PYE - P131MBQ

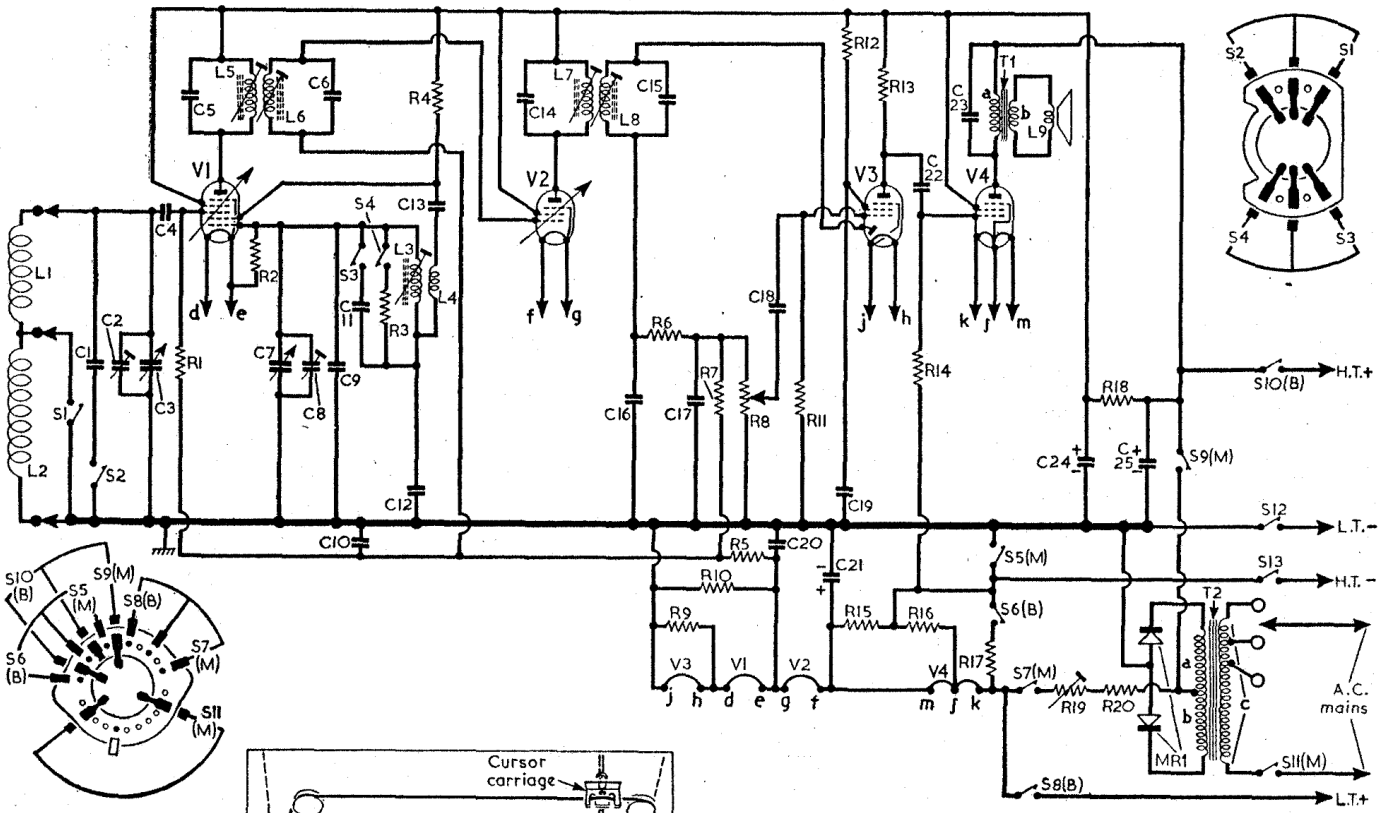
Intermediate frequency 470 kc/s.

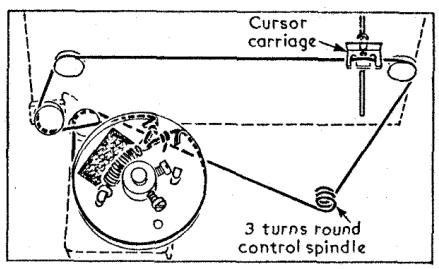
OTHER COMPONENTS		Approx. Values (ohms)	Locations
L1	Frame aerials ...	3·5	—
L2		14·0	—
L3	Oscillator coils ...	2·0	A2
L4		0·5	A2
L5	1st I.F.T. Pri. ...	10·0	B2
L6	Sec. ...	10·8	B2
L7	2nd I.F.T. Pri. ...	10·0	B2
L8	Sec. ...	10·8	B2
L9	Speech coil ...	2·5	C1
T1	O.P. trans. a ...	570·0	C1
	b ...	—	
T2	Mains trans. a ...	240·0	C2
	b ...	230·0	
	c, total	430·0	
MR1*	Metal rectifier ...	—	C2
S1-S4	Band switches ...	—	A2
S5			
S11	Mains/batt. switches	—	C2
S12, S13	Safety switches ...	—	C1

* Westinghouse 16RE2181.

