

General Description : Five-valve (including rectifier), three-waveband superheterodyne receiver for A.C. or D.C. mains. Released April 1948.
Price £17 17s. (plus tax).

Power Supplies : A.C. mains 190-250 volts, 40-100 c/s.; D.C. mains 190-250 volts. Consumption approximately 60 watts.

Wavebands : S.W. 16-50 m.; M.W. 200-560 m.; L.W. 1000-2000 m.

Intermediate Frequency : 465 kc/s.*

Valves : (V₁) OM10; (V₂) OM6; (V₃) OM4; (V₄) 332Pen; (V₅) OM1.

Dial Light : 8 volts, 0.2 amp.

Chassis : To remove chassis, disconnect supply mains, remove control knobs, remove cabinet back, disconnect loudspeaker leads, withdraw four 2 B.A. cheese-headed screws in cabinet base.

Alignment Procedure : The receiver should preferably be aligned with the aid of a ganging oscillator and double-beam oscillograph. Where these are not available the following procedure may be adopted. *Note :* On no account should a direct earth connection be made to the chassis. The screened lead from the signal generator should be connected to chassis via a 0.1-μF. capacitor.

I.F. : Inject 465 kc/s.* signal. Adjust L₁₆, L₁₅, L₈, L₇ to give maximum output.

R.F. : Connect modulated signal generator input to A terminal via standard dummy aerial.

S.W. : Set pointer to 18 Mc/s. and inject 18-Mc/s. signal. Adjust C₁₈ and C₉ for maximum output. Set pointer to 6 Mc/s. Adjust cores of L₉ and L₆ for maximum output. Repeat all operations until no further improvement can be obtained.

M.W. : Set pointer to 214 m. and inject 1400-kc/s. signal. Adjust C₁₉ and C₈ for maximum output. Check calibration and sensitivity at 500 m.

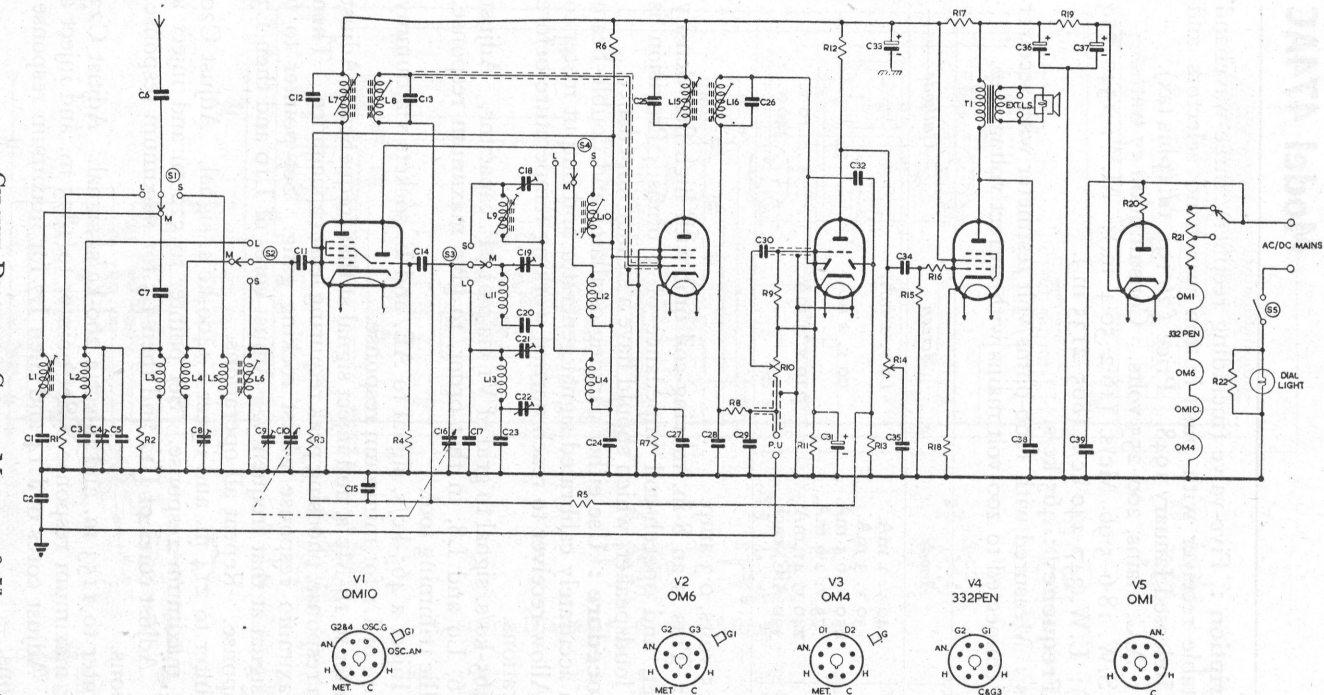
L.W. : Set pointer to 1000 m. and inject 300-kc/s. signal. Adjust C₂₁ and C₄ for maximum output. Set pointer to 1875 m. and inject 160-kc/s. signal. Adjust C₂₂ for maximum output. Repeat all operations until no further improvement can be obtained.

