

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-209 (21-1660)

MANUFACTURER'S SPECIFICATIONS

RECEIVER

Frequency Coverage	26.965 to 27.405 MHz
Sensitivity	0.5 μ V for 10 dB (S+N)/N
Selectivity	$\pm$ 3kHz at -6dB
Adjacent Channel Rejection	90dB
Audio Distortion at 1000Hz	Less than 10% at 2 watts output (8 Ω)
I.F.	455 kHz
Squelch	Adjustable from 0.5 μ V

TRANSMITTER

Frequency Coverage	26.965 to 27.405 MHz
Power Output	3.5 watts in HI Power Position 1.5 watts in LOW Power Position
Modulation	90% -100%
Spurious Output	-60 dB or better
Emission	8A3
Frequency Tolerance	0.002%
Current Drain (12.5V DC)	65-1400 mA (from no-signal receive, to full modulation on transmit)

Courtesy of the Manufacturer

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

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REALISTIC MODEL TRC-209

RECEIVER ADJUSTMENTS

Connect an AC VTVM or AF wattmeter across speaker voice coil.
Adjust volume control to obtain a suitable indication.

TEST EQUIPMENT	TRANSCIVER	ADJUST	REMARKS
Input of DC meter to TP1. No signal input.	Ch. 19	VR10	IF AGC Adjust for 2.00 volts.
Output of signal generator to antenna input. 27.185MHz, 1000Hz @ 30% modulation. Output 1uV.	Ch. 19	VR1	RF AGC Adjust for 2.00 volts RMS (.5 watts) audio output.
Output of signal generator to antenna input. 27.185MHz, 1000Hz @ 30% modulation. Output 10,000uV.	Ch. 19 Squelch Maximum	VR2	SQUELCH RANGE Adjust so squelch just breaks.

TRANSMITTER ALIGNMENT

Connect a 50-ohm, 25-watt dummy load to antenna connector.

NOTE: Be sure to check transmit frequency and power on all active channels after alignment of transmitter.

See page 4 for channel frequencies.

TEST EQUIPMENT	TRANSCIVER	ADJUST	REMARKS
Input of RF wattmeter to antenna input.	Ch. 19 Power Hi	T5, T6, T7, L4, L7, L8	Adjust for maximum RF output.
Input of RF wattmeter to antenna input.	Ch. 19 Power Hi	VR9	Adjust for 4.0 watts RF output maximum.

TRANSMITTER ADJUSTMENTS

Connect a 50-ohm, 25-watt dummy load to antenna connector.

NOTE: Be sure to check transmit frequency and power on all active channels after adjustment of transmitter.

See page 4 for channel frequencies.

TEST EQUIPMENT	TRANSCIVER	ADJUST	REMARKS
Input of oscilloscope or modulation meter to antenna input. Inject a 1000Hz, 100mV audio signal at mic input.	Ch. 19 Power Hi	VR5	AMC Adjust for 100% modulation maximum. See Figure 1.
Input of RF wattmeter to antenna input.	Ch. 19 Power Hi	VR6	RF METER At 4.0 watts RF output adjust so that meter indicates in the center of the blue area.

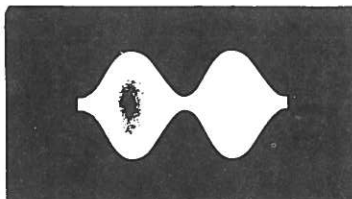


Figure 1

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 12-volt DC input.
Connect low sides of test equipment to ground unless specified otherwise.
Connect 50-ohm dummy load or antenna before keying transmitter.
Suggested Alignment Tools:
T1,T2,T4,T5,T6,T7,L4.....9440
T3.....5000,5009,8276,8728,9089
L7,L8.....8728,9304,9089
C58,C62.....5000,8276,9089

GC ELECTRONICS:

SYNTHESIZER ALIGNMENT

TEST EQUIPMENT	TRANSCEIVER	ADJUST	REMARKS
Input of DC meter to TP2.	Ch. 1	T4	Adjust for 1.50 volts. Check for approximately 2.50 volts on channel 40.
Input of DC meter to TP2.	Ch. 1 XMT	C58	Adjust for 1.30 volts. Check for approximately 2.30 volts on channel 40.
Input of frequency counter to TP5 (IC1 Pin 22).	Ch. 1		Check for 16.270MHz. Check all channels. (See Truth Chart for correct frequencies.)
Input of frequency counter to TP6 (IC3 Pin 17).	Ch. 1 XMT	C62	Adjust for 26.965MHz. Check all channels. (See Truth Chart for correct frequencies.)

RECEIVER ALIGNMENT

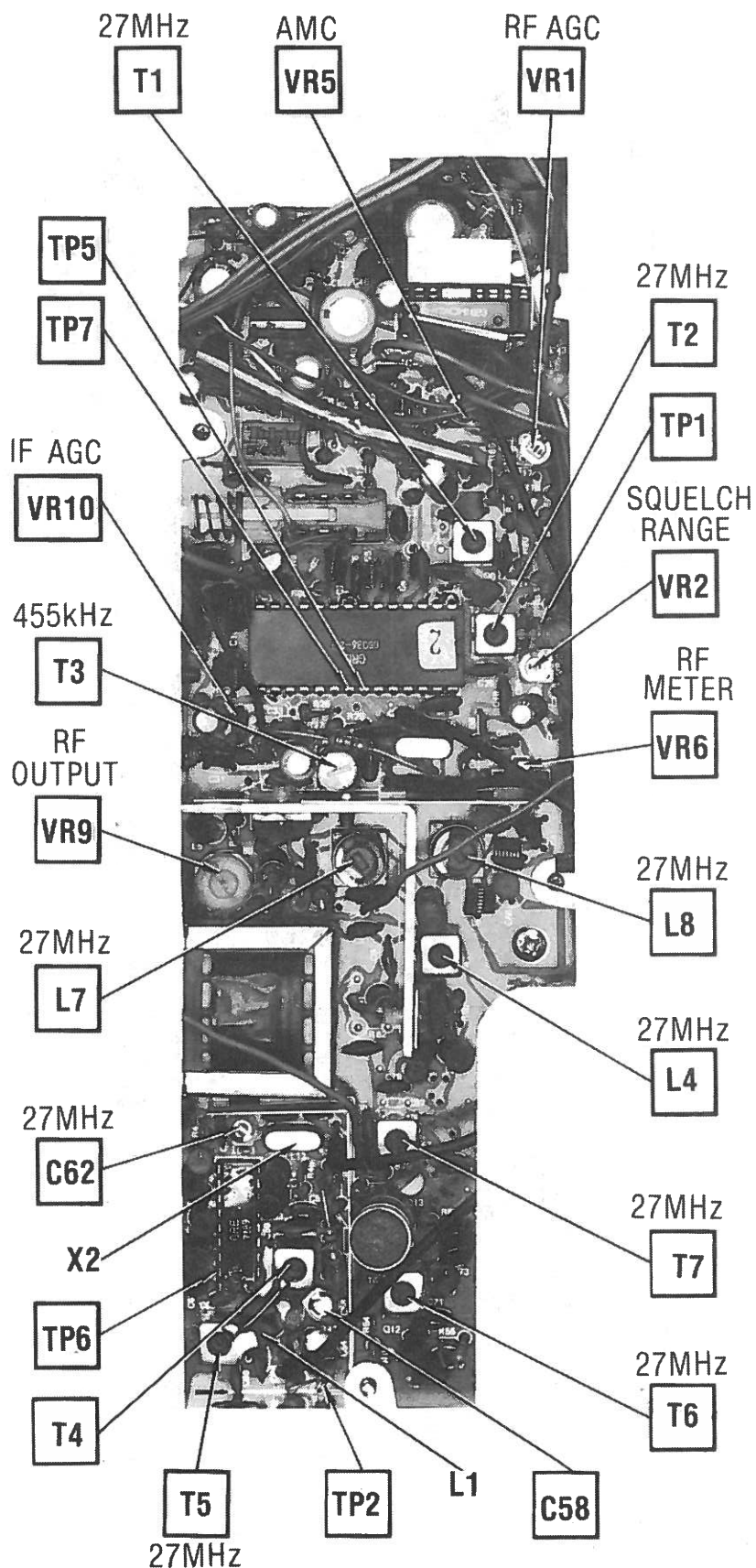
Connect an AC VTVM or AF wattmeter across speaker voice coil.
Adjust volume control to obtain a suitable indication.
Set generator output low enough to prevent AGC limiting.

TEST EQUIPMENT	TRANSCEIVER	ADJUST	REMARKS
Output of signal generator to TP7 (IC1 Pin 21). 455kHz,1000Hz @ 30% modulation.	Ch. 19	T3	Adjust for maximum audio output.
Output of signal generator to antenna input. 27.185MHz,1000Hz @ 30% modulation.	Ch. 19	T2,T1	Adjust for maximum audio output. Readjust T3 for maximum.

