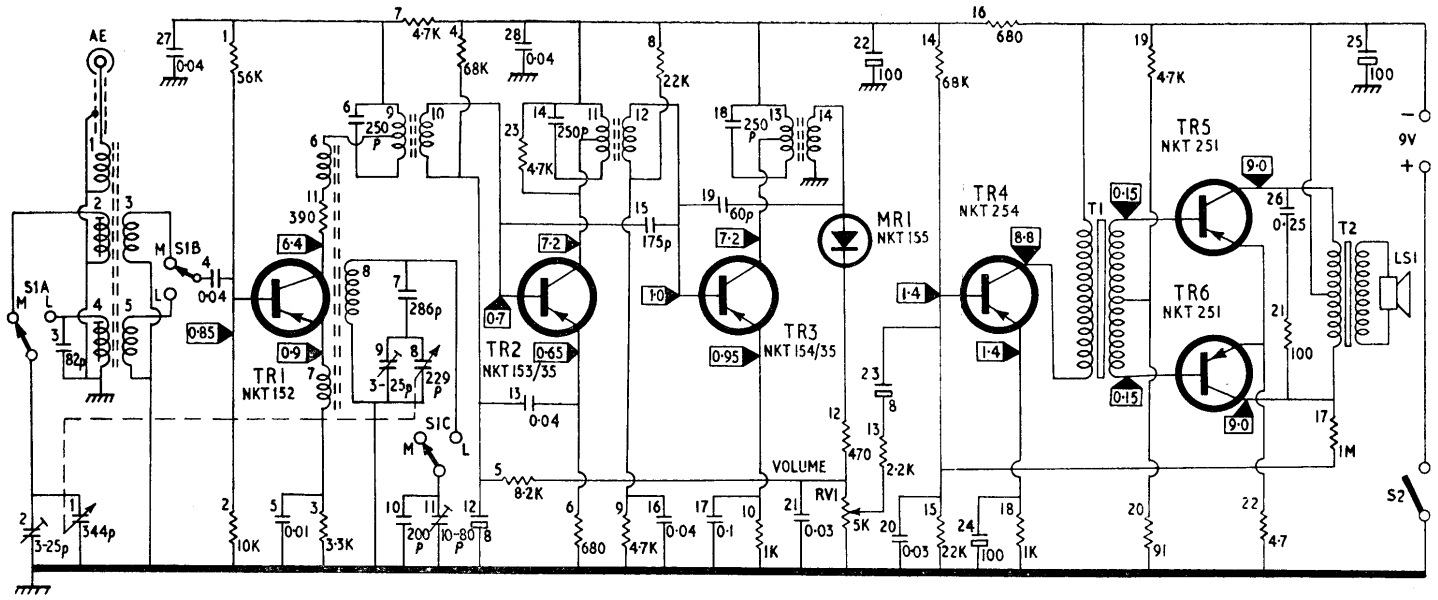
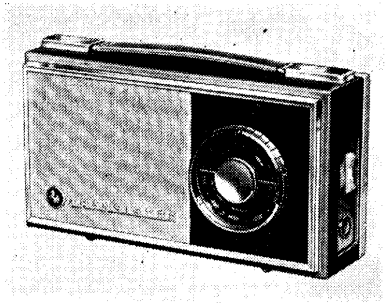
1338 'E R T' SERVICE CHART INVICTA 322, 332 (ISSUE 1 ONLY)





322. Six transistor portable radio, released March, 1961, at £17 4s. 1d.

Batteries. Ever Ready PP9, Drydex DT7, Vidor T6007.

Consumption. 14mA with no signal input.

Wavebands. LW, 1180-2060m; MW, 183-555m.

