FERGUSONIC 909, 908

"MAINS MINORS"

Four-valve, plus rectifier, A.C.–D.C. superhet "compact" covering short- and medium-wave bands. Model 908 covers medium and long bands. Made by Ferguson Radio, Ltd., Gt. Cambridge Road, Enfield, Middx.

Circuit.—(Model 909.) The aerial is coupled by transformer coils, both primaries and secondaries being switched, to V1, the frequency-changer. Transformer coils are also used in the oscillator section, the anode coils being tuned. The S.W. grid coil remains in circuit on M.W.

Trimmer-tuned I.F. transformers lead to V2, the I.F. amplifier, and V3, the diode-diode triode. The demodulation and A.V.C. circuits are straightforward, A.V.C., being applied to V1 and V2 on both bands. V1, V2 and V3 have a common cathode return.

V3 is resistance-capacity coupled to V4, the output pentode. V5 is a half-wave rectifier with a series smoothing choke. All the valves are run in series and with a line cord resistance to break down the mains voltage.

MODEL 908.—This is identical to the 909 except for the variably tuned circuits, which cover M. and L. waves.

The aerial is connected through a condenser to a coil which acts as a choke on M.W. and a transformer primary on L.W. On L.W. an extra coupling coil with shunt condenser is switched in. On M.W., the L.W. grid coil acts as an aerial coupling coil and is condenser fed from the aerial choke.

The oscillator circuits are tuned grid, with a common coupling coil fed by condenser from the anode.

GANGING

I.F. CIRCUITS.—Tune to M.W. maximum. Inject 470 kc. and adjust I.F. trimmers.

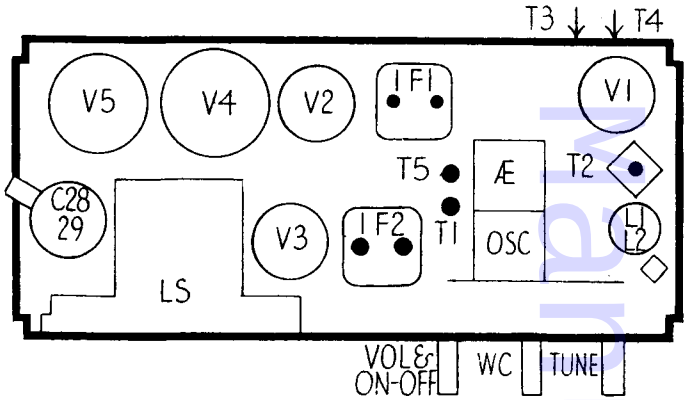
M.W. BAND.—Tune to 214 m., inject 1,400 kc. and adjust T3, T4. Pad with T5 at 500 m. (600 kc.), rocking gang slightly.

S.W. BAND.—Trim with T1 and T2 at convenient point at bottom of band. Padding is fixed.

L.W. BAND (Model 908).—Adjust osc. and aerial trimmers at 1,250 m. (240 kc.) and pad with series oscillator capacity at 2,000 m. (150 kc.).

RESISTANCES

R		Ohms.	R		Ohms.
1	..	25,000	11	..	150
2	..	50,000	12	..	.5 meg.
3	..	20	13	..	.5 meg.
4	..	.5 meg.	14	..	1 meg.
5	..	25,000	15	..	100
6	..	.1 meg.	16	..	100
7	..	.5 meg.	17	..	655
8	..	.5 meg.	18	..	50
9	..	2 meg.	L1	..	1,200
10	..	50,000	L2	..	650



Chassis layout of the Mains Minor. Models 909, 908 are similar except for the variably tuned circuits.

