



PHOTOFACT[®] with

CIRCUITRACE[®]

For Supplier Address See PHOTOFACT Index

NOTE

Repair or adjustment of transmitter circuits must be under supervision of a person with first-or second-class radiotelephone license.

(Refer to FCC Rules and Regulations Part 95, Subpart C & D.)

The frequency of the transmitter should be checked periodically with a secondary frequency standard to insure proper and legal operation.

Best results will be obtained when adjusting the final RF output circuit if the antenna normally used is connected and the chassis is as nearly in the cabinet as possible.

Connect either 50-ohm dummy load or the normally used antenna system.



MODEL TRC-427 (21-1534)

MANUFACTURER'S SPECIFICATIONS

RECEIVER: (ANL: OUT)

	UNIT	NOMINAL	LIMIT		UNIT	NOMINAL	LIMIT
Maximum Sensitivity	μ V	0.3	0.5	Desensitization (3 dB Desens.) at 100 μ V	dB	60	55
Sensitivity for 10 dB S/N	μ V	0.5	1	Audio Power Output			
AGC Figure of Merit 50 mV	dB	90	80	a. Maximum	W	5	4
Overload AGC 50 mV - 1 V	dB	+4	+6	b. 10% THD	W	4	3
			-2	Audio Frequency Response (-6 dB)			
Squelch Sensitivity at Threshold	μ V	0.5	1	a. Lower Freq. 450 Hz	dB	-6	-6 $\pm$ 3 dB
Squelch Sensitivity at Tight	μ V	1000	355 - 2820	b. Upper Freq. 2500 Hz	dB	-6	-6 $\pm$ 3 dB
Adjacent Channel Selectivity				THD at 500 mW Audio Output			
a. at $\pm$ 10 kHz	dB	70	60	a. 30% Mod (Input 1 mV)	%	2	4
Spurious Rejection Ratio	dB	60	50	b. 50% Mod	%	4	5
Spurious Response Attenuation				c. 80% Mod	%	6	8
a. 455/2 kHz	dB	60	50	Signal-to-Noise Ratio at 1000 μ V	dB	45	35
Image Rejection Ratio				RF Gain Control Range	dB	40	30
a. -910 kHz	dB	70	60	S-Meter Sensitivity at "S9"	μ V	100	50 - 200
IF Rejection Ratio				Oscillator Drop-out Voltage	V	7	10
a. 10.695 MHz	dB	70	60	Battery Drain			
b. 455 kHz	dB	110	90	a. at no signal	mA	250	600
Cross Modulation	dB	60	50	b. at Max. AF Output	mA	800	1500

REALISTIC MODEL TRC-427 (21-1534)

TRANSMITTER:

	UNIT	NOMINAL	LIMIT
Frequency Tolerance (25°C, 13.8V)	%	0.0005	0.003
RF Power Output	W	4 (Max.)	3.6 - 4.0
AMC Range 50% - 100% Mod.	dB	36	30
Modulation Frequency Response (-6 dB)			
a. Lower Frequency 450 Hz	dB	-6	-6 $\pm$ 3 dB
b. Upper Frequency 2500 Hz	dB	-6	-6 $\pm$ 3 dB
Microphone Sensitivity 1 kHz 50% Mod.	mV	1	2
Modulation Distortion at 1 kHz 80% Mod.	%	3	8
RF Power Output Uniformity Ch. to Ch.	W	0.2	0.5
Modulation Capability, Positive/Negative	%	95/95	80/85
RF Power Output at 12.0 V	W	2.7	2.2
Battery Drain			
a. at no Modulation	mA	950	1200
b. at 80% Modulation	mA	1550	2000
Superior Radiation	dB	70	60

Courtesy of the Manufacturer

HOWARD W. SAMS & CO., INC. Indianapolis, Indiana 46206

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ALIGNMENT INSTRUCTIONS

CAUTION: Use isolation transformer or observe polarity when connecting test equipment. Maintain line voltage at 120V AC. Allow a 15-minute warm-up period. Adjustments made with 13.8-volt DC input. Connect microphone.

Suggested Alignment Tools:	GC ELECTRONICS:
L1 thru L4, L16 thru L20	9440
L5, L6, L7	5000, 5009, 8276, 8728, 9089
L9, L12, L15	8728, 9304, 9089
VC1	5000, 8276, 9089

SYNTHESIZER ALIGNMENT

TEST EQUIPMENT	TRANSCIEVER	ADJUST	REMARKS
Input of frequency counter to TP6 (IC1 Pin 2).	Ch. 19	VC1	Adjust for 10.240MHz.
Input of DC meter to TP2 (Junction of R73 and R74).	Ch. 1	L17	Adjust for 1.50 volts. Check for approx. 2.25 volts on channel 40.
Input of oscilloscope to TP3 (L18 Secondary).	Ch. 19	L18	Adjust for maximum RF (300mV p-p typical). See Figure 1.
Input of frequency counter to TP3 (L18 Secondary).	Ch. 1		Check for 16.270MHz. Check all channels. See Truth Chart for correct frequencies.
Input of oscilloscope to TP4 (TR10 Base).	Ch. 19 XMT	L19,L20	Adjust for maximum RF (400mV p-p typical). See Figure 2.
Input of frequency counter to TP4 (TR10 Base).	Ch. 1 XMT		Check for 26.965MHz. If necessary readjust VC1 for correct frequency. Check all channels. See Truth Chart for correct frequencies.

RECEIVER ALIGNMENT

Connect an AC VTVM or AF wattmeter across speaker voice coil. Adjust volume control to obtain a suitable indication. Set generator output low enough to prevent AGC limiting. Preset controls as follows, unless otherwise noted: RF Gain Maximum, Squelch MINIMUM, Tone Max CW, CH. 9 Out, ANL Out, PA/MON/CB CB.

TEST EQUIPMENT	TRANSCIEVER	ADJUST	REMARKS
Output of signal generator to TP7 (TR3 Base). 455kHz, 1000Hz @ 30% modulation.	Ch. 19	L7,L6,L5	Adjust for maximum audio output.
Output of signal generator to antenna input. 27.185MHz,1000Hz @ 30% modulation.	Ch. 19	L4,L3,L2,L1	Adjust for maximum audio output. Readjust L5, L6 and L7 for maximum.

RECEIVER ADJUSTMENTS

Connect an AC VTVM or AF wattmeter across speaker voice coil.
Adjust volume control to obtain a suitable indication.
Preset controls as follows, unless otherwise noted: RF Gain Maximum, Squelch MINIMUM, Tone Max CW,
Ch. 9 Out, ANL Out, PA/MON/CB -CB.

TEST EQUIPMENT	TRANSCEIVER	ADJUST	REMARKS
Output of signal generator to antenna input. 27.185MHz, 1000Hz @ 30% modulation. Output .3uV.	Ch. 19 Volume Maximum	VR1	IF GAIN Adjust for 2.0 volts RMS (.5 watt) audio output.
Output of signal generator to antenna input. 27.185MHz, 1000Hz @ 30% modulation. Output 1000uV.	Ch. 19 Squelch Maximum	VR2	SQUELCH RANGE Adjust so that squelch just breaks.
Output of signal generator to antenna input. 27.185MHz, 1000Hz @ 30% modulation. Output 100uV.	Ch. 19	VR3	SIG METER Adjust for 9 on SIG scale of meter.

TRANSMITTER ALIGNMENT

Connect a 50-ohm, 25-watt dummy load to antenna connector.
NOTE: Be sure to check transmit frequency and power on all active channels after alignment of transmitter.
See page 4 for channel frequencies.

TEST EQUIPMENT	TRANSCEIVER	ADJUST	REMARKS
Input of RF wattmeter to antenna input.	Ch. 19	L16, L15	Adjust for maximum RF output.
Input of RF wattmeter to antenna input.	Ch. 19	L12	Adjust for 4.0 watts RF output maximum.
Input of spectrum analyzer or harmonic meter to antenna input.	Ch. 19	L9	Adjust for MINIMUM at 54MHz (2nd harmonic).

TRANSMITTER ADJUSTMENTS

Connect a 50-ohm, 25-watt dummy load to antenna connector.
NOTE: Be sure to check transmit frequency and power on all active channels after adjustment of transmitter.
See page 4 for channel frequencies.

TEST EQUIPMENT	TRANSCEIVER	ADJUST	REMARKS
Input of oscilloscope or modulation meter to antenna input. Inject a 1000Hz, 40mV audio signal at mic input.	Ch. 19	VR5	AMC Adjust for 95% modulation maximum. See Figure 3.
Input of RF wattmeter to antenna input.	Ch. 19	VR4	TX PWR METER AT 4.0 watts RF output, adjust for 4 on TX PWR scale of meter.

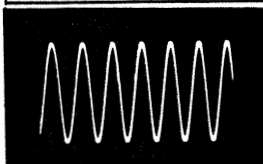


FIGURE 1

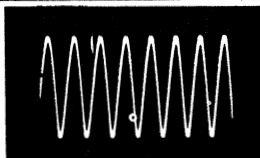


FIGURE 2

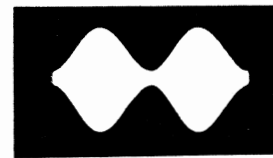
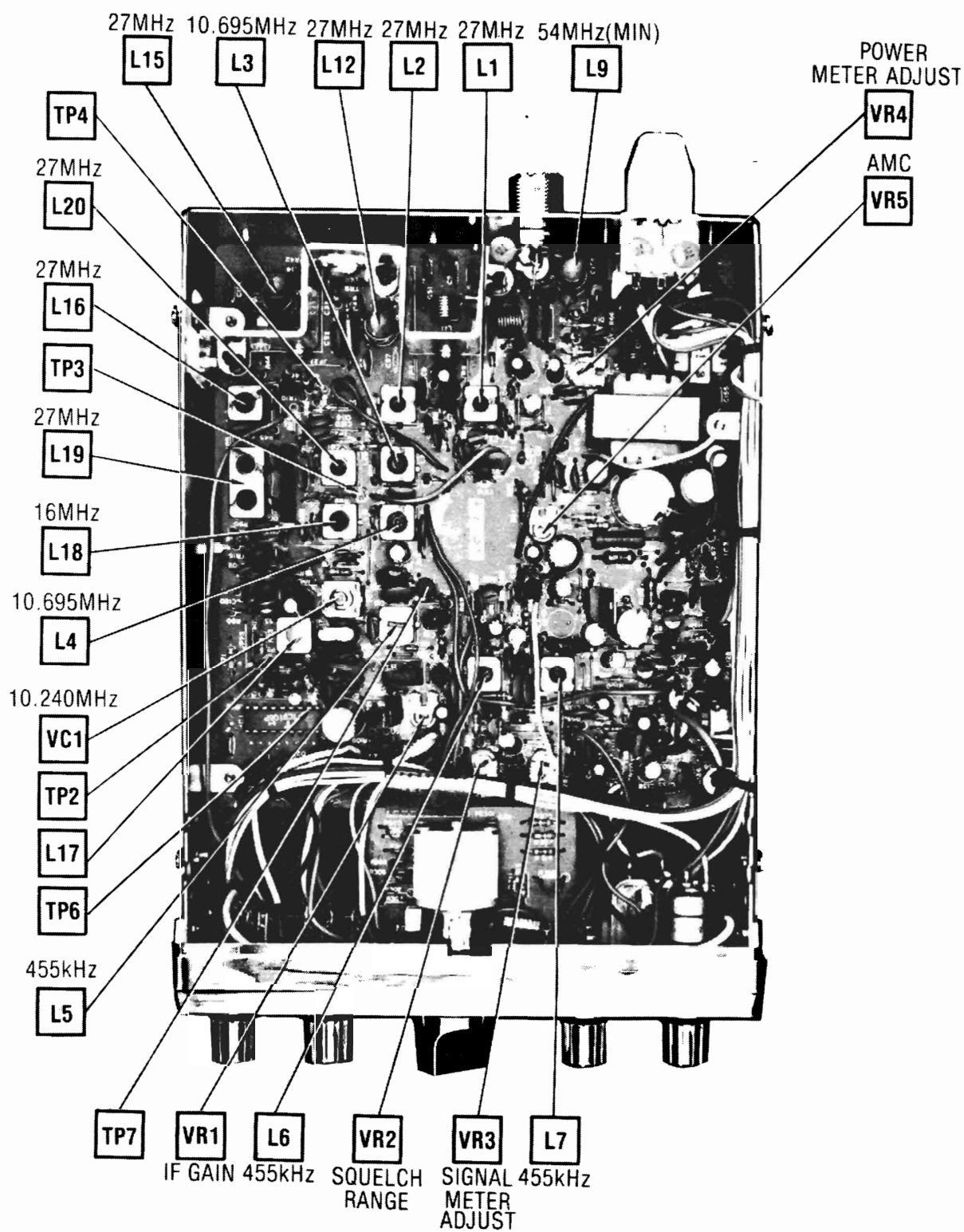


