

1480

E R T Service Chart

MARCONIPHONE 4116
HMV 2120

SEVEN-TRANSISTOR battery portable covering L, M and short waves. Features include PB waveband selection, telescopic aerial for SW and sockets for private listening and car radio aerial.

Battery. Ever Ready PP6, Drydex DT6, Vidor VT6 or equivalent.

Consumption. Quiescent 14mA, 50mW 36mA, 300mW 73mA.

Wavebands. MW 185-565m(1620-530kc/s), LW 1120-2050m(268-148kc/s), SW 17.6-51m(17-5.9mc/s).

Transistors. AF115 mixer-oscillator, AF117 first IF amplifier, AF117 second IF amplifier, AC155 audio amplifier, AC113 audio driver, AC154 and AC157 complementary push-pull output.

Diode. OA70 detector.

Stabiliser. AA120 bias stabiliser.
IF. 475kc/s.

Aerials. 6 x 3/4 in. ferrite rod for M and L waves. Six-section 23in. telescopic aerial for SW.

Speaker. 3 1/2 in. diameter 15ohms.

Output. 300mW.

Dimensions. 8 1/2 in. wide, 5 1/2 in. high (excluding handle), 2 in. deep.

Manufacturer. British Radio Corporation Ltd.

Service departments. Eley's Estate, Angel Road, Edmonton, London N18. Tel.: Edmonton 3060. 24 Sheepcote Street, Birmingham 15. Tel.: Midland 5291. 160-162 Battlefield Road, Glasgow S2. Tel.: Langside 9251-4.

DISMANTLING

Pull lower edge of back to release from cabinet. Remove battery. Pull off tuning and volume control knobs. Unscrew handle fixings. Take out fixing screw and washer

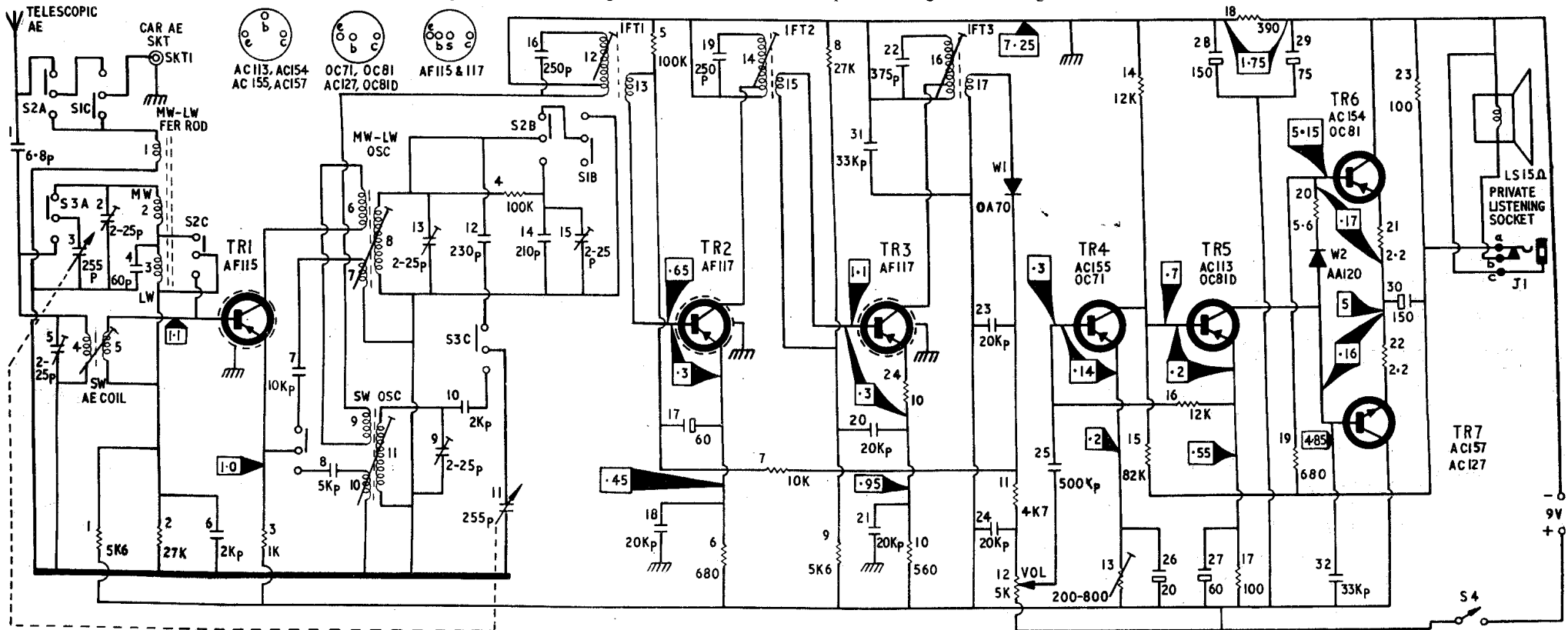
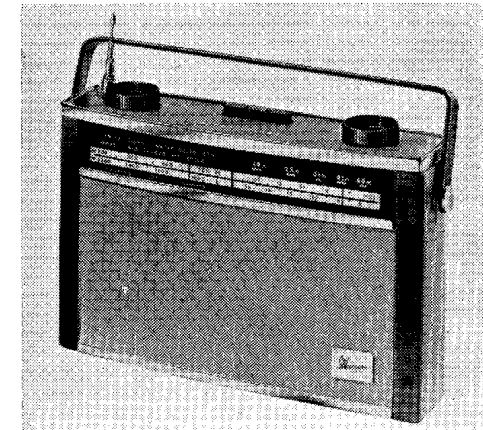
from bottom righthand corner of printed board, also screw and washer securing tuning gang bracket.

