

SAMS **PHOTOFACT[®]**

CB RADIO SERIES



CB-251
251
MARCH 1979

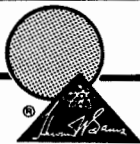


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HOWARD W. SAMS & CO., INC. Indianapolis, Indiana



PHOTOFACT[®] with

CIRCUITRACE[®]

For Supplier Address See PHOTOFACT Index

NOTE

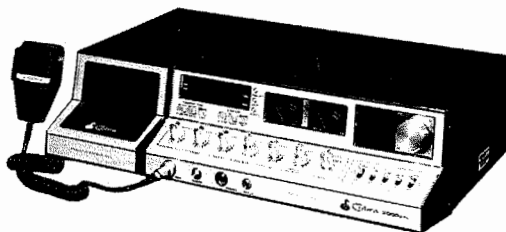
Repair or adjustment of transmitter circuits must be under supervision of a person with first-or second-class radiotelephone license.

(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 2000GTL

COBRA MODEL 2000GTL

MANUFACTURER'S SPECIFICATIONS

GENERAL

Channels	40.
Frequency Range	26.965 to 27.405 MHz.
Frequency Control	Phase Locked Loop (PLL) synthesizer.
Frequency Tolerance	±130 Hz Typical.
Operating Temperature Range	-30°C to +50°C.
Microphone	Plug-in type; 600Ω dynamic.
Power Source	120V AC nominal. 13.8V DC nominal. (Positive or negative ground).
Power Consumption (120V AC)	<i>Transmit:</i> AM full mod., 65 watts. SSB 70 watts. <i>Receive:</i> Squelched, 30 watts. Full audio, 40 watts.
Current Drain (13.8V DC)	<i>Transmit:</i> AM and SSB., 2.2A DC (nominal). <i>Receive:</i> Full audio output, 1.1A DC (nominal). No signal, 0.65A DC (nominal).
Size	5"(H) x 15"(W) x 4-7/16"(D)
Weight	19½ pounds. (including speaker)
Antenna Connector	UHF, SO239.
Semiconductors	18 integrated circuits, 6 FETs, 76 transistors, 93 diodes, 12 LEDs and 1 SCR.
Meter 1	Illuminated; indicates relative power output and received signal strength.
Meter 2	Illuminated, indicates standing wave ratio and level of modulation.

TRANSMITTER

Power Output	AM, 4 watts. SSB, 12 watts, PEP.
Modulation	AM, high- and low-level Class B.
Intermodulation Distortion	SSB: 3rd and 5th order, more than -25dB. 7th and 9th order, more than -35dB.
SSB Carrier Suppression	-55 dB Nominal.
Unwanted Sideband	-50 dB Nominal.
Frequency Response	AM and SSB: 300 to 2500 Hz.
Output Impedance	50 ohms, unbalanced.
SSB Filter	7.8 MHz, crystal lattice type:
Output Indicators	Meters show relative RF output power, percentage of modulation and SWR. "ON THE AIR" Transmit Indicator.

RECEIVER

Sensitivity	SSB: 0.25 μV for 10 dB (S+N)/N at greater than ½-watt of audio output. AM: 0.5 μV for 10 dB (S+N)/ at greater than ½-watt of audio output.
Selectivity	AM: 6 dB @3 KHz, 50 dB @9 KHz. SSB: 6 dB @1.1 KHz, 60 dB @2.3 KHz.
Image Rejection	More than 65 dB.
IF Frequency	AM: 7.8 MHz 1st IF, 455 KHz 2nd IF SSB: 7.8 MHz
Adjacent-Channel Rejection	60 dB AM & 70 dB SSB.
AM and SSB RF Gain Control	40 dB adjustable for optimum signal reception.
Automatic Gain Control (AGC)	Less than 10 dB change in audio output for inputs from 10 to 100,000 microvolts.
Squelch	Adjustable; threshold less than 0.5 μV.
ANL	Switchable.

Courtesy of the Manufacturer

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

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ALIGNMENT INSTRUCTIONS

CAUTION: Use isolation transformer or observe polarity when connecting test equipment. Maintain line voltage at 120V AC. Allow a 15-minute warm-up period.

Adjustments made with 13.8 volt DC input.

Connect 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, L2, L4 thru L10, L12, L14, L19 thru L23, L30, L31,

L45 thru L48, L59, L501, L502.....9440

L3, L13, L15.....5000, 5009, 8276, 8728, 9089

L36, L38.....8728, 9304, 9089

CT2, CT501.....5000, 8276, 9089

SYNTHESIZER ALIGNMENT

TEST EQUIPMENT	TRANSCIVER	ADJUST	REMARKS
Input of frequency counter to TP13 (IC1 Pin 8).	Ch. 19		Check for 10.240MHz.
Input of oscilloscope to TP10.	Ch. 19, AM	L21	Adjust for maximum RF RF (3.4V p-p typical) (See Figure 1).
Input of DC meter to TP9.	Ch. 40, AM	L19	Adjust for 2.70 volts. Check for approximate 1.95 volts on Channel 1
Input of oscilloscope to TP1.	Ch. 19, AM	L20	Adjust for maximum RF. (190mv p-p typical) (See Figure 2).
Input of frequency counter to TP1.	Ch. 1, AM	L23	Adjust for 34.7650MHz +20Hz. Check all channels. (See Truth Chart for correct frequencies.)
Input of frequency counter to TP1.	Ch. 1, USB	L59	Adjust for 34.7665MHz +20Hz. Check all channels. (See Truth Chart for correct frequencies.)
Input of frequency counter to TP1.	Ch. 1, LSB	L22	Adjust for 34.7635MHz +20Hz. Check all channels. (See Truth Chart for correct frequencies.)
Input of frequency counter to TP10.	Ch. 1, AM		Check for .790MHz. Check all channels. (See Truth Chart for correct frequencies.)
Input of frequency counter to TP3.	Ch. 19, USB	CT2	Adjust for 7.8015MHz +5Hz, -0Hz.
Input of frequency counter to TP3.	Ch. 19, LSB	L30	Adjust for 7.798MHz +0Hz, -5Hz.
Input of frequency counter to TP14 (IC3 Pin 7).	Ch. 19, AM XMT	L31	Adjust for 7.800MHz +5Hz.
Input of frequency counter to To TP15 (FET 1 Gate 1).	Ch. 19, AM		Check for 7.3450MHz.
Input of frequency counter to antenna input.	Ch. 1, AM XMT	VR5	Adjust for 26.965MHz. Check all channels. (See page 4 for channel frequencies.)

FREQUENCY COUNTER ALIGNMENT

TEST EQUIPMENT	TRANSCEIVER	ADJUST	REMARKS
Input of oscilloscope to TP504 (IC512 Pin 5).	Ch. 19, AM Voicelock Midrange Counter/Time Counter	L501	Adjust for maximum, then rotate core 1/2 turn clockwise.
Input of oscilloscope to TP502.	Ch. 19, USB Voicelock Midrange Counter/Time Counter	L502	Adjust for maximum RF.
	Ch. 19, AM Voicelock Midrange Counter/Time Counter	CT501	Adjust for 27.1850 on counter display.

RECEIVER ALIGNMENT

Connect an AC VTVM or AF wattmeter across speaker voice coil.

Adjust volume control to obtain a suitable indication. Set generator output low enough to prevent AGC limiting. Preset controls as follows unless otherwise noted:

RF Gain Maximum, Voicelock Midrange, Squelch MINIMUM, NB Off, ANL Off, Tone Maximum Clockwise.

TEST EQUIPMENT	TRANSCEIVER	ADJUST	REMARKS
Output of signal generator thru .01uF to TP16 (TR15 Emitter). 7.8MHz, no modulation.	Ch. 19, USB	L14,L12,L10 L9,L8,L7	Adjust for maximum output.
Output of signal generator thru .01uF to TP15 (FET Gate 1). 455kHz,1000Hz @ 30% modulation.	Ch. 19, AM	L15,L13,L3	Adjust for maximum output.
Output of signal generator thru .01uF to antenna input. 27.185MHz,1000Hz @ 30% modulation.	Ch. 19, AM	L6,L5,L4	Adjust for maximum output. Readjust L7,L8,L9,L10,L3, L13 and L15 for maximum.
Output of signal generator thru .01uF to antenna input. 27.185MHz,1000Hz @ 30% modulation. Input of oscilloscope to TP17 (D2 cathode).	Ch. 19, AM	L1,L2	Set generator output for 10db signal to noise plus noise ratio of receiver. Inject a 100pps, 1uSec pulse width signal at antenna input. Switch NB on and adjust for maximum pulse amplitude. (8.2V peak typical) (See Figure 3).

RECEIVER ADJUSTMENTS

Connect an AC VTVM or AF wattmeter across speaker voice coil.

Adjust volume control to obtain a suitable indication. Preset controls as follows, unless otherwise noted:

RF Gain Maximum, Voicelock Midrange, Squelch MINIMUM, NB Off, ANL Off, Tone Maximum Clockwise.

TEST EQUIPMENT	TRANSCEIVER	ADJUST	REMARKS
Output of signal generator thru .01uF to antenna input. 27.185MHz,1000Hz @ 30% modulation. Output 1000uV.	Ch. 19, AM Squelch Maximum	VR3	SQUELCH RANGE Adjust so squelch just breaks.
Output of signal generator thru .01uF to antenna input. 27.185MHz,1000Hz @ 30% modulation. Output 100uV.	Ch. 19, AM	VR1	AM SIGNAL METER Adjust for 9 on SIGNAL scale of meter.
Output of signal generator thru .01uF to antenna input. 27.186MHz, no modulation. Output 100uV.	Ch. 19, USB	VR2	SSB SIGNAL METER Adjust for 9 on SIGNAL scale of meter.

TRANSMITTER ALIGNMENT

Connect a 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, AM	L47,L48,L46, L45,L38	Adjust for maximum RF output.
Input of spectrum analyzer or harmonic meter to antenna input.	Ch. 19, AM	L36	Adjust for MINIMUM at 54MHz (2nd harmonic).

TRANSMITTER ADJUSTMENTS

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

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

See page 4 for channel frequencies.

TEST EQUIPMENT	TRANSCIVER	ADJUST	REMARKS
Input of RF wattmeter to antenna input. No modulation.	Ch. 19, USB Dynamike Plus MINIMUM	VR4	CARRIER BALANCE Adjust for MINIMUM RF output.
Input of RF wattmeter to antenna input. Insert a 0-500mA DC meter at TP3. No modulation.	Ch. 19, USB Dynamike Plus MINIMUM	VR9	DRIVER BIAS Adjust for 25mA idle current.
Input of RF wattmeter to antenna input. Insert a 0-500mA DC meter at TP7. No modulation.	Ch. 19, USB Dynamike Plus MINIMUM	VR8	FINAL BIAS Adjust for 50mA idle current.
Input of RF wattmeter to antenna input. Inject a two tone, 500mV audio signal at mic input.	Ch. 19, USB Dynamike Plus Maximum	VR11	SSB ALC Adjust for 11.0 watts PEP RF output maximum.
Input of oscilloscope or modulation meter to antenna input. Inject a 1000Hz, 20mV audio signal at mic input.	Ch. 19, AM Dynamike Plus Maximum	VR12	AM AMC Adjust for 100% modulation maximum. (See Figure 4).
Input of RF wattmeter to antenna input.	Ch. 19, AM Dynamike Plus MINIMUM	VR10	AM CARRIER POWER Adjust for 4.0 watts RF output maximum.
Input of oscilloscope or modulation meter to antenna input. Inject a 1000Hz audio signal at mic input. Set generator output to produce 100% mod.	Ch. 19, AM Dynamike Plus Maximum	VR7	MOD METER Adjust for 100% on MOD scale of meter.
Input of RF wattmeter to antenna input.	Ch. 19, AM Dynamike Plus MINIMUM	VR6	RF PWR METER At 4.0 watts RF output adjust so RF PWR METER agrees with RF wattmeter.

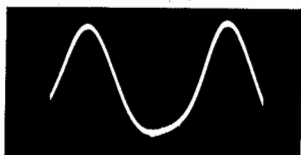


FIGURE 1

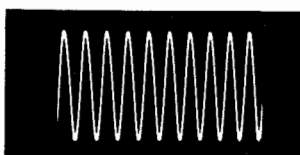


FIGURE 2

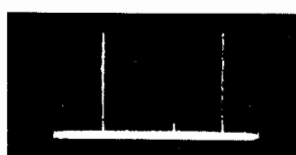


FIGURE 3

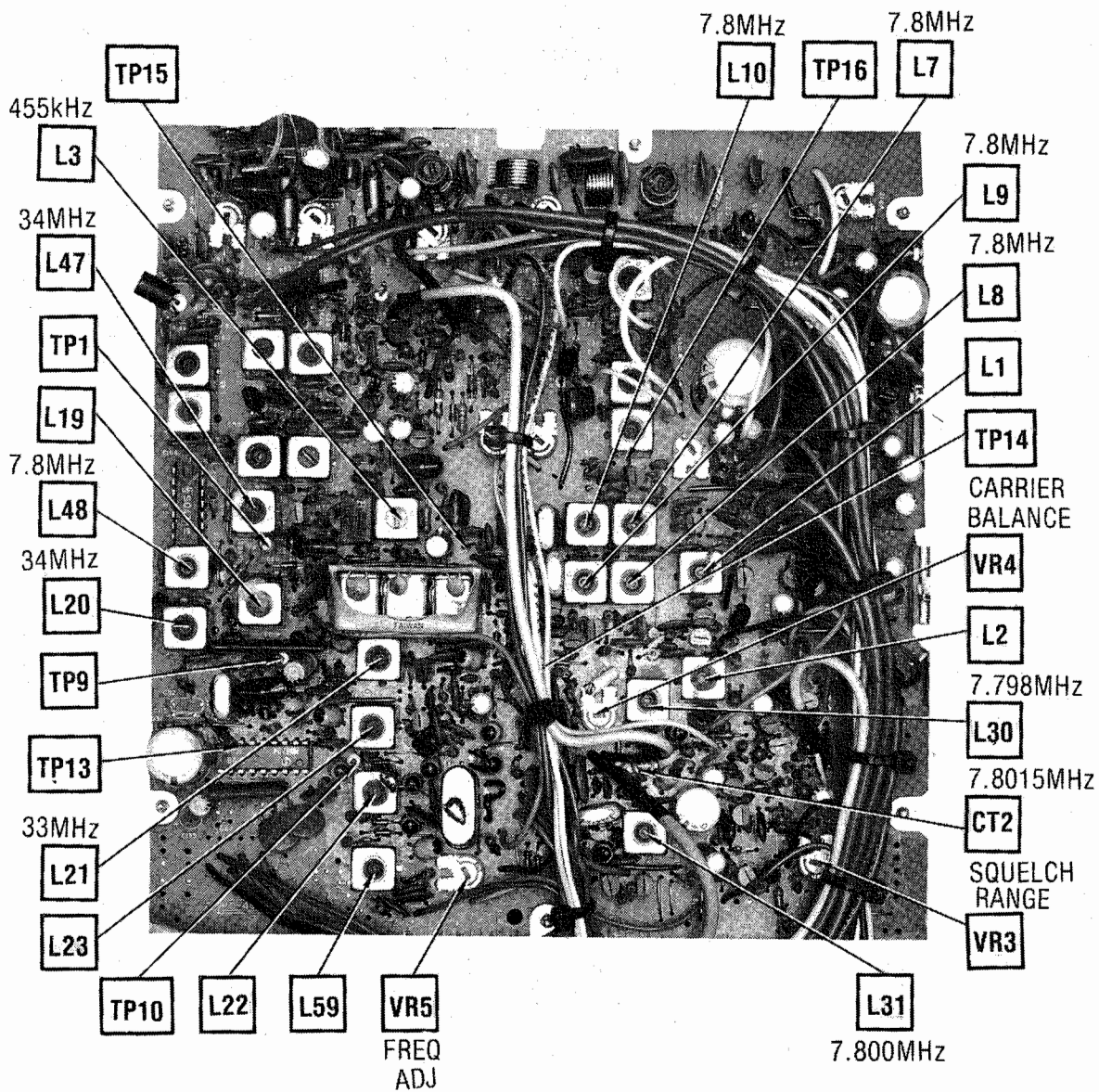


FIGURE 4

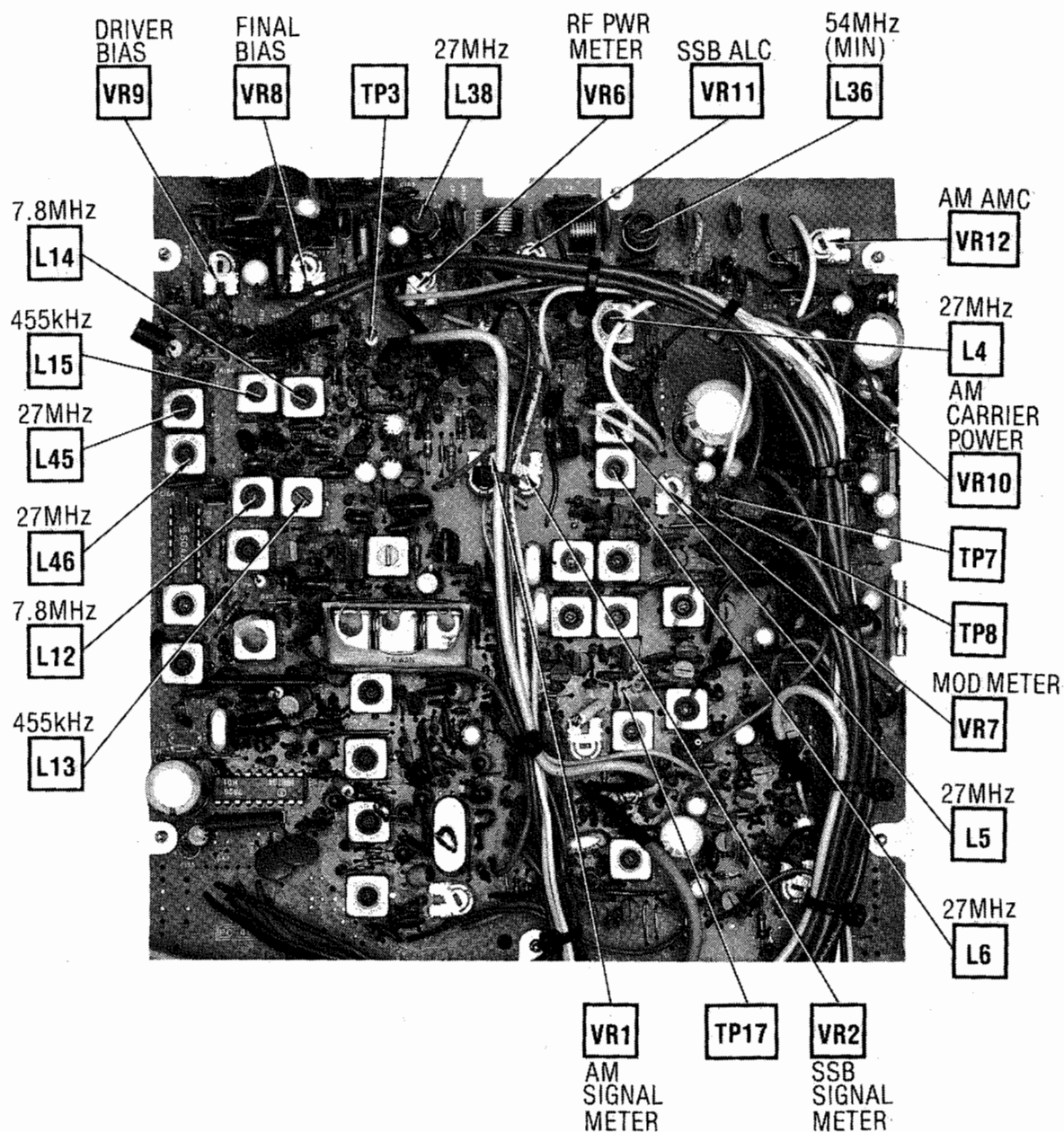
TRUTH CHART

CHANNEL	1 = 8.00 Volts 0 = 0 to .50 Volts								AM Rec & XMT SYNTH OUTPUT IN MHz AT TP1	USB Rec & XMT SYNTH OUTPUT IN MHz AT TP1	LSB Rec & XMT SYNTH OUTPUT IN MHz AT TP1	DIVIDER INPUT IN MHz AT TP10
	CHANNEL INPUT CODES											
	PINS											
	10	11	12	13	14	15	16					
1	1	0	0	1	1	1	1		34.7650	34.7665	34.7635	.790
2	1	0	1	0	0	0	0		34.7750	34.7765	34.7735	.800
3	1	0	1	0	0	0	1		34.7850	34.7865	34.7835	.810
4	1	0	1	0	0	1	1		34.8050	34.8065	34.8035	.830
5	1	0	1	0	1	0	0		34.8150	34.8165	34.8135	.840
6	1	0	1	0	1	0	1		34.8250	34.8265	34.8235	.850
7	1	0	1	0	1	1	0		34.8350	34.8365	34.8335	.860
8	1	0	1	1	0	0	0		34.8550	34.8565	34.8535	.880
9	1	0	1	1	0	0	1		34.8650	34.8665	34.8635	.890
10	1	0	1	1	0	1	0		34.8750	34.8765	34.8735	.900
11	1	0	1	1	0	1	1		34.8850	34.8865	34.8835	.910
12	1	0	1	1	1	0	1		34.9050	34.9065	34.9035	.930
13	1	0	1	1	1	1	0		34.9150	34.9165	34.9135	.940
14	1	0	1	1	1	1	1		34.9250	34.9265	34.9235	.950
15	1	1	0	0	0	0	0		34.9350	34.9365	34.9335	.960
16	1	1	0	0	0	1	0		34.9550	34.9565	34.9535	.980
17	1	1	0	0	0	1	1		34.9650	34.9665	34.9635	.990
18	1	1	0	0	1	0	0		34.9750	34.9765	34.9735	1.000
19	1	1	0	0	1	0	1		34.9850	34.9865	34.9835	1.010
20	1	1	0	0	1	1	1		35.0050	35.0065	35.0035	1.030
21	1	1	0	1	0	0	0		35.0150	35.0165	35.0135	1.040
22	1	1	0	1	0	0	1		35.0250	35.0265	35.0235	1.050
23	1	1	0	1	1	0	0		35.0550	35.0565	35.0535	1.080
24	1	1	0	1	0	1	0		35.0350	35.0365	35.0335	1.060
25	1	1	0	1	0	1	1		35.0450	35.0465	35.0435	1.070
26	1	1	0	1	1	0	1		35.0650	35.0665	35.0635	1.090
27	1	1	0	1	1	1	0		35.0750	35.0765	35.0735	1.100
28	1	1	0	1	1	1	1		35.0850	35.0865	35.0835	1.110
29	1	1	1	0	0	0	0		35.0950	35.0965	35.0935	1.120
30	1	1	1	0	0	0	1		35.1050	35.1065	35.1035	1.130
31	1	1	1	0	0	1	0		35.1150	35.1165	35.1135	1.140
32	1	1	1	0	0	1	1		35.1250	35.1265	35.1235	1.150
33	1	1	1	0	1	0	0		35.1350	35.1365	35.1335	1.160
34	1	1	1	0	1	0	1		35.1450	35.1465	35.1435	1.170
35	1	1	1	0	1	1	0		35.1550	35.1565	35.1535	1.180
36	1	1	1	0	1	1	1		35.1650	35.1665	35.1635	1.190
37	1	1	1	1	0	0	0		35.1750	35.1765	35.1735	1.200
38	1	1	1	1	0	0	1		35.1850	35.1865	35.1835	1.210
39	1	1	1	1	0	1	0		35.1950	35.1965	35.1935	1.220
40	1	1	1	1	0	1	1		35.2050	35.2065	35.2035	1.230

