



DYNATRON

RADIO SERVICE MANUAL

MODELS TP36 and TP37

January 1967

'RALLY' MODELS TP36 and TP37

General Description

The "Rally" model TP36 (Model TP37 in Teak Cabinet) is an eight transistor battery operated portable radio receiver, covering the Long and Medium wavebands.

An internal ferrite rod aerial is provided for normal reception, with push button selection of an input from a car aerial to give optimum performance in a car. An earphone socket is incorporated.

Technical Data

Batteries:

Two 9v. dry batteries type PP9, VT9, etc.

Aerial:

8 in. Ferrite Rod.

Wavebands:

Medium 183-570 metres.

Long 1130-2000 metres.

Output:

1 Watt.

Loudspeakers:

6 in. x 4 in. elliptical high flux, 25 ohms impedance.

Transistors and Diodes

TR1	AF115	Self-oscillating mixer.
TR2	AF117	I.F. Amplifier.
TR3	AF117	I.F. Amplifier.
TR4	NKT.275P	A.F. Amplifier.
TR5	NKT.775	A.F. Amplifier.
TR6	NKT.272A	A.F. Driver.
TR7	NKT.773	Complementary pair.
TR8	NKT.271A	
Diode	OA90	Detector.

Cabinet

TP36 Grey, Red, Green.

TP37 Teak Veneer.

Dimensions

8½ in. high x 10½ in. wide x 3½ in. deep.

Weight

4½ lbs.

Chassis Removal

1. Remove push-on tags to loudspeaker and earphone socket.
2. Remove control knobs and lift off dial scale.
3. Remove screw at each end of dial plate, when chassis may be withdrawn.

Quiescent Current

- (a) Connect 25 ohm Output Meter across tags L.S.
Connect 18v. d.c. to supply leads.
Set VOLUME to minimum.
Depress tone buttons.
Set wavechange to MEDIUM wave.
Set car button "up".
Set gang to maximum capacity.
- (b) Set AVO to 10 mA range and connect between TR7 collector and chassis.
- (c) Switch on.
- (d) By means of RV2 adjust I_q to: 4mA.
- (e) Solder TR7 collector to tag P and seal RV2 with paint.

Static Measurements

(a) All measurements made with AVO 8.

(b) Transistors	Type	e	b	c
No.				
4	NKT.275P	0.24	0.3	5.2
5	NKT.775	8.9	8.4	0.14
6	NKT.272A	0	0.14	9.0
7	NKT.773	9.0	9.2	18.0

(c) Mid Point — 9V.

(d) Module LP 1156
Tag 1 Volts — 6.9
Tag 2 Volts — 7.6

Alignment Procedure

The frequency changer and I.F. amplifiers are contained in a pre-tuned module which will not require adjustment. In the event of any component failure, including transistors within this module, it should be returned to Dynatron Spares Department for replacement.

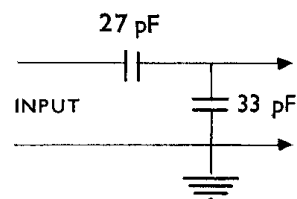
R.F.:

Check that the pointer travels symmetrically within the scale aperture between the limits of the gang travel. Set up a standard loop aerial with its axis parallel to the receiver aerial about 15 inches away.

