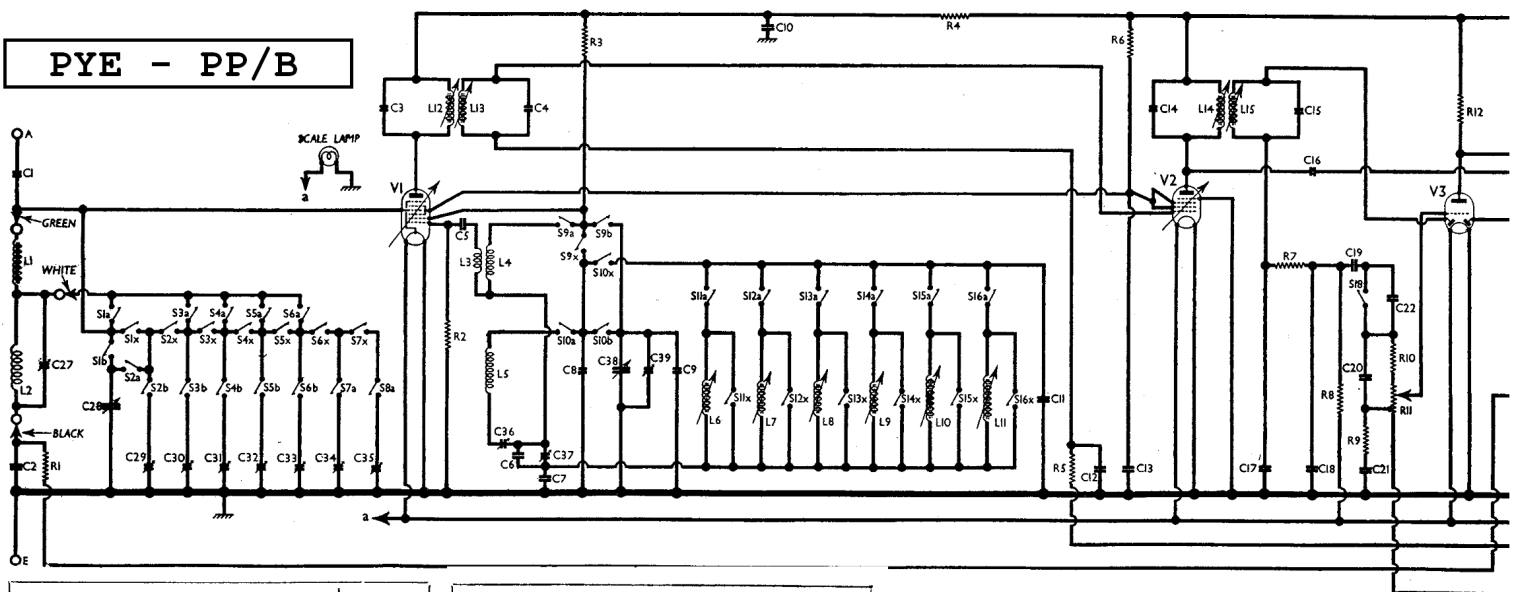


# PYE - PP/B



## CONDENSERS

Values (μF)

C1	Ext. aerial series condenser	0.000005
C2	V1 pentode CG decoupling	0.1
C3	1st IF transformer fixed	0.00007
C4	tuning condenser	0.00007
C5	V1 osc. CG condenser	0.0002
C6	Osc. circuit MW fixed	0.0009
C7	Oscillator reaction coupling	0.001
C8	Osc. LW and auto trimmer	0.00003
C9	Osc. circ. MW fixed	0.00003
C10	trimmer	0.00003
C11	V1 anode RF by-pass	0.1
C12	Osc. circuit auto tuning	0.00063
C13	V2 CG decoupling	0.1
C14	V1, V2 SG's decoupling	0.1
C15	2nd IF transformer fixed	0.00006
C16	tuning condensers	0.00008
C17	Coupling to V3 AVC diode	0.00002
C18	IF by-pass condensers	0.0001
C19	AF coupling to V3 triode	0.0001
C20	Parts of tone compensating	0.0002
C21	circuit	0.01
C22	Bass attenuator	0.0005
C23	AF coupling to T1	0.1
C24	High-note attenuator	0.0001
C25	Part of fixed tone corrector	0.001
C26*	HT reservoir condenser	8.0
C27*	Frame aerial MW trimmer	—
C28*	Frame aerial manual tuning	—
C29*	Aerial LW trimmer...	—
C30*	—	—
C31*	Aerial circuit MW	—
C32*	tuning condensers	—
C33*	—	—
C34*	Aerial circuit LW	—
C35*	tuning condensers	—
C36*	Osc. circuit LW tracker	—
C37*	Osc. circuit MW tracker	—
C38*	Osc. circuit manual tuning	—
C39*	Osc. circuit MW trimmer...	—