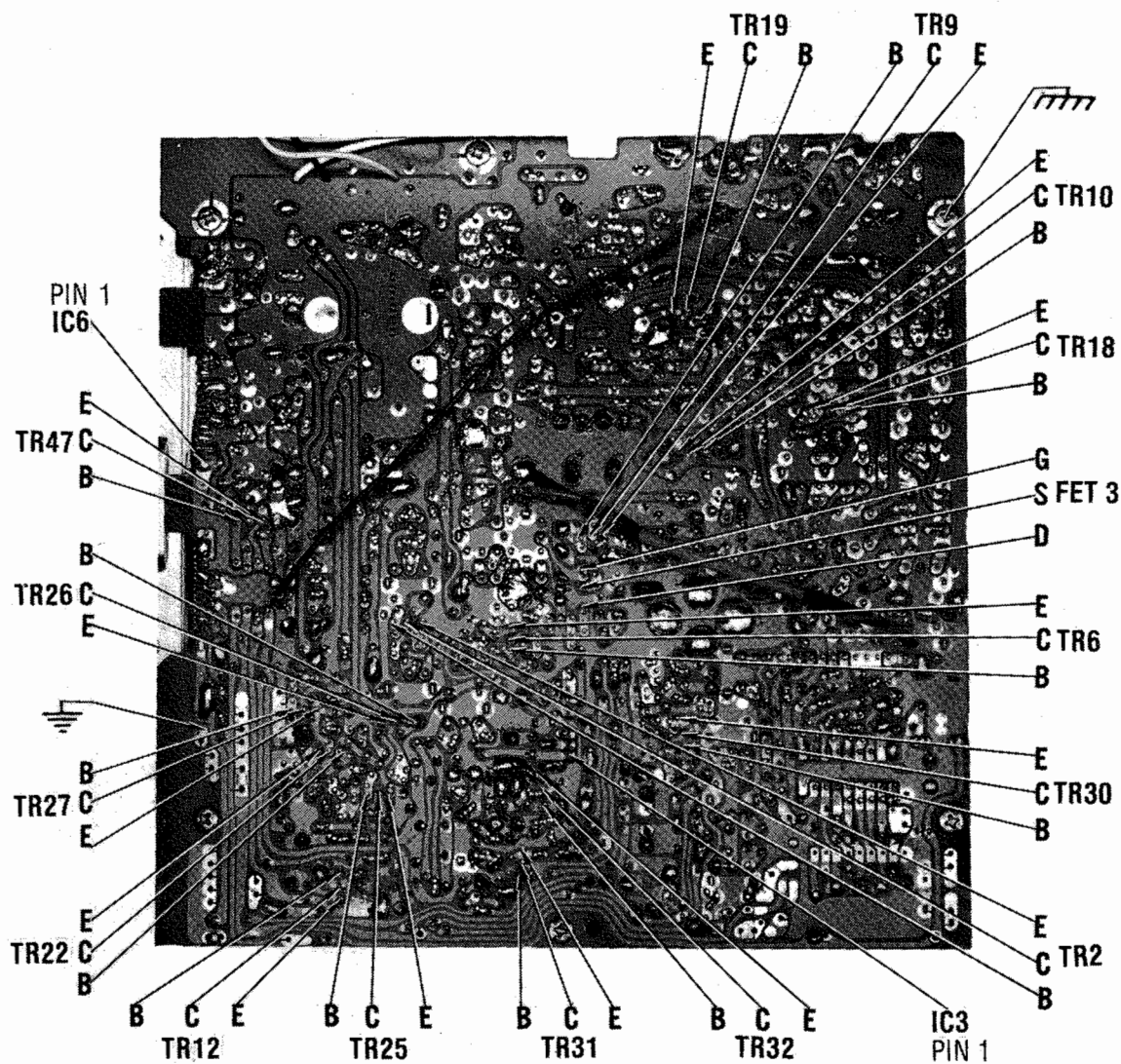
COBRA MODEL 2000GTL



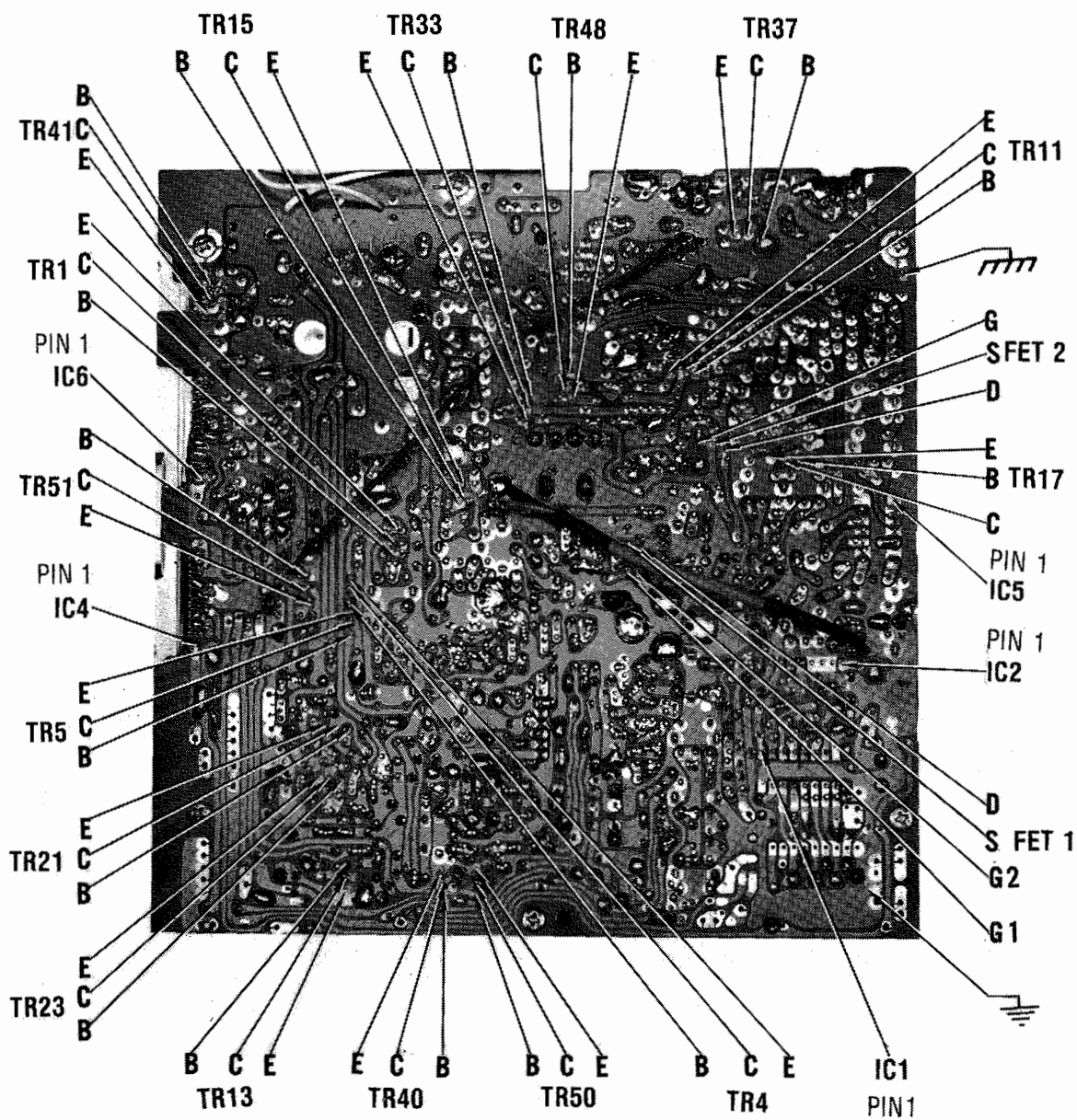
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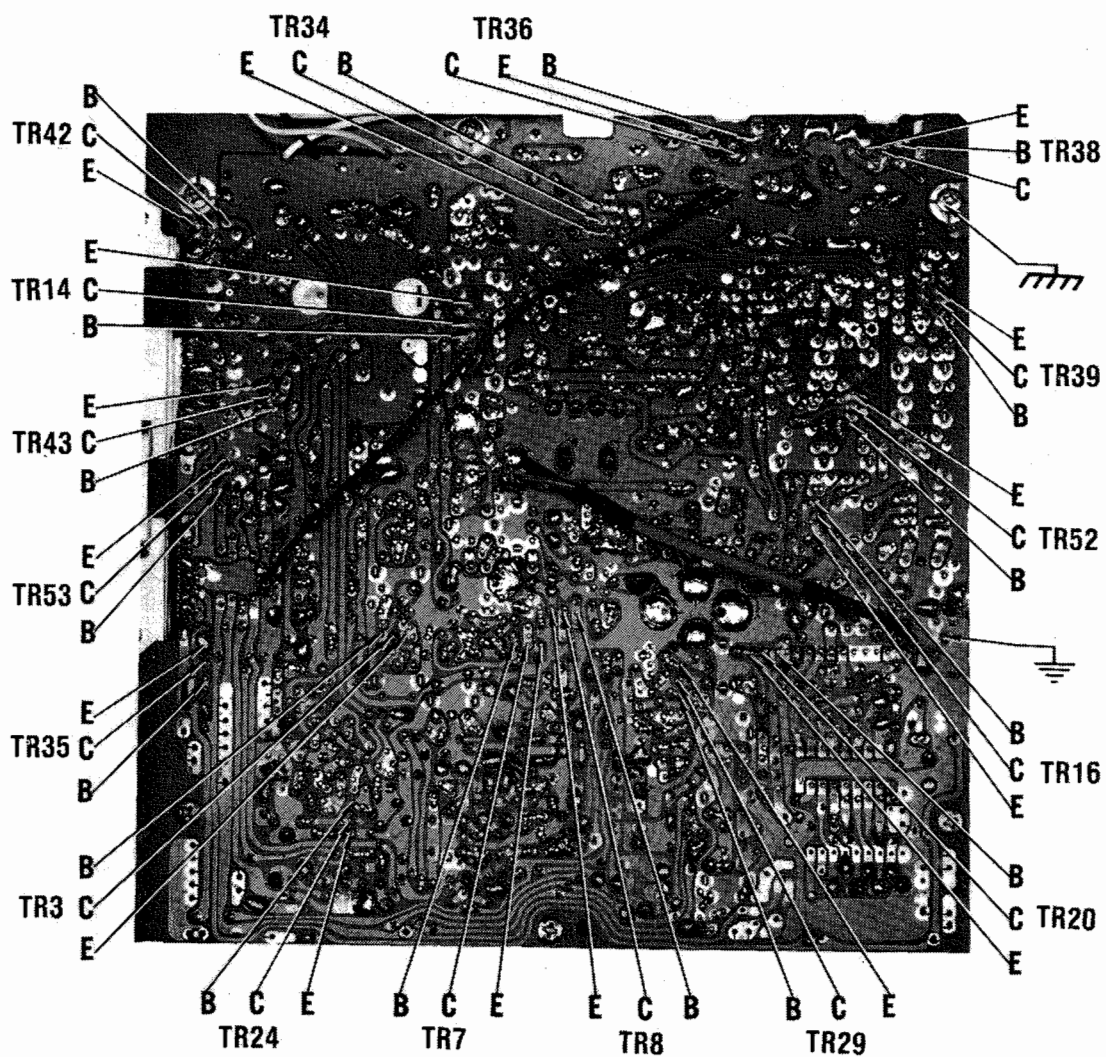
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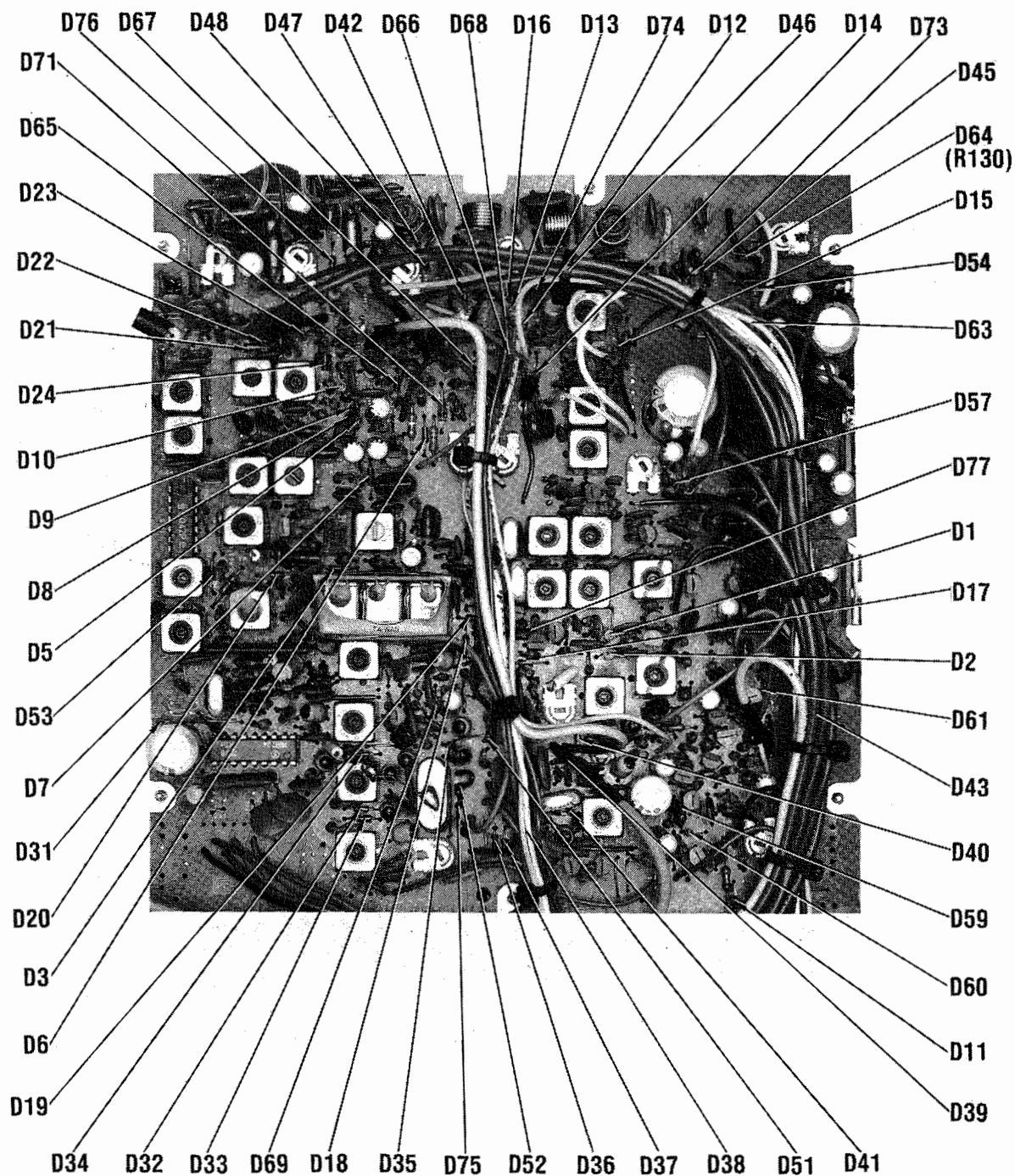
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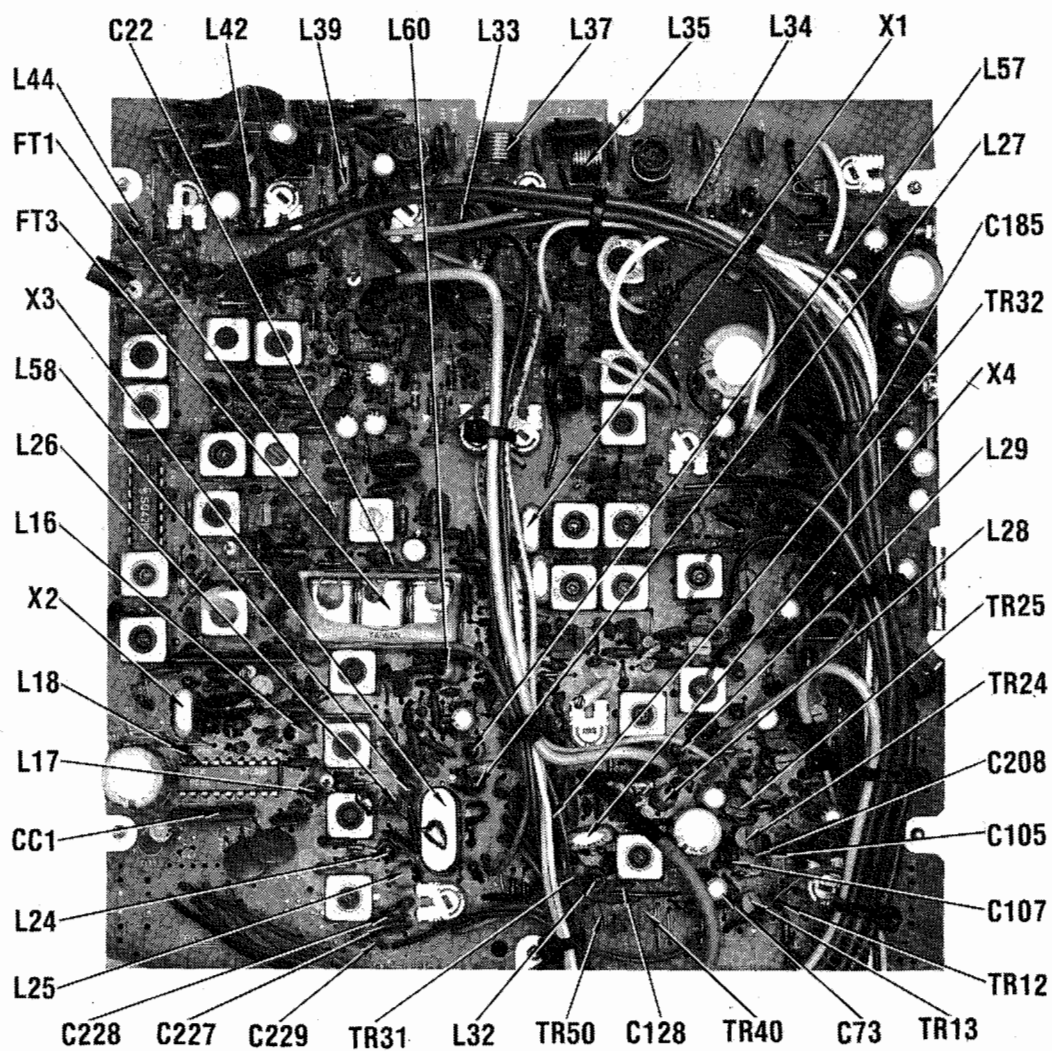
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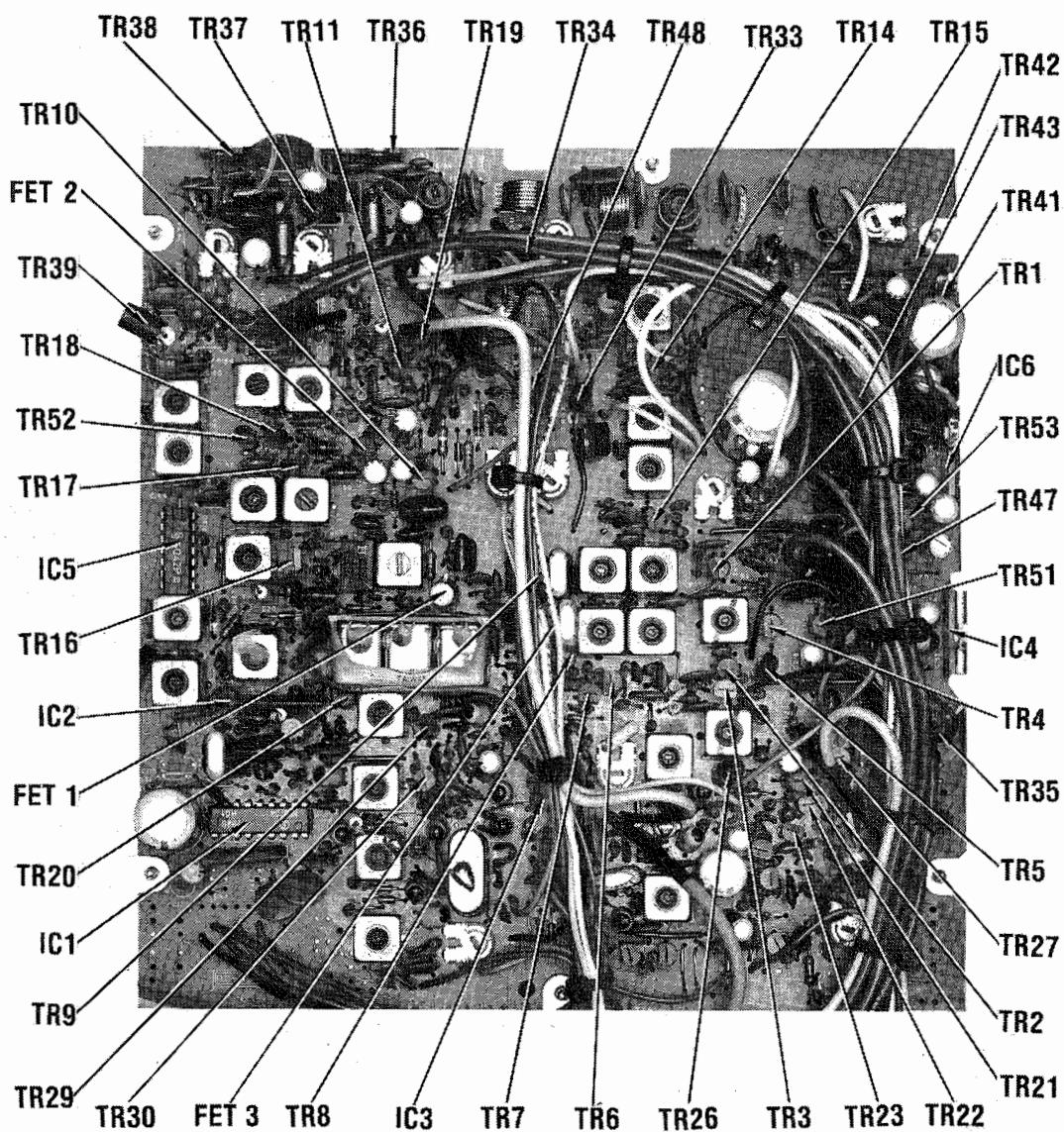
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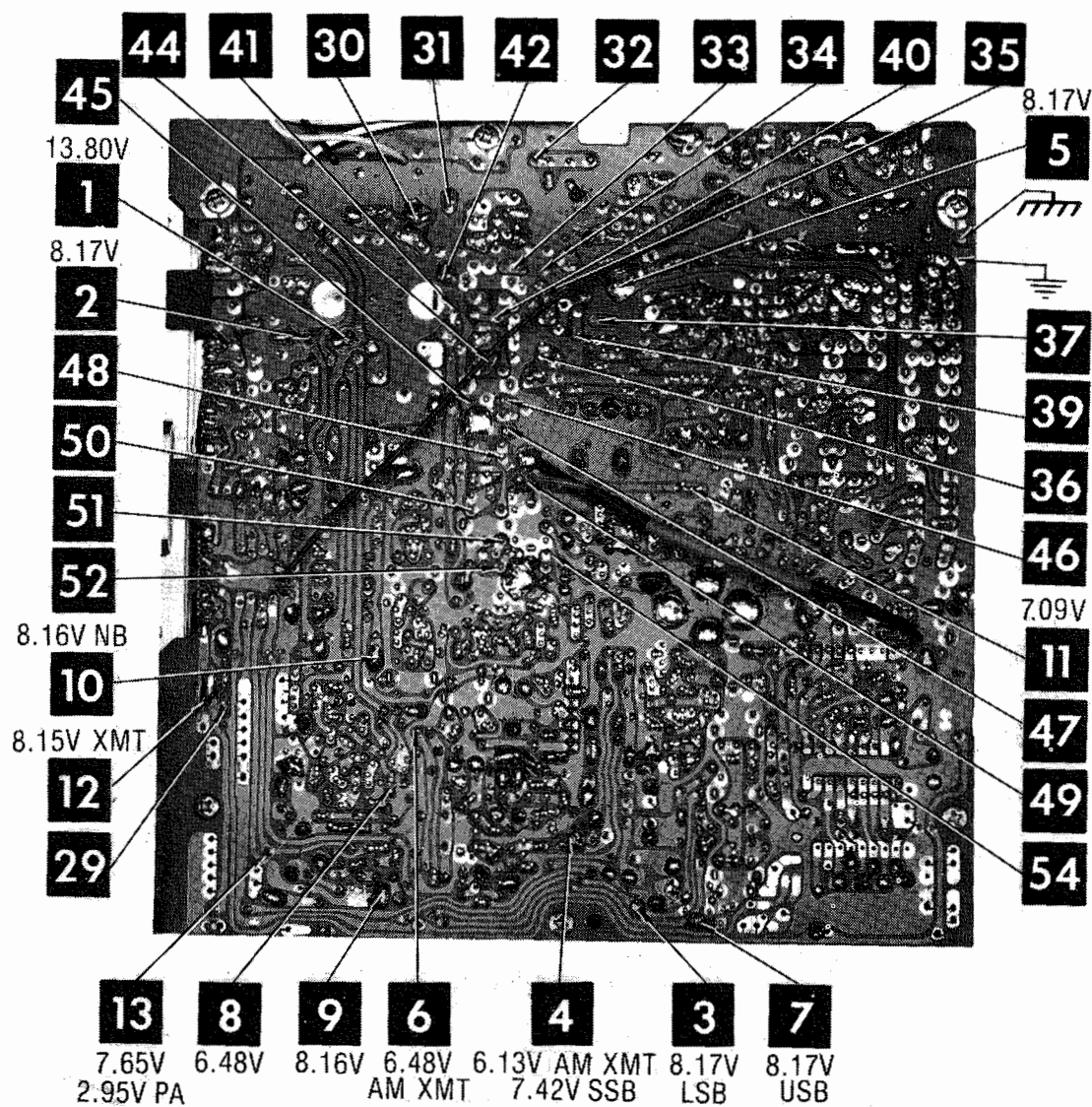
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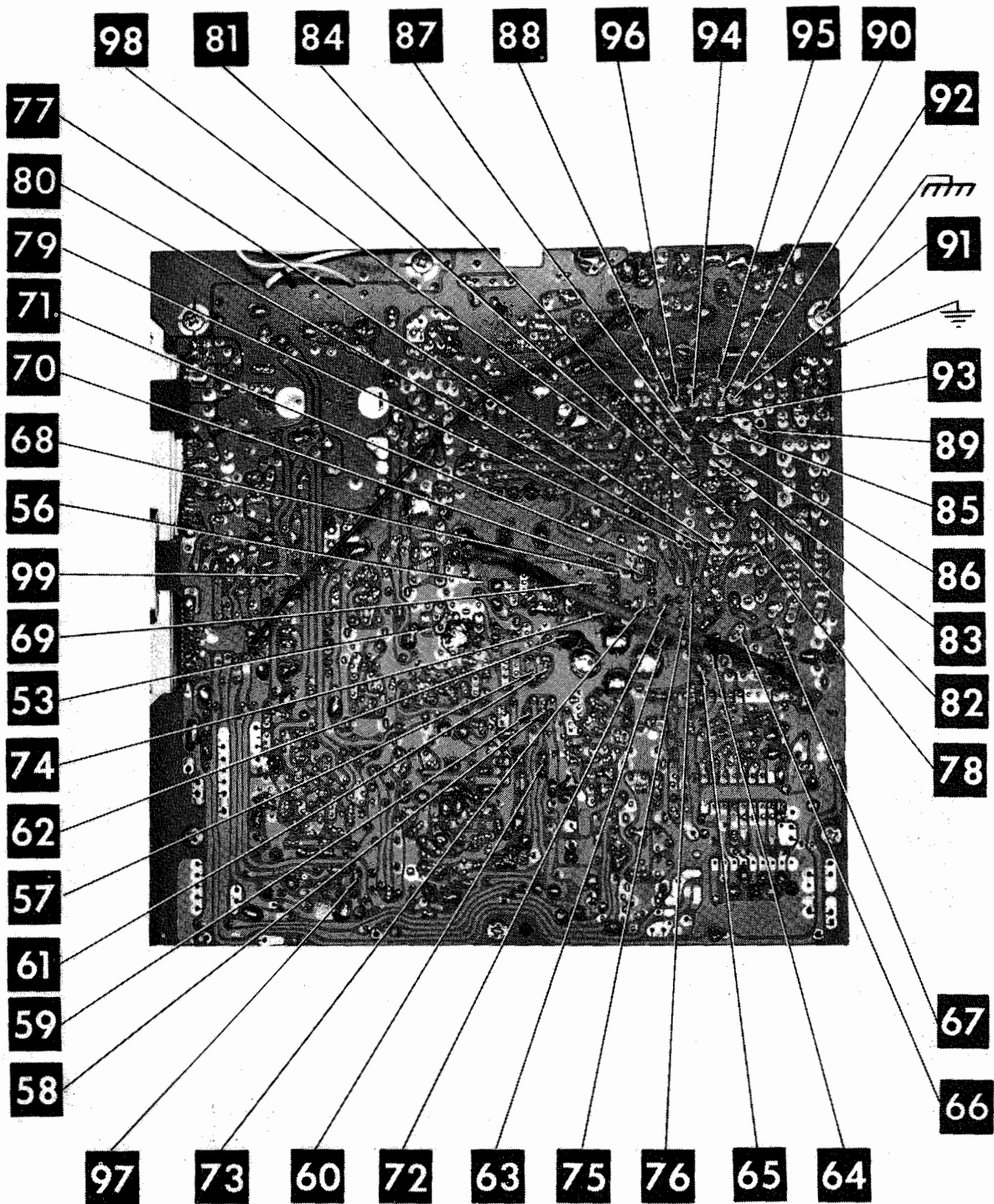
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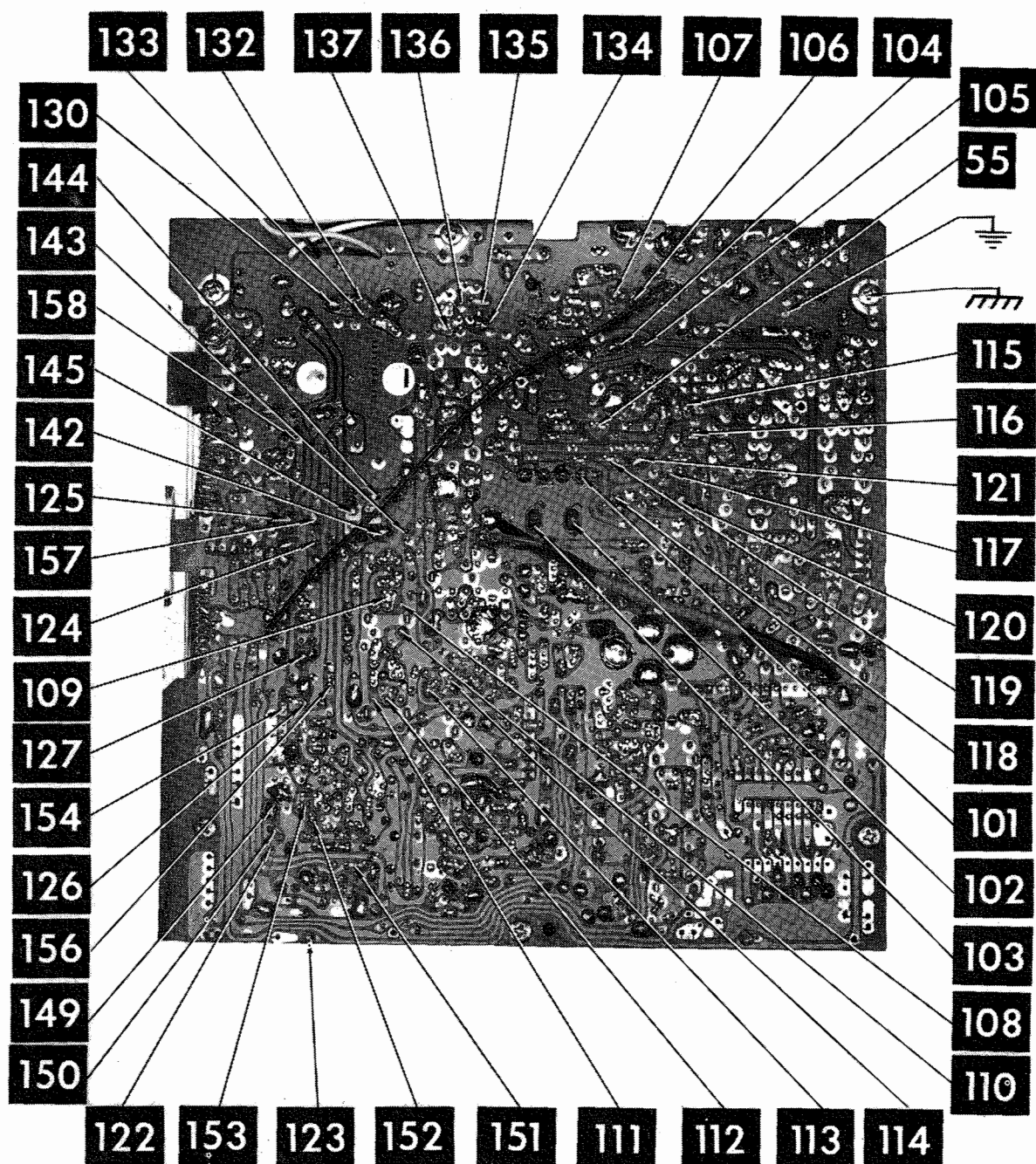
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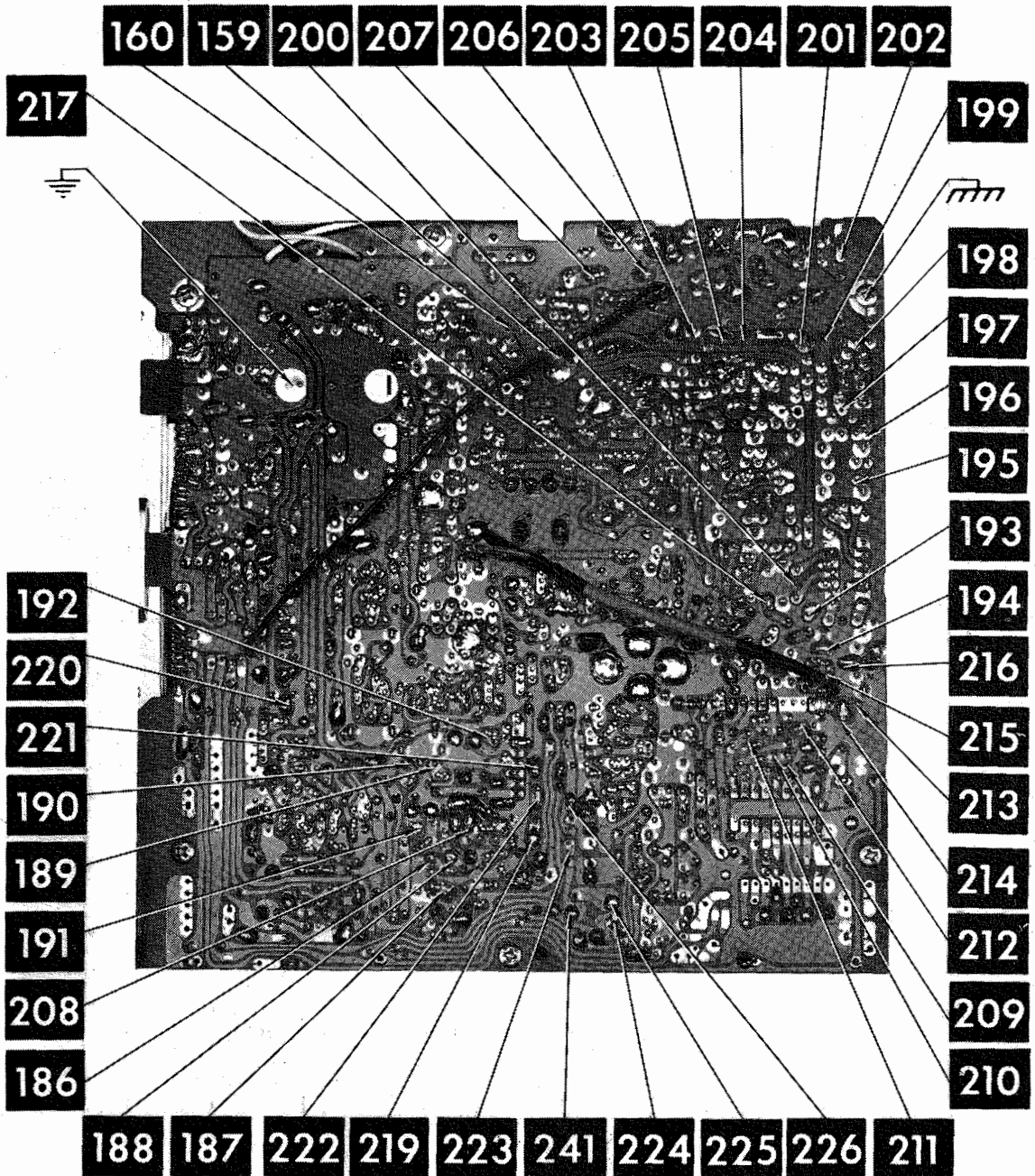
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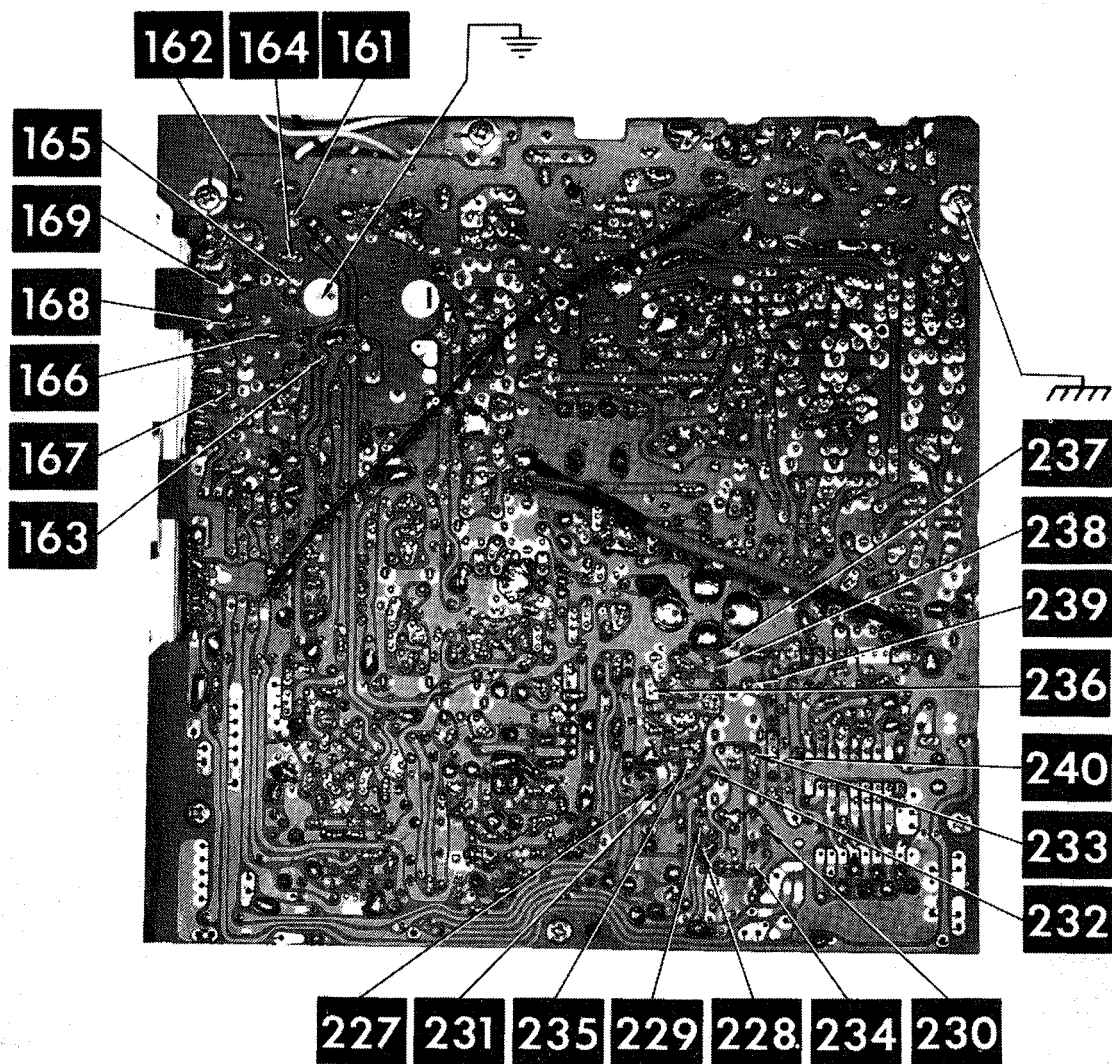
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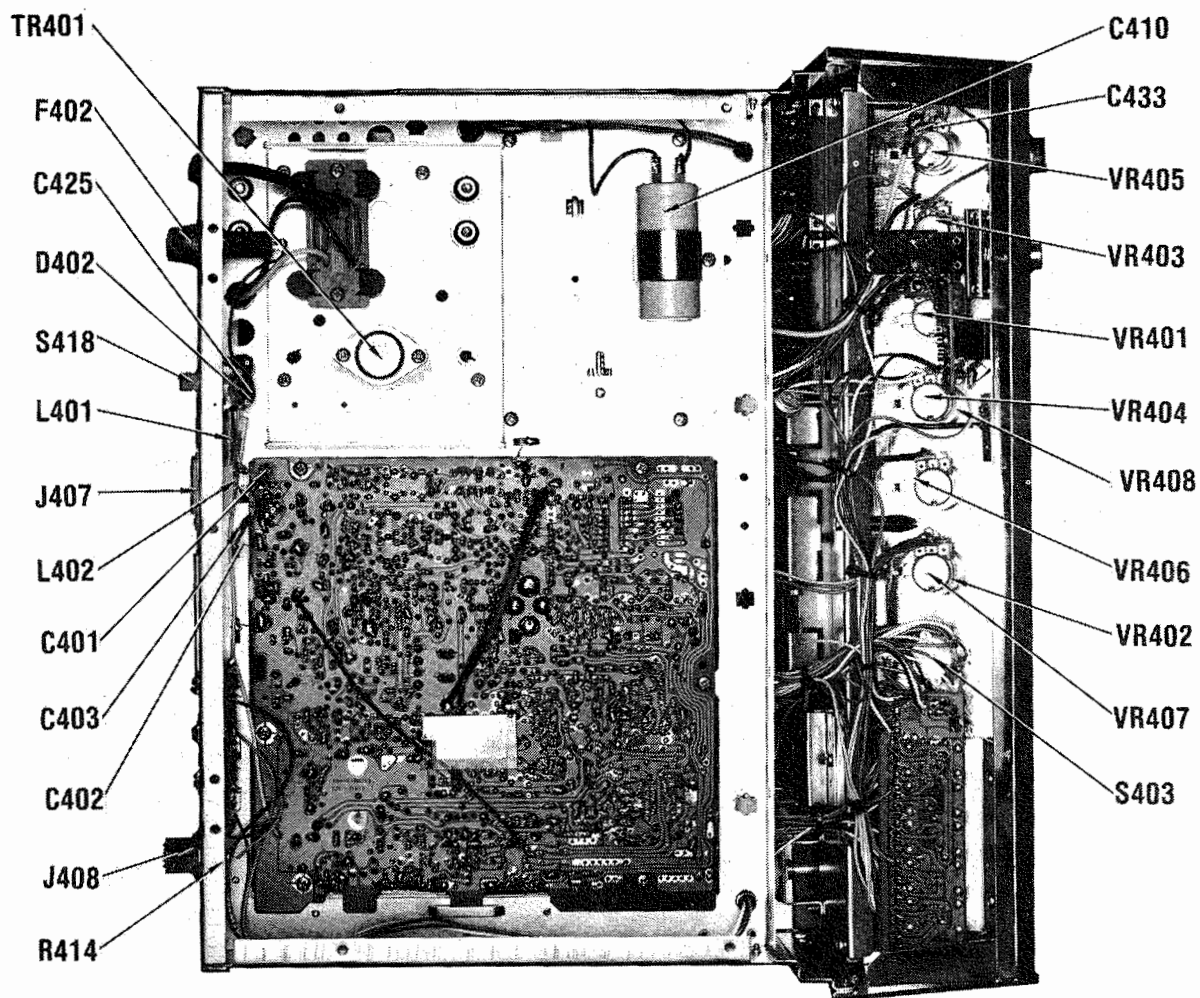
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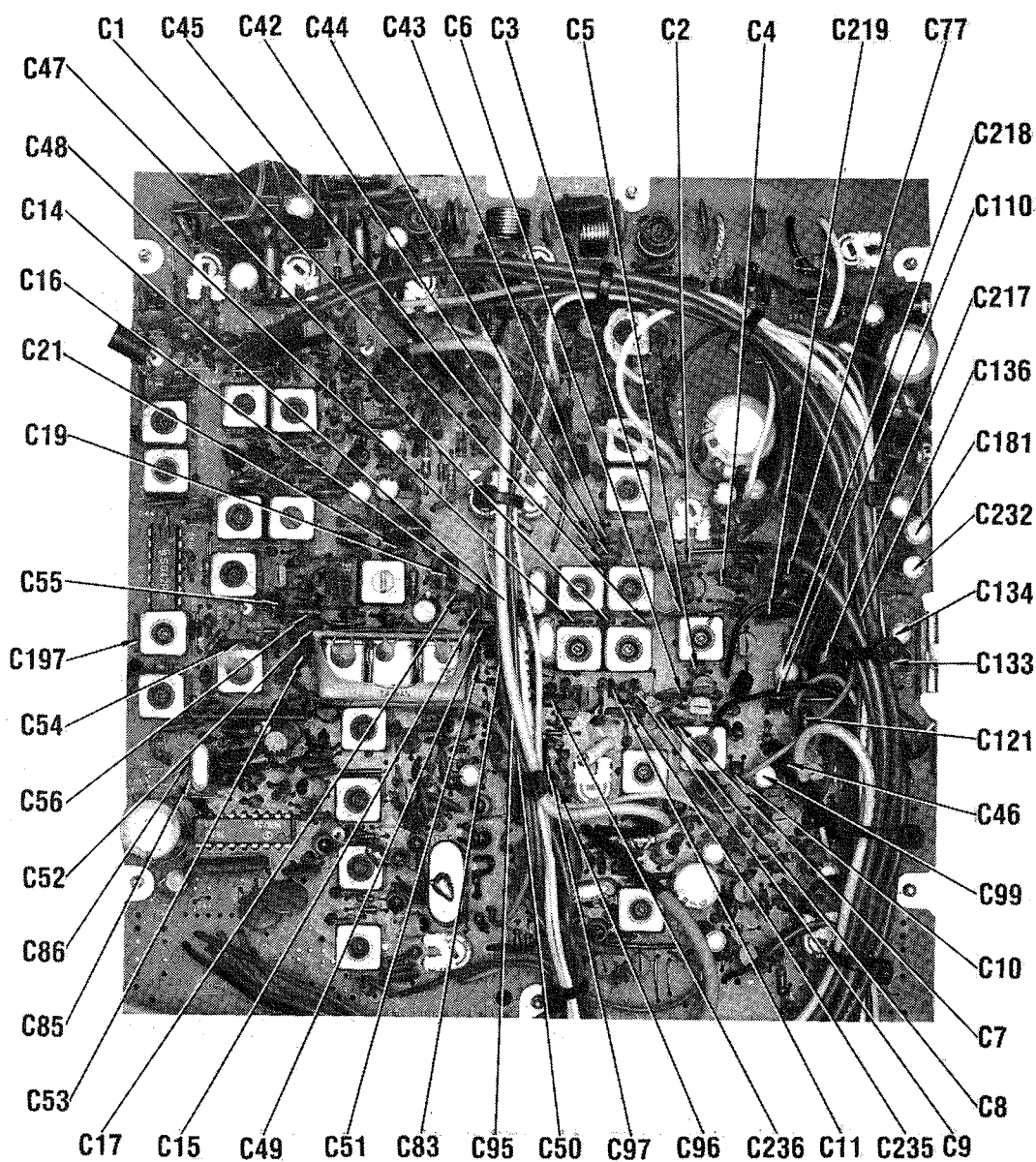
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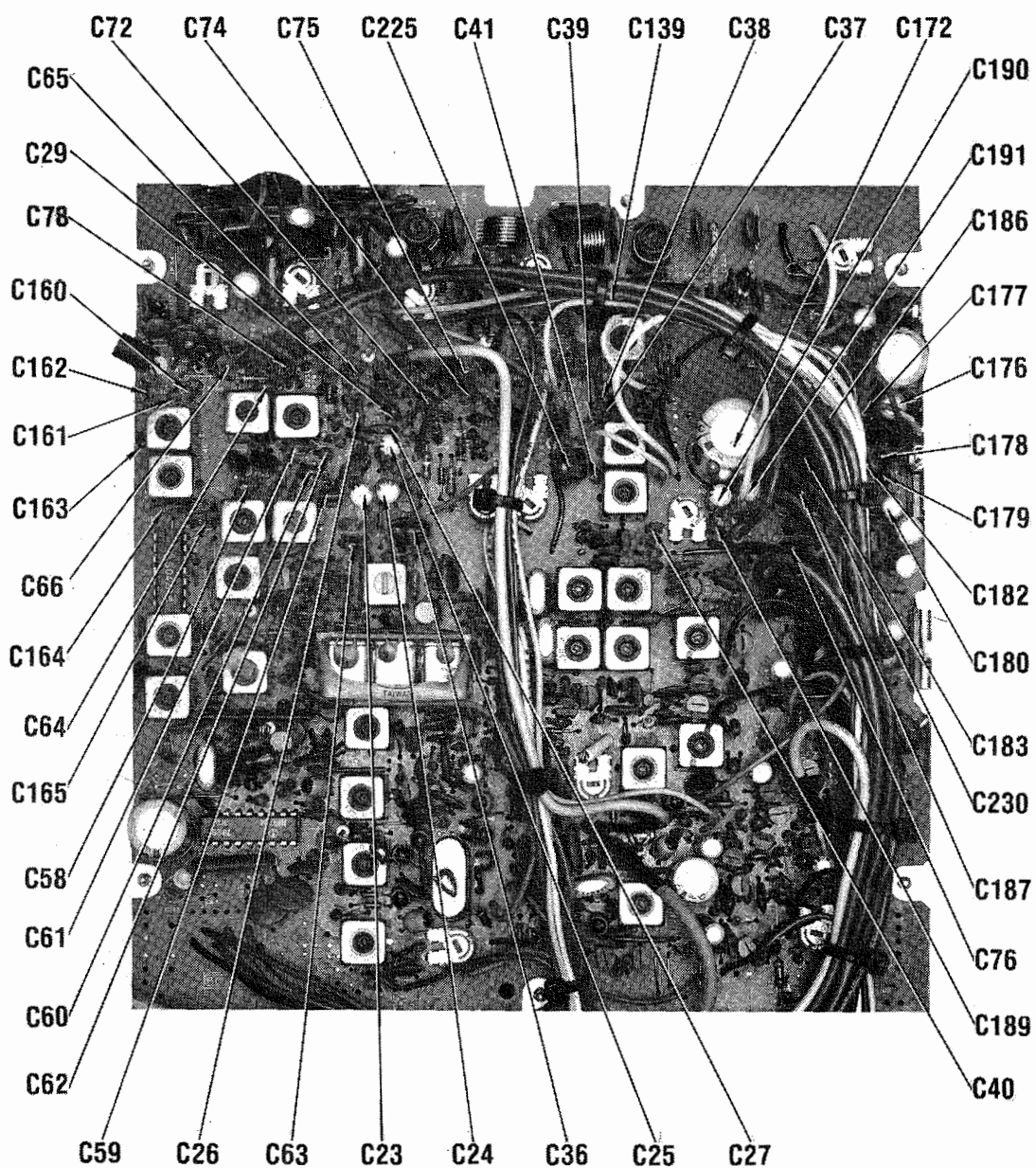
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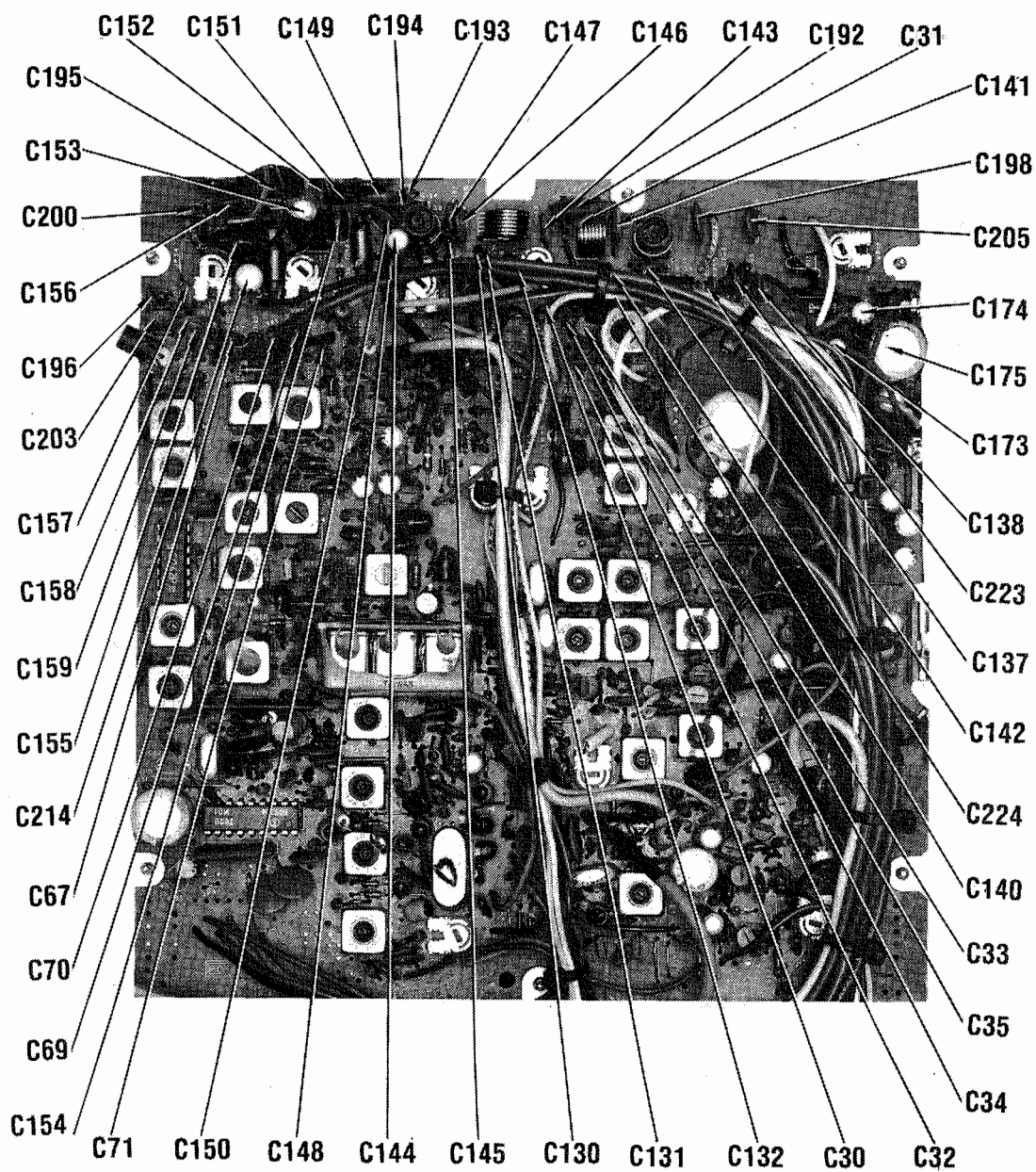
CHASSIS - BOTTOM



