

**Resistors**

R1	220Ω
R2	220kΩ
R3	10kΩ
R4	1MΩ
R5	22kΩ
R6	1MΩ
R7	39kΩ
R8	33kΩ
R9	100Ω
R10	2.2kΩ
R11	47kΩ
R12	1kΩ
R13	470kΩ
R14	56kΩ
R15	1kΩ
R16	47kΩ
R17	100kΩ
R18	1.8MΩ
R19	470kΩ
R20	100kΩ
R21	100kΩ
R22	2MΩ
R23	2MΩ
R24	15kΩ
R25	2.2kΩ
R26	2.2kΩ
R27	2.2kΩ
R28	220kΩ
R29	220kΩ
R30	500kΩ
R31	500kΩ

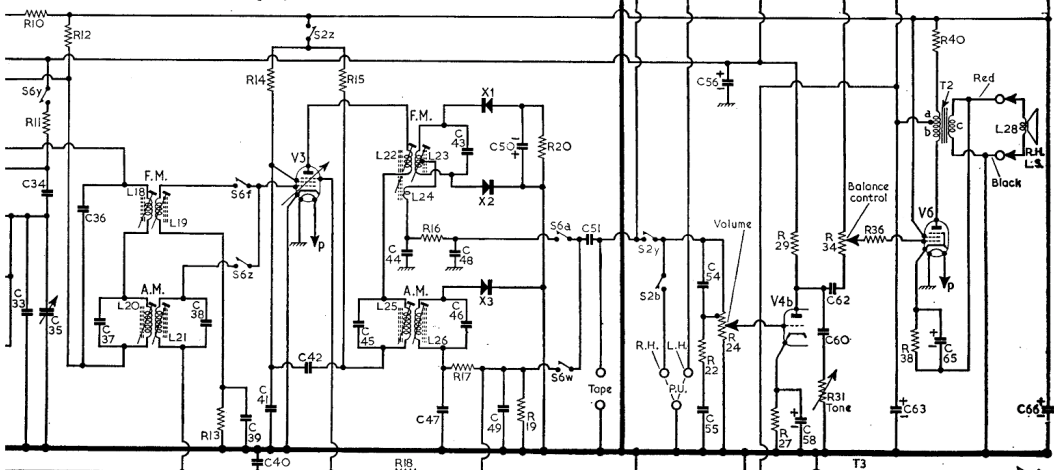
**Capacitors**

C1	0.001μF
C2	150pF
C3	2.2pF
C4	3pF
C5	4pF
C6	800pF
C7	0.001μF
C8	5pF
C9	5pF
C10	5pF
C11	15pF
C12	8.2pF
C13	22pF
C14	0.001μF
C15	68pF
C16	0.001μF
C17	100pF
C18	330pF
C19	15pF
C20	30pF
C21	110pF

**Miscellaneous\***

T1	{ a b c }	{ 490.0 — — }
T2	{ a b c }	{ 490.0 — — }
T3	{ a b c d }	{ 80.0 80.0 — 25.0 (total) }
X1	OA79 <sup>1</sup>	
X2	OA79 <sup>1</sup>	
X3	OA71 <sup>1</sup>	
S1	—	
S2, S3	—	
S4-S6	—	

## PYE - 2DSG



### CIRCUIT ALIGNMENT

**Equipment Required.**—An A.M. signal generator, modulated 30 per cent at 400c/s; an F.M. signal generator, deviated by  $\pm 15$  kc/s and  $\pm 75$ kc/s; an A.C. voltmeter for use as output meter; a 100pF capacitor and a 0.01μF capacitor; and a trimming tool.

Allow the receiver and signal generator to warm up for at least ten minutes before commencing the alignment procedure.

#### A.M. Alignment

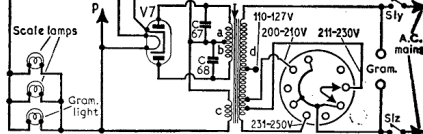
- 1.—Switch the receiver to M.W., turn volume control and tuning gang to maximum. Connect output meter across either L27 or L28 speaker sockets, and the A.M. signal generator to V2b control grid (pin 2) via the 0.01μF capacitor.
- 2.—Feed in a modulated 470kc/s signal and adjust the cores of L26 (B1), L25 (F4), L21 (C1) and L20 (G4) for maximum output.
- 3.—Transfer the signal generator to the A.M. aerial socket via the 100pF capacitor. Feed in a 470kc/s signal and adjust the I.F. rejector trimmer capacitor, if fitted (see "Modifications" overleaf) for minimum reading on the output meter.
- 4.—Check that with the tuning gang at maximum capacitance the cursor coincides with the dots at the right-hand ends of the L.W. and V.H.F. tuning scales.
- 5.—Switch the receiver to L.W. and tune it to 1,400m. Feed in a 214kc/s signal and adjust the core of L17 (F4) for maximum output, then slide the former of L12 (D1) along the ferrite rod for maximum output.
- 6.—Switch the receiver to M.W. and tune it to 500m. Feed in a 600kc/s signal and adjust the core of L16 (G4) for maximum output, then slide the former of L11 (D2) along the ferrite rod for maximum output.
- 7.—Tune the receiver to 200m. Feed in a 1,500kc/s signal and adjust C30 (G4)

