

SMITHS *R*adiomobile

**OWNERS  
MANUAL**

***transistor-powered* CAR RADIO**

**MANUALLY TUNED MODELS FOR EITHER  
MEDIUM WAVE ONLY**

**OR**

**MEDIUM AND LONG WAVE RECEPTION**

MODELS 40T & 41T (MEDIUM & LONG WAVE 12v.)

MODELS 42T & 42TC (MEDIUM WAVE ONLY 12v.)

IF FREQUENTLY 4575

7  
3

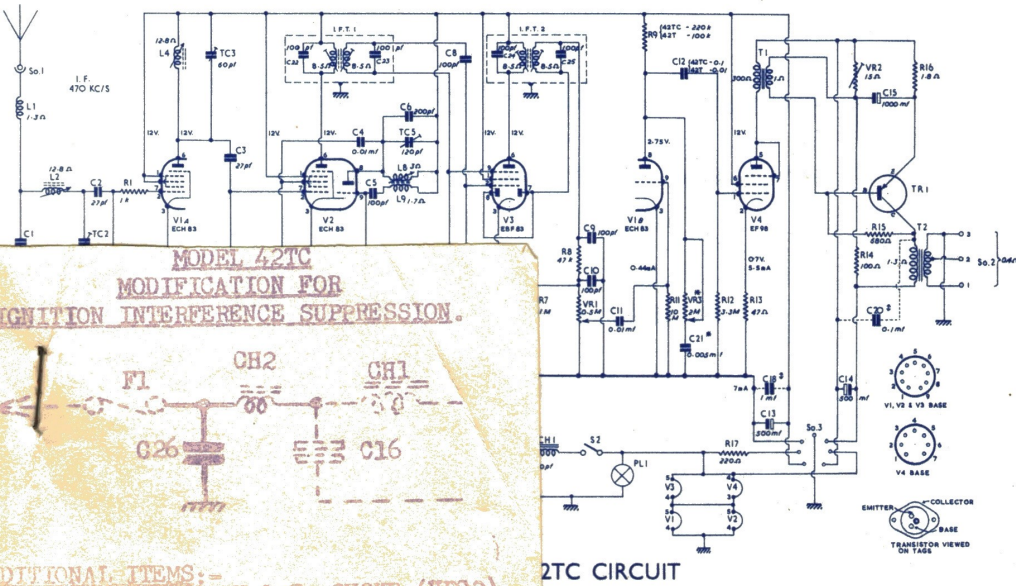
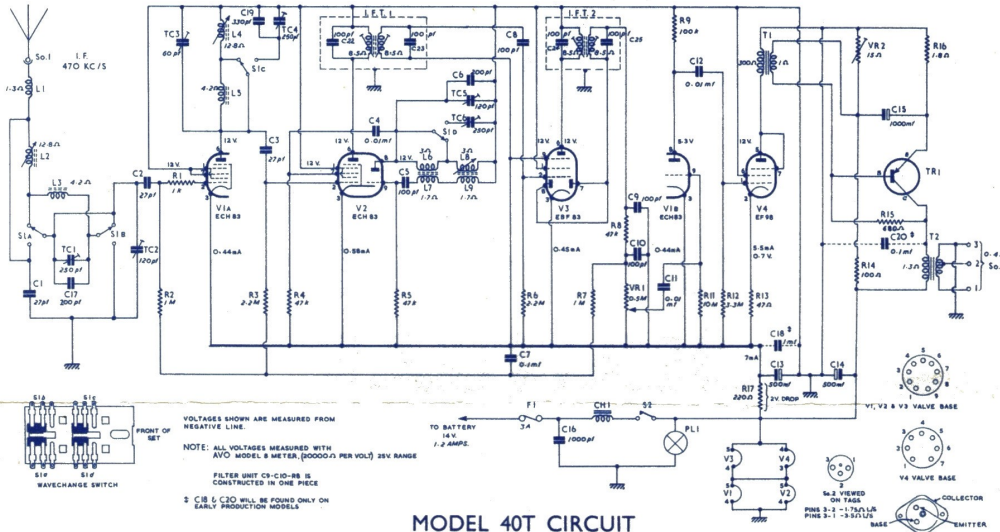
# Owners Service Data for Medium and Long Wave Transistor Powered Car Radio

Sufficient information is contained in this manual to enable a competent radio mechanic to effect all normal repairs to these sets.

