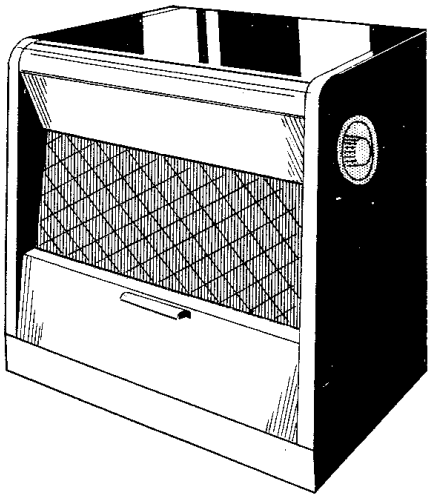
MODEL 1621

SERVICE MANUAL



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

MODEL 1621

INDEX

Part No. 95058 Issue 1 April 1956

SPECIFICATION

Model 1621

Physical

Height 29⅛ inches) Approximate
Depth 18⅛ inches) overall
Width 27¾ inches)

Mains Supply

195 - 255 volts 50 c/s A.C. only.

Consumption

Radio - 100 watts approx.
Gram - 120 watts approx.

Rated Output

7 watts maximum.

Intermediate Frequency

F.M. 10.7 Mc/s. A.M. 470 kc/s

Wave Ranges

F.M. 87.5 - 100 Mc/s
M.W. 187 - 575 metres (1604-522 kc/s)
L.W. 900 - 2000 metres(333-150 kc/s)

Scale Lamps Floodlight & Fuses

Three scale lamps 6.8V 0.3 amp.
Floodlamp 6.8V 0.3 amp.
Two Fuses - 1.5 amp (cartridge type)

Valves

V1	ECC85/B719	R.F. Amplifier and Frequency Changer(F.M.only)
V2	ECH81/X719	I.F.Amplifier (F.M.) and Frequency Changer (A.M.)
V3	EF85/W719	I.F.Amplifier (F.M. and A.M.)
V4	EABC80/DH719	Ratio Detector and A.F. Amplifier (F.M.) Signal Detector and A.F. Amplifier (A.M.)
V5	DH77	Phase Splitter
V6	N78)	Push-Pull Output Stage
V7	N78)	
V8	U709	H.T. Rectifier

Loudspeaker

13½ inch elliptical cone permanent magnet type. The speech coil has an impedance of 5 ohms at 1,000 cycles.

Auto-Mechanism

Three-speed auto-mechanism type 48540S. 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 33⅓ r.p.m. records (unmixed) and up to eight 7-inch 45 r.p.m. records.

For full information see separate service manual for Three-speed Automatic Record Changer Basic Type 48540.

Pick-Up

High impedance crystal reversible type employing replaceable styli.

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 Micro-groove Stylus for 33⅓ and 45 r.p.m. records.

Motor

Shaded pole induction type.

A.B.C. Switch and Auxiliary Sockets

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. The positions of the switch are as follows:-

* A Auxiliary input for tape, etc.
B 78 r.p.m. records.
C 33⅓ or 45 r.p.m. records.

* The Auxiliary input sockets fitted at the rear of the instrument may be used for the connection of a tape player etc, for play-back through the radio unit when the A.B.C. switch is set to position "A" and the waveband switch to position "G".

INSTALLATION

A.M. Aerial

Although the instrument will operate satisfactorily from an indoor aerial, a high outdoor aerial, 60 to 80 feet (including down-lead)is essential for the best possible reception.

F.M. Aerial

General

In the majority of cases for the best possible performance either an outdoor or indoor dipole with co-axial feeder cable should be installed.

In high signal strength and/or low interference areas, satisfactory results may be obtained by utilising a simple dipole.

This can be made from a length of twin moulded mains lead with one end opened apart so that two 2ft.6ins. arms are formed. This "T" shaped arrangement should be installed with "T" arms horizontal at right angles to the direction of the transmitter and attached to a picture rail or skirting board. Resiting and/or tilting may be necessary for best results.

In VERY high signal strength areas either the internal F.M. aerial or a 40 inch length of insulated wire may prove satisfactory.

The wire should be routed horizontally and at right angles to the direction of the transmitter. Various positions should be tried and tilting may be necessary for best results.

Local conditions may greatly affect V.H.F./F.M. reception i.e., height above sea level, type of building in which the aerial is installed, local surroundings, etc., and these must be considered on installation.

F.M. Aerial Connection

Outdoor or Indoor.

(a) When using either on outdoor or indoor dipole aerial with co-axial feeder cable, the inner lead must be soldered to the thin pin of the F.M. aerial plug and the braided screening soldered to the thick pin.

(b) When using a length of twin moulded mains lead opened apart at one end to approximately 2ft.6ins. each arm, the leads at the other end must each be soldered to a pin of the F.M. aerial plug.

(c) When using a 40 inch length of insulated lead, one end must be soldered to the thin pin of the F.M. aerial plug.

Internal

To use the internal F.M. aerial simply insert the 2 pin plug, which will be found attached to a lead at the rear of the instrument, in the F.M. AE. socket.

Earth

An earth terminal is fitted adjacent to the A.M. aerial socket and to this must be connected an efficient earth. A copper plate or rod buried about three feet deep in moist ground provides the best earth. Do not use a telephone earth, gas pipe or hot water pipe as an earth.

Transit Packing

1. Remove the four red headed screws and washers from the corners of the mechanism plate and replace with the chrome headed screws and leather washers contained in the cardboard carton attached to the floor of the cabinet.

Note The carton also contains the A.M. and F.M. aerial plugs, earth eyelets and envelopes containing the Cranked Spindle, Tampion and Adaptor Screw.

2. Remove the two split rubber washers between the pusher tube and the turntable.

3. Unscrew the red headed transit screw in the centre of the turntable and remove the chromium retaining ring. Remove the two screws securing the turntable to the pulley and lift off turntable. Remove the three red headed motor transit screws.

4. Replace the turntable and the two pulley screws. Replace the retaining ring and secure the ring in position with the Adaptor Screw.

5. Place the Cranked Spindle in the pusher tube and the Tampion in the parking position on the mechanism base plate.

Note The Tampion may be fitted in the pusher tube when it is desired to play a single record.

CIRCUIT DESCRIPTION

R.F. Amplifier and Frequency Changer (F.M.)