## OTHER COMPONENTS

Approx. Values (ohms)

L1	Frame LW loading coil	6.0
L2	Frame aerial winding	1.0
L3	Oscillator MW reaction coil	0.5
L4	Osc. circuit MW tuning coil	2.0
L5	Osc. circuit LW tuning coil	4.5
L6	—	0.5
L7	Oscillator circuit MW	0.5
L8	auto tuning coils	2.0
L9	—	2.0
L10	Oscillator circuit LW	4.3
L11	auto tuning coils	4.3
L12	1st IF trans. Pri.	10.5
L13	Sec.	10.5
L14	2nd IF trans. Pri.	10.5
L15	Sec.	10.5
L16	Speaker speech coil	2.4
T1	Intervalve Pri.	950.0
T2	trans. Sec., total	8,400.0
	Pri., total	950.0
	trans. Sec.	0.2
S1a, b, x	Aerial circuit waveband switches	—
S2a, b, x	—	—
S3a, b, x	Aerial circuit auto selector to S8a	—
S9a, b, x	Oscillator circuit waveband switches	—
S10a, b, x	—	—
S11a, x to S16a, x	Oscillator circuit auto selector switches	—
S17x	GB circuit switch	—
S17y	HT circuit switch	—
S17z	LT circuit switch	—
S18	Bass control switch	—
S19	"Top" control switch	—

\* Electrolytic. † Variable. Pre-set.

## RESISTANCES

Values (ohms)

R1	V1 pentode CG decoupling	1,100,000
R2	V1 osc. CG resistance	110,000
R3	V1 osc. anode HT feed	22,000
R4	V1 anodes HT feed	1,000
R5	V2 CG decoupling	1,100,000
R6	V1, V2 SG's HT feed	47,000
R7	IF stopper	110,000
R8	V3 signal diode load	470,000
R9	Part of tone compensator	25,000
R10	Volume control limiter	500,000
R11	Manual volume control	1,000,000*
R12	V3 triode anode load	68,000
R13	V3 AVC diode load	470,000
R14	resistances	470,000
R15	V4 CG's decoupling	50,000
R16	Part of fixed tone corrector	25,000
R17	V1, V2 fixed GB; V3 triode, V4 GB; AVC delay resistances	100
R18	—	820

\* Tapped at 400,000 Ω from lower end.

## VALVE ANALYSIS

Valve voltages and currents given in the table below are those measured in our receiver when it was operating with a new HT battery reading 142 V on load. The receiver was tuned to the lowest wave-length on the MW band and the volume control was at maximum, but there was no signal input, as L2 was short-circuited.

Voltages were measured on the 400 V scale of a model 7 Universal Avometer, chassis being negative.

Valve	Anode Voltage (V)	Anode Current (mA)	Screen Voltage (V)	Screen Current (mA)
V1 FC2A	128	0.5	49	0.9
	77	1.7	—	—
V2 VP2B	131	1.5	49	0.5
V3 TDD2A	68	0.8	—	—
V4 QP22B	130†	2.1	105	0.8

† Each anode.

If as in our case V2 should become unstable when its anode and screen currents are being measured, it can be stabilised by connecting a 0.1μF condenser from top cap to chassis.

## CIRCUIT ALIGNMENT

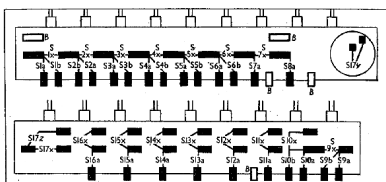
In all cases, the signal from the generator is fed into the set by coupling to the frame aerials. A single turn of wire round the cabinet, or even some distance away, should provide adequate coupling.

**IF Stages.**—Press MW button, and tune to higher wavelength end of scale. Feed in a 467 KC/S signal, and adjust cores of L12, L13, L14 and L15 for maximum output. Repeat these adjustments carefully.

**RF and Oscillator Stages.**—With gang at maximum, pointer should be at the tops of the clear glass strips on which the scales are printed.

**MW.**—Press MW button, tune to 210m on scale, feed in a 210m (1,426 KC/S) signal, and adjust C39, then C27 (on frame assembly) for maximum output. Feed in a 520m (576 KC/S) signal, tune it in, and adjust C37 for maximum output while rocking the gang for optimum results. Repeat the MW adjustments.

**LW.**—Press LW button, tune to 1,800 m on scale, feed in an 1,800 m (166.7 KC/S) signal, and adjust C36 for maximum output. Tune to 1,300 m on scale, feed in a 1,300 m (230 KC/S) signal, and adjust C29 for maximum output, rocking the gang slightly if necessary. Repeat the LW adjustments.



Diagrams of the press-button unit. Above, the side facing the chassis deck; below, the side seen from beneath the chassis.