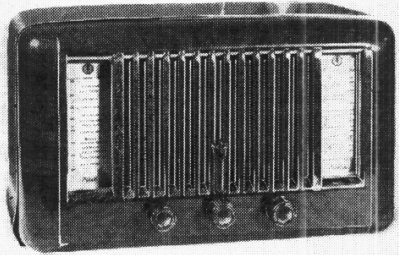


"TRADER" SERVICE SHEET

913

PILOT LITTLE MAESTRO MODEL 10 A.C./D.C.



COMPONENTS AND VALUES

THERE are two Pilot model 10 "Little Maestro" receivers: an A.C. version and an A.C./D.C. version. This *Service Sheet* covers the A.C./D.C. version only; the A.C. version is covered separately in *Service Sheet* 912.

The receiver is a 4-valve (plus rectifier) 2-band superhet designed to operate from A.C. or D.C. mains of 200-250 V without voltage adjustment. The waveband ranges are 200-550 m and 1,000-2,000 m. The plastic cabinet may be in walnut or coloured finishes.

Release date and original price: April 1949; £10 13s. 6d. plus purchase tax. Coloured finishes 4s. 7d extra.

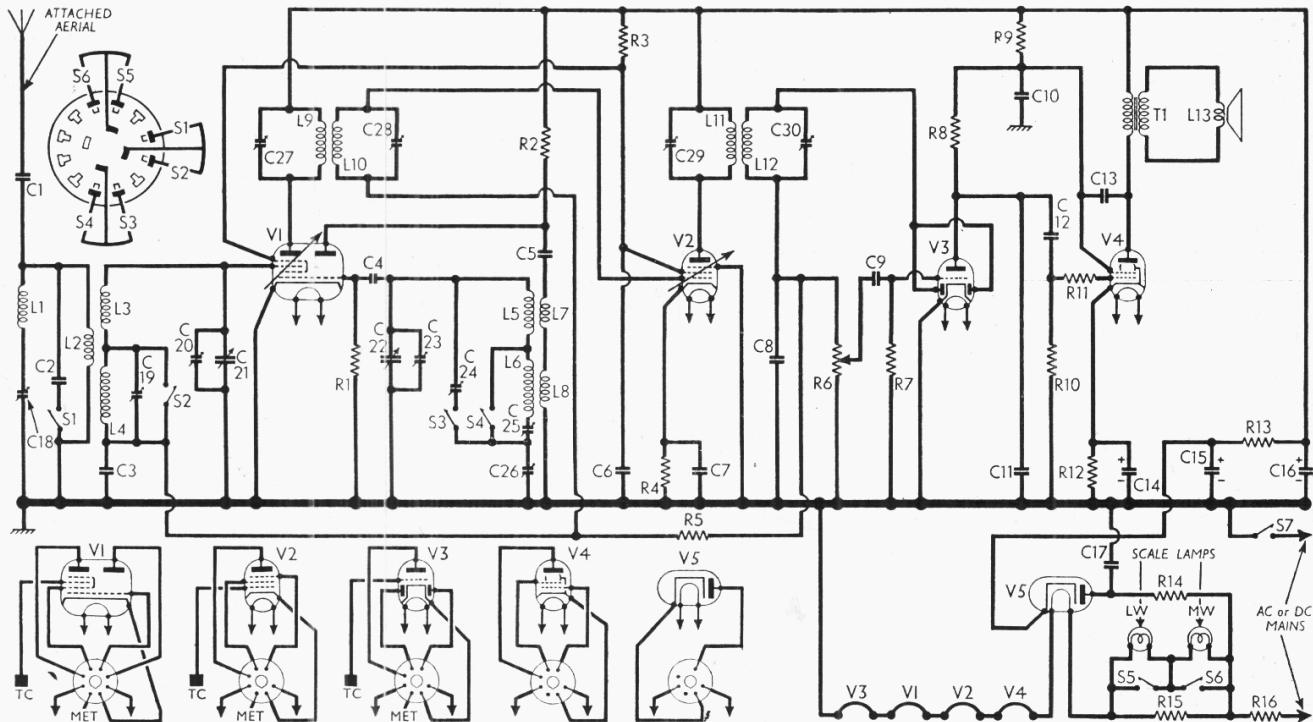
CAPACITORS		Values (uF)	Locations
C1	Aerial series ...	0-0003	A1
C2	Aerial L.W. shunt ...	0-0003	J3
C3	A.G.C. decoup. ...	0-1	H4
C4	V1 osc. C.G. ...	0-00006	A2
C5	Osc. anode coup. ...	0-0001	A2
C6	S.G.'s decoupling ...	0-1	J4
C7	V2 cath. by-pass ...	0-05	F5
C8	I.F. by-pass ...	0-0003	G3
C9	A.F. coupling ...	0-002	G3
C10	H.T. feed decoup. ...	0-25	H4
C11	I.F. by-pass ...	0-0003	F4
C12	A.F. coupling ...	0-01	F4
C13	Tone corrector ...	0-01	F4
C14*	V4 cath. by-pass ...	50-0	E4
C15*	H.T. smoothing ...	16-0	E4
C16*		16-0	D1
C17	Mains R.F. by-pass ...	0-05	E4
C18†	I.F. filter tune ...	0-0001	A1
C19†	Aerial L.W. trim ...	0-0001	A1
C20†	Aerial M.W. trim ...	—	A1
C21†	Aerial tuning ...	0-000483	A1
C22†	Oscillator tuning ...	0-000483	A2
C23†	Osc. M.W. trim. ...	—	A2
C24†	Osc. L.W. trim. ...	0-0001	A2
C25†	Osc. L.W. tracker ...	0-0003	H5
C26†	Osc. M.W. tracker ...	0-0007	H5
C27†	1st I.F. transformer ...	—	B2
C28†		tuning ...	—
C29†	2nd I.F. trans- former tuning ...	—	G4
C30†		—	G4