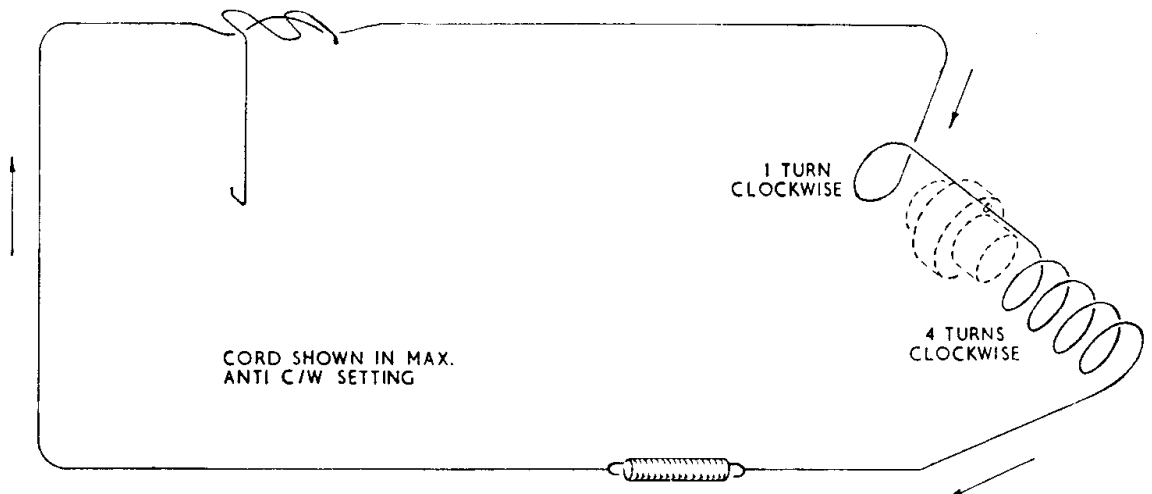
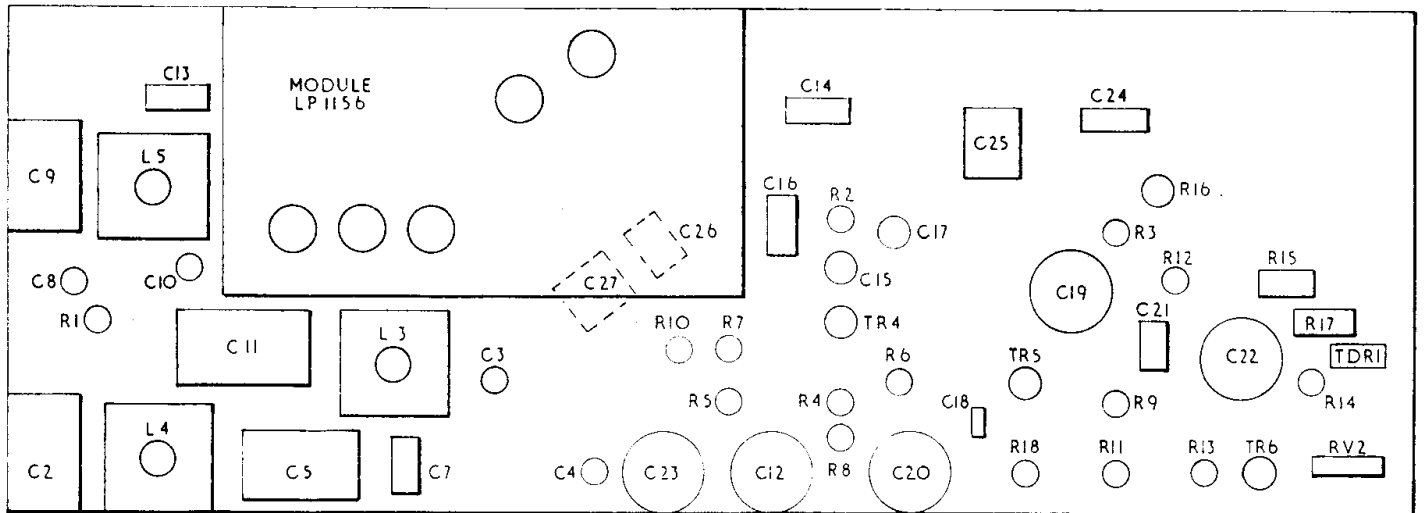
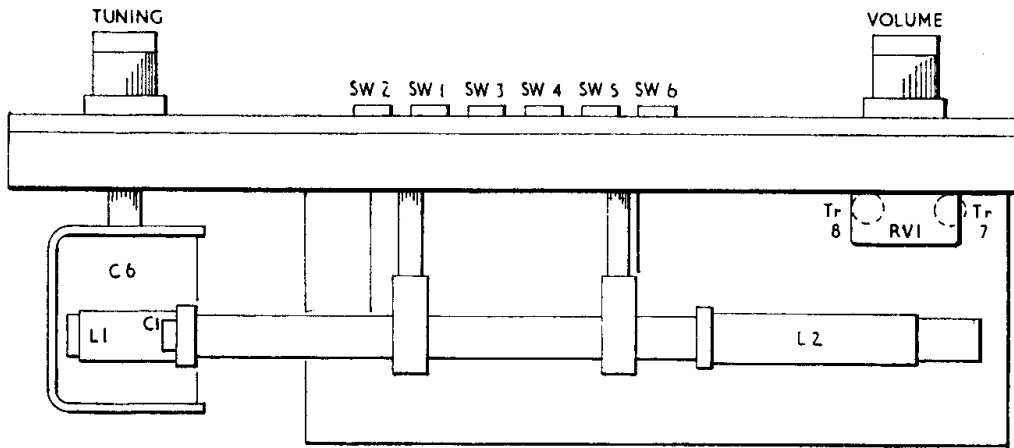
1. Close gang, switch to "M.W." with "Car" button up.
2. Feed 525 kc/s signal to loop and tune oscillator for maximum output.
3. Open gang fully. Feed 1560 kc/s signal to loop, and tune cg for maximum.
4. Repeat 2 and 3.
5. Feed 560 kc/s to loop and tune set to signal. Adjust M.W. aerial coil L2 for maximum.
6. Feed 1500 kc/s to loop and tune set to signal. Adjust C2 for maximum.
7. Repeat 5 and 6.
8. Switch set to Long Wave and tune set to 1600 metres calibration mark centre.
9. Feed 187 kc/s to loop and tune C11 signal.
10. Adjust position of L.W. coil to produce maximum output.
11. Check calibration and tracking of both M.W. and L.W.

