

**General Description:** A portable A.M./F.M. radio incorporating a two-track cassette tape recorder and operating from mains or battery supplies. A microphone is fitted and sockets are provided for the connection of auxiliary inputs and an earphone.

**Mains Supplies:** 240 volts, 50Hz.

**Batteries:** 9 volts (6×1.5 volts).

**Wave-bands:** L.W. 145–285kHz; M.W. 520–1610kHz;  
S.W. 5.9–18MHz; F.M. 87.5–108MHz.

### Adjustments

**I.C.1 Bias:** Connect V.T.V.M. To Pins 4(+) and 6(−) of I.C.1 and adjust VR5 to obtain a reading of 0.5 volts.

**Recorder Bias:** With no input signal, connect V.T.V.M. across R105 and adjust VR6 for a reading of 3.5mV (tape selection 'Normal').

### Drive Cord (Fig. 243)

Use a 0.5mm dial cord and a grommet.

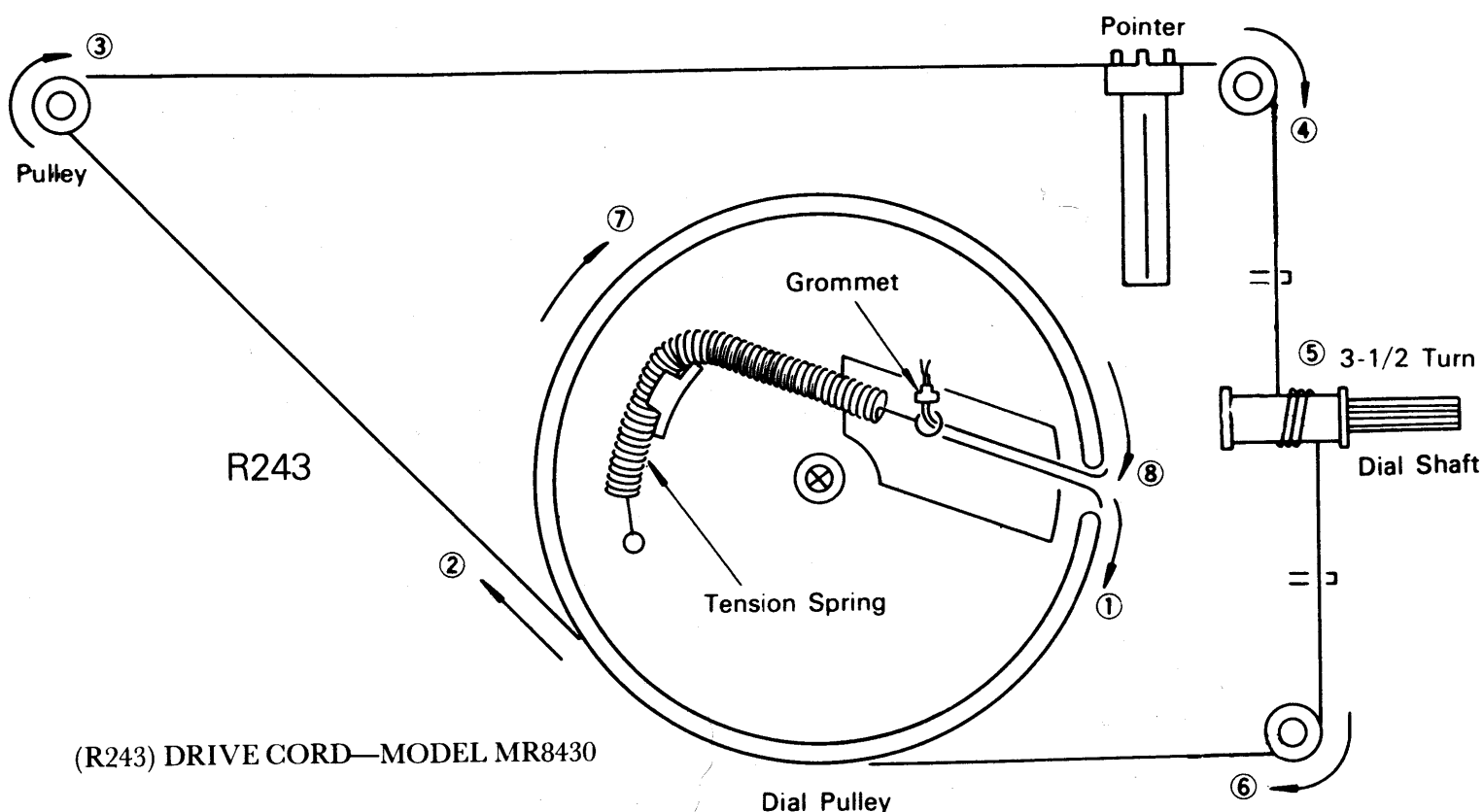
Cut the dial cord to a length of 780mm.