FIGURE 3

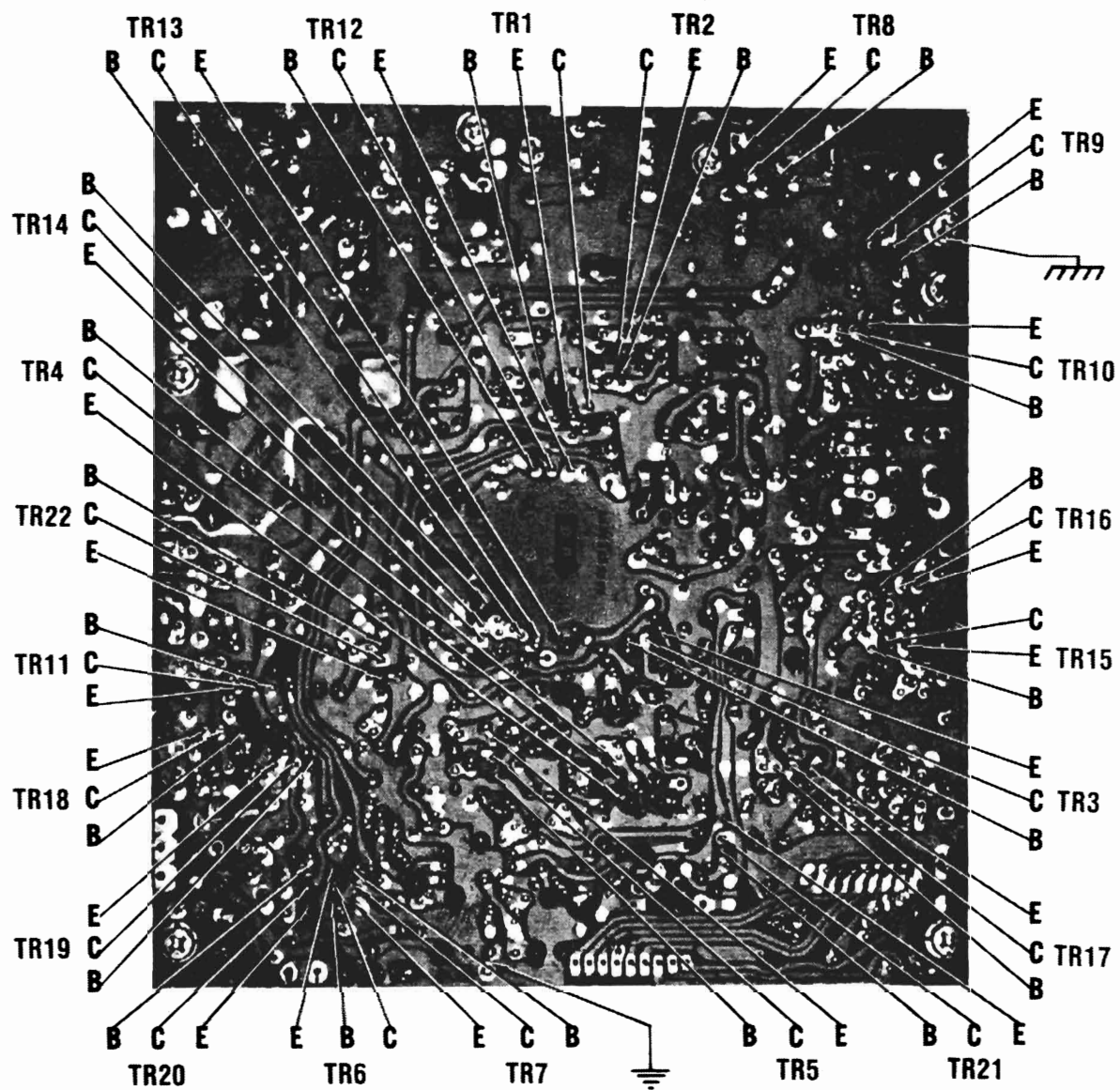
TRUTH CHART

C H A N N E L	1 = 7.30 Volts 0 = 0 to .50 Volts								REC VCO OUTPUT IN MHz AT TP3	XMT VCO OUTPUT IN MHz AT TP3	XMT SYNTH OUTPUT IN MHz AT TP4
	CHANNEL INPUT CODES										
	IC1 PINS										
	17	16	15	14	13	12	11	10			
1	1	1	1	1	1	1	1	1	16.270	16.725	26.965
2	1	1	1	0	0	0	0	1	16.280	16.735	26.975
3	1	1	1	0	1	0	0	1	16.290	16.745	26.985
4	1	1	1	1	1	0	1	0	16.310	16.765	27.005
5	1	1	1	0	1	0	0	0	16.320	16.775	27.015
6	1	1	1	0	0	0	1	0	16.330	16.785	27.025
7	1	1	1	1	1	1	0	1	16.340	16.795	27.035
8	1	1	1	0	0	0	0	0	16.360	16.815	27.055
9	1	1	1	1	1	0	0	0	16.370	16.825	27.065
10	1	1	0	0	0	1	0	0	16.380	16.835	27.075
11	1	1	0	1	1	1	1	1	16.390	16.845	27.085
12	1	1	0	0	0	0	0	1	16.410	16.865	27.105
13	1	1	0	0	1	0	0	1	16.420	16.875	27.115
14	1	1	0	1	1	0	1	0	16.430	16.885	27.125
15	1	1	0	0	1	0	0	0	16.440	16.895	27.135
16	1	1	0	0	0	0	1	0	16.460	16.915	27.155
17	1	1	0	1	1	1	0	1	16.470	16.925	27.165
18	1	1	0	0	0	0	0	0	16.480	16.935	27.175
19	1	1	0	1	1	0	0	0	16.490	16.945	27.185
20	1	0	1	0	0	1	0	0	16.510	16.965	27.205
21	1	0	1	1	1	1	1	1	16.520	16.975	27.215
22	1	0	1	0	0	0	0	1	16.530	16.985	27.225
23	1	0	1	0	1	0	0	1	16.560	17.015	27.255
24	1	0	1	1	1	0	1	0	16.540	16.995	27.235
25	1	0	1	0	1	0	0	0	16.550	17.005	27.245
26	1	0	1	0	0	0	1	0	16.570	17.025	27.265
27	1	0	1	1	1	1	0	1	16.580	17.035	27.275
28	1	0	1	0	0	0	0	0	16.590	17.045	27.285
29	1	0	1	1	1	0	0	0	16.600	17.055	27.295
30	1	0	0	0	0	1	0	0	16.610	17.065	27.305
31	1	0	0	1	1	1	1	1	16.620	17.075	27.315
32	1	0	0	0	0	0	0	1	16.630	17.085	27.325
33	1	0	0	0	1	0	0	1	16.640	17.095	27.335
34	1	0	0	1	1	0	1	0	16.650	17.105	27.345
35	1	0	0	0	1	0	0	0	16.660	17.115	27.355
36	1	0	0	0	0	0	1	0	16.670	17.125	27.365
37	1	0	0	1	1	1	0	1	16.680	17.135	27.375
38	1	0	0	0	0	0	0	0	16.690	17.145	27.385
39	1	0	0	1	1	0	0	0	16.700	17.155	27.395
40	0	1	0	0	0	1	0	0	16.710	17.16	27.405

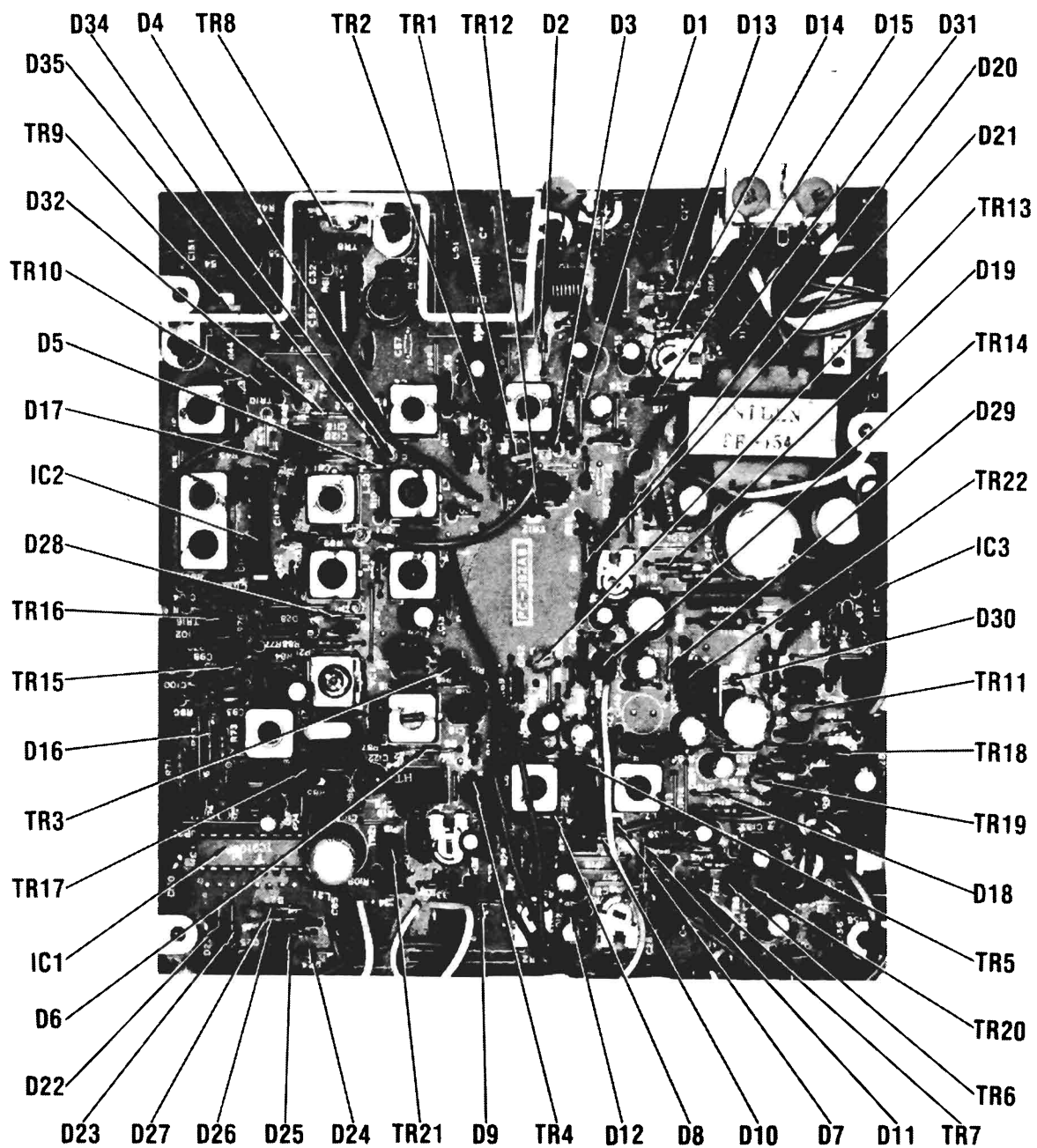


REALISTIC MODEL TRC-427 (21-1534)

