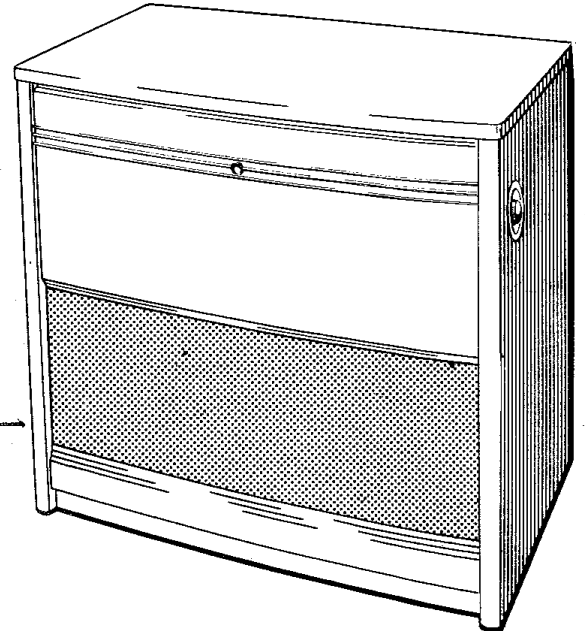


MODEL 1627



SERVICE MANUAL

**8 VALVE A.M.-F.M. CONSOLE
4-SPEED AUTO-RADIOGRAM
FOR A.C. MAINS**



MODEL 1627

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SPECIFICATION

Physical

Height 29 $\frac{1}{4}$ inches } Approx.
Width 18 $\frac{1}{4}$ inches } Overall.
Depth 31 inches }

Mains Supply

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

Consumption

Radio 60 watts.
Gram 80 watts.

Rated Output

8 watts approx.

Intermediate Frequency

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

Wave Ranges

L.W. 900-2,000 metres (333-150 kc/s)
M.W. 187-575 metres (1604-522 kc/s)
F.M. 87.5-100 Mc/s

Scale Lamps

Two 6.8 volt 0.3 amp. Tubular Scale Lamps
One 6.8 volt 0.3 amp. Combined Flood Light
and Front Indicator Lamp.

Fuses

Two Mains Fuses 1.5 amp. Cartridge Type.

Valves

V1 ECC85 F.M. and R.F. Amplifier/
Frequency Changer.
V2 ECH81 Frequency Changer
V3 EF85 I.F. Amplifier
V4 EABC80 Detector and A.G.C. Rectifier
(A.M.) Ratio Detector (F.M.)
V5 ECC83 Paraphase Amplifier

V6 EL84) Push-pull Output
V7 EL84)
V8 EZ81 Full-Wave H.T. Rectifier

Loudspeakers

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

External Loudspeaker

Provision is made for an external loudspeaker
with a speech coil impedance of approximately
5 Ω and the sockets are so arranged that
either internal or external loudspeakers may
be selected together or individually.

Auto-Mechanism

Four speed auto-mechanism Basic Type 95572.
For full information, see separate Service
Manual (Part No. 96414).

Pick-Up

High impedance Crystal Reversible Styli.
Type HGP37/1C.

Styli

Type SE-1 for 78 r.p.m. records.
Type SE-2 for 45, 33 $\frac{1}{3}$ and 16 $\frac{2}{3}$ r.p.m.
records.

High impedance Crystal Reversible Styli Type
"Studio 0".

Styli

Type N5304N Standard for 78 r.p.m. records.
Type N5304L Microgroove for 45, 33 $\frac{1}{3}$ and
16 $\frac{2}{3}$ records.

Motor

Shaded pole induction type.

INSTALLATION

Transit Packing

Remove the tape securing the record steady
and pick-up arm.
Remove the four red transit screws with the
metal and leather washers from the corners
of the mechanism plate.

This allows the auto-mechanism to float on
its spring mountings.
From the bag tied to the inside of the

cardboard back, remove the envelope con-
taining the four large headed screws with
leather washers and fit one each in the
holes from which the transit screws were
removed.

From another envelope, remove the small
plated adaptor screw and fit as directed
on the envelope.
Finally fit the crooked extension spindle
from the other envelope into the turntable
centre spindle.

Mains Supply

The receiver may be adjusted to operate on A.C. main supplies of 195-215, 216-235, and 236-255 volts at 50 cycles only. To adjust the mains input disconnect the instrument from the mains and proceed as follows--

- (A) Remove the cardboard back (5 screws).
- (B) Connect the voltage adjustment lead to the terminal with markings which includes the voltage of the mains supply.

A.M. Aerial

This instrument is fitted with a Ferrite Rod Aerial for the reception of a selection of stations in the medium and long wavebands. In difficult reception areas an external aerial is essential to obtain the maximum sensitivity from this receiver. The aerial should be fitted with a lightning arrester or switch and well insulated from grounded objects.

F.M. Aerial

General - In the majority of cases for the best possible performance from this instrument either an indoor or outdoor dipole or multi-array with a co-axial feeder should be installed, depending upon reflected signal interference if received.

In areas of very high signal strength satisfactory results may be obtained by utilizing a simple dipole. This can be made from a twin length of moulded mains lead, with one end opened apart so that 2-foot 6-inch lengths are formed. This T-shaped arrangement must be fixed horizontally at right angles to the direction of the transmitter. Local conditions greatly affect VHF/FM reception. Local screening and height of aerial also affects reception. Reflected signal interference can in some cases cause distortion.

Earth

An earth terminal is fitted adjacent to the aerial socket, at the rear of the instrument. This should be connected to an efficient earth. A copper plate or rod buried 3-feet in moist ground provides the best earth. Do not use a gas pipe, a telephone earth or hot water pipe as an earth.

Final Connections and Checks

Connect a suitable plug to the mains lead. Ensure that the loudspeaker plug is in the internal position. Ensure that the two fuses are in their clips.

DISMANTLING

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

Removal of Power Output Chassis

1. Remove the cardboard back panel.
2. Slacken screws on the mains transformer panel terminals and disconnect the leads (6).
3. Remove the two loudspeaker plugs, the five-pin cable connecting plug, the aerial and earth plugs from the R.F. chassis and the flood lamp from its bracket on the cabinet front. (As it is a little difficult to replace the flood lights without removal of the top cover panel, it is advisable to remove the panel on all occasions when access to the flood light is necessary. It is retained in position by means of 8 instrument headed wood screws).
4. Unplug aerial and earth leads, pick-up leads and F.M. feeder plug from the R.F. chassis.

5. Remove the four securing screws and withdraw chassis.

Removal of R.F. Chassis

1. Remove the top control knobs and the side control knob.
2. Remove the two wood screws securing top panel and lift out panel.
3. Unplug the aerial and earth, pick-up leads and the F.M. feeder from the R.F. chassis.
4. Remove the four screws securing the chassis. lift off and withdraw chassis.

Auto-Mechanism

1. Disconnect supply leads from motor panel.
2. Remove P.U. plug from Aux/Gram switch panel.
3. Remove four fixing screws at each corner on top of auto-mechanism.
4. Lift out auto-mechanism.

ALIGNMENT

F.M. ALIGNMENT

Important Note - Distortion can result from mis-alignment, especially in the discriminator transformer.

General

When distortion is thought to be due to mis-alignment, 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.

Before commencing re-alignment always allow approximately 10 minutes warming up period. Screen leads must always be used for connecting 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 careful application of one or two drops of high penetrating oil. The use of a small pointed brush 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 strips of adhesive tape be placed over the top and bottom of the F.M. I.F. transformers. This will eliminate the possibility of unintentional mis-adjustment when re-aligning the A.M. I.F. circuits.

The cores of L4 and L5/6 in the printed circuit R.F. head should not need adjustment and it is advisable to avoid moving the cores unless it is known that alignment of the R.F. head unit is required. The cores must be carefully eased to avoid damage to the screw thread in the printed panel.

Two methods of alignment are possible. One is to use the sweep generator method, which should be used whenever possible; the alternative spot frequency method is also given as a standby in cases where the necessary equipment is not readily available

Sweep Generator Method

Equipment Required

Sweep generator (wobbulator) 10.2 - 11.2 Mc/s sweep.
Oscilloscope of 50 mV sensitivity.
F.M. signal generator.
A.C. volt meter 0-5V.
Diode probe as illustrated in Fig.7.

Procedure

Set oscilloscope sweep period to 5 micro-seconds. Set volume control at minimum and tone control at maximum top except for operation No.3. All cores to be in their outer positions. Set gang to approximately half

capacity and de-tune L20 by screwing in core approximately 15 turns from position when top of core is flush with the base of the former.

1. Connect probe to anode of V3 (pin.7). Inject sweep generator into V2 grid pin 2 and adjust L14 and L15 for double humped curve as in Fig.1, symmetrically displaced about 10.7 Mc/s. Adjust input as necessary.
2. Transfer diode probe to test point 'B' This is a boot tag attached to R17 (.47 M Ω) the other end of which is connected to V3 pin 7, and adjust L20 for curve to peak at 10.7 Mc/s as in Fig.2.
3. Reduce sensitivity of oscilloscope by about 40 dB and connect input of oscilloscope to junction R29 (.1 M Ω) and C51 (.02 μ F) on the grid of V5. Turn volume control to maximum and reduce input as necessary to give a suitable discriminator curve display as the circuit is brought into line. Adjust L21 for 'S' shaped curve as Fig.3. The centre of the straight portion of the curve should occur at 10.7 Mc/s. Re-set volume control to minimum.
4. Re-connect diode probe as before and re-set oscilloscope sensitivity. Repeat operation 2. The cores of L15 and L14 may be adjusted slightly if necessary to obtain an optimum curve shape as Fig.4.
5. Remove screening can from the VHF unit and inject signal from sweep generator into test point 'A' on VHF unit. Adjust secondary (upper) core L8 until top of core is flush with the end of the former. Adjust L7 for curve to peak at 10.7 Mc/s as Fig.5.
6. Adjust L8 for curve to peak at 10.7 Mc/s as Fig.6. If any tilt is experienced in the overall response, this may be corrected by slight adjustment of L20.

