

SAMS PHOTOFACT[®] CB RADIO SERIES



CB-207
207
JULY 1978



CONTENTS

TRADE NAME	MODEL	PAGE
COBRA	21GTL 25GTL	5
REALISTIC	TRC-457 (21-1580) TRC-458 (21-1581)	37
SEARS	663.38070700	95



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



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 25GTL

MANUFACTURER'S SPECIFICATIONS

TRANSMITTER

Power Output:	4 watts.
Modulation:	High- and low-level, Class B amplitude modulation.
Frequency Response:	300 — 3000 Hz.
Output Impedance:	50 ohms, unbalanced.

RECEIVER

Sensitivity:	Less than 1 μ V for 10dB(S+N)/N.
Selectivity:	6dB @7KHz, 60dB @10KHz.
Image Rejection:	80dB.
Adjacent-Channel Rejection:	60dB.
I.F. Frequencies:	Double conversion, 1st: 10.695MHz. 2nd: 455KHz.
Automatic Gain Control: (AGC):	Less than 10dB change in audio output for inputs from 10 to 50,000 microvolts.
RF Gain Control:	Adjustable for optimum signal reception.
Noise Blanker:	RF type.
Squelch:	Adjustable; threshold less than 1 μ V.
Audio Output Power:	4 watts.
Frequency Response:	300 — 3000 Hz.
Distortion:	Less than 7% @ 3 watts @ 1000 Hz.
Built-in Speaker:	16 ohms, round.
External Speaker: (Not Supplied)	8 ohms; disables internal speaker when connected.

Courtesy of the Manufacturer

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

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COBRA MODELS 21GTL/25GTL

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 low sides of test equipment to ground unless specified otherwise.

Connect 50-ohm dummy load or antenna before keying transmitter.

Connect microphone.

Suggested Alignment Tools: GC ELECTRONICS:
 L1 thru L4, L14 thru L19 9440
 VC1 8276, 5000
 L10 9091, 8728A, 8728
 L5, L6, L7 5009, 8728A, 8728

SYNTHESIZER ALIGNMENT

TEST EQUIPMENT	TRANSCEIVER	ADJUST	REMARKS
Input of frequency counter to TP10 (Junction VC1, C110 and C111)	Ch. 19	VC1	Adjust for 10.240MHz.
Input of DC meter to TP2.	Ch. 40	L15	Adjust for 3.00 volts
	Ch. 40, XMT		Check for 5.00 volts.
Input of oscilloscope to TP3.	Ch. 19	L16	Adjust for maximum.
Input of frequency counter to TP3.	Ch. 1		Check for 16.270MHz. Check all channels. (See Truth Chart for correct frequencies.)
	Ch. 1, XMT		Check for 16.725MHz. Check all channels. (See Truth Chart for correct frequencies.)
Input of frequency counter to antenna jack.	Ch. 1, XMT		Check for 26.965MHz. If necessary readjust VC1 for 26.965MHz.

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.
 ANL Off, NB Off, RF Gain Maximum, Squelch MINIMUM.

TEST EQUIPMENT	TRANSCEIVER	ADJUST	REMARKS
Output of signal generator thru .01uF to TP11 (FET2, Gate). 455kHz, 1000Hz @ 30% modulation.	Ch. 19	L7, L6, L5	Adjust for maximum output.
Output of signal generator thru .01uF to antenna jack. 27.185MHz, 1000Hz @ 30% modulation	Ch. 19	L4, L3, L2, L1	Adjust for maximum output.
Inject a 100pps, 1uSec. pulse width, signal at antenna jack. TP12 (TR21 Collector).	Ch. 19 NB On	L19	Adjust for maximum amplitude of pulse.

RECEIVER ADJUSTMENTS

Connect an AC VTVM or AF wattmeter across speaker voice coil.
Adjust volume control to obtain a suitable indication.
RF Gain Maximum, ANL Off, NB Off, Squelch MINIMUM.

TEST EQUIPMENT	TRANSCIVER	ADJUST	REMARKS
Output of signal generator thru .01uF to antenna jack. 27.185MHz, 1000Hz @ 30% modulation. Output .4uV.	Ch. 19 Volume Maximum	VR2	IF GAIN Adjust for 2 volts audio.
Output of signal generator thru .01uF to antenna jack. 27.185MHz, 1000Hz @ 30% modulation. Output 100uV.	Ch. 19 Squelch Maximum	VR4	SQUELCH RANGE Adjust so that squelch just breaks.
Output of signal generator thru .01uF to antenna jack. 27.185MHz, 1000Hz @ 30% modulation. Output 100uV.	Ch. 19	VR1	SIG METER Adjust for 9 on SIG scale of meter.

TRANSMITTER ALIGNMENT

Connect an RF wattmeter and 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	TRANSCIVER	ADJUST	REMARKS
	Ch. 19	L18, L17, L14, L10	Adjust for maximum.
	Ch. 19	L10	Adjust for 3.8 watts.

TRANSMITTER ADJUSTMENTS

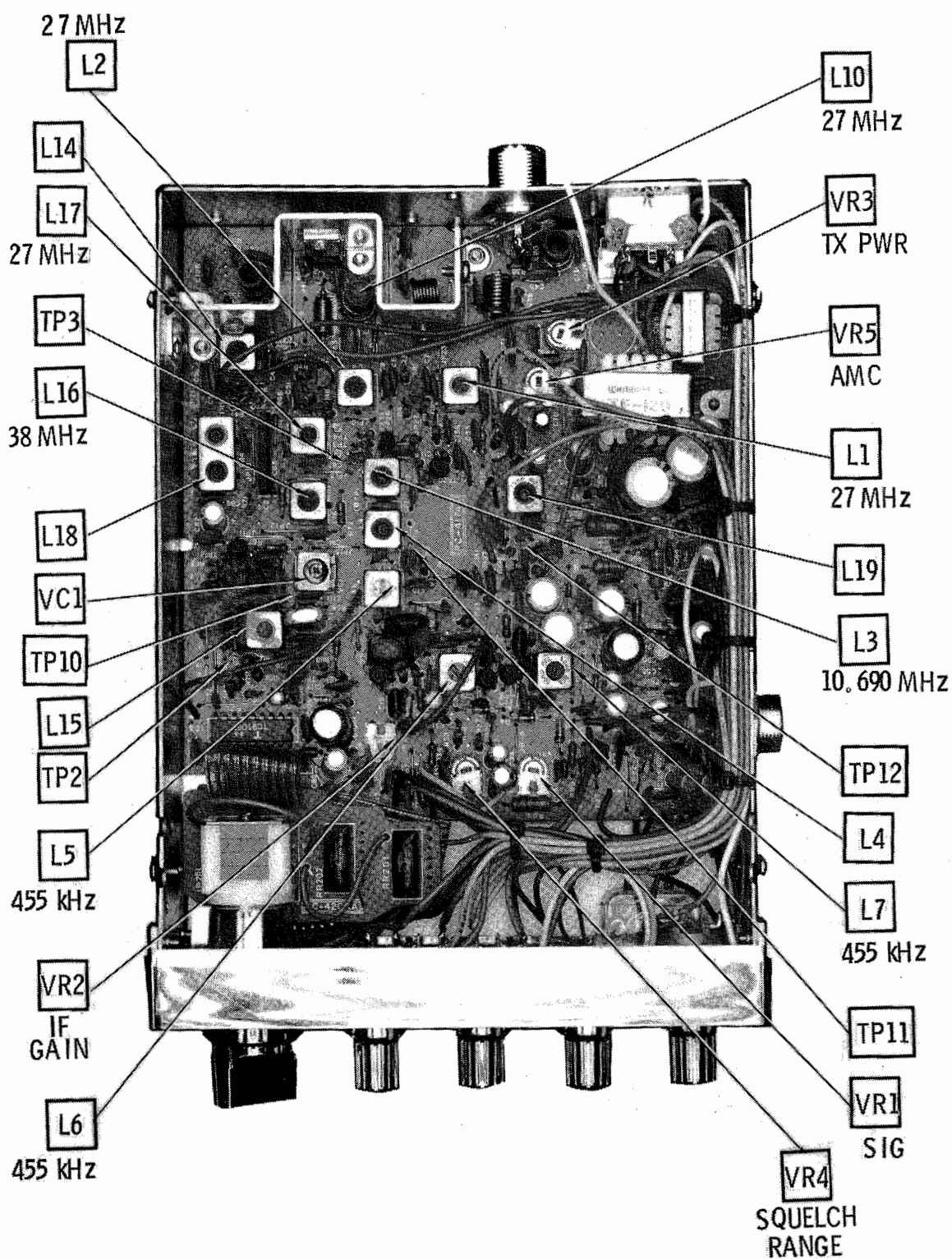
Connect an RF wattmeter and 50-ohm, 25-watt dummy load to antenna connector.
NOTE: Be sure to check transmit frequency and power on all active channels after adjustment of transmitter.
See page 4 for channel frequencies.

TEST EQUIPMENT	TRANSCIVER	ADJUST	REMARKS
Input of oscilloscope or harmonic meter to antenna jack. Inject a 1000Hz, 100mV signal at Mic input.	Ch. 19	VR5	AMC Adjust for 95% modulation.
Connect an RF wattmeter and 50-ohm, 25-watt dummy load to antenna connector.	Ch. 19	VR3	TX PWR METER Adjust so that TX PWR meter agrees with RF wattmeter.

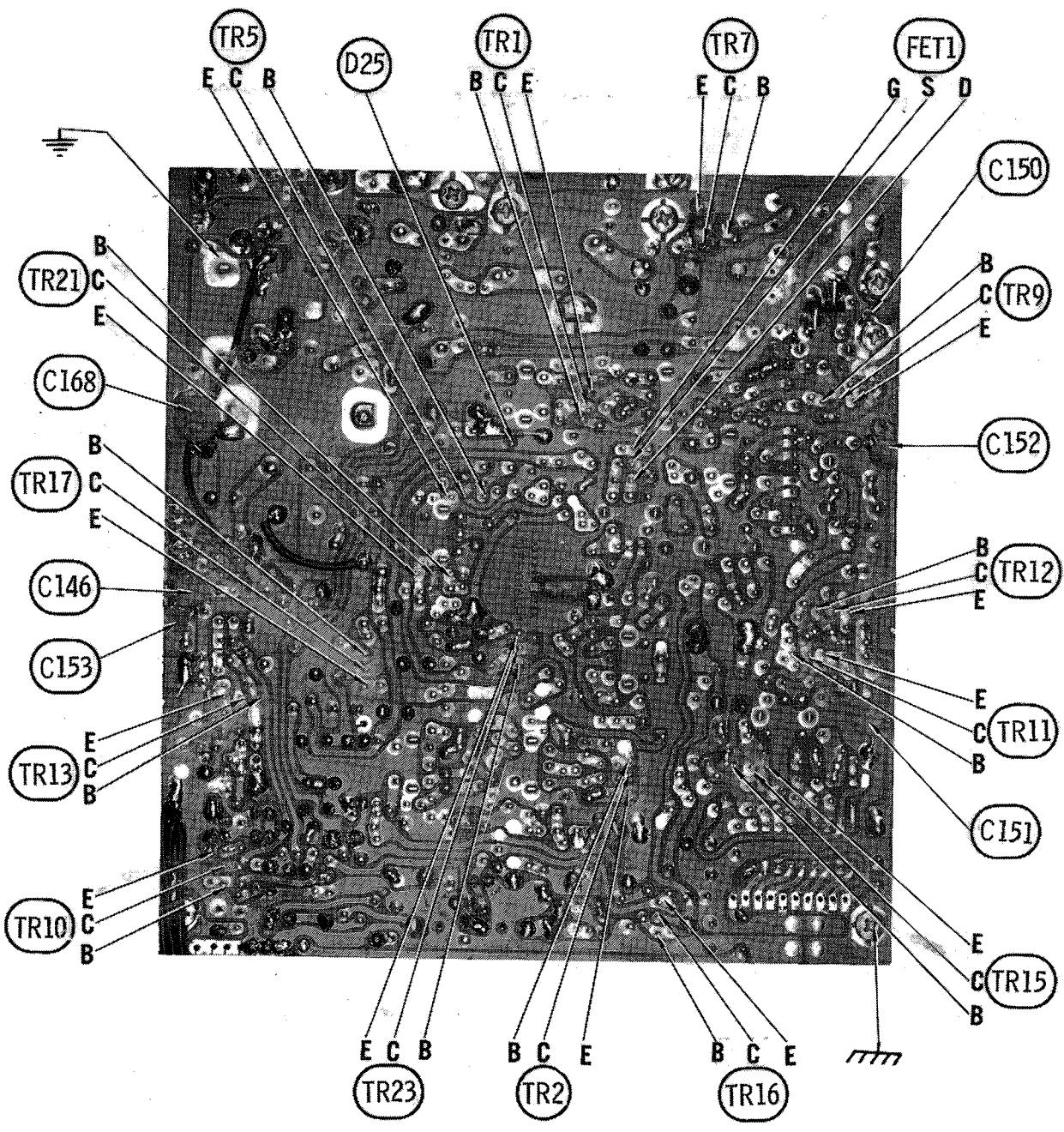
COBRA MODELS 21GTL/25GTL

TRUTH CHART

CHANNEL	1 = 7.00 Volts 0 = 0 Volts								REC SYNTHESIZER OUTPUT IN MHz AT TP3	XMT SYNTHESIZER OUTPUT IN MHz AT TP3	
	IC3 PROGRAM DIVIDER										
	PINS										
	17	16	15	14	13	12	11	10			
1	1	1	1	1	1	1	1	1	16.270	16.725	
2	1	1	1	0	0	0	0	1	16.280	16.735	
3	1	1	1	0	1	0	0	1	16.290	16.745	
4	1	1	1	1	1	0	1	0	16.310	16.765	
5	1	1	1	0	1	0	0	0	16.320	16.775	
6	1	1	1	0	0	0	1	0	16.330	16.785	
7	1	1	1	1	1	1	0	1	16.340	16.795	
8	1	1	1	0	0	0	0	0	16.360	16.815	
9	1	1	1	1	1	0	0	0	16.370	16.825	
10	1	1	0	0	0	1	0	0	16.380	16.835	
11	1	1	0	1	1	1	1	1	16.390	16.845	
12	1	1	0	0	0	0	0	1	16.410	16.865	
13	1	1	0	0	1	0	0	1	16.420	16.875	
14	1	1	0	1	1	0	1	0	16.430	16.885	
15	1	1	0	0	1	0	0	0	16.440	16.895	
16	1	1	0	0	0	0	1	0	16.460	16.915	
17	1	1	0	1	1	1	0	1	16.470	16.925	
18	1	1	0	0	0	0	0	0	16.480	16.935	
19	1	1	0	1	1	0	0	0	16.490	16.945	
20	1	0	1	0	0	1	0	0	16.510	16.965	
21	1	0	1	1	1	1	1	1	16.520	16.975	
22	1	0	1	0	0	0	0	1	16.530	16.985	
23	1	0	1	0	1	0	0	1	16.560	17.015	
24	1	0	1	1	1	0	1	0	16.540	16.995	
25	1	0	1	0	1	0	0	0	16.550	17.005	
26	1	0	1	0	0	0	1	0	16.570	17.025	
27	1	0	1	1	1	1	0	1	16.580	17.035	
28	1	0	1	0	0	0	0	0	16.590	17.045	
29	1	0	1	1	1	0	0	0	16.600	17.055	
30	1	0	0	0	0	1	0	0	16.610	17.065	
31	1	0	0	1	1	1	1	1	16.620	17.075	
32	1	0	0	0	0	0	0	1	16.630	17.085	
33	1	0	0	0	1	0	0	1	16.640	17.095	
34	1	0	0	1	1	0	1	0	16.650	17.105	
35	1	0	0	0	1	0	0	0	16.660	17.115	
36	1	0	0	0	0	0	1	0	16.670	17.125	
37	1	0	0	1	1	1	0	1	16.680	17.135	
38	1	0	0	0	0	0	0	0	16.690	17.145	
39	1	0	0	1	1	0	0	0	16.700	17.155	
40	0	1	0	0	0	1	0	0	16.710	17.165	

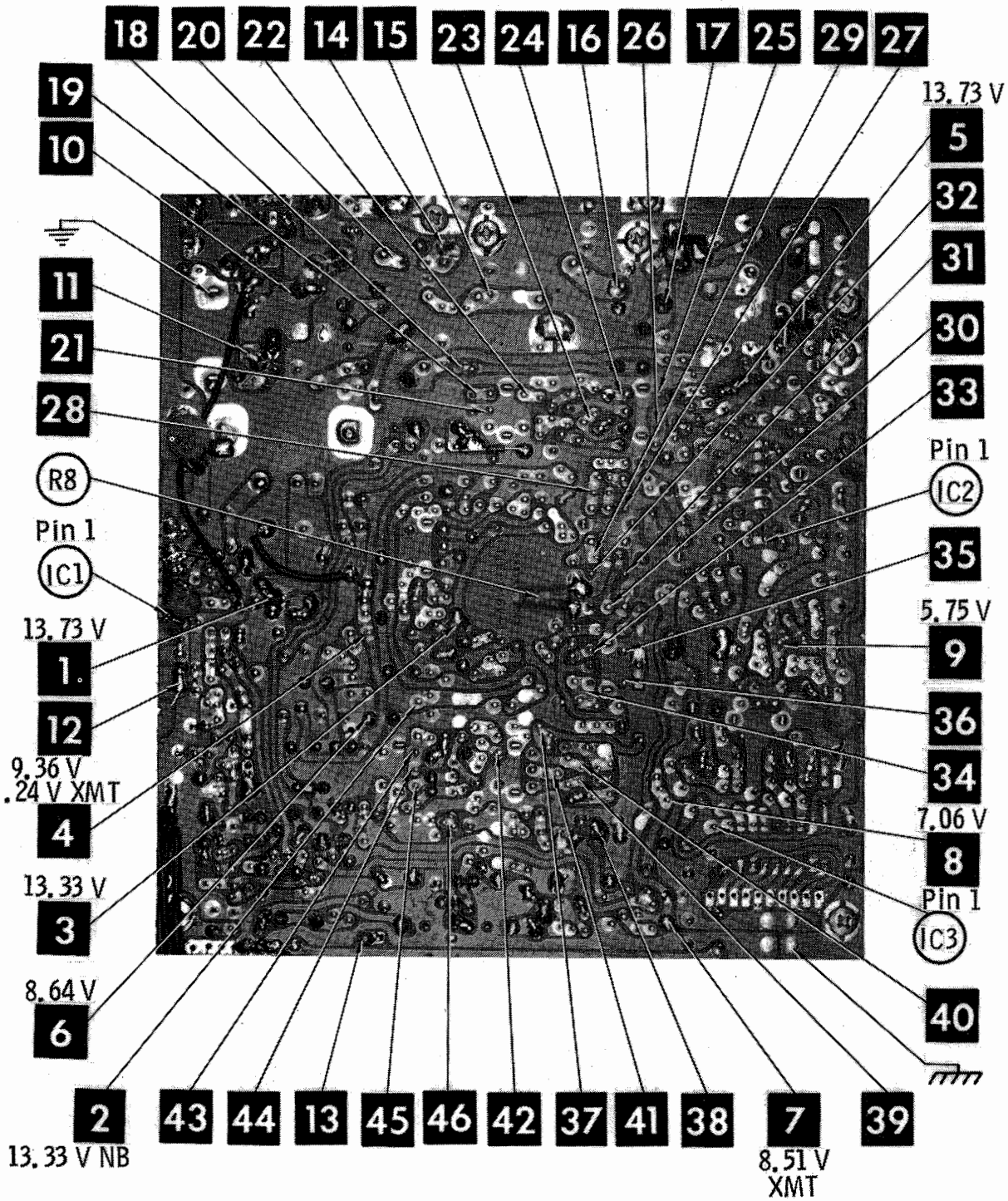


CHASSIS - BOTTOM

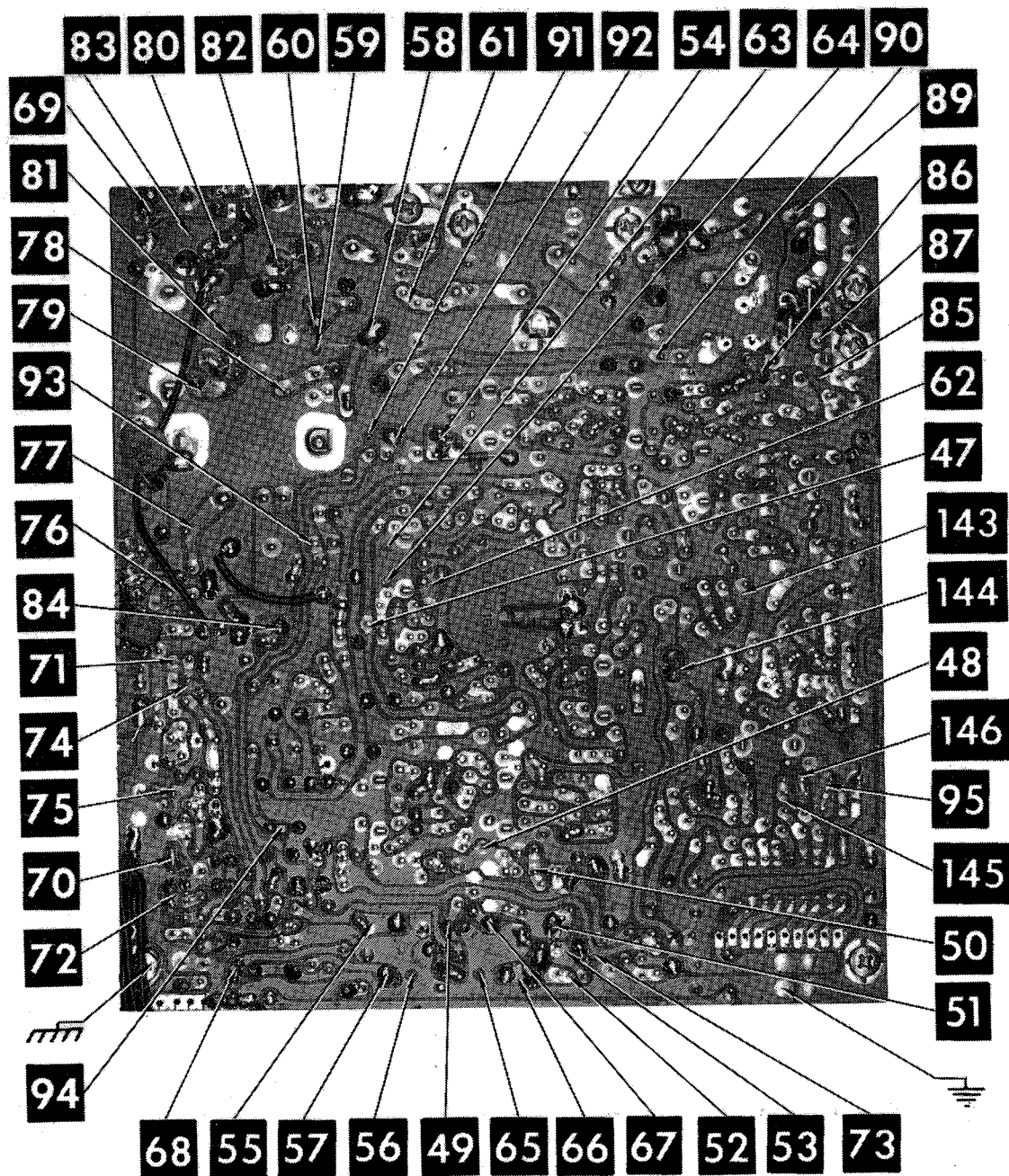


MAIN BOARD

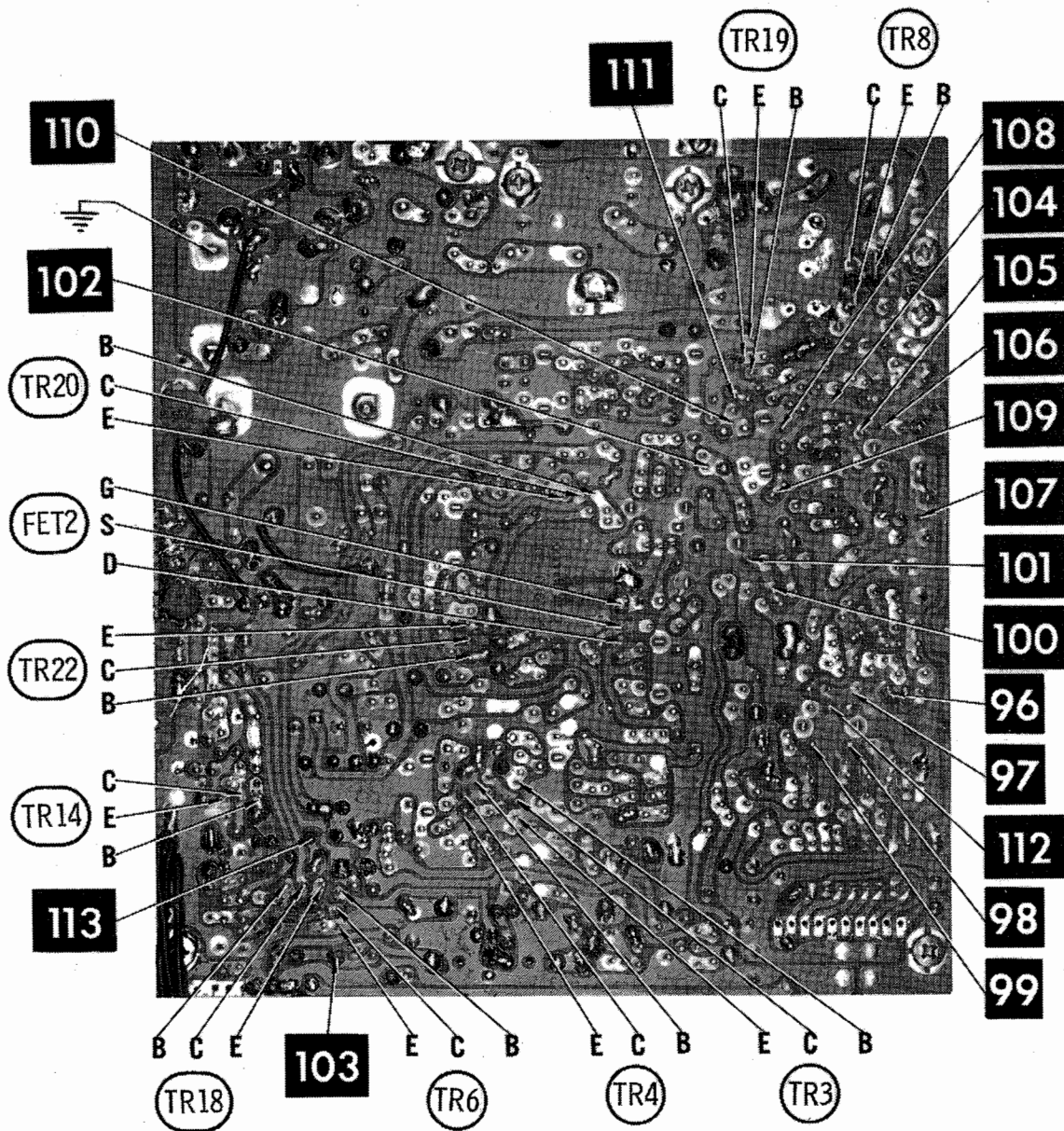
COBRA MODELS 21GTL/25GTL



MAIN BOARD

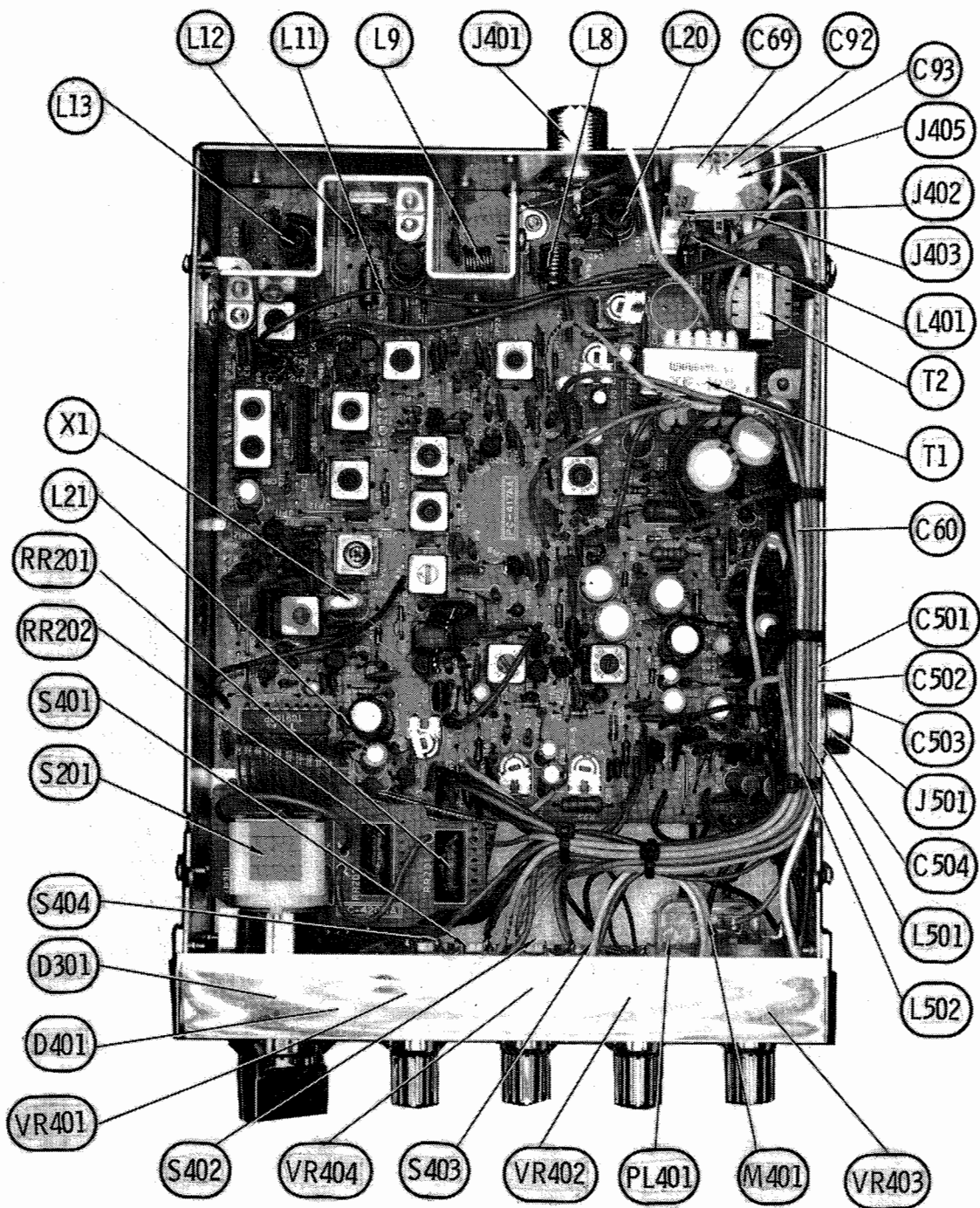


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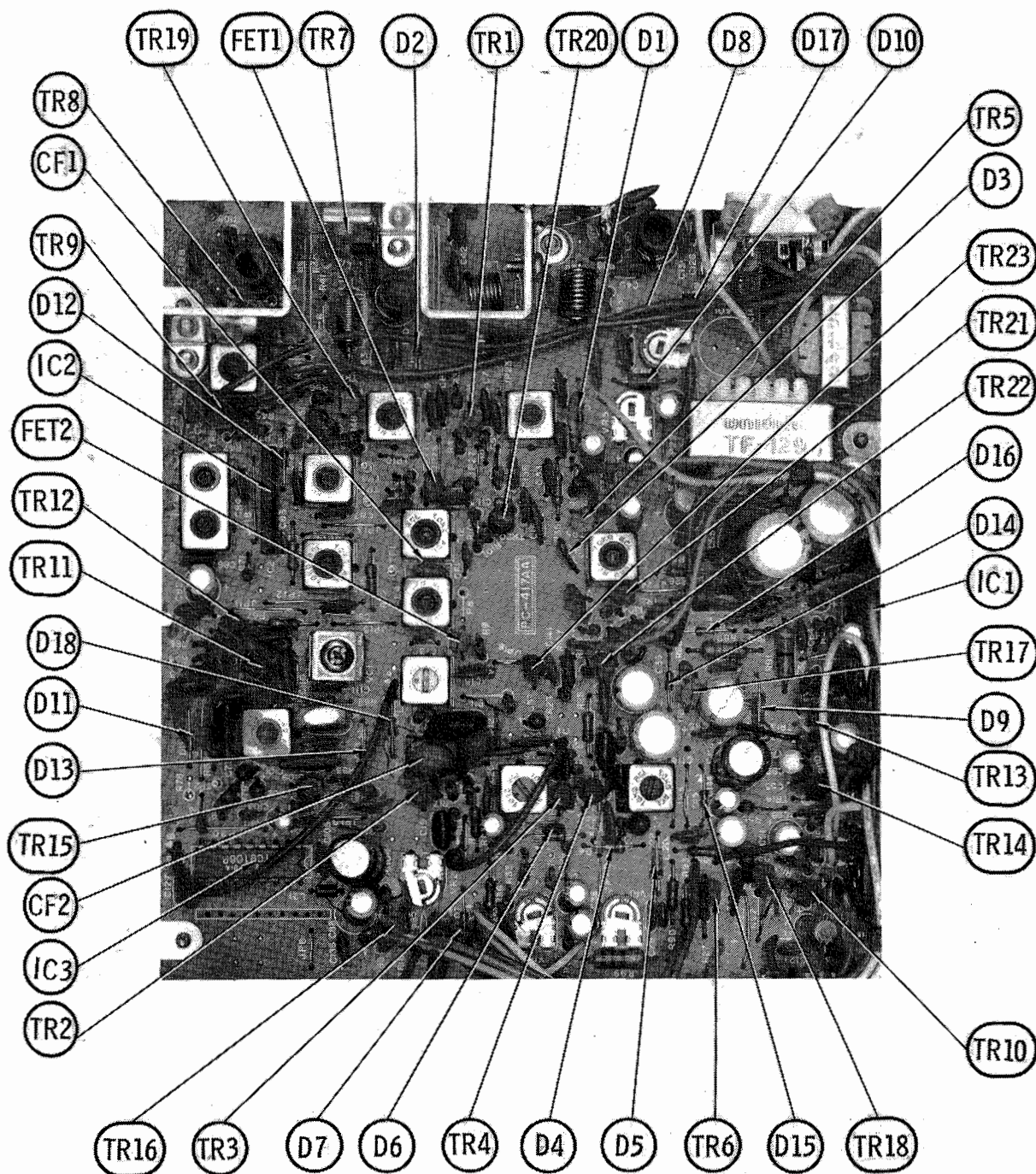


COBRA MODELS 21GT/25GT

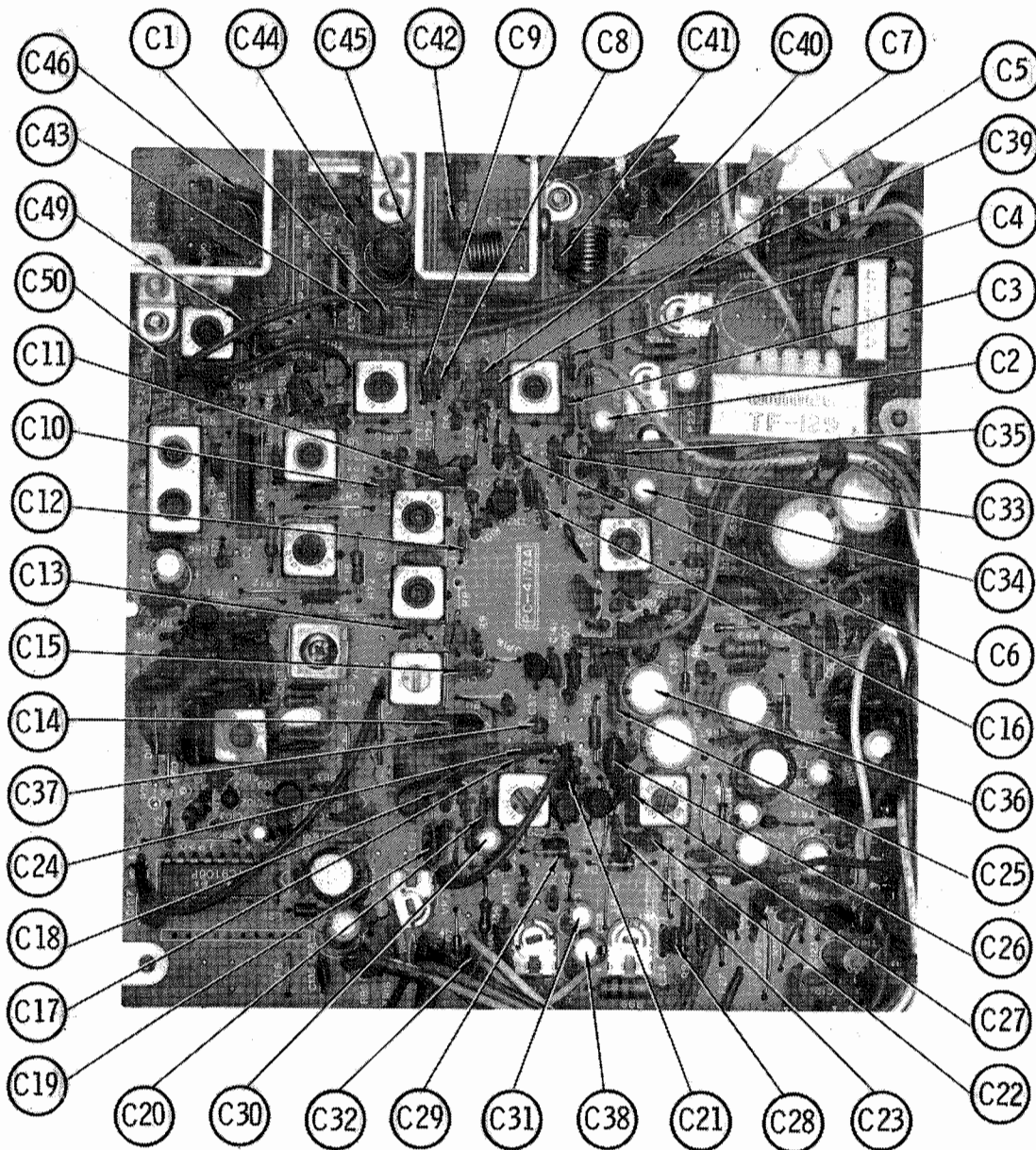
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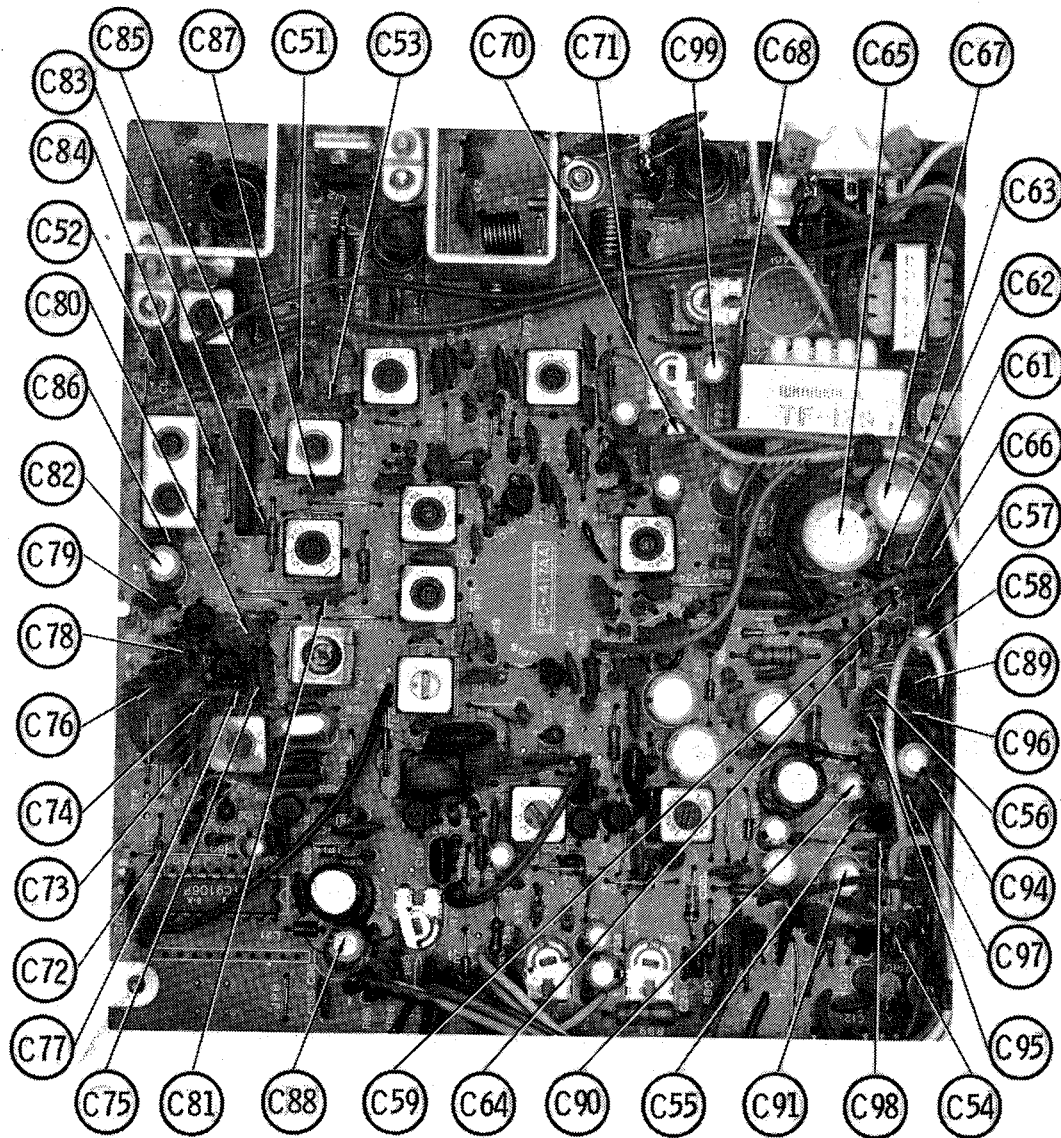
CHASSIS - BOTTOM



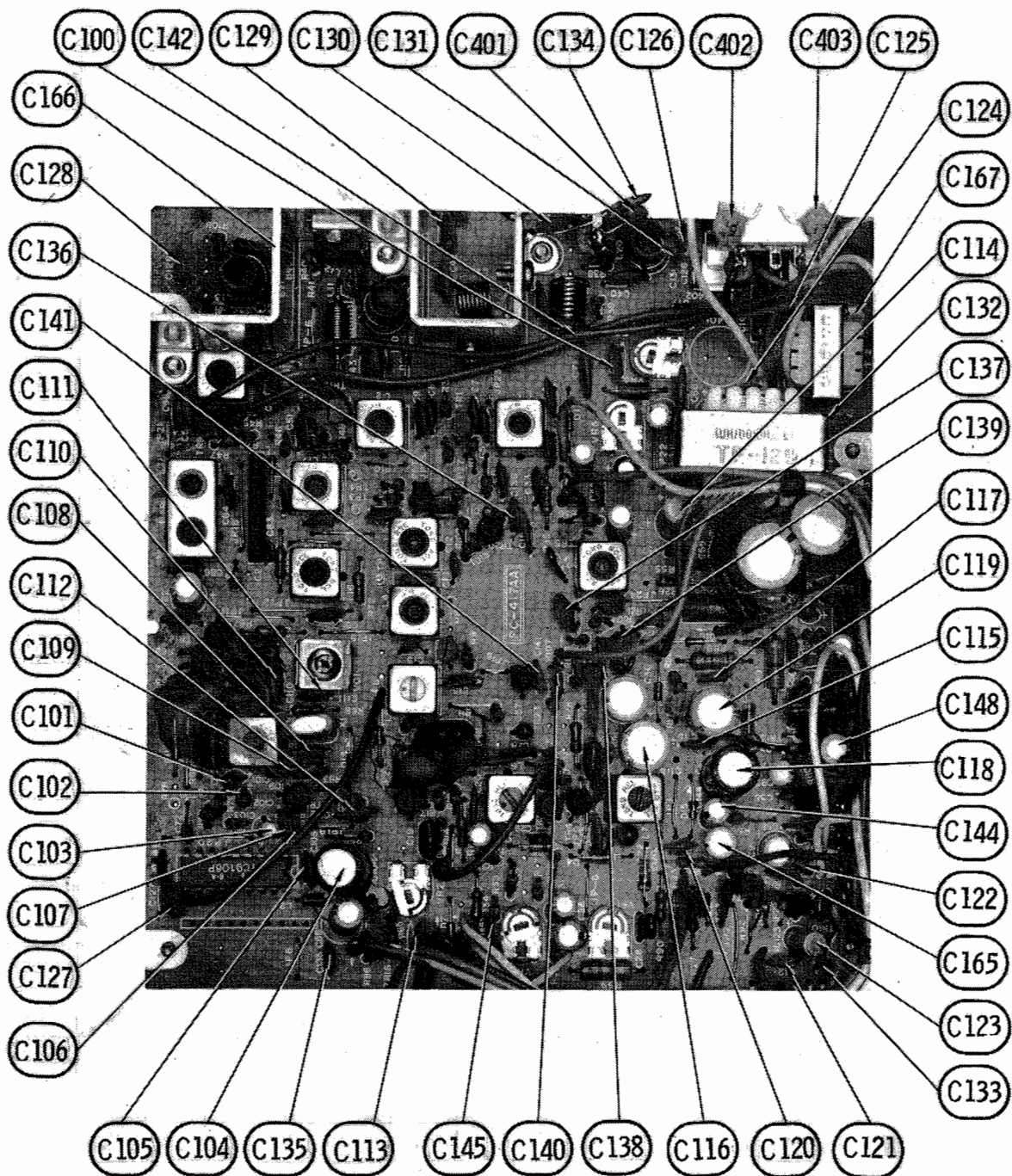
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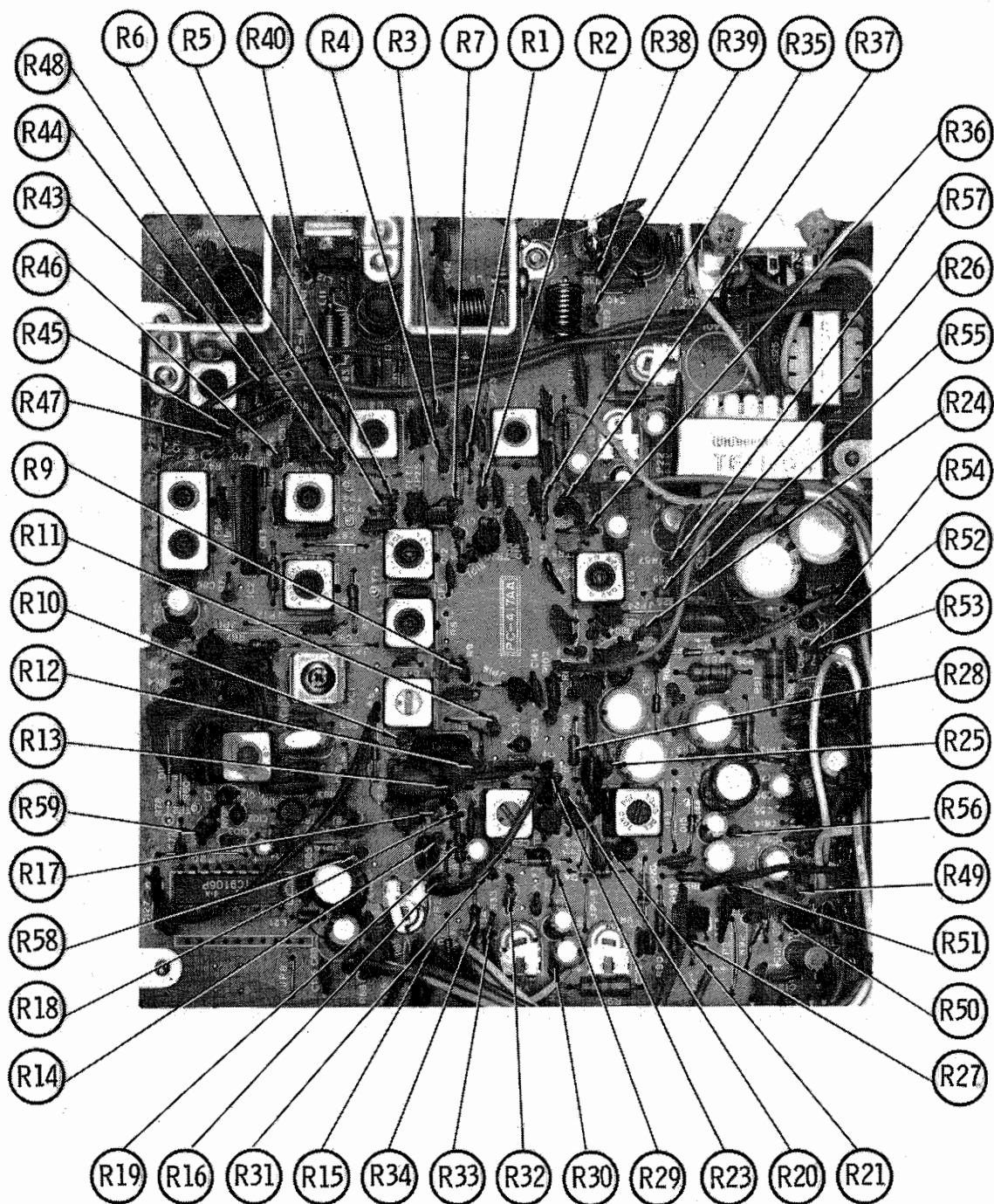
MAIN BOARD



