the adjustment which gives best quality of reproduction with the volume control at maximum.

MODEL 1618B ONLY

The Model 1618B is electrically similar to the Model 1618A, the difference being the auto-mechanism, the matching unit and A.B.C. switch, and the loudspeaker used, the details of which are given below. All information given on the preceding pages of this manual will otherwise apply to both models. A separate section relating to the Model 1618B is also incorporated in the Spare Parts List.

SPECIFICATION

Loudspeaker

13½ inch elliptical cone loud-speaker. The speech coil has a D.C. resistance of 4 ohms and an impedance of 5 ohms at 1,000 cycles.

Auto-Mechanism

Three-speed auto-mechanism type 48540L. Capable of handling up to eight 10-inch or 12-inch 78 r.p.m. records (unmixed), up to eight 10-inch or 12-inch 33 1/3 r.p.m. records (unmixed) and up to eight 7-inch 45 r.p.m. records.

The relevant matching circuit is chosen by a switch (S9) marked A.B.C. on the control panel.

For full information see service manual for automatic record changer Basic type 48540.

Pick-up

High impedance crystal reversible head type employing replaceable sapphire tipped stylus.

Styli

"His Master's Voice" type R.S.3 Standard Stylus for 78 r.p.m. records.

"His Master's Voice" type R.S.3 Microgroove Stylus for 33 1/3 and 45 r.p.m. records.

Important - Replace only with the specified type.

Motor

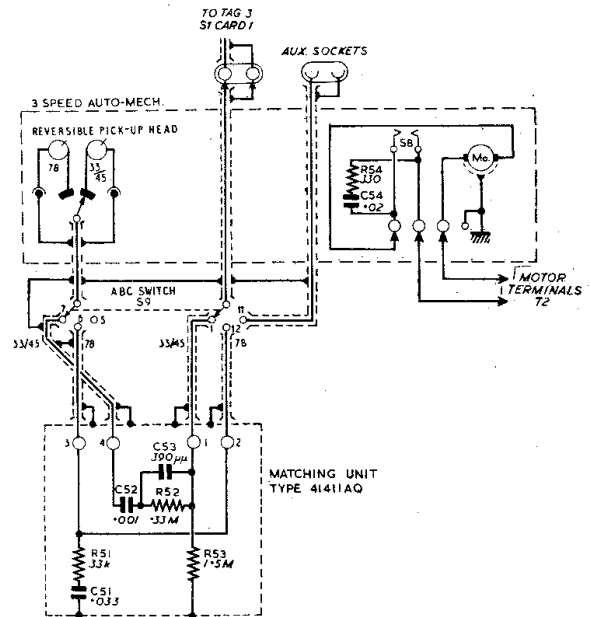
No.2 Squirrel Cage shaded pole induction type.

* The auxiliary input sockets fitted at the rear of the instrument may be used for the connection of a tape player for playback through the radio unit when the A.B.C. switch is set to position A and the wavechange switch to the Gram position. The input to the sockets should be approximately 1 volt at 1 kc/s for maximum output.

Note: Some modern 78 r.p.m. records may give better reproduction with the switch set in the "C" position.

Matching Unit

A resistance-capacitance pick-up matching circuit is fitted and the network suitable for the characteristics of the type of record being played is selected by the A.B.C. switch (S9) mounted on the control panel adjacent to the tuning scale.



The positions of the switch are as follows:-

- * A Auxiliary input for tape, etc.
- B 78 r.p.m. records.
- C 33 1/3 or 45 r.p.m. records.

Removal of Auto-Mechanism

1. Unclip the motor leads from the mains transformer panel.
2. Un-plug the pick-up leads from the rear of the R.F. chassis.
3. Unsolder the leads from the auxiliary panel.
4. Remove the four knobs from the control panel.
5. Remove the two wood screws securing the control panel and lift out the panel.
6. Remove the two woodscrews securing the A.B.C. switch.
7. Remove the four screws from the corners of the auto-mechanism and lift out mechanism complete with matching unit and A.B.C. switch.