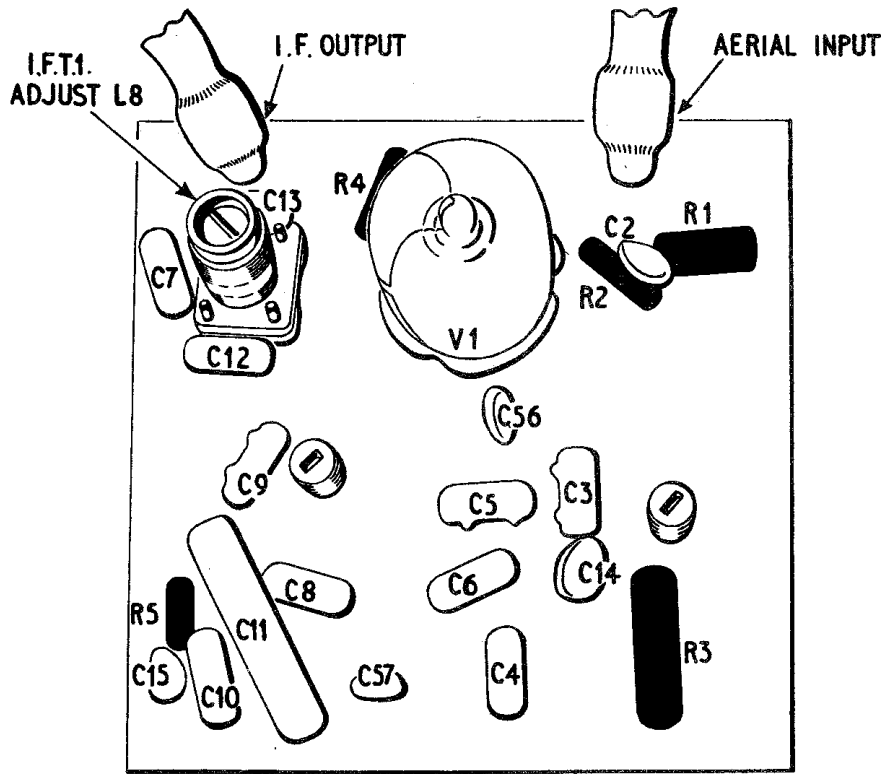
R.F. Alignment (F.M.)

1. Ensure that the VHF unit screening can is in position. Connect voltmeter across L.S. terminals. Turn volume control to maximum. Set gang capacitor to maximum capacitance. Inject a signal at 87.5 Mc/s with a deviation of + 25 kc/s and adjust L5/6 for maximum output.
2. Set generator to 88 Mc/s, tune in receiver and adjust L4 for maximum output. Seal mushroom slugs in position.

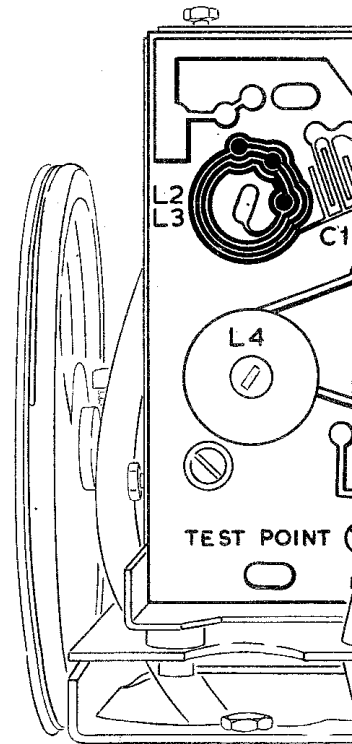
Spot Frequency Method (F.M.)

Equipment Required

Signal generator of known accuracy with output of not less than 50 mV.
D.C. microammeter 0-50 or 0-100 μ A.
Two accurately matched resistors (100 k Ω).