Insert both ends of the dial into the grommet.

Tie the ends together so that a loop is formed. Secure the dial cord by crushing the grommet.

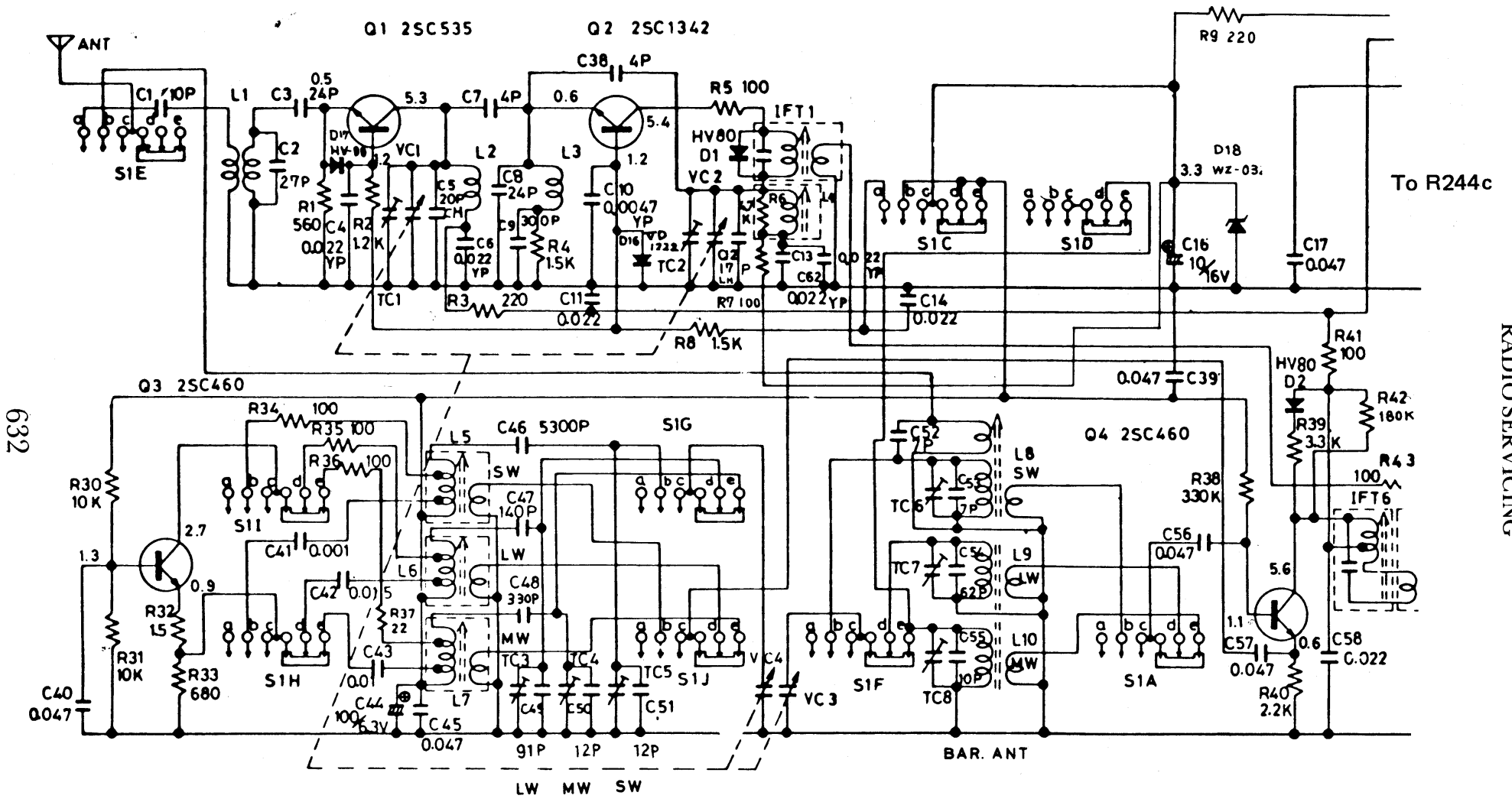
Thread the dial cord through the coil spring.

