

General Description : Five-valve (including rectifier), three-waveband superheterodyne receiver. Released July 1949.

Power Supply : A.C. Mains, 200-255 volts, 40-100 c/s., consumption 40 watts.

Wavebands : S.W. 15.8-51.3 m. (19-5.8 Mc/s.); M.W. 187-575 m. (1605-520 kc/s.); L.W. 940-2050 m. (320-146 kc/s.).

Intermediate Frequency : 470 kc/s.

Valves : (V₁) 7S7; (V₂) 7B7; (V₃) 7C6; (V₄) 7C5; (V₅) 7Y4.

Dial Light : 6.5 volts, 0.3 amp. M.E.S. fitting.

Audio Output : 3 watts.

Ext. Loudspeaker : Impedance 3 ohms.

Gram. P.U. : High-impedance or crystal types.

Alignment Procedure :

Equipment : Modulated signal generator, output meter to match 3 ohms, non-metallic trimming tool.

Output should be maintained at 200 mW. All operations should be repeated to ensure accuracy. Set volume and tone controls fully clockwise.

I.F. Transformers : Inject 470-kc/s. signal to control grid of V₁ via 0.1- μ F. capacitor. Adjust L₁₃, L₁₂, L₆ and L₅ for maximum output in the order stated.

Medium Waveband : Tuning capacitor at minimum, adjusting pointer so that its edge just touches beginning of horizontal scale lines. With standard dummy aerial in circuit, inject 1550-kc/s. signal via A and E sockets. Set tuning pointer to line marked M* on top left of scale. Adjust C₁₁ for maximum output. Adjust C₂ for maximum output. Check calibration and sensitivity at spot frequencies.

Long Waveband : Set tuning pointer to line marked L* on top right of scale and inject 160-kc/s. signal. Adjust C₁₇ for maximum output. Check calibration and sensitivity at spot frequencies.

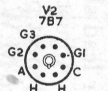
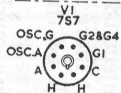
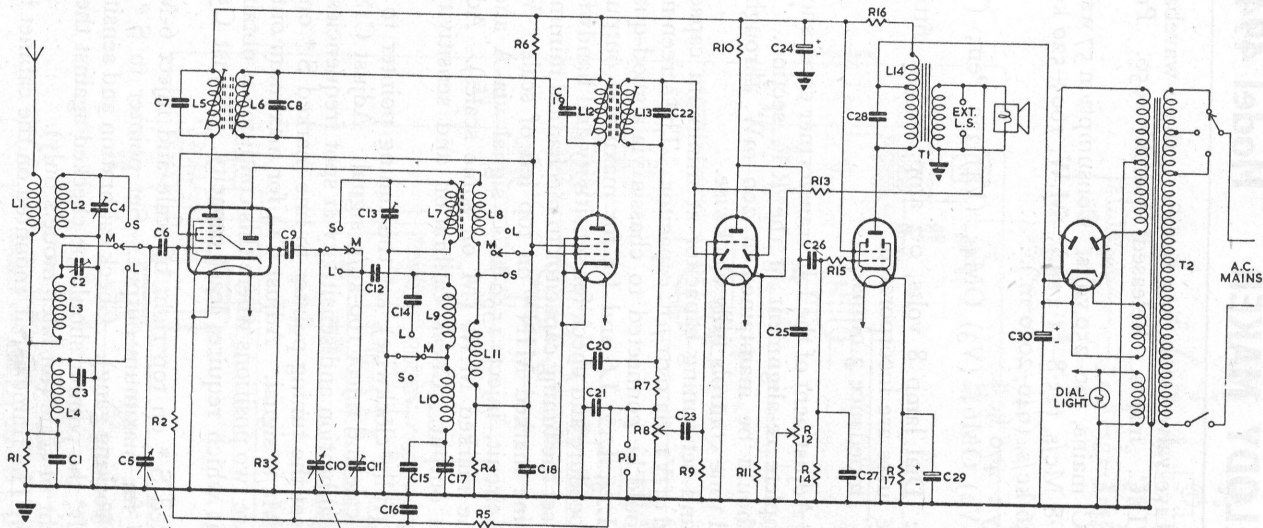
Short Waveband : Set tuning pointer to line marked S* on top left of scale and inject 18-Mc/s. signal. Adjust C₁₃ for maximum output. (Two possible positions; correct one requires least trimmer capacity.) Adjust C₄.

Set tuning pointer to line marked S* on top right of scale and inject 6-Mc/s. signal. Adjust core of L₇ for maximum output. Re-trim C₁₃ and C₄ at 18 Mc/s. Check calibration and sensitivity at spot frequencies.

Voltage Checks : Taken with 1000-ohm/volt testmeter; no signals. Measurements should be taken as approximate.

V ₁	Pin 2	208 v.	Pin 3	82 v.	Pin 5	80 v.
V ₂	Pin 2	204 v.	Pin 3	80 v.		—
V ₃	Pin 2	46 v.		—		—
V ₄	Pin 2	268 v.	Pin 3	202 v.	Pin 7	9 v.
V ₅	Pin 3	250 A.C.	Pin 6	250 A.C.	Pin 7	280 v.

* Not visible when receiver is in cabinet.



Capacitors.

C1	0.005	C11	5-60 pF.	C21	100 pF.
C2	5-60 pF.	C12	440 pF.	C22	100 pF.
C3	75 pF.	C13	5-60 pF.	C23	0.005
C4	5-60 pF.	C14	133 pF.	C24	32 (450 v.)
C5	Main tuning	C15	500 pF.	C25	0.02
C6	500 pF.	C16	0.1	C26	0.01
C7	100 pF.	C17	5-60 pF.	C27	100 pF.
C8	100 pF.	C18	0.1	C28	0.005
C9	100 pF.	C19	100 pF.	C29	25 (25 v.)
C10	Main tuning	C20	100 pF.	C30	16 (450 v.)

Resistors.

R1	1000	1/2 W.	R10	680k	1/2 W.
R2	330k	1/2 W.	R11	100	1/2 W.
R3	47k	1/2 W.	R12	0.5M	Pot.
R4	33k	1/2 W.	R13	470	1/2 W.
R5	2.2M	1/2 W.	R14	470k	1/2 W.
R6	12k	1/2 W.	R15	47k	1/2 W.
R7	47k	1/2 W.	R16	2.7k	2 W.
R8	0.5M	Pot.	R17	270	1/2 W.
R9	4.7M	1/2 W.			

Approx. D.C. Resistances.

L3	3.5	L11	5.5
L4	13.5	L12	9
L5	9	L13	9
L6	9	L14	13
L8	2.6	T1 (p)	280
L9	2.8	T2 (p)	47 (Total)
L10	7.5	T2 (s)	265 + 265
L1, L2, L7	Very low		