Realistic TRC-52 Service Manual

REALISTIC®

Service Manual

21-142

TRC-52

CB TRANSCEIVER

Catalog Number 21-142

CUSTOM MANUFACTURED FOR RADIO SHACK A TANDY CORPORATION COMPANY

TABLE CONTENTS

1. SPECIFICATIONS

GENERAL SPECIFICATIONS

Transmitter	Crystal-controlled synthesizer, amplitude modulation.
Receiver	Crystal-controlled dual-conversion super heterodyne system.
Communicating frequencies	26.965 MHz to 27.255 MHz (all 23 channels)
Operating voltage	11—16 V DC (positive **or** negative ground)
Temperature and Humidity Range	−20°C to +60°C and 10% to 90%
Transmitter/Receiver switching	Electronic (diode switching)

STANDARD TEST CONDITIONS

Battery supply voltage	13.8 V DC
Modulation	1000 Hz, 30%
Audio output power	500 mW
Audio output load	8 ohm
Antenna impedance	50 ohm (non-inductive load)
Ambient conditions	
Temperature	25°C ±5°C
Humidity	50% to 70%

TRANSMITTER SPECIFICATIONS

		NOMINAL	LIMIT
RF output power	:	4 W	2.7—4.0 W
Spurious ratio	:	55 dB	50 dB
Frequency tolerance	:		±0.005 %
Microphone input sensitivity (1 kHz, 50% modulation)	:	1 mV	2 mV—5 mV
Current drain at no modulation	:	900 mA	Less than 950 mA
Current drain at 80% modulation	:	1.2 A	1.5 A max

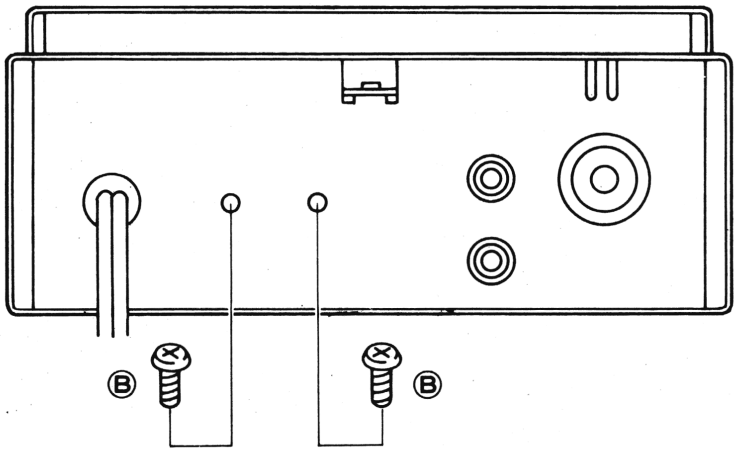
RECEIVER SPECIFICATIONS (1 μV = 0 dB, ANL: OUT)

		NOMINAL	LIMIT
Maximum sensitivity	:	0.5 μV	0.25 — 1 μV
Sensitivity at 10 dB S/N	:	0.5 μV	1.0 μV
Image rejection ratio (f_o —910 kHz)	:	35 dB	25 dB
1st I.F. rejection ratio (11.275 MHz)	:	40 dB	30 dB
2nd I.F. rejection ratio (455 kHz)	:	100 dB	80 dB
Spurious rejection ratio	:	40 dB	25 dB
RF GAIN control ratio (Max. control range)	:	40 dB	30 — 50 dB
Squelch sensitivity at threshold	:	1 μV	2 μV
Squelch sensitivity at tight point	:	300 μV	125 — 2000 μV
A.G.C. figure of merit			
(RF input 50 mV, AF 10 dB down)	:	90 dB	70 dB
I.F. bandwidth	:	7 kHz	5 — 9 kHz
Adjacent channel selectivity	:	45 dB	30 dB
Cross modulation	:	45 dB	35 dB
Audio output power (RF input 1 mV)			
at maximum power	:	4.5 W	3.0 W
at 10% distortion	:	3.0 W	2.5 W
Audio distortion (RF input 1 mV)			
AF output 0.5 W	:	5.0%	7.0%
Audio fidelity (RF input 1 mV)			
1 kHz 0 dB reference at 300 Hz	:	—6.0 dB	—10 dB
at 2.0 kHz	:	—6.0 dB	—10 dB
S-meter sensitivity (S-9)	:	100 μV	50 — 300 μV
Current drain at no signal	:	320 mA	350 mA maximum
Current drain at maximum output	:	1.0 A	1.3 A
Hum & Noise (RF input 1 mV) un-squelched	:	45 dB	40 dB

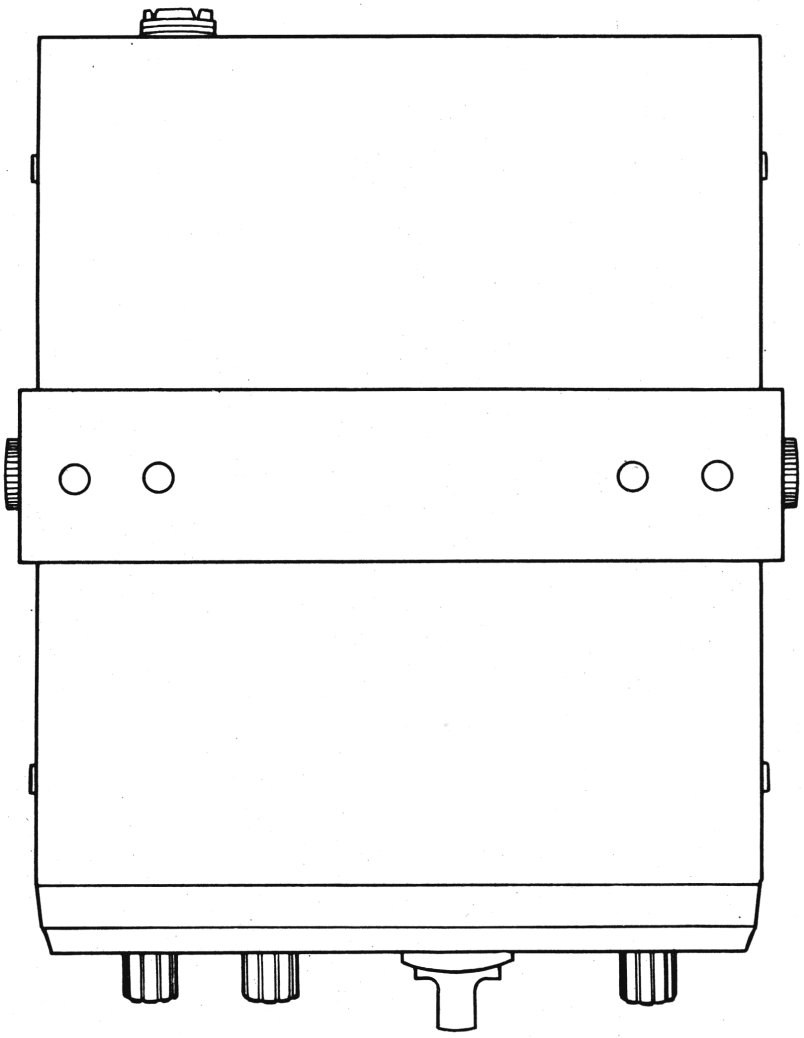
PA SPECIFICATIONS

Maximum output power (AF input 1 kHz, 10 mV)	:	4.5 W	3 W
10% distortion power (AF input 1 kHz, 10 mV)	:	3 W	2.5 W