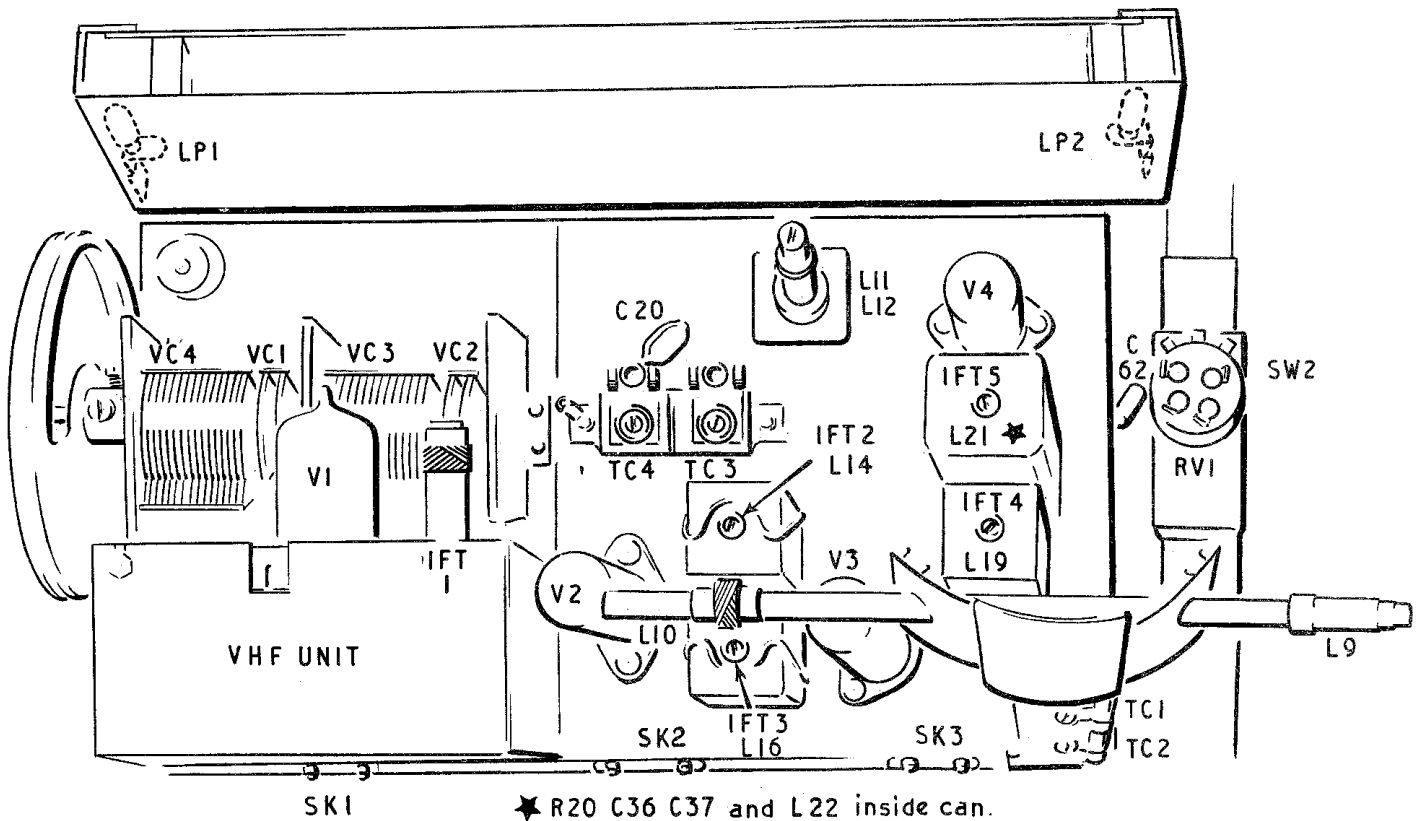


V.H.F. UNIT - FRONT VIEW



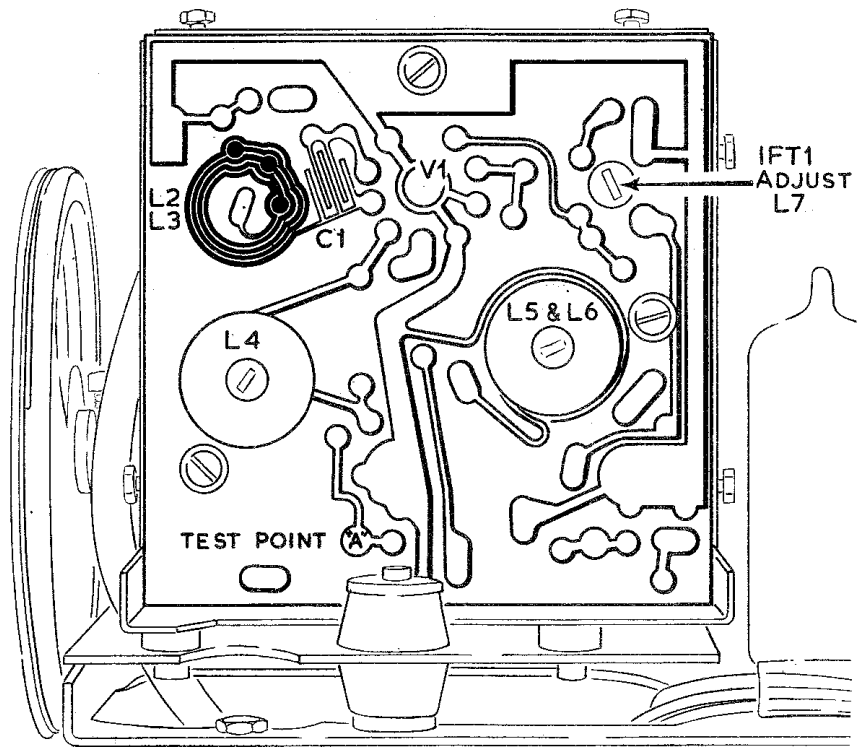
V.H.F. UNIT - REAR VIEW

THE INTERNAL F.M. AERIAL LOADING COIL (L1) IS FIXED TO INSIDE OF CABINET AT REAR



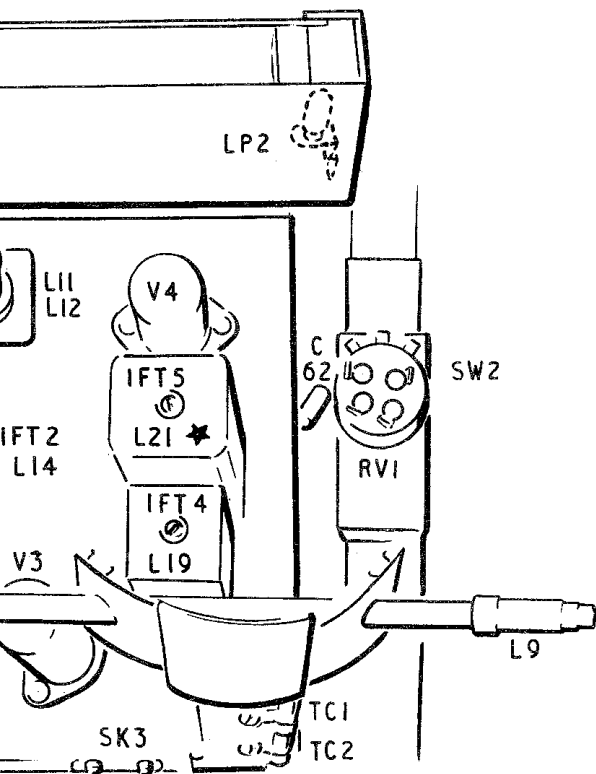
TUNER UNIT - TOPSIDE VIEW

INPUT

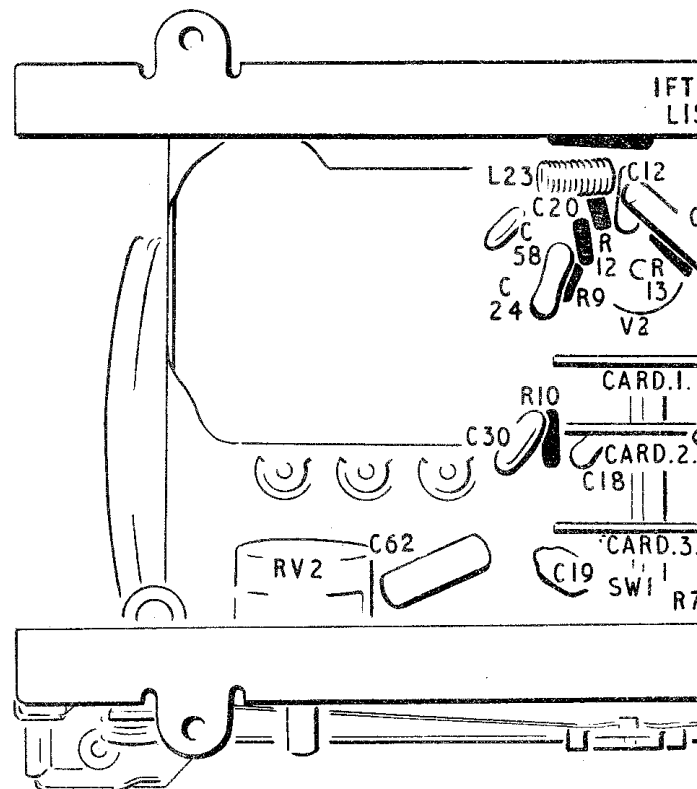


V.H.F. UNIT - REAR VIEW

INTERNAL F.M. AERIAL LOADING COIL (L1)
 MOUNTED TO INSIDE OF CABINET AT REAR



22 inside can.

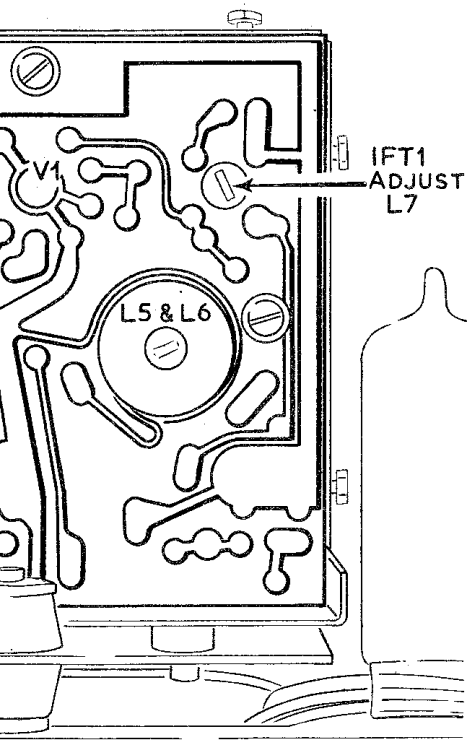


TUNER UNIT - U

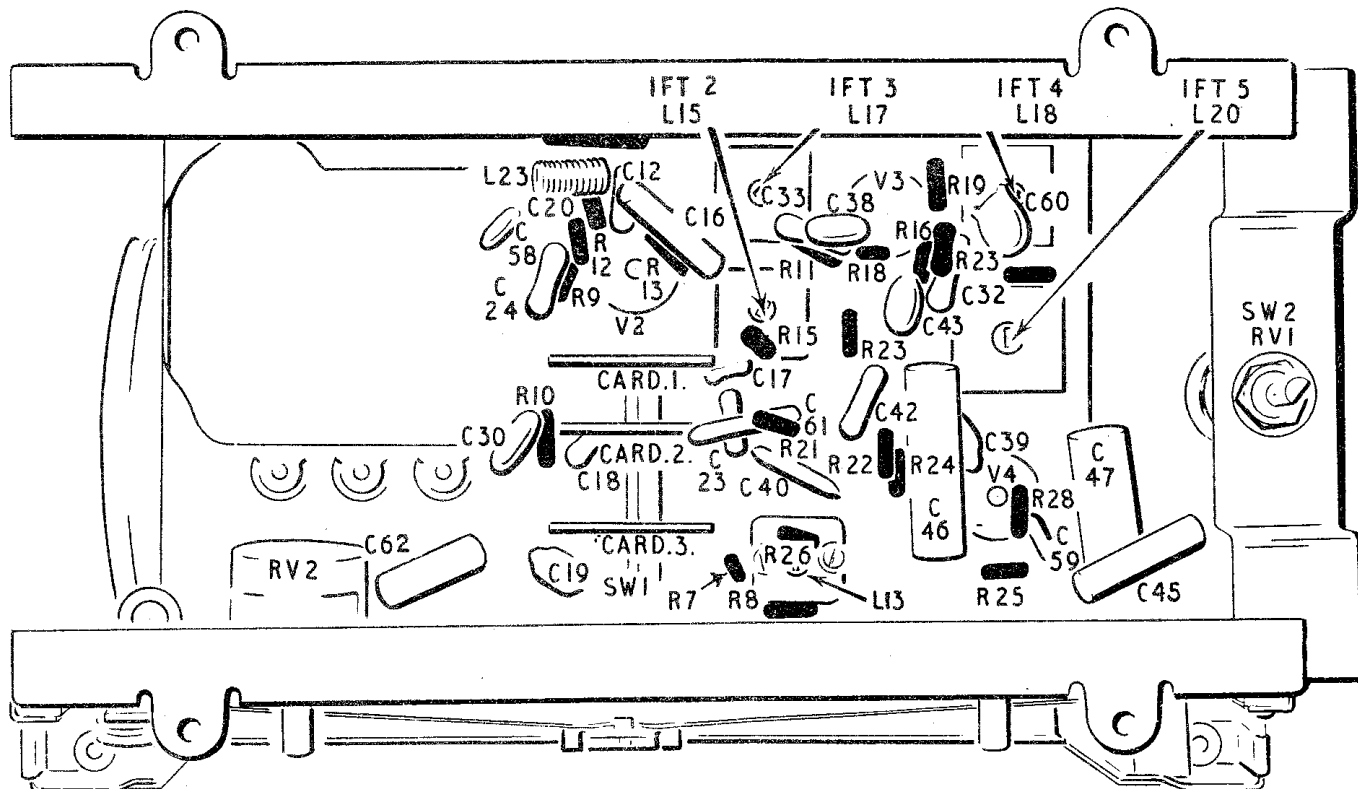
VALVE VOLTAGES

The voltages stated below were obtained when the instrument was connected to a 225 volt 50 c/s mains supply with the voltage adjustment tapping on 216-235V. Variations of + 15% may be anticipated between models. Values stated below were obtained using a meter with a resistance of 10,000 Ω per-volt.

VALVE		ANODE	SCREEN	CATHODE
V1A	F.M.	85	-	0.5
V1B	A.M.	150	-	-
V2P	F.M.	190	80	2.1
	A.M.	225	80	2.2
V2T	F.M.	95	-	2.1
	A.M.	95	-	2.1
V3	F.M.	170	165	1.6
	A.M.	205	225	1.5
V4T	F.M.	85	-	-
	A.M.	85	-	-
V5	1st T	70	-	.7
	2nd T	75	-	.8
V6	F.M.	280	290	10
	A.M.	285	290	10
V7	F.M.	280	290	10
	A.M.	285	290	10
V8		290 A.C. (Pins 1 - 7)		345
Smoothed H.T. (at C50)			295V	
H.T. Current (F.M. at C50)			86 mA.	
			(A.M.) 77 mA.	