CHASSIS - BOTTOM

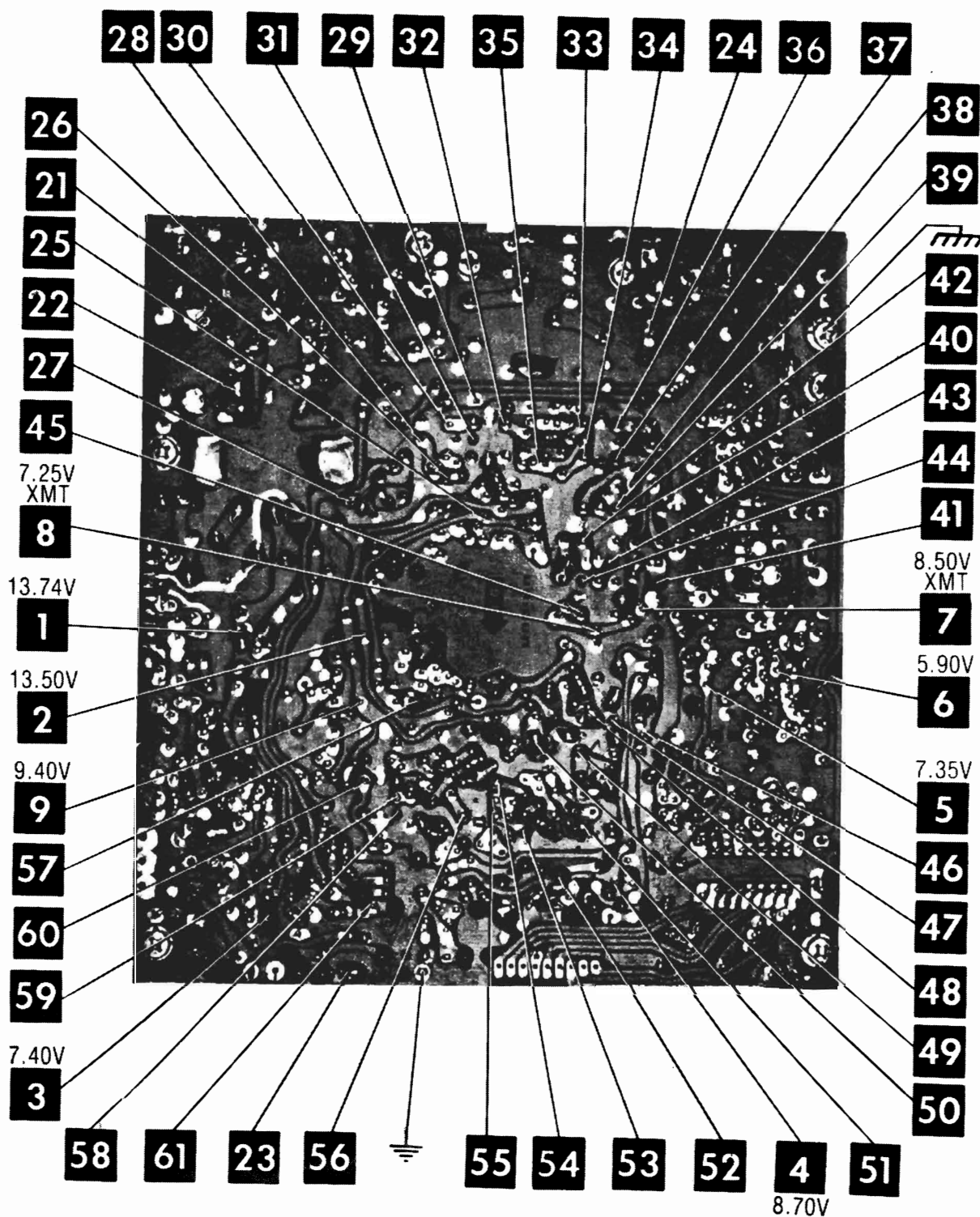


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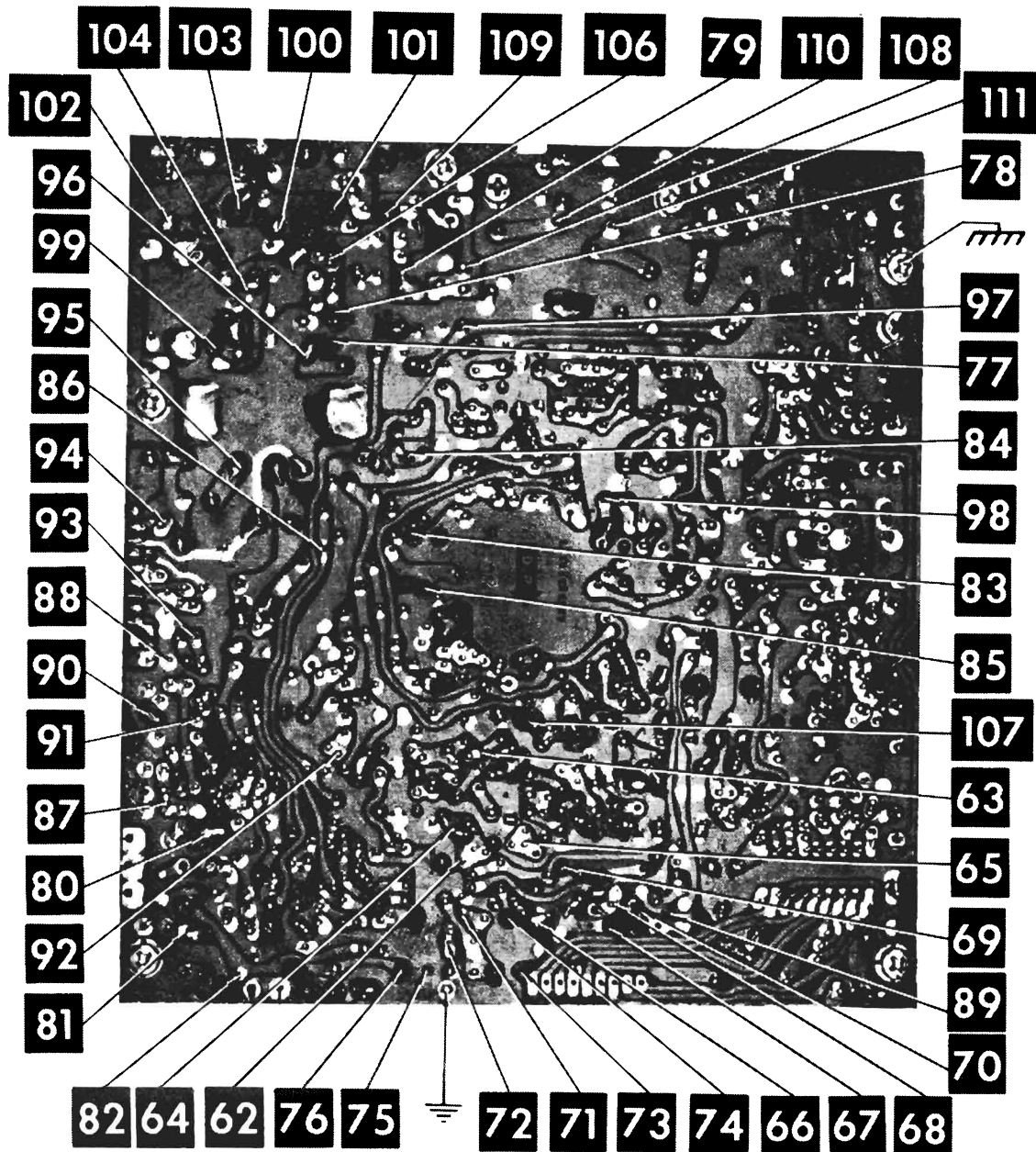


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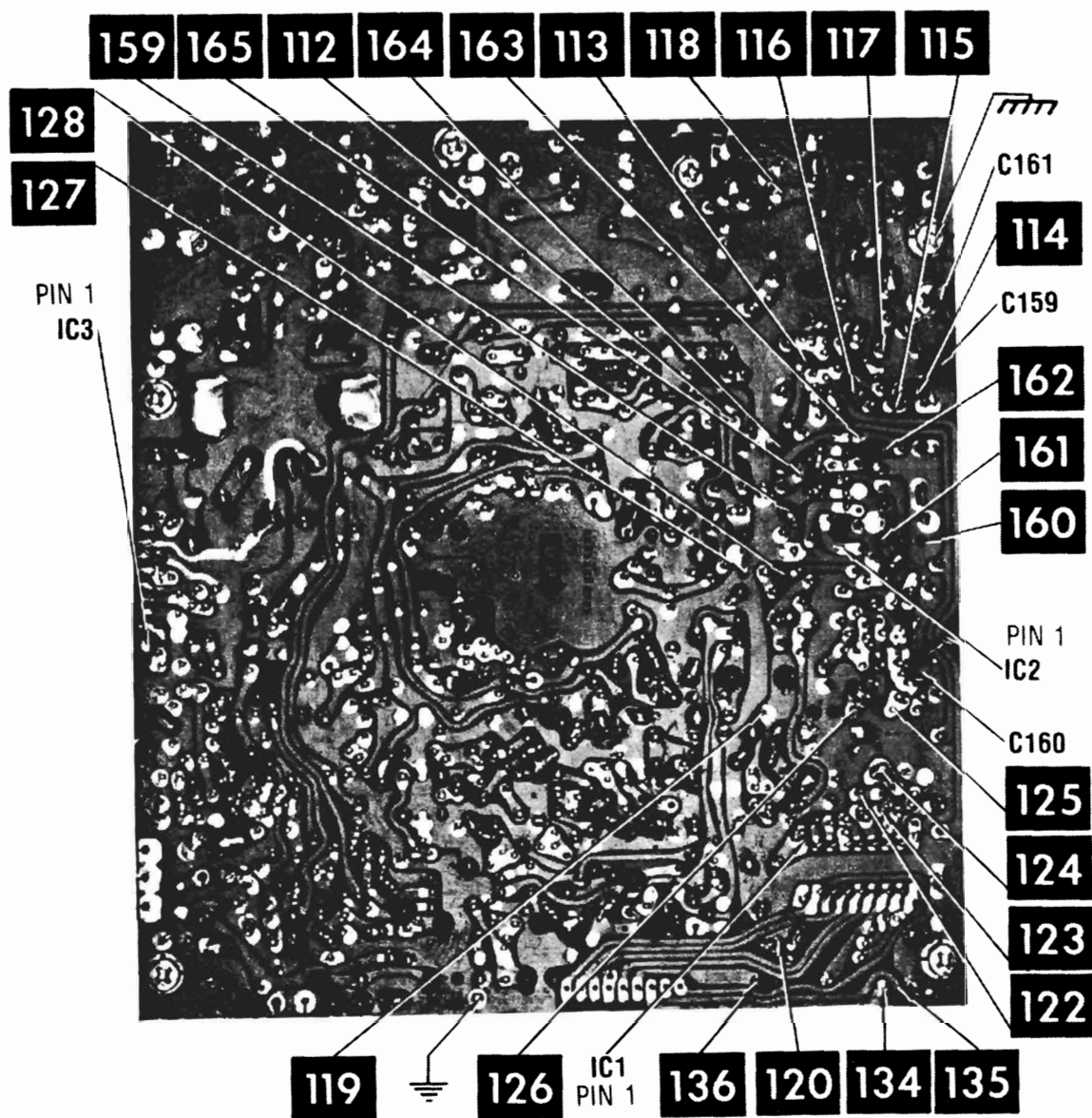


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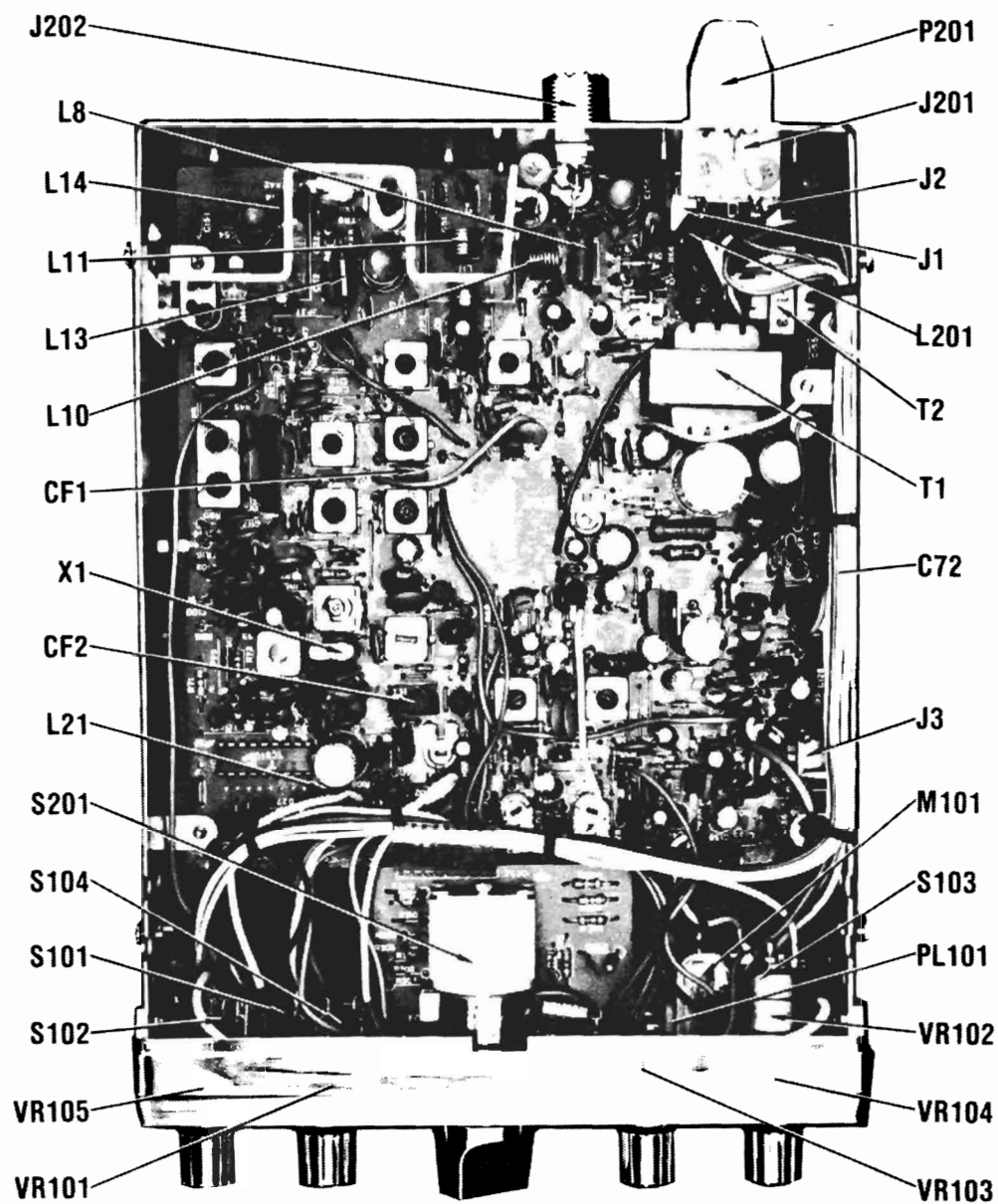


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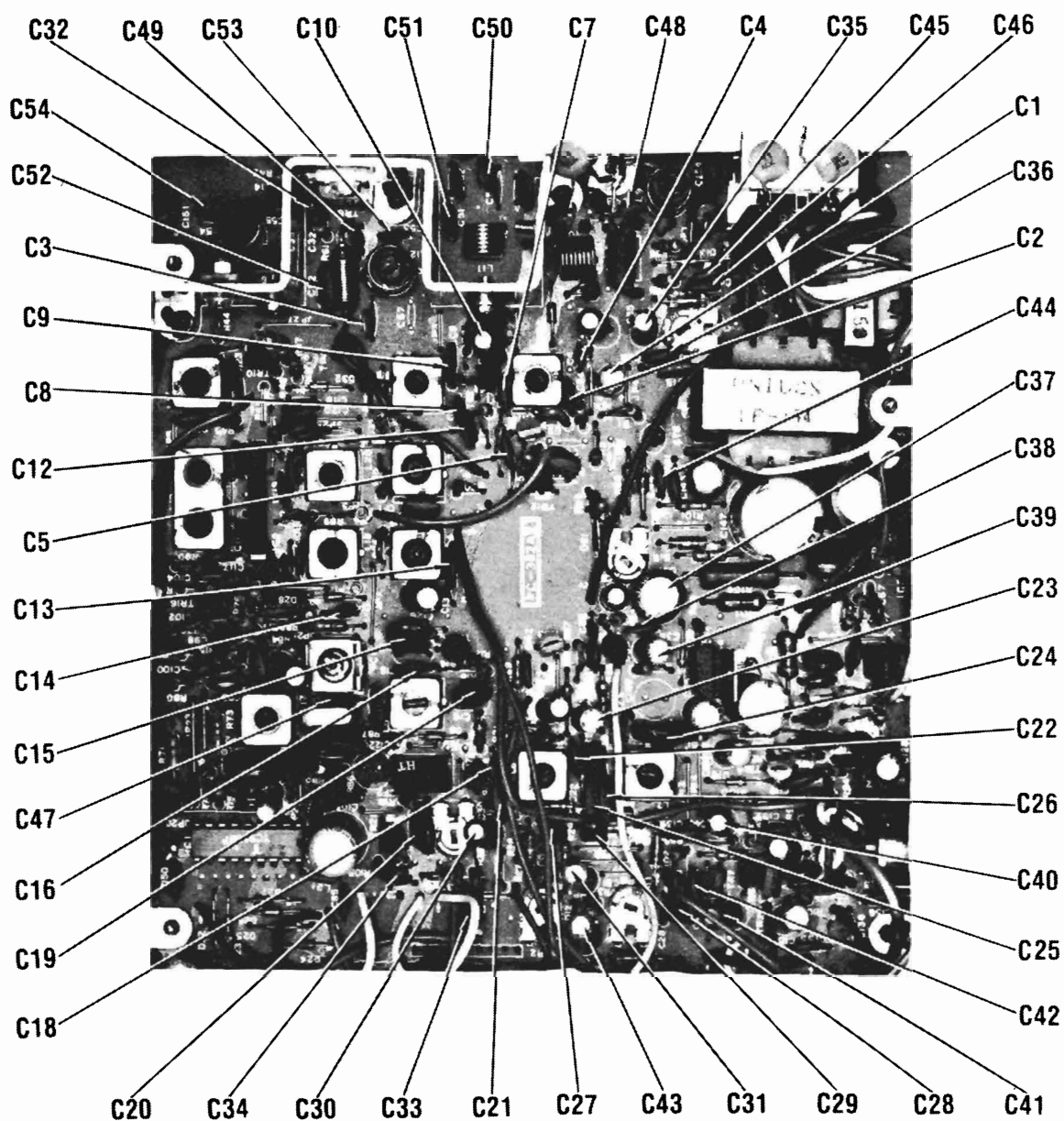
MAIN BOARD