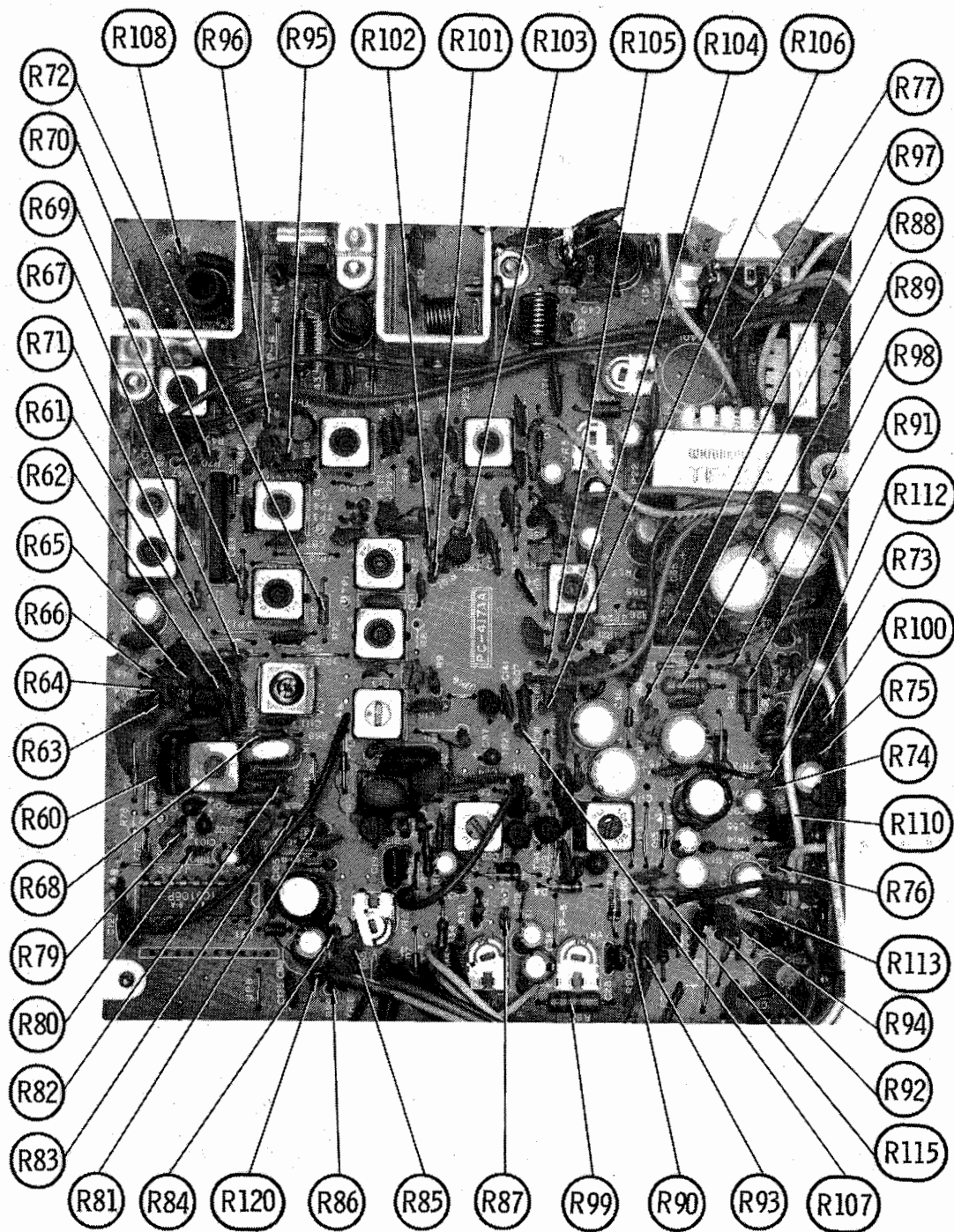
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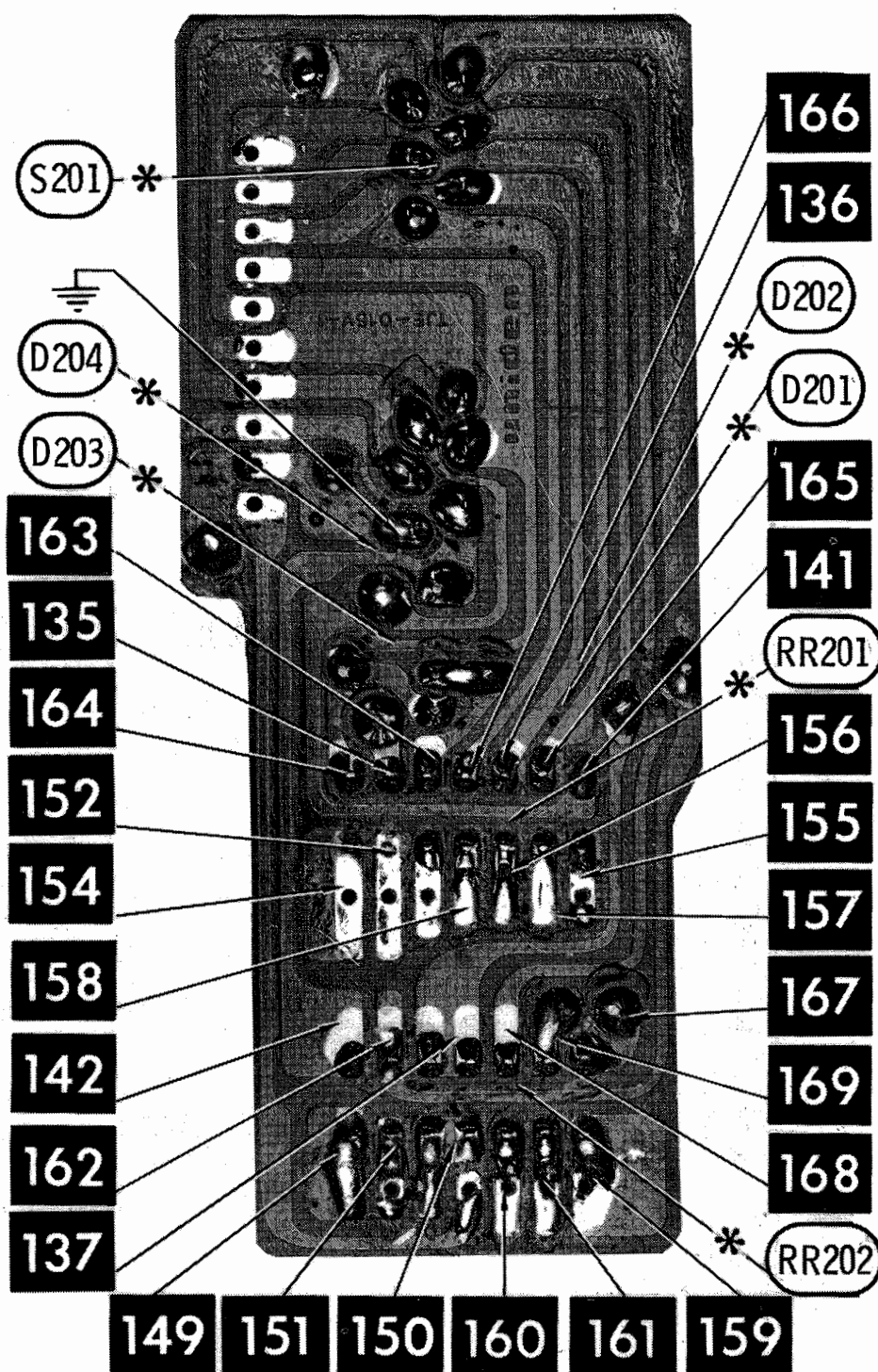
MAIN BOARD



MAIN BOARD



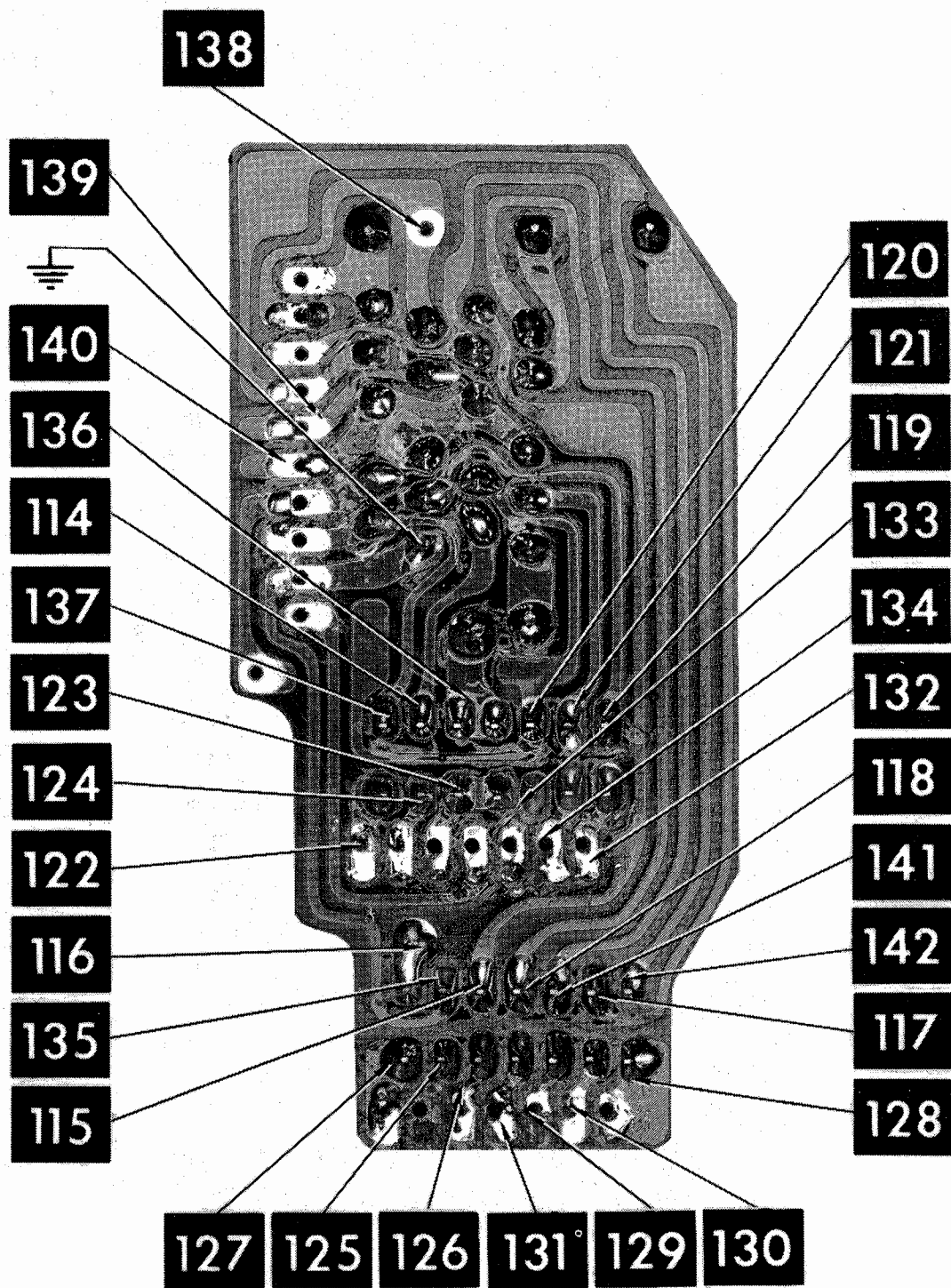
MAIN BOARD



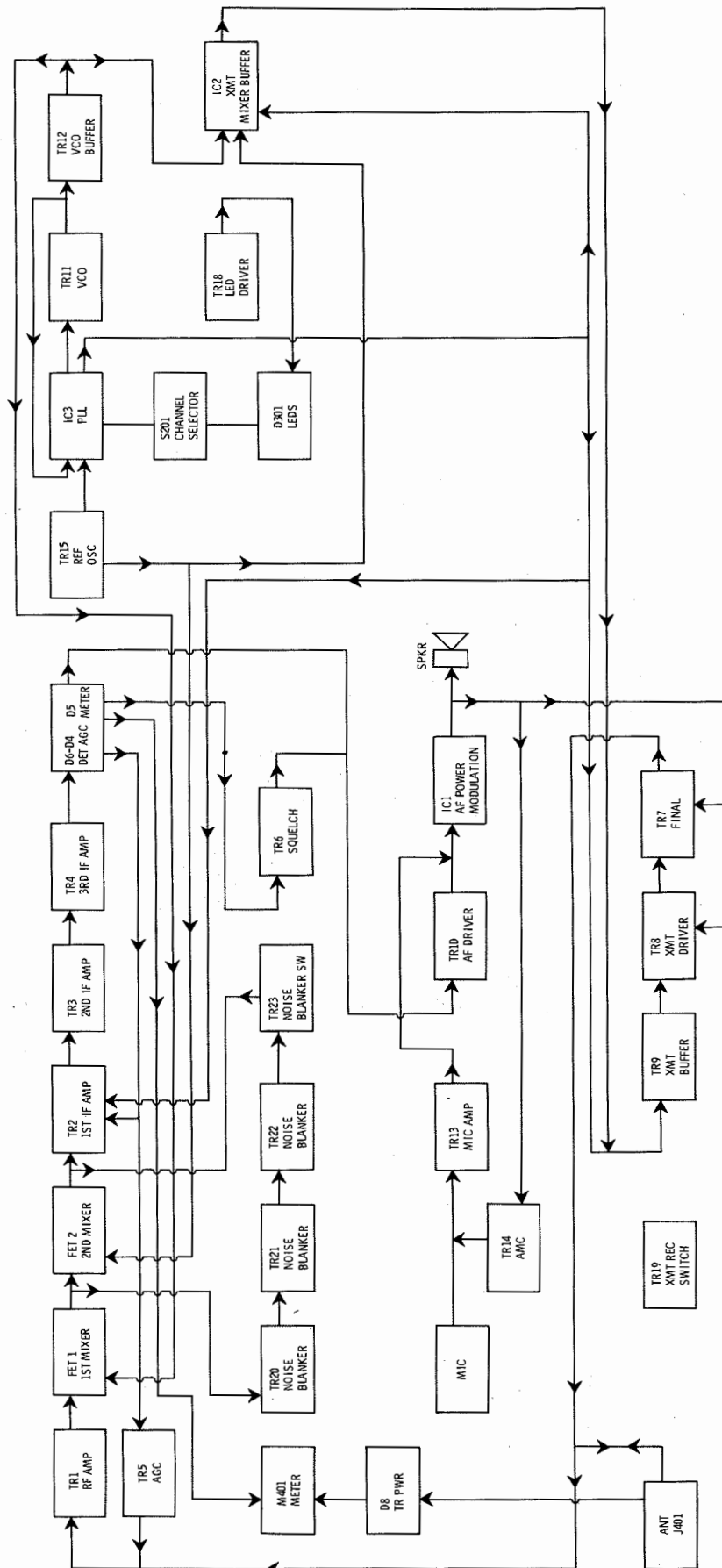
COBRA MODELS 21GTL/25GTL

* Component located on top side

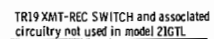
SWITCH BOARD (MODEL 21GTL)



SWITCH BOARD (MODEL 25GTL)



BLOCK DIAGRAM

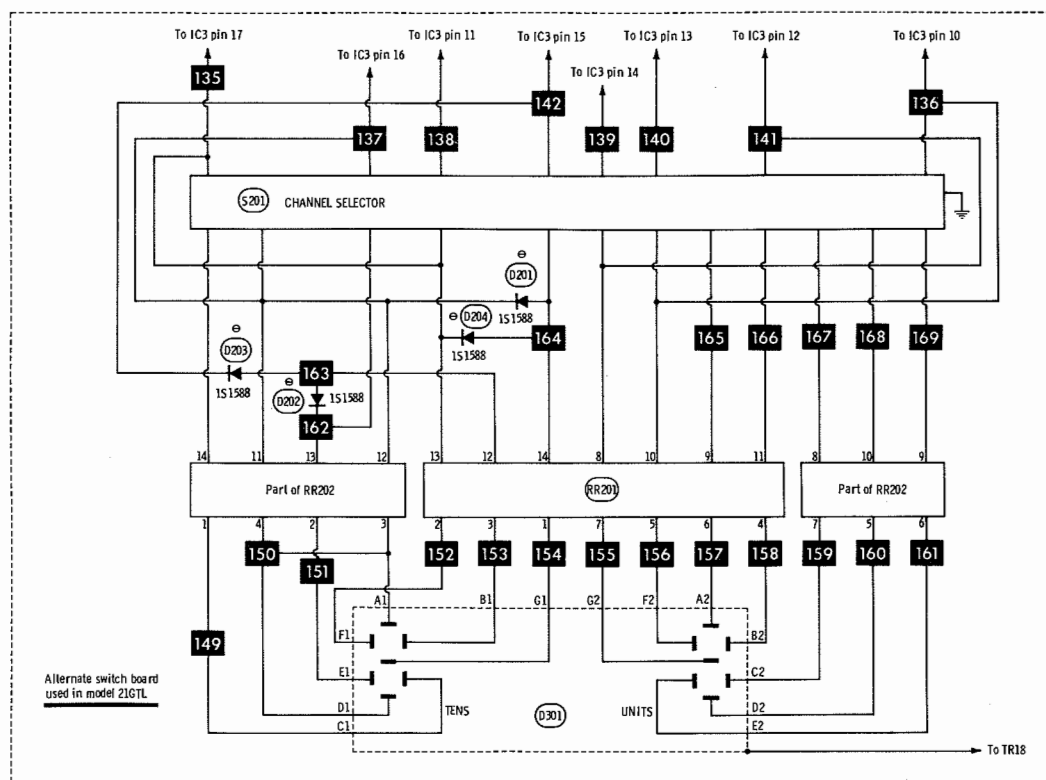
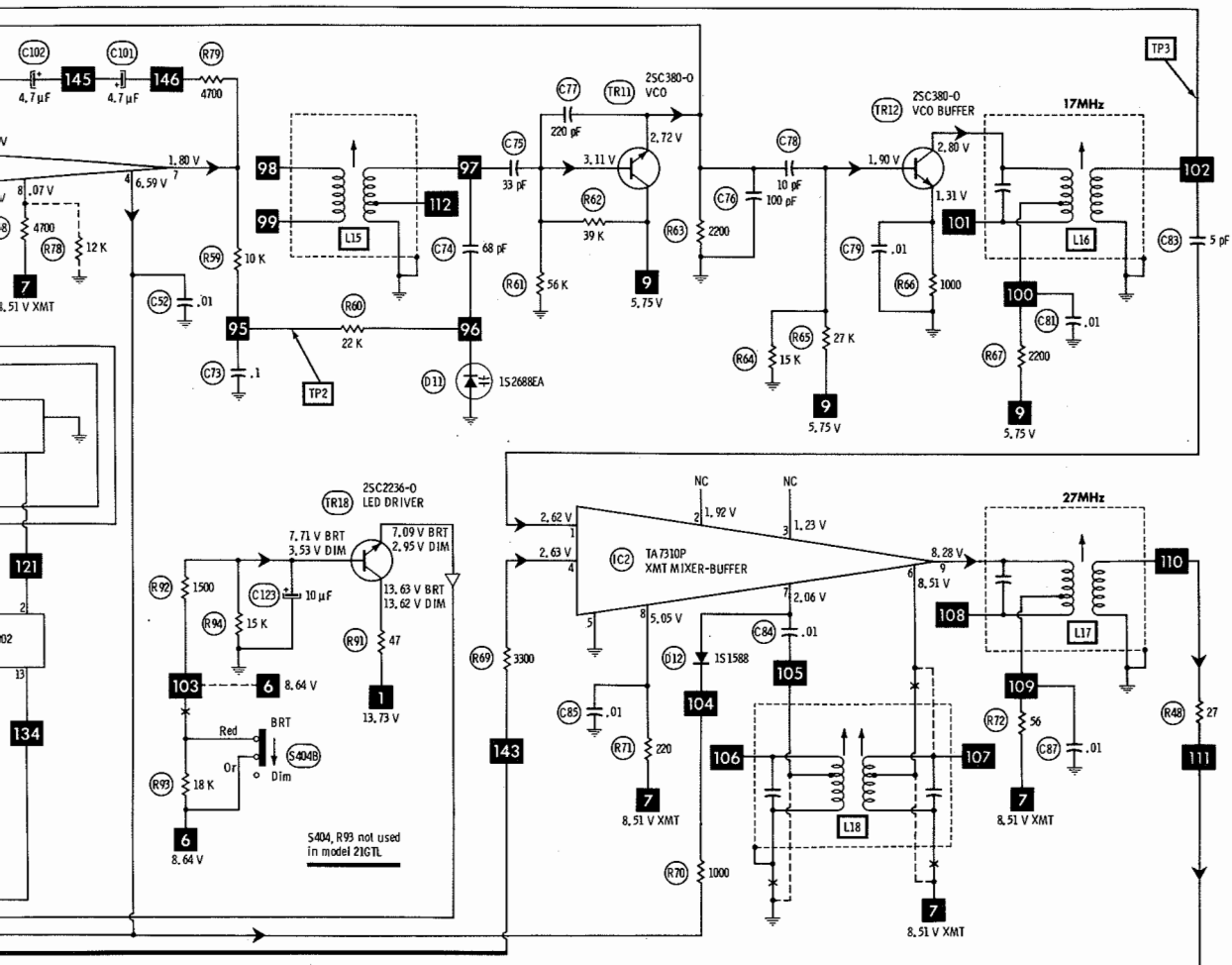


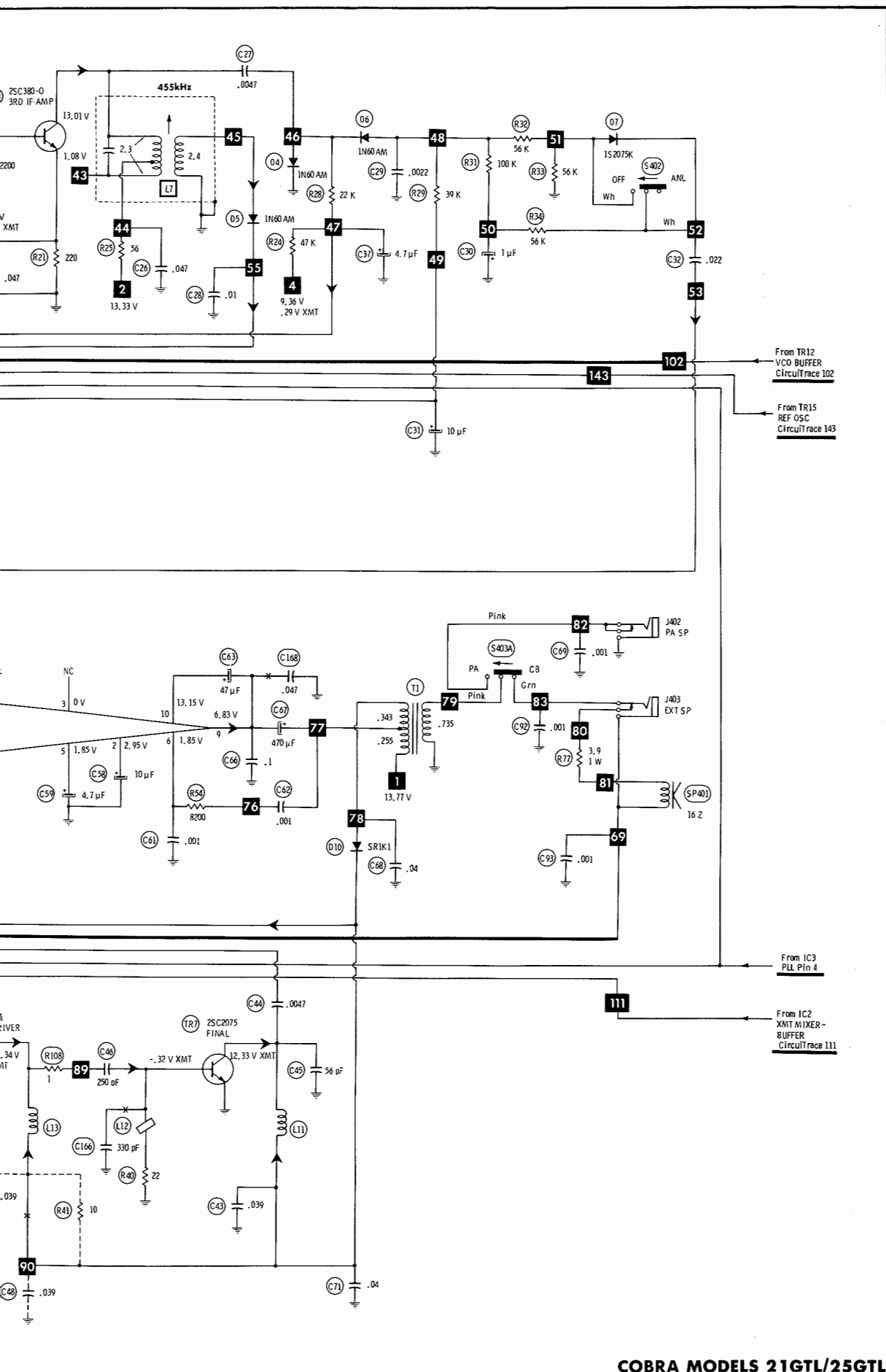
PARTS LIST AND DESCRIPTION

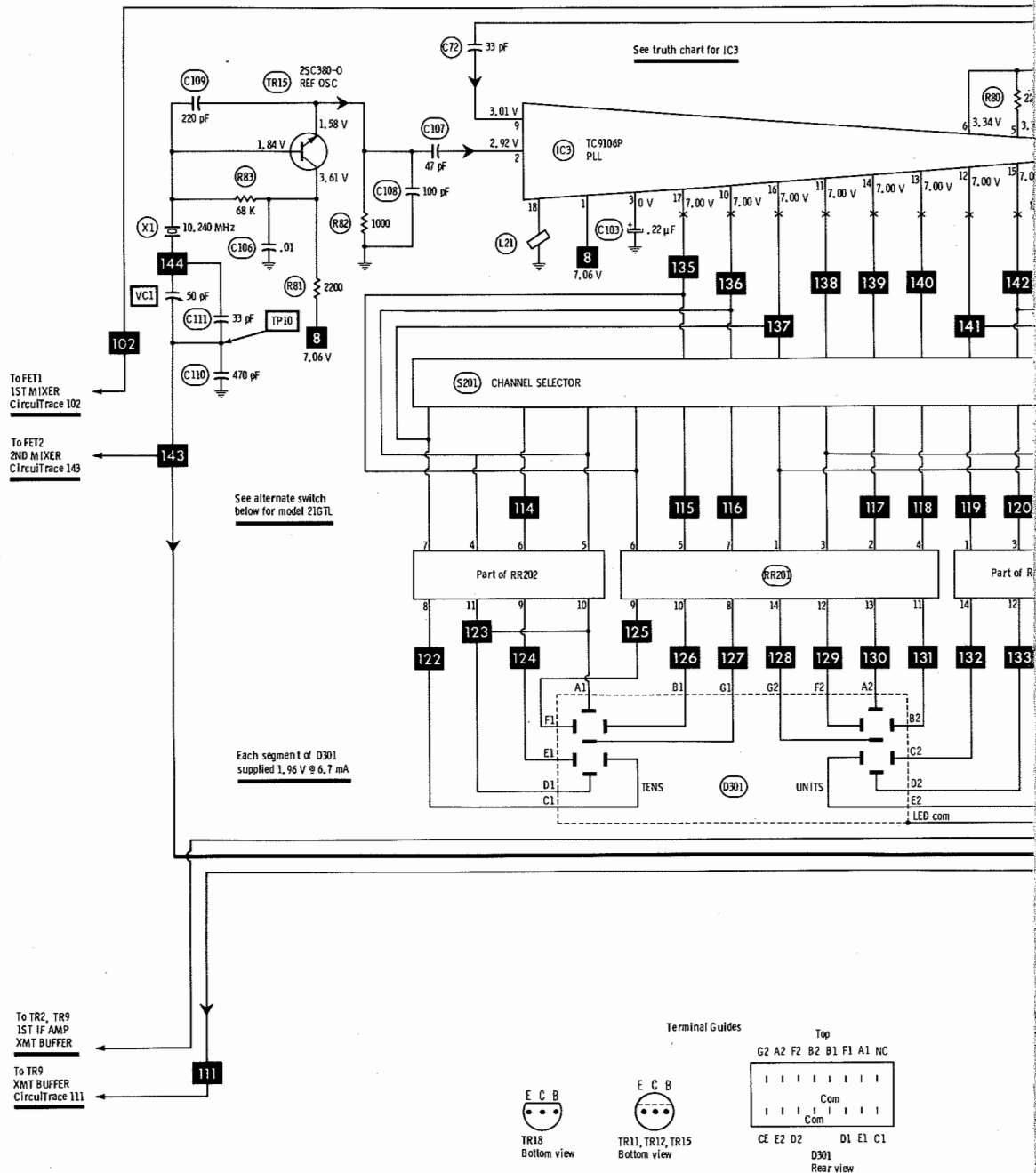
(When ordering parts, state Model, Part Number, and Description.)

SEMICONDUCTORS (Select replacement transistor for best results)

ITEM No.	TYPE No.	MFR. PART No.	REPLACEMENT DATA									
			GENERAL ELECTRIC PART No.	MALLORY PART No.	MOTOROLA PART No.	RAYTHEON PART No.	RCA PART No.	SPRAGUE PART No.	SYLVANIA PART No.	THORDARSON PART No.	WORKMAN PART No.	ZENITH PART No.
D1	1S1588	150-014-9-001	GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	ZEN-430
D2	1S1588		GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
D3	1S1588		GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
O4	1N60AM		1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	1N60	WEP134	
D5	1N60AM	150-014-9-001	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	1N60	WEP134	ZEN-430
	1N60		1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	1N60	WEP134	ZEN-430
O6	1N60AM	150-014-9-001	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	1N60	WEP134	ZEN-430
	1N60		1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	1N60	WEP134	ZEN-430
D7	1S2075K	151-028-9-001	GE-300	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG177	1N4148	WEP1062	
D8	1S1588	151-051-9-001	GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
D9	1N60AM	150-014-9-001	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	1N60	WEP134	ZEN-430
	1N60		1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	1N60	WEP134	ZEN-430
D10	SR1K-1	151-040-9-003	GE-504A	PTC201	HEPRO0052	REN 116	SK3030	RT-213	ECG116	1N4004	WEP156	212-76-02
D11	1S2688EA	154-004-9-001				REN 614	SK3126		ECG613			103-281
D12	1S1588	151-051-9-001	GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
D13	WZ-071	151-075-9-001	GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
O14	1S1588	151-051-9-001	GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
D15	0529, 1L	152-089-9-001										
D16	1S1588	151-051-9-001	GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
O17	S5277B	151-076-9-001	GE-504A	PTC201	HEPRO0052	REN 116	SK3030	RT-213	ECG116	1N4004	WEP156	212-76-02
D18			GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
D201			GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
D202	1S1588	151-051-9-001	GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
O203	1S1588	151-051-9-001	GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
D204	1S1588	151-051-9-001	GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
FET1	2SK104H	182-055-9-001	GE-FET-2	PTC161	HEPF0021	REN 132	SK3448	RT-175	ECG312	1N4148	WEP925	ZEN-123
FET2	2SK104H	182-055-9-001	GE-FET-2	PTC161	HEPF0021	REN 132	SK3448	RT-175	ECG312	1N4148	WEP925	ZEN-123
IC1	TA7222P	307-143-9-003										
IC2	TA7310P	307-133-9-004				REN 1192	SK3487		ECG1192			
IC3	TC9106D	307-144-9-001					SK3445					
TR1	2SC1923BN	176-089-9-001	GE-61	PTC132	HEPS0016	REN 107	SK3018	RT-107	ECG229	2SC535	WEP956	
TR2	2SC380-0	176-089-9-002	GE-61*	PTC136*	HEPS0016*	REN 107	SK3018*	RT-107A	ECG107	2SC380	WEP380	ZEN-127
TR3	2SC 180-0	176-089-9-002	GE-61*	PTC136*	HEPS0016*	REN 107	SK3018*	RT-107A	ECG107	2SC380	WEP380	ZEN-127
TR4	2SC380-0	176-089-9-002	GE-61*	PTC136*	HEPS0016*	REN 107	SK3018*	RT-107A	ECG107	2SC380	WEP380	ZEN-127
TR5	2SC1815-0	176-085-9-002	GE-62	PTC136*	HEPS0015*	REN 236	SK3245	RT-304	ECG199	WEP66	121-29000	
TR6	2SC1815-0	176-085-9-002	GE-62	PTC136*	HEPS0015*	REN 236	SK3245	RT-304	ECG199	WEP66	121-29000	
TR7	2SC2075	176-089-9-007	GE-215	PTC186	HEPS0016	REN 235	SK3197	RT-146	ECG235	WEP785		
TR8	2SC2091	176-074-9-002 (13)	GE-215	PTC186	HEPS0016	REN 235	SK3197	RT-146	ECG235	2SC1366	WEP785	
TR9	2SC941-0	176-089-9-004	GE-210*	PTC132*	HEPS0016*	REN 123A*	SK3122	RT-107A	ECG123A*	2SC460	WEP66	121-29000*
	2SC941TM-0		GE-210*	PTC132*	HEPS0016*	REN 123A*	SK3122	RT-107A	ECG123A*	2SC460	WEP66	121-29000*
TR10	2SC458C	176-048-9-002	GE-210*	PTC121*	HEPS0009*	REN 123A*	SK3122	RT-187	ECG289	2SC458	WEP458	121-29000*
TR11	2SC380-0	176-089-9-002	GE-61*	PTC136*	HEPS0016*	REN 107	SK3018*	RT-107A	ECG107	2SC380	WEP380	ZEN-127
TR12	2SC380-0	176-089-9-002	GE-61*	PTC136*	HEPS0016*	REN 107	SK3018*	RT-107A	ECG107	2SC380	WEP380	ZEN-127
TR13	2SC .8C	176-048-9-002	GE-210*	PTC121*	HEPS0009*	REN 123A*	SK3122	RT-187	ECG289	2SC458	WEP458	121-29000*
TR14	2SA495-0		GE-221*	PTC103*	HEPS0013*	REN 159*	SK3466	RT-303	ECG159*	2SA495	WEP495	ZEN-106
	2SA495TM-0	177-037-9-001	GE-221*	PTC103*	HEPS0013*	REN 159*	SK3466	RT-303	ECG159*	2SA495	WEP495	ZEN-106
TR15	2SC380-0	176-089-9-002	GE-61*	PTC136*	HEPS0016*	REN 107	SK3018*	RT-107A	ECG107	2SC380	WEP380	ZEN-127
TR16	2SA495-0		GE-221*	PTC103*	HEPS0013*	REN 159*	SK3466	RT-303	ECG159*	2SA495	WEP495	ZEN-106
	2SA495TM-0	177-037-9-001	GE-221*	PTC103*	HEPS0013*	REN 159*	SK3466	RT-303	ECG159*	2SA495	WEP495	ZEN-106
TR17	2SC2236Y	176-089-9-006	GE-276	PTC180	HEPS0016	REN 306	SK3197	RT-310	ECG306	WEP771		
TR18	2SC2236-0	176-089-9-005	GE-276	PTC180	HEPS0016	REN 306	SK3197	RT-310	ECG306	WEP771		
TR19	2SC1815-0	176-085-9-002	GE-62	PTC136*	HEPS0015*	REN 236	SK3245	RT-304	ECG199	WEP66	121-29000	
TR20	2SC380-0	176-089-9-002	GE-61*	PTC136*	HEPS0016*	REN 107	SK3018*	RT-107A	ECG107	2SC380	WEP380	ZEN-127
TR21	2SC1815Y	176-089-9-003	GE-62	PTC136*	HEPS0015*	REN 236	SK3245	RT-304	ECG199	WEP66	121-29000	
TR22	2SA495-0		GE-221*	PTC103*	HEPS0013*	REN 159*	SK3466	RT-303	ECG159*	2SA495	WEP495	ZEN-106
	2SA495TM-0	177-037-9-001	GE-221*	PTC103*	HEPS0013*	REN 159*	SK3466	RT-303	ECG159*	2SA495	WEP495	ZEN-106
TR23	2SC1815Y	176-089-9-003	GE-62	PTC136*	HEPS0015*	REN 236	SK3245	RT-304	ECG199	WEP66	121-29000	







- ✖ Circuitry not used in some versions
 - Circuitry used in some versions
 - ⊕ See parts list
 - ✱ Nominal value
 - ⊥ Ground
 - ⏏ Chassis
 - ▽ Common tie point
- Measurements made in Channel 1 with switching as shown 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. Arrow at control indicates direction of advance. Terminal identification may not be found on unit. Resistors are 1/2W or less, 5% unless noted. Value in () used in some versions.

A PHOTOFACIT STANDARD NOTATION SCHEMATIC
WITH **CIRCUITRACE®**

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PARTS LIST AND DESCRIPTION (CONTINUED)

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

ELECTROLYTIC CAPACITORS (cont)

ITEM No.	RATING	REPLACEMENT DATA				
		MFR. PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.	
					Q-LINE	GENERAL LINE
C91	33 16V	022-157-9-006	PC30-25	VTT33025	QV1-63	EV-1325
C94	10 16V	022-157-9-004	PC10-25	VTT10B25	QV1-41	EV-1222
C99	4.7 25V	022-157-9-003	PC5-50	VTT4R7B50	QV1-27	EV-1319
C101	4.7 16V	027-026-9-004		TDC475M035FL	QDT1-49	SD35-4R79
C102	4.7 16V	027-026-9-004		TDC475M035FL	QDT1-49	SD35-4R79
C103	.22 16V	022-172-9-003		TDC224M050EL	QDT1-10	SD50-R229
C104	470 10V	022-160-9-001	PC500-16	VTT470K16	QV1-149	EV-1150
C114	47 10V	022-160-9-002	PC50-16	VTT47D16	QV1-73	EV-1226
C116	220 10V		PC250-10	VTT220F10	QV1-115	EV-1140
C118	470 10V	022-160-9-001	PC500-16	VTT470K16	QV1-149	EV-1150
C119	220 16V	022-163-9-001	PC250-25	VTT220H16	QV1-117	EV-1240
C123	10 16V	022-157-9-004	PC10-25	VTT10B25	QV1-41	EV-1222
C143	220 16V	022-163-9-001	PC250-25	VTT220H16	QV1-117	EV-1240
C144	10 16V	022-157-9-004	PC10-25	VTT10B25	QV1-41	EV-1222
C148	47 10V	022-160-9-002	PC50-16	VTT47D16	QV1-73	EV-1226
C165	47 10V	022-160-9-002	PC50-16	VTT47D16	QV1-73	EV-1226
C167	10 16V	022-157-9-004	PC10-25	VTT10B25	QV1-41	EV-1222

COBRA MODELS 21GTL/25GTL

CAPACITORS

ITEM No.	RATING	MFR. PART No.	REPLACEMENT DATA				
			CENTRALAB PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.	
						Q-LINE	GENERAL LINE
C1	22 N220 10%	020-205-9-002	UK50-103		*		10TCR-Q22
C3	.01 50V		UK50-103		MAG5011		
C4	.01 50V		DD-221		MAG5011		
C5	220 10% 50V		UK50-103		GP322		10TS-T22
C6	.01 50V		UK50-103		MAG5011		
C7	.01 50V		UK50-103		MAG5011		
C8	.01 50V		UK50-103		MAG5011		
C9	.01 50V		UK50-103		MAG5011		
C10	.01 50V		UK50-103		MAG5011		
C11	.01 50V		UK50-103		MAG5011		
C12	47 10% 50V	(1)	DTZ-47	NP047	CN0447		10TCC-Q47
C13	.001 50V		DD-102G	GP1000	GP210	QC2-81	5GA-D10
C14	.068 10% 25V			WMF1S68	EWFA1A68	QF1-195	1PB-S68
C15	.01 50V	(1)	UK50-103		MAG5011		
C16	.047 25V	(1)	UK25-503		MAG2515		HY-735
C17	.047 25V		UK25-503		MAG2515		HY-735
C18	1 +.25 50V	020-190-9-001					
C19	.047 10% 25V		UK25-503	DPMS2S47	EWFA1A47	QFT2-171	1FT-S47
C20	.047 25V		UK25-503	DPMS6D1	MAG2515	QFT2-1	HY-735
C21	.001 10% 25V		UK25-503		EWFA1A210		1FT-D10
C23	.047 25V		UK25-503		MAG2515		HY-735
C24	.047 25V		UK25-503		MAG2515		HY-735
C25	.047 25V		UK25-503		MAG2515		HY-735
C26	.047 10% 25V			DPMS2S47	EWFA1A47	QFT2-171	1FT-S47
C27	.0047 10% 25V			WMF1D47	EWFA1A247	QFT2-63	1FT-D47
C28	.01 10% 25V			WMF1S1	EWFA1A110	QFT2-91	1FT-S10
C29	.0022 10% 25V				M192P2229R8	QFT2-27	1FT-D22
C32	.022 10% 25V			DPMS2S22	EWFA1A22	QFT2-127	1FT-S22
C33	.01 50V		UK50-103		MAG5011		
C35	.01 50V		UK50-103		MAG5011		
C39	.047 25V		UK25-503		MAG2515		HY-735
C40	68 N220 10%	020-196-9-001			*		10TCR-Q68
C41	330 10% 50V		DD-331	GP330	GP333		10TS-T33
C42	330 10% 50V		DD-331	GP330	GP333		10TS-T33
C43	.04 25V				GP140		5GA-S40
C44	.0047 50V		DD-472	GP4700	GP247		5GA-D47
C45	56 10% 50V		DD-560		GP456		10TS-Q56
C46	250 10% 50V		DD-251		GP325	QC2-55	5GAT25
C47	.039 25V				GP140		5GA-S40
C48	.039 25V				GP140		5GA-S40
C49	.01 50V		UK50-103		MAG5011		
C50	.0047 50V		DD-472	GP4700	GP247		5GA-D47
C51	.01 50V		UK50-103		MAG5011		
C52	.01 50V		UK50-103		MAG5011		
C53	.01 50V		UK50-103		MAG5011		
C54	.022 10% 25V			DPMS2S22	EWFA1A22	QFT2-127	1FT-S22
C55	.001 50V		DD-102G	GP1000	GP210	QC2-81	5GA-D10
C56	.0068 25V			WMF1D68	EWFA1A268	QFT2-73	1FT-D68
C57	.001 25V			DPMS6D1	EWFA1A210	QFT2-1	1FT-D10
C60	.01 50V		UK50-103		MAG5011		
C61	.001 50V		DD-102G	GP1000	GP210	QC2-81	5GA-D10
C62	.001 10% 25V			DPMS6D1	EWFA1A210	QFT2-1	1FT-D10

PARTS LIST AND DESCRIPTION (CONTINUED)

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

CAPACITORS (cont)

ITEM No.	RATING	MFR. PART No.	REPLACEMENT DATA				
			CENTRALAB PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE Q-LINE	PART No. GENERAL LINE
C64	.01 50V	020-205-9-003	UK50-103		MAG5011		
C66	.1 10% 25V						
C68	.04 25V		DD-102G	GP1000	GP140	QC2-81	5GA-S40
C69	.001 50V				GP210		5GA-010
C71	.04 25V		DD-330	GP33	GP140		5GA-S40
C72	33 10% 50V				GP433		10TS-Q33
C73	.1 10% 25V		DTN-68	WMF05P1 N68	EPF05010	QFT2-215	1FT-P10
C74	68 N750 10% 50V				CN7468		10TCU-Q68
C75	33 N220 10% 50V		DTN-100	N100	*		10TCR-Q33
C76	100 N750 10% 50V		DTN-220	N220	CN7310		10TCU-T10
C77	220 N750 10% 50V	(2)	DTZ-10	NP010	CN7322		10TCU-T22
C78	10 10% 50V		UK50-103		CN0410		10TCC-Q10
C79	.01 50V		UK50-103		MAG5011		
C80	.01 50V		UK50-103		MAG5011		
C81	.01 50V		DTZ-4R7	NP04P7	MAG5011		10TCC-V47
C83	5 10% 50V		UK50-103		CN0547		
C84	.01 50V		UK50-103		MAG5011		
C85	.01 50V		UK50-103		MAG5011		
C86	.01 50V		UK50-103		MAG5011		
C87	.01 50V		UK50-103		MAG5011		
C89	.001 10% 25V	020-205-9-004		DPMS601	EPF1A210	QFT2-1	1FT-010
	.033 25V				M192P3339R8	QFT2-149	1FT-S33
C90	270 10% 50V		DD-271	GP270	GP327		10TS-T27
C92	.001 50V		DD-102G	GP1000	GP210	QC2-81	5GA-010
C93	.001 50V		DD-102G	GP1000	GP210	QC2-81	5GA-010
C95	.001 10% 25V						
C96	.022 10% 25V						
C97	.0022 50V		DD-222		GP222	QC2-97	5GA-022
C98	.01 50V		UK50-103		MAG5011		
C100	.01 50V		UK50-103		MAG5011		
C105	.01 50V	020-205-9-005	UK50-103		MAG5011		
C106	.01 50V		UK50-103		MAG5011		
C107	47 10% 50V		DTZ-47	NP047	CN0447		10TCC-Q47
C108	100 N220 10% 50V				*		10TCR-T10
C109	220 N220 10% 50V				*		10TCR-T22
C110	470 10% 50V		DD-471	GP470	GP347		10TS-T47
C111	33 NPO 10% 50V		DTZ-33	NP033	CN0433		10TCC-Q33
C112	.047 25V		UK25-503		MAG2515		HY-735
C113	.01 50V		UK50-103		MAG5011		
C115	.01 50V		UK50-103		MAG5011		
C117	.01 50V	(1)	UK50-103		MAG5011		
C120	.01 50V		UK50-103		MAG5011		
C121	.01 50V		UK50-103		MAG5011		
C122	.001 50V		DD-102G	GP1000	GP210	QC2-81	5GA-010
C124	.01 50V		UK50-103		MAG5011		
C125	.01 50V		UK50-103		MAG5011		
C126	.001 50V		DD-102G	GP1000	GP210	QC2-81	5GA-D10
C127	.01 50V		UK50-103		MAG5011		
C128	.01 50V		UK50-103		MAG5011		
C129	.01 50V		UK50-103		MAG5011		
C130	.01 50V	(1)	UK50-103		MAG5011		
C131	.01 50V		UK50-103		MAG5011		
C132	.047 25V		UK25-503		MAG2515		HY-735
C133	.01 50V		UK50-103		MAG5011		
C134	.047 25V		UK25-503		MAG2515		HY-735
C135	.01 50V		UK50-103		MAG5011		
C136	.01 50V		UK50-103		MAG5011		
C137	.01 50V		UK50-103		MAG5011		
C138	100 10% 50V		DD-101	GP100	GP310		10TS-T10
C139	150 10% 50V		DD-151		GP315		10TS-T15
C140	330 10% 50V		DD-331	GP330	GP333		10TS-T33
C141	150 10% 50V	(1)	DD-151		GP315		10TS-T15
C142	2 NPO 10% 50V		DTZ-2R2	NP02P2	CN0522		10TCC-V22
C145	.04 25V				GP140		5GA-S40
C146	.01 50V		UK50-103		MAG5011		
C150	.001 50V		DD-102G	GP1000	GP210	QC2-81	5GA-D10
C151	.01 50V		UK50-103		MAG5011		
C152	.01 50V		UK50-103		MAG5011		
C153	.001 50V		DD-102G	GP1000	GP210	QC2-81	5GA-D10
C166	330 10% 50V		DD-331	GP330	GP333		10TS-T33
C168	.047 25V		UK25-503		MAG2515		HY-735
C401	33 10% 50V	028-052-9-001	DD-330	GP33	GP433		10TS-Q33
C402	.01 50V		UK50-103		MAG5011		
C403	.01 50V		UK50-103		MAG5011		
C501	.001 50V		DD-102G	GP1000	GP210	QC2-81	5GA-D10
C502	.01 50V		UK50-103		MAG5011		
C503	.001 50V		DD-102G	GP1000	GP210	QC2-81	5GA-D10
C504	.01 50V		UK50-103		MAG5011		
VC1	50						

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

(1) Model 25GTL only.

(2) See alternate Mic Amp circuit.

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	RESIST-ANCE	REPLACEMENT DATA			
			MFGR. PART No.	CENTRALAB PART No.	MALLORY PART No.	TRW PART No.
VR1	STG	20K	008-316-9-003			U260R253B
VR2	IF Gain	200	008-344-9-001			
VR3	TX Power	20K	008-316-9-003			U260R253B
VR4	Squelch Range	50K	008-316-9-002			U260R503B
VR5	AMC	5000	008-316-9-004			U260R502B
VR401	RF Gain	1000	008-344-9-004 (18)			
VR402	Squelch	50K	008-344-9-003			
VR403	Volume/Switch	50K	008-344-9-002			
VR404	Dynamike	5000	008-344-9-005			

(18) Used in Model 256TL.

RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA		ITEM No.	RATING	REPLACEMENT DATA	
		WORKMAN PART No.	MFGR. PART No.			WORKMAN PART No.	MFGR. PART No.
RR201	Resistor Network		527-076-9-002(1)	RR202	Resistor Network		527-076-9-002(1)

(1) Consists of seven 680 ohm resistors.

COILS (RF-IF)

ITEM No.	FUNCTION	REPLACEMENT DATA			REMARKS
		PART No.	OTHER IDENTIFICATION	MILLER PART No.	
L1	Rec Antenna (27MHz)	660-023-9-001	LA-029	CBS740-7	(1) Used in Model 256TL only.
L2	Rec RF (27MHz)	046-024-9-001	LA-138		
L3	Rec Mixer (10.695MHz)	060-024-9-002	LA-181		
L4	IF (10.695MHz)	060-024-9-002	LA-181		
L5	IF (455kHz)	060-019-9-002	LA-106	8517	
L6	IF (455kHz)	046-024-9-003	LA-204		
L7	IF (455kHz)	046-024-9-004	LA-276		
L8	Antenna Matching	041-104-9-002	LE-089		
L9	PI Filter	041-104-9-001	LE-088		
L10	Final Amp (27MHz)	041-088-9-001	LC-019	CB305	
L11	RF Choke	041-069-9-004	LD-012	4588	
L12	RF Choke	044-068-9-003	LD-087		
L13	RF Choke	041-056-9-003	LC-018	CB304	
L14	XMT Buffer (27MHz)	060-029-9-004	LA-208		
L15	VCO	044-046-9-001	LA-165		
L16	VCO Buffer (17MHz)	046-024-9-002	LA-201		
L17	XMT Buffer (27MHz)	066-019-9-002	LA-088	CBS717-TC	
L18	XMT Mixer	060-029-9-001	LA-198		
L19	Noise Blanker	060-024-9-001(1)	LA-180	CBS715-TC	
L20	TVI Trap	041-056-9-003	LC-018	CB304	
L21	RF Choke				
L401	RF Choke	044-051-9-001			
L501	RF Choke				
L502	RF Choke				

COBRA MODELS 216TL/256TL

PARTS LIST AND DESCRIPTION (CONTINUED)

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

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	950mA	.8	.86mH	042-021-9-001 TF-083(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	8	18	061-039-9-001 TF-129(1)			(1) Number on unit.

SPEAKER

ITEM No.	TYPE		REPLACEMENT DATA		NOTES
			MFGR. PART No.	QUAM PART No.	
SP401	4" PM	16 Ohms	580-028-9-001 10P03G(1)	4A1Z16	(1) Number on unit.

