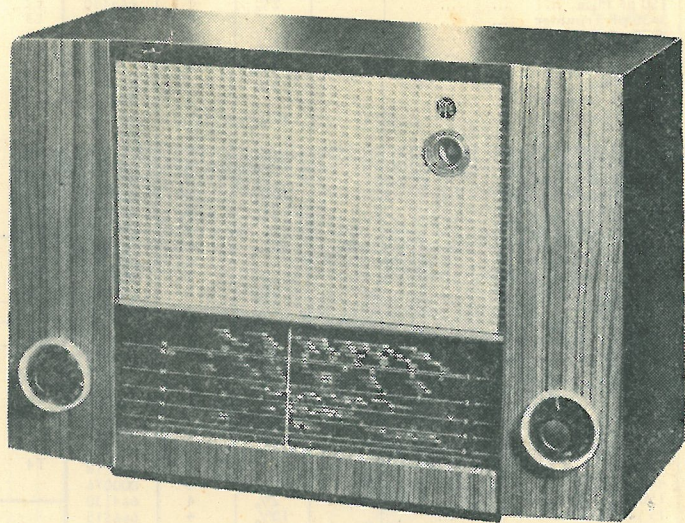


SERVICE SHEET FOR



model PZ92



FOR OPERATION OFF 230 VOLT 50 CYCLE A.C. MAINS

CIRCUIT ANALYSIS

TRIMMING PROCEDURE

Mains Consumption 54 watts. A.F. Output 4.5 watts.						Unsmoothed H.T. 263 volts. Smoothed H.T. 225 volts.				
	Valve	Mullard	Ea	Ia	Es	Is	Osc.		Ek	Ik
							Ea	Ia		
V1	R.F. Amplifier	EF.41	149	2.8	48	0.9	—	—	—	3.7
V2	Frequency Changer	ECH.81	186	0.9	48	2.5	120	6.2	—	9.6
V3	I.F. Amplifier	EF.41	225	3.1	48	0.8	—	—	—	3.9
V4	A.F. Amp. Det. and A.V.C.	EBC.41	74	0.5	—	—	—	—	—	0.5
V5	Output	EL.84	245	42.6	225	4.8	—	—	7.1	47.4
V6	Rectifier	EZ.40	Anode to Anode 500 V. A.C.						263	66.5
V7	Tuning Indicator	EM.34	225 (Target)		—	—	—	—	—	1.4

Note.—When switched to Gram., Ek for V1 and V2=3.3 volts. All measurements taken on B.C. band with no signal input. Gang fully meshed.
Mains input 230 V. A.C.
Measurements taken with an Avometer Model 8 instrument which has a resistance of 20,000 ohms per volt.

Apply Signals as below	Set Receiver Controls to	Adjust in order shown for Maximum Output
(1) 470 kc/s. between chassis and control grid of V2 via 0.1 μ F condenser	Low frequency end of Band 1.	Iron dust cores of T2 and T1
(2) 600 kc/s. between chassis and aerial socket via standard dummy aerial	Band 1. 600 kc/s.	Iron dust cores of L11, L6 and L1
(3) As (2) but 1,500 kc/s.	Band 1. 1,500 kc/s.	Trimmers C28, C12 and C2
(4) Repeat (2) and (3) until calibration and tracking are correct.		
(5) 3.3 Mc/s. between chassis and aerial socket via 400 ohm dummy aerial	Band 2. 3.3 Mc/s	Iron dust cores of L12, L7 and L2
(6) As (5) but 7.2 Mc/s.	Band 2. 7.2 Mc/s.	Trimmers C15 and C3
(7) Repeat (5) and (6) until calibration and tracking are correct.		
(8) As (5) but 9.6 Mc/s.	Band 3. 9.6 Mc/s.	Cores of L13, L8 and L3
(9) As (5) but 11.8 Mc/s.	Band 4. 11.8 Mc/s.	Cores of L14, L9 and L4
(10) As (5) but 15.3 Mc/s.	Band 5. 15.3 Mc/s.	Cores of L15, L10 and L5
(11) As (5) but 21.6 Mc/s.	Band 5. 21.6 Mc/s.	Trimmers C31, C17 and C7
(12) Repeat (10) and (11) until calibration and tracking are correct.		