V1 (ECC85/B719) is a double-triode valve. One triode V1A operates as a grounded grid R.F. amplifier, the F.M. aerial being coupled to the cathode circuit via transformer L1/L2. A tuned circuit L4/VC1 fed from the anode of V1A passes the signal to the grid of the other triode section V1B. V1B section acts as a self-oscillating frequency changer, the oscillator circuit being tuned by L8/VC2.

V1B section is coupled to the control grid of V2 by the first I.F. transformer. This transformer is in two sections (A and B) the first section is mounted on the V.H.F. unit and the second section mounted on the main chassis.L6 acts as a coupling coil between the two sections.

When the receiver is switched to the Long, Medium or Gram. position, the H.T. supply to the anode of V1 is disconnected (SW1 card 2) and the F.M. output from IFT1 to the grid circuit of V2 is also disconnected. The A.M. aerial is earthed in the F.M. position.

I.F. Amplifier (F.M.) and Frequency Changer (A.M.)

V2 (ECH81/X719) a triode-heptode valve, amplifies at the intermediate frequency of 10.7 Mc/s for F.M. reception; the triode section being made inoperative by disconnecting the anode supply (SW1 card 2). For A.M. reception the valve operates as a conventional frequency changer.

I.F. Amplifier (A.M. and F.M.)

The I.F. output from V2 is coupled by IFT2 (A.M.) or IFT3 (F.M.) to V3 (EF85/W719) a pentode valve which amplifies at

the intermediate frequencies of 470 kc/s or 10.7 Mc/s. This stage is coupled to V4 via I.F. transformer IFT4 or ratio detector transformer (IFT5).

The high slope of V3 demands precautions against instability, R12, R15, C36, C37 in the anode and screen circuits of V3 form a neutralizing bridge network, the value of C36 being important. It should noted that the cathode of V3 is connected internally to pins 1 and 3. C35 should be connected to pin 3 and R14 and C43 to pin 1.

Ratio Detector (F.M.) Detector and A.G.C. Rectifier (A.M.) and A.F. Amplifier (F.M. & A.M.)

V4 (EABC80/DH719), a triple-diode triode, operates as a ratio detector and A.F. amplifier on F.M. and as a conventional detector, A.G.C. rectifier and A.F. amplifier on A.M.

The F.M. discriminator is a ratio detector of the unbalanced variety, R23 being the load resistor and C51 the stabilising capacitor.

R17 and C48 form the de-emphasis circuit (to compensate for treble boost applied at the transmitter).

The output from the ratio detector is passed via C44, R17, and SW1 Card 1, tags 12R and 1R to the top of the volume control RV1 and thence to the grid of V4 via C49.

The third diode is used for the demodulation of A.M. signals from IFT4. The volume control RV1 acts as the diode load, A.G.C. voltage is taken from the D.C.component of the rectified voltage across RV1 and applied to control the bias of valves V2 and V3 on A.M. only.

A.F. Stage

Equal and opposite voltage from V6 (DH77) are applied to the push-pull output stage consisting of V7 and V8 both N78 pentode valves. Fixed tone correction is effected by C60, C61 across the primary winding of the output transformer (TR1).

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, proceed as follows:-

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

Do not connect to 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.
Replace the back panel, insert the A.M. and F.M. aerial plugs in their sockets 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 into the supply sockets.

DISMANTLING

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

Removal of Power/Output Chassis

1. Remove the back panel.
2. Slacken screws on mains transformer panel terminals and disconnect all six leads and uncleat these leads from the floor of the cabinet.
3. Remove the two loudspeaker plugs and the five-pin plug from the front of the chassis.
4. Unplug the 2-pin A.M. aerial plug from the rear of the R.F. chassis and uncleat these leads from the cabinet.
5. Remove the four chassis securing screws and withdraw chassis.

Removal of R.F. Chassis

1. Remove the four control knobs from the control panel and the volume control knob from the side of the cabinet.
2. Remove the two woodscrews securing the top panel and lift out the panel.
3. Unplug the three 2-pin plugs from the side of the chassis and the 5-pin plug from the rear of the power chassis.
4. Remove the two securing screws holding the chassis and lift the chassis out.

Removal of V.H.F. Unit

1. Remove the screen (4 screws) surrounding the unit.

Note: A right angled screwdriver is necessary to remove the two front screws.

2. Unsolder the three braided screen leads from the gang capacitor.
3. Unsolder C5 and C15 from VC1 and VC2 respectively.
4. Unsolder screen lead from L6 at TP2 tags 1 and 2 (screening to tag 2).

5. Unsolder brown lead from L26 in the V.H.F. Unit.

6. Unsolder red lead from tag 6R S.W.1 card 2 (H.T. lead).

7. Unsolder the earthing tag connecting the centre screen or shield in the V.H.F., unit to the chassis.

8. Unsolder the screen lead at the F.M. aerial socket.

9. Remove the three securing screws from the top of the unit and withdraw unit.

NOTE: The routing of the wires should be noted.

F.M. AND A.M. ALIGNMENT

Important Note:- Distortion can result from misalignment, especially in the discriminator transformer. When distortion is thought to be due to misalignment, the I.F. stages should be checked for symmetrical response of the band-width, but care should be taken first to ensure that the fault does not lie in the A.F. stages.

General

Before commencing re-alignment always allow approximately 10 minutes warming up period. Screen leads must always be used for connecting the test equipment.
If it is found that the cores in the R.F. and I.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 cores will prevent the oil from spreading. If, on the other hand, the cores are excessively free a length of cotton thread can be screwed into the former with the cores to prevent any movement after adjustment.

When the F.M. I.F. circuits have been aligned, it is recommended that small strips of adhesive tape be placed over the top and bottom of the F.M. I.F. transformers. This will eliminate the possibility of misadjustment when re-aligning the A.M.I.F. circuits.

Neosid dust cores are used in coils L4 and L7/8 and it is important that the correct type of core (see Parts List) is inserted in the appropriate formers.

I.F. and Ratio Detector Alignment (F.M.)

Apparatus Required

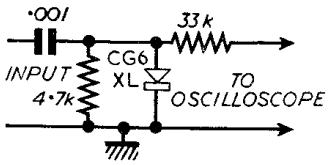
Oscilloscope. Sensitivity 1 cm for an input of .1 volt. wide frequency band amplifier.
Sweep Generator. 10.7 Mc/s ± 300 kc/s Deviation.