FUSE DEVICES

ITEM No.	DESCRIPTION	REPLACEMENT DATA						
		PART No.		BUSS PART No.		LITTELFUSE PART No.		WORKMAN PART No.
		DEVICE	HOLDER	DEVICE	HOLDER	DEVICE	HOLDER	DEVICE
F401	2A Quick Acting	191-251-3-002		AGC-2	HDJ	312002	150145	FG2-2

PARTS LIST AND DESCRIPTION (CONTINUED)

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

MICROPHONE

ITEM No.	REPLACEMENT DATA				CONNECTION DATA						
	MFGR. PART No.	GC PART No.	GC NOISE CANCEL	GC POWER	GC CONNECTOR	GC Red	GC Shield	GC Yellow	GC Blue	GC White	GC Black
Mic	562-025-9-001	18-032	18-034	18-010	18-092	2	1	3	4	NC	1

MISCELLANEOUS

ITEM No.	PART NAME	PART No.	NOTES
CF1	Filter	140-020-9-001	10.695MHz
CF2	Filter	140-022-9-001	455kHz
D301	LED Display	158-014-9-001	Channel Readout
D401	LED	158-020-9-001	RX/TX Indicator Model 25GTL
J401	Jack	772-027-9-001	Antenna
J402	Jack	773-086-9-001	PA Sp.
J403	Jack	773-086-9-001	External Speaker
J405	Jack	762-020-9-001	Power
J501	Jack	772-038-9-001	Mic
M401	Meter	320-095-9-001	SIG/TX PWR
P401	Cord Assembly	426-021-9-001	DC Power
PL401	Lamp	400-054-9-001	Meter Illumination
S201	Switch	083-237-9-001	Channel Selector Model 25GTL
S201	Switch	083-238-9-001	Channel Selector Model 21GTL
S401	Switch	084-051-9-001	NB Model 25GTL
S402	Switch	084-051-9-001	ANL
S403	Switch	084-051-9-001	PA/CB
S404	Switch	084-051-9-001	BRT/DIM Model 25GTL
X1	Crystal		10.240MHz
	Printed Circuit Board	302-315-9-001	Channel Selector Model 25GTL
	Printed Circuit Board	302-317-9-001	Channel Selector Model 21GTL
	Printed Circuit Board	302-316-9-001	LED Display
	Printed Circuit Board	302-314-9-001	Main
	Printed Circuit Board	302-239-9-001	Mic Connector

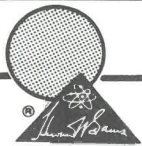
COBRA MODELS 21GTL/25GTL

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

ITEM	PART No.	ITEM	PART No.
Case, Bottom Model 25GTL	272-129-9-001	Front Plate Model 25GTL	260-153-9-001
Case, Bottom Model 21GTL	272-131-9-001	Front Plate Model 21GTL	260-154-9-002
Case, Top Model 25GTL	272-128-9-001	Knob, Control	751-095-9-002
Case, Top Model 21GTL	272-130-9-001	Knob, Channel Switch	751-151-9-001
Front Panel Model 25GTL	255-168-9-001	Main Chassis	257-103-9-001
Front Panel Model 21GTL	255-169-9-001		

WIRING DATA

General-use Hook-up Wire (available in 5 colors)	BELDEN No. 8523	Coiled Microphone Cable	
Shielded Hook-up Wire (spiral wrapped)	BELDEN No. 8421	3-conductor (1 shielded) 23AWG	BELDEN No. 9471 (5')
(braided)	BELDEN No. 8401		BELDEN No. 8497 (6')
Speaker Cable (available in 4 colors)	BELDEN No. 8782		BELDEN No. 9472 (7-1/2')
Bonding Strap	BELDEN No. 8672		28AWG BELDEN No. 9466 (6')
AC Power Cord	(6') BELDEN No. 17106		31AWG BELDEN No. 9468 (10')
	(9') BELDEN No. 17109	4-conductor (unshielded) 23AWG	BELDEN No. 8415 (6')
		5-conductor (1 shielded) 28AWG	BELDEN No. 9467 (6')
			BELDEN No. 9465 (7-1/2')



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-457

MANUFACTURER'S SPECIFICATIONS

GENERAL:

Channels	: 40 Channels for AM, Upper Side Band and Lower Side Band, utilizing Digital Circuitry
Frequency Range	: 26.965 MHz to 27.405 MHz
Frequency Control	: Digital (Phase Lock Loop) Synthesizer
Frequency Accuracy	: ± 100 Hz
Operating Temperature Range	: -20°C to $+50^{\circ}\text{C}$
Power Requirements	: 13.8V DC (12-16 volts DC, negative or positive ground) or 120V AC (60 Hz)
Antenna	: 52 ohm (Coaxial connector)
Microphone	: 600 ohm Dynamic Type
Speaker	: 8 ohm, 2.5 Watt
Clock	: Digital Type (solid state)
Size	: 4" x 15" x 11-1/2" (HWD) (10 x 38 x 29.2 cm [HWD])
Weight	: 16 lbs. (approx.) (7.3 kg)
Accessories	: AC Cord, DC Cord with in-line Fuse, Microphone and Microphone Hanger and Mounting Brackets

MEASUREMENT CONDITION:

Power Source	: 13.8V DC, 120V AC (60 Hz)
Antenna Impedance	: 50 ohms
Test Temperature	: 25°C
AM Modulation Frequency	: 1 kHz
SSB Modulation Frequency, Transmit	: Two tone: 500 Hz and 2400 Hz Single tone: 1 kHz
Mean Signal Input Level	: 1000 μV
Reference Audio Output Power	: 0.5 W
Reference AM Modulation Percentage	: 1 kHz 30%
Audio Frequency, SSB Receive	: 1 kHz
Audio Output Load	: 8 ohms resistive
Measuring Channel	: 19

Courtesy of the Manufacturer

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

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REALISTIC MODELS TRC-457/-458

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 volts at TP10 (TR401, Emitter). Connect low sides of test equipment to ground unless specified otherwise. Connect 50-ohm dummy load or antenna before keying transmitter. Suggested Alignment Tools: GC ELECTRONICS
 CT1 thru CT7.8276, 5000
 L27, L30, L329091, 8728-A, 8728
 L1 thru L8, L16, L17, L24, L37, L399440

SYNTHESIZER ALIGNMENT

TEST EQUIPMENT	TRANSCIVER	ADJUST	REMARKS
Input of frequency counter thru 47pF to TP11(IC7, pin 10).	Ch. 1, AM		Check for 10.240MHz.
Input of oscilloscope to TP6.	Ch. 1, AM	L24	Adjust for maximum RF.
Input of frequency counter to TP6.	Ch. 1, AM, CLARIFIER, Midrange	CT6	Adjust for 33.855MHz $\pm$ 20Hz.
	Ch. 1, USB, CLARIFIER, Midrange	CT4	Adjust for 33.8574MHz $\pm$ 20Hz.
	Ch. 1, LSB, CLARIFIER, Midrange	CT5	Adjust for 33.8526MHz $\pm$ 20Hz.
Input of DC meter to TP7.	Ch. 1, AM, CLARIFIER, Midrange	L17	Adjust for 2.00 volts.
Input of oscilloscope to TP8.	Ch. 19, AM, CLARIFIER, Midrange	L16	Adjust for maximum RF.
Input of frequency counter to TP8.	Ch. 1, AM, CLARIFIER, Midrange		Check for 34.765MHz. Check all channels. (See Truth Chart for correct frequencies).
	Ch. 1, USB, CLARIFIER, Midrange		Check for 34.7675MHz. Check all channels. (See Truth Chart for correct frequencies).
	Ch. 1, LSB, CLARIFIER, Midrange		Check for 34.7625MHz. Check all frequencies. (See Truth Chart for correct frequencies).
Input of frequency counter to TP12 (TR31 collector).	Ch. 1, AM, CLARIFIER, Midrange		Check for .910MHz. Check all channels. (See Truth Chart for correct frequencies).
Input of frequency counter to TP9.	Ch. 1, USB	CT2	Adjust for 7.8025MHz $\pm$ 5Hz.
	Ch. 1, LSB	CT3	Adjust for 7.7975MHz $\pm$ 5Hz.
Input of frequency counter to antenna jack.	Ch. 1, AM, XMT	VR9	Adjust for 26.965MHz.

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.
RF GAIN Maximum, CLARIFIER 0, Squelch MINIMUM, NB Off, ANL Off.

AM

TEST EQUIPMENT	TRANSCIVER	ADJUST	REMARKS
Output of signal generator thru .01uF to TP13 (FET1, G1) 7.8MHz, 1000Hz @ 30% modulation.	Ch. 19, AM	L8, L7, L6, L5	Adjust for maximum output.
Output of signal generator thru .01uF to antenna jack. 27.185MHz, 1000Hz @ 30% modulation.	Ch. 19, AM	L4, L3	Adjust for maximum output. If necessary readjust L5, L6, L7, and L8.
Inject a 100pps, 1uSec signal at MIC input. Input of oscilloscope to TP5.	Ch. 19, AM NB On	L1, L2	Adjust for maximum.

RECEIVER ALIGNMENT

Connect an AC VTVM or AF wattmeter across speaker voice coil.
Adjust volume control to obtain a suitable indication.
RF GAIN Maximum, Clarifier 0, Squelch MINIMUM, ANL Off, NB Off, Volume Maximum.

SSB

TEST EQUIPMENT	TRANSCIVER	ADJUST	REMARKS
Output of signal generator thru .01uF to antenna jack. 27.186MHz no modulation. Output .25uV.	Ch. 19, USB	CT1	Adjust for 2 volts audio.

RECEIVER ADJUSTMENTS

Connect an AC VTVM or AF wattmeter across speaker voice coil.
Adjust volume control to obtain a suitable indication.
RF GAIN Maximum, Clarifier 0, Squelch MINIMUM, NB Off, ANL Off.

TEST EQUIPMENT	TRANSCIVER	ADJUST	REMARKS
Output of signal generator thru .01uF to antenna jack. 27.185MHz, 1000Hz @ 30% modulation. Output .5uV.	Ch. 19, AM VOLUME Maximum	VR5	AM RX GAIN Adjust for 2 volts audio.
Output of signal generator thru .01uF to antenna jack. 27.185MHz, 1000Hz @ 30% modulation. Output 50uV.	Ch. 19, AM RF GAIN MINIMUM SQUELCH Maximum	VR2	RF GAIN Adjust for 2 volts audio.
Output of signal generator thru .01uF to antenna jack. 27.185MHz, 1000Hz @ 30% modulation. Output 1000uV.	Ch. 19, AM Squelch Maximum	VR3	SQUELCH RANGE Adjust so that squelch just breaks.
Output of signal generator thru .01uF to antenna jack. 27.185MHz, 1000Hz @ 30% modulation. Output 100uV.	Ch. 19, AM	VR1	SIGNAL METER Adjust for 9 on SIGNAL scale of meter.

TRANSMITTER ALIGNMENT

Connect an RF wattmeter and 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.

AM

TEST EQUIPMENT	TRANSCEIVER	ADJUST	REMARKS
Input of Spectrum analyzer or harmonic meter to antenna jack.	Ch. 19, AM	L27	Adjust for MINIMUM at 54MHz.

TRANSMITTER ALIGNMENT

Connect an RF wattmeter and 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.

SSB

TEST EQUIPMENT	TRANSCEIVER	ADJUST	REMARKS
Inject a 1000Hz 5mV signal at MIC input.	Ch. 19	L39,L37,L32, L30,CT7	Adjust for maximum.
Inject a 1000Hz 200mV signal at MIC input.	Ch. 19	CT7	Adjust for 12 watts.

TRANSMITTER ADJUSTMENTS

Connect an RF wattmeter and 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.

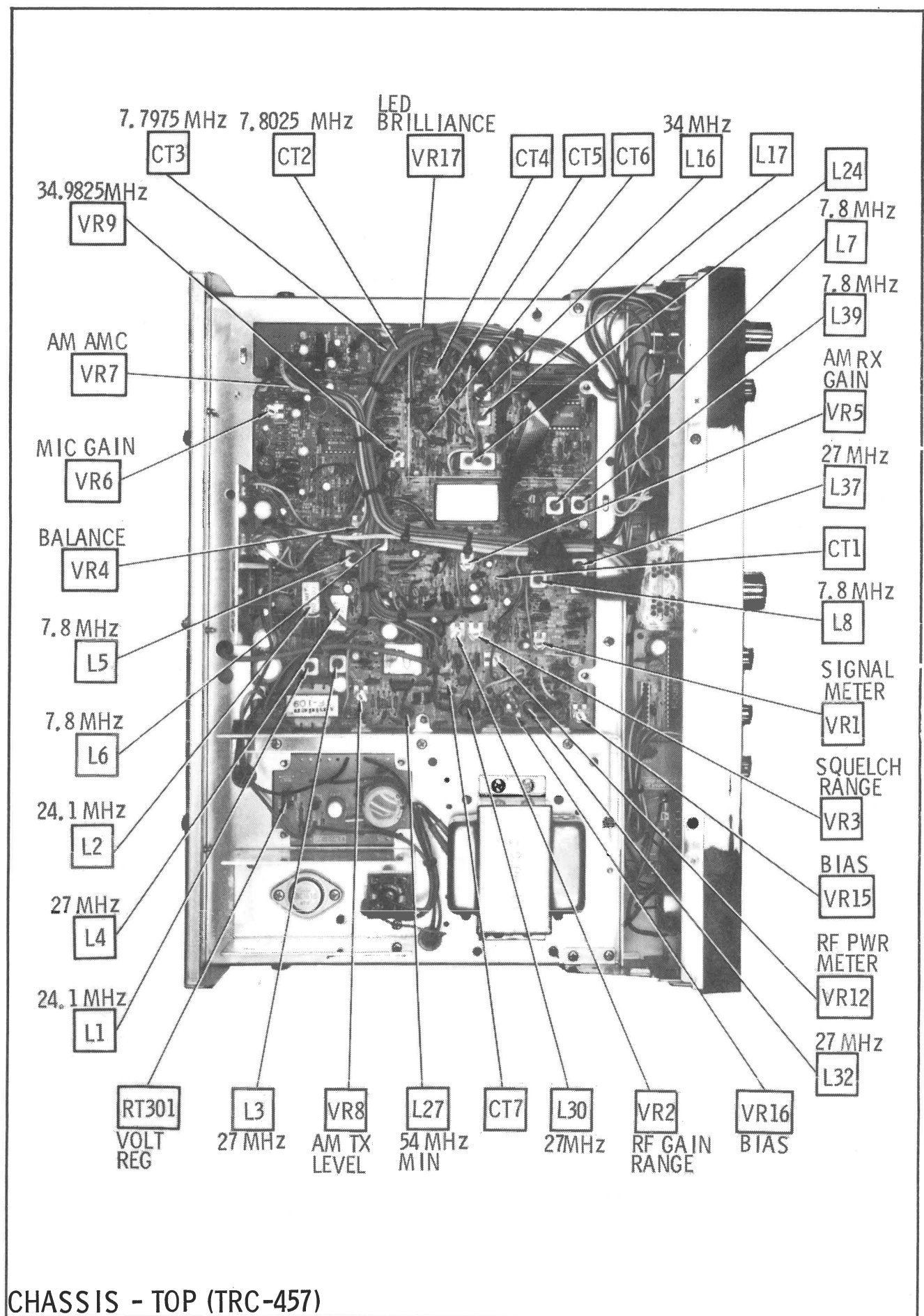
See page 4 for channel frequencies.

TEST EQUIPMENT	TRANSCEIVER	ADJUST	REMARKS
Input of DC meter to TP10 (TR401, Emitter)	Ch. 19, AM	RT301	VOLT REG Adjust for 13.80 volts.
	Ch. 19, AM	VR17	LED BRILLIANCE Adjust so that channel LED and clock display are the same brightness.
Connect current meter in series with circuit at TP4. No signal input.	Ch. 19, USB	VR15	BIAS Adjust for 40mA.
Connect current meter in series with circuit at TP2. No signal input.	Ch. 19, USB	VR16	BIAS Adjust for 15mA.
Connect an RF wattmeter and 50-ohm, 25-watt dummy load to antenna connector. No signal input.	Ch. 19, USB	VR4	BALANCE Adjust for MINIMUM RF.
	Ch. 19, AM	VR8	AM POWER Adjust for 4 watts maximum.
Inject a 1000Hz, 5mV signal at MIC input. Input of oscilloscope or modulation meter to antenna jack.	Ch. 19, AM	VR6,VR7	MIC GAIN & AM AMC Turn VR7(From top) fully clockwise. Adjust VR6 for 50% modulation. Increase audio to 200mV. Adjust VR7 for 100% modulation maximum.
Connect an RF wattmeter and 50-ohm, 25-watt dummy load to antenna connector.	Ch. 19, AM	VR12	POWER METER Adjust so that the POWER meter reads just below the red on the power scale of meter.

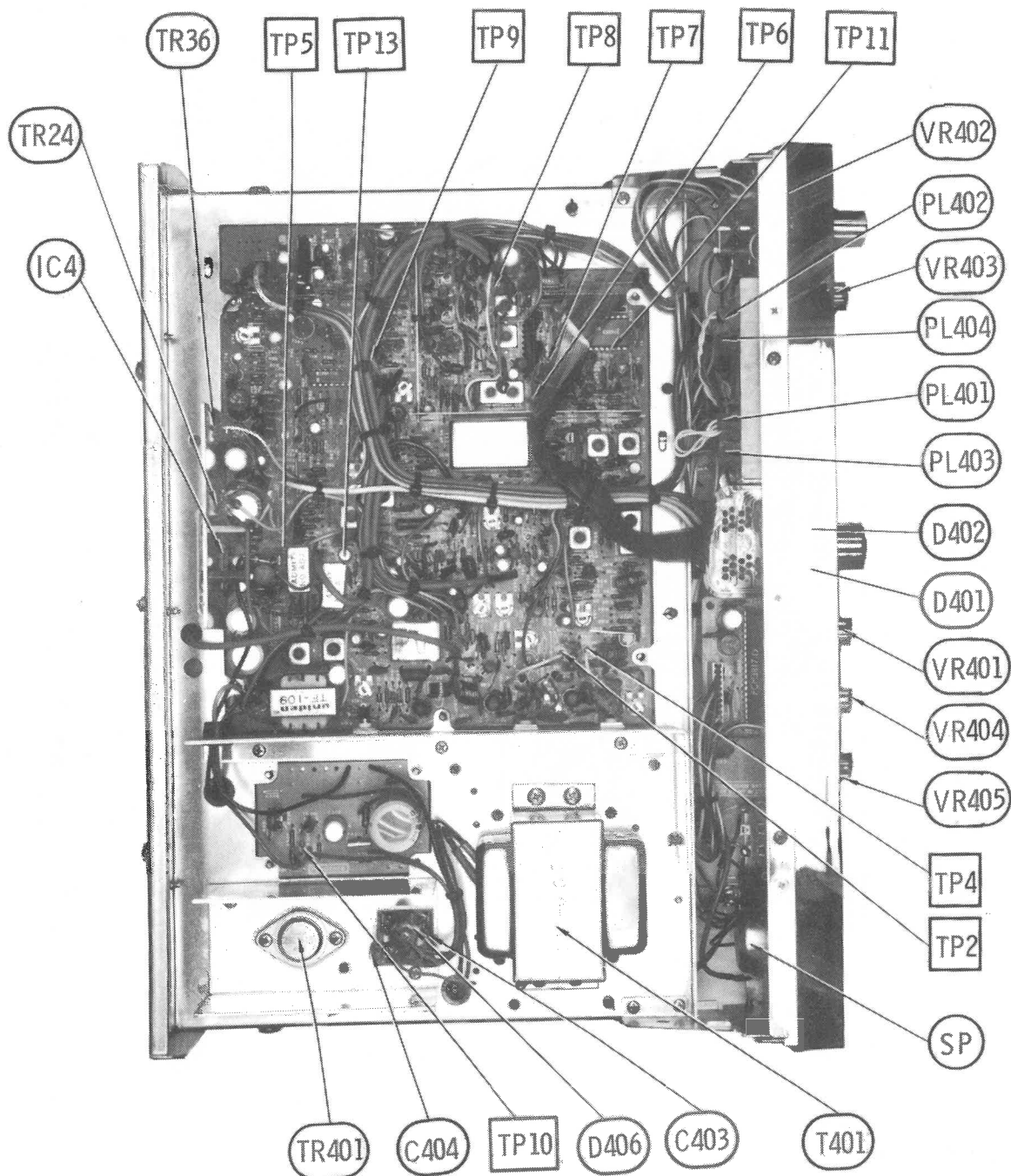
TRUTH CHART

CHANNEL	1 = 4.90 Volts 0 = 0 Volts IC7 PROGRAM DIVIDER								AM(REC) SYNTHESIZER OUTPUT IN MHz AT TP8	USB (REC & XMT) AM(XMT) SYNTHESIZER OUTPUT IN MHz AT TP8	LSB (REC & XMT) SYNTHESIZER OUTPUT IN MHz AT TP8	AM,USB,LSB (REC & XMT) DIVIDER INPUT IN MHz AT TP12
	PINS											
	21	20	18	17	16	15	14	13				
1	0	1	0	1	0	0	0	1	34.765	34.7675	34.7625	.910
2	0	1	0	1	0	0	1	0	34.775	34.7775	34.7725	.920
3	0	1	0	1	0	0	1	1	34.785	34.7875	34.7825	.930
4	0	1	0	1	0	1	0	1	34.805	34.8075	34.8025	.950
5	0	1	0	1	0	1	1	0	34.815	34.8175	34.8125	.960
6	0	1	0	1	0	1	1	1	34.825	34.8275	34.8225	.970
7	0	1	0	1	1	0	1	1	34.835	34.8375	34.8325	.980
8	1	0	0	0	0	0	0	0	34.855	34.8575	34.8525	1.000
9	1	0	0	0	0	0	0	1	34.865	34.8675	34.8625	1.010
10	1	0	0	0	0	0	1	0	34.875	34.8775	34.8725	1.020
11	1	0	0	0	0	0	1	1	34.885	34.8875	34.8825	1.030
12	1	0	0	0	0	1	0	1	34.905	34.9075	34.9025	1.050
13	1	0	0	0	0	1	1	0	34.915	34.9175	34.9125	1.060
14	1	0	0	0	0	1	1	1	34.925	34.9275	34.9225	1.070
15	1	0	0	0	1	0	0	0	34.935	34.9375	34.9325	1.080
16	1	0	0	1	0	0	0	0	34.955	34.9575	34.9525	1.100
17	1	0	0	1	0	0	0	1	34.965	34.9675	34.9625	1.110
18	1	0	0	1	0	0	1	0	34.975	34.9775	34.9725	1.120
19	1	0	0	1	0	0	1	1	34.985	34.9875	34.9825	1.130
20	1	0	0	1	0	1	0	1	35.005	35.0075	35.0025	1.150
21	1	0	0	1	0	1	1	0	35.015	35.0175	35.0125	1.160
22	1	0	0	1	0	1	1	1	35.025	35.0275	35.0225	1.170
23	1	0	1	0	0	0	0	0	35.055	35.0575	35.0525	1.200
24	1	0	0	1	1	0	0	0	35.035	35.0375	35.0325	1.180
25	1	0	0	1	1	0	0	1	35.045	35.0475	35.0425	1.190
26	1	0	1	0	0	0	0	1	35.065	35.0675	35.0625	1.210
27	1	0	1	0	0	0	1	0	35.075	35.0775	35.0725	1.220
28	1	0	1	0	0	0	1	1	35.085	35.0875	35.0825	1.230
29	1	0	1	0	0	1	0	0	35.095	35.0975	35.0925	1.240
30	1	0	1	0	0	1	0	1	35.105	35.1075	35.1025	1.250
31	1	0	1	0	0	1	1	0	35.115	35.1175	35.1125	1.260
32	1	0	1	0	0	1	1	1	35.125	35.1275	35.1225	1.270
33	1	0	1	0	1	0	0	0	35.135	35.1375	35.1325	1.280
34	1	0	1	0	1	0	0	1	35.145	35.1475	35.1425	1.290
35	1	0	1	1	0	0	0	0	35.155	35.1575	35.1525	1.300
36	1	0	1	1	0	0	0	1	35.165	35.1675	35.1625	1.310
37	1	0	1	1	0	0	1	0	35.175	35.1775	35.1725	1.320
38	1	0	1	1	0	0	1	1	35.185	35.1875	35.1825	1.330
39	1	0	1	1	0	1	0	0	35.195	35.1975	35.1925	1.340
40	1	0	1	1	0	1	0	1	35.205	35.2075	35.2025	1.350

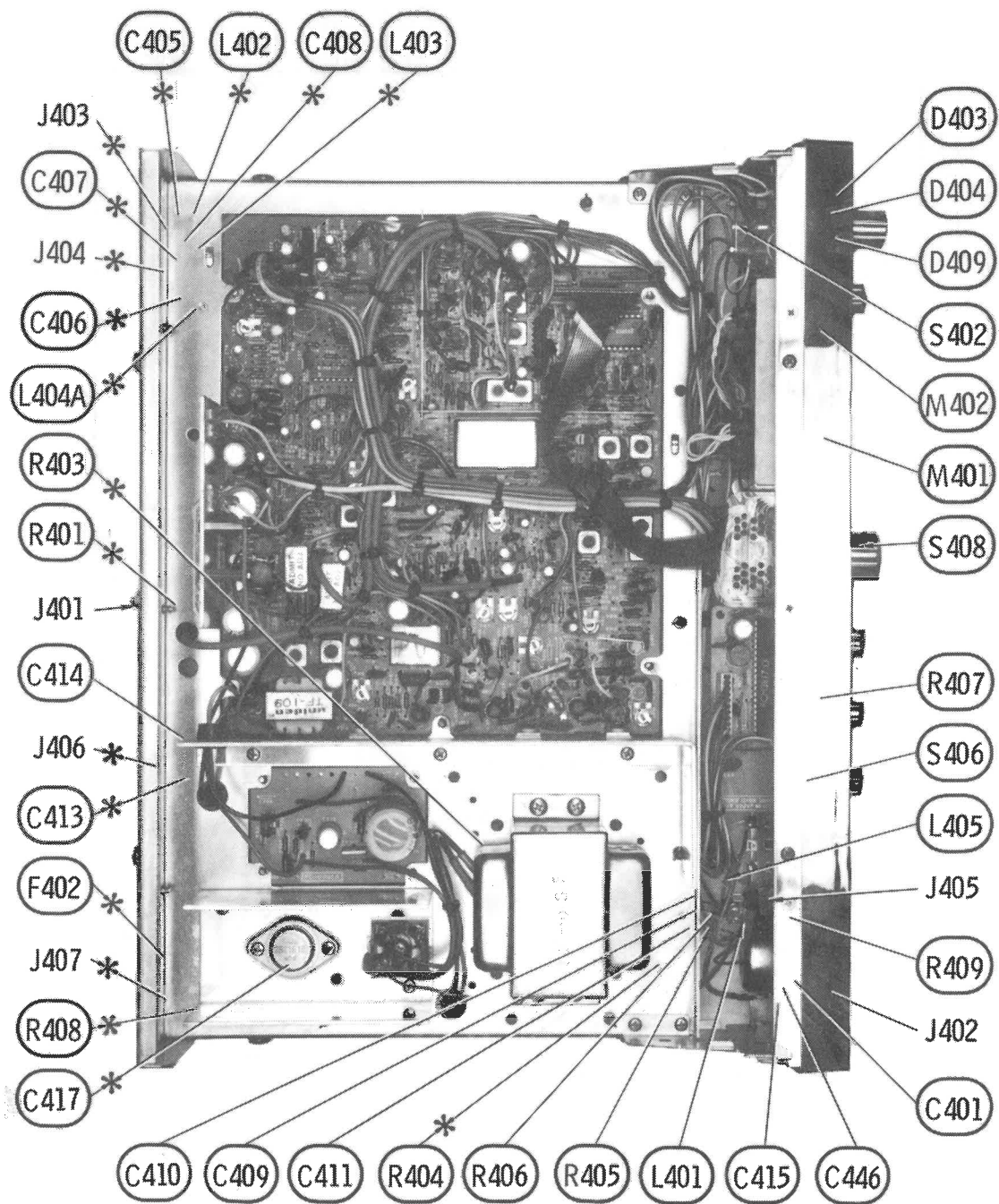
REALISTIC MODELS TRC-457/-458



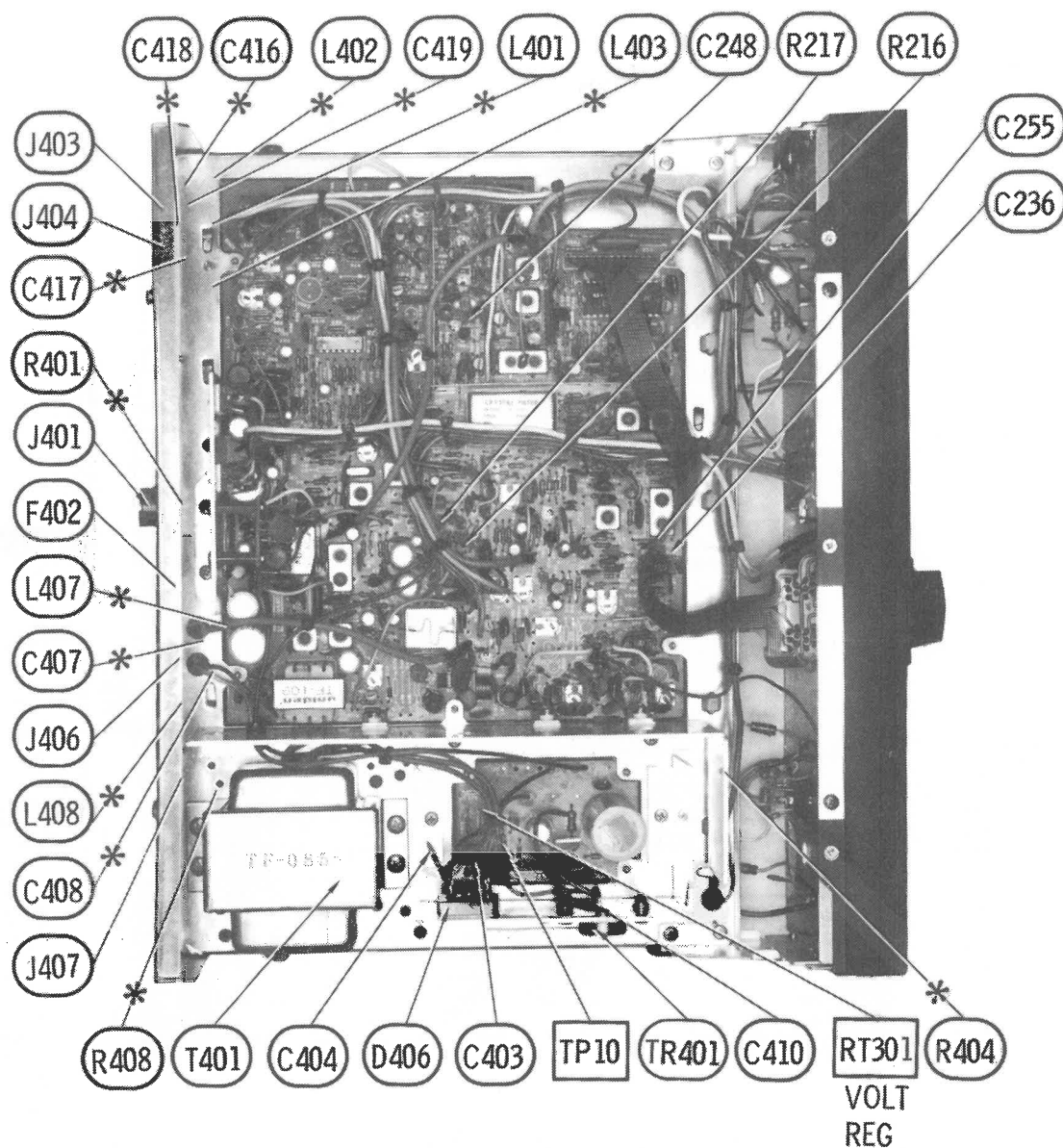
CHASSIS - TOP (TRC-457)



CHASSIS - TOP (TRC-457)

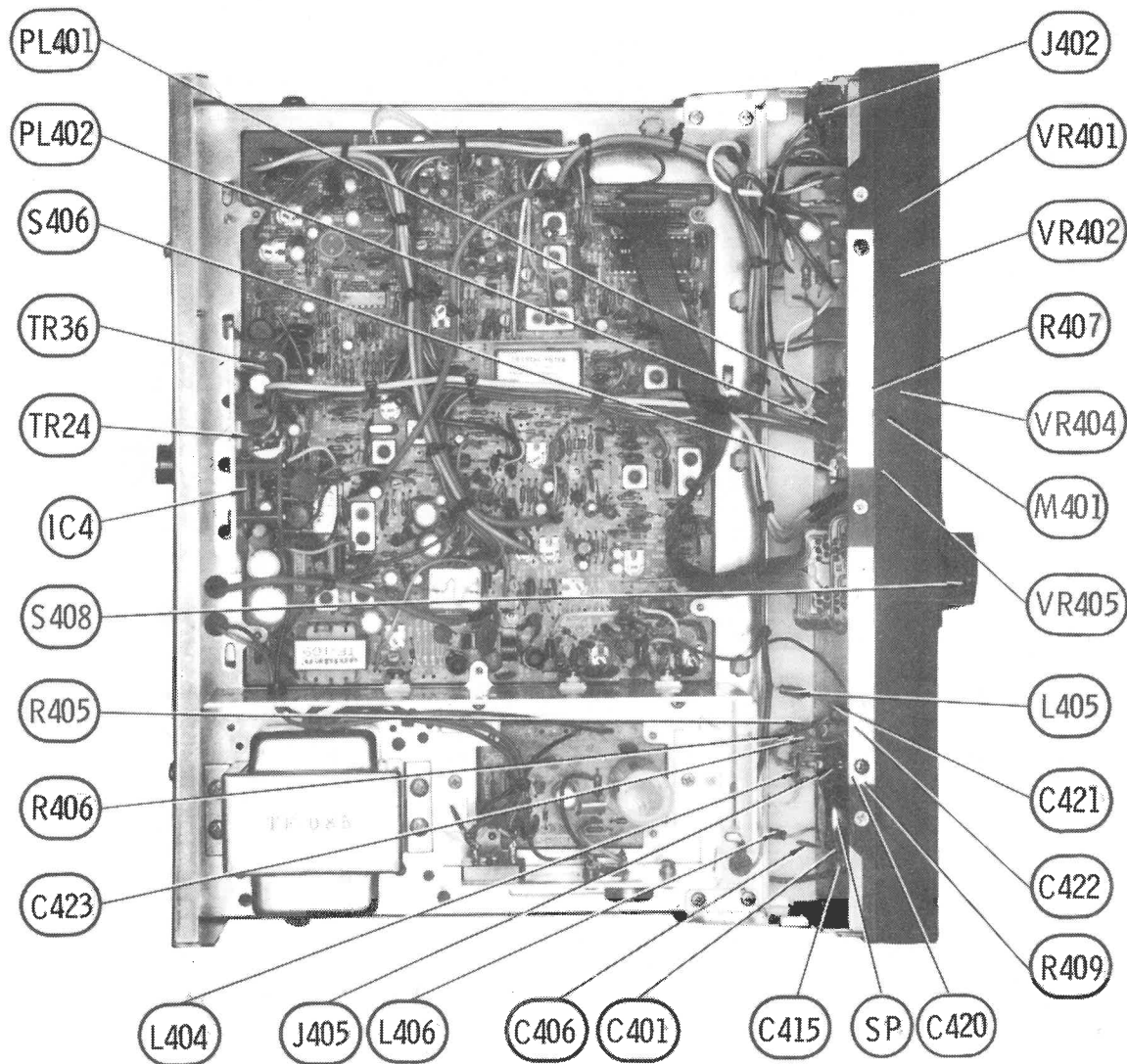


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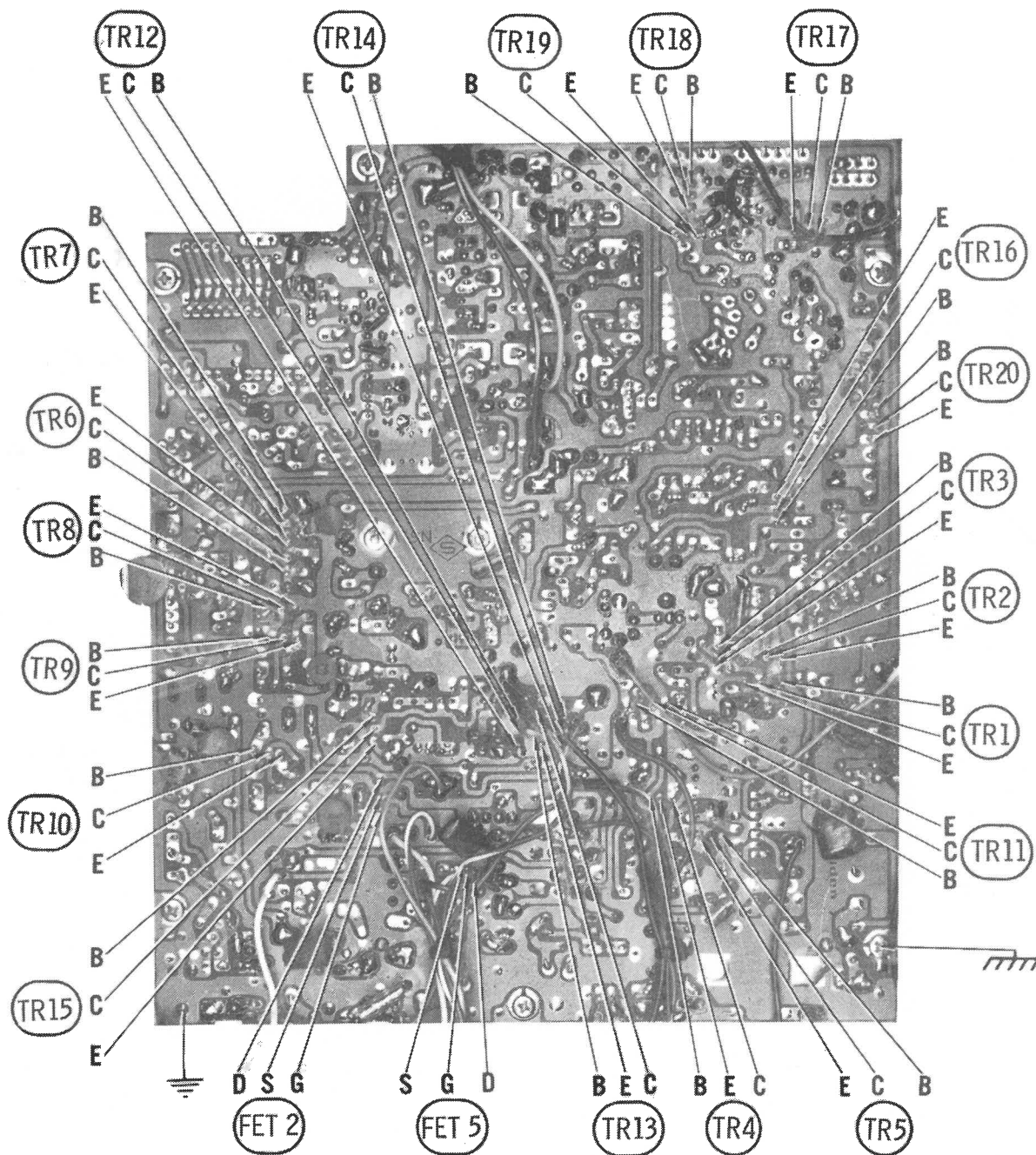


* Located on bottom of chassis

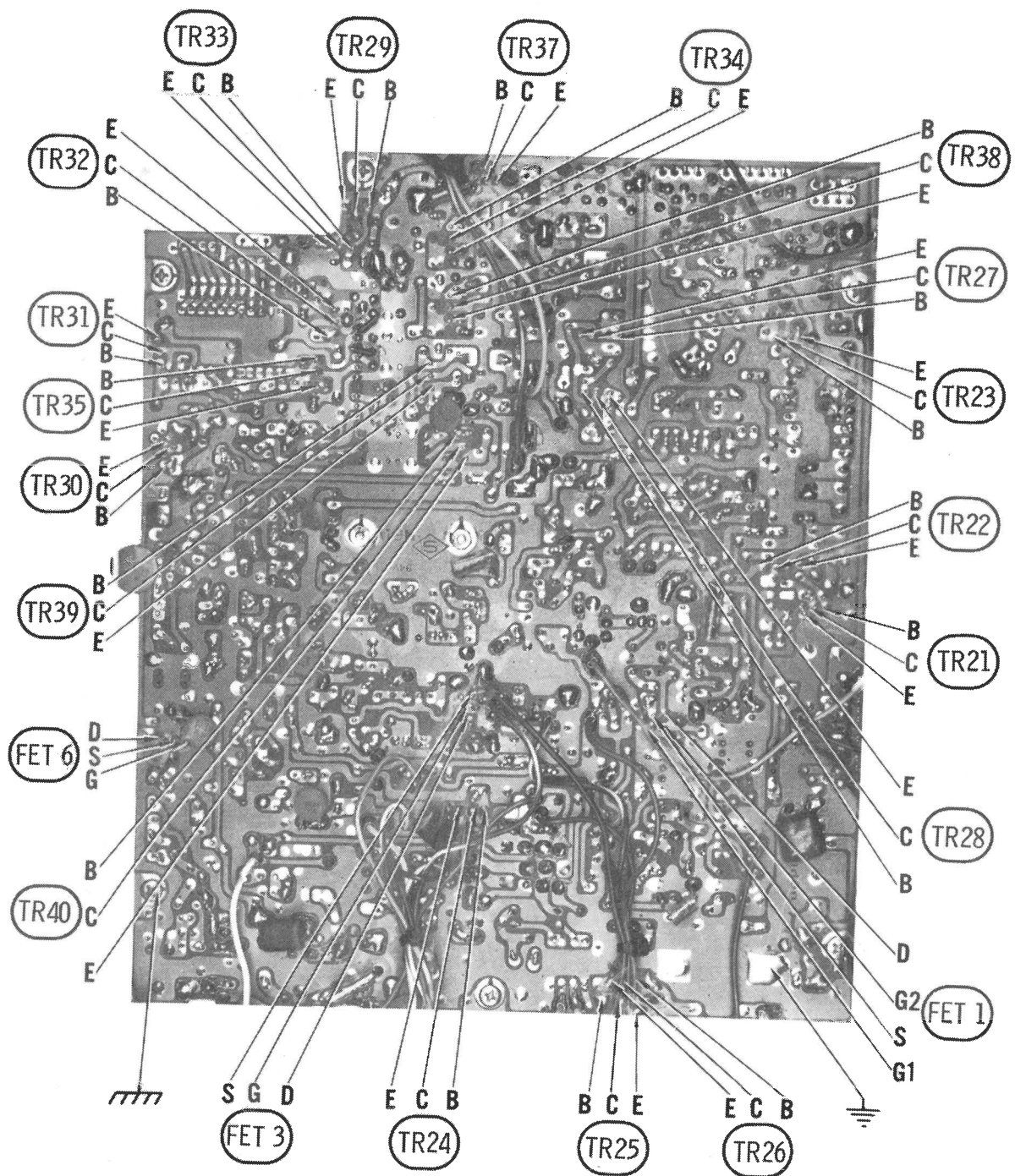
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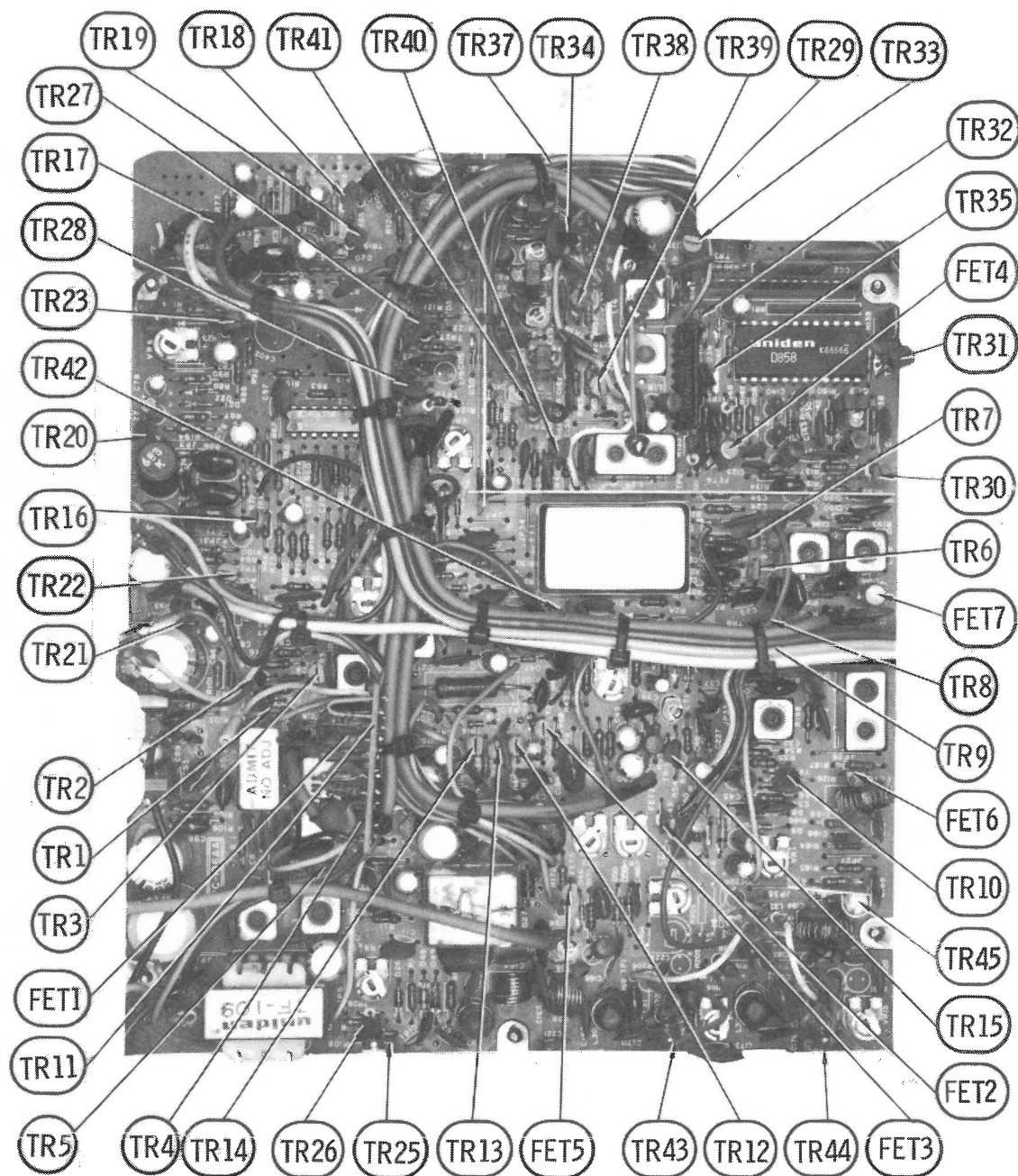
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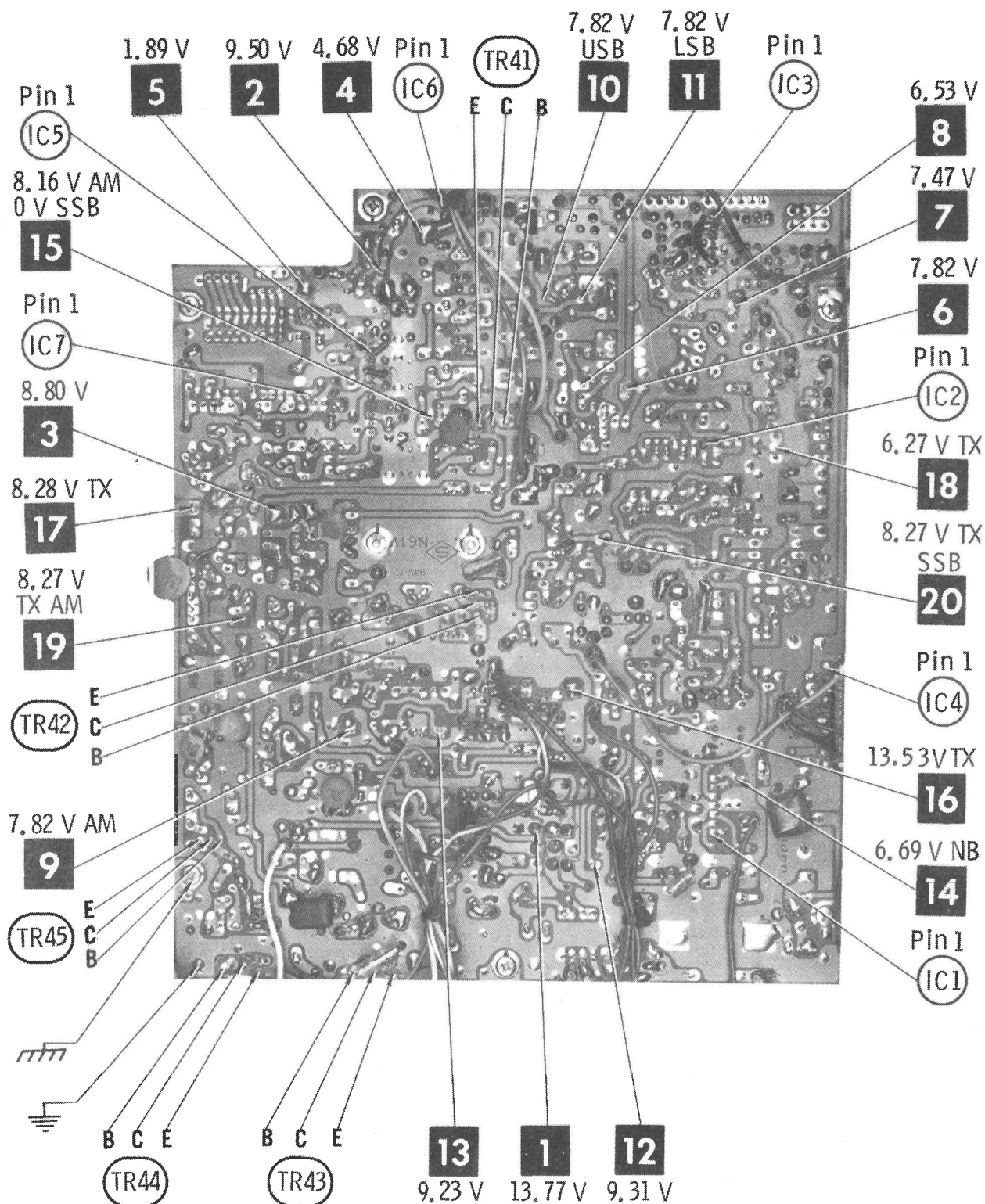
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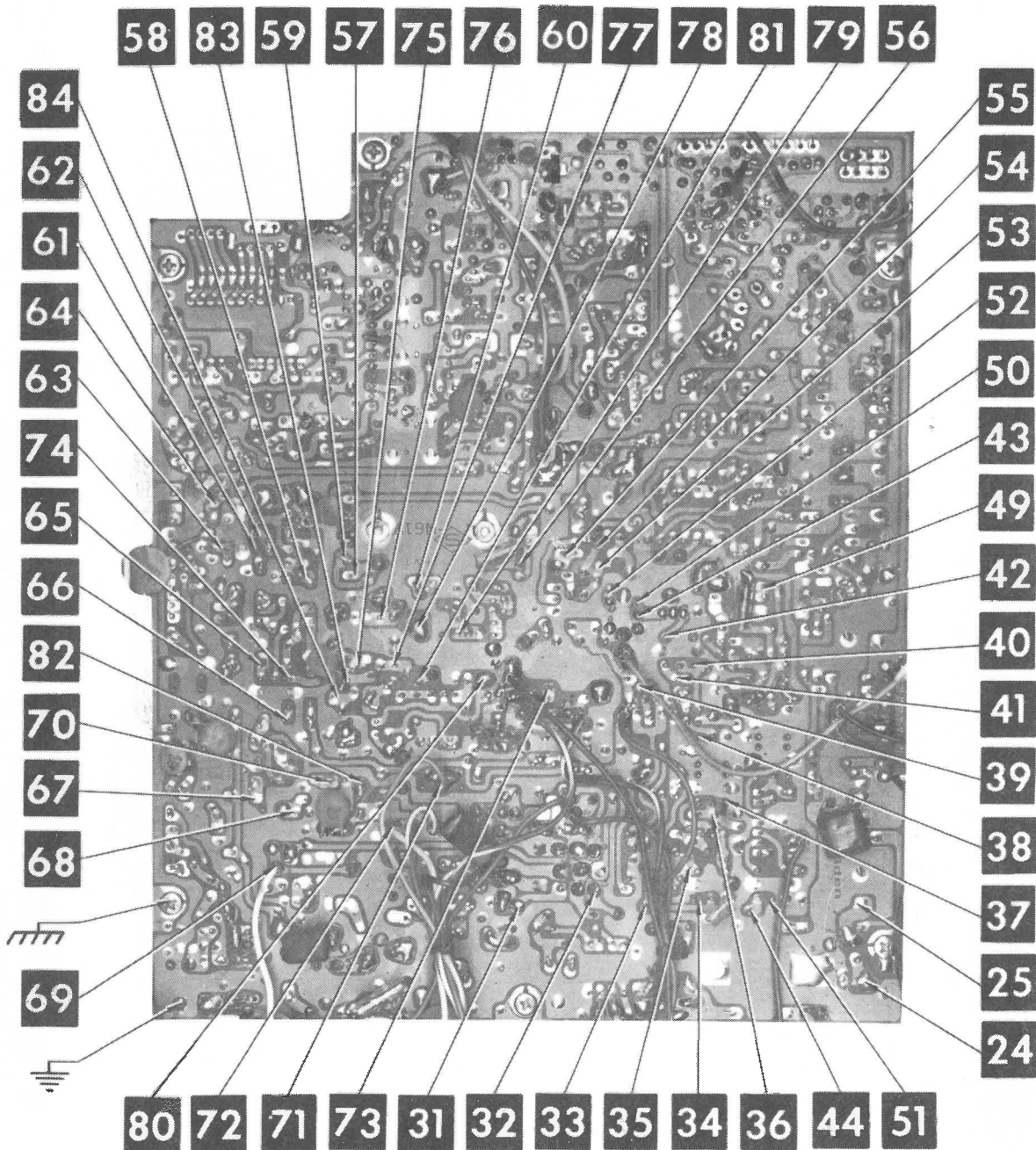
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MAIN BOARD