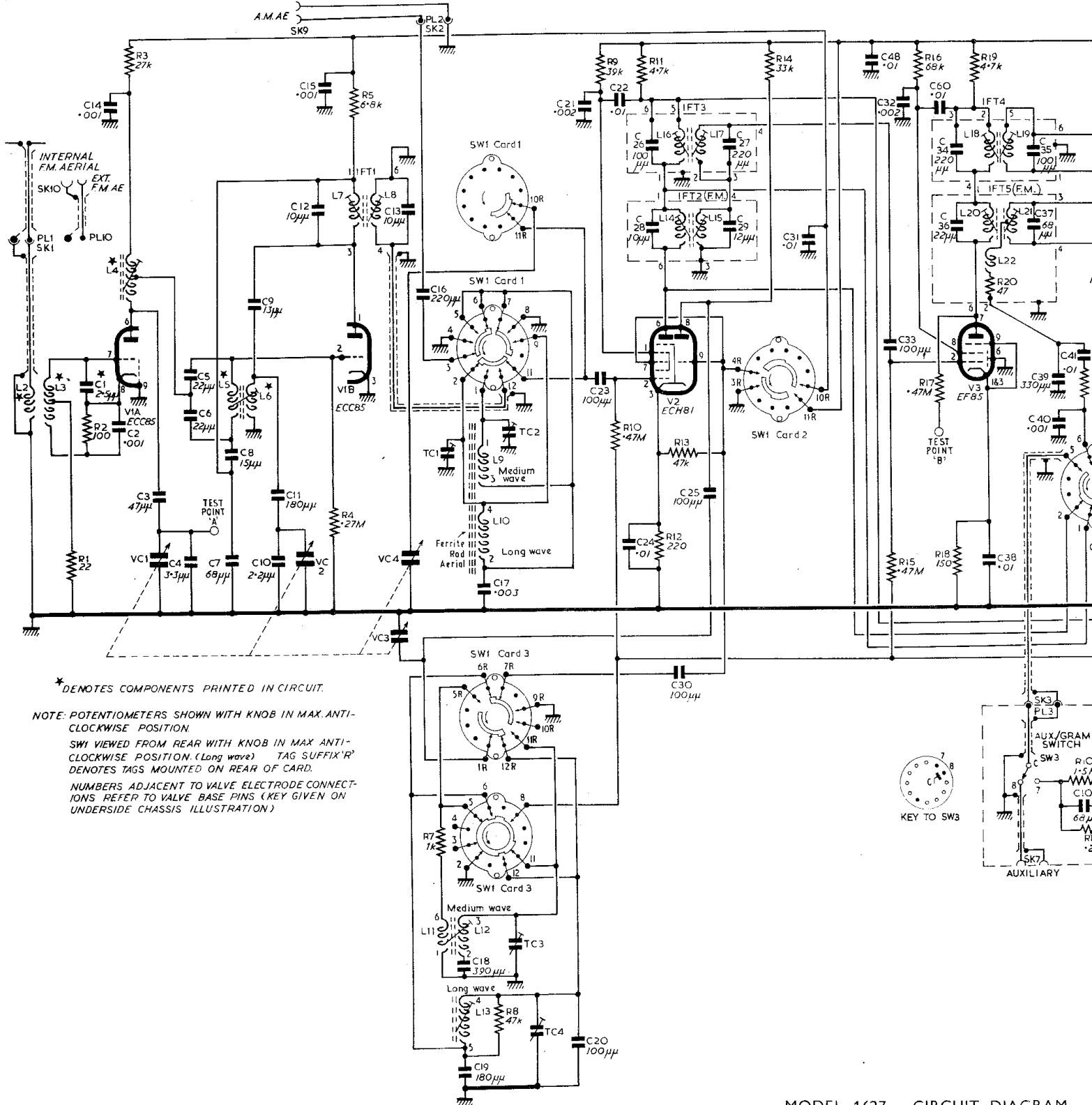


T - REAR VIEW



TUNER UNIT - UNDERSIDE VIEW

C	1,4	2,3	4	5,6	7	8	10	9	11,12	15	13	16	18,19	17	21	20,23,22	26,28,24	30,25	27,29	31	48,32,33	60,34,36	38	35,37,39,40,41	101,100	
R	1	2	3						4	5	7		8		9	10	11,12,13		14		15	16,17,18	19,20			
MISC	PL2, SK13, SK10	PL10	VIA	VC1	L5	L6	SK9	L7, V1B	VC2	IFT1	L8	VC3, VC4	SK2, PL2	TCL1, L11	SW1 Cards: I63, TC2	L12, L13	L9, L10, L13, TC4	L16	V2	IFT3	L17	SW1 Card2	L18	V3	IFT4	L19, L21

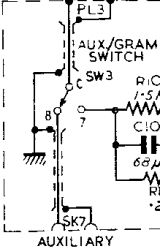
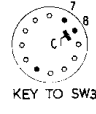


* DENOTES COMPONENTS PRINTED IN CIRCUIT.

NOTE: POTENTIOMETERS SHOWN WITH KNOB IN MAX. ANTI-CLOCKWISE POSITION.

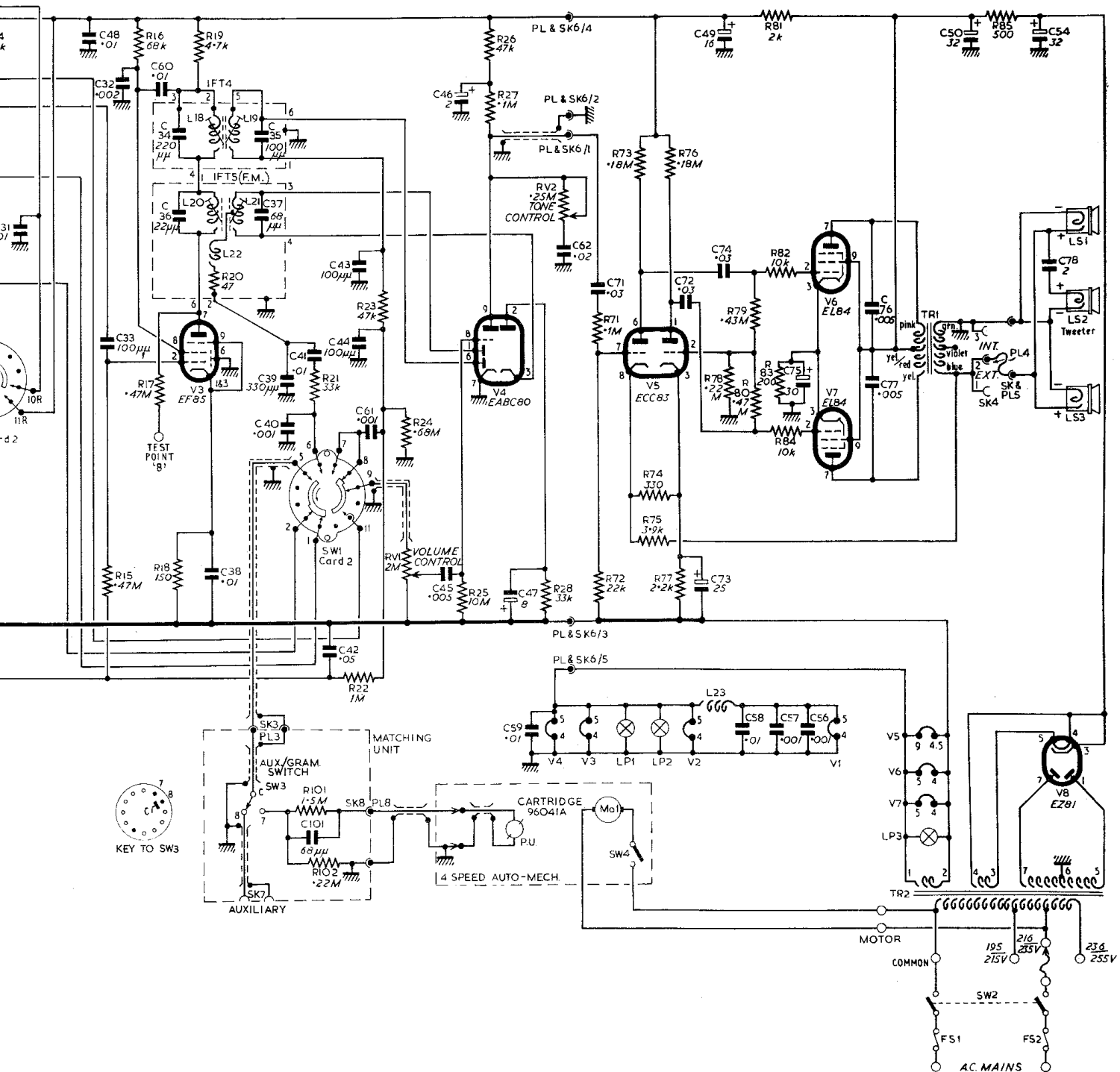
SW1 VIEWED FROM REAR WITH KNOB IN MAX. ANTI-CLOCKWISE POSITION. (Long wave) TAG SUFFIX 'R' DENOTES TAGS MOUNTED ON REAR OF CARD.

NUMBERS ADJACENT TO VALVE ELECTRODE CONNECTIONS REFER TO VALVE BASE PINS (KEY GIVEN ON UNDERSIDE CHASSIS ILLUSTRATION)



MODEL 1627 - CIRCUIT DIAGRAM

31	48,52,53	60,54,56	38	35,37,39,40,41,101,43,44,42,61	45,46	59,47	62	71.	72	49,73,74	58	57,75,56	76,77	50	54,78	C			
	15	16,17,18	19,20	101,102,21	22,23	24	25,26,27	28	71,72,73	74,75,77,76	78	79,80,83,81,82,84		85		R			
TR2	L1B, V3	IFT4	L19, L21	SW1 Card 2	RV1	V4	RV2, PL & SK6	V5	Ma1, SW4, LP1	LP2	V6	V7	LP3, TR2	TR1	FS1	SK4, PL4, SK4, PL3, LS3	FS2	V8	LS1, LS2, LS3



MODEL 1627 - CIRCUIT DIAGRAM

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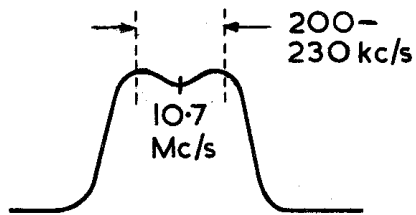


FIG. 1

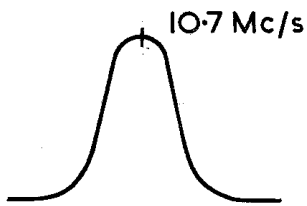


FIG. 2

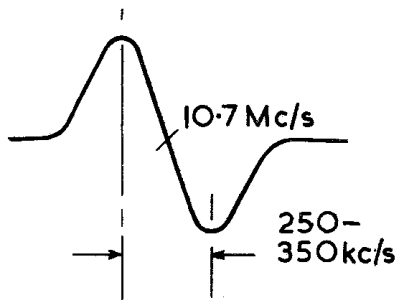


FIG. 3

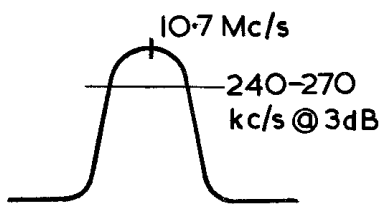


FIG. 4

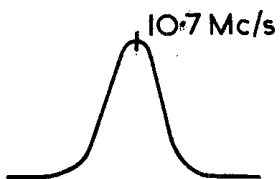
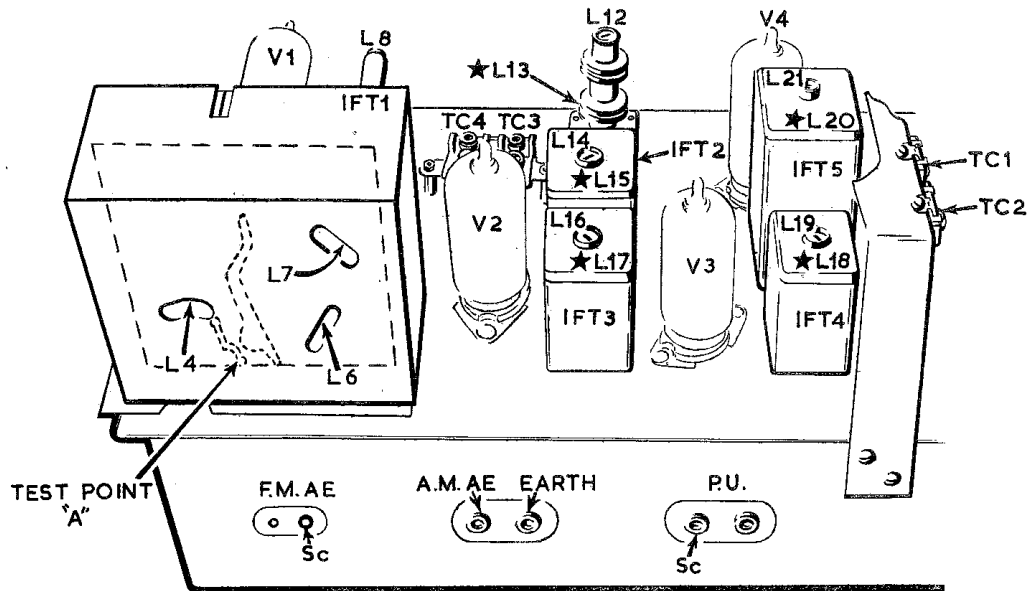


FIG. 5

THE CORES OF THE INDUCTORS WITH THE REFERENCE NUMBERS MARKED THUS ★ ARE LOCATED ON THE UNDERSIDE OF THE CHASSIS



TEST POINT 'B' IS LOCATED ON UNDERSIDE OF THE CHASSIS ADJACENT TO L21/L20 COIL FORMER BASE.

