1429 'E R T' SERVICE CHART DECCA TP75

SIX-transistor plus one diode miniature pocket portable for MW and LW. Direct-drive tuning dial with edge-operated wave-change switch and volume on/off control.

Batteries. Two Ever Ready PP6, Vidor VT6 or equivalents.

Consumption. No signal 15mA.

Wavebands. MW 190-565m (1,580-530kc/s), LW 1120-1950m (268-174kc/s).

Output. 250mW.

Transistors. OC44 mixer oscillator, OC45 first IF amplifier, OC45 second IF amplifier, OC81D audio amplifier, OC81(2) push-pull output.

Diodes. OA70 detector and AGC.

IF. 472kc/s.

Speaker. 3⅜in. circular high flux. 50ohms.

Aerial. Internal ferrite rod for MW and LW. Socket for car aerial.

Dimensions. 7½ × 2⅞ × 4⅞in.

Price on release. 11½gns.

Manufacturer. Decca Radio and Television Ltd.

Service department. Ingate Place, Queenstown Road, London, SW8. Tel.: Macaulay 6677.

BRIEF CIRCUIT DESCRIPTION

First stage consists of OC44 transistor operating in self-oscillator mixing circuit. Two OC45 transistors act as first and second IF amplifiers, signal being fed via third IF transformer (IFT3) to OA70 detector and AGC diode. AGC voltage is applied to base of first IF amplifier TR2 via secondary of IFT1. Detected signal is amplified by OC81D.

Amplified signal is applied to primary of T4, the secondaries of which drive output transistors TR5 and TR6. No output transformer is used, speech coil of the speaker being the transistor load. Negative feedback is applied to base of TR4 from junction of C22 and loudspeaker.

SERVICE NOTES

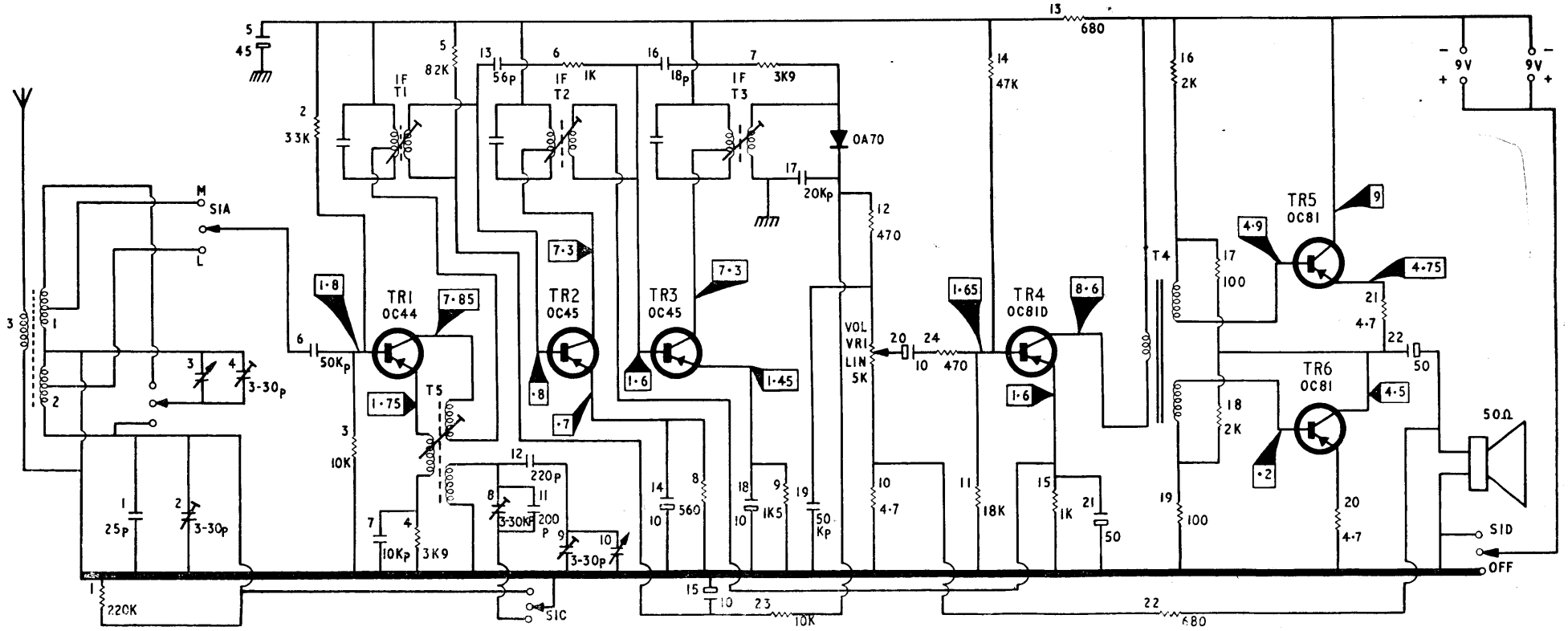
When replacing transistors note that standard wiring coding has been adopted as follows: Green-base, white-collector, red-emitter.