Arrange the dial cord in the numerical order while holding one end of the cord, then engage the coil spring as shown.



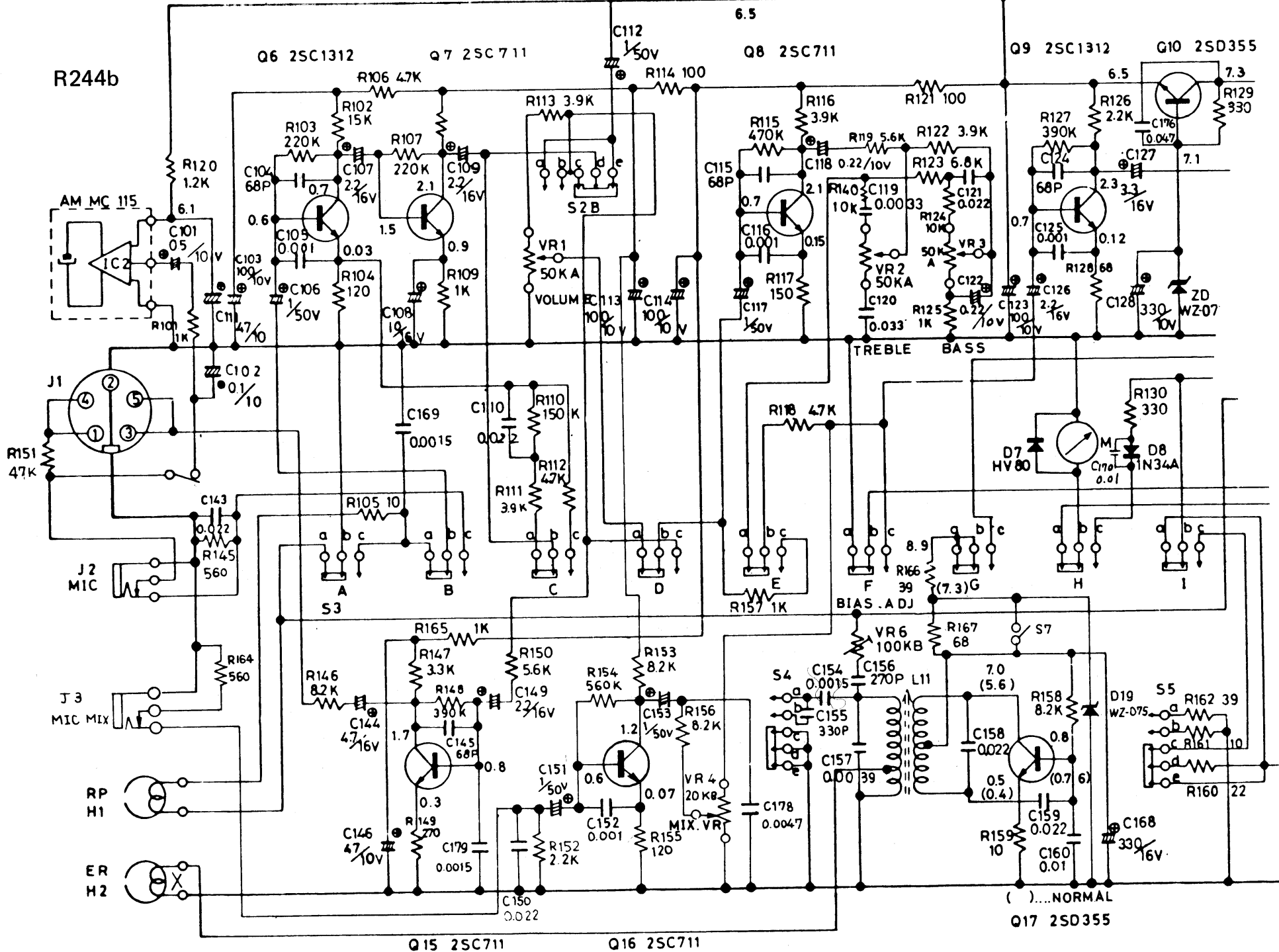
