

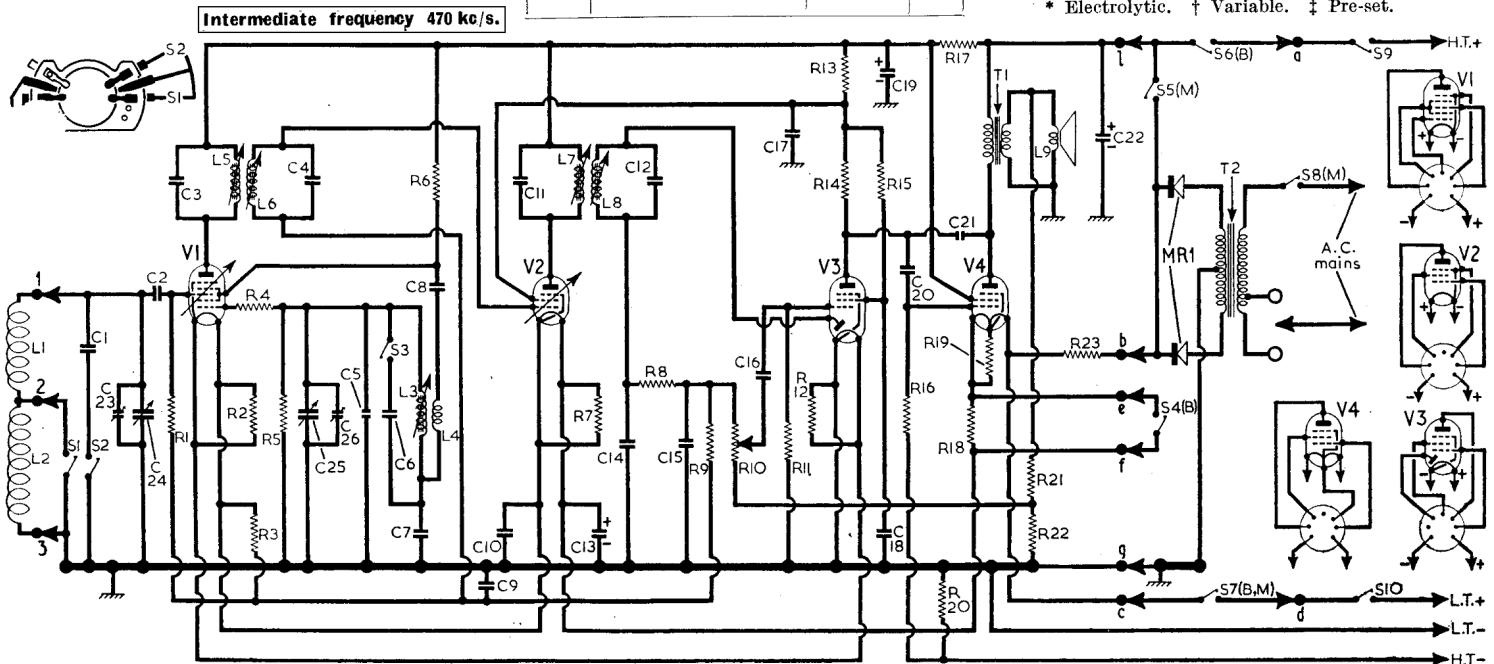
PYE - P31MBQ

OTHER COMPONENTS		Approx. Values (ohms)	Locations
L1	M.W. frame aerial	3-2	—
L2	L.W. frame aerial...	15-0	—
L3	Osc. tuning coil ...	2-4	D2
L4	Osc. reaction coil ...	0-5	D2
L5	1st I.F. trans. { Pri.	12-0	B1
L6		12-0	B1
L7	2nd I.F. trans. { Pri.	12-0	B1
L8		12-0	B1
L9	Speech coil ...	2-3	A1
T1	O.P. trans. { Pri. ...	700-0	A1
	Sec. ...	0-5	
T2	Mains trans. { Pri. ...	400*0	
	Sec. ...		G4
S1-S3	Waveband switches	—	B1
S4-S8	Mains/battery sw.	—	G4
S9, S10	Lid switches	—	F2
MR1	H.T. metal rect.	—	G4