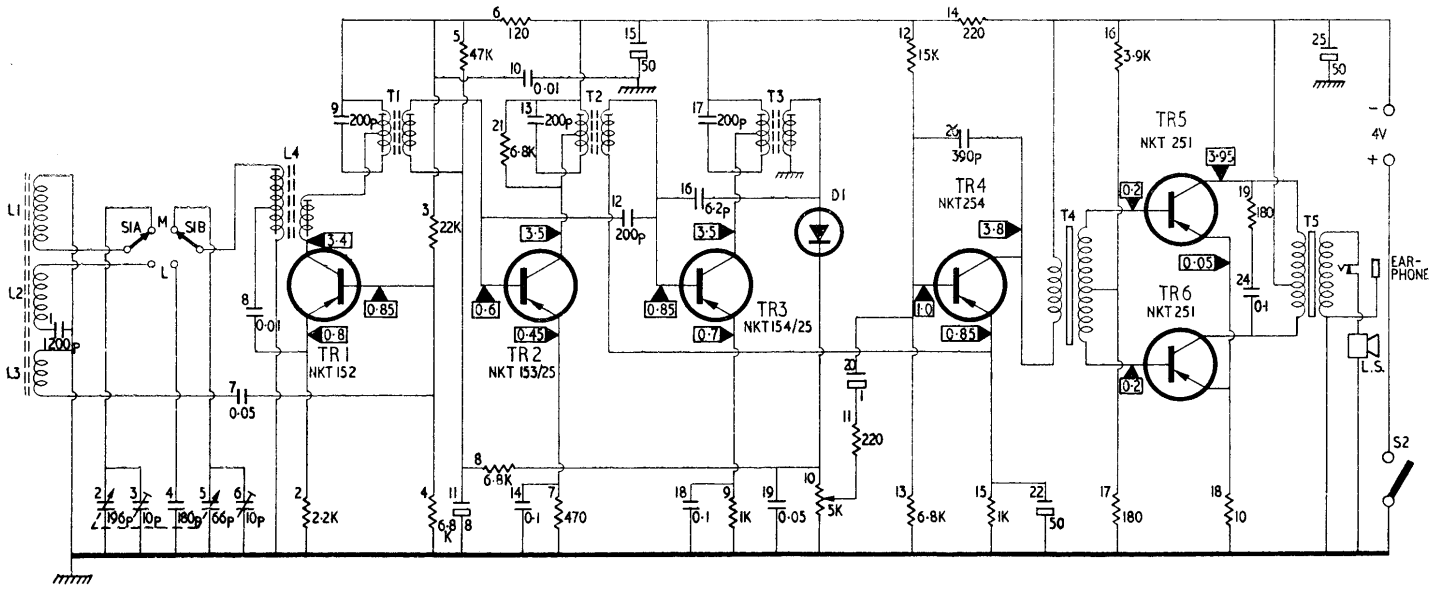
Transistors. NKT152, NKT153/35, NKT 154/35, NKT254, NKT251 (2).

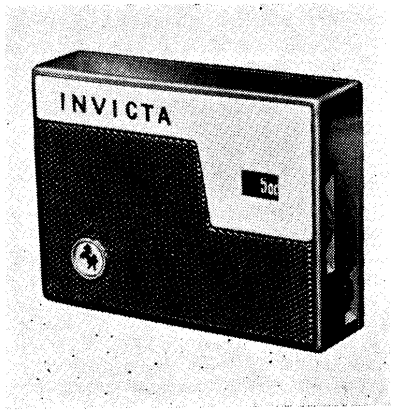
Diode. NKT155.

IF. 470kc/s.

Speaker. 5in. round, 3ohms.

Aerial. Internal ferrite rod, with socket for car aerial.





332. Six transistor personal receiver, released August, 1961, at £11 5s. 10d.

Batteries. Three Mallory type ZM-401, or three Ever Ready type D23, in which case voltages on circuit are slightly higher.

Consumption. 6-9mA with no signal input.

INVICTA 322—*Continued*

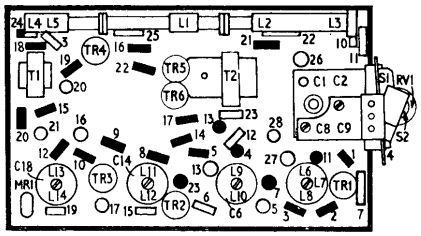
Manufacturer. Invicta Radio Ltd.
Service department. Radio and TV Services, Gloucester Street, Cambridge.

