



D Y N A T R O N

RADIO SERVICE MANUAL

MODEL TP42

April 1968

'RALLY' MODEL TP42

General Description

The 'Rally' Model TP42 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/external loud-speaker socket is provided.

Technical Data

Batteries

Two 9 volt batteries type PP9 are supplied with the receiver.

Aerials

8 in. Ferrite rod for Long and Medium Wavebands (car aerial input for standard car aerial installation).

Wavebands

Medium 185–570 metres. 1620–525 kHz

Long 1100–2000 metres. 270–150 kHz

Output

1 watt into 25 ohms

Loudspeaker

7 in. × 4 in. elliptical high flux 25 ohms. (18 × 10 cms.)

Tone Control

Bass lift circuit selected by push button.

Transistors and Diodes, etc.

TR1	AF115	Mixer/Oscillator
TR2	AF117	I.F. Amp.
TR3	AF117	I.F. Amp.
TR4	NKT.275P	A.F. Amp.
TR5	NKT.775	A.F. Amp.
TR6	NKT.272A	Driver
TR7	NKT.773	Complementary pair output
TR8	NKT.271A	
TDR1	VA1040	Bias compensator
D1	OA90	Detector

Cabinet

TP42 Rexine covered, Black, Green or Red.

Dimensions

10½ in. wide × 3½ in. deep × 7¾ in. high (including handle).
(27 × 8.9 × 19.5 cms.).

Weight

3¾ lbs. without batteries. 5½ lbs. with batteries. (1.7 and 2.5 kgs.).

Chassis Removal

1. Remove battery connectors.
2. Remove push on tags to earphone socket.
3. Remove connection to external aerial socket.
4. Remove control knob and lift off dial scale.
5. Remove 4BA nut from each end of dial plate and withdraw chassis from cabinet.

Quiescent Current—TR7 and TR8

1. Open TR7 collector connection and insert 10 mA range meter.
2. With volume control at **minimum** adjust RV2 for 4mA indication.
3. Remove meter, seal RV2 and reconnect TR7 collector.

Note: Check 'mid point' volts at TR7 emitter—9 volts (with 18 volt batteries).

Static Voltage Measurements

These voltages are shown on circuit diagram measured with Avo 8.

Alignment Procedure

I.F. 470 kHz: The frequency changer and I.F. amplifiers are contained in a pre-tuned module which will not require adjustment. In the event of a component failure, including transistors, the module should be returned to Dynatron Spares Department for replacement. When a replacement is fitted to a receiver the first I.F. transformer should be peaked for optimum gain. **Only this adjustment should be made.**

R.F. Section

Check pointer coincides with end of scale aperture when gang is closed. Align circuits as follows:

Medium Wave using Ferrite Rod Aerial:

Inject signals from generator using a coupling loop.

1. Close gang and adjust L5 to receive 525 kHz input signal.
2. Open gang and adjust C9 to receive 1630 kHz input signal.
3. Set input signal to loop at 560 kHz, tune to signal and adjust L2 on rod for maximum output.
4. Set input signal to loop at 1500 kHz, tune to signal and set C2 for maximum output.
5. Repeat 3 and 4 for optimum.

Long Wave using Ferrite Rod Aerial

1. Switch to L.W. and tune to 1600 metres on dial.
2. Set input signal to loop at 187 kHz and tune C11 for signal.
3. Adjust L1 on rod for maximum output.
4. Check calibration and tracking of Medium and Long Waves using known stations.

Medium Wave using Car Aerial Coils

Inject signals from generator using a dummy aerial (as shown on circuit diagram) into car aerial socket.