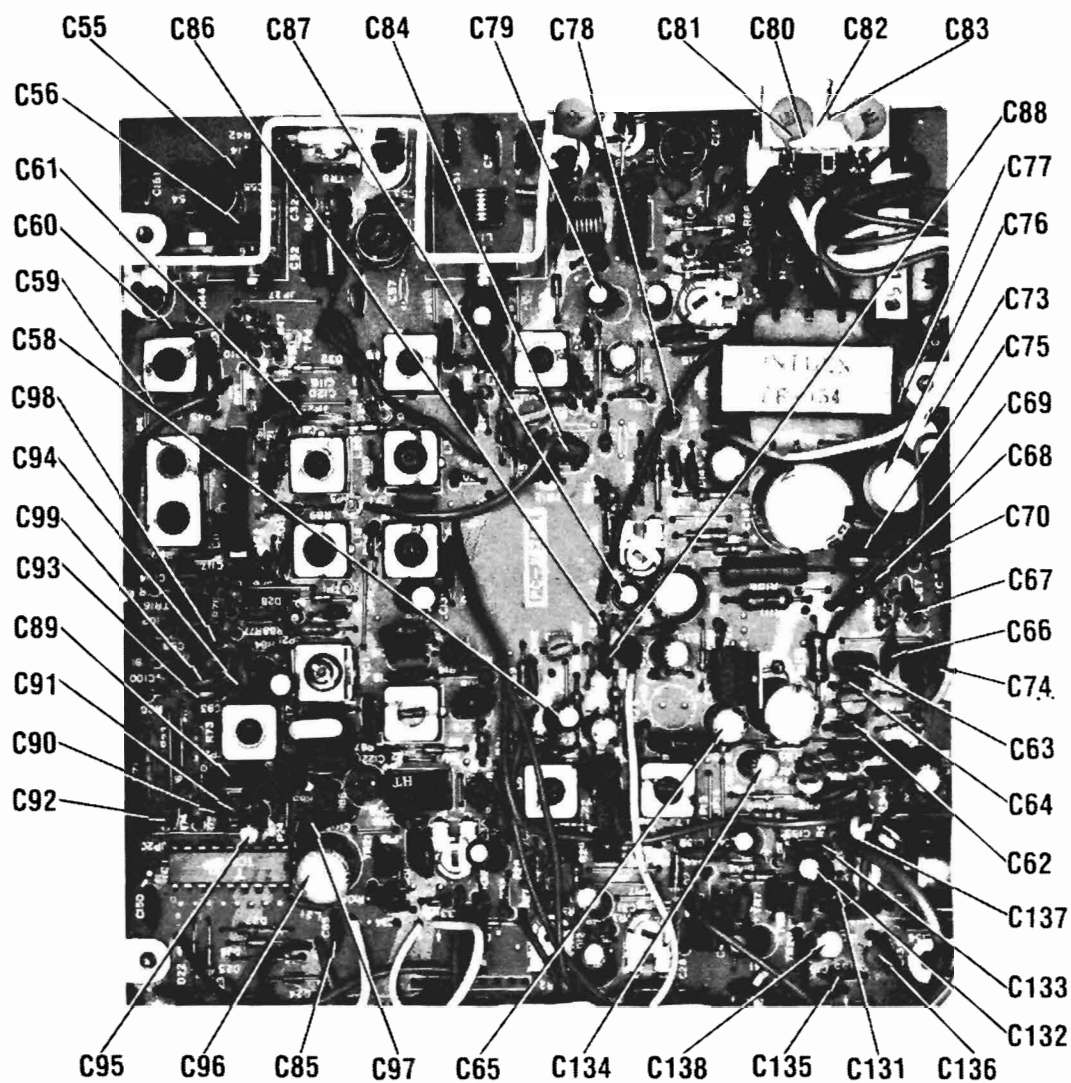
MAIN BOARD



MAIN BOARD

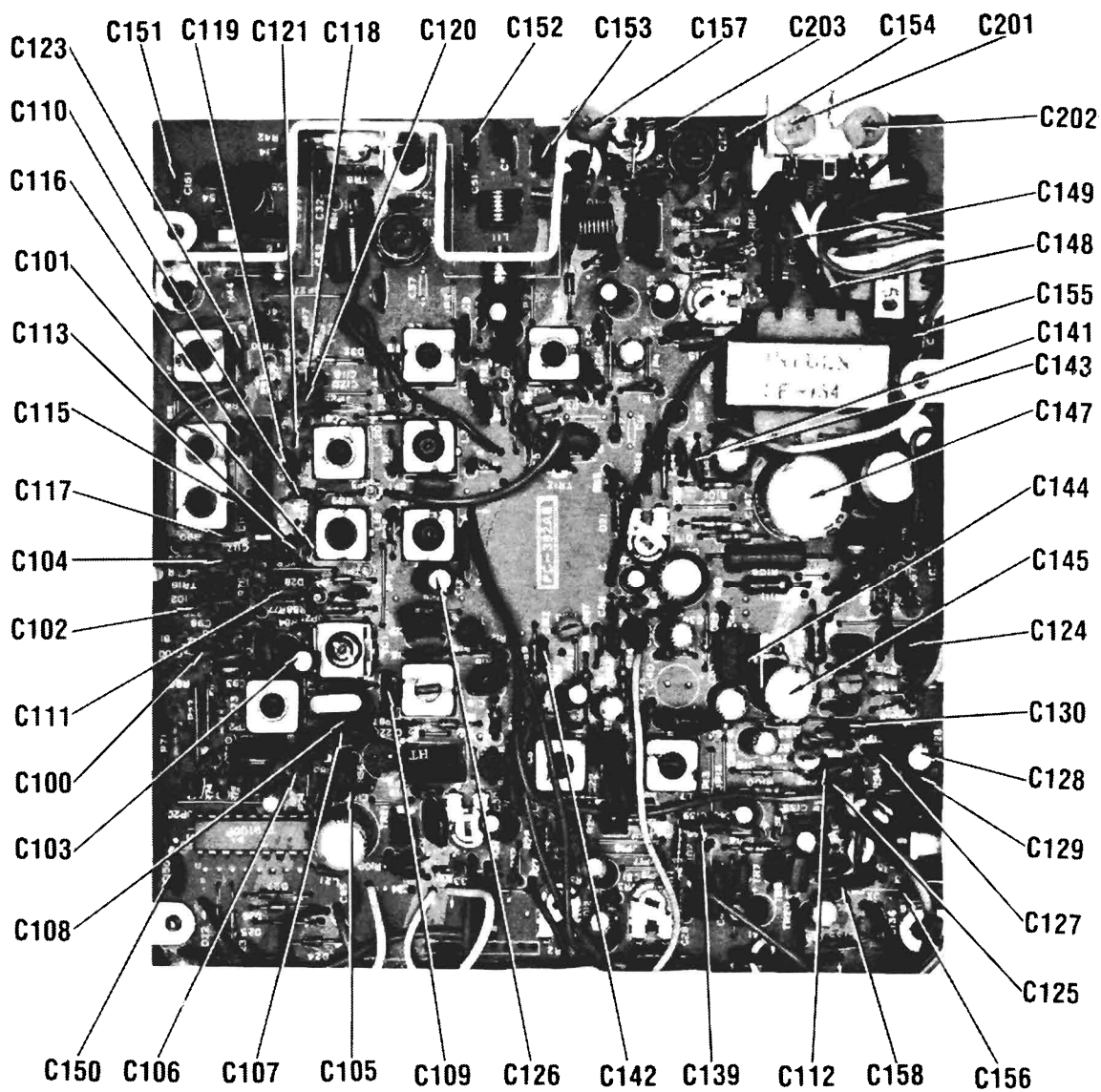


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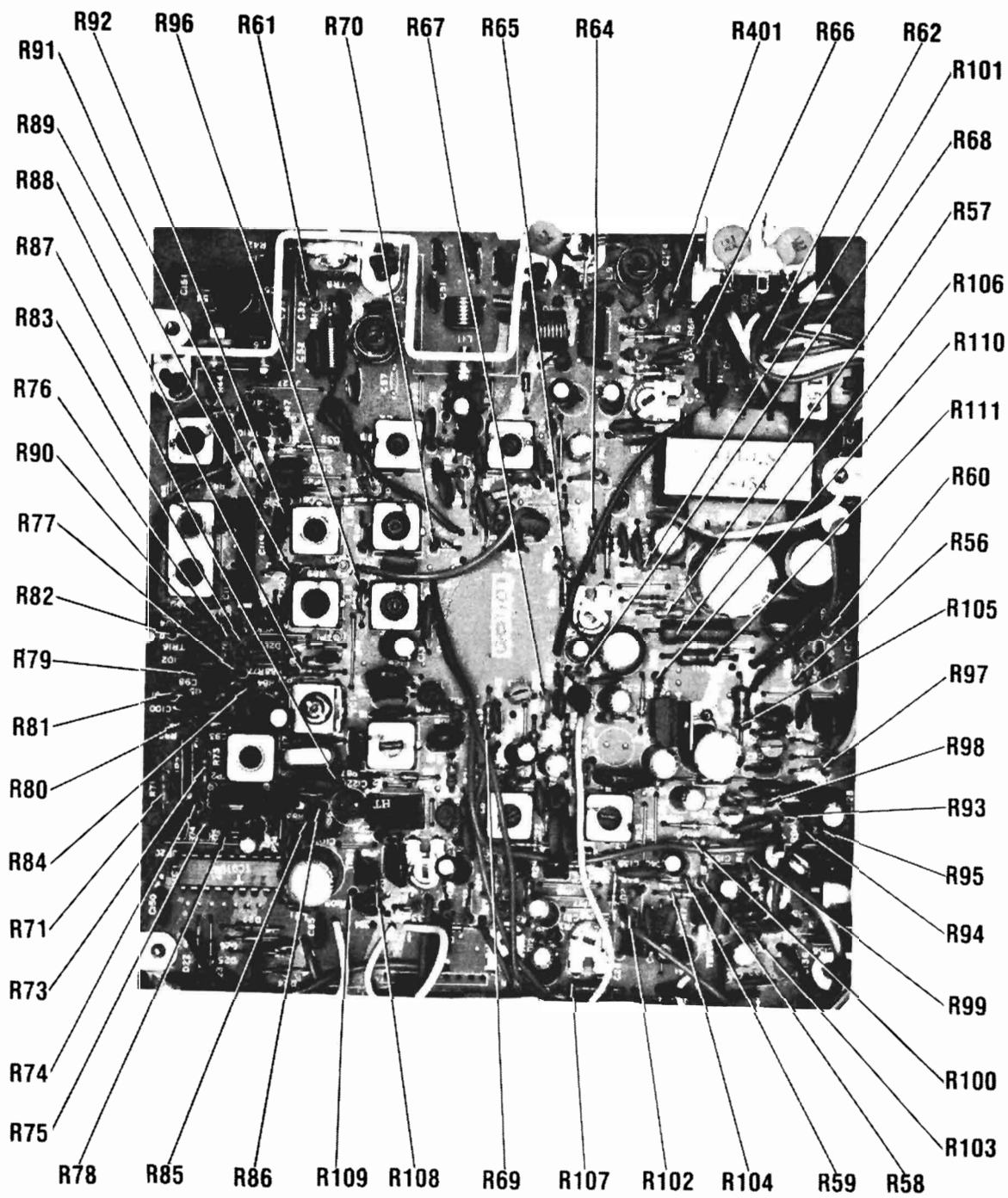


REALISTIC MODEL TRC-427 (21-1534)