In order to facilitate tuning of the aerial and R.F. circuits a resistor of 10 K ohms in series with a condenser of 0.01 μ F should be connected between V3 grid and chassis for all R.F. tests. This has the effect of reducing the I.F. sensitivity by about 20 times.

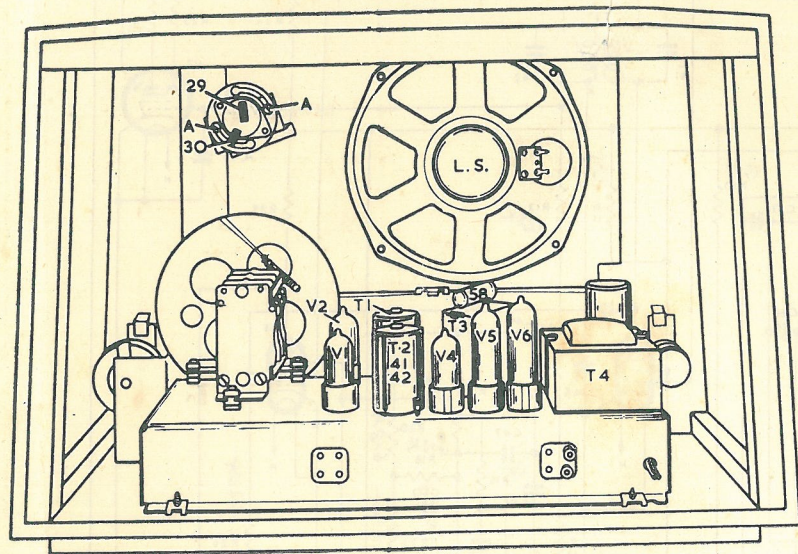
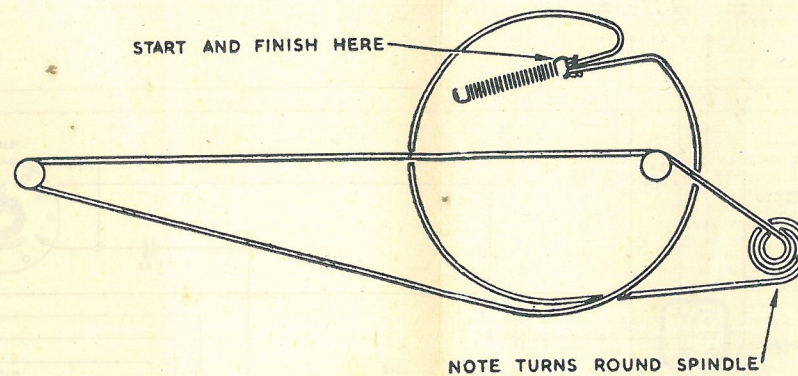