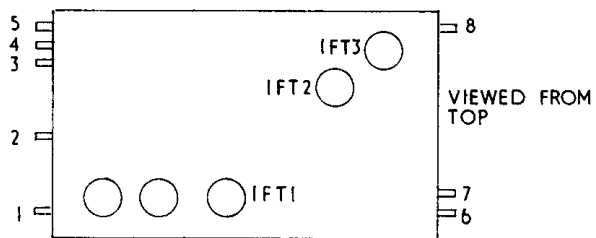
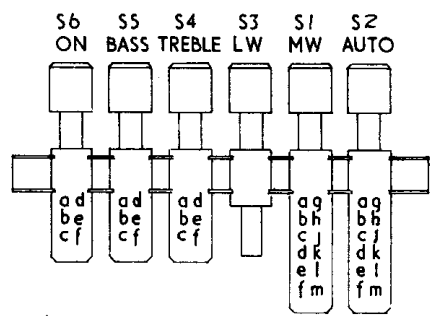
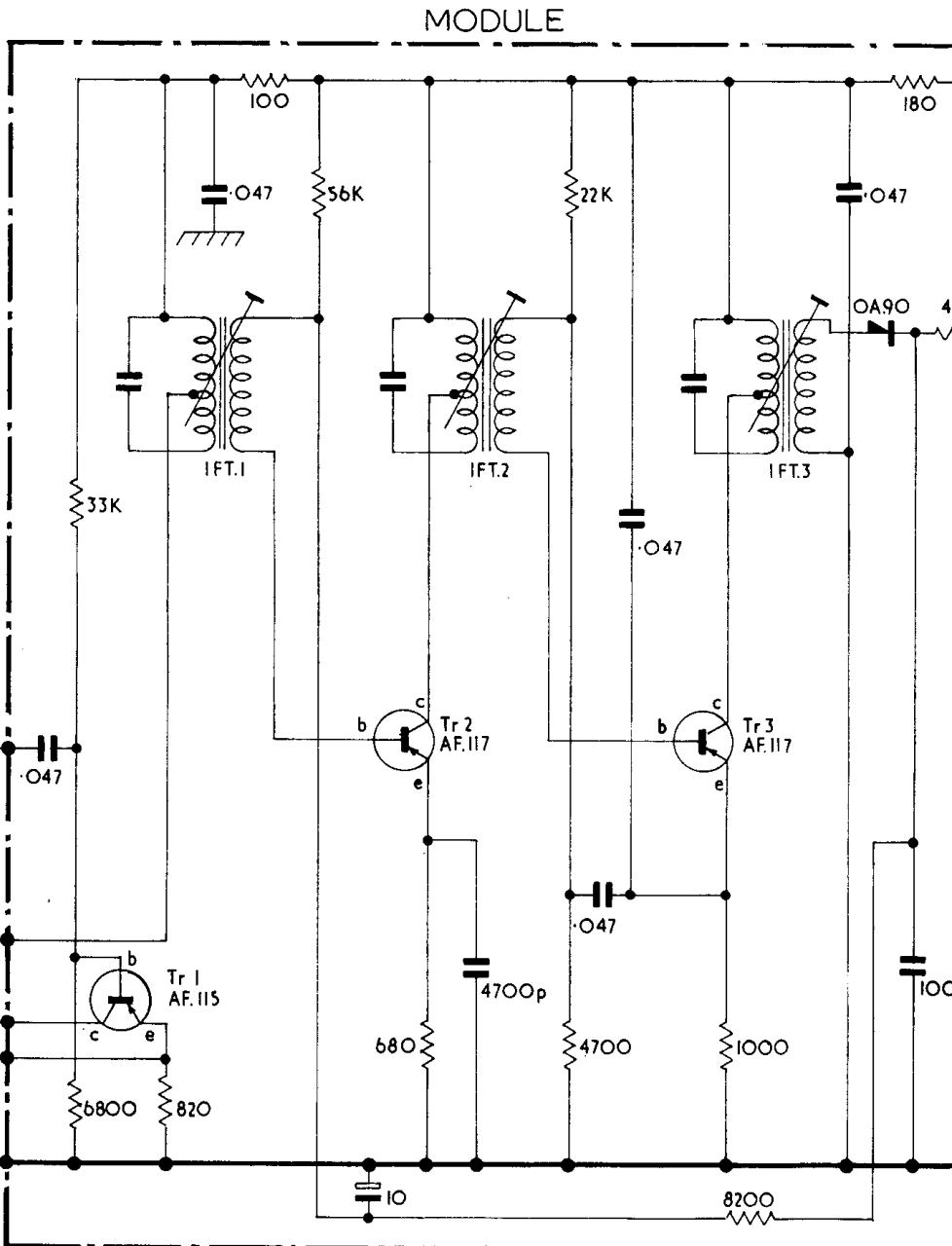
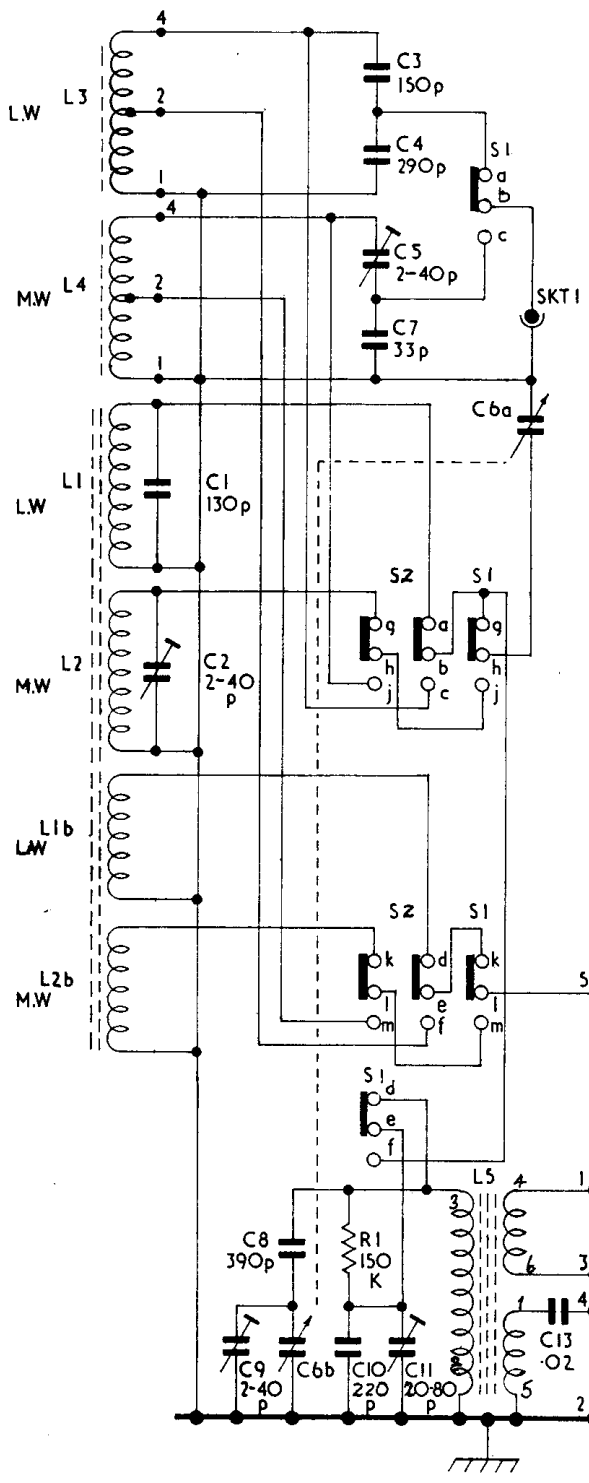
Alignment of Car Aerial Coils

