

# COSSOR 40

Three-valve, plus rectifier, two waveband, table model receiver with tuned radio-frequency circuit, suitable for A.C. mains. Made by A. C. Cossor, Ltd., Highbury Grove, London, N.5.

**Circuit.**—An aerial coil with a primary on L.W. and a coupling condenser on M.W. connects the aerial to V1, a variable mu pentode radio-frequency amplifier. A tuned anode H.F. transformer forms the coupling to V2.

V2 is an H.F. pentode as a leaky-grid detector. The cathode circuit includes a bias resistor which comes into use when a pick-up is switched in. Reaction is applied from the anode by means of coupling coils and a variable condenser.

Resistance-capacity coupling leads to V3, a triode output valve with a fixed tone condenser across the output transformer.

V4 is an orthodox full-wave rectifier with a hum-dinger across the heater winding.

Volume control is by means of R2, which varies the voltages on the control grid and screen of V1.

**Special Transformers**—In some models a mains transformer (MC 11337) with a voltage selector panel at the base is used. In this case the resistances R 16, 17 and 18 are not required and R1 is reduced in value to 500 ohms.

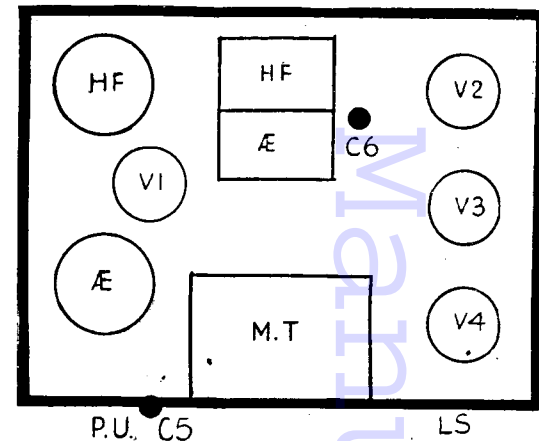
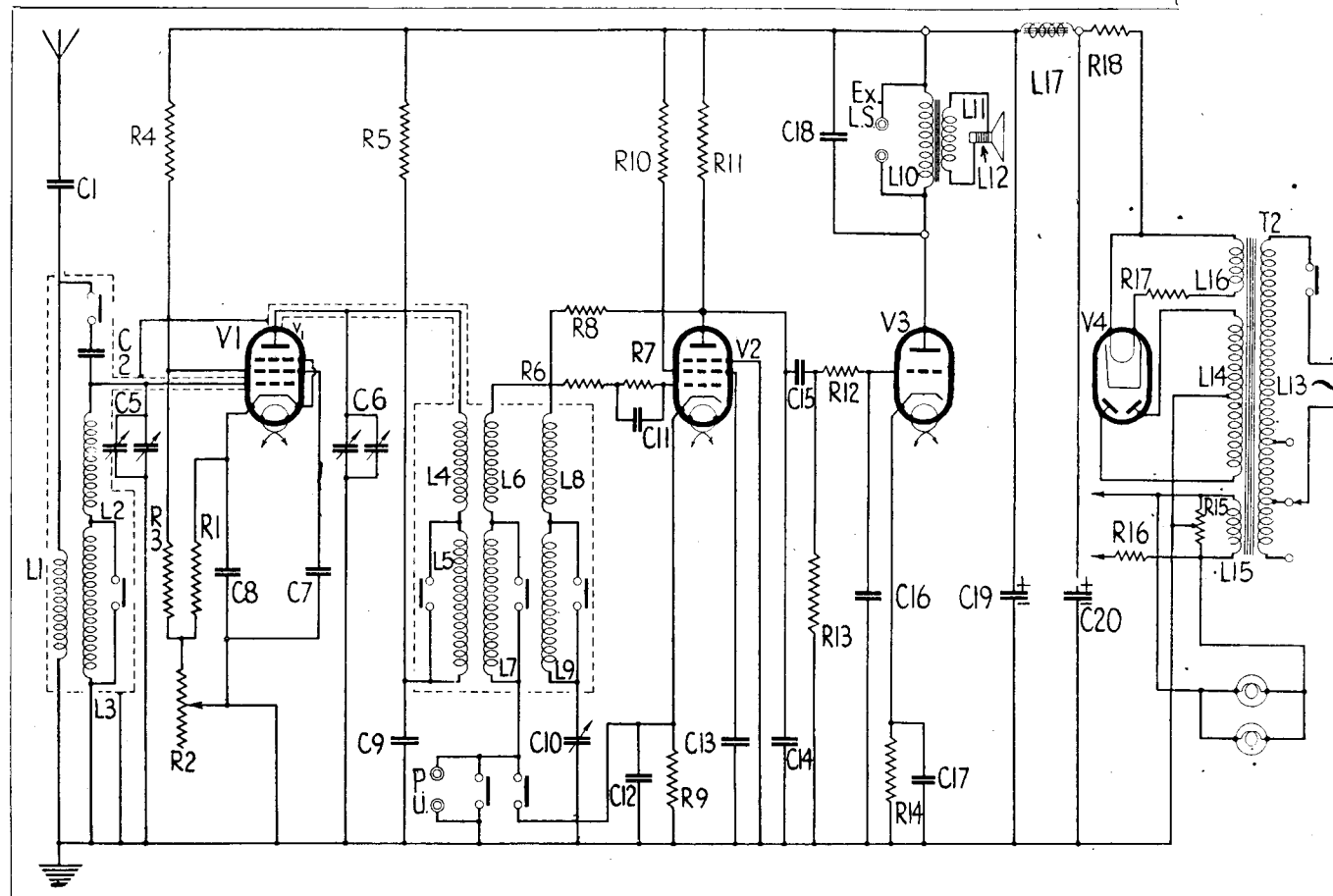
In sets with the transformer on top (MC 11356) R 16, 17 and 18 should be added if not present and R1 made 750 ohms.