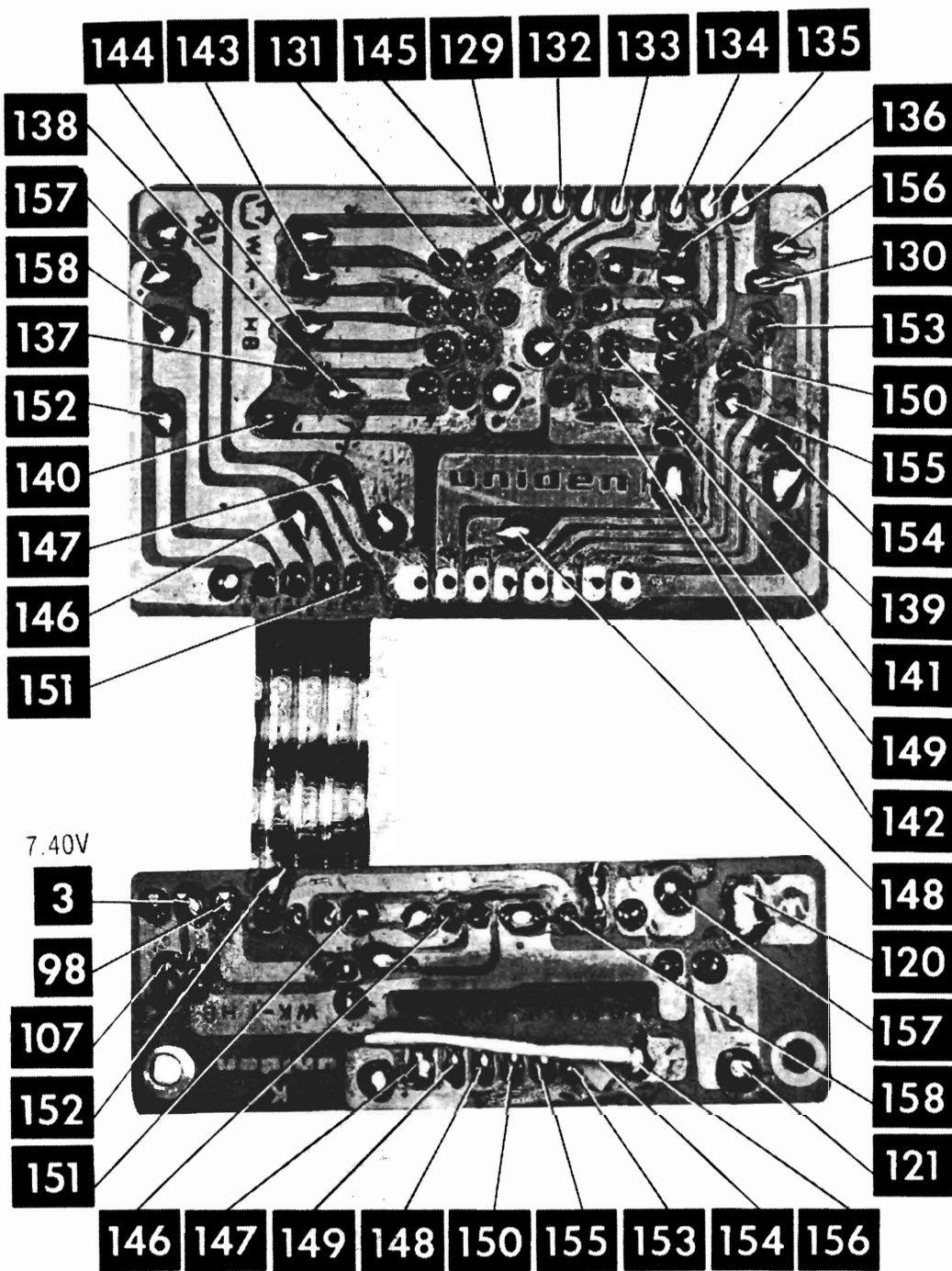
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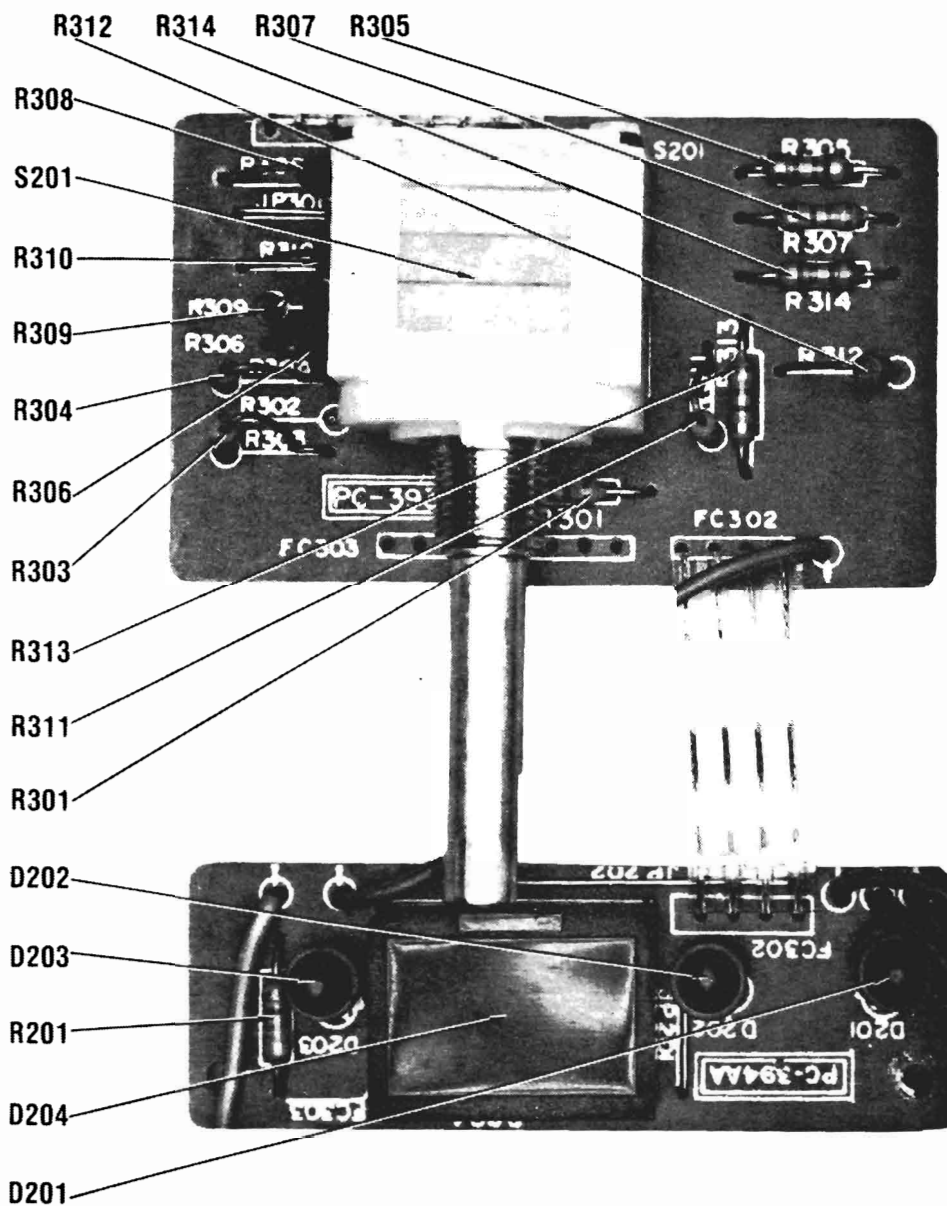
MAIN BOARD



MAIN BOARD

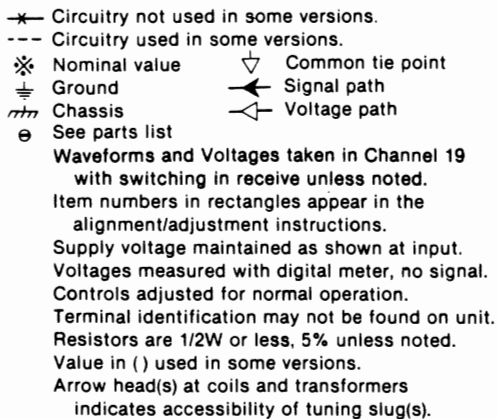
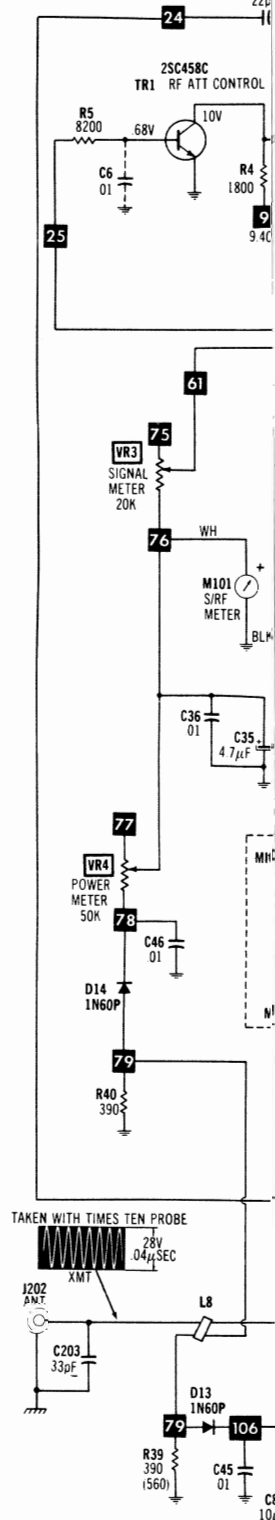


CH. SELECTOR BOARD



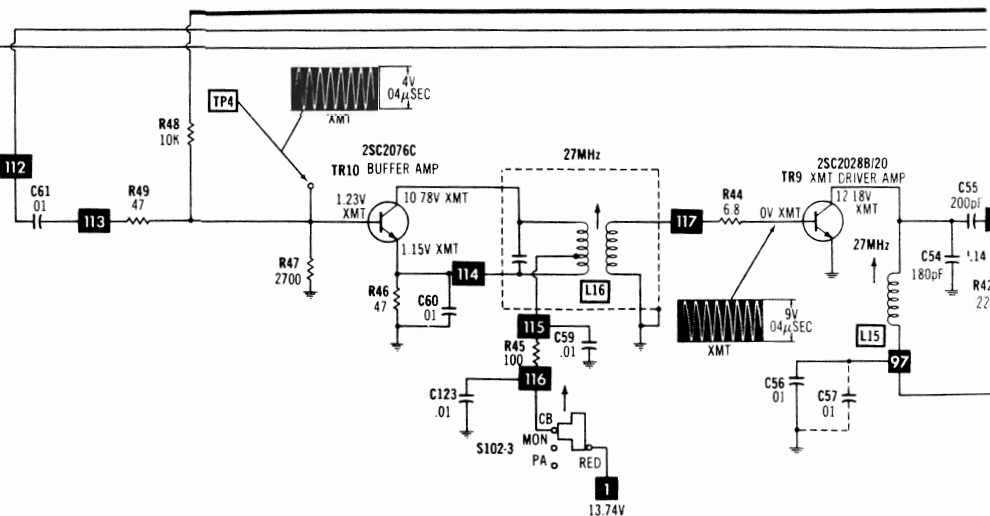
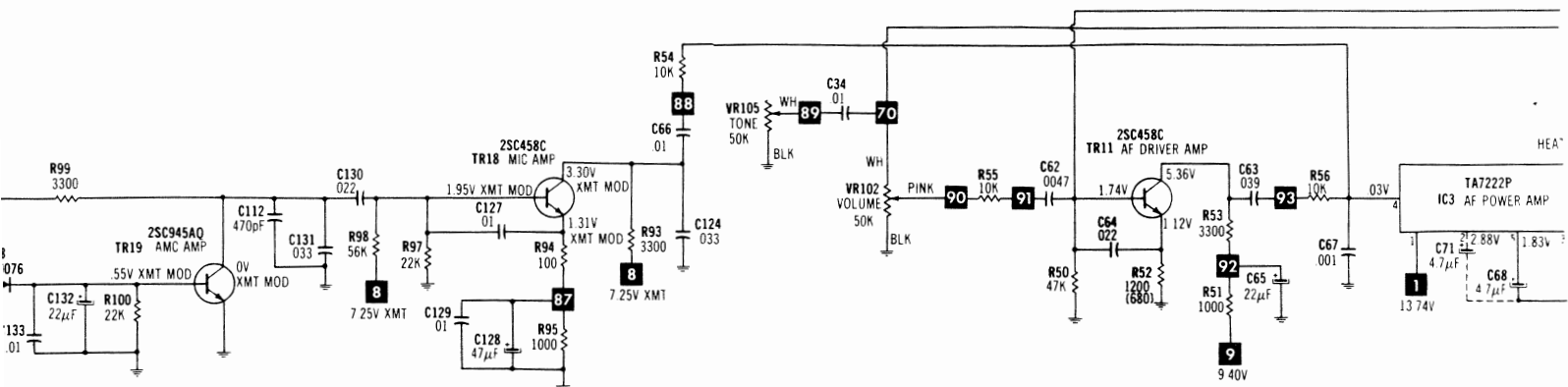
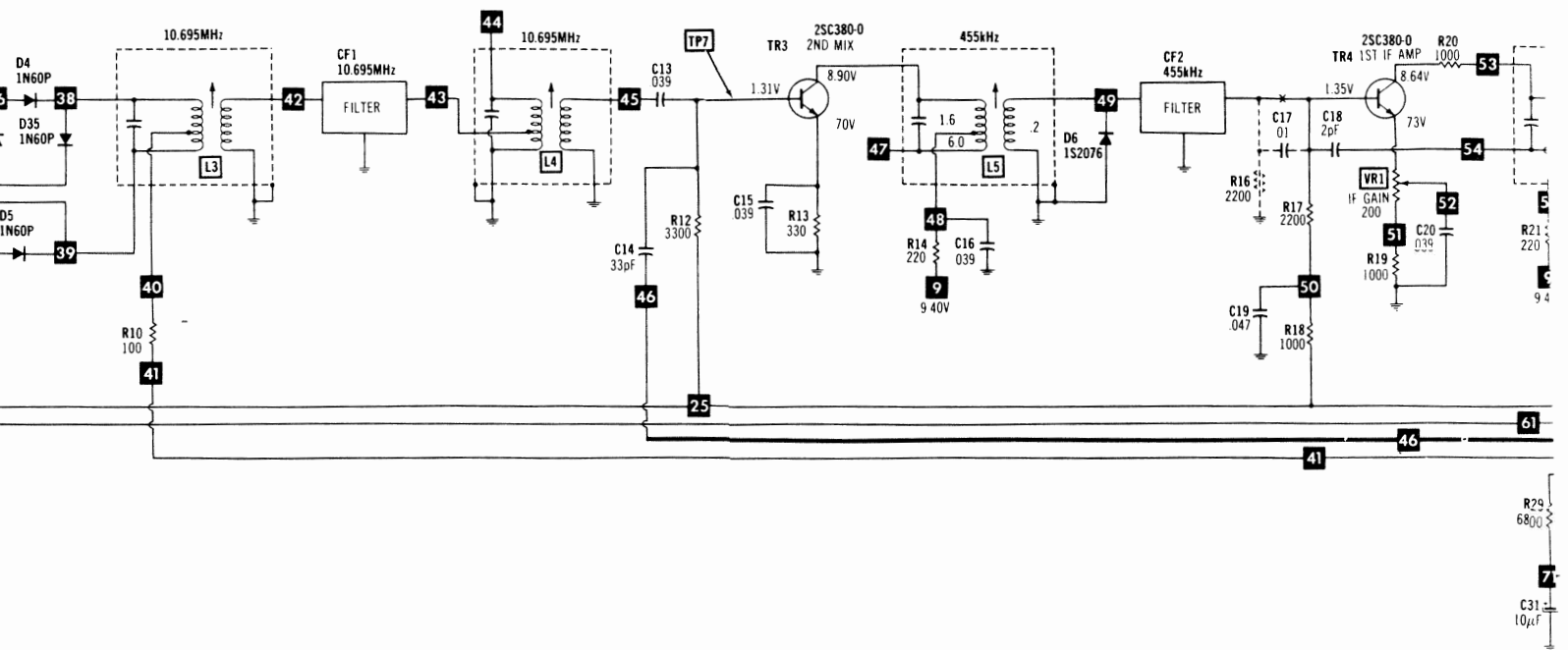
REALISTIC MODEL TRC-427 (21-1534)