SPARE PARTS LIST

PART No.	DESCRIPTION	No. PER. INST.	PART No.	DESCRIPTION	No. PER. INST.
INSTRUCTIONS					
49496	Instruction Card	1	P101992	Spigot) 45 R.P.M. adaptor	1
49495	Cabinet Label	1	P101993	Spring clip) storage clip	1
42963	Transit Label	1	8711	Screw - securing storage clip	1
CABINET			91831A	Castors	4
419901	Cabinet complete	1	1950	Transfer - Trade Mark	1
419902C	Cabinet Lid	1	40747A	Trade Mark Plate	1
22110B	Lid hinges	2	419938	" " " packing	1
9559	Screws - securing lid hinges	10	<u>NOTE</u>	For lamp and fittings see under	
419935C	Flap	1		"LAMPS & FITTINGS"	
22279	Flap hinges	2	CONTROL KNOBS AND ESCUTCHEONS		
9524	Screws - securing flap hinges	12	40171AE	Knob "VOLUME ON/OFF"	1
416733B	Handle for flap	1	40171BW	Knob "TUNING"	1
8681	Screws - securing handle	2	40171BU	Knob "TONE"	1
8681	Screws - securing handle	2	40171BV	Knob "WAVECHANGE"	1
91238	Catch fastener - in cabinet	1	11805	P.K.SCREWS - securing knobs	4
91239	Catch blade - on flap	1	32728B	Escutcheon for Volume Control	1
8651	Screws -securing fastener and blade	4	9564	Screws - securing escutcheon	3
419913B	Baffle board - silked	1	CHASSIS ASSEMBLIES		
9525	Screws - securing baffle board	4	47000AD	R.F.& I.F. Chassis assy complete	1
6110x8801	Silk only for baffle board - in bulk.	28"x 14"	200Q25M	Screws)securing	4
419725B	Radio panel	1	201502	Spring washers) chassis to cabinet	4
27590	Screws)securing	2	91813	Front channel only	1
10713	Cup washers)radio panel	2	91820D	Rear channel with panels only	1
91838B	Cabinet back	1	47031	P.K.Screws - securing channels to chassis	6
200Q20H	Screws)securing back	6	47014L	Power Push Pull output chassis complete	1
14997	Washers) to bracket	6	200Q25H	Screws)securing chassis	4
31573	Bracket - bottom }for cabinet	1	201502	Spring washers) to cabinet	4
36083	Brackets - top } back	5	91820B	Rear channel with panels only	1
2418	Screws - securing bracket to cabinet	12	91813B	Front channel with panels only	1
419929C	Motor Board	1	47031	P.K.Screws - securing channels to chassis	6
48699	Corner plates - upper }on auto-mech.	4	91822B	Push Pull chassis only with valveholders, output transformer and tags etc., less valves and electrical components	1
48701	Corner plates - lower }board	4	91827	Spacers)securing Push Pull	4
200Q42M	Screws - securing plates	8	200Q40F	Screws)chassis to power	8
46315	Corner screws)securing board	4	201804	S.P.Washers)unit chassis	8
35851	Leather washers)bush assys.	4	LAMPS AND FITTINGS		
290025K	Screws)Transit fixings	4	35412D	Lamps on chassis	3
46316	Washer) for board	4	91825A	Carrier assy for lamps	1
35851	Leather washers	4	8777	P.K.Screws -securing carrier	2
48702	Corner springs - supporting board	4	35421D	Lamps for auto-mech compartment	1
45780A	Corner plate and bush assy	4	44615A	Lampholder	1
200Q20H	Screws)securing plates to	8	91839	Bracket for lampholder	1
201302	Washers)corner brackets	8	8602	Screws - securing bracket to cabinet	2
45777	Brackets supporting above plate assys	4	91841	Window for auto-mech lamp	1
8637	Screws -securing brackets to cabinet	12			
14670	Lifting knob	1			
201402	Washer) securing knob	1			
200Q20M	Screw)	1			
48697	P.U. Head cradle	1			
9539	Screw - securing cradle	1			
CP.104186	45 R.P.M. spindle adaptor	1			