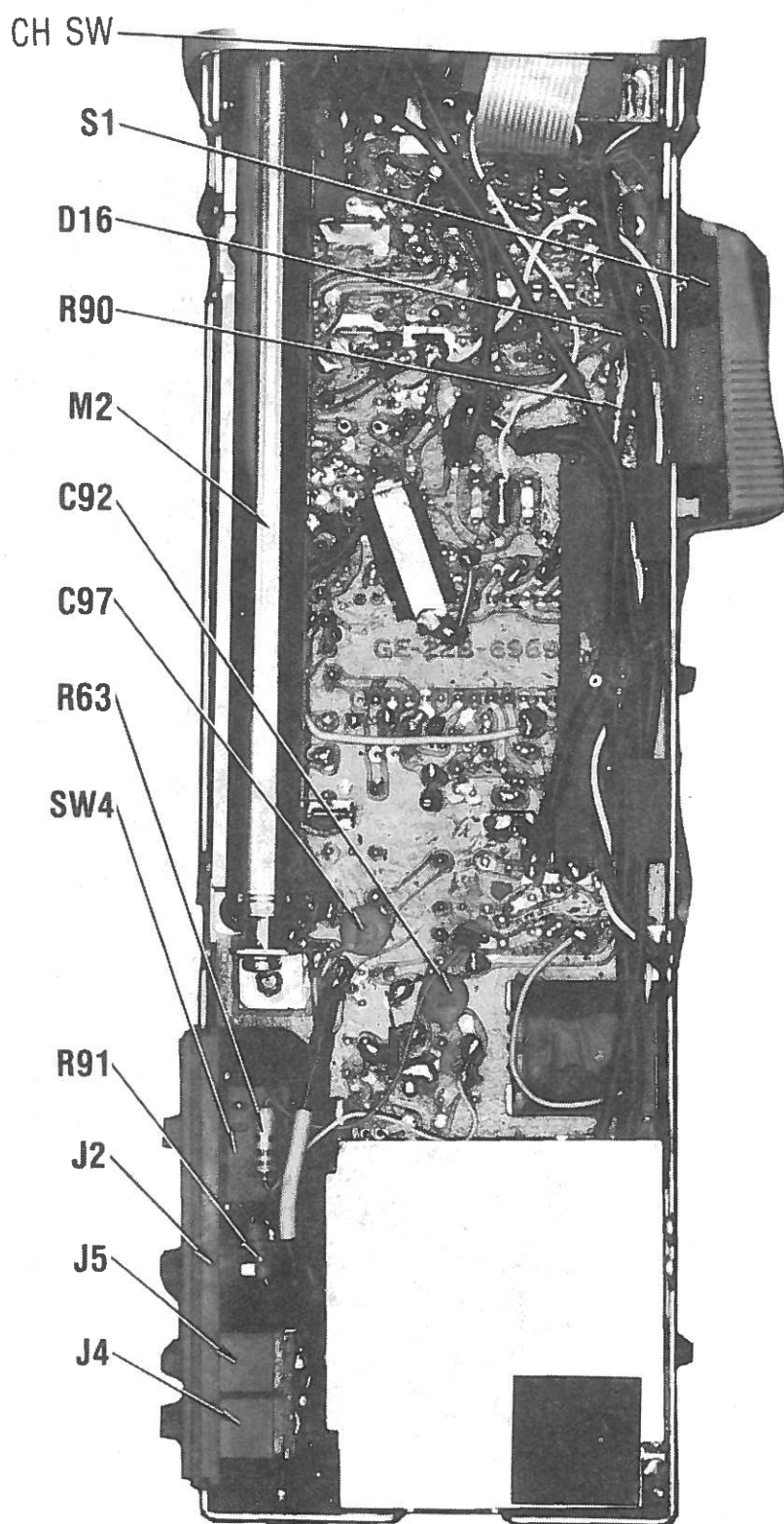
REALISTIC MODEL TRC-209

TRUTH CHART

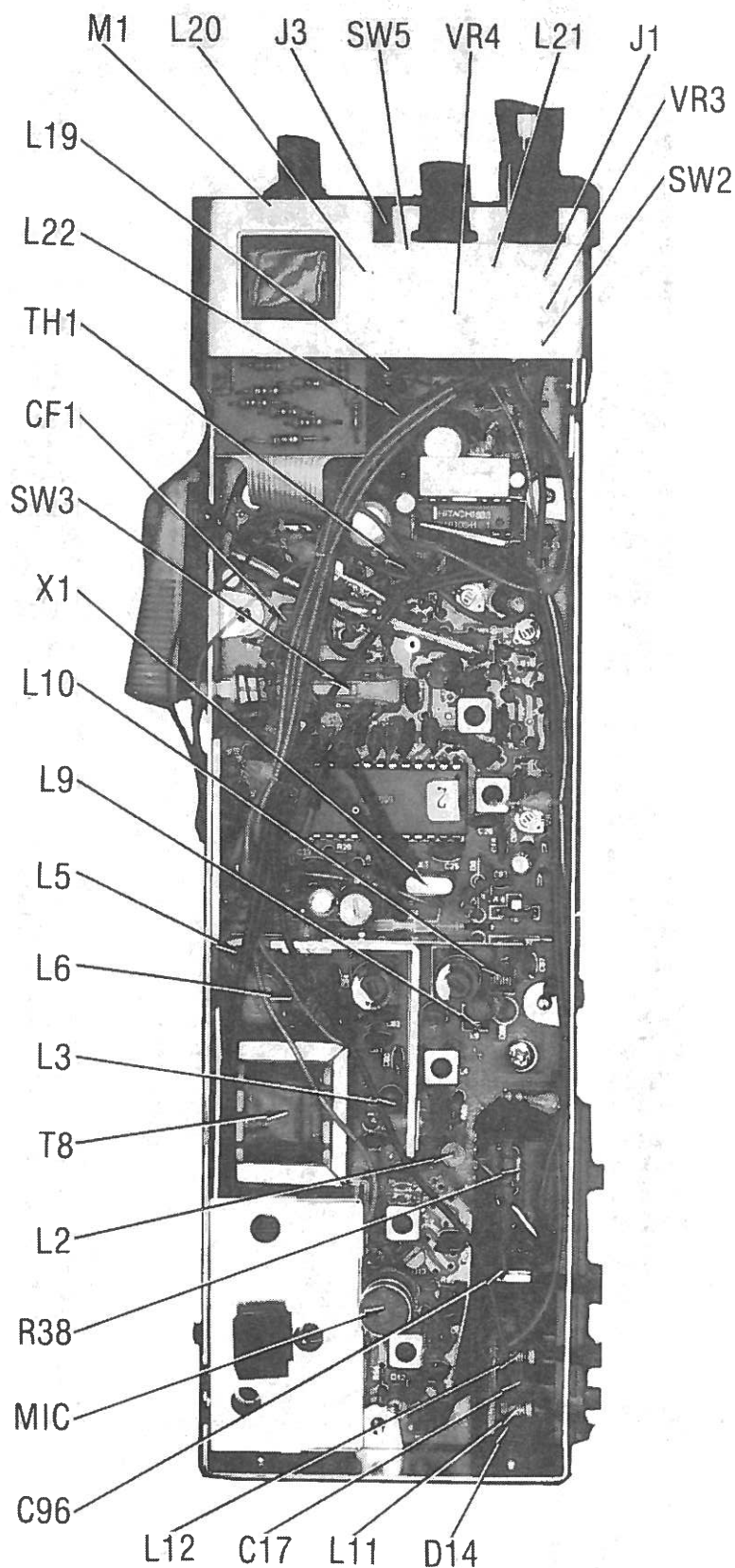
C H A N N E L	1 = 6.03 Volts 0 = .03 Volts								REC VCO OUTPUT IN MHz AT TP5	XMT SYNTH OUTPUT IN MHz AT TP6	
	CHANNEL INPUT CODES										
	IC3 PINS										
	7	8	11	12	13	14					
1	0	0	0	0	0	0			16.270	26.965	
2	0	0	0	0	0	1			16.280	26.975	
3	0	0	0	0	1	0			16.290	26.985	
4	0	0	0	1	0	0			16.310	27.005	
5	0	0	0	1	0	1			16.320	27.015	
6	0	0	0	1	1	0			16.330	27.025	
7	0	0	0	1	1	1			16.340	27.035	
8	0	0	1	0	0	1			16.360	27.055	
9	0	0	1	0	1	0			16.370	27.065	
10	0	0	1	0	1	1			16.380	27.075	
11	0	0	1	1	0	0			16.390	27.085	
12	0	0	1	1	1	0			16.410	27.105	
13	0	0	1	1	1	1			16.420	27.115	
14	0	1	0	0	0	0			16.430	27.125	
15	0	1	0	0	0	1			16.440	27.135	
16	0	1	0	0	1	1			16.460	27.155	
17	0	1	0	1	0	0			16.470	27.165	
18	0	1	0	1	0	1			16.480	27.175	
19	0	1	0	1	1	0			16.490	27.185	
20	0	1	1	0	0	0			16.510	27.205	
21	0	1	1	0	0	1			16.520	27.215	
22	0	1	1	0	1	0			16.530	27.225	
23	0	1	1	1	0	1			16.560	27.255	
24	0	1	1	0	1	1			16.540	27.235	
25	0	1	1	1	0	0			16.550	27.245	
26	0	1	1	1	1	0			16.570	27.265	
27	0	1	1	1	1	1			16.580	27.275	
28	1	0	0	0	0	0			16.590	27.285	
29	1	0	0	0	0	1			16.600	27.295	
30	1	0	0	0	1	0			16.610	27.305	
31	1	0	0	0	1	1			16.620	27.315	
32	1	0	0	1	0	0			16.630	27.325	
33	1	0	0	1	0	1			16.640	27.335	
34	1	0	0	1	1	0			16.650	27.345	
35	1	0	0	1	1	1			16.660	27.355	
36	1	0	1	0	0	0			16.670	27.365	
37	1	0	1	0	0	1			16.680	27.375	
38	1	0	1	0	1	0			16.690	27.385	
39	1	0	1	0	1	1			16.700	27.395	
40	1	0	1	1	0	0			16.710	27.405	