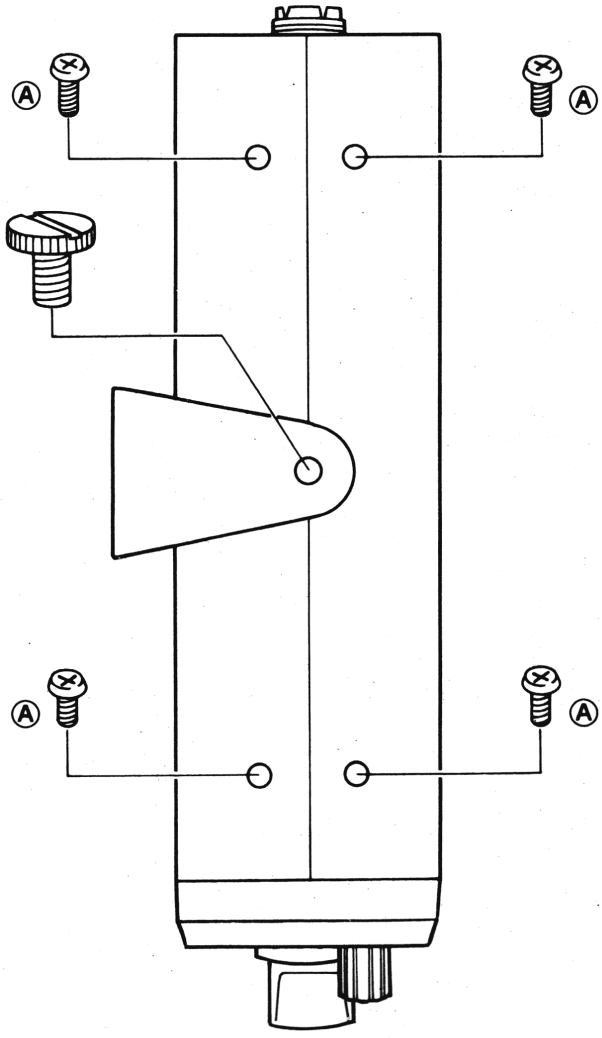
2. DISASSEMBLY INSTRUCTIONS



REAR VIEW



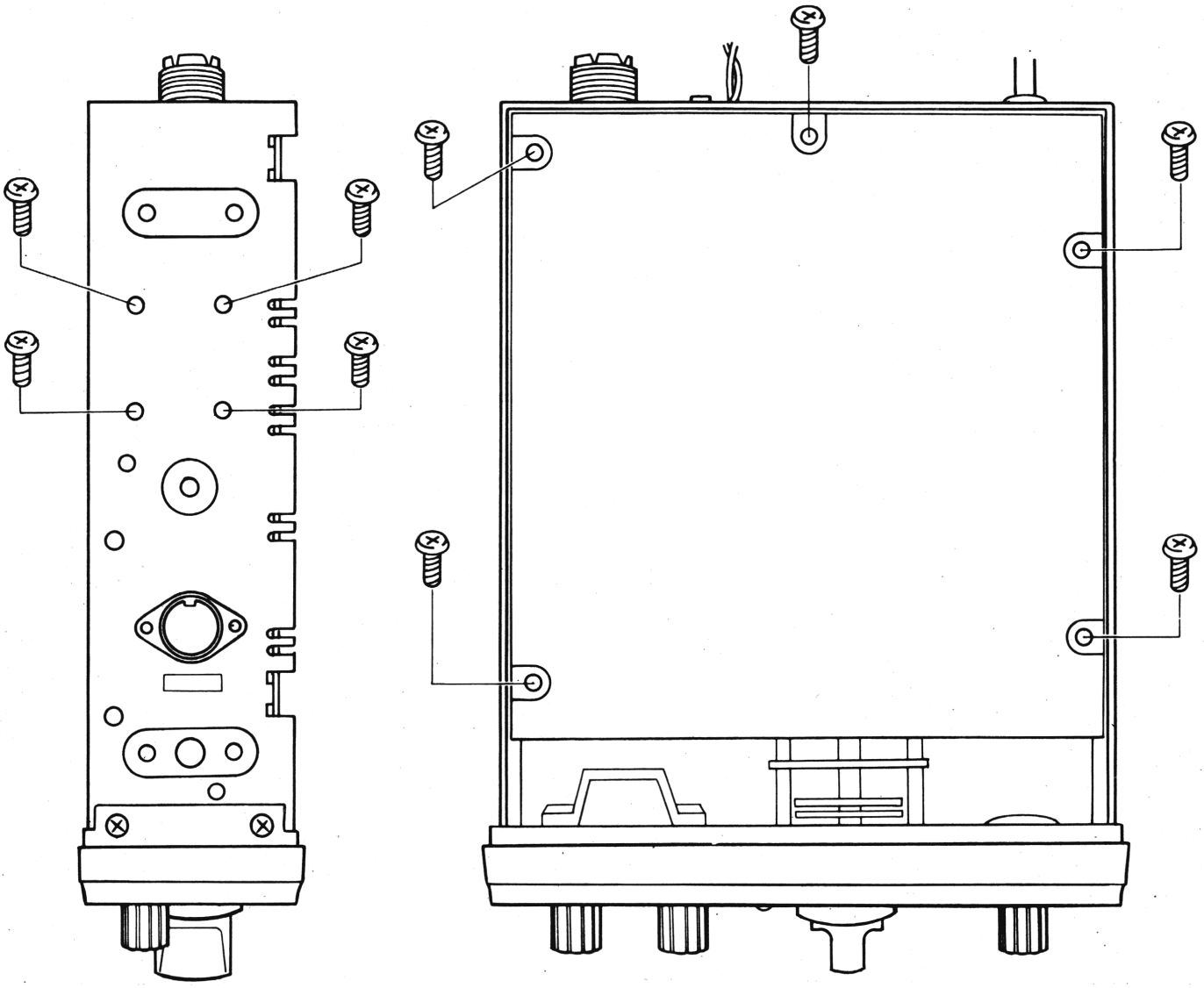
TOP VIEW



SIDE VIEW

1. Remove 2 mounting bracket screws.
2. Remove 4 screws Ⓐ each from the sides of top and bottom covers.
3. Remove 2 screws Ⓑ from rear panel.