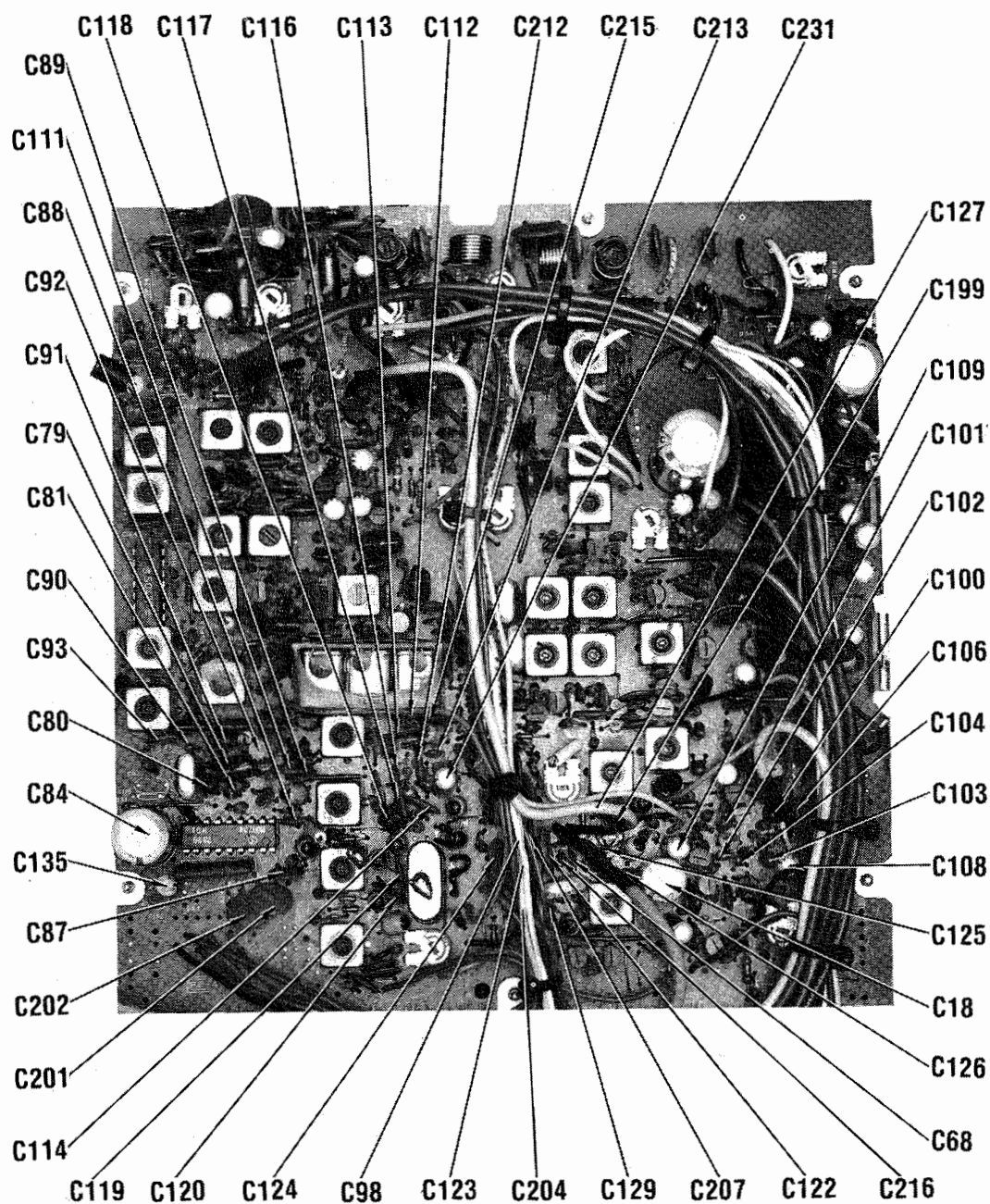
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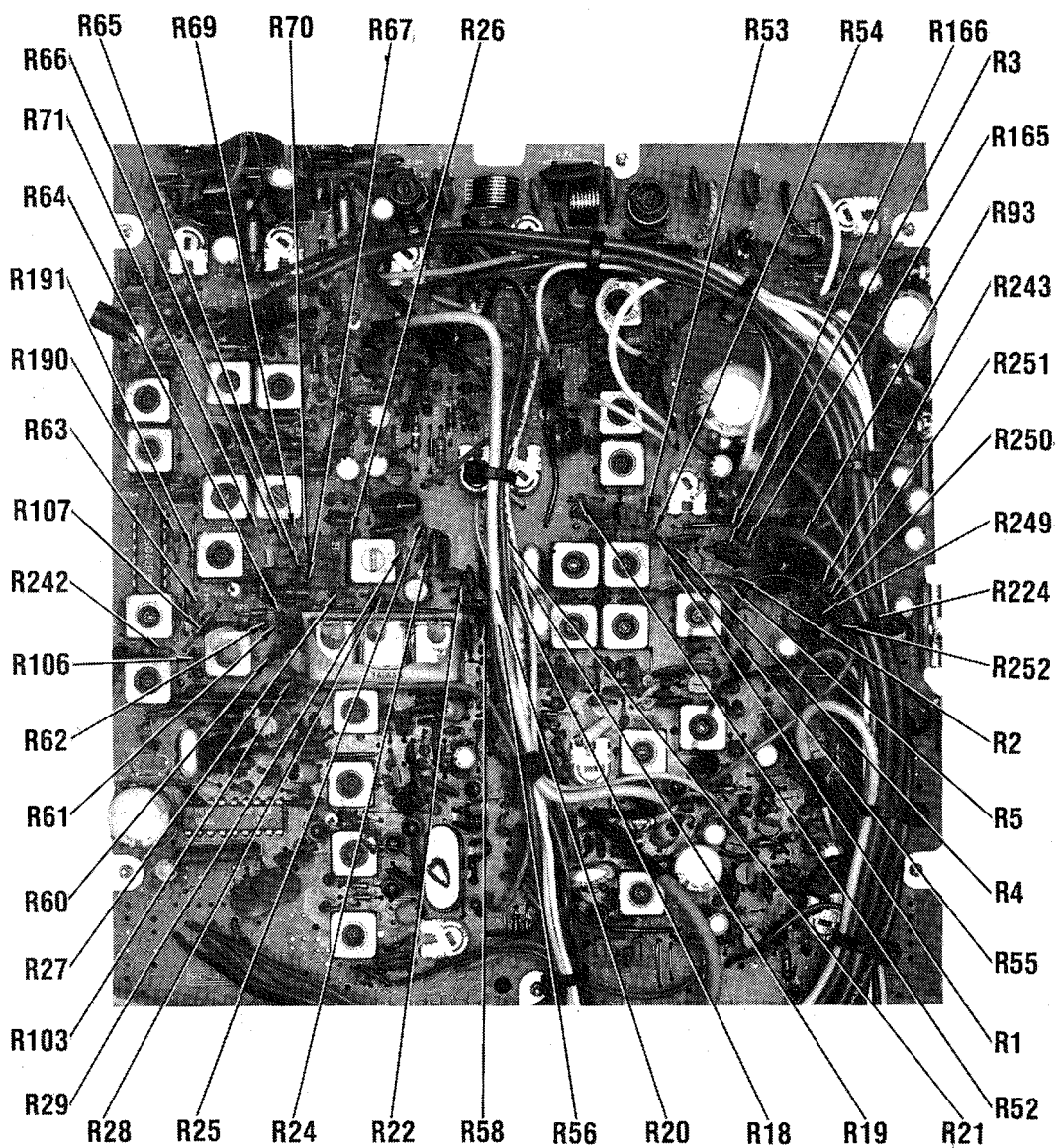
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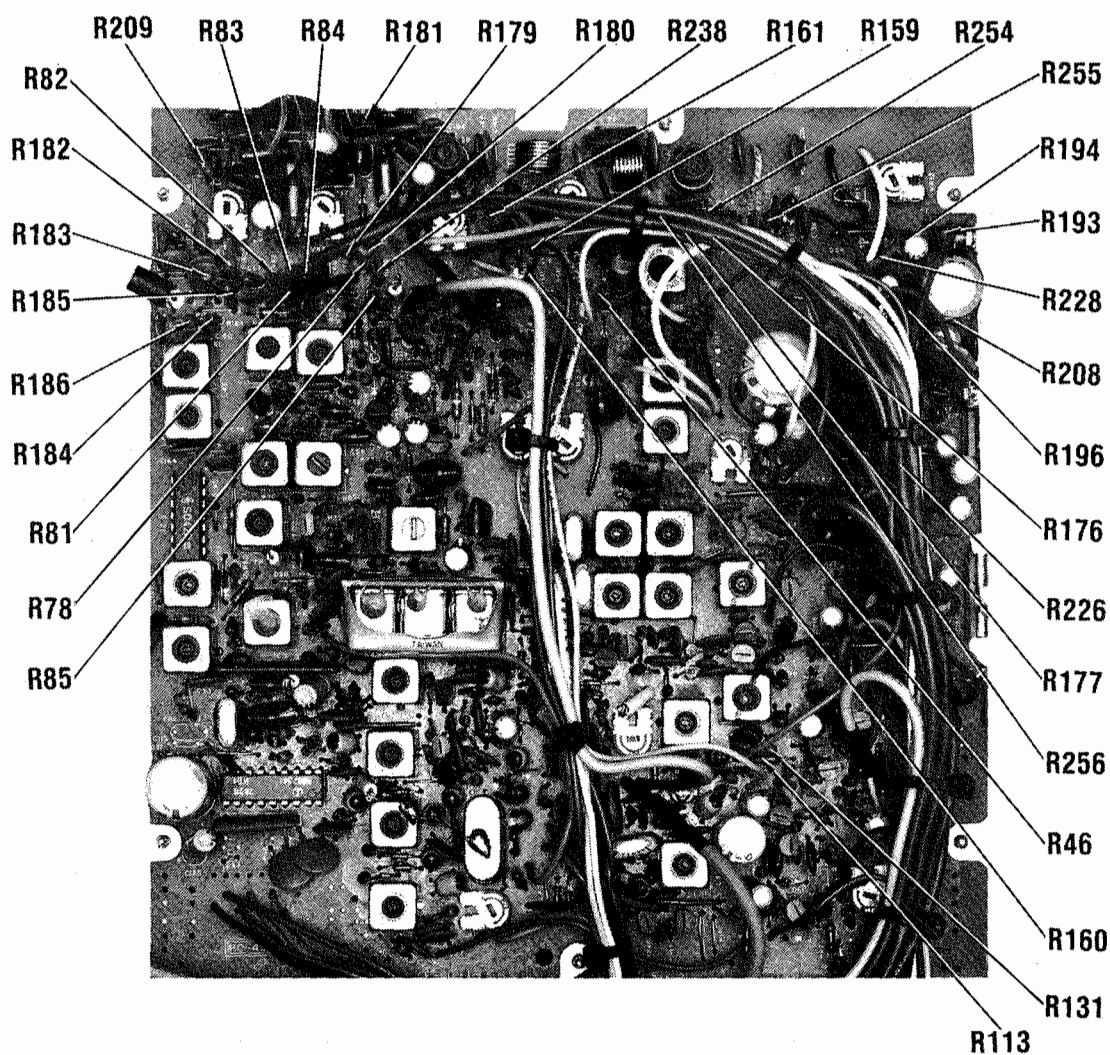
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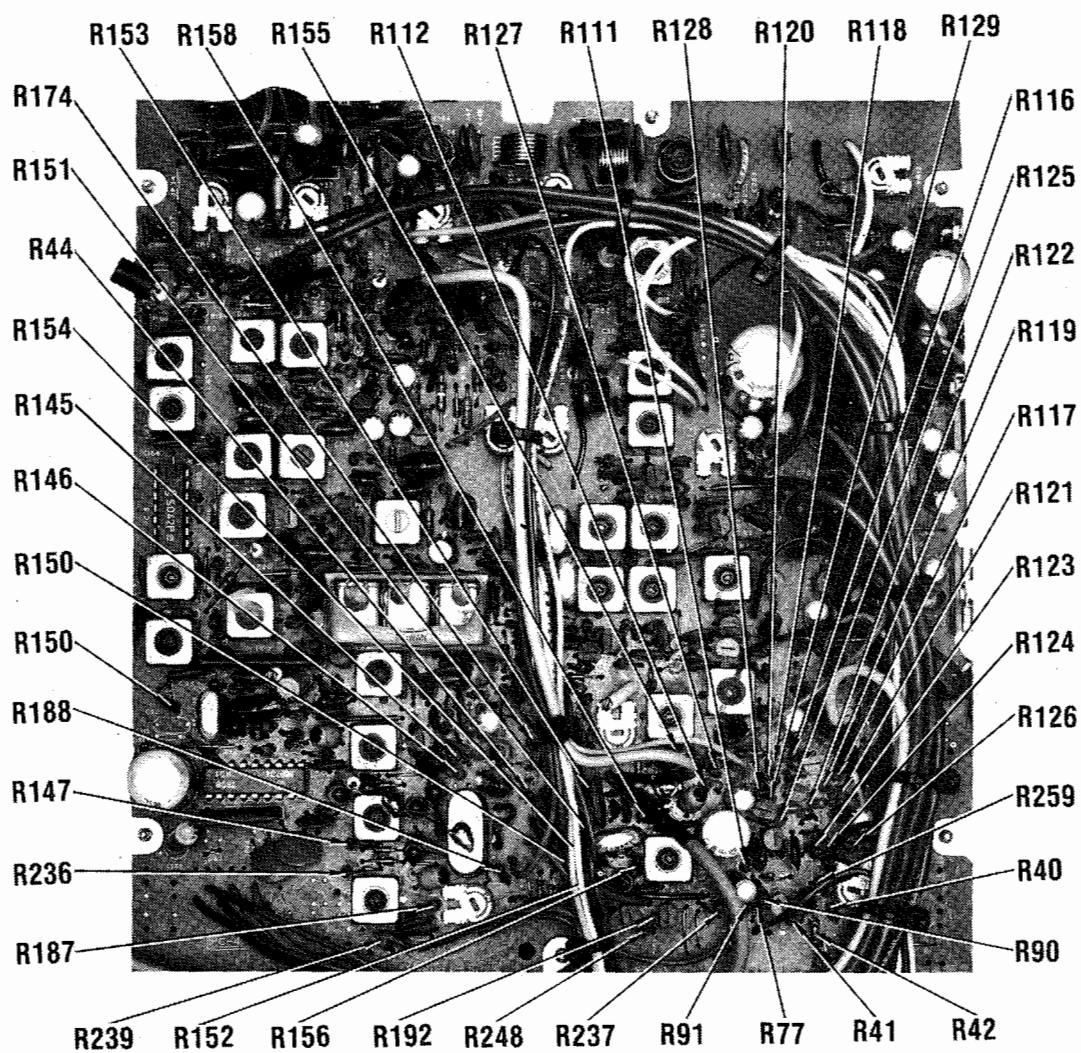
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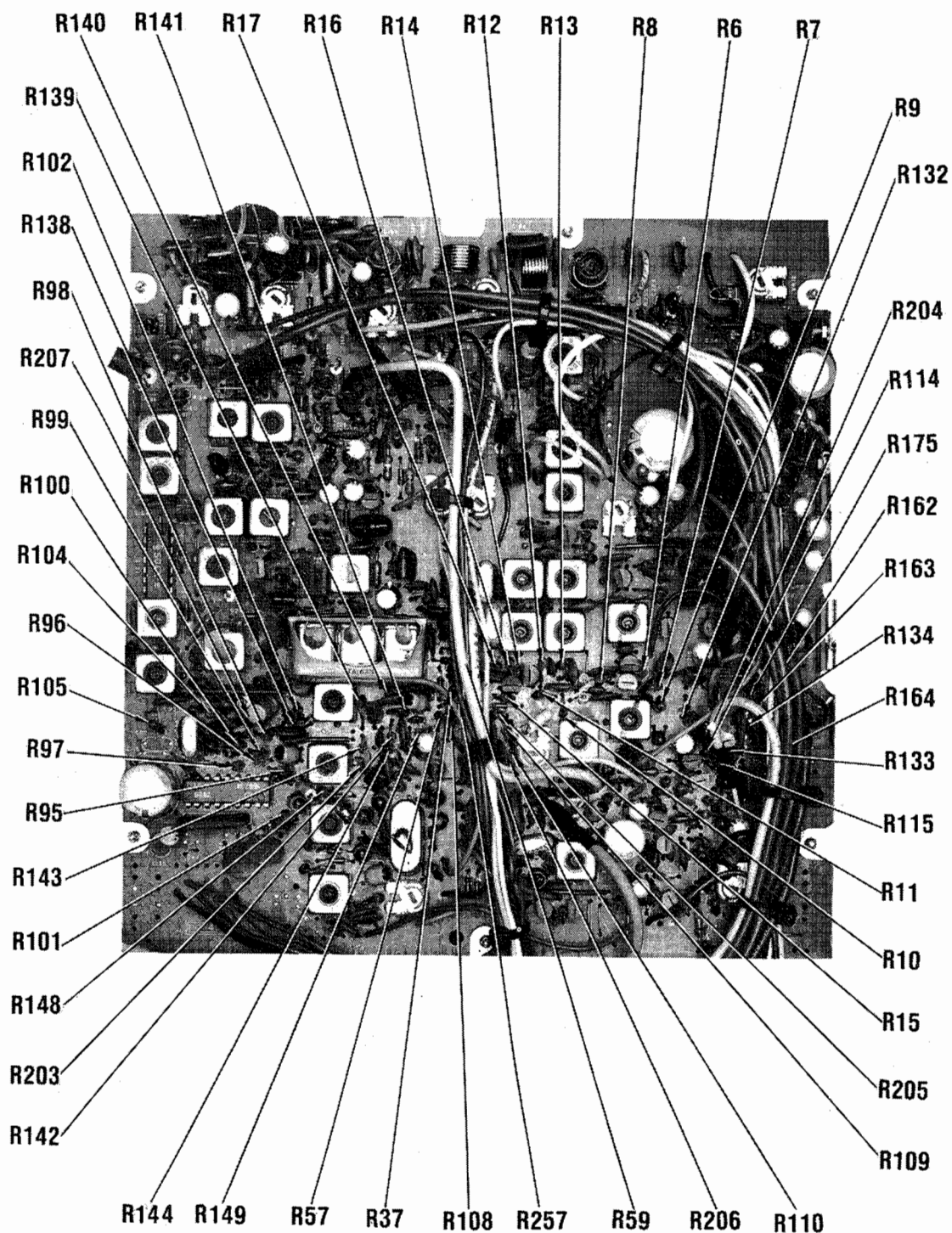
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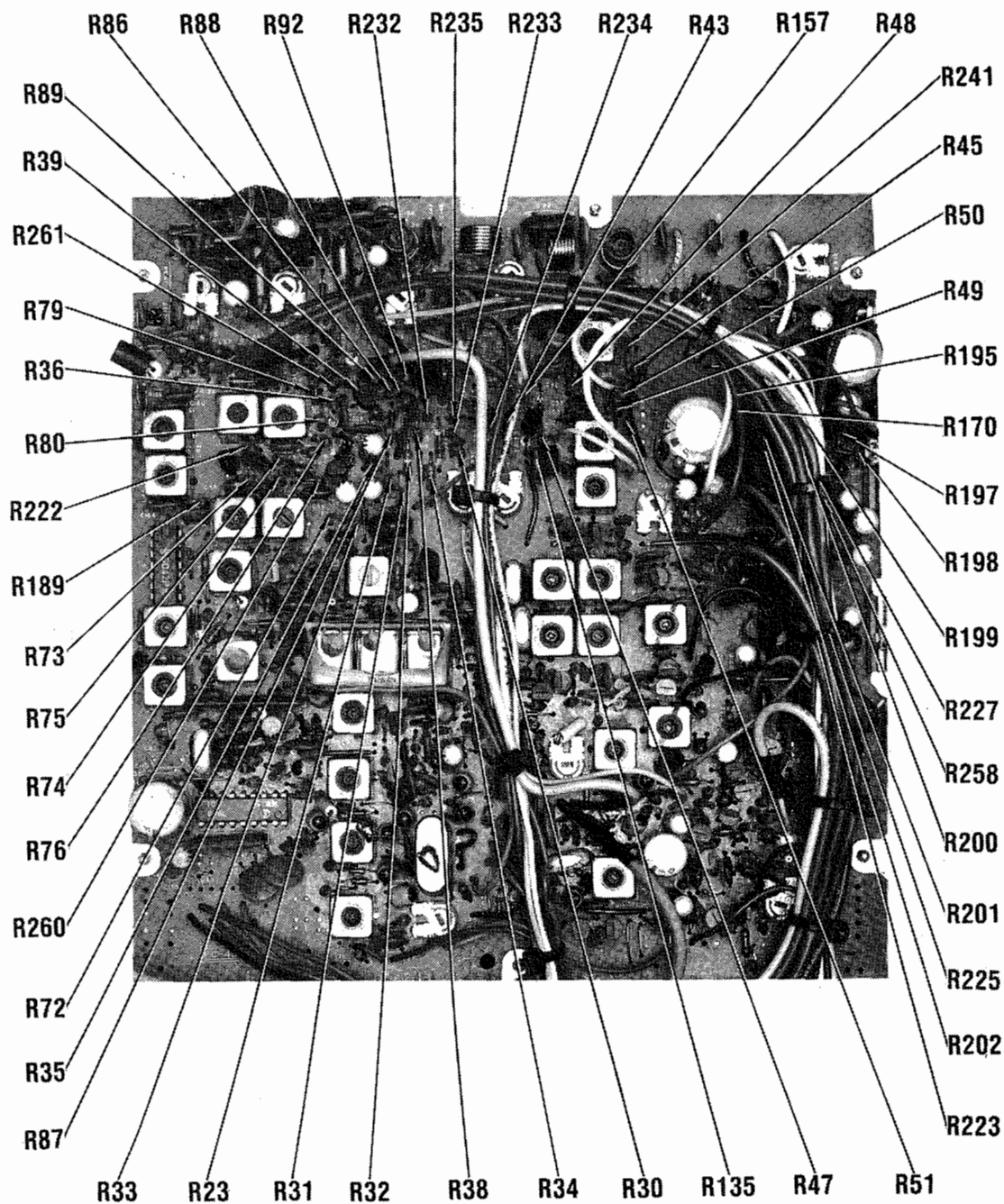
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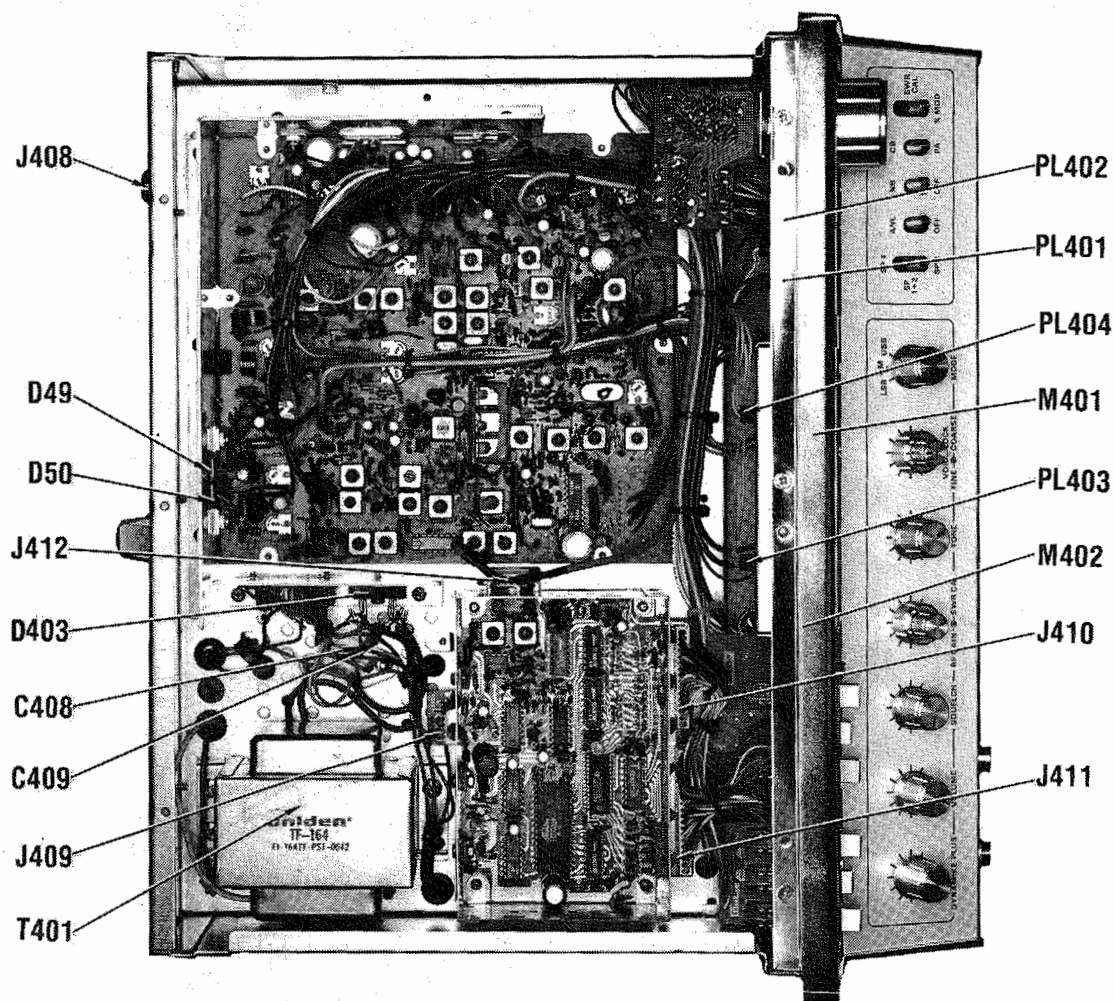
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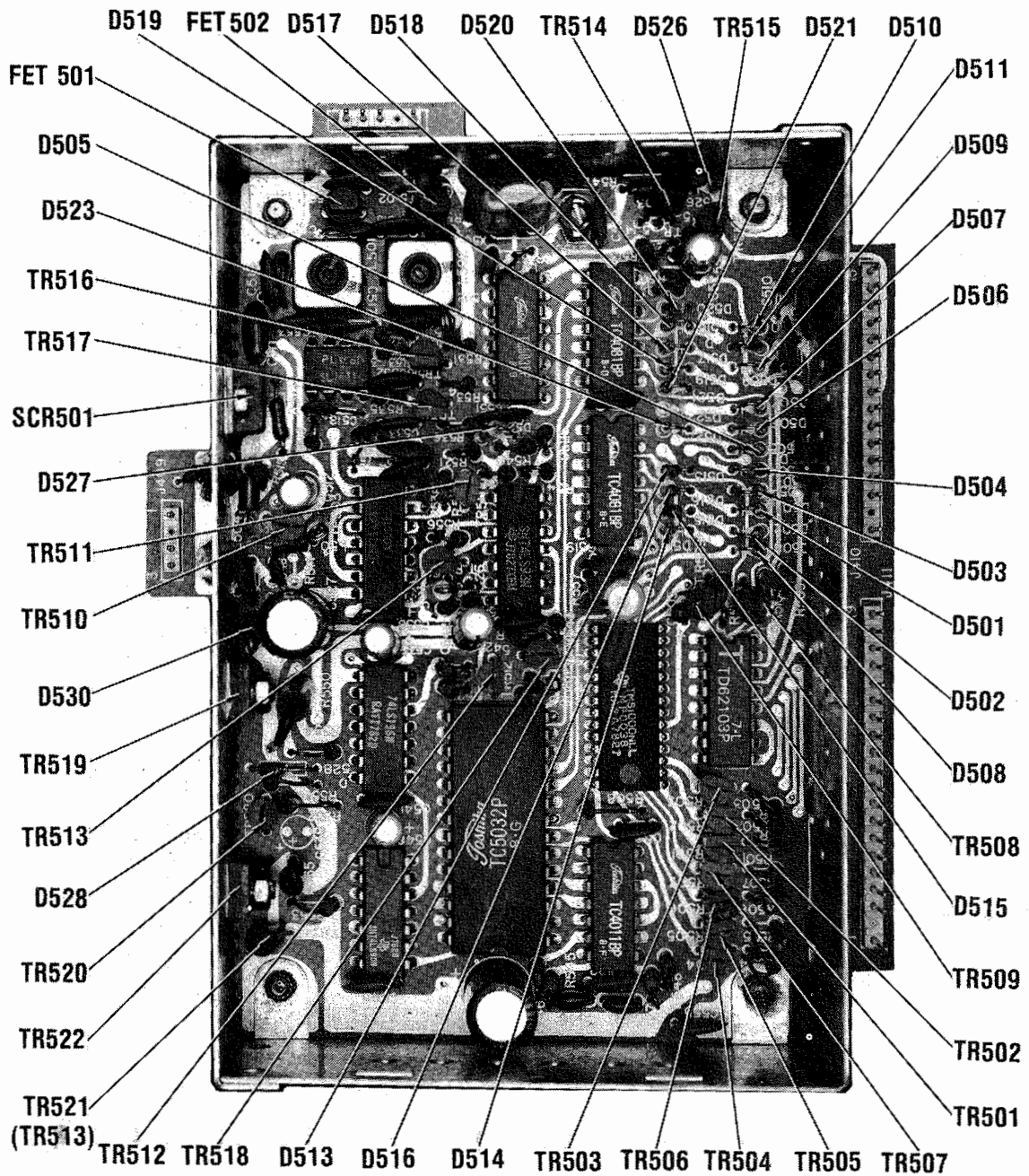
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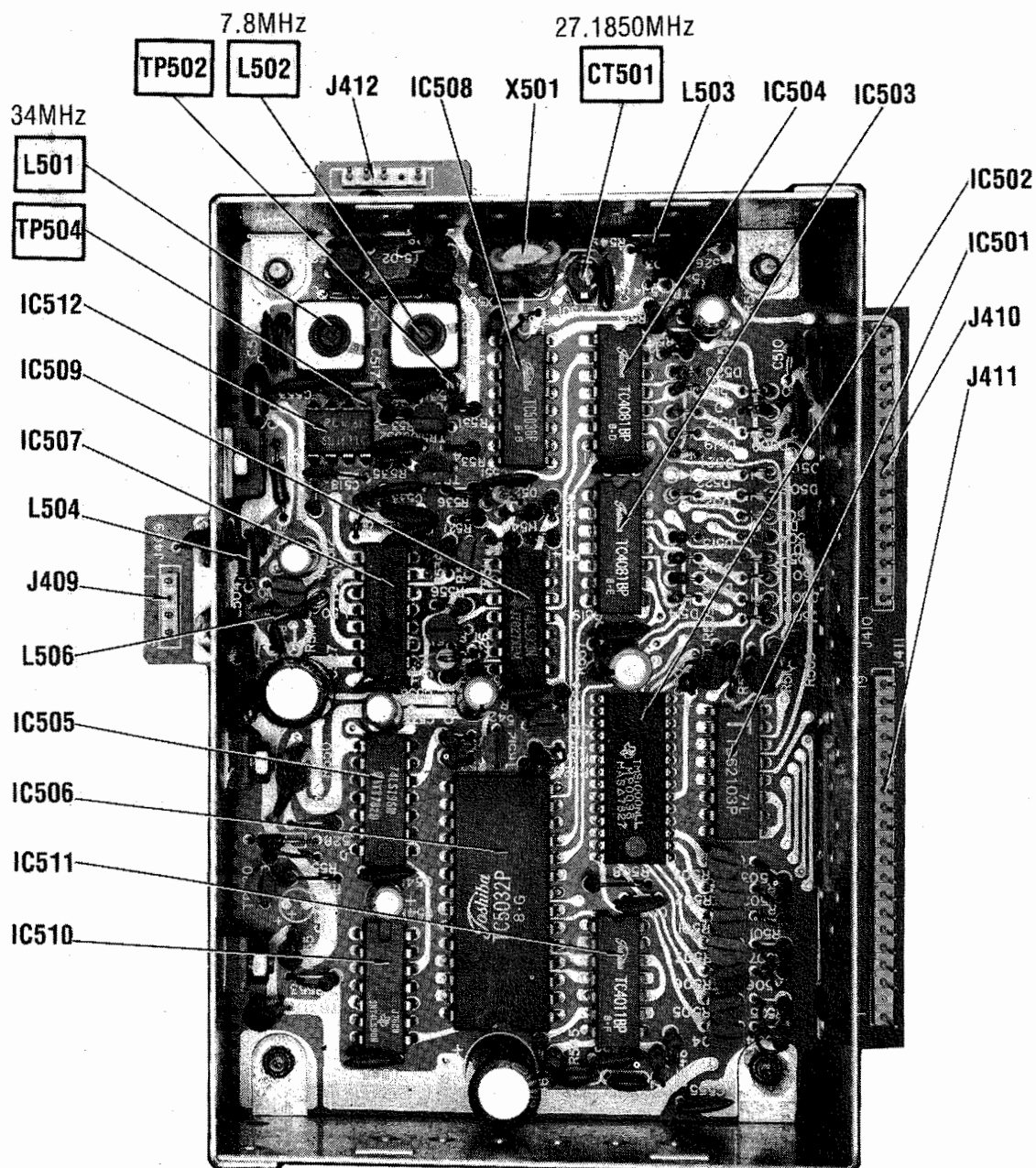
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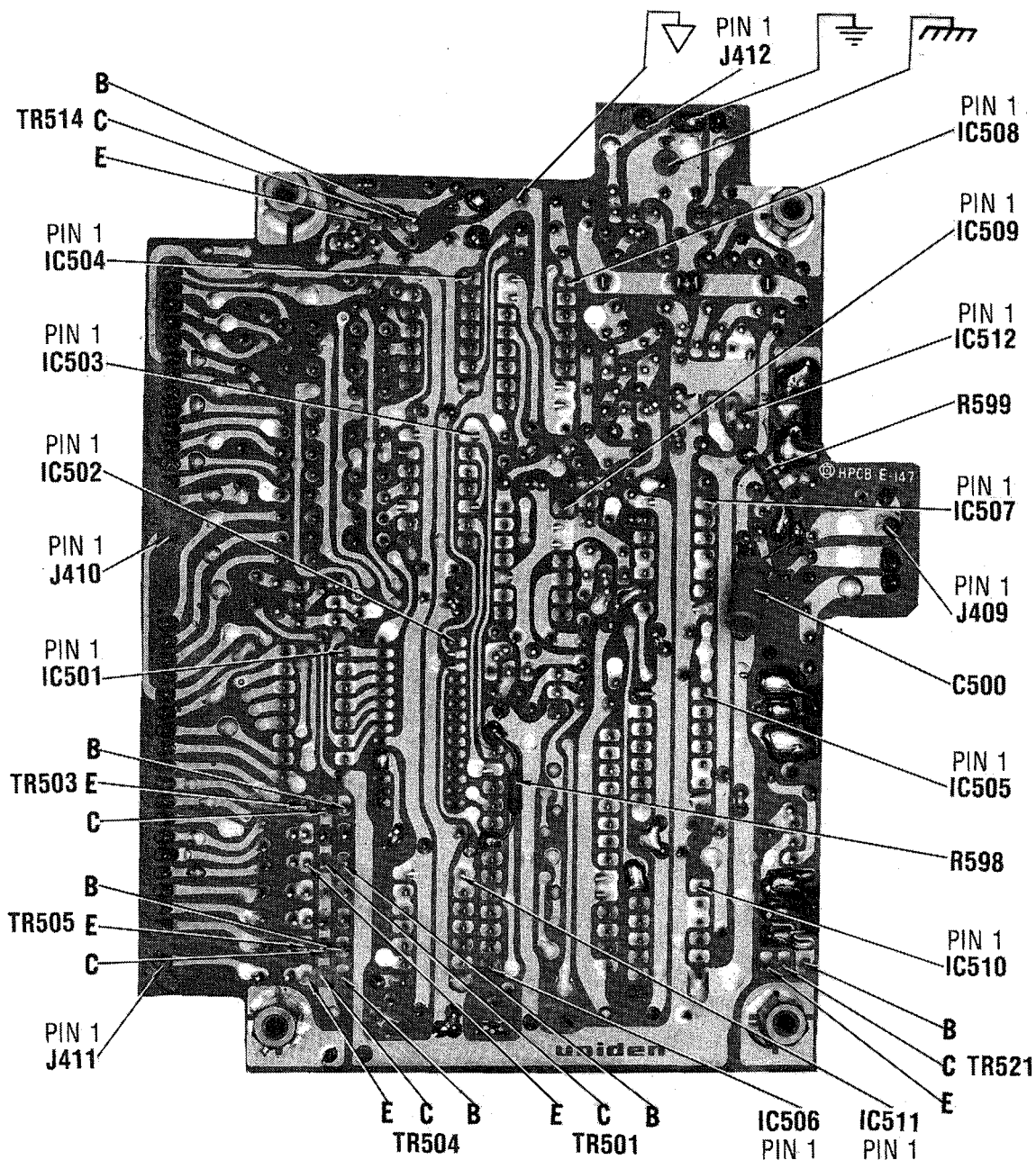
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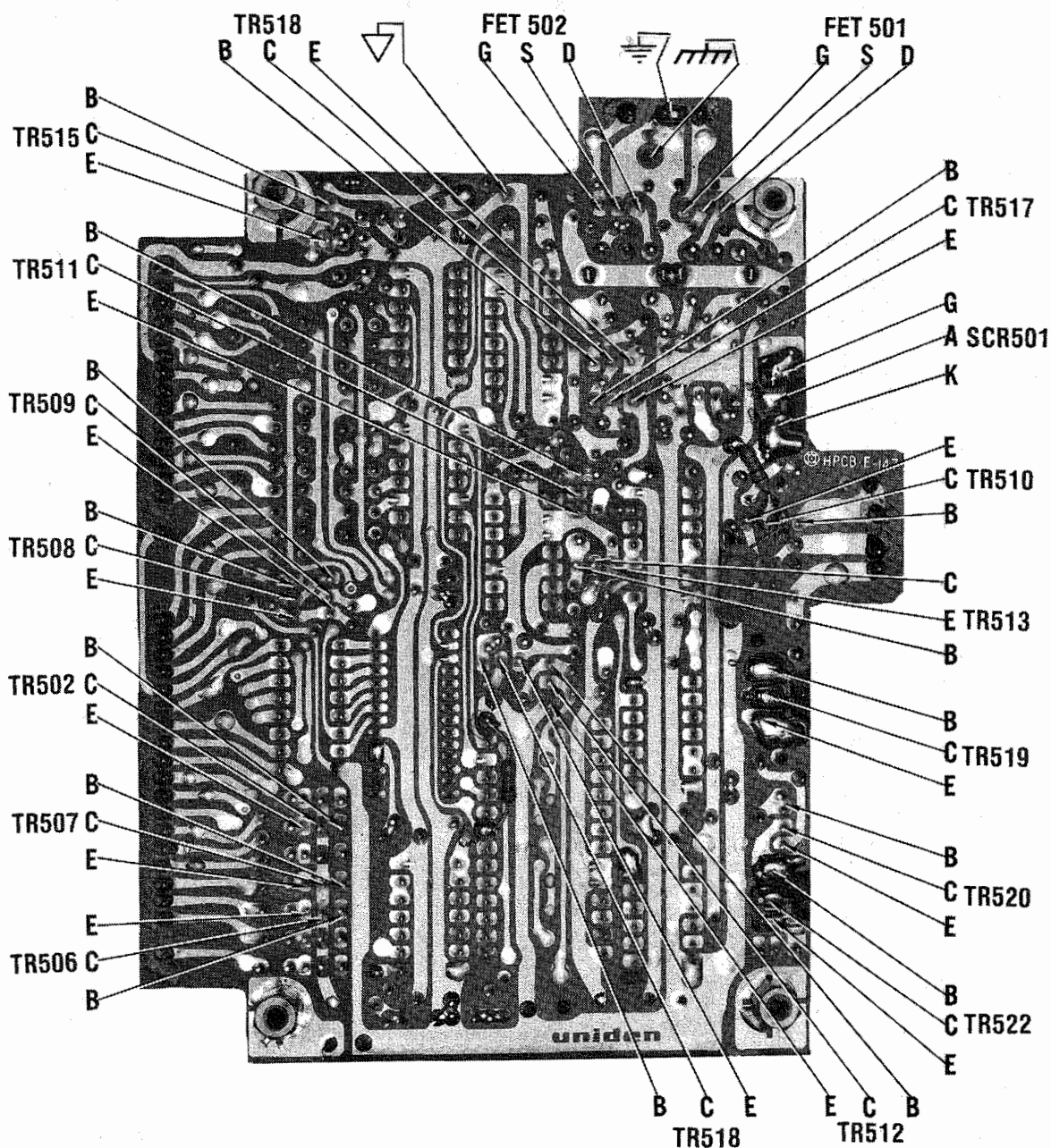
CLOCK & FREQ. COUNTER BOARD



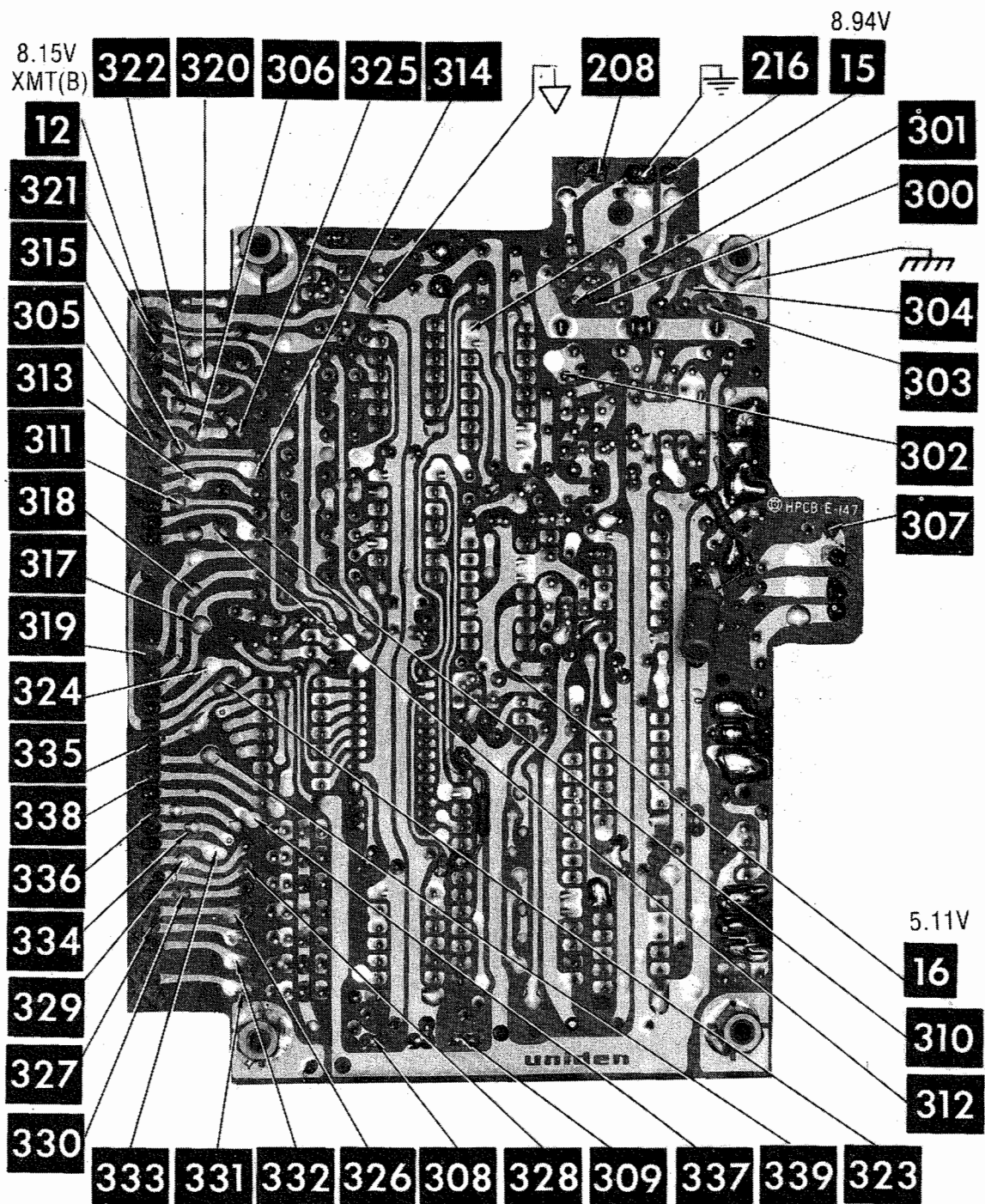
CLOCK & FREQ. COUNTER BOARD



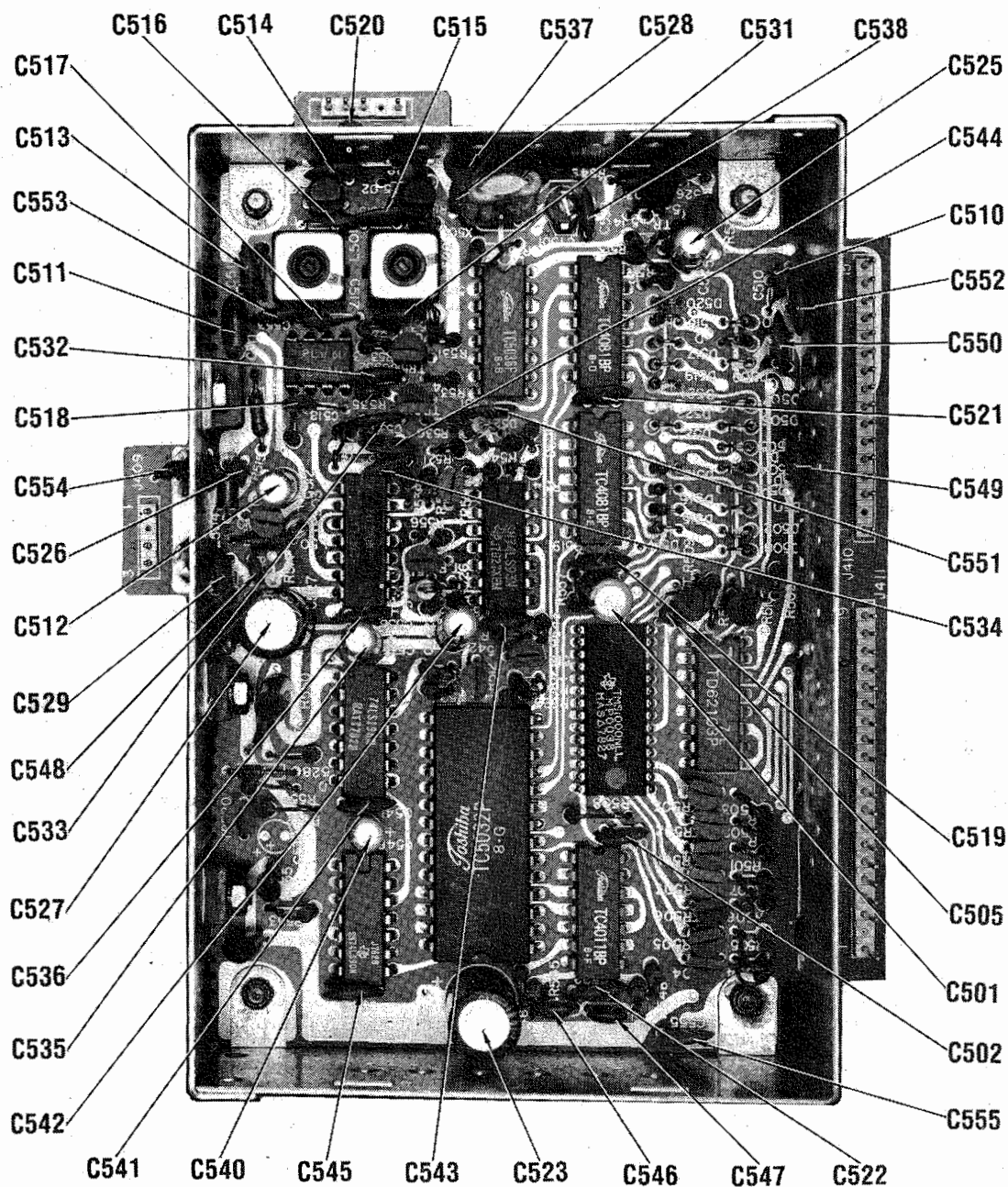
CLOCK & FREQ. COUNTER BOARD



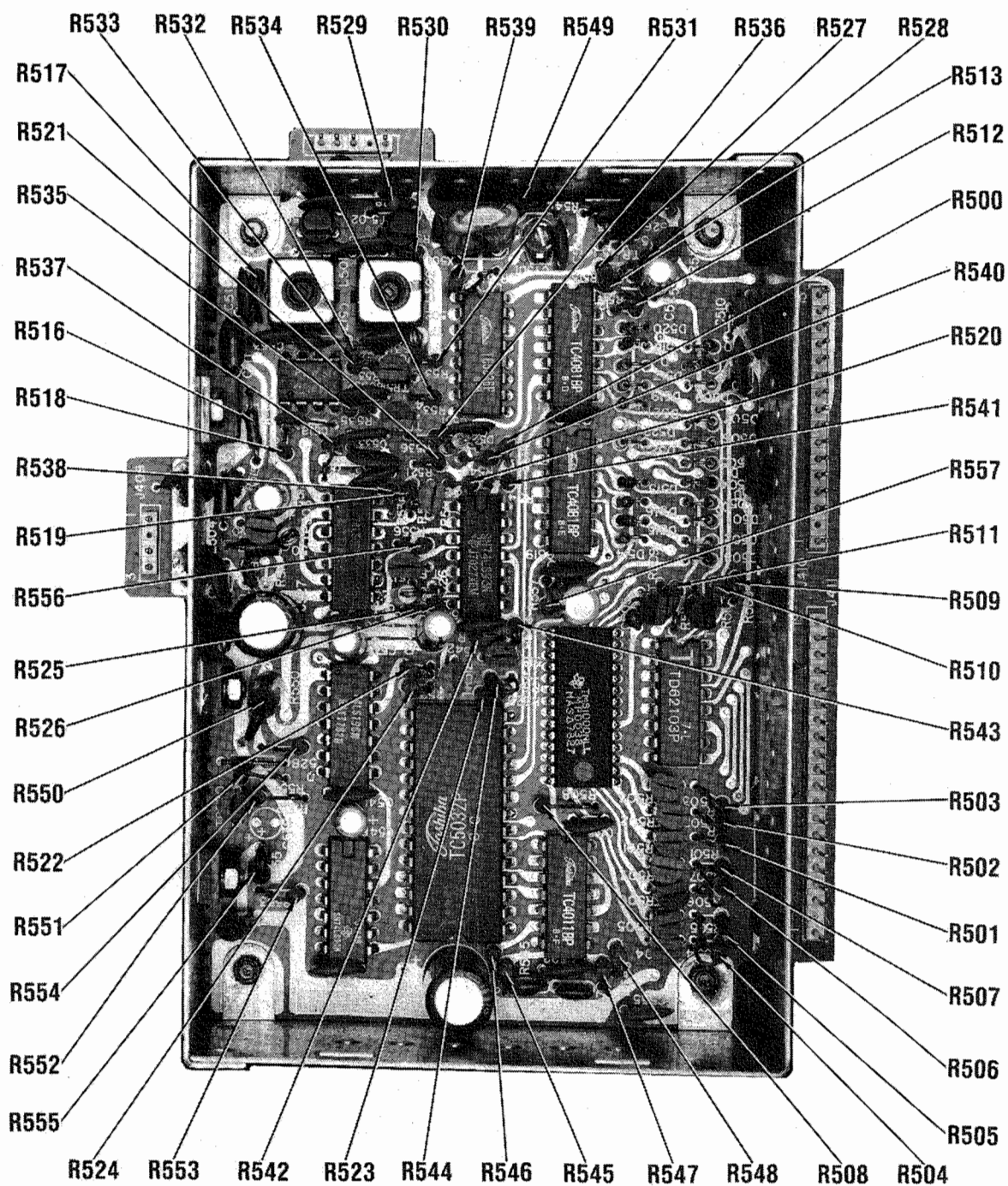
CLOCK & FREQ. COUNTER BOARD



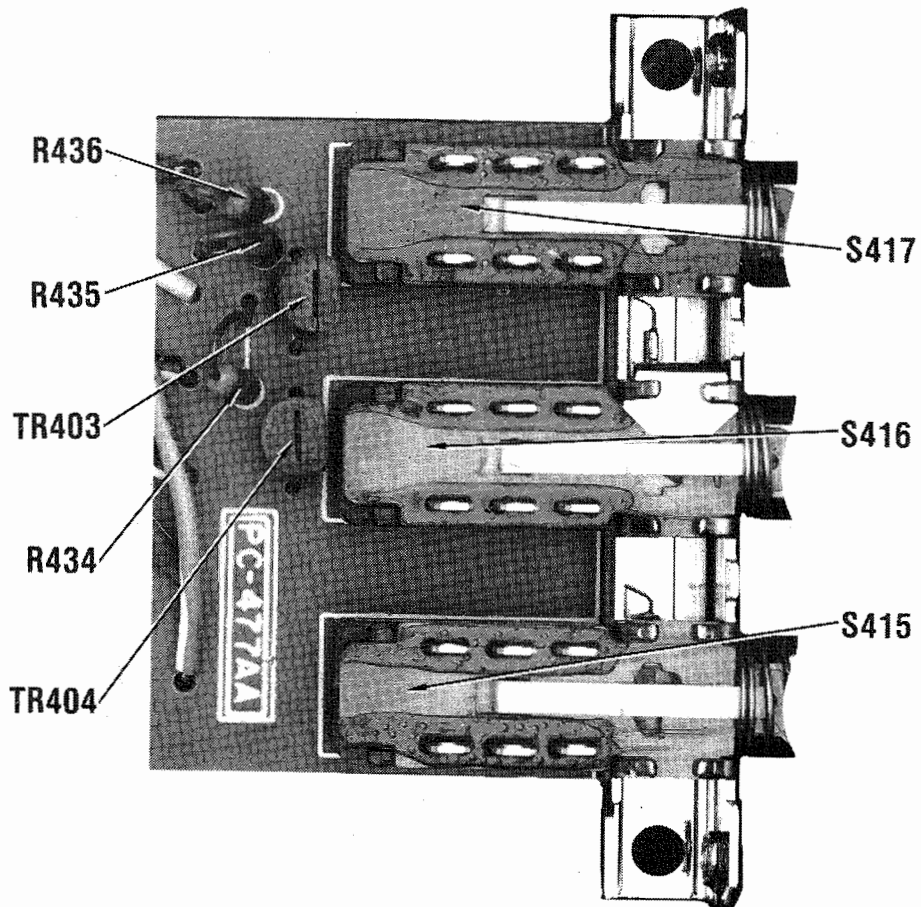
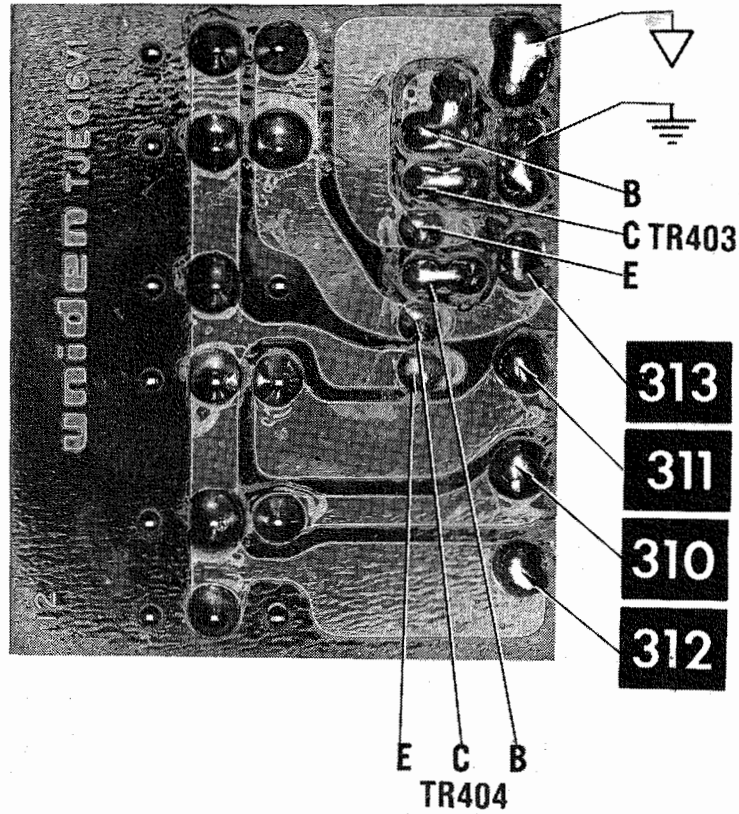
CLOCK & FREQ. COUNTER BOARD