(R243) DRIVE CORD—MODEL MR8430

R244a



RADIO SERVICING

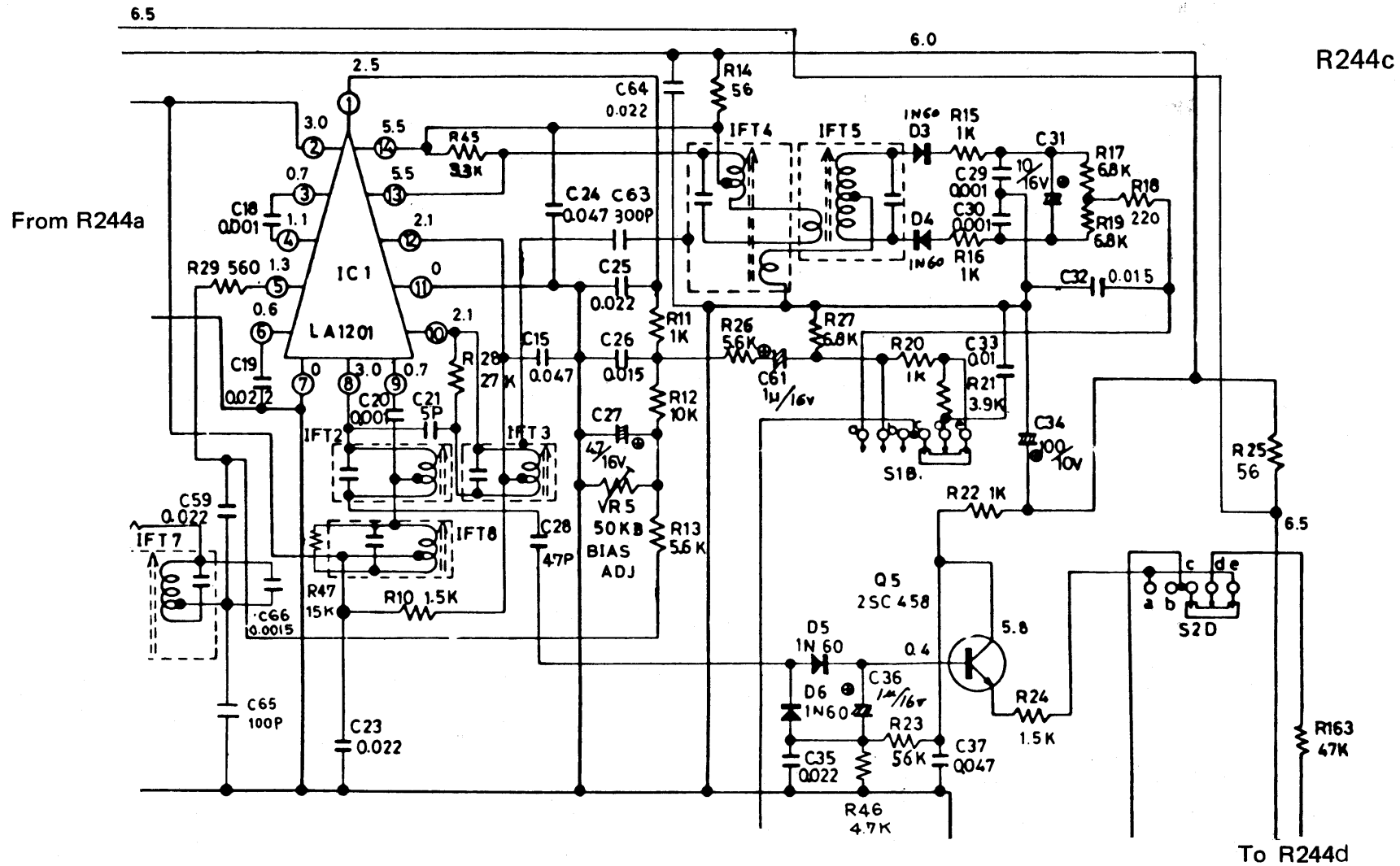
(R244a) CIRCUIT DIAGRAM—MODEL MR8430 (PART)