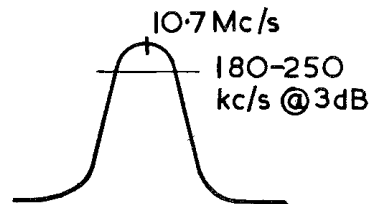


FIG. 6

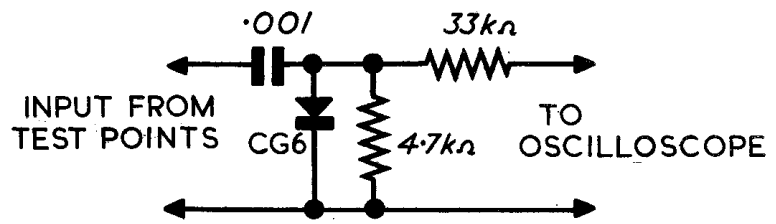


FIG. 7 DIODE PROBE

Procedure

1. De-tune all F.M., I.F. and discriminator circuits, bringing the tops of the cores flush with the tops of the coil formers.
2. Connect two 100 k Ω resistors in series across C47 (from pin 2 of V4 to chassis) and connect microammeter between earth and junction of resistors (+VE to chassis).
3. Inject 10.7 Mc/s unmodulated carrier into V2 grid (pin 2). Adjust L15 and L14 for maximum reading on microammeter, adjusting the input such that the reading does not exceed 50 μ A as the circuit is brought into line. Adjust the cores alternately until no improvement results.
4. Adjust L20 (lower core of IFT5) for maximum reading.
5. Connect microammeter between junction of the two 100 k Ω resistors and the junction of C39 and C41 (IFT5 pin 2). Adjust L21 (upper core of IFT5) for zero reading on microammeter. This will occur mid-way between a positive and a negative-going peak.
6. Connect microammeter between junction of the two 100 k Ω resistors and earth as before and re-adjust L20 for maximum reading.
7. Set input to give reading of 50 μ A. Tune generator to 10.6 Mc/s and 10.8 Mc/s and note readings on microammeter. If the readings are not within 3 μ A of each other, re-adjust L20 until they are.
8. Remove screening can from the VHF unit and inject 10.7 Mc/s unmodulated carrier into test point 'A' and adjust L7 (lower core of IFT1) for maximum reading. Adjust L8 for maximum reading. Replace screening can.
9. Repeat operation (5).
10. Set gang to maximum capacitance. Inject 87.5 Mc/s into aerial socket and adjust L5/6 for maximum reading on microammeter.
11. Re-tune generator to 88 Mc/s, tune in receiver and adjust L4 for maximum reading on microammeter.

A.M. ALIGNMENT

I.F. Alignment (A.M.)

1. Connect a 0-10 volts A.C. meter or an output meter across the loudspeaker terminals.
2. Set the Waveband Switch to M.W.
3. Set the gang tuning capacitors to minimum capacity position.
4. Set the Volume control fully clockwise and the Tone control for maximum top response.
5. Inject 470 kc/s modulated signal into V2 grid (pin 2).
6. Adjust cores of L19, L18, L17 and L16 in that order, for maximum output.
7. Repeat this operation.

Medium Wave

- (a) Set the Waveband Switch to M.W., Volume and Tone controls fully clockwise.
- (b) Set the ganged tuning capacitor to maximum capacity position and slide the pointer on the cord drive so that it coincides with the right end of the calibration strip affixed to the front of the chassis.
- (c) Inject modulated signals in the sequence as given in the table into the A.M. aerial socket, preferably by means of a dummy aerial.

Medium Wave

	Set Generator kc/s	Set Gang Capacitor	Adjust
1	520	Max. capacity. Pointer at right end.	L12 for max. output
2	1640	Min. capacity. Pointer at left end.	TC3 for max. output
3	Repeat operations 1 & 2		
4	590	Tune the receiver ganged capacitor for max. output	*L9 aerial coil for max. output
5	1430	Tune the receiver ganged capacitor for max. output	TC2 for max. output
6	Repeat operations 4 & 5		

* This is set in the factory and does not normally require re-adjustment.

Long Wave

Switch to L.W. and set up as for (a), (b) and (c) and proceed:-

	Set Generator kc/s	Set Gang Capacitor	Adjust
1	148	Max. capacity. Pointer at right end	L13 for max. output
2	333	Min. capacity. Pointer at left end	TC4 for max. output
3	Repeat operations 1 & 2		
4	160	Tune the receiver ganged capacitor for max. output	*L10 aerial coil for max. output
5	300	Tune the receiver ganged capacitor for max. output	TC1 for max. output
6	Repeat operations 4 & 5		

* This is adjusted in the factory and does not normally require re-adjustment.

CALIBRATION

Replace the chassis in the cabinet.
Check calibration with the pointer approx-
imately in the centre of the tuning scale

on a station of known frequency. Adjust
the pointer slightly to give best compromise
on all bands.

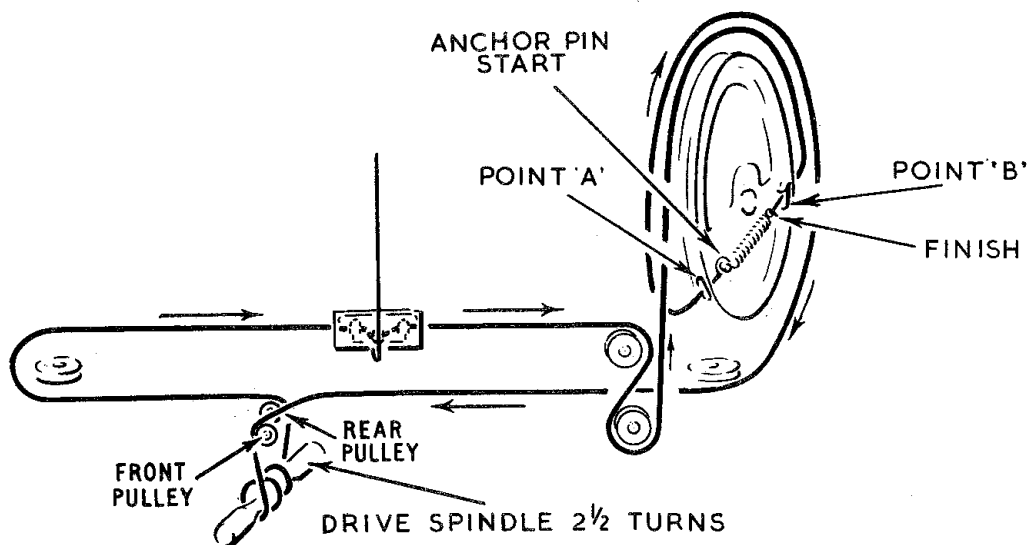
TUNING CAPACITOR AND CORD DRIVE

Use only the correct nylon cord (6370x
0012). Approximately 50-inches are required
for the drive and approximately a further
24-inches for the pointer guide.

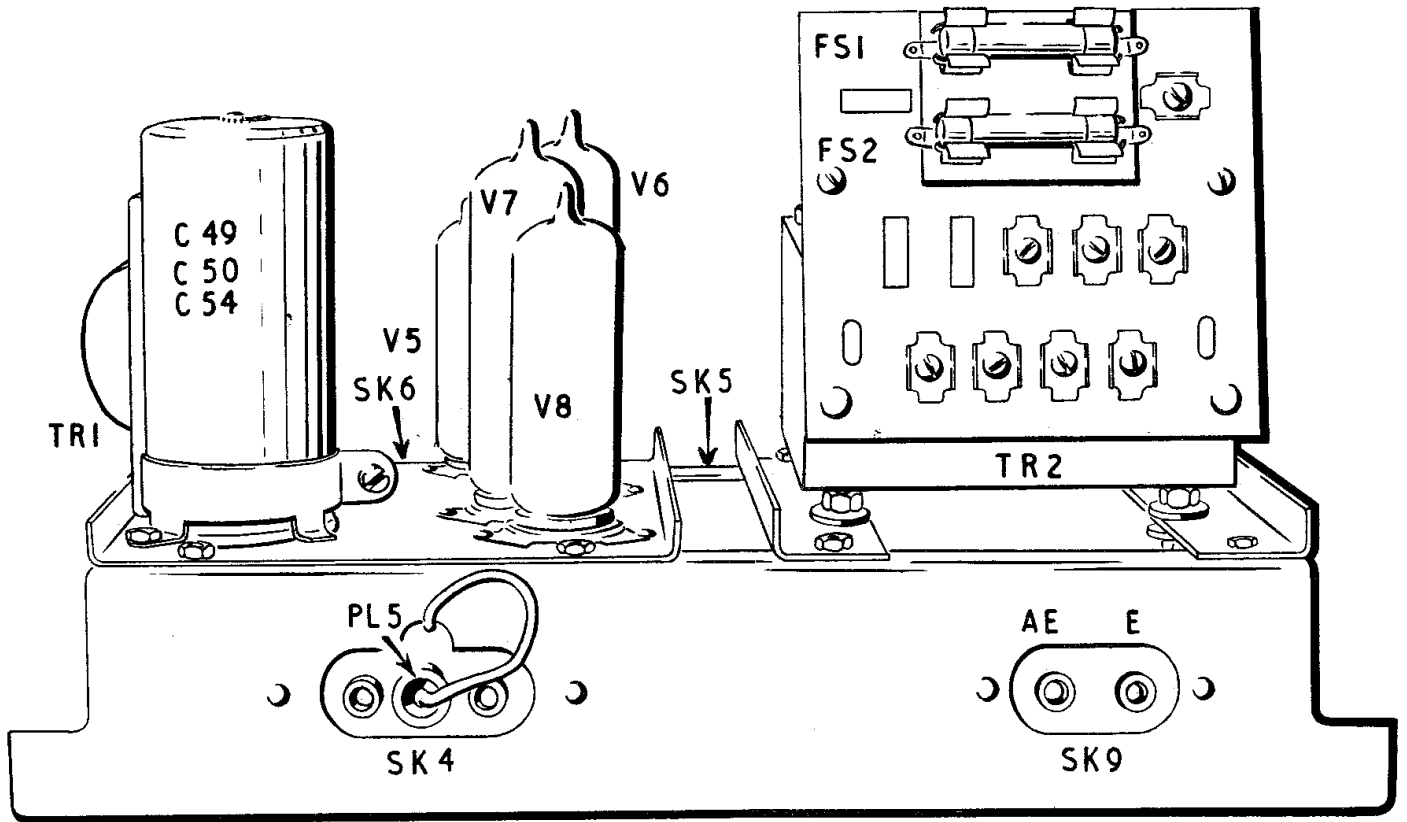
To replace the cord proceed as follows:-