- (a) Depress M.W. and "Car" push buttons. Replace loop aerial with dummy car aerial and connect the latter to the aerial leads of tuner.
- (b) Adjust generator output to 560kc/s and tune the set to the signal. Adjust L4 to obtain maximum output.
- (c) Adjust generator output to 1500kc/s and tune the set to the signal. Adjust C5 to obtain maximum output.
- (d) Repeat operations (b) and (c) until no further improvement can be made.
- (e) Switch to L.W. and tune to 1600 metres calibration mark centre.
- (f) Feed 187kc/s to dummy aerial and adjust L3 to give maximum output.

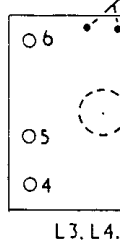


DUMMY CAR AERIAL

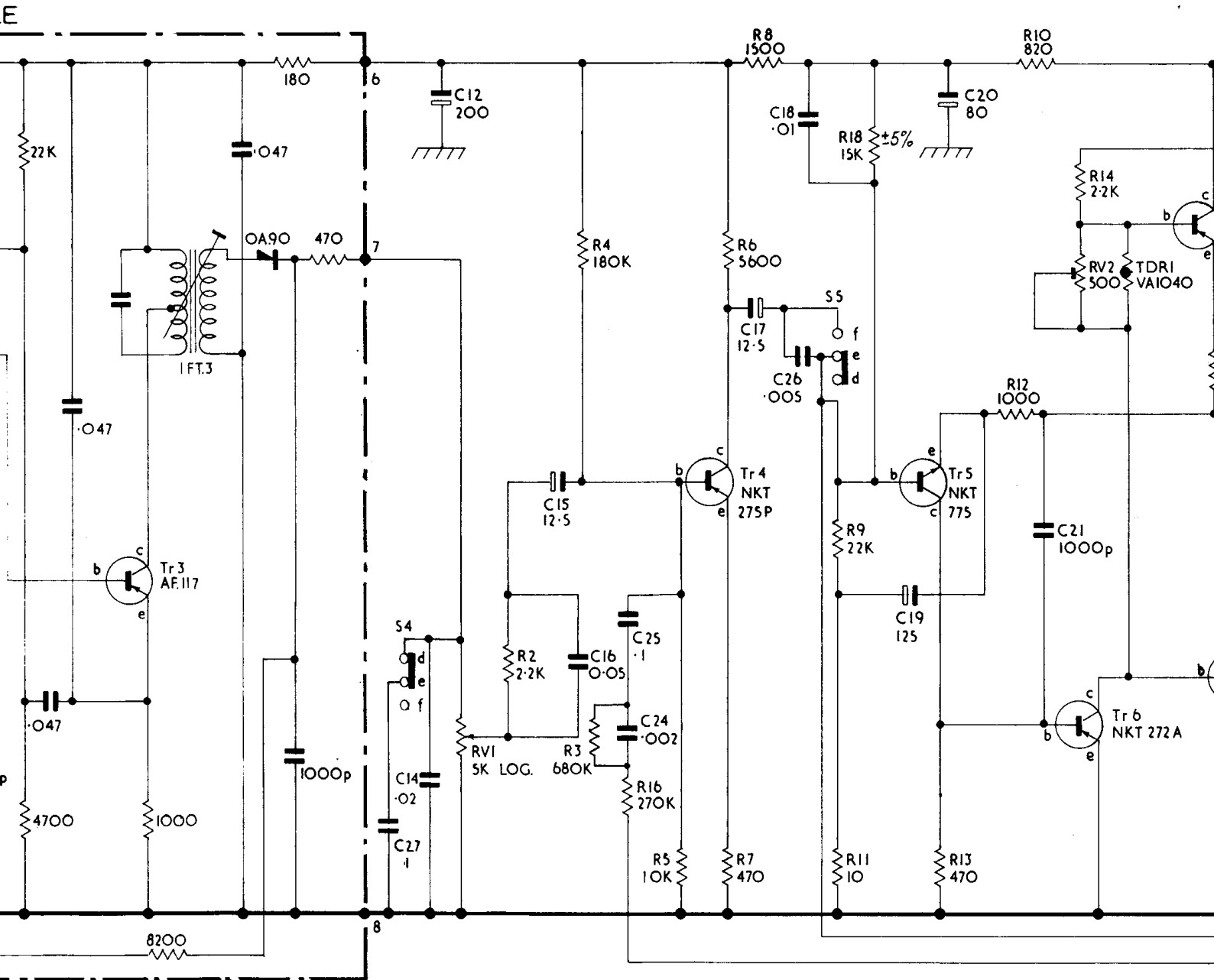




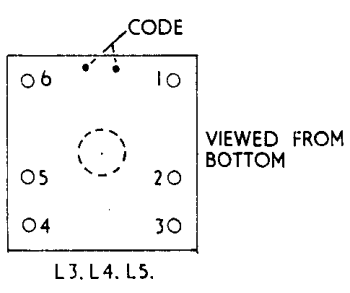
MODULE LP 1156



L3, L4.

