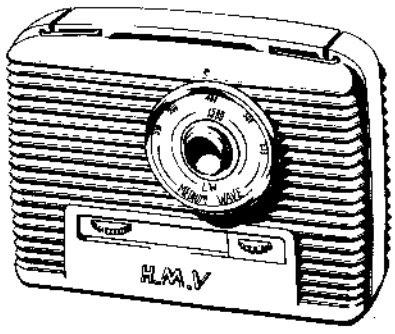
"HIS MASTER'S VOICE"

MODELS 1410B

1410G

SERVICE MANUAL

PORTABLE SUPERHET BATTERY RECEIVER



MODELS 1410B - BLUE

1410G - GREY

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Part No. 96321 Issue 1 June 1957

SPECIFICATION

Physical

Height 5¾ inches)
Width 7⅝ inches)Approx.
Depth 2¾ inches)Overall.
Weight 2¼ lbs.(including Batteries)Approx.

Battery Supply

H.T. 67.5 volts (Ever Ready Type B139).
L.T. 4.5 volts (Three Ever Ready Type U11).

Consumption

H.T. 4.5 mA
L.T. 30 mA No Signal)Approx.
40 mA Average Signal)

Wave Ranges

M.W. 200-550 m (1500-545 kc/s)
L.W. 1000-2000 m (300-150 kc/s)

Intermediate Frequencies

470 kc/s

Valves

V1 DK96 Frequency Changer
V2 DF96 I.F. Amplifier
V3 DAF96 Detector A.G.C. and A.F. Amplifier

Transistors

TRA1 OC72)Push-Pull Output Stage
TRA2 OC72) (Matched Pair)

Aerial

Internal Ferrite Rod

Rated Output

215 mW

Loudspeakers

2½-inch High Flux Density,Permanent Magnet Type. The speech coil has a D.C. Resistance of 2½ Ω, and an impedance of 3 Ω at 1000 c/s.

CIRCUIT DESCRIPTION

The signals are fed via the Waveband switch (SW1) direct to the grid of V1. M.W. and L.W. coils are tuned by VC1 of the gang capacitor. The local oscillator section of V1 is grid tuned by L5 and VC2, and is inductively coupled by L6 to the oscillator anode. The resultant I.F. signal is inductively coupled to the grid of V2 (I.F. Amplifier) via IFT1.

Output from V2 (DF96) is coupled via IFT2 to the diode section of V3; the intermediate frequency is filtered by C12-R8-C13. The resultant filtered A.F. signal developed across RV1 is coupled via isolating capacitor (C14) to the grid of the pentode section of V3 (A.F. amplifier). A.G.C. is developed across R8-RV1 filtered by R7-C10 and is fed via aerial coils L1-L2 to the grid of V1.

V3 (DAF96) amplifies the A.F. signal which is fed via the interstage transformer (TR1) to the bases of TRA1 and TRA2; base bias is provided by the voltage drop across the Bias control (RV2).

Transistors TRA1 and TRA2 are used as a quiescent push-pull output stage. R11 provides emitter bias and increases the stability of the transistors. Output from this stage is fed via the output transformer (TR2) to the loudspeaker (LS1).

Battery Supplies

The H.T. supply is taken from one 67.5V battery and the L.T. from three 1.5V batteries.

The ON/OFF switch (SW2) disconnects the H.T. and L.T. negative supplies from the receiver.

DISMANTLING

Removal of Radio Chassis

1. To remove the tuning dial, place the thumb and fingers around the dial and carefully ease the dial off.
2. Hold the instrument firmly in the hand and release the back by way of the coin-slot provided on the underside of the cabinet, i.e. with the underside of the cabinet facing uppermost and the front facing away, insert coin into slot,gently press down and twist.
3. Disconnect the batteries.
4. Unsolder loudspeaker connection, and L.T. battery connection.
5. Loosen the screw securing the retaining plate located under the chassis in the centre of the cabinet, and slide the plate away from the chassis.
6. Withdraw the chassis from the cabinet.

In order to expedite delivery of spare part orders, please quote:—

1. Model and serial numbers.
2. Spare part number and description.
3. Quantity required.

Unless full particulars are quoted. delay in execution of orders must inevitably result.

Order Spare Parts from :

E.M.I. SALES & SERVICE LTD., SERVICE DIVISION,
BLYTH ROAD, HAYES, MIDDLESEX.
Telephone: SOUthall 2468

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