

**General Description :** Five-valve (including rectifier), three-waveband superheterodyne radiogramophone. Released March 1951. Price £49 5s. 6d.

**Power Supply :** A.C. mains, 200-255 volts, 50 c/s. Three adjustment tappings: 200-215; 216-234; 235-255 volts. Consumption: radio, 40 watts; gramophone, 55 watts.

**Wavebands :** S.W. 19.5-85 Mc/s. (15.8-51.3 m.); M.W. 1605-520 kc/s. (187-577 m.); L.W. 325-147 kc/s. (923-2040 m.).

**Intermediate Frequency :** 470 kc/s.

**Valve Analysis :**

Valve	Anode Volts	Anode Current (mA.)	Screen Volts	Screen Current (mA.)	Cathode Volts
V <sub>1</sub> 7S7 (osc.)	208 96	3 3.2	80 —	3.4 —	— —
V <sub>2</sub> 7B7	204	10	80	2.3	—
V <sub>3</sub> 7C6	46	Very low	—	—	—
V <sub>4</sub> 7C5	268	32	202	2.5	9
V <sub>5</sub> 7Y4	250 A.C.	28 (each)	—	—	280

**Dial Light :** 6.5 volts, 0.3 amp. M.E.S. fitting.

**Gramophone Unit :** Non-mix, three-speed auto-change for 33, 45 and 78 r.p.m. Interchangeable sapphire stylus pick-up heads, red long-playing, green 78 r.p.m.

**Audio Output :** 3 watts to an 8-in. high-fidelity permanent magnet loudspeaker with a speech-coil impedance of 3 ohms.

**Ext. Loudspeaker :** 3 ohms impedance.

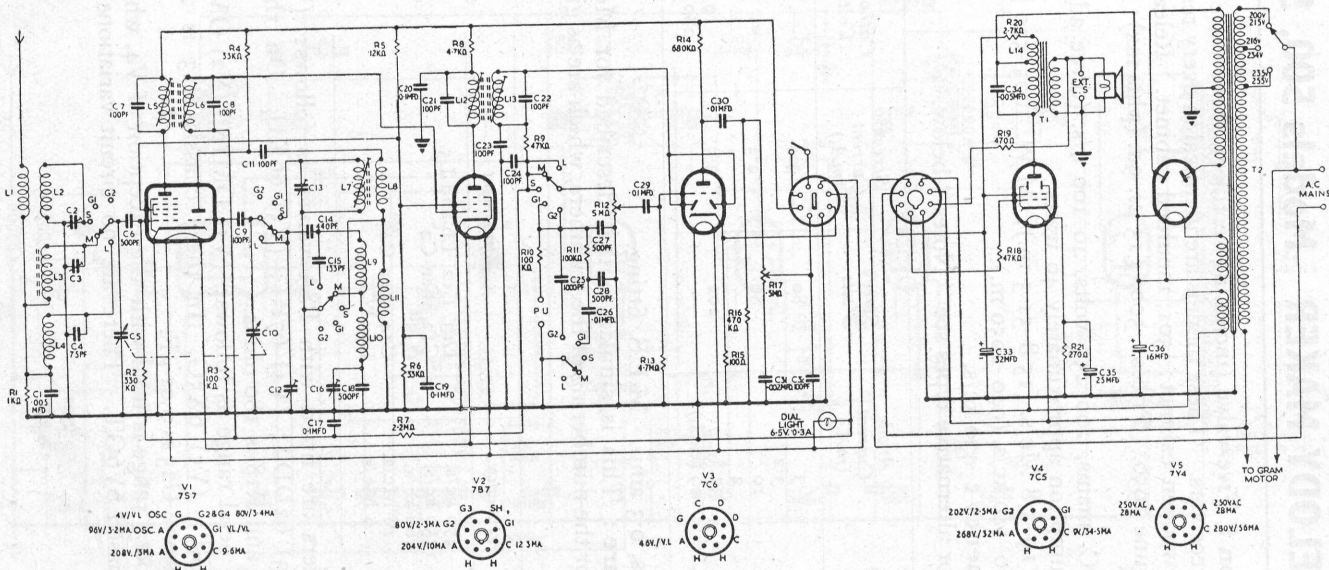
**Alignment Procedure :** Output should be maintained at 200 mW. and all operations repeated to ensure accuracy. Set volume and tone controls fully clockwise.

**I.F.:** Inject a 470-kc/s. signal to control grid of V<sub>1</sub> via 0.1-μF. capacitor. Adjust L<sub>13</sub>, L<sub>12</sub>, L<sub>6</sub> and L<sub>5</sub> for maximum output in order stated.

**M.W.:** With tuning capacitor at minimum, pointer should coincide with line marked MIN\* on top right of scale. With standard dummy aerial in circuit, inject a 1550-kc/s. signal via A. and E. sockets. Set tuning pointer to line marked M\* on top left of scale. Adjust C<sub>12</sub> and then C<sub>3</sub> for maximum response. Check calibration and sensitivity at spot frequencies.

**L.W.:** Set tuning pointer to line marked L\* on top left of scale and inject a 160-kc/s. signal. Adjust C<sub>16</sub> for maximum response. Check calibration and sensitivity at spot frequencies.

**S.W.:** Set tuning pointer to line marked S\* on top of scale and inject a 18-Mc/s. signal. Adjust C<sub>13</sub> for maximum response, choosing peak requiring least trimmer capacitance. Then adjust C<sub>2</sub>. Set tuning pointer to line marked S\* on bottom of scale and inject a 6-Mc/s. signal. Adjust core of L<sub>7</sub> for maximum response. Then re-trim C<sub>13</sub> and C<sub>2</sub> at 18 Mc/s., and check calibration and sensitivity at spot frequencies.



CIRCUIT DIAGRAM—COSSOR MODEL 502

*D.C. Resistance of Inductors.*

L1	Very low
L2	Very low
L3	3.5 ohms
L4	13.5 ohms
L5	9 ohms
L6	9 ohms
L7	Very low

L8	2.5 ohms
L9	2.8 ohms
L10	7.5 ohms
L11	5.5 ohms
L12	9 ohms
L13	9 ohms
L14	13 ohms

T1 (Primary)	280 ohms
(Secondary)	Very low
T2 (Primary) 200-v. tapping	40 ohms
216-v. tapping	43.8 ohms
235-v. tapping	47 ohms
(Secondary) H.T. winding	265 + 265 ohms
Heater windings	Very low.