COSSOR Models 470AC, 487AC, 480K, 490K

General Description : Five-valve (including rectifier), three-waveband superheterodyne receiver. Model 470AC released May 1947, price £21 11*s.* 6*d.* (plus tax), Model 487AC released December 1947, price £19 15*s.* (plus tax), Model 480K released May 1947, price £27 16*s.* 6*d.* (plus tax), Model 490K released January 1948, price according to cabinet finish.

Power Supply : A.C. mains, 200–250 volts, 40–100 c/s. Consumption approximately 50 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) 6V6G; (V5) 6X5G.

Dial Light : 8 volts, 0·3 amp.

Variations : Model 487AC differs from Model 470AC in cabinet design. Later version includes modified tone-corrector circuit. Model 480K differs from Model 487AC only in cabinet design. Model 490K uses 487AC chassis with a 6½-in. loudspeaker.

Alignment Procedure : Switch on receiver and signal generator at least 15 minutes before re-aligning.

I.F. Filter Circuit : Inject 465-kc/s.* signal to AE and E terminals. Adjust core of L1 for minimum signal.

I.F. : Inject 465-kc/s. signal to top cap of V1 via 0·01-μF. capacitor without removing grid lead. Adjust cores in following order: L16 (lower); L15 (upper); L8 (lower); L7 (upper).

S.W. : Tune to 18 Mc/s., inject 18-Mc/s. signal to AE and E terminals via dummy aerial. Adjust C7 and C16 for maximum output.

M.W. : Tune to 1·4 Mc/s., inject 1·4-Mc/s. signal and adjust C6 and C17 for maximum output.

L.W. : Tune to 300 kc/s., inject 300-kc/s. signal and adjust C3 and C19 for maximum output. Inject 160-kc/s. signal and adjust C20 for maximum output. Re-check C20 and C19.

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

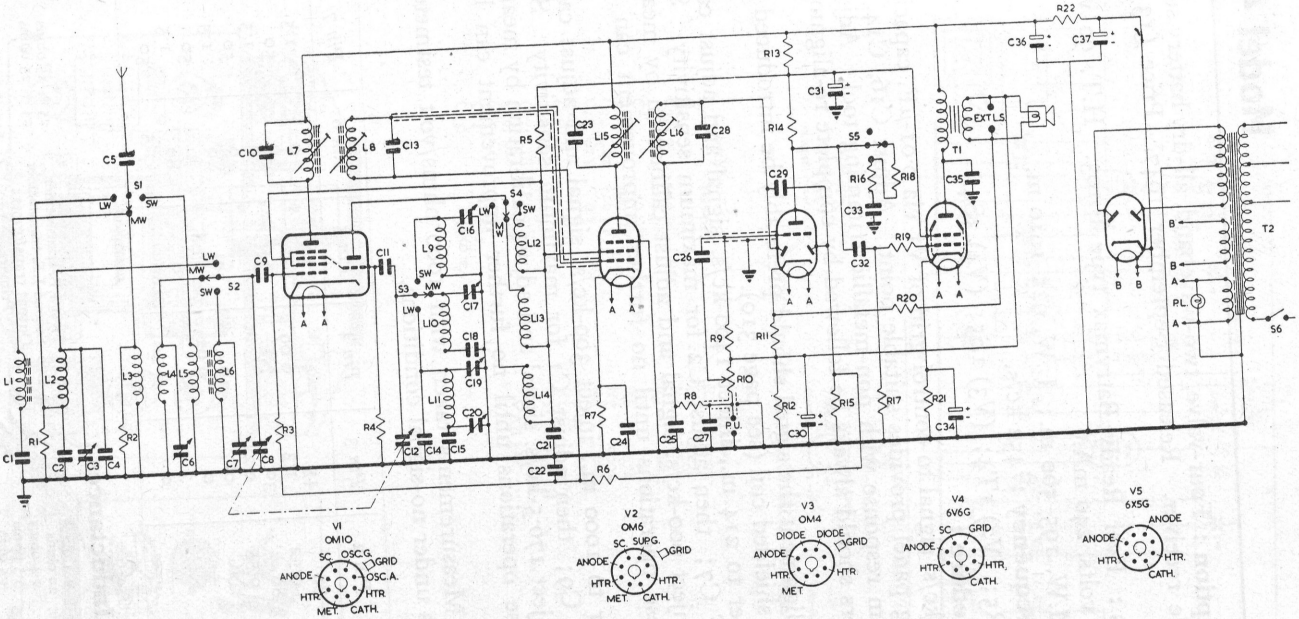
L2	75 ohms	L12	26 ohms	T2 (primary)	45 ohms, 40 ohms, or 37 ohms according to tapping
L3	20 ohms	L14	8 ohms		
L6, L7 and L8	10 ohms	L15 and L16	10 ohms		
L11	15 ohms	T1 (primary)	400 ohms	T2 (secondary)	64 + 64 ohms

Voltage Check Points : All measurements taken with a multi-range 1000 ohms/volt testmeter while receiver connected to 200 volts A.C. (no-signal conditions).

V1	Pin 3	276 v.	Pin 4	105 v.	Pin 6	110 v.
V2	Pin 3	270 v.	Pin 4	105 v.	Pin 8	4·2 v.
V3	Pin 3	35 v.	Pin 8	2·6 v.		—
V4	Pin 3	250 v.	Pin 4	210 v.	Pin 8	9·4 v.
V5	Pin	340 A.C.	Pin 5	340 A.C.	Pin 8	345 v.

* See note on page 328.

Circuit Diagram—Cossor Models 470AC, 487AC, 480K and 490K



Capacitors.

C1	225 pF.
C2	1500 pF.
C3, 6, 7	3-bank 5–50 pF.
C4	25 pF.
C5	500 pF.
C8, 12	532 pF.
C9	300 pF.
C10	100 pF.
C11	100 pF.
C13	100 pF.
C14	75 pF.
C15	140 pF.
C16, 17, 19, 20	4-bank 5–50 pF.
C18	570 pF.
C21	0·1
C22	0·1
C23	100 pF.
C24	0·01
C25	100 pF.
C26	0·005
C27	100 pF.
C28	100 pF.
C29	100 pF.
C30	25 (25 v.)
C31	8 (450 v.)
C32	0·01
C33	0·05
C34	25 (25 v.)
C35	0·01
C36, 37	+ 8 (450 v.)

Resistors.

R1	12k	¼ W.
R2	3·3k	¼ W.
R3	330k	¼ W.
R4	12k	¼ W.
R5	10k	¼ W.
R6	2·2M	¼ W.
R7	1k	¼ W.
R8	47k	¼ W.
R9	4·7M	¼ W.
R10	500k	Pot.
R11	100	¼ W.
R12	2·2k	¼ W.
R13	3·9k	1 W.
R14	100k	¼ W.
R15	1M	¼ W.
R16	6·8k	½ W.
R17	470k	¼ W.
R18	6·8k	½ W.
R19	100k	¼ W.
R20	220	¼ W.
R21	270	½ W.
R22	1·5k	7½ W. (vitreous)