2. DISASSEMBLY INSTRUCTIONS



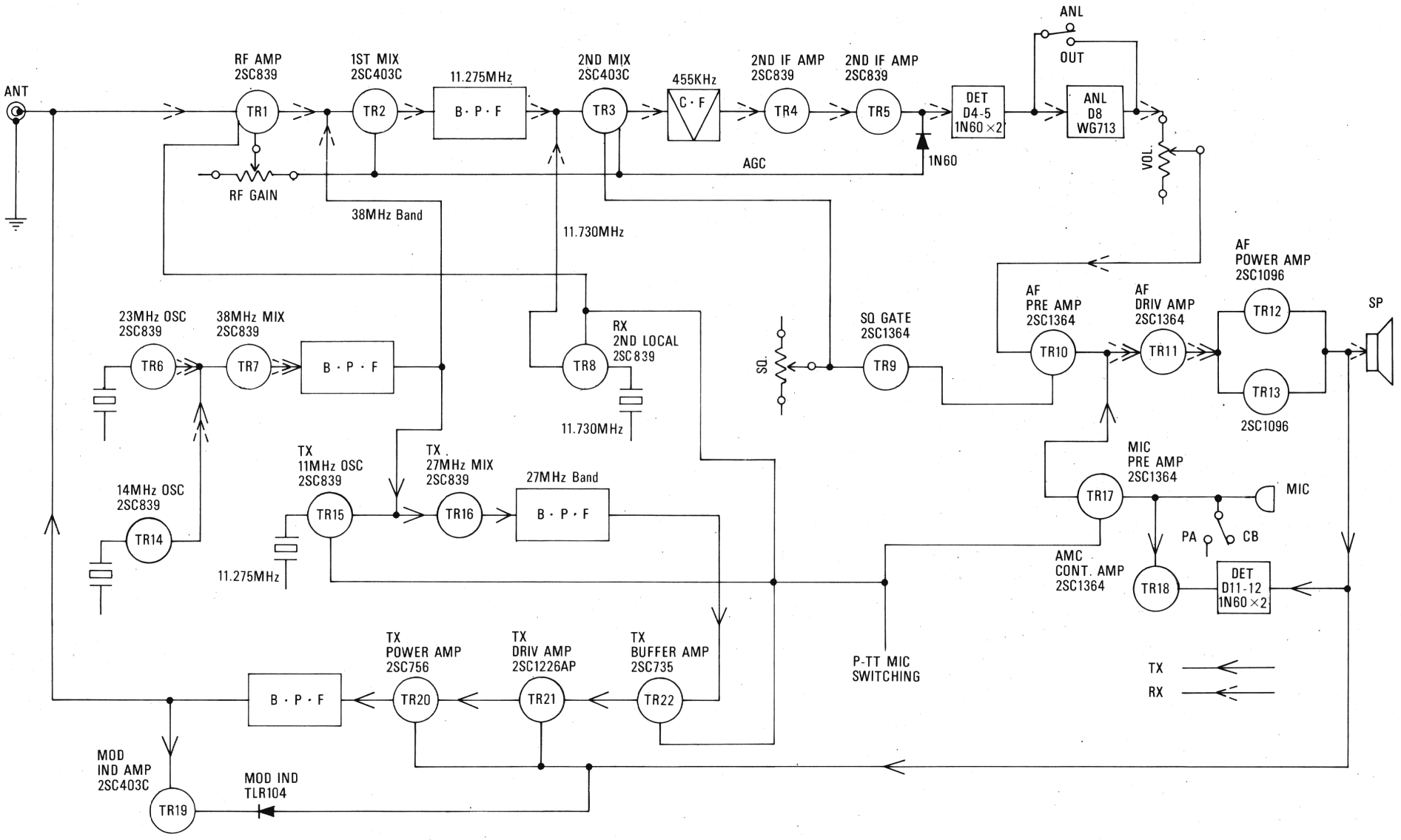
SIDE VIEW

TOP VIEW

PRINTED CIRCUIT BOARD REMOVAL

1. Remove 4 screws holding heat sink to the side of the unit.
2. Remove 2 screws holding heat sink to the rear of the unit.
3. Remove 5 screws from Printed Circuit Board.

3. BLOCK DIAGRAM



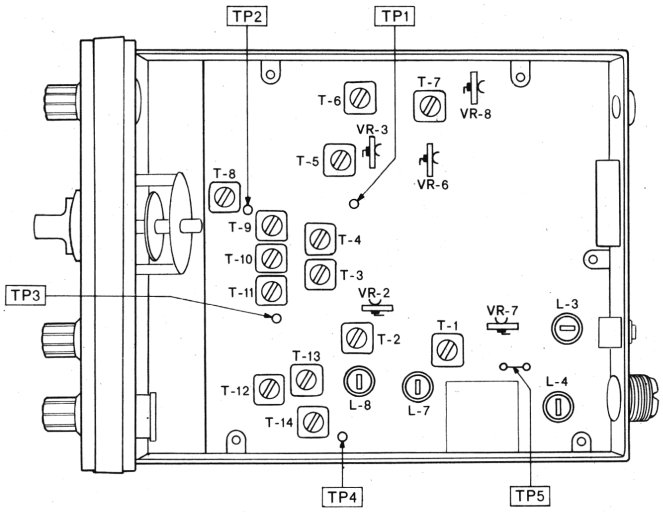
4. ALIGNMENT INSTRUCTIONS

TRANSMITTER ALIGNMENT

1. Test Equipment Required:

a. Vacuum tube volt meter.
b. RF output power meter.
c. 50 ohm load (non-inductive).
d. RF attenuator.
e. Frequency counter.
f . DC am-meter.
g. Field strength meter.
h. Oscilloscope.
i . Audio generator
j . DC power supply. (13.8 volt/2 amp.)

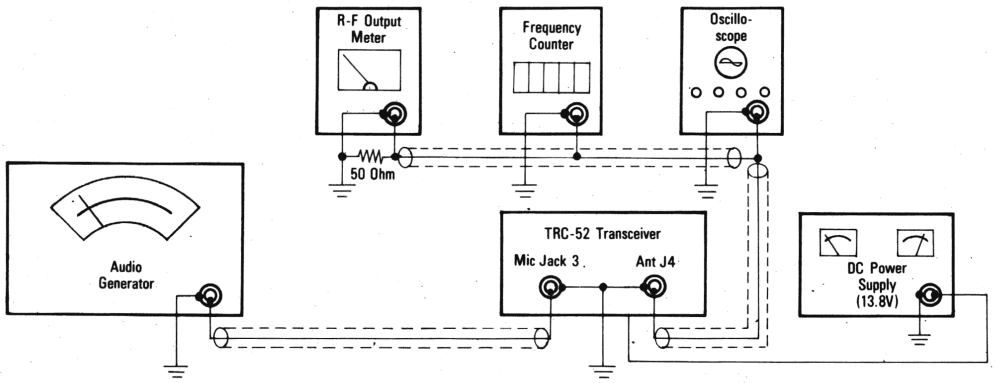
CHASSIS LAYOUT-ALIGNMENT POINTS



2. Alignment Procedure:

STEP	PRESET TO	CONNECT	ADJUST	ADJUST FOR
1.	TX Mode. No modulation. Channel: 23	VTVM with RF Probe to secondary of T-8 (TP-2)	T-8	Adjust for maximum oscillation output. Then carefully adjust clockwise till output drops 10%. (23 MHz oscillation alignment)
2.	TX Mode. No modulation. Channel: 13	VTVM to secondary of T-11 (TP-3)	T-9 T-10 T-11	Adjust for maximum reading on VTVM. (38 MHz mixer output alignment)
3.	Same as Step 2.	VTVM to secondary of T-14 (TP-4)	T-12 T-13 T-14	Adjust for maximum reading on VTVM. (27 MHz filter alignment) Use Frequency Counter to be sure adjustment is made for 27 MHz.
4.	Same as Step 2.	RF output power meter to antenna jack (J-4)	L-8 L-7 L-4	Adjust for maximum reading on power meter.
5.	Same as Step 2.	RF output power meter to antenna jack and DC ampere meter in series at TP-5	L-4	Adjust L-4 to obtain prescribed input power.
6.	Same as Step 2.	Field strength meter to antenna through 50 ohm load and RF attenuator.	L-3	Adjust for the minimum output at 54 MHz.
7.	TX Mode. No modulation.	Frequency counter to antenna through 50 ohm load and attenuator.		Check frequency of all channels.
8.	Same as Step 2.	Same as Step 2.	VR-7	Adjust so that the pointer needle of the meter on the unit rests between white and red line on the meter scale.
9.	Same as Step 2.	Oscilloscope with 50 ohm load to antenna and AF generator to pin 4 of microphone jack (J-3)	VR-8	Adjust for 80% modulation with 10 mV 1 kHz output from AF generator.