RESISTORS		Values	Locations
R1	V1 C.G. ...	1MΩ	E3
R2	V1 filament shunt	180Ω	D3
R3	G.B. feed ...	4-7MΩ	E3
R4	Osc. grid stopper ...	2-2kΩ	D2
R5	V1 osc. C.G. ...	100kΩ	D3
R6	Osc. anode feed ...	10kΩ	D2
R7	V2 filament shunt...	270Ω	E3
R8	I.F. stopper ...	100kΩ	E3
R9	A.G.C. decoupling	4-7MΩ	E3
R10	Volume control ...	1MΩ	E2
R11	V3 C.G. ...	10MΩ	E3
R12	V3 filament shunt...	180Ω	F3
R13	H.T. decoupling ...	27kΩ	F3
R14	V3 anode load ...	1MΩ	F3
R15	V3 S.G. feed ...	10MΩ	F3
R16	V4 C.G. ...	1MΩ	F3
R17	H.T. smoothing ...	1kΩ	F3
R18	Filament series ...	10Ω	F2
R19	V4 filament shunt...	680Ω	F2
R20	V4 G.B. ...	100Ω	F3
R21	Neg. feed-back ...	10kΩ	E2
R22		2-2kΩ	E2
R23	Filament ballast ...	1-6kΩ	F2

CAPACITORS		Values	Locations
C1	L.W. trimmer ...	180pF	C1
C2	V1 C.G. ...	100pF	D3
C3	1st I.F. trans. tun- ing	100pF	B1
C4		100pF	B1
C5	Osc. trimmer ...	15pF	D3
C6	L.W. osc. trimmer	510pF	D2
C7	Tracker ...	560pF	D2
C8	Osc. anode coup. ...	100pF	D2
C9	A.G.C. decoup. ...	0-01μF	D3
C10	Filament by-pass ...	0-1μF	E3
C11	2nd I.F. trans. tun- ing	100pF	B1
C12		100pF	A1
C13*	Filament smoothing	100pF	R1
C14	I.F. by-passes ...	100pF	E3
C15		100pF	E2
C16	A.F. coupling ...	0-002μF	E3
C17	H.T. decoupling ...	0-01μF	F3
C18	V3 S.G. decoup. ...	0-01μF	F3
C19*	H.T. smoothing ...	32μF	A1
C20	A.F. coupling ...	0-01μF	F3
C21	Neg. feed-back ...	15pF	F3
C22*	H.T. smoothing ...	32μF	A1
C23†	M.W. aerial trim...	35pF	C1
C24†	Aerial tuning ...	528pF	C1
C25†	Oscillator tuning ...	528pF	C1
C26†	M.W. osc. trim. ...	35pF	C1

* Electrolytic. † Variable. ‡ Pre-set.



CIRCUIT ALIGNMENT

For the following alignment adjustments the chassis should be partly withdrawn from the carrying case and supported so that all the cores and trimmers are accessible.

I.F. Stages.—Switch receiver to M.W. and tune to 560 m. Connect output of signal generator, via an 0.1 μF capacitor in the "live" lead, to control grid (pin 6) of V1 and chassis. Feed in a 470 kc/s (638.3 m) signal and adjust the cores of L3 (location reference B1), L7 (E3), L6 (B1) and L5 (E3) for maximum output, reducing the input as the circuits come into line to avoid A.G.C. effects.

R.F. and Oscillator Stages.—Check that with the gang at maximum capacitance, the lines separating the M.W. and L.W. scales coincide with the cursor lines on the escutcheon. This may be adjusted by slackening the grub screw securing the tuning scale to the gang spindle and rotating the scale relative to the gang. No alignment adjustments are made on L.W.

M.W.—Switch receiver to M.W., tune to 500 m, and with the signal generator connected to V1 control grid feed in a 500 m (600 kc/s) signal and adjust the core of L3 (D2) for maximum output. Tune receiver to 200 m, feed in a 200 m (1,500 kc/s) signal and adjust C26 (C1) for maximum output. Remove signal generator leads from V1 control grid and chassis and lay them near the frame aerial. With the receiver tuned to 200 m, feed in a 200 m (1,500 kc/s) signal and adjust C23 (C1) for maximum output. Repeat these adjustments until calibration is correct at both ends of scale.

Valve	Anode		Screen	
	V	mA	V	mA
V1 DK91	85	0-85	63	2-05
V2 DF91	85	1-9	60	0-8
V3 DAF91	*	*	*	*
V4 DL94	88	3-35	85	0-68

* Readings very low.

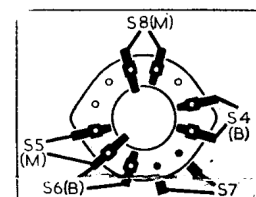


Diagram of the mains/battery change-over switch. (B) Switches close for battery operation, and (M) for mains.