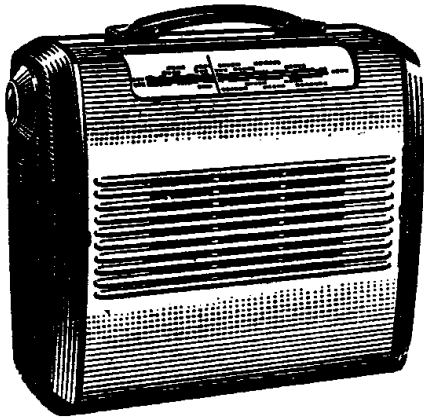


COSSOR

MAINS & BATTERY PORTABLE

MODEL 499.UB



GENERAL DESCRIPTION

Four valve Superheterodyne portable Receiver for operation on A.C./D.C. mains or batteries.

PRICE £14 14s. 1d. Plus Tax.

DATE RELEASED September, 1950.

CABINET 11" x 12" x 5 1/2".

CONSUMPTION Batteries: H.T. 11 mA ; L.T. 50 mA.
Mains: 20 Watts.

BATTERIES L.T: Ever Ready " All-Dry 31 " (7.5 volts).
H.T: Two Ever Ready " Batrymax ", Type B104 (45 volts each).

WEIGHT 14 lbs. (with batteries).

A.C./D.C. MAINS The Receiver will operate on mains supplies of 190-250 volts (40-100 cycles on A.C.). When the mains socket and lead is inserted firmly into the back of the Receiver, the batteries are automatically rendered inoperative. There are two voltage adjustment tappings marked 200-220 ; 220-240. A metal rectifier is employed, made up of two small units, Type R.M.2 (S.T. & C.).

INTERMEDIATE FREQUENCY 470 Kc/s.

WAVEBANDS MEDIUM Waveband 1603-525 Kc/s. (187-572 metres).
LONG Waveband 323-145 Kc/s. (928-2068 metres).

VALVES 1R5 Pentagrid Frequency Changer.
1S5 Diode Pentode.

1T4 Variable-mu R.F. Pentode.
3S4 Output Pentode.

LOUDSPEAKER A 6 1/2" high flux density permanent magnet moving coil unit with a speech coil impedance of 3 ohms.

EXTERNAL AERIAL An external aerial socket is provided on the underside of the right hand moulded end of cabinet.

ON/OFF SWITCH An indicator panel on the top right of tuning scale will show red when the receiver is switched on, and white when it is switched off.

CHASSIS Remove the rear metal casing secured by two knurled nuts on the underside. Remove the front metal casing, secured by two 6 BA screws on the underside, and by two self-tapping screws on the inside, accessible from the rear. For complete access to the chassis, the speaker can be released from its ring clamp and laid on the workbench.

ALIGNMENT PROCEDURE

When carrying out the following alignment procedure it should be borne in mind that where the Receiver is operated from mains supplies the chassis will be at high potential ; therefore the screening of the signal generator input lead should be connected to the chassis via a good quality 0.1 mfd. condenser.

I.F. TRANSFORMERS

Inject a 470 Kc/s. signal from an accurately calibrated modulated signal generator into the control grid of V1 via an 0.01 mfd. condenser.

Connect an output meter with an impedance of 3 ohms across the secondary of the output transformer, T1.

Using a trimming tool, adjust the iron cores of L9, L8, L4 and L3 for maximum response on the output meter, in the order given.

The signal input should be kept as low as possible to prevent the A.V.C. from operating.

R.F. ALIGNMENT

For R.F. alignment the signal should be introduced via an R.M.A. standard shielded coil, spaced about one foot away from the Receiver frame aerial. *

MEDIUM WAVEBAND

Switch to M.W. and with the volume control at maximum set the tuning pointer to the 206.5 metre mark.

Inject a 1450 Kc/s. modulated signal via the shielded coil.

Adjust calibration by means of the M.W. oscillator trimmer C13 for maximum response.

Adjust the aerial trimmer C3 for maximum response at the 206.5 metre mark.

LONG WAVEBAND

Switch to L.W. and with the volume control at maximum, set the tuning pointer to the 1875 metre mark.

Inject a 160 Kc/s. signal.

Adjust the Long wave padder C16 for maximum response.