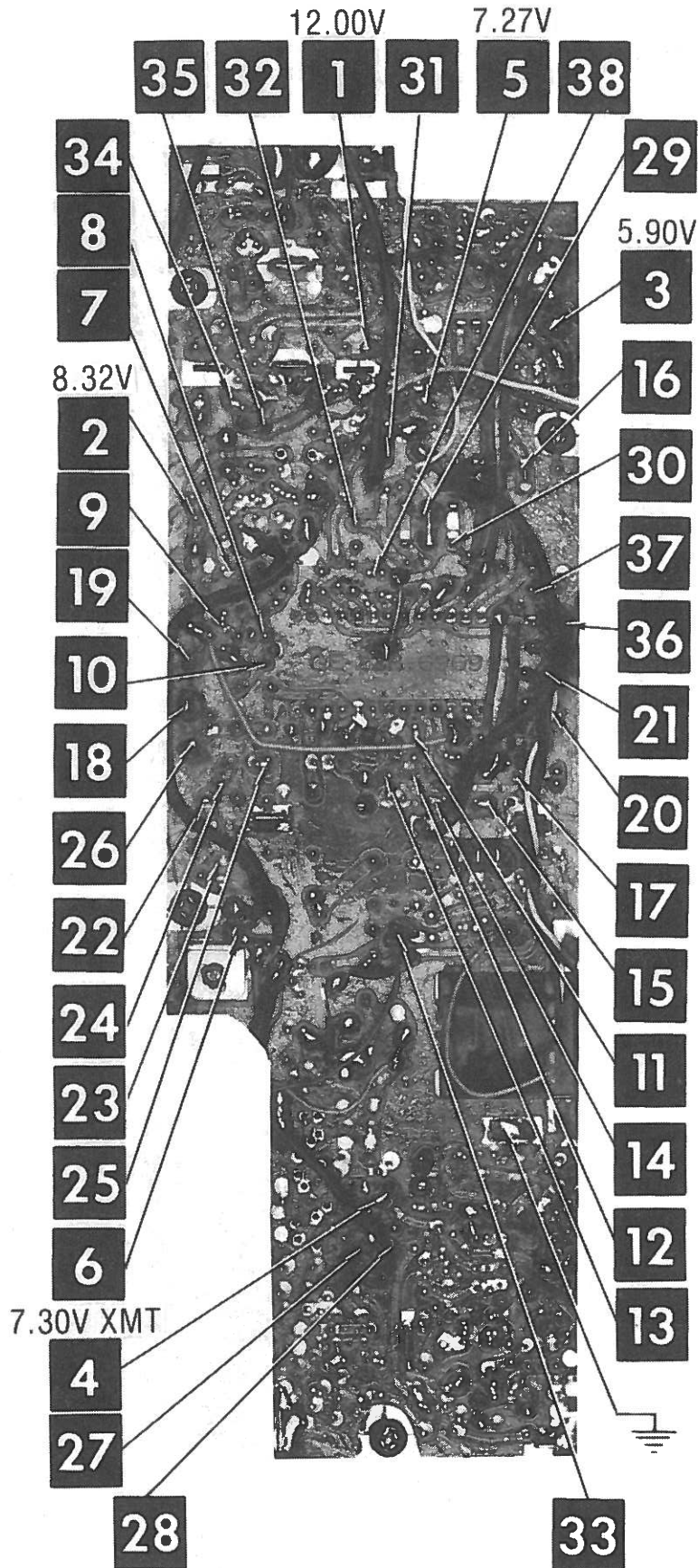
MAIN BOARD



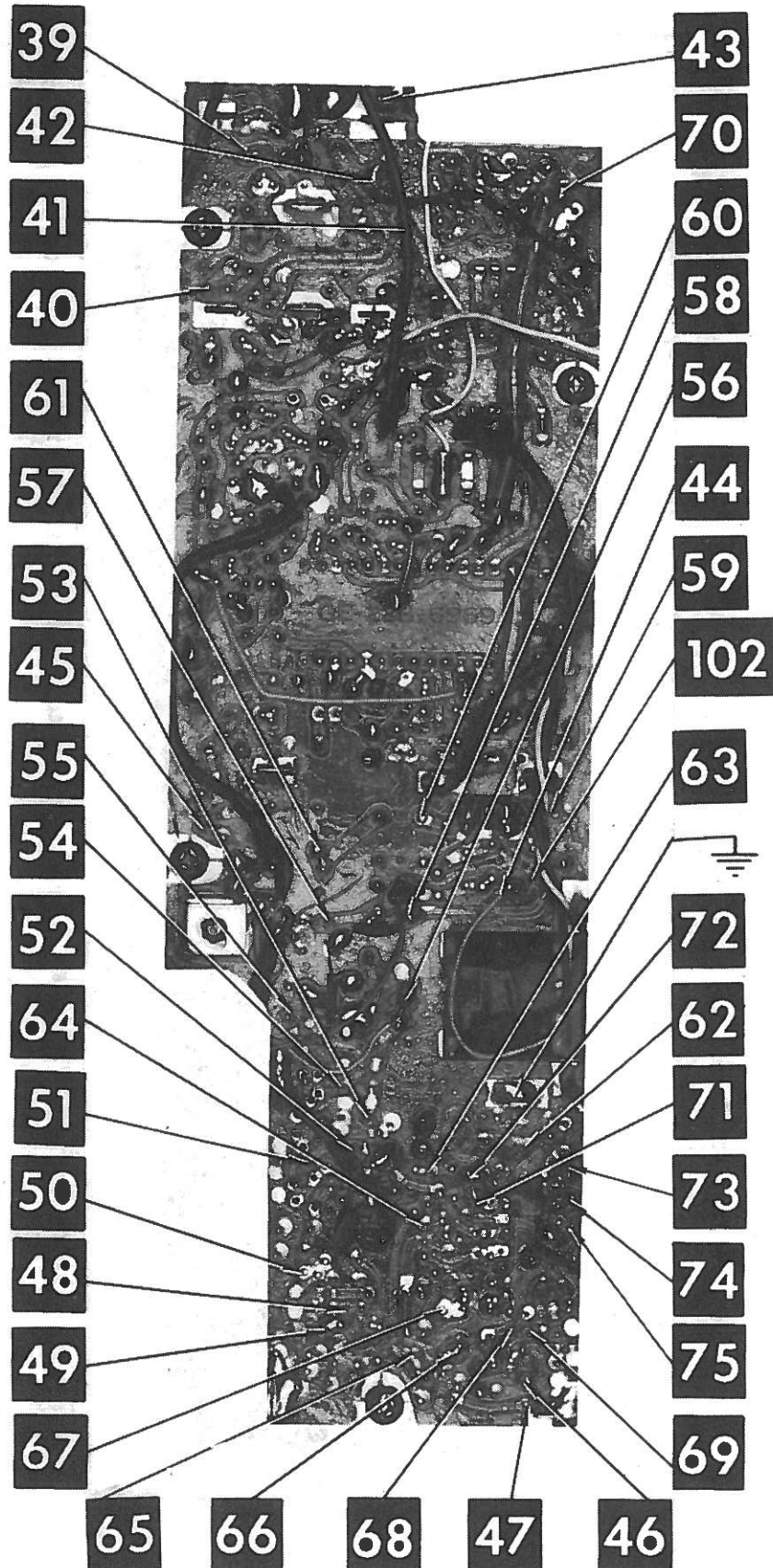
CHASSIS-BOTTOM VIEW



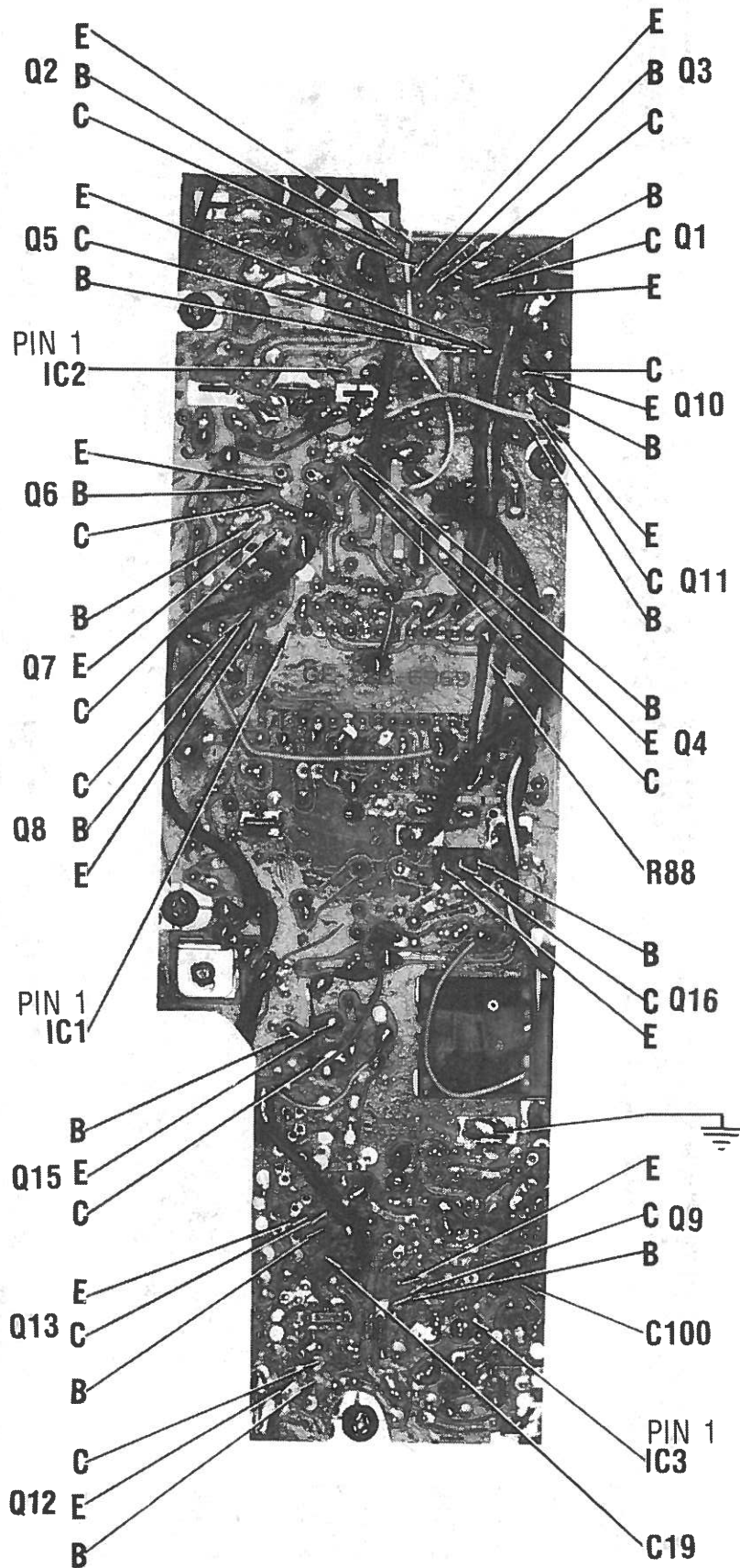
CHASSIS-TOP VIEW



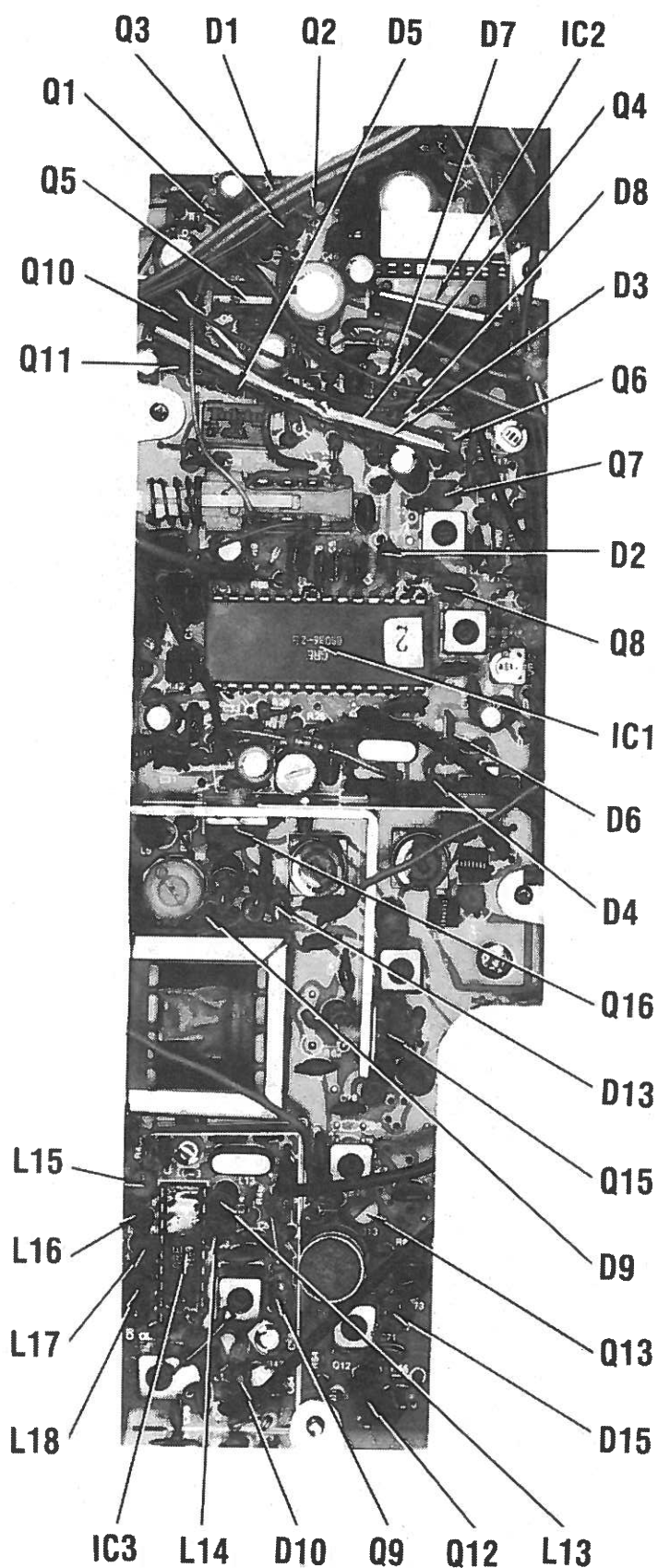
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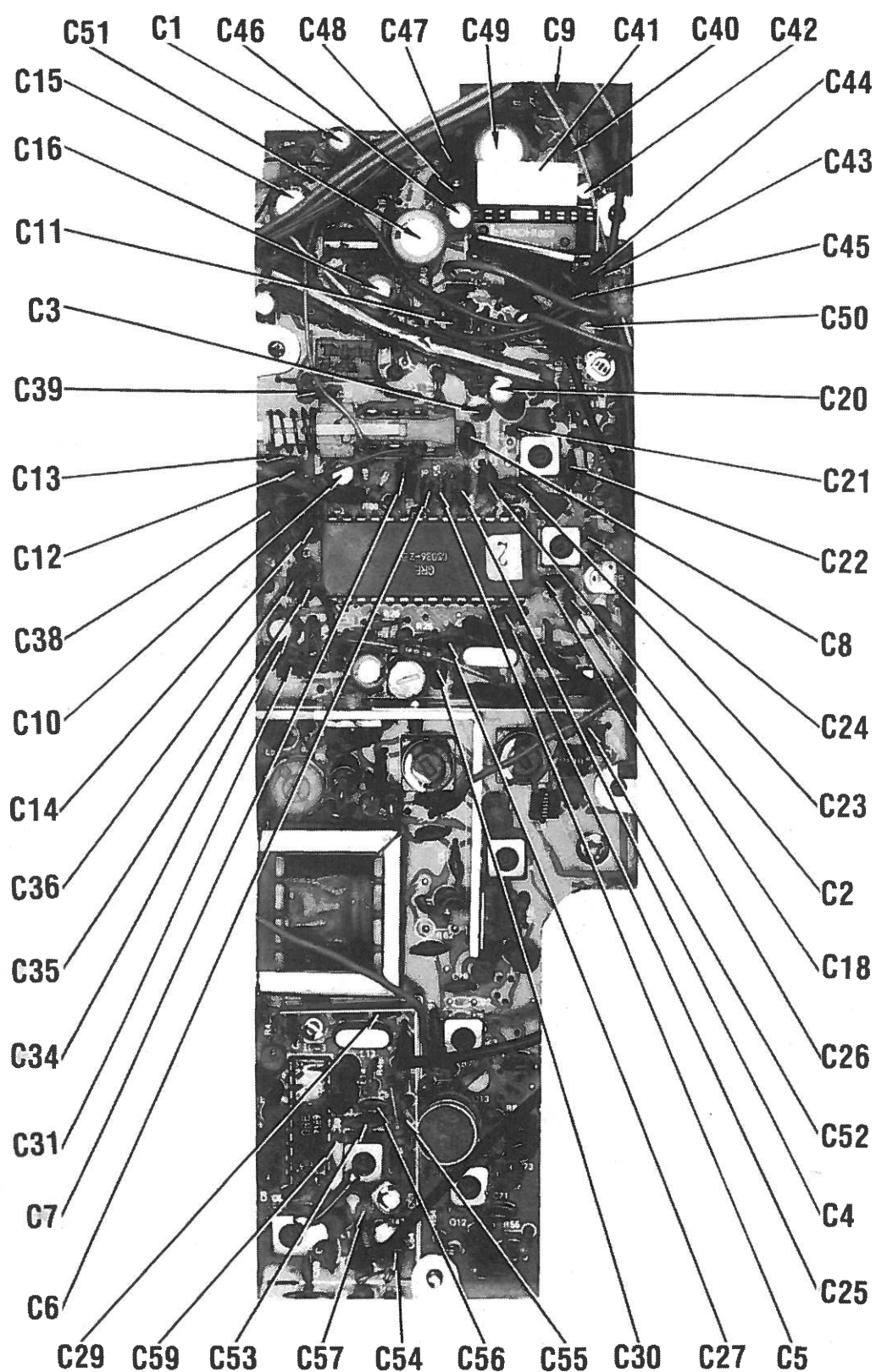