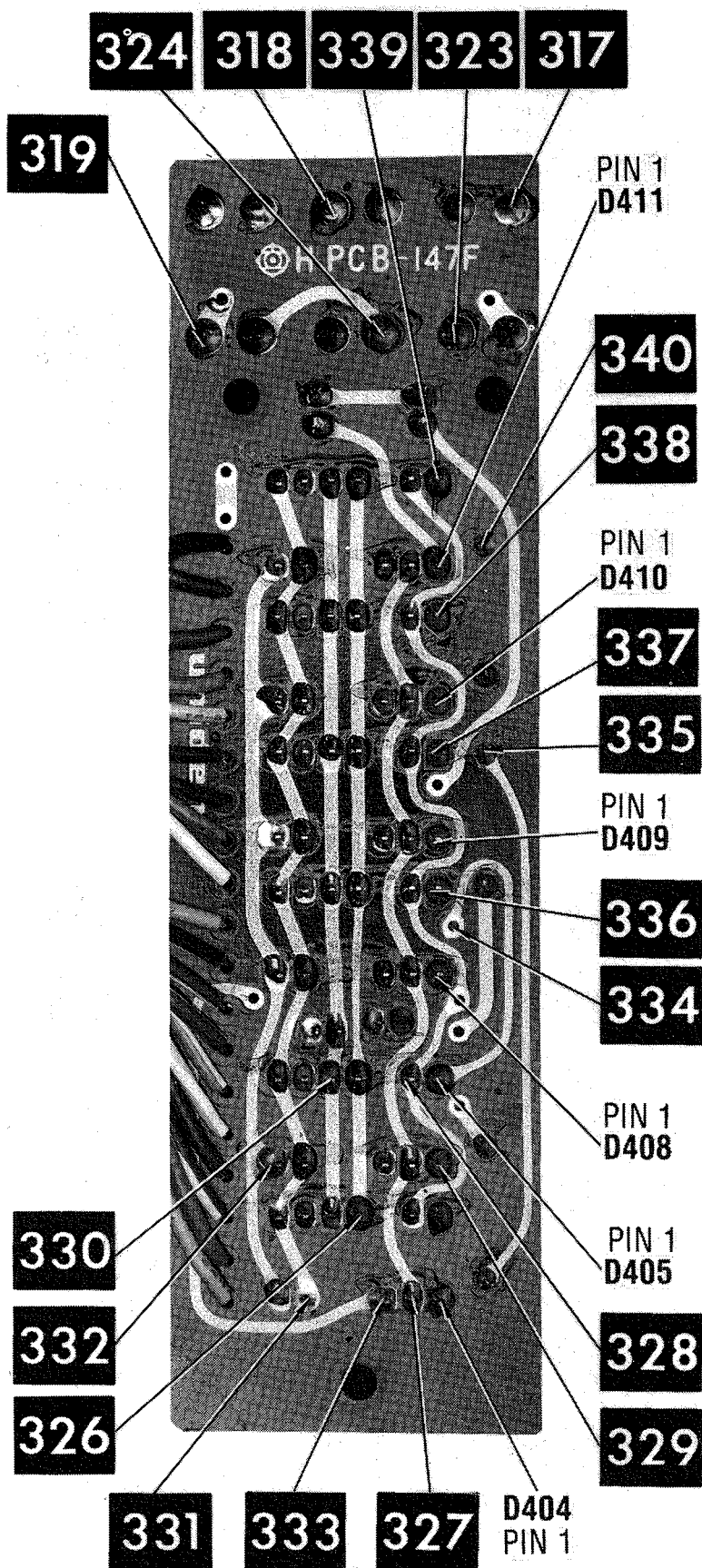
CLOCK & FREQ. COUNTER BOARD



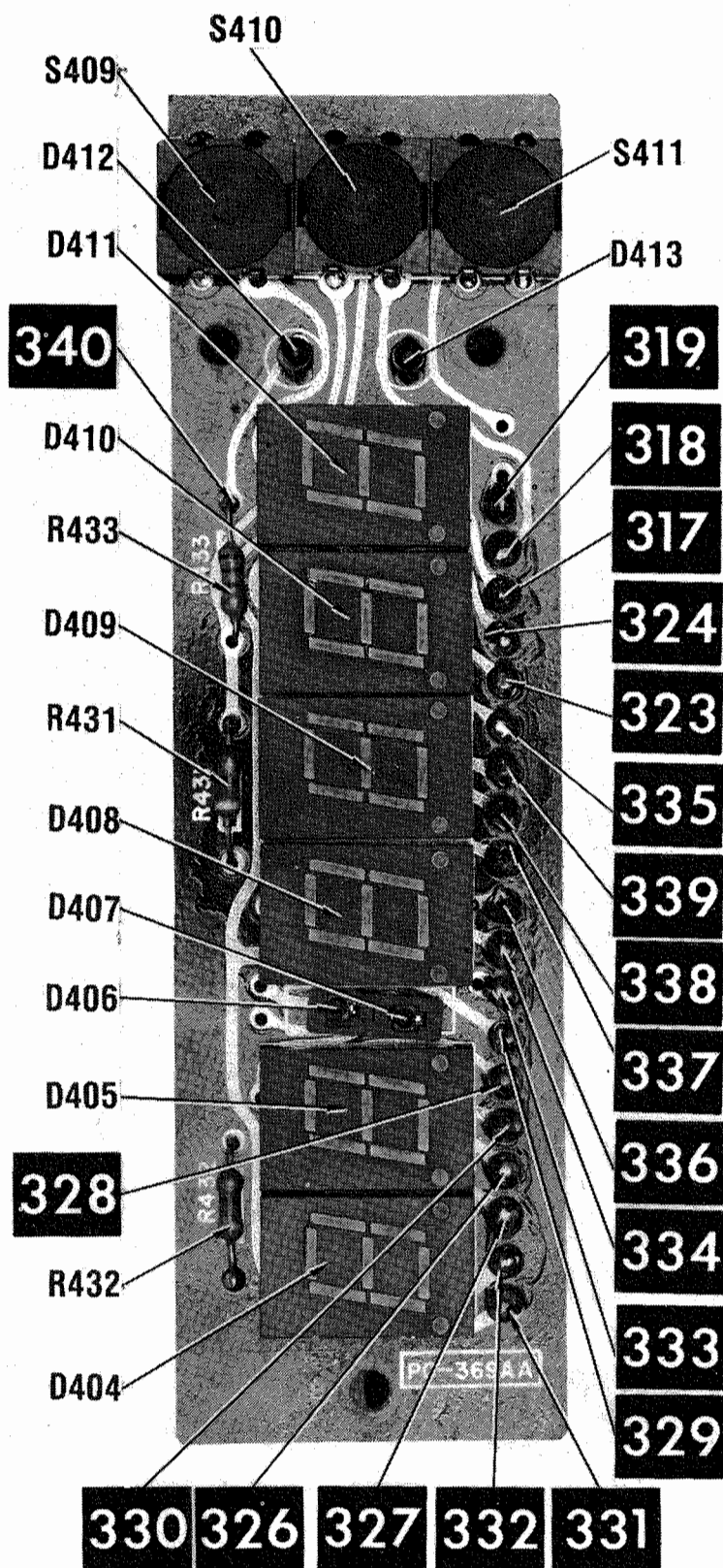
CLOCK & FREQ. COUNTER BOARD



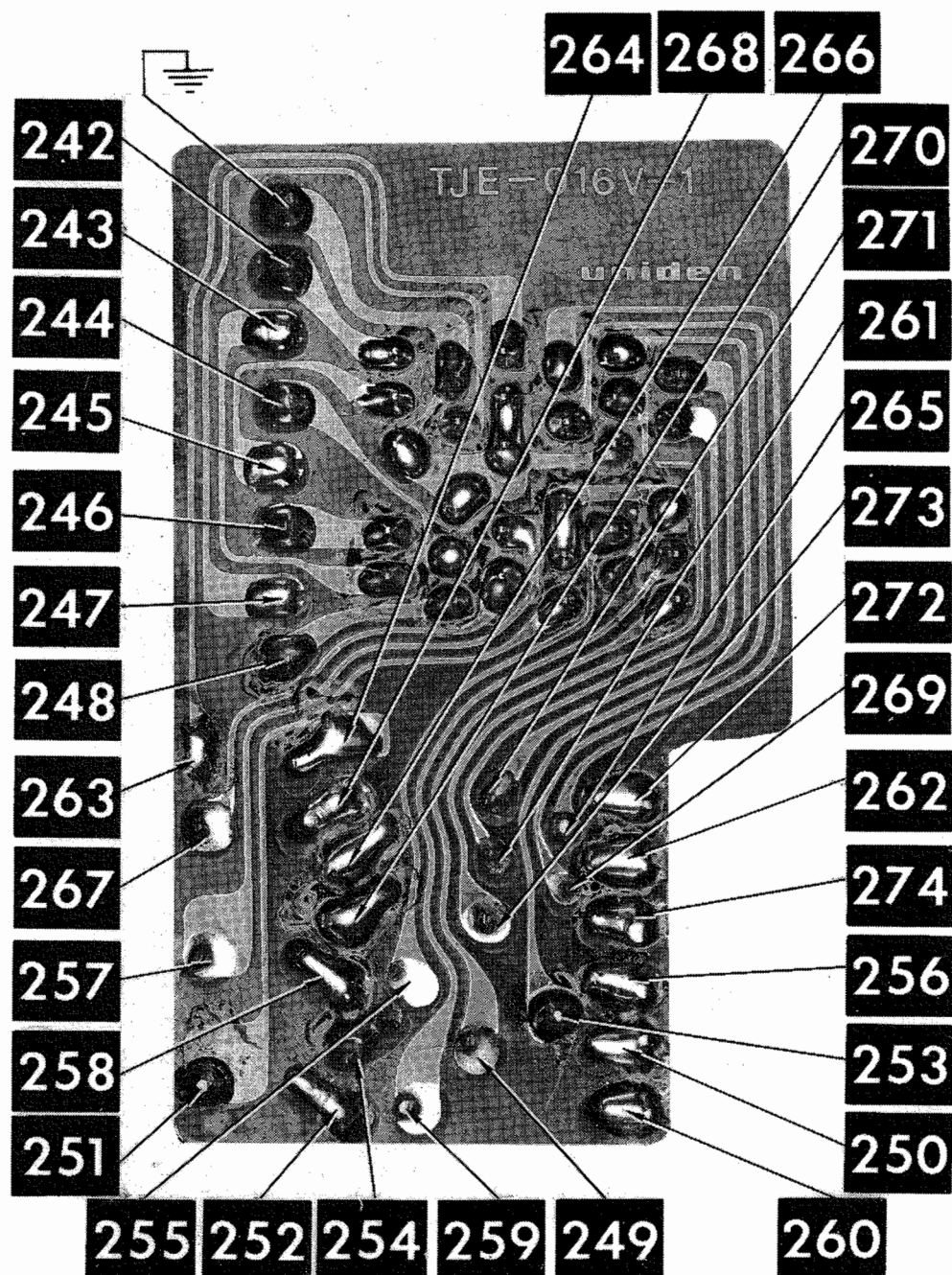
FREQ. COUNTER & TIME BOARD



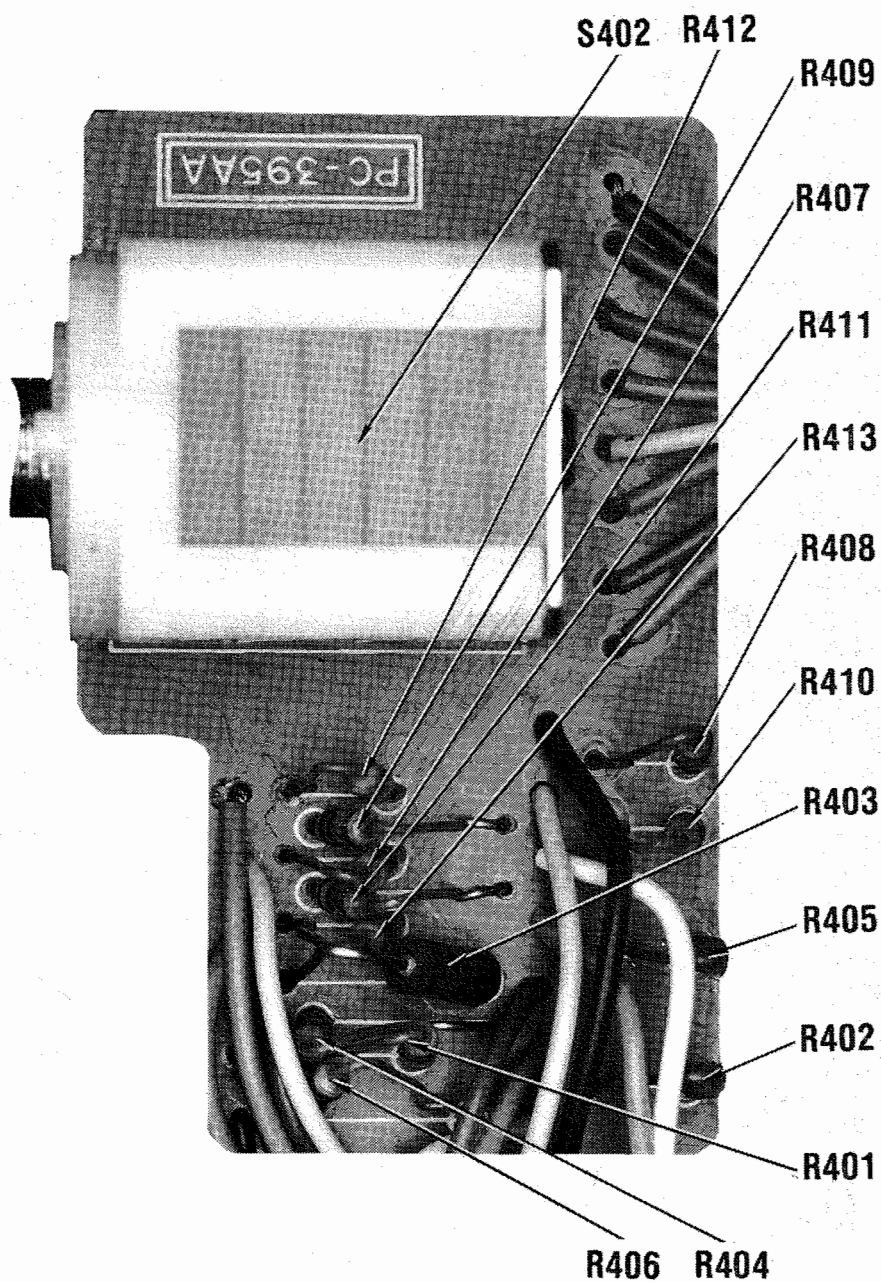
CLOCK & FREQ. DISPLAY BOARD



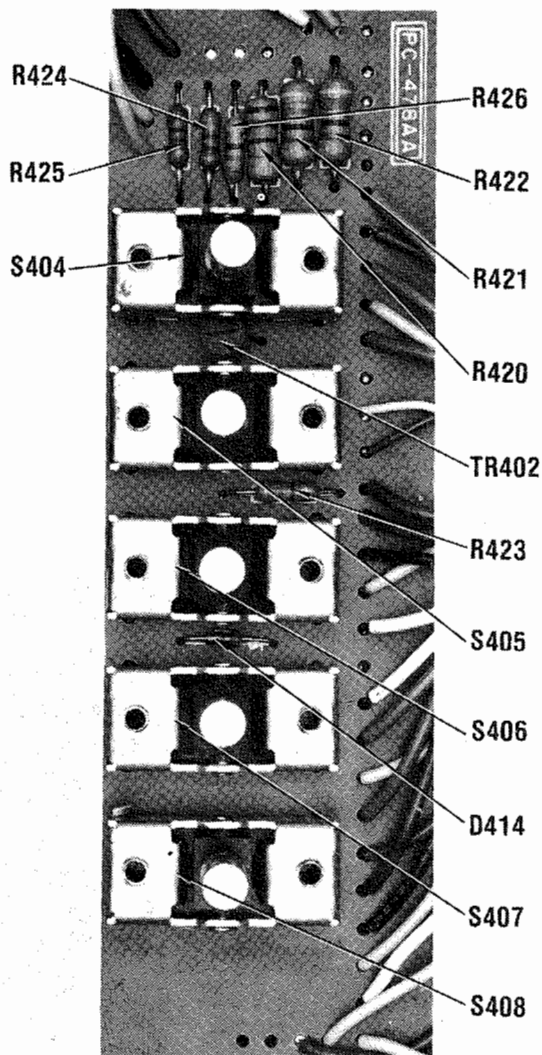
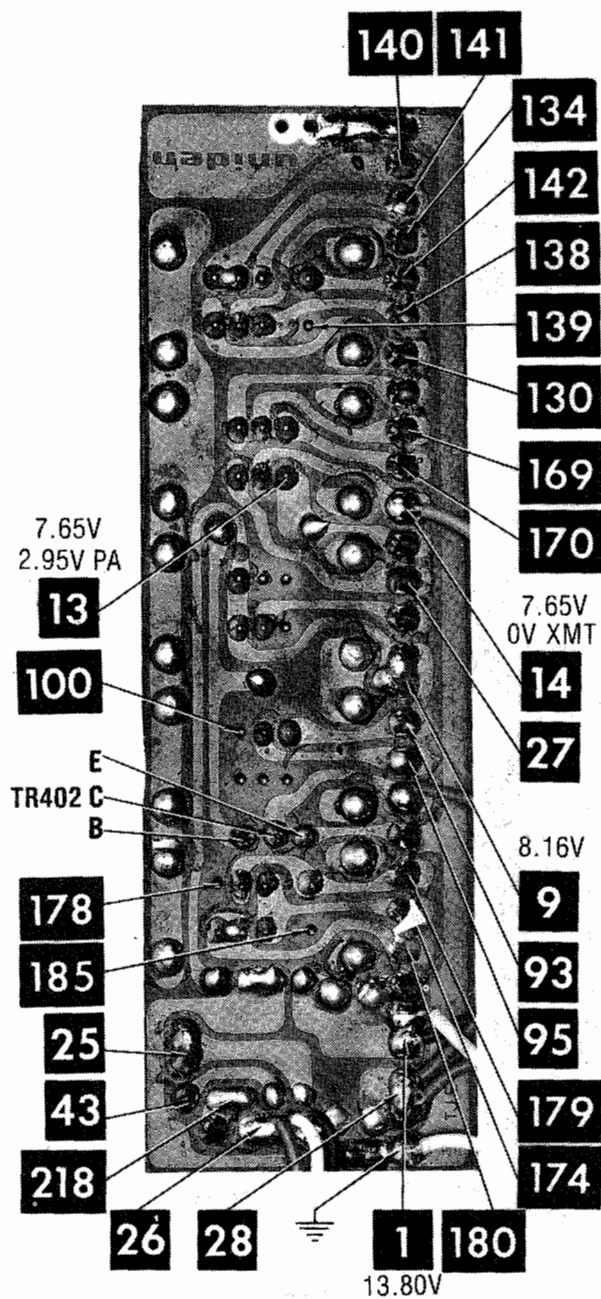
CLOCK & FREQ. DISPLAY BOARD



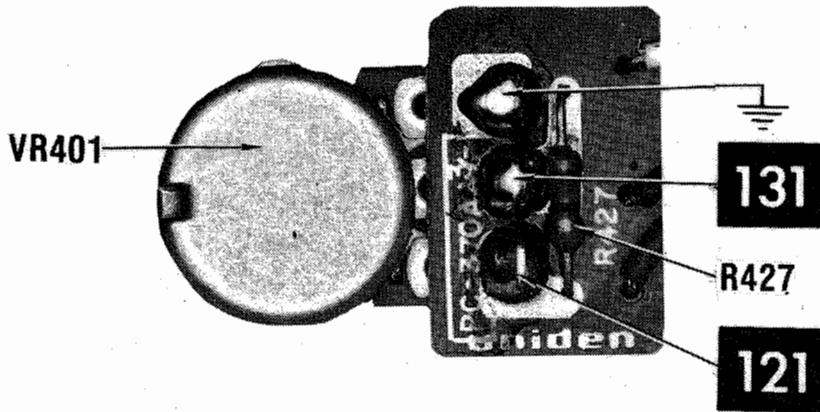
CH. SELECTOR BOARD



CH. SELECTOR BOARD

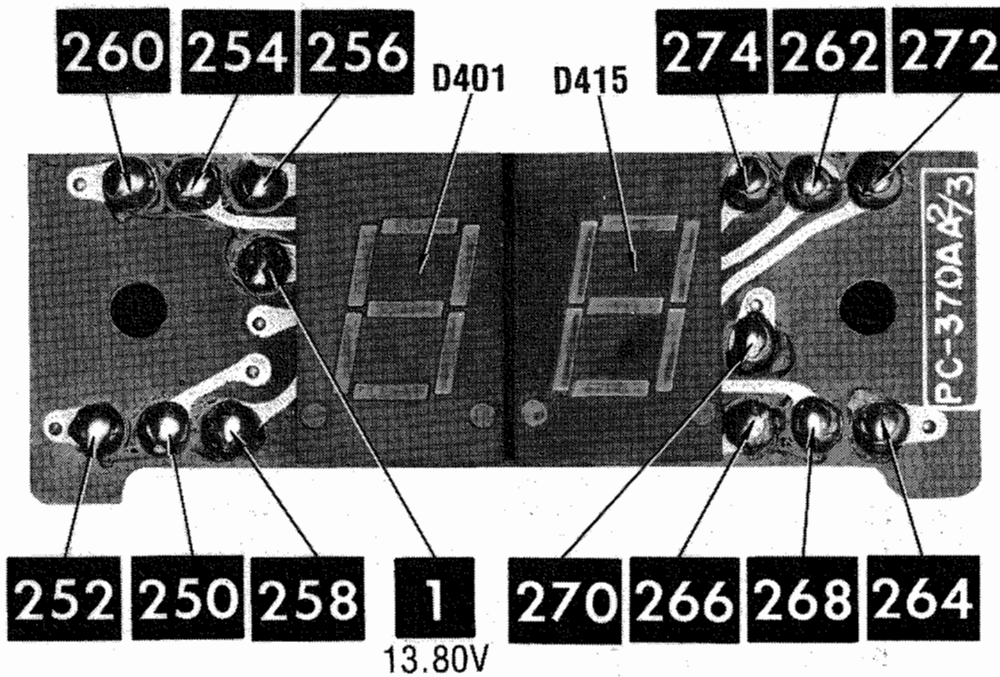


SLIDE SWITCH BOARD

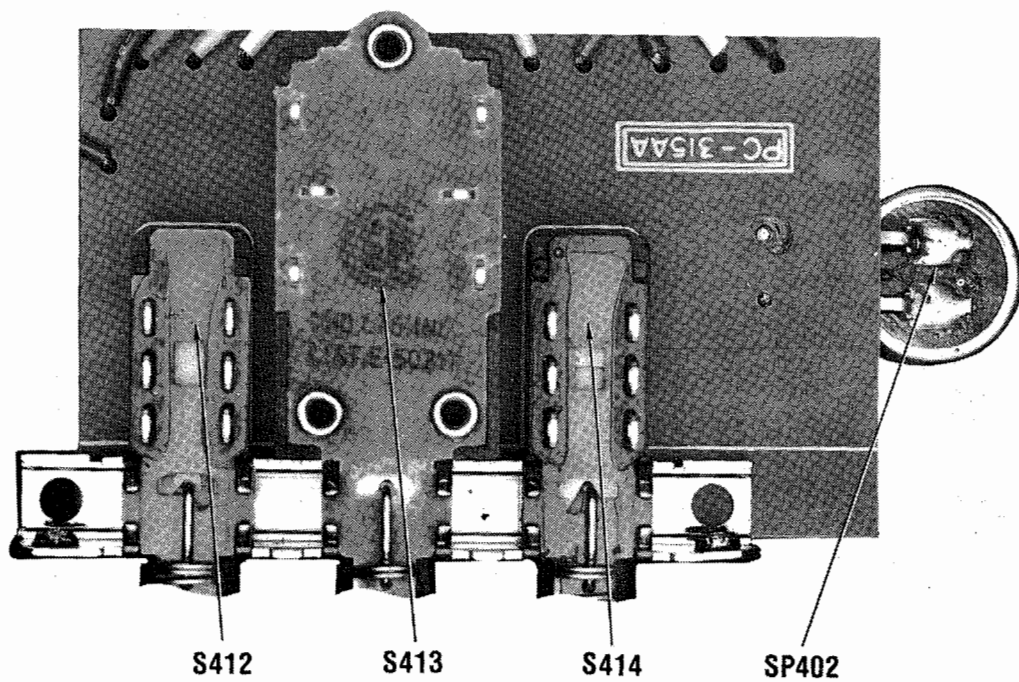
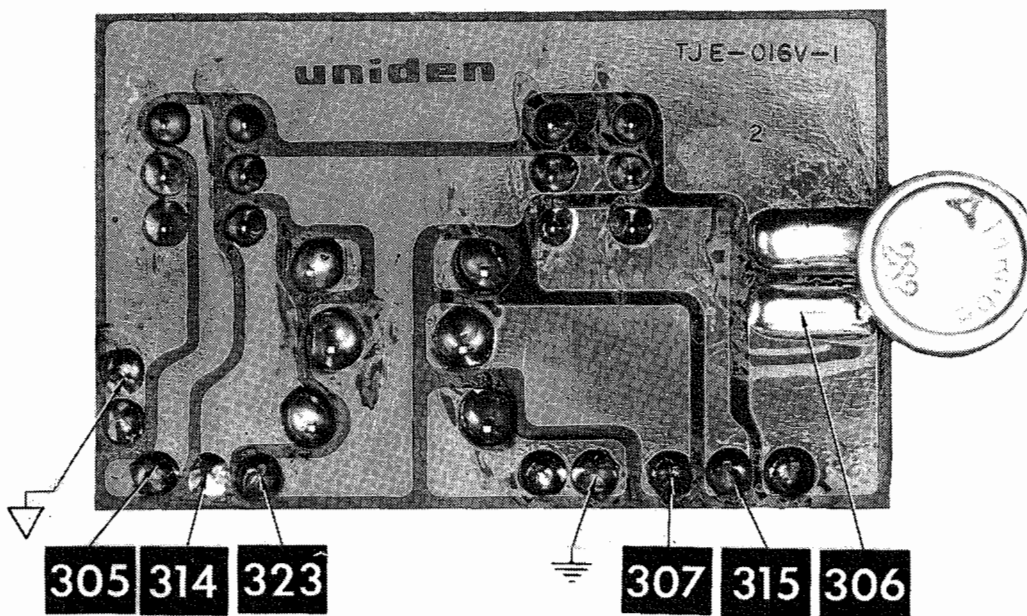


SQUELCH CONTROL BOARD

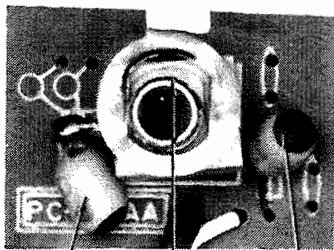
A Howard W. Sams CIRCUITRACE® Photo



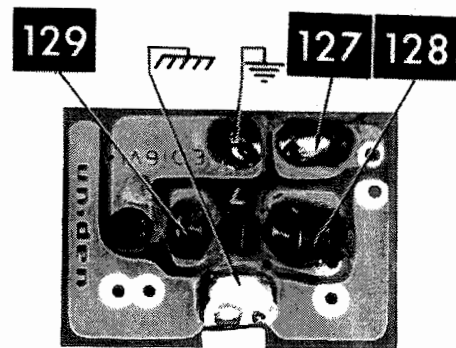
LED READOUT BOARD



DYNALERT BOARD

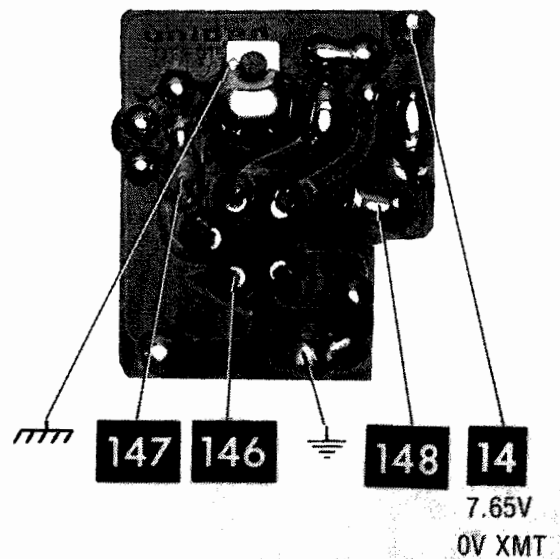
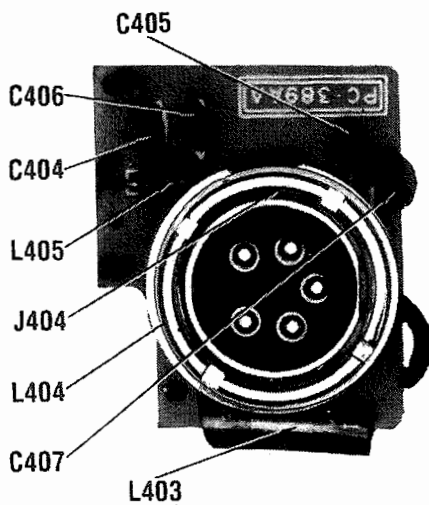


L415 J406 L414



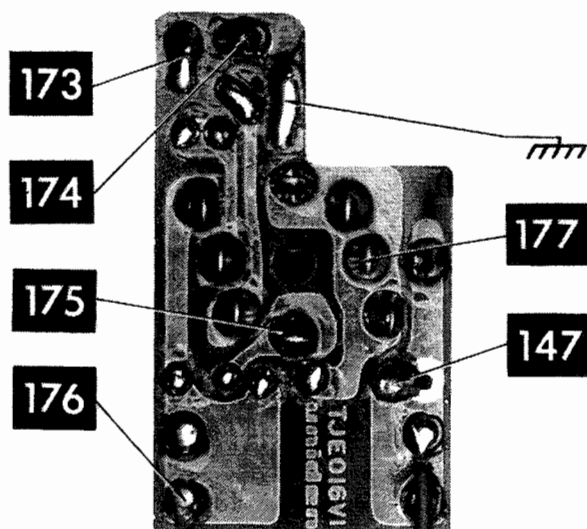
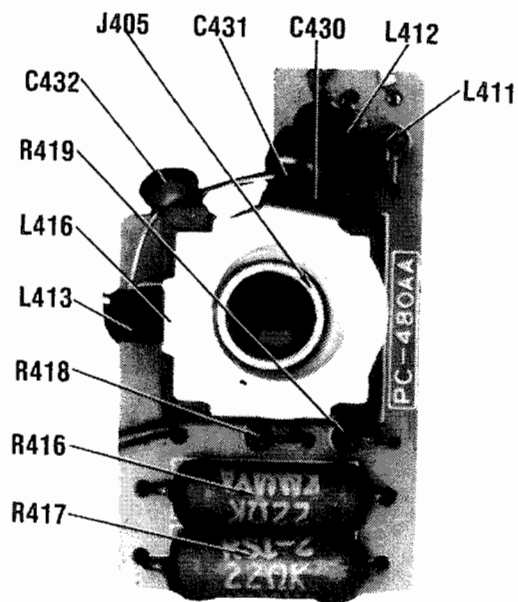
AUX JACK BOARD

A Howard W. Sams **CIRCUITRACE®** Photo



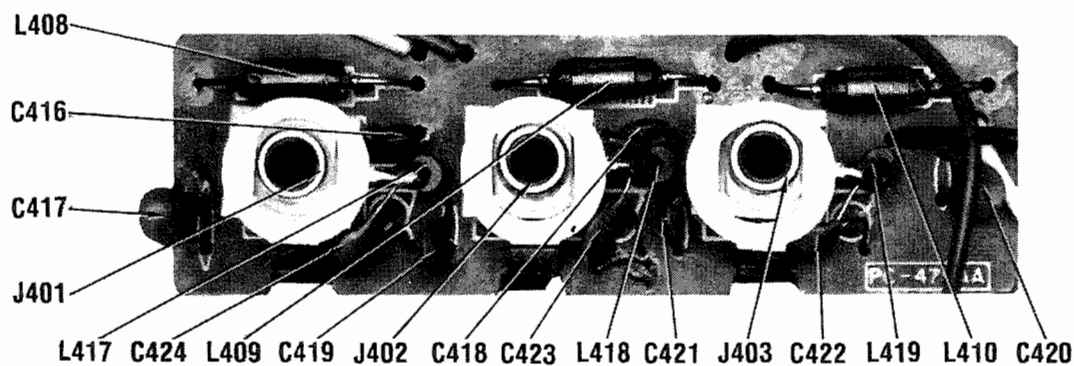
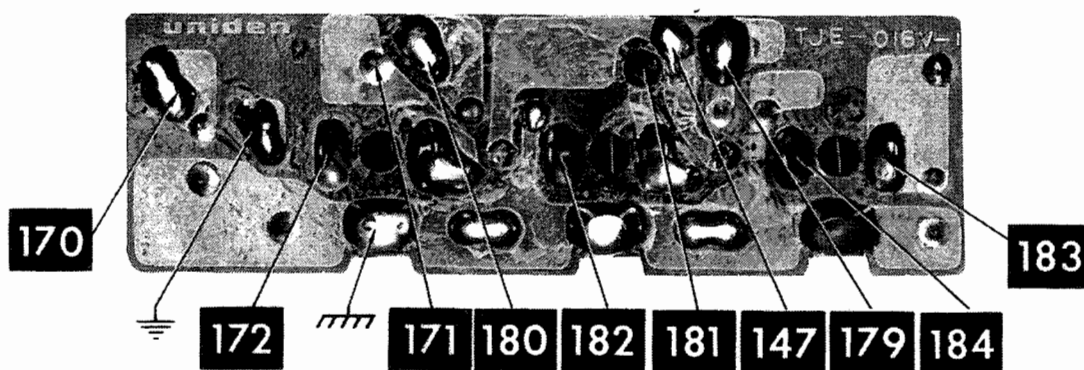
7.65V
0V XMT

MIC JACK BOARD

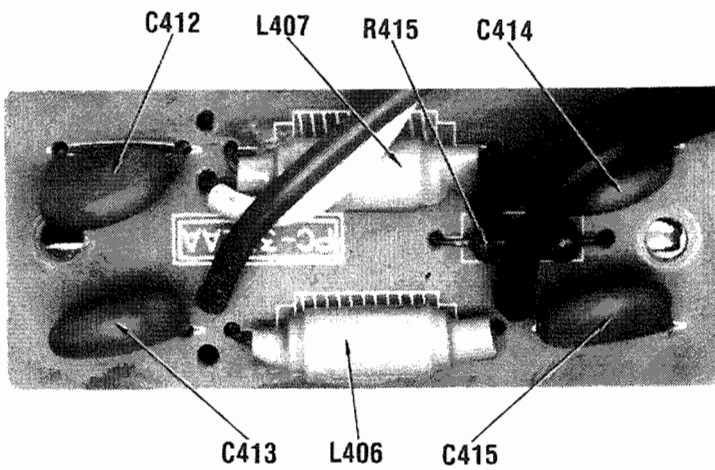
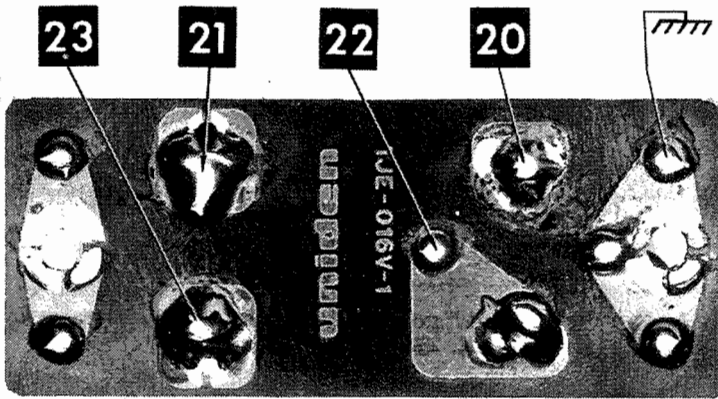


PHONE JACK BOARD

A Howard W. Sams **CIRCUITRACE®** Photo

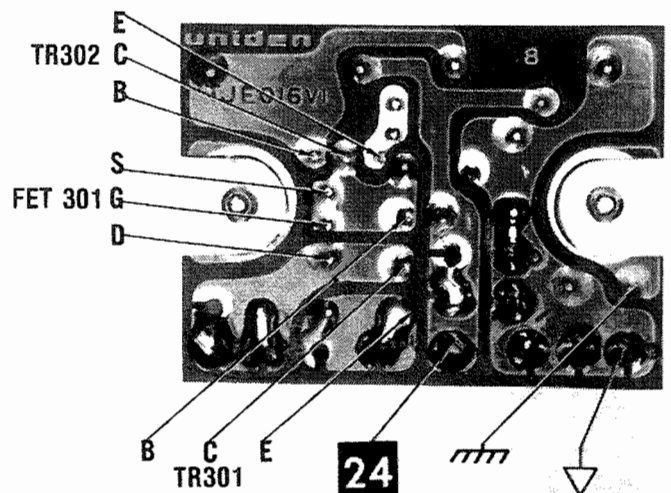
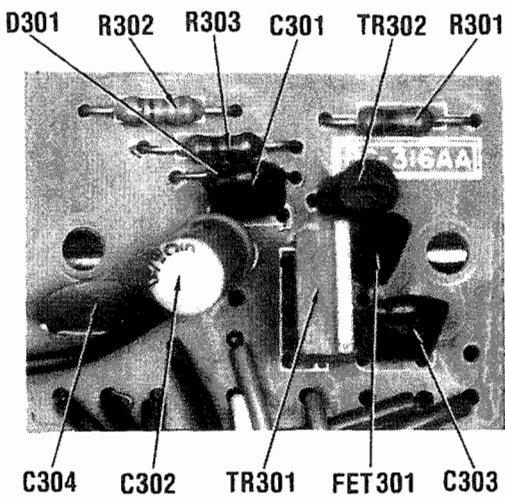


OUTPUT & JACK BOARD

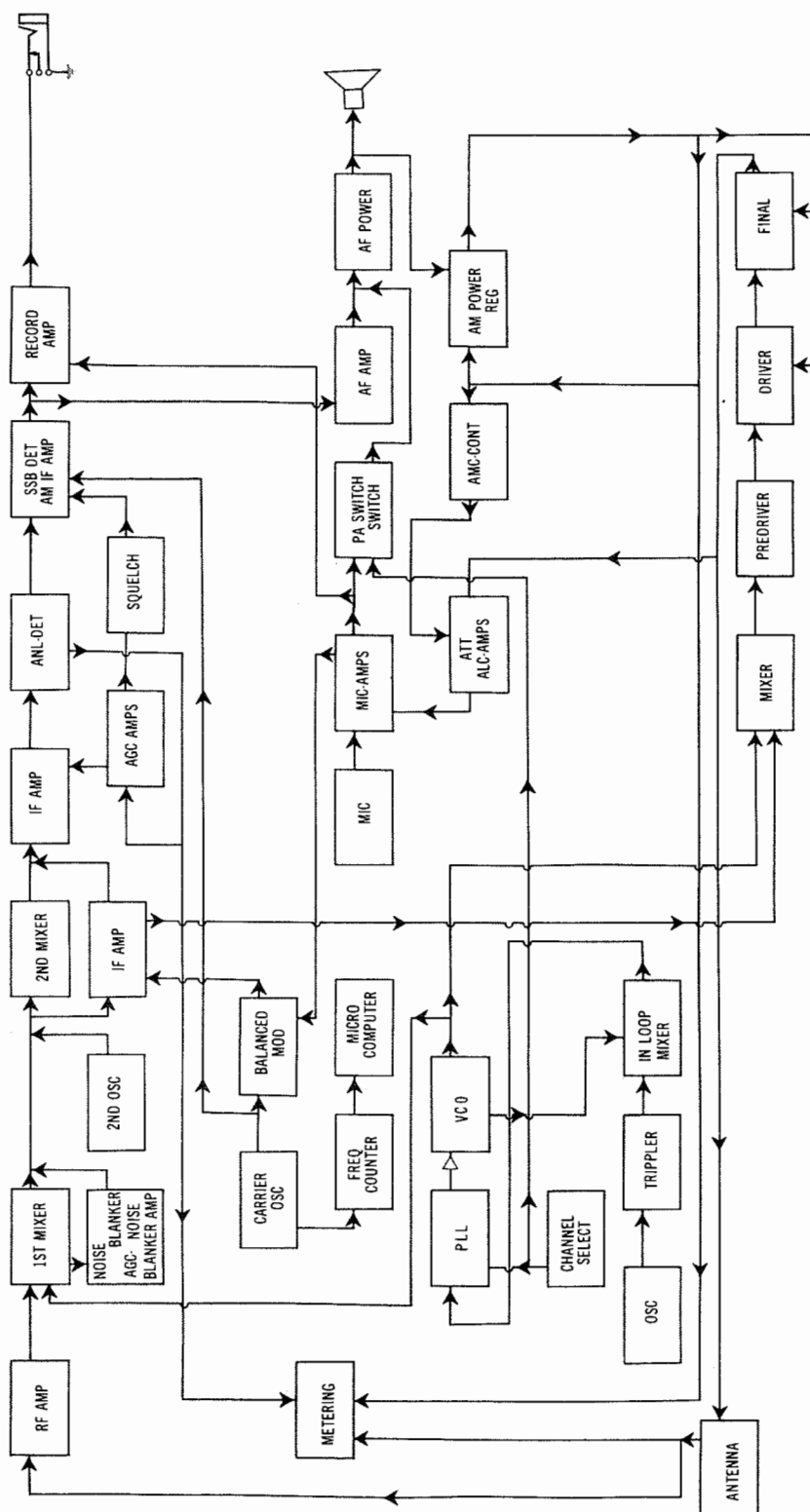


LINE FILTER BOARD

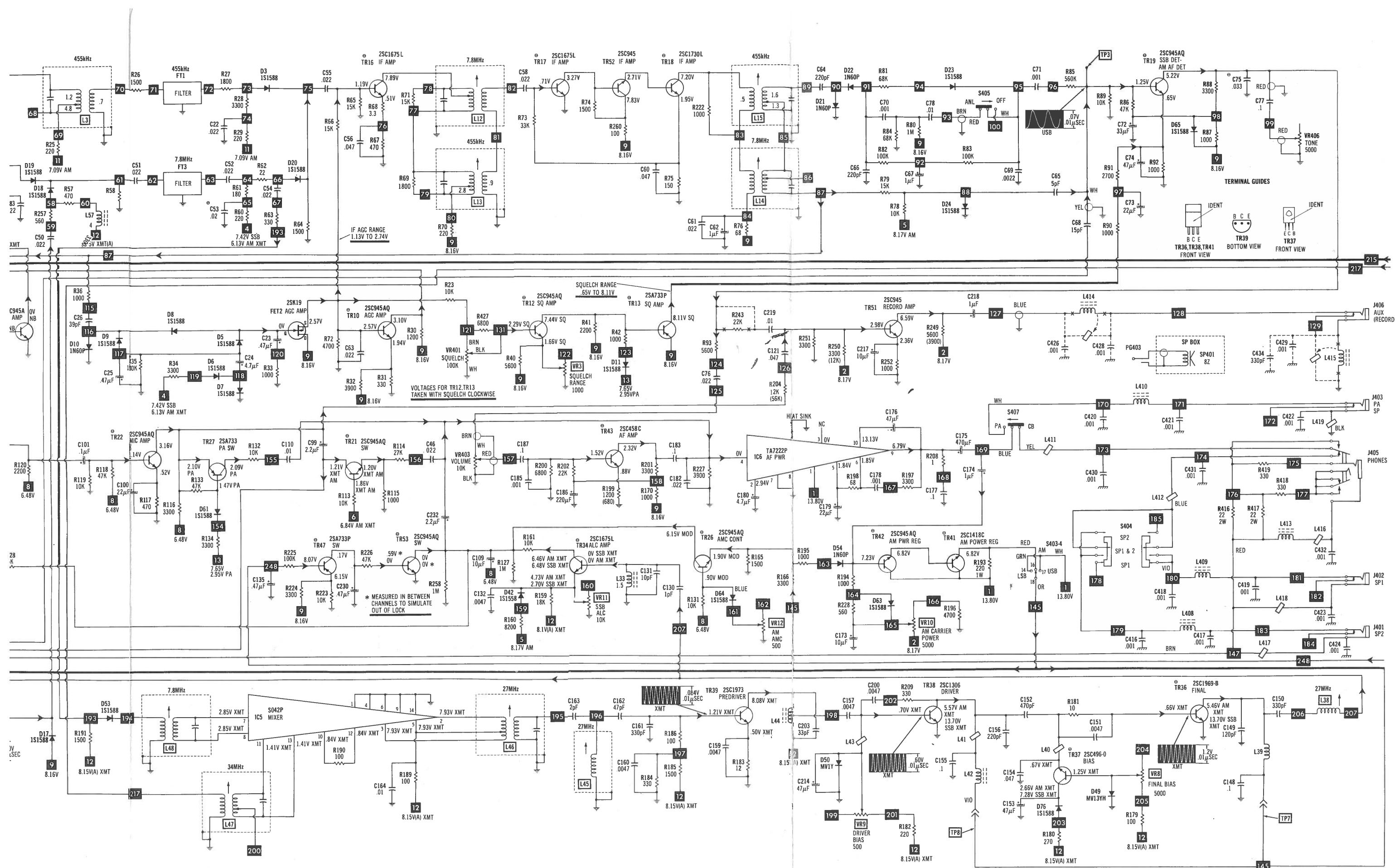
A Howard W. Sams CIRCUITRACE® Photo

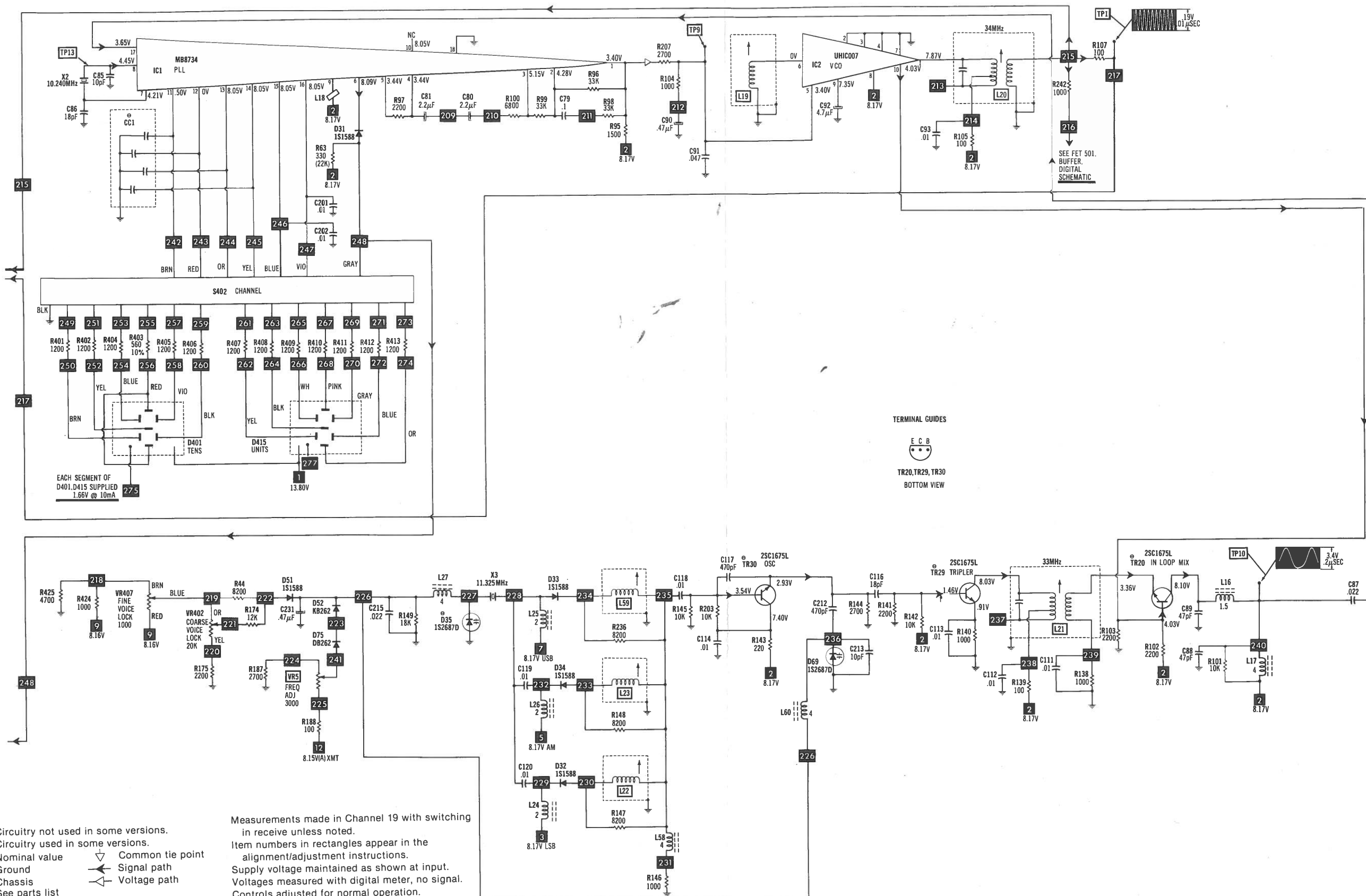


POWER SUPPLY BOARD





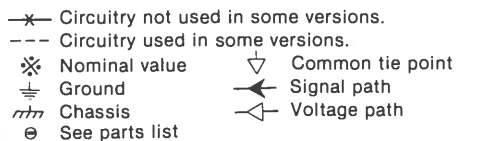




✕ Circuitry not used in some versions.
 --- Circuitry used in some versions.
 ✖ Nominal value
 ⚡ Ground
 ⏏ Chassis
 Ⓢ See parts list
 Waveforms and Voltages taken in Channel 19 with switching in receive unless noted.
 A PHOTOFACT STANDARD NOTATION SCHEMATIC

Measurements made 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).

