

# PILOT "MAJOR MAESTRO"

Four-valve, plus rectifier, medium and short waveband midget receiver in bakelite cabinet, for A.C./D.C. supplies. Models for 200-250 or 110 volts. Made by Pilot Radio, Ltd., 87, Park Royal Road, London, N.W.10.

**Circuit.**—Unusual point is that set covers medium and short bands (200-570 and 16.5-54 metres). Transformer coils for the two bands couple the aerial to V1, the frequency-changer. Similar coils are used in an orthodox oscillator circuit. Trimmer tuned I.F. transformers link up V2, the I.F. amplifier, and V3, the double-diode triode.

The demodulation and A.V.C. diodes of V3 have, in part, a common load, of which the volume control is a section. The triode is resistance-capacity coupled to V3, an output pentode, V4.

The rectifier, V5, is a full-wave type with strapped anodes in a straight-forward half-wave "universal" arrangement. In the 110 volts model, a choke

takes the place of the speaker field and the latter is connected across the H.T. output.

In the 110 volts model, R9, 12 and 13 are of 10,000 ohms (instead of 22,000), C18 is 400 mmfds. (150 mmfds.), C25 is 40 mfd. (8 mfd.), R7 is 215 ohms (660 ohms), and the speaker field is 2,500 ohms (1,000 ohms).

### GANGING

**I.F. Circuits.**—Adjust trimmers at 451 kcs.

**S.W. Band.**—Trim with T1 and T2 at 17 metres. Padding is fixed.

**M.W. Band.**—Trim with T3 and T4 at 200 metres. Pad with T5 at 500 metres.

### VALVE READINGS

Valve	Type	Anode	Ser.	Cat.	Heater.
1	6ASG	145	65	—	6.3
		82.5 (osc. anode)			
2	6K7G	145	65	—	6.3
3	6Q7G	55	—	—	6.3
4	25A6G	135	145	20	25
5	25Z6G	—	—	232	25

### RESISTANCES

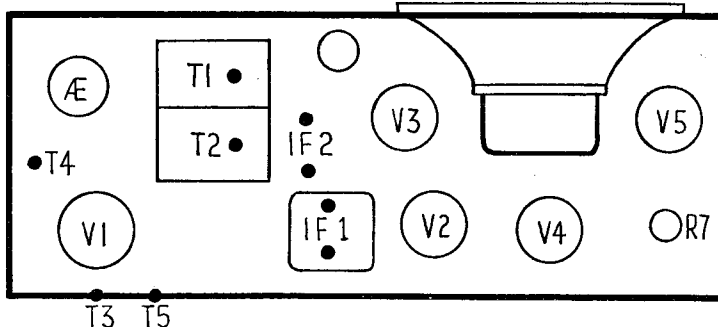
R	Ohms.	R	Ohms.
1	200	8	33,000
2	39,000	9	22,000
3	1 meg.	10	1 meg.
4	9.5 meg.	11	100,000
5	270,000	12	22,000
6	470	13	22,000
7	660	Field	1,000

## Fault in Conduit Caused Buzz in Receiver

LOUD buzzing sounds were heard on a radio when it was tuned to any station but the local. The sound was recognised as arcing. As the set appeared perfectly normal, attention was directed to the house wiring.

The set was getting its supply off the lighting circuit. On knocking the conduit below the light switch the buzzing sound varied. It was found that lead-covered wiring had been used within the metal conduit. The lead covering was making intermittent contact with the conduit.

