

# PYE - P27UBQ

Valve		Anode		Screen	
		V	mA	V	mA
V1	DK91	65	0.2	47	1.5
V2	DF91	65	1.3	65	0.48
V3	DAF91	*	*	*	*
V4	DL92	89	5.8	65	1.1

\* No appreciable reading.

OTHER COMPONENTS		Approx. Values (ohms)	Locations
L1	Frame aerial ...	1-6	—
L2	L.W. coil ...	14-0	G3
L3	Osc. coil, total ...	3-3	F3
L4	1st I.F. trans. { Pri. ...	10-0	B2
L5	trans. { Sec. ...	10-0	B2
L6	2nd I.F. trans. { Pri. ...	10-0	C2
L7	trans. { Sec. ...	10-0	C2
L8	Speech coil ...	2-8	C1
T1	Sec. ...	S70-0	C1
S1-S3	Waveband switches	Very low	F3
S4, S5	Power sw. g'd S1-S3	—	F3

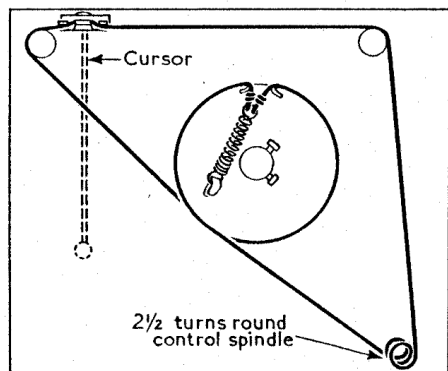
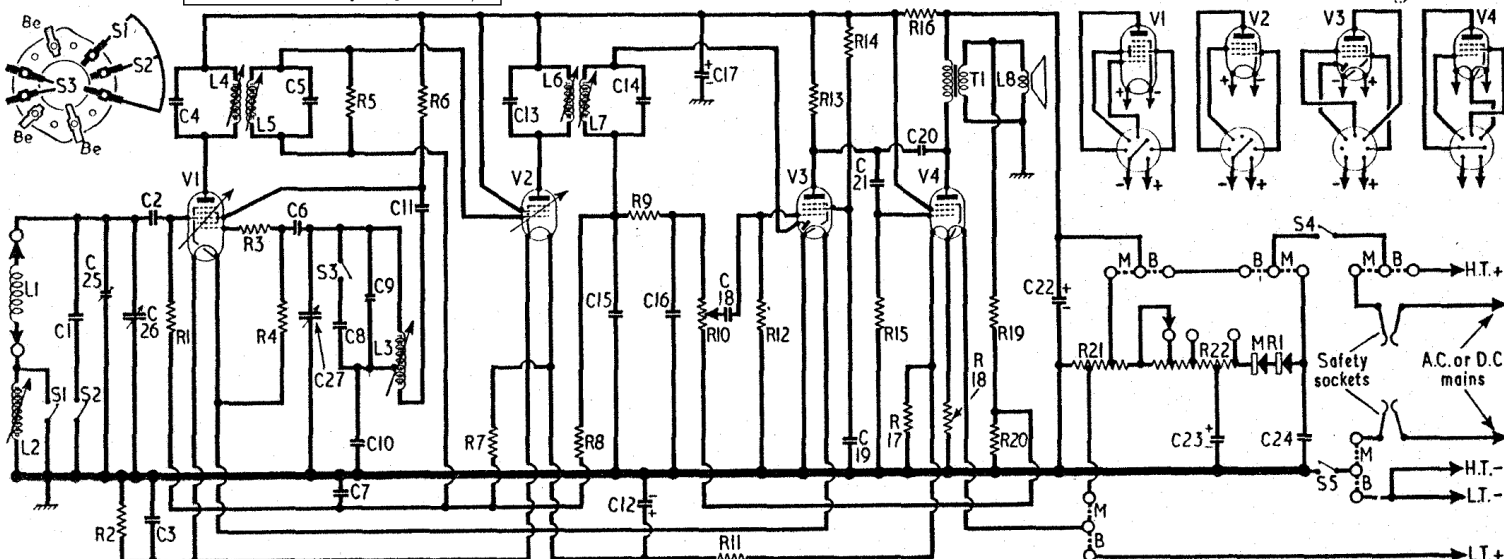
RESISTORS		Values	Locations
R1	V1 hex. C.G. ...	1MΩ	F4
R2	Fil. shunt ...	1kΩ	E4
R3	Osc. grid stopper ...	2-2kΩ	F3
R4	V1 osc. C.G. ...	100kΩ	F3
R5	I.F. trans. shunt ...	1MΩ	E4
R6	Osc. anode feed ...	10kΩ	E3
R7	G.B. feed ...	22MΩ	E4
R8	A.G.C. decoupling ...	4-7MΩ	E4
R9	I.F. stopper ...	47kΩ	D4
R10	Volume control ...	1MΩ	E3
R11	Filament series ...	27Ω	D4
R12	V3 C.G. ...	10MΩ	D4
R13	V3 anode load ...	1MΩ	D4
R14	V3 S.G. feed ...	10MΩ	D4
R15	V4 C.G. ...	1MΩ	D4
R16	H.T. smoothing ...	6-8kΩ	D3
R17	Filament H.T. ...	2-2kΩ	D4
R18	shunts ...	2-2kΩ	D4
R19	Neg. feedback pot. ...	10kΩ	C1
R20	divider ...	2-2kΩ	D3
R21	Filament ballast ...	*3,500Ω	A2
R22	Voltage adjust. ...	†2,000Ω	A2