PART No.	DESCRIPTION	No. PER. INST.	PART No.	DESCRIPTION	No. PER. INST.
FUSES AND FUSE PANEL			2856	Circlips - securing pulleys	2
38825E	F1) Fuses 1.5 Amp	1	27136C	Tuning drum	1
38825E	F2)	1	13387	Screws - securing drum	2
49805E	Fuse and mains adjustment panel complete	1	37101J	Twin gang tuning capacitor	1
8777	P.K.Screws - securing panel to T2	2	46958	Rubber bushes }securing	3
91176A	Small fuse panel assy only	1	6250	Washers } gang	3
44002	Eyelet rivets - securing small panel	2	2856	Circlips }	3
37037	Terminals only	8	SWITCHES		
200068F	Terminal screws only	8	47002C	SI Wavechange switch with front two wafers only	1
VALVES AND VALVEHOLDERS ETC.			201322	Large washer for SI	1
X78	VI Frequency changer	1	93446A	Rear (3rd) wafer for SI	1
W77	V2 I.F. Amplifier	1	47016	Spacers }securing	2
DH77	V3 A.F. Amplifier, detector and AGC diodes	1	47021	Insulated washers }wafer to	4
DH77	V4 Phase splitter	1	200060Q	Screws } bracket	2
N78	V5) Push Pull output	1	200406	Nuts }	2
N78	V6)	1	201806	S.P.Washers }	2
U709	V7 H.T.Rectifier	1	47015	Bracket for rear wafer	1
41674A	Valveholder for VI-2-3-4-5&6	6	12169	P.K.Screws - securing brackets	2
39250C	Valveholder for V7	1		Part of volume control	-
59119AB	Rivets securing all holders	14	PANELS, TAGS, PLUGS, SOCKETS		
44577A	Valve screens for VI-2-& 3	3	20202A	A/E Panel on R.F. chassis	1
44578	Springs for valve screens	3	20314A	P.U. Panel on R.F. chassis	1
35786E	Valve retaining wires for V4-5-6 & 7	4	36399A	Ext. L/S Panel on power unit chassis	1
31079	Springs for retaining wires	7	20314K	A/E Panel assy complete on power unit chassis	1
37202	Lugs - securing springs secured with valveholders for V4-5-6-7	8	200041M	Screw } Earthing	1
TUNING DETAILS			200804	Locknuts }	2
91817A	Tuning Scale	1	201604	Washers } fittings	3
91816A	Scale backing plate assy	1	201804	S.P.Washers } on A/E	1
8777	P.K.Screws -securing backing plate	1	200704	Nut }	1
91815	Support strip - under R.H.edge of backing plate	1	15140	Tag }	1
8777	P.K.Screws - securing strip	2	20314A	Int. L/S panel on power unit chassis	1
91811	L.H.&R.H. angle brackets supporting backing plate	2	35430A	5 way panel (Sol) on power unit chassis	1
10606	P.K.Screws -securing brackets to chassis	4	59119GC	Rivets - securing all above panels	14
91821	Support strips	2	35429A	5 way plug (Pl)	1
8777	P.K.Screws - securing strips to chassis and angle brackets	6	3475G	Single yellow plug (small)	1
91814A	Cursor bar	1	3475B	Single black plug (small)	1
200062F	Screws }securing bar to	2	16289J	Single yellow plug (large)	1
201806	S.P.Washers }angle brackets	2	37095AA	3 way tag strip - on power unit	1
200406	Nuts }	2	200060G	Screw }securing strip	1
91829A	Pointer assy	1	200406	Nut }	1
6370x0012	Nylon drive cord	68"	201806	S.P.Washer }	1
46954	Spring for drive cord	1	37095AB	3 way tag strip - on amplifier deck	1
48772C	Reduction drive assy	1	37095LB	11 way tag strip - on amplifier deck	1
8777	P.K.Screws - securing drive to bracket	2	37095BB	4 way tag strip on R.F. chassis	1
48773	Bracket for drive assy	1	12619	P.K.Screws - securing strips	5
8777	P.K.Screws - securing bracket	2	36889A	Stand off insulator tag (large) on power unit	1
4505	Pulleys	2	200040F	Screw }	1
			201804	S.P.Washer }securing tag	1
			20334A	Stand off insulator tag (large) on R.F. chassis	1