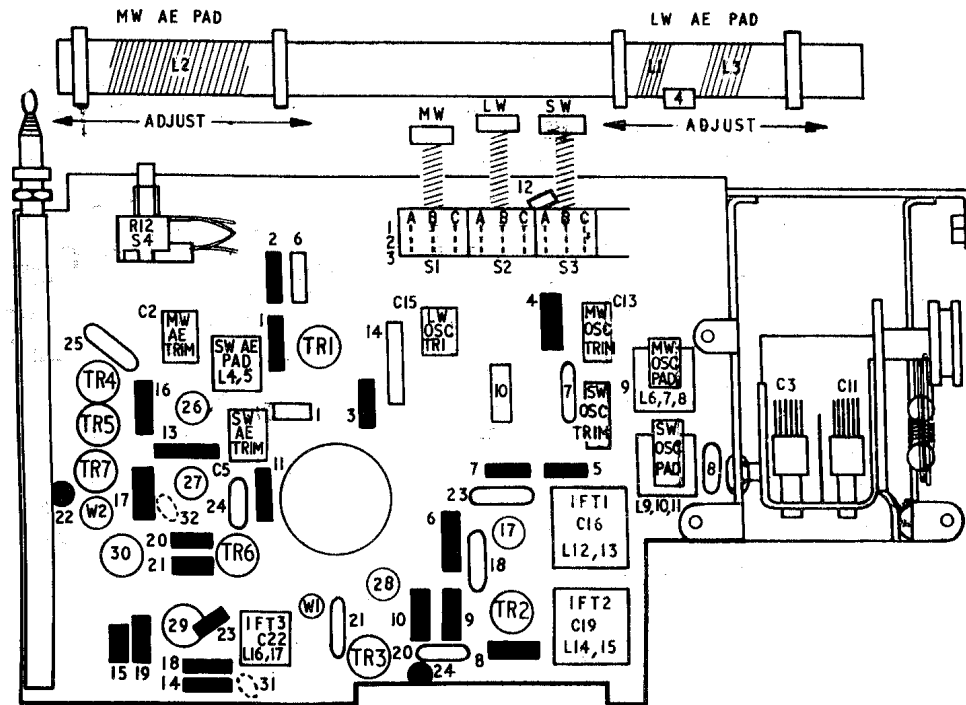
To obtain access to the cord drive, first unscrew milled-edge bush from nut to release tag connection to telescopic aerial. Withdraw telescopic aerial from front panel. Remove nut securing volume control. Unsolder leads to gang condenser and car aerial socket.

Remove six screws (and battery lead clamp) securing printed board to front panel and gang bracket. The gang and drive cord assembly may now be withdrawn.

SERVICE NOTES

Check battery voltage on load before any fault tracing is attempted. A milliammeter, connected in series with the power supply, provides a useful check of current consumption during fault tracing.





ALIGNMENT

Equipment required. Modulated signal generator covering L, M and S wavebands, output meter 15ohms or Avo 8 on 10V AC range, 100Kp capacitor, 25pF capacitor.

Set volume control to maximum. Adjust signal generator output during alignment to maintain receiver output level at 50mW.

IF. Switch receiver to MW. Turn gang to maximum capacitance (fully meshed). Apply 475kc/s modulated signal, via 100Kp capacitor, across aerial section of gang C3. Adjust IFT3, IFT2 and IFT1 in that order for maximum output. Repeat until no further improvement results.

RF MW. Check that cursor coincides with zero marker at righthand end of MW scale. If the scale has no zero marker see that the cursor travel is central in the scale window, i.e. gap between cursor and end of window is equal at both ends.

Switch to MW. Tune to 500m on scale. Set generator to 600kc/s modulated signal and feed into receiver via a loop loosely coupled to the ferrite aerial. Adjust oscillator coil L7/8 and aerial coil L2 for maximum output. L2 is adjusted by sliding coil along ferrite rod.

Tune receiver to 200m. Inject a modulated 1500kc/s signal and peak oscillator trimmer

C13 and aerial trimmer C2 for maximum output. Repeat these operations until optimum calibration and output are obtained.

RF LW. Switch to LW. Tune receiver until pointer lies exactly under the "14" of 1400m on the LW scale. Inject a 220kc/s signal. Adjust LW oscillator trimmer C15 and LW aerial coil L3 for maximum output. L3 is adjusted by sliding along ferrite rod.

RF SW. Disconnect lead from telescopic aerial tag. Unscrew core of L10/11 until it just protrudes from its can. Couple generator, via a 25pF blocking capacitor, to the lead disconnected from the telescopic aerial. Switch to SW. Tune receiver so that righthand pointer coincides with centre of 500m mark on MW scale.

Inject a 6.77mc/s signal from the generator and screw in core of L10/11 to obtain the maximum output from the third peak. Adjust core of L4/5 for maximum output.

Tune receiver so that righthand pointer coincides with centre of 200m mark on MW scale. Feed in a 15.45mc/s signal and adjust oscillator trimmer C9 and aerial trimmer C5 for maximum output. Repeat as necessary for optimum accuracy of calibration and maximum output.

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