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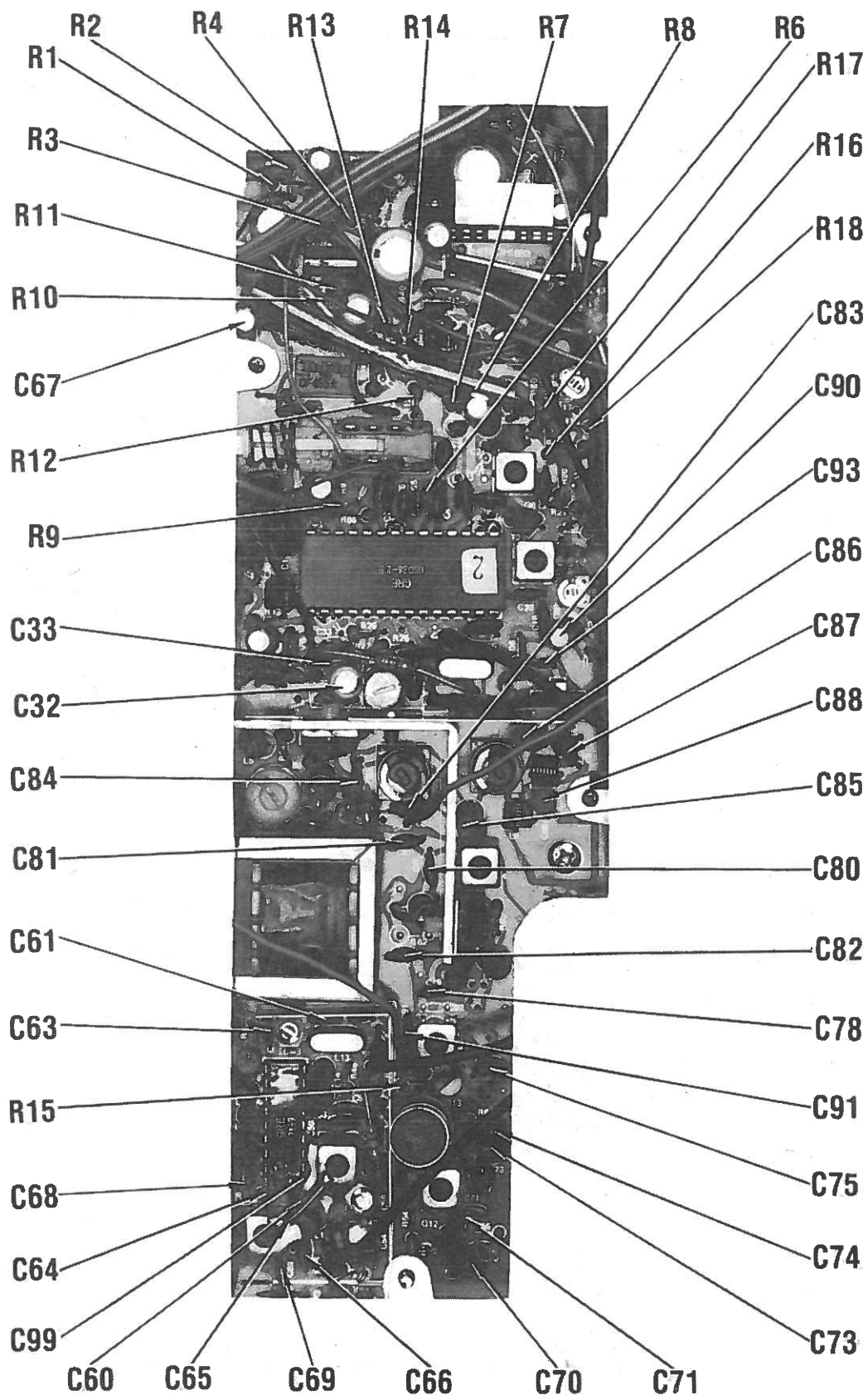
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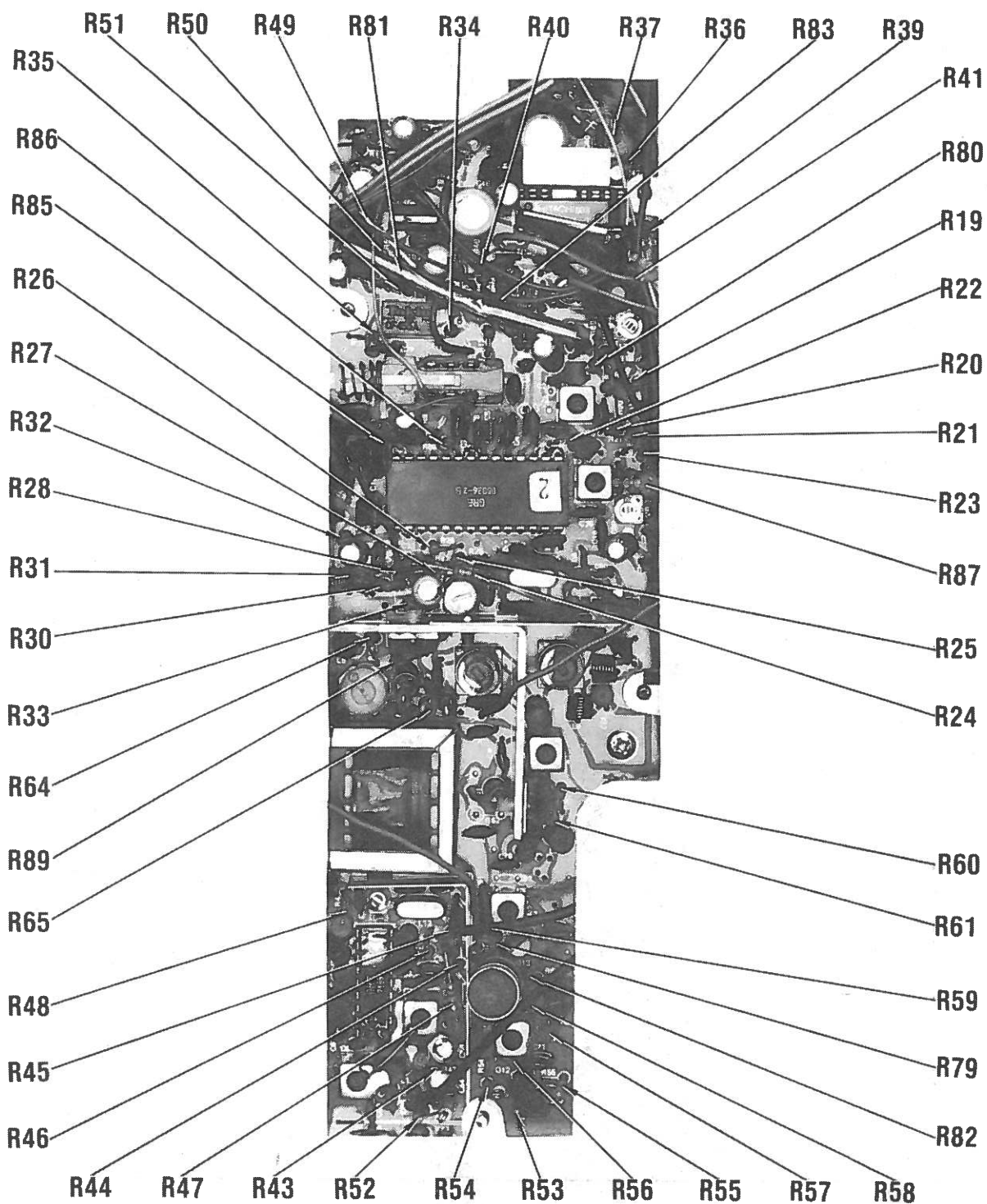
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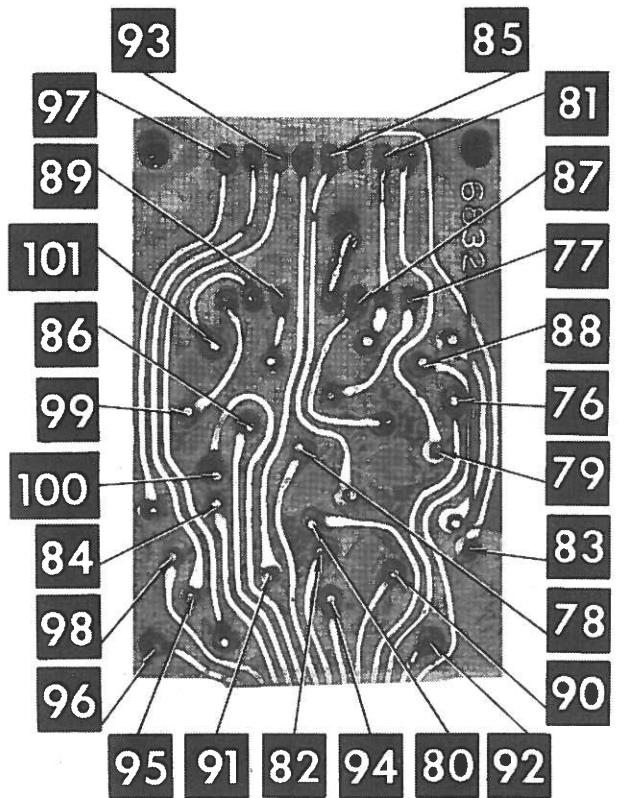