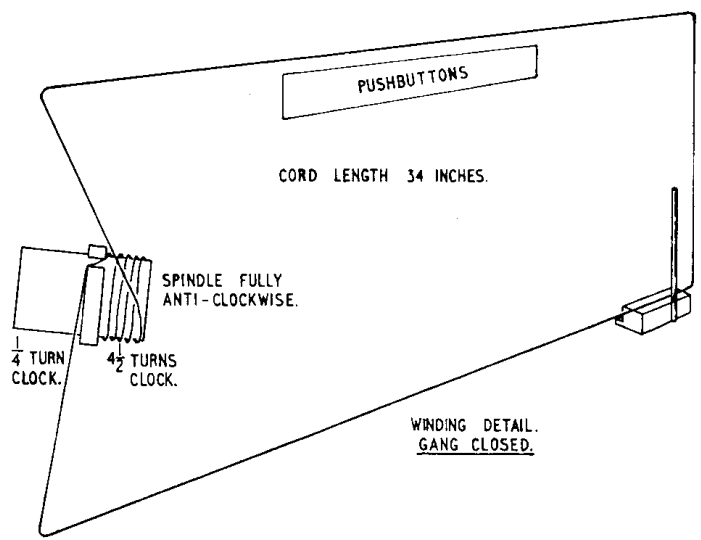
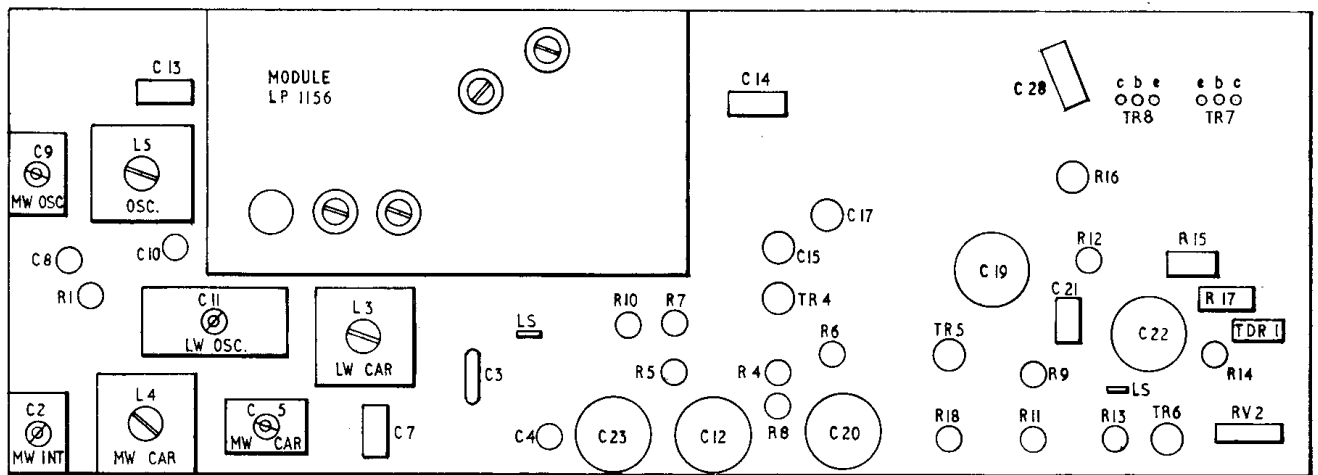
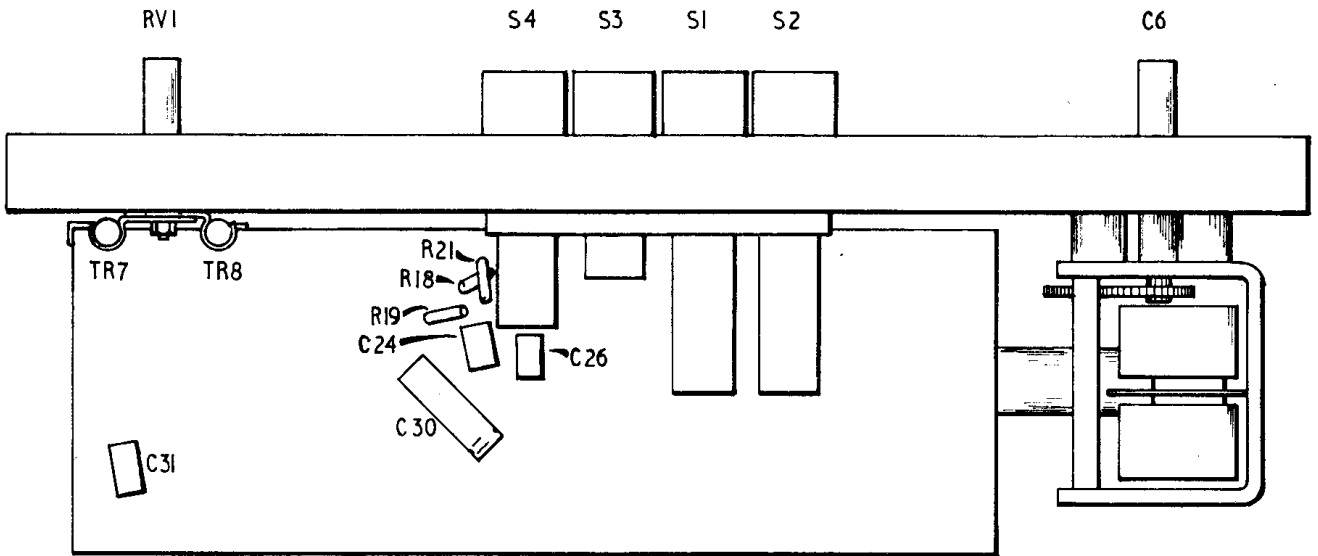
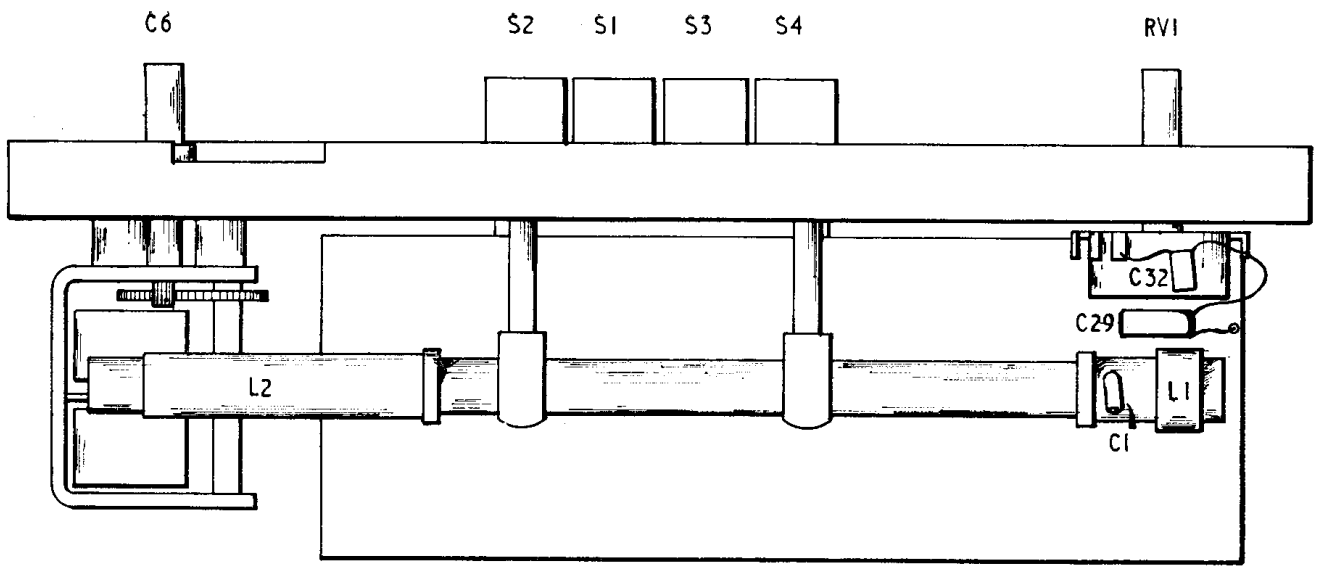
1. Depress M.W. and car buttons.
2. Set input signal to 560 kHz and tune to signal. Adjust L4 for maximum output.
3. Set input signal to 1500 kHz and tune to signal. Adjust C5 for maximum output.
4. Repeat 2 and 3 for optimum.

