COSSOR MELODY MINOR Model 512

General Description : Four-valve (including rectifier), two-waveband transportable table receiver for A.C./D.C. mains with built-in frame aerial.

Power Supply : A.C./D.C. mains, 200–250 volts (two adjustment positions). A.C. 40–100 c/s. Consumption 50 watts.

Wavebands : M.W. 1605–547 kc/s.; L.W. 347–145 kc/s.

Intermediate Frequency : 470 kc/s.

Valve Analysis : Readings on Avometer Model 8 (20,000-ohms/volt).

Valve	*Anode Volts*	*Anode Current, mA.*	*Screen Volts*	*Screen Current, mA.*	*Cathode Volts*	*Cathode Current, mA.*
V1 141TH .	155	2·4	75	3·7	—	9
(osc.) .	70	2·9	—	—	—	—
V2 171DDP .	155	5	115	1·9	—	6·9
V3 451PT .	168	33	156	6·3	4·2	39·3
V4 311SU .	185 A.C.	—	—	—	184	55·4

Alignment Procedure : Note that the chassis is "live".

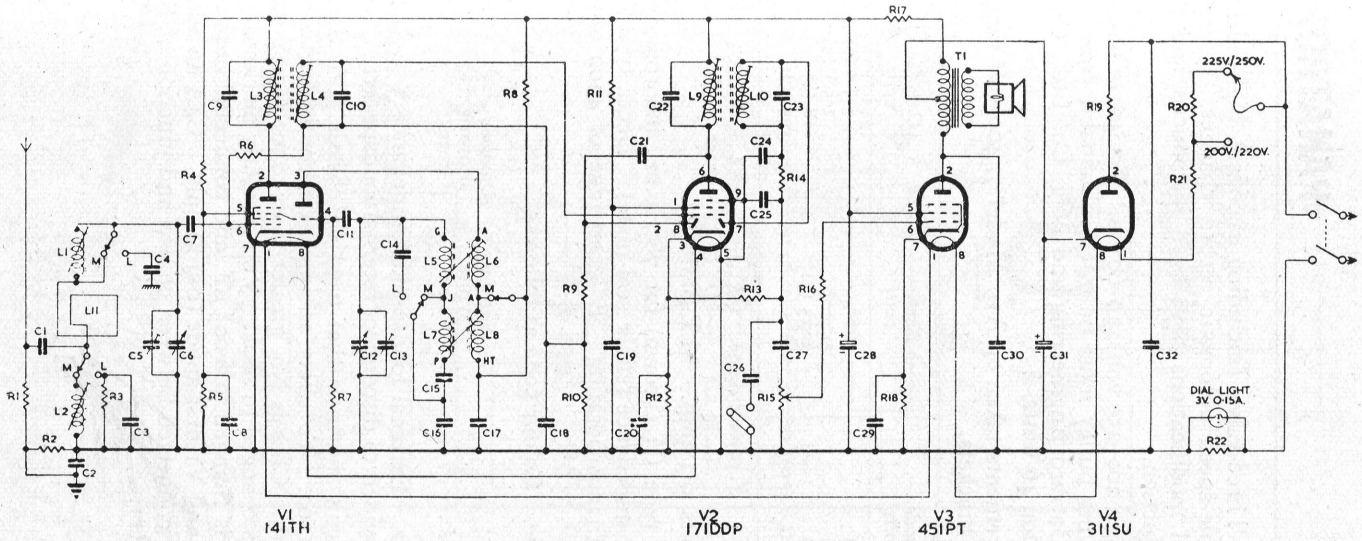
I.F. : Switch to M.W. with tuning gang fully open. Inject a 470-kc/s. signal to control grid of V1 via a 0·1-μF. capacitor and connect screening of generator output lead to chassis via a 0·1-μF. capacitor. Adjust L10, L9, L4 and L3 to maximum output in that order, noting that the bottom core of the 2nd I.F.T. must be trimmed to its inner resonance position, while the other three cores must be in their outer position.

R.F. : Check that pointer is set to the maximum mark on the dial plate with the tuning gang fully enmeshed. Align M.W. before L.W. Inject signals to aerial socket via dummy aerial (see note below regarding frame-aerial alignment) (bottom mark at H.F. end).

M.W. : Inject 1550 kc/s. signal, set pointer to 1550 kc/s., adjust C13 and then C5 for maximum output. Inject 575 kc/s., set pointer to 575 kc/s. (bottom mark near L.F. end), adjust core of L5–L6 and then core of L2 for maximum output. The aerial cores are on the back turndown of the chassis, the M.W. pad coil being nearer the end of the chassis. Repeat adjustments till neither affects the other. Check calibration and sensitivity.

L.W. : Inject a 160-kc/s. signal, set pointer to 160-kc/s. calibration mark. Adjust oscillator core L7–L8 and then L1 for maximum output. Check calibration and sensitivity at spot frequencies.

Notes : After the chassis has been put into its cabinet the pointer must be aligned to the maximum of the dial window with the tuning gang at mechanical maximum. The alignment procedure given above is for use when the receiver is being operated with an external aerial only. Should the receiver be operated solely on the frame aerial, then it is advisable that the M.W. aerial trimmer should be adjusted for maximum output at 1550 kc/s. and the L.W. trimmer at 200 kc/s. The signal should be introduced via an R.M.A. standard shielded coil, spaced about 1 ft. away from the frame aerial.



CIRCUIT DIAGRAM AND CORD-DRIVE SYSTEM—COSSOR MODEL 512

Capacitors.

C1	0·0018
C2	0·01
C3	0·0015 (2%)
C4	22 pF. (5%)
C5	Trimmer
C6	Tuning gang (aerial)
C7	100 pF.
C8	0·1
C9	100 pF.
C10	100 pF.
C11	100 pF.
C12	Tuning gang (oscillator)
C13	Trimmer
C14	47 pF.
C15	220 pF. (1%)
C16	638 pF. (1%)
C17	0·1
C18	0·05
C19	0·1
C20	0·1
C21	10 pF.
C22	100 pF. (2%)
C23	175 pF. (2%)
C24	100 pF.
C25	100 pF.
C26	0·001
C27	0·01
C28	32 (275 v.)
C29	50 (25 v.
C30	0·005 (600 v.)
C31	32 (275 v.)
C32	0·01 (600 v. A.C.)

Resistors.

R1	1·5M
R2	330k
R3	4·7k
R4	15k (½ W.)
R5	27k (½ W.)
R6	2·2M
R7	47k
R8	33k
R9	2·2M
R10	470k
R11	22k
R12	560 (10%)
R13	220k
R14	47k
R15	0·5M (Pot.)
R16	47k
R17	1·2k (10%, ½ W.)
R18	270 (½ W.)
R19	180
R20	300 (5%, 3·5 W.)
R21	950 (5%, 10 W.)
R22	33 (5%)

Dial Light, 3 volts, 0·15 amp., M.E.S.