adjust the cores of L15 (G4) and L9 (G3) for maximum output.

- 12.—Tune the receiver to 16.85m. Feed in a 17.8mc/s signal and adjust C32 (G4) and C20 (G3) for maximum output.
- 11.—Repeat operations 9 and 10.

#### F.M. Alignment

- 1.—Switch the receiver to V.H.F. Connect the F.M. signal generator to V3 control grid (pin 2). Feed in a 10.7Mc/s signal, deviated by  $\pm 75$ kc/s, and adjust the cores of L23 (B2) and L22 (F4) for maximum output.
- 2.—Transfer the signal generator to V2b control grid (pin 2). Feed in a 10.7Mc/s signal, deviated by  $\pm 75$ kc/s, and adjust the cores of L18 (G4) and L19 (C2) for maximum output.
- 3.—Tune the receiver to the high frequency end of the band. Transfer the F.M. signal generator clip to the core screw of L4 (J5). Feed in a 10.7Mc/s signal, deviated by  $\pm 75$ kc/s, and adjust the cores L6 (K5) and L7 (K6) for maximum output.
- 4.—Transfer the signal generator live lead to the lower (larger) F.M. aerial input socket, and its screened lead to the A.M. aerial socket. Loosen the screw clamping the core mounting plate of L3, L4 (location reference J5) to the push rod. Tune the receiver to 96Mc/s; feed in a 96Mc/s signal, deviated by  $\pm 15$ kc/s, and screw the push rod in or out for maximum output. Then tighten the clamp screw. On no account should the separate core adjustments on the mounting plate be adjusted individually.
- 5.—Check the calibration at 88Mc/s and 100Mc/s.



Valve	Anode (V)	Anode (mA)	Screen (V)	Screen (mA)	Cath. (V)
V1 ECC85	*	*	—	—	*
V2 ECH81					
a	63	2.7	—	—	—
b	235	2.0	62	4.3	—
V3 BF89	235	7.0	75	2.8	—
V4a,b					
ECC83	105	*	—	—	1.0
V5, V6					
EL84	245	47.0	240	*	8.0
V7 EZ80	250 <sup>1</sup>	—	—	—	270.0*

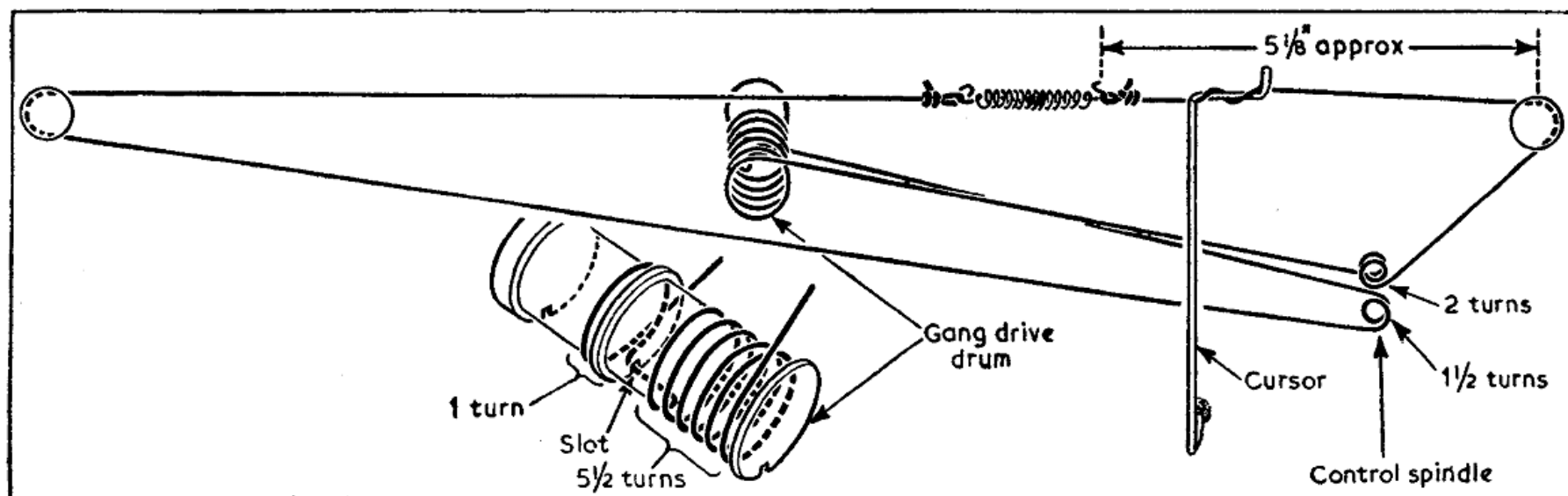
\*No reading quoted.