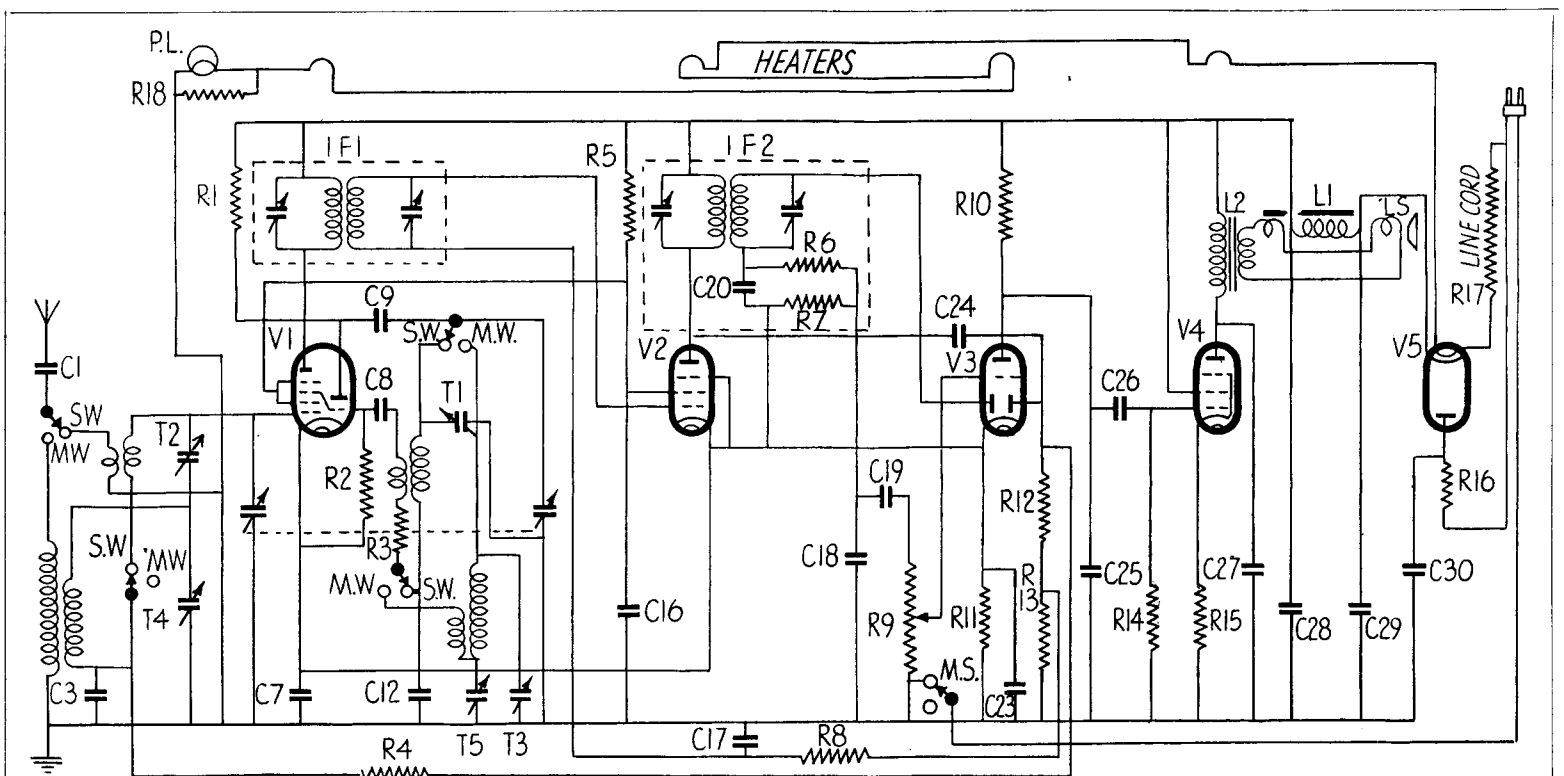
CONDENSERS

C		Mfd.	C		Mfd.
1	..	500 mmfds.	19	..	.02
3	..	.1	20	..	.00025
7	..	.1	23	..	25
8	..	100 mmfds.	24	..	.0001
9	..	100 mmfds.	25	..	.0005
12	..	.005	26	..	.02
13	..	.00065	27	..	.005
16	..	.1	28	..	16
17	..	.1	29	..	16
18	..	.00025	30	..	.02

VALVE READINGS

V	Type	Electrode	Volts	Ma.
1	ECH3	Anode	175	1.5
		Screen	85	2.5
		Osc. anode	75	4
2	EF9	Anode	175	5
		Screen	85	1.5
3	EBC3	Anode	90	—
4	7D6	Anode	150	30
		Screen	175	5
5	1D5	Cathode	250	—

Pilot lamps, 6–8v., .2 amp.



The circuit of the 909, covering medium and short wavebands. Model 908 covers medium and long bands, but, except for the aerial and oscillator circuits, is the same as the 909.

PHILIPS MODEL 735A

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WINDINGS

L.		Ohms.	L		Ohms.
2	..	300	19	..	32
3	..	less than .5	20	..	8.5
4	..	less than .5	21	..	125
5	..	26	22	..	125
6	..	90	23	..	40
7	..	4.5	24	..	45
8	..	4.4	25	..	45
9	..	48	26	..	90
10	..	45	27	..	800
11	..	.7	28	..	1.5
12	..	.7	29	..	28
13	..	2	30	..	28
14	..	less than .5	31	..	3.5
15	..	less than .5	32	..	800
16	..	1	33	..	23
17	..	8	34	..	23
18	..	2	35	..	110