FIG. 1

DRIVE CORD VIEWED FROM FRONT OF CHASSIS WITH GANG FULLY CLOSED



THE DRIVE CORD SHOULD BE OF NYLON BRAIDED GLASS YARN LENGTH 53 1/2" BETWEEN CENTRES OF LOOPS

FIG. 2

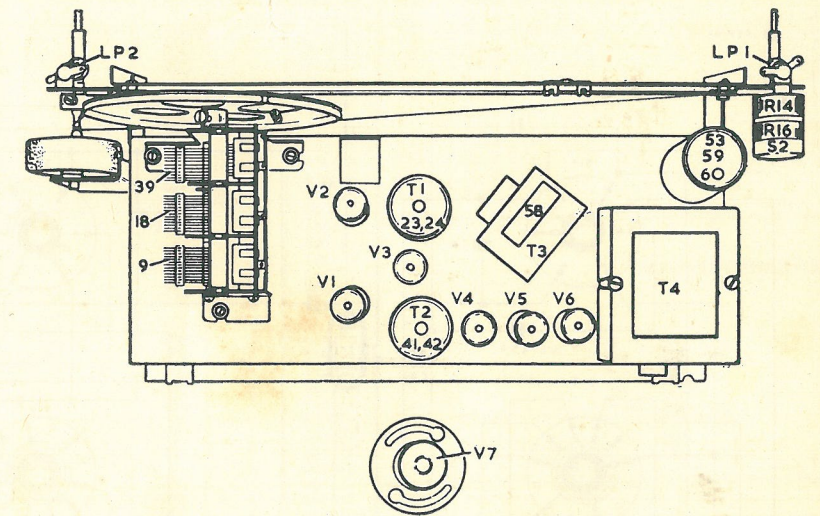
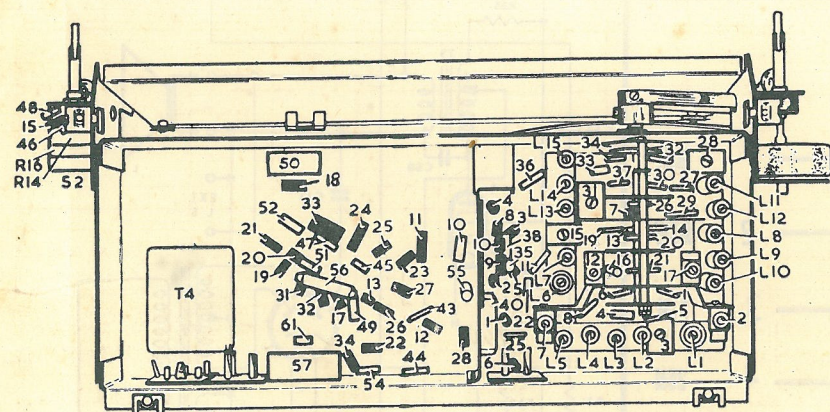


FIG. 3



NOTE: RESISTORS SHOWN SOLID BLACK



SIG
SIF
SIE

SID
SIC
SIB
SIA

CODING FOR SWITCH UNIT

FIG. 4

Notes

- 1 The Special Flywheel Tuning needs no maintenance other than a very occasional drop of oil.
- 2 A 100 division Trimming Scale is printed on the front of the drive drum for use when trimming the receiver outside the cabinet. With the Gang fully closed, a piece of wire should be fixed to the scale backplate to line up with O division; this will serve as a pointer for the scale. A Calibration Chart is printed adjoining the circuit diagram. When no accurate frequency standard is available the receiver should be calibrated against a reliable broadcasting station operating on a wavelength close to that specified in the Trimming Procedure. After the alignment has been carried out and the chassis refitted in the cabinet, the pointer should be lined up with the spots to be found at the right-hand end of the tracks.
- 3 External Speaker 2-4 ohms impedance.
- 4 Scale Bulbs 6.5 volts 0.3 amp.

TO REMOVE TUNING INDICATOR. Loosen two screws "A" (see Fig. 1), rotate circular baseplate in a clockwise direction to end of slots and pull out. When replacing the Tuning Indicator, reverse the above procedure, making sure that the shadows appear vertical. Tighten up two screws "A."

TO REMOVE CHASSIS.

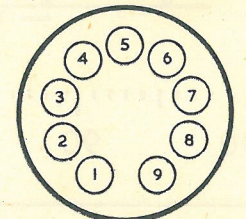
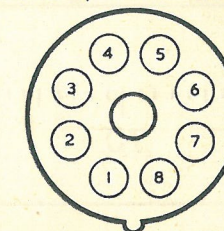
- 1 Remove back of set.
- 2 Pull off knobs.
- 3 Pull out Loudspeaker Plugs.
- 4 Remove Tuning Indicator.
- 5 Remove the four Chassis Fixing Screws from underside of cabinet.
- 6 Withdraw chassis.