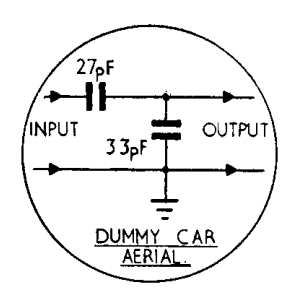
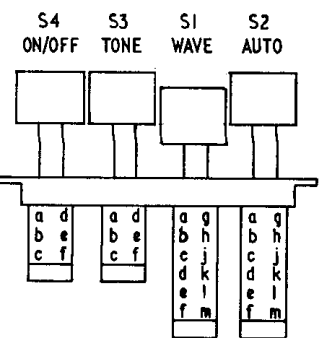
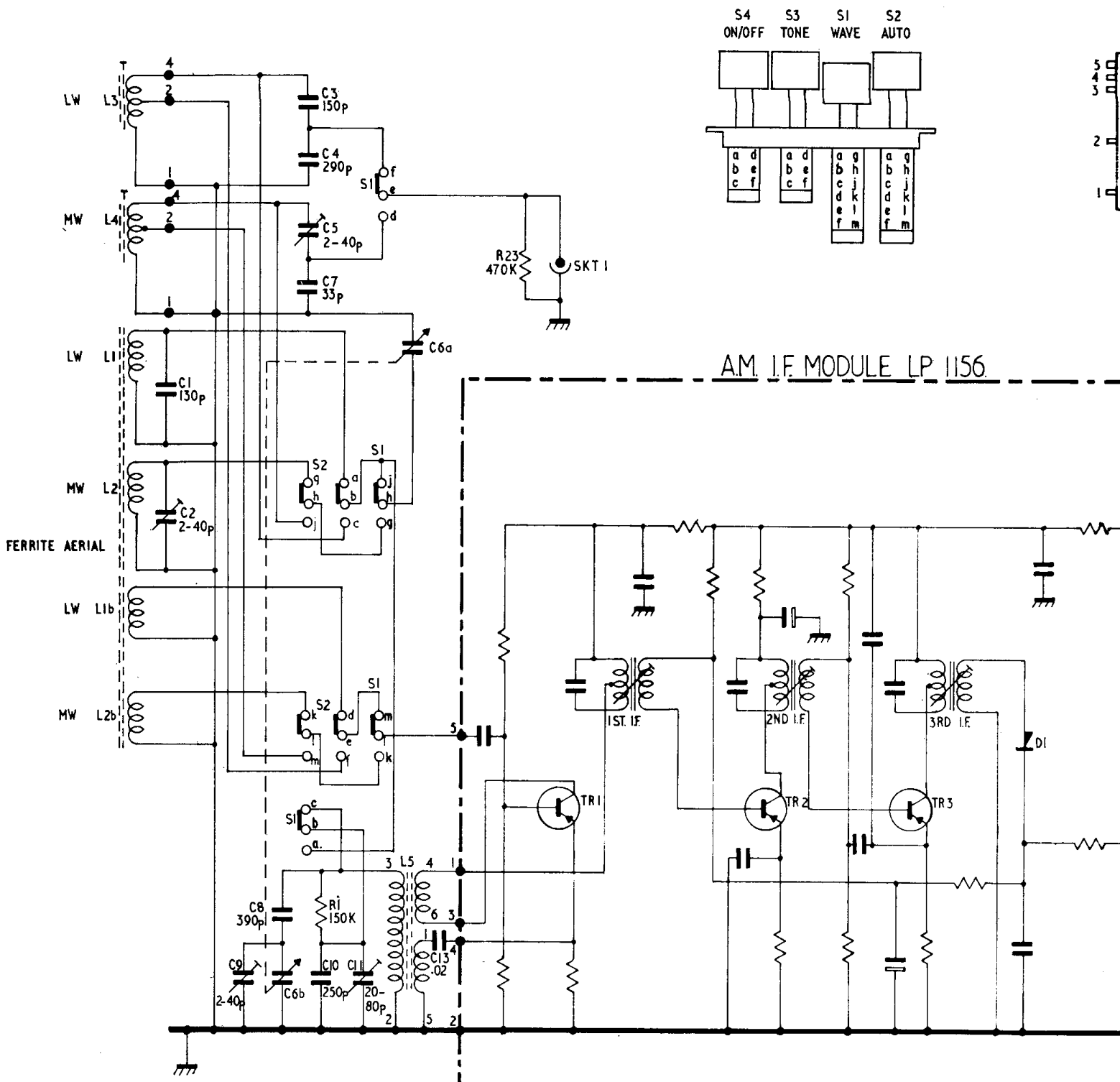
Long Wave using Car Aerial Coils