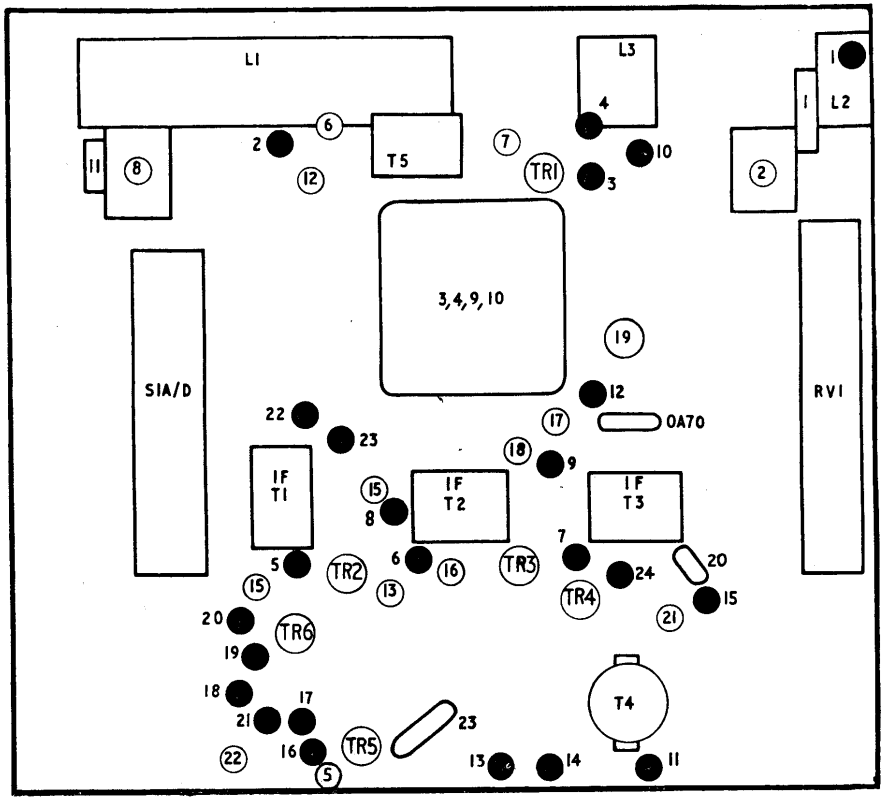
When soldering transistors it is essential to use a heat sink. A small pair of pliers holding the wire being soldered will suffice if aluminium or copper clips not available. Excessive heat applied to transistor or its connections can damage or destroy it.

Electric soldering irons should have small diameter bit. Iron should be removed from joint immediately the solder flows. To avoid possibility of leakage currents causing damage to transistors during soldering iron should be properly earthed.

Take care not to scratch or chip paint covering on glass-enclosed transistors. If light is admitted transistors will act as photo-electric device and may cause trouble in receiver.

Continued overleaf





To avoid confusion and to facilitate ordering of spares the component numbers used in ERT service charts are the same as in manufacturer's manual.

ALIGNMENT

Equipment required. Modulated signal generator covering MW, LW and IF, AC voltmeter or multi-meter with low AC volts range, 2K2 resistor, trimming tools.

Connect meter across loudspeaker coil. Signal generator output should be reduced as circuits are aligned to keep meter reading as low as consistent with accurate indication.

IF. Turn main tuning condenser to maximum capacity, fully meshed. Switch set to MW. Tune generator to 472kc/s and feed in via 2K2 resistor across coupling coil L3. Adjust generator output to give low reading on meter. Peak cores IFT1, IFT2 and IFT3 for maximum output. Repeat operation until no further improvement obtained.

RF MW. Switch receiver to MW and tune to 555m. Set generator to 540kc/s and inject signal to coupling coil L3 via 2K2 resistor. Adjust oscillator coil T5 for maximum output. Tune receiver to 192m. Change generator to 1560kc/s. Adjust C9 for maximum output. Repeat last two operations.

Tune receiver to 500m. Adjust signal generator to position giving maximum output, approximately 600kc/s. Adjust position of L1 on ferrite rod to give maximum output. Retune receiver to 200m. Adjust signal generator tuning to position giving maximum output, approximately 1500kc/s. Trim C4 for maximum output. Repeat last two operations.

RF LW. Fully mesh gang condenser and switch receiver to LW. Tune generator to 150kc/s and inject signal across coupling coil L3 via 2K2 resistor. Trim C8 for maximum output.

Tune receiver to 1760m. Adjust generator tuning to give maximum output, approximately 170kc/s. Adjust position of coil L2 on ferrite rod to give maximum output.

Tune receiver to 1250m. Tune signal generator to position giving maximum output, approximately 240kc/s. Trim C2 for maximum output. Repeat last three operations.

Printed in Great Britain by Odhams Press Limited, 93 Long Acre, London, WC2.
Limited, Drury House, Russell Street, London, WC2 (a member of th