Operation

1. Screw out core of L24 (IFT4) until it is just protruding from the former.

2. Screw in core of L23 (IFT4) about 10 turns.

3. Set Volume and Tone control max. clockwise.



4. Connect oscilloscope (with gain at maximum) to test point "B" via a suitable diode probe as illustrated above.

5. Inject 10.7 Mc/s deviated ± 300 kc/s into the grid of V2 (pin 2).

6. Adjust L19 and L20 (IFT2) until double humped response curve similar to Fig.1 is obtained. Separation between the two peaks should be approximately 300 kc/s.

Note: - An accurate marker pip at 10.7 Mc/s should be injected at the appropriate sweep generator terminals.

7. Screw out core of L23 (IFT4) until a waveform (similar to Fig.2) which is symmetrical around 10.7 Mc/s is obtained.

8. Transfer oscilloscope to C55/R24 junction (on tag panel underneath chassis).

9. Screw in core of L24 until a waveform (similar to Fig.3) which is symmetrical around 10.7 Mc/s is obtained.

   Note: L23 (operation 8) may need slight re-adjustment.

10. Connect sweep generator to test point "A" and set the gang capacitor to maximum (plates engaged). The input may have to be increased at this point. Return oscilloscope to diode probe.

11. Adjust L16 (IFT1 (b)) to give symmetrical response similar to Fig.4. This should be not less than 180 kc/s wide 3 dbs down.

Note:- On certain models a core may be found inserted into coils L5/L6 (IFT1(a)). This core is set in position when the model leaves the factory and must not be disturbed.

R.F. Alignment (F.M.)

Apparatus Required

F.M. Signal Generator

Microammeter (0-500 μA).

Output Meter 0 - 10 volts.

Operation

1. Connect output meter across loudspeaker terminals or across a 5 ohm dummy load in place of speaker, if required.
2. Unsolder earth end of resistor R4 which is accessible through cut-out in screening can on the V.H.F. unit(chassis topside view) and insert microammeter 0-500 μA in series with R4 to chassis (chassis positive).
3. Set gang capacitor to maximum (plates fully engaged), volume control fully clockwise and tone control fully clockwise.
4. Adjust TC1 until shorting test point A produces minimum change in microammeter reading.
5. Inject 87.5 Mc/s ± 15 kc/s deviation into the F.M. aerial sockets (larger socket earthy) and adjust L8 and L4 in that order for maximum output.
6. Set gang capacitor to minimum (plates fully disengaged) and tune in generator which should be approximately within ± ¼ Mc/s of 100 Mc/s.
7. Set generator to 94.5 Mc/s ± 15 kc/s deviation, tune in receiver and re-peak L4.
8. Repeat operations 4,5,6 and 7.

I.F. Alignment (A.M.)

1. Set waveband switch to M.W., the gang capacitor to minimum (plates disengaged) and the volume and tone controls fully clockwise.
2. Connect output meter across the loudspeaker terminals or across a 5 ohms dummy load resistor in place of speaker.
3. Inject a modulated signal of 470 kc/s into the control grid (pin 2) of V2 (ECH81).
4. Adjust cores of L22, L21, L18, L17 in that order for maximum output.

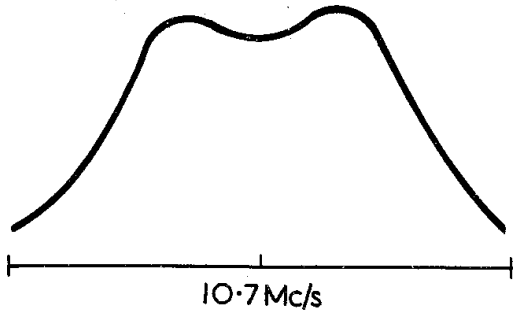


FIG 1.

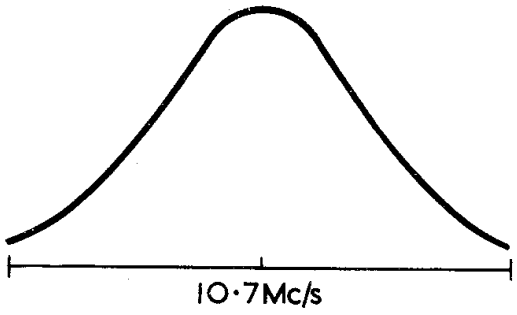


FIG 2.

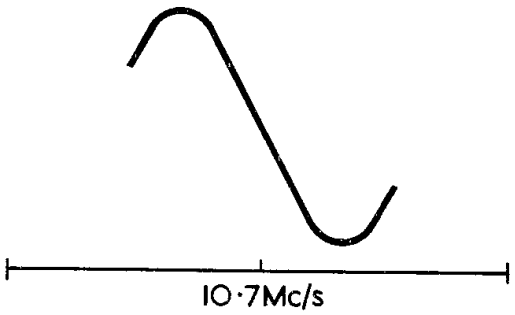


FIG 3.

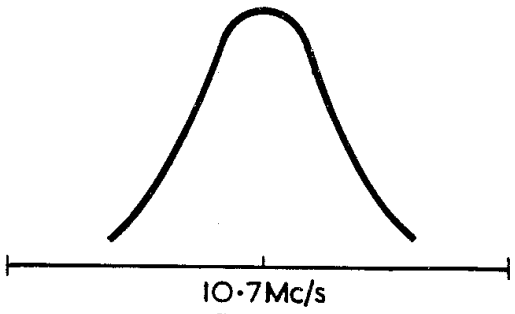


FIG 4.

R.F. Alignment (A.M.)

Medium Wave

Inject signal into A.M. aerial and earth sockets via a suitable medium wave dummy aerial. Set wavechange switch to M.W. and volume and tone controls fully clockwise.

Op.No.	Set Gang	Set Generator kc/s	Operation
1	Max.	522	Adjust L10 for max. output.
2	Min.	1602	Adjust TC3 for max. output.
3			Repeat operations 1 and 2.
4	Tune in	588	Adjust L13 for max. output.
5	Tune in	1427	Adjust TC4 for max. output.
6			Repeat operations 4 and 5.

Long Wave

Controls as before but with wavechange switch to L.W. Long Wave dummy aerial to be used.

Op.No.	Set Gang	Set Generator kc/s	Operation
1	Max.	150	Adjust L11 for max. output.
2	Min.	333	Adjust TC2 for max. output.
3			Repeat operations 1 and 2.
4	Tune in	162	Adjust L15 for max. output.
5	Tune in	300	Adjust TC5 for max. output.
6			Repeat operations 4 and 5.