Approx. D.C. Resistance : Resistance of inductances not listed below is "very low" :

L ₂ 75 ohms	L ₇ and 8 10 ohms	L ₁₃ 15 ohms	T ₁ (primary) 400 ohms
L ₃ 20 ohms	L ₁₀ 29 ohms	L ₁₄ 7 ohms	
L ₆ 10 ohms	L ₁₁ 2 ohms	L ₁₅ and L ₁₆ 8 ohms	

Voltage Check Points : Readings taken with a 1000 ohms/volt test-meter with receiver connected to 200 volts A.C. mains (no-signal conditions).

V ₁	Pin 2	12.6 v.	Pin 3	145 v.	Pin 4	80 v.	Pin 6	80 v.
V ₂	Pin 2	18.9 v.	Pin 3	146 v.	Pin 4	80 v.	Pin 7	12.6 v.
V ₃	Pin 2	6.3 v.	Pin 3	50 v.	Pin 8	1.4 v.		
V ₄	Pin 2	18.9 v.	Pin 3	170 v.	Pin 4	150 v.	Pin 7	53 v.
V ₅	Pin 2	80 v.	Pin 5	200 v.	Pin 7	53 v.	Pin 8	225 v.



Capacitors.

C1	225 pF.	C12	100 pF.	C22	5-50 pF.
C2	0.02	C13	100 pF.	C23	140 pF.
C3	1500 pF.	C14	100 pF.	C24	0.1
C4	5-50 pF.	C15	0.1	C25	100 pF.
C5	25 pF.	C17	75 pF.	C26	100 pF.
C6	0.005	C18	5-50 pF.	C27	0.01
C7	500 pF.	C19	5-50 pF.	C28	100 pF.
C8	5-50 pF.	C20	570 pF.	C29	100 pF.
C9	5-50 pF.	C21	5-50 pF.	C30	0.005
C11	300 pF.				

Resistors.

C31	25 (25 v.)	R1	12k	1 W.	R9	4.7M	1 W.	R16	100k	1 W.
C32	100 pF.	R2	3.3k	1 W.	R10	0.5M	Pot.	R17	1.5k	1 W.
C33	8 (450 v.)	R3	330k	1 W.	R11	2.2k	1 W.	R18	270	1 W.
C34	0.01	R4	12k	1 W.	R12	100k	1 W.	R19	1k	4 W.
C35	0.01	R5	2.2M	1 W.	R13	1M	1 W.	R20	47	1 W.
C36	8	R6	10k	1 W.	R14	25k	Pot.	R21	722	30 W.
C37	8	R7	1k or 270*	1 W.	R15	470k	1 W.	R22	50	4 W.
C38	0.002 (500 v.)	R8	47k	1 W.						
C39	0.01									

* Depending on type of I.F. Transformer used.