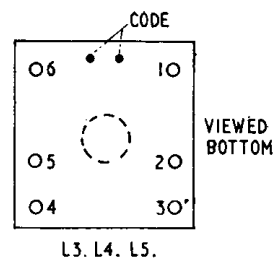
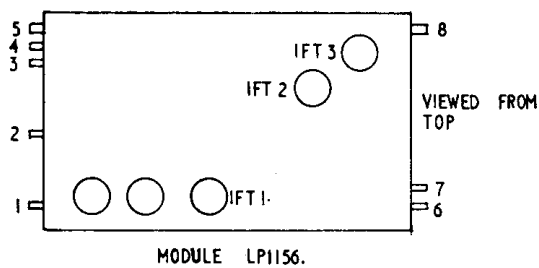
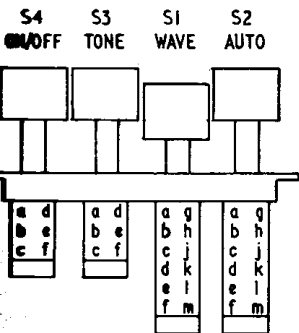
1. Switch to L.W. and feed in 187 kHz and tune to signal.
2. Adjust L3 to give maximum output.

NOTE:

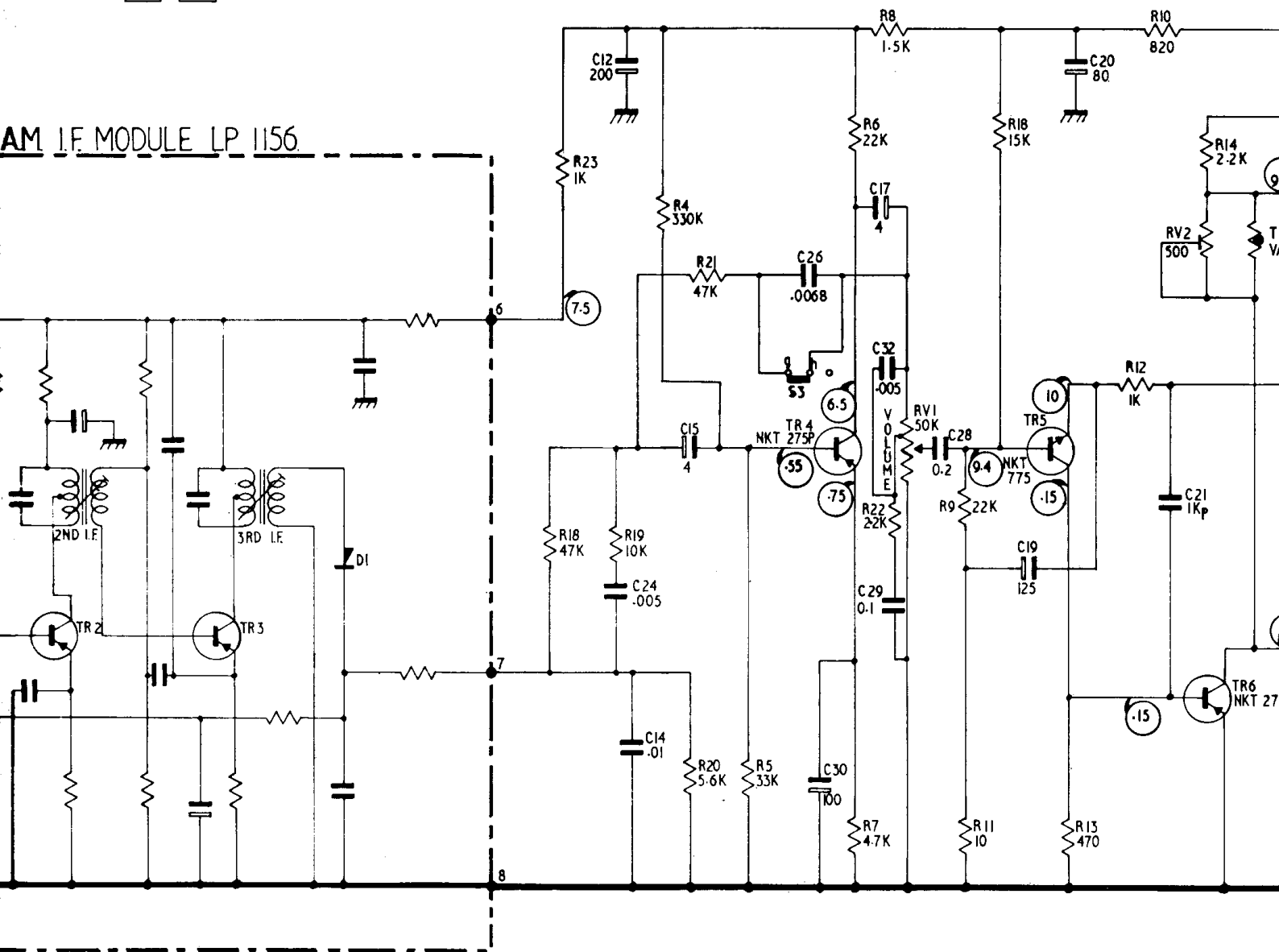
M.W. trimmer C5 may need adjustment for optimum performance on a particular car aerial installation if cable capacitance is high. In this case tune a station at H.F. end of band and trim C5 for maximum signal.