CALIBRATION

Replace the chassis in the cabinet and check calibration at about the centre of the tuning scale on a station of known wavelength. Adjust pointer to give best compromise on all wavebands if necessary.

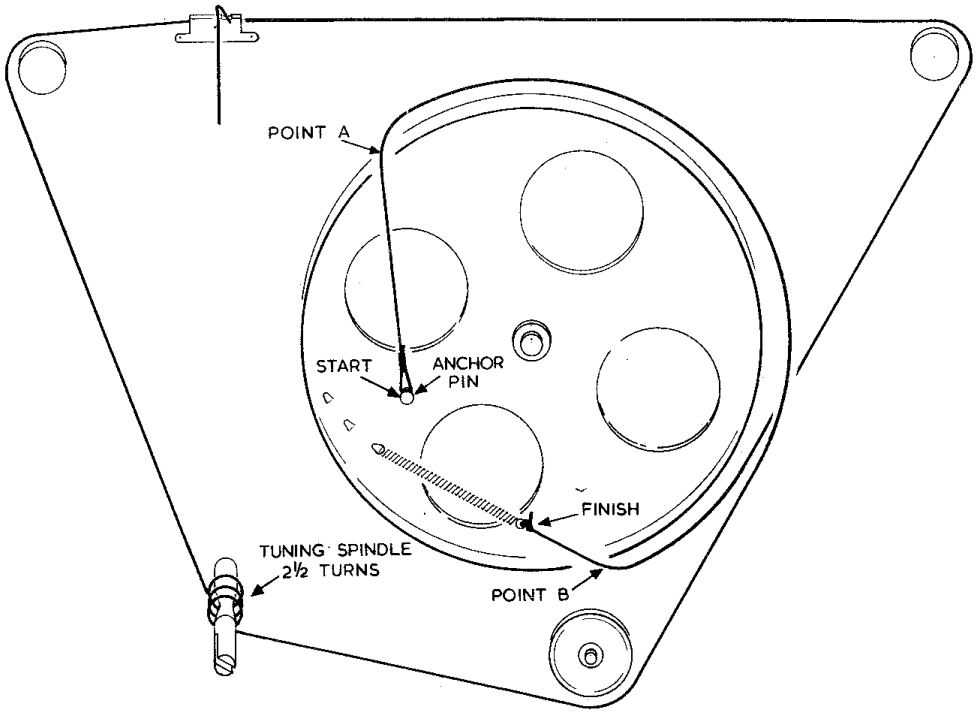
CAPACITOR AND POINTER DRIVE

Use only the specified nylon cord 6370x0012, approximately 80 inches of cord is used.

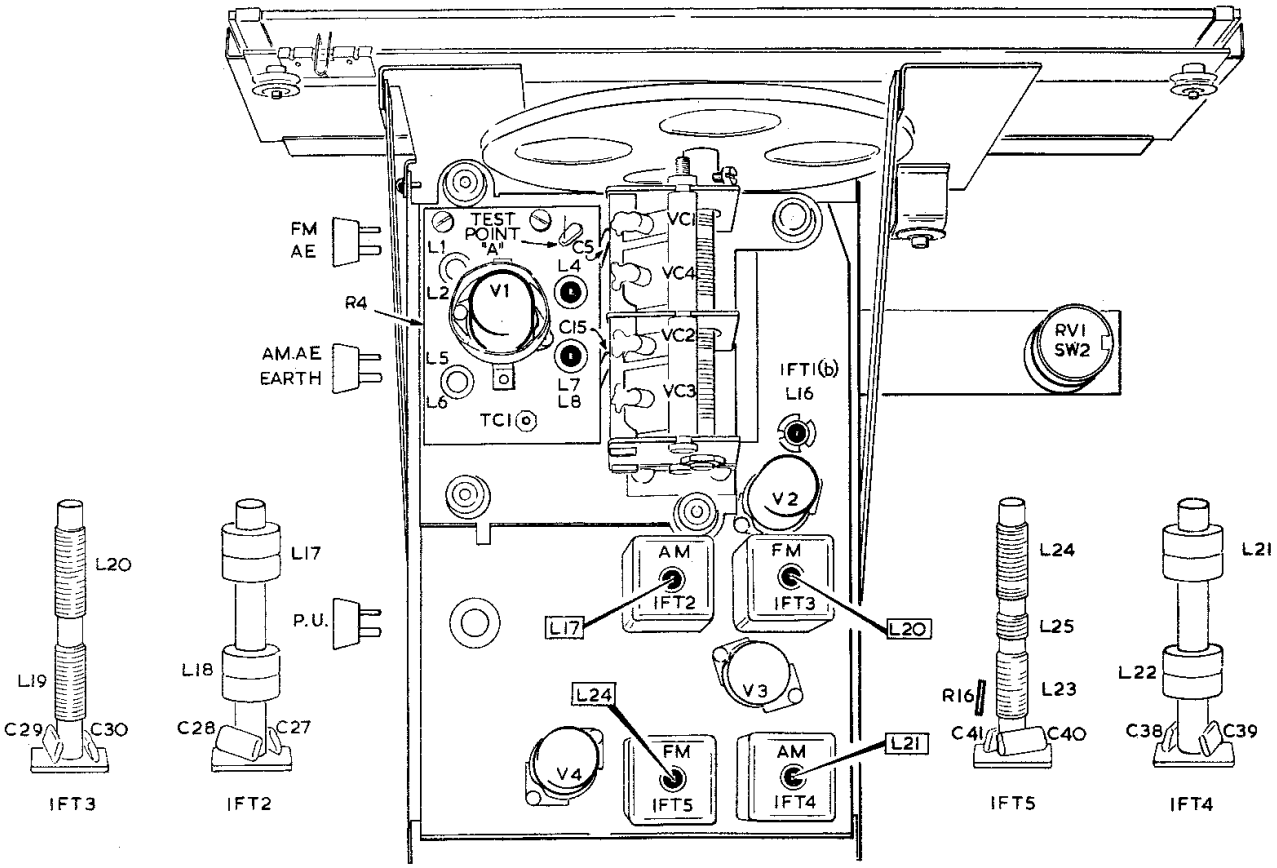
To replace cord proceed as follows:-

1. Slide the scale sideways until it disengages from the clips.
2. Remove the four P.K.screws securing the flock sprayed scale backing plate and lift out the plate.
3. Form a loop at one end of the cord and attach the loop to the anchor pin.
4. Pass the cord through the hole "Point A" in the periphery of the drum and wind the cord round the pulleys and drive spindle as shown in the illustration.
5. Pass the cord through the other hole "Point B" in the periphery of the drum and attach the cord to one end of the tension spring.
6. Connect the free end of the tension spring to the first tag on the drum.

