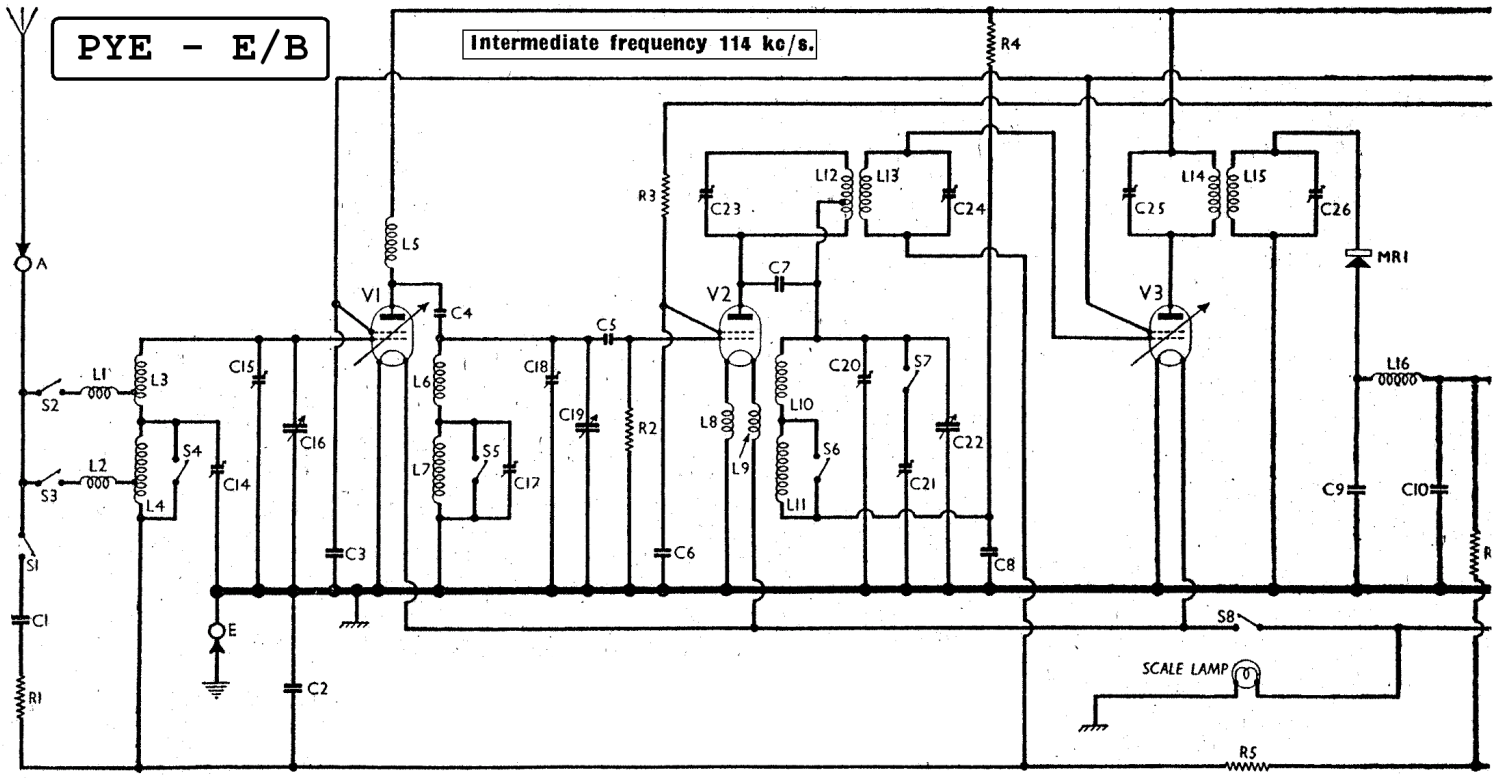
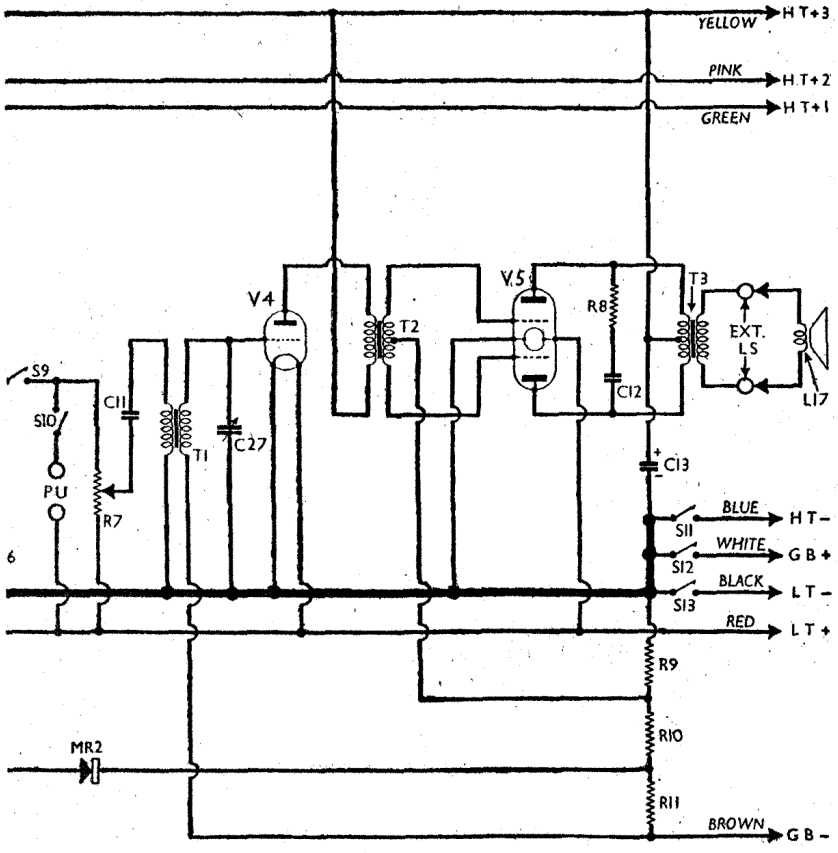
PYE - E/B