1. Form a loop at one end of the cord.
2. Attach loop to anchor pin and pass the
other end of the cord through the hole
in the periphery of the drum.
See point 'A' in the illustration.

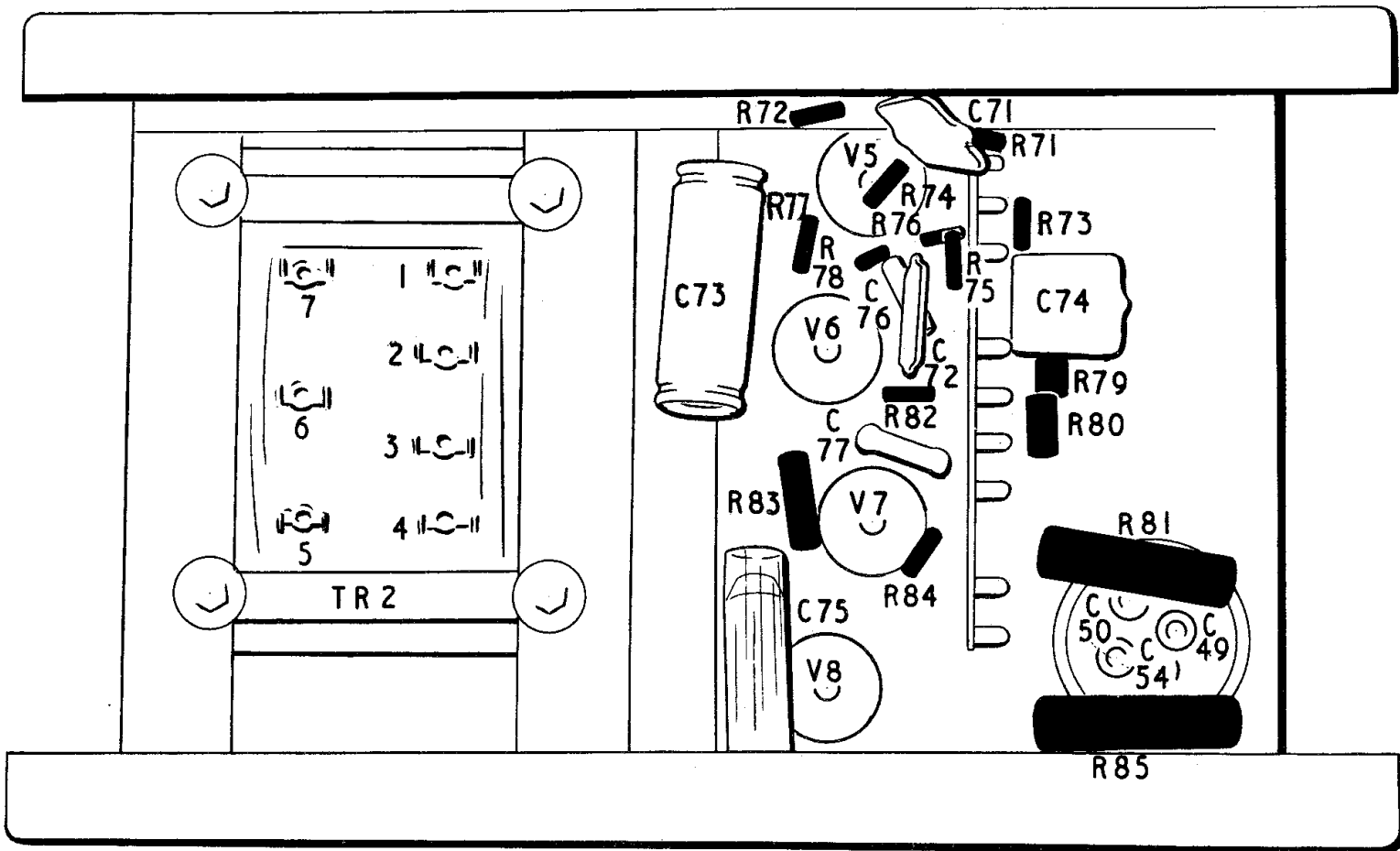
3. Pass cord round drum and wind it round
pulleys and tuning spindle ($2\frac{1}{2}$ turns) in
the direction of the arrows.
4. Pass the cord through the hole in the
periphery of the drum (point 'B') and
attach it to one end of the tension spring.
5. Attach the free end of the spring to one
of the anchor tags.
6. Shellac knots to prevent slipping. Ten-
sion of the pointer steady guide is
maintained by a spring attached to the
cord.