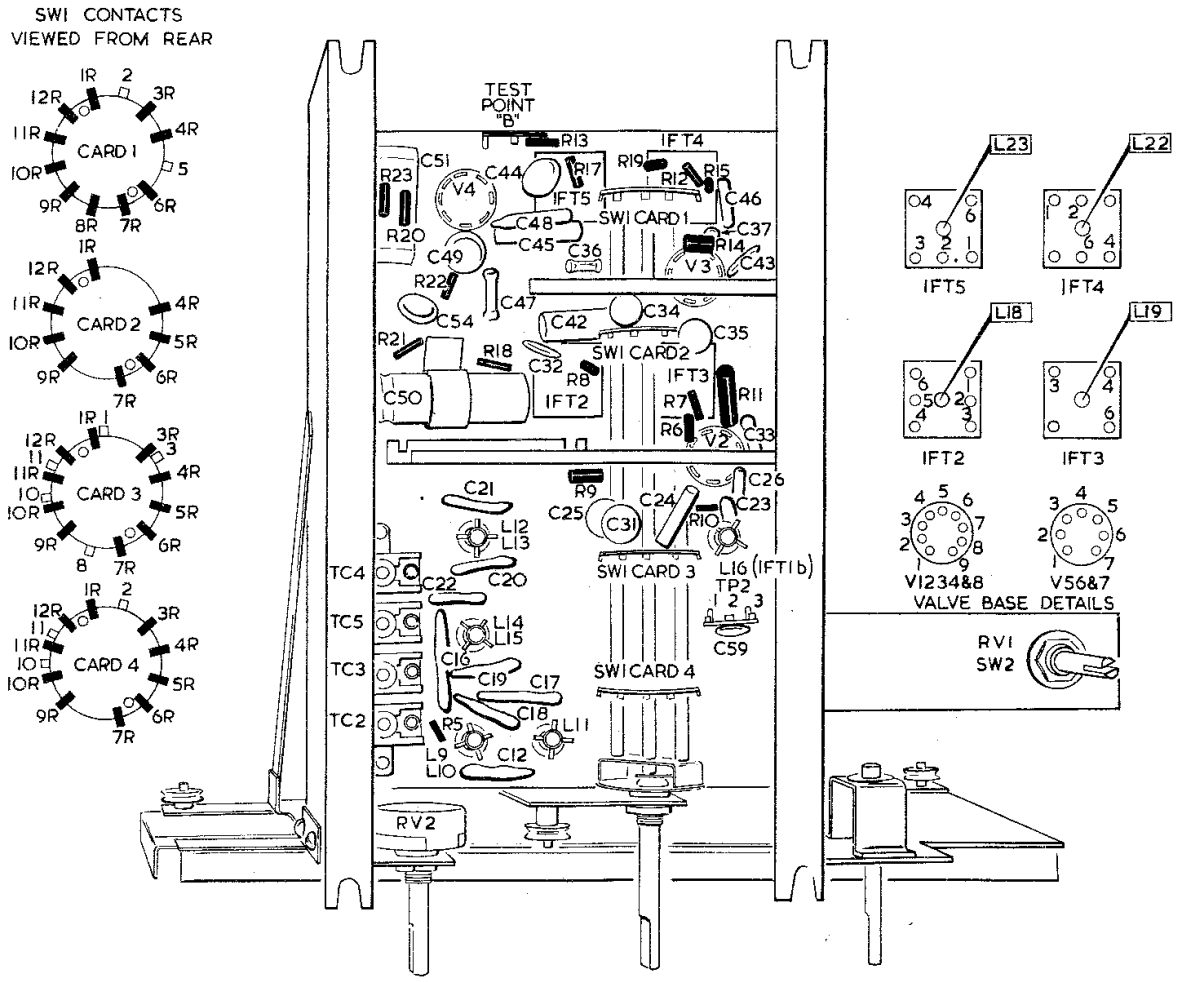
   Secure all knots with shellac.



