SERVICE SHEET FOR

model PZ100

FOR A.C. OR D.C.
MAINS OPERATION

CIRCUIT ANALYSIS

For Operation off 200—250 v. A.C. or D.C. Mains.
Mains Consumption 48 watts. Unsmooth H.T. 225 volts.
A.F. Output 2 watts. Smoothed H.T. 175 volts.

	Valve	Mullard	Ea	Ia	Es	Is	Osc. Ea	Osc. Ia	Ek	Ik
V1	Frequency Changer	UCH.42	175	—	65	5·0	90	3·9	—	—
V2	I.F. Amplifier	UF. 41	175	—	65	—	—	—	—	—
V3	Det. & L.F. Amp.	UBC.41	55	0·23	—	—	—	—	—	—
V4	Output	UL.41	215	46	175	—	—	—	11·7	—
V5	Rectifier	UY.41	225 v. A.C. Anode to Earth Line.						225	71

Note.—All measurements taken with receiver tuned to L.F. end of M.W. band. No signal input.
Mains input 240 v. A.C. into 230 to 250 v. tap.
Measurements taken with an Avometer Model 8 instrument which has a resistance of 20,000 ohms per volt.

TRIMMING PROCEDURE

Apply signal as below	Set receiver controls to	Adjust in order for maximum output
(1) 470 kc/s. between gang frame and control grid of V1 via 0·1 μF condenser.	**Gang fully meshed**	Iron dust cores T1 and T2.
(2) 600 kc/s. between Aerial and Earth sockets via Standard Dummy Aerial	600 kc/s.	Iron dust core L3.
(3) As (2) but 1,500 kc/s.	1,500 kc/s.	Trimmers C13 and C4.
(4) Repeat (2) and (3) until calibration and tracking are correct.		

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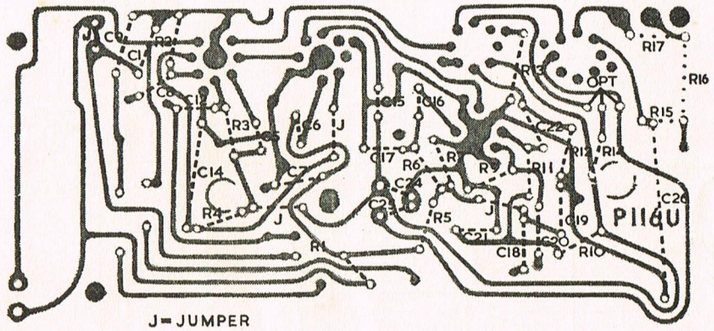
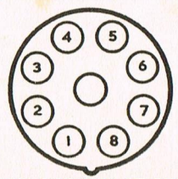


J = JUMPER

FIG. 1

VALVE BASE CONNECTIONS

	1	2	3	4	5	6	7	8
V1	H	A	AT	GT.G3	G2.G4	G1	K	H
V2	H	A	G3.K.S	G3.K.S	G2	G1	G3.K.S	H
V3	H	A	G	S	D1	D2	K	H
V4	H	A	—	—	G2	G1	K.G3	H
V5	H	A	—	—	—	—	K	H