VALVE BASE CONNECTIONS

	1	2	3	4	5	6	7	8	9
V1	H	A	G ₃ S	K G ₃ S	G 2	G 1	K G ₃ S	H	—
V2	G 2 G 4	G 1	G ₅ S	H	H	A H	G 3	A T	G T
V3	H	A	K G ₃ S	K G ₃ S	G 2	G 1	K G ₃ S	H	—
V4	H	A	G	S	D 1	D 2	K	H	—
V5	—	G 1	K G ₃	H	H	—	A	—	G 2
V6	H	A 1	—	—	—	A 2	K	H	—
V7	—	H	A 1	G	T	A 2	H	K	—

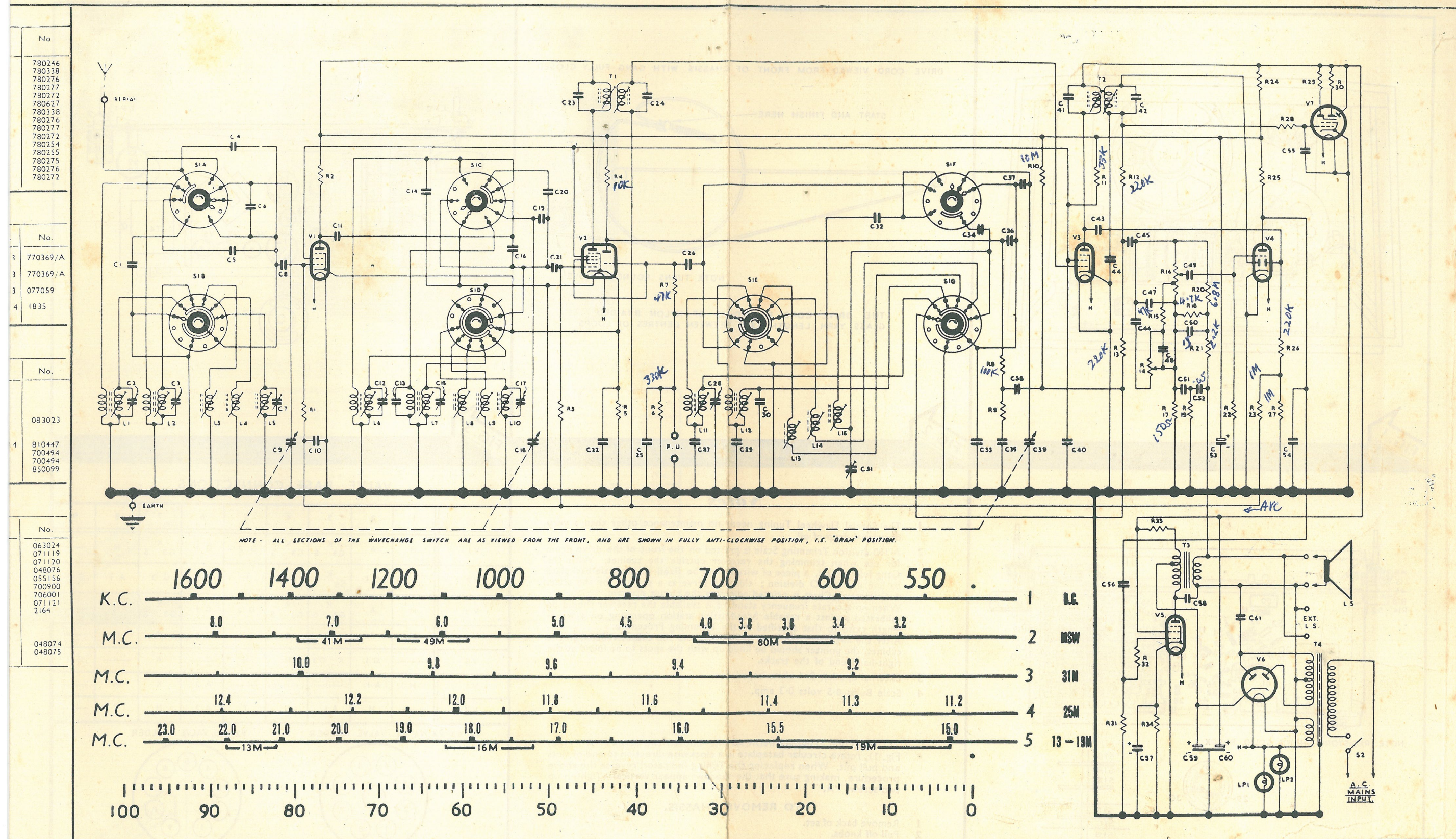