TRANSMITTER TEST EQUIPMENT SETUP DIAGRAM



RECEIVER ALIGNMENT

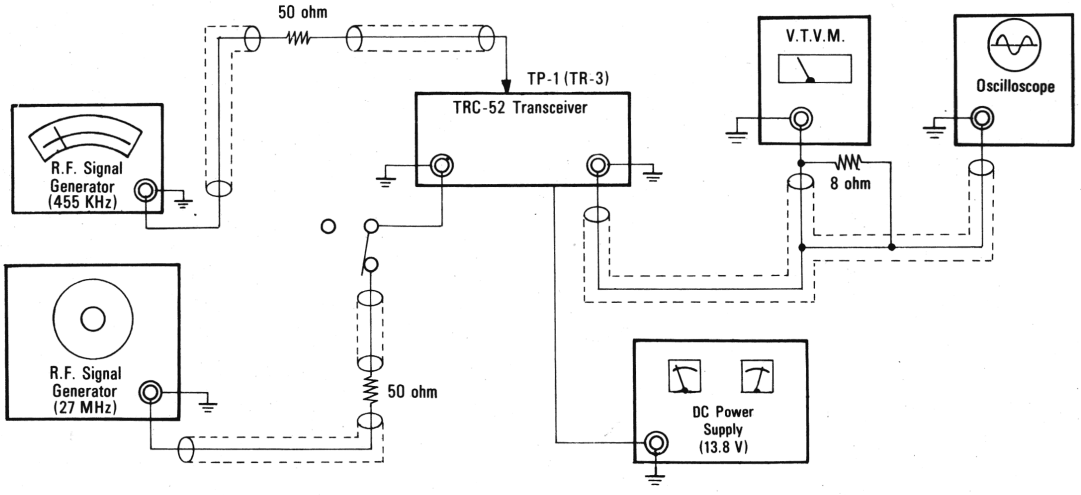
1. Test Equipment Required:

a. Signal generator (455 KHz and 27 MHz band, 50 ohm output impedance, 1,000 Hz, 30% modulation). Keep generator output as low as possible and still obtain a usable output.
b. AF output meter.
c. Oscilloscope.
d. 8 ohm dummy load.
e. DC power supply (13.8 volt 2 amp.)

2. Alignment Procedure

STEP	CONNECT SG.	PRESET TO	CONNECT OUTPUT METER	ADJUST	ADJUST FOR
1.	To TP3 (base of TR-3) thru 0.01 uF capacitor Freq: 455 kHz	ANL: OUT VOL: Max. SQ: Min. RF GAIN: Max. PA/CB: CB	To EXT. SPKR jack (J-2)	T-5 T-6 T-7	Adjust for maximum reading on AF output meter
2.	To antenna connector J-4. Freq: 27.115 MHz	SQL: Min. ANL: OUT VOL: Max. RF GAIN: Max. PA/CB: CB Channel: 13	Same as Step 1.	T-1 T-2 T-3 T-4	Adjust for maximum reading on AF output meter
3.	Same as Step 2. Input = 0.5 μV	Same as Step 2.	Same as Step 2.	VR-3	Adjust for 0.5 Watts AF output power (8 ohm load).
4.	Same as Step 2. Input = 100 μV (S meter adjustment)	Same as Step 2.	Same as Step 2.	VR-6	Adjust for S-9 reading on S-meter
5.	Same as Step 2. Input = 300 μV (Squelch adjustment)	Same as Step 2. Squelch: Max. Volume: Max.	Same as Step 2.	VR-2	Adjust for 2V AF output

RECEIVER TEST EQUIPMENT SETUP DIAGRAM



5. CRYSTALS & FREQUENCIES USED TO FUNCTION ON EACH CHANNEL

CH	Frequency	Master Osc. 1	Master Osc. II	Receive Osc.	TransmitsOsc.
1	26.965 MHz	14.950 MHz	23.290 MHz	11.730 MHz	11.275 MHz
2	26.975	14.960	23.290	11.730	11.275
3	26.985	14.970	23.290	11.730	11.275
4	27.005	14.990	23.290	11.730	11.275
5	27.015	14.950	23.350	11.730	11.275
6	27.025	14.960	23.350	11.730	11.275
7	27.035	14.970	23.350	11.730	11.275
8	27.055	14.990	23.350	11.730	11.275
9	27.065	14.950	23.390	11.730	11.275
10	27.075	14.960	23.390	11.730	11.275
11	27.085	14.970	23.390	11.730	11.275
12	27.105	14.990	23.390	11.730	11.275
13	27.115	14.950	23.450	11.730	11.275
14	27.125	14.960	23.450	11.730	11.275
15	27.135	14.970	23.450	11.730	11.275
16	27.155	14.990	23.450	11.730	11.275
17	27.165	14.950	23.490	11.730	11.275
18	27.175	14.960	23.490	11.730	11.275
19	27.185	14.970	23.490	11.730	11.275
20	27.205	14.990	23.490	11.730	11.275
21	27.215	14.950	23.540	11.730	11.275
22	27.225	14.960	23.540	11.730	11.275
23	27.255	14.990	23.540	11.730	11.275

6. TROUBLE SHOOTING HINTS

UNIT WILL NOT TURN ON

1. Defective power switch.
2. Fuse blown.
3. Broken DC power cable.
4. Poor solder connection or other open connection in power circuit.

NO RECEIVE SOUND

1. Defective external speaker jack.
2. Poor contact on microphone connector.
3. Defective push switch on microphone.
4. Defective internal speaker.
5. Defective semiconductor in RX circuit.

NO NOISE

1. Apply audio signal TR-10 base. (signal inject/trace).
2. Measure transistor voltages in all audio stages and receiver section.
   Compare with voltages noted on the schematic.
3. Improper local oscillator adjustment or main oscillator.

