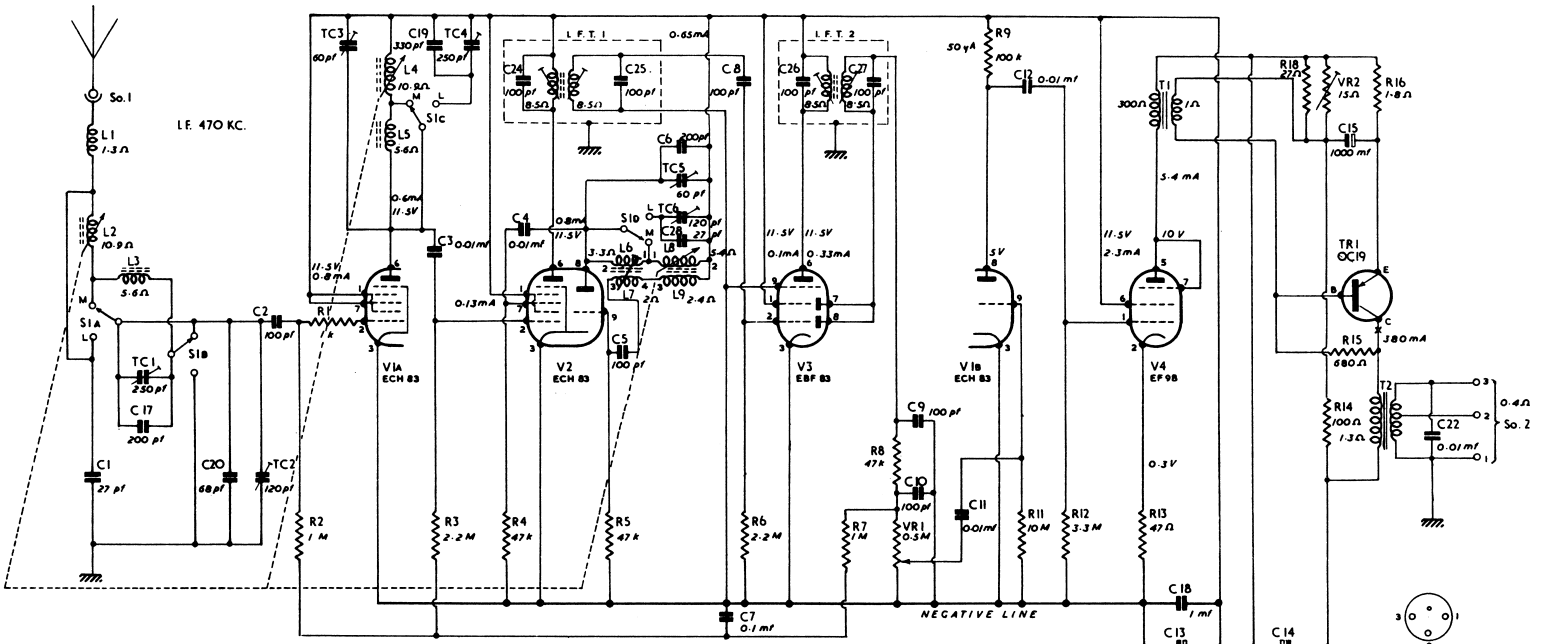
CIRCUIT DIAGRAM MODEL 5OT



NOTE: VOLTAGES SHOWN ARE MEASURED FROM NEGATIVE LINE

ALL VOLTAGE & CURRENT READINGS MEASURED WITH AVO MODEL 8 METER (20,000 OHMS PER VOLT)

FILTER UNIT C9 - C10 - R8 IS CONSTRUCTED IN ONE PIECE.

MODEL 51T IS EQUIPPED WITH A POLARITY CHANGE-OVER FACILITY AS SHOWN ON 52T CIRCUIT DIAGRAM

DRIVER TRANSFORMER – PRI: BRAIDED LEADS

OUTPUT " " PVC COVERED LEADS

DEC. 1959

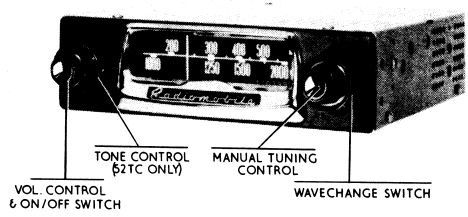
MODEL 5OT & MODEL 51T

H2

MANUALLY TUNED
MODELS 50T, 51T, 52T & 52TC

GENERAL DESCRIPTION

The Model 50T series comprises a manually tuned, high sensitivity super-heterodyne car radio receiver which, apart from the loudspeaker, is a self contained unit. The receiver employs four 12 volt H.T. valves, with a Power-Transistor output stage.



