

R.G.D. Models RI50 'Rover', RI55

General Description: Portable three-waveband A.M./F.M. battery-operated radios provided with a telescopic aerial and a socket for the connection of an earphone.

Wavebands: L.W. 145–260kHz; M.W. 515–1,610kHz; F.M. 88–104MHz.

Batteries: 6V (4 × U11).

Quiescent Current: 11mA.

Loudspeaker: 8Ω impedance.

Alignment (see Fig. W364):

A.M.: Connect a signal generator, modulated at 1 kHz to a depth of 30 per cent, to a shielded test coil (85 turns of enamel-covered wire on a 2-in. diameter former). Position the test coil so that it is coaxially in line with, and a few inches from the M.W. end of the ferrite rod. Follow the instructions set out below and adjust for maximum output.

Operation	Waveband	Dial Pointer	Input Frequency	Adjustment
1	M.W.	188m	470kHz	L24, L25
2	M.W.	188m	470kHz	L22, L23
3	M.W.	188m	470kHz	L18, L19
4	M.W.	Left hand of scale	505kHz	L12, L13
5	M.W.	Right hand of scale	1,650kHz	Ct6
6	M.W.	500m	600kHz	L8, L10
7	M.W.	215m	1,400kHz	Ct4
8	L.W.	Left hand of scale	140kHz	L14, L15
9	L.W.	Right hand of scale	270kHz	Ct5
10	L.W.	1,950m	155kHz	L9, L11
11	L.W.	1,180m	255kHz	Ct3

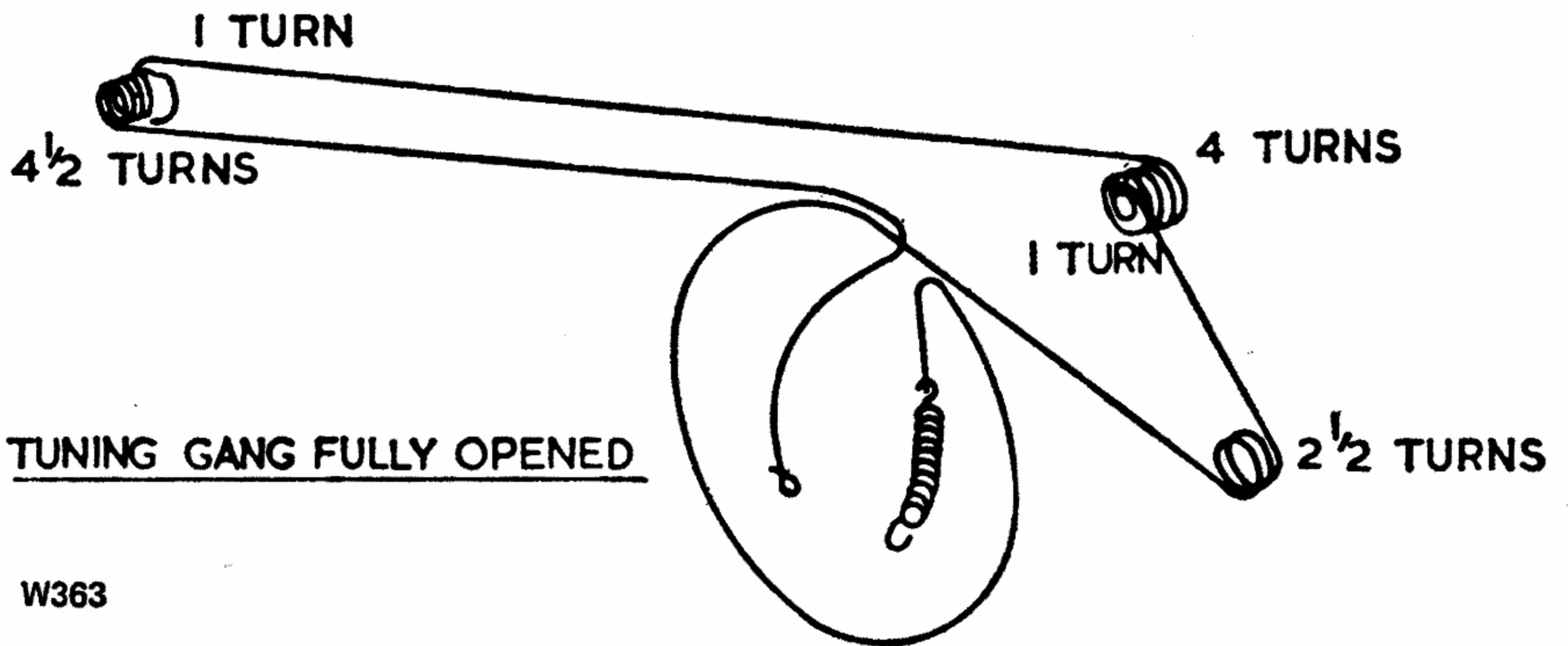
F.M. I.F.: Switch to F.M. Set sweep generator to 10.7MHz.

