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

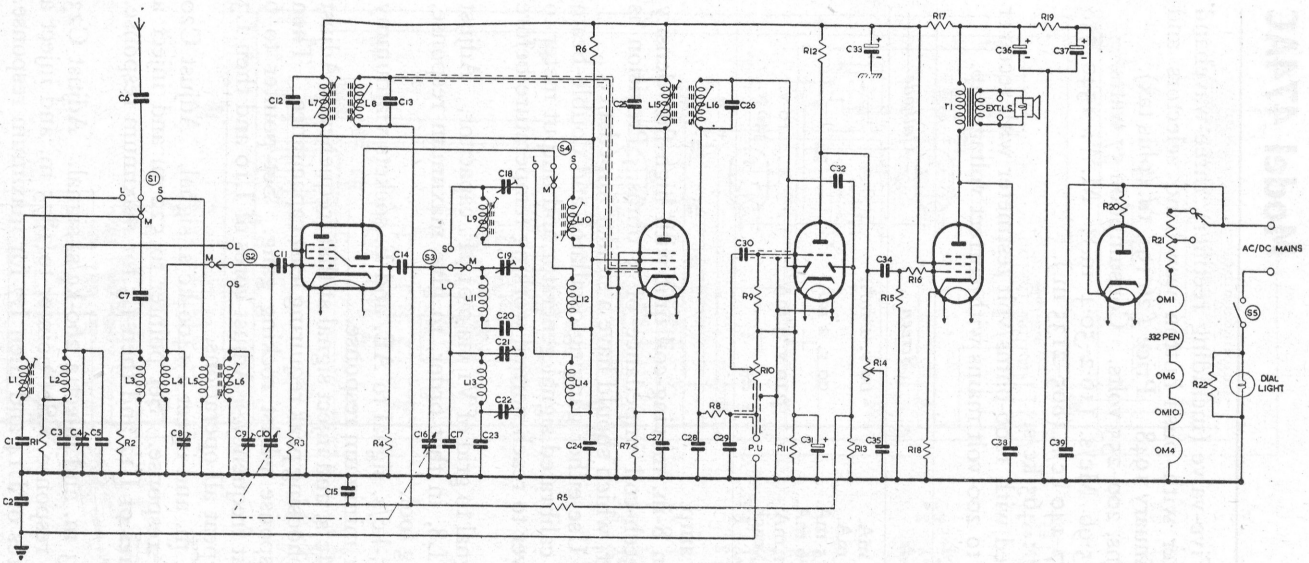
L2	75 ohms	L7 and 8	10 ohms	L13	15 ohms	T1 (primary)	400 ohms
L3	20 ohms	L10	29 ohms	L14	7 ohms		
L6	10 ohms	L11	2 ohms	L15 and L16	8 ohms		

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

V1	Pin 2	12·6 v.	Pin 3	145 v.	Pin 4	80 v.	Pin 6	80 v.
V2	Pin 2	18·9 v.	Pin 3	146 v.	Pin 4	80 v.	Pin 7	12·6 v.
V3	Pin 2	6·3 v.	Pin 3	50 v.	Pin 8	1·4 v.		—
V4	Pin 2	18·9 v.	Pin 3	170 v.	Pin 4	150 v.	Pin 7	53 v.
V5	Pin 2	80 v.	Pin 5	200 v.	Pin 7	53 v.	Pin 8	225 v.

* See note on page 328.

Circuit Diagram—Cossor Models 487U and 470KU



Capacitors.

C1	225 pF.	C12	100 pF.	C22	5–50 pF.	C31	25 (25 v.)	R1	12k	¼ W.	R9	4·7M	¼ W.	R16	100k	¼ W.
C2	0·02	C13	100 pF.	C23	140 pF.	C32	100 pF.	R2	3·3k	¼ W.	R10	0·5M	Pot.	R17	1·5k	1 W.
C3	1500 pF.	C14	100 pF.	C24	0·1	C33	8 (450 v.)	R3	330k	¼ W.	R11	2·2k	¼ W.	R18	270	½ W.
C4	5–50 pF.	C15	0·1	C25	100 pF.	C34	0·01	R4	12k	¼ W.	R12	100k	¼ W.	R19	1k	4 W.
C5	25 pF.	C17	75 pF.	C26	100 pF	C35	0·01	R5	2·2M	¼ W.	R13	1M	¼ W.	R20	47	1 W.
C6	0·005	C18	5–50 pF.	C27	0·01	C36	8	R6	10k	½ W.	R14	25k	Pot.	R21	722	30 W.
C7	500 pF.	C19	5–50 pF.	C28	100 pF.	C37	8	R7	1k or 270*	¼ W.	R15	470k	½ W.	R22	50	4 W.
C8	5–50 pF.	C20	570 pF.	C29	100 pF.	C38	0·002 (500 v.)	R8	47k	¼ W.						
C9	5–50 pF.	C21	5–50 pF.	C30	0·005	C39	0·01									
C11	300 pF.															

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