RESISTORS		Values	Locations
R1	V1 C.G.	220kΩ	F3
R2	V1 osc. C.G. ...	47kΩ	F3
R3	M.W. osc. stabilizer	33kΩ	G3
R4	Osc. H.T. feed ...	22kΩ	G3
R5	V1, V2 G.B. ...	4·7MΩ	F3
R6	I.F. filter	100kΩ	E3
R7	A.G.C. decoupling	4·7MΩ	F3
R8	Volume control ...	1MΩ	E3
R9	Filament H.T. by-	680Ω	E3
R10	passes	5·6kΩ	F3
R11	V3 C.G.	10MΩ	E3
R12	V3 S.G. feed ...	10MΩ	E3
R13	V3 anode load ...	2·2MΩ	E3
R14	V4 C.G.	4·7MΩ	D3
R15	Filament H.T. by-	1·8kΩ	D3
R16	passes	2·7kΩ	E3
R17	V4 G.B.	1·8kΩ	C2
R18	H.T. smoothing ...	3·9kΩ	F3
R19	Filament ballast re-	750Ω	D3
R20	sistors	3·2kΩ	E3

CAPACITORS		Values	Locations
C1	L.W. aerial trim....	160pF	A2
C2	M.W. aerial trim....	35pF	A2
C3	Aerial tuning ...	528pF	A2
C4	V1 C.G.	100pF	A2
C5	1st I.F.T. tuning...	100pF	B2
C6		100pF	B2
C7	Oscillator tuning...	528pF	A2
C8	M.W. osc. trimmers	35pF	A2
C9		15pF	G3
C10	A.G.C. decoupling	0·04μF	F3
C11	L.W. osc. trim. ...	470pF	G3
C12	Osc. tracker ...	560pF	G3
C13	Osc. reaction coup.	100pF	F3
C14	2nd I.F.T. tuning	100pF	B2
C15		100pF	B2
C16	I.F. by-passes ...	100pF	E3
C17		100pF	E3
C18	A.F. coupling ...	0·002μF	E3
C19	V3 S.G. decoupling	0·01μF	E3
C20	Filament by-passes	0·5μF	F3
C21		100μF	B2
C22	A.F. coupling ...	0·001μF	E3
C23	Tone corrector ...	0·002μF	C1
C24	H.T. smoothing ...	32μF	B2
C25		32μF	B2





Above: Sketch of the drive cord system.

Valve		Anode V	Anode mA	Screen V	Screen mA
V1	DK96 ...	77	0·44	77	0·12
		Oscillator			
		41	1·65		
V2	DF96 ...	77	1·0	77	0·33
V3	DAF96 ...	23	0·017	13	0·005
V4	DL96 ...	87	3·9	77	0·65
MR1*	16RE2181	184†	—	—	—

* Westinghouse. † A.C. reading, cathode to cathode; total D.C. current 36 mA.

CIRCUIT ALIGNMENT

1.—Remove chassis from carrying case, leaving frame aerial leads connected. Switch receiver to M.W. and turn gang to maximum capacitance.

2.—Connect output of signal generator, via an 0.1 μF capacitor in the "live" lead, between chassis and control grid (pin 6) of **V1.**

3.—*Feed in a 470 kc/s signal and adjust the* cores of **L8** (B2), **L7** (E3), **L6** (B2) and **L5** (F3) for maximum output.

4.—Repeat operation 3 until no further improvement results.

5.—With receiver still on M.W. and tune it to 500 m. *Feed in a 600 kc/s signal and adjust* the core of **L3** (A2) for maximum output.

6.—Tune receiver to 200 m, feed in a 1,500 kc/s signal and adjust **C8** (A1) for maximum output.

7.—Repeat operations 5 and 6 until calibration is correct.

8.—Tune receiver to L.W., feed in a 214 kc/s signal and check calibration at 1,400 m. If a large error exists, **C11** should be checked for value and replaced if necessary.

9.—Replace receiver in carrying case and switch it to M.W.

10.—*Transfer signal generator output leads to* a 6in diameter injection loop consisting of ten turns of insulated wire. Place this loop parallel to, and about 20in from, the frame aerial windings in the lid of the carrying case.

11.—Tune receiver to 200 m, feed in a 1,500 kc/s signal and adjust **C2** (A2) for maximum output, rocking the gang while making this adjustment for optimum results.