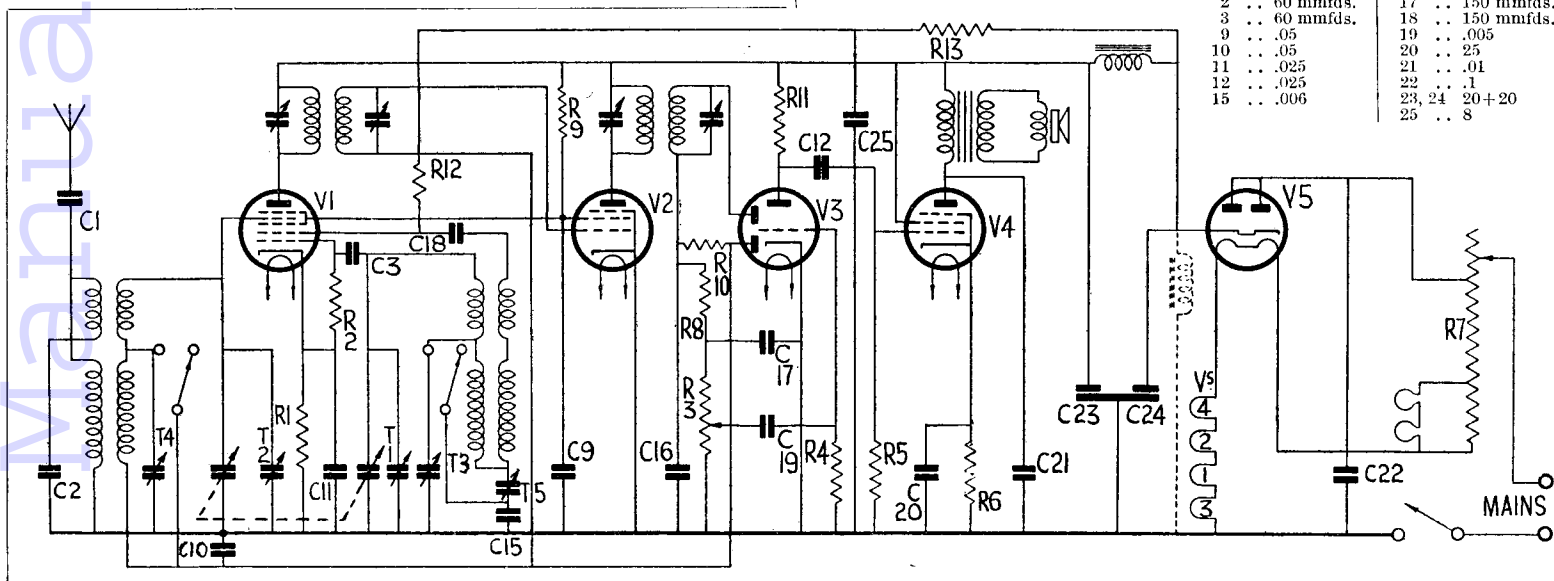
Another noise-making fault in the electrical circuit of a house was found to be due to a loose-contact fuse.—ALFRED ROSE, London, N.16.



A compact universal receiver, the "Major Maestro," has a simple and conventional two-waveband circuit.

### CONDENSERS

C	Mfds.	C	Mfds.
1	60 mmfds.	16	150 mmfds.
2	60 mmfds.	17	150 mmfds.
3	60 mmfds.	18	150 mmfds.
9	.05	19	.005
10	.05	20	.25
11	.025	21	.01
12	.025	22	.1
15	.006	23, 24	20+20
		25	8



## Intermittent Working

SEVERAL Marconiphone 885 models have come in for intermittent working, and the fault has been caused in the same way.

In the first case I traced the fault to an I.F. transformer primary. On testing with an ohmmeter everything seemed in order.

After some searching I found that the trimming condenser had an intermittent high resistance short which only occurred when there was a high voltage across it.

The fault is due to the construction of the trimmers which have two claws on the free ends. These in time cut through the dielectric.—F. L. DRUMMER, Drummer's Radio, Southampton.

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### VALVE READINGS

V.	Type.	Electrode.	Volts.	Ma.
1	KTW63	Anode	230	4.6
		Screen	80	2
		Cathode	2.2	6.6
2	X65	Anode	230	1.5
		Osc. anode	105	5
		Screen	80	2.5
		Cathode	2.2	8.8
3	KTW63	Anode	195	5.5
		Screen	80	1
		Cathode	2.2	6.5
4	D63	Diodes only		
5	DH63	Anode	80	6
6	KT66	Anode	253	7.5
		Screen	230	4.1
		Cathode	16	70
	U50	Anodes	385 A.C.	
		Cathode	355	102.4
8	Y63	Target	230	

### RESISTANCES

R	Ohms.	R	Ohms.
1	.1 meg.	19	100
2	.350	20	.23 meg.
3	.23 meg.	21	1.5 meg.
4	.35 meg.	22	1.5 meg.
5	.230	23	.5 meg.
6	.150	24	50,000
7	35,000	25	.5 meg.
8	35,000	26	1,000
9	23,000	27	200
10	.350	28	1,500
11	5,000	29	3,500
12	.5 meg.	30	15
13	2.3 meg.	31	50
14	2.3 meg.	32	50,000
15	.5 meg.	34	1,000
16	.23 meg.	35	10,000
17	15,000	VR1	2 meg.
18	15,000	Field	670

For more information number www.savoyradio.co.uk