RESISTORS		Values (ohms)	Locations
R1	V1 osc. C.G. ...	33,000	J5
R2	Osc. Anode load ...	22,000	J5
R3	S.G.'s H.T. feed ...	33,000	G5
R4	V2 fixed G.B. ...	100	F5
R5	A.G.C. decoup. ...	1,000,000	H4
R6	Volume control ...	250,000	F3
R7	V3 C.G. resistor ...	10,000,000	F4
R8	V3 triode load ...	270,000	F4
R9	H.T. feed decoup. ...	22,000	F5
R10	V4 C.G. resistor ...	270,000	F5
R11	V4 C.G. stopper ...	4,700	F5
R12	V4 G.B. resistor ...	270	F5
R13	H.T. smoothing ...	1,500	E5
R14	V5 surge limiter ...	100	E5
R15	Scale lamps shunt ...	100	J3
R16	Heater ballast ...	830	B2

OTHER COMPONENTS		Approx. Values (ohms)	Locations
L1	I.F. filter coil ...	22-0	A1
L2	Aerial coup. coil ...	14-0	A1
L3	Aerial tuning coils ...	2-5	A1
L4		16-5	A1
L5	Oscillator tuning coils ...	3-0	A2
L6		6-5	A2
L7	Oscillator reaction coils, total ...	3-0	A2
L8		3-0	A2

(Cont. col. 1 overleaf)

* Electrolytic. † Variable. ‡ Pre-set.



Circuit diagram of the Pilot Little Maestro Model 10 A.C./D.C. two-band superhet. Inset, in the top left-hand corner, is a diagram of the waveband switch unit, drawn as seen from the rear of an inverted chassis.

OTHER COMPONENTS (continued)			Approx. Values (ohms)	Locations
L9	1st I.F. trans. { Pri.		10-0	B2
L10		Sec.	10-0	B2
L11	2nd I.F. trans. { Pri.		34-0	G4
L12		Sec.	34-0	G4
L13	Speech coil		2-5	—
T1	Speaker trans. { Pri.		480-0	C1
	Sec.		0-6	—
S1-S6	W/band switches...		—	H3
S7	Mains sw., g'd R6...		—	F3

CIRCUIT DESCRIPTION

Input from attached aerial via series capacitor **C1**, is inductively coupled by **L2** to single-tuned circuits **L3, C21** (M.W.) and **L3, L4, C21** (L.W.) which precede a triode hexode valve (**V1, Brimar 12K8GT**) operating as frequency changer with electron coupling. A filter circuit **L1, C18** removes interfering signals at the intermediate frequency, and a fixed capacitor **C2** is shunted across **L2** on L.W. to prevent M.W. breakthrough.

Triode oscillator grid coils **L5** (M.W.), **L5, L6** (L.W.) are tuned by **C22**, with parallel trimming by **C23** (M.W.), **C24** (L.W.), and series tracking by **C26** (M.W.) and **C25, C26** (L.W.). Inductive reaction coupling from anode, via **C5**, by coils **L7** (M.W.) and **L7, L8** (L.W.).

Second valve (**V2, Brimar 12K7GT**) is a variable-mu R.F. pentode operating as intermediate frequency amplifier with tuned transformer couplings **C27, L9, L10, C28** and **C29, L11, L12, C30**.

Intermediate frequency 451 kc/s.

Diode second detector is part of double diode triode valve (**V3, Brimar 12Q7GT**), the diode sections of which are wired in parallel. Audio frequency component in rectified output is developed across volume control **R6**, which is also the load resistor, and passed, via A.F. coupling capacitor **C9** and C.G. resistor **R7**, to grid of triode section, which operates as A.F. amplifier. I.F. filtering by **C8** and **C11** in diode and triode anode circuits respectively.

The D.C. component developed across **R6** is tapped off and fed back through a decoupling circuit **R5, C3** as G.B. to F.C. and I.F. valves giving automatic gain control.

Resistance-capacitance coupling by **R8, C12, R10**, via grid stopper **R11**, between **V3** triode and beam tetrode output valve

Plan view of the chassis, indicating the positions of all adjustments involved in circuit alignment, with the exception of those for trackers **C25, C26**, which are mounted on the rear chassis member. The attached aerial connecting tag is also identified.