PART No.	DESCRIPTION	No. PER. INST.
Panels, Tags, Plugs, Sockets (Continued)		
12619	P.K.Screw - securing tag	1
40029A	Stand-off insulator tags (small)	4
59007CD	Rivets - securing tags	4
36489	Earthing tag on R.F. chassis	1
10606	P.K.Screw - securing tag	1
11802	Tags for flying leads	6
91881B	3 way panel for P.U. matching	1
8602	Screws	2
36489	Tag) securing panel	1
NOTE:	For panel on mains transformer see under "FUSES"	
MATCHING UNIT		
41411BR	Matching unit complete	1
9545	Screws - securing unit	2
41425A	Can only	1
41429H	Cover assy	1
211	P.K.Screws - securing cover to can	3
34697	Insulations - bottom	2
13418	Can liner	1
41483	Insulation around components	1
NOTE:	For electrical components see under "RESISTORS" and "CAPACITORS"	
RUBBER GROMMETS, SLEEVES		
16757	Rubber grommets	2
46958	Rubber bushes for gang	3
36892A	Orange)	1
36892B	Red) rubber sleeves	1
36892D	Yellow)	1
36892G	Black)	4
CLIPS AND CLEATS		
36480	Buckle cleats	2
9545	Screws - securing cleat	2
40764A	Fibre cleats	2
9545	Screws) securing fibre cleats	2
201304	Washer)	2
38190B	Clip for Electrolytic capacitor	1
47019	Insulation strip	1
200040F	Screw) securing	1
200404	Nut) capacitor	1
201804	S.P.Washer) to clip	1
200040M	Screws)	2
201804	S.P.Washers) securing clip to	2
200404	Nuts) chassis	2
WIRES AND CABLES		
20853B	Mains lead	1
4201x2300	Mains lead - in bulk	9Ft
91854A	Cable form assy R.F. to power chassis	1
4020x2300	P.V.C.covered wire for chassis)	
To	wiring in bulk.Change last figure	
4020x2309	as per standard colour code for) As colour required) Req'd	

PART No.	DESCRIPTION	No. PER. INST.	
4120xl600	P.V.C.covered flex in bulk	) As Req'd	
To	14/.0076"colour as per wire		
4120xl609	above)	
RESISTORS (FIXED)			
37811G	R1 100 Ω	$\frac{1}{4}$ W 5%	1
33363DW	R2 22 KΩ	$\frac{1}{2}$ W 20%	1
33373V	R3 15 KΩ	1W 5%	1
37810PM	R4 12 KΩ	$\frac{1}{2}$ W 5%	1
33363EE	R5 470 KΩ	$\frac{1}{2}$ W 20%	1
33360DY	R6 47 KΩ	$\frac{1}{2}$ W 20%	1
33363EH	R7 1.5 MΩ	$\frac{1}{2}$ W 20%	1
33360DU	R8 10 KΩ	$\frac{1}{2}$ W 20%	1
37811V	R9 15 KΩ	$\frac{1}{2}$ W 5%	1
33363EA	R10 100 KΩ	$\frac{1}{2}$ W 20%	1
33363EA	R11 100 KΩ	$\frac{1}{2}$ W 20%	1
33363EN	R12 10 MΩ	$\frac{1}{2}$ W 20%	1
33360EG	R13 1 MΩ	$\frac{1}{2}$ W 20%	1
33360DN	R14 1 KΩ	$\frac{1}{2}$ W 20%	1
33360Y	R15 47 KΩ	$\frac{1}{4}$ W 5%	1
33360Y	R16 47 KΩ	$\frac{1}{4}$ W 5%	1
37870FP	R17 2 KΩ	$\frac{1}{2}$ W 6W 5%	1
33360EC	R18 220 KΩ	$\frac{1}{2}$ W 20%	1
33360EC	R19 220 KΩ	$\frac{1}{2}$ W 20%	1
33360DU	R20 10 KΩ	$\frac{1}{2}$ W 20%	1
33360DU	R21 10 KΩ	$\frac{1}{2}$ W 20%	1
37810JG	R22 120 Ω	$\frac{1}{2}$ W 5%	1
37870	R23 500 Ω	6W 5%	1
33360BY	R27 47 KΩ	$\frac{1}{2}$ W 10%	1
33360CC	R28 220 KΩ	$\frac{1}{2}$ W 10%	1
33360CE	R29 470 KΩ	$\frac{1}{2}$ W 10%	1
33360CG	R30 1 MΩ	$\frac{1}{4}$ W 10%	1
RESISTORS (VARIABLE)			
37940FN	VRI .5 MΩ "Volume" control and ON/OFF switch	1	
91819	Bracket for Volume control	1	
8777	P.I.Screws - securing brackets	2	
37940HK	VR2 50 KΩ "Tone" control	1	
CAPACITORS (FIXED)			
38050DC	C1 22 Pfs 20%	350v	1
38001J	C2 220 Pfs 5%	350v	1
38001VQ	C3 510 Pfs 2%	350v	1
38000VE	C4 180 Pfs 2%	350v	1
38001WF	C5 3900 Pfs 20%	750v	1
38004ZJ	C6 47 Pfs 2%	350v	1
38004TF	C7 100 Pfs 2%	350v	1
38117DG	C8 100 Pfs 20%	750v	1
38117DE	C9 47 Pfs 20%	750v	1
38210EA	C10 .1Mfs 20%	150v	1
38117DJ	C11 220 Pfs 20%	750v	1
38006TF	C12 100 Pfs 2%	350v	1
38006TF	C13 100 Pfs 2%	350v	1
38006TF	C14 100 Pfs 2%	350v	1
38006TF	C15 100 Pfs 2%	350v	1
38210DY	C16 .047Mfs 20%	150v	1
38210EA	C17 .1 Mfs 20%	150v	1
38117DG	C18 100 Pfs 20%	750v	1
38210DY	C20 220 Pfs 20%	750v	1
38213DS	C21 4700 Pfs 20%	750v	1