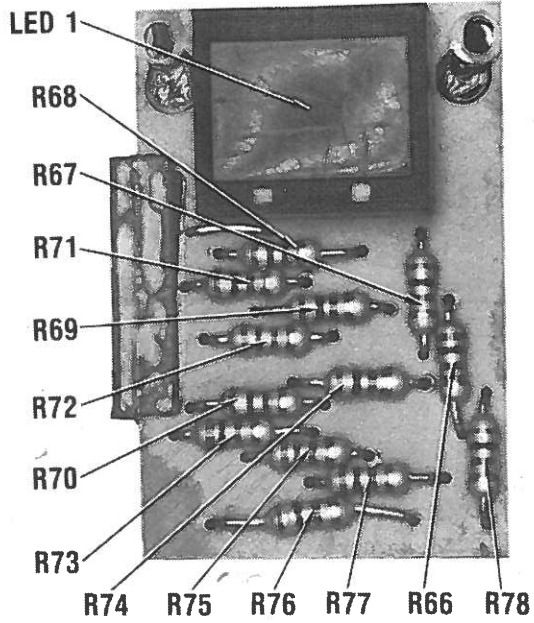
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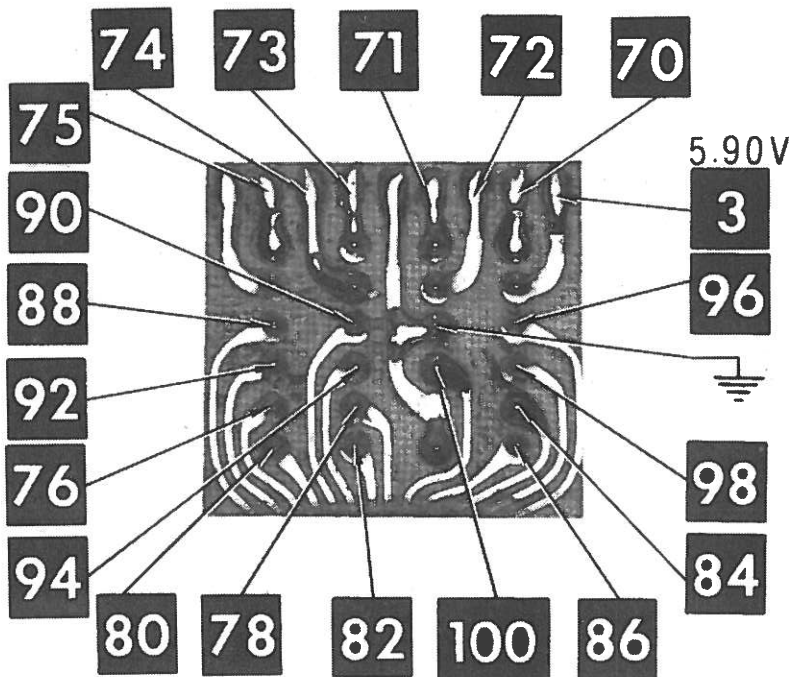
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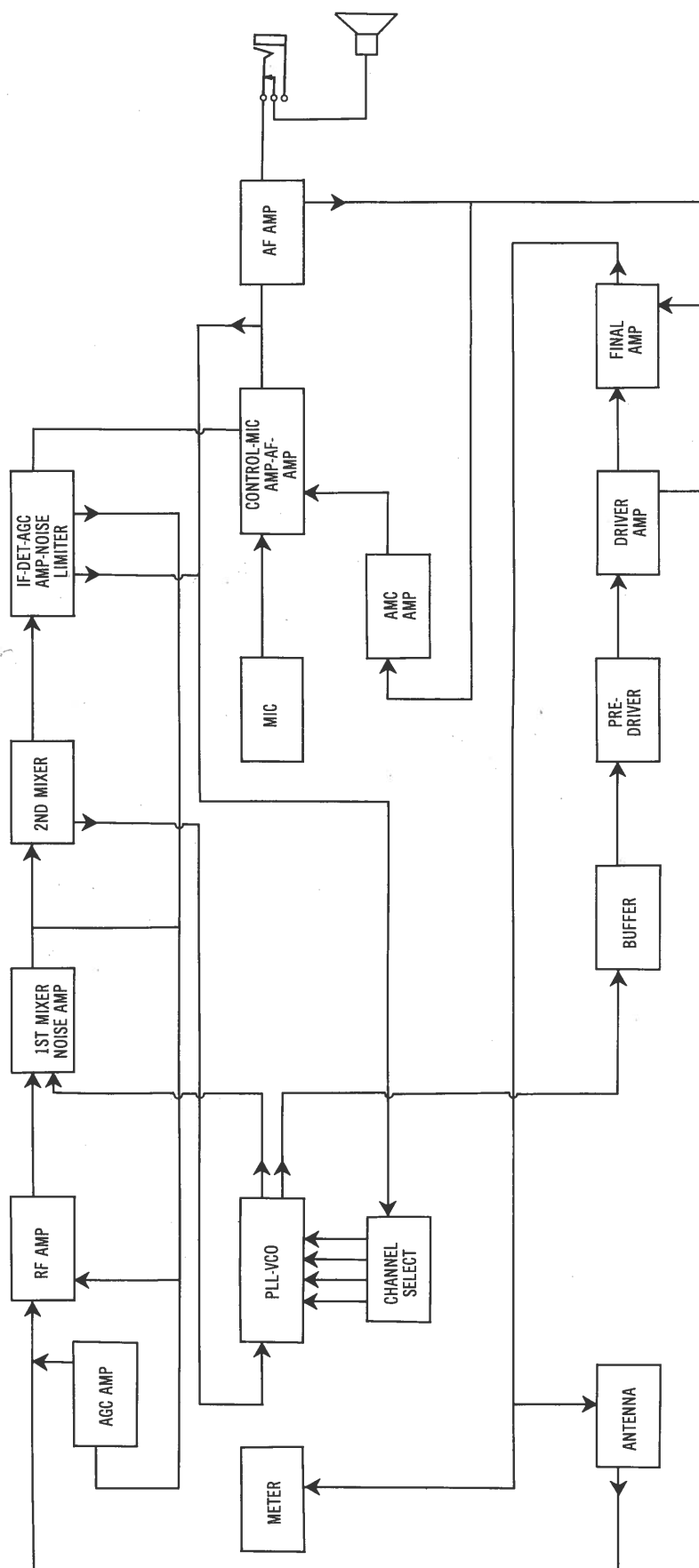
MAIN BOARD