Operation	Test Equipment Connections	Adjustment
1	Connect sweep generator via a 0.1 μF capacitor to C8/L4 junction and oscilloscope to R23/TX5 junction.	Tune L20, L21 for maximum gain and symmetry of response curve.
2	Connections as above	Tune L16, L17 for maximum gain and symmetry of response curve.
3	Connections as above	Tune L6, L7 for maximum gain and symmetry of response curve.
4	Leave sweep generator connected to C8/L4 junction and move oscilloscope to R34/R35 junction.	Tune L26, L27, and L28, L29 for symmetry of response curve and maximum gain.



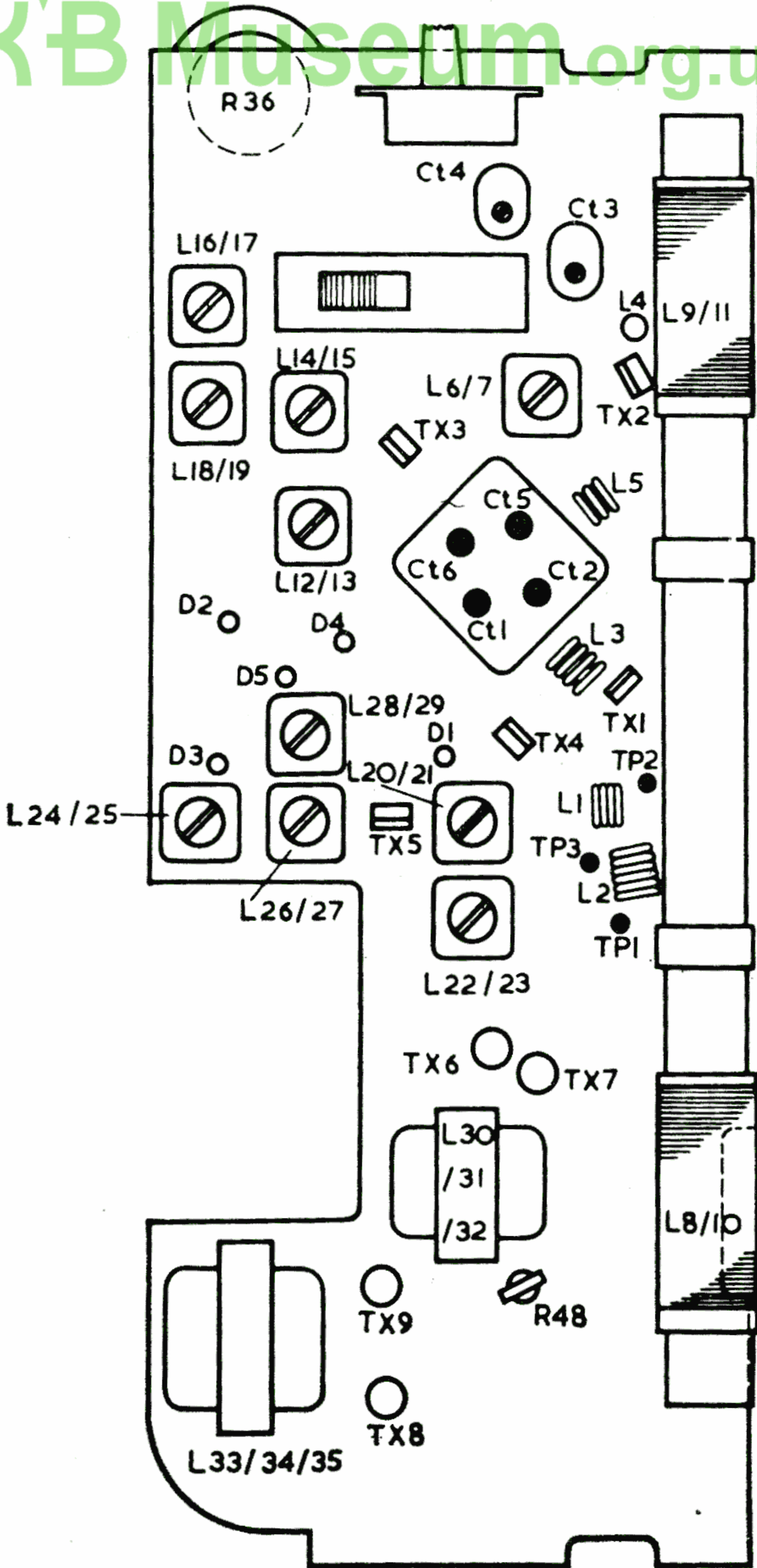
R.F.: Connect to TP2 a signal generator, frequency modulated with 1 kHz and deviated by ± 22.5 kHz.