DISMANTLING

Chassis removal. Remove two captive screws at rear of cabinet and take off back cover. Use a pair of fine nosed pliers to take out large central screw, then pull off tuning knob assembly, ensuring that spindle flats are in line. Unscrew single counter-sunk screw next to tuning control spindle and extract small self-tapping screw on right-hand side of printed panel. Do not disturb either of the brass cheese headed screws which protrude through holes in panel.

SERVICE NOTES

Voltages. Readings given on circuit are negative with respect to chassis and are taken with a 20K-per-volt meter when switched to MW, with no signal input and gang fully meshed.
Circuit differences. R23 is omitted on some receivers.



ALIGNMENT

Equipment required. Signal generator covering 200-1500kc/s with AM modulation. Two 0.1mF capacitors. Suitable coupling coil. Output meter.
Procedure. Apply a 470kc/s modulated signal across L3 via a 0.1mF in each lead, switch to MW, set gang to maximum capacity, then adjust cores of L13, L11 and L9 for maximum output.

For RF alignment the chassis should be in the cabinet and the battery in its correct position. Check that with gang fully meshed the datum marks on tuning knob coincide with pointers on front of cabinet.

Couple generator to rod aerial via search coil placed at 11in. from centre of rod, inject 600kc/s, set dial to 500m and adjust core of L8 for maximum ouput; L8 is accessible through a hole in the printed panel. Change input to 1500kc/s and dial to 200m, then adjust C9 for maximum; C9 is accessible via knob escutcheon aperture. Repeat these two operations until calibration is correct.

Change input to 214kc/s, switch to LW, set dial to 1400m, then adjust C11 for maximum output. Position search coil so that L2 is nearest to it, while keeping 11in. spacing from centre of rod, then adjust position of L4 on rod for maximum output and seal.

Switch back to MW, inject 600kc/s, set dial to 500m and adjust position of L2 on rod for maximum output. Change input to 1,500kc/s and dial setting to 200m, then adjust C2 for maximum; C2 is accessible via knob escutcheon aperture. Repeat the last two operations until tracking is correct, then seal.

INVICTA 332—*Continued*

Transistors. NKT152, NKT153/25, NKT 154/25, NKT254, NKT251 (2).
Diode. OA90.
IF. 470kc/s.
Speaker. 2in. round, 8ohms, with earphone socket cut-out switch.
Aerial. Internal ferrite rod.

DISMANTLING

Chassis removal. Take off back of case and remove two chassis fixing screws (332), or undo flap at back of case and remove three chassis fixing screws (332/L). Lift out chassis and unsolder speaker leads.

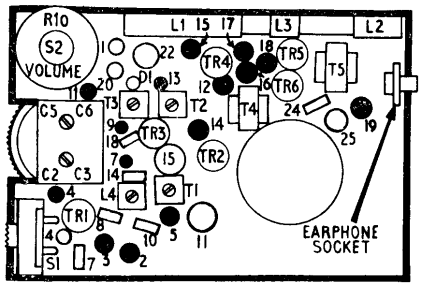
ALIGNMENT

Equipment required. As for model 322.
Procedure. Switch to MW, set gang at maximum capacity, apply a 470kc/s modulated signal between chassis and aerial side of C7 (with aerial disconnected) and adjust cores of T3, T2 and T1 for maximum output.

Switch to LW, change input to 200kc/s and adjust core of L4 for maximum output.

Switch to MW, set generator to 1,500kc/s and dial to 200m, then adjust C6 for maximum output. Change input to 600kc/s and couple generator to rod aerial via a loop placed at 20ins from middle of rod with L1 nearer to loop. Set dial to 500m and adjust position of L1 on rod for maximum output. Change input to 1,500kc/s and dial setting to 200m, then adjust C3 for maximum. Repeat these last two adjustments until tracking is correct, then seal L1 on rod with bitumen.

Switch back to LW, change input to 200kc/s and adjust position of L2 on rod for maximum output and secure with bitumen.



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