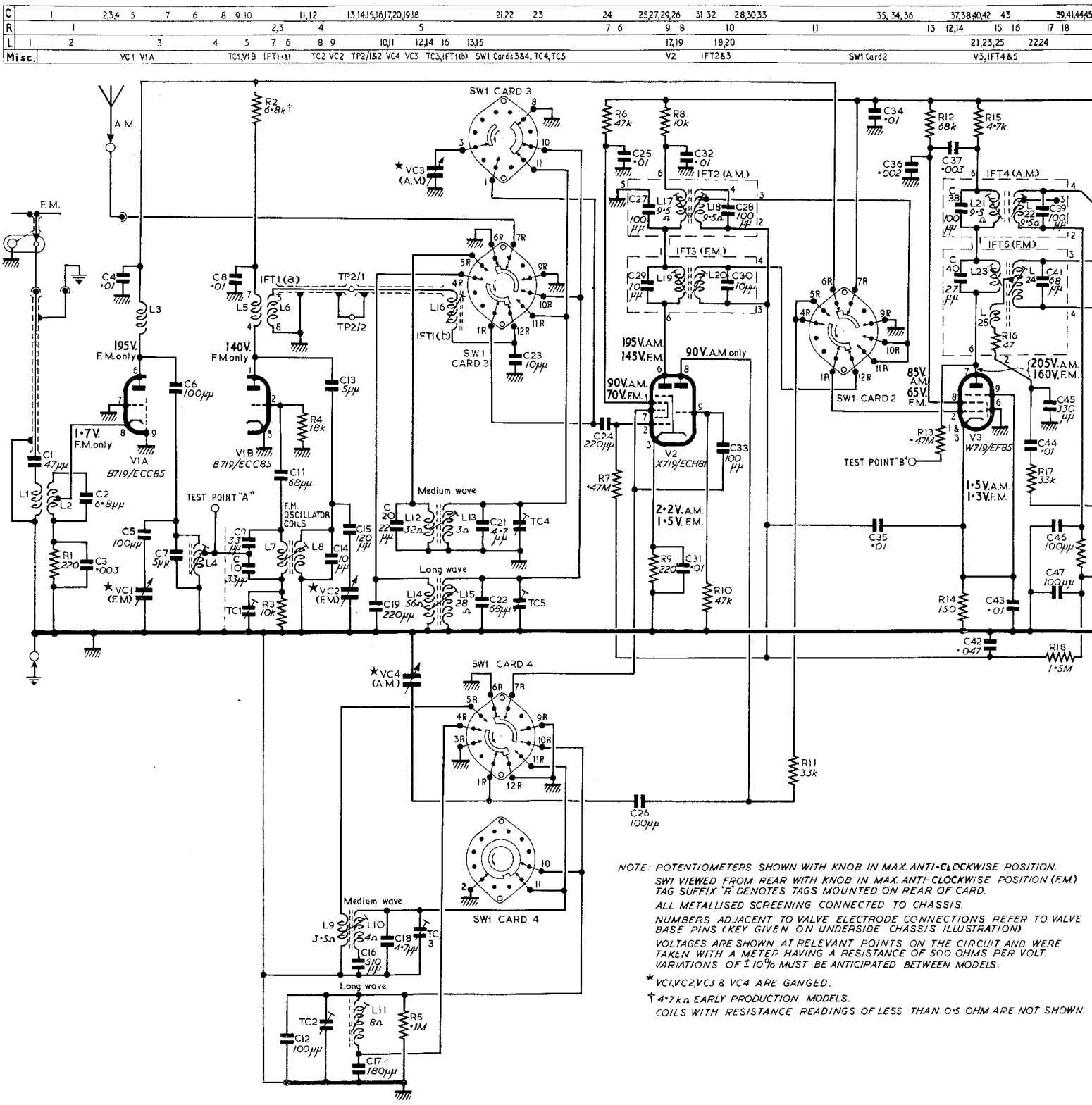
CORD DRIVE



TOPSIDE R.F. CHASSIS VIEW



UNDERSIDE R.F. CHASSIS VIEW



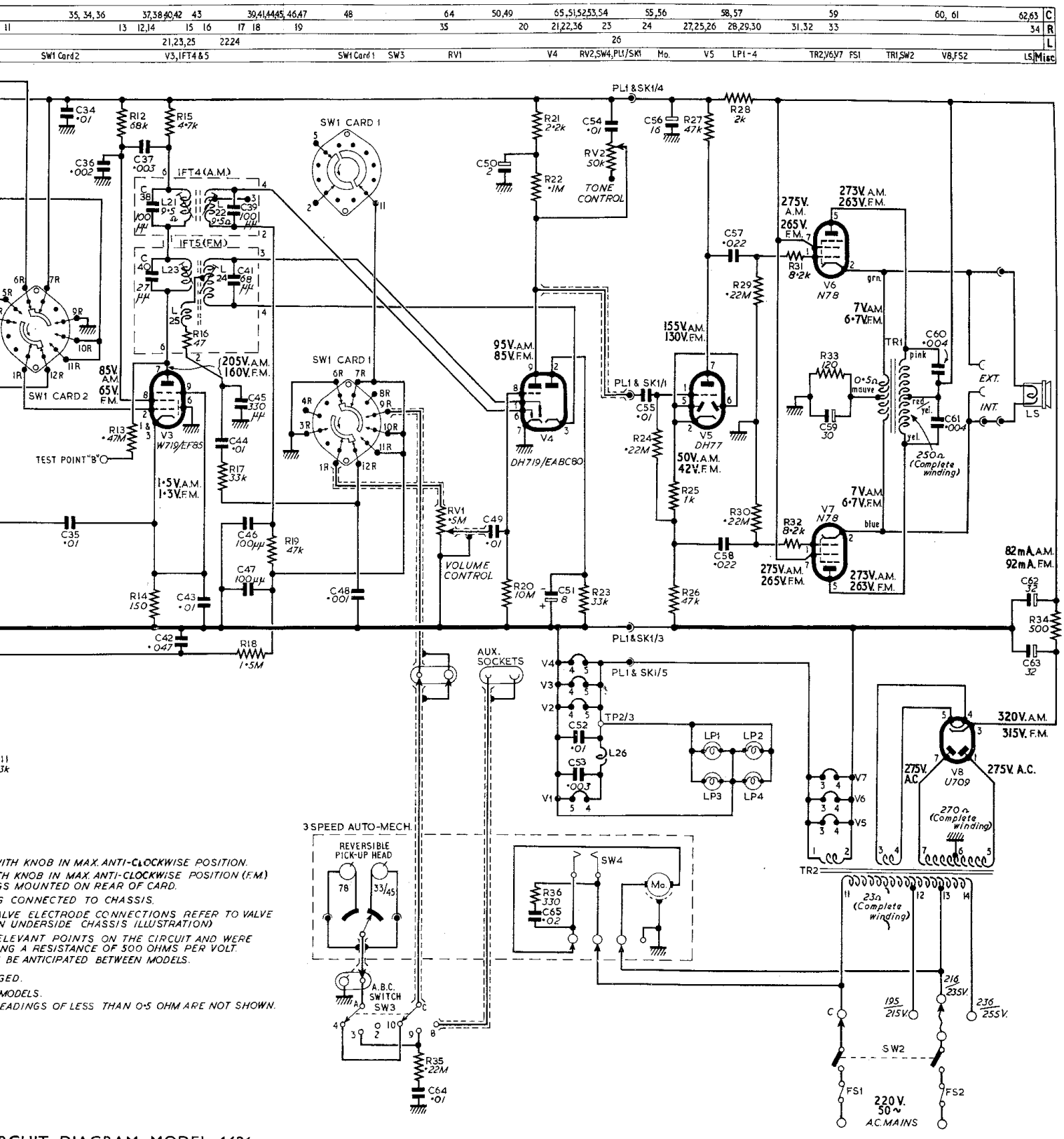
NOTE: POTENTIOMETERS SHOWN WITH KNOB IN MAX. ANTI-CLOCKWISE POSITION.
SW1 VIEWED FROM REAR WITH KNOB IN MAX. ANTI-CLOCKWISE POSITION (F.M.)
TAG SUFFIX 'R' DENOTES TAGS MOUNTED ON REAR OF CARD.
ALL METALLISED SCREENING CONNECTED TO CHASSIS.
NUMBERS ADJACENT TO VALVE ELECTRODE CONNECTIONS REFER TO VALVE BASE PINS (KEY GIVEN ON UNDERSIDE CHASSIS ILLUSTRATION)
VOLTAGES ARE SHOWN AT RELEVANT POINTS ON THE CIRCUIT AND WERE TAKEN WITH A METER HAVING A RESISTANCE OF 500 OHMS PER VOLT. VARIATIONS OF ±10% MUST BE ANTICIPATED BETWEEN MODELS.