## RECEIVER TYPES:

- 40T 12-volt positive polarity, Medium and Long Waves.
- 41T 12-volt positive or negative polarity, Medium and Long Waves.
- 42T 12-volt positive or negative polarity, Medium Wave only.
- 42TC 12-volt positive or negative polarity, Medium Wave only. With tone control.

Total current consumption 1.2 amps. with 14-volt supply.



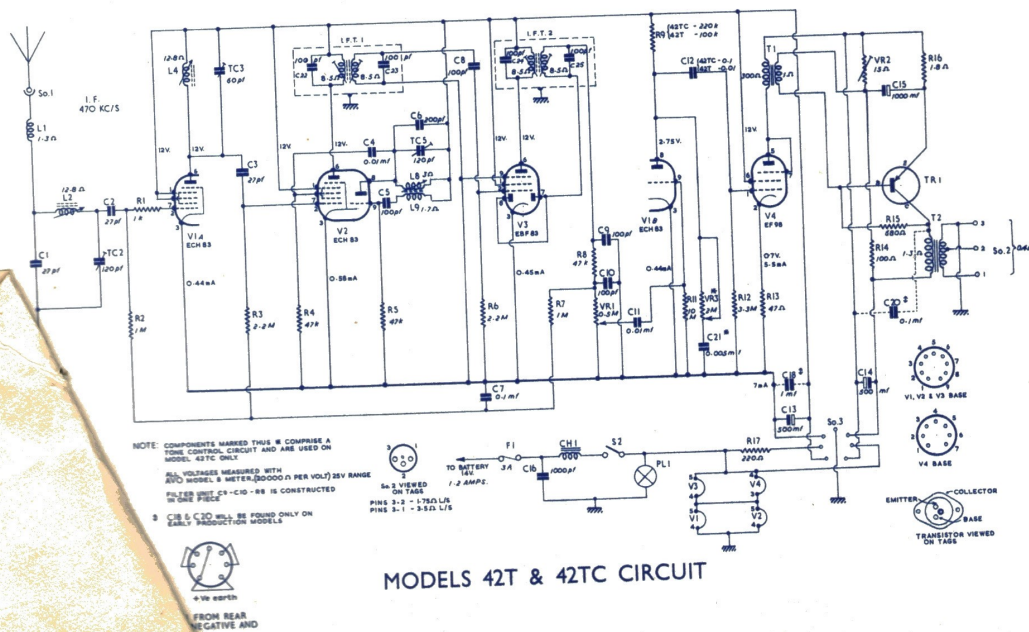
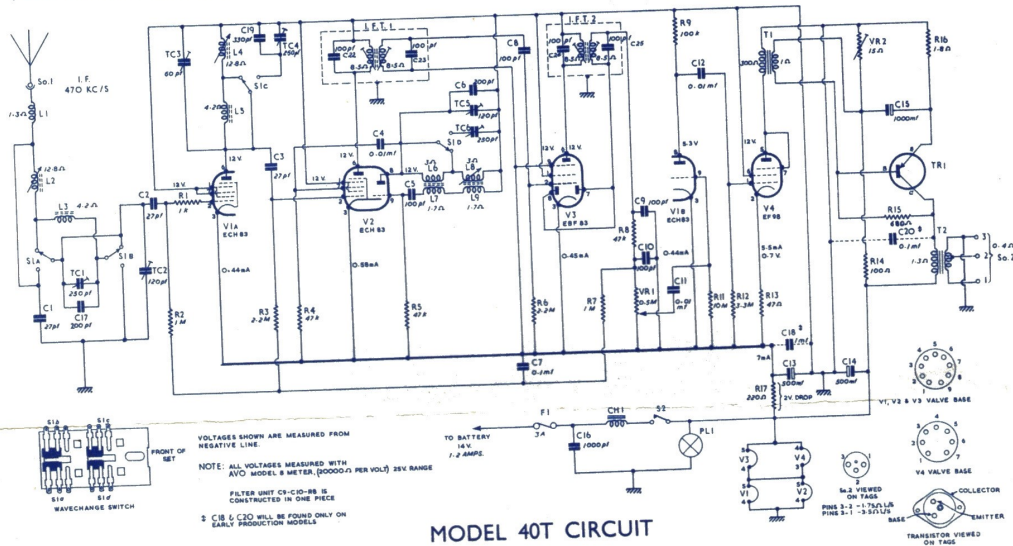
# Owners Service Data for Medium and Long Wave Transistor Powered Car Radio

