

PYE - P75

Valve	Anode		Screen		Cath.
	V	mA	V	mA	
V1 ECH42	194 73	1.1 2.6	47	2.2	—
V2 EF41	194	2.7	47	1.2	—
V3 EBC41	24	0.1	—	—	0.5
V4 EL41	205	23.0	194	3.2	5.7
V5 EZ41	390*	—	—	—	216.0†

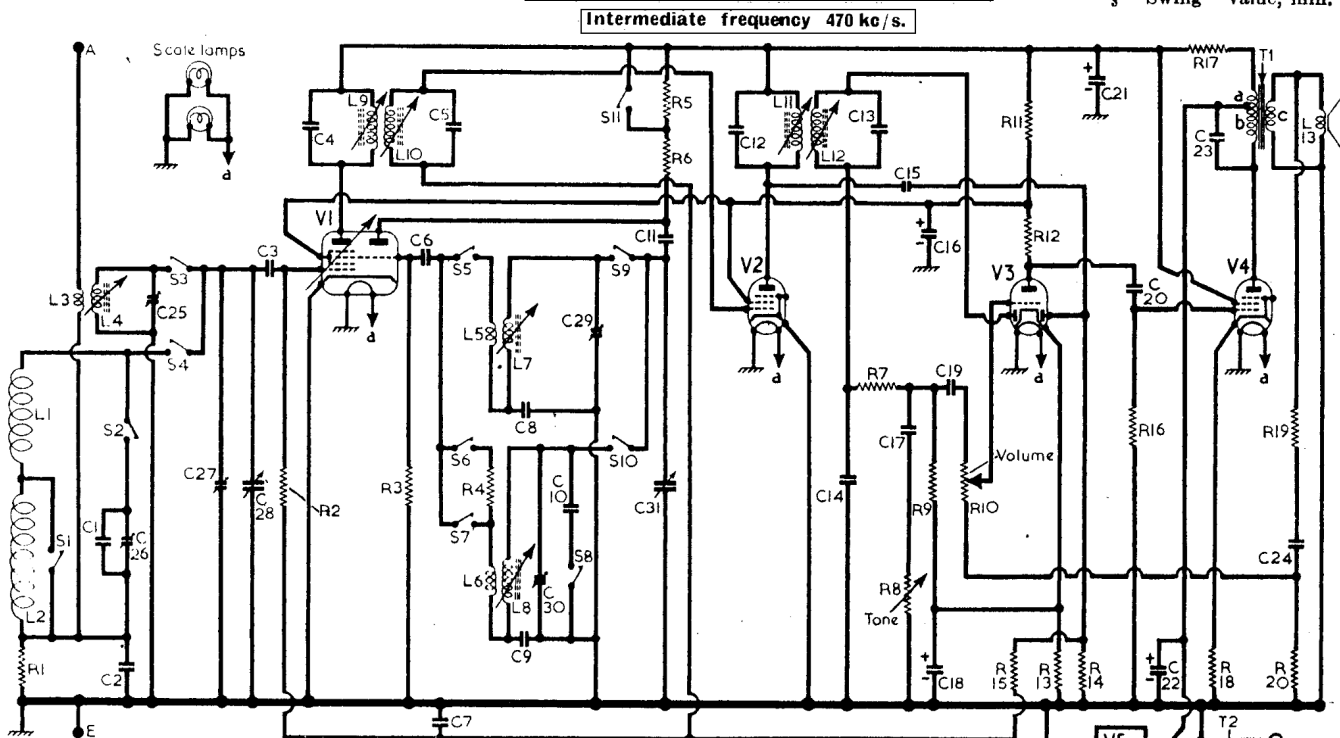
* A.C. reading, each anode.
† Cathode current, 36-1 mA.

OTHER COMPONENTS		Approx. Values (ohms)	Locations
L1	M.W. frame aerial...	3.0	A1
L2	L.W. frame aerial...	18.5	A1
L3	S.W. aerial coupling	—	G4
L4	S.W. aerial tuning	—	G4
L5	Oscillator reaction	43.0	F3
L6	coils	0.5	F4
L7	Oscillator tuning	—	F3
L8	coils	2.5	F4
L9	1st I.F. trans. { pri.	11.0	B2
L10	sec.	11.0	B2
L11	2nd I.F. trans. { pri.	11.0	B2
L12	sec.	11.0	B2
L13	Speech coil	2.5	—
T1	O.P. trans. { a	6.0	B1
	b	500.0	
	c	—	
T2	Mains trans. { a	230.0	C2
	b	245.0	
	c	70.0	
S1-S11	Waveband sw.	—	G3
S12	Mains sw., g'd R10	—	D3

