

PYE - P/B

VALVE ANALYSIS

CAPACITORS		Values (μ F)
C1†	Frame aerial tuning ...	—
C2†	V1 anode tuning ...	—
C3†	Oscillator circuit tuning ...	—
C4†	V1 anode MW trimmer ...	—
C5†	Osc. circ. MW trimmer ...	—
C6	AVC line-decoupling ...	0.1
C7	V1, V3 SG decoupling ...	0.1
C8	V1 anode decoupling ...	0.1
C9†	V1 anode LW trimmer ...	—
C10	V2 CG capacitor ...	0.00002
C11	V2 SG decoupling ...	0.1
C12†	1st IF trans. pri. tuning ...	—
C13†	1st IF trans. sec. tuning ...	—
C14	V2 anode decoupling ...	0.1
C15†	Osc. circ. LW trimmer ...	—
C16†	2nd IF trans. pri. tuning ...	—
C17†	2nd IF trans. sec. tuning ...	—
C18	IF by-pass capacitors ...	0.0001
C19		0.002
C20	AF coupling to T1 ...	0.25
C21	Part tone corrector ...	0.0025

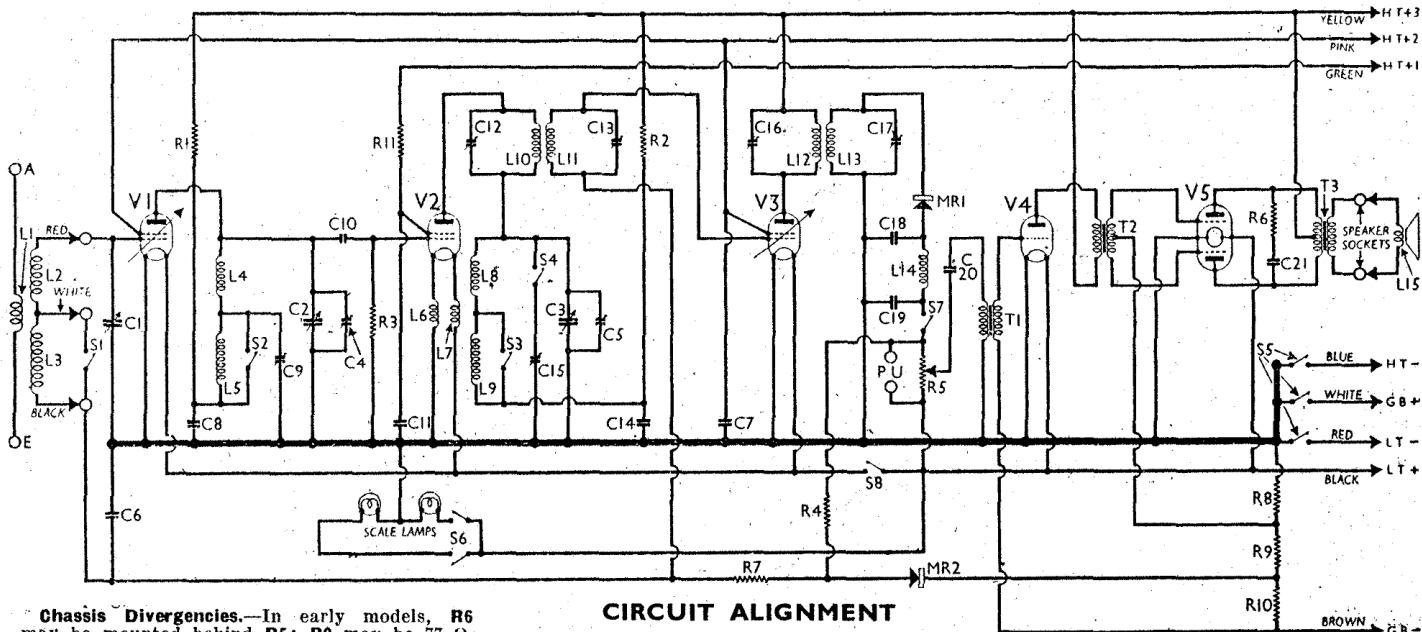
† Variable. ‡ Pre-set.