<sup>1</sup>A.C. reading.

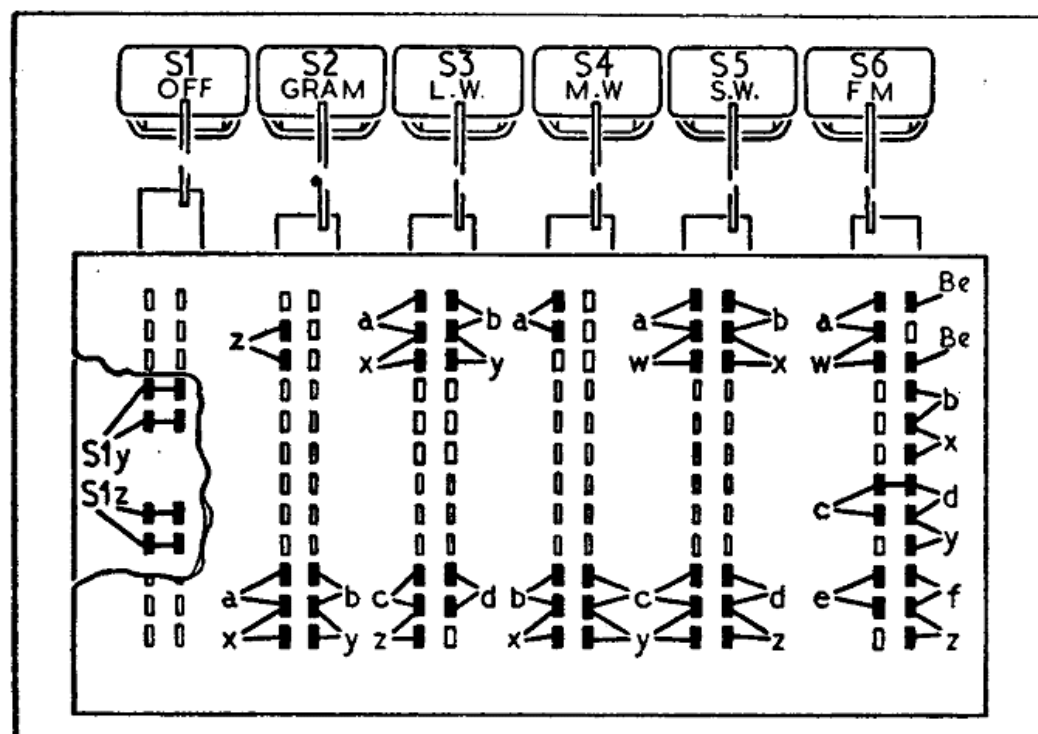
\*Cathode current 125mA.

**Switches.**—In this Service Sheet the switches, which are all contained in a press-button unit, are coded in a manner that permits their function to be seen from the circuit diagram. Each press-button controls a group of switches, and all the switches in that group have the same switch number. All S1 switches, for instance, are controlled by the "off" button; all S2 switches by the gram button; the S3 switches by the L.W. button; the S4 switches by the M.W. button; the S5 by the S.W. button; and the S6 switches by the F.M. button.

When a button is depressed, some of the switches in the group it controls close, and the others open, and this is indicated by suffix letters. Letters a, b, c, d, etc., indicate that the switch closes when the button is depressed, while at the opposite end of the alphabet letters w, x, y, z indicate that it opens.



*A view of part of the B.S.R. pickup arm drawn as seen from the front of the gram unit with the arm in its raised position. Above: Diagrams of the tuning drive system drawn as seen with the gang fully closed.*



*Diagram of the switch unit drawn as seen from underneath the chassis. The coding of the switches is explained under "General Notes" in col. 2. S1Y and S1Z are fitted behind the main switch panel and their connections are indicated in the plan view of the chassis (location reference B2).*

**PYE - 2DSG**