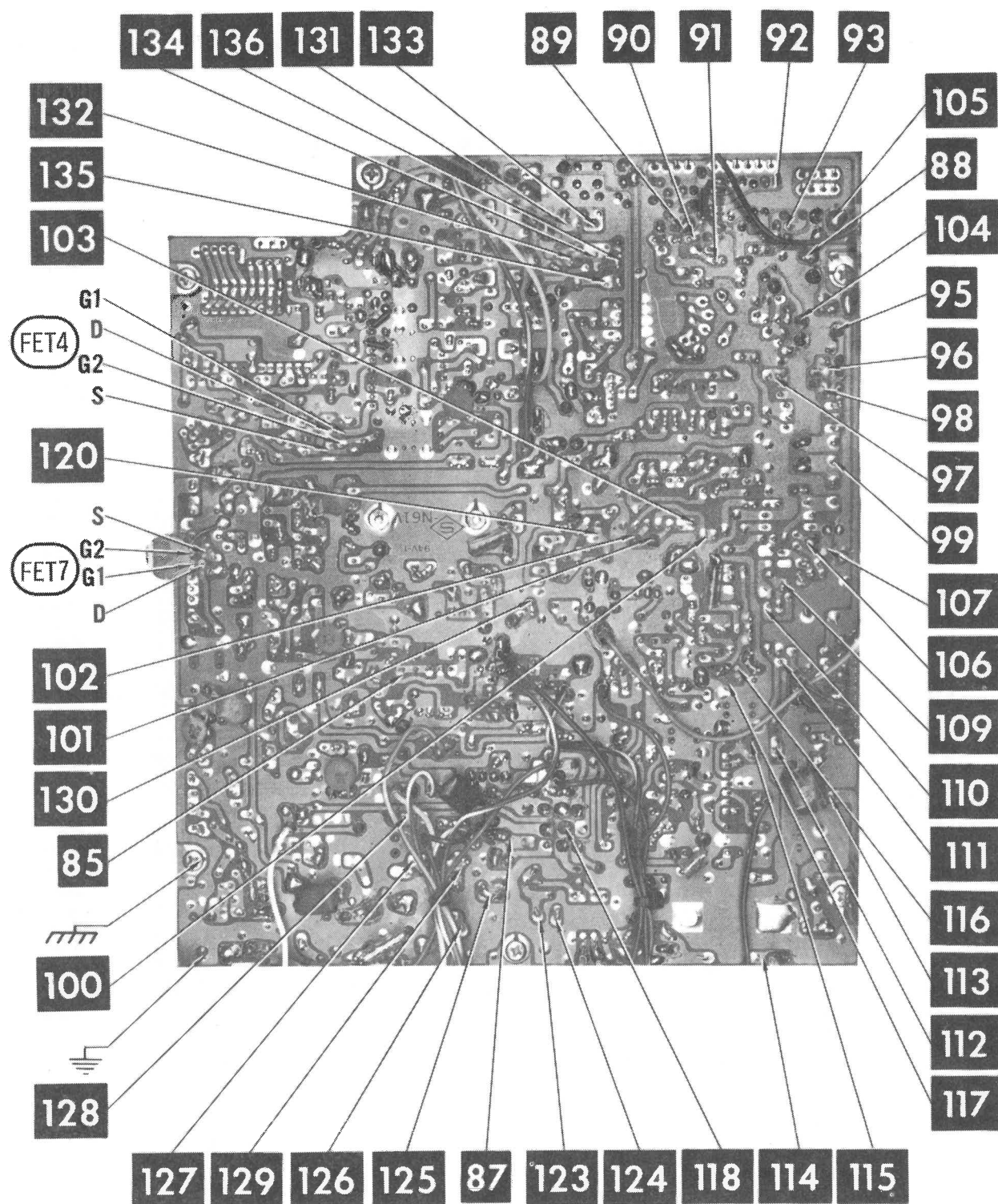


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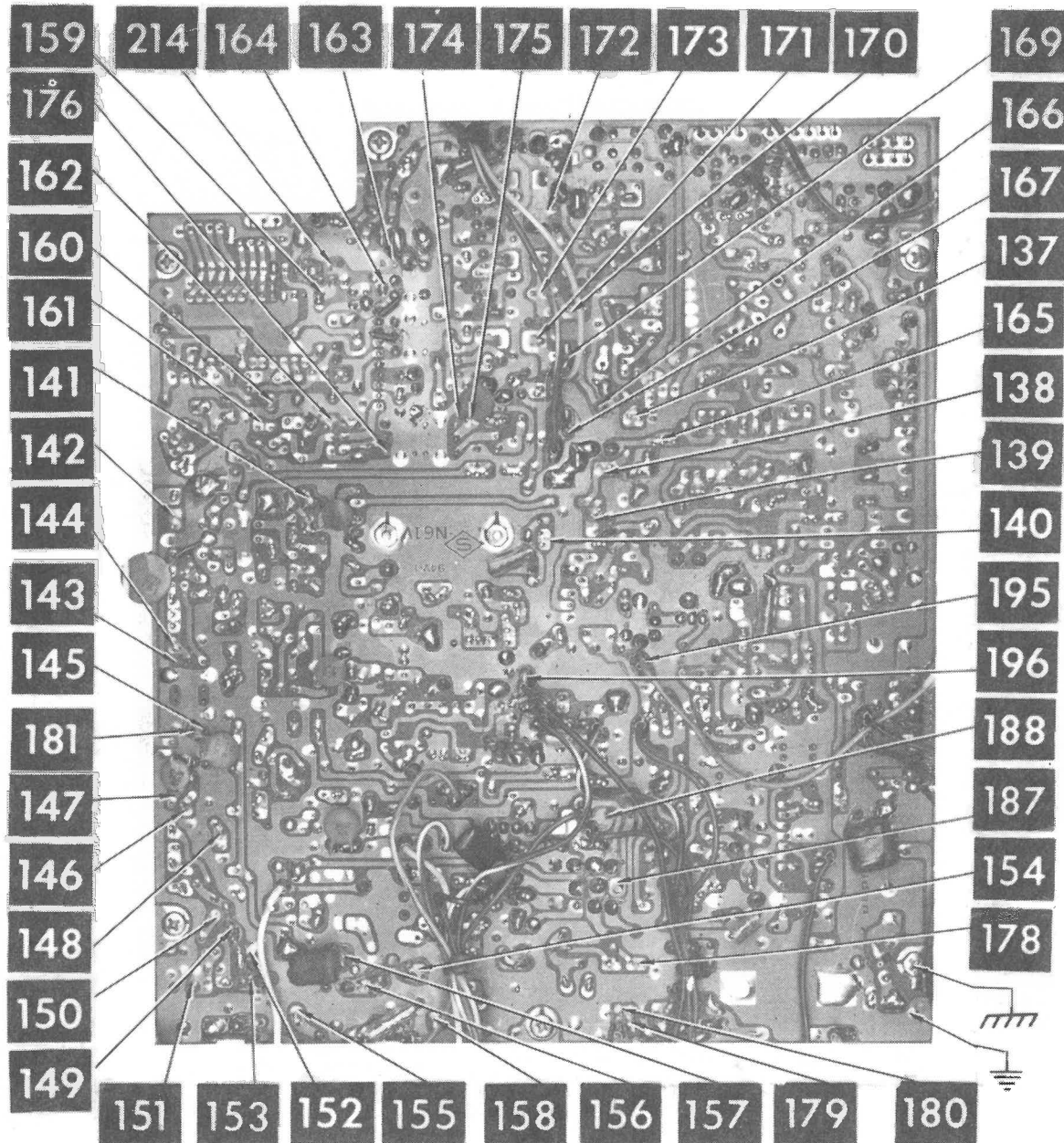


REALISTIC MODELS TRC-457/-458

MAIN BOARD

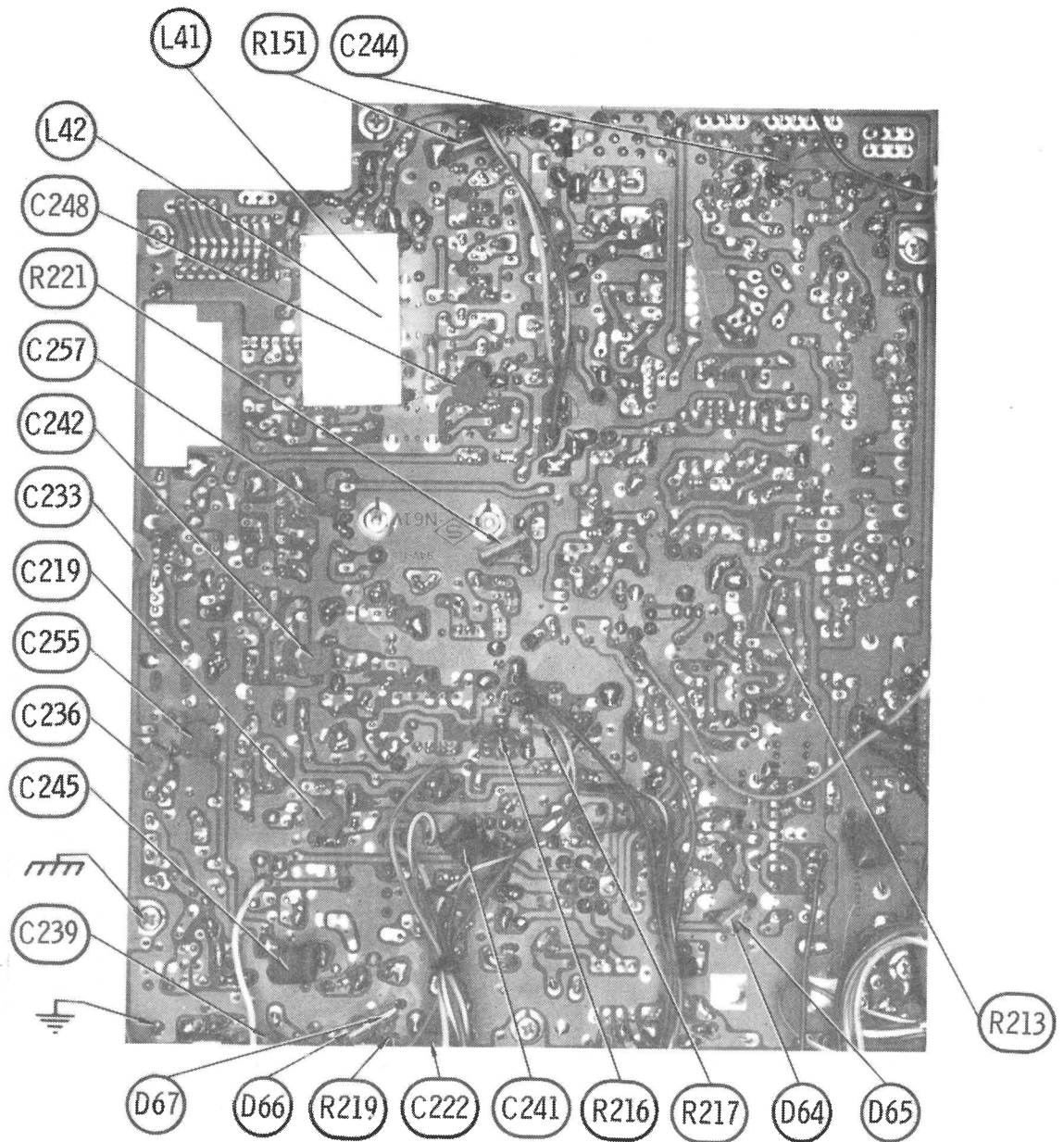


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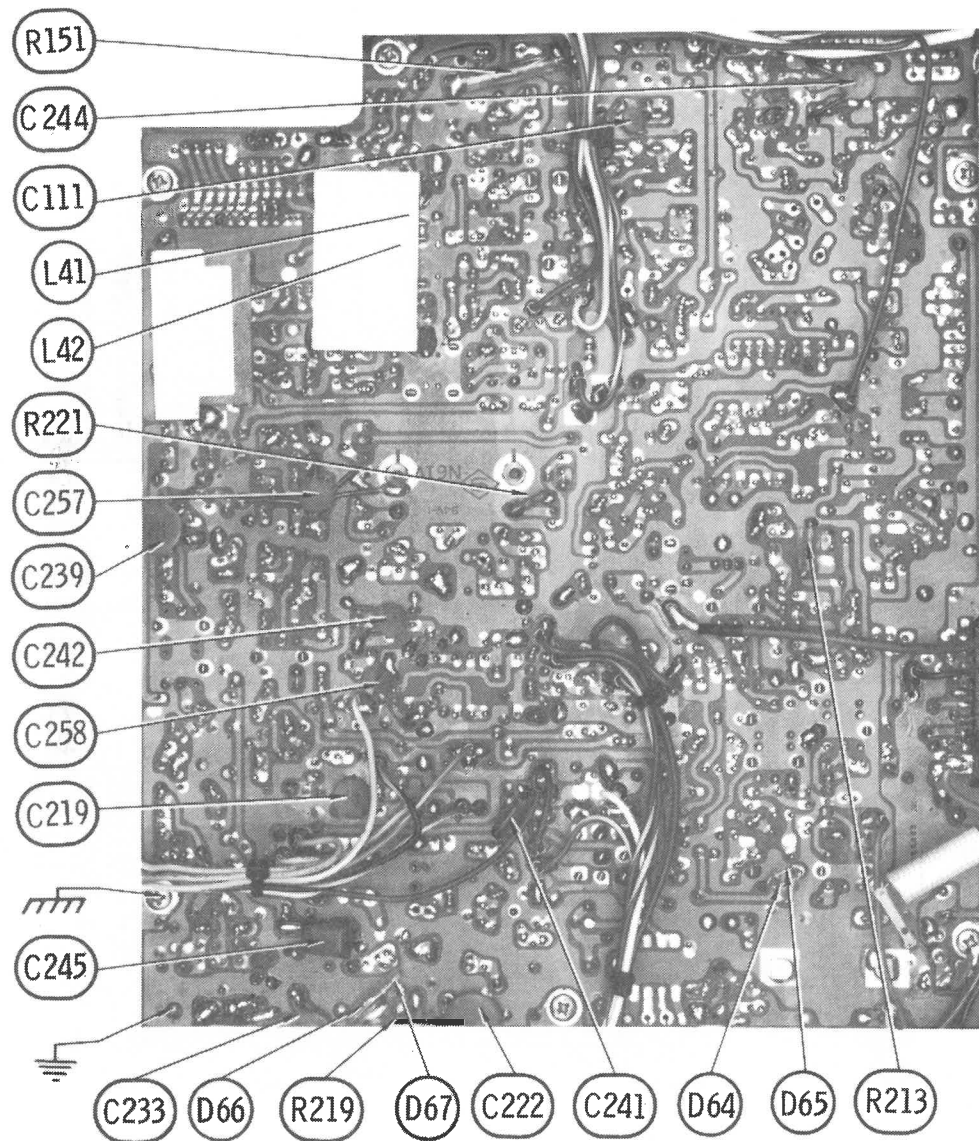


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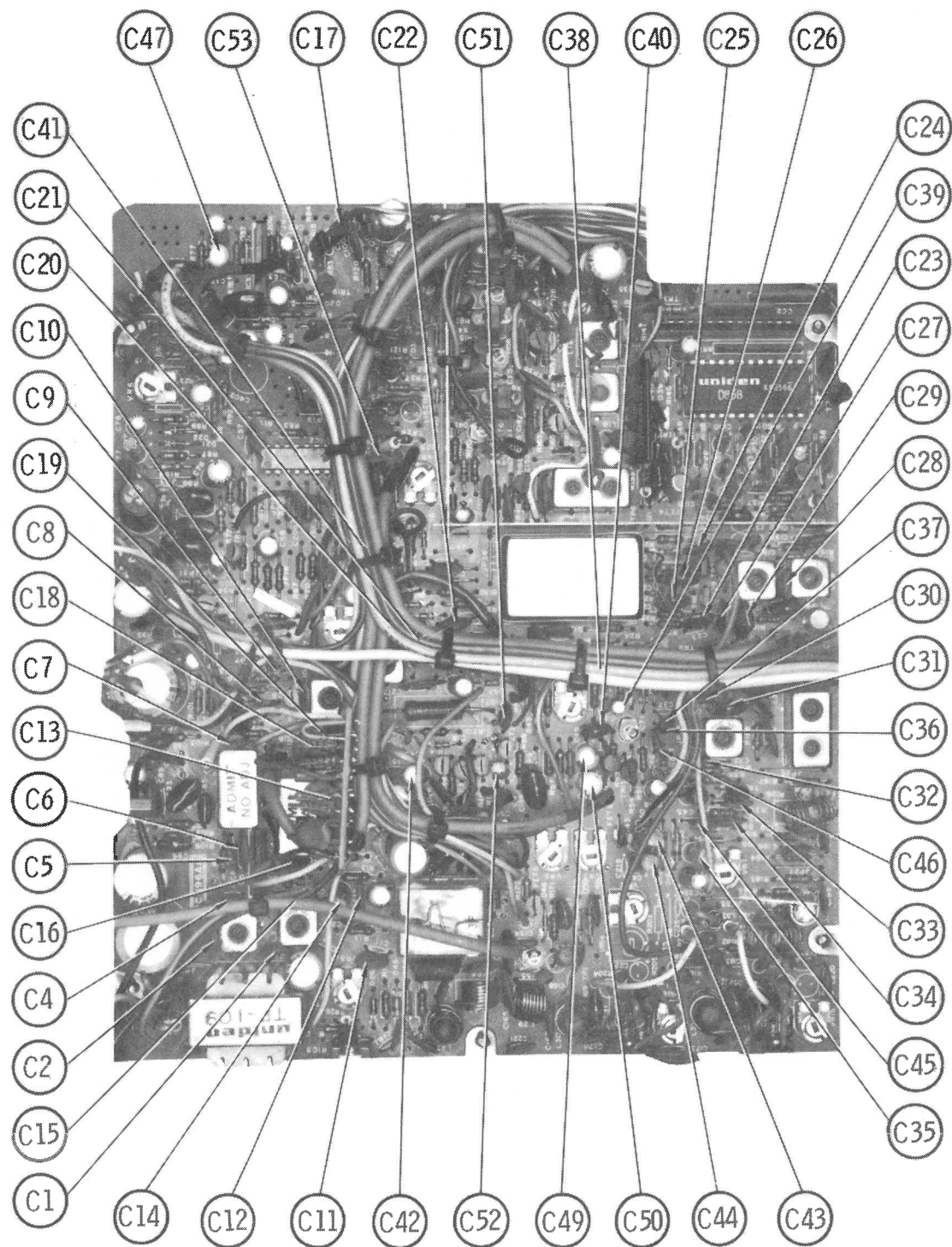
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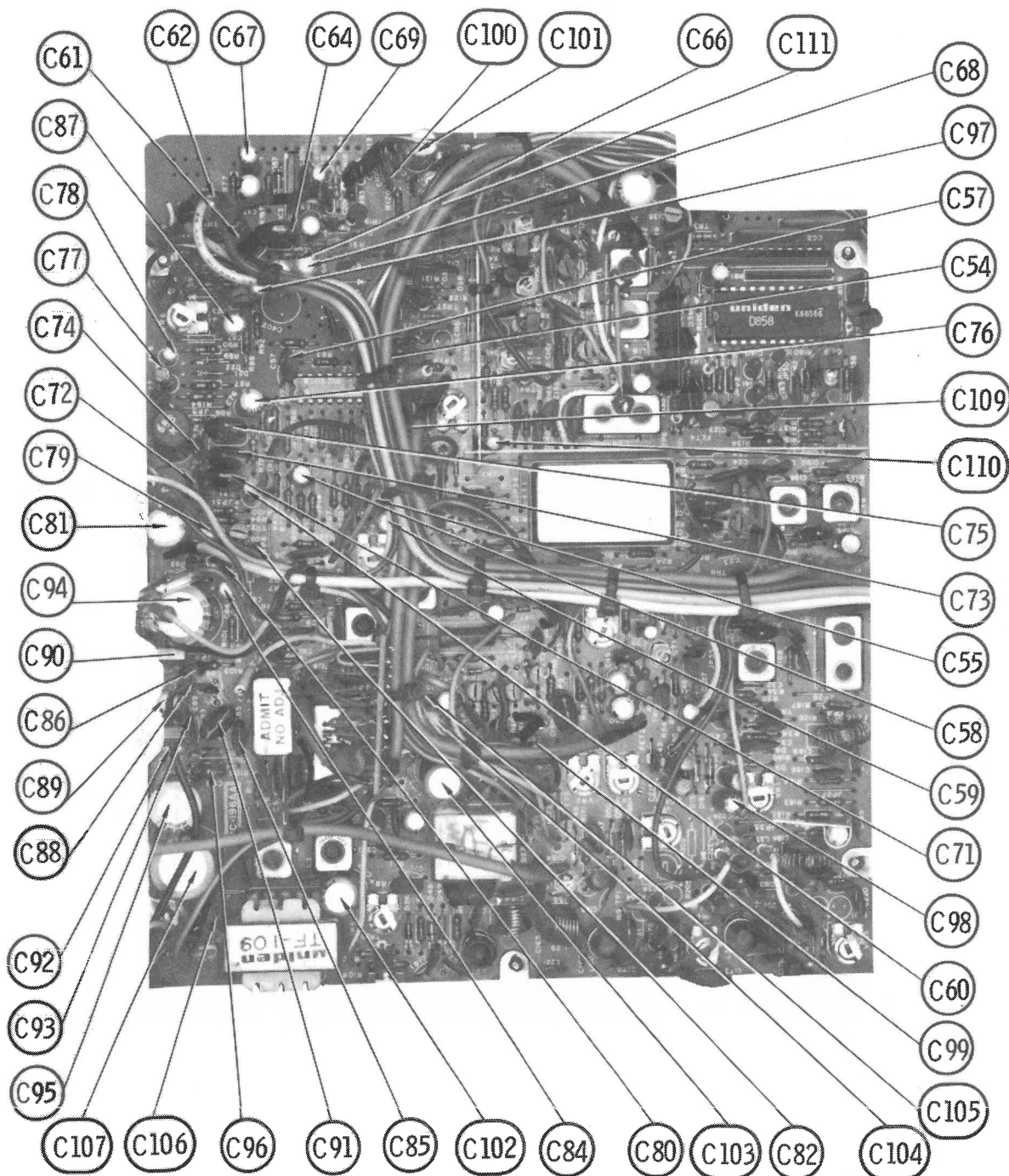
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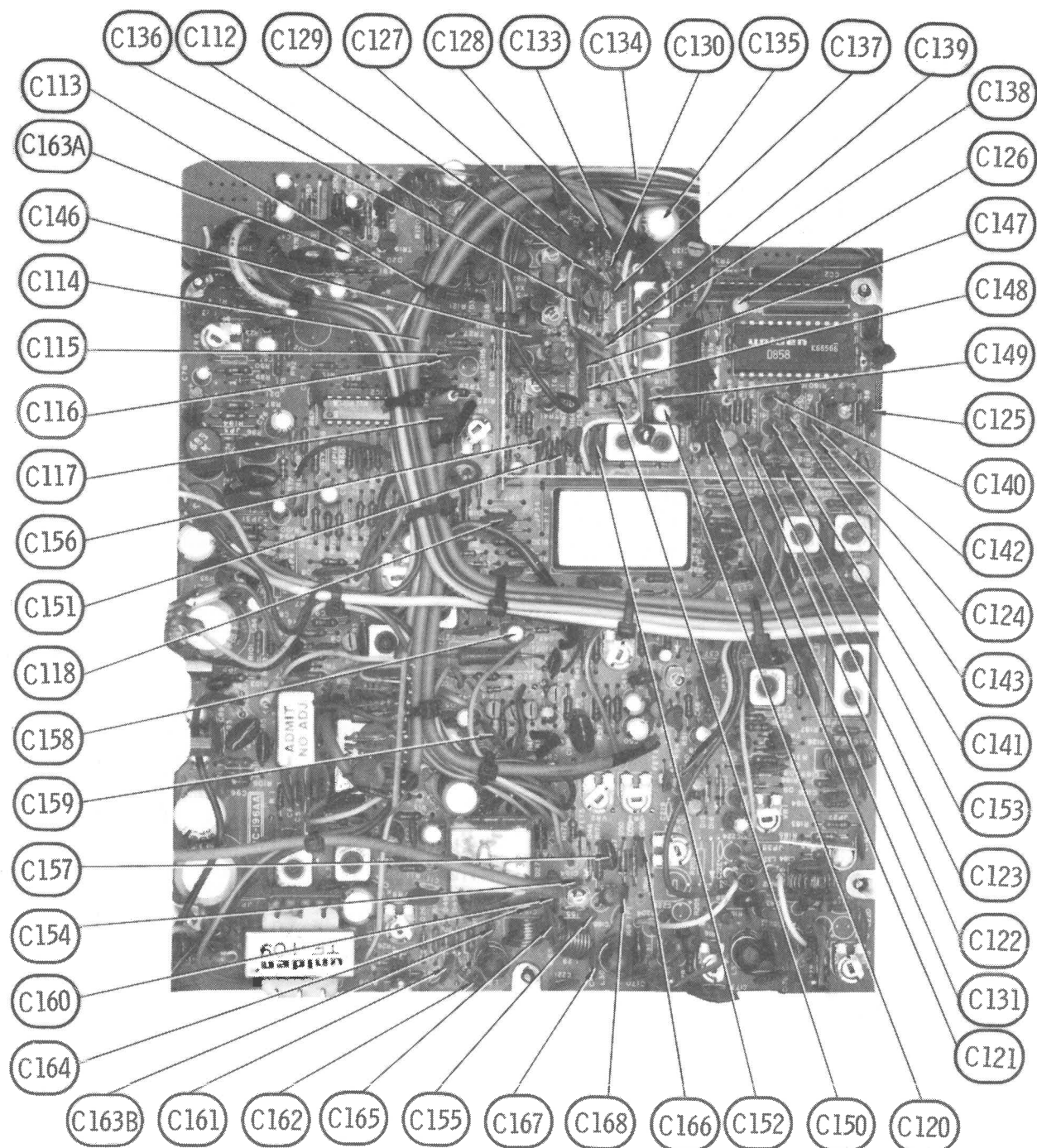
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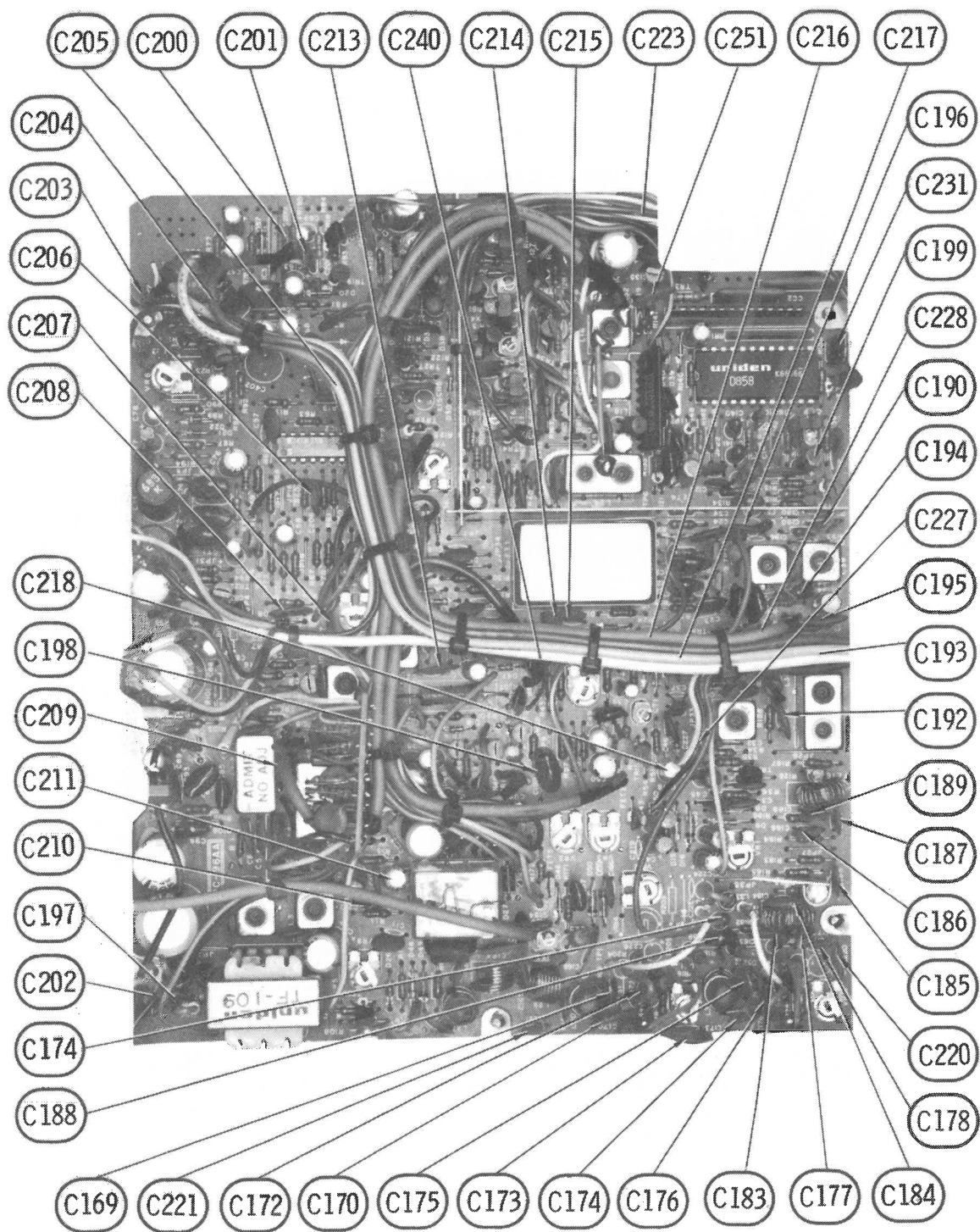
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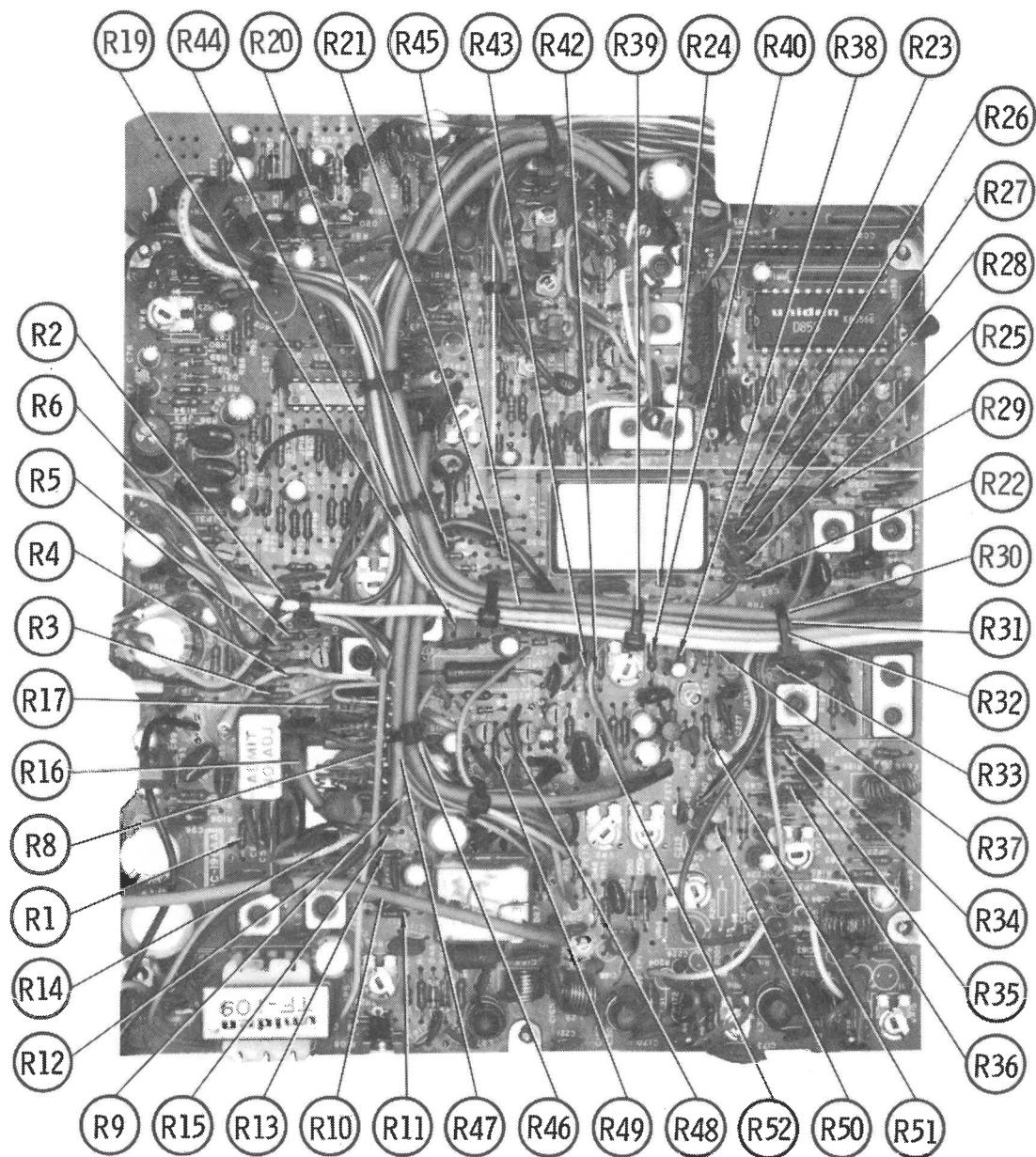
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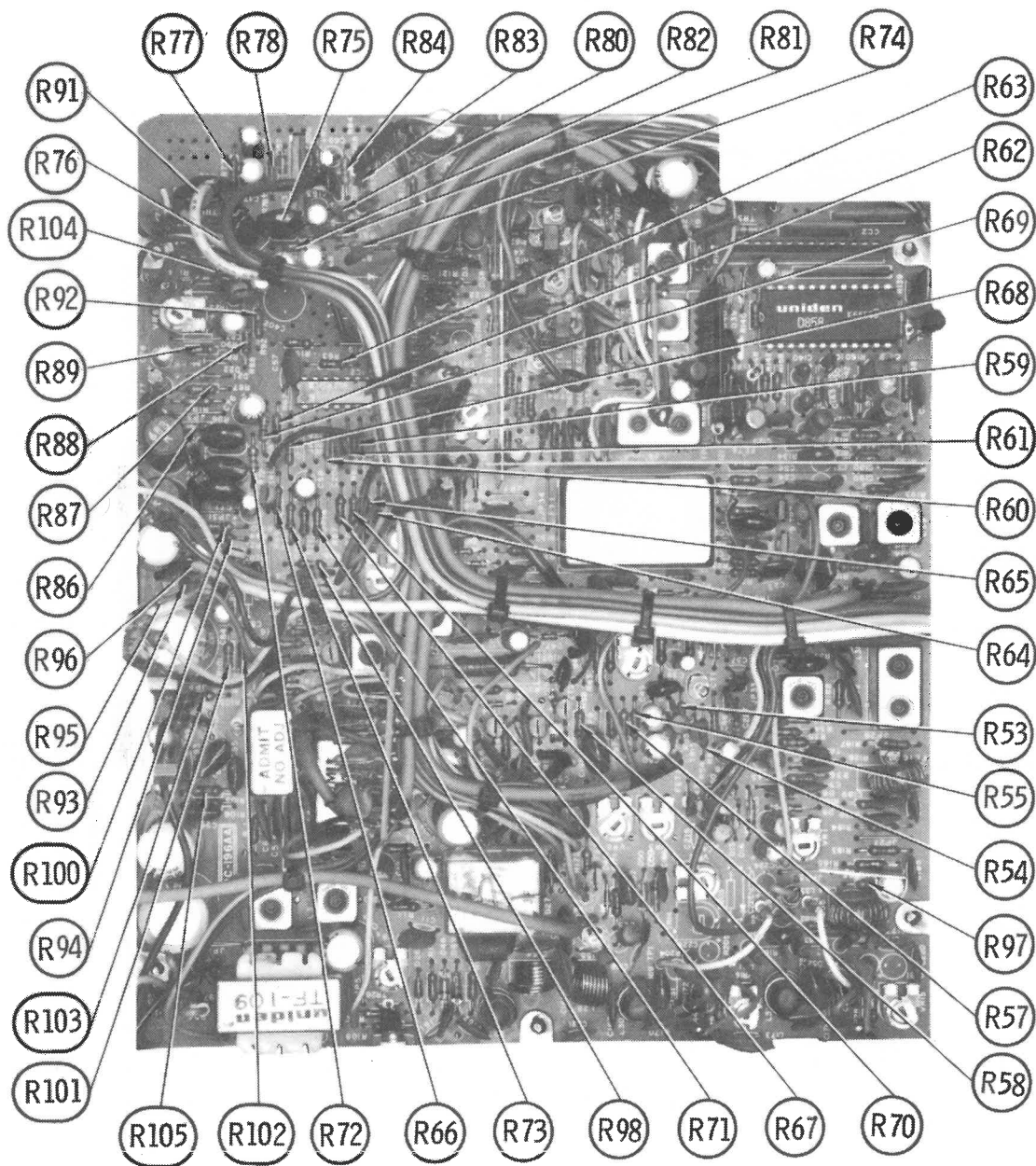
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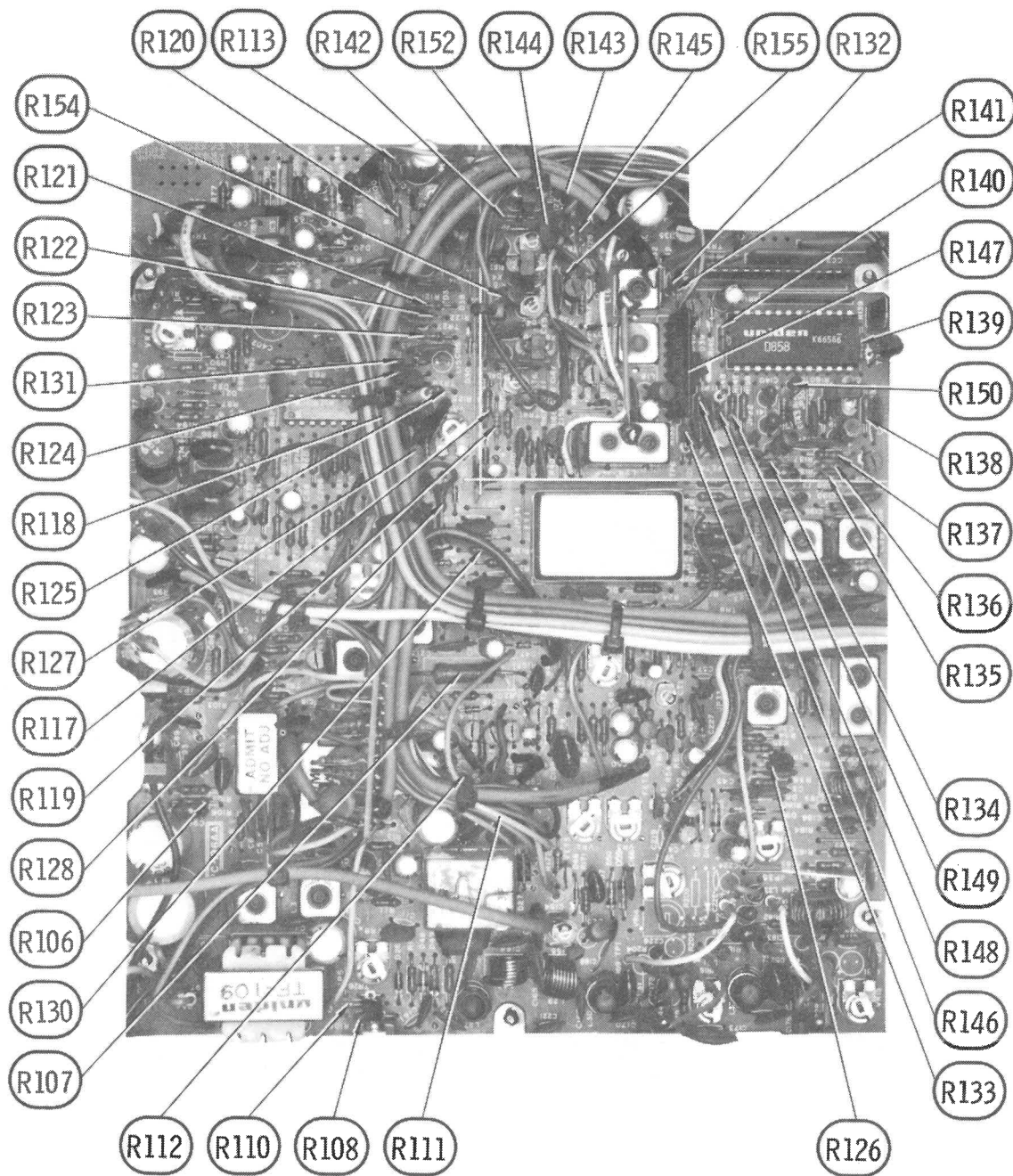
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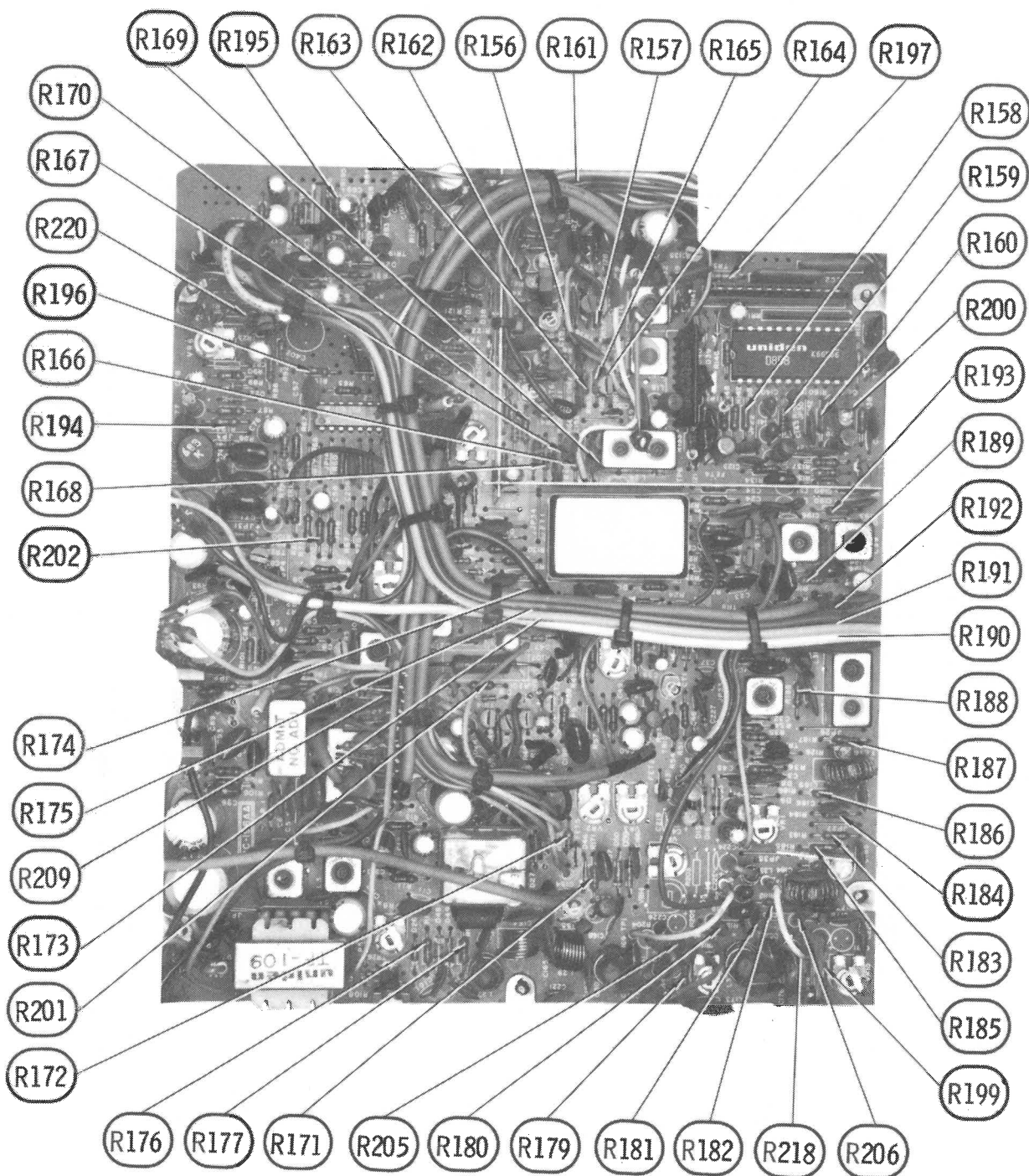
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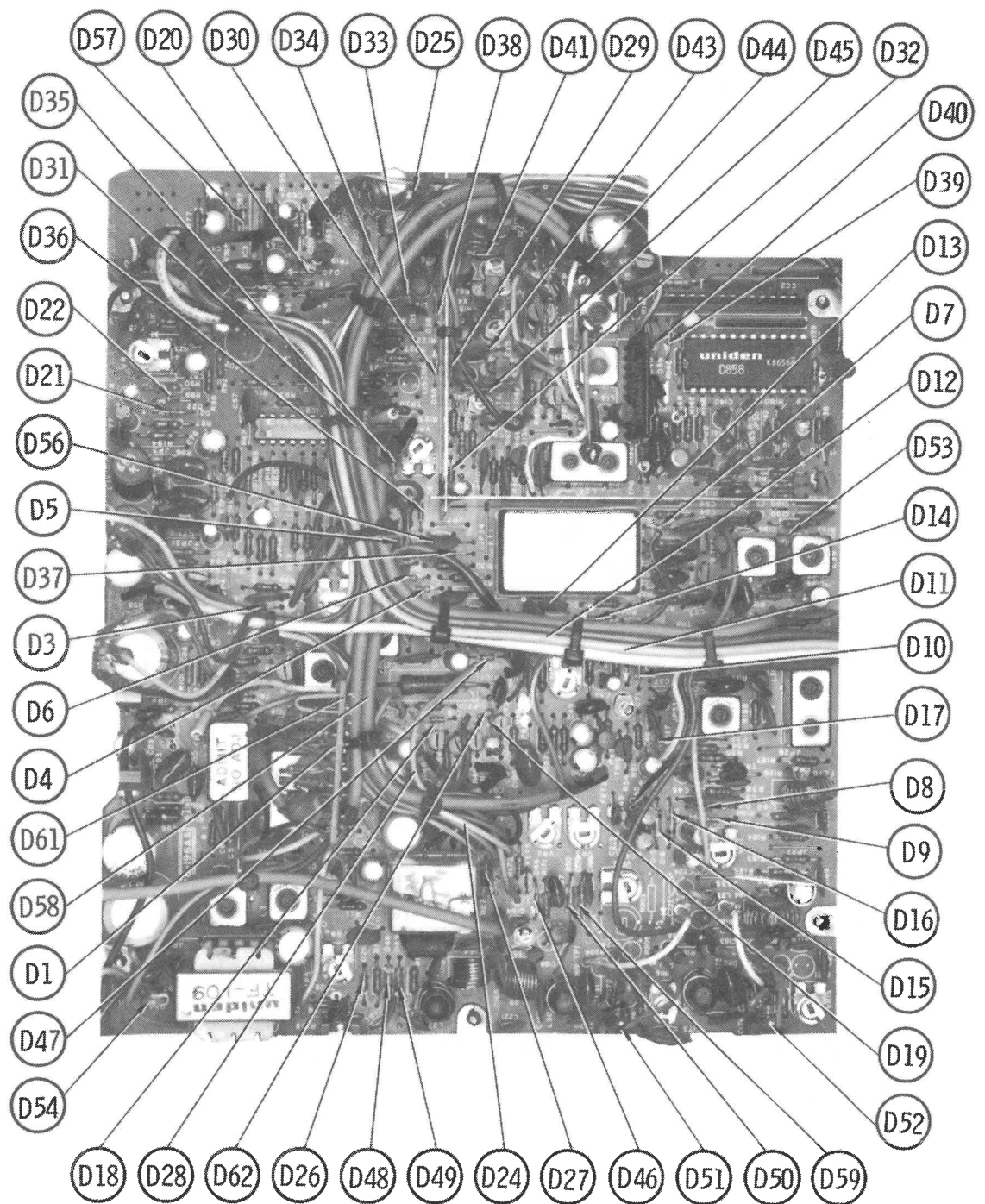
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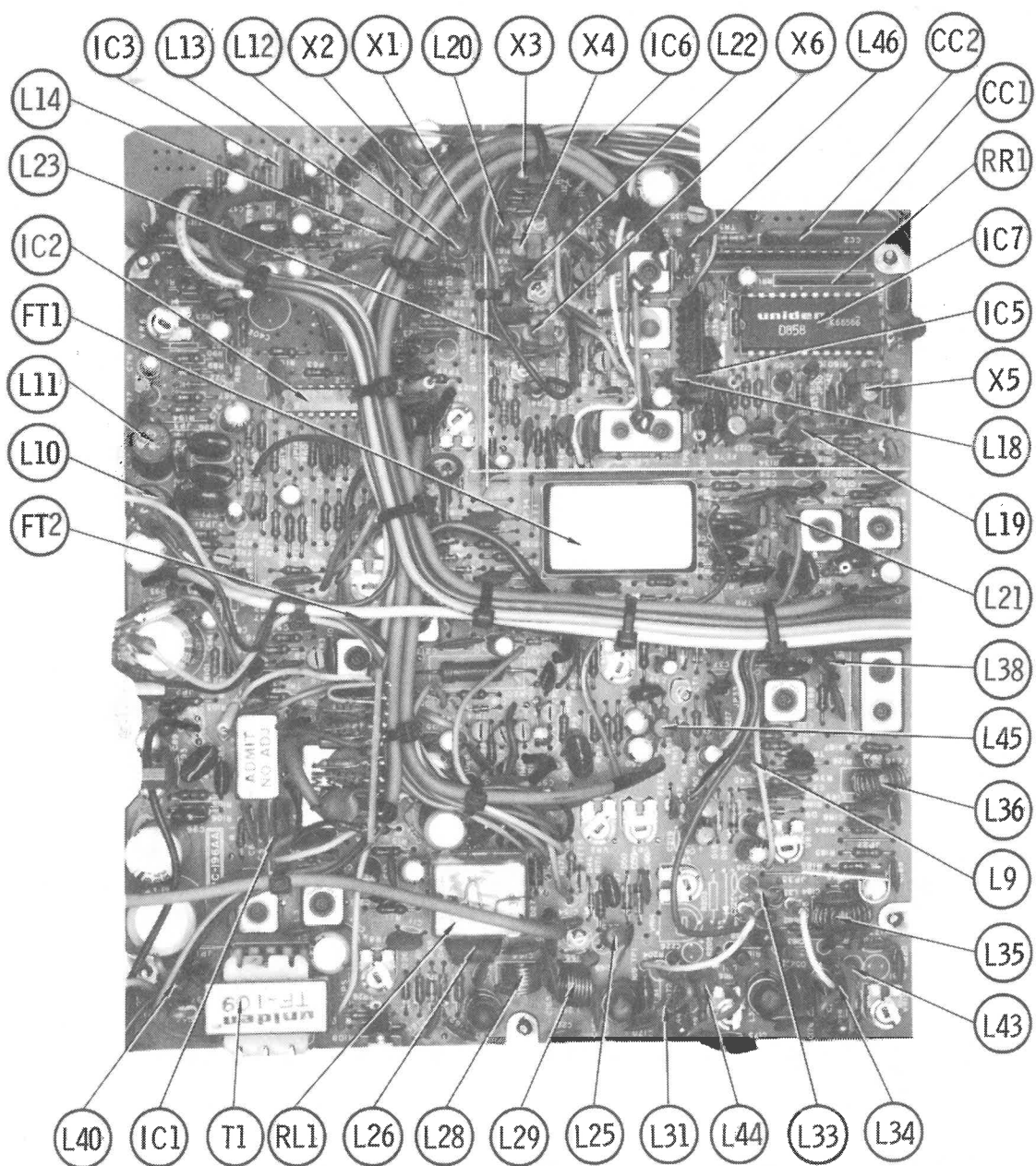
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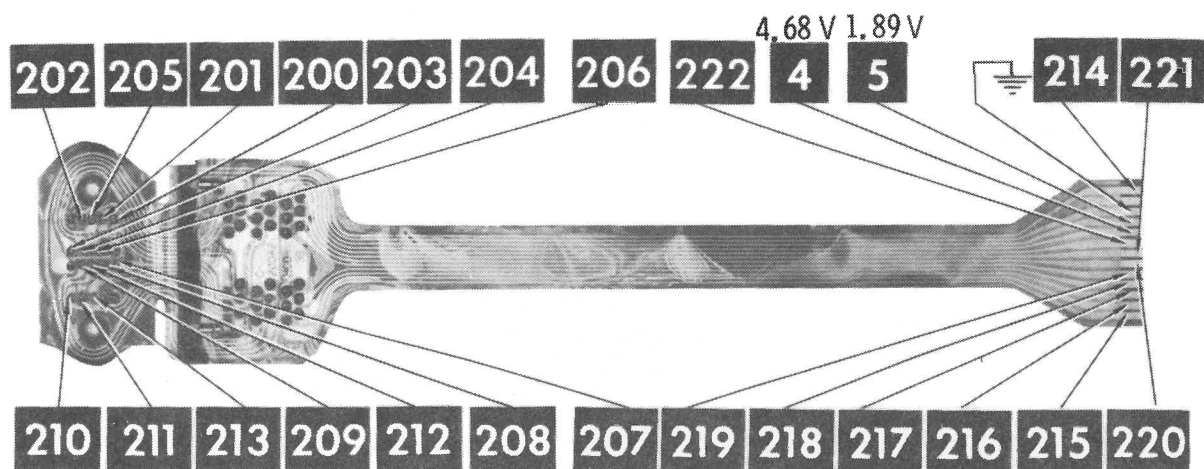
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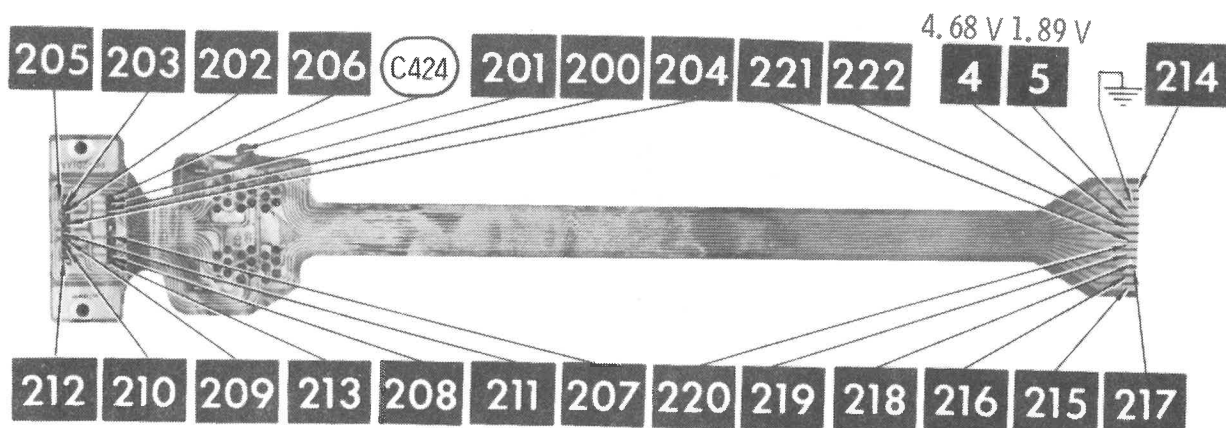
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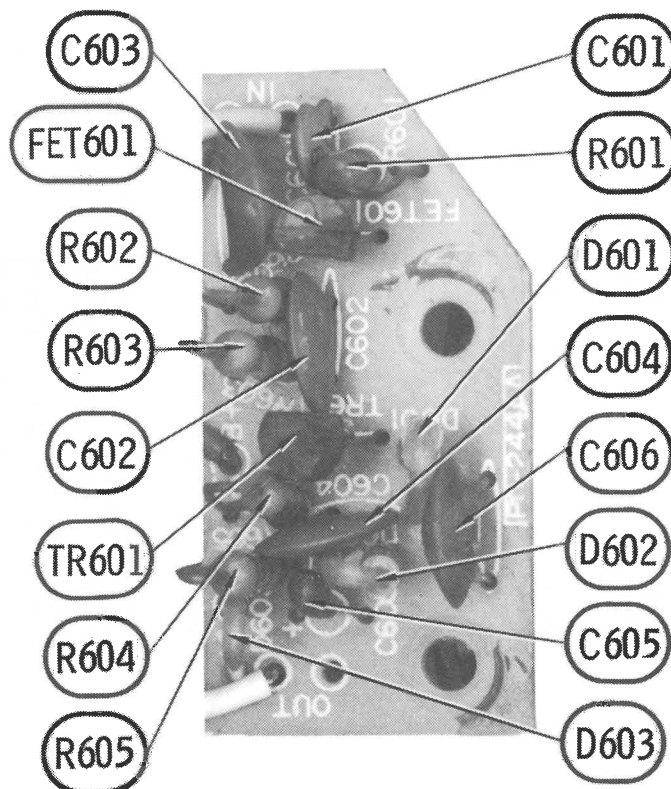
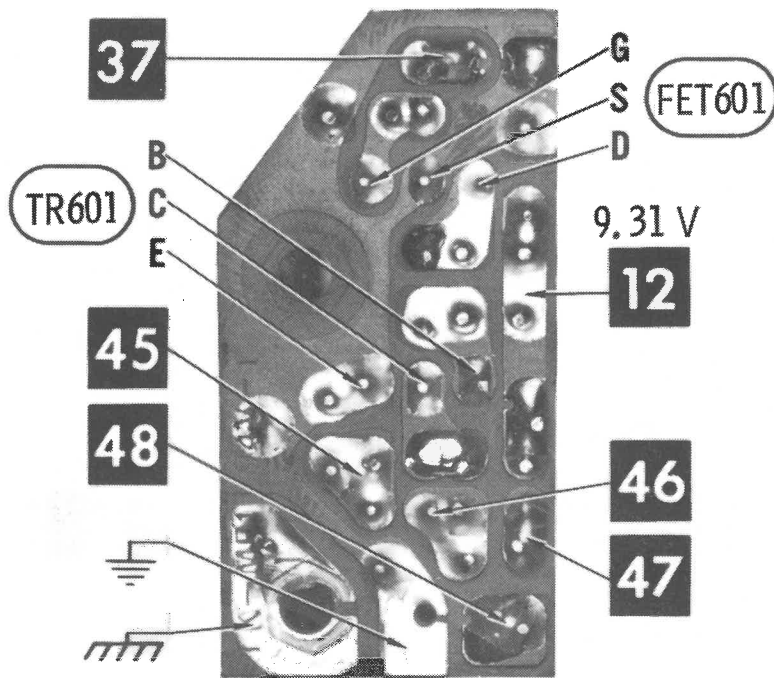
MAIN BOARD