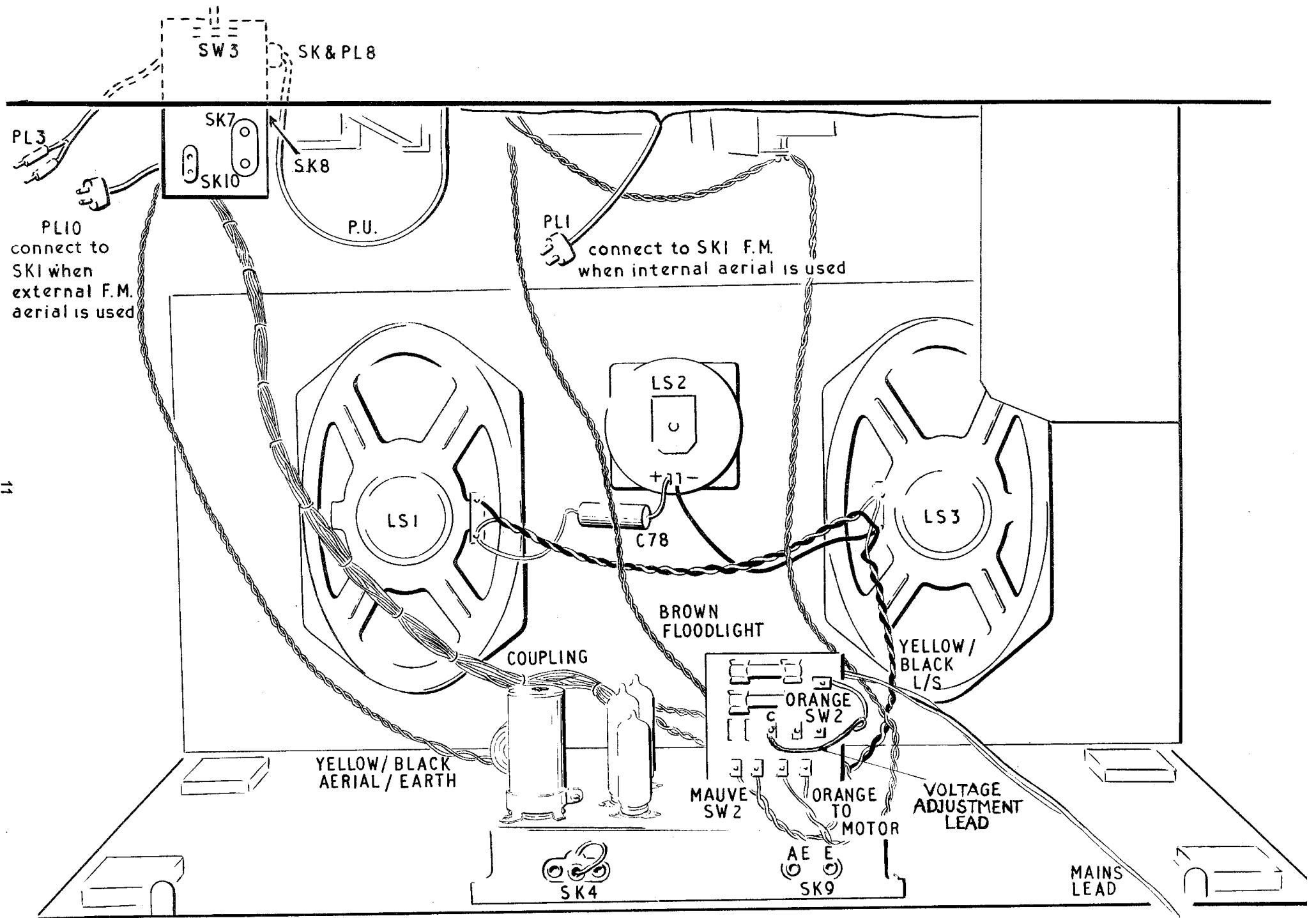
CORD DRIVE



MODEL 1627 POWER & OUTPUT UNIT - REAR VIEW



MODEL 1627 POWER & OUTPUT UNIT - UNDERSIDE VIEW



11

MODEL 1627 UNIT INTERCONNECTING DIAGRAM

SPARE PARTS LIST

PART No.	DESCRIPTION	No. INST.	PER FIN-ISH	PART No.	DESCRIPTION	No. INST.	PER FIN-ISH
INSTRUCTIONS				POWER & AMPLIFIER UNITS			
96334	Cabinet Label	1	00	95648E	Power & Amplifier Unit	1	-
97323	Transfer (Trade Marks)	1	00	200025K	Screw }securing Power &	4	689
96325	Instruction Book	1	00	201502	Washer }Amp. to Cabinet	4	00
96360	Guarantee Card	1	00	91813H	Front Channel Assy.	1	00
40747A	Trade Mark Plate Assy.	1	854	91820H	Rear Channel Assy.	1	00
CABINET AND FITTINGS				95649	Angle Support	2	00
426801	Cabinet	1	POL	44040	P.K. Screws securing Support	4	00
22110B	Hinge	2	854	47031	P.K. Screws securing Rear & Front Channels	12	00
9559	Woodscrews (securing Hinges)	10	854	CONTROL KNOBS & ESCUTCHEON			
96299	Mesh (Grille)	1	00	94797B	Knob (Tuner)	1	00
95691B	Beading 28 5/8" Long	2	00	94797A	Knob (Wavechange)	1	00
95691C	Beading 14" Long	2	00	94797C	Knob (Tone)	1	00
96165A	Card Back	1	00	96164A	Knob (Vol ON/OFF)	1	00
200020H	Screw }securing Card	5	676	47042	Springs for Knobs	4	00
14997	Washer } Back	5	676	40172AN	Knob (AUX/GRAM)	1	00
31573	Card Back Brackets	5	689	11805	P.K. Screws securing Knob	1	00
8602	Woodscrew securing Card Back Brackets	10	00	32728D	Escutcheon for Volume Control	1	00
14922	Inserts (2 BA)	12	106	9564	Woodscrew securing Escutcheon	3	854
20751	Inserts (4 BA)	4	106	LAMPS, AND HOLDERS ETC.			
91831A	Castors	4	00	35421D	Lamp 0.3 amp. 6.8 volt(PL1)	2	00
91831C	Castor Sheath only	4	475	93939A	Lampholders	2	00
94133	Lens (Amber)	1	00	35420D	Lamp (PL2) }attached	1	00
426802E	Lid	1	POL	44615A	Lampholder } to	1	00
426821D	Radio Panel	1	POL	47012	Lamp Bracket } Cabinet	1	689
8714	Woodscrew securing Radio Panel	2	854	9545	Woodscrew securing Bracket	2	689
96160	Perspex Window	1	00	FUSES			
426832A	Baffle Board	1	-	38825E	Fuse (1.5 amp.)	2	00
9553	Woodscrew securing Baffle Board	14	00	TUNING DETAILS			
94500R	VHF. RF & IF UNIT ASSY.	1	00	28441T	Drive Drum Assy.	1	-
200040K	Screw }securing Unit	4	689	13387	Screw }securing Drive	2	689
201504	D.C. Washer }to Cabinet	4	00	46954	Spring }Drum Assy.	1	00
94500S	VHF. RF & IF UNIT/AM/FM	1	00	94488A	Pulley Bracket Assy.	1	00
47031	PK Screw securing VHF. RF & IF Unit to Rear & Front Channel	6	00	8777	P.K. Screw securing Bracket	2	00
96130A	VHF Head & Gang Assy.	1	00	96127	Pivot Plate	1	689
6250	Washer }securing VHF Head	3	689	4505	Pulley	1	689
2856	Circlip } & Gang Assy.	3	00	6418	Washer }securing Pulley	2	689
46958	Bush }	3	00	8777	P.K. Screw } & Pivot Plate	2	00
96100B	VHF Head	1	-	94491	Tuning Bracket	1	689
96101B	Panel Assy. (Printed Circuit)	1	-	12619	P.K. Screw	3	00
96102	Spacer }securing Panel	3	689	94490	Pulley Spindle	1	689
96103	Washer }Assy. to VHF Head	3	00	94098	Pulley	2	436
200060Q	Screw }	3	689	94785C	Pulley Bracket	1	00
200506	Locknut }	3	689	8777	Screw securing Bracket	2	00
96109	Screen for VHF Head	1	689	167/204/			
38743	PK Screw securing Screen	5	00	011	Nylon Drive Cord	2 1/2 yds.	00
94510	Bracket }securing	1	689	94489	Tuning Spindle	1	03
12619	PK Screw }Tone Control	2	00				
94789	Front Channel	1	00				
94790B	Rear Channel Assy.	1	00				

PART No.	DESCRIPTION	No. PER INST.	FIN-ISH	PART No.	DESCRIPTION	No. PER INST.	FIN-ISH
Tuning Details (Continued)				CAPACITORS			
6250	Washer	1	689	C1	2.5µF Approx. (On Printed Circuit)	1	-
2856	Circlip securing Spindles & Pulley	3	00	C2	0.001 µF -20% +80%	375V	1
93929D	Scale Plate Assy.	1	833	C3	47µF ± 2%	750V	1
94784	Packing Strip)securing	2	689	38117ADJ	C4	3.3µF ± ¼µF	750V 1
11805	P.K. Screws)Scale Plate	4	00	33117ZB	C5	22µF ± 2%	750V 1
92326L	Scale	1	00	33117ZB	C6	22µF ± 2%	750V 1
93936	Retaining Blocks for Scale	2	00	38117F	C7	68µF ± 5%	750V 1
INDUCTORS				38117B	C8	15µF ± 5%	750V 1
94787A	Aerial Bracket Assy.	1	00	38117RE	C9	13µF ± 5%	750V 1
8777	P.K. Screw securing Bracket	2	00	38116YL	C10	2.2µF ± 5%	750V 1
94514	Aerial Coil (Ferrite Rod)	1	00	38117VE	C11	180µF ± 2%	750V 1
Part of Printed Circuit	L2 AE Coil Primary)See T1	1	00	38116A	C12	10µF ± 5%	750V 1
96108	L3 AE Coil Secondary)Mushroom Core for L1-2-3	1	00	38116A	C13	10µF ± 5%	750V 1
See Printed Panel 96101B	L4 R.F. Coil	1	00	38125B	C14	0.001 µF -20% +80%	375V 1
92760A	L5-L6 Oscillator Coils	2	00	38125B	C15	0.001 µF -20% +80%	375V 1
	L7 I.F. Primary) IFT1	1	00	38117DJ	C16	220µF ± 20%	750V 1
	L8 I.F. Secondary)	1	00	38130C	C17	0.003 µF -25% +50%	350V 1
40907	Core for IFT1	-	-	38001VM	C18	390µF ± 2%	350V 1
92780C	L9 MW AE Coil	1	00	38000VE	C19	180µF ± 2%	350V 1
92770D	L10 LW AE Coil	1	00	38004TF	C20	100µF ± 2%	350V 1
93004K	(L11 L2 MW Osc. Coils	1	00	38122A	C21	0.002 µF ± 20%	350V 1
	(L13 LW Osc. Coil	1	00	38109B	C22	0.01 µF -20% +80%	500V 1
93004Z	(L14 2nd I.F. Primary)see	1	00	38117DG	C23	100µF ± 20%	750V 1
	(L15 2nd I.F. Secondary)IFT2	1	00	38109B	C24	0.01 µF -20% +80%	500V 1
93004N	(L16 3rd I.F. Primary)see	1	00	38117DG	C25	100µF ± 20%	750V 1
	(L17 3rd I.F. Secondary)IFT3	1	00	38475A	C26	100µF	1
93004N	(L18 4th I.F. Primary)see	1	00	38475B	C27	220µF	1
	(L19 4th I.F. Secondary)IFT4	1	00	38133A	C28	10µF 5%	750V 1
46551AW	(L20 5th I.F. Primary)	1	00	38133RD	C29	12µF 5%	750V 1
	(L21 5th I.F. Secondary)see	1	00	38117DG	C30	100µF ± 20%	750V 1
	(L22 5th I.F. Tertiary)IFT5	1	00	38109B	C31	0.01 µF -20% +80%	500V 1
92645B	L23 Heater Choke	1	00	38122A	C32	0.002 µF ± 20%	350V 1
93004K	LW & MW Osc. Coil	1	00	38117DG	C33	100µF ± 20%	750V 1
46553	Core	2	00	38475B	C34	220µF	1
201806	SP Washer)securing LW & MW	2	00	38475A	C35	100µF	1
200060F	Screw)Osc. Coil	2	639	38006ZB	C36	22µF ± 5%	1
92760A	IFT1 FM I.F. Coil on Printed Circuit 96101B	1	00	38006YC	C37	68µF ± 2%	1
93004Z	IFT2, 2nd I.F. Transformer	1	00	38109B	C38	0.01 µF -20% +80%	500V 1
92477	Retaining Spring	1	00	38117DK	C39	330µF ± 20%	750V 1
93004N	IFT3, 3rd I.F. Transformer	1	00	38529ACM	C40	0.001 µF ± 25%	500V 1
92477	Retaining Spring	1	00	38109B	C41	0.01 µF -20% +80%	500V 1
93004N	IFT4, 4th I.F. Transformer	1	00	38525NC	C42	0.05 µF ± 20%	350V 1
92477	Retaining Spring	1	00	38117DG	C43	100µF ± 20%	750V 1
46551AW	IFT5 Ratio Det. Transformer	1	00	38117DG	C44	100µF ± 20%	750V 1
13517	P.K. Screw securing IFT5	2	00	38267B	C45	0.005 µF	500V 1
92890F	T2 Mains Transformer	1	00	38175L	C46	2 µF	350V 1
6250	Washer)securing T2	8	689	38406A	C47	8 µF	50V 1
201804	SP Washer)	4	00	33109B	C48	0.01 µF -20% +80%	500V 1
200404	Nut)	4	689	38150X	C49	16 µF	450V 1
40435T	T1 Output Transformer	1	00	See C49	(C50	32 µF	450V 1
44040	P.K. Screw securing T1	2	00		(C54	32 µF	450V 1
				38125B	C56	0.001 µF -20% +80%	375V 1
				38125B	C57	0.001 µF -20% +80%	375V 1
				38109B	C58	0.01 µF -20% +80%	500V 1
				38109B	C59	0.01 µF -20% +80%	500V 1
				38109B	C60	0.01 µF -20% +80%	500V 1
				38529ACM	C61	0.001 µF ± 25%	500V 1
				38550GN	C62	0.02 µF ± 20%	350V 1
				38137A	C71	0.03 µF -20% +80%	500V 1
				38137A	C72	0.03 µF -20% +80%	500V 1
				38153F	C73	25 µF	25V 1
				38137A	C74	0.03 µF -20% +80%	500V 1
				38175C	C75	30 µF	15V 1
				38130D	C76	5,000µF -25% +50%	350V 1
				38130D	C77	5,000µF -25% +50%	350V 1
				38553GN	C78	0.02 µF ± 20%	350V 1
				38529ACQ	C101	0.01 µF ± 25%	500V 1