Intermediate frequency 114 kc/s.





RESISTORS		Values (ohms)
R1	Local/distant resistor ...	7.5
R2	V2 CG resistor	250,000
R3	V2 SG HT feed	65,000
R4	V2 anode HT feed ...	2,000
R5	AVC line decoupling ...	20,000
R6		100,000
R7	Manual volume control; MR1 load resistor ...	40,000
R8	Part tone corrector ...	5,000
R9	GB and AVC delay potential divider resistors ...	84
R10		163
R11		163

VALVE ANALYSIS

Valve	Anode Voltage (V)	Anode Current (mA)	Screen Voltage (V)	Screen Current (mA)
V1 S215VM	129	0·9	66	0·1
V2 S215VM	127	1·4	†	0·3
V3 S215VM	130	0·9	66	0·1
V4 L2	129	1·5	—	—
V5 PD220	129*	0·5*	—	—

† Voltage depends on position of HT + 1 plug.
* Each anode, quiescent.

CAPACITORS		Values (μF)
C1	Local/distant capacitor ...	0·005
C2	AVC line decoupling ...	0·1
C3	V1, V3 SG's decoupling ...	0·1
C4	V1-V2 RF coupling ...	0·00005
C5	V2 CG capacitor	0·00002
C6	V2 SG decoupling ...	0·1
C7	Oscillator coupling ...	0·0003
C8	V2 anode decoupling ...	0·1
C9	IF by-pass capacitors ...	0·0001
C10		0·002
C11	AF coupling to T1 ...	0·25
C12	Part tone corrector ...	0·0025
C13*	HT circuit reservoir ...	8·0
C14‡	Aerial circ. LW trimmer ...	—
C15‡	Aerial circ. MW trimmer ...	—
C16†	Aerial circuit tuning ...	—
C17‡	V2 CG LW trimmer ...	—
C18‡	V2 CG MW trimmer ...	—
C19†	V2 CG circuit tuning ...	—
C20‡	Osc. circ. MW trimmer ...	—
C21‡	Osc. circ. LW trimmer ...	—
C22†	Oscillator circuit tuning ...	—
C23‡	1st IF trans. pri. tuning ...	—
C24‡	1st IF trans. sec. tuning ...	—
C25‡	2nd IF trans. pri. tuning ...	—
C26‡	2nd IF trans. sec. tuning ...	—
C27†	Variable tone control ...	—

* Electrolytic. † Variable. ‡ Pre-set.