CH. SELECTOR BOARD

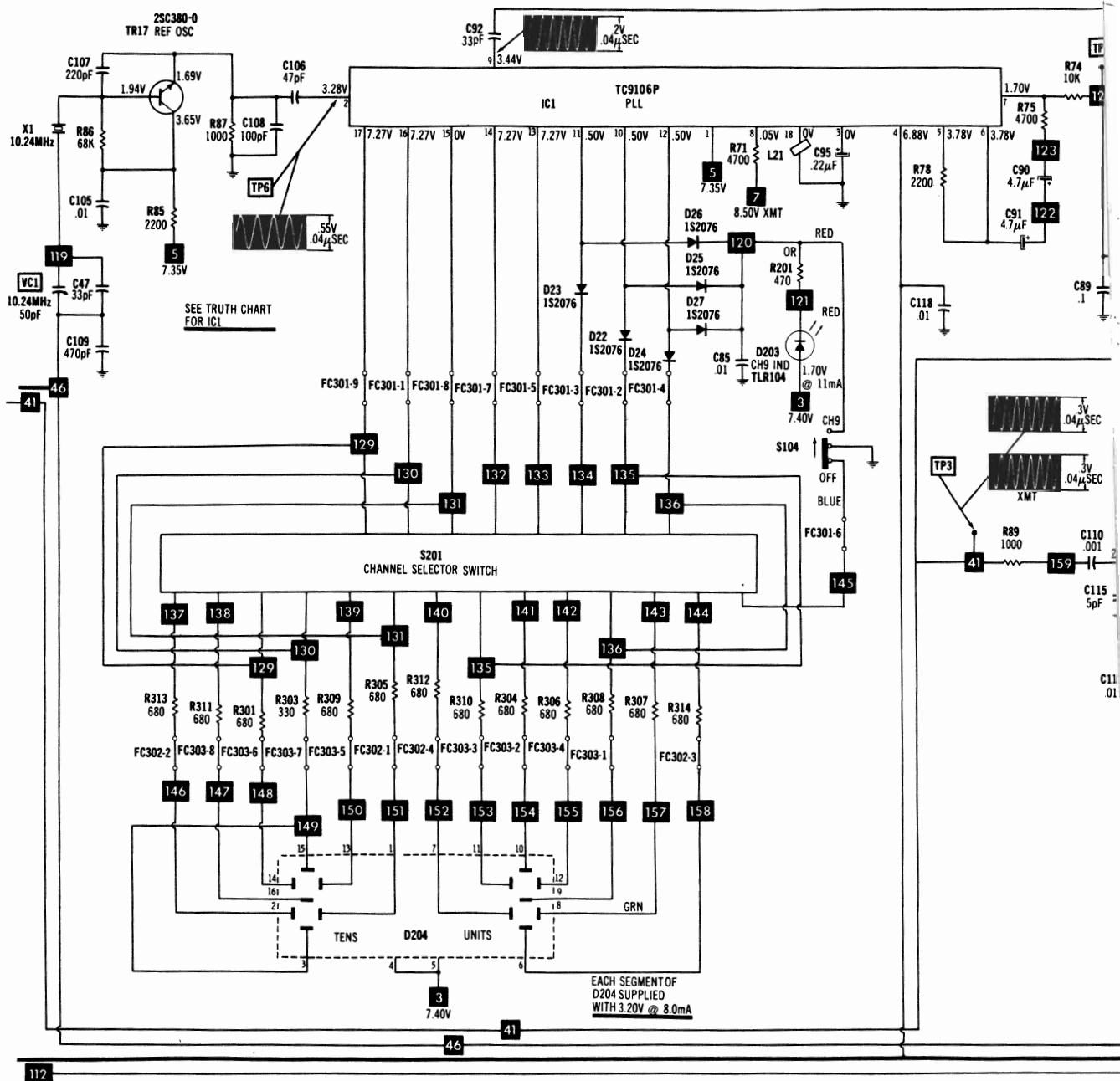


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MAIN BOARD

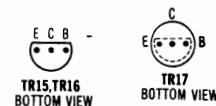


- ✱ Circuitry not used in some versions.
 - Circuitry used in some versions.
 - ✱ Nominal value
 - ⊥ Ground
 - ⊥ Chassis
 - ⊥ See parts list
 - ⊥ Common tie point
 - ⊥ Signal path
 - ⊥ Voltage path
- Waveforms and Voltages taken in Channel 19 with switching in receive unless noted.
 Item numbers in rectangles appear in the alignment/adjustment instructions.
 Supply voltage maintained as shown at input.
 Voltages measured with digital meter, no signal.
 Controls adjusted for normal operation.
 Terminal identification may not be found on unit.
 Resistors are 1/2W or less, 5% unless noted.
 Value in () used in some versions.
 Arrow head(s) at coils and transformers indicates accessibility of tuning slug(s).

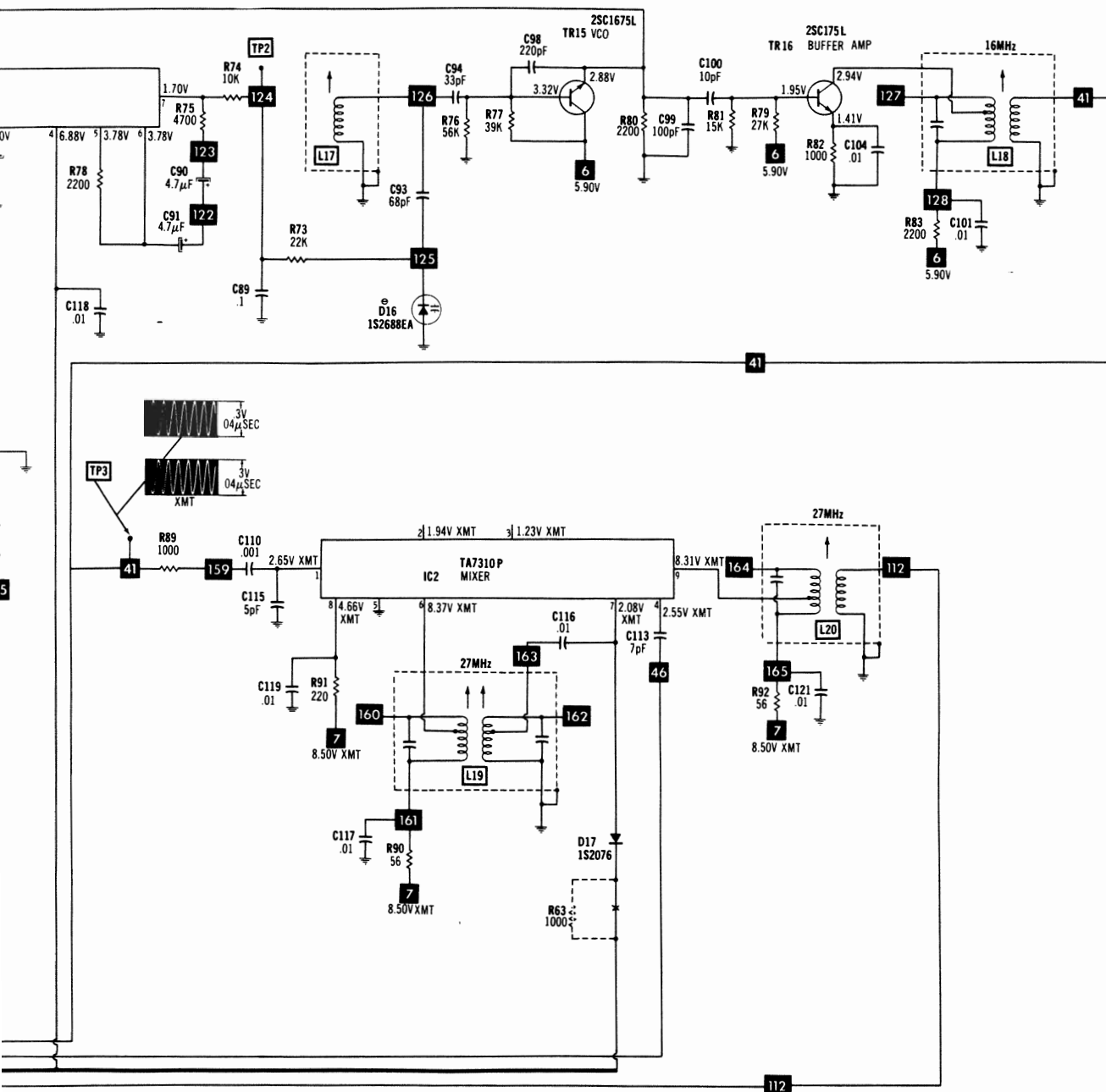
A PHOTOFACT STANDARD NOTATION SCHEMATIC

WITH **CIRCUITRACE**

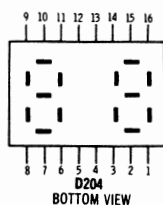
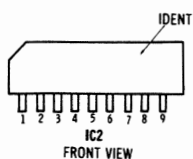
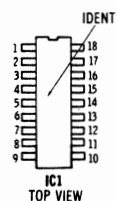
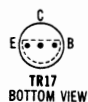
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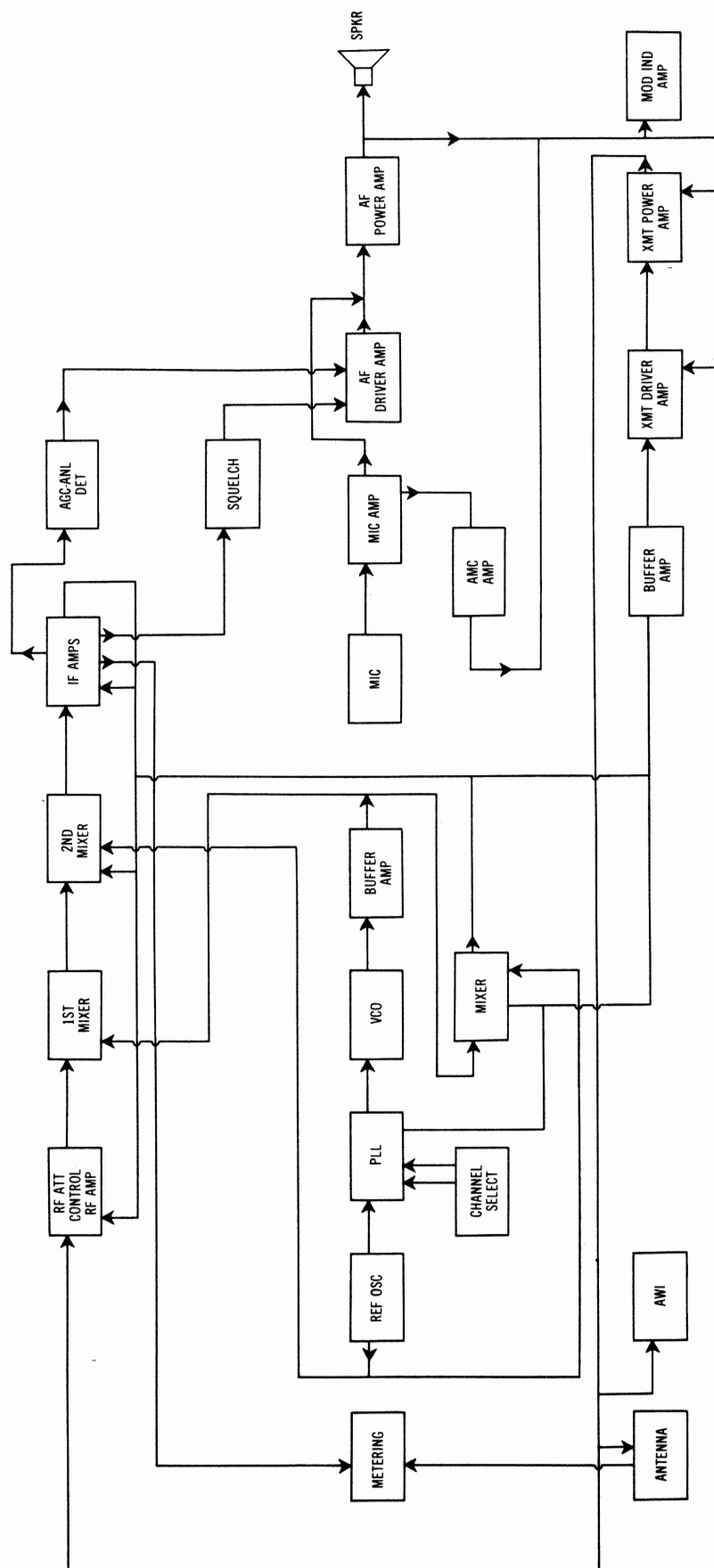


PLL & CH. SELECTOR S



TERMINAL GUIDES





BLOCK DIAGRAM

PARTS LIST AND DESCRIPTION

(When ordering parts, state Model, Part Number, and Description.)