CH. SELECTOR & READOUT BOARD (TRC-457)

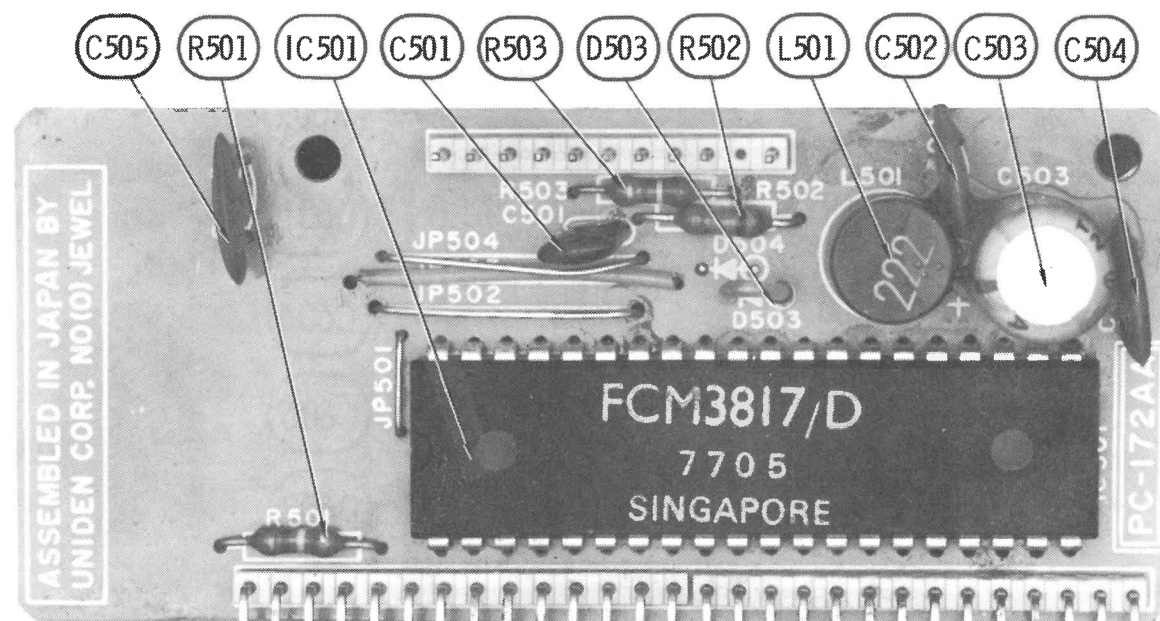
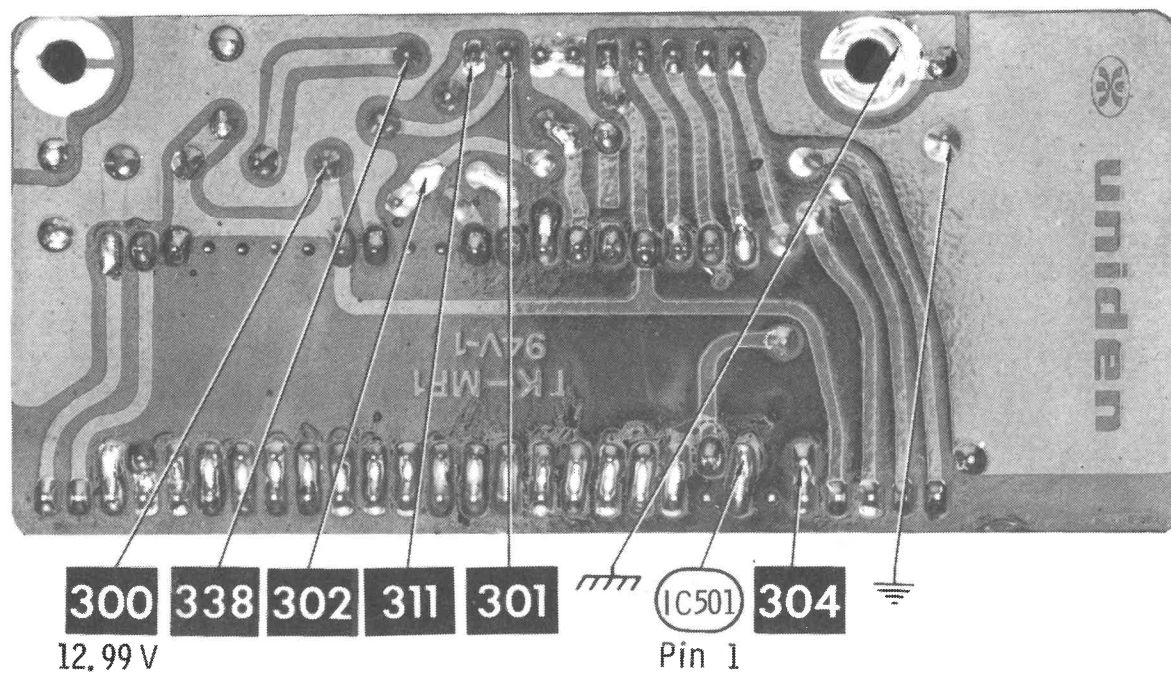


CH. SELECTOR & READOUT BOARD (TRC-458)

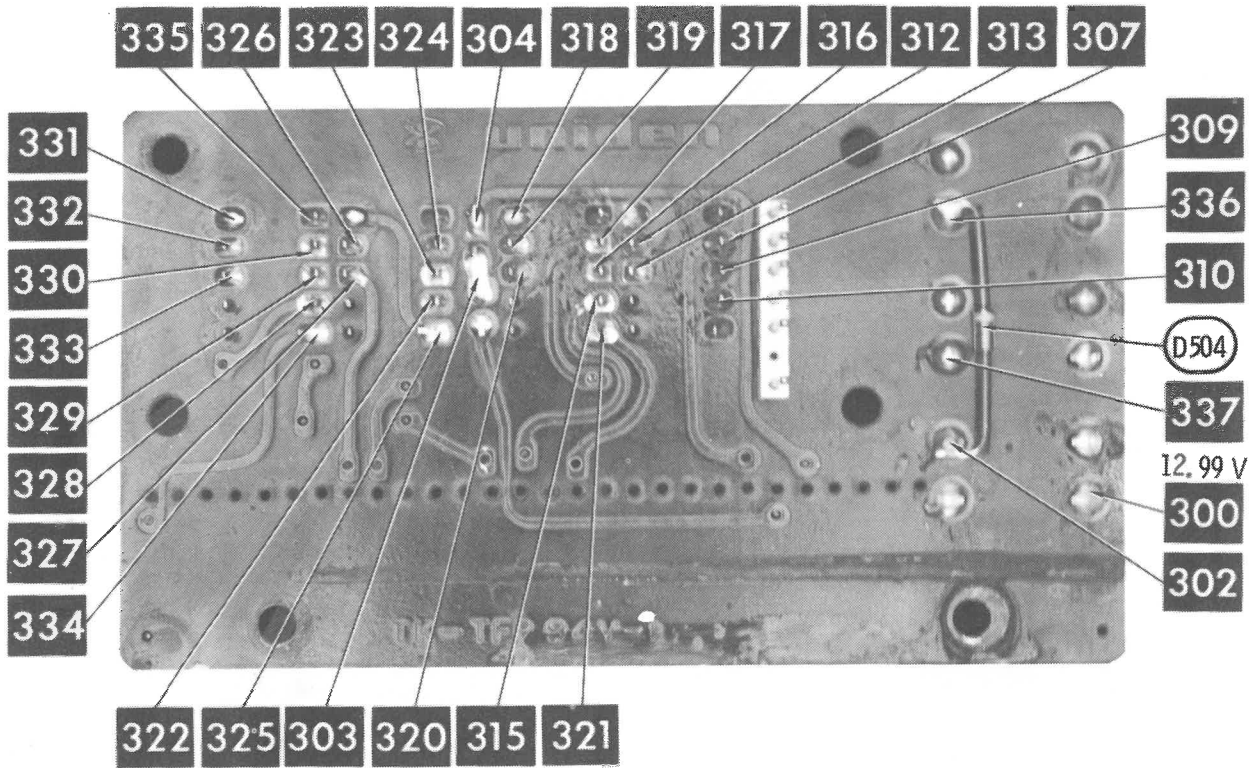


NOISE BLANKER BOARD

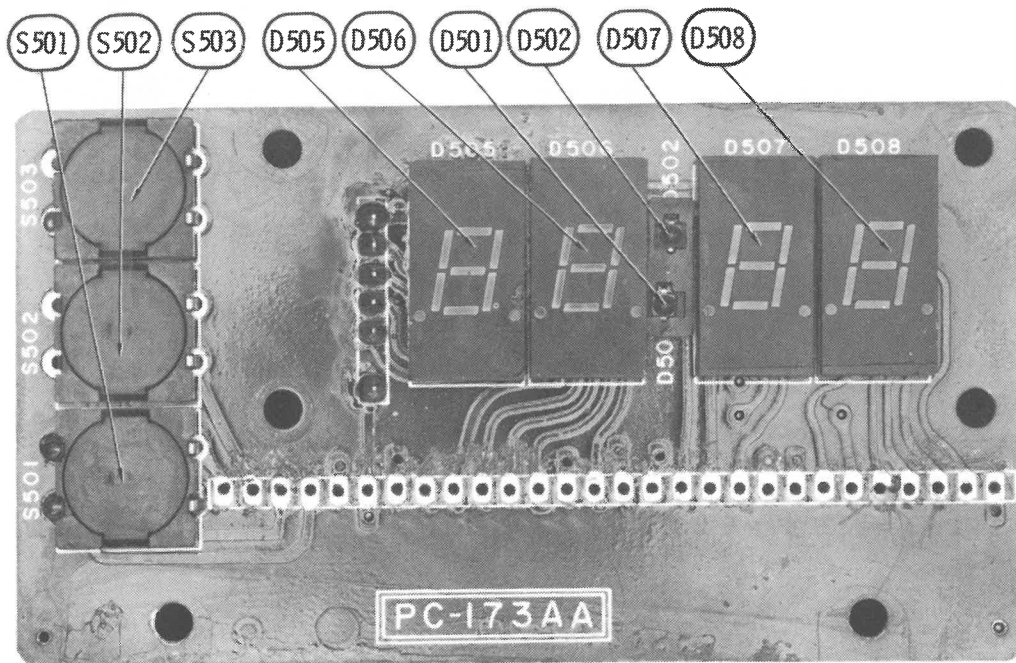
REALISTIC MODELS TRC-457/-458



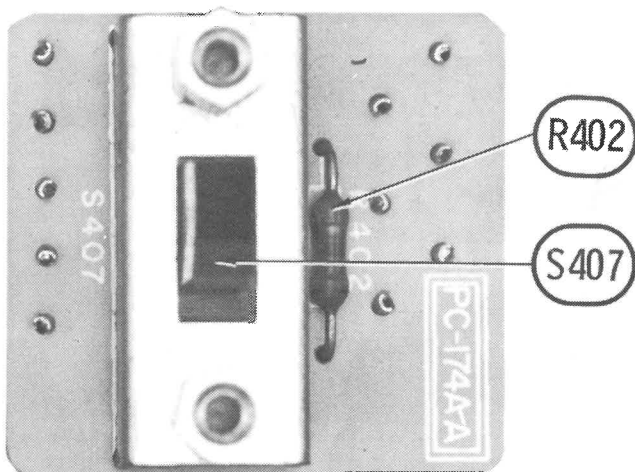
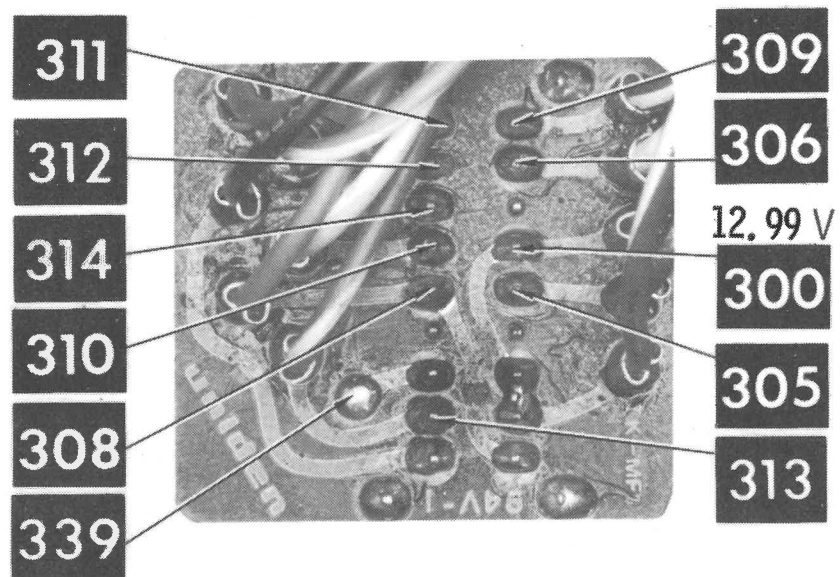
CLOCK LOGIC BOARD (TRC-457)



REALISTIC MODELS TRC-457/-458

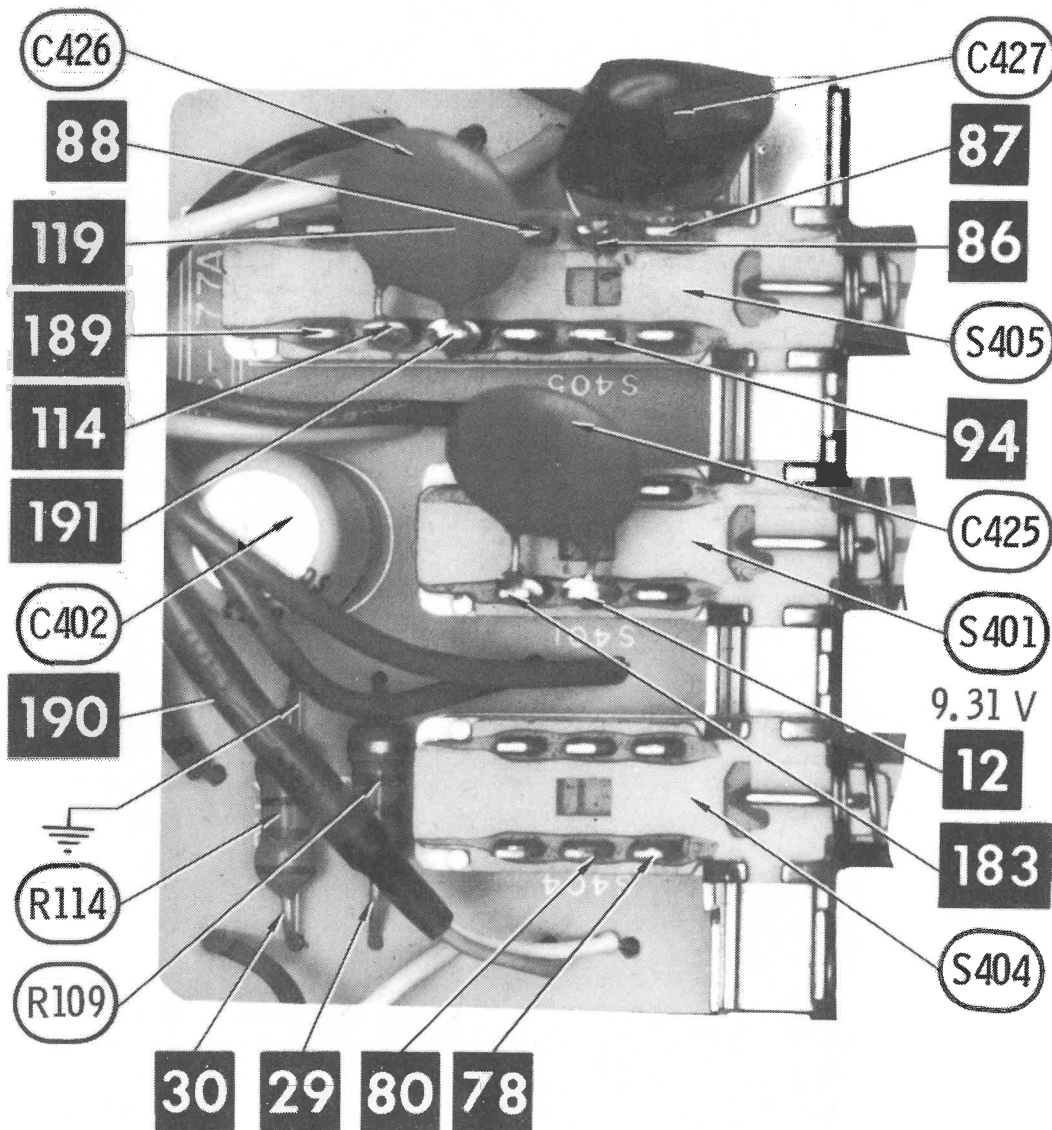


CLOCK READOUT BOARD (TRC-457)

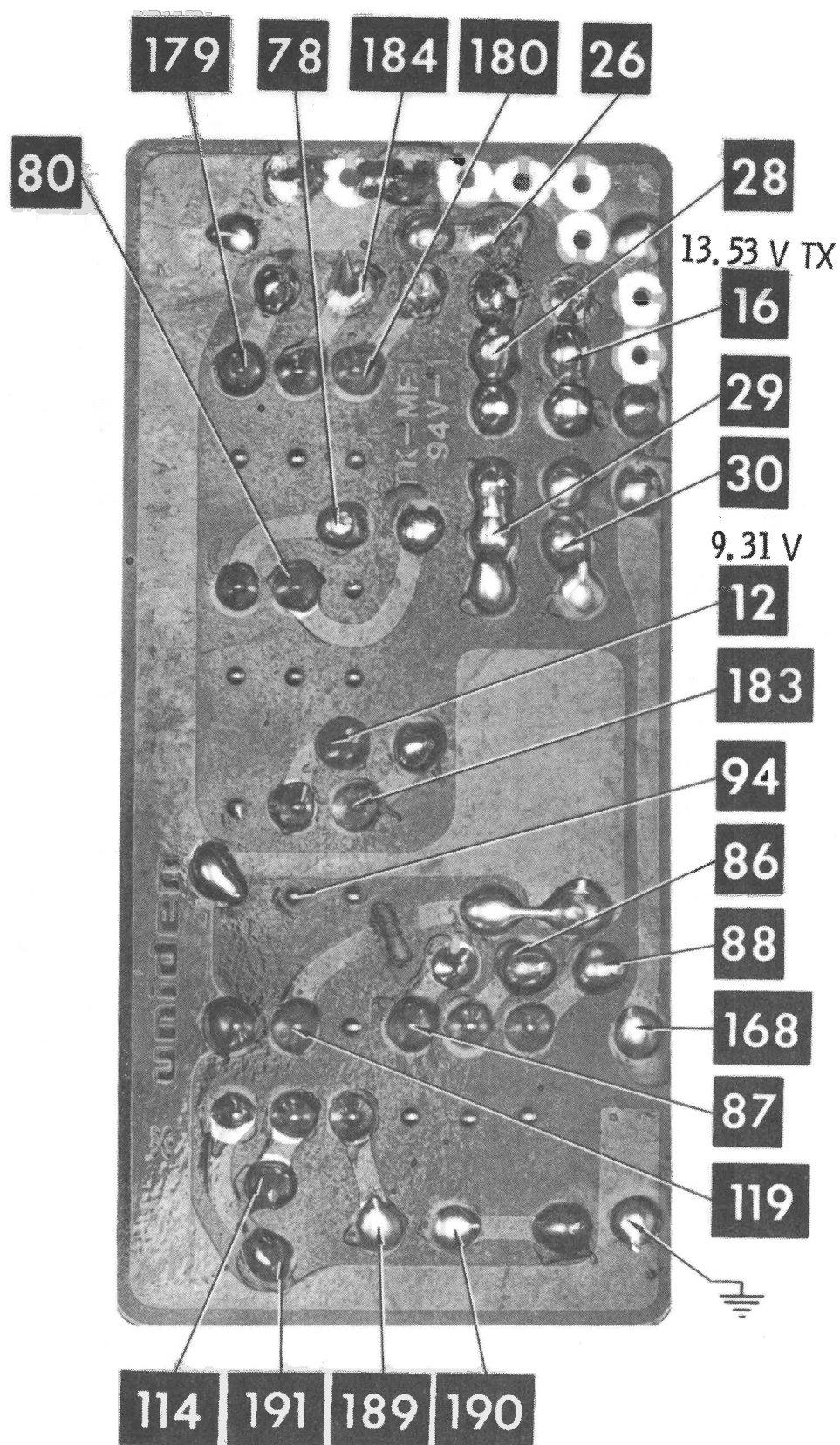


12-24 HOUR BOARD (TRC-457)

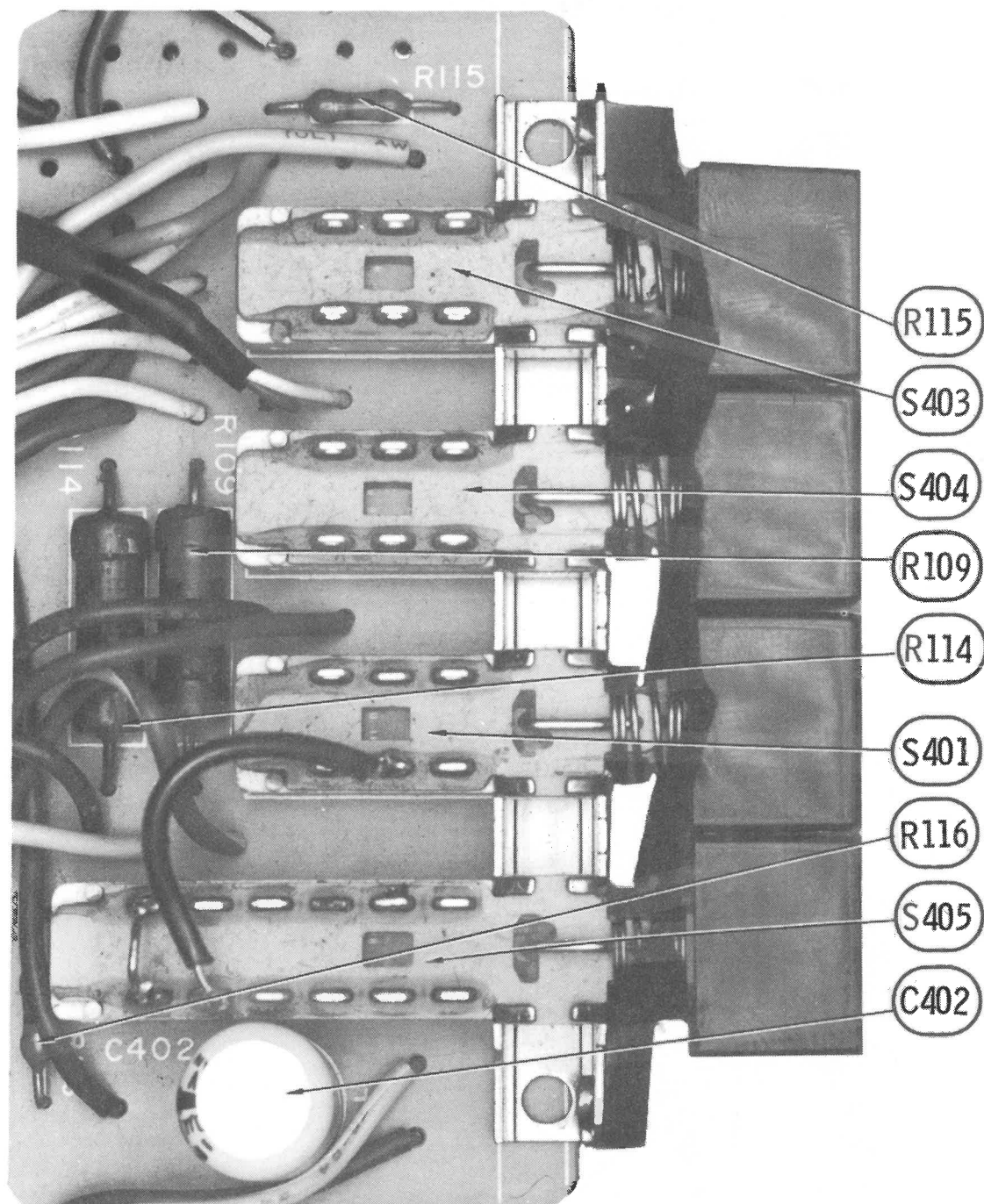
REALISTIC MODELS TRC-457/.458



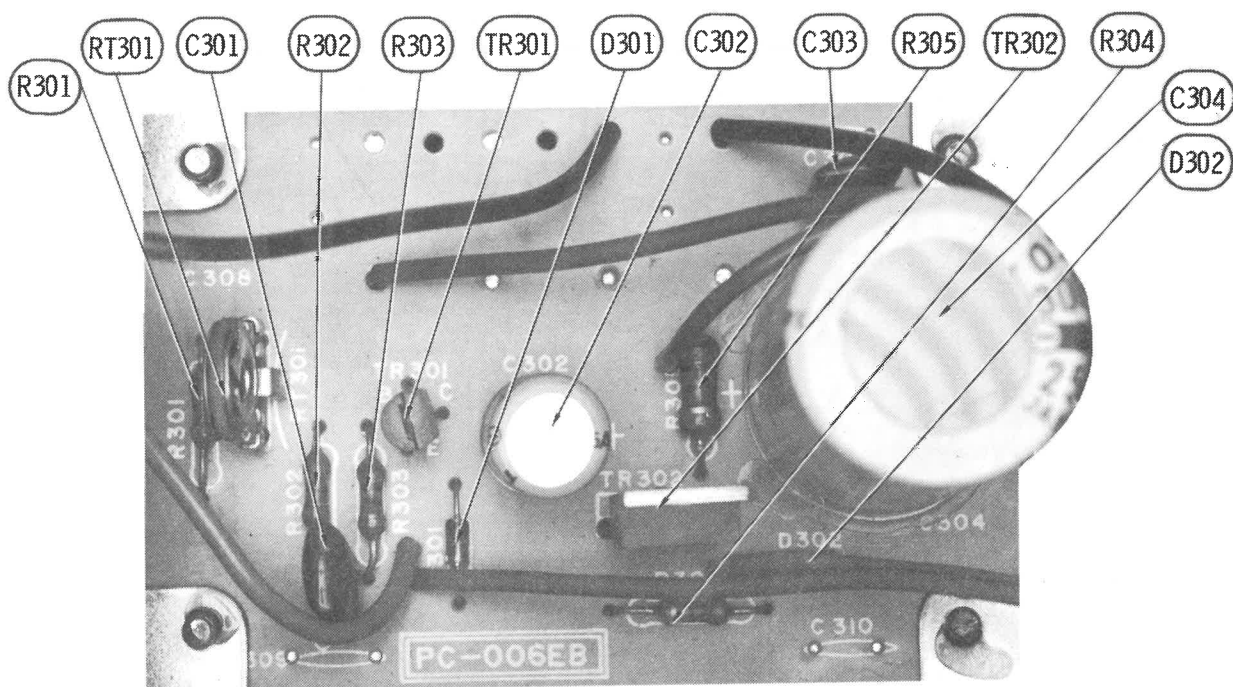
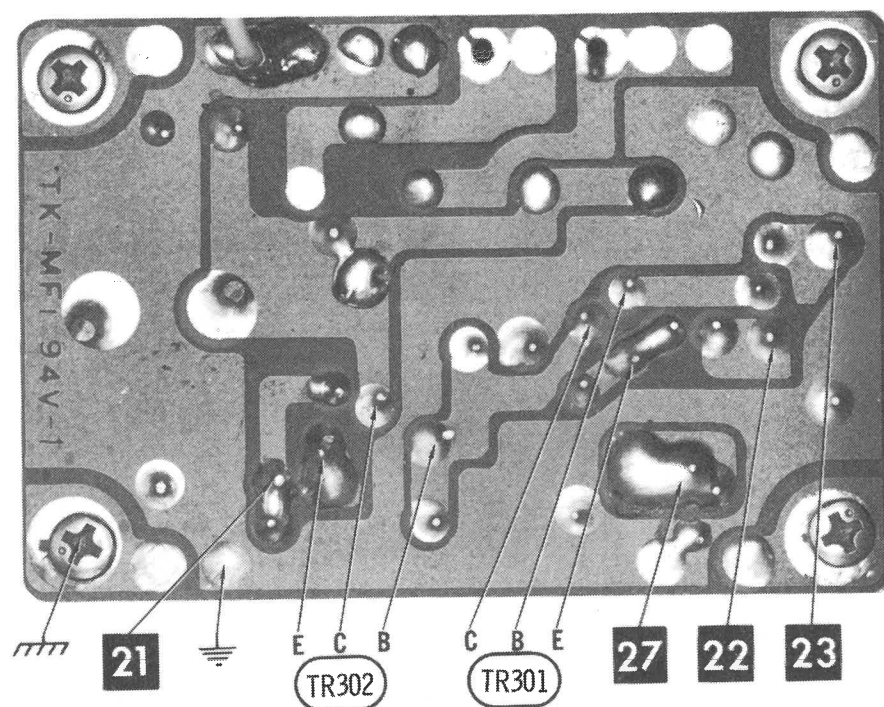
SWITCH BOARD (TRC-458)



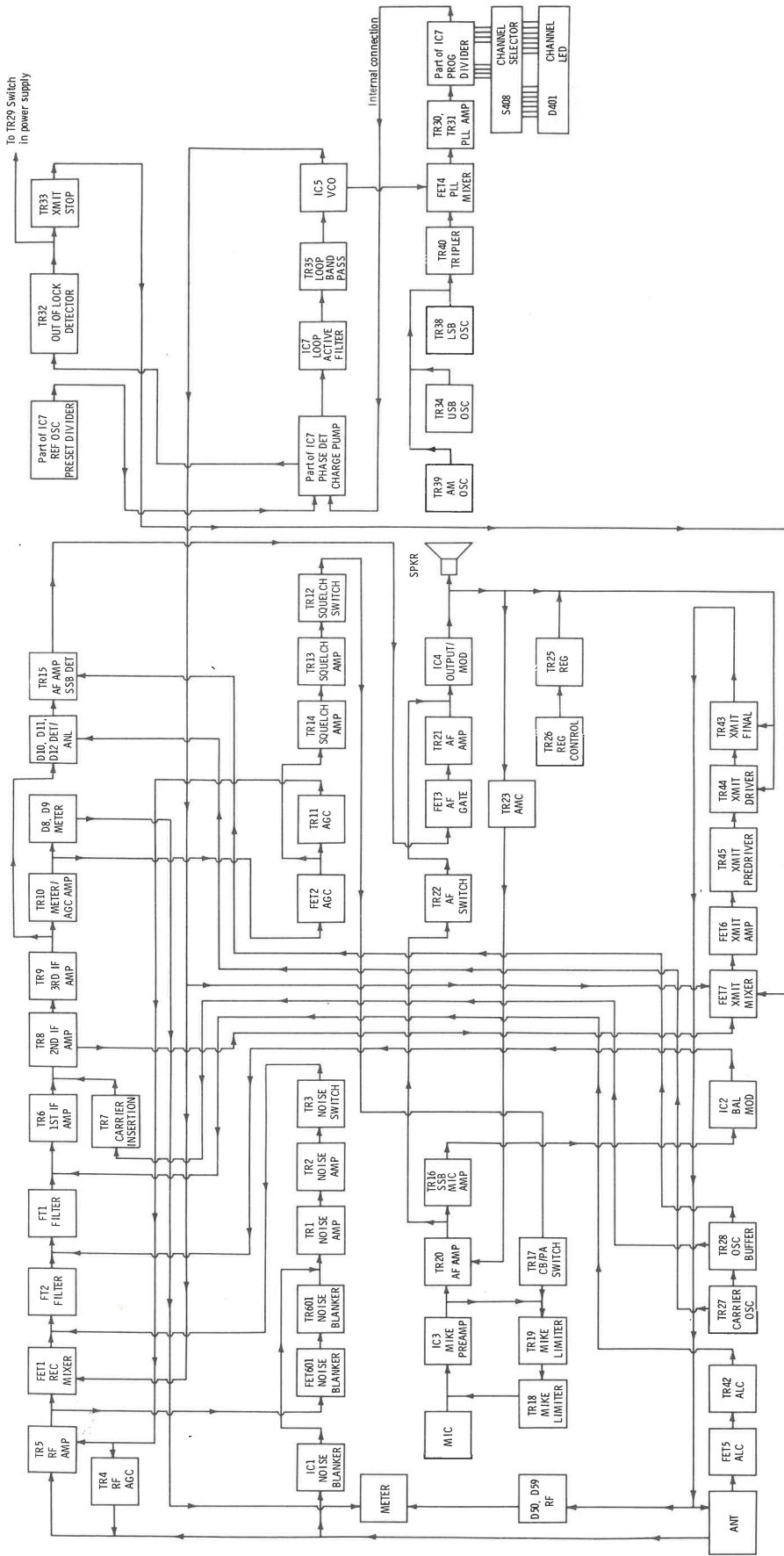
SWITCH BOARD (TRC-457)



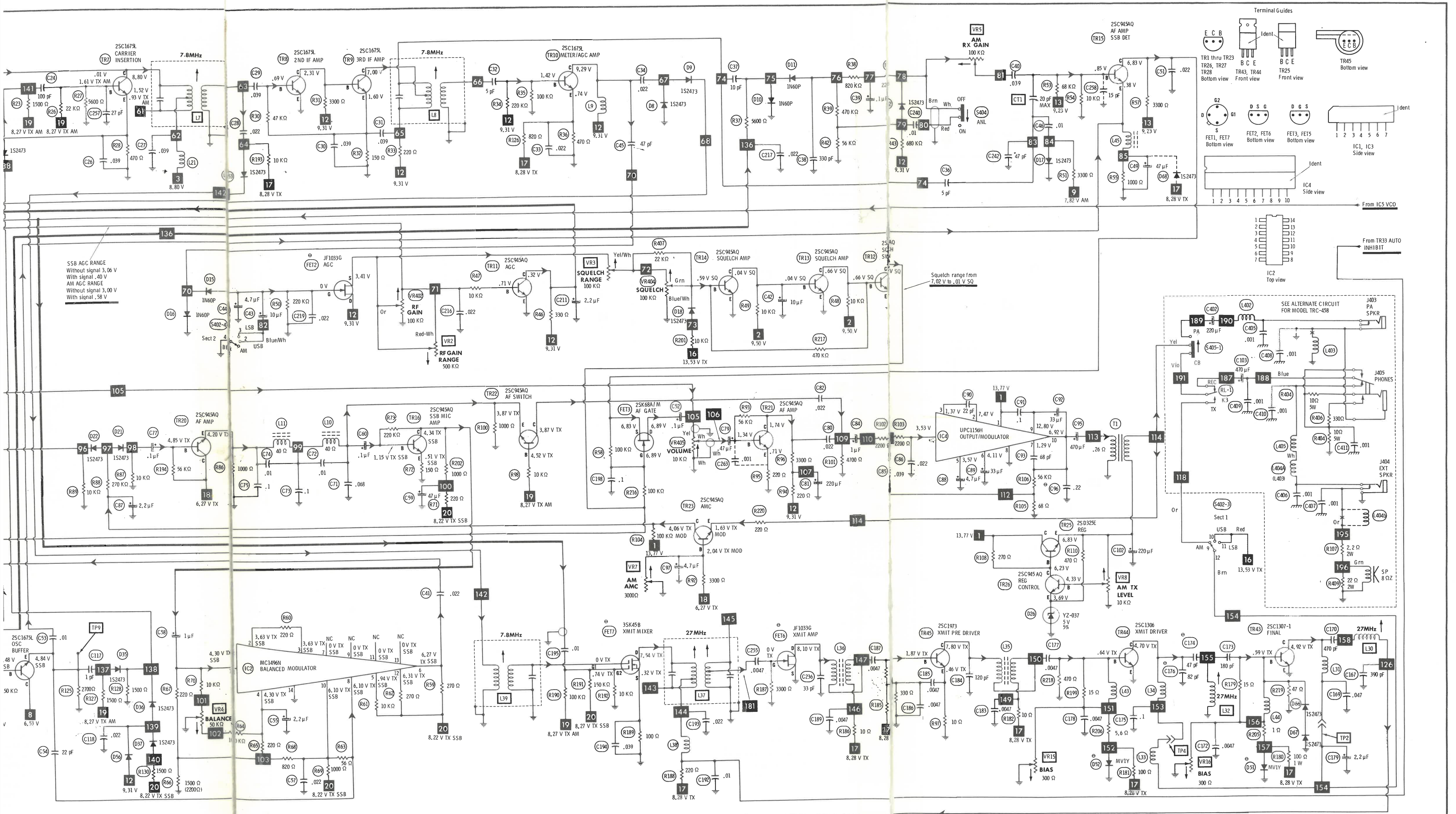
SWITCH BOARD (TRC-457)

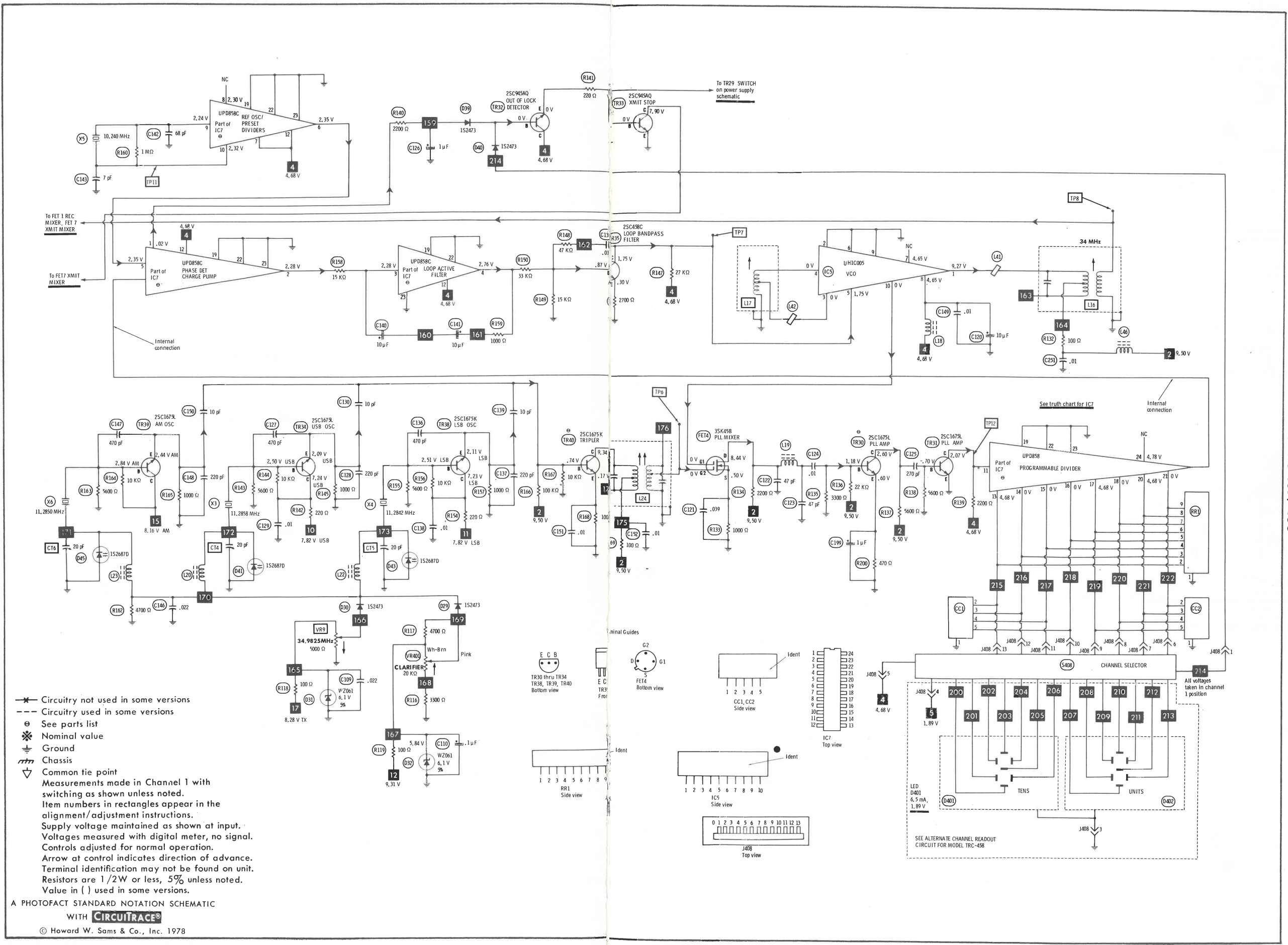


POWER SUPPLY BOARD

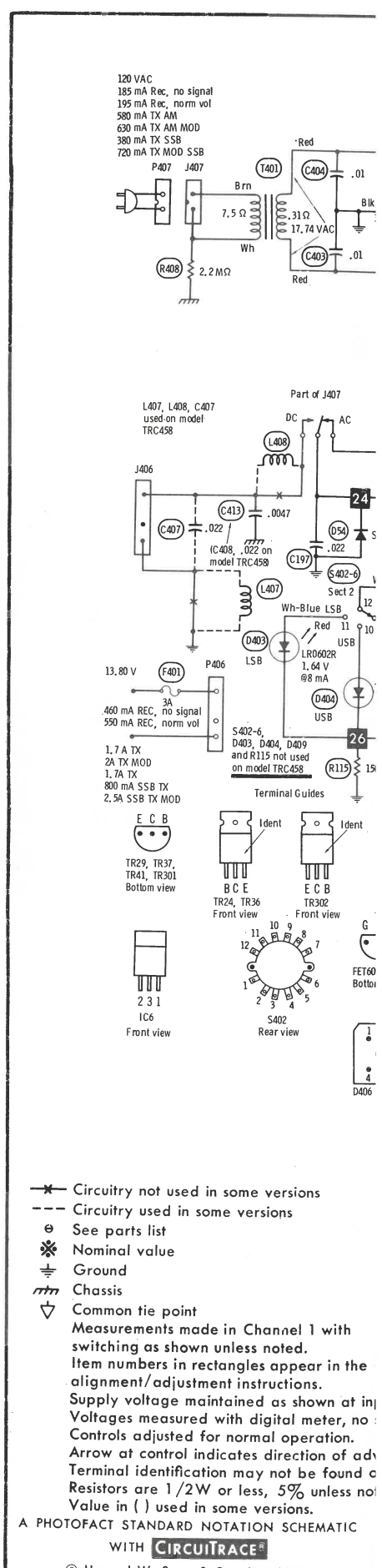


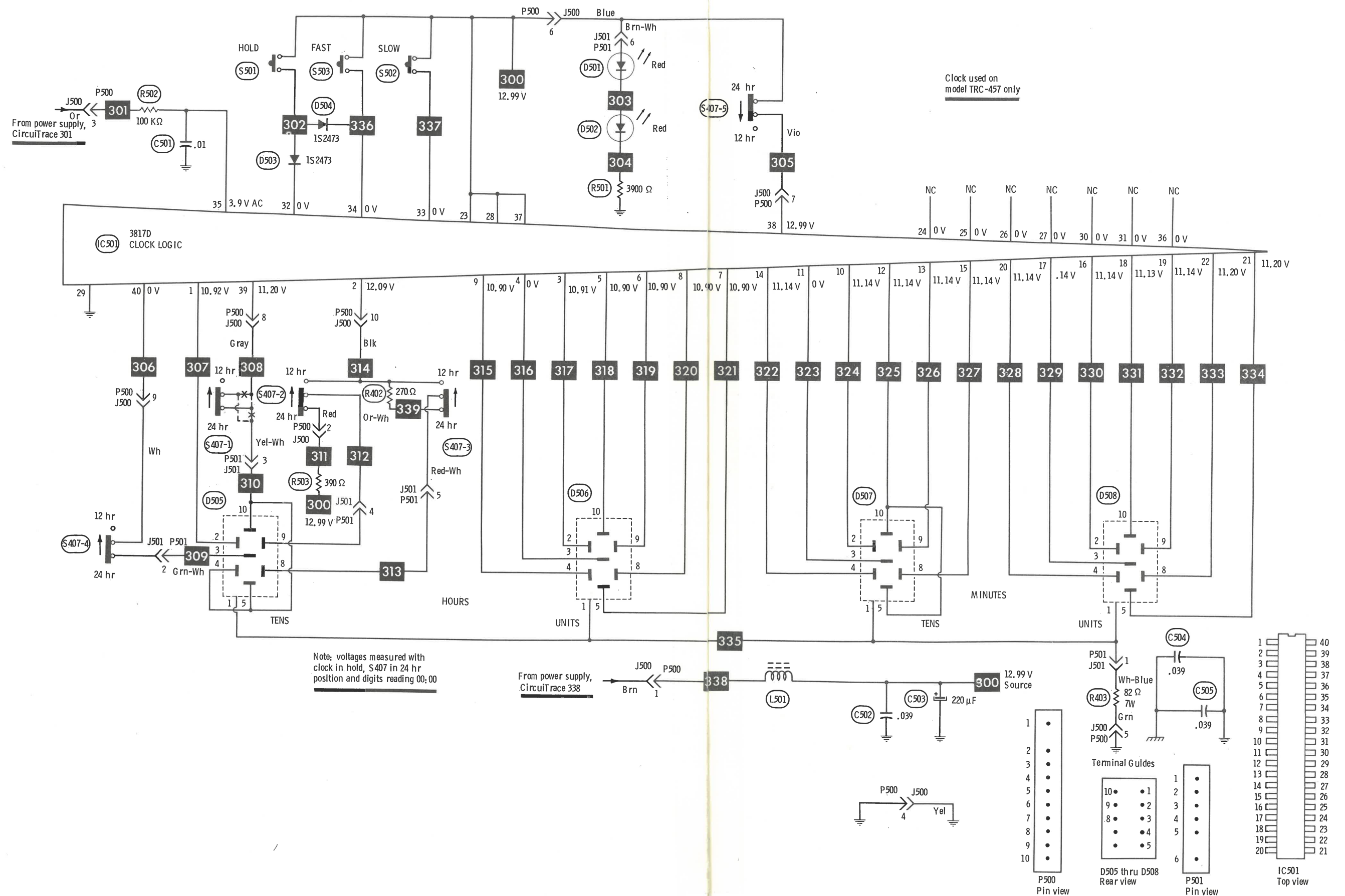






REALISTIC MODELS TRC-457/-458





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.	MOTOROLA PART No.	RAYTHEON PART No.	RCA PART No.	SPRAGUE PART No.	SYLVANIA PART No.	THORDARSON PART No.	WORKMAN PART No.	ZENITH PART No.
D1	1S2473	DX-0299	GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
D3	1S2473	DX-0299	GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
D4	1S2473	DX-0299	GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
D5	1S2473	DX-0299	GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
D6	1S2473	DX-0299	GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
D7	1S2473	DX-0299	GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
D8	1S2473	DX-0299	GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
D9	1S2473	DX-0299	GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
D10	1N60P	DX-0162	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	1N60	WEP134	ZEN-430
D10	1N60P	DX-0161(14)	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	1N60	WEP134	ZEN-430
D11	1N60P	DX-0162	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	1N60	WEP134	ZEN-430
D11	1N60P	DDAY001023(14)	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	1N60	WEP134	ZEN-430
D12	1S2473	DX-0299	GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
D13	1S2473	DX-0299	GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
D14	1S2473	DX-0299	GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
D15	1N60P	DX-0162	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	1N60	WEP134	ZEN-430
D15	1N60P	DX-0161(14)	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	1N60	WEP134	ZEN-430
D16	1N60P	DX-0162	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	1N60	WEP134	ZEN-430
D16	1N60P	DX-0161(14)	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	1N60	WEP134	ZEN-430
D17	1S2473	DX-0299	GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
D18	1S2473	DDAY048001	GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S2473K	DDAY048001	GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
D18	1S2473	DX-0299(14)	GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S2473K	DX-0299(14)	GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
D19	1S2473	DDAY048001	GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S2473K	DDAY048001	GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
D19	1S2473	DX-0299(14)	GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S2473K	DX-0299(14)	GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
D20	1S2473	DX-0299	GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
D21	1S2473	DX-0299	GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
D22	1S2473	DX-0299	GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
D24	DZ-092	DX-0087	GEZD-9.1	ZB9.1A	HEPZ0412	REN 139	SK3060	RT-240	ECG139	1N4739A	WEP1109	103-272
D25	BZ-075	DDAY009005	GEZD-7.5	ZB7.5A	HEPZ0410	REN 138	SK3059	RT-239	ECG138	1N4737A	WEP1107	ZEN-505
D26	YZ-037	DDAY087002	GEZD-7.5	ZB7.5A	HEPZ0410	REN 138	SK3059	RT-239	ECG138	1N4737A	WEP1107	ZEN-505
D25	BC-075	DX-0748	GEZD-7.5	ZB7.5A	HEPZ0410	REN 138	SK3059	RT-239	ECG138	1N4737A	WEP1107	ZEN-505
D26	YZ-037	DX-0529	GEZD-3.6	ZB3.6B		REN 134		RT-234	ECG134A		WEP1151	
D27	SR1K2	DX-0475	GE-504A	PTC201	HEPR0052	REN 116	SK3030	RT-213	ECG116	1N4004	WEP156	212-76-02
D28	CZ-092	DX-0087	GEZD-9.1	ZB9.1A	HEPZ0412	REN 139	SK3060	RT-240	ECG139	1N4739A	WEP1109	103-272
D29	1S2473	DX-0299	GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
D30	1S2473	DX-0299	GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
D31	WZ-061	DX-0530	GEZD-6.2	ZM6.2B		REN 137		RT-237	ECG5013	1N4735A	WEP1414	
D32	WZ-061	DX-0530	GEZD-6.2	ZM6.2B		REN 137		RT-237	ECG5013	1N4735A	WEP1414	
D33	1S2473	DX-0299	GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
D34	1S2473	DX-0299	GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
D35	1S2473	DX-0299	GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
D36	1S2473	DX-0299	GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
D37	1S2473	DX-0299	GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
D38	1S2473	DX-0299	GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
D39	1S2473	DX-0299	GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
D40	1S2473	DX-0299	GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
D41	1S2687D	DX-0749			HEPR2502	REN 612			ECG612			ZEN-452
D43	1S2687D	DX-0749			HEPR2502	REN 612			ECG612			ZEN-452
D44	CZ-092	DX-0087	GEZD-9.1	ZB9.1A	HEPZ0412	REN 139	SK3060	RT-240	ECG139	1N4739A	WEP1109	103-272
D45	1S2687D	DX-0749			HEPR2502	REN 612			ECG612			ZEN-452
D46	1S2473	DX-0299	GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
D47	1S2473	DX-0299	GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
D48	1N60P	DX-0162	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	1N60	WEP134	ZEN-430
D49	1N60P	DX-0162	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	1N60	WEP134	ZEN-430
D50	1N60P	DX-0162	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	1N60	WEP134	ZEN-430
D50	1N60P	DDAY001023(14)	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	1N60	WEP134	ZEN-430
D51	MV-1Y	DX-0752			PTC301	REN 601	SK3463		ECG601			
D51	MV-1Y	DX-0750(14)			PTC301	REN 601	SK3463		ECG601			
D52	MV-1Y	DX-0752			PTC301	REN 601	SK3463		ECG601			
D52	MV-1Y	DX-0750(14)			PTC301	REN 601	SK3463		ECG601			
D53	1S2473	DX-0299	GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
D54	SR1K1	DX-0475	GE-504A	PTC201	HEPR0052	REN 116	SK3030	RT-213	ECG116	1N4004	WEP156	212-76-02
D56	1S2473	DX-0299	GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
D57	1N60P	DDAY001002	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	1N60	WEP134	ZEN-430
D57	1N60P	DX-0161(14)	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	1N60	WEP134	ZEN-430
D58	1S2473	DX-0299	GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
D59	1N60P	DX-0162	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	1N60	WEP134	ZEN-430
D59	1N60P	DDAY001023(14)	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	1N60	WEP134	ZEN-430
D61	1S2473	DX-0299	GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
D62	1S2473	DDAY048001	GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S2473K	DDAY048001	GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
D64	1S2475	DDAY048001	GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S2475K	DDAY048001	GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
D65	1S2475	DDAY048001	GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S2475K	DDAY048001	GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4		

