

**T**EN-TRANSISTOR portable covering FM/VHF and medium wave with separate tuning scales for each band. Ferrite rod aerial operates on MW and there is a telescopic aerial for FM/VHF. Case is imitation leather with plastic and metal trim. It is fitted with a carry strap.

**Batteries.** Four Ever Ready U7 penlight cells, Vidor V12R or Mallory MN1500. (Ever Ready U12 or Vidor V12 can be used but have shorter life.)

**Consumption.** Quiescent: 10mA (AM), 15mA (FM). Current peaks to 50mA on average signal at maximum volume.

**Wavebands.** MW 182-590m (1640-505kc/s), FM/VHF 88-108mc/s.

**Transistors.** 2SA71A FM RF amplifier, 2SA71A FM mixer-oscillator, 2SA285 AM mixer-oscillator, 2SA70MB FM IF amplifier, 2SA70MB(2) AM and FM IF amplifiers, 2SB32 audio amplifier, 2SB33 audio driver, 2SB33(2) matched output.

**Diodes.** SD46 AGC clamp, OA90(2) ratio detector, OA90 AM detector, D234MA80 AM oscillator damping.

**Thermistor.** D5.300.

**IFs.** 470kc/s and 10.7mc/s.

**Aerials.** Internal ferrite rod for MW, telescopic for FM/VHF.

**Speaker.** 2½in. 8ohms.

**Output.** 280mW.

**Outlet.** Jack for personal phone.

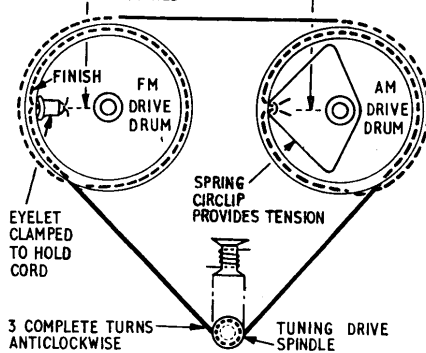
**Dimensions.** 6½ × 4 × 2½in.

**Weight.** 1lb. 11oz. including batteries.

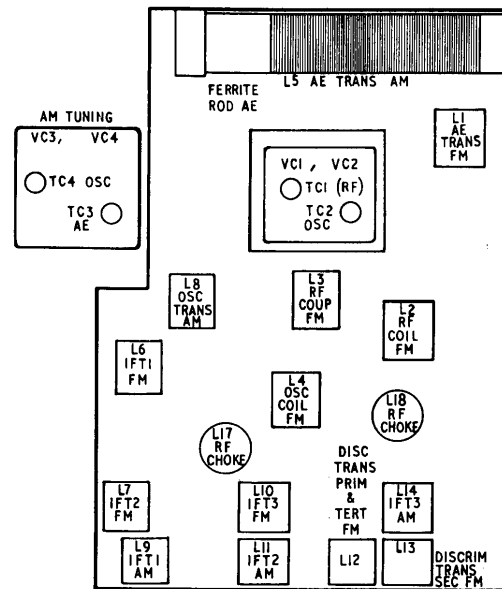
**Manufacturer.** Regentone Radio and Television Ltd.

**Service departments.** Combined Radio and Television Service Ltd., Regent Works, Sidcup, Kent. Tel.: Footscray 3333. Also at East Kilbride, Glasgow. Tel.: East Kilbride 25101.

POSITION OF STATION INDICATORS WITH BOTH TUNING GANGS FULLY MESHED



Above, AM and FM tuning drive system showing routing of cord. Right, top chassis view giving location of trimmers, tuning cores and alignment test points



**ALIGNMENT**

**Equipment required.** Signal generators covering 470-1600kc/s, 10.7mc/s, 85-110mc/s, transmitting loop comprising 85 turns 30swg enamelled wire on 2in. diameter former, 8ohms 100mW output meter, DC valve voltmeter (or high impedance DC voltmeter) with 0-10V range, 5Kp capacitor, trimming tools.

All test signals are amplitude modulated with 400c/s at 30 per cent unless otherwise stated. During alignment reduce signal input to maintain output at 50mW. Check that at maximum and minimum rotation of gang the two red tuning lines are horizontal. All alignment points are accessible on opening back of case.

**AM IF.** Connect output meter in place of speaker (plug into jack socket). Connect AM generator across aerial section of tuning gang VC3 (tag carrying yellow lead from aerial coil). Switch to MW. Turn gang to maximum capacitance and volume control to maximum.

Inject 470kc/s signal and adjust cores

**DISMANTLING**

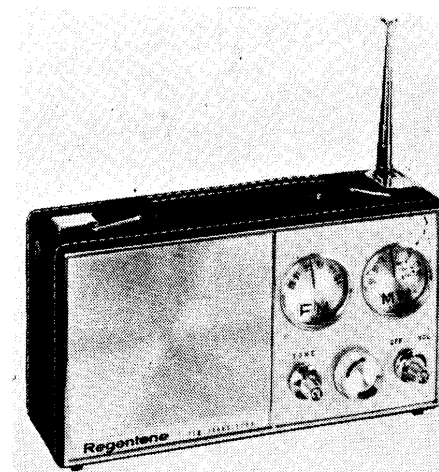
**Chassis removal.** Pull off three front control knobs. Remove battery. Take out five cross-point head screws located as follows: top and bottom of printed circuit board righthand side, centre of board near L18, top and bottom of lefthand end of assembly securing metalwork to casing.