SEMICONDUCTORS (Select replacement transistor for best results)

ITEM No.	TYPE No.	MFG. PART No.	REPLACEMENT DATA							
			GENERAL ELECTRIC PART No.	MALLORY PART No.	RAYTHEON PART No.	RCA PART No.	SYLVANIA PART No.	THORDARSON PART No.	WORKMAN PART No.	ZENITH PART No.
D1	MC301	DX0985	GE-300	PTC214	REN 177	SK3175/177	ECG177	TM177	WEP1062/177	103-131
D2	MC301	DX0985	GE-300	PTC214	REN 177	SK3175/177	ECG177	TM177	WEP1062/177	103-131
D3	XZ051	DX0987		ZM5.1B		SK3776/5010A	ECG5010A	TM5010	WEP1411/5010	103-279-10
D4	1N60P	DX0162	1N60	PTC206	REN 109	SK3088	ECG109	TM109/**	WEP134/109	103-29001
D5	1N60P	DX0162	1N60	PTC206	REN 109	SK3088	ECG109	TM109/**	WEP134/109	103-29001
D6	1S2076	DX0287	GE-514	PTC214	REN 177	SK3100/519	ECG519	TM519	WEP925/519	103-287
D7	1N60AM	DX0681	1N60	PTC206	REN 109	SK3088	ECG109	TM109/**	WEP134/109	103-29001
D8	1N60AM	DX0681	1N60	PTC206	REN 109	SK3088	ECG109	TM109/**	WEP134/109	103-29001
D9	1S2076K	DX1118	GE-514	PTC214	REN 177	SK3100/519	ECG519	TM519	WEP925/519	103-287
D10	1N60AM	DX0681	1N60	PTC206	REN 109	SK3088	ECG109	TM109/**	WEP134/109	103-29001
D11	1N60AM	DX0681	1N60	PTC206	REN 109	SK3088	ECG109	TM109/**	WEP134/109	103-29001
D12	1N60AM	DX0681	1N60	PTC206	REN 109	SK3088	ECG109	TM109/**	WEP134/109	103-29001
D13	1N60P	DX0162	1N60	PTC206	REN 109	SK3088	ECG109	TM109/**	WEP134/109	103-29001
D14	1N60P	DX0162	1N60	PTC206	REN 109	SK3088	ECG109	TM109/**	WEP134/109	103-29001
D15	SR1K1	DX0475	GE-504A	PTC201	REN 116	SK3311	ECG116	TM116	WEP156	212-76-02
D16	1S2688EA	DX1120			REN 614	SK3126	ECG613	TM613	WEP200/614	103-281
	1S2688EB	DX1120			REN 614	SK3126	ECG613	TM613	WEP200/614	103-281
D17	1S2076	DX0287	GE-514	PTC214	REN 177	SK3100/519	ECG519	TM519	WEP925/519	103-287
D18	1S2076	DX0287	GE-514	PTC214	REN 177	SK3100/519	ECG519	TM519	WEP925/519	103-287
D19	1N60AM	DX0681	1N60	PTC206	REN 109	SK3088	ECG109	TM109/**	WEP134/109	103-29001
D20	CZ-092	DX0087	GEZD-9.1	ZB9.1A	REN 139	SK3060/139A	ECG139A	TM139/**	WEP1109/139	103-272
	DA-055	DX0087	GEZD-9.1	ZB9.1A	REN 139	SK3060/139A	ECG139A	TM139/**	WEP1109/139	103-272
D21	1N60AM	DX0681	1N60	PTC206	REN 109	SK3088	ECG109	TM109/**	WEP134/109	103-29001
D22	1S2076	DX0287	GE-514	PTC214	REN 177	SK3100/519	ECG519	TM519	WEP925/519	103-287
D23	1S2076	DX0287	GE-514	PTC214	REN 177	SK3100/519	ECG519	TM519	WEP925/519	103-287
D24	1S2076	DX0287	GE-514	PTC214	REN 177	SK3100/519	ECG519	TM519	WEP925/519	103-287
D25	1S2076	DX0287	GE-514	PTC214	REN 177	SK3100/519	ECG519	TM519	WEP925/519	103-287
D26	1S2076	DX0287	GE-514	PTC214	REN 177	SK3100/519	ECG519	TM519	WEP925/519	103-287
D27	1S2076	DX0287	GE-514	PTC214	REN 177	SK3100/519	ECG519	TM519	WEP925/519	103-287
D28	05Z7.5UNT	DX1119		ZM7.5B		SK3781/5015A	ECG5015A	TM5015	WEP1416/5015	
D29	1S2076	DX0287	GE-514	PTC214	REN 177	SK3100/519	ECG519	TM519	WEP925/519	103-287
D30	CZ-092	DX0087	GEZD-9.1	ZB9.1A	REN 139	SK3060/139A	ECG139A	TM139/**	WEP1109/139	103-272
	DA-055	DX0087	GEZD-9.1	ZB9.1A	REN 139	SK3060/139A	ECG139A	TM139/**	WEP1109/139	103-272
D31	SR1K-1	DX0475	GE-504A	PTC201	REN 116	SK3311	ECG116	TM116	WEP156	212-76-02
D32	1S2076	DX0287	GE-514	PTC214	REN 177	SK3100/519	ECG519	TM519	WEP925/519	103-287
D34	1N60-P	DX0162	1N60	PTC206	REN 109	SK3088	ECG109	TM109/**	WEP134/109	103-29001
D35	1N60-P	DX0162	1N60	PTC206	REN 109	SK3088	ECG109	TM109/**	WEP134/109	103-29001
IC1	TC9106P	MX3619			REN 1192	SK3830				
IC2	TA7310P	MX3256				SK3445/1192	ECG1192	TM1192	WEP2120/1192	
IC3	TA7222P	MX3618				SK3726				
TR1	2SC458C	DDBY273001	GE-210	PTC121*	REN 289	SK3124/289	ECG289	TM289/**	WEP458	121-29000A*
TR2	2SC1923BN	DDBY298003	GE-61	PTC132	REN 229	SK3132	ECG229	TM229	WEP784	121-29000A*
TR3	2SC380-0	DDBY247002	GE-61*	PTC136*	REN 107	SK3245/199	ECG107	TM107	WEP380	121-29021*
TR4	2SC380-0	DDBY247002	GE-61*	PTC136*	REN 107	SK3245/199	ECG107	TM107	WEP380	121-29021*
TR5	2SC380-0	DDBY247002	GE-61*	PTC136*	REN 107	SK3245/199	ECG107	TM107	WEP380	121-29021*
TR6	2SA733P	DDBY003001	GE-48	PTC127	REN 294	SK3114/290	ECG294	TM294/**	WEP911/290	121-29003
TR7	2SC945AP	DDBY224006	GE-20*	PTC121*	REN 123A*	SK3122	ECG123A*	TM123A*	WEP736/123A*	121-29000A*
TR8	2SC2029A/10	DDBY257002	GE-333	PTC186	REN 235	SK3197/235	ECG235	TM235	WEP785/235	121-29039
TR9	2SC2028B/20	DDBY256007	GE-270	PTC180	REN 295	SK3253/295	ECG295	TM295	WEP755/195A*	121-880
TR10	2SC2076C	DDBY270001	GE-210	PTC121*	REN 295	SK3122	ECG295	TM295	WEP784	121-29000
	2SC2076D	DDBY270001	GE-210	PTC121*	REN 295	SK3122	ECG295	TM295	WEP784	121-29000
TR11	2SC458C	DDBY273001	GE-210	PTC121*	REN 289	SK3124/289	ECG289	TM289/**	WEP458	121-29000A*
TR12	2SC458C	DDBY273001	GE-210	PTC121*	REN 289	SK3124/289	ECG289	TM289/**	WEP458	121-29000A*
TR13	2SA733P	DDBY003001	GE-48	PTC127	REN 294	SK3114/290	ECG294	TM294/**	WEP911/290	121-29003
TR14	2SC945AP	DDBY224006	GE-212	PTC121*	REN 199	SK3124/289	ECG199	TM199/**	WEP1945	121-972
TR15	2SC1675L	DDBY259001	GE-213	PTC132*	REN 229*	SK3122	ECG229*	TM229*	WEP773	121-29021
TR16	2SC1675L	DDBY259001	GE-213	PTC132*	REN 229*	SK3122	ECG229*	TM229*	WEP773	121-29021
TR17	2SC380-0	DDBY247002	GE-61*	PTC136*	REN 107	SK3245/199	ECG107	TM107	WEP380	121-29021*
TR18	2SC458C	DDBY273001	GE-210	PTC121*	REN 289	SK3124/289	ECG289	TM289/**	WEP458	121-29000A*
TR19	2SC945AP	DDBY224003	GE-212	PTC121*	REN 199	SK3124/289	ECG199	TM199/**	WEP1945	121-972
TR20	2SD471L	DDBY411002	GE-268	PTC144*	REN 289	SK3849/289	ECG289	TM289	WEP910/289	121-883
TR21	2SA733P	DDBY003001	GE-48	PTC127	REN 294	SK3114/290	ECG294	TM294/**	WEP911/290	121-29003
TR22	2SC1096-3Z	DDBY227002	GE-28	PTC110	REN 186A	SK3248	ECG186A	TM186A/**	WEP1096	121-29008

* Lead configuration may vary from original.
/** Also available as exact type replacement.

PARTS LIST AND DESCRIPTION (CONTINUED)

(When ordering parts, state Model, Part Number, and Description.)

ELECTROLYTIC CAPACITORS

ITEM No.	RATING	REPLACEMENT DATA				
		MFR. PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.	
					Q-LINE	GENERAL LINE
C1	10 16V	CELZ311000	PC10-25	VTT10B25	QV1-41	EV-1222
C10	4.7 16V	CELZ314790	PC5-50	VTT4R7B50	QV1-31	EV-1619.1
C23	10 16V	CELZ311000	PC10-25	VTT10B25	QV1-41	EV-1222
C30	1 16V	CELZ311090	PC1-50	VTT1A50	QV1-11	EV-1615
C31	10 16V	CELZ311000	PC10-25	VTT10B25	QV1-41	EV-1222
C35	4.7 16V	CELZ314790	PC5-50	VTT4R7B50	QV1-31	EV-1619.1
C37	100 16V	CELZ311010	PC100-16	VTT100F16	QV1-95	EV-1231
C39	10 16V	CELZ311000	PC10-25	VTT10B25	QV1-41	EV-1222
C40	10 16V	CELZ311000	PC10-25	VTT10B25	QV1-41	EV-1222
C41	4.7 16V	CELZ314790	PC5-50	VTT4R7B50	QV1-31	EV-1619.1
C43	2.2 16V	C2250D-AP	PC2-100	VTT2R2A50	QV1-21	EV-1617.1
C58	1 16V	CELZ311090	PC1-50	VTT1A50	QV1-11	EV-1615
C65	22 16V	CELZ312200	PC25-25	VTT2B16	QV1-55	EV-1224
C68	4.7 16V	CSEZ314796		TDC475M010EL	QDT1-48	SD10-4R79
C71	4.7 16V	CELZ314790	PC5-50	VTT4R7B50	QV1-31	EV-1619.1
C73	47 16V	CELZ314700	PC50-16	VTT47D16	QV1-73	EV-1226
C76	470 16V	CELZ314710	PC500-16	VTT470K16	QV1-151	EV-1251
C78	.47 35V	CSEZ664786		TDC474M050EL	QDT1-19	SD50-R479
C79	.47 50V	CELZ814780	PC1-50	VTT47A63	QV1-3	EV-1610
C87	10 16V	CELZ311000	PC10-25	VTT10B25	QV1-41	EV-1222
C90	4.7 16V	CSEZ314796		TDC475M010EL	QDT1-48	SD10-4R79
C91	4.7 16V	CSEZ314796		TDC475M010EL	QDT1-48	SD10-4R79
C95	.22 16V	C224MD-AP		TDC224M050EL	QDT1-10	SD50-R229
C96	470 10V	CELZ114710	PC500-16	VTT470K16	QV1-151	EV-1251
C103	47 10V	CELZ114700	PC50-16	VTT47D16	QV1-73	EV-1226
C122	10 16V	CELZ311000	PC10-25	VTT10B25	QV1-41	EV-1222
C126	47 10V	CELZ114700	PC50-16	VTT47D16	QV1-73	EV-1226
C128	47 10V	CELZ114700	PC50-16	VTT47D16	QV1-73	EV-1226
C132	22 6.3V	CELZ902200	PC25-25	VTT2B16	QV1-55	EV-1224
C134	10 16V	CELZ311000	PC10-25	VTT10B25	QV1-41	EV-1222
C138	10 16V	CELZ311000	PC10-25	VTT10B25	QV1-41	EV-1222
C140	100 10V	CELZ111010	PC100-16	VTT100F16	QV1-95	EV-1231
C143	47 16V	CELZ314700	PC50-16	VTT47D16	QV1-73	EV-1226
C145	470 10V	CELZ114710	PC500-16	VTT470K16	QV1-151	EV-1251
C147	1000 16V	CELZ311020	PC1000-16	VTT1000L16	QV1-183	EV-1261