PARTS LIST AND DESCRIPTION (CONTINUED)

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

SEMICONDUCTORS (Select replacement transistor for best results)

ITEM No.	TYPE No.	MFR. PART No.	REPLACEMENT DATA									
			GENERAL ELECTRIC PART No.	MALLORY PART No.	MOTOROLA PART No.	RAYTHEON PART No.	RCA PART No.	SPRAGUE PART No.	SYLVANIA PART No.	THORDARSON PART No.	WORKMAN PART No.	ZENITH PART No.
FET1	3SK45B	DDCY104001	GE-FET-4	PTC182	HEPF2007	REN 222	SK3065	RT-181	ECG222		WEP905	121-826
FET2	JF1033-RED	DDCY202003	GE-FET-2	PTC161	HEPF0021	REN 132	SK3448	RT-175	ECG312			ZEN-123
FET3	2SK198L	DDCY202003	GE-FET-2	PTC161	HEPF0021	REN 132	SK3448	RT-175	ECG312			ZEN-123
	2SK68AM	DDCY009002	GE-FET-2	PTC161	HEPF0021	REN 132	SK3448	RT-175	ECG312			ZEN-123
FET4	2SK68M	DDCY009002	GE-FET-2	PTC161	HEPF0021	REN 132	SK3448	RT-175	ECG312			ZEN-123
	3SK45B-09	DDCY104003	GE-FET-4	PTC182	HEPF2007	REN 222	SK3065	RT-181	ECG222		WEP905	121-826
FET5	2SK68AM	DDCY009002	GE-FET-2	PTC161	HEPF0021	REN 132	SK3448	RT-175	ECG312			ZEN-123
	2SK68M	DDCY009002	GE-FET-2	PTC161	HEPF0021	REN 132	SK3448	RT-175	ECG312			ZEN-123
FET6	JF1033-RED	DDCY202003	GE-FET-2	PTC161	HEPF0021	REN 132	SK3448	RT-175	ECG312			ZEN-123
	2SK798L	DDCY202003	GE-FET-2	PTC161	HEPF0021	REN 132	SK3448	RT-175	ECG312		WEP905	121-826
FET7	3SK45B	DDCY104001	GE-FET-4	PTC182	HEPF2007	REN 222	SK3065	RT-181	ECG222			ZEN-123
FET601	JF1033G	DDCY104001	GE-FET-2	PTC161	HEPF0021	REN 132	SK3448	RT-175	ECG312			ZEN-123
	JF1033H	DDCY104001	GE-FET-2	PTC161	HEPF0021	REN 132	SK3448	RT-175	ECG312			ZEN-123
IC1	UPC577H	DDEY064001	GEIC-140		HEPC6050G	REN 1082	SK3461		ECG1082	UPC577H	WEP939	
IC2	MC1496N	DDEY070001					SK3233		ECG973			
IC3	UPC592H2	DDEY070001					SK3469		ECG1195			
IC4	UPC1156H	DDEY081001							ECG1194			
IC5	UHC-005	DDEY083001				REN 977	SK3462		ECG1204			
IC6	UPC78L05	DDEY083001							ECG977			
IC7	UPC858C	DDEY055001							ECG1198			
IC501	FCM3817D	DDEY081001										
TR1	3817DPC	DDBY224003	GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	2SC945	WEP1945	121-Z9000
TR2	2SC945AQ	DDBY003001	GE-48	PTC127	HEPS0019*	REN 294	SK3138	RT-303	ECG294	2SA733	WEP916	121-933
TR3	2SA733P	DDBY224003	GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	2SC945	WEP1945	121-Z9000
TR4	2SC945AQ	DDBY224003	GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	2SC945	WEP1945	121-Z9000
TR5	2SC945AQ	DDBY269001	GE-17*	PTC136*	HEPS0025*	REN 107	SK3018*	RT-107A	ECG316*		WEP535	121-888
	2SC1730L	DDBY269001	GE-213	PTC132*	HEPS0025*	REN 123A*	SK3124	RT-308	ECG229*		WEP956*	ZEN-127
TR6	2SC1675K2	DDBY259001	GE-213	PTC132*	HEPS0025*	REN 123A*	SK3124	RT-308	ECG229*		WEP956*	ZEN-127
	2SC1675L	DDBY259001	GE-213	PTC132*	HEPS0025*	REN 123A*	SK3124	RT-308	ECG229*		WEP956*	ZEN-127
TR7	2SC1675K2	DDBY259001	GE-213	PTC132*	HEPS0025*	REN 123A*	SK3124	RT-308	ECG229*		WEP956*	ZEN-127
	2SC1675L	DDBY259001	GE-213	PTC132*	HEPS0025*	REN 123A*	SK3124	RT-308	ECG229*		WEP956*	ZEN-127
TR8	2SC1675K2	DDBY259001	GE-213	PTC132*	HEPS0025*	REN 123A*	SK3124	RT-308	ECG229*		WEP956*	ZEN-127
	2SC1675L	DDBY259001	GE-213	PTC132*	HEPS0025*	REN 123A*	SK3124	RT-308	ECG229*		WEP956*	ZEN-127
TR9	2SC1675K2	DDBY259001	GE-213	PTC132*	HEPS0025*	REN 123A*	SK3124	RT-308	ECG229*		WEP956*	ZEN-127
	2SC1675L	DDBY259001	GE-213	PTC132*	HEPS0025*	REN 123A*	SK3124	RT-308	ECG229*		WEP956*	ZEN-127
TR10	2SC1675K2	DDBY259001	GE-213	PTC132*	HEPS0025*	REN 123A*	SK3124	RT-308	ECG229*		WEP956*	ZEN-127
	2SC1675L	DDBY259001	GE-213	PTC132*	HEPS0025*	REN 123A*	SK3124	RT-308	ECG229*		WEP956*	ZEN-127
TR11	2SC945AQ	DDBY224003	GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	2SC945	WEP1945	121-Z9000
TR12	2SC945AQ	DDBY224003	GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	2SC945	WEP1945	121-Z9000
TR13	2SC945AQ	DDBY224003	GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	2SC945	WEP1945	121-Z9000
TR14	2SC945AQ	DDBY224003	GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	2SC945	WEP1945	121-Z9000
TR15	2SC945AQ	DDBY224003	GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	2SC945	WEP1945	121-Z9000
TR16	2SC945AQ	DDBY224003	GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	2SC945	WEP1945	121-Z9000
TR17	2SA733P	DDBY003001	GE-48	PTC127	HEPS0019*	REN 294	SK3138	RT-303	ECG294	2SA733	WEP916	121-933
TR18	2SC945AQ	DDBY224003	GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	2SC945	WEP1945	121-Z9000
TR19	2SA733P	DDBY003001	GE-48	PTC127	HEPS0019*	REN 294	SK3138	RT-303	ECG294	2SA733	WEP916	121-933
TR20	2SC945AQ	DDBY224003	GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	2SC945	WEP1945	121-Z9000
TR21	2SC945AQ	DDBY224003	GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	2SC945	WEP1945	121-Z9000
TR22	2SC945AQ	DDBY224003	GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	2SC945	WEP1945	121-Z9000
TR23	2SC945AQ	DDBY224003	GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	2SC945	WEP1945	121-Z9000
TR24	2SD325E	DDBY406002	GE-28	PTC110	HEPS0027	REN 186	SK3197	RT-197	ECG186	2SD325	WEP751	121-Z9000*
TR25	2SD325E	DDBY406002	GE-28	PTC110	HEPS0027	REN 186	SK3197	RT-197	ECG186	2SD325	WEP751	121-Z9000*
	2SD325E	DDBY406002	GE-28	PTC110	HEPS0027	REN 186	SK3197	RT-197	ECG186	2SD325	WEP751	121-Z9000*
TR26	2SC945AQ	DDBY224003	GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	2SC945	WEP1945	121-Z9000
	2SC1675L	DDBY259001	GE-213	PTC132*	HEPS0025*	REN 123A*	SK3124	RT-308	ECG229*		WEP956*	ZEN-127
TR27	2SC1675L	DDBY259001	GE-213	PTC132*	HEPS0025*	REN 123A*	SK3124	RT-308	ECG229*		WEP956*	ZEN-127
TR28	2SC1675L	DDBY259001	GE-213	PTC132*	HEPS0025*	REN 123A*	SK3124	RT-308	ECG229*		WEP956*	ZEN-127
	2SC1675KZ	DDBY259001	GE-213	PTC132*	HEPS0025*	REN 123A*	SK3124	RT-308	ECG229*		WEP956*	ZEN-127
TR29	2SC945AQ	DDBY224003	GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	2SC945	WEP1945	121-Z9000
TR30	2SC1675L	DDBY259001	GE-213	PTC132*	HEPS0025*	REN 123A*	SK3124	RT-308	ECG229*		WEP956*	ZEN-127
	2SC1675KZ	DDBY259001	GE-213	PTC132*	HEPS0025*	REN 123A*	SK3124	RT-308	ECG229*		WEP956*	ZEN-127
TR31	2SC1675L	DDBY259001	GE-213	PTC132*	HEPS0025*	REN 123A*	SK3124	RT-308	ECG229*		WEP956*	ZEN-127
	2SC1675KZ	DDBY259001	GE-213	PTC132*	HEPS0025*	REN 123A*	SK3124	RT-308	ECG229*		WEP956*	ZEN-127
TR32	2SC945AQ	DDBY224003	GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	2SC945	WEP1945	121-Z9000
TR33	2SC945AQ	DDBY224003	GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	2SC945	WEP1945	121-Z9000
TR34	2SC1675L	DDBY259001	GE-213	PTC132*	HEPS0025*	REN 123A*	SK3124	RT-308	ECG229*		WEP956*	ZEN-127
TR35	2SC1675KZ	DDBY259001	GE-213	PTC132*	HEPS0025*	REN 123A*	SK3124	RT-308	ECG229*		WEP956*	ZEN-127
	2SC458C	DDBY273001	GE-210*	PTC121*	HEPS0009*	REN 123A*	SK3124	RT-187	ECG289	2SC458	WEP458	121-Z9000*
TR36	2SD325E	DDBY406002	GE-28	PTC110	HEPS0027	REN 186	SK3197	RT-197	ECG186	2SD325	WEP751	121-Z9000*
TR37	2SA719Q	DDBY011003	GE-269	PTC103*	HEPS0019*	REN 290	SK3114	RT-305	ECG290	2SA719	WEP911	121-879
	2SC1675L	DDBY259001	GE-213	PTC132*	HEPS0025*	REN 123A*	SK3124	RT-308	ECG229*		WEP956*	ZEN-127
TR38	2SC1675KZ	DDBY259001	GE-213	PTC132*	HEPS0025*	REN 123A*	SK3124	RT-308	ECG229*		WEP956*	ZEN-127
TR39	2SC1675L	DDBY259001	GE-213	PTC132*	HEPS0025*	REN 123A*	SK3124	RT-308	ECG229*		WEP956*	ZEN-127
	2SC1675KZ	DDBY259001	GE-213	PTC132*	HEPS0025*	REN 123A*	SK3124	RT-308	ECG229*		WEP956*	ZEN-127
TR40	2SC1675L	DDBY259001	GE-213	PTC132*	HEPS0025*	REN 123A*	SK3124	RT-308	ECG229*		WEP956*	ZEN-127
	2SC1675KZ	DDBY259001	GE-213	PTC132*	HEPS0025*	REN 123A*	SK3124	RT-308	ECG229*		WEP956*	ZEN-127
TR41	2SC945AQ	DDBY224003	GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	2SC945	WEP1945	121-Z9000
TR42	2SC945AQ	DDBY224003	GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	2SC945	WEP1945	121-Z9000
TR43	2SC1307(1)	DDBY231002(13)	GE-216	PTC186		REN 236	SK3197	RT-158	ECG236		WEP840	
TR44	2SC1306	DDBY230001(12)	GE-215	PTC186		REN 235	SK3197	RT-146	ECG235	2SC1306	WEP785	
TR45	2SC1973	DDBY272001	GE-335				SK3250		ECG315	2SC773	WEP922	
TR301	2SC945AQ	DDBY224003	GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	2SC945	WEP1945	121-Z9000
TR302	2SD325E	DDBY406002	GE-28	PTC110	HEPS0027	REN 186	SK3197	RT-197	ECG186	2SD325	WEP751	
TR401	2SD325E	DDBY406002	GE-28	PTC110	HEPS0027	REN 186	SK3197	RT-197	ECG186	2SD325	WEP751	
	2SC1618	DDBY282001	GE-14	PTC140	HEPS7004	REN 130	SK3027	RT-131	ECG130		WEP704	
TR601	2SC1618G	DDBY282001	GE-14	PTC140	HEPS7004	REN 130	SK3027	RT-131	ECG130		WEP704	
	2SC1675L	DDBY259001	GE-213	PTC132*	HEPS0025*	REN 123A*	SK3124	RT-308	ECG229*		WEP956*	ZEN-127
	2SC1675KZ	DDBY259001	GE-213	PTC132*	HEPS0025*	REN 123A*	SK3124	RT-308	ECG229*		WEP956*	ZEN-127

* Lead configuration may vary from original.

(12) 12 WATTS @ 3 AMPS.

(13) 25 WATTS @ 8 AMPS.

(14) Used in Model TRC-458 (21-1581)

PARTS LIST AND DESCRIPTION (CONTINUED)

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

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PARTS LIST AND DESCRIPTION (CONTINUED)

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

CAPACITORS (cont)

ITEM No.	RATING	MFR. PART No.	REPLACEMENT DATA				
			CENTRALAB PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.	
						Q-LINE	GENERAL LINE
C28	.022		DC-203	MGP02	TA120	QC2-157	TG-S20
C29	.039			DPMS6S39	PVC6139		6PS-S39
C30	.039			DPMS6S39	PVC6139		6PS-S39
C31	.039			DPMS6S39	PVC6139		6PS-S39
C32	5 NPO		DTZ-4R7	NPO4P7	CN0547		10TCC-V47
C33	.022		DC-203	MGP02	TA120	QC2-157	TG-S20
C34	.022		DC-203	MGP02	TA120	QC2-157	TG-S20
C36	5 NPO		DTZ-4R7	NPO4P7	CN0547		10TCC-V47
C37	10 NPO		DTZ-10	NPO10	CN0410		10TCC-Q10
C38	330 N750		DTN-330	N330	CN7333		10TCU-T33
C40	.039			DPMS6S39	PVC6139		6PS-S39
C41	.022		DC-203	MGP02	TA120	QC2-157	TG-S20
C45	47 NPO		DTZ-47	NPO47	CN0447		10TCC-Q47
C46	.01		DC-103	MGP01	TA110	QC2-141	TG-S10
C51	.022			DPMS2S22	EWFA1A122	QF1-127	1PB-S22
C53	.01		DC-103	MGP01	TA110	QC2-141	TG-S10
C54	22 NPO		DTZ-22	NPO22	CN0422		10TCC-Q22
C57	.022		DC-203	MGP02	TA120	QC2-157	TG-S20
C61	.033			DPMS6S33	EWFA1A133	QF1-171	6PS-S33
C62	.047			DPMS2S47	EWFA1A147	QF1-195	1PB-S47
C64	.068			WMF1S68	EWFA1A168	QF1-195	1PB-S68
C71	.068			WMF1S68	EWFA1A168	QF1-127	1PB-S22
C72	.022			DPMS2S22	EWFA1A122	QF1-215	1PB-P10
C73	.1			DPMS2P1	EWFA1A010	QF1-91	1PB-S10
C74	.01			WMF1S1	EWFA1A110	QF1-215	1PB-P10
C75	.1			DPMS2P1	EWFA1A010	QF1-127	1PB-S22
C80	.022			DPMS2S22	EWFA1A122	QF1-127	1PB-S22
C82	.022			DPMS2S22	EWFA1A122	QF1-127	1PB-S22
C85	.039			DPMS6S39	PVC6139	QF1-127	6PS-S39
C86	.022			DPMS2S22	EWFA1A122		1PB-S22
C90	22 NPO		DTZ-22	NPO22	CN0422	QF1-215	10TCC-Q22
C91	.1			DPMS2P1	EWFA1A010		1PB-P10
C93	68 NPO		DD-560		GP456	QF1-253	10TS-Q56
C96	.22			DPMS2P22	EWFA1A022	QC2-157	1PB-P22
C100	.022		DC-203	MGP02	TA120	QC2-157	TG-S20
C105	.022		DC-203	MGP02	TA120	QC2-157	TG-S20
C106	.022		DC-203	MGP02	TA120	QC2-157	TG-S20
C109	.022		DC-203	MGP02	TA120	QC2-157	TG-S20
C111	18 NPO				CN0418		10TCC-Q18
C112	18 NPO				CN0418		10TCC-Q18
C113	.001		DD-1026	GP1000	GP210	QC2-81	5GA-D10
C114	.001		DD-1026	GP1000	GP210	QC2-81	5GA-D10
C115	100 NPO		DTZ-100	NPO100	CN0310		10TCC-T10
C116	10 NPO		DTZ-10	NPO10	CN0410		10TCC-Q10
C117	1 NPO				CN0510		10TCC-V10
C118	.022		DC-203	MGP02	TA120	QC2-157	TG-S20
C121	.039			DPMS6S39	PVC6139		6PS-S39
C122	47 NPO		DTZ-47	NPO47	CN0447		10TCC-Q47
C123	47 NPO		DTZ-47	NPO47	CN0447		10TCC-Q47
C124	.01		DC-103	MGP01	TA110	QC2-141	TG-S10
C125	270		DD-271	GP270	GP327		10TS-T27
C127	470		DD-471	GP470	GP347		10TS-T47
C128	220		DD-221		GP322		10TS-T22
C129	.01		DC-103	MGP01	TA110	QC2-141	TG-S10
C130	10 NPO		DTZ-10	NPO10	CN0410		10TCC-Q10
C131	.01			WMF1S1	EWFA1A110	QF1-91	1PB-S10
C133	.1			DPMS2P1	EWFA1A010	QF1-215	1PB-P10
C134	.1			DPMS2P1	EWFA1A010	QF1-215	1PB-P10
C136	470		DD-471	GP470	GP347		10TS-T47
C137	220		DD-221		GP322		10TS-T22
C138	.01		DC-103	MGP01	TA110	QC2-141	TG-S10
C139	10 NPO		DTZ-10	NPO10	CN0410		10TCC-Q10
C142	68 NPO		DD-680	GP68	GP468		10TS-Q68
C143	7 NPO		DTZ-6R8	NPO6P8	CN0568		10TCC-V68
C146	.022		DC-203	MGP02	TA120	QC2-157	TG-S20
C147	470		DD-471	GP470	GP347		10TS-T47
C148	220		DD-221		GP322		10TS-T22
C149	.01		DC-103	MGP01	TA110	QC2-141	TG-S10
C150	10 NPO		DTZ-10	NPO10	CN0410		10TCC-Q10
C151	.01		DC-103	MGP01	TA110	QC2-141	TG-S10
C152	.01		DC-103	MGP01	TA110	QC2-141	TG-S10
C153	.047			DPMS2S47	EWFA1A147	QF1-171	1PB-S47
C154	10 NPO		DTZ-10	NPO10	CN0410		10TCC-Q10
C155	1 NPO				CN0510		10TCC-V10
C156	.022		DC-203	MGP02	TA120	QC2-157	TG-S20
C157	.039			DPMS6S39	PVC6139		6PS-S39
C159	.0047		DD-472	GP4700	GP247		5GA-D47
C160	.0047		DD-472	GP4700	GP247		5GA-D47
C161	.0047		DC-103	MGP01	TA110	QC2-141	TG-S10
C162	.0047		DC-103	MGP01	TA110	QC2-141	TG-S10
C163B	39 NPO	(1)			CN0439		10TCC-Q39
C163B	47 NPO	(1)	DTZ-47	NPO47	CN0447		10TCC-Q47
C164	68 NPO	(2)	DTZ-68	NPO68	CN0468		10TCC-Q68
C165	220 NPO		DTZ-220				10TCC-T22
C166	.0047		DD-472	GP4700	GP247		5GA-D47
C167	390 N750		DTN-390				10TCU-T39
C168	.5 NPO						
C169	.047			DPMS2S47	EWFA1A147	QF1-171	1PB-S47
C170	470 N750		DTN-470				10TCU-T47
C172	.0047		DD-472	GP4700	GP247		5GA-D47
C173	180 NPO		DTZ-180				10TCC-T18
C174	47 NPO		DTZ-47	NPO47	CN0447		10TCC-Q47
C175	.1			DPMS2P1	EWFA1A010	QF1-215	1PB-P10
C176	82 NPO		DTZ-82	NPO82	CN0482		10TCC-Q82
C177	.0047		DD-472	GP4700	GP247		5GA-D47
C178	.0047		DD-472	GP4700	GP247		5GA-D47

REALISTIC MODELS TRC-457/-458

PARTS LIST AND DESCRIPTION (CONTINUED)

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

CAPACITORS (cont)

ITEM No.	RATING	MFR. PART No.	REPLACEMENT DATA				
			CENTRALAB PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.	
						Q-LINE	GENERAL LINE
C183	.0047		DD-472	GP4700	GP247		5GA-D47
C184	120 NPO		DTZ-120		CNO312		10TCC-T12
C185	.0047		DD-472	GP4700	GP247		5GA-D47
C186	.0047		DD-472	GP4700	GP247		5GA-D47
C187	.0047		DD-472	GP4700	GP247		5GA-D47
C188	.047			DPMS2S47	EWFA1A147	QF1-171	1PB-S47
C189	.0047		DD-472	GP4700	GP247		5GA-D47
C190	.01		DC-103	MGP01	TA110	QC2-141	TG-S10
C192	.01		DC-103	MGP01	TA110	QC2-141	TG-S10
C193	.022		DC-203	MGP02	TA120	QC2-157	TG-S20
C194	.039			DPMS6S39	PVC6139		6PS-S39
C195	.01		DC-103	MGP01	TA110	QC2-141	TG-S10
C196	.022		DC-203	MGP02	TA120	QC2-157	TG-S20
C197	.022		DC-203	MGP02	TA120	QC2-157	TG-S20
C198	.1			DPMS2P1	EWFA1A010	QF1-215	1PB-P10
C200	.01			WMF1S1	EWFA1A110	QF1-91	1PB-S10
C202	.022		DC-203	MGP02	TA120	QC2-157	TG-S20
C203	.022		DC-203	MGP02	TA120	QC2-157	TG-S20
C204	.01		DC-103	MGP01	TA110	QC2-141	TG-S10
C205	.01		DC-103	MGP01	TA110	QC2-141	TG-S10
C206	.022		DC-203	MGP02	TA120	QC2-157	TG-S20
C207	.01		DC-103	MGP01	TA110	QC2-141	TG-S10
C208	.01		DC-103	MGP01	TA110	QC2-141	TG-S10
C209	.01		DC-103	MGP01	TA110	QC2-141	TG-S10
C210	.01			WMF1S1	EWFA1A110	QF1-91	1PB-S10
C213	.1		DC-104	MGP1	TA010	QC2-233	TG-P10
C214	.01		DC-103	MGP01	TA110	QC2-141	TG-S10
C215	.022		DC-203	MGP02	TA120	QC2-157	TG-S20
C216	.022		DC-203	MGP02	TA120	QC2-157	TG-S20
C217	.022		DC-203	MGP02	TA120	QC2-157	TG-S20
C219	.022		DC-203	MGP02	TA120	QC2-157	TG-S20
C220	.022		DC-203	MGP02	TA120	QC2-157	TG-S20
C221	.022		DC-203	MGP02	TA120	QC2-157	TG-S20
C222	.1		DC-104	MGP1	TA010	QC2-233	TG-P10
C223	.022		DC-203	MGP02	TA120	QC2-157	TG-S20
C227	.022		DC-203	MGP02	TA120	QC2-157	TG-S20
C228	.022		DC-203	MGP02	TA120	QC2-157	TG-S20
C231	.047			DPMS2S47	EWFA1A147	QF1-171	1PB-S47
C233	.1		DC-104	MGP1	TA010	QC2-233	TG-P10
C236	33 NPO		DTZ-33	NP033	CNO433	QC2-233	10TCC-Q33
C239	.1		DC-104	MGP1	TA010	QC2-233	TG-P10
C240	.01			WMF1S1	EWFA1A110	QF1-91	1PB-S10
C241	.047			DPMS2S47	EWFA1A147	QF1-171	1PB-S47
C242	47 NPO		DTZ-47	NP047	CNO447		10TCC-Q47
C244	33 NPO		DTZ-33	NP033	CNO433		10TCC-Q33
C245	.047			DPMS2S47	EWFA1A147	QF1-171	1PB-S47
C248	.022		DC-203	MGP02	TA120	QC2-157	TG-S20
C251	.01		DC-103	MGP01	TA110	QC2-141	TG-S10
C255	.0047		DD-472	GP4700	GP247		5GA-D47
C257	27 NPO				CNO427		10TCC-Q15
C258	15 NPO		DTZ-15	NP015	CNO415	QF1-127	1PB-S22
				DPMS2S22	EWFA1A122	QC2-81	5GA-D10
C263	.001		DD-102G	GP1000	GP210		6PS-S39
C301	.039			DPMS6S39	PVC6139		6PS-S39
C303	.039			DPMS6S39	PVC6139		6PS-S39
C401	.047			DPMS2S47	EWFA1A147	QF1-171	1PB-S47
C403	.01		DC-103	MGP01	TA110	QC2-141	TG-S10
C404	.01		DC-103	MGP01	TA110	QC2-141	TG-S10
C405	.01	(1)	DD-102G	GP1000	GP210	QC2-81	5GA-D10
C406	.001	(1)	DC-203	MGP02	TA120	QC2-157	TG-S20
C406	.022	(2)	DD-402G	GP1000	GP210	QC2-81	5GA-D10
C407	.001	(1)	DC-203	MGP02	TA120	QC2-157	TG-S20
C407	.022	(2)	DD-102G	GP1000	GP210	QC2-81	5GA-D10
C408	.001	(1)	DC-203	MGP02	TA120	QC2-157	TG-S20
C408	.022	(2)	DD-102G	GP1000	GP210	QC2-81	5GA-D10
C409	.001	(1)	DD-102G	GP1000	GP210	QC2-81	5GA-D10
C410	.001	(1)	DD-102G	GP1000	GP210	QC2-81	5GA-D10
C410	.1	(2)	DC-104	MGP1	TA010	QC2-233	TG-P10
C411	.001	(1)	DD-102G	GP1000	GP210	QC2-81	5GA-D10
C412	.001	(1)	DD-102G	GP1000	GP210	QC2-81	5GA-D10
C413	.0047	(1)	DD-472	GP4700	GP247		5GA-D47
C414	.0047	(1)	DD-472	GP4700	GP247		5GA-D47
C415	.001		DD-102G	GP1000	GP210	QC2-81	5GA-D10
C416	.001		DD-102G	GP1000	GP210	QC2-81	5GA-D10
C417	.1	(1)	DC-104	MGP1	TA010	QC2-233	TG-P10
C417	.001	(2)	DD-102G	GP1000	GP210	QC2-81	5GA-D10
C418	.001	(2)	DD-102G	GP1000	GP210	QC2-81	5GA-D10
C419	.001	(2)	DD-102G	GP1000	GP210	QC2-81	5GA-D10
C420	.001	(2)	DD-102G	GP1000	GP210	QC2-81	5GA-D10
C421	.001	(2)	DD-102G	GP1000	GP210	QC2-81	5GA-D10
C422	.001	(2)	DD-102G	GP1000	GP210	QC2-81	5GA-D10
C423	.001	(2)	DD-102G	GP1000	GP210	QC2-81	5GA-D10
C424	.001	(2)	DD-102G	GP1000	GP210	QC2-81	5GA-D10
C425	.01	(2)	DC-103	MGP01	TA110	QC2-141	TG-S10
C426	.01	(2)	DC-103	MGP01	TA110	QC2-141	TG-S10
C427	.1	(2)		DPMS2P1	EWFA1A010	QF1-215	1PB-P10
C501	.01	(1)		WMF1S1	EWFA1A110	QF1-91	1PB-S10
C502	.039	(1)			GP140		5GA-S40
C504	.039	(1)			GP140		5GA-S40

PARTS LIST AND DESCRIPTION (CONTINUED)

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

CAPACITORS (cont)

ITEM No.	RATING	MFR. PART No.	REPLACEMENT DATA				
			CENTRALAB PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE Q-LINE	PART No. GENERAL LINE
C505	.039	(1)					
C601	8 NPO		DTZ-6R8	NP06P8	GP140		5GA-S40
C602	.0047		DD-472	GP4700	CN0568		10TCC-V68
C603	.01		DC-103	MGP01	GP247		5GA-D47
C604	39 NPO				TA110	QC2-141	TG-S10
C606	.01				CN0439		10TCC-Q39
CC1		C-0793(3)	DC-103	MGP01	TA110	QC2-141	TG-S10
CC2		C-0793(3)					
CT1	20	CCVY028004					
CT2	20	CCVY028004					
CT3	20	CCVY028004					
CT4	20	CCVY028004					
CT5	20	CCVY028004					
CT6	20	CCVY028004					
CT7	20	CCVY028004					

(1) Model TRC-457

(2) Model TRC-458

(3) Consists of four .01 capacitors.

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

ITEM No.	FUNCTION	RESIST-ANCE	REPLACEMENT DATA			
			MFR. PART No.	CENTRALAB PART No.	MALLORY PART No.	TRW PART No.
RT301	Volt Reg	300	P-6423			
VR1	Signal Meter	20K	P-6416	T-300	MTC32L1	X201R351B
VR2	RF Gain Range	100K	P-6418			U260R253B
VR3	Squelch Range	100K	P-6418			U260R104B
VR4	Balance	50K	P-6417			U260R104B
VR5	AM RX Gain	100K	P-6418			U260R503B
VR6	MIC Gain	20K	P-6416			U260R104B
VR7	AM AMC	3000	RRVY189010			U260R253B
VR8	AM TX Level	10K	P-6415			U260R502B
VR9	34.9825MHz	5000	P-6414			U260R103B
VR12	RF PWR Meter	100K	P-6418			U260R502B
VR15	Bias	300	P-6420			U260R104B
VR16	Bias	300	P-6420			
VR17	LED Brilliance	500	RRVY145006			
VR401	Clarifier	20K	P-1768			U260R502B
VR402	RF Gain	100K	P-1767			
VR403	SWR/CAL	5000	p-1769(18)			
VR404	Squelch	100K	P-1767			
VR405	Volume/Power Switch	10K	P-1766			

(18) Used in Model TRC-457 only.

RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA		ITEM No.	RATING	REPLACEMENT DATA	
		WORKMAN PART No.	MFR. PART No.			WORKMAN PART No.	MFR. PART No.
R403	82 ohm 7W		NFL-0122(1)	RR-1	Resistor Network		C-0792(2)
R404	10 ohm 5W	10W-SQ10	NFR-0063				

(1) Model TRC-457

(2) Consists of eight 4700 ohm resistors.

COILS (RF-IF)

ITEM No.	FUNCTION	REPLACEMENT DATA			REMARKS
		PART No.	OTHER IDENTIFICATION	MILLER PART No.	
L1	Noise Blanker (23.5MHz)	CA-3272	LA-029		
L2	Noise Blanker (23.5MHz)	CA-3747	LA-155	CBS-740-T	
L3	Rec Ant (27MHz)	CA-3746	LA-152		
L4	Rec RF (27MHz)	CA-3748	LA-156		
L5	IF (7.8MHz)	CA-3762(1)	LA-178		
		CA-3764(2)			
L6	IF (7.8MHz)	CA-3751			
L7	IF (7.8MHz)	CA-3414	LA-038		
L8	IF (7.8MHz)	CA-3424	LA-096		
L9	RF Choke (470uH)	C-0787		CBS512-7TC	
L10	RF Choke (56mH)	C-0788	LZ-012	CBS511-7TC	
L11	RF Choke (68mH)	C-0789	LZ-015		
L12	RF Choke (470uH)	C-0787	LZ-015		
L13	RF Choke (470uH)	C-0787	LZ-012		
L14	RF Choke (470uH)	C-0787	LZ-012		
L16	VCO (34.195MHz)	CA-3750	LZ-012		
L17	VCO (34.195MHz)	CA-3753	LA-195		
L18	RF Choke (470uH)	C-0787	LA-191		
L19	RF Choke (100uH)	C-0786	LZ-012		

(1) Used in Model TRC457
(2) Used in Model TRC458

REALISTIC MODELS TRC-457/-458

PARTS LIST AND DESCRIPTION (CONTINUED)

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

COILS (RF-IF) (cont)

ITEM No.	FUNCTION	REPLACEMENT DATA			REMARKS
		PART No.	OTHER IDENTIFICATION	MILLER PART No.	
L20	RF Choke (470uH)	C-0787	LZ-012		
L21	RF Choke (470uH)	C-0787	LZ-012		
L22	RF Choke (470uH)	C-0787	LZ-012		
L23	RF Choke (470uH)	C-0787	LZ-012		
L24	Trippler (33.855MHz)	CA-3752	LA-190		
L25	RF Choke (470uH)	C-0787	LZ-012	CB304	
L27	TVI Trap (54MHz)	CA-3409	LC018		
L28	RF Choke (.4uH)	CA-3763	LE-051		
L29	RF Choke (.4uH)	CA-3763	LE-051	CB305	
L30	Final (27MHz)	CA-3639	LC-019		
L31	RF Choke (.89uH)	CA-3757	LD-018	CB304	
L32	XMT Driver (27MHz)	CA-3409	LC-018		
L33	RF Choke (.89uH)	CA-3757	LD-018		
L34	RF Choke (.89uH)	CA-3757	LD-018		
L35	XMT Amp (27MHz)	CA-3758	LD-057		
L36	XMT Buffer (27MHz)	CA-3758	LA-057		
L37	XMT Mixer (27MHz)	CA-3749	LA-157		
L38	RF Choke (470uH)	C-0787	LZ-012	CB572-7TC	
L39	XMT Mixer (2.8MHz)	CA-3414	LA-038		
L40	RF Choke (7.3uH)	CA-3756	LD-013		
L43	RF Choke (1uH)	C-0785	LZ-002		
L44	RF Choke (1uH)	C-0785	LZ-002		
L45	RF Choke (100uH)	C-0786	LZ-012		
L46	RF Choke (10uH)	C-0796			
L401	RF Choke (1.2uH)	CA-3644	LD-066		
L402	RF Choke (1.2uH)	CA-3644	LD-066		
L403	RF Choke (1.2uH)	CA-3644	LD-066		
L404	RF Choke (1.2uH)	CA-3644	LD-066		
L405	RF Choke (1.2uH)	CA-3644	LD-066		(3) Model TRC-458
L406	RF Choke (1.2uH)	CA-3644(3)	LD-066		
L407	RF Choke (1.2uH)	CA-3412(3)	LE-003		
L408	RF Choke (1.2uH)	CA-3412(3)	LE-003		(4) Model TRC-457
L501	RF Choke (2.2mH)	C-0795(4)	LZ-003		

TRANSFORMER (Audio Output)

ITEM No.	IMPEDANCE		REPLACEMENT DATA			NOTES
	PRI.	SEC.	MFGR. PART No.	THORDARSON PART No.	TRIAD PART No.	
T1	8	18	TD-0156 TF-109(1)			(1) Number on unit.

TRANSFORMER (Power)

ITEM No.	RATING		REPLACEMENT DATA			NOTES
	PRI.	SEC. 1	MFGR. PART No.	THORDARSON PART No.	TRIAD PART No.	
T401	120V AC @ 580mA AC	17.74V AC @ 4.55A AC	TA-0529 TF-085(1)			(1) Number on unit.

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		MFGR. PART No.	QUAM PART No.	
SP	2 3/4" PM 8 ohms	S-4605 SP-030(1)	27A0528	(1) Number on unit.

FUSE DEVICES

ITEM No.	DESCRIPTION	REPLACEMENT DATA						
		PART No.		BUSS PART No.		LITTELFUSE PART No.		WORKMAN PART No.
		DEVICE	HOLDER	DEVICE	HOLDER	DEVICE	HOLDER	DEVICE
F401	3 amp	ZFSY001006	W-1934	AGC3	HDJ	312003	150145	FG3-2
F402	3 amp	ZFSY002003	F-1112	AGC3	HKP	312003	342001AL	FG3-2

PARTS LIST AND DESCRIPTION (CONTINUED) (When ordering parts, state Model, Part Number, and Description.)

MICROPHONE

ITEM No.	REPLACEMENT DATA				CONNECTION DATA						
	MFGR. PART No.	GC PART No.	GC NOISE CANCEL	GC POWER	GC CONNECTOR	GC Red	GC Shield	GC Yellow	GC Blue	GC White	GC Black
MIC	M-2222	18-032	18-034	18-010	18-105	4	1	3	NC	NC	1

MISCELLANEOUS

ITEM No.	PART NAME	PART No.	NOTES
D401	LED	L-0782	Channel Display Tens (DA-076) Model TRC-157
D401	LED	L-0776	Channel Display (TLR321) Model TRC-158
D402	LED	L-0782	Channel Display Units (DA-076) Model TRC-157
D403	LED	L-0781	LSB Indicator (LR-0602R) Model TRC-157
D404	LED	L-0781	USB Indicator (LR-0602R) Model TRC-157
D405	LED	L-0781	AM Indicator (LR-0602R) Model TRC-157
D501	LED	L-0783	Clock Display Colon Model TRC-157
D502	LED	L-0783	Clock Display Colon Model TRC-157
D505	LED	L-0782	Clock Display Tens (DA-076) Model TRC-157
D506	LED	L-0782	Clock Display Units (DA-076) Model TRC-157
D507	LED	L-0782	Clock Display Tens (DA-076) Model TRC-157
D508	LED	L-0782	Clock Display Units (DA-076) Model TRC-157
FT1	Filter	C-0791	7.8MHz
FT2	Filter	C-0794	7.8MHz
J401	Jack	J-0846	Antenna
J402	Jack	J-0723	Microphone
J403	Jack	J-0643	PA
J404	Jack	J-0643	EXT SP
J405	Jack	J-0853	Headphone
J406	Jack	J-0819	DC Power
J407	Jack	JKKY063001	AC Power
L26	Ferrite Bead	CA-3761	
L41	Ferrite Bead	CA-3754	
L42	Ferrite Bead	CA-3754	
M401	Meter	M-0340	S/Rf Model TRC-157
M401	Meter	M-0342	S/Rf Model TRC-158
M401	Meter	M-0341	SWR Model TRC-157
PL401	Lamp	L-0786	S/Rf Meter (11.73V @ 43mA)
PL402	Lamp	L-0786	SWR Meter (11.73V @ 43mA) Model TRC-457
PL403	Lamp	L-0787	S/Rf TX (11.03V @ 64mA) Model TRC-458
PL404	Lamp	L-0787	SWR TX (11.03V @ 64mA) Model TRC-457
RL-1	Relay	ZRLY027001	XMT/Rec RL-027
S401	Switch	S-7383	NB Model TRC-457
S401	Switch	S-7315	NB Model TRC-458
S402	Switch	S-1278	AM/LSB/USB Model TRC-457
S402	Switch	S-1279	AM/LSB/USB Model TRC-458
S403	Switch	S-7313	SWR/CAL Model TRC-457
S404	Switch	S-7313	ANL Model TRC-457
S404	Switch	S-7315	ANL Model TRC-458
S405	Switch	S-7313	CB/PA Model TRC-457
S405	Switch	S-7313	CB/PA Model TRC-458
S406	Switch	S-7315	Power (Part of Volume Control)
S407	Switch	S-2382	Clock Model TRC-457
S408	Switch	S-1276	Channel Selector
S501	Switch	S-7314	Hold Model TRC-457
S502	Switch	S-7314	Slow Model TRC-457
S503	Switch	S-7314	Fast Model TRC-457
X1	Crystal	MX-2171	7.8025MHz
X2	Crystal	MX-2172	7.7975MHz
X3	Crystal	MX-2317	11.2858MHz
X4	Crystal	XX-2315	11.2842MHz
X5	Crystal	MX-2292	10.240MHz
X6	Crystal	MX-2316	11.2850MHz
PC Board		PPCY196024	Main
PC Board		X-7429	Power Supply
PC Board		PPCY175013	Switch Model TRC-457
PC Board		PPCY177012	Switch Model TRC-458
PC Board		X-7431	Flexible Model TRC-457
PC Board		X-7438	Flexible Model TRC-458
PC Board		X-7422	Noise Blanker Model TRC-458
PC Board		X-7432	Clock Circuit Model TRC-458
PC Board		X-7433	Clock Display Model TRC-458
PC Board		X-7434	12 Hr/24 Hr Model TCR-458
PC Board		X-7435	LED Model TCR-458

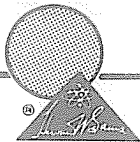
REALISTIC MODELS TRC-457/-458

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

ITEM	PART No.	ITEM	PART No.
Escutcheon Model TRC-457	Z-3506	Knob, Channel Model TRC-458	K-2565
Escutcheon Model TRC-458	Z-3513	Knob, Control	K-2564
Cabinet Top Model TRC-457	Z-3502	Knob, Clock Model TRC-457	K-2562
Cabinet Top Model TRC-458	Z-3510	Mounting Bracket (Left)	MB-0137
Cabinet Bottom Model TRC-457	Z-3505	Mounting Bracket (Right)	MB-0136
Cabinet Bottom Model TRC-458	Z-3512	Microphone Hanger	M-3105
Knob, Channel Model TRC-457	K-2563		

WIRING DATA

General-use Hook-up Wire (available in 5 colors)	BELDEN No. 8523	Coiled Microphone Cable	
Shielded Hook-up Wire (spiral wrapped)	BELDEN No. 8421	3-conductor (1 shielded) 23AWG	BELDEN No. 9471 (5')
(braided)	BELDEN No. 8401		BELDEN No. 8497 (6')
Speaker Cable (available in 4 colors)	BELDEN No. 8782		BELDEN No. 9472 (7-1/2')
Bonding Strap	BELDEN No. 8672	28AWG	BELDEN No. 9466 (6')
AC Power Cord	(6') BELDEN No. 17106	31AWG	BELDEN No. 9468 (10')
	(9') BELDEN No. 17109	4-conductor (unshielded) 23AWG	BELDEN No. 8415 (6')
		5-conductor (1 shielded) 28AWG	BELDEN No. 9467 (6')
			BELDEN No. 9465 (7-1/2')



PHOTOFACT[®] with

CIRCUITRACE[®]

For Supplier Address See PHOTOFACT Index

NOTE

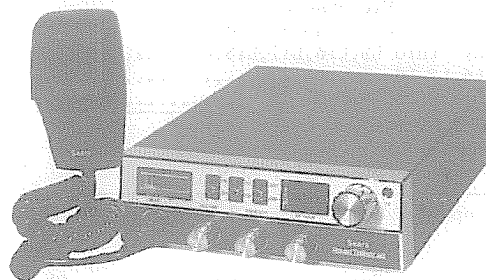
Repair or adjustment of transmitter circuits must be under supervision of a person with first-or second-class radiotelephone license.

(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 663.38070700

MANUFACTURER'S SPECIFICATIONS

TRANSMITTER	UNITS	NOMINAL	LIMIT
1. Frequency Tolerance at 25°C (5 minutes after switch on)	%	±0.002	±0.005
2. Carrier Power at No Modulation	W	3.7	3.4 – 4.0
3. Spurious Harmonic Emission	dB	-65	-60
4. Battery Drain at No Modulation	mA	950	1100
5. Microphone Sensitivity For 50% Mod.	mV	0.6	1.2
6. AMC Range 50 – 100% Mod.	dB		50
7. Battery Drain AM: 80% Mod.	mA	1250	1500
RECEIVER (ANL & Noise Blanker Switch OFF)			
1. Max Sensitivity	μV	0.5	1
2. Sensitivity for 10 dB S/N	μV	0.5	1
3. ACC Figure of Merit 50 mV. for 10 dB Change in Audio output	dB	90	75
4. Overall Audio Fidelity at 6 dB Down			
Upper Frequency	Hz	2500	2000 – 3000
Lower Frequency	Hz	450	200 – 600
5. Cross Modulation	dB	60	50
6. Adjacent Channel Selectivity (10 KHz)	dB	70	60
7. Maximum Audio Output Power	W	4	3
8. Audio Output Power at 10% THD	W	3.5	2.5
9. RF Gain Control Range at Max Sensitivity Level	dB	35	26
10. Hum & Noise Ratio at Input 1 mV	dB	46	40
11. Squelch Sensitivity at Threshold	μV	0.5	1
12. Squelch Sensitivity at Tight	μV	1,000	250 – 4000
13. S. Meter Sensitivity at "S-9"	μV	100	50 – 200
14. Image Rejection Ratio	dB	86	70
15. IF Rejection Ratio	dB	80	70
16. Oscillator Dropout Voltage	V	9	11
17. Battery Drain at No Signal	mA	350	500

Courtesy of the Manufacturer

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

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SEARS MODEL 663.38070700

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 9-volt DC input.
 Adjustments made with 12-volt DC input.
 Adjustments made with 13.8-volt DC input.
 Connect low sides of test equipment to ground unless specified otherwise.
 Connect 50-ohm dummy load or antenna before keying transmitter.
 Connect Microphone.
 Suggested Alignment Tools: GC Electronics:
 L1 thru L5, L16, L17, L18, L20, L21, L24.....9440
 L6, L7, L8.....5000, 5009, 8276, 8278, 8728A
 L10, L11, L12, L15.....8728, 8728A, 9304

SYNTHESIZER ALIGNMENT

TEST EQUIPMENT	TRANSCEIVER	ADJUST	REMARKS
Input of oscilloscope to TP1.	Ch. 19	L5	Adjust for maximum RF output.
Input of frequency counter to TP1.	Ch. 19		Check for 10.240MHz.
Input of DC meter to TP5.	Ch. 19	L20	Adjust for 2.4 volts.
Input of oscilloscope to TP6.	Ch. 19	L21	Adjust for maximum RF output.
Input of frequency counter to TP6.	Ch. 1		Check for 37.660MHz. Check all channels. (See Truth Chart for correct frequencies.)
Input of frequency counter to TP8.	Ch. 19	L24	Adjust for 36.570MHz.
Input of frequency counter to TP4.	Ch. 1		Check for 1.090MHz. Check all channels. (See Truth Chart for correct frequencies.)
Input of oscilloscope to TP3.	Ch. 19, XMT	L18	Adjust for maximum RF output.
Input of frequency counter to TP3.	Ch. 1, XMT		Check for 26.965MHz. If necessary readjust L24 for correct frequency. Check all channels. (See page 4 for channel 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.
 RF Gain Maximum, Squelch MINIMUM, ANL Switch Off.

TEST EQUIPMENT	TRANSCEIVER	ADJUST	REMARKS
Output of signal generator thru .01uF to TP9 (TR3 base). 455kHz, 1000Hz @ 30% modulation.	Ch. 19	L8, L7, L6	Adjust for maximum output.
Output of signal generator thru .01uF to antenna input. 27.185MHz, 1000Hz @ 30% modulation.	Ch. 19	L4, L3, L2, L1	Adjust for maximum output. If necessary readjust L6, L7 and L8 for maximum.

RECEIVER ADJUSTMENTS

Connect an AC VTVM or AF wattmeter across speaker voice coil.
 Adjust volume control to obtain a suitable indication.
 RF Gain Maximum, ANL Switch Off.

TEST EQUIPMENT	TRANSCEIVER	ADJUST	REMARKS
Output of signal generator thru .01uF to antenna input. 27.185MHz, 1000Hz @ 30% modulation. Output .9uV.	Ch. 19 Squelch MINIMUM Volume Maximum	VR1	AGC Adjust for 2.0 volts audio output.
Output of signal generator thru .01uF to antenna input. 27.185MHz, 1000Hz @ 30% modulation. Output 500uV.	Ch. 19 Squelch Maximum	VR203	SQUELCH RANGE Adjust so that squelch just breaks.