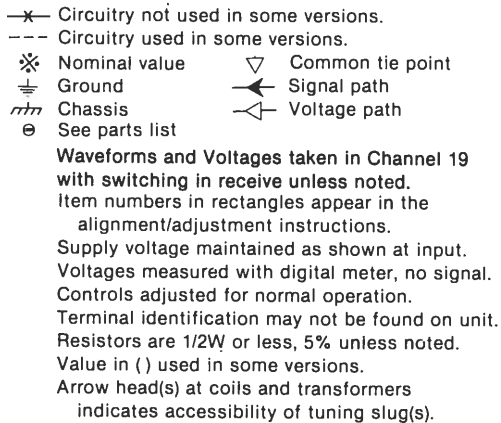
PLL SCHEMATIC



A PHOTOFACT STANDARD NOTATION SCHEMATIC

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COBRA MODEL 2000GTL





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')
(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	4-conductor (unshielded) 23AWG	BELDEN No. 8415 (6')
	(9') BELDEN No. 17109	5-conductor (1 shielded) 28AWG	BELDEN No. 9467 (6')
			BELDEN No. 9465 (7-1/2')

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	SYLVANIA PART No.	THORDARSON PART No.	WORKMAN PART No.	ZENITH PART No.
D1	1N60P	150-006-9-001	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-29001
D2	1N60	150-006-9-001	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-29001
D3	1N60P	151-051-9-001	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-29001
	1S1588		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S2473		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S2472		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S953		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D5	1S1588	151-051-9-001	GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S2473		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S2472		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S953		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D6	1S1588	151-051-9-001	GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S2473		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S2472		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S953		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D7	1S1588	151-051-9-001	GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S2473		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S2472		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S953		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D8	1S1588	151-051-9-001	GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S2473		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S2472		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S953		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D9	1S1588	151-051-9-001	GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S2473		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S2472		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S953		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D10	1N60P	150-006-9-001	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-29001
D11	1N60P	151-051-9-001	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-29001
	1S1588		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S2473		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S2472		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S953		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D12	MC301	151-072-9-001	GE-300	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG177	TM177	WEP1062	103-131
	1S2186		GE-300	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG177	TM177	WEP1062	103-131
	BA243		GE-300	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG177	TM177	WEP1062	103-131
	BA244		GE-300	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG177	TM177	WEP1062	103-131
D13	MC301	151-072-9-001	GE-300	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG177	TM177	WEP1062	103-131
	1S2186		GE-300	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG177	TM177	WEP1062	103-131
	BA243		GE-300	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG177	TM177	WEP1062	103-131
	BA244		GE-300	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG177	TM177	WEP1062	103-131
D14	1S1588	151-051-9-001	GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S2473		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S2472		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S953		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D15	1S1588	151-051-9-001	GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S2473		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S2472		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S953		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D16	1S1588	151-051-9-001	GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S2473		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S2472		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S953		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D17	1S1588	151-051-9-001	GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S2473		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S2472		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S953		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D18	1S1588	151-051-9-001	GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S2473		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S2472		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S953		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D19	1S1588	151-051-9-001	GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S2473		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S2472		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S953		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D20	1S1588	151-051-9-001	GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S2473		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S2472		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S953		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D21	1N60P	150-006-9-001	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-29001
D22	1N60P	150-006-9-001	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-29001
D23	1N60P	151-051-9-001	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-29001
	1S1588		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S2473		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S2472		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S953		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287

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

SEMICONDUCTORS (Select replacement transistor for best results) (cont)

ITEM No.	TYPE No.	MFRG. 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.
D24	1S1588	151-051-9-001	GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S2473		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S2472		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S953		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D31	1S1588	151-051-9-001	GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S2473		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S2472		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S953		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D32	1S1588	151-051-9-001	GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S2473		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S2472		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S953		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D33	1S1588	151-051-9-001	GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S2473		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S2472		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S953		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D34	1S1588	151-051-9-001	GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S2473		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S2472		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S953		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D35	1S2687	153-008-9-001	GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S2686		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S2687D		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S1588		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D36	1S2473	151-051-9-001	GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S2472		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S953		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S1588		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D37	1S1588	151-051-9-001	GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S2473		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S2472		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S953		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D38	1S1588	151-051-9-001	GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S2473		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S2472		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S953		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D39	1S1588	151-051-9-001	GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S2473		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S2472		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S953		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D40	1S1588	151-051-9-001	GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S2473		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S2472		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S953		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D41	1S1588	151-051-9-001	GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S2473		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S2472		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S953		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D42	1S1588	151-051-9-001	GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S2473		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S2472		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S953		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D43	1S1588	151-051-9-001	GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S2473		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S2472		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S953		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D45	1N60P	150-006-9-001	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-29001
	1N60		PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-29001	
	1N60P		PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-29001	
	1N60		PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-29001	
D47	1S1588	151-051-9-001	GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S2473		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S2472		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S953		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D48	1S1588	151-051-9-001	GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S2473		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S2472		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S953		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D49	MV-13YH	153-011-9-001	PTC302	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287	
	1S1588		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S2473		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S2472		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D50	MV-1Y	004-175-9-001	PTC301	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287	
	1S1588		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S2473		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S2472		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D52	KB262	151-032-9-004	GE-90	HEPR2503	REN 614	SK3100	RT-262	ECG614	TM519	WEP200	103-219	
	1S1588		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S2473		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S2472		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D53	1S1588	151-051-9-001	GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S2473		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S2472		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S953		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D54	1N60P	150-006-9-001	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-29001
	1N60		PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-29001	
	1S1588		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S2473		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D57	1S2472	151-051-9-001	GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S953		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S1588		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S2473		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D59	1S2472	151-051-9-001	GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S953		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S1588		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S2473		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D60	1S2472	151-051-9-001	GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S953		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S1588		GE-514	PTC214	HEPR9137	REN 177						

PARTS LIST AND DESCRIPTION (CONTINUED)

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

SEMICONDUCTORS (Select replacement transistor for best results) (cont)

ITEM No.	TYPE No.	MFR. PART No.	REPLACEMENT DATA										WORKMAN PART No.	ZENITH PART No.
			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.				
D63	1S1588	151-051-9-001	GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287		
	1S2473		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287		
	1S2472		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287		
	1S953		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287		
D65	1S1588	151-051-9-001	GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287		
	1S2473		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287		
	1S2472		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287		
	1S953		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287		
D66	1S1588	151-051-9-001	GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287		
	1S2473		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287		
	1S2472		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287		
	1S953		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287		
D67	1S1588	151-051-9-001	GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287		
	1S2473		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287		
	1S2472		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287		
	1S953		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287		
D68	1S1588	151-051-9-001	GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287		
	1S2473		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287		
	1S2472		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287		
	1S953		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287		
D69	1S26870	153-008-9-001			HEPR2502	REN 612			ECG612		103-176			
	1S2687				HEPR2502	REN 612			ECG612		103-176			
	1S2686				HEPR2502	REN 612			ECG612		103-176			
	1N60P		1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-29001		
D71	1N60P	150-006-9-001	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-29001		
	1N60		PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-29001			
	1N60		PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-29001			
	1N60P		1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-29001		
D74	1N60P	150-006-9-001	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-29001		
	1N60		PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-29001			
	1N60		PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-29001			
	1N60P		1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-29001		
D75	K8262	151-032-9-004	GE-90		HEPR2503	REN 614		RT-262	ECG614		WEP200	103-219		
	1S1588		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287		
	1S2473		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287		
	1S2472		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287		
D301	XZ062	152-094-9-001	GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287		
	1S2473		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287		
	1S2472		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287		
	1S953		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287		
D402	SR1K-2	151-045-9-001	GE-504A	PTC201	HEPR0052	REN 116	SK3311	RT-213	ECG116	TM116	WEP1154	103-29008		
	1001		GE-504A	PTC201	HEPR0052	REN 116	SK3311	RT-213	ECG116	TM116	WEP1154	103-29008		
	1001		GE-504A	PTC201	HEPR0052	REN 116	SK3311	RT-213	ECG116	TM116	WEP1154	103-29008		
	1001		GE-504A	PTC201	HEPR0052	REN 116	SK3311	RT-213	ECG116	TM116	WEP1154	103-29008		
D403	1S10810	151-081-9-001							ECG5313		WEP1044	103-287		
	1S1588		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287		
	1S2473		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287		
	1S2472		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287		
D501	1S1588	151-051-9-001	GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287		
	1S2473		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287		
	1S2472		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287		
	1S953		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287		
D502	1S1588	151-051-9-001	GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287		
	1S2473		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287		
	1S2472		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287		
	1S953		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287		
D503	1S1588	151-051-9-001	GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287		
	1S2473		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287		
	1S2472		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287		
	1S953		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287		
D504	1S1588	151-051-9-001	GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287		
	1S2473		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287		
	1S2472		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287		
	1S953		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287		
D505	1S1588	151-051-9-001	GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287		
	1S2473		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287		
	1S2472		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287		
	1S953		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287		
D506	1S1588	151-051-9-001	GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287		
	1S2473		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287		
	1S2472		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287		
	1S953		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287		
D507	1S1588	151-051-9-001	GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287		
	1S2473		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287		
	1S2472		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287		
	1S953		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287		
D508	1S1588	151-051-9-001	GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287		
	1S2473		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287		
	1S2472		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287		
	1S953		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287		
D509	1S1588	151-051-9-001	GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287		
	1S2473		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287		
	1S2472		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287		
	1S953		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287		
D510	1S1588	151-051-9-001	GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287		
	1S2473		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287		
	1S2472		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287		
	1S953		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287		
D511	1S1588	151-051-9-001	GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287		
	1S2473		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287		
	1S2472		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287		
	1S953		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287		
D513	1S1588	151-051-9-001	GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287		
	1S2473		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287		
	1S2472		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519				

(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.)

SEMICONDUCTORS (Select replacement transistor for best results) (cont)

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.
TR3	25C1730	176-073-9-001	GE-17*	PTC136*	HEPS0025*	REN 107	SK3124	RT-107A	ECG316*	TM316*	WEP535	121-972*
	25C1730L		GE-17*	PTC136*	HEPS0025*	REN 107	SK3124	RT-107A	ECG316*	TM316*	WEP535	121-972*
	25C1675		GE-213	PTC132*	HEPS0025*	REN 229*	SK3122	RT-308	ECG229*	TM229*	WEP773	121-Z9021
	25C1674		GE-61*	PTC132*	HEPS0010*	REN 229*	SK3246	RT-308	ECG229*	TM229*	WEP784	121-Z9021
	25C460		GE-61*	PTC136*	HEPS0014*	REN 107	SK3122	RT-134	ECG107	TM107/**	WEP460	121-Z9000*
TR4	25C839	176-062-9-001	GE-61*	PTC132*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	TM123A/**	WEP1945	121-Z9000A*
	25C945A		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	TM199/**	WEP1945	121-972
	25C945AQ		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	TM199/**	WEP1945	121-972
	25C945		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	TM199/**	WEP1945	121-972
	25C458		GE-210	PTC121*	HEPS0009*	REN 289	SK3122	RT-187	ECG289	TM289/**	WEP458	121-Z9000A*
	25C372		GE-61*	PTC121*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	TM123A/**	WEP372	121-Z9000A*
	25C900		GE-62	PTC139*	HEPS0015*	REN 199	SK3124	RT-302	ECG199	TM199/**	WEP66	121-972
	25C828		GE-61*	PTC139*	HEPS0015*	REN 199	SK3444	RT-302	ECG199	TM199/**	WEP828	121-972
	25C1740		GE-62	PTC121*	HEPS0015*	REN 123A*	SK3122	RT-109*	ECG123A*	TM123A/**	WEP736*	121-Z9000A*
	25C945A		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	TM199/**	WEP1945	121-972
TR5	25C945AQ	176-062-9-001	GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	TM199/**	WEP1945	121-972
	25C945		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	TM199/**	WEP1945	121-972
	25C458		GE-210	PTC121*	HEPS0009*	REN 289	SK3122	RT-187	ECG289	TM289/**	WEP458	121-Z9000A*
	25C372		GE-61*	PTC121*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	TM123A/**	WEP372	121-Z9000A*
	25C900		GE-62	PTC139*	HEPS0015*	REN 199	SK3124	RT-302	ECG199	TM199/**	WEP66	121-972
	25C828		GE-61*	PTC139*	HEPS0015*	REN 199	SK3444	RT-302	ECG199	TM199/**	WEP828	121-972
	25C1740		GE-62	PTC121*	HEPS0015*	REN 123A*	SK3122	RT-109*	ECG123A*	TM123A/**	WEP736*	121-Z9000A*
	25A733P		GE-48	PTC127	HEPS0019*	REN 294	SK3138	RT-303	ECG294	TM294/**	WEP911	121-952
	25A733		GE-48	PTC127	HEPS0019*	REN 294	SK3138	RT-303	ECG294	TM294/**	WEP911	121-952
	25A495		GE-221*	PTC103*	HEPS0013*	REN 159*	SK3114	RT-303	ECG159*	TM159/**	WEP495	121-Z9003
TR6	25C945AQ	176-062-9-001	GE-65	PTC103*	HEPS0019*	REN 234	SK3114	RT-303	ECG234	TM234	WEP564	121-879
	25C945A		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	TM199/**	WEP1945	121-972
	25C945		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	TM199/**	WEP1945	121-972
	25C458		GE-210	PTC121*	HEPS0009*	REN 289	SK3122	RT-187	ECG289	TM289/**	WEP458	121-Z9000A*
	25C372		GE-61*	PTC121*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	TM123A/**	WEP372	121-Z9000A*
	25C900		GE-62	PTC139*	HEPS0015*	REN 199	SK3124	RT-302	ECG199	TM199/**	WEP66	121-972
	25C828		GE-61*	PTC139*	HEPS0015*	REN 199	SK3444	RT-302	ECG199	TM199/**	WEP828	121-972
	25C1740		GE-62	PTC121*	HEPS0015*	REN 123A*	SK3122	RT-109*	ECG123A*	TM123A/**	WEP736*	121-Z9000A*
	25C1675L		GE-213	PTC132*	HEPS0025*	REN 229*	SK3122	RT-308	ECG229*	TM229*	WEP773	121-Z9021
	25C1675		GE-213	PTC132*	HEPS0025*	REN 229*	SK3122	RT-308	ECG229*	TM229*	WEP773	121-Z9021
TR7	25C460	176-065-9-001	GE-61*	PTC136*	HEPS0014*	REN 107	SK3122	RT-134	ECG107	TM107/**	WEP460	121-Z9000*
	25C828		GE-61*	PTC136*	HEPS0014*	REN 107	SK3122	RT-134	ECG107	TM107/**	WEP460	121-972
	25C1674		GE-61	PTC132*	HEPS0010*	REN 229*	SK3246	RT-308	ECG229*	TM229*	WEP784	121-Z9000*
	25C1730		GE-62	PTC121*	HEPS0015*	REN 123A*	SK3122	RT-109*	ECG123A*	TM123A/**	WEP736*	121-Z9000A*
	25C945AQ		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	TM199/**	WEP1945	121-972
	25C945A		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	TM199/**	WEP1945	121-972
	25C458		GE-210	PTC121*	HEPS0009*	REN 289	SK3122	RT-187	ECG289	TM289/**	WEP458	121-Z9000A*
	25C372		GE-61*	PTC121*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	TM123A/**	WEP372	121-Z9000A*
	25C900		GE-62	PTC139*	HEPS0015*	REN 199	SK3124	RT-302	ECG199	TM199/**	WEP66	121-972
	25C828		GE-61*	PTC139*	HEPS0015*	REN 199	SK3444	RT-302	ECG199	TM199/**	WEP828	121-972
TR8	25C1740	176-065-9-001	GE-62	PTC121*	HEPS0015*	REN 123A*	SK3122	RT-109*	ECG123A*	TM123A/**	WEP736*	121-Z9000A*
	25C1675L		GE-213	PTC132*	HEPS0025*	REN 229*	SK3122	RT-308	ECG229*	TM229*	WEP773	121-Z9021
	25C1675		GE-213	PTC132*	HEPS0025*	REN 229*	SK3122	RT-308	ECG229*	TM229*	WEP773	121-Z9021
	25C460		GE-61*	PTC136*	HEPS0014*	REN 107	SK3122	RT-134	ECG107	TM107/**	WEP460	121-Z9000*
	25C839		GE-61*	PTC136*	HEPS0014*	REN 107	SK3122	RT-134	ECG107	TM107/**	WEP460	121-Z9000*
	25C1674		GE-61	PTC132*	HEPS0010*	REN 229*	SK3246	RT-308	ECG229*	TM229*	WEP784	121-Z9000*
	25C1730		GE-62	PTC121*	HEPS0015*	REN 123A*	SK3122	RT-109*	ECG123A*	TM123A/**	WEP736*	121-Z9000A*
	25C945AQ		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	TM199/**	WEP1945	121-972
	25C945A		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	TM199/**	WEP1945	121-972
	25C458		GE-210	PTC121*	HEPS0009*	REN 289	SK3122	RT-187	ECG289	TM289/**	WEP458	121-Z9000A*
TR9	25C372	176-062-9-001	GE-61*	PTC121*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	TM123A/**	WEP372	121-Z9000A*
	25C900		GE-62	PTC139*	HEPS0015*	REN 199	SK3124	RT-302	ECG199	TM199/**	WEP66	121-972
	25C828		GE-61*	PTC139*	HEPS0015*	REN 199	SK3444	RT-302	ECG199	TM199/**	WEP828	121-972
	25C1740		GE-62	PTC121*	HEPS0015*	REN 123A*	SK3122	RT-109*	ECG123A*	TM123A/**	WEP736*	121-Z9000A*
	25C945AQ		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	TM199/**	WEP1945	121-972
	25C945A		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	TM199/**	WEP1945	121-972
	25C458		GE-210	PTC121*	HEPS0009*	REN 289	SK3122	RT-187	ECG289	TM289/**	WEP458	121-Z9000A*
	25C372		GE-61*	PTC121*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	TM123A/**	WEP372	121-Z9000A*
	25C900		GE-62	PTC139*	HEPS0015*	REN 199	SK3124	RT-302	ECG199	TM199/**	WEP66	121-972
	25C828		GE-61*	PTC139*	HEPS0015*	REN 199	SK3444	RT-302	ECG199	TM199/**	WEP828	121-972
TR10	25C1740	176-065-9-001	GE-62	PTC121*	HEPS0015*	REN 123A*	SK3122	RT-109*	ECG123A*	TM123A/**	WEP736*	121-Z9000A*
	25C1675L		GE-213	PTC132*	HEPS0025*	REN 229*	SK3122	RT-308	ECG229*	TM229*	WEP773	121-Z9021
	25C1675		GE-213	PTC132*	HEPS0025*	REN 229*	SK3122	RT-308	ECG229*	TM229*	WEP773	121-Z9021
	25C460		GE-61*	PTC136*	HEPS0014*	REN 107	SK3122	RT-134	ECG107	TM107/**	WEP460	121-Z9000*
	25C839		GE-61*	PTC136*	HEPS0014*	REN 107	SK3122	RT-134	ECG107	TM107/**	WEP460	121-Z9000*
	25C1674		GE-61	PTC132*	HEPS0010*	REN 229*	SK3246	RT-308	ECG229*	TM229*	WEP784	121-Z9000*
	25C1730		GE-62	PTC121*	HEPS0015*	REN 123A*	SK3122	RT-109*	ECG123A*	TM123A/**	WEP736*	121-Z9000A*
	25C945AQ		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	TM199/**	WEP1945	121-972
	25C945A		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	TM199/**	WEP1945	121-972
	25C458		GE-210	PTC121*	HEPS0009*	REN 289	SK3122	RT-187	ECG289	TM289/**	WEP458	121-Z9000A*
TR11	25C372	176-065-9-001	GE-61*	PTC121*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	TM123A/**	WEP372	121-Z9000A*
	25C900		GE-62	PTC139*	HEPS0015*	REN 199	SK3124	RT-302	ECG199	TM199/**	WEP66	121-972
	25C828		GE-61*	PTC139*	HEPS0015*	REN 199	SK3444	RT-302	ECG199	TM199/**	WEP828	121-972
	25C1740		GE-62	PTC121*	HEPS0015*	REN 123A*	SK3122	RT-109*	ECG123A*	TM123A/**	WEP736*	121-Z9000A*
	25C1675L		GE-213	PTC132*	HEPS0025*	REN 229*	SK3122	RT-308	ECG229*	TM229*	WEP773	121-Z9021
	25C1675		GE-213	PTC132*	HEPS0025*	REN 229*	SK3122	RT-308	ECG229*	TM229*	WEP773	121-Z9021
	25C460		GE-61*	PTC136*	HEPS0014*	REN 107	SK3122	RT-134	ECG107	TM107/**	WEP460	121-Z9000*
	25C839		GE-61*	PTC136*	HEPS0014*	REN 107	SK3122	RT-134	ECG107	TM107/**	WEP460	121-Z9000*
	25C1674		GE-61	PTC132*	HEPS0010*	REN 229*	SK3246	RT-308	ECG229*	TM229*	WEP784	121-Z9000*
	25C1730		GE-62	PTC121*	HEPS0015*	REN 123A*	SK3122	RT-109*	ECG123A*	TM123A/**	WEP736*	121-Z9000A*
TR12	25C945AQ	176-062-9-001	GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	TM199/**	WEP1945	121-972
	25C945A		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	TM199/**	WEP1945	121-972
	25C458		GE-210	PTC121*	HEPS0009*	REN 289	SK3122	RT-187	ECG289	TM289/**	WEP458	121-Z9000A*
	25C372		GE-61*	PTC121*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	TM123A/**	WEP372	121-Z9000A*
	25C900		GE-62	PTC139*	HEPS0015*	REN 199	SK3124	RT-302	ECG199	TM199/**	WEP66	121-972
	25C828		GE-61*	PTC139*	HEPS0015*	REN 199	SK3444	RT-302	ECG199	TM199/**	WEP828	121-972
	25C1740		GE-62	PTC121*	HEPS0015*	REN 123A*	SK3122	RT-109*	ECG123A*	TM123A/**	WEP736*	121-Z9000A*
	25A733P		GE-48	PTC127	HEPS0019*	REN 294	SK3138	RT-303	ECG294	TM294/**	WEP911	12

PARTS LIST AND DESCRIPTION (CONTINUED)

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

SEMICONDUCTORS (Select replacement transistor for best results) (cont)

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.
TR18	2SC1730L	176-073-9-001	GE-17*	PTC136*	HEPS0025*	REN 107	SK3124	RT-107A	ECG316*	TM316*	WEP535	121-972*
	2SC1730		GE-17*	PTC136*	HEPS0025*	REN 107	SK3124	RT-107A	ECG316*	TM316*	WEP535	121-972*
	2SC1675		GE-213	PTC132*	HEPS0025*	REN 229*	SK3122	RT-308	ECG229*	TM229*	WEP773	121-29021
	2SC1674		GE-61*	PTC132*	HEPS0010*	REN 229*	SK3246	RT-308	ECG229*	TM229*	WEP784	121-29021
	2SC460		GE-61*	PTC136*	HEPS0014*	REN 107	SK3122	RT-134	ECG107	TM107/**	WEP460	121-29000*
TR19	2SC839	176-062-9-001	GE-61*	PTC132*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	TM123A/**	WEP1945	121-29000A*
	2SC945AQ		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	TM199/**	WEP1945	121-972
	2SC945A		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	TM199/**	WEP1945	121-972
	2SC458		GE-210	PTC121*	HEPS0009*	REN 289	SK3122	RT-187	ECG289	TM289/**	WEP458	121-29000A*
	2SC372		GE-61*	PTC121*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	TM123A/**	WEP372	121-29000A*
TR20	2SC900	176-065-9-001	GE-62	PTC139*	HEPS0015*	REN 199	SK3124	RT-302	ECG199	TM199/**	WEP66	121-972
	2SC828		GE-61*	PTC139*	HEPS0015*	REN 199	SK3444	RT-302	ECG199	TM199/**	WEP828	121-972
	2SC1740		GE-62	PTC121*	HEPS0015*	REN 123A*	SK3122	RT-109*	ECG123A*	TM123A*	WEP736*	121-29000A*
	2SC1675L		GE-213	PTC132*	HEPS0025*	REN 229*	SK3122	RT-308	ECG229*	TM229*	WEP773	121-29021
	2SC1675		GE-213	PTC132*	HEPS0025*	REN 229*	SK3122	RT-308	ECG229*	TM229*	WEP773	121-29021
TR21	2SC460	176-062-9-001	GE-61*	PTC136*	HEPS0014*	REN 107	SK3122	RT-134	ECG107	TM107/**	WEP460	121-29000*
	2SC839		GE-61*	PTC136*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	TM123A/**	WEP1945	121-29000A*
	2SC1674		GE-61	PTC132*	HEPS0010*	REN 229*	SK3246	RT-308	ECG229*	TM229*	WEP784	121-29021
	2SC1730		GE-17*	PTC136*	HEPS0025*	REN 107	SK3124	RT-107A	ECG316*	TM316*	WEP535	121-972*
	2SC945AQ		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	TM199/**	WEP1945	121-972
TR22	2SC945A	176-062-9-001	GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	TM199/**	WEP1945	121-972
	2SC458		GE-210	PTC121*	HEPS0009*	REN 289	SK3122	RT-187	ECG289	TM289/**	WEP458	121-29000A*
	2SC572		GE-61*	PTC121*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	TM123A/**	WEP372	121-29000A*
	2SC900		GE-62	PTC139*	HEPS0015*	REN 199	SK3124	RT-302	ECG199	TM199/**	WEP66	121-972
	2SC828		GE-61*	PTC139*	HEPS0015*	REN 199	SK3444	RT-302	ECG199	TM199/**	WEP828	121-972
TR23	2SC1740	176-062-9-001	GE-62	PTC121*	HEPS0015*	REN 123A*	SK3122	RT-109*	ECG123A*	TM123A*	WEP736*	121-29000A*
	2SC945AQ		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	TM199/**	WEP1945	121-972
	2SC945A		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	TM199/**	WEP1945	121-972
	2SC458		GE-210	PTC121*	HEPS0009*	REN 289	SK3122	RT-187	ECG289	TM289/**	WEP458	121-29000A*
	2SC372		GE-61*	PTC121*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	TM123A/**	WEP372	121-29000A*
TR24	2SC900	176-062-9-001	GE-62	PTC139*	HEPS0015*	REN 199	SK3124	RT-302	ECG199	TM199/**	WEP66	121-972
	2SC828		GE-61*	PTC139*	HEPS0015*	REN 199	SK3444	RT-302	ECG199	TM199/**	WEP828	121-972
	2SC1740		GE-62	PTC121*	HEPS0015*	REN 123A*	SK3122	RT-109*	ECG123A*	TM123A*	WEP736*	121-29000A*
	2SC945AQ		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	TM199/**	WEP1945	121-972
	2SC945A		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	TM199/**	WEP1945	121-972
TR25	2SC458	177-020-9-001	GE-210	PTC121*	HEPS0009*	REN 289	SK3122	RT-187	ECG289	TM289/**	WEP458	121-29000A*
	2SC372		GE-61*	PTC121*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	TM123A/**	WEP372	121-29000A*
	2SC900		GE-62	PTC139*	HEPS0015*	REN 199	SK3124	RT-302	ECG199	TM199/**	WEP66	121-972
	2SC828		GE-61*	PTC139*	HEPS0015*	REN 199	SK3444	RT-302	ECG199	TM199/**	WEP828	121-972
	2SC1740		GE-62	PTC121*	HEPS0015*	REN 123A*	SK3122	RT-109*	ECG123A*	TM123A*	WEP736*	121-29000A*
TR26	2SA733P	176-062-9-001	GE-48	PTC127	HEPS0019*	REN 294	SK3138	RT-303	ECG294	TM294/**	WEP911	121-952
	2SA733		GE-48	PTC127	HEPS0019*	REN 294	SK3138	RT-303	ECG294	TM294/**	WEP911	121-952
	2SA495		GE-221*	PTC103*	HEPS0013*	REN 159*	SK3114	RT-303	ECG159*	TM159/**	WEP495	121-29003
	2SA564		GE-65	PTC103*	HEPS0019*	REN 234	SK3114	RT-303	ECG234	TM234	WEP564	121-879
	2SC945AQ		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	TM199/**	WEP1945	121-972
TR27	2SC945A	177-020-9-001	GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	TM199/**	WEP1945	121-972
	2SC458		GE-210	PTC121*	HEPS0009*	REN 289	SK3122	RT-187	ECG289	TM289/**	WEP458	121-29000A*
	2SC372		GE-61*	PTC121*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	TM123A/**	WEP372	121-29000A*
	2SC900		GE-62	PTC139*	HEPS0015*	REN 199	SK3124	RT-302	ECG199	TM199/**	WEP66	121-972
	2SC828		GE-61*	PTC139*	HEPS0015*	REN 199	SK3444	RT-302	ECG199	TM199/**	WEP828	121-972
TR28	2SC1740	177-020-9-001	GE-62	PTC121*	HEPS0015*	REN 123A*	SK3122	RT-109*	ECG123A*	TM123A*	WEP736*	121-29000A*
	2SA733P		GE-48	PTC127	HEPS0019*	REN 294	SK3138	RT-303	ECG294	TM294/**	WEP911	121-952
	2SA733		GE-48	PTC127	HEPS0019*	REN 294	SK3138	RT-303	ECG294	TM294/**	WEP911	121-952
	2SA495		GE-221*	PTC103*	HEPS0013*	REN 159*	SK3114	RT-303	ECG159*	TM159/**	WEP495	121-29003
	2SA564		GE-65	PTC103*	HEPS0019*	REN 234	SK3114	RT-303	ECG234	TM234	WEP564	121-879
TR29	2SC1675L	176-065-9-001	GE-213	PTC132*	HEPS0025*	REN 229*	SK3122	RT-308	ECG229*	TM229*	WEP773	121-29021
	2SC1675		GE-213	PTC132*	HEPS0025*	REN 229*	SK3122	RT-308	ECG229*	TM229*	WEP773	121-29021
	2SC460		GE-61*	PTC136*	HEPS0014*	REN 107	SK3122	RT-134	ECG107	TM107/**	WEP460	121-29000*
	2SC839		GE-61*	PTC132*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	TM123A/**	WEP1945	121-29000A*
	2SC1674		GE-61	PTC132*	HEPS0010*	REN 229*	SK3246	RT-308	ECG229*	TM229*	WEP784	121-29021
TR30	2SC1730	176-065-9-001	GE-17*	PTC136*	HEPS0025*	REN 107	SK3124	RT-107A	ECG316*	TM316*	WEP535	121-972*
	2SC1675L		GE-213	PTC132*	HEPS0025*	REN 229*	SK3122	RT-308	ECG229*	TM229*	WEP773	121-29021
	2SC1675		GE-213	PTC132*	HEPS0025*	REN 229*	SK3122	RT-308	ECG229*	TM229*	WEP773	121-29021
	2SC460		GE-61*	PTC136*	HEPS0014*	REN 107	SK3122	RT-134	ECG107	TM107/**	WEP460	121-29000*
	2SC839		GE-61*	PTC132*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	TM123A/**	WEP1945	121-29000A*
TR31	2SC1674	176-062-9-001	GE-61	PTC132*	HEPS0010*	REN 229*	SK3246	RT-308	ECG229*	TM229*	WEP784	121-29021
	2SC1730		GE-17*	PTC136*	HEPS0025*	REN 107	SK3124	RT-107A	ECG316*	TM316*	WEP535	121-972*
	2SC945AQ		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	TM199/**	WEP1945	121-972
	2SC945A		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	TM199/**	WEP1945	121-972
	2SC458		GE-210	PTC121*	HEPS0009*	REN 289	SK3122	RT-187	ECG289	TM289/**	WEP458	121-29000A*
TR32	2SC372	176-065-9-001	GE-61*	PTC121*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	TM123A/**	WEP372	121-29000A*
	2SC900		GE-62	PTC139*	HEPS0015*	REN 199	SK3124	RT-302	ECG199	TM199/**	WEP66	121-972
	2SC828		GE-61*	PTC139*	HEPS0015*	REN 199	SK3444	RT-302	ECG199	TM199/**	WEP828	121-972
	2SC1740		GE-62	PTC121*	HEPS0015*	REN 123A*	SK3122	RT-109*	ECG123A*	TM123A*	WEP736*	121-29000A*
	2SC1675L		GE-213	PTC132*	HEPS0025*	REN 229*	SK3122	RT-308	ECG229*	TM229*	WEP773	121-29021
TR33	2SC1675	176-062-9-001	GE-213	PTC132*	HEPS0025*	REN 229*	SK3122	RT-308	ECG229*	TM229*	WEP773	121-29021
	2SC460		GE-61*	PTC136*	HEPS0014*	REN 107	SK3122	RT-134	ECG107	TM107/**	WEP460	121-29000*
	2SC839		GE-61*	PTC132*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	TM123A/**	WEP1945	121-29000A*
	2SC1674		GE-61	PTC132*	HEPS0010*	REN 229*	SK3246	RT-308	ECG229*	TM229*	WEP784	121-29021
	2SC1730		GE-17*	PTC136*	HEPS0025*	REN 107	SK3124	RT-107A	ECG316*	TM316*	WEP535	121-972*

PARTS LIST AND DESCRIPTION (CONTINUED)

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

SEMICONDUCTORS (Select replacement transistor for best results) (cont)

ITEM No.	TYPE	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.
TR34	25C1675L	176-065-9-001	GE-213	PTC132*	HEPS0025*	REN 229*	SK3122	RT-308	ECG229*	TM229*	WEP773	121-29021
	25C1675		GE-213	PTC132*	HEPS0025*	REN 229*	SK3122	RT-308	ECG229*	TM229*	WEP773	121-29021
	25C460		GE-61*	PTC136*	HEPS0014*	REN 107	SK3122	RT-134	ECG107	TM107/**	WEP460	121-29000*
	25C839		GE-61*	PTC132*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	TM123A*/**	WEP1945	121-29000A*
	25C1674		GE-61	PTC132*	HEPS0010*	REN 229*	SK3246	RT-308	ECG229*	TM229*	WEP784	121-29021
TR35	25C1730	176-062-9-001	GE-17*	PTC136*	HEPS0025*	REN 107	SK3124	RT-107A	ECG316*	TM316*	WEP535	121-972*
	25C945AQ		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	TM199/**	WEP1945	121-972
	25C945		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	TM199/**	WEP1945	121-972
	25C458		GE-210	PTC121*	HEPS0009*	REN 289	SK3122	RT-187	ECG289	TM289/**	WEP458	121-29000A*
	25C372		GE-61*	PTC121*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	TM123A*/**	WEP372	121-29000A*
TR36	25C900	176-087-9-002	GE-62	PTC139*	HEPS0015*	REN 199	SK3124	RT-302	ECG199	TM199/**	WEP66	121-972
	25C828		GE-61*	PTC139*	HEPS0015*	REN 199	SK3444	RT-302	ECG199	TM199/**	WEP828	121-972
	25C1740		GE-62	PTC121*	HEPS0015*	REN 123A*	SK3122	RT-109*	ECG123A*	TM123A*	WEP736*	121-29000A*
	25C1969		GE-216	PTC186	REN 236	SK3197	RT-158	ECG236	TM236	WEP840	121-29040	
	25C1969B		GE-216	PTC186	REN 236	SK3197	RT-158	ECG236	TM236	WEP840	121-29040	
TR37	25C496-0	176-087-9-002	GE-57	PTC163	HEPS5000	REN 295	SK3253	RT-162	ECG295	TM295/**	WEP913	121-29002
	25C496		GE-57	PTC163	HEPS5000	REN 295	SK3253	RT-162	ECG295	TM295/**	WEP913	121-29002
TR38	25C1846	172-024-9-002	GE-336	PTC904		REN 295	SK3253		ECG295	TM295	WEP913	121-880
	25D471		GE-268	PTC144*	HEPS3001*	REN 289	SK3124	RT-114*	ECG289	TM289	WEP910	121-883
	25C1306		GE-38	PTC129A	HEPS5021	REN 238	SK3115	RT-140	ECG238	TM238	WEP740B	121-29001
	25C2020		GE-38	PTC129A	HEPS5021	REN 238	SK3115	RT-140	ECG238	TM238	WEP740B	121-29001
	25C2184		GE-46	PTC158	HEPS3001	REN 237	SK3049	RT-174	ECG237	TM237	WEP799	121-29041
TR39	25C2166	176-073-9-003	GE-46	PTC158	HEPS3001	REN 237	SK3049	RT-174	ECG237	TM237	WEP799	121-29041
	25C1973		GE-335			REN 315	SK3250		ECG315	TM315	WEP914	921-1008
TR40	25C945AQ	176-062-9-001	GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	TM199/**	WEP1945	121-972
	25C945A		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	TM199/**	WEP1945	121-972
	25C458		GE-210	PTC121*	HEPS0009*	REN 289	SK3122	RT-187	ECG289	TM289/**	WEP458	121-29000A*
	25C372		GE-61*	PTC121*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	TM123A*/**	WEP372	121-29000A*
	25C900		GE-62	PTC139*	HEPS0015*	REN 199	SK3124	RT-302	ECG199	TM199/**	WEP66	121-972
TR41	25C828	176-055-9-004	GE-61*	PTC139*	HEPS0015*	REN 199	SK3444	RT-302	ECG199	TM199/**	WEP828	121-972
	25C1740		GE-62	PTC121*	HEPS0015*	REN 123A*	SK3122	RT-109*	ECG123A*	TM123A*	WEP736*	121-29000A*
	25C1419C		GE-66	PTC167	HEPS5027	REN 152	SK3054	RT-197	ECG152	TM152	WEP745	121-987-02
	25C1419		GE-66	PTC167	HEPS5027	REN 152	SK3054	RT-197	ECG152	TM152	WEP745	121-987-02
	25D325		GE-28	PTC110	HEPS5027	REN 186	SK3197	RT-197	ECG186	TM186/**	WEP745	121-29008
TR42	25C1096	176-062-9-001	GE-28	PTC110	HEPS3041	REN 186A	SK3197	RT-166	ECG186A	TM186A/**	WEP1096	121-29008
	25D235		GE-66	PTC154	HEPS3061	REN 152	SK3054	RT-197	ECG152	TM152/**	WEP745	121-987-02
	25C945AQ		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	TM199/**	WEP1945	121-972
	25C945A		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	TM199/**	WEP1945	121-972
	25C458		GE-210	PTC121*	HEPS0009*	REN 289	SK3122	RT-187	ECG289	TM289/**	WEP458	121-29000A*
TR43	25C372	176-048-9-001	GE-61*	PTC139*	HEPS0015*	REN 199	SK3124	RT-302	ECG199	TM199/**	WEP66	121-972
	25C900		GE-62	PTC139*	HEPS0015*	REN 199	SK3444	RT-302	ECG199	TM199/**	WEP828	121-972
	25C828		GE-61*	PTC139*	HEPS0015*	REN 199	SK3444	RT-302	ECG199	TM199/**	WEP828	121-972
	25C1740		GE-210	PTC121*	HEPS0015*	REN 123A*	SK3122	RT-109*	ECG123A*	TM123A*	WEP736*	121-29000A*
	25C458C		GE-210	PTC121*	HEPS0009*	REN 289	SK3122	RT-187	ECG289	TM289/**	WEP458	121-29000A*
TR44	25C945	176-048-9-001	GE-210	PTC121*	HEPS0009*	REN 289	SK3122	RT-187	ECG289	TM289/**	WEP458	121-29000A*
	25C945		GE-210	PTC121*	HEPS0009*	REN 289	SK3122	RT-187	ECG289	TM289/**	WEP458	121-29000A*
	25C900		GE-62	PTC139*	HEPS0015*	REN 199	SK3124	RT-302	ECG199	TM199/**	WEP66	121-972
	25C828		GE-61*	PTC139*	HEPS0015*	REN 199	SK3444	RT-302	ECG199	TM199/**	WEP828	121-972
	25C372		GE-61*	PTC121*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	TM123A/**	WEP372	121-29000A*
TR47	25C1740	177-020-9-001	GE-62	PTC121*	HEPS0015*	REN 123A*	SK3122	RT-109*	ECG123A*	TM123A*	WEP736*	121-29000A*
	25A733P		GE-48	PTC127	HEPS0019*	REN 294	SK3138	RT-303	ECG294	TM294/**	WEP911	121-952
	25A733		GE-48	PTC127	HEPS0019*	REN 294	SK3138	RT-303	ECG294	TM294/**	WEP911	121-952
	25A495		GE-221*	PTC103*	HEPS0013*	REN 159*	SK3114	RT-303	ECG159*	TM159/**	WEP495	121-29003
	25A564		GE-65	PTC103*	HEPS0019*	REN 234	SK3114	RT-303	ECG234	TM234	WEP564	121-879
TR48	25A733P	177-020-9-001	GE-48	PTC127	HEPS0019*	REN 294	SK3138	RT-303	ECG294	TM294/**	WEP911	121-952
	25A733		GE-48	PTC127	HEPS0019*	REN 294	SK3138	RT-303	ECG294	TM294/**	WEP911	121-952
	25A495		GE-221*	PTC103*	HEPS0013*	REN 159*	SK3114	RT-303	ECG159*	TM159/**	WEP495	121-29003
	25A564		GE-65	PTC103*	HEPS0019*	REN 234	SK3114	RT-303	ECG234	TM234	WEP564	121-879
	25C945AQ		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	TM199/**	WEP1945	121-972
TR50	25C945A	176-062-9-001	GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	TM199/**	WEP1945	121-972
	25C458		GE-210	PTC121*	HEPS0009*	REN 289	SK3122	RT-187	ECG289	TM289/**	WEP458	121-29000A*
	25C372		GE-61*	PTC121*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	TM123A/**	WEP372	121-29000A*
	25C900		GE-62	PTC139*	HEPS0015*	REN 199	SK3124	RT-302	ECG199	TM199/**	WEP66	121-972
	25C828		GE-61*	PTC139*	HEPS0015*	REN 199	SK3444	RT-302	ECG199	TM199/**	WEP828	121-972
TR51	25C1740	176-062-9-001	GE-62	PTC121*	HEPS0015*	REN 123A*	SK3122	RT-109*	ECG123A*	TM123A*	WEP736*	121-29000A*
	25C945AQ		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	TM199/**	WEP1945	121-972
	25C945A		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	TM199/**	WEP1945	121-972
	25C458		GE-210	PTC121*	HEPS0009*	REN 289	SK3122	RT-187	ECG289	TM289/**	WEP458	121-29000A*
	25C372		GE-61*	PTC121*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	TM123A/**	WEP372	121-29000A*
TR52	25C945AQ	176-062-9-001	GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	TM199/**	WEP1945	121-972
	25C945A		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	TM199/**	WEP1945	121-972
	25C458		GE-210	PTC121*	HEPS0009*	REN 289	SK3122	RT-187	ECG289	TM289/**	WEP458	121-29000A*
	25C372		GE-61*	PTC121*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	TM123A/**	WEP372	121-29000A*
	25C900		GE-62	PTC139*	HEPS0015*	REN 199	SK3124	RT-302	ECG199	TM199/**	WEP66	121-972
TR53	25C828	176-062-9-001	GE-61*	PTC139*	HEPS0015*	REN 199	SK3444	RT-302	ECG199	TM199/**	WEP828	121-972
	25C1740		GE-62	PTC121*	HEPS0015*	REN 123A*	SK3122	RT-109*	ECG123A*	TM123A*	WEP736*	121-29000A*
	25C945AQ		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	TM199/**	WEP1945	121-972
	25C945A		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	TM199/**	WEP1945	121-972
	25C458		GE-210	PTC121*	HEPS0009*	REN 289	SK3122	RT-187	ECG289	TM289/**	WEP458	121-29000A*
TR301	25C372	176-055-9-004	GE-61*	PTC121*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	TM123A/**	WEP372	121-29000A*
	25C900		GE-62	PTC139*	HEPS0015*	REN 199	SK3124	RT-302	ECG199	TM199/**	WEP66	121-972
	25C828		GE-61*	PTC139*	HEPS0015*	REN 199	SK3444	RT-302	ECG199	TM199/**	WEP828	121-972
	25C1740		GE-62	PTC121*	HEPS0015*	REN 123A*	SK3122	RT-109*	ECG123A*	TM123A*	WEP736*	121-29000A*
	25C1419C		GE-66	PTC167	HEPS5027	REN 152	SK3054	RT-197	ECG152	TM152	WEP745	121-987-02
TR302	25C1419	176-062-9-001	GE-66	PTC167	HEPS5027	REN 152	SK3054	RT-197	ECG152	TM152	WEP745	121-987-02
	25D325		GE-28	PTC110	HEPS5027	REN 186	SK3197	RT-197	ECG186	TM186/**	WEP745	121-29008
	25D1096		GE-28	PTC110	HEPS3041	REN 186A	SK3197	RT-166	ECG186A	TM186A/**	WEP1096	121-29008
	25D235		GE-66	PTC154	HEPS3061	REN 152	SK3054	RT-197	ECG152	TM152/**	WEP745	121-987-02
	25C945AQ		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	TM199/**	WEP1945	121-972
TR401	25C945	172-040-9-001	GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	TM199/**	WEP1945	121-972
	25C458											

PARTS LIST AND DESCRIPTION (CONTINUED)

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

SEMICONDUCTORS (Select replacement transistor for best results) (cont)

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.
TR402	2SC945AQ	176-062-9-001	GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	TM199/**	WEP1945	121-972
	2SC945A		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	TM199/**	WEP1945	121-972
	2SC458		GE-210	PTC121*	HEPS0009*	REN 289	SK3122	RT-187	ECG289	TM289/**	WEP458	121-29000A*
	2SC372		GE-61*	PTC121*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	TM123A/**	WEP372	121-29000A*
	2SC900		GE-62	PTC139*	HEPS0015*	REN 199	SK3124	RT-302	ECG199	TM199/**	WEP66	121-972
TR403	2SC828	176-062-9-001	GE-61*	PTC139*	HEPS0015*	REN 199	SK3444	RT-302	ECG199	TM199/**	WEP828	121-972
	2SC1740		GE-62	PTC121*	HEPS0015*	REN 123A*	SK3122	RT-109*	ECG123A*	TM123A/**	WEP736*	121-29000A*
	2SC945AQ		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	TM199/**	WEP1945	121-972
	2SC945A		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	TM199/**	WEP1945	121-972
	2SC458		GE-210	PTC121*	HEPS0009*	REN 289	SK3122	RT-187	ECG289	TM289/**	WEP458	121-29000A*
TR404	2SC372	177-020-9-001	GE-61*	PTC121*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	TM123A/**	WEP372	121-29000A*
	2SC900		GE-62	PTC139*	HEPS0015*	REN 199	SK3124	RT-302	ECG199	TM199/**	WEP66	121-972
	2SC828		GE-61*	PTC139*	HEPS0015*	REN 199	SK3444	RT-302	ECG199	TM199/**	WEP828	121-972
	2SC1740		GE-62	PTC121*	HEPS0015*	REN 123A*	SK3122	RT-109*	ECG123A*	TM123A/**	WEP736*	121-29000A*
	2SA733A		GE-48	PTC127	HEPS0019*	REN 294	SK3138	RT-303	ECG294	TM294/**	WEP911	121-952
TR501	2SA733	176-062-9-001	GE-48	PTC127	HEPS0019*	REN 294	SK3138	RT-303	ECG294	TM294/**	WEP911	121-952
	2SA495		GE-221*	PTC103*	HEPS0013*	REN 159*	SK3114	RT-303	ECG234	TM234	WEP564	121-879
	2SA564		GE-65	PTC103*	HEPS0019*	REN 234	SK3114	RT-303	ECG159*	TM159/**	WEP495	121-29003
	2SC945AQ		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	TM199/**	WEP1945	121-972
	2SC945A		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	TM199/**	WEP1945	121-972
TR502	2SC458	176-062-9-001	GE-210	PTC121*	HEPS0009*	REN 289	SK3122	RT-187	ECG289	TM289/**	WEP458	121-29000A*
	2SC372		GE-61*	PTC121*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	TM123A/**	WEP372	121-29000A*
	2SC900		GE-62	PTC139*	HEPS0015*	REN 199	SK3124	RT-302	ECG199	TM199/**	WEP66	121-972
	2SC828		GE-61*	PTC139*	HEPS0015*	REN 199	SK3444	RT-302	ECG199	TM199/**	WEP828	121-972
	2SC1740		GE-62	PTC121*	HEPS0015*	REN 123A*	SK3122	RT-109*	ECG123A*	TM123A/**	WEP736*	121-29000A*
TR503	2SC945AQ	176-065-9-001	GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	TM199/**	WEP1945	121-972
	2SC945A		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	TM199/**	WEP1945	121-972
	2SC458		GE-210	PTC121*	HEPS0009*	REN 289	SK3122	RT-187	ECG289	TM289/**	WEP458	121-29000A*
	2SC372		GE-61*	PTC121*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	TM123A/**	WEP372	121-29000A*
	2SC900		GE-62	PTC139*	HEPS0015*	REN 199	SK3124	RT-302	ECG199	TM199/**	WEP66	121-972
TR504	2SC828	176-065-9-001	GE-61*	PTC139*	HEPS0015*	REN 199	SK3444	RT-302	ECG199	TM199/**	WEP828	121-972
	2SC1740		GE-62	PTC121*	HEPS0015*	REN 123A*	SK3122	RT-109*	ECG123A*	TM123A/**	WEP736*	121-29000A*
	2SC945AQ		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	TM199/**	WEP1945	121-972
	2SC945A		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	TM199/**	WEP1945	121-972
	2SC458		GE-210	PTC121*	HEPS0009*	REN 289	SK3122	RT-187	ECG289	TM289/**	WEP458	121-29000A*
TR505	2SC372	176-062-9-001	GE-61*	PTC121*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	TM123A/**	WEP372	121-29000A*
	2SC900		GE-62	PTC139*	HEPS0015*	REN 199	SK3124	RT-302	ECG199	TM199/**	WEP66	121-972
	2SC828		GE-61*	PTC139*	HEPS0015*	REN 199	SK3444	RT-302	ECG199	TM199/**	WEP828	121-972
	2SC1740		GE-62	PTC121*	HEPS0015*	REN 123A*	SK3122	RT-109*	ECG123A*	TM123A/**	WEP736*	121-29000A*
	2SC945AQ		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	TM199/**	WEP1945	121-972
TR506	2SC945A	176-062-9-001	GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	TM199/**	WEP1945	121-972
	2SC458		GE-210	PTC121*	HEPS0009*	REN 289	SK3122	RT-187	ECG289	TM289/**	WEP458	121-29000A*
	2SC372		GE-61*	PTC121*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	TM123A/**	WEP372	121-29000A*
	2SC900		GE-62	PTC139*	HEPS0015*	REN 199	SK3124	RT-302	ECG199	TM199/**	WEP66	121-972
	2SC828		GE-61*	PTC139*	HEPS0015*	REN 199	SK3444	RT-302	ECG199	TM199/**	WEP828	121-972
TR507	2SC1740	176-062-9-001	GE-62	PTC121*	HEPS0015*	REN 123A*	SK3122	RT-109*	ECG123A*	TM123A/**	WEP736*	121-29000A*
	2SC945AQ		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	TM199/**	WEP1945	121-972
	2SC945A		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	TM199/**	WEP1945	121-972
	2SC458		GE-210	PTC121*	HEPS0009*	REN 289	SK3122	RT-187	ECG289	TM289/**	WEP458	121-29000A*
	2SC372		GE-61*	PTC121*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	TM123A/**	WEP372	121-29000A*
TR508	2SC900	177-020-9-001	GE-62	PTC139*	HEPS0015*	REN 199	SK3124	RT-302	ECG199	TM199/**	WEP66	121-972
	2SC828		GE-61*	PTC139*	HEPS0015*	REN 199	SK3444	RT-302	ECG199	TM199/**	WEP828	121-972
	2SC1740		GE-62	PTC121*	HEPS0015*	REN 123A*	SK3122	RT-109*	ECG123A*	TM123A/**	WEP736*	121-29000A*
	2SA733A		GE-48	PTC127	HEPS0019*	REN 294	SK3138	RT-303	ECG294	TM294/**	WEP911	121-952
	2SA733		GE-48	PTC127	HEPS0019*	REN 294	SK3138	RT-303	ECG294	TM294/**	WEP911	121-952
TR509	2SA495	176-062-9-001	GE-221*	PTC103*	HEPS0013*	REN 159*	SK3114	RT-303	ECG234	TM234	WEP564	121-879
	2SA564		GE-65	PTC103*	HEPS0019*	REN 234	SK3114	RT-303	ECG159*	TM159/**	WEP495	121-29003
	2SC945AQ		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	TM199/**	WEP1945	121-972
	2SC945A		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	TM199/**	WEP1945	121-972
	2SC458		GE-210	PTC121*	HEPS0009*	REN 289	SK3122	RT-187	ECG289	TM289/**	WEP458	121-29000A*
TR510	2SC372	176-062-9-001	GE-61*	PTC121*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	TM123A/**	WEP372	121-29000A*
	2SC900		GE-62	PTC139*	HEPS0015*	REN 199	SK3124	RT-302	ECG199	TM199/**	WEP66	121-972
	2SC828		GE-61*	PTC139*	HEPS0015*	REN 199	SK3444	RT-302	ECG199	TM199/**	WEP828	121-972
	2SC1740		GE-62	PTC121*	HEPS0015*	REN 123A*	SK3122	RT-109*	ECG123A*	TM123A/**	WEP736*	121-29000A*
	2SC945AQ		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	TM199/**	WEP1945	121-972
TR511	2SC945A	176-062-9-001	GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	TM199/**	WEP1945	121-972
	2SC458		GE-210	PTC121*	HEPS0009*	REN 289	SK3122	RT-187	ECG289	TM289/**	WEP458	121-29000A*
	2SC372		GE-61*	PTC121*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	TM123A/**	WEP372	121-29000A*
	2SC900		GE-62	PTC139*	HEPS0015*	REN 199	SK3124	RT-302	ECG199	TM199/**	WEP66	121-972
	2SC828		GE-61*	PTC139*	HEPS0015*	REN 199	SK3444	RT-302	ECG199	TM199/**	WEP828	121-972
TR512	2SC1740	176-065-9-001	GE-62	PTC121*	HEPS0015*	REN 123A*	SK3122	RT-109*	ECG123A*	TM123A/**	WEP736*	121-29000A*
	2SC945AQ		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	TM199/**	WEP1945	121-972
	2SC945A		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	TM199/**	WEP1945	121-972
	2SC458		GE-210	PTC121*	HEPS0009*	REN 289	SK3122	RT-187	ECG289	TM289/**	WEP458	121-29000A*
	2SC372		GE-61*	PTC121*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	TM123A/**	WEP372	121-29000A*

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

COBRA MODEL 2000GT

* Lead configuration may vary from original.