PART No.	DESCRIPTION	No. PER. INST.
Capacitors Fixed (Continued)		
38150N	(C22) (C29) (C30) 16 +32 +32 Mfd 350v Electrolytic	1
38190B	Capacitor clip	1
47019	Insulation strip	1
20004QF	Screw	1
200404	Nut	1
201804	S.P.Washer	1
200040M	Screws	2
201804	S.P.Washer	2
200404	Nuts	2
38216DW	C23 .002 Mfd 20% 350v	1
38216DU	C24 .01 Mfd 20% 350v	1
38216DW	C25 .022 Mfd 20% 350v	1
38175C	C26 30 Mfd 15v Electrolytic	1
38214F	C27 .01 Mfd 25% 1000v	1
38214F	C28 .01 Mfd 25% 1000v	1
	(C29) (C30) See C22	
38216DW	C33 .022 Mfd 20% 350v	1
38004QH	C32 120 Pfs 10% 350v	1
38004BN	C36 1000 Pfs 10% 350v	1
38004JP	C35 200 Pfs 10% 350v	1

CAPACITORS (VARIABLE)

39653	(TC1) (TC2) (TC3) 4-30 Pfs 3 Bank trimmer	1
47017	Fillar	2
200040R	Screws	2
17362	Insulating washers	2
201304	Washers	2
201804	S.P.Washers	2
200404	Nuts	2
165756	Tag	1
35480B	TC4 3-30 Pfs Trimmer	1
35480B	TC5 3-30 Pfs Trimmer	1
35480B	TC6 3-30 Pfs Trimmer	1
37101J	(VC1) (VC2) Ganged tuning capacitor	1
46958	Rubber bushes	3
6250	Washers	3
2856	Circlips	3

INDUCTORS

40970T	L1/2 S.W.Aerial coil	1
40970AL	L3/4 M.W.Aerial coil	1
40970AM	L5/6 L.W.Aerial coil	1
40970AT	L7/8 S.W. Osc coil	1
40970AJ	L9/10 M.W. Osc coil	1
40970AU	L11 L.W. Osc coil	1
46553	Dust iron cores for above coils L12/13) See 1st and 2nd L14/15) I.F.T.'s	6
46551J	IPT1 1st I.F. transformer complete	1

