

PYE - VHF2D

Resistors

R1	220Ω	K6
R2	220kΩ	K6
R3	10kΩ	K6
R4	1MΩ	K6
R5	22kΩ	K6
R6	1MΩ	G4
R7	39kΩ	G4
R8	33kΩ	G4
R9	100Ω	G4
R10	2.7kΩ	G4
R11	47kΩ	G4
R12	1kΩ	G4
R13	470kΩ	G4
R14	56kΩ	F4
R15	1kΩ	F4
R16	47Ω	F4
R17	47kΩ	F4
R18	100kΩ	F4
R19	1.8MΩ	F4
R20	470kΩ	F4
R21	47kΩ	B2
R22	22kΩ	A2
R23	1MΩ	E3
R24	2.7kΩ	B2
R25	15kΩ	B2
R26	220kΩ	A2
R27	680kΩ	A2
R28	1kΩ	A1
R29	150Ω	A1
R30	1kΩ	F4
R31	50kΩ	E3

Coils*

L1	—	J5
L2	—	J5
L3	—	J5
L4	—	J5
L5	—	J5
L6	—	K6
L7	—	K6
L8	—	G3
L9	—	G3
L10	18-0	D2
L11	—	D2
L12	7-0	D1
L13	—	G4
L14	—	G4
L15	—	G4
L16	2-5	G4

L17	4-5	F4
L18	—	C1
L19	—	C1
L20	5-5	C1
L21	5-5	C1
L22	—	B1
L23	—	B1
L24	—	B1
L25	5-5	B1
L26	5-5	B1
L27	—	—

Capacitors

C1	0.001μF	J5
C2	150pF	K6
C3	2.2pF ¹	K6
C4	3pF	K6
C5	4pF	J5
C6	800pF	K6
C7	0.001μF	J5
C8	5pF ²	K6
C9	5pF ²	K6
C10	5pF ²	K6
C11	15pF	K6
C12	8.2pF ²	K6
C13	22pF ³	K6
C14	0.001μF	C2
C15	68pF ³	K6
C16	0.001μF	C2
C17	100pF	D1
C18	330pF	F3
C19	15pF	G3
C20	30pF	G3
C21	110pF	F3
C22	30pF	G3
C23	528pF ³	C2
C24	100pF	G4
C25	0.005μF	G4
C26	0.005μF	G4
C27	100pF	G4
C28	520pF ⁴	G4
C29	200pF ⁴	F4
C30	30μF	G4
C31	160pF ⁴	F4
C32	30pF	G4
C33	15pF	G4
C34	100pF	G4
C35	528pF ⁵	C2
C36	15pF ⁵	C1
C37	180pF ⁴	C1

C38	180pF ⁴	C1
C39	100pF	G4
C40	0.04μF	G4
C41	0.005μF	F4
C42	0.005μF	F4
C43	47pF ⁴	B1
C44	800pF	F4
C45	200pF ⁴	B1
C46	200pF ⁴	B1
C47	100pF	F4
C48	150pF	F4
C49	100pF	F4
C50	2μF	B2
C51	10μF	F4
C52	0.005μF	F4
C53	0.01μF	G3
C54	33pF	E3
C55	0.01μF	E3
C56	4μF	B2
C57	50μF	D2
C58	50μF	D2
C59	150pF	B1
C60	0.01μF	A2
C61	50μF	A1
C62	0.05μF	E3
C63	0.01μF	H4
C64	0.01μF	H4

Miscellaneous*

T1	{ a 20-0 b 500-0 c 0-4 }	E4
T2	{ a 190-0 b 190-0 c — d 40-0 (total) }	H4
S1	—	B2
S2, S3	—	F3
S4-S6	—	G3

* Approximate D.C. resistance in ohms.

- 1 ± 1pF.
- 2 ± 1pF.
- 3 ± 5%.
- 4 ± 2%.
- 5 Swing value, min. to max.

CIRCUIT ALIGNMENT

Equipment Required.—An A.M. signal generator, modulated 30 per cent at 400c/s; an F.M. signal generator, deviated by ±15kc/s and +75kc/s; an A.C. voltmeter for use as an output meter; a 100pF capacitor and a 0.01μF capacitor; and a non-metallic screwdriver-type trimming tool.