To gain access to screw under the telescopic aerial, first remove the aerial securing screw (in case bottom) and raise the aerial slightly. Ensure the soldering tag is replaced when reassembling.

Complete assembly can be removed to extent of the phone socket leads. Tuning and control sub-assembly is secured to the printed board by two further cross-point screws.

**SERVICE NOTES**

Wavechange switch is shown in AM position in the circuit diagram. Voltage readings taken under no-signal conditions, with volume control at zero and using a 20,000ohms/volt meter. All readings are positive with respect to chassis negative line.



Clear functional front panel incorporates separate tuning scales for FM and MW, tone control and combined volume and on/off control. Waveband switching is by push-button

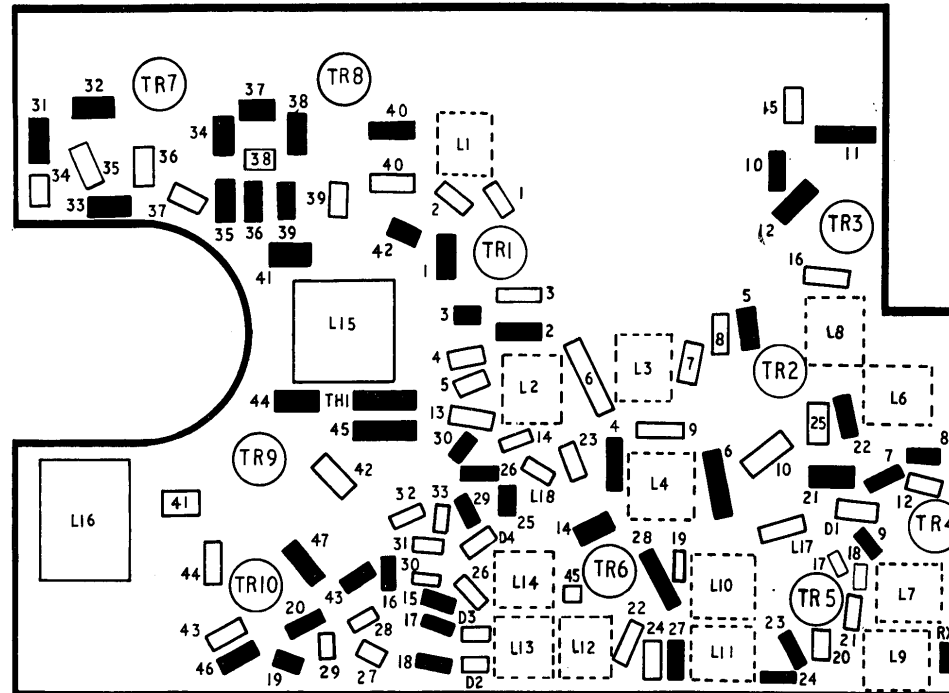
of L14, L11 and L9 in that order for maximum output. Repeat until no further improvement results.

**AM RF.** Remove generator connection from gang and connect to transmitting loop. Place loop 12in. from, and coaxial with, the ferrite rod aerial. Tune receiver to 51 on scale. Set generator to 510kc/s. Adjust oscillator core L8 for maximum output. Retune receiver to 16 on scale. Set generator to 1600kc/s. Adjust oscillator trimmer TC4 for maximum output. Repeat these adjustments.

Change receiver tuning to 6 on scale. Tune generator to 600kc/s and adjust aerial coil L5 (by sliding along ferrite rod) for maximum output. Set generator to 1400kc/s. Tune receiver for maximum output at this frequency and adjust trimmer TC3 for maximum output. Repeat adjustment of L5 and TC3.

**FM IF.** Connect generator via 5Kp capacitor to the emitter of TR2 (red sleeved lead on component side of board just above L4). Tune generator to 10.7mc/s frequency modulated. Trim cores of L12, L10, L7 and L6 for maximum audio output.

Switch generator to AM. Trim core of



Printed circuit board viewed from foil side, with components shown as seen through the board. Components indicated by broken lines are mounted on the foil side

L13 for minimum output. Switch generator back to FM. Check adjustment of L12 and L10 for maximum output.

**FM RF.** Connect generator between telescopic aerial and chassis. Set receiver pointer to 88. Tune generator to 88mc/s. Adjust cores of L4 and L2 for maximum output. Reset generator to 104mc/s. Tune receiver for maximum output at this frequency.

Adjust trimmers TC2 and TC1 for maximum output. Repeat these operations. Rotate gang to mid-position (red indicator vertical). Inject signal of 96mc/s and trim core of L3 for maximum output.

**Circuit diagram.** To assist service engineers, component numbers in ERT charts conform to the ones used in manufacturers' manuals. In the diagrams these numbers normally appear above the component value or type.

To reduce the number of decimal points the letter K or M is inserted in place of the point in some resistor values. For example, 4700ohms is written 4K7 and 2.2megohms is shown as 2M2.

## KEEP UP-TO-DATE WITH ERT

**E**RT provides the latest news about products, events and technical developments in the radio and electrical industry.

Service managers and engineers can have ERT delivered to their home address each week. Annual subscription is £3 10s. which includes weekly service chart supplements, the servicing directory, spring and autumn price lists, six hi-fi and PA supplements and various salesman's guides.

As ERT is supplied to the trade only, orders should be accompanied by your firm's letter heading or a trade card. Send to the Publisher, ERT, Carlton House, Great Queen Street, London WC2.