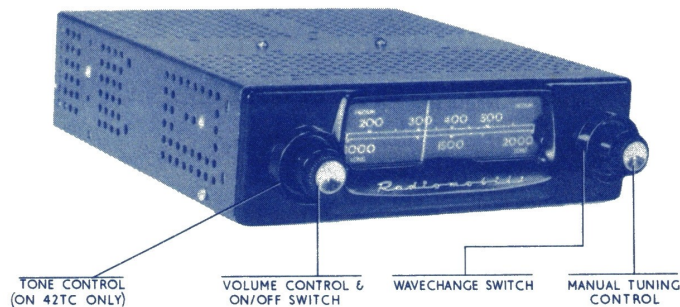
Sufficient information is contained in this manual to enable a competent radio mechanic to effect all normal repairs to these sets.

## RECEIVER TYPES:

- 40T 12-volt positive polarity, Medium and Long Waves.
- 41T 12-volt positive or negative polarity, Medium and Long Waves.
- 42T 12-volt positive or negative polarity, Medium Wave only. With tone control.
- 42TC 12-volt positive or negative polarity, Medium Wave only. With tone control.

Total current consumption 1.2 amps. with 14-volt supply.





GENERAL VIEW OF UNIT SHOWING CONTROLS

THE COMBINED VOLUME CONTROL AND ON/OFF SWITCH switches on the receiver when turned clockwise, and progressive rotation of this control increases the volume. When turned fully anti-clockwise, the receiver is turned off.

THE MANUAL TUNING CONTROL provides variable station selection.

THE TONE CONTROL (Model 42TC only) is concentric with the volume control and provides selective tone correction for the reproduction of either speech or music. This control is continuously variable and when turned fully clockwise the amount of bass reproduction is reduced; when turned fully anti-clockwise the treble reproduction is reduced.

THE WAVEBAND SWITCH (Models 40T & 41T only) is concentric with the tuning control, and its two positions are marked M and L for instant identification.

The following notes should be carefully read before beginning the servicing of these car radios in order to avoid damaging the transistor-powered output stage.

1. If the voltage polarisation is accidentally reversed the transistor will be destroyed.
2. Power supply should always be an accumulator except when a well regulated and ripple free mains unit is available.
3. As all the valves and the transistor operate from a 12-volt supply it is difficult to make operational tests and a suspect valve or transistor should be checked by substitution.
4. Always switch off the receiver before connecting or disconnecting any of the transistor leads, and also disconnect the transistor before making any continuity tests.

### TRANSISTOR REPLACEMENT

1. Check that the transistor is free from metal burrs, which could damage the mica insulator.
2. A coating of silicone grease (RMO.1999) should be applied to both sides of the mica insulator, to ensure maximum heat transfer.
3. Place mica insulator in position and ensure that the transistor fixing bolts are firmly tightened on the heat sink.
4. Place VR2 slider in minimum current position, *i.e.* slider moved towards H.F. chassis.
5. Resolder leads to transistor, firmly gripping the wires from the transistor with a pair of pliers which will form a heat shunt thus avoiding any overheating of the transistor.