/** Also available as exact type replacement.

ITEM No.	RATING	REPLACEMENT DATA				
		MFG. PART No.	CORNELL- DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.	
					Q-LINE	GENERAL LINE
C10	.22 25V	027-040-9-001		TDC224M05OEL	QDT1-10	SD50-R229
C18	330 10V	022-183-9-001	WBR300-35*	VTT330G10	QV1-131	EV-1145
C23	.47 50V	022-157-9-001	PC1-50	VTTR47A63	QV1-3	EV-1610
C24	4.7 25V	022-157-9-003	PC5-50	VTT47R750	QV1-31	EV-1619.1
C25	.47 50V	022-157-9-001	PC1-50	VTTR47A63	QV1-3	EV-1610
C29	.47 25V	027-040-9-002		TDC474M05OEL	QDT1-19	SD50-R479
C33	1 50V	022-157-9-002		VTT1A50	QV1-11	EV-1615
C62	1 25V	027-035-9-003	PC1-50	TDC105M035EL		SD35-19
C67	1 25V	027-035-9-003		TDC105M035EL		SD35-19
C72	33 10V	027-040-9-004		TDC336M010FL	QDT1-89	SD10-339
C73	22 10V	022-163-9-001	PC25-25	VTT22B16	QV1-55	EV-1224
C74	47 6.3	027-040-9-003		TDC476M020GL	QDT1-98	SD20-479
C80	2.2 25V	027-031-9-001		TDC225M035FL		SD35-2R29
C81	2.2 25V	027-031-9-001		TDC225M035FL		SD35-2R29
C84	1000 10V	022-171-9-003	PC1000-16	VTT1000L10	QV1-179	EV-1161
C90	.47 25V	027-040-9-002		TDC474M05OEL	QDT1-19	SD50-R479
C92	4.7 25V	022-157-9-003	PC5-50	VTT47R750	QV1-31	EV-1619.1
C95	47 10V	022-160-9-002	PC50-16	VTT47D16	QV1-73	EV-1226
C99	2.2 25V	022-158-9-002	PC2-100	VTT2R2A50	QV1-21	EV-1617.1
C100	22 6V	027-035-9-004		TDC226M015FL	QDT1-82	SD15-229
C101	.1 35V	027-035-9-001		TDC104M05OEL	QDT1-2	SD50-R109
C103	10 10V	027-036-9-001		TDC106M025FL	QDT1-64	SD25-109
C104	.47 25V	027-040-9-002		TDC474M05OEL	QDT1-19	SD50-R479
C108	.47 50V	022-157-9-001	PC1-50	VTTR47A63	QV1-3	EV-1610
C109	10 16V	022-157-9-004	PC10-25	VTT10B25	QV1-41	EV-1222
C133	10 16V	022-157-9-004	PC10-25	VTT10B25	QV1-41	EV-1222
C134	10 16V	022-157-9-004	PC10-25	VTT10B25	QV1-41	EV-1222

PARTS LIST AND DESCRIPTION (CONTINUED)

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

ELECTROLYTIC CAPACITORS (cont)

ITEM No.	RATING	REPLACEMENT DATA				
		MFRG. PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.	
					Q-LINE	GENERAL LINE
C135	.47 50V	022-157-9-001	PC1-50	VTT47A63	QV1-3	EV-1610
C144	1 50V	022-157-9-002	PC1-50	VTT1A50	QV1-11	EV-1615
C153	47 10V	022-160-9-002	PC50-16	VTT47D16	QV1-73	EV-1226
C172	1000 25V	022-171-9-004	WBR1000-25*	VTT1000M25	QV1-185	EV-1360
C173	10 16V	022-157-9-004	PC10-25	VTT10B25	QV1-41	EV-1222
C174	1 50V	022-157-9-002	PC1-50	VTT1A50	QV1-11	EV-1615
C175	470 10V	022-160-9-001	PC500-16	VTT470K16	QV1-151	EV-1251
C176	47 10V	022-160-9-002	PC50-16	VTT47D16	QV1-73	EV-1226
C179	22 6.3V	027-035-9-004	PC25-25	VTT22B16	QV1-55	EV-1224
C180	4.7 25V	022-157-9-003	PC5-50	VTT47B50	QV1-31	EV-1619.1
C181	10 25V	022-171-9-001	PC10-25	VTT10B25		EV-1422
C186	220 10V	022-171-9-002	PC250-10	VTT220F10	QV1-115	EV-1140
C190	.47 50V	022-157-9-001	PC1-50	VTT47A63	QV1-3	EV-1610
C191	1 50V	022-157-9-002	PC1-50	VTT1A50	QV1-11	EV-1615
C214	47 10V	022-160-9-002	PC50-16	VTT47D16	QV1-73	EV-1226
C217	10 16V	022-157-9-004	PC10-25	VTT10B25	QV1-41	EV-1222
C218	1 50V	022-157-9-002	PC1-50	VTT1A50	QV1-11	EV-1615
C230	.47 50V	022-157-9-001	PC1-50	VTT47A63	QV1-3	EV-1610
C231	.47 50V	022-157-9-001	PC1-50	VTT47A63	QV1-3	EV-1610
C232	2.2 25V	022-158-9-002	PC2-100	VTT2R2A50	QV1-21	EV-1617.1
C302	10 25V	022-171-9-001	PC10-25	VTT10B25		EV-1422
C410	4700 35V	022-185-9-001				
C500	1 50V	022-157-9-002	PC1-50	VTT1A50	QV1-11	EV-1615
C501	22 16V	022-157-9-005	PC25-25	VTT22B16	QV1-55	EV-1224
C505	.47 35V	027-040-9-002		TDC474M050EL	QDT1-19	SD50-R479
C512	4.7 25V	022-157-9-003	PC5-50	VTT47B50	QV1-31	EV-1619.1
C523	470 10V	022-192-9-001	PC500-16	VTT470K16	QV1-151	EV-1251
C525	1 50V	022-157-9-002	PC1-50	VTT1A50	QV1-11	EV-1615
C527	220 16V	022-163-9-003	PC250-25	VTT220H16	QV1-117	EV-1240
C535	22 10V	022-163-9-001	PC25-25	VTT22B16	QV1-55	EV-1224
C542	22 10V	022-163-9-001	PC25-25	VTT22B16	QV1-55	EV-1224
C548A	22 10V	022-163-9-001	PC25-25	VTT22B16	QV1-55	EV-1224

* Axial device used as radial replacement.

CAPACITORS

ITEM No.	RATING	MFRG. PART No.	REPLACEMENT DATA			
			CENTRALAB PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.
						Q-LINE GENERAL LINE
C1	33 NPO 5%		DTZ-33	NP033	CN0433	10TCC-Q33
C2	.022 50V		DC-253	MGP025	TA125	TG-S25
C3	.022 50V		DC-253	MGP025	TA125	TG-S25
C4	.022 50V		DC-253	MGP025	TA125	TG-S25
C5	.001 50V		DD-102		GP210	10TS-D10
C6	.022 50V		DC-253	MGP025	TA125	TG-S25
C7	.022 50V		DC-253	MGP025	TA125	TG-S25
C8	.001 50V		DD-102		GP210	10TS-D10
C9	82 50V		DTZ-82	NP082	CN0482	10TCC-Q82
C11	.001 50V		DD-102		GP210	10TS-D10
C14	.001 50V		DD-102		GP210	10TS-D10
C15	100 50V		DTZ-100	NP0100	CN0310	10TCC-T10
C16	.02 50V		UK50-223		MAG5012	
C17	100 50V		DTZ-100	NP0100	CN0310	10TCC-T10
C19	.047 50V 10%			DPMS2S47	M192P4739R8	1FT-S47
C21	.022 50V 10%			DPMS2S22	M192P2239R8	1FT-S22
C22	.022 50V			MGP025	TA125	TG-S25
C26	39 NPO 50V 10%				CN0439	10TCC-Q39
C27	.022 50V		DC-253	MGP025	TA125	TG-S25
C30	.0047 50V		DD-472	GP4700	GP247	56A-D47
C31	12 NPO 50V				CN0412	10TCC-Q12
C32	.0047 50V		DD-472	GP4700	GP247	56A-D47
C34	.0047 50V		DD-472	GP4700	GP247	56A-D47
C35	.001 50V		DD-102		GP210	10TS-D10
C36	.1 50V 10%			WMF05P1	M192P1049R8	1FT-P10
C37	.001 50V		DD-102		GP210	10TS-D10
C38	4 NPO 50V					
C39	.001 50V		DD-102		GP210	10TS-D10
C40	.001 50V		DD-102		GP210	10TS-D10
C41	2 NPO 50V		DTZ-2R2	NP02P2	CN0522	10TCC-V22
C42	.001 50V		DD-102		GP210	10TS-D10
C43	.001 50V		DD-102		GP210	10TS-D10
C44	.001 50V		DD-102		GP210	10TS-D10
C45	100 50V		DTZ-100	NP0100	CN0310	10TCC-T10
C46	.022 50V 10%			DPMS2S22	M192P2239R8	1FT-S22

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
C47	2 NPO 50V	020-225-9-005	DTZ-2R2	NP02P2	CN0522		10TCC-V22
C48	5 NPO 50V				*		10TCC-V50
C49	.022 50V 10%			DPMS2S22	M192P2239R8	QFT2-127	1FT-S22
C50	.022 50V		DC-253	MGP025	TA125		TG-S25
C51	.022 50V		DC-253	MGP025	TA125		TG-S25
C52	.022 50V		DC-253	MGP025	TA125		TG-S25
C53	.02 50V		UK50-223		MAG5012		
C54	.022 50V		DC-253	MGP025	TA125		TG-S25
C55	.022 50V 10%			DPMS2S22	M192P2239R8	QFT2-127	1FT-S22
C56	.047 50V 10%			DPMS2S47	M192P4739R8	QFT2-171	1FT-S47
C58	.022 50V 10%	020-225-9-005		DPMS2S22	M192P2239R8	QFT2-127	1FT-S22
C59	.047 50V 10%			DPMS2S47	M192P4739R8	QFT2-171	1FT-S47
C60	.047 50V 10%			DPMS2S47	M192P4739R8	QFT2-171	1FT-S47
C61	.022 50V		DC-253	MGP025	TA125		TG-S25
C63	.022 50V 10%			DPMS2S22	M192P2239R8	QFT2-127	1FT-S22
C64	220 N750 50V 10%		DTN-220	N220	CN7322		10TCU-T22
C65	5 NPO 50V				*		10TCC-V50
C66	220 N750 50V 10%		DTN-220	N220	CN7322		10TCU-T22
C68	15 NPO 50V 5%		DTZ-15	NP015	CN0415		10TCC-Q15
C69	.0022 50V 10%			DPMS6D22	M192P2229R8	QFT2-27	1FT-D22
C70	.001 50V 10%	020-225-9-006		DPMS6D01	M192P10292	QFT2-1	1FT-D10
C71	.001 50V 10%			DPMS6D01	M192P10292	QFT2-1	1FT-D10
C75	.033 50V 10%			DPMS6S33	M192P3339R8	QFT2-149	1FT-S33
C76	.022 50V 10%			DPMS2S22	M192P2239R8	QFT2-127	1FT-S22
C77	.1 50V 10%			WMF05P1	M192P1049R8	QFT2-215	1FT-P10
C78	.01 50V 10%			WMF1S1	M192P1039R8	QFT2-91	1FT-S10
C79	.1 50V 10%			WMF05P1	M192P1049R8	QFT2-215	1FT-P10
C82	.047 50V		UK50-503		MAG5015		
C83	.022 50V		DC-253	MGP025	TA125		TG-S25
C85	10 NPO 50V		DTZ-10	NP010	CN0410		10TCC-Q10
C86	18 NPO 50V 5%	020-225-9-006			CN0418		10TCC-Q18
C87	.022 50V		DC-253	MGP025	TA125		TG-S25
C88	47 NPO 50V 10%		DTZ-47	NP047	CN0447		10TCC-Q47
C89	47 NPO 50V 10%		DTZ-47	NP047	CN0447		10TCC-Q47
C91	.047 50V 10%			DPMS2S47	M192P4739R8	QFT2-171	1FT-S47
C93	.01 50V		UK50-103		MAG5011		
C94	.047 50V		UK50-503		MAG5015		
C96	.01 50V		UK50-103		MAG5011		
C97	.01 50V		UK50-103		MAG5011		
C98	7 NPO 50V						
C102	.0047 50V 10%	020-225-9-006		WMF1D47	M192P4729R8	QFT2-63	1FT-D47
C105	.0022 50V 10%			DPMS6D22	M192P2229R8	QFT2-27	1FT-D22
C106	.01 50V		UK50-103		MAG5011		
C107	.01 50V 10%			WMF1S1	M192P1039R8	QFT2-91	1FT-S10
C110	.01 50V 10%			WMF1S1	M192P1039R8	QFT2-91	1FT-S10
C111	.01 50V		UK50-103		MAG5011		
C112	.01 50V		UK50-103		MAG5011		
C113	.01 50V		UK50-103		MAG5011		
C114	.01 50V		UK50-103		MAG5011		
C115	.0047 50V		DD-472	GP4700	GP247		5GA-D47
C116	18 NPO 50V 10%	020-225-9-005			CN0418		10TCC-Q18
C117	470 N750 50V 5%		DTN-470				10TCU-T47
C118	.01 50V 10%			WMF1S1	M192P1039R8	QFT2-91	1FT-S10
C119	.01 50V		UK50-103		MAG5011		
C120	.01 50V		UK50-103		MAG5011		
C121	.047 50V 10%			DPMS2S47	M192P4739R8	QFT2-171	1FT-S47
C122	100 NPO 50V 5%		DTZ-100	NP0100	CN0310		10TCC-T10
C123	220 N750 10%		DTN-220	N220	CN7322		10TCU-T22
C124	.022 50V		DC-253	MGP025	TA125		TG-S25
C125	5 NPO 50V				*		10TCC-V50
C126	.01 50V	020-225-9-005	UK50-103		MAG5011		
C127	180 N750 50V 10%		DTN-180				10TCU-T18
C128	47 NPO 50V 10%		DTZ-47	NP047	CN0447		10TCC-Q47
C129	.01 50V		UK50-103		MAG5011		
C130	1 NPO 50V				CN0510		10TCC-V10
C131	10 NPO 50V		DTZ-10	NP010	CN0410		10TCC-Q10
C132	.0047 50V		DD-472	GP4700	GP247		5GA-D47
C136	.047 50V 10%			DPMS2S47	M192P4739R8	QFT2-171	1FT-S47
C137	.5 50V						
C138	.0047 50V	020-218-9-001	DD-472	GP4700	GP247		5GA-D47
C139	.5 50V						
C140	.0047 50V		DD-472	GP4700	GP247		5GA-D47
C141	82 NPO 50V 10%		DTZ-82	NP082	CN0482		10TCC-Q82
C142	27 NPO 50V 10%				CN0427		10TCC-Q27
C143	180 N750 50V 10%		DTN-180				10TCU-T18
C145	3 NPO 50V		DTZ-3R3	NP03P3	CN0533		10TCC-V33
C146	390 N750 50V 10%		DTN-390				10TCU-T39
C147	47 NPO 50V 10%		DTZ-47	NP047	CN0447		10TCC-Q47
C148	.1 50V 10%			WMF05P1	M192P1049R8	QFT2-215	1FT-P10
C149	12D N220 50V 10%	020-212-9-001			*		10TCR-T12
C150	330 N750 50V 10%		DTN-330	N330	CN7333		10TCU-T33
C151	.0047 50V		DD-472	GP4700	GP247		5GA-D47
C152	470 N750 50V 10%		DTN-470				10TCU-T47
C154	.047 50V 10%			DPMS2S47	M192P4739R8	QFT2-171	1FT-S47
C155	.1 50V 10%			WMF05P1	M192P1049R8	QFT2-215	1FT-P10
	.022 50V		DC-253	MGP025	TA125		TG-S25
C156	220 N750 50V 10%		DTN-220	N220	CN7322		10TCU-T22
C157	.0047 50V		DD-472	GP4700	GP247		5GA-D47
C158	.0047 50V		DD-472	GP4700	GP247		5GA-D47
C159	.0047 50V		DD-472	GP4700	GP247		5GA-D47
C160	.0047 50V	020-204-9-013	DD-472	GP4700	GP247		5GA-D47
C161	330 N220 50V 5%				*		10TCR-T33
C162	47 NPO 50V 10%		DTZ-47	NP047	CN0447		10TCC-Q47
C163	2 NPO 50V		DTZ-2R2	NP02P2	CN0522		10TCC-V22
C164	.01 50V		UK50-103		MAG5011		
C165	.0047 50V		DD-472	GP4700	GP247		5GA-D47
C177	.1 50V 10%			WMF05P1	M192P1049R8	QFT2-215	1FT-P10

COBRA MODEL 2000GTL

PARTS LIST AND DESCRIPTION (CONTINUED)

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

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		
C178	.001 50V 10%	020-225-9-005	DD-102	DPMS6D1	M192P10292	QFT2-1	1FT-D10		
C182	.022 50V 10%			DPMS2S22	M192P2239R8	QFT2-127	1FT-S22		
C183	.1 50V 10%			WMF05P1	M192P1049R8	QFT2-215	1FT-P10		
C185	.001 50V			WMF05P1	GP210	QFT2-215	10TS-D10		
C187	.1 50V 10%				M192P1049R8		1FT-P10		
C189	.001 50V				GP210		10TS-D10		
C192	.1 25V			UK25-104	MAG2501		HY-750		
C193	.001 50V			DD-102	MGP025	GP210		10TS-D10	
C194	.022 50V			DC-253		TA125		TG-S25	
C195	.1 25V			UK25-104		MAG2501		HY-750	
C196	.0047 50V		DD-472	GP247		5GA-D47			
C197	.02 50V		UK50-223	GP4700	MAG5012				
C198	.01 50V		UK50-103		MAG5011				
C199	.01 50V		UK50-103		MAG5011				
C200	.0047 50V		DD-472		GP247				
C201	.01 50V		UK50-103	GP4700	MAG5011		5GA-D47		
C202	.01 50V		UK50-103		MAG5011				
C203	33 NPO 50V 5%		DTZ-33		NP033			CN0433	10TCC-Q33
C204	.022 50V		DC-253		MGP025			TA125	TG-S25
C205	.0047 50V		DD-472	GP4700	GP247	5GA-D47			
C207	47 NPO 50V 10%		DTZ-47	NP047	CN0447	10TCC-Q47			
C208	.001 50V		DD-102		GP210	10TS-D10			
C212	470 N750 50V 5%		DTN-470			10TCU-T47			
C213	10 N750 50V		DTN-10		N10	CN7410	10TCU-Q10		
C215	.022 50V		DC-253		MGP025	TA125	TG-S25		
C216	5 NPO 50V		020-225-9-005		*	10TCC-V50			
C219	.01 50V 10%				WMF1S1	M192P1039R8	QFT2-91	1FT-S10	
C223	.0047 50V				GP4700	GP247	5GA-D47		
C224	.0047 50V				DD-472	GP247	5GA-D47		
C225	.047 50V 10%				DPMS2S47	M192P4739R8	QFT2-171	1FT-S47	
C227	.022 50V				DC-253	MGP025	TA125	TG-S25	
C228	.022 50V				DC-253	MGP025	TA125	TG-S25	
C229	.022 50V				DC-253	MGP025	TA125	TG-S25	
C235	330 50V				DD-331	GP330	GP333	10TS-T33	
C236	330 50V				DD-331	GP330	GP333	10TS-T33	
C301	.022 50V 10%		020-225-9-005		DPMS2S22	M192P2239R8	QFT2-127	1FT-S22	
C303	.022 50V 10%				DPMS2S22	M192P2239R8	QFT2-127	1FT-S22	
C304	.022 50V 10%				DC-253	TA125	TG-S25		
C401	.1 25V				UK25-104	MAG2501	HY-750		
C402	.001 50V				DD-102	GP210	10TS-D10		
C403	.1 25V				UK25-104	MAG2501	HY-750		
C404	.001 50V				DD-102	GP210	10TS-D10		
C405	.001 50V				DD-102	GP210	10TS-D10		
C406	.001 50V				DD-102	GP210	10TS-D10		
C407	.001 50V				DD-102	GP210	10TS-D10		
C408	.01 50V		UK50-103	020-225-9-005	MAG5011				
C409	.01 50V		UK50-103		MAG5011				
C412	.001 125V		DD-102		GP210			10TS-D10	
C413	.001 125V		DD-102		GP210			10TS-D10	
C414	.001 125V		DD-102		GP210			10TS-D10	
C415	.001 125V	DD-102	GP210		10TS-D10				
C416	.001 50V	DD-102	GP210		10TS-D10				
C417	.001 50V	DD-102	GP210		10TS-D10				
C418	.001 50V	DD-102	GP210		10TS-D10				
C419	.001 50V	DD-102	GP210		10TS-D10				
C420	.001 50V	DD-102	GP210	10TS-D10					
C421	.001 50V	DD-102	GP210	10TS-D10					
C422	.001 50V	DD-102	GP210	10TS-D10					
C423	.001 50V	DD-102	GP210	10TS-D10					
C424	.001 50V	DD-102	GP210	10TS-D10					
C425	.047 50V	UK50-503	020-225-9-005	MAG5015					
C426	.001 50V	DD-102		GP210			10TS-D10		
C428	.001 50V	DD-102		GP210			10TS-D10		
C429	.001 50V	DD-102		GP210			10TS-D10		
C430	.001 50V	DD-102		GP210			10TS-D10		
C431	.001 50V	DD-102		GP210			10TS-D10		
C432	.001 50V	DD-102		GP210			10TS-D10		
C433	.001 50V	DD-102		GP210			10TS-D10		
C434	330 50V	DD-331		GP330			GP333	10TS-T33	
C502	33 NPO 50V 10%	DTZ-33		NP033			CN0433	10TCC-Q33	
C510	.001 50V	DD-102	025-121-9-006	GP210	QFT2-171	10TS-D10			
C511	.047 50V 10%	DC-253		DPMS2S47		M192P4739R8	1FT-S47		
C513	.022 50V	DC-253		MGP025		TA125	TG-S25		
C514	.022 50V	DC-253		MGP025		TA125	TG-S25		
C515	.022 50V	DC-253		MGP025		TA125	TG-S25		
C516	.001 50V	DD-102		MGP025		GP210	10TS-D10		
C517	.001 50V	DD-102				GP210	10TS-D10		
C518	.001 50V	DD-102				GP210	10TS-D10		
C519	.022 50V	DC-253				TA125	TG-S25		
C520	.001 50V	DD-102		MGP025		GP210	10TS-D10		
C521	.022 50V	DC-253	TA125		TG-S25				
C522	.022 50V	DC-253	TA125		TG-S25				
C526	.001 50V	DD-102	GP210		10TS-D10				
C528	.001 50V	DD-102	MGP025	GP210	10TS-D10				
C529	.022 50V	DC-253		TA125	TG-S25				
C531	.022 50V	DC-253		MGP025	TA125	TG-S25			
C532	.02 50V	UK50-223		MAG5012		TG-S25			
C533	.022 50V	DC-253	MGP025	TA125		TG-S25			
C534	.022 50V	DC-253	MGP025	TA125		TG-S25			
C536	.022 50V	DC-253	MGP025	TA125		TG-S25			
C537	56 NPO 50V 5%	025-121-9-006		CN0456	QFT2-91	10TCC-Q56			
C538	47 50V			CN0447		10TCC-Q47			
C541	.022 50V			NP047		CN0447	TG-S25		
C543	.02 50V			DC-253		TA125			
C544	.022 50V			UK50-223		MAG5012			
C545	.02 50V			DC-253		TA125			
C546	.01 50V 10%			UK50-223		MAG5012			
						WMF1S1	M192P1039R8		1FT-S10

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
C547	.01 50V 10%			WMF1S1	M192P1039R8	QFT2-91
C548B	.001 50V		DD-102		GP210	
C549	470 N750 50V 10%		DTN-470			1FT-S10
C550	470 N750 50V 10%		DTN-470			10TS-D10
C551	.022 50V		DC-253	MGP025	TA125	10TCU-T47
C552	470 N750 50V 10%		DTN-470			TG-S25
C553	.022 50V		DC-253	MGP025	TA125	10TCU-T47
C554	.001 50V		DD-102		GP210	TG-S25
C555	.022 50V		DC-253	MGP025	TA125	10TS-D10
CC1		527-077-9-002(1)				TG-S25
CT2	20	028-051-9-001				
CT501	20	028-051-9-001				

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

(1) Consists of (4) four 87pF Caps.

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	AM Signal Meter	3000	008-323-9-001			U260R502B
VR2	SSB Signal Meter	3000	008-323-9-001			U260R502B
VR3	Squelch Range	1000	008-334-9-001			U260R102B
VR4	Carrier Balance	10K	008-342-9-002			U260R103B
VR5	Frequency Adjust	3000	008-323-9-001			U260R502B
VR6	RF PWR Meter	100K	008-316-9-001			U260R104B
VR7	Mod Meter	50K	008-316-9-002			U260R503B
VR8	Final Bias	5000	008-316-9-004			U260R502B
VR9	Driver Bias	500	008-342-9-001			U260R501B
VR10	AM Carrier Power	5000	008-316-9-004			U260R502B
VR11	SSB ALC	10K	008-342-9-002			U260R103B
VR12	AM AMC	500	008-342-9-001			U260R501B
VR401	Squelch	100K	008-346-9-005			
VR402	Coarse Voice Lock	20K	008-357-9-001 (18)			
VR407	Fine Voice Lock					
VR403	Volume	10K	008-346-9-002			
VR404	RF Gain	1000	008-357-9-002 (19)			
VR408	SWR CAL	5000				
VR405	DynamiKe Plus	1000	008-349-9-002			
VR406	Tone	5000	008-350-9-002	F1-5000 (1), SSK012	RU53L,SL36,SL1500 SL36,SL1500	BU1 (1),CF8, SS1,DC1

(1) Enlarge mounting hole.

(18) Includes VR402 and VR407.

(19) Includes VR404 and VR408.

COILS (RF-IF)

ITEM No.	FUNCTION	REPLACEMENT DATA			REMARKS
		PART No.	OTHER IDENTIFICATION	MILLER PART No.	
L1	NB Amp	060-018-9-001	LA-038	CBS512-7TC	
L2	NB Amp	060-025-9-010	LA-179		
L3	IF (455kHz)	060-022-9-001	LA-163		
L4	Antenna Matching (27MHz)	060-030-9-015	LA-261		
L5	RF Amp (27MHz)	060-030-9-014	LA-260		
L6	RF Amp (27MHz)	060-030-9-013	LA-259		
L7	Mixer (7.8MHz)	060-030-9-012	LA-258		
L8	Mixer (7.8MHz)	060-030-9-011	LA-257		
L9	Mixer (7.8MHz)	060-031-9-005	LA-268		
L10	Mixer (7.8MHz)	060-031-9-006	LA-269		
L12	IF (7.8MHz)	060-031-9-007	LA-270		
L13	IF (455kHz)	060-031-9-009	LA-272		
L14	IF (7.8MHz)	060-031-9-008	LA-271		
L15	IF (455kHz)	060-031-9-001	LA-264		
L16	Loop Mixer (100uH)	041-087-9-002	LZ-012		
L17	RF Choke (470uH)	041-088-9-004	LZ-012		
L19	VCO	060-030-9-002	LA-216		
L20	VCO (34MHz)	060-030-9-001	LA-195		
L21	Tripler (33MHz)	060-030-9-010	LA-256		
L22	RF Choke	046-028-9-001	LA-051		
L23	RF Choke	046-028-9-003	LA-285		
L24	RF Choke (220uH)	041-109-9-001	LZ-012		
L25	RF Choke (220uH)	041-109-9-001	LZ-012		
L26	RF Choke (220uH)	041-109-9-001	LZ-012		
L27	RF Choke (470uH)	041-088-9-004	LZ-012		
L28	RF Choke (470uH)	041-088-9-004	LZ-012		
L29	RF Choke (470uH)	041-088-9-004	LZ-012		
L30	Carrier Oscillator (7.798MHz)	060-031-9-003	LA-266		
L31	Carrier Oscillator (7.800MHz)	060-031-9-002	LA-265		

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.	
L32	RF Choke (470uH)	041-088-9-004	LZ-012	CB305	
L33	ALC Amp (100uH)	041-087-9-002	LZ-012		
L35	RF Choke	044-043-9-008	LE-051		
L36	TVI Trap (54MHz)	041-088-9-001	LC-019		
L37	PI Filter	044-043-9-008	LE-051		
L38	Final (27MHz)	041-088-9-001	LC-019		
L39	RF Choke	044-053-9-003	LD-098		
L42	RF Choke	044-053-9-003	LD-098		
L44	RF Choke	044-053-9-002	LD-096		
L45	Predriver (27MHz)	060-030-9-008	LA-254		
L46	Mixer (27MHz)	060-030-9-006	LA-220	CBS05	
L47	VCO (34MHz)	060-025-9-008	LA-160		
L48	Mixer (7.8MHz)	060-030-9-005	LA-219		
L57	RF Choke (470uH)	041-088-9-004	LZ-012		
L58	RF Choke (470uH)	041-088-9-004	LZ-012		
L59	RF Choke	046-028-9-002	LA-284		
L60	RF Choke (470uH)	041-088-9-004	LZ-012		
L401	RF Choke	044-043-9-002	LD-013		
L402	RF Choke	044-043-9-002	LD-013		
L403	RF Choke	044-048-9-002	LD-089		
L406	RF Choke	041-069-9-005	LD-027	CBS512-7TC	
L407	RF Choke	041-069-9-005	LD-027		
L408	RF Choke	044-048-9-002	LD-089		
L409	RF Choke	044-048-9-002	LD-089		
L410	RF Choke	044-048-9-002	LD-089		
L413	RF Choke	044-048-9-002	LD-089		
L414	RF Choke (470uH)	041-088-9-004	LZ-012		
L415	RF Choke (470uH)	041-088-9-004	LZ-012		
L501	Buffer (34MHz)	060-030-9-001	LA-195		
L502	Buffer (7.8MHz)	060-018-9-001	LA-038		

TRANSFORMER (Power)

ITEM No.	RATING		REPLACEMENT DATA			NOTES
	PRI.	SEC. 1	MFGR. PART No.	THORDARSON PART No.	TRIAD PART No.	
T401	120V AC @ .65A AC	15.50V @ 3A DC	065-147-9-001 TF-164 (1)			(1) Number on unit.

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		MFGR. PART No.	QUAM PART No.	
SP401	4" PM 8 Ohms	580-D13-9-001 580-030-9-001 (1)	4A1Z8	(1) Used in some versions.

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	4A Quick Acting	194-005-9-001	FH-002	AGC4	HRK	311004	150145	
F402	4A Quick Acting	194-005-9-001	FH-002	AGC4	HKP	311004	342-012AL	

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	562-024-9-001	18-032	18-034	18-010	18-092	1	2	5	3	NC	4

MISCELLANEOUS

ITEM No.	PART NAME	PART No.	NOTES
D401	LED	158-026-9-001	Channel Selector, Tens (TLR321) (Each segment supplied with 1.66V @ 10mA)
D404	LED	158-026-9-002	Tens, Hours, Millions (5082-7760-C)
D405	LED	158-026-9-002	Units, Hours, Millions (5082-7760-C)
D406	LED	158-026-9-003	Colon (1.70V @ 1.5mA) (5082-4100)
D407	LED	158-026-9-003	Decimal (1.70V @ 1.5mA) (5082-4100)
D408	LED	158-026-9-002	Tens, Thousands, Minutes (5082-7760-C)
D409	LED	158-026-9-002	Units, Thousands, Minutes (5082-7760-C)
D410	LED	158-026-9-002	Tens, Hundreds, Seconds (5082-7760-C)
D411	LED	158-026-9-002	Units, Hundreds, Seconds (5082-7760-C)
D412	LED	158-026-9-004	Time (1.70V @ 1.5mA) (5082-4484)
D413	LED	158-026-9-004	Time (1.70V @ 1.5mA) (5082-4484)
D415	LEO	158-026-9-001	Channel Selector, Units (5082-7750-C) (Each segment supplied with 1.66V @ 10mA)
FT1	Filter	143-006-9-002	455kHz, FL-050
FT2	Filter	143-006-9-002	7.8MHz, FL-046
FT3	Filter	143-010-9-001	7.8MHz, FL-067
J401	Jack	772-025-9-001	Speaker (2) (JK-010)
J402	Jack	772-025-9-001	Speaker (1) (JK-010)
J403	Jack	772-025-9-001	PA (JK-010)
J404	Jack	773-092-9-001	Microphone (JK-107)
J405	Jack	773-094-9-001	Phone (JK-005-002)
J406	Jack	772-025-9-001	Aux Record (JK-010)
J407	Jack	762-020-9-001	DC Power (JK-052)
J408	Jack	772-036-9-001	Antenna (JK-068)
L18	Ferrite Bead	763-084-9-001	(LD-077)
L34	Ferrite Bead	044-043-9-006	(LD-071)
L40	Ferrite Bead	044-048-9-003	(LD-087)
L41	Ferrite Bead	044-053-9-004	(LD-101)
L43	Ferrite Bead	044-048-9-003	(LD-087)
L51	Ferrite Bead	763-084-9-001	LD-077
L404	Ferrite Bead	763-084-9-001	LD-077
L405	Ferrite Bead	763-084-9-001	LD-077
L411	Ferrite Bead	044-048-9-003	LD-087
L412	Ferrite Bead	044-048-9-003	LD-087
L416	Ferrite Bead	044-048-9-003	LD-087
L417	Ferrite Bead	044-048-9-003	LD-087
L418	Ferrite Bead	044-048-9-003	LD-087
L419	Ferrite Bead	044-048-9-003	LD-087
L503	Ferrite Bead	044-048-9-003	LD-087
L504	Ferrite Bead	044-048-9-003	LD-087
L506	Ferrite Bead	044-048-9-003	LD-087
M401	Meter	320-105-9-001	SWR Modulation (MT-185)
M402	Meter	320-106-9-001	Signal RF Power (MT-184) (11.65V @ 45mA)
PG401	Plug	420-027-9-001	AC (WZ-022)
PG402	Plug	426-042-9-001	DC Power (W-070273)
PG403	Plug	775-034-9-001	Connector Speaker (PG-003)
PL401	Lamp	400-060-9-001	Receive (11.45V @ 44mA) (PL-068-002)
PL402	Lamp	400-060-9-002	On-The-Air (11.45V @ 44mA) (PL-068-004)
PL403	Lamp	400-060-9-003	Meter (11.65V @ 45mA) (PL-068-006)
PL404	Lamp	400-060-9-003	Meter (11.65V @ 45mA) (PL-068-006)
PL405	Lamp	400-060-9-004	USB (11.65V @ 45mA) (PL-068-008)
PL406	Lamp	400-056-9-001	AM (11.65V @ 45mA) (PL-068-012)
PL407	Lamp	400-060-9-005	LSB (11.65V @ 45mA) (PL-068-014)
P404	Plug		Microphone
SP402	Buzzer		
S401	Switch	088-051-9-004	Power, On/Off, (Push) (SW-177)
S402	Switch	083-241-9-002	Channel Selector (Rotary) SR-209)
S403	Switch	083-249-9-001	Mode, AM/LSB/USB, (Rotary) (SR-231)
S404	Switch	080-010-9-001	Speaker (1)/Speaker (2)/Speaker (1) & (2)
S405	Switch	080-010-9-002	ANL/Off (SW-152)
S406	Switch	080-010-9-002	NB/Off (SW-152)
S407	Switch	080-010-9-002	CB/PA (SW-152), Dim, Tone
S408	Switch	080-010-9-001	SWR/CAL/Mod (SW-151)
S409	Switch	080-051-9-001	Time Set (SW-084)
S410	Switch	088-051-9-001	Hour (SW-084)
S411	Switch	088-051-9-001	Minute (SW-084)
S412	Switch	088-051-9-003	Alarm/Off (SW-175)
S413	Switch	088-051-9-003	Radio/Off (SW-175)
S415	Switch	088-051-9-002	Counter/Off (SW-174)
S416	Switch	088-051-9-002	Auto (SW-174)
S417	Switch	088-051-9-002	Time/Off (SW-174)
S418	Switch	084-065-9-003	AC/DC (SW-099)
X1	Crystal	135-026-9-002	7.3450MHz (QX-093)
X2	Crystal	133-014-9-001	10.240MHz (QX-077)

COBRA MODEL 2000GTL

PARTS LIST AND DESCRIPTION (CONTINUED)

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

MISCELLANEOUS

ITEM No.	PART NAME	PART No.	NOTES
X3	Crystal	135-027-9-003	11.325MHz (QX-086)
X4	Crystal	135-026-9-001	7.8000MHz (QX-092)
X501	Crystal	135-028-9-007	10.4888MHz
	Cable	426-045-9-002	Flat (WF-005)
	Cable	426-045-9-003	Flat (WF-109)
	P.C. Board	302-384-9-001	Channel LED (PC-370AA)
	P.C. Board	302-323-9-001	Channel SW (PC-395AA)
	P.C. Board	302-383-9-001	Counter (PC-370AA)
	P.C. Board	302-375-9-001	Filter (PC-372AA)
	P.C. Board	302-374-9-001	LED (PC-369AA)
	P.C. Board	302-381-9-001	Main (PC-497AA)
	P.C. Board	302-312-9-001	Mic Jack (PC-389AA)
	P.C. Board	302-379-9-001	Phone Jack (PC-480AA)
	P.C. Board	302-373-9-001	Power Supply (PC-316AA)
	P.C. Board	302-380-9-001	Record Jack (PC-481AA)
	P.C. Board	302-378-9-001	Speaker Jack (PC-479AA)
	P.C. Board	302-385-9-001	Squelch Volume (PC-370AA)
	P.C. Board	302-372-9-001	Switch (PC-315AA)
	P.C. Board	302-376-9-001	Switch (PC-477AA)
	P.C. Board	302-377-9-001	Switch (PC-478AA)
	P.C. Board	302-382-9-001	Switch (PC-519AA)

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

ITEM	PART No.	ITEM	PART No.
Case, Bottom	253-068-9-002	Optical Filter	763-115-9-003
Case, Top (Wood)	253-073-9-001	Optical Filter	763-115-9-004
Cover, Bottom, Speaker	252-026-9-001	Optical Filter, Display	763-115-9-005
Cover, Side, Right	263-009-9-001	Panel, Front	255-180-9-001
Cover, Side, Left	263-009-9-002	Panel, Front Display	260-178-9-001
Cover, Top, Speaker (Wood)	290-004-9-002	Panel, Front Speaker	255-174-9-002
Knob, Channel (Complete)	751-168-9-001	Panel, Rear	262-022-9-001
Knob, Inner (Complete)	751-172-9-004	Panel, Rear Speaker	253-068-9-003
Knob, Outer (Complete)	751-172-9-001	Push-Button (Power)	284-028-9-001
Knob, Push-Button (Complete)	751-168-9-007	Speaker Grille (A)	261-076-9-001
Optical Filter, Clock	380-316-9-001	Speaker Grille (B)	261-076-9-002
Optical Filter	380-316-9-002		



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-448 (21-1561)

REALISTIC MODEL TRC-448

MANUFACTURER'S SPECIFICATIONS

DESCRIPTION		CONDITION	NOMINAL	LIMIT
TRANSMITTER				
Frequency Tolerance	AM		±0.0003%	±0.005%
	SSB		±0.0003%	±0.005%
RF Output	AM	13.8 V DC	3.8 W (4 watts max.)	3.5 ~ 4.0 W
	SSB	13.8 V DC	12 W PEP	10 ~ 12 W
Modulation Distortion		80% MOD 1 kHz	3%	10%
Spurious Harmonic Emission	AM		-65 dB	-60 dB
	SSB		-65 dB	-60 dB
Carrier Suppression	SSB		-50 dB	-40 dB
Unwanted Sideband Suppression		2.5 kHz (SSB)	-50 dB	-40 dB
Current Drain		No Modulation (AM)	1500 mA	2000 mA
		(SSB)	1000 mA	1500 mA
		80% MOD (AM)	2000 mA	2600 mA
		10 W PEP Two-Tone (SSB)	2500 mA	3000 mA
Modulation Frequency Response		1 kHz 0 dB		
		Lower 450 Hz	AM SSB -6 dB	AM -10 dB, SSB -14 dB
		Upper 2.5 kHz	AM SSB -6 dB	AM SSB -10 dB
Carrier Power Uniformity		Ch-to-Ch with No MOD	AM 0.3 W	0.5 W
MIC Input Level Uniformity		Ch-to-Ch for 4 W Output, 1000Hz Single-Tone	SSB 2 dB	3 dB
Intermodulation Distortion		500 and 2500 Hz Two-Tone	30 dB	25 dB
MIC Input Level Uniformity		LSB/USB 4 W Output		
		1.5 kHz Single Tone	1 dB	3 dB
Microphone Sensitivity		AM 50% MOD	0.7 mV	1.5 mV
		SSB 4 W PEP	0.7 mV	1.5 mV
RECEIVER				
Max. Sensitivity		AM	0.5 μV	1 μV
		SSB	0.25 μV	0.5 μV
Sensitivity		10 dB S/N AM	0.5 μV	1 μV
		SSB	0.25 μV	0.5 μV
AGC Figure of Merit		50 mV 10 dB AM	90 dB	80 dB
		SSB	90 dB	80 dB
Overload AGC Characteristics		10 mV to 100 mV AM	±2 dB	±5 dB
		SSB	±2 dB	±5 dB

Courtesy of the Manufacturer

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

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8CF936

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:

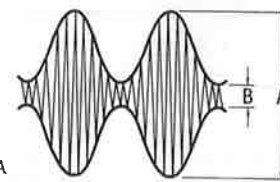
T1 thru T8, T207 thru T214.....9440

T9.....5000, 5009, 8276, 8228, 8728A

T201 thru T204.....9440

L207, L208, T205, T206.....5009, 8728, 8728A

TC1 thru TC7, TC201.....5000, 8276



$$\text{Modulation Ratio} = \frac{A - B}{A + B} \times 100 (\%)$$

FIGURE 1

SYNTHESIZER ALIGNMENT

TEST EQUIPMENT	TRANSCEIVER	ADJUST	REMARKS
Input of frequency counter to TP8.	Ch. 19	TC6	Adjust for 10.240MHz +10Hz.
Input of DC meter to TP9 (Junction of VR4 and VR2).	Ch. 19 Clarifier Midrange	VR2	Adjust for 4.00 volts.
Input of oscilloscope to TP5.	Ch. 19, AM	T7, T8	Adjust for maximum RF (45mV p-p typical).
Input of frequency counter to TP5.	Ch. 19, AM Clarifier Midrange	TC4	Adjust for 33.485MHz.
Input of frequency counter to TP5.	Ch. 19, USB Clarifier Midrange	TC5	Adjust for 33.4875MHz.
Input of oscilloscope to TP2.	Ch. 19, USB	T1, T2	Adjust for maximum RF (300mV p-p typical).
Input of frequency counter to TP2.	Ch. 19, USB	TC1	Adjust for 15.605MHz +10Hz.
Input of DC meter to TP7.	Ch. 1, USB	TC3	Adjust for 2.50 volts +.1 volt. Check for approximate 3.50 volts on channel 40.
Input of DC meter to TP7.	Ch. 1, LSB	TC2	Adjust for 2.50 volts +.1 volt. Check for approximate 3.50 volts on channel 40.
Input of oscilloscope to TP3.	Ch. 19, LSB	T3, T4	Adjust for maximum RF (120mV p-p typical).
Input of frequency counter to TP6.	Ch. 1, AM Clarifier Midrange		Check for 1.280MHz. Check all channels. (See Truth Chart for correct frequencies.)
Input of oscilloscope to TP4.	Ch. 19, AM	T6	Adjust for maximum RF (400mV p-p typical).
Input of frequency counter to TP4.	Ch. 1, AM Clarifier Midrange		Check for 34.765MHz. Check all channels. (See Truth Chart for correct frequencies.)
Input of oscilloscope to TP4.	Ch. 19, LSB	T5	Adjust for maximum RF (700mV p-p typical).
Input of frequency counter to TP4.	Ch. 1, LSB Clarifier Midrange		Check for 19.1625MHz. Check all channels. (See Truth Chart for correct frequencies.)
Input of frequency counter to TP4	Ch. 1, USB Clarifier Midrange		Check for 34.7675MHz. Check all channels. (See Truth Chart for correct frequencies.)
Input of frequency counter to antenna input.	Ch. 1, AM XMT	VR1	Adjust for 26.965MHz. 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. Preset controls as follows, unless otherwise noted: RF Gain Maximum, Clarifier Midrange, Squelch MINIMUM, NB Out, Mon/PA/CB CB.			
TEST EQUIPMENT	TRANSCEIVER	ADJUST	REMARKS
Output of signal generator thru .01uF to TP214. 7.8MHz, 1000Hz @ 30% modulation.	Ch. 19, AM	T209,T208, T207	Adjust for maximum output.
Output of signal generator thru .01uF to antenna input. 27.185MHz, 1000Hz @ 30% modulation.	Ch. 19, AM	T212,T211, T210	Adjust for maximum output. Readjust T207, T208 and T209 for maximum.
Output of signal generator thru .01uF to antenna input. 27.185MHz, 1000Hz @ 30% modulation. Input of oscilloscope to TP210.	Ch. 19, AM	T213,T214	Set generator output for 10db signal to noise plus ratio of receiver. Inject a 100pps, 1uSec. pulse width signal at antenna input. Switch noise blanker on and adjust for maximum pulse amplitude (200mV peak, typical).