★ VC1, VC2, VC3 & VC4 ARE GANGED.

† 4·7kΩ EARLY PRODUCTION MODELS.

COILS WITH RESISTANCE READINGS OF LESS THAN 0·5 OHM ARE NOT SHOWN.

CIRCUIT DIAGRAM MODEL 1621



RCUIT DIAGRAM MODEL 1621

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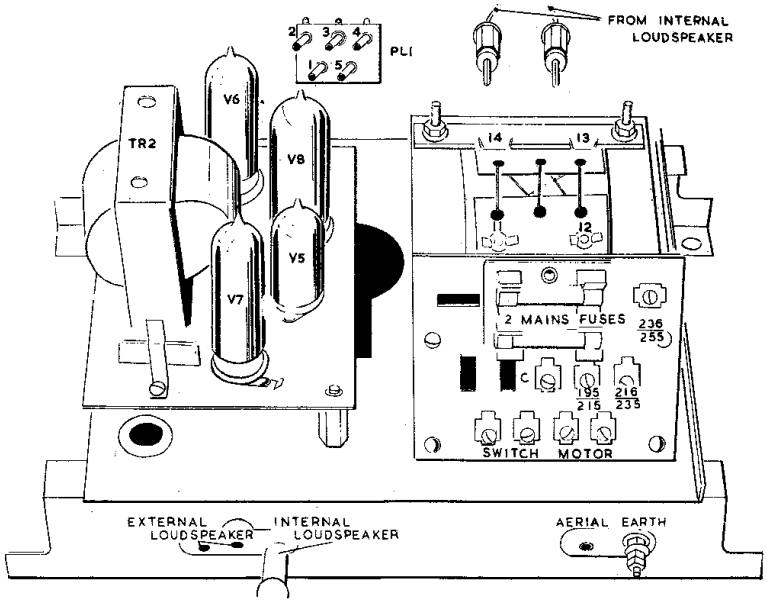
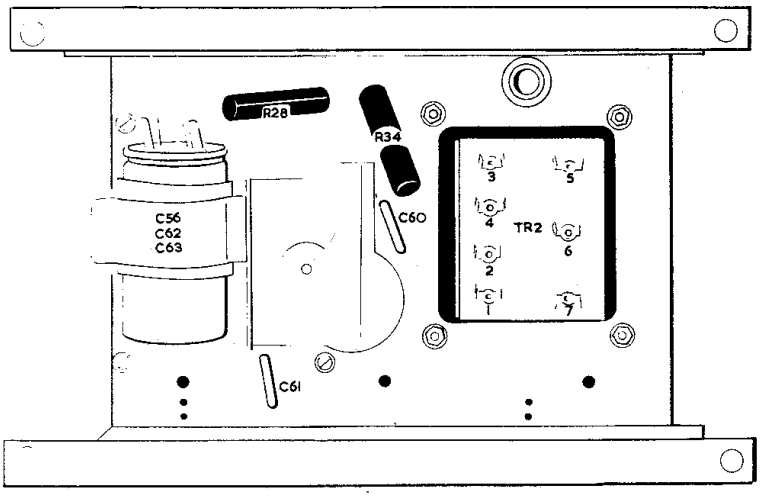
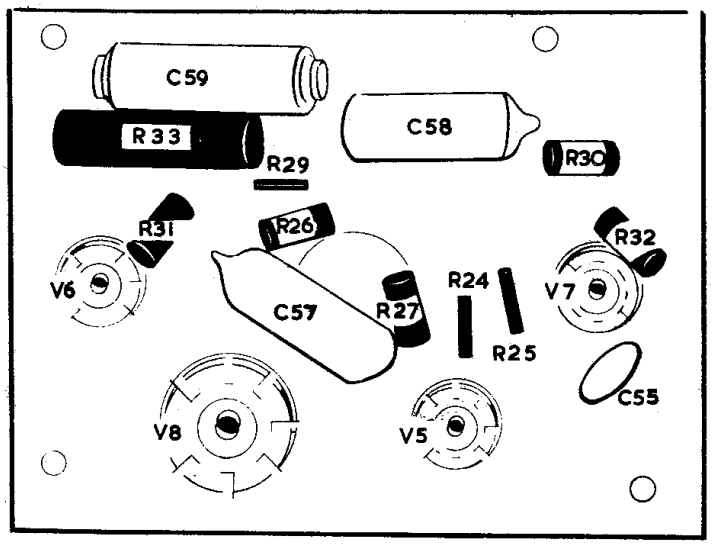


POWER/AMPLIFIER CHASSIS TOPSIDE VIEW



UNDERSIDE POWER CHASSIS VIEW



UNDERSIDE SUB-CHASSIS VIEW

SPARE PARTS LIST

Resistors

REF.	DESCRIPTION		PART No.
R1	220 Ω	¼w 20%	33362DJ
R2	6.8 kΩ	¼w 10%	33362BT
R3	10 kΩ	¼w 20%	33362DU
R4	18 kΩ	¼w 20%	33362DL
R5	100 kΩ	¼w 20%	33362EA
R6	47 kΩ	¼w 10%	33362BY
R7	470 kΩ	¼w 20%	33362EE
R8	10 kΩ	¼w 20%	33362DU
R9	220 Ω	¼w 10%	33360BJ
R10	47 kΩ	¼w 20%	33362DY
R11	33 kΩ	¼w 20%	33363DX
R12	68 kΩ	¼w 10%	33362BZ
R13	470 kΩ	¼w 20%	33362EE
R14	150 Ω	¼w 10%	33360BH
R15	4.7 kΩ	¼w 20%	33362DS
R16	47 Ω	¼w 20%	37802DE
R17	33 kΩ	¼w 20%	33362DX
R18	1.5 MΩ	¼w 20%	33362EH
R19	47 kΩ	¼w 20%	33362BY
R20	10 MΩ	¼w 20%	33362EN
R21	2.2 kΩ	¼w 20%	33362DQ
R22	100 kΩ	¼w 20%	33362EA
R23	33 kΩ	¼w 20%	33362DX
R24	220 kΩ	¼w 20%	33360EC
R25	1000 Ω	¼w 20%	33360DN
R26	47 kΩ	¼w 5%	33360Y
R27	47 kΩ	¼w 5%	33360Y
R28	2000 Ω	¼w 5%	37870FP
R29	220 kΩ	¼w 20%	33360EC
R30	220 kΩ	¼w 20%	33360EC
R31	10 kΩ	¼w 20%	33360DU
R32	10 kΩ	¼w 20%	33360DU
R33	120 Ω	5%	37810JG
R34	500 Ω	5%	37870EZ
RV1	.5 MΩ Volume		37940FN
RV2	50 kΩ Tone		37940HJ