CAPACITORS

ITEM No.	RATING	MFR. PART No.	REPLACEMENT DATA			
			CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.	
					Q-LINE	GENERAL LINE
C2	.01 50V	CF1251		MAG5011		10TCR-Q22
C3	22 N220 50V 10%			GP210		10TS-D10
C4	.001 50V			MAG5011		
C5	.01 50V			MAG5011		
C6	.01 50V			MAG5011		
C7	.01 50V			MAG5011		
C8	.5 50V ±.25			CN0510		
C9	.01 50V			MAG5011		
C11	.01 50V			MAG5011		
C12	.01 50V			MAG5011		
C13	.039 25V	CCCZ815081		M192P3939R8		192P3939R8
C14	33 50V 10%		NP033	CN0433		10TCC-Q33
C15	.039 25V		DPMS6S39	M192P3939R8	QFT2-159	1FT-S39
C16	.039 25V			M192P3939R8		192P3939R8
C17	.01 50V			MAG5011		
C18	2 50V ±.25			CN0522		
C19	.047 25V		DPMS2S47	M192P439R8	QFT2-171	1FT-S47
C20	.039 25V		DPMS7S39	M192P3939R8	QFT2-159	1FT-S39
C21	.039 25V			M192P3939R8		192P3939R8
C22	.01 50V			MAG5011		
C24	.068 25V	CF1025	WMF1S68	EW1A168	QF1-195	1PB-S68
C25	56 50V 10%			CN0456		10TCC-Q56
C26	.039 25V			M192P3939R8		192P3939R8
C27	.0033 25V		WMF1D33	M192P3329R8	QFT2-43	1FT-D33
C28	.01 25V		WMF1S1	M192P1039R8	QFT2-91	1FT-S10
C29	.01 25V		WMF1S1	M192P1039R8	QFT2-91	1FT-S10
C32	180 50V 10%					10TCC-T18
C33	.0033 25V		WMF1D33	M192P3329R8	QFT2-43	1FT-D33
C34	.01 25V		WMF1S1	M192P1039R8	QFT2-91	1FT-S10
C36	.01 50V			MAG5011		
C38	.01 50V			MAG5011		
C42	.039 25V			M192P3939R8		192P3939R8
C44	.01 50V			MAG5011		
C45	.01 50V			MAG5011		
C46	.01 50V			MAG5011		
C47	33 50V 10%		NP033	CN0433		10TCC-Q33
C48	68 50V 10%		NP068	CN0468		10TCC-Q68
C49	.0047 50V		GP4700	GP247		5GA-D47
C50	200 50V 10%		GP200	GP320		10TS-T20
C51	330 50V 10%		GP330	GP333		10TS-T33
C52	.039 25V			M192P3939R8		192P3939R8
C53	91 50V 10%		NP0100	CN0310		10TCC-T10
C54	180 50V 10%					10TCC-T18
C55	200 50V 10%		GP200	GP320		10TS-T20
C56	.01 50V			MAG5011		
C57	.01 50V			MAG5011		
C59	.01 50V			MAG5011		

REALISTIC MODEL TRC-427 (21-1534)

PARTS LIST AND DESCRIPTION (CONTINUED)

(When ordering parts, state Model, Part Number, and Description.)

CAPACITORS(cont)

ITEM No.	RATING	MFR. PART No.	REPLACEMENT DATA			
			CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.	
					Q-LINE	GENERAL LINE
C60	.01 50V			MAG5011		
C61	.01 50V			MAG5011		
C62	.0047 25V		WMF1D47	M192P4729R8	QFT2-63	1FT-D47
C36	.039 25V		DPMS6S39	M192P3939R8	QFT2-159	1FT-S39
C64	.022 25V		DPMS2S22	M192P2239R8	QFT2-127	1FT-S22
C66	.01 25V		WMF1S1	M192P1039R8	QFT2-91	1FT-S10
C67	.001 25V		DPMS6D1	M192P10292	QFT2-1	1FT-D10
C69	.001 25V		DPMS6D1	M192P10292	QFT2-1	1FT-D10
C70	.001 50V			GP210		10TS-D10
C72	.01 50V			MAG5011		
C74	.0047 50V		GP4700	GP247		5GA-D47
C75	.1 25V		WMF05P1	M192P1049R8	QFT2-215	1FT-P10
C77	.047 25V			MAG2515		HY-735
C80	.001 50V			GP210		10TS-D10
C81	.01 50V			MAG5011		
C82	.001 50V			GP210		10TS-D10
C83	.001 50V			GP210		10TS-D10
C84	.01 50V			MAG5011		
C85	.01 50V			MAG5011		
C86	.001 50V			GP210		10TS-D10
C88	.01 25V		WMF1S1	M192P1039R8	QFT2-91	1FT-S10
C89	.1 25V		WMF05P1	M192P1049R8	QFT2-215	1FT-P10
C92	33 50V 10%		NP033	CN0433		10TCC-Q33
C93	68 N750 50V 10%			*		10TCU-Q68
C94	33 50V 10%		NP033	CN0433		10TCC-Q33
C97	.01 50V			MAG5011		
C98	220 50V 10%			*		10TCC-T22
C99	100 N750 50V 10%					10TCU-T10
C100	10 50V 10%		NP010	CN0410		10TCC-Q10
C101	.01 50V			MAG5011		
C102	.01 50V			MAG5011		
C104	.01 50V			MAG5011		
C105	.01 50V			MAG5011		
C106	47 50V 10%		NP047	CN0447		10TCC-Q47
C107	220 50V 10%					10TCC-T22
C108	100 50V 10%		NP0100	CN0310		10TCC-T10
C109	470 50V 10%		GP470	GP347		10TS-T47
C110	.001 50V			GP210		10TS-D10
C111	.047 25V			MAG2515		HY-735
C112	470 50V 10%		GP470	GP347		10TS-T47
C113	7 50V +.25	CCC2817091		CN0410		
C115	5 50V +.25	CF1099		CN0568		
C116	.01 50V			MAG5011		
C117	.01 50V			MAG5011		
C118	.01 50V			MAG5011		
C119	.01 50V			MAG5011		
C120	.01 50V			MAG5011		
C121	.01 50V			MAG5011		
C123	.01 50V			MAG5011		
C124	.033 25V		DPMS6S33	M192P3339R8	QFT2-149	1FT-S33
C125	.01 50V			MAG5011		
C127	.01 25V		WMF1S1	M192P1039R8	QFT2-91	1FT-S10
C129	.01 50V			MAG5011		
C130	.022 25V		DPMS2S22	M192P2239R8	QFT2-127	1FT-S22
C131	.033 25V		DPMS6S33	M192P3339R8	QFT2-149	1FT-S33
C133	.01 50V			MAG5011		
C135	.01 50V			MAG5011		
C136	.001 50V			GP210		10TS-D10
C137	.0022 50V			GP222		10TS-D22
C139	.039 25V			M192P3939R8		192P3939R8
C141	.01 50V			MAG5011		
C142	.01 50V			MAG5011		
C144	.01 50V			MAG5011		
C148	.01 50V			MAG5011		
C149	.039 25V			M192P3939R8		192P3939R8
C150	.01 50V			MAG5011		
C151	.01 50V			MAG5011		
C152	.01 50V			MAG5011		
C153	.01 50V			MAG5011		
C154	.01 50V			MAG5011		
C155	.01 50V			MAG5011		
C156	.01 50V			MAG5011		
C157	.01 50V			MAG5011		
C158	.01 50V			MAG5011		
C159	.01 50V			MAG5011		
C160	.001 50V			GP210		10TS-D10
C161	330 50V 10%		GP330	GP333		10TS-T33
C201	.01 50V			MAG5011		
C202	.01 50V			MAG5011		
C203	33 50V 10%		NP033	CN0433		10TCC-Q33
VC1	50	C0924				

*Not normally in distributor's stock. Available thru distributor on order to manufacturer.

PARTS LIST AND DESCRIPTION (CONTINUED)

(When ordering parts, state Model, Part Number, and Description.)

CONTROLS (All wattages 1/2 watt, or less, unless listed)

ITEM No.	FUNCTION	RESISTANCE	REPLACEMENT DATA		
			MFGR. PART No.	MALLORY PART No.	TRW PART No.
VR1	IF Gain	200	P0837		
VR2	Squelch Range	20K	P6416		
VR3	Signal Meter Adj.	20K	P6416		U260R253B
VR4	Power Meter Adj.	50K	P6417		U260R253B
VR5	AMC	1000	P0838		U260R503B
VR101	RF Gain	50K	P1890		U260R102B
VR102	Volume	50K	P1891(18)		
VR104	PA Volume/Switch	50K			
VR103	Squelch	50K	P1890		
VR105	Tone	50K	P2090		

(18) Includes VR102, VR104 and Power Switch.

COILS (RF-IF)

ITEM No.	FUNCTION	REPLACEMENT DATA			REMARKS
		PART No.	OTHER IDENTIFICATION	MILLER PART No.	
L1	Rec Ant (27MHz)	CA3272	LA029	CBS740-	
L2	Rec RF (27MHz)	CA7883	LA224		
L3	Rec Mixer (10.695MHz)	CA7884	LA206		
L4	Rec Mixer (10.695MHz)	CA7442	LA163	CBS508-1TC	
L5	IF (455kHz)	CA3633	LA163		
L6	IF (455kHz)	CA3831	LA183		
L7	IF (455kHz)	CA3635	LA107	8517	
L9	TVI Trap (54MHz)	CA3640	LC017	CB303	
L10	Transmittant	CA7887	LE-089		
L11	Pi Filter	CA7886	LE-088		
L12	Final (27MHz)	CA3409	LC018	CB304	
L13	RF Choke	CA3641	LD-012	4588	
L15	XMT Driver (27MHz)	CA3640	LC-017	CB3 3	
L16	XMT Buffer (27MHz)	CA7885	LA-208		
L17	VCO	CA3701	LA-165		
L18	Buffer PLL	CA3834	LA-201		
L19	Mixer PLL (27MHz)	CA3833	LA-198		
L20	PLL Mixer	CA3420	LA-088	CBS717-TC	

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA			NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000~)	MFGR. PART No.	THORDARSON PART No.	TRIAD PART No.	
T2	1.4A	.13	.9mH	CB2293 TF-153(1)			(1) Number on unit.

TRANSFORMER (Audio Output)

ITEM No.	IMPEDANCE		REPLACEMENT DATA			NOTES
	PRI.	SEC.	MFGR. PART No.	THORDARSON PART No.	TRIAD PART No.	
T1	27	1 16 2 12	TD0163 TF-154(1)			(1) Number on unit.

SPEAKER

ITEM No.	TYPE		REPLACEMENT DATA		NOTES
			MFGR. PART No.	QUAM PART No.	
SP101	4" PM	16 Ohms	S4753		

REALISTIC MODEL TRC-427 (21-1534)

PARTS LIST AND DESCRIPTION (CONTINUED)

(When ordering parts, state Model, Part Number, and Description.)

FUSE DEVICES

ITEM No.	DESCRIPTION	REPLACEMENT DATA					
		PART No.		BUSS PART No.		LITTELFUSE PART No.	
		DEVICE	HOLDER	DEVICE	HOLDER	DEVICE	WORKMAN PART No.
F101	2A Quick Acting	HF0043		AGC2	HRK	312002	150145 FG2-2

MISCELLANEOUS

ITEM No.	PART NAME	PART No.	NOTES
CF-1	Ceramic Filter	C0922	10.695MHz (FL-048)
CF-2	Ceramic Filter	C0923	455kHz (FL-066)
D201	LED	L0762	TLR-104AWI (2.23V @ 28.5mA)
D202	LED	L0762	TLR-104MOD (1.70V @ 11mA)
D203	LED	L0762	TLR-104 CH. 9 (1.70V @ 11mA)
D204	LED	L0776	TLR-321, Ch. Disp
FC-301	Cable Assembly	WWFY104001	Channel Switch
FC-302	Cable	WWFY111001	
FC-303	Cable	WWFY112001	
J1	Jack	W1961	DC PWR
J2	Jack	J0897	PA Speaker (or JK-109)
J3	Jack	J0897	External Speaker (or JK-109)
J201	Jack	J0896	Microphone
J202	Jack	J0819	DC Power
L8	Bead Core	J6421	Antenna
L14	Bead Core	CA3761	27MHz
L21	Bead Core	CA3838	
L-201	Bead Core	CA3754	
MIC	Microphone	CA3839	
M101	Meter	M2222	Microphone Assembly (MK-020)
PL101	Meter	MD361	MT-134
S101	Switch	S2457	(10.20V @ 35mA)
S102	Switch	S2459	ANL/Out
S103	Switch		PA/MON/CB
S104	Switch	S2458	DC Power (Part of Volume Control)
S201	Switch	S1315	Slide Ch. 9-Out
X1	Crystal	MX2336	Channel Select
	P.C. Board	X-7787	10.240MHz
	P.C. Board	X-7788	PC-392AB (Main)
	P.C. Board	X-7789	PC-393AA (Ch. Switch)
			PC-394AA (LED)

CABINETS & CABINET PARTS (When ordering specify model, chassis & color)

ITEM	PART No.	ITEM	PART No.
Cabinet, Top	Z4123	Knob, Control	K2283
Cabinet, Bottom	Z4124	Knob, Channel Select	K2703
Panel, Front	Z4125	Hanger, Microphone	M3105

WIRING DATA

Cable (Speaker)(Unshielded).....	Use BELDEN No. 8782 (AWG24)(4 colors)
Shielding Strap.....	Use BELDEN No. 8660 (3/16" width)
Hook-up Wire (General Use).....	Use BELDEN No. 8524 (AWG22)(13 colors)
Hook-up Wire (Shielded).....	Use BELDEN No. 8401 (Braided Shield)(1 conductor)(AWG25)
	Use BELDEN No. 8421 (Spiral Shield)(1 conductor)(AWG25)
	Use BELDEN No. 8737 (Spiral Shield)(2 conductor)(AWG22)
Microphone Cable (Coiled).....	Use BELDEN No. 9467 (5 conductor-1 shielded)(6 ft.)(AWG28)