<i>Operation</i>	<i>Dial Pointer</i>	<i>Signal Generator Frequency</i>	<i>Adjustment</i>
1	Minimum Frequency	87 MHz	L5
2	Maximum Frequency	105 MHz	Ct2
3	Minimum Frequency	87 MHz	L3
4	Maximum Frequency	105 MHz	Ct1



(W363) DRIVE CORD—MODEL R150

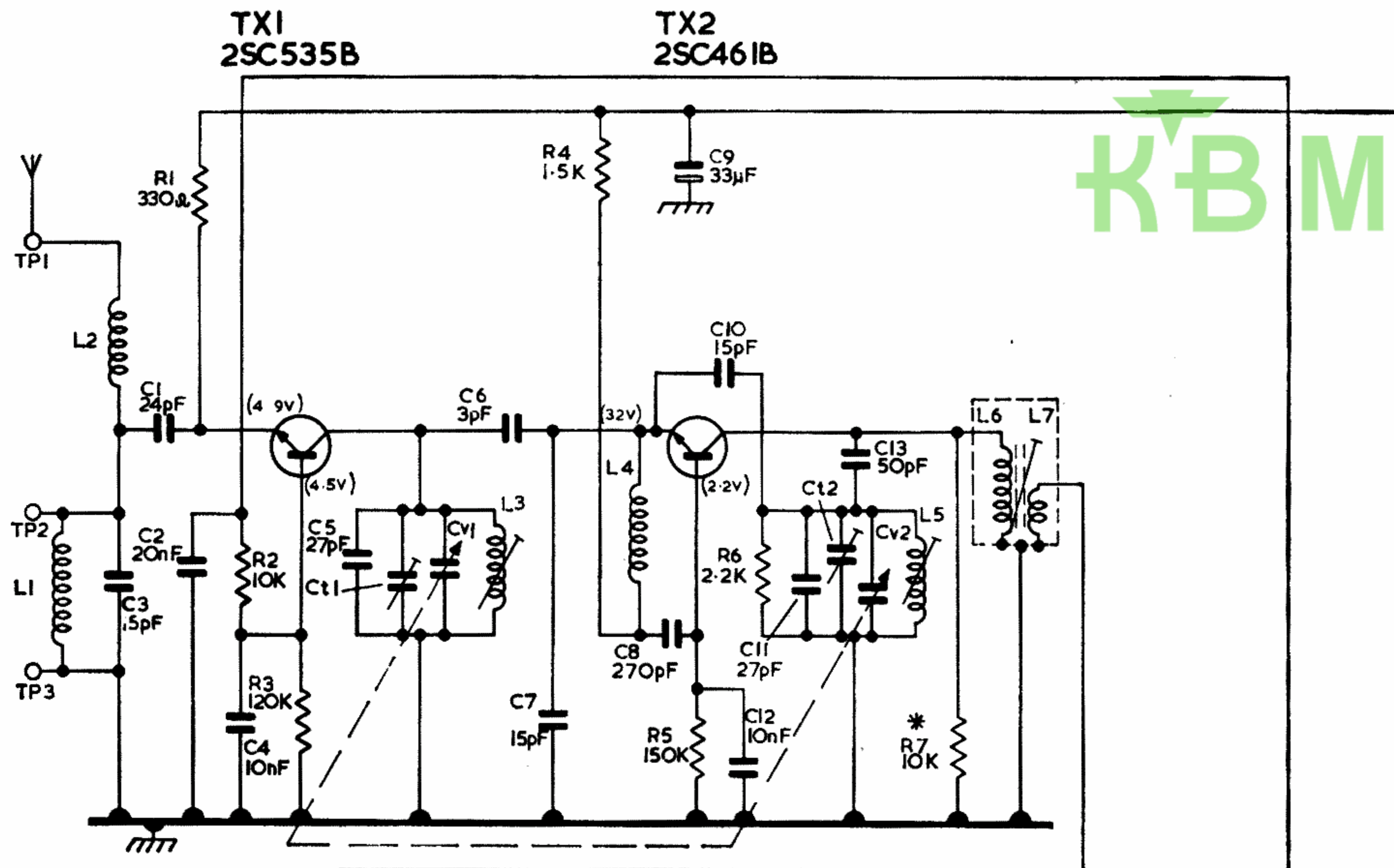
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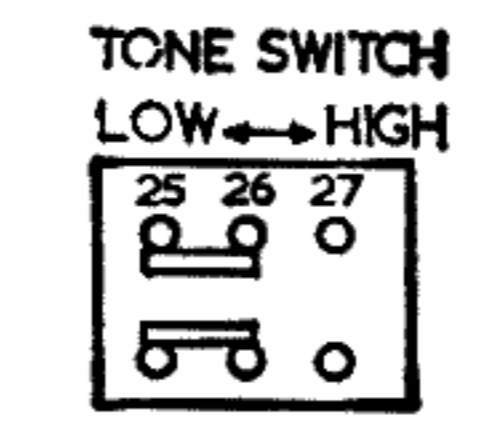
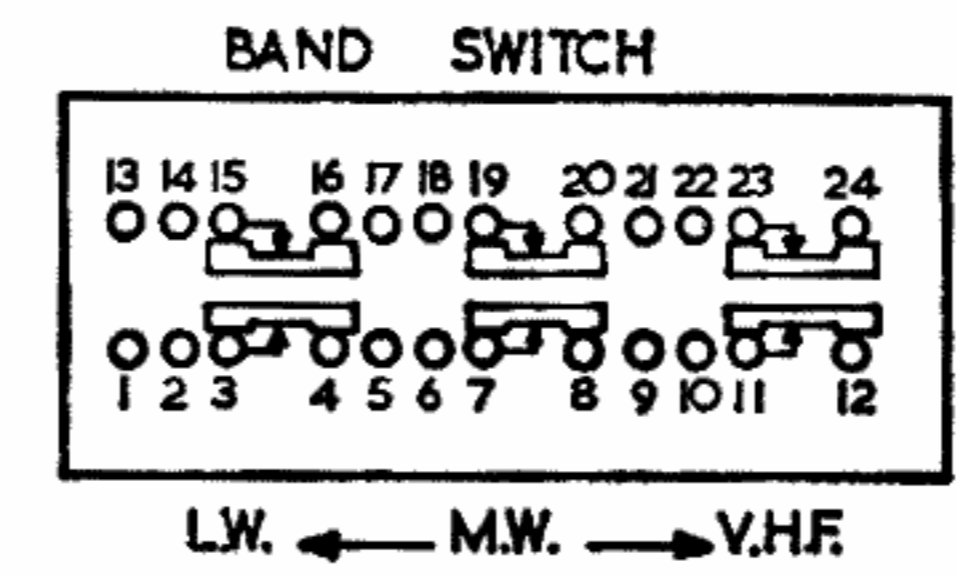
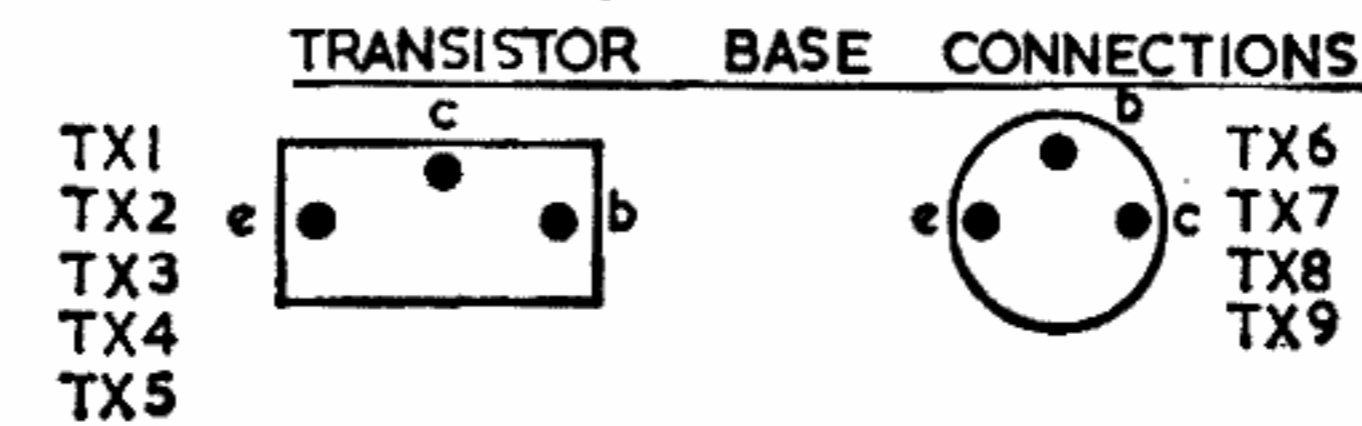
W364