RECEIVER ALIGNMENT (Continued)

Output of signal generator thru .01uF to antenna input. 27.185MHz, 1000Hz @ 30% modulation. Output 100uV.	Ch. 19 Squelch MINIMUM	VR204	SIG METER Adjust for 9 on SIG scale of meter.
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TRANSMITTER ALIGNMENT

Connect an RF wattmeter and 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.

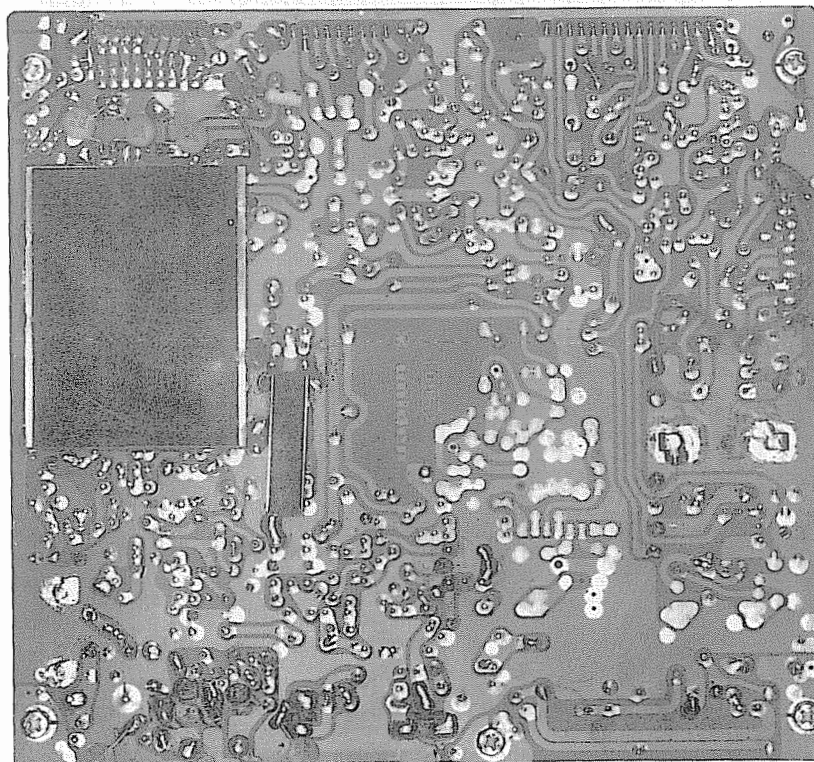
TEST EQUIPMENT	TRANSCEIVER	ADJUST	REMARKS
Input of RF wattmeter and 50-ohm, 25-watt dummy load to antenna input.	Ch. 19	L17, L16, L15	Adjust for maximum RF output.
Input of RF wattmeter and 50-ohm, 25-watt dummy load to antenna input.	Ch. 19	L12, L11	Adjust for 4.0 watts RF output maximum.
Input of spectrum analyzer or harmonic meter to antenna input.	Ch. 19	L10	Adjust for MINIMUM at 54MHz (2nd harmonic).

TRANSMITTER ADJUSTMENTS

Connect an RF wattmeter and 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, 10mV signal at MIC input.	Ch. 19	VR2	AMC Adjust for 100% modulation maximum. See Figure 1.
Input of RF wattmeter and 50-ohm, 25-watt dummy load to antenna input.	Ch. 19	VR205	RF METER Adjust so that RF meter agrees with RF wattmeter.

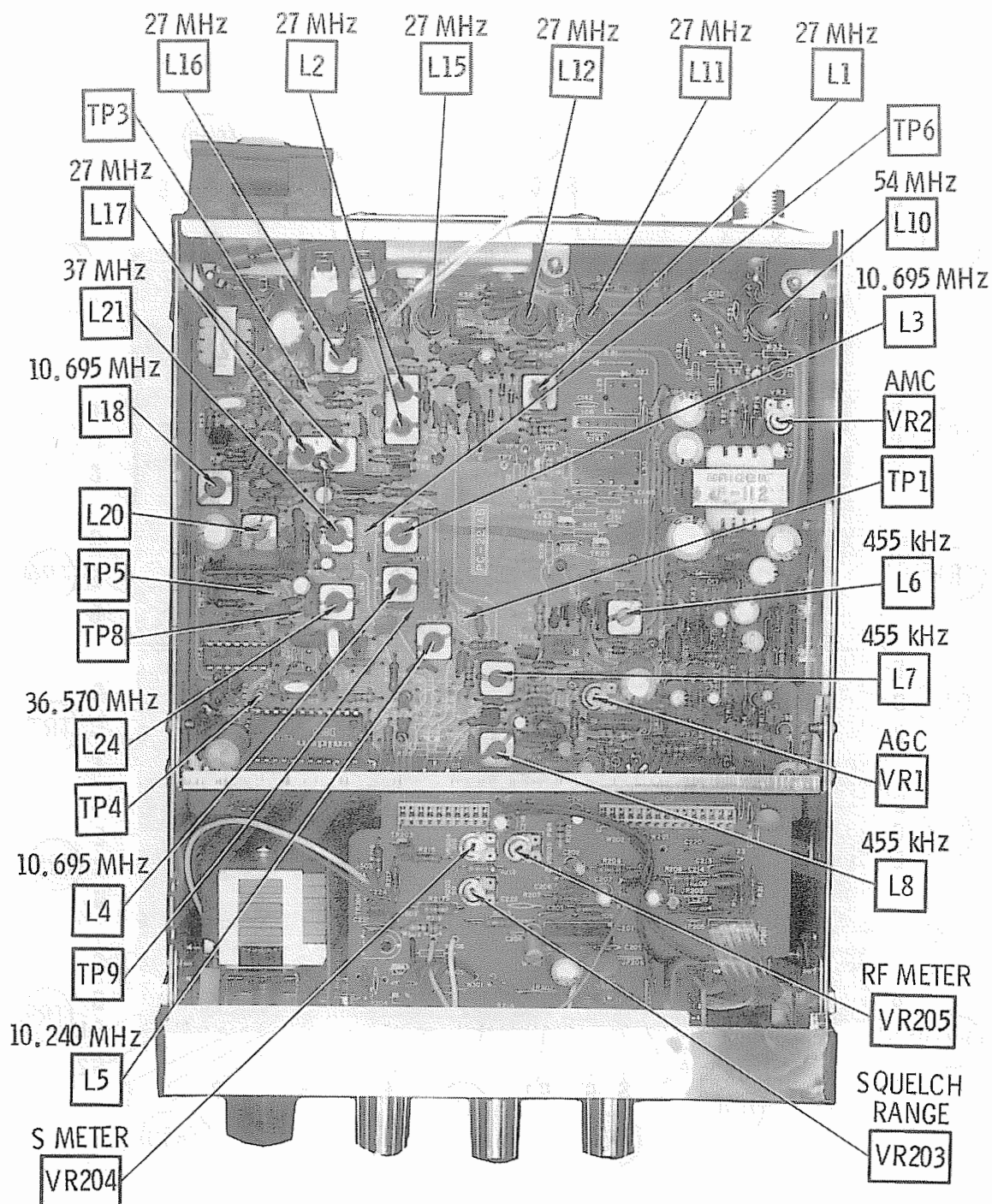
SEARS MODEL 663.38070700



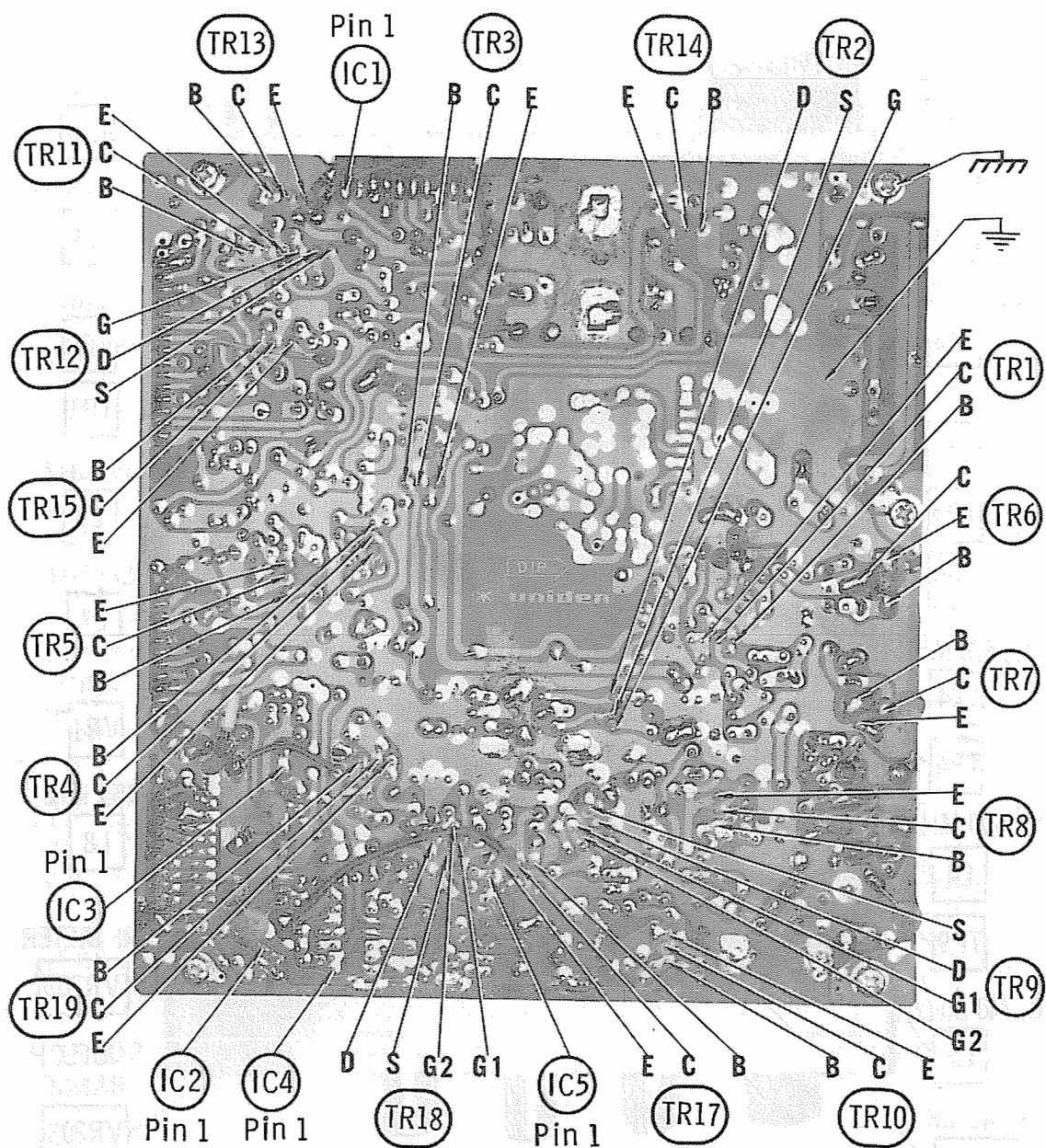
SHIELD LOCATION

TRUTH CHART

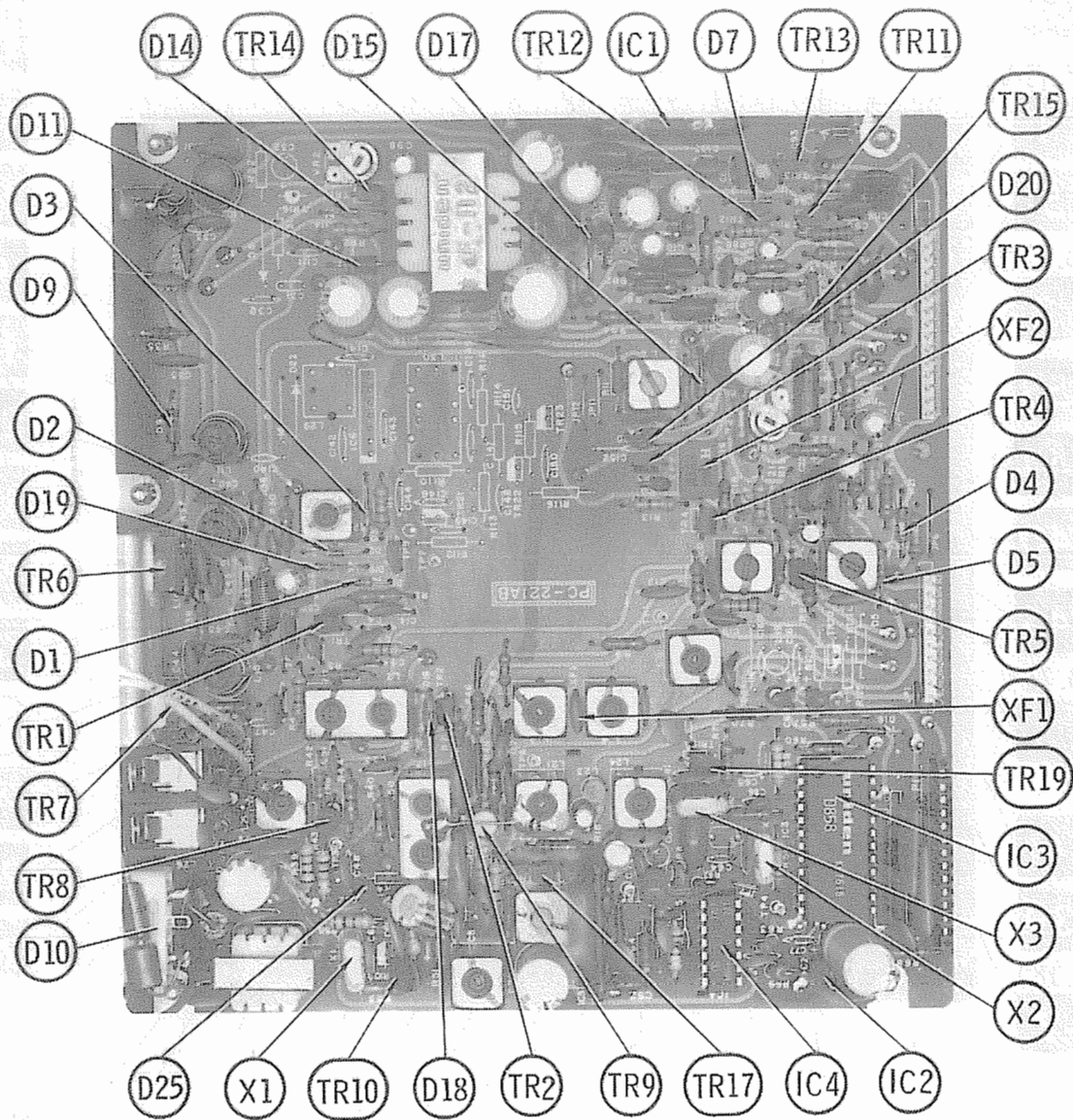
C H A N N E L	1 = 4.80 Volts 0 = 0 Volts							DIVIDER INPUT IN MHz AT TP4	REC & XMIT SYNTHESIZER OUTPUT IN MHz AT TP6		
	IC3 PROGRAM DIVIDER										
	PINS										
	19	18	17	16	15	14	13				
1	0	0	0	1	0	0	1		1.090	37.660	
2	0	0	1	0	0	0	0		1.100	37.670	
3	0	0	1	0	0	0	1		1.110	37.680	
4	0	0	1	0	0	1	1		1.130	37.700	
5	0	0	1	0	1	0	0		1.140	37.710	
6	0	0	1	0	1	0	1		1.150	37.720	
7	0	0	1	0	1	1	0		1.160	37.730	
8	0	0	1	1	0	0	0		1.180	37.750	
9	0	0	1	1	0	0	1		1.190	37.760	
10	0	0	0	0	0	0	0		1.200	37.770	
11	0	1	0	0	0	0	1		1.210	37.780	
12	0	1	0	0	0	1	1		1.230	37.800	
13	0	1	0	0	1	0	0		1.240	37.810	
14	0	1	0	0	1	0	1		1.250	37.820	
15	0	1	0	0	1	1	0		1.260	37.830	
16	0	1	0	1	0	0	0		1.280	37.850	
17	0	1	0	1	0	0	1		1.290	37.860	
18	0	1	1	0	0	0	0		1.300	37.870	
19	0	1	1	0	0	0	1		1.310	37.880	
20	0	1	1	0	0	1	1		1.330	37.900	
21	0	1	1	0	1	0	0		1.340	37.910	
22	0	1	1	0	1	0	1		1.350	37.920	
23	0	1	1	1	0	0	0		1.380	37.950	
24	0	1	1	0	1	1	0		1.360	37.930	
25	0	1	1	0	1	1	1		1.370	37.940	
26	0	1	1	1	0	0	1		1.390	37.960	
27	1	0	0	0	0	0	0		1.400	37.970	
28	1	0	0	0	0	0	1		1.410	37.980	
29	1	0	0	0	0	1	0		1.420	37.990	
30	1	0	0	0	0	1	1		1.430	38.000	
31	1	0	0	0	1	0	0		1.440	38.010	
32	1	0	0	0	1	0	1		1.450	38.020	
33	1	0	0	0	1	1	0		1.460	38.030	
34	1	0	0	0	1	1	1		1.470	38.040	
35	1	0	0	1	0	0	0		1.480	38.050	
36	1	0	0	1	0	0	1		1.490	38.060	
37	1	0	1	0	0	0	0		1.500	38.070	
38	1	0	1	0	0	0	1		1.510	38.080	
39	1	0	1	0	0	1	0		1.520	38.090	
40	1	0	1	0	0	1	1		1.530	38.100	



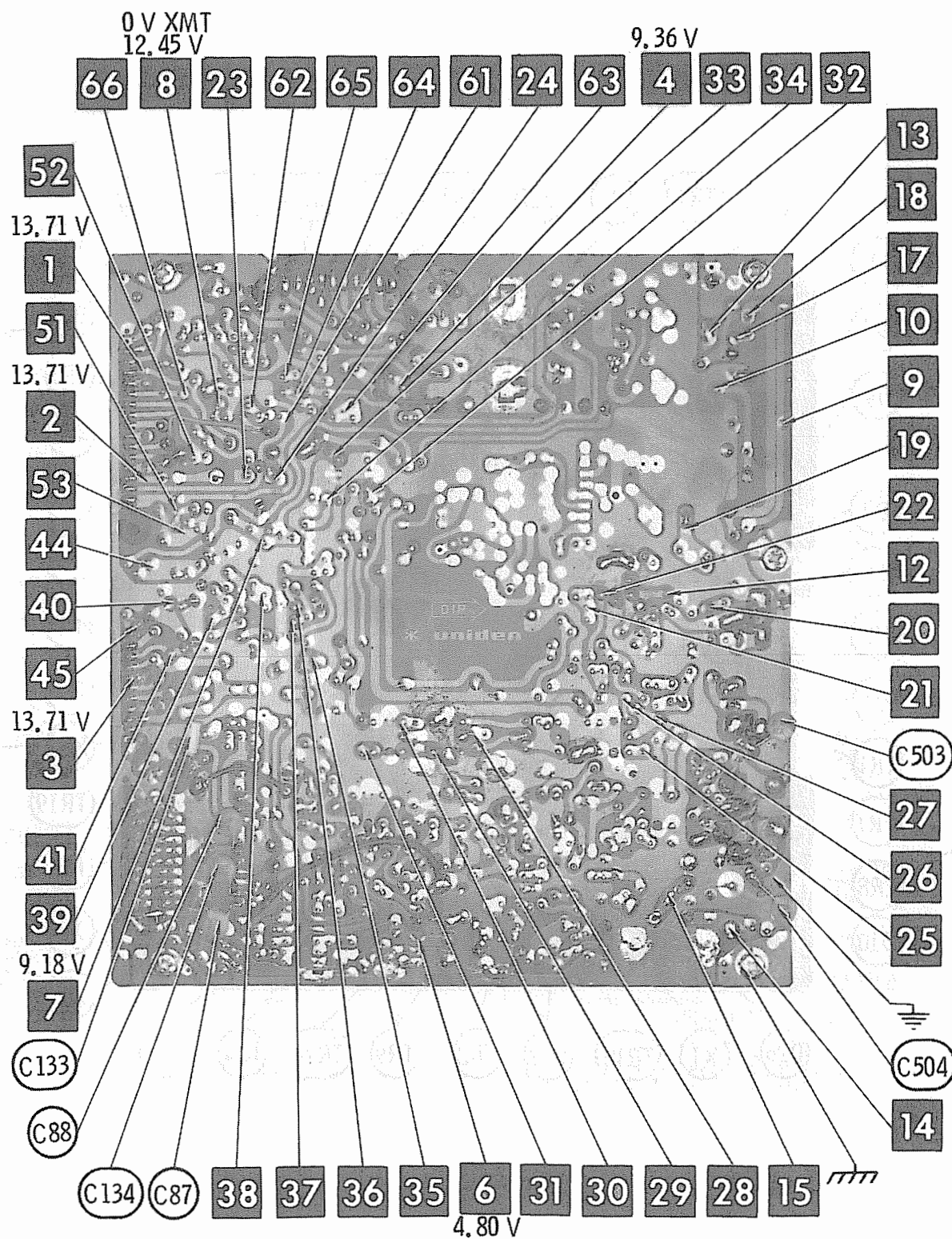
CHASSIS-BOTTOM



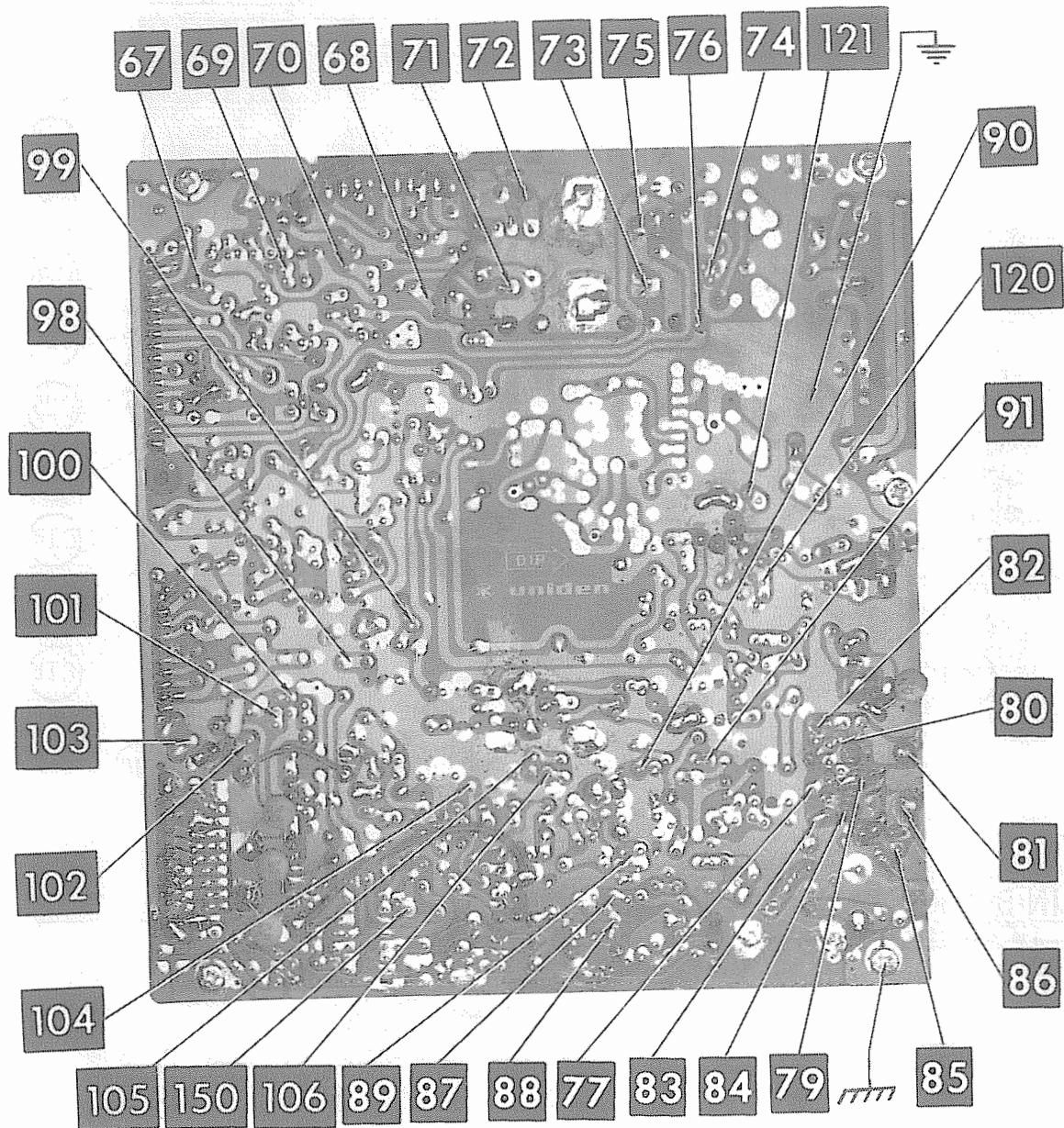
MAIN BOARD



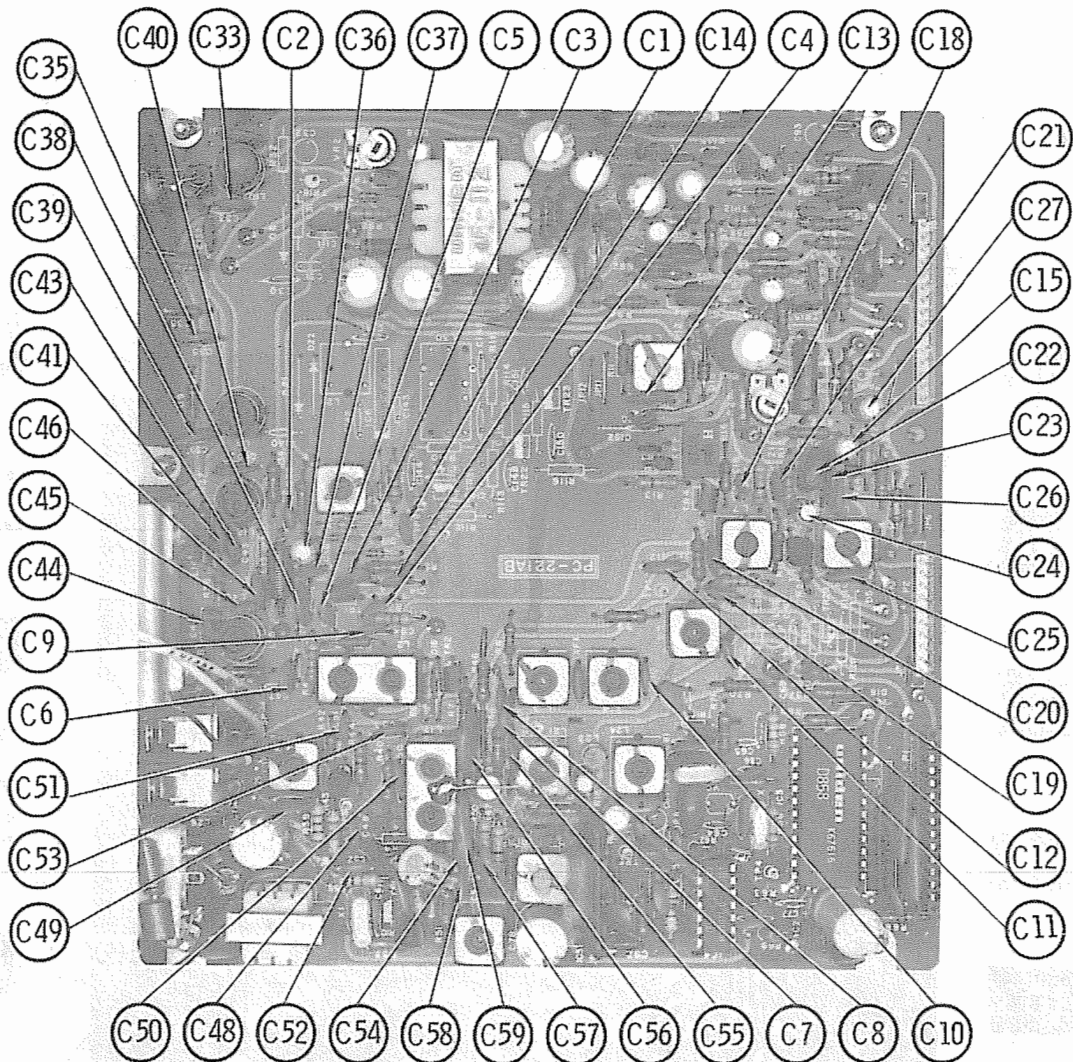
MAIN BOARD



MAIN BOARD

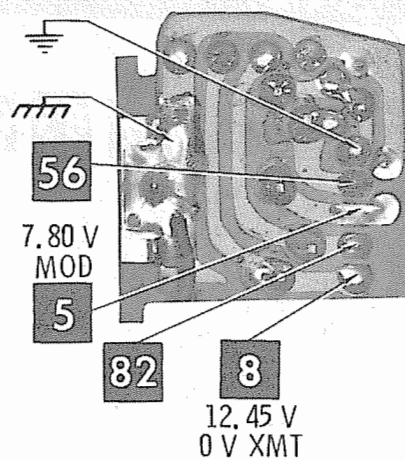


SEARS MODEL 663.38070700

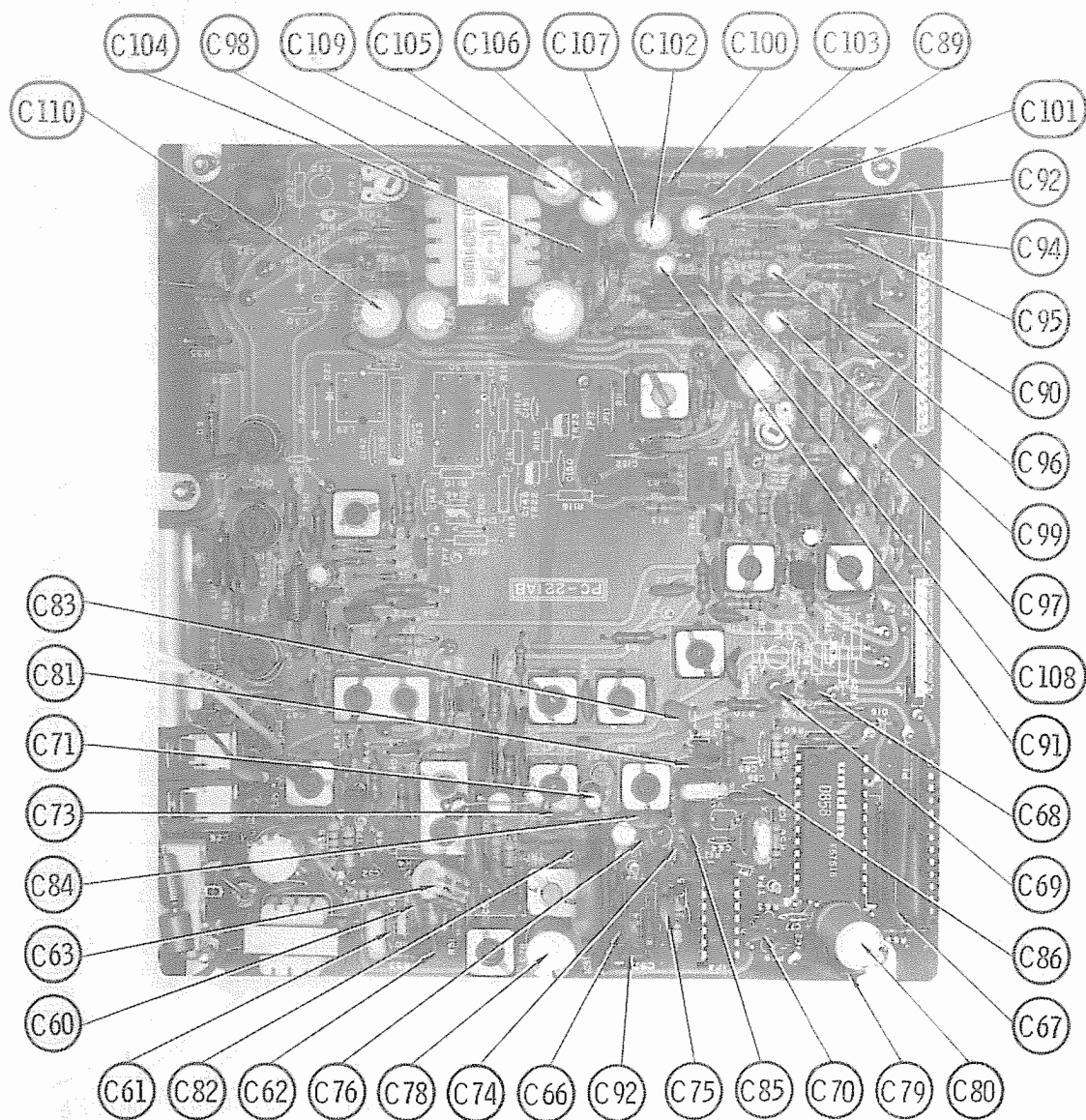


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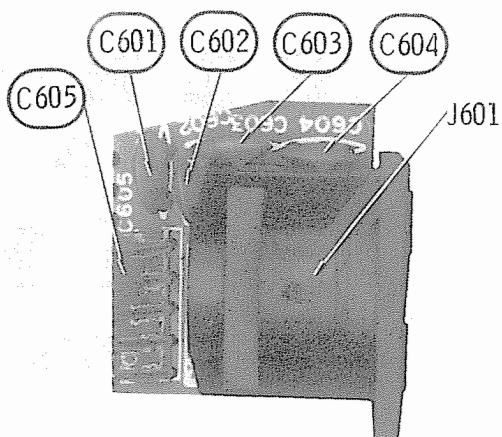
A Howard W. Sams **CIRCUITRACE** Photo



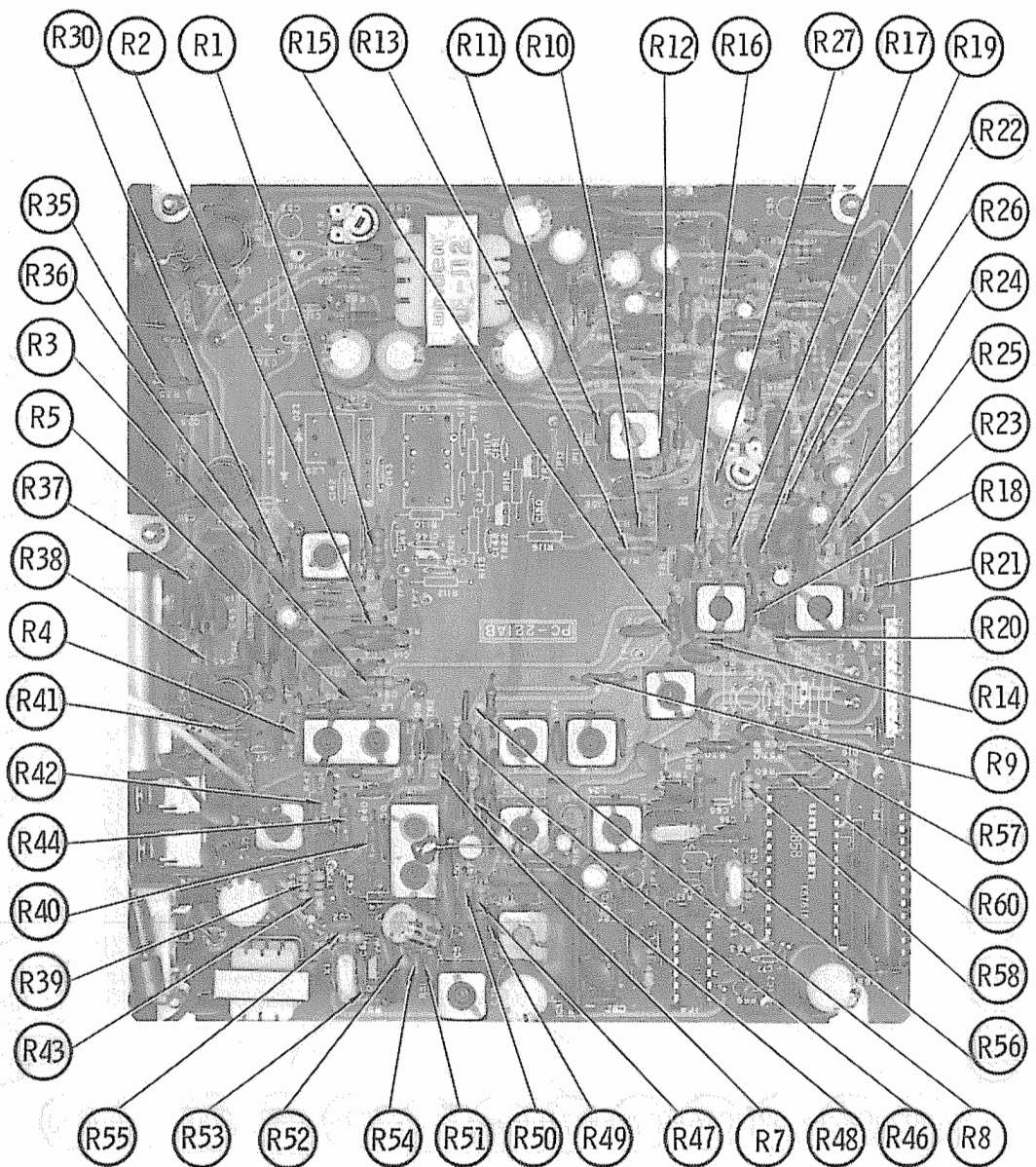
MIC JACK BOARD



MAIN BOARD

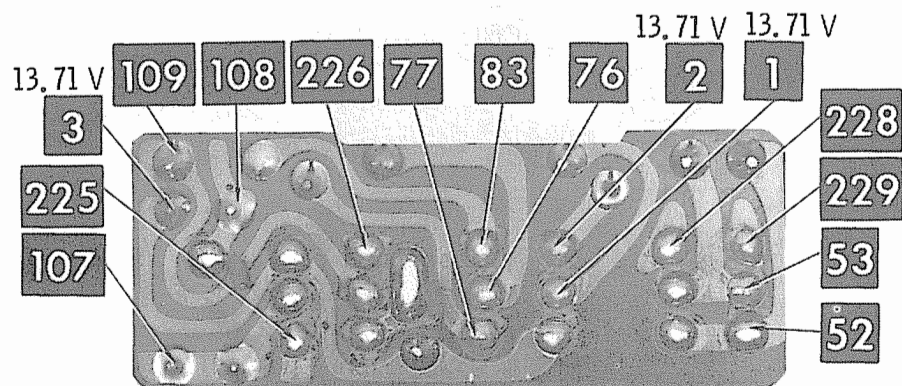


MIC JACK BOARD

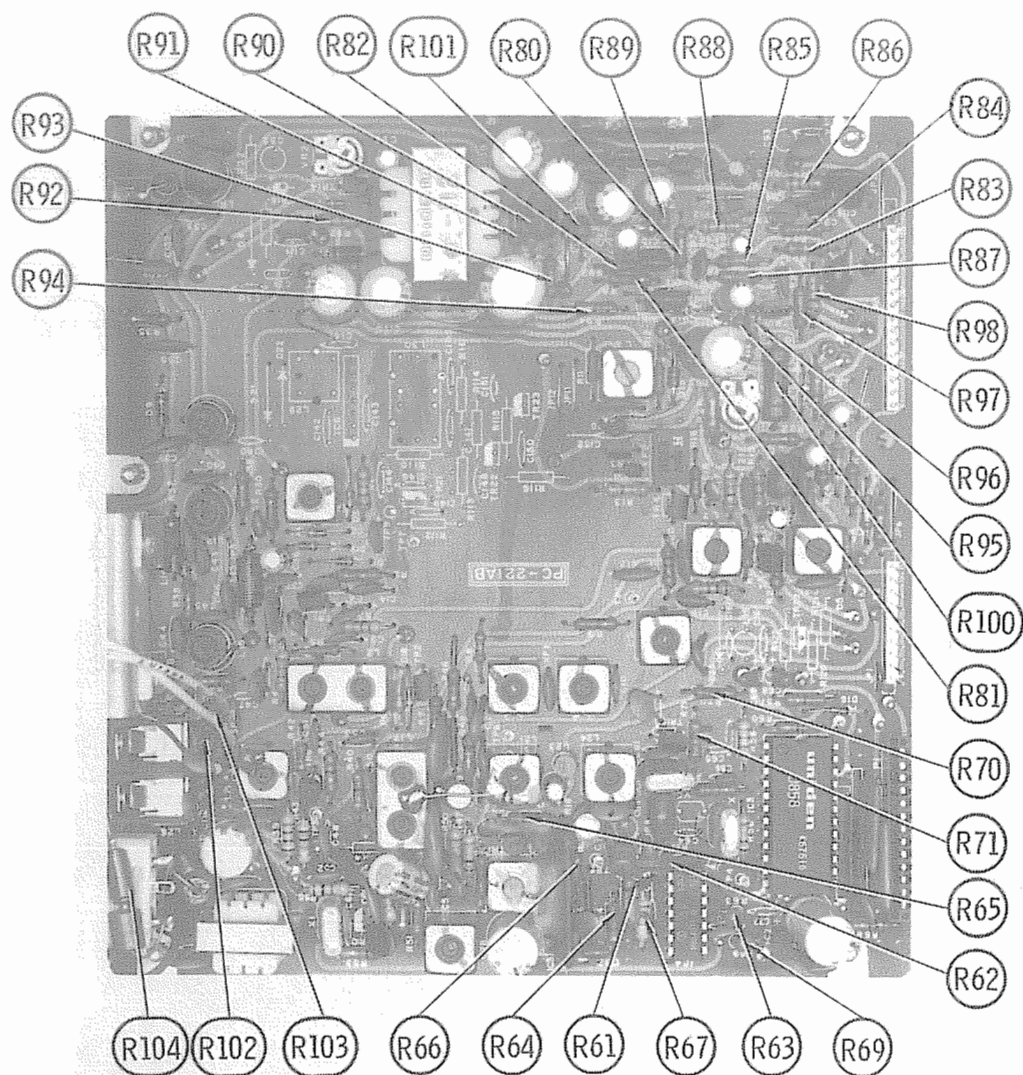


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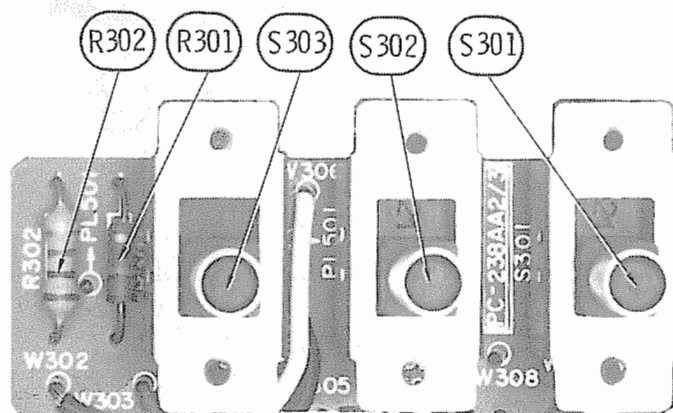
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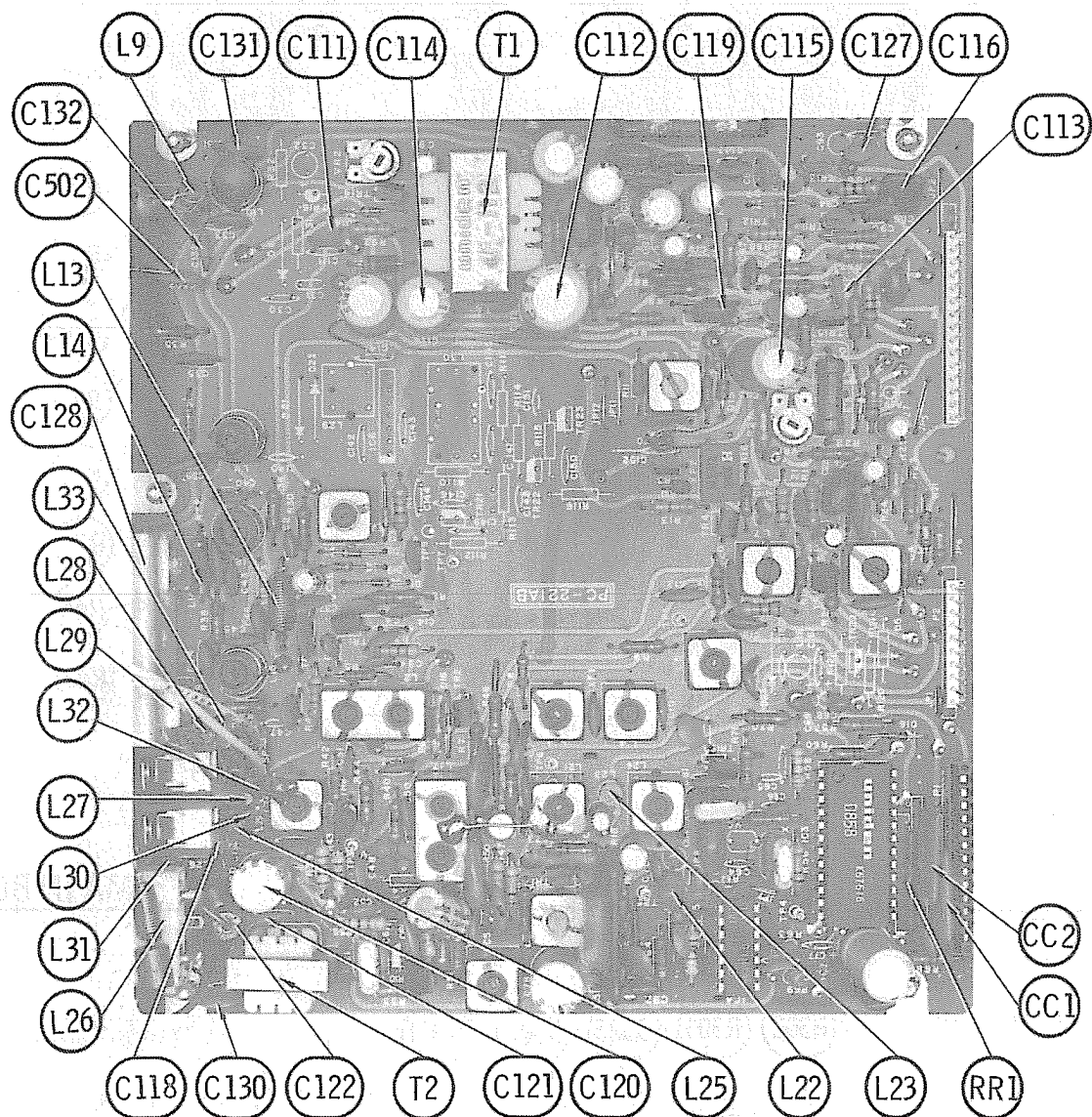
SWITCH BOARD