V1, V3, V4, V6, V7, VALVE HOLDER

V2, V5, VALVE HOLDER



VIEW LOOKING AT PINS

FIG. 5



CIRCUIT DIAGRAM and CALIBRATION CHART of the PYE MODEL PZ92 4109

PZ92

PZ 202 standard
(gram) same

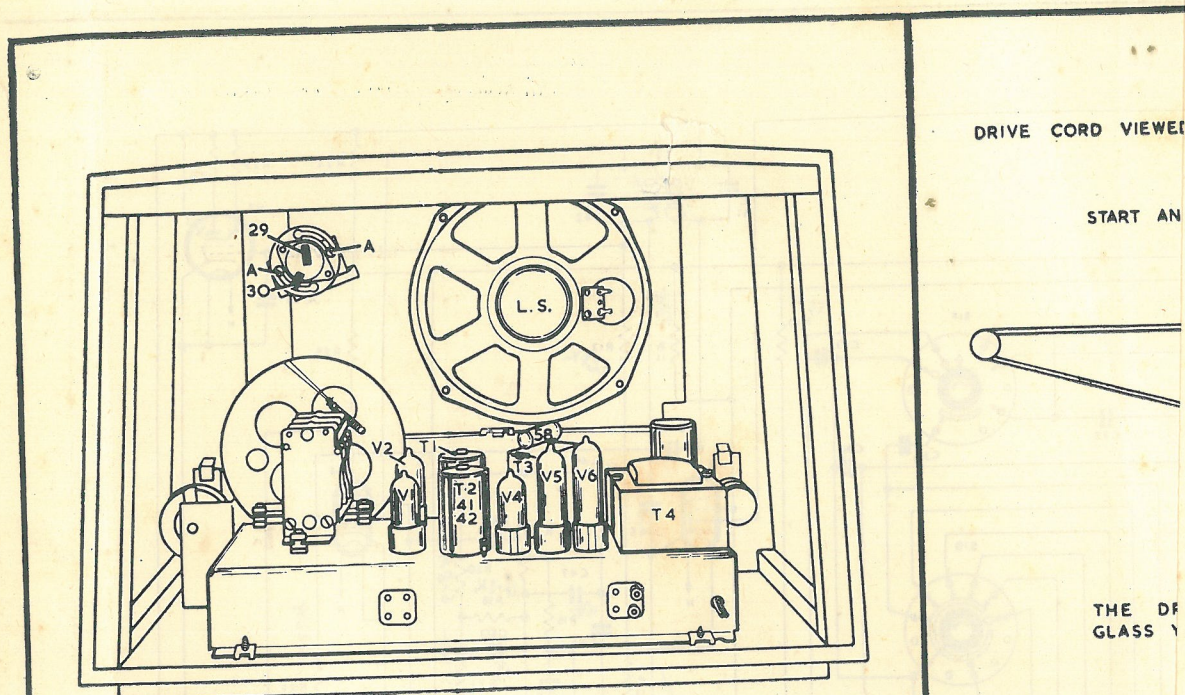


FIG. 1

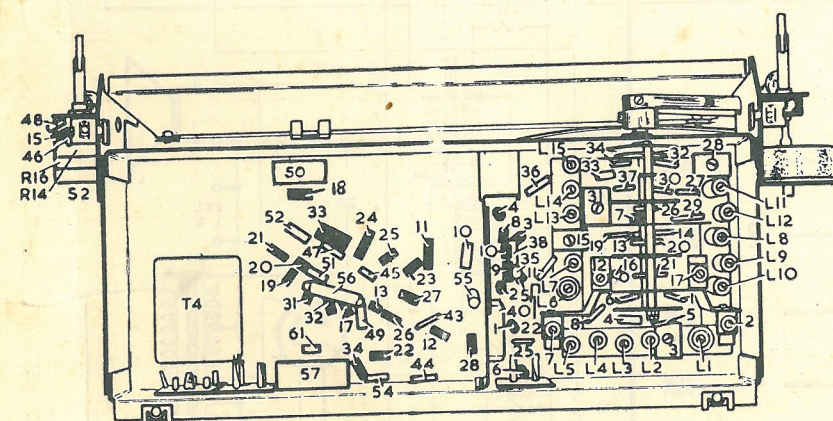
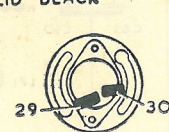