(W364) LOCATION OF MAIN COMPONENTS—MODEL R150

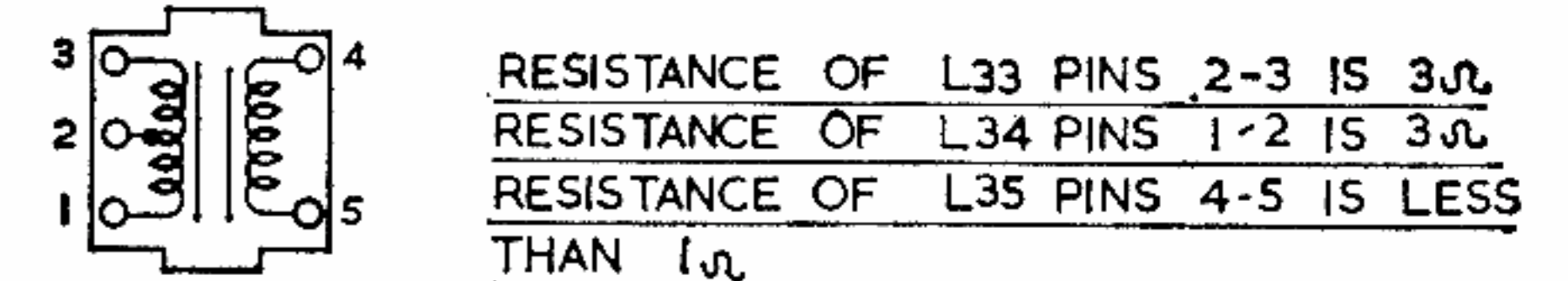
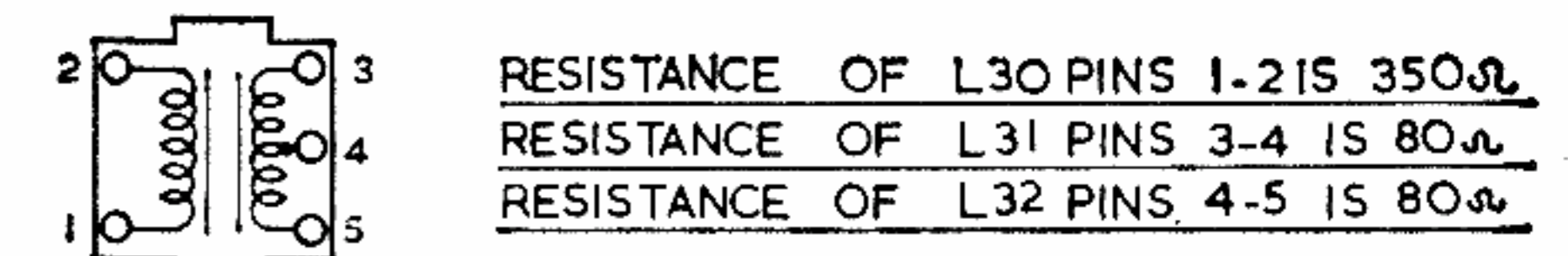
ALL VOLTAGES ARE NEGATIVE AND ARE MEASURED WITH AN AVO 8 ON AN APPROPRIATE RANGE WITH RESPECT TO THE POSITIVE BATTERY TERMINAL. F.M. VOLTAGES IN BRACKETS.