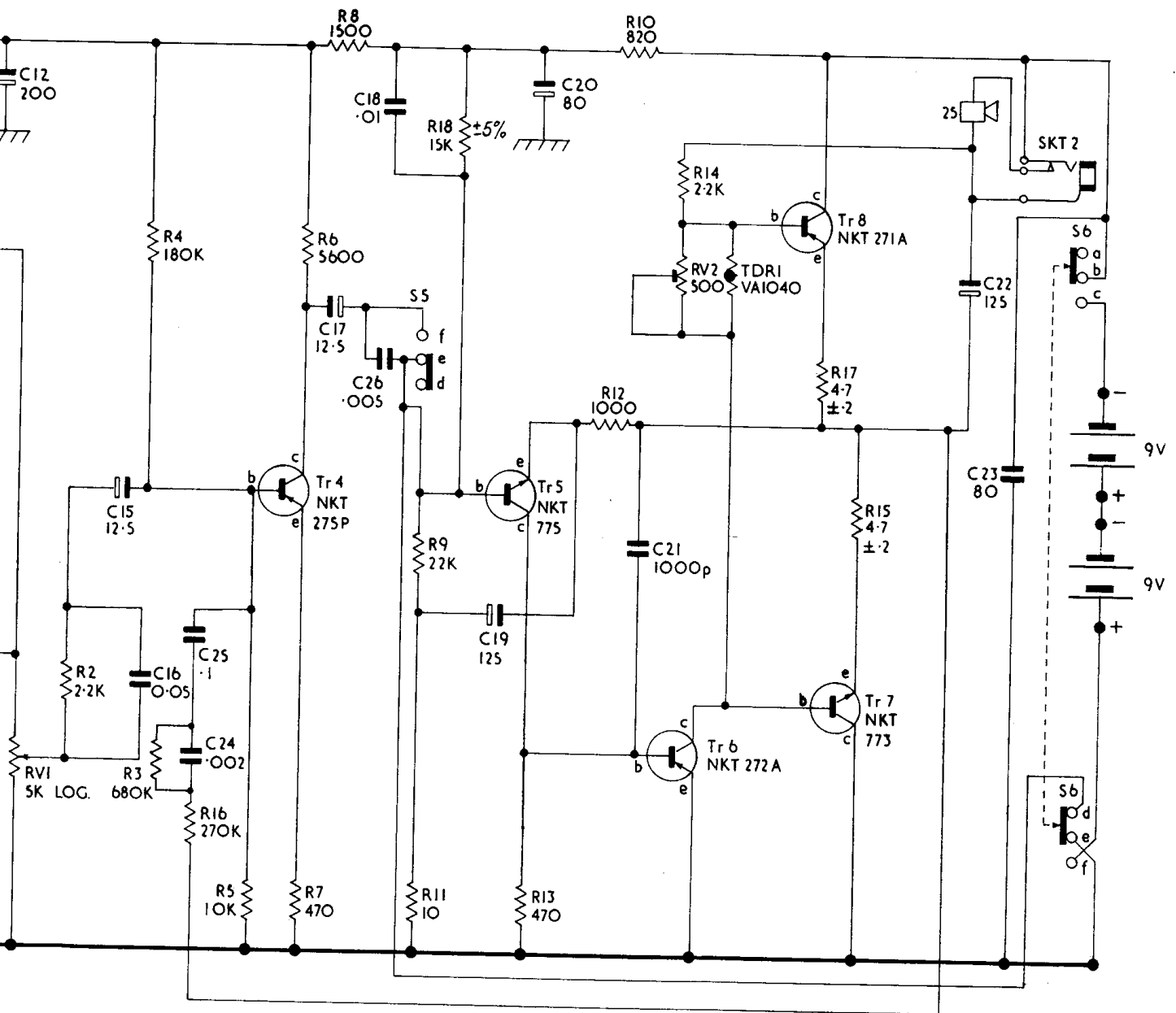


FROM



NOTES.

- 1 ALL RES
- 2 ALL RES
- 3 ALL CAP STATED.
- 4 S1 SHO
- 5 S2, S3 W
- 6 S4 SHO
- 7 S5 SHO
- 8 S6 SHO



NOTES.

- 1 ALL RESISTORS IN OHMS UNLESS OTHERWISE STATED.
- 2 ALL RESISTORS ARE $\pm 10\%$ UNLESS OTHERWISE STATED.
- 3 ALL CAPACITORS IN MICROFARADS UNLESS OTHERWISE STATED.
- 4 S1 SHOWN IN FERRITE POSITION.
- 5 S2, S3 WAVECHANGE SWITCH IN L.W POSITION.
- 6 S4 SHOWN IN TREBLE CUT POSITION.
- 7 S5 SHOWN IN BASE CUT POSITION.
- 8 S6 SHOWN IN OFF POSITION.

FROM