GENERAL VIEW OF UNIT SHOWING CONTROLS

SPECIFICATION

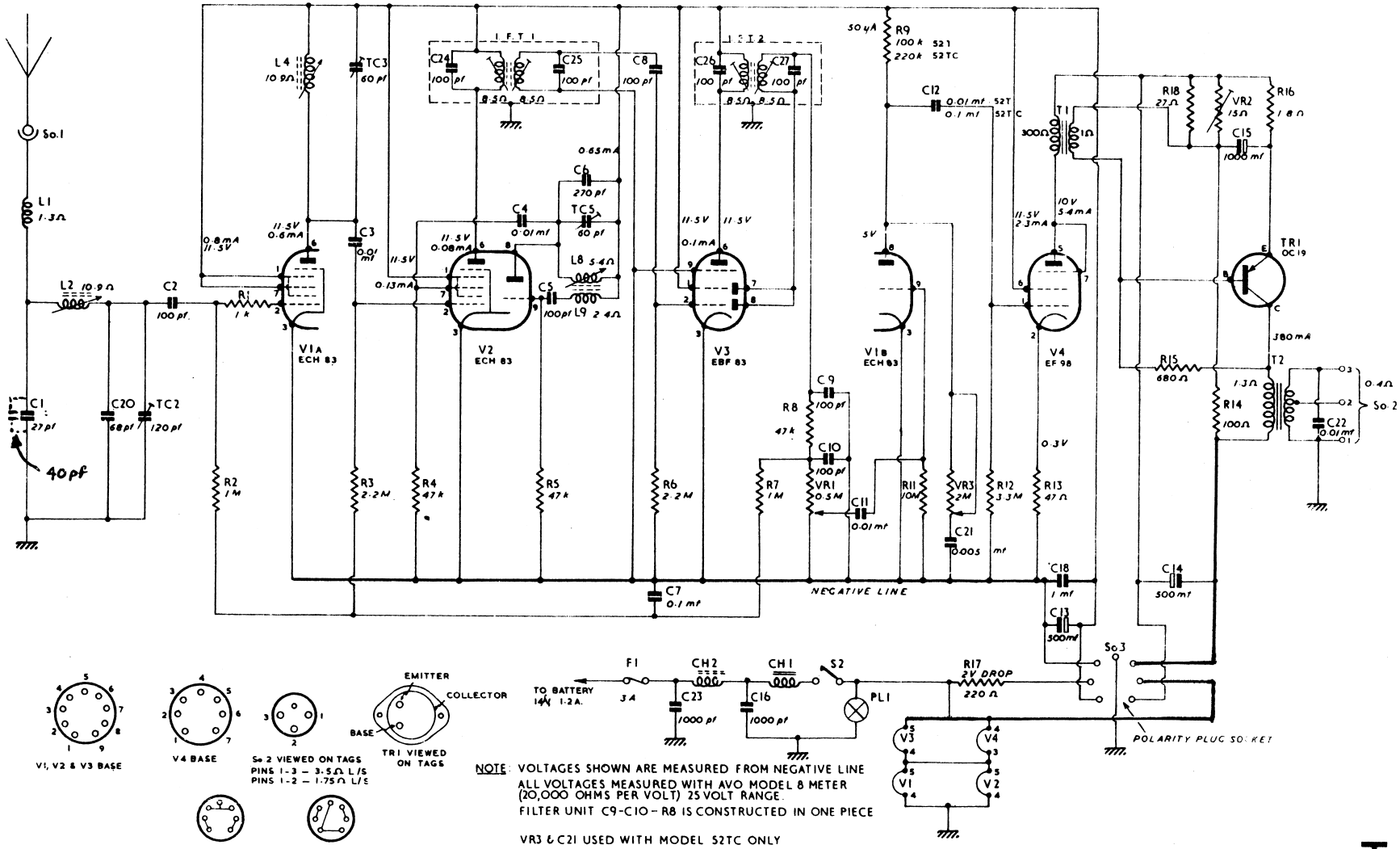
The information applies to all models unless otherwise stated.