LED BOARD



CHANNEL SELECTOR BOARD



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.	RAYTHEON PART No.	RCA PART No.	SYLVANIA PART No.	THORDARSON PART No.	WORKMAN PART No.	ZENITH PART No.
D1	05Z5.6 ERA0106R	DX-1132 DX-1132	GEZD-5.6 GEZD-5.6	ZB5.6B ZB5.6B	REN 136 REN 136	SK3057/16A SK3057/16A	ECG136A ECG136A	TM136A/** TM136A/**	WEP1104 WEP1104	103-29007 103-29007
D2	1S1555 HV80	DX-0270 DX-0270	GE-514 GE-514	PTC214 PTC214	REN 177 REN 177	SK3100/519 SK3100/519	ECG519 ECG519	TM519 TM519	WEP925 WEP925	103-287 103-287
D3	1S1555 HV80	DX-0270 DX-0270	GE-514 GE-514	PTC214 PTC214	REN 177 REN 177	SK3100/519 SK3100/519	ECG519 ECG519	TM519 TM519	WEP925 WEP925	103-287 103-287
D4	1N60 05Z9.1L	DX-0161 DX-1133	1N60 GEZD-9.1	PTC206 ZB9.1B	REN 109 REN 139	SK3088 SK3060/139A	ECG109 ECG139A	TM109/** TM139A/**	WEP134 WEP1109	103-29001 103-272
D5	1N60 1S1555	DX-0161 DX-0270	1N60 GE-514	PTC206 PTC214	REN 109 REN 177	SK3088 SK3100/519	ECG109 ECG519	TM109/** TM519	WEP134 WEP925	103-29001 103-287
D6	1S1555 HV80	DX-0270 DX-0270	GE-514 GE-514	PTC214 PTC214	REN 177 REN 177	SK3100/519 SK3100/519	ECG519 ECG519	TM519 TM519	WEP925 WEP925	103-287 103-287
D7	1S1555 HV80	DX-0270 DX-0270	GE-514 GE-514	PTC214 PTC214	REN 177 REN 177	SK3100/519 SK3100/519	ECG519 ECG519	TM519 TM519	WEP925 WEP925	103-287 103-287
D8	1S1555 HV80	DX-0270 DX-0270	GE-514 GE-514	PTC214 PTC214	REN 177 REN 177	SK3100/519 SK3100/519	ECG519 ECG519	TM519 TM519	WEP925 WEP925	103-287 103-287
D9	S5277B FC-52M	DX-1134	GE-504A	PTC201	REN 116 REN 612	SK3311	ECG116 ECG612	TM116 TM612	WEP156	212-76-02 103-176
D10	FC-52				REN 612		ECG612	TM612		103-176
D13	AW-033 EQ801-33		GEZD-3.3 GEZD-3.3		REN 5066 REN 5066	SK3330/5066A SK3330/5066A	ECG5066A ECG5066A	TM5066A TM5066A	WEP1150 WEP1150	
D14	S5277B	DX-1131	GE-504A	PTC201	REN 116	SK3311	ECG116	TM116	WEP156	212-76-02
D15	1S1555 HV80	DX-0270 DX-0270	GE-514 GE-514	PTC214 PTC214	REN 177 REN 177	SK3100/519 SK3100/519	ECG519 ECG519	TM519 TM519	WEP925 WEP925	103-287 103-287
D16	1S1555 HV80	DX-0270 DX-0270	GE-514 GE-514	PTC214 PTC214	REN 177 REN 177	SK3100/519 SK3100/519	ECG519 ECG519	TM519 TM519	WEP925 WEP925	103-287 103-287
IC-1	GRE5036-ZB GRE5036	MX-3638								
IC2	TBA810S-H	MX-3364	GEIC-278			SK3184/1115	ECG1115	TM1115	WEP2098	
IC3	GRE7189	MX-3637								
Q1	2SC1815GR		GE-62	PTC136	REN 199	SK3245/199	ECG199	TM199	WEP66	121-29000
Q2	2SC1815GR		GE-62	PTC136	REN 199	SK3245/199	ECG199	TM199	WEP66	121-29000
Q3	2SC735Y		GE-210	PTC123*	REN 289	SK3122	ECG289	TM289/**	WEP735A	121-29000A*
Q4	2SC735-0		GE-210	PTC123*	REN 289	SK3122	ECG289	TM289/**	WEP735A	121-29000A*
Q5	2SC1634		GE-20*	PTC123*	REN 1234*	SK3124/289	ECG123A*	TM123A/**	WEP66	121-29000A*
Q6	2SC1173-0		GE-215	PTC110	REN 236	SK3197/235	ECG236	TM236/**	WEP745	121-29040
Q7	2SC1173Y		GE-215	PTC110	REN 236	SK3197/235	ECG236	TM236/**	WEP745	121-29040
Q8	2SC1815GR		GE-215	PTC110	REN 236	SK3197/235	ECG236	TM236/**	WEP745	121-29040
Q9	2SC1923R		GE-61	PTC132	REN 229	SK3132	ECG229	TM229	WEP784	121-29000A*
Q10	2SC1923R		GE-61	PTC132	REN 229	SK3132	ECG229	TM229	WEP784	121-29000A*
Q11	2SC1923R		GE-61	PTC132	REN 229	SK3132	ECG229	TM229	WEP784	121-29000A*
Q12	2SC1923		GE-61	PTC132	REN 229	SK3132	ECG229	TM229	WEP784	121-29000A*
Q13	2SC1923		GE-61	PTC132	REN 229	SK3132	ECG229	TM229	WEP784	121-29000A*
Q14	2SC1815GR		GE-62	PTC136	REN 199	SK3245/199	ECG199	TM199	WEP66	121-29000
Q15	2SC735Y		GE-210	PTC123*	REN 289	SK3122	ECG289	TM289/**	WEP735A	121-29000A*
Q16	2SC1815GR		GE-62	PTC136	REN 199	SK3245/199	ECG199	TM199	WEP66	121-29000
Q17	2SC1634-6		GE-20*	PTC123*	REN 1234*	SK3124/289	ECG123A*	TM123A/**	WEP66	121-29000A*
Q18	2SC1634-6		GE-20*	PTC123*	REN 1234*	SK3124/289	ECG123A*	TM123A/**	WEP66	121-29000A*
Q19	2SC1017		GE-236	PTC192	REN 299	SK3298/299	ECG299	TM299	WEP1018	
Q20	2SC1017-01		GE-236	PTC192	REN 299	SK3298/299	ECG299	TM299	WEP1018	
Q21	2SC1678B		GE-322	PTC186	REN 235	SK3197/235	ECG235	TM235	WEP785	121-29039
Q22	2SC1678B		GE-322	PTC186	REN 235	SK3197/235	ECG235	TM235	WEP785	121-29039

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

ELECTROLYTIC CAPACITORS

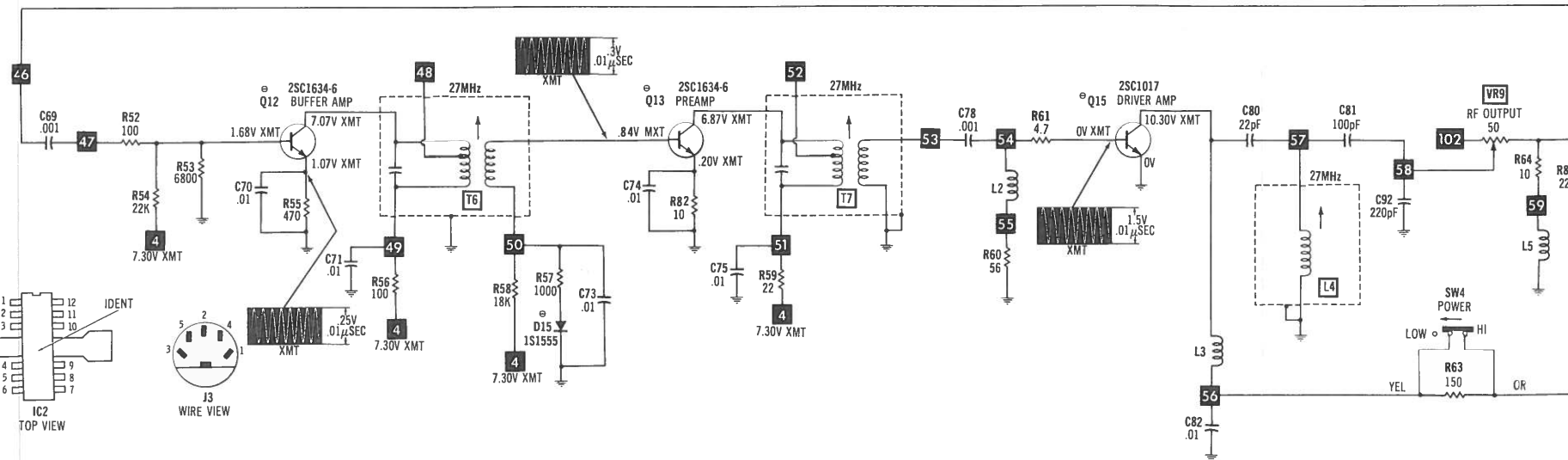
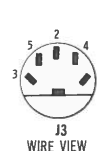
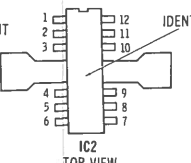
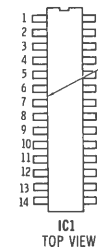
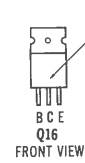
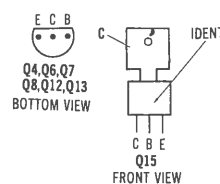
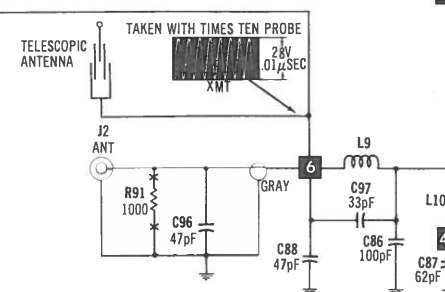
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			CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.	
C1	10 16V	CE04W1C100C	PC10-25	VTT10B25	QV1-41	EV-1222
C3	1 25V	EC5F25E1		TDC105M035EL		SD35-19
C10	10 16V	CE04W1C100C	PC10-25	VTT10B25	QV1-41	EV-1222
C11	22 6.3V	CS15E0J220M		TDC226M015FL	QDT1-82	SD15-229
C15	100 10V	CE04W1A101A	PC100-10	VTT100E10	QV1-93	EV-1131
C16	47 10V	CE04W1A470B	PC50-16	VTT47D16	QV1-73	EV-1226
C20	10 16V	CE041C100C	PC10-25	VTT10B25	QV1-41	EV-1222
C32	47 10V	CE04W1A470B	PC50-16	VTT47D16	QV1-73	EV-1226
C34	10 16V	CE04W1C100C	PC10-25	VTT10B25	QV1-41	EV-1222
C42	10 16V	CE04W1C100C	PC10-25	VTT10B25	QV1-41	EV-1222
C43	15 6.3V	CS15E0J150M		TDC156M020FL	QDT1-73	SD20-159
C46	10 16V	CE04W1C100C	PC10-25	VTT10B25	QV1-41	EV-1222
C49	220 10V	CE04W1A221E	PC250-10	VTT220F10	QV1-115	EV-1140
C50	1 50V	CE04W-1H010	PC1-50	VTT1A50	QV1-11	EV-1615
C51	220 16V	CE04-1C221C	PC250-25	VTT220H16	QV1-117	EV-1240
C55	.47 35V	CS15E1VR47M		TDC474M050EL	QDT1-19	SD50-R479
C67	4.7 35V	CE04W-1V4R7	PC5-50	VTT4R7B50	QV1-31	EV-1619.1
C68	33 6.3V	ECS26VK33		TDC336M010FL	QDT1-89	SD10-339
C90	1 50V	CE04W-1H010E	PC1-50	VTT1A50	QV1-11	EV-1615
C99	4.7 10V	ECS210VK4R7		TDC475M010EL	QDT1-48	SD10-4R79