Early versions of this receiver were provided with a 470k/cs A.M. I.F. rejector in the A.M. aerial circuit and a pre-set balancing potentiometer in the ratio-detector circuit. These components, however, were not fitted to the sample from which this *Service Sheet* was prepared, and are therefore not shown in our circuit diagram and chassis illustrations. Their positions in the circuit are described in col. 5 under "General Notes," and their adjustment is described in the alignment operations that follow.

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

A.M. Alignment

- 1.—Press the M.W. press-button, turn volume control and tuning gang to maximum. Connect the output meter across the external 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. Repeat these adjustments until no improvement can be obtained.
- 3.—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.
- 4.—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

for minimum reading on the output meter.

- 5.—Press the L.W. press-button and tune receiver 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.—Press the M.W. press-button and tune the receiver to 500m. Feed in a 600kc/s signal and adjust the core of L16 (G4) for maximum output, then slide the former of L10 (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) and C22 (G3) for maximum output.
- 8.—Repeat operations 6 and 7.
- 9.—Press the S.W. press-button and tune receiver to 49.18m. Feed in a 6.1Mc/s signal and adjust the cores of L15 (G4) and L9 (G3) for maximum output.
- 10.—Tune 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.—Adjust the pre-set balancing resistor, if fitted (see "General Notes," col. 5), in the ratio-detector circuit, for minimum resistance.
- 2.—Press the V.H.F. press-button. Connect the F.M. signal generator to V3 control grid (pin 2). Feed in a 10.7Mc/s signal, deviated by ±75kc/s, and adjust the cores of L23 (B2) and L22 (F4) for maximum output. Disconnect the F.M. signal generator.
- 3.—Connect the A.M. signal generator to

V3 control grid. Feed in a modulated 10.7Mc/s signal and adjust the pre-set balancing resistor referred to in operation 1 above, for minimum output. Disconnect the A.M. signal generator.

- 4.—Connect the F.M. signal generator to V2b control grid (pin 2). Feed in a 10.7Mc/s signal, deviated by ±75kc/s, and adjust the cores of L19 (C2) and L18 (G4) for maximum output.
- 5.—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 ±75kc/s, and adjust the cores of L6 and L7 (K6) for maximum output.
- 6.—Transfer the F.M. signal generator live lead to the lower 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 ±15kc/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.

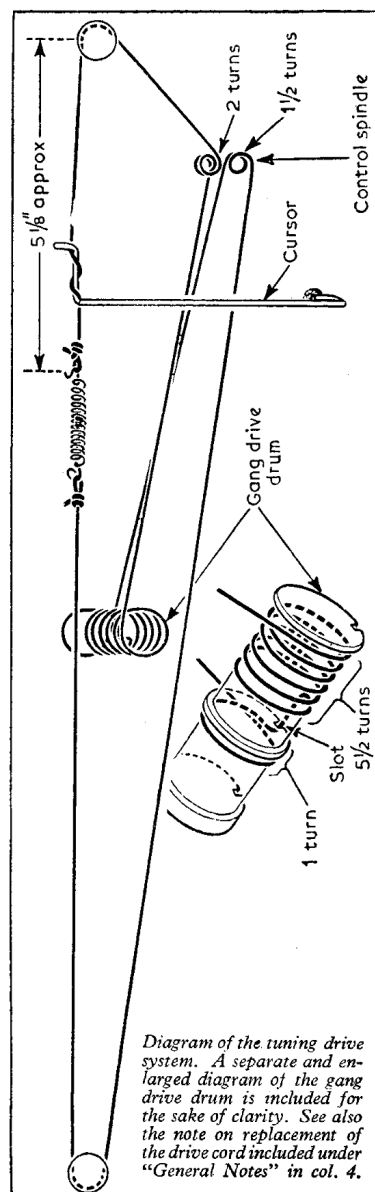


Diagram of the tuning drive system. A separate and enlarged diagram of the gang drive drum is included for the sake of clarity. See also the note on replacement of the drive cord included under "General Notes" in col. 4.

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