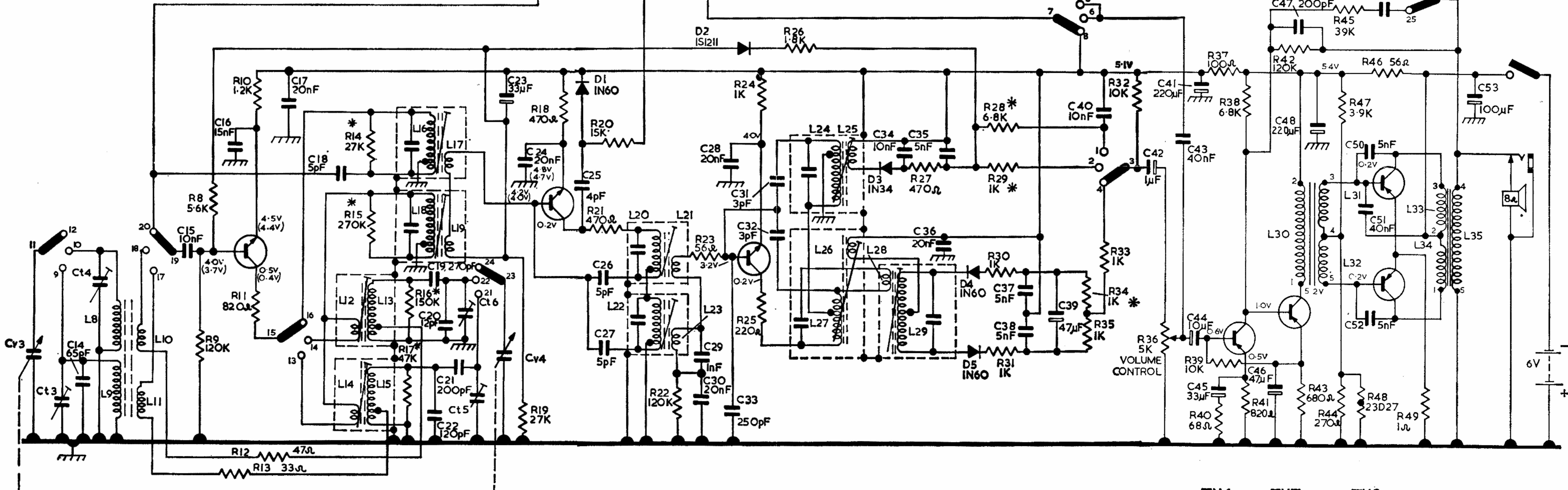
BECAUSE OF THE TOLERANCES OF THE TRANSISTORS THE MARKED RESISTORS MAY HAVE THE FOLLOWING VALUES:
 R7 MAY BE 6.8k TO 47k
 R14 " " 6.8k " 27k OR OMITTED
 R15 " " 82k " 330k OR OMITTED
 R16 " " 120k " 470k
 R17 " " 39k " 180k
 R28 " " 1k " 10k
 R29 " " 560Ω " 1k OR OMITTED AND SHORT CCT.
 R34 " " 560Ω " 1k OR OMITTED AND SHORT CCT



BAND SWITCH SHOWN IN 'F.M.' POSITION



LAST RESISTOR IS R49
 LAST CAPACITOR IS C53



W365a TX3 2SC460B TX4 2SC460B TX5 2SC460A TX6 2SB75B TX7 2SB75B TX8 2SB156B TX9 2SB156B

(W365a) CIRCUIT DIAGRAM—MODEL R150 (Part)

(W365b) CIRCUIT DIAGRAM—MODEL R150 (Part)

(W365c) CIRCUIT DIAGRAM—MODEL R150 (Continued)