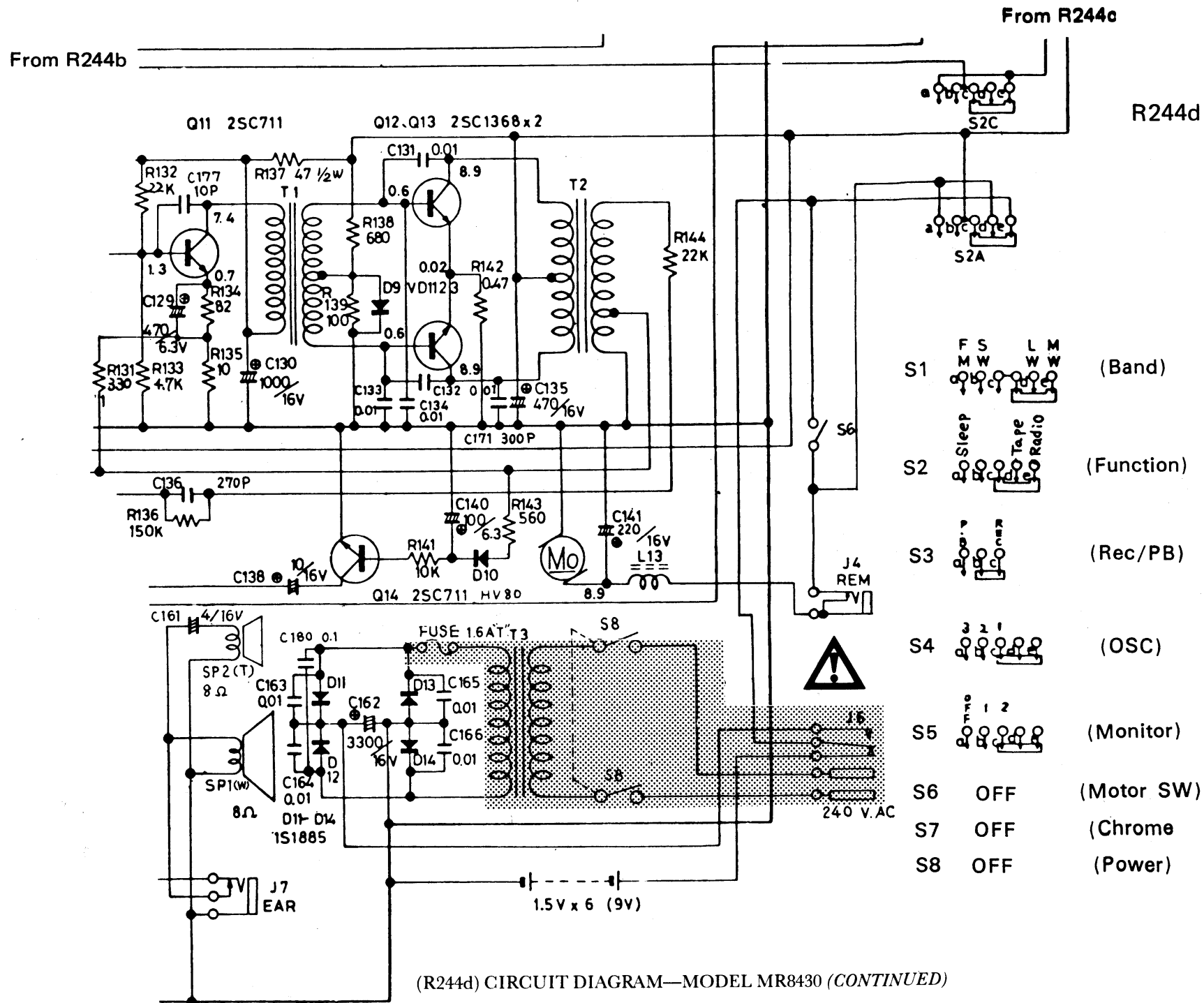
MURPHY

(R244b) CIRCUIT DIAGRAM—MODEL MR8430 (PART)

634



(R244c) CIRCUIT DIAGRAM—MODEL MR8430 (PART)



- S1 (Band)
- S2 (Function)
- S3 (Rec/PB)
- S4 (OSC)
- S5 (Monitor)
- S6 OFF (Motor SW)
- S7 OFF (Chrome)
- S8 OFF (Power)