FIG. 2

NOTE: RESISTORS SHOWN SOLID BLACK



CODING FOR SWITCH UNIT

FIG. 4

DRIVE CORD VIEWED

START AN

THE DRIVE
GLASS

- 1 The Special
- 2 A 100 division
for use with
Gang fully
to line up
A Calibration
When no
calibrated
length close
After the
cabinet, the
right-hand
- 3 External S
- 4 Scale Bulb

TO REMOVE
Fig. 1), re
and pull o
procedur
two screw

- 1 Remove b
- 2 Pull off kn
- 3 Pull out L
- 4 Remove t
- 5 Remove t
- 6 Withdraw

CONDENSERS

	Specification	Volts	±	Fig.	No.
C1	150 pF Mica	100	2%	4	664130
C2	3-30 pF Trimmer			4	800169
C3	4-70 pF Trimmer			4	800076
C4	5-6 pF Ceramic		20%	4	666659
C5	36 pF Mica		2%	4	664024
C6	82 pF Mica		2%	4	664092
C7	3-30 pF Trimmer			4	800169
C8	100 pF Ceramic		20%	4	666806
C9	528 pF Swing Gang Condenser			3	800223
C10	0.05 μF Tubular	100		4	666806
C11	100 pF Ceramic		20%	4	800169
C12	3-30 pF Trimmer			4	800076
C13	27 pF Ceramic		10%	4	666845
C14	160 pF Mica		2%	4	664140
C15	4-70 pF Trimmer			4	800076
C16	5-6 pF Ceramic		20%	4	666659
C17	3-30 pF Trimmer			4	800169
C18	528 pF Swing Gang Condenser			3	800223
C19	82 pF Mica		2%	4	664092
C20	36 pF Mica		2%	4	664024
C21	100 pF Ceramic			4	666806
C22	0.05 μF Tubular	100		4	666776
C23	100 pF Mica		2%	3	666776
C24	100 pF Mica		2%	3	665330
C25	270 pF Mica		10%	4	666806
C26	100 pF Ceramic		20%	4	664272
C27	560 pF Mica		2%	4	800076
C28	4-70 pF Trimmer			4	663407
C29	2,700 pF Mica		5%	4	664718
C30	18 pF Mica		5%	4	800076
C31	4-70 pF Trimmer			4	800076
C32	150 pF Mica		2%	4	664130
C33	15 pF Ceramic		10%	4	666515
C34	150 pF Mica		2%	4	664130
C35	0.01 μF Tubular	350		4	669096
C36	100 pF Ceramic		20%	4	666806
C37	150 pF Mica		2%	4	664130
C38	0.01 μF Tubular	350		4	669096
C39	528 pF Swing Gang Condenser			3	800223
C40	0.05 μF Tubular	350		4	668966
C41	100 pF Mica		2%	1 and 3	666776
C42	100 pF Mica		2%	1 and 3	666776
C43	47 pF Mica		20%	4	665676
C44	100 pF Ceramic		20%	4	666806
C45	0.01 μF Tubular	150		4	669082
C46	0.002 μF Tubular	350		4	669096
C47	100 pF Ceramic		20%	4	666806
C48	0.01 μF Tubular	150		4	669082
C49	0.01 μF Tubular	150		4	669082
C50	0.5 μF Tubular	350		4	668610
C51	0.05 μF Tubular	100		4	
C52	0.05 μF Tubular	100		4	
C53	15 μF Electrolytic	350		3	
C54	100 pF Ceramic		20%	4	666806
C55	0.01 μF Tubular	500		4	
C56	0.01 μF Tubular	500		4	
C57	50 μF Electrolytic	12		4	667171
C58	0.005 μF Tubular	1,000		1 and 3	668870
C59	30 μF Electrolytic	350		3	
C60	30 μF			4	669098
C61	0.001 μF Tubular	300 A.C.		4	

Note: Integral part of I.F. Transformer.