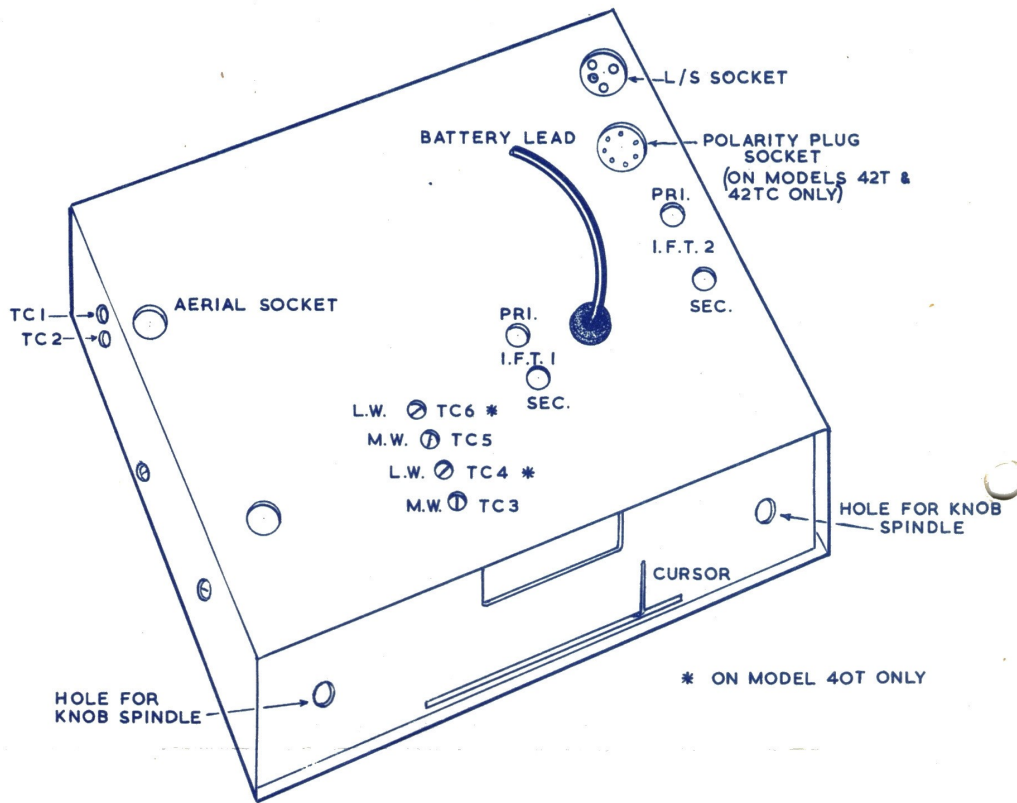


FIG. 2—VIEW FROM BELOW

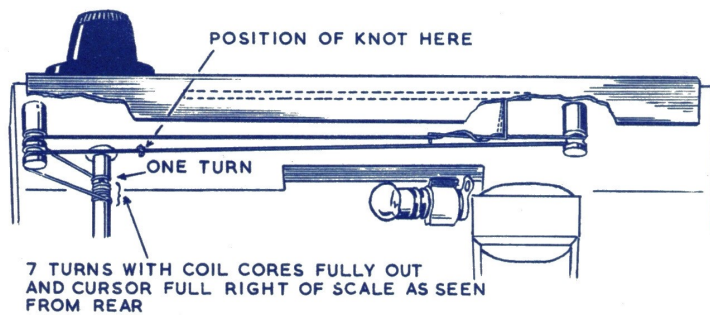


FIG. 3—VIEW OF CORD DRIVE MECHANISM

## TRANSISTOR CURRENT ADJUSTMENT

With the supply voltage at 14 volts the transistor current should measure 380 mA. Measurement is taken between yellow lead and its connection on the transistor. Any required adjustment is made on VR2, the slider being sealed on the paxolin side when the current is correctly adjusted, using wax or any other suitable adhesive.