(R244d) CIRCUIT DIAGRAM—MODEL MR8430 (CONTINUED)

MURPHY

## RADIO SERVICING

### A.M. Alignment

<i>Adjustment</i>	<i>Equipment</i>	<i>Step No.</i>	<i>Generator Frequency</i>	<i>Tuning</i>	<i>Adjust</i>
I.F.	A.M. Signal generator	1	470kHz (Mod.)		A.M. I.F.T.-6, 7, 8 Adjustment maximum
M.W. Band	Oscilloscope	2	Repeat Steps to obtain Maximum Output		
	V.T.V.M.	3	505kHz (Mod.)	505kHz	Set generator frequency to 505kHz with L7 (M.W. Oscillator coil).
M.W. Tracking	Loop antenna	4	1650kHz (Mod.)	1650kHz	Set generator frequency to 1650kHz with TC-4 (Trimmer condenser).
	Load resistance	5	Repeat Steps 3 and 4 two or three times to adjust f. cover		
		6	610kHz (Mod.)	610kHz	Adjust L10 (bar antenna) to obtain maximum sensitivity
	7	1400kHz (Mod.)	1400kHz	Adjust TC-8 (Trimmer condenser) so to obtain maximum sensitivity	
S.W. Band	Load resistance	8	Repeat Steps 6 and 7 two or three times to obtain maximum sensitivity.		
		9	5.85MHz (Mod.)	5.85MHz	Set generator frequency to 5.85MHz with L5 (S.W. oscillator coil).
		10	18.5MHz (Mod.)	18.5MHz	Set generator frequency to 18.5MHz with TC-5 (Trimmer condenser).
S.W. Tracking	Load resistance	11	Repeat Steps 9 and 10 two or three times to adjust f. cover.		
		12	7MHz (Mod.)	7MHz	Adjust Lf8 (Antenna coil) to obtain maximum sensitivity.
		13	16MHz (Mod.)	16MHz	Adjust TC-6 (Trimmer condenser) so as to obtain maximum sensitivity.
L.W. Band	Load resistance	14	Repeat Steps 12 and 13 two or three times to obtain maximum sensitivity		
		15	145kHz (Mod.)	145kHz	Set generator frequency to 145kHz with L6 (L.W. oscillator coil).
L.W. Tracking	Load resistance	16	310kHz (Mod.)	310kHz	Set generator frequency to 310kHz with TC-3 (Trimmer condenser).
		17	Repeat Steps 15 and 16 two or three times to adjust f. cover		
		18	180kHz (Mod.)	180kHz	Adjust Lf9 (Bar antenna) to obtain maximum sensitivity.
		19	280kHz (Mod.)	280kHz	Adjust TC-7 (Trimmer condenser) so to obtain maximum sensitivity.
		20	Repeat Steps 18 and 19 two or three times to obtain maximum sensitivity.		

### F.M. Alignment

<i>Adjustment</i>	<i>Equipment</i>	<i>Step No.</i>	<i>Generator Frequency</i>	<i>Tuning</i>	<i>Adjust</i>
I.F.	F.M. Signal generator	1	10.7MHz (Mod.)		F.M. I.F.T.-1, 2, 3, 4, 5 adjust for maximum gain I.F.T.-4, 5 adjust for symmetric 'S' curve (marker should appear in the middle of 'S' curve).
F.M. Band	F.M. Sweep/ marker generator	2	Repeat Steps to obtain Maximum Output.		
	Oscilloscope	3	87.25MHz (Mod.)	87.25MHz	Set frequency to 87.25MHz with L4 (F.M. oscillator coil).
F.M. Tracking	V.T.V.M.	4	109MHz (Mod.)	109MHz	Set frequency to 109MHz with TC-2 (Trimmer condenser).
	Dummy antenna	5	Repeat Steps 3 and 4 two or three times to adjust f. cover.		
	Load resistance	6	90MHz (Mod.)	90MHz	Adjust L-2 (F.M. R.F. coil) to obtain maximum sensitivity.
		7	106MHz (Mod.)	106MHz	Adjust TC-1 (Trimmer, condenser) to obtain maximum sensitivity.
		8	Repeat Steps 6 and 7 two or three times to obtain maximum sensitivity.		