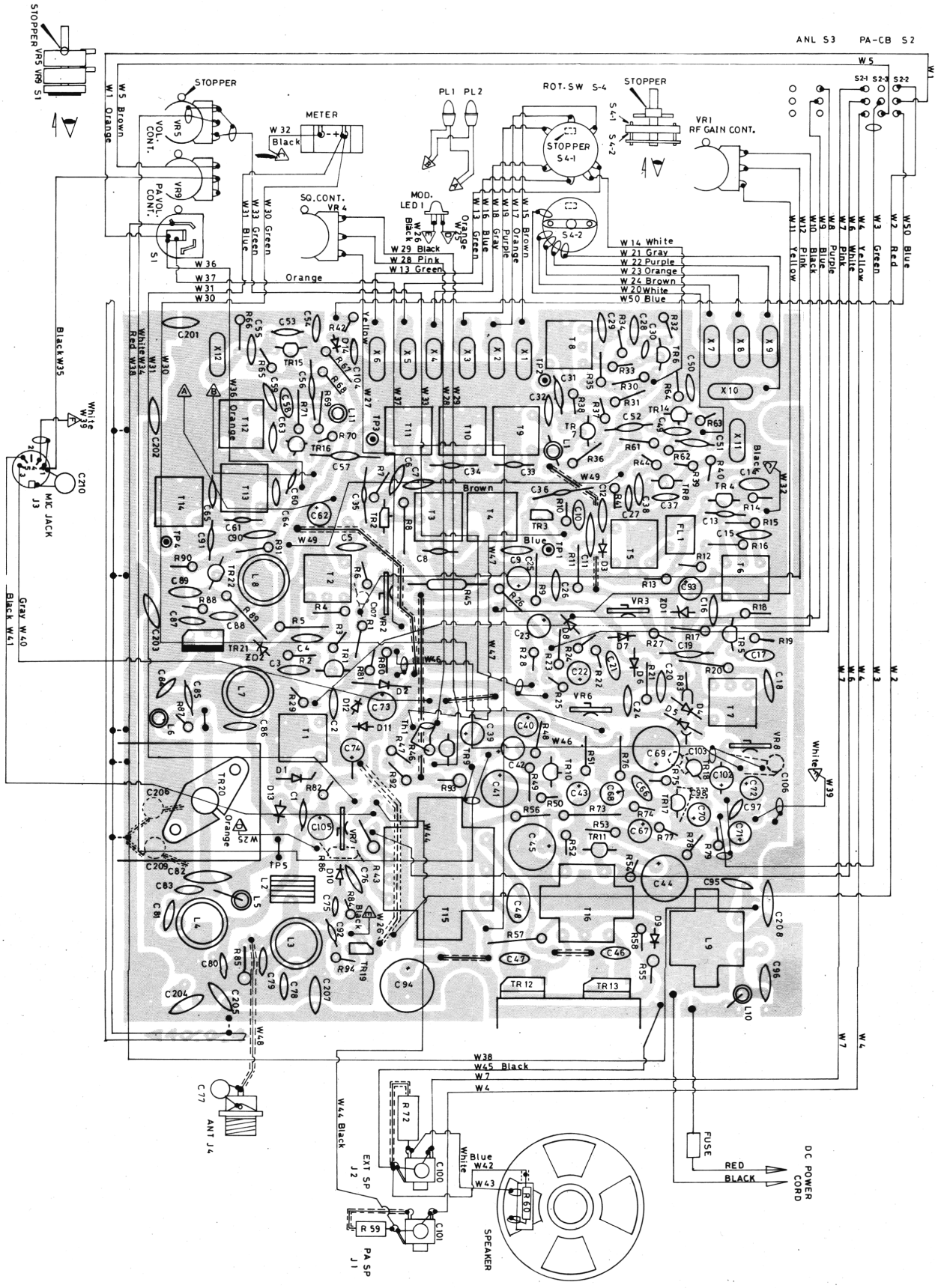
NO TRANSMISSION

1. Defective microphone connector.
2. Defective push switch on microphone.
3. Improper adjustment of main oscillator or local oscillator.
4. If you have checked all channels and obtain no RF output, check crystals and/or signal trace through transmitter circuit.
5. Defect in power supply.
6. Defective antenna connector.

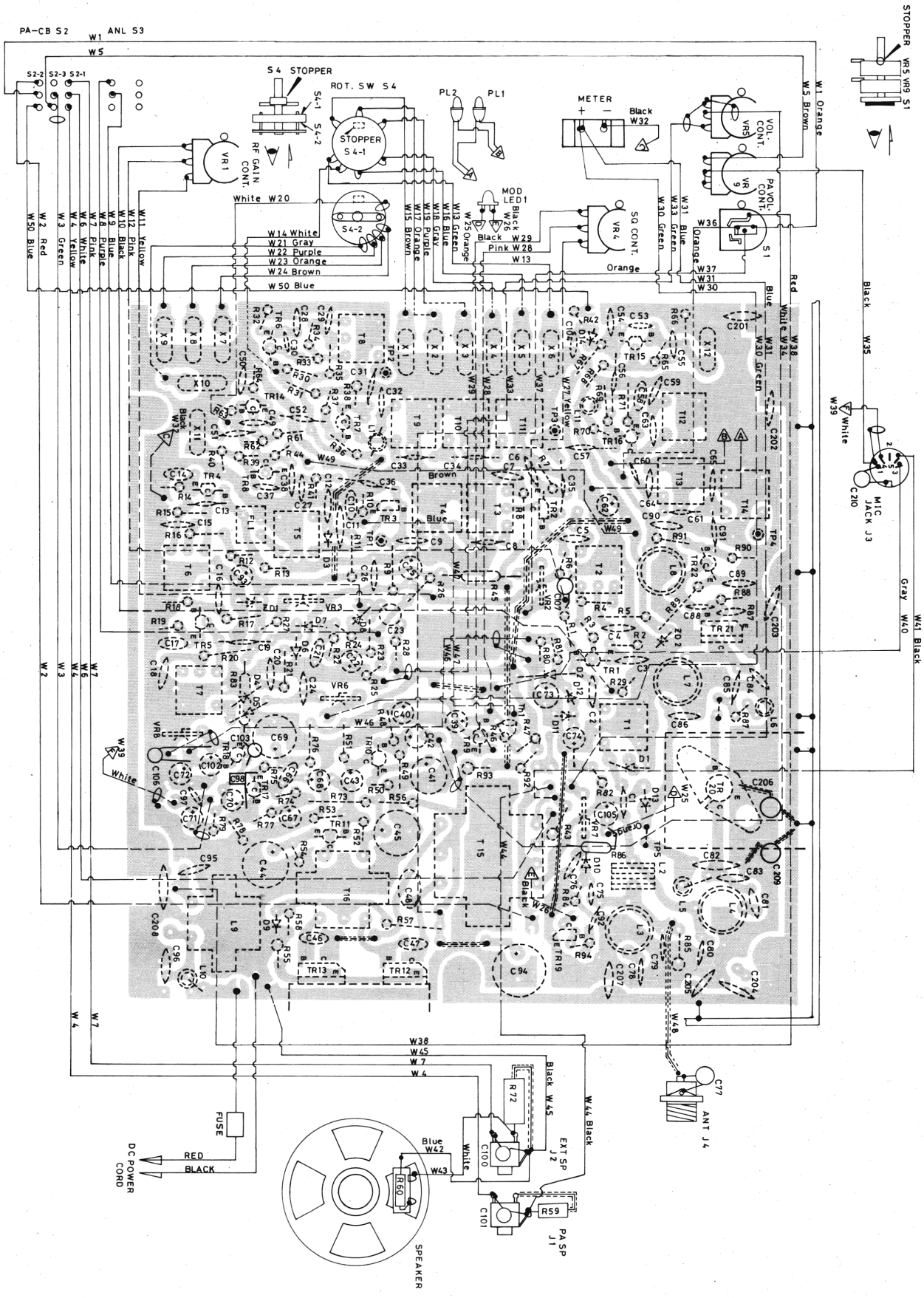
NO MODULATION

1. Defective microphone.
2. Poor audio output/Defective modulator.
3. Inoperative microphone amplifier.
4. Defective microphone connector.
5. Apply audio signal to pin No. 4 of microphone connector and trace to defective stage.