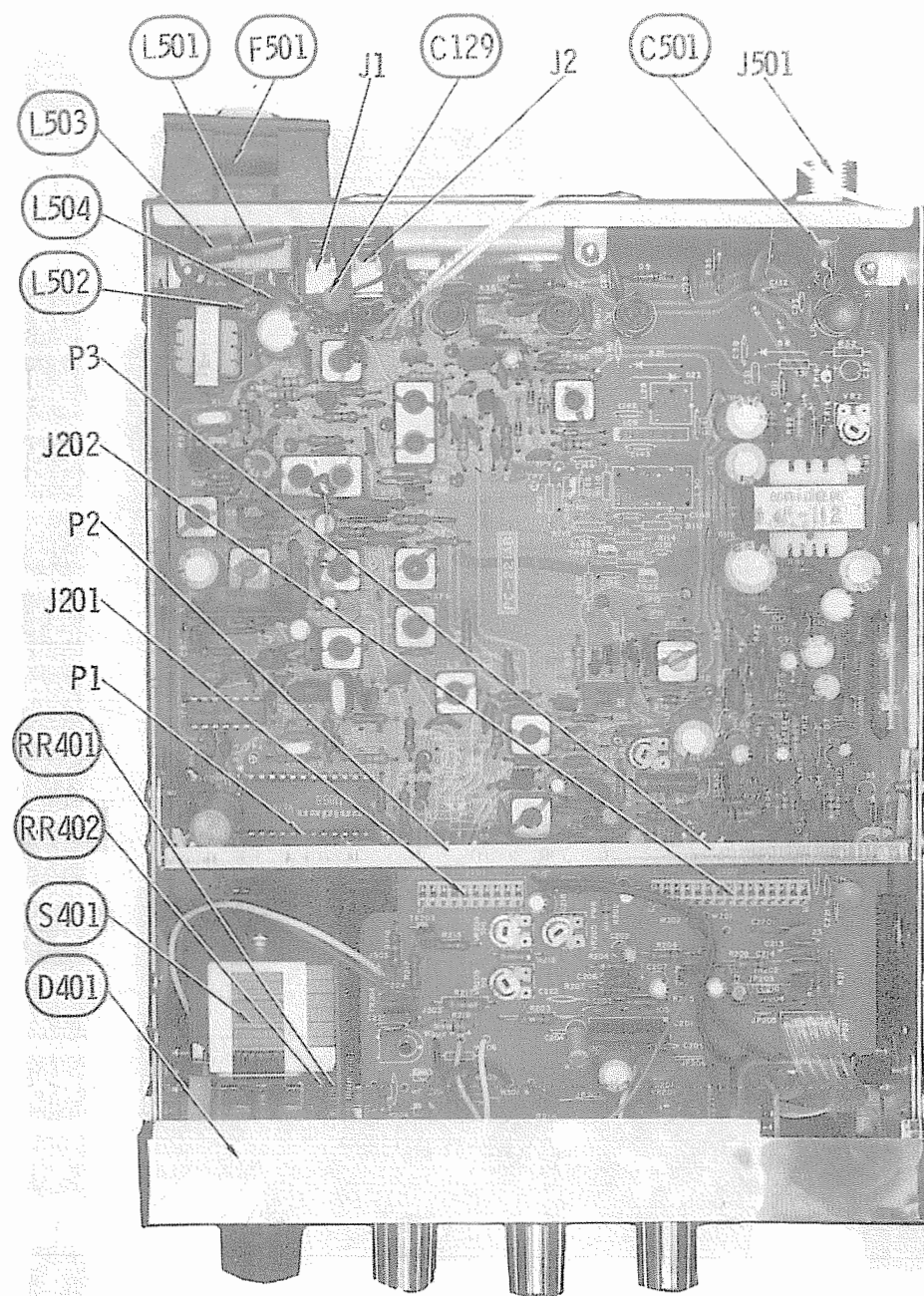
MAIN BOARD



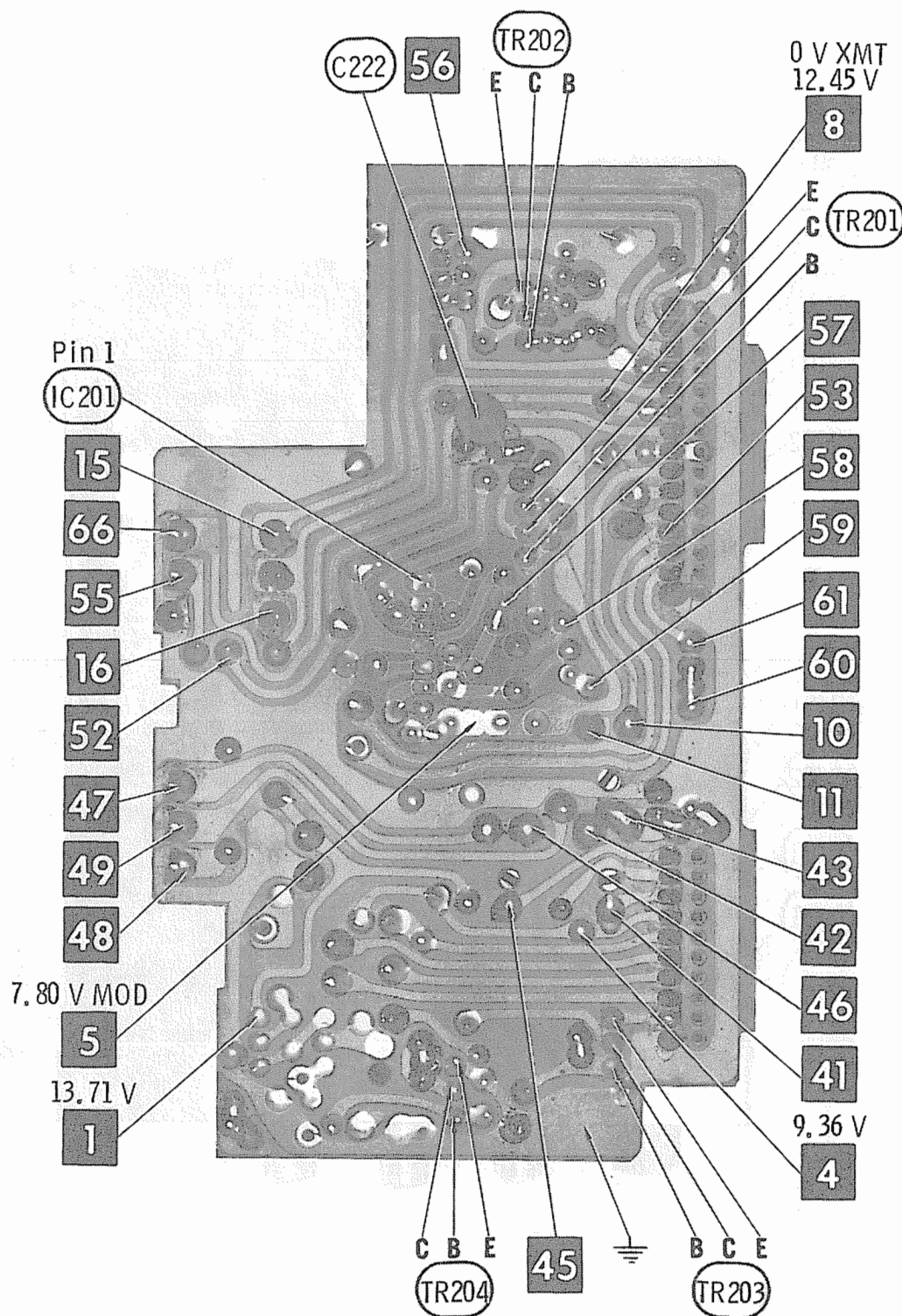
SWITCH BOARD



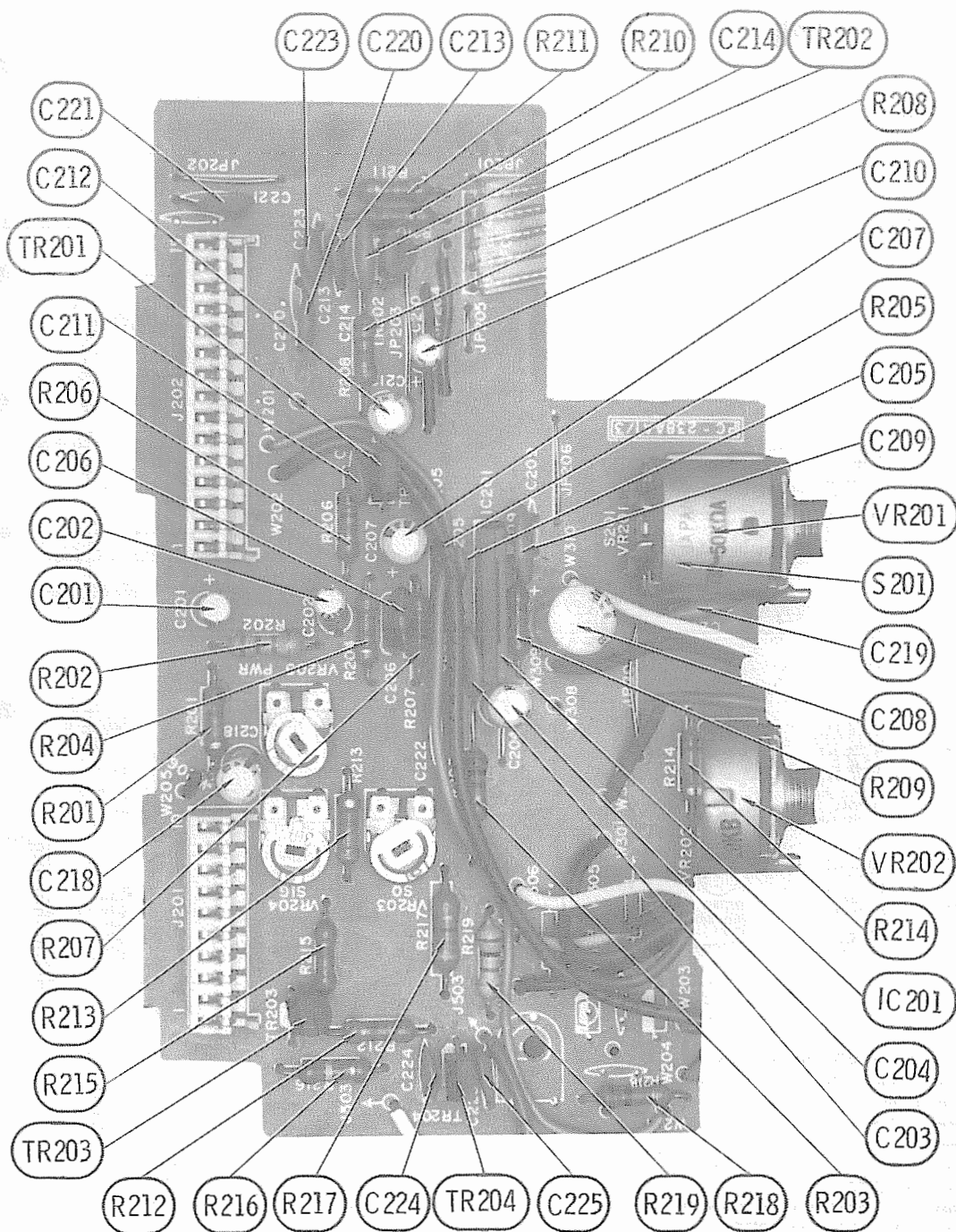
MAIN BOARD



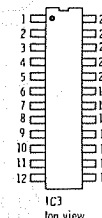
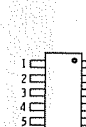
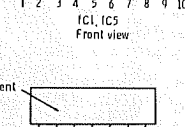
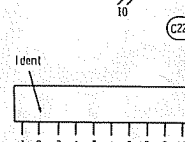
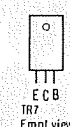
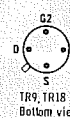
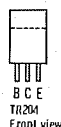
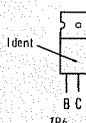
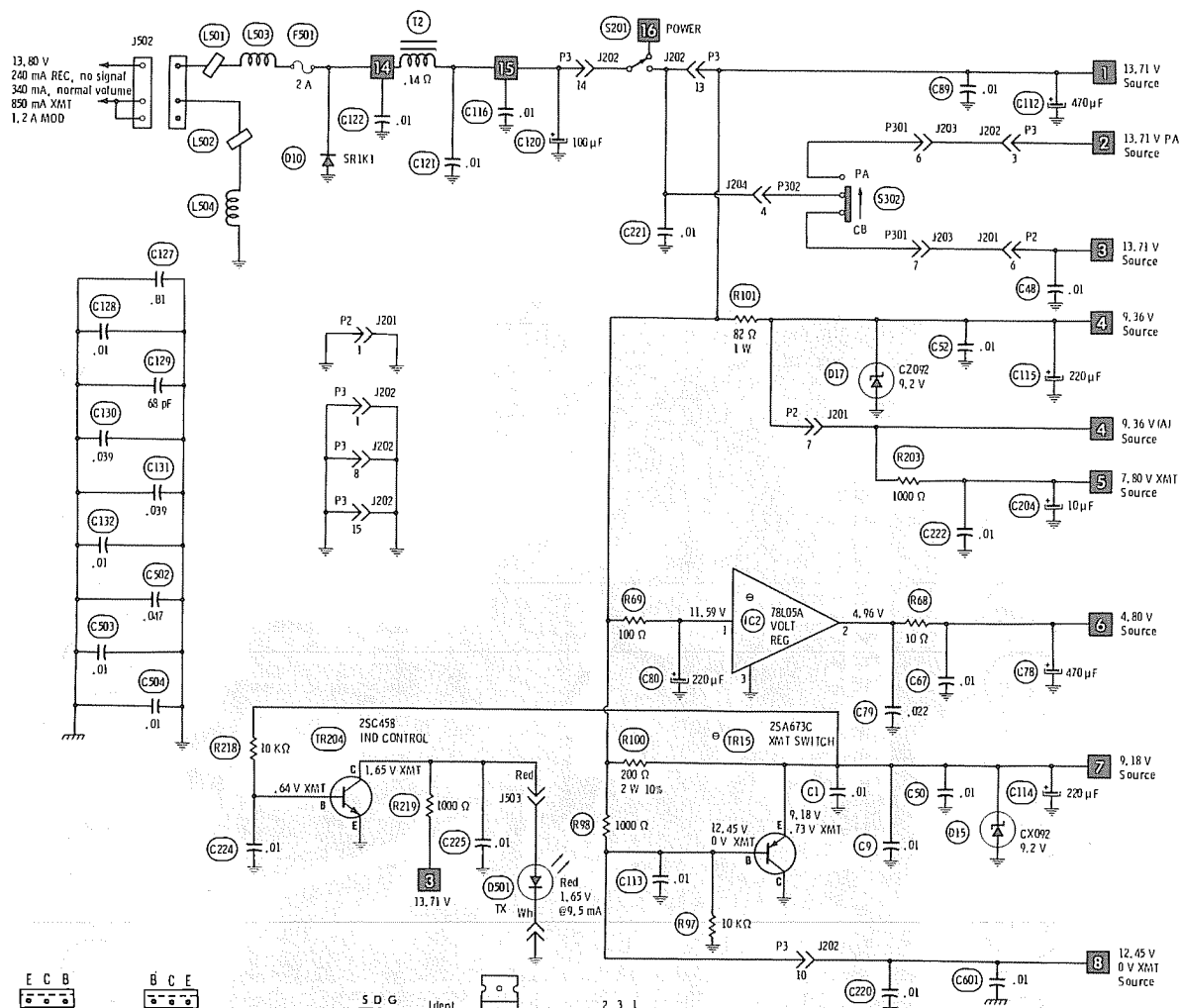
CHASSIS-BOTTOM



PLL BOARD



PLL BOARD



—*— Circuitry not used in some versions

--- Circuitry used in some versions

⊙ See parts list

⊛ Nominal value

⊕ Ground

⊞ Chassis

⊟ Common tie point

Measurements made in Channel 1 with switching as shown 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.

Arrow at control indicates direction of advance.

Terminal identification may not be found on unit.

Resistors are 1/2W or less, 5% unless noted.

Value in () used in some versions.

A PHOTOFACT STANDARD NOTATION SCHEMATIC

WITH **CIRCUITRACE**

Howard W. Sams & Co., Inc. 1978

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
C15	4.7 25V	CEL2514790	PC5-50	VTT47R850	QV1-27	EV-1319
C24	10 16V	CELZ311000	PC10-25	VTT10B25	QV1-41	EV-1222
C27	1 50V	CELZ011090	PC1-50	VTT1A50	QV1-11	EV-1615
C36	10 16V	CELZ311000	PC10-25	VTT10B25	QV1-41	EV-1222
C63	33 16V	CELZ313300	PC30-25	VTT33025	QV1-63	EV-1325
C68	2.2 16V	CSEZ312290		TUC225M035FL		S035-2R29
C69	2.2 16V	CSEZ312290		TUC225M035FL		S035-2R29
C71	.22 16V	CAAZ312286		TUC224M050EL	Q0T1-10	S050-R229
C78	470 6.3V	CELZ904710	PC500-16	VTT470K16	QV1-149	EV-1150
C80	220 16V	CELZ312210	PC250-25	VTT220H16	QV1-117	EV-1240
C91	10 16V	CELZ311000	PC10-25	VTT10B25	QV1-41	EV-1222
C92	.1 16V	CAAZ311086		TUC104M050EL	Q0T1-2	S050-R109
C96	.22 16V	CAAZ312286		TUC224M050EL	Q0T1-10	S050-R229
C98	2.2 25V	CELZ512290	PC2-100	VTT2R2A50	QV1-19	EV-1517
C99	.47 50V	CELZ814780	PC1-50	VTT47A63	QV1-3	EV-1610
C101	2.2 16V	CELZ512290	PC2-100	VTT2R2A50	QV1-19	EV-1517
C102	33 16V	CELZ313300	PC30-25	VTT33025	QV1-63	EV-1325
C105	33 16V	CELZ313300	PC30-25	VTT33025	QV1-63	EV-1325
C109	220 16V	CELZ312210	PC250-25	VTT220H16	QV1-117	EV-1240
C110	220 16V	CELZ312210	PC250-25	VTT220H16	QV1-117	EV-1240
C112	470 16V	CELZ314710	PC500-16	VTT470K16	QV1-151	EV-1250
C114	220 16V	CELZ312210	PC250-25	VTT220H16	QV1-117	EV-1240
C115	220 16V	CELZ312210	PC250-25	VTT220H16	QV1-117	EV-1240
C120	100 25V	CELZ511010	PC100-25	VTT100G25	QV1-97	EV-1330
C133	.1 16V	CAAZ311086		TUC104M050EL	Q0T1-2	S050-R109
C201	.1 16V	CAAZ311086		TUC104M050EL	Q0T1-2	S050-R109
C202	.1 16V	CAAZ311086		TUC104M050EL	Q0T1-2	S050-R109
C204	10 16V	CELZ311000	PC10-25	VTT10B25	QV1-41	EV-1222
C207	10 16V	CELZ311000	PC10-25	VTT10B25	QV1-41	EV-1222
C208	33 16V	CELZ313300	PC30-25	VTT33025	QV1-63	EV-1325
C210	.1 16V	CAAZ311086		TUC104M050EL	Q0T1-2	S050-R109
C212	1 50V	CELZ811090	PC1-50	VTT1A50	QV1-11	EV-1615
C218	2.2 25V	CELZ512290	PC2-100	VTT2R2A50	QV1-19	EV-1517

CAPACITORS

ITEM No.	RATING	MFR. PART No.	REPLACEMENT DATA				
			CENTRALAB PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.	
						Q-LINE	GENERAL LINE
C1	.01 25V	CCRZ012204	QC-103	MGP01	TA110	QC2-141	TG-S10
C2	22 N220				*		10TCR-Q22
C3	.01 25V		DC-103	MGP01	TA110	QC2-141	TG-S10
C4	.01 25V		DC-103	MGP01	TA110	QC2-141	TG-S10
C5	1.5 NPO		DTZ-1R5	NP01P5	CN0515		10TCC-V15
C6	.01 25V		QC-103	MGP01	TA110	QC2-141	TG-S10
C7	.022 25V		DC-203	MGP02	TA120	QC2-157	TG-S20
C8	.01 25V		DC-103	MGP01	TA110	QC2-141	TG-S10
C9	.01 25V		QC-103	MGP01	TA110	QC2-141	TG-S10
C10	.01 25V		DC-103	MGP01	TA110	QC2-141	TG-S10
C11	5	CCRZ012091	DTZ-4R7	NP04P7	CN0547		10TCC-V47
C12	.047 25V		DC-503	MGP05	TA150	QC2-207	TG-S50
C13	.039 25V				GP140		5GA-S40
C14	.01 25V		DC-103	MGP01	TA110	QC2-141	TG-S10
C18	2 N220				*		
C19	.022			DPMS2S22	EWFA1A122	QF1-127	1PB-S22
C20	.039 25V				GP140		5GA-S40
C21	.01 25V		DC-103	MGP01	TA110	QC2-141	TG-S10
C22	.068			WMF1S68	EWFA1A168	QF1-195	1PB-S68
C23	.039 25V				GP140		5GA-S40
C25	.0047 25V	CCRZ015604	DD-472	GP4700	GP247		5GA-D47
C26	.0047 25V		DD-472	GP4700	GP247		5GA-D47
C33	56 N220				*		10TCR-Q56
C35	.039 25V				GP140		5GA-S40
C37	.01 25V		DC-103	MGP01	TA110	QC2-141	TG-S10
C38	.039 25V				GP140		5GA-S40
C39	180 N220				*		10TCR-T18
C40	300		DD-301	GP300	GP330		10TS-T30
C41	.0047 25V		DD-472	GP4700	GP247		5GA-D47
C43	100		DD-101	GP100	GP310		10TS-T10
C44	180	CCRZ011814	DD-181		GP318		10TS-T18
C45	180		DD-181		GP318		10TS-T18
C46	.022 25V		QC-203	MGP02	TA120	QC2-157	TG-S20
C48	.01 25V		DC-103	MGP01	TA110	QC2-141	TG-S10
C49	.039 25V				GP140		5GA-S40
C50	.01 25V		QC-103	MGP01	TA110	QC2-141	TG-S10
C51	.002 25V		DD-202	GP2000	GP220	QC2-93	5GA-020
C52	.01 25V		QC-103	MGP01	TA110	QC2-141	TG-S10
C53	.01 25V		QC-103	MGP01	TA110	QC2-141	TG-S10
C54	.01 25V		QC-103	MGP01	TA110	QC2-141	TG-S10
C55	.01 25V	CCRZ013314 CCRZ011014	QC-103	MGP01	TA110	QC2-141	TG-S10
C56	.01 25V		DC-103	MGP01	TA110	QC2-141	TG-S10
C57	.0047 25V		DD-472	GP4700	GP247		5GA-D47
C58	.01 25V		DC-103	MGP01	TA110	QC2-141	TG-S10
C59	330 N220				*		10TCR-T33
C60	100 N220				*		10TCR-T10
C61	.01 25V		DC-103	MGP01	TA110	QC2-141	TG-S10
C62	.001 25V		DD-102G	GP1000	GP210	QC2-81	5GA-010
C66	.01 25V		QC-103	MGP01	TA110	QC2-141	TG-S10
C67	.01 25V		QC-103	MGP01	TA110	QC2-141	TG-S10
C70	.01 25V		QC-103	MGP01	TA110	QC2-141	TG-S10
C73	.01 25V	CCRZ013314 CCRZ011014	DC-103	MGP01	TA110	QC2-141	TG-S10
C74	22		DTZ-22	NP022	CN0422		10TCC-Q22
C75	.001 25V		DD-102G	GP1000	GP210	QC2-81	5GA-010
C76	22		DTZ-22	NP022	CN0422		10TCC-Q22
C79	.022			DPMS2S22	EWFA1A122	QF1-127	1PB-S22

SEARS MODEL 663.38070700

PARTS LIST AND DESCRIPTION (CONTINUED)

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

CAPACITORS (cont)

ITEM No.	RATING	MFR. PART No.	REPLACEMENT DATA				
			CENTRALAB PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.	
						Q-LINE	GENERAL LINE
C81	150	CCRZB14704	DD-151		GP315		10TS-T15
C82	7 NPO		DTZ-6R8	NP06P8	CN0568		10TCC-V68
C83	.01 25V		DC-103	MGPO1	TA110	QC2-141	TG-S10
C84	47 N220				*		10TCR-Q47
C85	.022			OPMS2S22	EWFA1A122	QF1-127	1PB-S22
C86	10 N150				*		10TCP-Q10
C87	.01 25V		DC-103	MGPO1	TA110	QC2-141	TG-S10
C88	.01 25V		DC-103	MGPO1	TA110	QC2-141	TG-S10
C89	.01 25V		DC-103	MGPO1	TA110	QC2-141	TG-S10
C90	.01			WMF1S1	EWFA1A110	QF1-91	1PB-S10
C92	.022	CCRZB11004		OPMS2S22	EWFA1A122	QF1-127	1PB-S22
C94	100		DD-101	GP100	GP310		10TS-T10
C95	100		DD-101	GP100	GP310		10TS-T10
C97	.01			WMF1S1	EWFA1A110	QF1-91	1PB-S10
C100	.01			WMF1S1	EWFA1A110	QF1-91	1PB-S10
C103	68		DD-680	GP68	GP468		10TS-Q68
C104	.068			WMF1S68	EWFA1A168	QF1-195	1PB-S68
C106	.068			WMF1S68	EWFA1A168	QF1-195	1PB-S68
C107	220		DD-221		GP322		10TS-T22
C108	.022			OPMS2S22	EWFA1A122	QF1-127	1PB-S22
C111	.01 25V		DC-103	MGPO1	TA110	QC2-141	TG-S10
C113	.01 25V		DC-103	MGPO1	TA110	QC2-141	TG-S10
C116	.01			WMF1S1	EWFA1A110	QF1-91	1PB-S10
C118	.001 25V		DD-102G	GP1000	GP210	QC2-81	5GA-D10
C119	.0047			WMF1D47	EWFA1A247	QF1-57	1PB-D47
C121	.01 25V		DC-103	MGPO1	TA110	QC2-141	TG-S10
C122	.02		DC-203	MGPO2	TA120	QC2-157	TG-S20
C127	.01 25V		DC-103	MGPO1	TA110	QC2-141	TG-S10
C128	.01 25V		DC-103	MGPO1	TA110	QC2-141	TG-S10
C129	68		DD-680	GP68	GP468		10TS-Q68
C130	.039 25V				GP140		5GA-S40
C131	.039 25V				GP140		5GA-S40
C132	.01 25V		DC-103	MGPO1	TA110	QC2-141	TG-S10
C134	68		DD-680	GP68	GP468		10TS-Q68
C203	330		DD-331	GP330	GP333		10TS-T33
C205	33		DTZ-33	NP033	CN0433		10TCC-Q33
C206	.039			OPMS6S39	PVC6139		6PS-S39
C209	.0047 25V		DD-472	GP4700	GP247		5GA-D47
C211	.001 25V		DD-102G	GP1000	GP210	QC2-81	5GA-D10
C213	.01 25V		DC-103	MGPO1	TA110	QC2-141	TG-S10
C214	.0047 25V		DD-472	GP4700	GP247		5GA-D47
C219	.0047 25V		DD-472	GP4700	GP247		5GA-D47
C220	.01 25V		DC-103	MGPO1	TA110	QC2-141	TG-S10
C221	.01 25V		DC-103	MGPO1	TA110	QC2-141	TG-S10
C222	.01 25V		DC-103	MGPO1	TA110	QC2-141	TG-S10
C223	100		DD-101	GP100	GP310		10TS-T10
C224	.01 25V		DC-103	MGPO1	TA110	QC2-141	TG-S10
C225	.01 25V		DC-103	MGPO1	TA110	QC2-141	TG-S10
C501	33		DTZ-33	NP033	CN0433		10TCC-Q33
C502	.047 25V		DC-503	MGPO5	TA150	QC2-207	TG-S50
C503	.01 25V		DC-103	MGPO1	TA110	QC2-141	TG-S10
C504	.01 25V		DC-103	MGPO1	TA110	QC2-141	TG-S10
C601	.01 25V		DC-103	MGPO1	TA110	QC2-141	TG-S10
C602	.001 25V		DD-102G	GP1000	GP210	QC2-81	5GA-D10
C603	.01 25V		DC-103	MGPO1	TA110	QC2-141	TG-S10
C604	.01 25V		DC-103	MGPO1	TA110	QC2-141	TG-S10
C605	.01 25V		DC-103	MGPO1	TA110	QC2-141	TG-S10
CC1		HHAY003001 (1) HHAY003001 (1)					
CC2							

* Not normally in distributor's stock. Available thru distributor on order to manufacturer.
(1) Consists of four .01 Capacitors.

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

ITEM No.	FUNCTION	RESIST-ANCE	REPLACEMENT DATA			
			MFR. PART No.	CENTRALAB PART No.	MALLORY PART No.	TRW PART No.
VR1	AGC	50K	RRVY133009			U260R5038
VR2	AMC	5000	RRVY133005			U260R5028
VR201	Volume/Switch	50K	RRVY194001			
VR202	Squelch	20K	RRVY193001			
VR203	Squelch Range	20K	RRVY133007			U260R2538
VR204	S Meter	20K	RRVY133007			U260R2538
VR205	RF Meter	20K	RRVY133007			U260R2538
VR501	RF Gain	50K	RRVY241001			

PARTS LIST AND DESCRIPTION (CONTINUED)

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

RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA		ITEM No.	RATING	REPLACEMENT DATA	
		WORKMAN PART No.	MFGR. PART No.			WORKMAN PART No.	MFGR. PART No.
RR1 RR401	Resistor Network Resistor Network		HHAY006001 (1) HHAY008001 (2)	RR402	Resistor Network		HHAY008001 (2)

(1) Consists of seven 4700 ohm resistors.

(2) Consists of seven 680 ohm resistors.

COILS (RF-IF)

ITEM No.	FUNCTION	REPLACEMENT DATA			REMARKS
		PART No.	OTHER IDENTIFICATION	MILLER PART No.	
L1	Rec Antenna (27MHz)	LLAY029001	LA-029	CBS740-T	
L2	Rec RF (27MHz)	LLAY194001	LA-194		
L3	IF (10.695MHz)	LLAY180001	LA-180	CBS715-TC	
L4	IF (10.695MHz)	LLAY181001	LA-181		
L5	Ref Oscillator (10.240MHz)	LLAY182001	LA-182		
L6	IF (455kHz)	LLAY163001	LA-163		
L7	IF (455kHz)	LLAY183001	LA-183		
L8	IF (455kHz)	LLAY184001	LA-184		
L9	RF Choke	LLDY073001	LD-073		
L10	TVI Trap (54MHz)	LLCY018001	LC-018	CBS304	
L11	PI Filter (27MHz)	LLCY020001	LC-020	CBS306	
L12	Final (27MHz)	LLCY018001	LC-018	CBS304	
L13	RF Choke	LLDY012001	LD-012	4588	
L15	XMT Buffer (27MHz)	LLCY017001	LC-017	CBS303	
L16	XMT Buffer (27MHz)	LLAY189001	LA-189		
L17	XMT Mixer (27MHz)	LLAY185001	LA-185		
L18	XMT Oscillator (10.695MHz)	LLAY193001	LA-193		
L20	VCO	LLAY187001	LA-187		
L21	VCO	LLAY188001	LA-188		
L22	RF Choke (100uH)	LLZY001013	LZ-001		
L23	RF Choke (1.5uH)	LLZY002002	LZ-002		
L24	PLL Oscillator (36.570MHz)	LLAY186001	LA-186		
L25	RF Choke	LLDY046001	LD-046		
L26	RF Choke	LLDY046001	LD-046		
L27	RF Choke	LLDY046001	LD-046		
L28	RF Choke	LLDY046001	LD-046		
L503	RF Choke	LLDY012001	LD-012	4588	
L504	RF Choke	LLDY012001	LD-012	4588	

SEARS MODEL 663.38070700

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	1.2A	.8	.86mH	TF-083 (1)	TR516		(1) Number on unit.

TRANSFORMER (Driver)

ITEM No.	TURNS RATIO			REPLACEMENT DATA			NOTES
	PRI.	SEC. 1	SEC. 2	MFGR. PART No.	THORDARSON PART No.	TRIAD PART No.	
T1	1	1		TF-112 (1)			(1) Number on unit.

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		MFGR. PART No.	QUAM PART No.	
SP501	4" PM 8 Ohms	ASPY003001	4A12B	

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.		WORKMAN PART No.
		DEVICE	HOLDER	DEVICE	HOLDER	DEVICE	HOLDER	DEVICE
F501	2 Amp	JFSY001005	ZFHY011001	AGC2	H0J	312002	150145	FG2-2

MICROPHONE

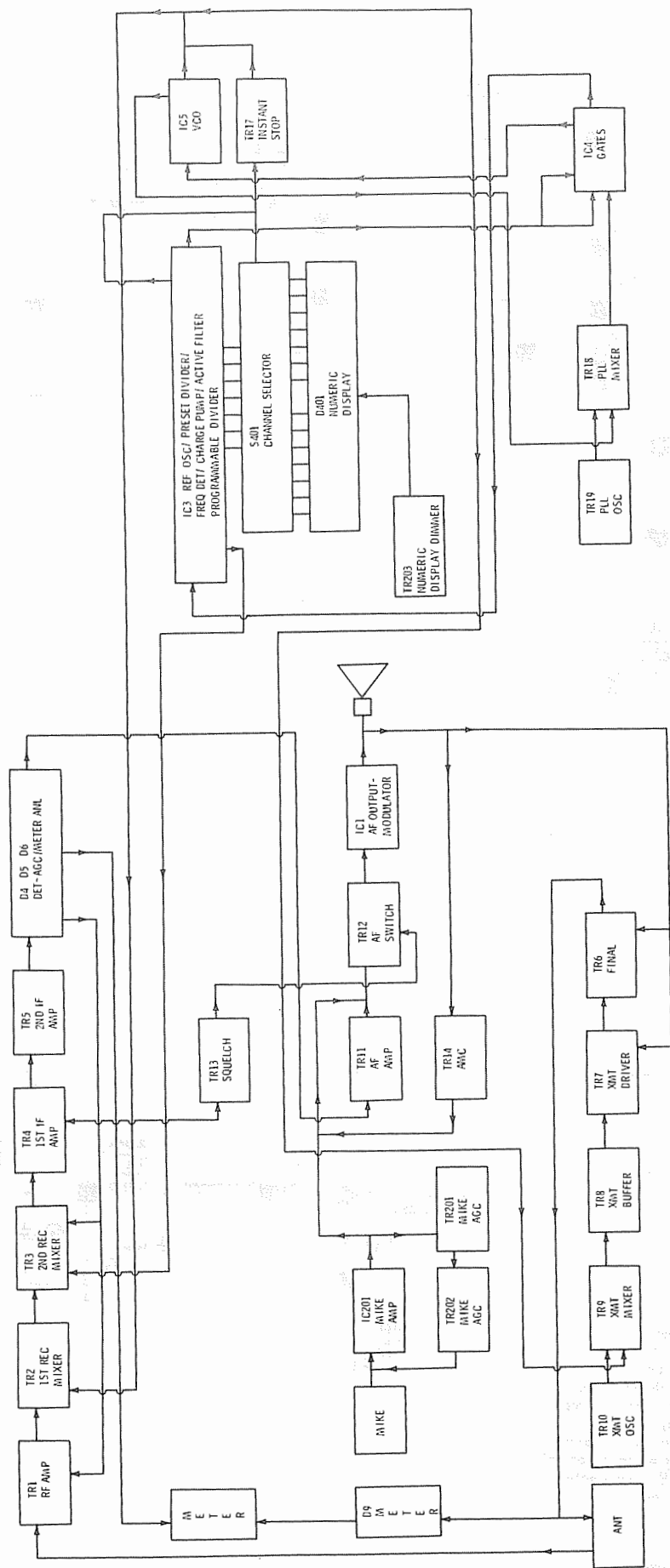
ITEM No.	REPLACEMENT DATA				CONNECTION DATA						
	MFGR. PART No.	GC PART No.	GC NOISE CANCEL	GC POWER	GC CONNECTOR	GC Red	GC Shield	GC Yellow	GC Blue	GC White	GC Black
MIC	AMKY023001	18-032	18-034	18-010	18-105	4	1	3	5	NC	1

MISCELLANEOUS

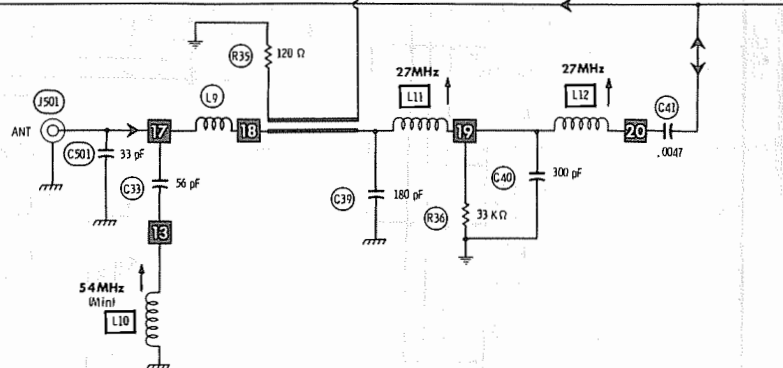
ITEM No.	PART NAME	PART No.	NOTES
D401	LED	00AYD78001	Channel Display (TLQ321)
D501	LED	0DAY073001	TX (LR0702R) (1.65V @ 9.5mA)
J1	Jack	JJKY078001	PA
J2	Jack	JJKY078001	External Speaker
J501	Jack	JJKY035001	Antenna
J502	Jack	JJKY052001	Power
J601	Jack	JJKY083001	Microphone
L14	Ferrite Bead	LLDY075001	
L29	Ferrite Bead	LLDY075001	
L30	Ferrite Bead	LLDY077001	
L31	Ferrite Bead	LLDY077001	
L32	Ferrite Bead	LLDY077001	
L33	Ferrite Bead	LLDY077001	
L501	Ferrite Bead	ZYY043001	
L502	Ferrite Bead	ZYY043001	
M501	Meter	ZMTY087001	
S201	Switch		S/R
S301	Switch	SSWY094001	Power (Part of Volume Control)
S302	Switch	SSWY094001	ANL
S303	Switch	SSWY094001	CB/PA
S401	Switch	SSRY155001	Dim/Brite
X1	Crystal	QQXY078001	Channel Selector
X2	Crystal	QQXY077001	10.695MHz
X3	Crystal	QQXY079001	10.240MHz
XF1	Crystal Filter	FFLY047001	36.570MHz
XF2	Crystal Filter	FFLY053001	10.695MHz
	Printed Circuit Board	PPCY221012	455kHz
	Printed Circuit Board	PPCY250011	Main
	Printed Circuit Board	PPCY238011	Channel Selector
			Control

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

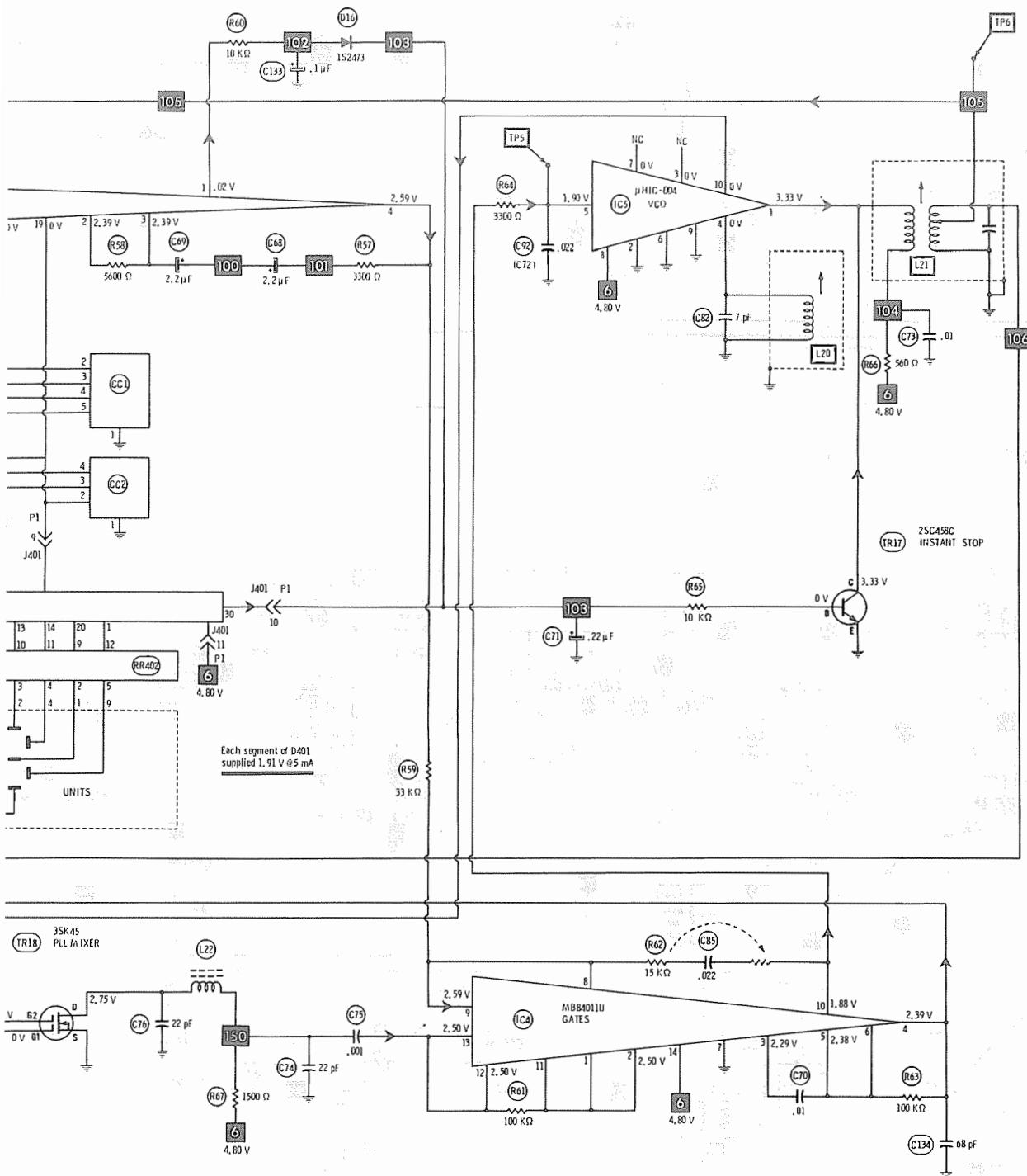
ITEM	PART No.	ITEM	PART No.
Escutcheon	MONP404489	Knob, Channel	MONP404483
Cabinet Top	MOBP204485	Knob, Control	MONP404484
Cabinet Bottom	MOBP204486	Mounting Bracket	MONP404535
Microphone Hanger	MOBP402919		



SEARS MODEL 663.38070700



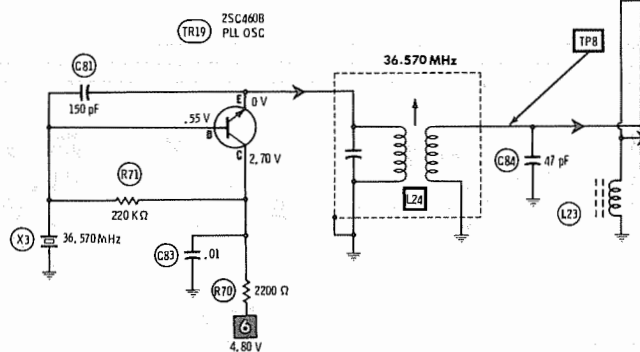
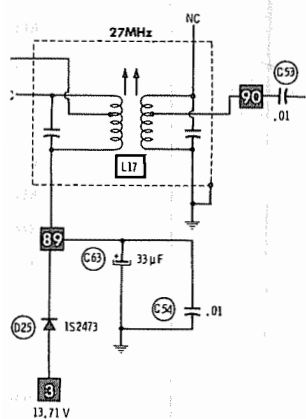
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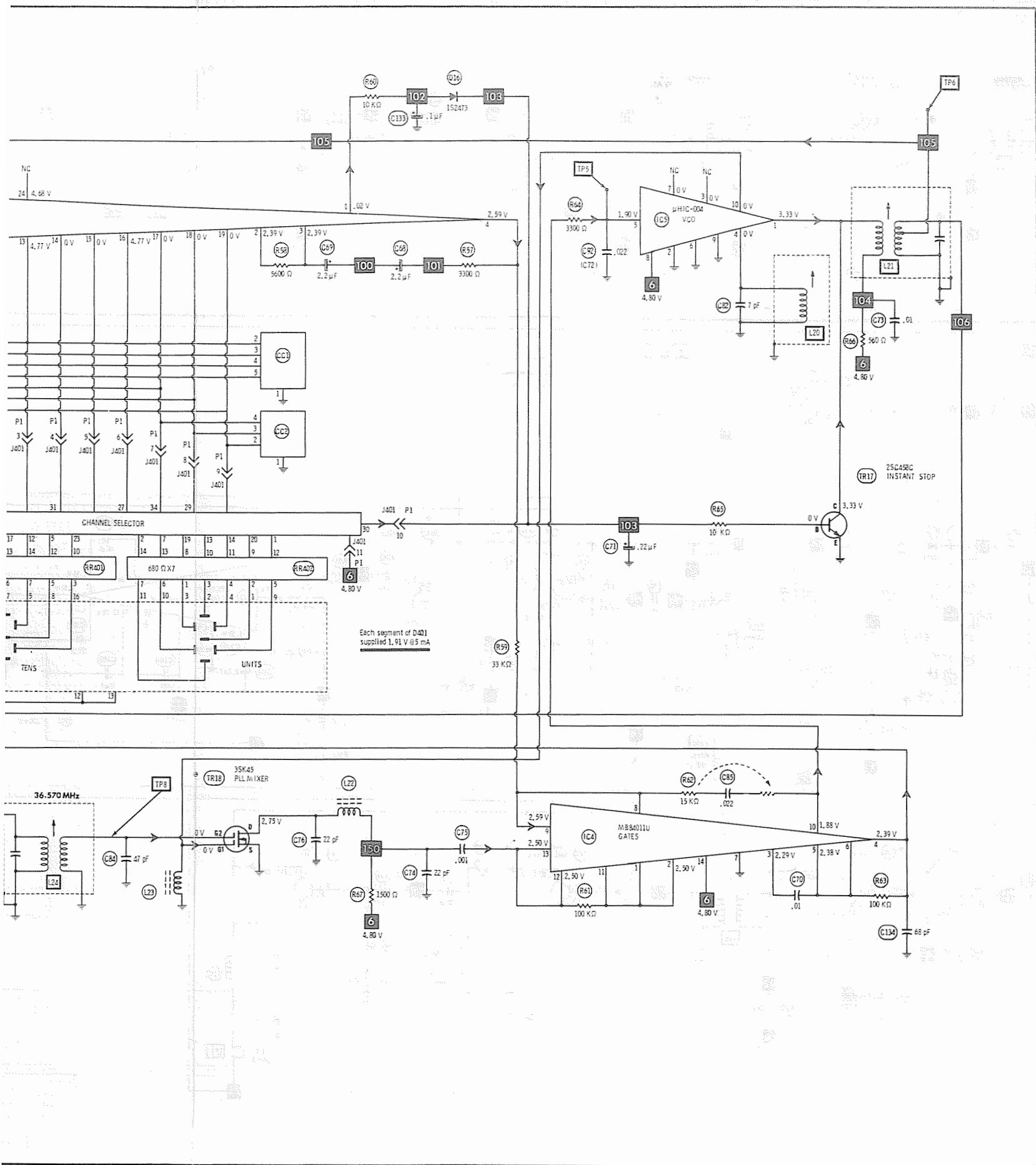
SEM

ITEM
No.

D1
D2
D3
D4
D5
D6
D7
D9
D10
D11
D12
D13
D14
D15
D16
D17
D18
D19
D20
D25
IC1
IC2
IC3
IC4
IC5
IC201
TR1
TR2
TR3
TR4
TR5
TR6
TR7
TR8
TR9
TR10
TR11
TR12
TR13
TR14
TR15
TR17
TR18
TR19
TR201
TR202
TR203
TR204



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PARTS LIST AND DESCRIPTION

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

WIRING DATA

General-use Hook-up Wire (available in 5 colors)	BELDEN No. 8523	Coiled Microphone Cable	
Shielded Hook-up Wire (spiral wrapped)	BELDEN No. 8421	3-conductor (1 shielded)	23AWG BELDEN No. 9471 (5')
Speaker Cable (available in 4 colors)	BELDEN No. 8401		BELDEN No. 8497 (6')
Bonding Strap	BELDEN No. 8782		BELDEN No. 9472 (7-1/2')
AC Power Cord	BELDEN No. 8672		BELDEN No. 9465 (6')
	(6') BELDEN No. 17106	4-conductor (unshielded)	31AWG BELDEN No. 9468 (10')
	(9') BELDEN No. 17109	5-conductor (1 shielded)	23AWG BELDEN No. 8415 (6')
			BELDEN No. 9467 (6')
			BELDEN No. 9465 (7-1/2')

SEMICONDUCTORS (Select replacement transistor for best results)

ITEM No.	TYPE No.	MFR. PART No.	REPLACEMENT DATA									
			GENERAL ELECTRIC PART No.	MALLORY PART No.	MOTOROLA PART No.	RAYTHEON PART No.	RCA PART No.	SPRAGUE PART No.	SYLVANIA PART No.	THORDARSON PART No.	WORKMAN PART No.	ZENITH PART No.
D1	152473	DDAY048012	GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
D2	152473	DDAY048012	GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
D3	152473	DDAY048012	GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
D4	1N60AM	DDAY001010	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	1N60	WEP134	ZEN-430
D5	1N60AM	DDAY001010	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	1N60	WEP134	ZEN-430
D6	152473K	DDAY048012	GE-300	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG177	1N4148	WEP1062	
D7	152473	DDAY048012	GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
D9	1N60AM	DDAY001010	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	1N60	WEP134	ZEN-430
D10	SR1K1	DDAY002001	GE-504A	PTC201	HEPR0052	REN 116	SK3030	RT-213	ECG116	1N4004	WEP156	212-76-02
D11	SR1K1	DDAY002001	GE-504A	PTC201	HEPR0052	REN 116	SK3030	RT-213	ECG116	1N4004	WEP156	212-76-02
D12	152473K	DDAY048012	GE-300	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG177	1N4148	WEP1062	
D13	152473K	DDAY048012	GE-300	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG177	1N4148	WEP1062	
D14	152473	DDAY048012	GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
D15	CZ092	DDAY010006	GEZD-9.1	HEZD9.1A	HEPZ0412	REN 139	SK3060	RT-240	ECG139	1N4739A	WEP1109	103-272
D16	152473	DDAY048012	GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
D17	CZ092	DDAY010006	GEZD-9.1	HEZD9.1A	HEPZ0412	REN 139	SK3060	RT-240	ECG139	1N4739A	WEP1109	103-272
D18	152473	DDAY048012	GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
D19	152473	DDAY048012	GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
D20	152473	DDAY048012	GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
D25	152473	DDAY048012	GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
IC1	UPC1156H	DDEY091001							ECG1194			
IC2	78L05A					REN 977	SK3462		ECG977			
	78L05A					REN 977	SK3462		ECG977			
	NJM78L05A	DDEY088001				REN 977	SK3462		ECG977			
IC3	D858								ECG1198			
	UPD858C								ECG1198			
	UPC858C	DDEY055001							ECG1198			
IC4	MB84011U								ECG4011B			
	MB84011V	DDEY089001							ECG4011B			
	84011U								ECG4011B			
IC5	UHC-004	DDEY087001					SK3469		ECG1203			
IC201	UPC942H2	UDCY097001							ECG1195			
TR1	25C13426	DDBY287001	GE-61*	PTC132	HEPS0014*	REN 229*	SK3018*	RT-108A*	ECG229*		WEP956*	ZEN-127
	25C1342		GE-61*	PTC132	HEPS0014*	REN 229*	SK3018*	RT-108A*	ECG229*		WEP956*	ZEN-127
TR2	25K55D	DDCY006001	GE-FET-2	PTC161	HEPF0021	REN 132	SK3448	RT-175	ECG312			ZEN-123
	25K55		GE-FET-2	PTC161	HEPF0021	REN 132	SK3448	RT-175	ECG312			ZEN-123
TR3	25C460B	DDBY277002	GE-61*	PTC136*	HEPS0014*	REN 107	SK3122	RT-134	ECG107	25C460	WEP460	121-722
	25C460		GE-61*	PTC136*	HEPS0014*	REN 107	SK3122	RT-134	ECG107	25C460	WEP460	121-722
TR4	25C460B	DDBY277002	GE-61*	PTC136*	HEPS0014*	REN 107	SK3122	RT-134	ECG107	25C460	WEP460	121-722
	25C460		GE-61*	PTC136*	HEPS0014*	REN 107	SK3122	RT-134	ECG107	25C460	WEP460	121-722
TR5	25C460B	DDBY277002	GE-61*	PTC136*	HEPS0014*	REN 107	SK3122	RT-134	ECG107	25C460	WEP460	121-722
	25C460		GE-61*	PTC136*	HEPS0014*	REN 107	SK3122	RT-134	ECG107	25C460	WEP460	121-722
TR6	25C2092	DDBY289001(14)	GE-337	PTC166		REN 235	SK3197	RT-146	ECG235	25C1306	WEP785	
TR7	25C2091	DDBY288001(15)	GE-270	PTC180		REN 295			ECG295		WEP913	
TR8	25C2076C		GE-210*	PTC121*	HEPS0015*	REN 123A*	SK3122	RT-308	ECG295		WEP736	121-722
	25C2076		GE-210*	PTC121*	HEPS0015*	REN 123A*	SK3122	RT-308	ECG295		WEP736	121-722
	25C2076C3	DDBY270001	GE-210*	PTC121*	HEPS0015*	REN 123A*	SK3122	RT-308	ECG295		WEP736	121-722
TR9	35K45B	DDCY104001	GE-FET-4	PTC182	HEPF2007	REN 222	SK3065	RT-181	ECG222		WEP905	121-826
	35K45		GE-FET-4	PTC182	HEPF2007	REN 222	SK3065	RT-181	ECG222		WEP905	121-826
TR10	25C460B	DDBY277002	GE-61*	PTC136*	HEPS0014*	REN 107	SK3122	RT-134	ECG107	25C460	WEP460	121-722
	25C460		GE-61*	PTC136*	HEPS0014*	REN 107	SK3122	RT-134	ECG107	25C460	WEP460	121-722
TR11	25C458C	DDBY273001	GE-210*	PTC121*	HEPS0009*	REN 123A*	SK3124	RT-187	ECG289	25C458	WEP458	121-29000*
	25C458		GE-210*	PTC121*	HEPS0009*	REN 123A*	SK3124	RT-187	ECG289	25C458	WEP458	121-29000*
TR12	JF10336		GE-FET-2	PTC161	HEPF0021	REN 132	SK3448	RT-175	ECG312			ZEN-123
	JF1033	DDCY202002	GE-FET-2	PTC161	HEPF0021	REN 132	SK3448	RT-175	ECG312			ZEN-123
TR13	25C458C	DDBY273001	GE-210*	PTC121*	HEPS0009*	REN 123A*	SK3124	RT-187	ECG289	25C458	WEP458	121-29000*
	25C458		GE-210*	PTC121*	HEPS0009*	REN 123A*	SK3124	RT-187	ECG289	25C458	WEP458	121-29000*
TR14	25C458C	DDBY273001	GE-210*	PTC121*	HEPS0009*	REN 123A*	SK3124	RT-187	ECG289	25C458	WEP458	121-29000*
	25C458		GE-210*	PTC121*	HEPS0009*	REN 123A*	SK3124	RT-187	ECG289	25C458	WEP458	121-29000*
TR15	25A673C	DDBY007002	GE-269	PTC103*	HEPS0025*	REN 290	SK3114	RT-115*	ECG290	25A661	WEP911	121-774
	25A673		GE-269	PTC103*	HEPS0025*	REN 290	SK3114	RT-115*	ECG290	25A661	WEP911	121-774
TR17	25C458C	DDBY273001	GE-210*	PTC121*	HEPS0009*	REN 123A*	SK3124	RT-187	ECG289	25C458	WEP458	121-29000*
	25C458		GE-210*	PTC121*	HEPS0009*	REN 123A*	SK3124	RT-187	ECG289	25C458	WEP458	121-29000*
TR18	35K45		GE-FET-4	PTC182	HEPF2007	REN 222	SK3065	RT-181	ECG222		WEP905	121-826
	35K45B09	DDCY104003	GE-FET-4	PTC182	HEPF2007	REN 222	SK3065	RT-181	ECG222		WEP905	121-826
TR19	25C460B	DDBY277002	GE-61*	PTC136*	HEPS0014*	REN 107	SK3122	RT-134	ECG107	25C460	WEP460	121-722
	25C460		GE-61*	PTC136*	HEPS0014*	REN 107	SK3122	RT-134	ECG107	25C460	WEP460	121-722
TR201	25A844C	DDBY008001	GE-244*	PTC103*	HEPS0019*	REN 129*	SK3114	RT-126A*	ECG129*		WEP60*	
	25A844		GE-244*	PTC103*	HEPS0019*	REN 129*	SK3114	RT-126A*	ECG129*		WEP60*	
TR202	25C458C	DDBY273001	GE-210*	PTC121*	HEPS0009*	REN 123A*	SK3124	RT-187	ECG289	25C458	WEP458	121-29000*
	25C458		GE-210*	PTC121*	HEPS0009*	REN 123A*	SK3124	RT-187	ECG289	25C458	WEP458	121-29000*
TR203	25D467B	DDBY410001	GE-243*	PTC178	HEPS3001*	REN 128	SK3024*	RT-114*	ECG128*		WEP59*	121-1014
	25D467		GE-243*	PTC178	HEPS3001*	REN 128	SK3024*	RT-114*	ECG128*		WEP59*	121-1014
TR204	25C458C	DDBY273001	GE-210*	PTC121*	HEPS0009*	REN 123A*	SK3124	RT-187	ECG289	25C458	WEP458	121-29000*
	25C458		GE-210*	PTC121*	HEPS0009*	REN 123A*	SK3124	RT-187	ECG289	25C458	WEP458	121-29000*