### I.F. ALIGNMENT

I.F. FREQUENCY - 457.5 Kc/s

1. Apply 470 Kc/s modulated 30% at 400 c/s between Pin 2 of V1 and chassis. (Through an 0.1 mfd capacitor.)
2. Volume control to maximum. Switch to M.W.; set tuning carriage so that cores are fully withdrawn from coils.
3. With suitable signal input adjust I.F.T.2 Sec., I.F.T.2 Pri., I.F.T.1 Sec., I.F.T.1 Pri., in that order for maximum output. Repeat sequence for maximum output.

### R.F. ALIGNMENT

The requisite dummy aerial comprises a 22 pfd capacitor in series and a 47 pfd shunt capacitor. (Radiomobile Part No. RMO.426A.)

### M.W. ALIGNMENT

1. Set wavechange switch to 'M' and tuning carriage to fully withdrawn position, ensuring that the cores are screwed clockwise fully into grommets.
2. Connect signal generator to aerial input (through dummy aerial).

Operation	Frequency Kc/s	Carriage Position	Adjust Core for Max. Output
1	1610	Fully Out (pointer full left)	TC5
2	1250	Corresponding to $\frac{3}{4}$ " pointer movement over scale, from full left	L8 Core
3	Repeat operation 1 & 2 until no further improvement results		
4	1550	Tune to Frequency	TC2, TC3
5	1250	Tune to Frequency	L2, L4 Cores
6	Repeat operation 4 & 5 until no further improvement results		

### M.W. SENSITIVITY

Check input for 200 M.W. output.

600 Kc/s not less than 104 dbs below 1 volt (6.3 Micro volts).

1550 Kc/s not less than 104 dbs below 1 volt (6.3 Micro volts).

### L.W. ALIGNMENT

1. Set wavechange switch to 'L' and carriage to fully withdrawn position.
2. Inject signal to Pin 2 of V1 (through 0.1 mfd capacitor).

Operation	Frequency Kc/s	Carriage Position	Adjust for Max. Output
1	150	Fully In (Check that with carriage fully out frequency is 300 Kc/s. If not, adjust L6 core and repeat adjustment of TC6 and L6 until coverage is correct.)	TC6
2	Inject signal to Aerial input via dummy aerial		
3	180	Tune in signal	TC4, TC1

### L.W. SENSITIVITY

Check input for 200 M.W. output.

180 Kc/s not less than 88 dbs below 1 volt (40 Microvolts).

260 Kc/s not less than 88 dbs below 1 volt (40 Microvolts).

# General Information

## Smiths Radiomobile Service

All enquiries about your car-radio will be handled with efficiency and speed by your Radiomobile Distributor or by the Dealer who sold it originally. These official representatives of Smiths Radiomobile have an expert knowledge of Radiomobile equipment and performance, and will supply genuine replacement parts from their own stocks.

## Conditions of Guarantee

The conditions of guarantee for Smiths Radiomobile Car-Radio in countries outside Great Britain and Northern Ireland are defined individually by the official Smiths Radiomobile Distributors in those countries. You can obtain full terms of these conditions from either the Distributors concerned or the Dealer who sells the equipment.

## Service under Guarantee

1. All normal applications for service under guarantee should be made either to the appropriate Smiths Radiomobile Distributor or to the Dealer from whom your equipment was originally bought.
2. If you cannot get in touch with an official Smiths Radiomobile representative, any reputable car-radio service station should be competent to examine your equipment, with the help of the technical section of this Manual. S. Smith & Sons (Radiomobile) Ltd., cannot accept any liability for labour costs, but free replacement components will be dispatched at once if you make a valid application direct to our Export Department, Cricklewood Works, London, N.W.2. Your application must also give full details of your car-radio, including particulars and date of purchase, Model or Type No., circuit reference of defective part/s and details of the vehicle to which it is fitted.

**S. SMITH & SONS (RADIOMOBILE) LIMITED, CRICKLEWOOD WORKS, LONDON, N.W.2.**  
Telephone : GLAdstone 3333.                      Telegrams : Mobilerad, Telex, London.

**Distributed by:**