**Wavebands.**—200-560 and 826-2,000 m. Provision for P.U. and for a 3,000 ohm extension speaker.

### GANGING

Do not make any adjustment to the trimmer C6 unless every other possible cause of the trouble has been investigated as this has been carefully set at the works to give the correct calibration.

If realignment is necessary, verify that the pointer is vertical when the condenser is turned fully anti-clockwise, then connect a test oscillator tuned to 240 metres (1,250 kcs.) to the A. and E. leads, set dial pointer to the same wavelength and adjust C6 to give maximum signal.



A simple "straight" mains set, the 40 is good training job for the service learner.

Changes in circuit due to different transformers are listed in the text.

### VALVE VOLTAGES

V	Type	Electrode	Volts.	M.A.
1	M.V.S./Pen	Anode	197	3.6
		Screen	124	.7
		Cathode	3	4.3
2	M.S./Pen	Anode	92	1.4
		Screen	30	.4
3	41M.P.	Anode	237	26
		Cathode	9	—
4	431.U.	Anodes	342	—
		Cathode	348 (or 310)	35.5

Pilot lamps, 6.5v., .3 amp.

### RESISTANCES

R	Ohms.	R	Ohms.
1	750	10	.5 meg.
2	12,000	11	.1 meg.
3	40,000	12	.1 meg.
4	30,000	13	.5 meg.
5	10,000	14	.300
6	200	15	.25
7	1 meg.	16	.155
8	300	17	.155
9	1,000	18	1,000

### CONDENSERS

C	Mfds.	C	Mfds.
1	.0005	13	.1
2	15 mmfds.	14	.0002
7	.1	15	.01
8	.1	16	.0002
9	.1	17	.50
10	.0003	18	.005
11	.0001	19	.4
12	50	20	.6

### WINDINGS

L	Ohms.	L	Ohms.
1	8	9	4
2	1.5	10	130
3	12.5	11	.18
4	1.5	12	.2
5	12.5	13	25 (22)
6	1.5	14	420 (370)
7	12.5	15	.1 (V. low)
8	.5	16	.1 (1)
		17	2,500

Bracketed figures apply to MC 11356.