VIEW LOOKING AT PINS

FIG. 2

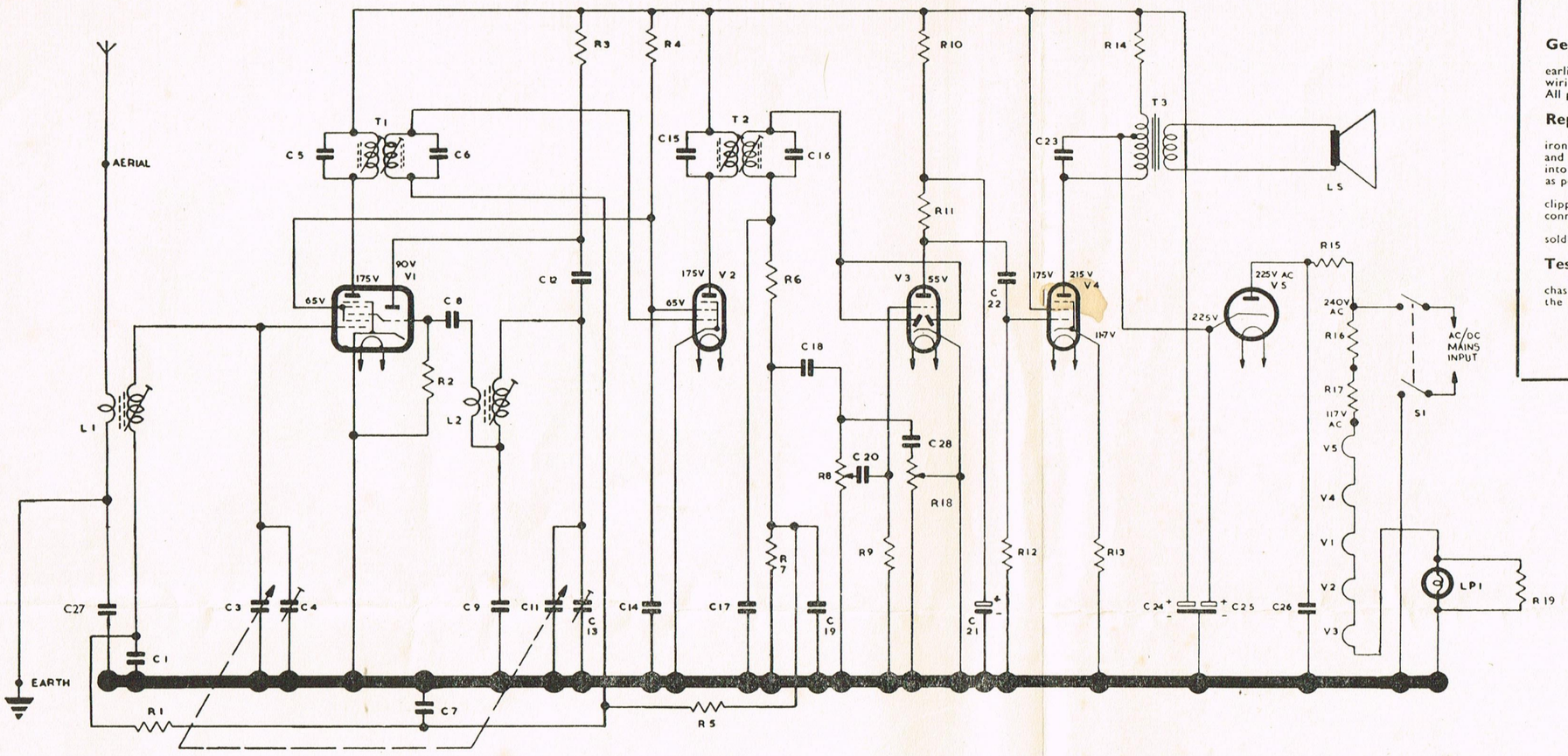
Notes

To Remove Chassis

(1) Disconnect the receiver from the mains supply
(2) Remove Card Back.
(3) Pull off knobs.
(4) Remove chassis fixing screws and clip
(5) Withdraw chassis.

Note.—When fixing card back in position after replacing the chassis, ensure that no excess mains lead is left in the cabinet and that the mains lead is firmly secured beneath the retaining clip.

Note.—BEFORE REMOVING THE CARD BACK, THE RECEIVER MUST BE COMPLETELY DISCONNECTED FROM THE MAINS SUPPLY.



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Notes

General

The printed circuit as used in this receiver replaces wire used in earlier receivers. This new method of circuitry offers uniform chassis wiring, fewer wiring troubles and simplifies circuit tracing and servicing. All parts are located on top of the chassis.

Replacing Parts

To avoid damaging printed circuits with excessive heat, use a soldering iron (60 watts maximum) with a small tip when replacing parts. Clean and tin replacement parts, and then melt the circuit solder before insertion into panel. To avoid running solder into adjoining circuits, use as little as possible.

For quick replacement, resistors and condensers may be replaced by clipping out the defective component and soldering the new one to the connecting wire from the original part.

Open or damaged sections of the printed circuit can be repaired by soldering a jumper of ordinary hook-up wire across the connection points.

Testing

Where the need arises for testing on the printed circuit side of the chassis plate, insulating varnish covering must first be scraped away from the test points

circuit diagram of the

MODEL PZ100

CONDENSERS

	Specification	Volts	±	Fig.	No.
C1	0·04 μF Tubular	150			669106
C2					
C3	523 pF Swing Gang Condenser				800361
C4†	3-30 pF Trimmer				
C5*	100 pF Mica		2%		666776
C6*	100 pF Mica		2%		666776
C7	0·02 μF Tubular	150			669105
C8	100 pF Ceramic		20%		666806
C9	510 pF Mica		2%		664535
C10					
C11	523 pF Swing Gang Condenser				800361
C12	100 pF Ceramic		20%		666806
C13†	3-30 pF Trimmer				
C14	0·05 μF Tubular	350			668807
C15*	100 pF Mica		2%		666776
C16*	100 pF Mica		2%		666776
C17	100 pF Ceramic		20%		666806
C18	0·01 μF Tubular	150			669082
C19	0·001 μF Tubular	400			669091
C20	0·01 μF Tubular	150			669082
C21	4 μF Electrolytic	250			667732
C22	0·01 μF Tubular	400			669096
C23	0·01 μF Tubular	600AC			668839
C24	50 μF + 50 μF Electrolytic	275			667708
C25					
C26	0·1 μF Tubular	300AC			669283
C27	250 pF Mica	2000			
C28	0·005 μF Ceramic		20%		

Note.—*Integral part of I.F. Transformer.
†Integral part of Gang Condenser.

RESISTORS

	Ohms	Watts	±	Fig.	No.
R1	470,000		20%		674368
R2	47,000		20%		674350
R3	22,000		20%		674364
R4	22,000		20%		674364
R5	2·2 meg.		20%		674370
R6	100,000		20%		674351
R7	470,000		20%		674368
R8	1 meg. Volume Control				
R9	10 meg.		20%		674355
R10	47,000		20%		674350
R11	470,000		20%		674368
R12	1 meg.		20%		674352
R13	220	½	10%		670434
R14	1,500	4	5%		670859
R15	180				
R16	930	20	5%		674635
R17	300				
R18	1 meg. Tone Control				
R19	47		20%		

INDUCTANCES

	Specification		Fig.	No.
L1	Aerial	M.W.7 A		780246 A
L2	Osc. Coil	M.W.9		780254

TRANSFORMERS

	Specification		Fig.	No.
T1	1st I.F. Transformer	Prim. 10·5Ω; Sec. 10·5Ω		077079
T2	2nd I.F. Transformer	Prim. 10·5Ω; Sec. 10·5Ω		077079
T3	Output Transformer	Prim. 225Ω; Sec. —		077069

SWITCHES, ETC.

	Specification	Fig.	No.
S1	ON/OFF Switch on Tone Control		
LP1	Dial Lamp 6 V. 0·04 A. (11 mm.)		
LS	Loudspeaker 5 inch P.M.		

MISCELLANEOUS

Item	Part No.