Capacitors

REF.	DESCRIPTION		PART No.
C1	47 μμF	± 20% 750v	38117DE
C2	6.8 μμF	± 10% 750v	38117XZ
C3	3000 μμF	- 20%+ 80% 500v	38125A
C4	.01 μF	- 20%+ 80% 500v	38109B
C5	100 μμF	± 20% 750v	38117DG
C6	100 μμF	± 2% 750v	38117TF
C7	5 μμF	± 20% 750v	38116LX
C8	.01 μF	- 20%+ 80% 500v	38109B
C9	33 μμF	± 5% 750v	38126B
C10	33 μμF	± 5% 750v	38126B
C11	68 μμF	± 20% 750v	38117DF
C12	100 μμF	± 20% 750v	38117TF
C13	5 μμF	± 20% 750v	38116LX
C14	10 μμF	± 5% 350v	38006BA
C15	120 μμF	± 2% 750v	38117TH
C16	510 μμF	± 2% 350v	38001VQ
C17	180 μμF	± 2% 350v	38001VE
C18	4.7 μF	± IPF 350v	38004ABY
C19	220 μμF	± 10% 350v	38117DJ
C20	22 μμF	± 10% 350v	38004BC
C21	4.7 μμF	± IPF 350v	38004ABY
C22	68 μμF	± 5% 350v	38004F
C23	10 μμF	± 5% 350v	38006BA
C24	220 μμF	± 20% 750v	38117DJ
C25	.01 μF	- 20%+ 80% 500v	38109B
C26	100 μμF	± 2% 350v	38004TF
C27	100 μμF	)	
C28	100 μμF	)	SEE IFT2
C29	10 μμF	)	
C30	10 μμF	)	SEE IFT3
C31	.01 μF	- 20%+ 80% 500v	38109B
C32	.01 μF	- 20%+ 80% 500v	38109B
C33	100 μμF	± 20% 750v	38117DG
C34	.01 μF	- 20%+ 80% 500v	38109B
C35	.01 μF	- 20%+ 80% 500v	38109B
C36	.002 μF	± 20% 350v	38122A
C37	.003 μF	- 20%+ 80% 300v	38125A
C38	100 μμF	)	
C39	100 μμF	)	See IFT4
C40	27 μμF	)	
C41	68 μμF	)	See IFT5
C42	.047 μF	± 20% 150v	38201DY
C43	.01 μF	- 20%+ 80% 500v	38109B
C44	.01 μF	- 20%+ 80% 500v	38109B
C45	330 μμF	± 20% 750v	38117DK
C46	100 μμF	± 20% 750v	38117DG
C47	100 μμF	± 20% 750v	38117DG
C48	.001 μF	± 20% 350v	38216DN
C49	.01 μF	- 20%+ 80% 500v	38109B
C50	2.0 μF	350v	38153A
C51	8.0 μF	200v	38199A
C52	.01 μF	- 20%+ 80% 500v	38109B
C53	.003 μF	- 20%+ 80% 300v	38125A
C54	.01 μF	- 20%+ 80% 500v	38109B
C55	.01 μF	- 20%+ 80% 500v	38109B
C56	16 μF	350v	38150N
C57	.022 μF	± 20% 350v	38216DW
C58	.022 μF	± 2% 350v	38216DW
C59	30 μF	15v	38175C
C60	.004 μF	± 20% 350v	38122C
C61	.004 μF	± 20% 350v	38122C
C62	32 μF	350v)	
C63	32 μF	350v)	SEE C56
TC1	3 - 30 μμF		35480B
TC2	4 - 30 μμF	)	
TC3	4 - 30 μμF	)	39603A
TC4	4 - 30 μμF	)	
TC5	4 - 30 μμF	)	

Inductors

REF.	DESCRIPTION	PART No.
L1) L2)	F.M. AE Coil	46810AN
L3	Anode Choke	40981Y
L4	H.F. Coil	46810AL
L5) L6)		See IFT1
L7) L8)	F.M. Osc.Coil	46810AM
L9) L10)	M.W.Osc.Coil	40970AJ
L11	L.W. Osc.Coil	40970AU

REF.	DESCRIPTION	PART No.
Inductors (Continued)		
L12)	M.W. Aerial Coil	40970AL
L13)		
L14)		
L15)	L.W. Aerial Coil	40970AM
L16	I.F. Coupling Coil	40970CC
L17)		
L18)		See IFT2
L19)		
L20)		SEE IFT3
L21)		
L22)		SEE IFT4.
L23)		
L24)		
L25)		SEE IFT5
L26	Heater Choke	92805H

REF.	DESCRIPTION	PART NO.
Transformers		
IFT1	F.M.	46810AQ
IFT2	A.M.	46551AG
IFT3	F.M.	46551AK
IFT4	A.M.	46551AG
IFT5	Ratio Detector	46651AM
TR1	Output Transformer	40435K
TR2	Mains Transformer	92890D
Fuses and Lamps		
Fuses	1.5 amp	38825E
Lamps	6.8v 3 amp	35421D

MODIFICATIONS & LATEST INFORMATION

1. In the event of the V.H.F. Unit needing replacement, it should be noted that these are pre-aligned at the factory. The following adjustments only will, therefore, be necessary after fitting the new Unit.

   (1) The pointer should be set to the frequency of the local 'Home Service' transmissions.

   (2) Adjust L7/8 for maximum output of the 'Home Service' programme.

   (3) Adjust L4 for maximum output.

   (4) Finally, ensuring beforehand that the station is accurately tuned in, adjust L16 slightly for maximum output if necessary.

2. In cases where re-alignment becomes necessary and calibration at 100 Mc/s is outside limits (± 250 kc/s) the 'tuning wire' accessible through hole in screening can, should be adjusted in conjunction with L7/9 at 88 Mc/s.