OTHER COMPONENTS		Approx. Values (ohms)
L1	Frame aerial windings ...	Very low
L2		1.83
L3		20.7
L4	V1 anode tuning coils ...	4.0
L5		32.0
L6	V2 filament reaction coup-	0.38
L7	ling coils ...	0.38
L8	Oscillator circuit tuning	2.25
L9		9.0
L10	1st IF trans. { Pri.	100.0
L11		100.0
L12	2nd IF trans. { Pri.	120.0
L13		170.0
L14	IF filter choke ...	230.0
L15	Speaker speech coil ...	4.23
T1	1st intervalve { Pri.	720.0
	trans. ... { Sec.	4,200.0
T2	2nd intervalve { Pri.	990.0
	trans. ... { Sec., total	810.0
T3	Output trans. { Pri., total	670.0
	trans. ... { Sec.	0.23
S1-S4	Waveband switches ...	—
S5	Battery circuit switch ...	—
S6	Scale lamp switch ...	—
S7, S8	Radio muting switches ...	—

Valve	Anode Voltage (V)	Anode Current (mA)	Screen Voltage (V)	Screen Current (mA)
V1 8215VM	127	1.1	66	0.4
V2 8215VM	127	1.0	*	0.4
V3 8215VM	130	1.1	66	0.4
V4 L2	129	1.5	—	—
V5 PD220	129†	0.5†	—	—

† Each anode. * According to HT + 1 tapping.

RESISTORS		Values (ohms)
R1	V1 anode HT feed ...	2,000
R2	V2 anode HT feed ...	2,000
R3	V2 CG resistor ...	250,000
R4	AVC line decoupling ...	100,000
R5	Manual volume control;	
	MRI load resistor ...	40,000
R6	Part tone corrector ...	5,000
R7	AVC line decoupling ...	20,000
R8	GB and AVC delay poten-	77
R9		118
R10		182
R11	V2 SG HT feed ...	65,000



Chassis Divergencies.—In early models, R6 may be mounted behind R5; R9 may be 77 Ω , and R10 223 Ω . R11 may be omitted altogether, but the makers recommend that it should be fitted when the receiver is being serviced.

Service Notes.—In cases where poor results are obtained on MW, but operation is satisfactory on LW, it is probable that the LW coil L9 is open-circuited.

The makers recommend that the original wire-wound cotton covered resistors should be replaced with the modern carbon types, as these are more reliable.

CIRCUIT ALIGNMENT

IF Stages.—The chassis must be removed from the cabinet. Connect signal generator leads via a 0.001 μ F condenser to control grid of V2 and chassis, and connect another condenser of about 0.1 μ F across C3 to mute the oscillator circuit. Feed in a 114 kc/s (2631.5 m) signal, and adjust C12, C13, C16 and C17 for maximum output. Remove 0.1 μ F condenser.

RF and Oscillator Stages.—With the gang at maximum capacity (edges of fixed and moving vanes parallel) the line across the centre of the scale should be horizontal. Replace chassis in cabinet, and couple signal generator output via a single turn loop of wire round the cabinet.

MW.—Switch set to MW, tune to 200 m on scale, feed in a 200 m (1,500 kc/s) signal, and adjust C5 for maximum output, selecting the peak involving the lesser trimmer capacity if two are found. Then adjust C4, and return to C5 if necessary.

LW.—Switch set to LW, screw up C9 to maximum, then unscrew it half a turn. Tune to 725 m on scale, feed in a 725 m (413.8 kc/s) signal and adjust C9 for maximum output. Tune to 850 m, feed in an 850 m (352.9 kc/s) signal, and adjust C15 for maximum output on the peak requiring the greater trimmer capacity.