7. PRINTED CIRCUIT BOARD (TOP VIEW)



8. PRINTED CIRCUIT BOARD (BOTTOM VIEW)



9. TRC-52 (Cat. No. 21-142) PARTS LIST

SYMBOL NO.	DESCRIPTION	RS. PART NO.	Mfgrs PART NO.
	CAPACITORS		
C- 1	Ceramic Disc 33 pF 50V		
C- 2	Ceramic Disc 0.01 μF 25V		
C- 3	Ceramic Disc 0.01 μF 25V		
C- 4	Ceramic Disc. 0.022 μF 25V		
C- 5	Ceramic Disc 0.01 μF 25V		
C- 6	Ceramic Disc 0.01 μF 25V		
C- 7	Ceramic Disc 0.022 μF 25V		
C- 8	Ceramic Disc 1 pF 50V		
C- 9	Ceramic Disc 0.01 μF 25V		
C-10	Mylar 0.039 μF 50V		
C-11	Ceramic Disc 500 pF 50V		
C-12	Ceramic Disc 0.039 μF 25V		
C-13	Ceramic Disc 4 pF 50V		
C-14	Mylar 0.039 μF 50V		
C-15	Ceramic Disc 0.039 μF 25V		
C-16	Ceramic Disc 0.01 μF 25V		
C-17	Mylar 0.039 μF 50V		
C-18	Ceramic Disc 0.039 μF 25V		
C-19	Ceramic Disc 56 pF 50V		
C-20	Ceramic Disc 0.01 μF 25V		
C-21	Mylar 0.0047 μF 50V		
C-22	Electrolytic 0.47 μF 50V		
C-23	Electrolytic 0.47 μF 50V		
C-24	Ceramic Disc 0.01 μF 25V		
C-25	Electrolytic 10 μF 16V		
C-26	Ceramic Disc 0.01 μF 25V		
C-27	Ceramic Disc 220 pF 50V		
C-28	Ceramic Disc 100 pF 50V		
C-29	Ceramic Disc 0.01 μF 25V		
C-30	Ceramic Disc 5 pF 50V		
C-31	Ceramic Disc 0.01 μF 25V		
C-32	Ceramic Disc 0.01 μF 25V		
C-33	Ceramic Disc 2 pF 50V		
C-34	Ceramic Disc 2 pF 50V		
C-35	Ceramic Disc 3 pF 50V		
C-36	Ceramic Disc 10 pF 50V		
C-37	Ceramic Disc 470 pF 50V		
C-38	Ceramic Disc. 0.01 μF 25V		
C-39	Electrolytic 10 μF 16V		
C-40	Electrolytic 1 μF 50V		
C-41	Electrolytic 47 μF 16V		
C-42	Electrolytic 0.47 μF 50V		
C-43	Electrolytic 0.47 μF 50V		
C-44	Electrolytic 100 μF 16V		
C-45	Electrolytic 100 μF 16V		
C-46	Mylar 0.033 μF 50V		
C-47	Mylar 0.033 μF 50V		
C-48	Mylar 0.1 μF 50V		
C-49	Ceramic Disc 470 pF 50V		
C-50	Ceramic Disc 220 pF 50V		
C-51	Ceramic Disc 0.01 μF 25V		
C-52	Ceramic Disc 47 pF 50V		
C-53	Ceramic Disc 470 pF 50V		
C-54	Ceramic Disc 220 pF 50V		
C-55	Ceramic Disc 0.01 μF 25V		
C-56	Ceramic Disc 47 pF 50V		
C-57	Ceramic Disc 120 pF 50V		
C-58	Mylar 0.0047 μF 50V		
C-59	Ceramic Disc 0.01 μF 25V		

9. TRC-52 (Cat. No.21-142) PARTS LIST (Continued)

SYMBOL NO.	DESCRIPTION			RS. PART NO.	Mfgrs PART NO.
C-60	Ceramic Disc	3 pF	50V		
C-61	Ceramic Disc	4 pF	50V		
C-62	Electrolytic	10 μF	16V		
C-63	Ceramic Disc	100 pF	50V		
C-64	Ceramic Disc	150 pF	50V		
C-65	Ceramic Disc	100 pF	50V		
C-66	Mylar	0.0047 μF	50V		
C-67	Electrolytic	10 μF	16V		
C-68	Electrolytic	1 μF	50V		
C-69	Electrolytic	100 μF	16V		
C-70	Electrolytic	4.7 μF	25V		
C-71	Electrolytic	4.7 μF	25V		
C-72	Electrolytic	33 μF	16V		
C-73	Electrolytic	22 μF	16V		
C-74	Electrolytic	1 μF	50V		
C-75	Ceramic Disc	3 pF	50V		
C-76	Ceramic Disc	0.039 μF	25V		
C-77	Ceramic Disc	120 pF	50V		
C-78	Ceramic Disc	47 pF	50V		
C-79	Ceramic Disc	27 pF	50V		
C-80	Ceramic Disc	220 pF	50V		
C-81	Ceramic Disc	0.01 μF	26V		
C-82	Ceramic Disc	0.1 μF	25V		
C-83	Ceramic Disc	33 pF	50V		
C-84	Ceramic Disc	100 pF	50V		
C-85	Ceramic Disc	270 pF	50V		
C-86	Ceramic Disc	0.039 μF	25V		
C-87	Ceramic Disc	47 pF	50V		
C-88	Ceramic Disc	150 pF	50V		
C-89	Ceramic Disc	0.01 μF	25V		
C-90	Ceramic Disc	0.039 μF	25V		
C-91	Ceramic Disc	47 pF	50V		
C-92	Ceramic Disc	2 pF	50V		
C-93	Electrolytic	10 μF	16V		
C-94	Electrolytic	470 μF	16V		
C-95	Ceramic Disc	0.039 μF	25V		
C-96	Ceramic Disc	0.039 μF	25V		
C-97	Ceramic Disc	0.01 μF	25V		
C-98	Mylar	0.01 μF	50V		
C-100	Ceramic Disc	0.01 μF	25V		
C-101	Ceramic Disc	0.01 μF	25V		
C-102	Electrolytic	10 μF	16V		
C-103	Ceramic Disc	82 pF	50V		
C-104	Ceramic Disc	0.01 μF	25V		
C-105	Electrolytic	4.7 μF	25V		
C-106	Ceramic Disc	150 pF	50V		
C-107	Ceramic Disc	0.01 μF	25V		
C-201	Ceramic Disc	0.039 μF	25V		
C-202	Ceramic Disc	0.039 μF	25V		
C-203	Ceramic Disc	0.039 μF	25V		
C-204	Ceramic Disc	0.039 μF	25V		
C-205	Ceramic Disc	0.039 μF	25V		
C-206	Ceramic Disc	0.039 μF	25V		
C-207	Ceramic Disc	0.039 μF	25V		
C-208	Ceramic Disc	0.1 μF	25V		
C-209	Ceramic Disc	0.039 μF	25V		
C-210	Ceramic Disc	0.01 μF	25V		
RESISTORS					
R- 1	Carbon Film	8.2K	ohm ¼W		
R- 2	Carbon Film	390	ohm ¼W		
R- 3	Carbon Film	56	ohm ¼W		
R- 4	Carbon Film	10K	ohm ¼W		