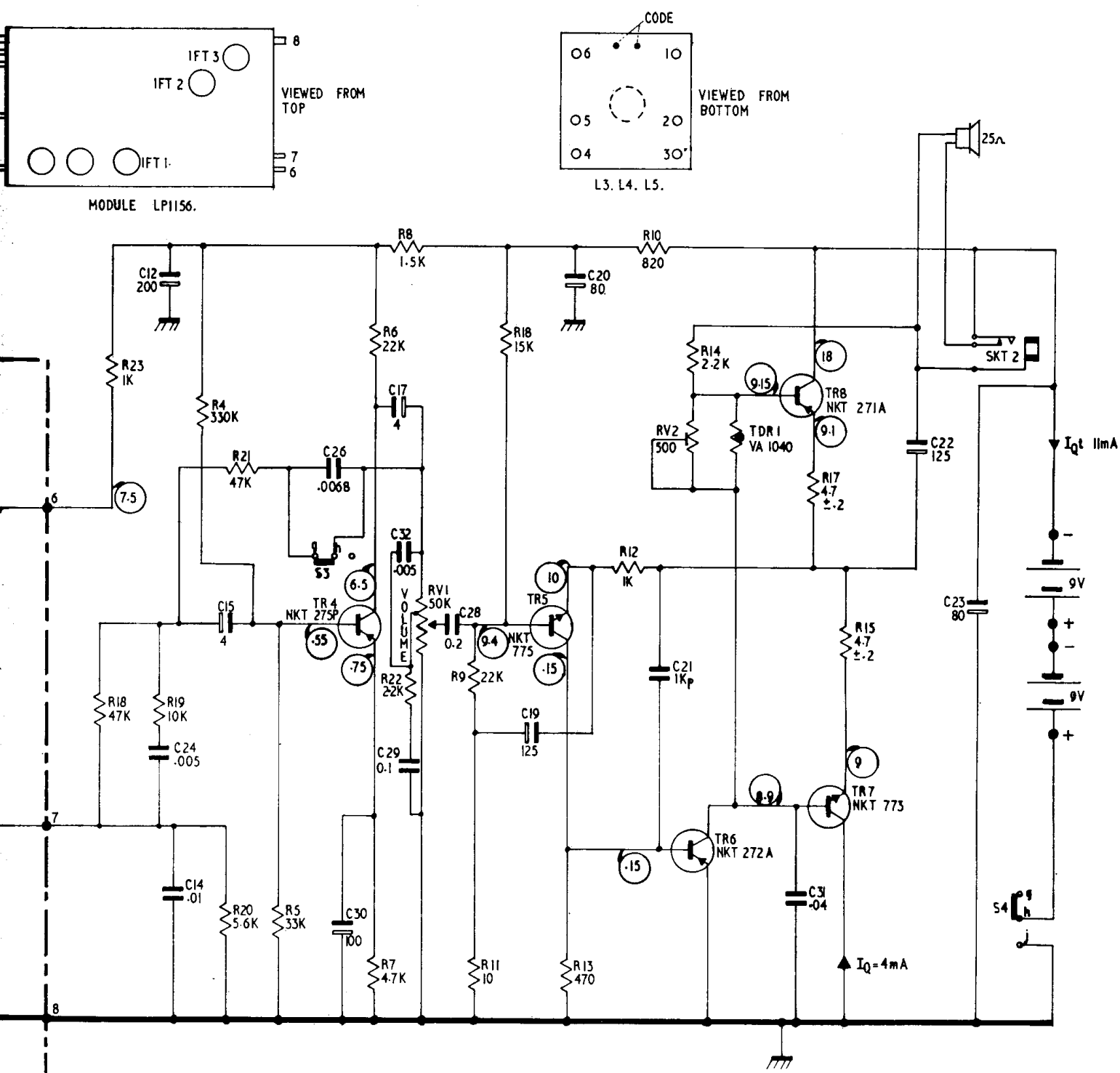


AM I.F. MODULE LP 1156



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 2. ALL CAPACITORS IN MICROFARADS UNLESS OTHER STATED.
 3. SW1 IN L.W. POSITION.
 SW2 IN INTERNAL POSITION.
 SW3 IN TREBLE POSITION.
 SW4 IN OFF POSITION.
 4. VOLTAGES MEASURED IN RESPECT TO CHASSIS WITH MINIMUM VOLUME SETTING AND NO SIGNAL. USE AVO 8.

(9.5) = VOLTAGES.



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