OTHER COMPONENTS		Approx. Values (ohms)
L1	Aerial series chokes ...	3·6
L2		23·0
L3	Aerial tuning coils ...	4·0
L4		33·0
L5	V1 anode RF choke ...	230·0
L6	V2 CG tuning coils ...	4·0
L7		33·0
L8	V2 filament oscillator	0·38
L9	coupling coils	0·38
L10	Osc. MW tuning coil ...	2·25
L11	Osc. LW tuning coil ...	9·0
L12	1st IF trans. Pri., total	114·0
L13	Sec. ...	122·0
L14	2nd IF trans. Pri. ...	122·0
L15	Sec. ...	122.0
L16	IF filter choke	230·0
L17	Speaker speech coil ...	1·23
T1	1st inter-valve trans. Pri. ...	720·0
	Sec. ...	4,200·0
T2	2nd inter-valve trans. Pri. ...	990·0
	Sec., total	310·0
T3	Output trans. Pri., total	570·0
	Sec. ...	0·23
S1	Local/distant switch ...	—
S2-S7	Waveband switches ...	—
S8,S9	Radio muting switches ...	—
S10	Pick-up switch	—
S11	HT circuit switch ...	—
S12	GB circuit switch ...	—
S13	LT circuit switch... ...	—

PYE - E/B

Chassis Divergencies.—The makers explain in their technical information that the GB potential divider resistors **R9, R10, R11** had different values in early models from those given in our tables. The former values were **R9,** 77 Ω; **R10,** 150 Ω; **R11,** 150 Ω.

In our sample chassis there were two differences as compared with the makers' diagram. The first concerns **R1, C1,** which were transposed. In the makers' diagram **R1** is joined to **S1,** and **C1** is joined to **C2,** but the matter is relatively unimportant.

The second difference was in the connection of **R2,** whose low potential end in our chassis was returned to LT positive. We show it in our circuit diagram as the makers show it in theirs, but if difficulty is experienced in getting **V2** to operate properly it is a point worth investigating. Our sample may, of course, have been altered since it left the factory.

CIRCUIT ALIGNMENT

IF Stages.—Connect signal generator leads via a 0.002 μF non-inductive capacitor to control grid of **V2** and chassis, and short-circuit **L8** by connecting rearmost pin of **V2** holder to chassis to mute the oscillator.

Feed in a 114 kc/s (2,631.5 m) signal, and adjust **C23, C24, C25** and **C26** for maximum output, reducing input to avoid AVC action as the circuits come into line. Now remove the short-circuit from **L8.**

RF and Oscillator Stages.—Transfer signal generator leads to **A** and **E** sockets via a dummy aerial.

To set scale drum accurately, turn gang to maximum, slacken the chain wheel fixing screw on the gang spindle, and turn tuning control until drum reaches its stop at minimum wavelength end. Now slacken escutcheon moulding (two screws) and adjust it so that the two pointers cover the red calibration line on the scale, then tighten screws.

Turn gang to maximum, then back a little; with the flat end of a metal bar pressed against the stator vanes, adjust rotors until it can be felt that they are level with stators and, while holding gang steady, adjust drum so that pointers are level with 560 m mark and black dot on LW scale. Then tighten up chain wheel screw. A slot in the boss permits quite a wide adjustment.

MW.—Switch set to MW, slacken off **C15** to minimum and screw up **C18** to maximum. Turn scale to minimum wavelength (red line), feed in a 196 m (1,530 kc/s) signal, and adjust **C20** for maximum output. If two peaks are found, select that involving the lesser trimmer capacitance. Then adjust **C15** and **C18** for maximum output. Finally, readjust **C20** for maximum output.

LW.—Switch set to LW, leaving tuning scale at red line. Set **C14** to minimum, and screw up **C17** nearly to maximum. Feed in a 775 m (387.1 kc/s) signal, and adjust **C21** for maximum output; but if two peaks are found, that involving the *greater* trimmer capacitance must be used. Then adjust **C14** and **C17** for maximum output. Now feed in a strong 775 m signal and readjust **C21** for maximum output, without disturbing **C14** and **C17.**