9. TRC-52 (Cat. No.21-142) PARTS LIST (Continued)

SYMBOL NO.	DESCRIPTION				RS. PART NO.	Mgrsf PART NO.
R- 5	Carbon Film	100	ohm	¼W		
R- 6	Carbon Film	120K	ohm	¼W		
R- 7	Carbon Film	1K	ohm	¼W		
R- 8	Carbon Film	150	ohm	¼W		
R- 9	Carbon Film	4.7K	ohm	¼W		
R-10	Carbon Film	1.5K	ohm	¼W		
R-11	Carbon Film	150	ohm	¼W		
R-12	Carbon Film	18K	ohm	¼W		
R-13	Carbon Film	2.2K	ohm	¼W		
R-14	Carbon Film	1K	ohm	¼W		
R-15	Carbon Film	39K	ohm	¼W		
R-16	Carbon Film	150	ohm	¼W		
R-17	Carbon Film	22K	ohm	¼W		
R-18	Carbon Film	5.6K	ohm	¼W		
R-19	Carbon Film	680	ohm	¼W		
R-20	Carbon Film	150	ohm	¼W		
R-21	Carbon Film	6.8K	ohm	¼W		
R-22	Carbon Film	100K	ohm	¼W		
R-23	Carbon Film	100K	ohm	¼W		
R-24	Carbon Film	39K	ohm	¼W		
R-25	Carbon Film	33K	ohm	¼W		
R-26	Carbon Film	470K	ohm	¼W		
R-27	Carbon Film	22K	ohm	¼W		
R-28	Carbon Film	100K	ohm	¼W		
R-29	Carbon Film	33K	ohm	¼W		
R-30	Carbon Film	27K	ohm	¼W		
R-31	Carbon Film	5.6K	ohm	¼W		
R-32	Carbon Film	100	ohm	¼W		
R-33	Carbon Film	10	ohm	¼W		
R-34	Carbon Film	1K	ohm	¼W		
R-35	Carbon Film	150	ohm	¼W		
R-36	Carbon Film	47K	ohm	¼W		
R-37	Carbon Film	10K	ohm	¼W		
R-38	Carbon Film	100	ohm	¼W		
R-39	Carbon Film	15K	ohm	¼W		
R-40	Carbon Film	5.6K	ohm	¼W		
R-41	Carbon Film	470	ohm	¼W		
R-42	Carbon Film	680	ohm	¼W		
R-43	Solid	120	ohm	½W		
R-44	Carbon Film	150	ohm	¼W		
R-45	Carbon Film	47K	ohm	¼W		
R-46	Carbon Film	3.9K	ohm	¼W		
R-47	Carbon Film	3.3K	ohm	¼W		
R-48	Carbon Film	22K	ohm	¼W		
R-49	Carbon Film	4.7K	ohm	¼W		
R-50	Carbon Film	1K	ohm	¼W		
R-51	Carbon Film	4.7K	ohm	¼W		
R-52	Carbon Film	22K	ohm	¼W		
R-53	Carbon Film	3.9K	ohm	¼W		
R-54	Carbon Film	100	ohm	¼W		
R-55	Metal Film	0.5	ohm	½W		
R-56	Carbon Film	150	ohm	¼W		
R-57	Carbon Film	1K	ohm	¼W		
R-58	Carbon Film	68	ohm	¼W		
R-59	Solid	47	ohm	¼W		
R-60	Metal Film	3.3	ohm	2W		
R-61	Carbon Film	150	ohm	¼W		
R-62	Carbon Film	22K	ohm	¼W		
R-63	Carbon Film	5.6K	ohm	¼W		
R-64	Carbon Film	220	ohm	¼W		
R-65	Carbon Film	15K	ohm	¼W		
R-66	Carbon Film	5.6K	ohm	¼W		
R-67	Carbon Film	220	ohm	¼W		
R-68	Carbon Film	150	ohm	¼W		
R-69	Carbon Film	10K	ohm	¼W		
R-70	Carbon Film	47K	ohm	¼W		

9. TRC-52 (Cat. No.21-142) PARTS LIST (Continued)

SYMBOL NO.	DESCRIPTION	RS. PART NO.	Mfgrs PART NO.
R-71	Carbon Film 150 ohm ¼W		
R-72	Metal Film 22 ohm 3W		
R-73	Carbon Film 330 ohm ¼W		
R-74	Carbon Film 3.3K ohm ¼W		
R-75	Carbon Film 82 ohm ¼W		
R-76	Carbon Film 1.5K ohm ¼W		
R-77	Carbon Film 33K ohm ¼W		
R-78	Carbon Film 6.8K ohm ¼W		
R-79	Carbon Film 1K ohm ¼W		
R-80	Carbon Film 1.5K ohm ¼W		
R-81	Carbon Film 18K ohm ¼W		
R-82	Carbon Film 1K ohm ¼W		
R-83	Carbon Film 3.9K ohm ¼W		
R-84	Carbon Film 220 ohm ¼W		
R-85	Solid 1.2K ohm ½W		
R-86	Carbon Film 680 ohm ¼W		
R-87	Carbon Film 68 ohm ¼W		
R-88	Carbon Film 470 ohm ¼W		
R-89	Carbon Film 82 ohm 1W		
R-90	Carbon Film 10K ohm ¼W		
R-91	Carbon Film 39K ohm ¼W		
R-92	Carbon Film 1K ohm ¼W		
R-93	Metal Film 82 ohm 1W		
R-94	Carbon Film 820 ohm ¼W		
	TRANSISTORS		
TR- 1	Transistor 2SC839H		
TR- 2	Transistor 2SC403 C-4		
TR- 3	Transistor 2SC403 C-4		
TR- 4	Transistor 2SC839H		
TR- 5	Transistor 2SC839H		
TR- 6	Transistor 2SC839H		
TR- 7	Transistor 2SC839H		
TR- 8	Transistor 2SC839H		
TR- 9	Transistor 2SC1364-6		
TR-10	Transistor 2SC1364-6		
TR-11	Transistor 2SC1364-6		
TR-12	Transistor 2SC1096-M		
TR-13	Transistor 2SC1096-M		
TR-14	Transistor 2SC839H		
TR-15	Transistor 2SC839F		
TR-16	Transistor 2SC839F		
TR-17	Transistor 2SC1364-6		
TR-18	Transistor 2SC1364-6		
TR-19	Transistor 2SC403 C-4		
TR-20	Transistor 2SC756-2-5		
TR-21	Transistor 2SC1226AP		
TR-22	Transistor 2SC735-0		
	DIODES		
D- 1	Diode WG-713		
D- 2	Diode WG-713		
D- 3	Diode WG-713		
D- 4	Diode IN-60		
D- 5	Diode IN-60		
D- 6	Diode IN-60		
D- 7	Diode IN-60		
D- 8	Diode WG-713		
D- 9	Varistor MV-1		
D-10	Diode IN-60		