CAPACITORS

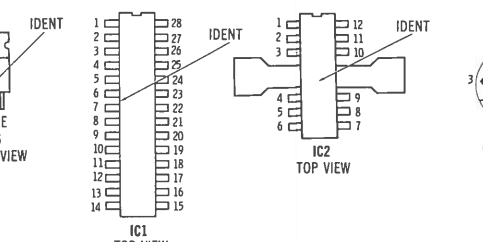
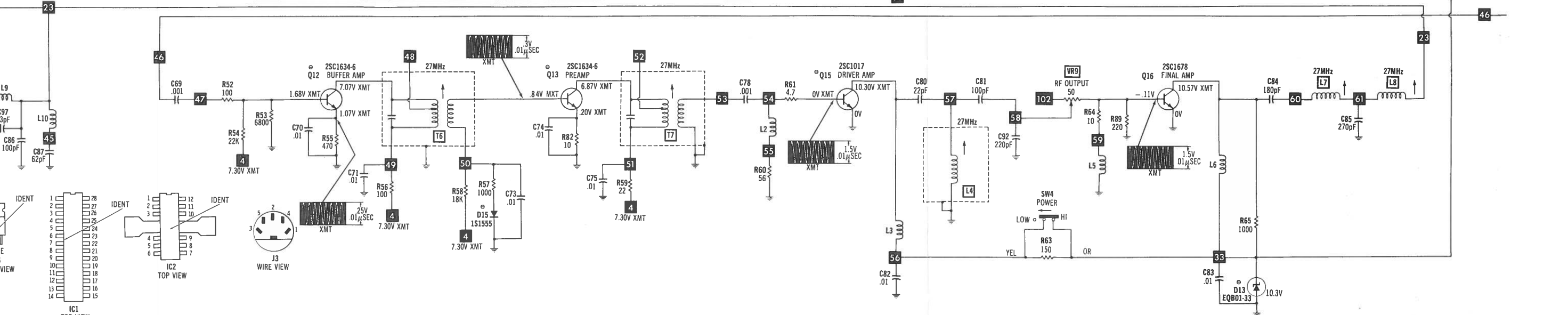
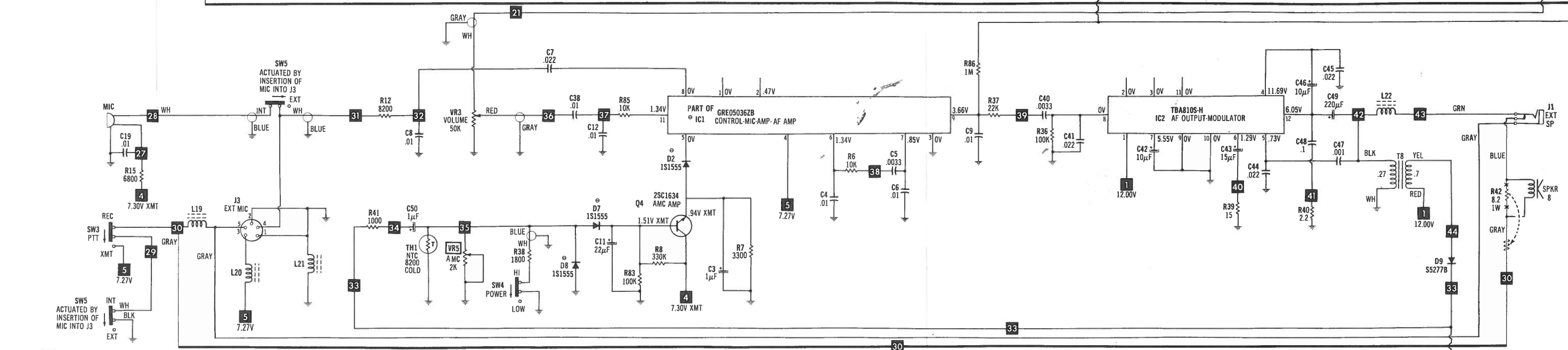
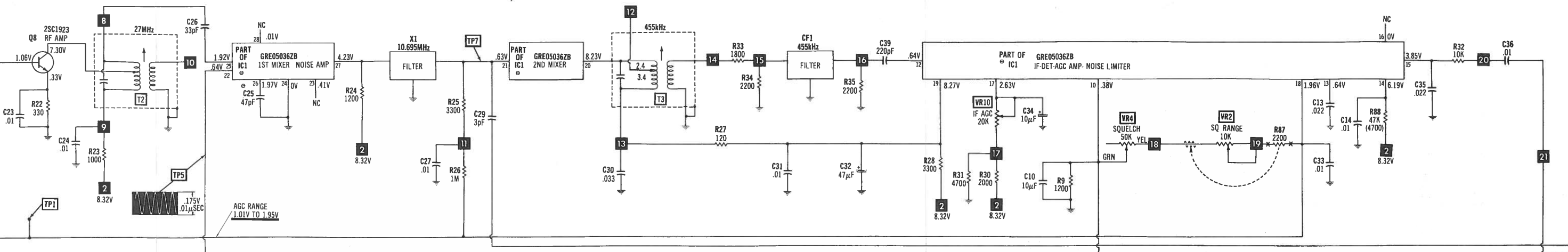
ITEM No.	RATING	MFR. PART No.	REPLACEMENT DATA				
			CENTRALAB PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.	
C2	.01 50V		UK50-103		MAG5011		
C4	.01 50V 10%			WMF1S1	EWFA1110	QFT2-91	1FT-S10
C5	.0033 50V 10%			WMF1D33	M192P3329R8	QFT2-43	1FT-D33
C6	.01 50V 10%			WMF1S1	EWFA1110	QFT2-91	1FT-S10
C7	.022 50V 10%			DPMS2S22	M192P2239R8	QFT2-127	1FT-S22
C8	.01 50V 10%			WMF1S1	EWFA1110	QFT2-91	1FT-S10
C9	.01 50V 10%			WMF1S1	EWFA1110	QFT2-91	1FT-S10
C12	.01 50V 10%			WMF1S1	EWFA1110	QFT2-91	1FT-S10
C13	.022 50V 10%			DPMS2S22	M192P2239R8	QFT2-127	1FT-S22
C14	.01 50V 10%			WMF1S1	EWFA1110	QFT2-91	1FT-S10

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

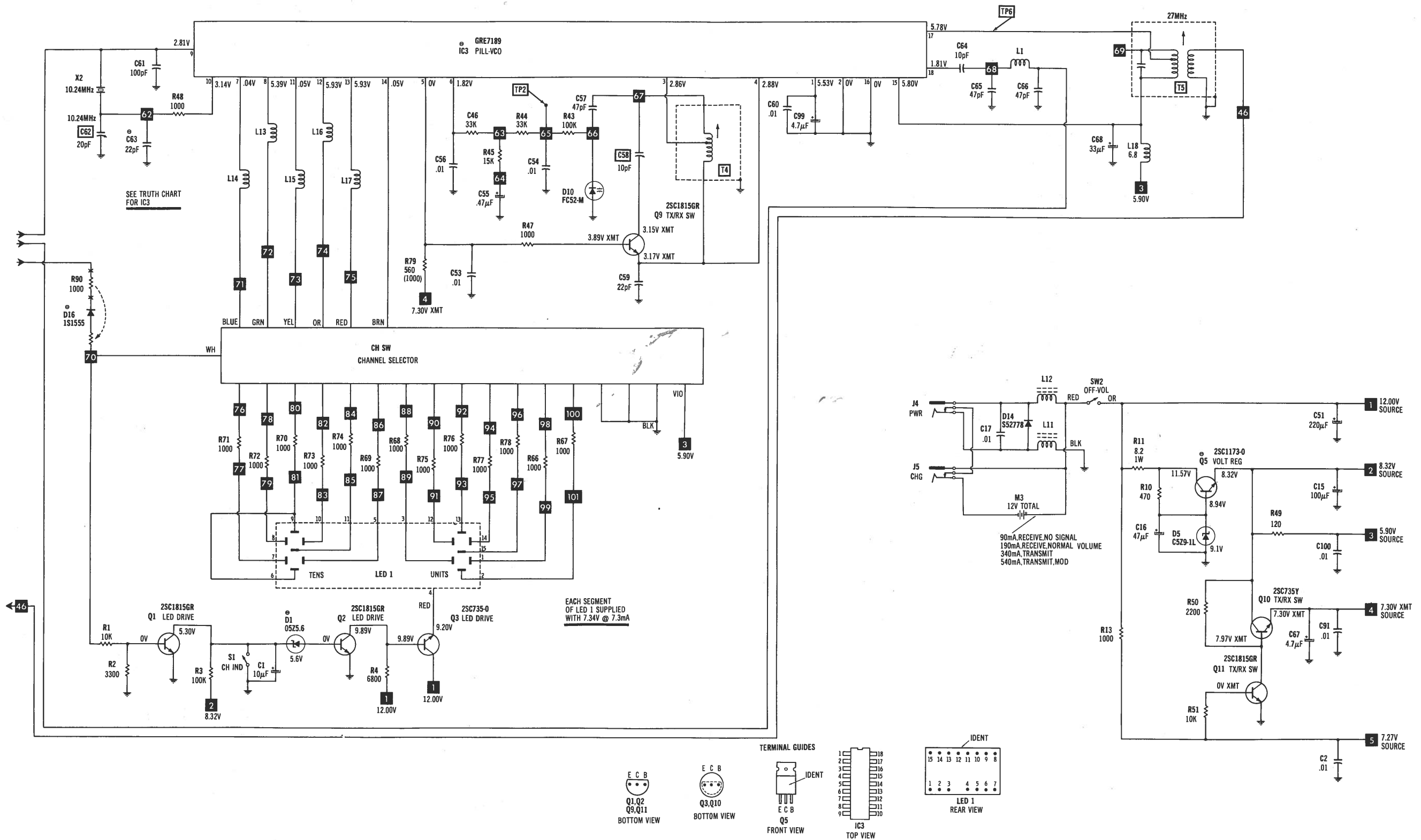
A PHOTOFAC STANDARD NOTATION SCHEMATIC
 WITH **CIRCUITRACE**[®]
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MAIN CB SCHEMATIC



MAIN CB SCHEMATIC



PARTS LIST AND DESCRIPTION (CONTINUED)

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

CAPACITORS (cont)