RESISTORS		Values	Locations
R1	Aerial shunt	22kΩ	G3
R2	V1 C.G.	1MΩ	G4
R3	V1 osc. C.G.	47kΩ	F4
R4	Osc. stabilizer	1.5kΩ	G4
R5	Osc. anode feeds	33kΩ	G3
R6		15kΩ	G4
R7	I.F. stopper	100kΩ	F4
R8	Tone control	1MΩ	D3
R9	Signal diode load	470kΩ	F4
R10	Volume control	1MΩ	D3
R11	H.T. smoothing	47kΩ	E3
R12	V3 anode load	220kΩ	E4
R13	V3 G.B.	4.7kΩ	E4
R14	A.G.C. diode load	1MΩ	F4
R15	A.G.C. decoupling	1MΩ	F4
R16	V4 C.G.	1MΩ	E4
R17	H.T. smoothing	1.6kΩ	F4
R18	V4 G.B.	220Ω	E4
R19	Neg. feed-back	3.9kΩ	E3
R20		390Ω	E3

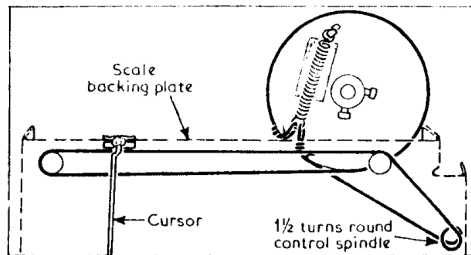
CAPACITORS		Values	Locations
C1	L.W. aerial trim...	120pF	G4
C2	Ext. aerial coup. ...	0.0027μF	G3
C3	V1 C.G. ...	100pF	G4
C4	1st I.F. trans. tuning	100pF	B2
C5	ing	100pF	B2
C6	V1 osc. C.G. ...	100pF	G4
C7	A.G.C. decoupling	0.02μF	F4
C8	Oscillator trackers	0.0047μF	G3
C9		430pF	G4
C10	L.W. osc. trim. ...	430pF	G4
C11	Osc. anode coup. ...	100pF	F4
C12	2nd I.F. trans. tuning	100pF	B2
C13	ing	100pF	B2
C14	I.F. by-pass	100pF	E4
C15	A.G.C. coupling	15pF	F4
C16*	H.T. smoothing	2μF	F4
C17	Part tone control	0.002μF	F3
C18*	V3 cath. by-pass	25μF	F4
C19	A.F. coupling	0.005μF	E3
C20		0.005μF	E4
C21*	H.T. smoothing	16μF	E3
C22*		32μF	E3
C23	Tone corrector	0.005μF	B1
C24	Neg. feed-back	0.1μF	E3
C25†	S.W. aerial trim...	50pF	F3
C26†	L.W. aerial trim...	30pF	G4
C27†	M.W. aerial trim...	50pF	F3
C28†	Aerial tuning	528pF	A1
C29†	S.W. osc. trim. ...	50pF	F3
C30†	M.W. osc. trim. ...	50pF	F3
C31†	Oscillator tuning ...	528pF	A2

* Electrolytic. † Variable. ‡ Pre-set.
§ "Swing" value, min. to max.



Drive Cord Replacement.—About three feet of nylon braided glass yarn is required for a new drive cord. It should be knotted into a loop at each end so that the overall length is 20½ inches between the centres of the loops. The drive cord should then be run as shown in the sketch below, starting with the gang at minimum capacitance and running clockwise round the drive drum.

Scale Lamps.—These are two 6.5 V, 0.3 A lamps with small clear spherical bulbs and M.E.S. bases.



Sketch of the drive cord system, drawn as seen from the front with gang at minimum.

Diagram of the waveband switch unit drawn as seen from the tone control end of an inverted chassis.

CIRCUIT ALIGNMENT

The chassis should be removed from its cabinet for the following alignment adjustments.

I.F. Stages.—Switch receiver to M.W. and turn gang to maximum capacitance. Connect output of signal generator, via a 0.1 μF capacitor in the "live" lead, to control grid (pin 6) of V1 and chassis. Feed in a 470 kc/s (688.3 m) signal and adjust the cores of L12 (location reference B2), L11 (E4), L10 (B2) and L9 (F4) for maximum output. Repeat these adjustments until no further improvement results.

R.F. and Oscillator Stages.—Check that with the gang at maximum capacitance the cursor coincides with the dots at the high wavelength ends of the S.W. and L.W. tuning scales. The tuning scale is fixed to the cabinet, and in early models where there is no substitute tuning scale on the scale backing plate, the tuning scale must be removed and placed over the volume and tuning control spindles, or a substitute paper tuning scale must be made up to replace it. Transfer signal generator leads to A and E leads.

M.W.—Switch receiver to M.W., tune to 500 m, feed in a 500 m (600 kc/s) signal and adjust the core of L8 (F4) for maximum output. Tune to 200 m, feed in a 200 m (1,500 kc/s) signal and adjust C30 (F3) and C27 (F3) for maximum output. Repeat these adjustments until no further improvement results.

L.W.—Switch receiver to L.W., tune to 1,400 m, feed in a 1,400 m (214 kc/s) signal and adjust C26 (G4) for maximum output.

S.W.—Switch receiver to S.W., tune to 49.15 m, feed in a 49.15 m (6.1 Mc/s) signal and adjust cores of L7 (F3) and L4 (G4) for maximum output. Tune to 16.88 m (17.8 Mc/s) signal and adjust C29 (F3) and C25 (F3) for maximum output. Repeat these adjustments until no further improvement results.