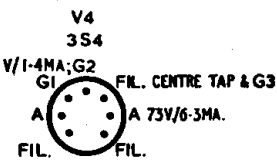
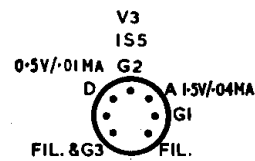
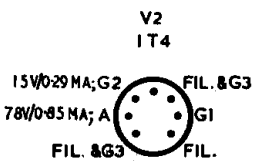
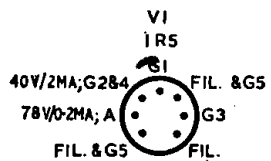
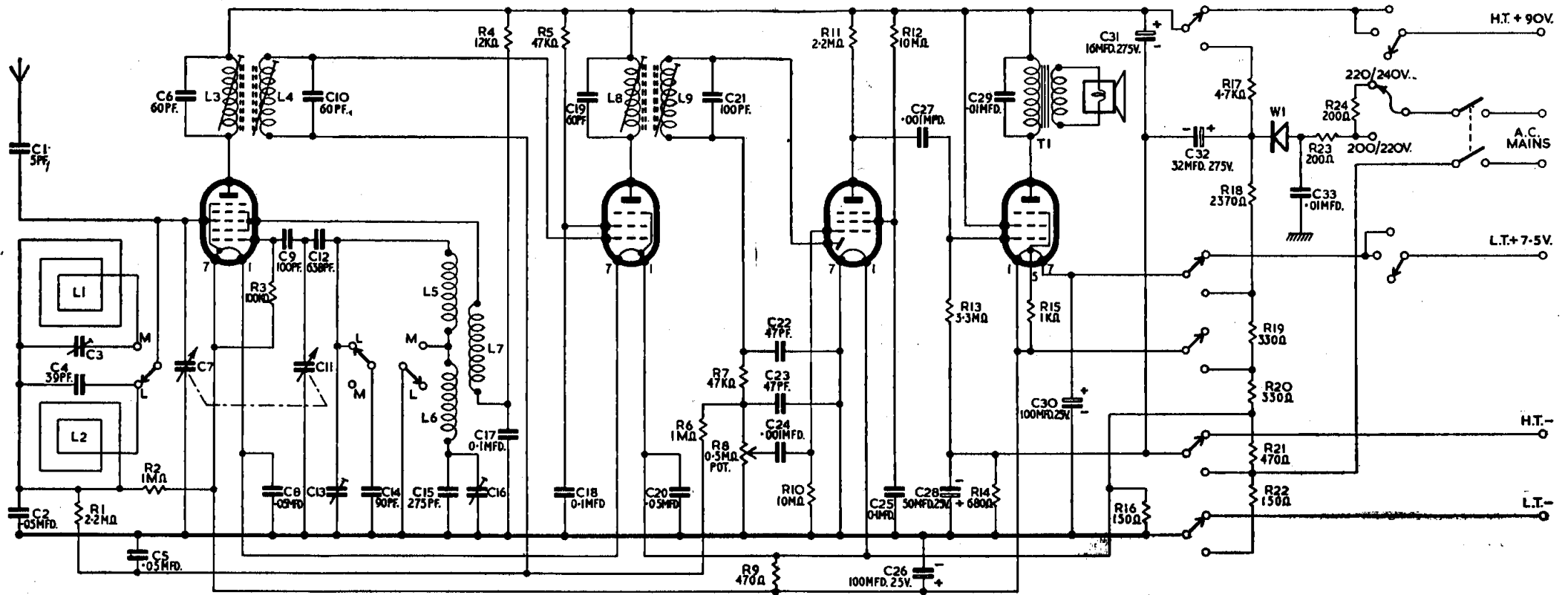
* The R.M.A. standard shielded coil specification is as follows :—

" This shall be a cylindrical coil, 5 cms. in radius and 6 cms. deep, wound with 20 turns to an approximate inductance of 40 microhenries. The whole coil shall be shielded by a wire cage arranged to avoid magnetic screening (i.e., there shall be no complete circuits whose planes are normal to the axes of the coil). The connecting leads shall also be screened."

A. C. COSSOR LTD.,

COSSOR HOUSE, Highbury Grove, London, N.5. ENGLAND.

Telephone : CANONBURY 1234 (33 lines).



THESE VOLTAGES & CURRENTS APPLY FOR BOTH BATTERY & MAINS OPERATION.

APPROXIMATE D.C. RESISTANCE OF COILS AND TRANSFORMERS

Circuit Code No.	D.C. Resistance	Part No.
L1	Very Low	MC430266
L2	2.6 ohms	MC430285
L3	13 ohms	MC415047
L4	13 ohms	
L5	5 ohms	MC430265
L6	8.5 ohms	
L7	3 ohms	MC415047/2
L8	11 ohms	
L9	8.5 ohms	MC412033/3
T1 Primary	450 ohms	
Secondary	Very Low	