\* Tapped at 1,900Ω + 1,500Ω + 100Ω from chassis.  
† Tapped at 200Ω + 1,100Ω + 350Ω + 350Ω from R21.

CAPACITORS		Values	Locations
C1	L.W. trimmer ...	180pF	G3
C2	V1 C.G. ...	100pF	F4
C3	Filament by-pass ...	0.1μF	E4
C4	1st I.F. trans. {	100pF	B2
C5	tuning ...	100pF	B2
C6	V1 osc. C.G. ...	100pF	F3
C7	A.G.C. decoupling ...	0.01μF	E4
C8	L.W. trimmer ...	560pF	F3
C9	M.W. trimmer ...	39pF	F3
C10	Tracker ...	560pF	F3
C11	Osc. anode coup. ...	330pF	F3
C12*	Filament smoothing ...	100μF	C1
C13	2nd I.F. trans. {	100pF	C2
C14	tuning ...	100pF	C2
C15	I.F. by-passes ...	100pF	D4
C16	...	100pF	D4
C17*	H.T. smoothing ...	32μF	B1
C18	A.F. coupling ...	0.002μF	D4
C19	V3 S.G. by-pass ...	0.05μF	D4
C20	Neg. feed-back ...	15pF	D4
C21	A.F. coupling ...	0.01μF	D4
C22*	...	60μF	C1
C23*	H.T. smoothing ...	32μF	B1
C24	R.F. by-pass ...	0.05μF	G3
C25†	M.W. aerial trim ...	50pF	G3
C26†	Aerial tuning ...	—	A1
C27†	Oscillator tuning ...	—	A2

\* Electrolytic. † Variable. ‡ Pre-set.

Intermediate frequency 465 kc/s.



Sketch of the drive cord system, as seen from the rear with the gang at maximum.

**Drive Cord Replacement.**—Thirty inches of nylon braided glass yarn is required for a new drive cord, which should be run as shown in the sketch (col. 2), where the system is drawn as seen from the rear of the chassis with the gang at maximum capacitance, although to anchor the spring the gang must be turned to minimum. The makers quote the exact length of the made-up cord as 23 1/2 in measured between the centres of 1/2 in end loops.

## CIRCUIT ALIGNMENT

**I.F. Stages.**—Remove chassis from case, connect signal generator via a 0.1 μF capacitor to control grid (pin 6) of V1, switch set to L.W., turn gang and volume control to maximum, feed in a 465 kc/s (645.16 m) signal, and adjust the cores of L7, L6, L5 and L4 (location references E4, B2, C2), in that order, for maximum output, reducing the input as the circuits come into line to avoid A.G.C. action.

**R.F. and Oscillator Stages.**—Replace chassis in case and check that with the gang at maximum capacitance, the cursor coincides with the 2,000 m mark on the L.W. scale. The following adjustments are accessible through holes in the rear of the chassis.

**M.W.**—Switch set to M.W., tune to 500 m on scale, feed in a 500 m (600 kc/s) signal and adjust the core of L3 (F3) for maximum output. Disconnect signal generator lead from V1 C.G. and lay it near the frame aerial, tune to 200 m on scale, feed in a 200 m (1,500 kc/s) signal and adjust C25 (G3) for maximum output.

**L.W.**—Switch set to L.W., tune to 1,330 m on scale, feed in a 1,330 m (167 kc/s) signal and adjust the core of L2 (G3) for maximum output.