PART No.	DESCRIPTION	No. PER INST.	FIN-ISH	PART No.	DESCRIPTION	No. PER INST.	FIN-ISH	
Capacitors (Continued)				19810	Cleat }securing C78	1	00	
	(VC1)			9545	Woodscrew }to Cabinet	1	689	
95633D	(VC2) AM/FM Gang	1	-	47017	Spacer	2	00	
	(VC3) Capacitor			10250	Insulated Washer }securing	2	00	
	(VC4) Assembly			201306	Washer }TC3 &	2	689	
37245B	TC1 Trimmer	4 - 30 μ F	1	201806	SP Washer }TC4	2	00	
37245B	TC2	4 - 30 μ F	1	200406	Nut	2	689	
32668A	(TC3)	4 - 30 μ F	1	200068Q	Screw	2	689	
	(TC4)	4 - 30 μ F		10606	P.K. Screw securing			
	(2 Bank Trimmer				TC1 - TC2	2	00	
RESISTORS				LEADS				
33360C	R1	22 Ω \pm 5%	$\frac{1}{4}$ W	1	33556G	Motor Lead	1	00
33362BG	R2	100 Ω \pm 10%	$\frac{1}{4}$ W	1	618659B	P.U. Lead	1	-
33363ND	R3	27,000 Ω \pm 10%	$\frac{1}{4}$ W	1	96172A	H.T. & L.T. Lead with	1	-
33362NE	R4	0.27 M Ω \pm 10%	$\frac{1}{4}$ W	1		5-pin Plug	1	-
33362BT	R5	6.800 Ω \pm 10%	$\frac{1}{4}$ W	1	35429A	Tag Panel (5-pin)	1	-
33362DN	R7	1,000 Ω \pm 20%	$\frac{1}{4}$ W	1	11802	Tag	4	-
33362DY	R8	47,000 Ω \pm 20%	$\frac{1}{4}$ W	1	40764G	Cleat }securing H.T.	1	00
33362QC	R9	39,000 Ω \pm 10%	$\frac{1}{4}$ W	1	201304	Washer } & L.T. Lead	1	689
33362EE	R10	0.47 M Ω \pm 20%	$\frac{1}{4}$ W	1	10606	P.K. Screw	1	00
33362DS	R11	4700 Ω \pm 20%	$\frac{1}{4}$ W	1	20853B	Mains Lead	9 ft.	
33362BJ	R12	220 Ω \pm 10%	$\frac{1}{4}$ W	1	T1057	F.M. Aerial Lead	1 ft.	
33362DY	R13	47,000 Ω \pm 20%	$\frac{1}{4}$ W	1	146/010/			
33363DX	R14	33,000 Ω \pm 20%	$\frac{1}{4}$ W	1	100	F.M. Frame Aerial Lead	30 ft.	
33362EE	R15	0.47 M Ω \pm 20%	$\frac{1}{4}$ W	1	44562A	Plug for F.M. Lead	1	00
33362BZ	R16	68,000 Ω \pm 10%	$\frac{1}{4}$ W	1	3551	Brads securing Frame Aerial	10	00
33362EE	R17	0.47 M Ω \pm 20%	$\frac{1}{4}$ W	1		Lead	10	00
33362BH	R18	150 Ω \pm 10%	$\frac{1}{4}$ W	1	36702Q	Sleeve }securing	1	00
33362DS	R19	4700 Ω \pm 20%	$\frac{1}{4}$ W	1	28641	Cleat }Mains	1	00
37802DE	R20	47 Ω \pm 20%	$\frac{1}{4}$ W	1	9545	Woodscrew)Lead	1	689
		(See IFT5)			VALVEHOLDERS AND PANELS ETC.			
33362DX	R21	33,000 Ω \pm 20%	$\frac{1}{4}$ W	1	39250N	Valveholder (B9A) V1-2-3	3	00
33362EG	R22	1 M Ω \pm 20%	$\frac{1}{4}$ W	1	59119AA	Rivet securing Valveholders	6	00
33362DY	R23	47,000 Ω \pm 20%	$\frac{1}{4}$ W	1	39675GB	Panel Assy. (7 Tags)	1	00
33362EF	R24	0.68 M Ω \pm 20%	$\frac{1}{4}$ W	1	12619	P.K. Screw securing Panel	1	00
33362EN	R25	10 M Ω \pm 20%	$\frac{1}{4}$ W	1	39675CC	Panel Assy. (5 Tags)	1	00
33362DY	R26	47,000 Ω \pm 20%	$\frac{1}{4}$ W	1	12619	P.K. Screw securing Panel	1	00
33362EA	R27	0.1 M Ω \pm 20%	$\frac{1}{4}$ W	1	96126A	Insulated Tag	1	00
33362DX	R28	33,000 Ω \pm 20%	$\frac{1}{4}$ W	1	10606	P.K. Securing Tag	1	00
33362EA	R71	0.1 M Ω \pm 20%	$\frac{1}{4}$ W	1	16576	Tag	1	104
33362DW	R72	22,000 Ω \pm 20%	$\frac{1}{4}$ W	1	10606	P.K. Screw securing Tag	1	00
33362PX	R73	0.18 M Ω \pm 10%	$\frac{1}{4}$ W	1	40029A	Insulated Tag	1	00
33362BK	R74	330 Ω \pm 10%	$\frac{1}{4}$ W	1	59007CD	Rivet securing Tag	1	00
33362QW	R75	3900 Ω \pm 10%	$\frac{1}{4}$ W	1	1735	Tags secured to TC3 & 4	1	104
33362PX	R76	0.18 M Ω \pm 10%	$\frac{1}{4}$ W	1	56147	Grommet on LF Unit	1	00
33362BQ	R77	2,200 Ω \pm 10%	$\frac{1}{4}$ W	1	39250N	Valveholders (B9A) for		
33362EC	R78	0.22 M Ω \pm 20%	$\frac{1}{4}$ W	1		V5-6-7-8.	4	00
33360SL	R79	0.43 M Ω \pm 5%	$\frac{1}{4}$ W	1	59119AB	Rivet securing Valveholders	8	00
33360AE	R80	0.47 M Ω \pm 5%	$\frac{1}{4}$ W	1	39675JC	Tag Panel (11 Tags)	1	00
37870FP	R81	2,000 Ω \pm 5%	6W	1	12619	P.K. Screw securing Panel	2	00
33362DU	R82	10,000 Ω \pm 20%	$\frac{1}{4}$ W	1	36889A	Tag Panel Assy.	1	00
33363AW	R83	200 Ω \pm 5%	$\frac{1}{4}$ W	1	44040	P.K. Screw securing Panel	1	00
33362DU	R84	10,000 Ω \pm 20%	$\frac{1}{4}$ W	1	39260A	Valveholder on Panel 96101B	1	00
37870EZ	R85	500 Ω \pm 5%	6W	1	36702F	Sleeve on Printed Panel	1	00
33362EC	R102	0.22 M Ω \pm 20%	$\frac{1}{4}$ W	1	44564A	F.M. Aerial & Earth Socket	1	00
37990B	RV1	2 M Ω D.P.S.T.SW)			59119AC	Rivet securing Panel	2	00
		Volume Control)			20314A	A.M. Aerial & Earth Socket	1	00
38750	Nut securing Volume Control				59119CC	Rivet securing Socket	2	00
37991C	RV2	0.25 M Ω Tone Control	$\frac{1}{4}$ W	1	20314A	Pick-up Socket	1	00
33362EH	R101	1.5 M Ω \pm 20%	$\frac{1}{4}$ W	1	59119CC	Rivets securing Socket	2	00
38190M	Capacitor Clip				35430A	Power Socket	1	00
44040	P.K. Screw)securing				59119CC	Rivet securing Socket	4	00
201304	Washer)Capacitor Clip				20314A	Loudspeaker Socket	1	00
200040K	Screw)securing				59119CC	Rivet securing Socket	2	00
200404	Nut)C1 - 7 - 8				36399A	Ext.Loudspeaker Socket	1	00
201804	SP Washer) to Clip							

PART No.	DESCRIPTION	No. PER INST.	FIN- ISH	PART No.	DESCRIPTION	No. PER INST.	FIN- ISH
Valveholders and Panels etc. (Continued)				VALVES			
59119CC	Rivet securing Socket	2	00	V1	ECC 85/B719	1	00
20314A	A & E Socket	1	00	V2	ECH 81/X719	1	00
59119CC	Rivet securing Socket	2	00	V3	EF 85/W719	1	00
44562B	Pick-up Plug	1	00	V4	EABC 80/DW719	1	00
39675AE	Tag Panel Assy. (2 Tags)	1	00	V5	ECC 83	1	00
9545	Woodscrew securing Panel	1	689	V6	EL 84	1	00
16289J	Plug (Yellow)	1	00	V7	EL 84	1	00
16289B	Plug (Black)	1	00	V8	EZ 81	1	00
44562B	F.M. Aerial Plug	1	00				
AUTOMECHANISM				96128A	S1 Wavechange & R/G Switch	1	00
95572B	Auto Mechanism 4-Speed	1	00	201822	Washer securing Switch	1	00
45777	Bracket	4	876	-	S2 ON/OFF Switch See VRL	1	-
244	Woodscrew securing Bracket	12	689	94438B	S101 Matching & Aux. Switch Unit	1	-
45780A	Bush & Plate Assy. }	4	854	35419K	Switch only	1	-
200023H	Screw	8	676	8602	Woodscrew securing Switch	4	689
201302	Washer	8	676	94783	Switch Bracket	1	689
49938E	Spring	4	00	8777	P.K. Screw securing Bracket	2	00
35851	Leather Washer	4	00	LOUDSPEAKERS			
46313	Cup	4	689	96166A	Loudspeaker (Tweeter)	1	00
46315	Screw	4	06	8651	Woodscrew)securing	4	689
For Further Details see Auto-Mech Manual.				201304	Washer)Loudspeaker	4	689
TRANSIT PACKING				93870R	Loudspeaker	2	00
200025K	Screw	4	843	200025H	Screw)securing	8	689
46316	Washer	4	843	201302	Washer)Loudspeaker	8	689
35851	Leather Washer	4	00	LOUDSPEAKERS IN EARLY MODELS			
91341	Bag	1	00	93870L	L.S.1. FROM BACK LH	1	
				93870C	L.S.2. FROM BACK RH	1	