LOUDSPEAKER

46570Q	LOUDSPEAKER complete	1
200025H	Screws	4
201302	Washers	4

PART No.	DESCRIPTION	No. PER. INST.
46574A	Cone	1
46572B	Speech coil and spider assy	1
30503A	Tag panel assy	1
59120E	Rivet - securing panel	2
46573	Card ring	1
36862	Dust cap	1
46575	P.V.C. sleeving	1

AUTO-MECHANISM

48700A	Auto-Mech complete	1
49005	Fixing screws	4
P101781	Small washers	4
P93103	Springs	4
P93107	Cup washers	4
P93105	Large washers	4
200402	Nuts	4
	or	
53232 A	Wingnuts	4
P78266	Circlips	4

AS MODEL 1618A EXCEPT FOR THE FOLLOWING INSTRUCTIONS

49494	Instruction Card	1
49495	Cabinet Label	1
42963	Transit Label	1
49512	Warning Label	1

CABINET

419901B	Cabinet complete.	1
419762B	Baffle board - silked	1
419725C	Radio Panel	1
91838A	Cabinet Back	1
	Delete 419929C Motor Board together with all fittings and fixtures for same. All other cabinet parts as Model 1618A.	
46551J	IPT2 2nd I.F. transformer complete	1
46553	Dust iron cores for IPT. 1/2	4
13517	P.K.Screws - securing IPT.1/2	4
40435K	T1 Output transformer	1
10606	P.K.Screws - securing T1	2
49820	T2 Mains transformer complete	1
200404	Nuts	4
201304	Washers	4
201804	S.P.Washers	4

NOTE: For panel on mains transformer
see under "FUSES"

MATCHING UNIT

41411AQ	Matching unit complete	1
200060F	Screws - securing unit	2
41425A	Can only	1
41429D	Cover assy only	1
211	P.K.Screws - securing cover	2

PART No.	DESCRIPTION	No. PER. INST.	PART No.	DESCRIPTION	No. PER. INST.
Matching Unit (Continued)			WIRES AND CABLES (ADDITIONAL TO 1618A)		
34697	Insulation bottom	2	92004A	Screened lead cableform	1
13418	Insulation liner	1	LOUDSPEAKER		
41483	Insulation around components	1	4660QH	Loudspeaker complete	1
41411AT	Tag panel only	1	200005M	Screw	4
3336QBX	R51 Resistor 33K 10%	1	201300	Washers } Securing L/Speaker	4
33360CD	R52 Resistor 330K 10%	1	44117C	Cone only	1
33360CH	R53 Resistor 1.5M 10%	1	46604B	Speech coil and spider assy only	1
38211DX	C51 Capacitor .033 Mf 20%	1	19417A	Tag panel only	1
3800LBN	C52 Capacitor 1000 pf 10%	1	36862	Dust cap only	1
38000QA	C53 Capacitor 390 pf 10%	1	46575	P.V.C. Sleeve only	1
AUXILIARY PANEL ASSY. (ADDITIONAL TO 1618A)			18476	Felt strip only	1
91881C	Aux. input panel assy	1	AUTO-MECHANISM		
9559	Screws - securing assy to cabinet	2	48540L	Auto-mech complete	1
20202A	Panel only	1	46315	Chrome screws } securing auto-	1
59119CC	Rivets - securing panel to bracket	2	49998	Springs } mech to corner	4
SWITCH (ADDITIONAL TO 1618A)			46313	Cup washers } plate and bush	4
35419K	"A-B-C" switch	1	35851	Leather washers } assys	4
92000	Plate for switch	1	200025K	Screws } Transit fixings	4
8602	Screws - securing plate to cabinet	2	46316	Washers } Transit fixings	4
CONTROL KNOB (ADDITIONAL TO 1618A)			35851	Leather washers }	4
40172AF	"A-B-C" Knob	1	45780A	Corner plate and bush assy	4
11805	P.K. Screw - securing knob	1	20002QH	Screws } securing plate assys	8
CLIPS AND CLEATS			201302	Washers } to corner brackets	8
Delete 1 only buckle cleat			45777	Corner brackets - supporting above plate assy	4
39777	36480 and add Buckle cleat (long)	1	8637	Screws - securing brackets to cabinet	12
			3336QBK	R54 330 Ω ± 10%	1
			38202GN	C54 0.02 Mfd ± 20% 750v	1