RESISTORS

	Ohms	Watts	±	Fig.	No.
R1	1 meg.		20%	4	670410
R2	10,000		20%	4	670398
R3	1 meg.		20%	4	670410
R4	10,000		20%	4	670398
R5	330		20%	4	670389
R6	330,000		20%	4	670407
R7	47,000		20%	4	670402
R8	100,000		20%	4	670404
R9	47,000		20%	4	670402
R10	10 meg.		20%	4	670416
R11	33,000		10%	4	670460
R12	220,000		20%	4	670406
R13	220,000		20%	4	670406
R14	1 meg. Tone Control			4	810447
R15	47,000		20%	4	670402
R16	1 meg. Tapped 300,000 Volume Control			4	810447
R17	150		10%	4	670508
R18	4,700		10%	4	670526
R19	150		10%	4	670508
R20	6-8 meg.		20%	4	670415
R21	2,200		10%	4	670522
R22	10 meg.		20%	4	670416
R23	1 meg.		20%	4	670410
R24	3,300		20%	4	670357
R25	220,000		20%	4	670406
R26	220,000		20%	4	670406
R27	1 meg.		20%	4	670410
R28	2-2 meg.		20%	4	670412
R29	1 meg.		20%	1 and 4	670410
R30	1 meg.		20%	1 and 4	670410
R31	470,000		20%	4	670408
R32	10,000		20%	4	670398
R33	1,600		5%	4	671836
R34	150		10%	4	670508

INDUCTANCES

	Specification	Ref.	Fig.	No.
L1	Band 1 Aerial Coil	M.W. 7	4	780246
L2	Band 2 Aerial Coil	M.S.W. 4	4	780338
L3	Band 3 Aerial Coil	S.W. 6	4	780276
L4	Band 4 Aerial Coil	S.W. 5	4	780277
L5	Band 5 Aerial Coil	S.W. 3	4	780272
L6	Band 1 R.F. Coil	M.W. 17	4	780627
L7	Band 2 R.F. Coil	M.S.W. 4	4	780338
L8	Band 3 R.F. Coil	S.W. 6	4	780276
L9	Band 4 R.F. Coil	S.W. 5	4	780272
L10	Band 5 R.F. Coil	S.W. 3	4	780254
L11	Band 1 Osc. Coil	M.W. 9	4	780255
L12	Band 2 Osc. Coil	S.W. 12	4	780275
L13	Band 3 Osc. Coil	S.W. 7	4	780276
L14	Band 4 Osc. Coil	S.W. 6	4	780276
L15	Band 5 Osc. Coil	S.W. 3	4	780272

TRANSFORMERS

	Specification	Fig.	No.
T1	1st I.F. Trans. { Prim. 10 Ω Sec. 10.8 Ω }	1 and 3	770369/A
T2	2nd I.F. Trans. { Prim. 10 Ω Sec. 10.8 Ω }	1 and 3	770369/A
T3	Output Trans. { Prim. 450 Ω Sec. 450 Ω }	1 and 3	077059
T4	Mains Trans. { Prim. 32 Ω Sec. 138 Ω + 140 Ω }	1, 3 & 4	1835

SWITCHES, LAMPS, ETC.

	Specification	Fig.	No.
S1A	Rear Bank 4		
S1B	Front Bank 4		
S1C	Rear Bank 3		
S1D	Front Bank 3		
S1E	Front Bank 2		
S1F	Rear Bank 1		
S1G	Front Bank 1		
S2	ON/OFF Switch on Volume Control	3 and 4	810447
LP1	Dial Lamp 6.5 V. 0.3 A.	3	700494
LP2	Dial Lamp 6.5 V. 0.3 A.	3	700494
LS	Loudspeaker	1	850099

MISCELLANEOUS

	Item	No.
	Cabinet	063024
	Ornamental Strip	071119
	Magic Eye Escutcheon	071120
	Knob (Tone and Wavechange)	048076
	Knob (Tuning and Volume)	055156
	Knob Spring (Large)	700900
	Knob Spring (Small)	706001
	Knob Disc	071121
	Scale	2164
	Wavechange Indicator	048074
	Tone Indicator	048075

CIRCUIT