RECEIVER ADJUSTMENTS

Connect an AC VTVM or AF wattmeter across speaker voice coil. Adjust volume control to obtain a suitable indication. Preset controls as follows, unless otherwise noted: RF Gain Maximum, Clarifier Midrange, Squelch MINIMUM, NB Out, Mon/PA/CB CB.			
TEST EQUIPMENT	TRANSCEIVER	ADJUST	REMARKS
Input of DC meter to TP208. No signal input.	Ch. 19, AM	VR207	AGC Adjust for 1.40 volts.
Output of signal generator thru .01uF to antenna input. 27.185MHz, 1000Hz @ 30% modulation. Output 1000uV.	Ch. 19, AM Squelch Maximum	VR209	SQUELCH RANGE Adjust so squelch just breaks.
No signal input.	Ch. 19, AM	VR206	S METER ZERO Adjust for 0 on S units scale of meter.
Output of signal generator thru .01uF to antenna input. 27.185MHz, 1000Hz @ 30% modulation. Output 100uV.	Ch. 19, AM	VR205	S METER Adjust for 9 on S units scale of meter.

TRANSMITTER ALIGNMENT

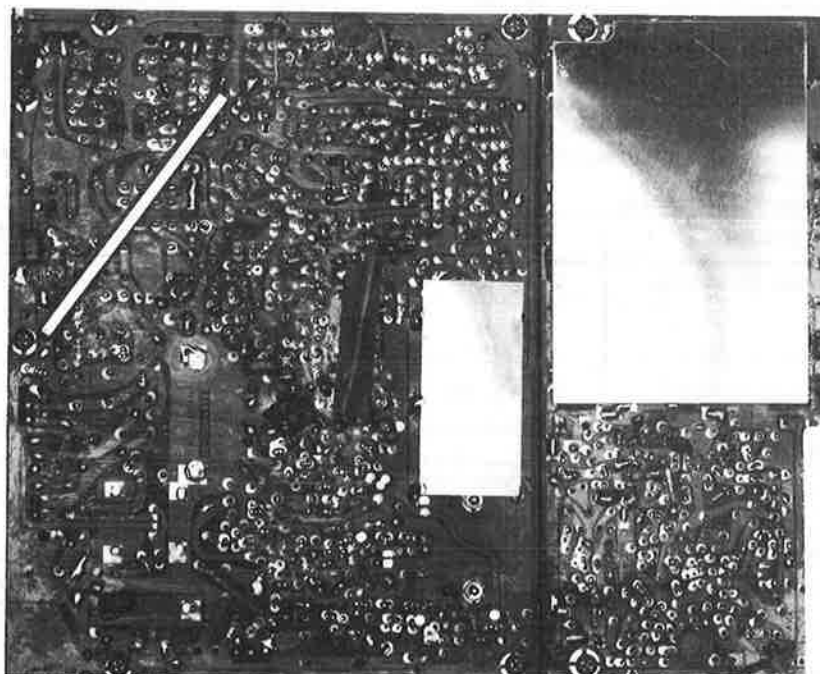
Connect a 50-ohm, 25-watt dummy load to antenna connector. NOTE: Be sure to check transmit frequency and power on all active channels after alignment of transmitter. See page 4 for channel frequencies.			
TEST EQUIPMENT	TRANSCEIVER	ADJUST	REMARKS
Input of RF wattmeter to antenna input.	Ch. 19, AM	T201,T202, T203,T204, T205,T206, L207,L208	Adjust for maximum RF output.
Input of spectrum analyzer or harmonic meter to antenna input.	Ch. 19, AM	TC201	Adjust for MINIMUM at 54MHz (2nd harmonic).

TRANSMITTER ADJUSTMENTS

Connect a 50-ohm, 25-watt dummy load to antenna connector. NOTE: Be sure to check transmit frequency and power on all active channels after adjustment of transmitter. See page 4 for channel frequencies.			
TEST EQUIPMENT	TRANSCEIVER	ADJUST	REMARKS
Input of RF wattmeter to antenna input. No modulation input.	Ch. 19, USB	VR3,TC7,T9	CARRIER BALANCE Adjust for MINIMUM RF output. Switch to LSB and check for MINIMUM RF output.
Connect a 0-500mA DC meter at TP216. No modulation.	Ch. 19, USB	VR202	FINAL BIAS Adjust for 50mA idle current.

TRANSMITTER ADJUSTMENTS (Continued)

TEST EQUIPMENT	TRANSCIEVER	ADJUST	REMARKS
Input of oscilloscope to antenna input. Inject a two-tone, 30mV signal at mic input.	Ch. 19, USB	VR201	DRIVER BIAS Adjust for cleanest waveform.
Input of RF wattmeter to antenna input. Inject a two-tone, 30mV signal at mic input.	Ch. 19, USB	VR4	SSB MOD Set VR204 to MINIMUM (fully counterclockwise) and adjust VR4 for 11.0 watts PEP maximum.
Input of RF wattmeter to antenna input. Inject a 1000Hz, 30mV signal at mic input.	Ch. 19, USB	VR204	SSB ALC Adjust for 11.0 watts PEP maximum.
Input of oscilloscope or modulation meter to antenna input. Inject a 1000Hz, 5mV signal at mic input.	Ch. 19, AM	VR5	AM AMC Adjust for 85% to 90% modulation maximum. (See Figure 1.)
Input of RF wattmeter to antenna input.	Ch. 19, AM	VR210	AM POWER Adjust for 4.0 watts RF output maximum.
Input of RF wattmeter to antenna input.	Ch. 19, AM	VR203	RF METER Adjust so RF meter agrees with RF wattmeter.
Input of oscilloscope or modulation meter to antenna input. Inject a 1000Hz signal at mic input. Set output to produce a 30% modulation. (See Figure 1.)	Ch. 19, AM	VR208	MOD INDICATOR Adjust so mod light just turns on.

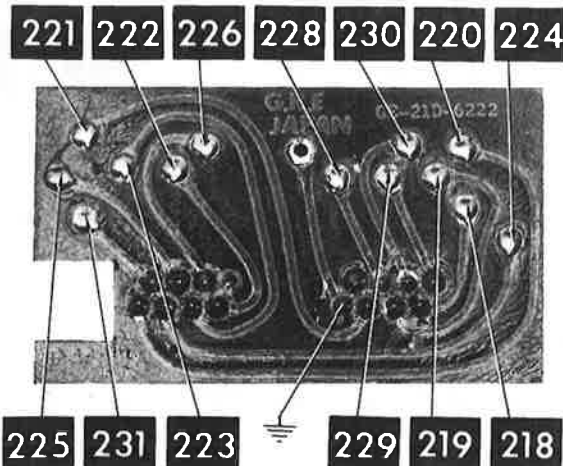


SHIELD LOCATION

TRUTH CHART

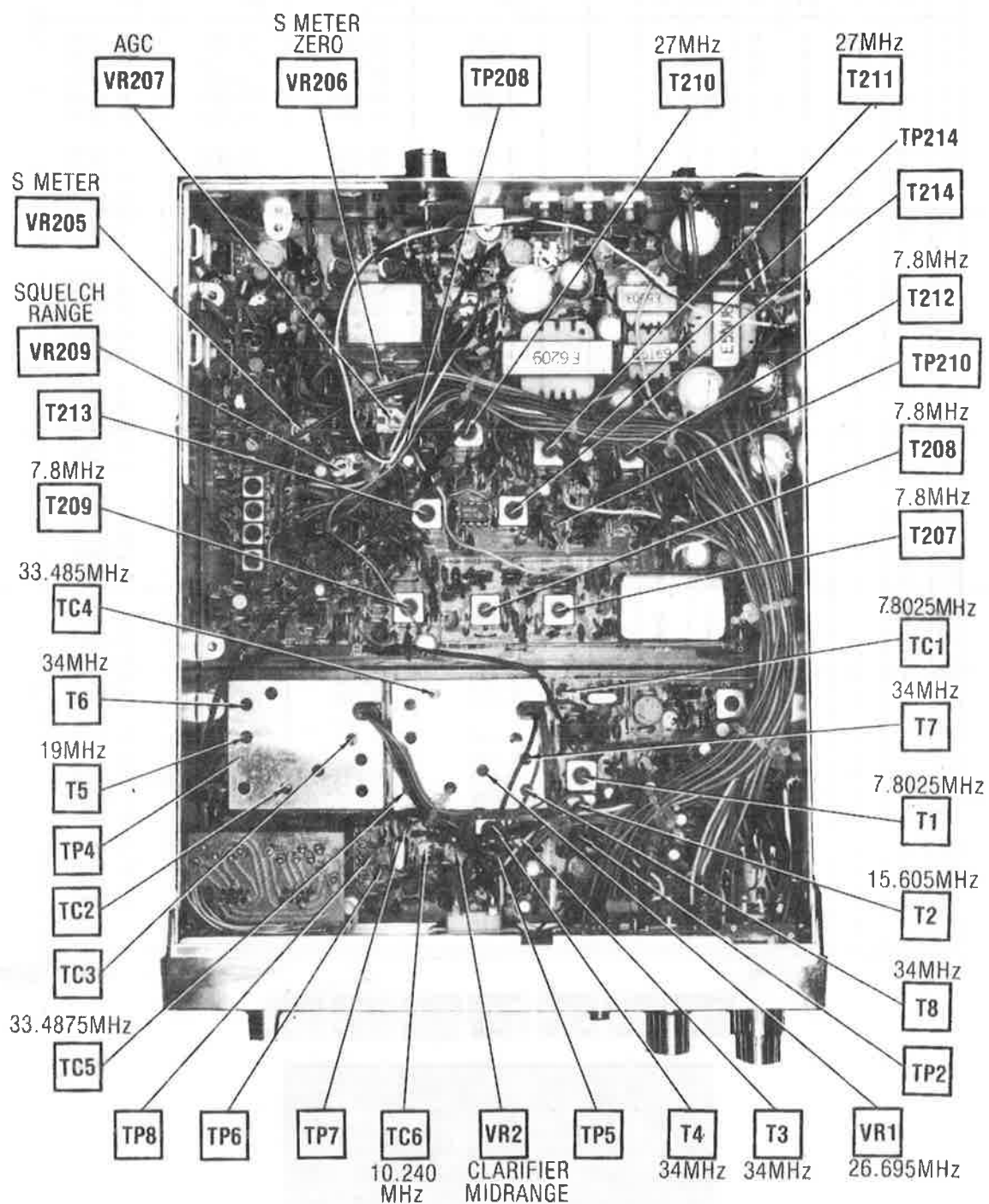
CHANNEL	1 = 5.10 Volts 0 = 0 Volts								DIVIDER INPUT IN MHZ AT TP6	AM REC SYNTH OUTPUT IN MHZ AT TP4	LSB REC & XMIT SYNTH OUTPUT IN MHZ AT TP4	USB REC AM XMIT SYNTH OUTPUT IN MHZ AT TP4
	PROGRAM DIVIDER											
	PINS											
	11	12	13	14	15	16						
1	0	0	0	0	0	0			1.280	34.765	19.1625	34.7675
2	0	0	0	0	0	0			1.290	34.775	19.1725	34.7775
3	0	0	0	0	0	1			1.300	34.785	19.1825	34.7875
4	0	0	0	1	0	0			1.320	34.805	19.2025	34.8075
5	0	0	0	1	0	1			1.330	34.815	19.2125	34.8175
6	0	0	0	1	1	0			1.340	34.825	19.2225	34.8275
7	0	0	0	1	1	1			1.350	34.835	19.2325	34.8375
8	0	0	1	0	0	1			1.370	34.855	19.2525	34.8575
9	0	0	1	0	1	0			1.380	34.865	19.2625	34.8675
10	0	0	1	0	1	1			1.390	34.875	19.2725	34.8775
11	0	0	1	1	0	0			1.400	34.885	19.2825	34.8875
12	0	0	1	1	1	0			1.420	34.905	19.3025	34.9075
13	0	0	1	1	1	1			1.430	34.915	19.3125	34.9175
14	0	1	0	0	0	0			1.440	34.925	19.3225	34.9275
15	0	1	0	0	0	1			1.450	34.935	19.3325	34.9375
16	0	1	0	0	1	1			1.470	34.955	19.3525	34.9575
17	0	1	0	1	0	0			1.480	34.965	19.3625	34.9675
18	0	1	0	1	0	1			1.490	34.975	19.3725	34.9775
19	0	1	0	1	1	0			1.500	34.985	19.3825	34.9875
20	0	1	1	0	0	0			1.520	35.005	19.4025	35.0075
21	0	1	1	0	0	1			1.530	35.015	19.4125	35.0175
22	0	1	1	0	1	0			1.540	35.025	19.4225	35.0275
23	0	1	1	1	0	1			1.570	35.055	19.4525	35.0575
24	0	1	1	0	1	1			1.550	35.035	19.4325	35.0375
25	0	1	1	1	0	0			1.560	35.045	19.4425	35.0475
26	0	1	1	1	1	0			1.580	35.065	19.4625	35.0675
27	0	1	1	1	1	1			1.590	35.075	19.4725	35.0775
28	1	0	0	0	0	0			1.600	35.085	19.4825	35.0875
29	1	0	0	0	0	1			1.610	35.095	19.4925	35.0975
30	1	0	0	0	1	0			1.620	35.105	19.5025	35.1075
31	1	0	0	0	1	1			1.630	35.115	19.5125	35.1175
32	1	0	0	1	0	0			1.640	35.125	19.5225	35.1275
33	1	0	0	1	0	1			1.650	35.135	19.5325	35.1375
34	1	0	0	1	1	0			1.660	35.145	19.5425	35.1475
35	1	0	0	1	1	1			1.670	35.155	19.5525	35.1575
36	1	0	1	0	0	0			1.680	35.165	19.5625	35.1675
37	1	0	1	0	0	1			1.690	35.175	19.5725	35.1775
38	1	0	1	0	1	0			1.700	35.185	19.5825	35.1875
39	1	0	1	0	1	1			1.710	35.195	19.5925	35.1975
40	1	0	1	0	0	0			1.720	35.205	19.6025	35.2075