ITEM No.	RATING	MFG. PART No.	REPLACEMENT DATA				
			CENTRALAB PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.	
						Q-LINE	GENERAL LINE
C17	.01 50V	ECV-1ZW10X53	UK50-103		MAG5011		
C18	.01 25V		UK50-103		MAG5011		
C19	.01 25V		UK50-103		MAG5011		
C21	10 NPO 50V 10%		DTZ-10	NP010	CN0410		10TCC-Q10
C22	.01 50V 10%			WMF1S1	EWFA1110	QFT2-91	1FT-S10
C23	.01 50V 10%			WMF1S1	EWFA1110	QFT2-91	1FT-S10
C24	.01 50V 10%			WMF1S1	EWFA1110	QFT2-91	1FT-S10
C25	47 NPO 50V 10%			NP047	CN0447		10TCC-Q47
C26	33 NPO 50V 5%		DTZ-47	NP033	CN0433		10TCC-Q33
C27	.01 50V 10%		DTZ-33	WMF1S1	EWFA1110	QFT2-91	1FT-S10
C29	3 NPO 50V 10%		DTZ-3R3	NP03P3	CN0533		10TCC-V33
C30	.033 50V 10%			DPMS6S33	M192P3339R8	QFT2-149	1FT-S33
C31	.01 50V 10%			WMF1S1	EWFA1110	QFT2-91	1FT-S10
C33	.01 50V 10%			WMF1S1	EWFA1110	QFT2-91	1FT-S10
C35	.022 50V 10%			DPMS2S22	M192P2239R8	QFT2-127	1FT-S22
C36	.01 50V 10%			WMF1S1	EWFA1110	QFT2-91	1FT-S10
C38	.01 50V 10%			WMF1S1	EWFA1110	QFT2-91	1FT-S10
C39	220 50V 10%		DD-221		GP322		10TS-T22
C40	.0033 50V 10%			WMF1D33	M192P3329R8	QFT2-43	1FT-D33
C41	.022 50V 10%			DPMS2S22	M192P2239R8	QFT2-127	1FT-S22
C44	.022 50V 10%			DPMS2S22	M192P2239R8	QFT2-127	1FT-S22
C45	.022 50V		DC-253	MGP025	TA125		TG-S25
C47	.001 50V 10%			DPMS6D1	EWFA210	QFT2-1	1FT-D10
C48	.1 50V 10%			WMF05P1	EWFO5010	QFT2-215	1FT-P10
C52	3 NPO 50V $\pm$.5pF		DTZ-3R3	NP03P3	CN0533		10TCC-V33
C53	.01 50V		UK50-103		MAG5011		
C54	.01 50V 10%			WMF1S1	EWFA1110	QFT2-91	1FT-S10
C56	.01 50V 10%			WMF1S1	EWFA1110	QFT2-91	1FT-S10
C57	47 50V 5%			CD15ED470J03	SX447	QW1-19	MWA-470
C58	10				*		
C59	22 N220 50V $\pm$ 5pF				MAG5011		10TCR-Q22
C60	.01 50V	ECV-1ZW20X53	UK50-103		GP310		
C61	100 50V 10%		DD-101	GP100			10TS-T10
C62	20						
C63	22 NPO 50V 10%		DTZ-22	NP022	CN0422		10TCC-Q22
C64	10 NPO 50V 10%		DTZ-10	NP010	CN0410		10TCC-Q10
C65	47 NPO 50V 10%		DTZ-47	NP047	CN0447		10TCC-Q47
C66	47 NPO 50V 10%		DTZ-47	NP047	CN0447		10TCC-Q47
C69	.001 50V		DD-102		GP210		10TS-D10
C70	.01 50V 10%			WMF1S1	EWFA1110	QFT2-91	1FT-S10
C71	.01 50V 10%			WMF1S1	EWFA1110	QFT2-91	1FT-S10
C73	.01 50V 10%			WMF1S1	EWFA1110	QFT2-91	1FT-S10
C74	.01 50V 10%			WMF1S1	EWFA1110	QFT2-91	1FT-S10
C75	.01 50V 10%			WMF1S1	EWFA1110	QFT2-91	1FT-S10
C78	.001 50V 10%		DD-102		GP210		10TS-D10
C80	22 N220 50V 5%				*		10TCR-Q22
C81	100 50V 10%		DD-101	GP100	GP310		10TS-T10
C82	.01 50V		UK50-103		MAG5011		
C83	.01 50V		UK50-103		MAG5011		
C84	180 50V 10%		DD-181		GP318		10TS-T18
C85	270 125V 5%			CD15FD271J03	SX327	QW1-37	MWB-271
C86	100 125V 5%			CD15FD101J03	SX310	QW1-27	MWA-101
C87	62 50V 5%		DD-680	GP68	GP468		10TS-Q68
C88	47 125V 5%			CD15ED470J03	SX447	QW1-19	MWA-470
C91	.01 25V		UK25-103		MAG2511		HY-520
C92	220 50V 10%		DD-221		GP322		10TS-T22
C93	.001 50V		DD-102		GP210		10TS-D10
C96	47 N220 50V 5%				*		10TCR-Q47
C97	33 N220 50V 10%				*		10TCR-Q33
	30 N220 50V 10%				*		10TCR-Q30
C100	.01 50V		UK50-103		MAG5011		

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

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

ITEM No.	FUNCTION	RESIST-ANCE	REPLACEMENT DATA			
			MFG. PART No.	CENTRALAB PART No.	MALLORY PART No.	TRW PART No.
VR1	RF AGC	20K	C-0938			X260R253B
VR2	Squelch Range	10K	C-0939			
VR3	Volume/Power SW	50K	P-1876			
VR4	Squelch	50K	P-6508			
VR5	AMC	2000	C-0940			
VR6	RF Meter	20K	C-0941			
VR9	RF Output	50K	P-0836			
VR10	IF AGC	20K	EVN-A1AA00B24			

RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA		ITEM No.	RATING	REPLACEMENT DATA	
		MFG. PART No.	WORKMAN PART No.			MFG. PART No.	WORKMAN PART No.
TH1	8200 CoId HTC		M-10K				

PARTS LIST AND DESCRIPTION (CONTINUED)

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

COILS (RF-IF)

ITEM No.	FUNCTION	REPLACEMENT DATA			REMARKS
		PART No.	OTHER IDENTIFICATION	MILLER PART No.	
L1	RF Choke (3.9uH)	CA-3956	3R9	70F396A1	
L2	RF Choke (10uH)	C-0728	100	4622	
L3	RF Choke (.6uH)	CA-3958			
L4	Driver Amp (27MHz)		GRN572		
L5	RF Choke (4.7uH)	LF4-4R7K	4R7		
L6	RF Choke (.84uH)	CB-2195			
L7	Final (27MHz)	CA-3014			
L8	Loading Final (27MHz)	CA-2268			
L9	Antenna Matching	CA-3488			
L10	RF Choke	CA-3488			
L11	RF Choke	CA-3961			
L12	RF Choke	CA-3961			
L13	RF Choke	LF4-2R7K	2R7		
L14	RF Choke	CA-4924	2R7		
L15	RF Choke	CA-4924	2R7		
L16	RF Choke	CA-4924	2R7		
L17	RF Choke	LF4-2R7R	2R7		
L18	RF Choke	LF4-471K	471	9250-474	
L19	RF Choke	CA-3961			
L20	RF Choke	CA-3962			
L21	RF Choke	CA-3962			
L22	RF Choke	CA-3961			
T1	Rec Antenna (27MHz)	CA-3964	GRN555		
T2	RF Amp (27MHz)	CA-3965	GRN548		
T3	1F (455kHz)	CA-7843			
T4	PLL/VCO	CA-3966			
T5	PLL/VCO (27MHz)	CA-4966	GRN549		
T6	Buffer Amp (27MHz)	CA-4966	GRN549		
T7	Preamp (27MHz)	CA-4966	GRN549		

TRANSFORMER (MODULATOR)

ITEM No.	TURNS RATIO			REPLACEMENT DATA			NOTES
	PRI.	SEC. 1	SEC. 2	MFGR. PART No.	THORDARSON PART No.	TRIAD PART No.	
T8	1	2.4		TA-0681 E7N13B (1)			(1) Number on unit.

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		MFGR. PART No.	QUAM PART No.	
SPKR	2 1/8" PM 8 Ohms	S-4712	22A05Z8	

MISCELLANEOUS

ITEM No.	PART NAME	PART No.	NOTES
CF1	Filter	C-0892	455kHz, Ceramic
CH SW	Switch	S-8182	Channel Selector
J1	Jack	J-6385	External Speaker
J2	Jack		Antenna (Part of Jack Board Assembly J-0743)
J3	Jack	J-0964	External Microphone (with switch)
J4	Jack		Power (Part of Jack Board Assembly J-0743)
J5	Jack		Charge (Part of Jack Board Assembly J-0743)
LED1	LED	L-0932	Tens & Units (Each segment supplied with 7.34V @ 7.3mA)
M1	Meter	M-0398	RF/Battery
M3	Battery		12V Total 10 N1CD or 8 "AA" Cells
S1	Switch	K-3050	Channel Indicator (Part of SW3)
SW2	Switch		Off/Volume (Part of VR-3)
SW3	Switch	S-1210	PTT Rec/XMT
SW4	Switch		Power Low/Hi (Part of Jack Board Assembly J-0743)
SW5	Switch	J-0964	(Actuated by insertion of MIC into J3)
X1	Filter	C-0942	10.695MHz
X2	Crystal	MX-2309	10.24MHz
	Antenna	A-4423	Telescopic
	P.C. Board	J-0743	Jack
	P.C. Board	X-7835	Main Assembly
	P.C. Board	X-7834	Switch Assembly

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

ITEM	PART No.	ITEM	PART No.
Battery Cover Assembly	DB-0240	Rear Case Assembly	Z-4197
Front Case Assembly	Z-4196	Talk Button (Includes Channel Indicator Switch)	K-3050
Knob, Channel	K-3054	Top Escutcheon Assembly	Z-4192
Knob, Squelch/Off-Vol	K-3053		

WIRING DATA

Cable (Speaker)(Unshielded).....	Use BELDEN No. 8782 (AWG24)(4 colors)
Shielding Strap.....	Use BELDEN No. 8660 (3/16" width)
Hook-up Wire (General Use).....	Use BELDEN No. 8524 (AWG22)(13 colors)
Hook-up Wire (Shielded).....	Use BELDEN No. 8401 (Braided Shield)(1 conductor)(AWG25)
	Use BELDEN No. 8421 (Spiral Shield)(1 conductor)(AWG25)
	Use BELDEN No. 8737 (Spiral Shield)(2 conductor)(AWG22)
Coax(Transmission Line).....	Use BELDEN No. 8216 (RG-174/U, 50 ohms)