9. TRC-52 (Cat. No.21-142) PARTS LIST (Continued)

SYMBOL NO.	DESCRIPTION		RS. PART NO.	Mfgrs PART NO.
D-11	Diode	IN-60		
D-12	Diode	IN-60		
D-13	Diode	SRIK-1		
D-14	Diode	WG-713		
LED-1	Diode	TLR-104		
ZD-1	Zener Diode	CZ-092		
ZD-2	Zener Diode	WZ-061		
TH-1	Thermisort	TD5-C320	T-1159	
	CRYSTALS			
X- 1	Crystal	23.290 MHz	CX-0066	
X- 2	Crystal	23.340 MHz	CX-0067	
X- 3	Crystal	23.390 MHz	CX-0068	
X- 4	Crystal	23.440 MHz	CX-0069	
X- 5	Crystal	23.490 MHz	CX-0070	
X- 6	Crystal	23.540 MHz	CX-0071	
X- 7	Crystal	14.950 MHz	CX-0072	
X- 8	Crystal	14.960 MHz	CX-0073	
X- 9	Crystal	14.970 MHz	CX-0074	
X-10	Crystal	14.990 MHz	CX-0075	
X-11	Crystal	11.730 MHz	CX-0076	
X-12	Crystal	11.275 MHz	CX-0077	
	TRANSFORMERS			
T- 1	LA-029 Coil, Antenna		CA-3272	
T- 2	LA-041 Coil, RF		CA-4571	
T- 3	LA-043 Coil, 1st IF		CA-7441	
T- 4	LA-019 Coil, 1st IF		CA-7442	
T- 5	LA-073 Coil, 2nd IF		CA-7443	
T- 6	LA-039 Coil, 2nd IF		CA-7444	
T- 7	LA-040 Coil, 2nd IF		CA-7445	
T- 8	LA-046 Coil, 23 MHz		CA-4572	
T- 9	LA-047 Coil, 38 MHz Filter		CA-3273	
T-10	LA-047 Coil, 38 MHz Filter		CA-3273	
T-11	LA-042 Coil, 38 MHz Filter		CA-3274	
T-12	LA-009 Coil, 27 MHz Filter		CA-3275	
T-13	LA-009 Coil, 27 MHz Filter		CA-3275	
T-14	LA-008 Coil, 27 MHz Filter		CA-3276	
T-15	TF-038 Audio Output/Modulation Transformer		TD-0125	
T-16	TF-011 Audio Interstage Transformer		TN-0078	
	INDUCTANCES			
L- 1	2R2 Micro Inductor			
L- 2	LE-005 Coil, Antenna Filter		CA-3277	
L- 3	LC-018 Coil, Antenna Trap		CA-3278	
L- 4	LC-019 Coil, Antenna Filter		CA-3279	
L- 5	LD-012 Coil, RF Choke		CA-2241	
L- 6	2R2 Micro Inductor		CA-3280	
L- 7	LC-017 Coil, Driver		CA-3281	
L- 8	LC-020 Coil, Buffer		CA-3282	
L- 9	TF-017 Choke Transformer		CB-2242	
L-10	LD-027 Coil, Power Choke		CC-2243	
L-11	2R2 Micro Inductor			
	VARIABLE RESISTORS			
VR1	RV-048 Variable Resistor 100K ohm B, RF Gain		P-1517	
VR2	Semi-Fixed Resistor 50K ohm		P-6262	
VR3	Semi-Fixed Resistor 30K ohm		P-6263	

9. TRC-52 (Cat. No.21-142) PARTS LIST (Continued)

SYMBOL NO.	DESCRIPTION	RS. PART NO.	Mfgrs PART NO.
VR-4	RV-071 Variable Resistor 50K ohm Squelch	P-1518	
VR5/9	RV-117 Variable Resistor 10K ohm A × 2 Volume	P-1519	
VR6	Semi-Fixed Resistor 20K ohm	P-6264	
VR7	Semi-Fixed Resistor 20K ohm	P-6265	
VR8	Semi-Fixed Resistor 500 ohm	P-6266	
	SWITCHES		
S1	RV-117 Power Switch (on VR5/9)	P-1520	
S2	SW-030 Slide Switch PA-CB	S-2258	
S3	SW-023 Slide Switch, ANL	S-2259	
S4	SW-062 Rotary Switch, Channel	S-1166	
	MISCELLANEOUS		
FL1	FL-003 Ceramic Filter, 455 KHz	C-0593	
	SP-003 Speaker, 8 ohm, 2W, 4 inch	S-4541	
	MT-018 Meter, 200 μA (Full scale)	M-0262	
	MT-020 Microphone	M-2246	
J1	ZY-007 Microphone hanger	M-3074	
J2	JK-001 PA Speaker Jack	J-0645	
J3	JK-001 External Speaker Jack	J-0646	
J4	JK-008 Microphone Connector	J-6302	
PL1	JK-002 Antenna Connector	J-6303	
PL2	Pilot Lamp 14V 50 mA Red	L-0564	
	Pilot Lamp 14V 50 mA Clear	L-0543	
	FS-001 In-line Fuse 2A	HF-1088	
	FH-001 In-line Fuse Holder	HF-1089	
	SK-001 Crystal Holder Socket	J-6006	
	DC Power Cord	W-1782	
	PC Board	X-4857	
	M2-02164 Chassis	Z-2212	
	M3-02763 Case, top	Z-2213	
	M3-02763 Case, Bottom	Z-2214	
	M3-00837 Mounting Bracket	MB-0119	
	M4-00238 Mounting Bracket Screw	HS-1831	
	M2-02761 Front Panel	Z-2215	
	M4-01727 Channel Selector Knob	K-1810	
	M4-01728 Control Knob	K-1811	
	M4-01957 Channel Number Disc	K-1812	
	M4-02764 FCC Plate	HB-3048	
	M4-00844 Heat Sink	HH-0144	
	M4-01956 Heat Sink	HH-0145	
	M4-02767 Meter Illumination Board	HB-3049	
	M4-00840 Channel Illumination Board	HB-3050	
	M4-01702 Rubber Washer	HW-0952	
	M4-00638 Rubber Washer	HW-0953	
	M4-01706 Rubber Brushing	HB-3051	
	M4-01961 Speaker Net	HB-3052	
	Binding Screw 3mmφ × 5mm	HS-1832	
	Binding Screw 3mmφ × 8mm	HS-1833	
	Tapping Screw 2mmφ × 4mm	HS-1834	
	Tapping Screw 3.5mmφ × 8mm	HS-1835	
	Tapping Screw 5mmφ × 10 mm	HS-1836	
	Pan Head Screw 3mmφ × 5mm	HS-1837	
	Pan Head Screw 3mmφ × 6mm	HS-1838	
	Flat Head Screw 3mmφ × 5mm	HS-1839	
	Flat Head Screw 2mmφ × 5mm	HS-1840	
	Nut 3mm	HN-0309	
	Flat Washer 3mm	HW-0953	
	Spring Washer 3mm	HW-0954	
	Washer 3.5mm	HW-0955	
	Washer 4mm	HW-0956	

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