PHYSICAL:	Height:	2 inches	(5.1 cm.)
	Width:	7 inches	(17.8 cm.)
	Depth:	7 inches	(17.8 cm.)
	Weight:	4 lb.	(1.8 Kg.)

VALVES:	ECH.83	(V1a) R.F. amplifier and (V1b) First A.F. amplifier.
	ECH.83	Frequency changer.
	EBF.83	I.F. amplifier, detector and A.G.C.
	EF.98	Driver.
	OC.19	Output transistor.

WAVEBANDS 50T & 51T	Medium and Long Waves	187– 578 Metres	(1605–520 Kc/s)
		1000–2000 Metres	(300–150 Kc/s)
52T	Medium (Broadcast) Wave only	187– 578 Metres	(1605–520 Kc/s)
52TC	Medium (Broadcast) Wave having tone control facility.		

INTERMEDIATE FREQUENCY: 470 Kc/s.



MODEL 52T & MODEL 52TC

H2

I.F. ALIGNMENT:

1. Apply 470 Kc/s modulated 30% at 400 c/s between Pin 2 of V? and chassis. (Through an 0.1 mfd capacitor).

2. Volume control to maximum. Tone Control fully clockwise. Set tuning carriage so that cores are fully withdrawn from coils.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 33 pfd shunt capacitor.

M.W. ALIGNMENT:

1. Set tuning carriage to fully withdrawn position, ensuring that cores are screwed anti-clockwise back into grommets.

2. Set ferrite auxiliary rods (on L2 and L4) to mid position.

3. Connect signal generator to aerial input. (Through dummy aerial).

OPERATION	CARRIAGE POSITION	GENERATOR SETTING Kc/s	ADJUST FOR MAXIMUM OUTPUT
1	Tuning carriage fully out. Ignore Pointer position.	1610	(a) TC5 (Oscillator trimmer) (b) TC3 (R.F. trimmer) (c) TC2 (Aerial trimmer)
2	Tune Pointer to set mark at 550 Kc/s.	550	L8/L9 Oscillator slug.
3	Repeat operations 1 and 2.		
4	Tune to 1100 Kc/s. Set Pointer to 1100 Kc/s mark on Dial Scale.	1100	L2 (Aerial) and L4 (R.F.) Slugs.
5	Tune to 550 Kc/s	550	Auxiliary Rods in L2 and L4 if gain low.
6	Check that Pointer alignment reasonably agrees with Station call signs on Dial Scale.		
7	Seal Auxiliary Rods in L2 and L4 with wax after operation 6 is completed.		
8	Check that sensitivity at 550 Kc/s, 1100 Kc/s and 1500 Kc/s is better than 4 microvolts at 200 MW output.		

E.M.I. (AUSTRALIA) LIMITED.

SYDNEY - MELBOURNE - ADELAIDE - PERTH - NEWCASTLE.

REF. NO. CR.248.

"HIS MASTER'S VOICE" Car Radio

SERVICE INFORMATION

MODEL: 52TC "LITTLE NIPPER"
(Manually Tuned)
Tailored and One-Unit Models

The following notes should be carefully read before carrying out any adjustments to the receiver.

1. If the voltage polarisation is accidentally reversed the transistor will be damaged.

2. Because of the difficulties associated with making operational tests, a suspect valve or transistor should be checked by substitution.

3. Power supply should always be an accumulator except where a well regulated and ripple-free supply is available. The average mains unit is not suitable.

TRANSISTOR REPLACEMENT:

1. Check that transistor is free from metal burrs, which could damage mica insulator earthing collector and result in blowing the fuse.

2. A coating of silicone grease should be applied to both sides of mica insulator, to ensure maximum heat transfer.

3. Place mica insulator in position and ensure transistor fixing bolts are firmly tightened on heat sink, in order to effect maximum heat transfer.

4. Place VR2 slider in minimum current position. (Slider moved to extreme position, towards H.F. chassis).

5. Re-solder base and emitter leads (employing heat shunt) and adjust transistor current as described below.

TRANSISTOR CURRENT ADJUSTMENT:

With input volts at 14, transistor current should measure 380 m.a. Measurement is taken between yellow lead and its connection on transistor with AVO model 8 (or similar) on 1 amp range of meter. Any required adjustment is made on VR2. Slider should be sealed (on the paxolin side) on the appropriate setting, using a suitable adhesive.