REALISTIC MODEL TRC-448

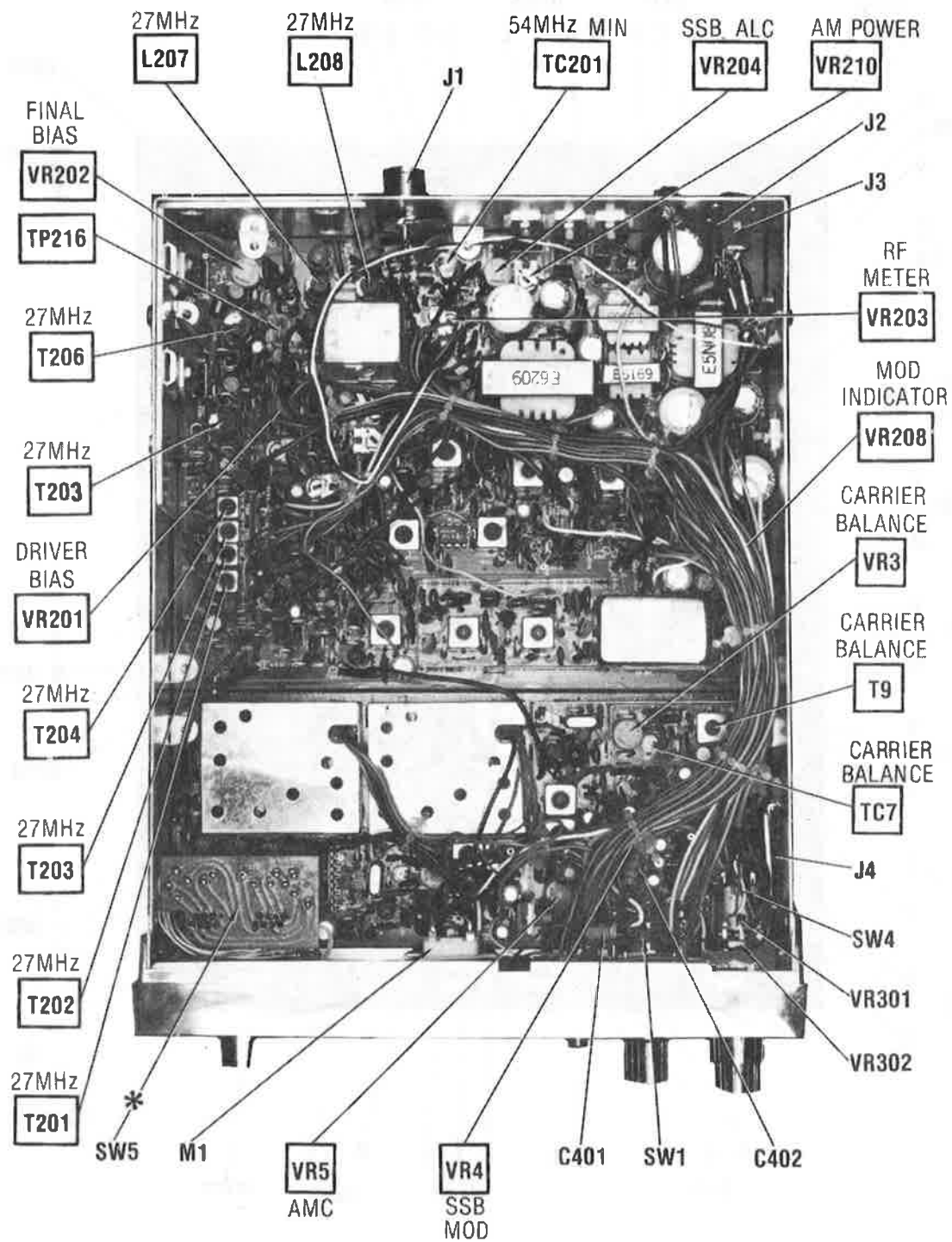


A Howard W. Sams CIRCUITRACE® Photo

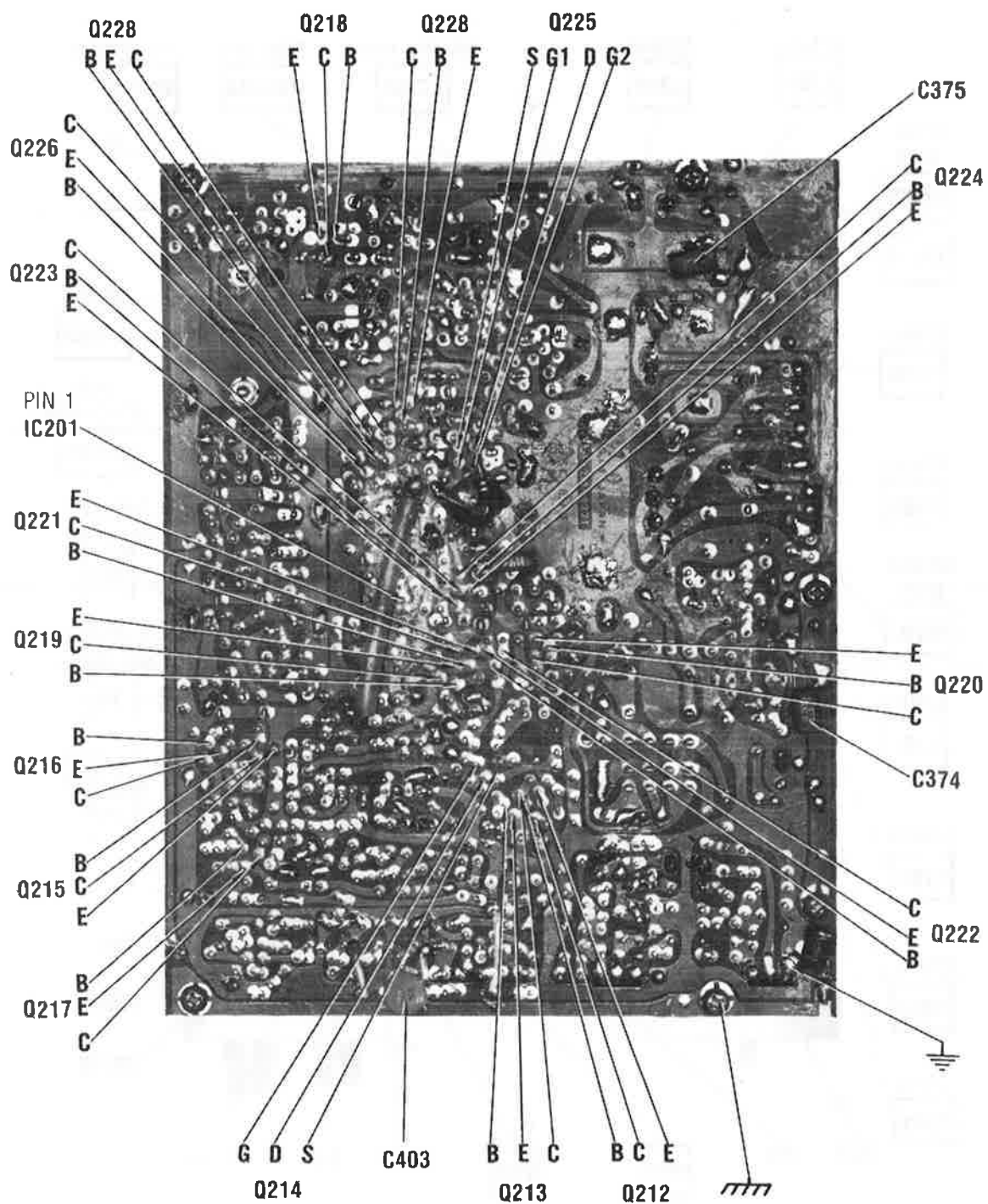
SWITCH BOARD



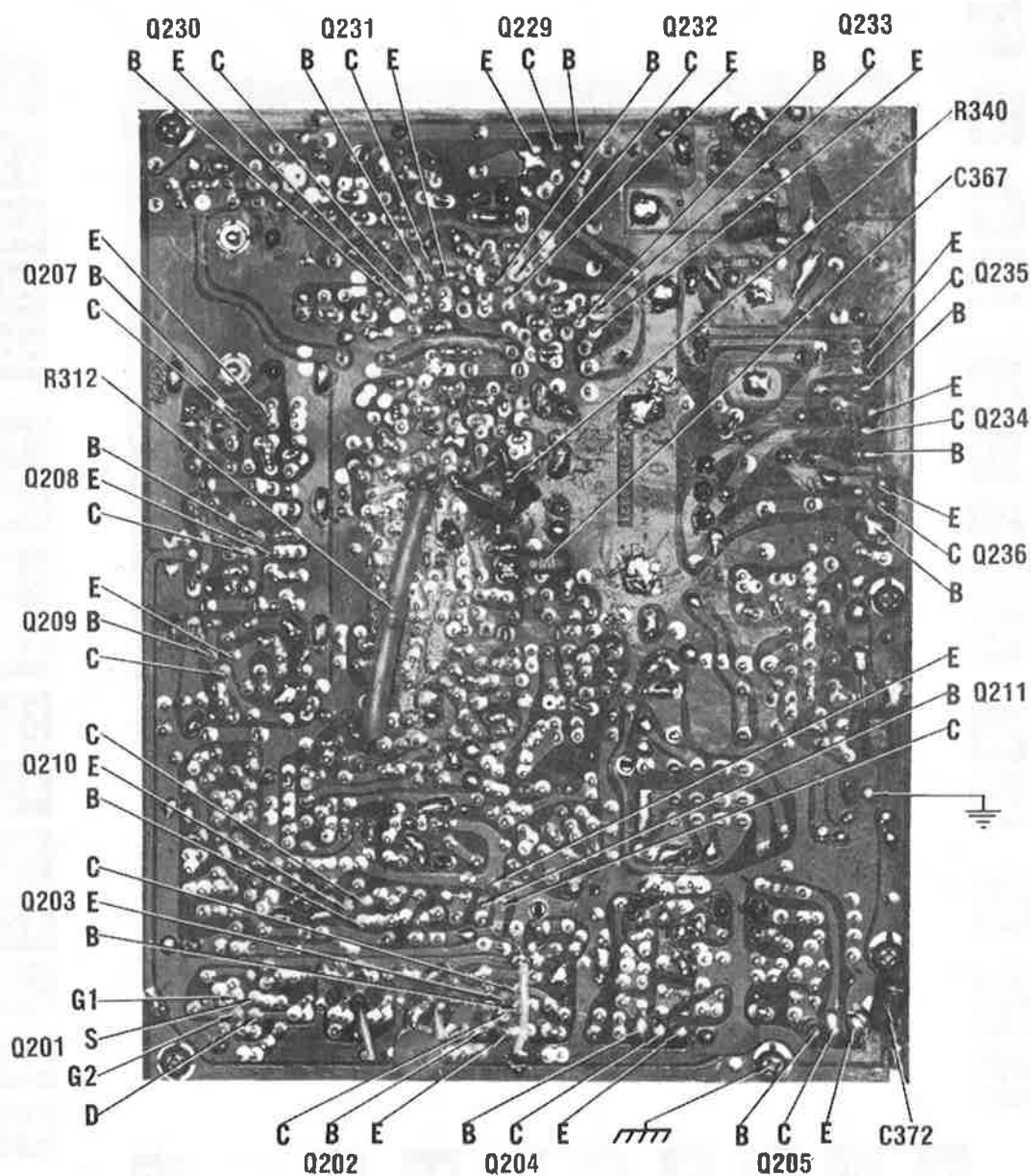
CHASSIS-BOTTOM



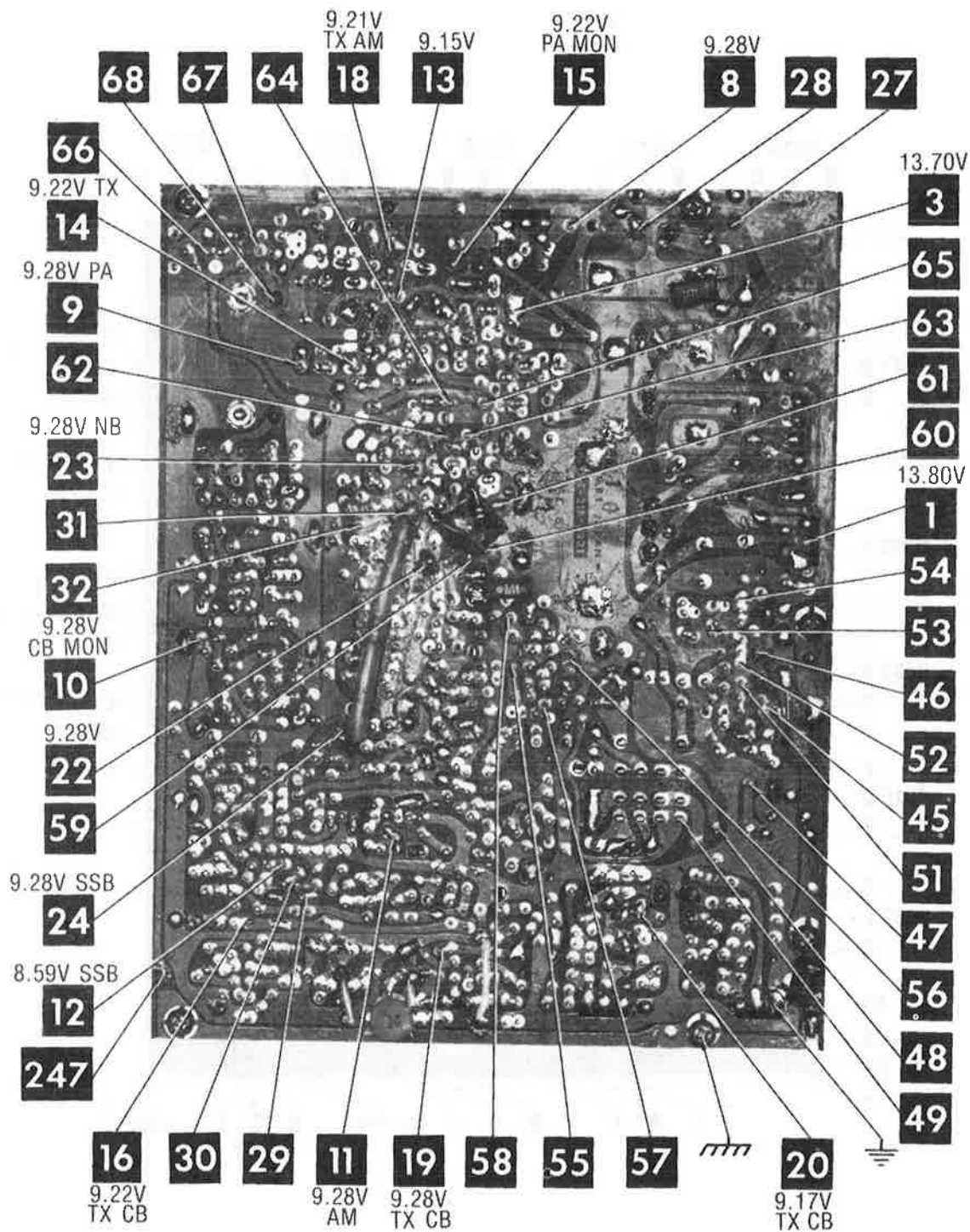
CHASSIS-BOTTOM



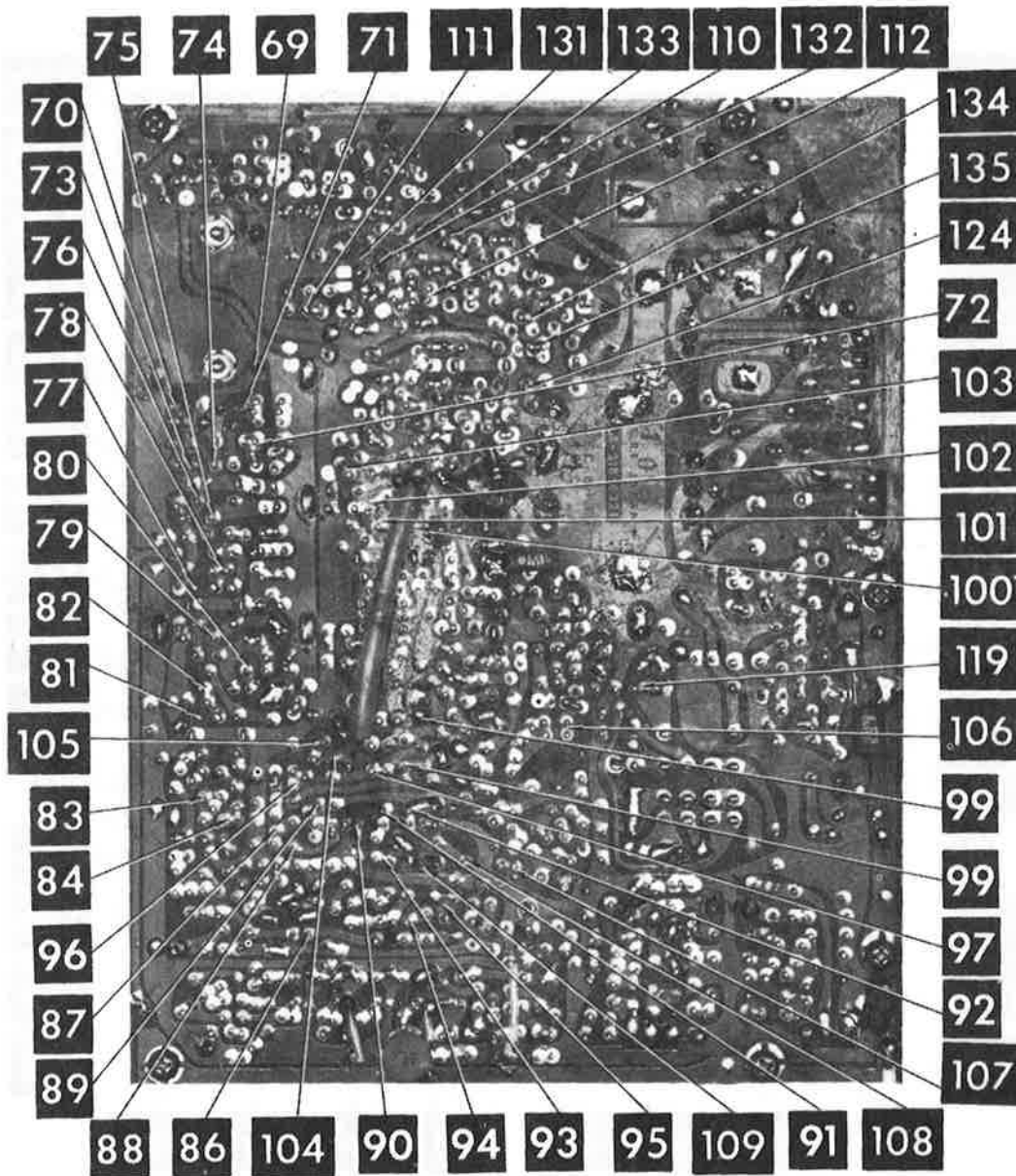
MAIN BOARD



MAIN BOARD

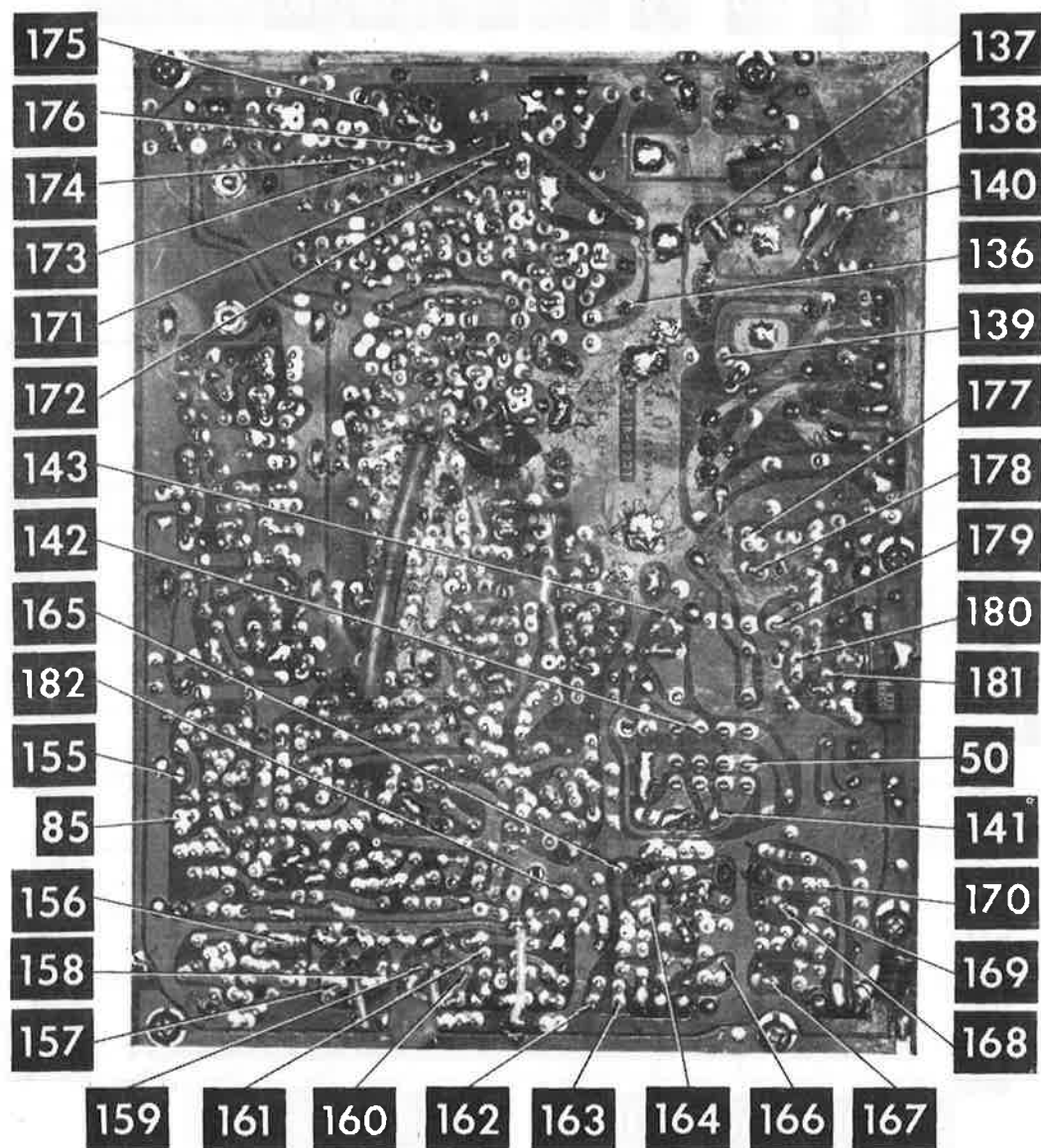


MAIN BOARD

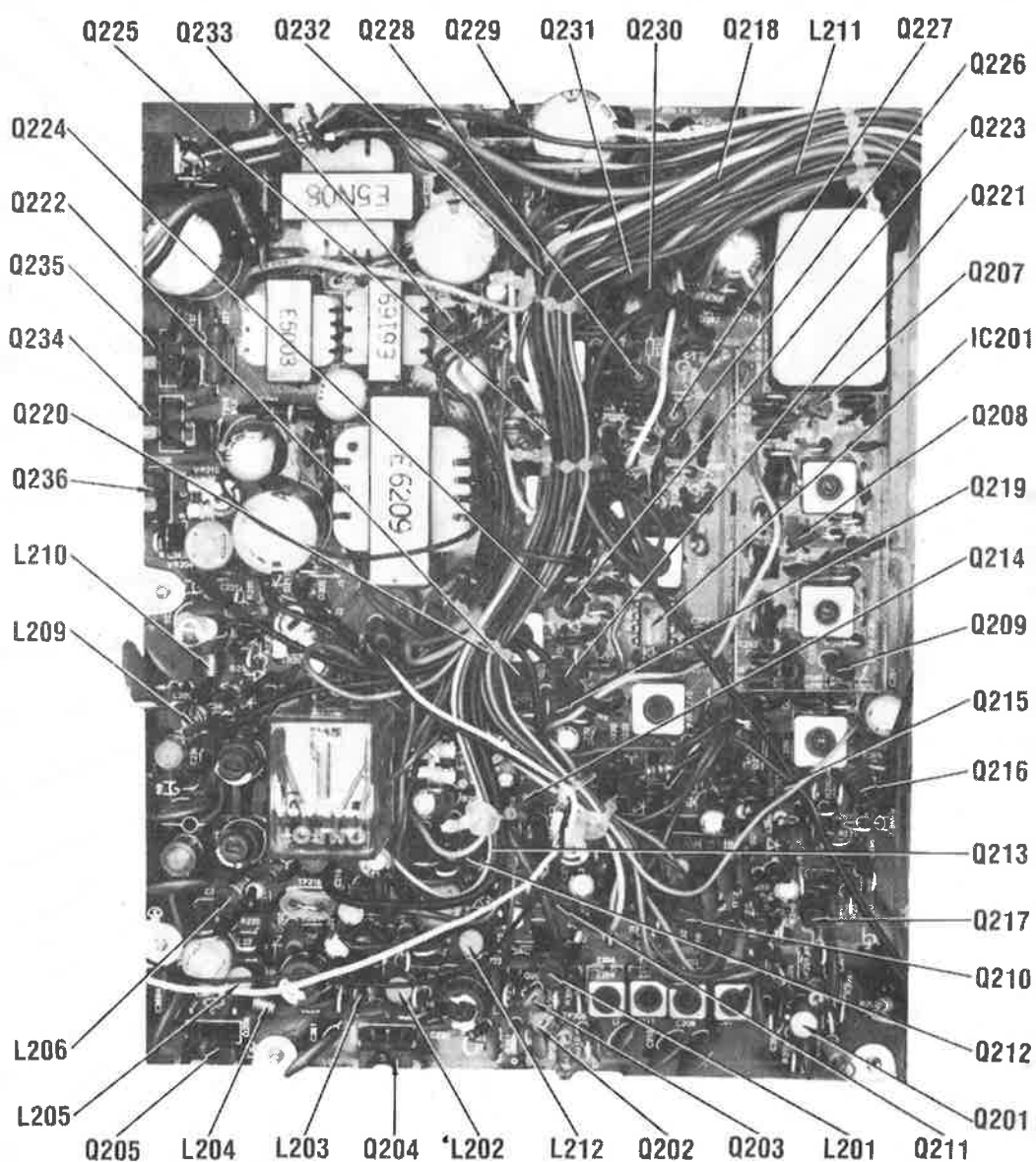


REALISTIC MODEL TRC-448

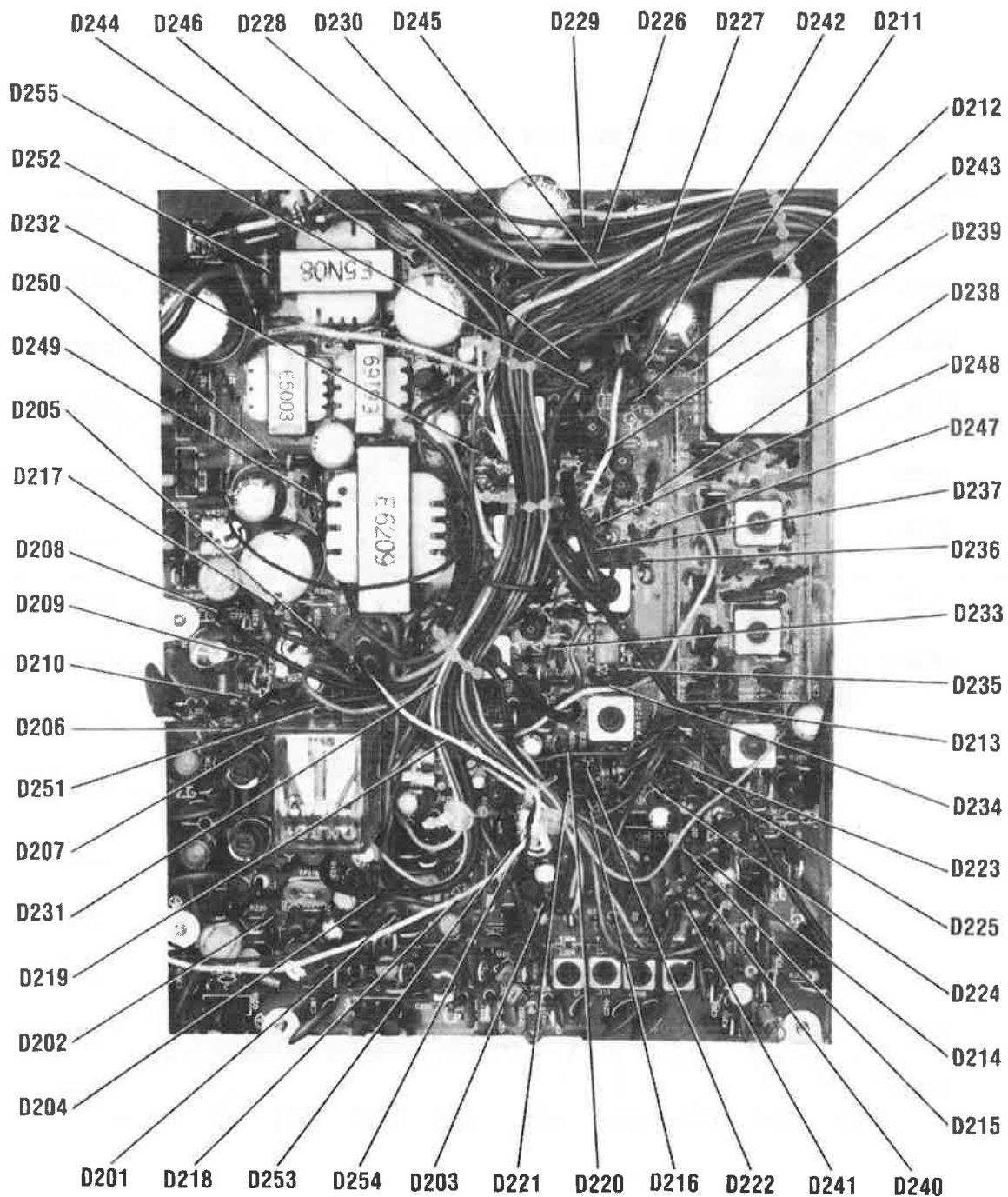
MAIN BOARD



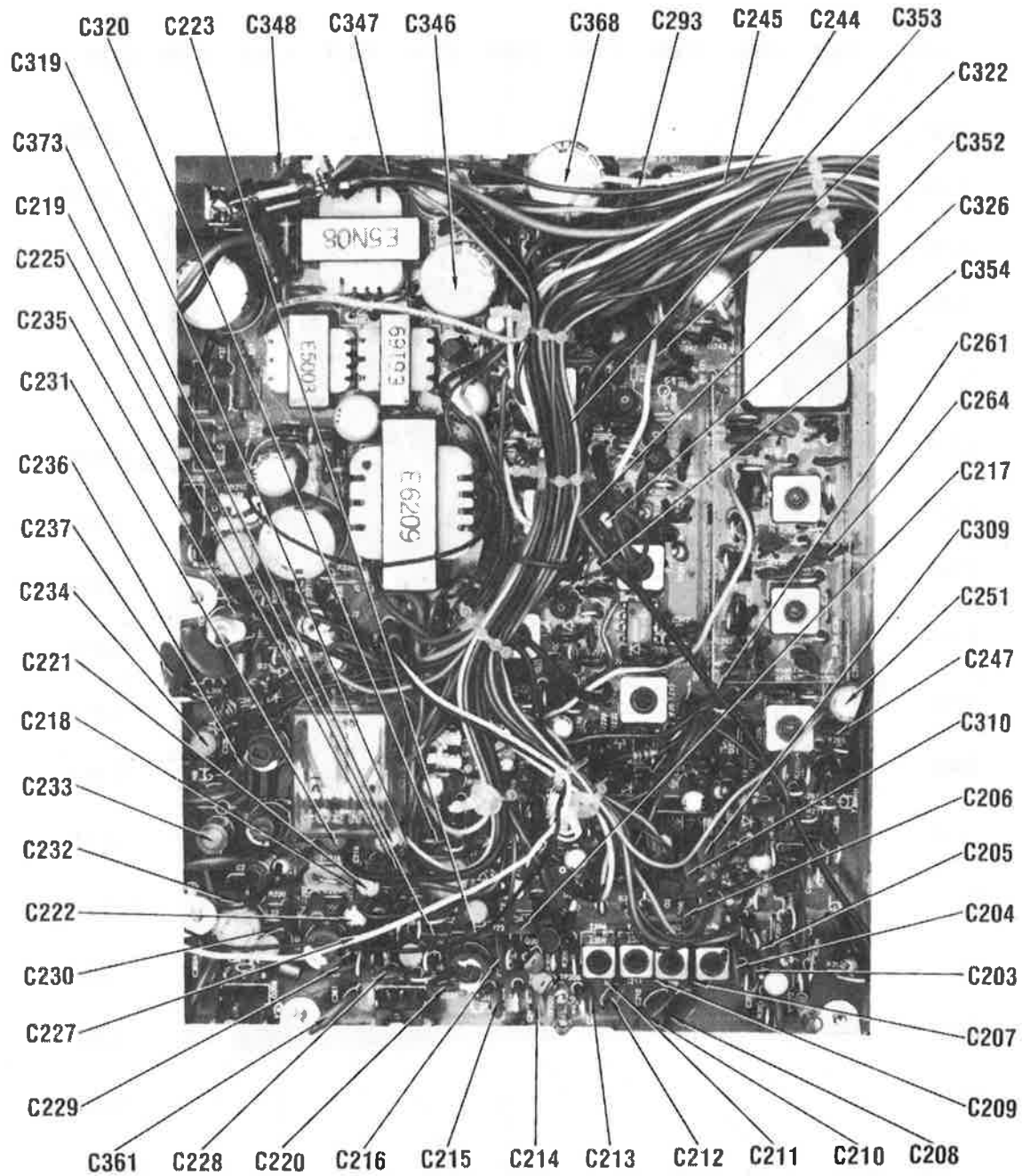
MAIN BOARD



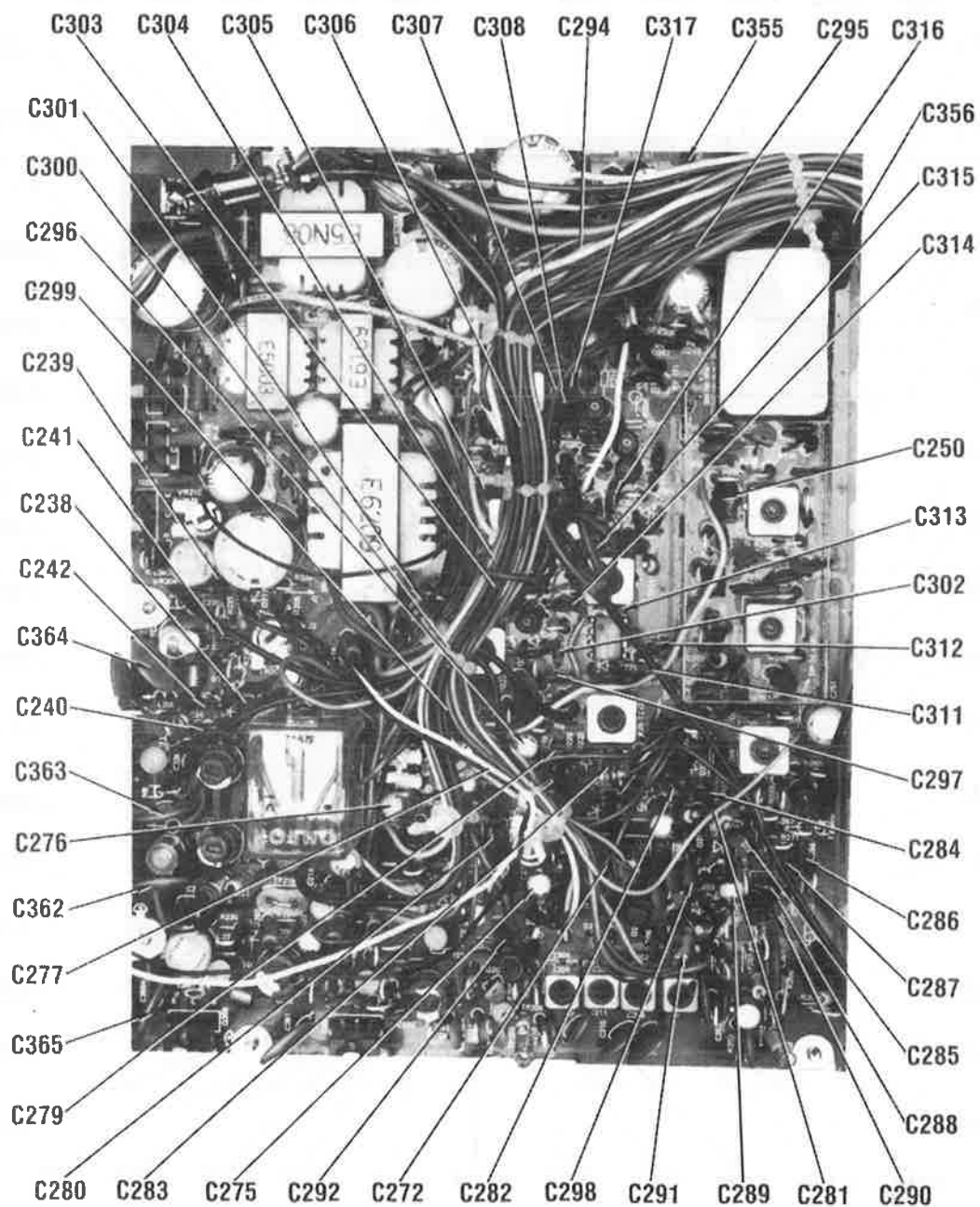
MAIN BOARD



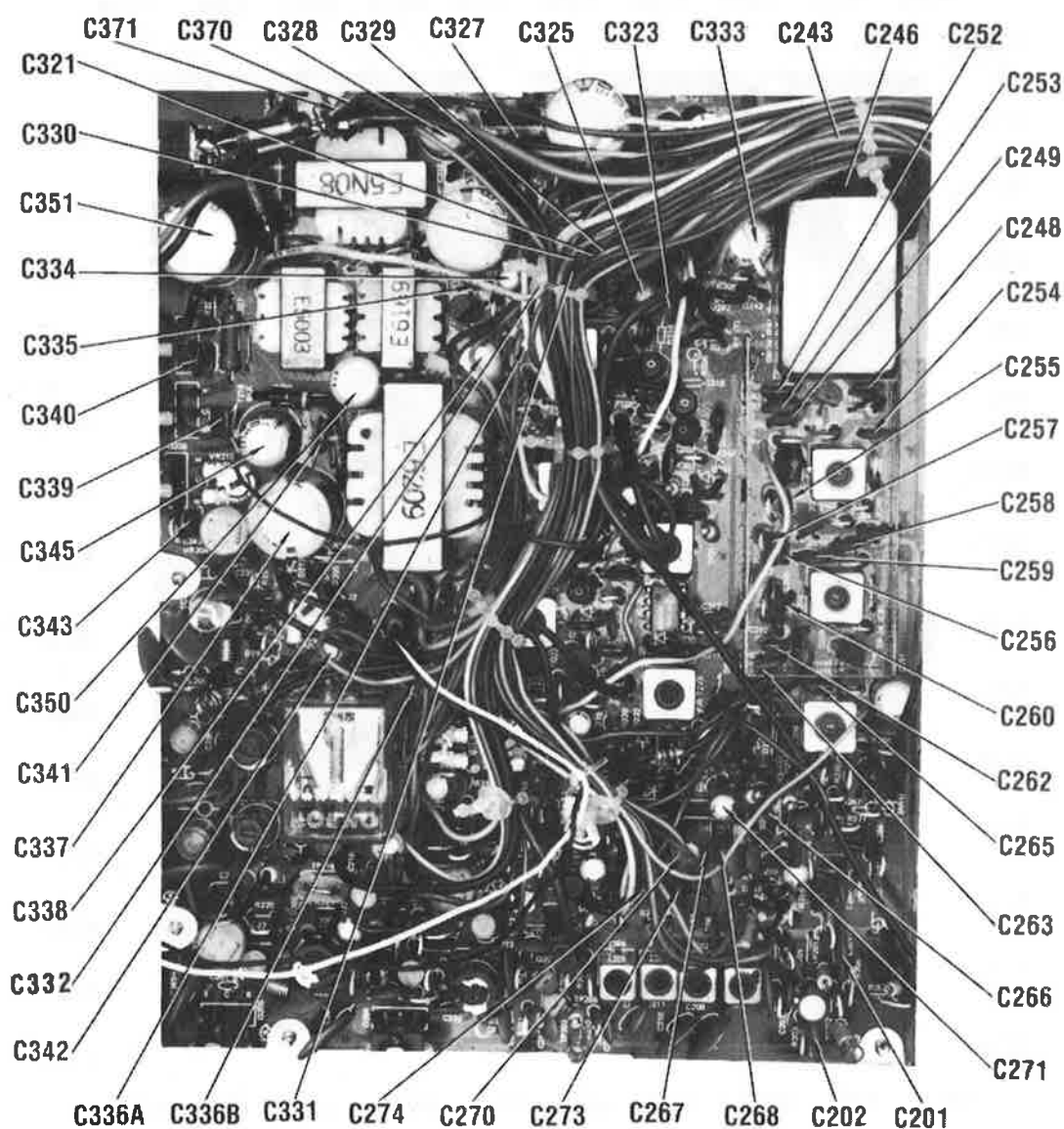
MAIN BOARD



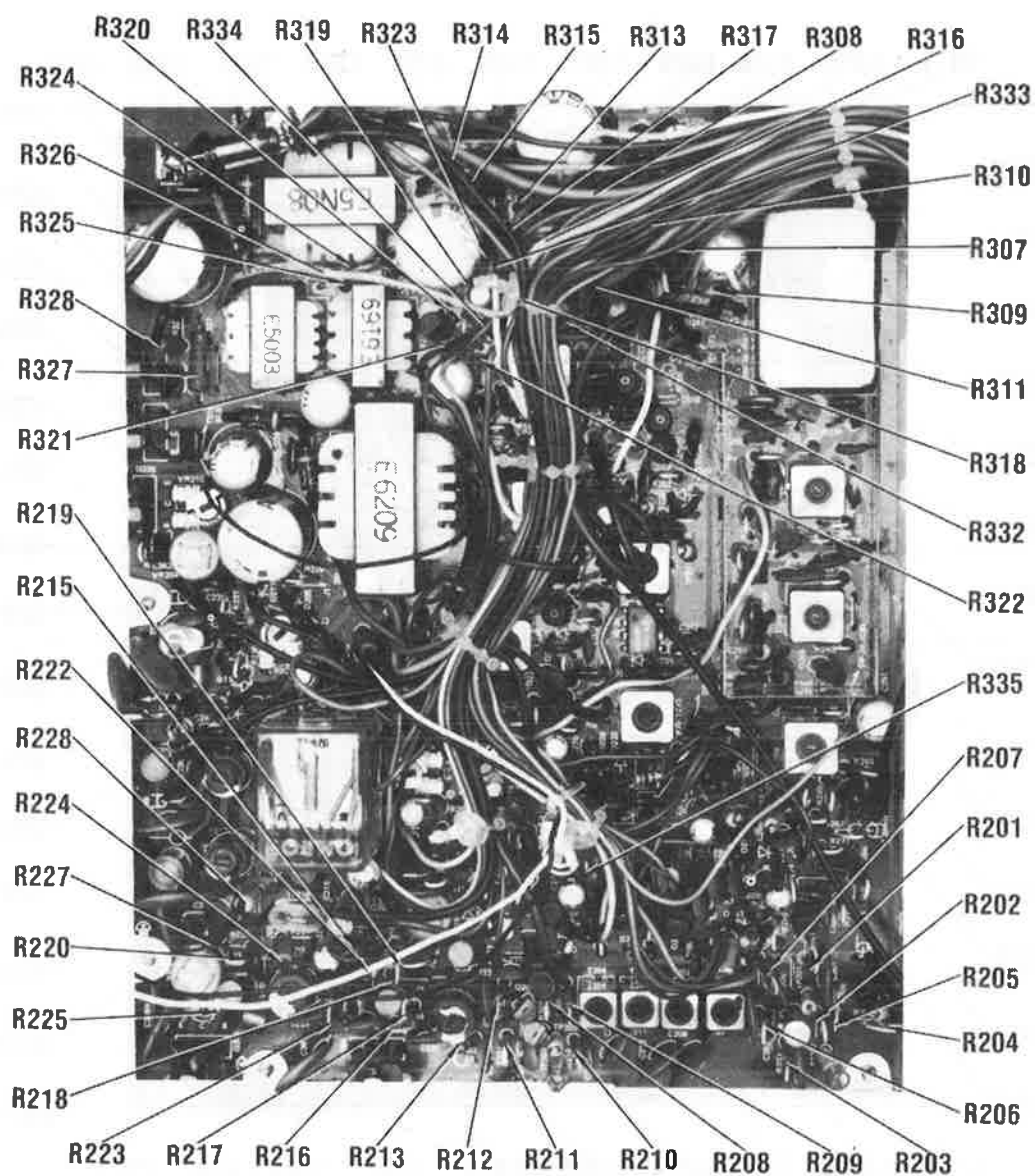
MAIN BOARD



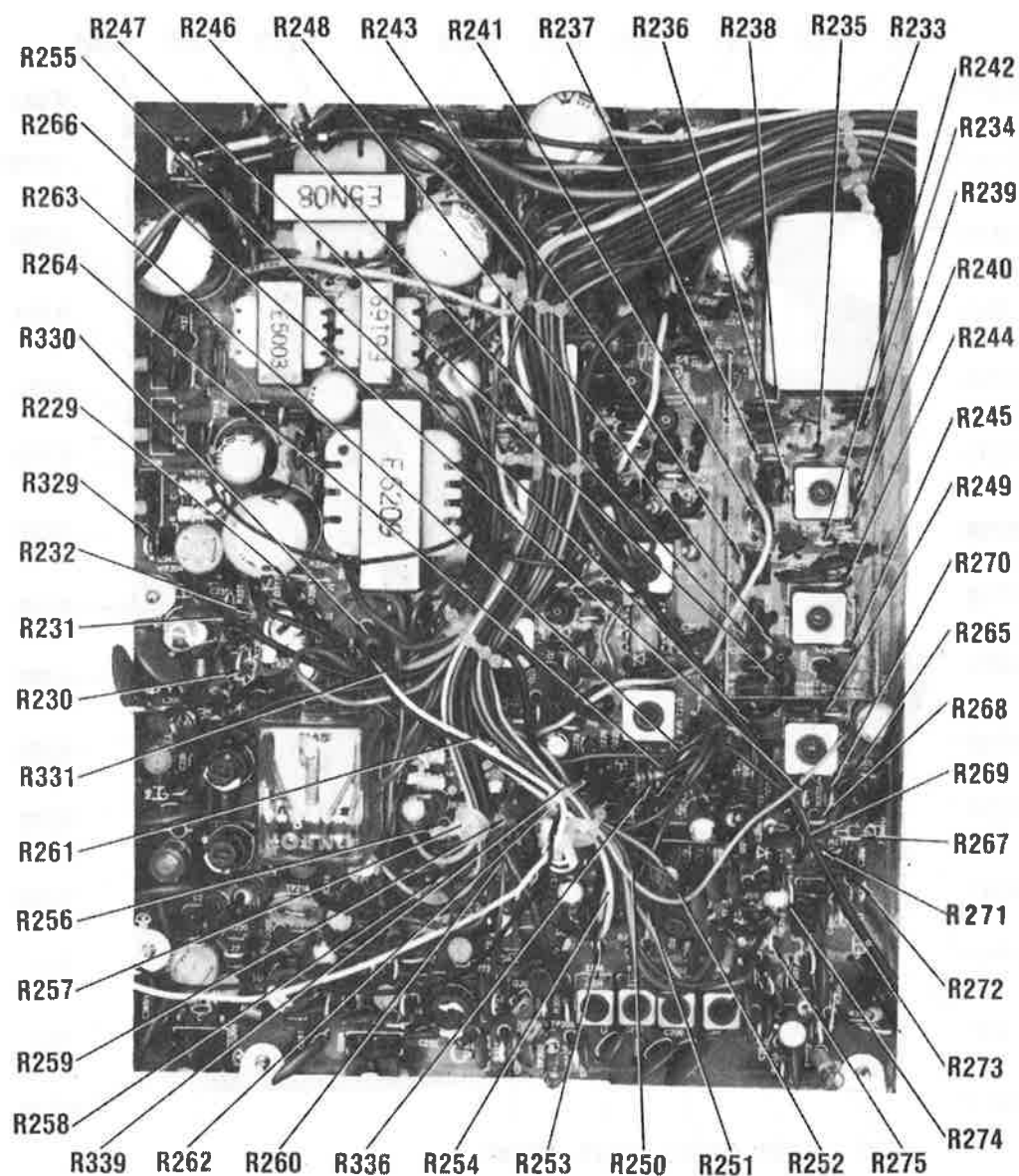
MAIN BOARD



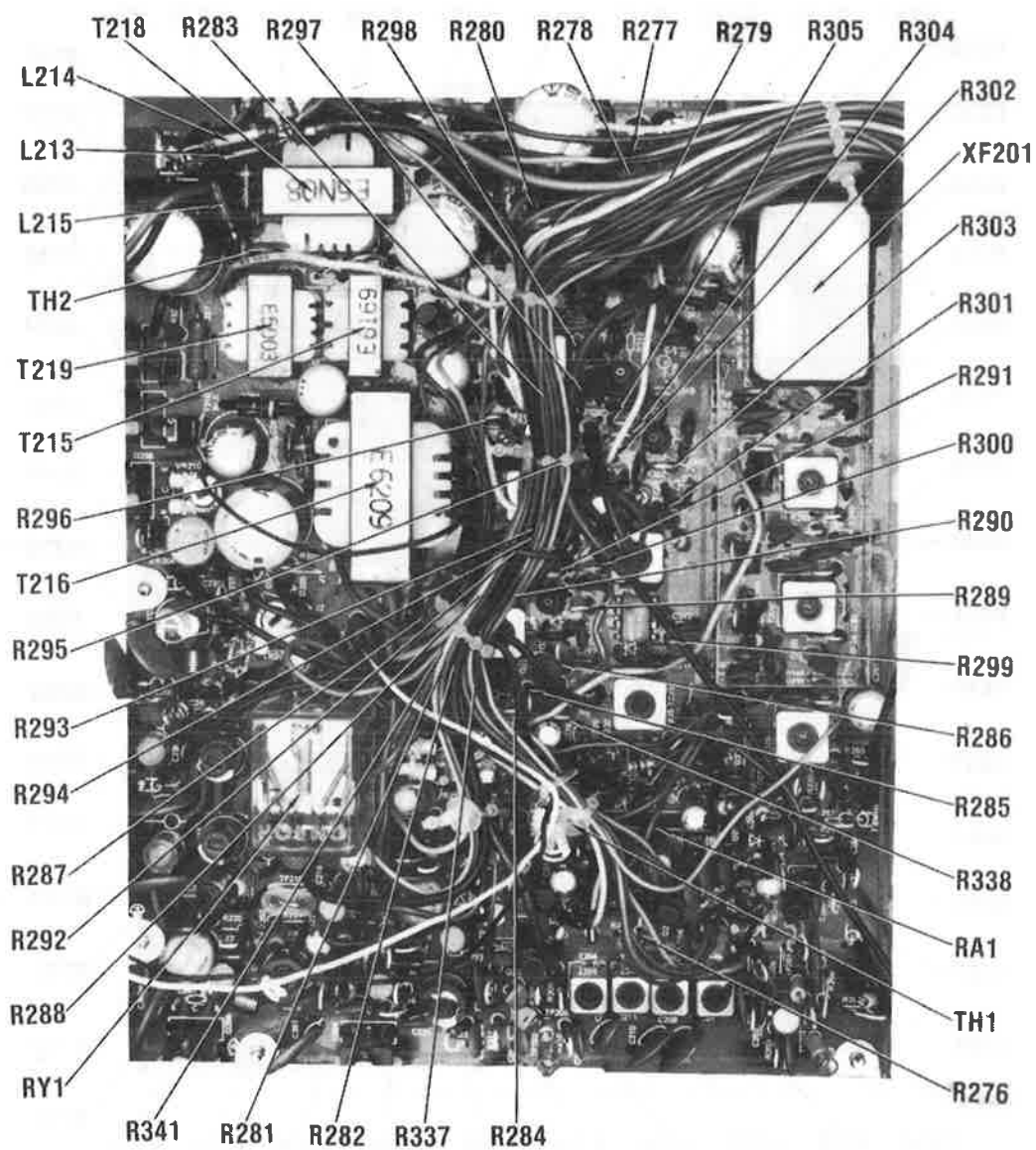
MAIN BOARD



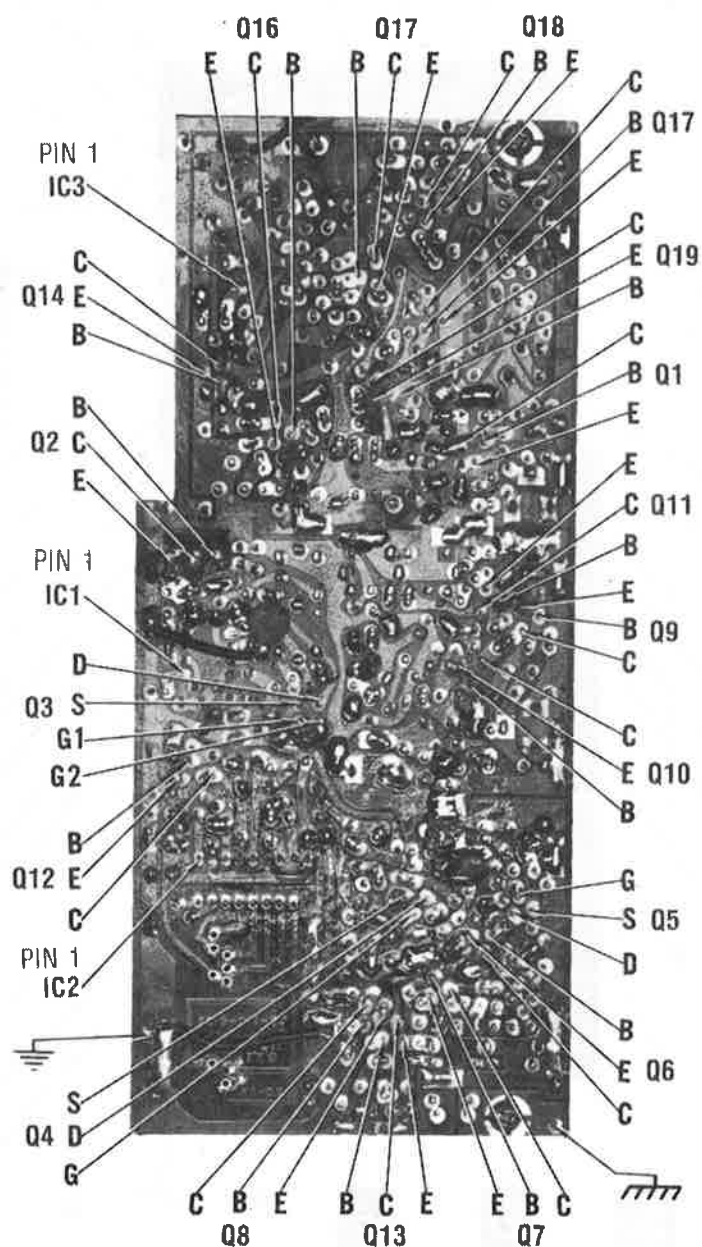
MAIN BOARD



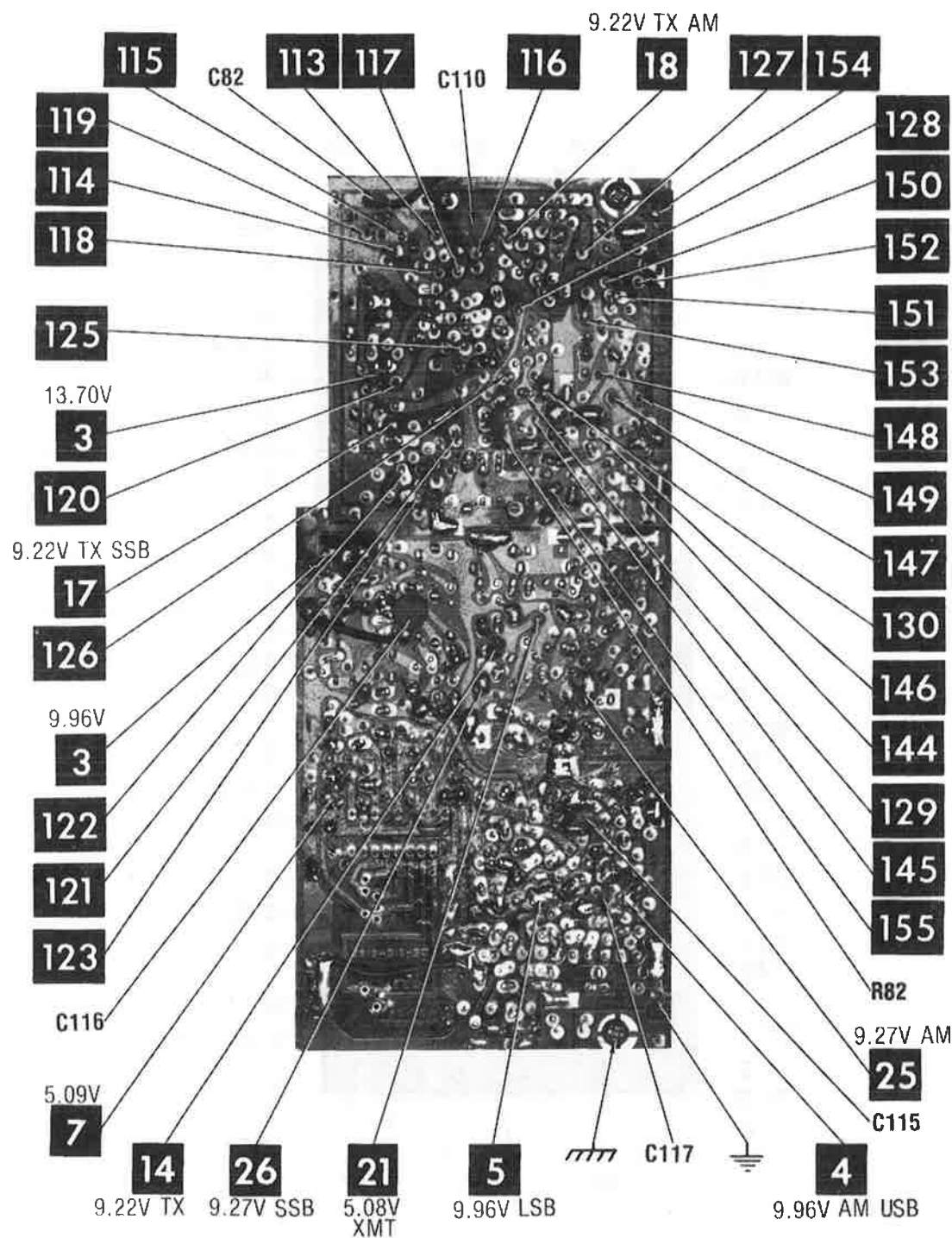
MAIN BOARD



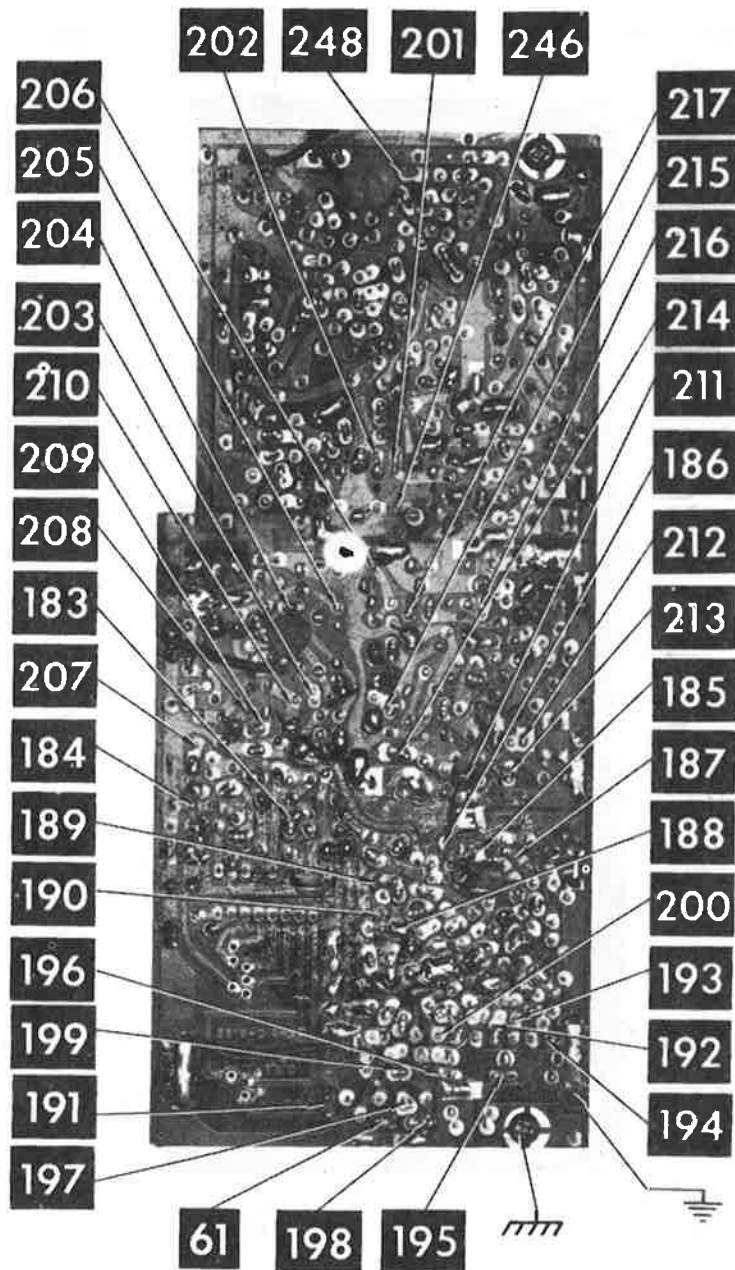
MAIN BOARD



PLL BOARD

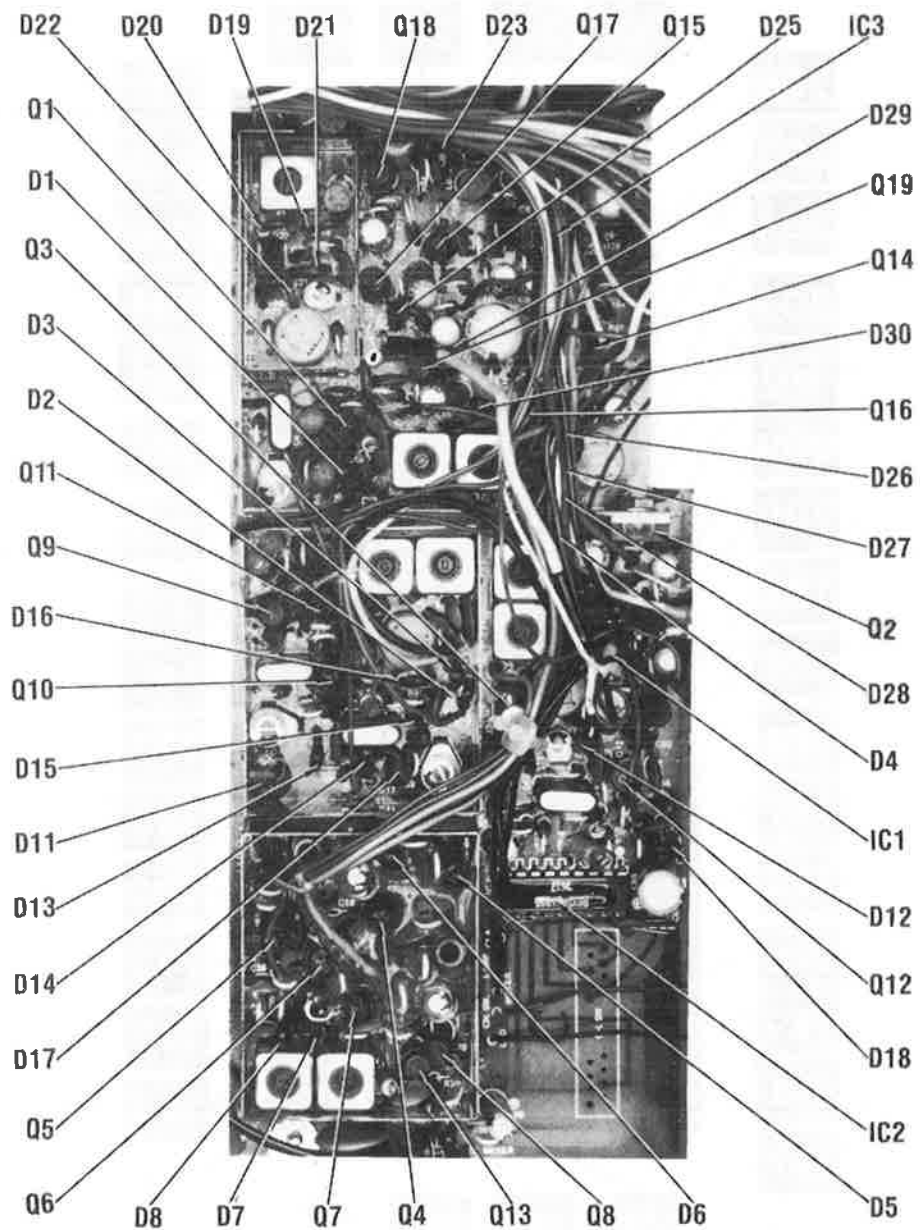


PLL BOARD

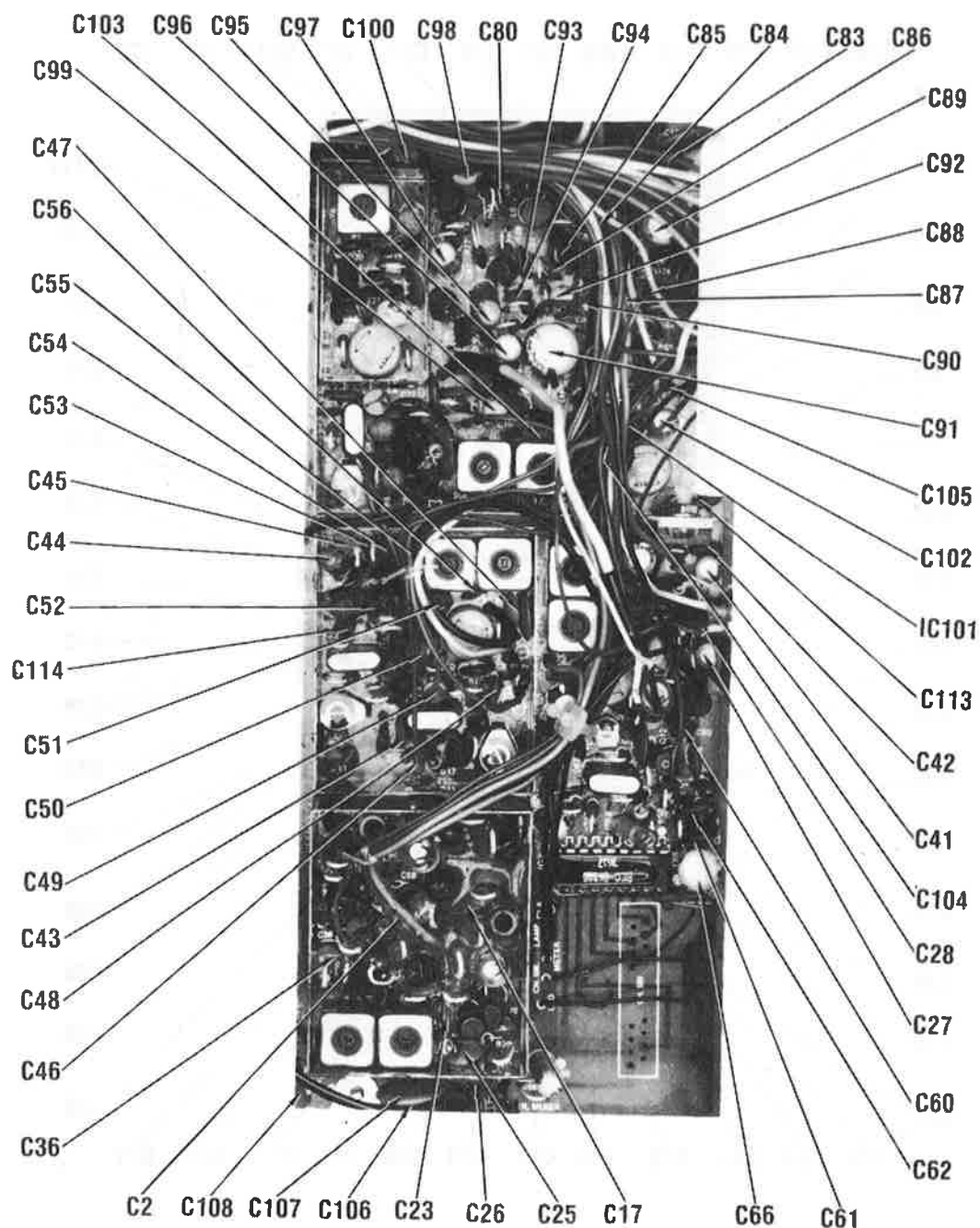


REALISTIC MODEL TRC-448

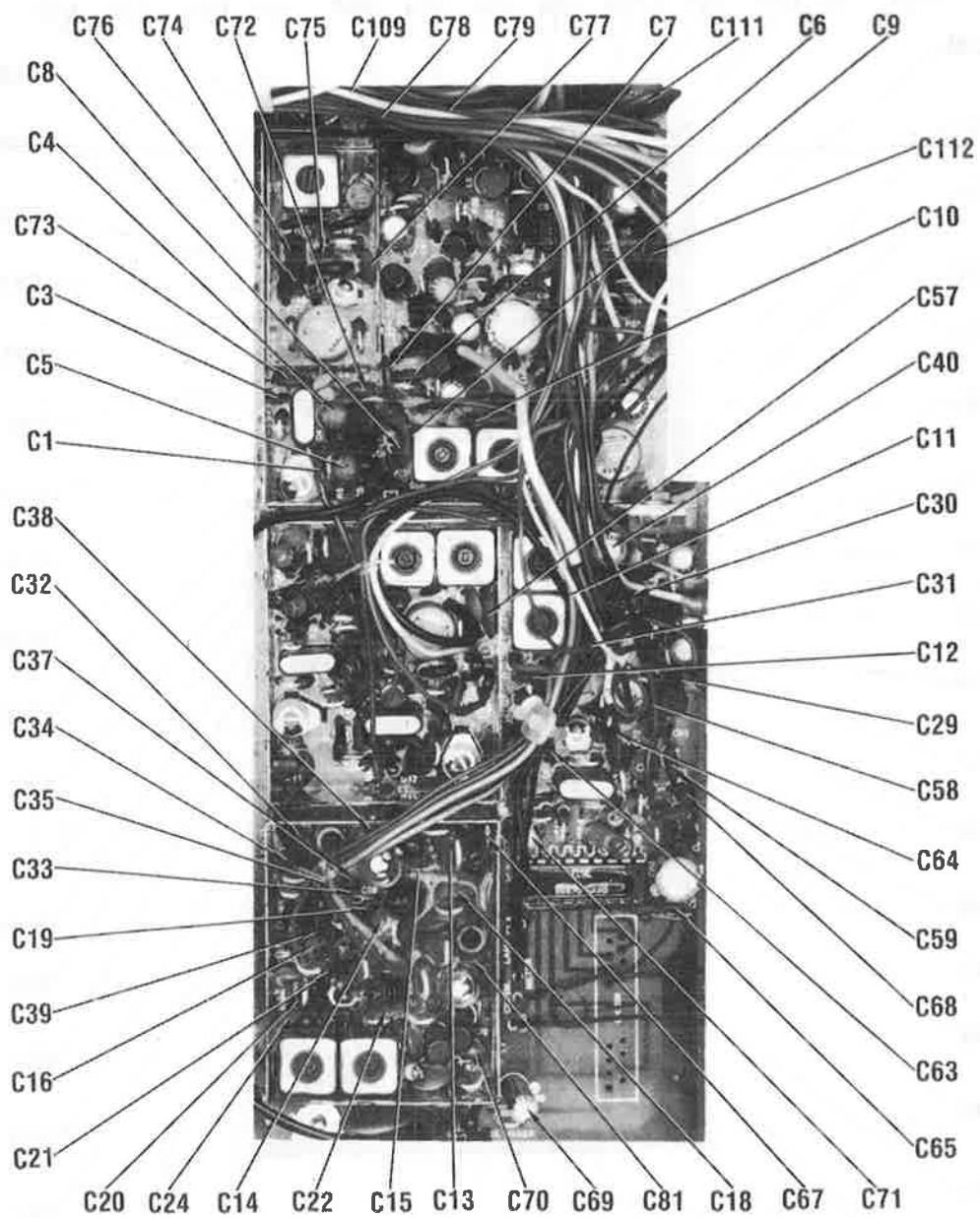
PLL BOARD



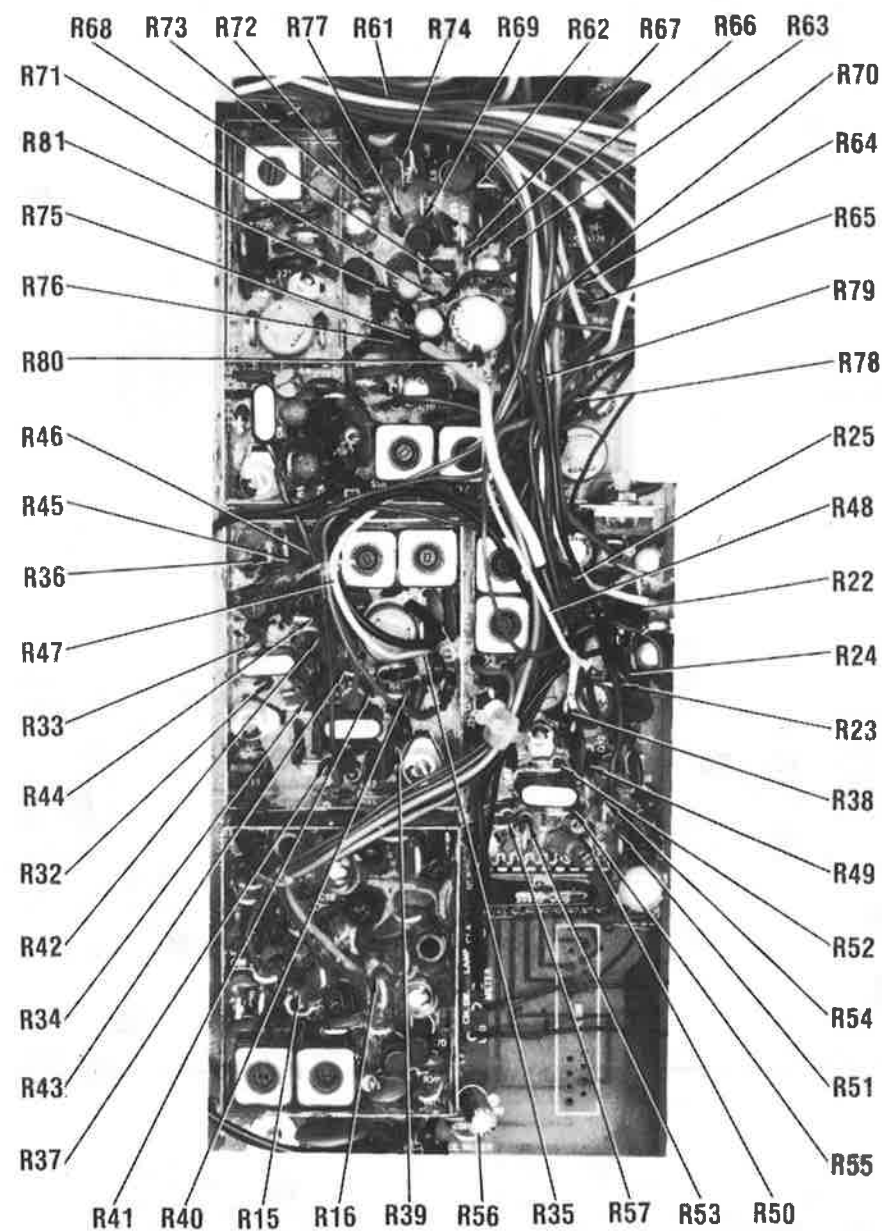
PLL BOARD



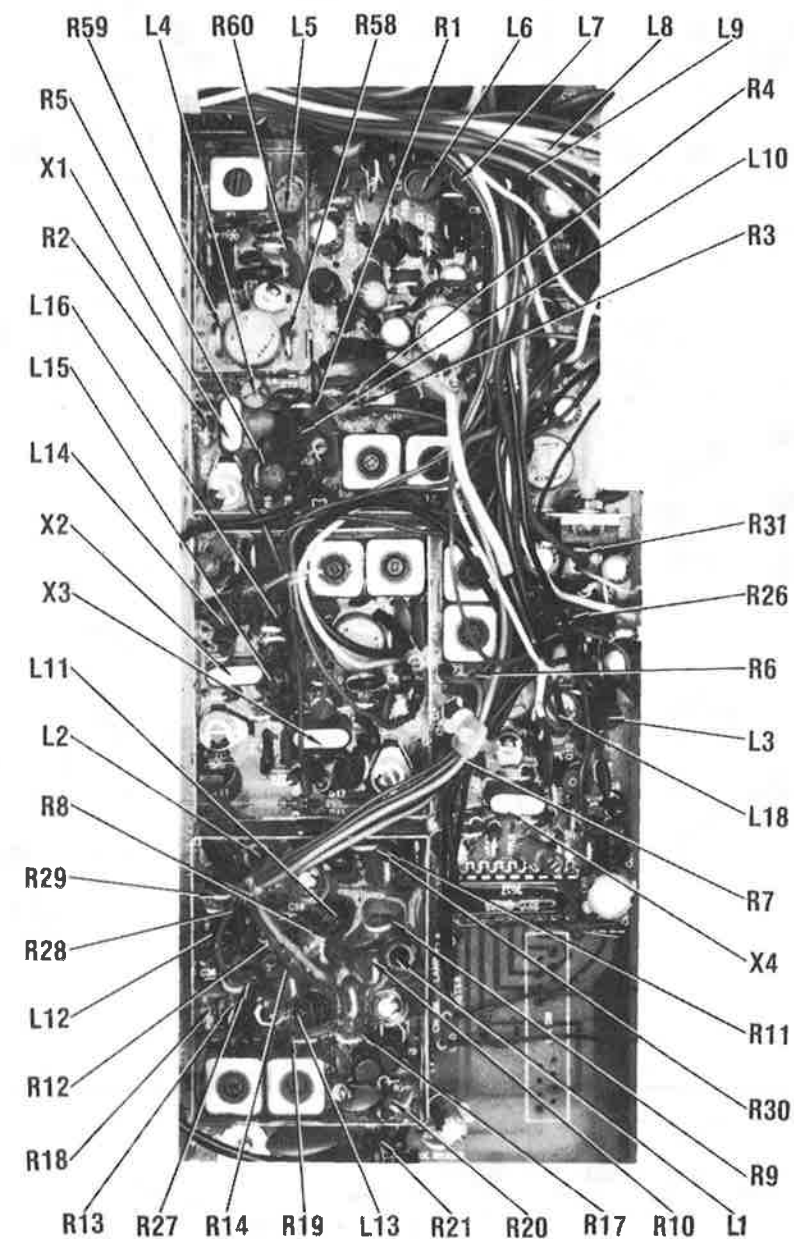
PLL BOARD



PLL BOARD



PLL BOARD



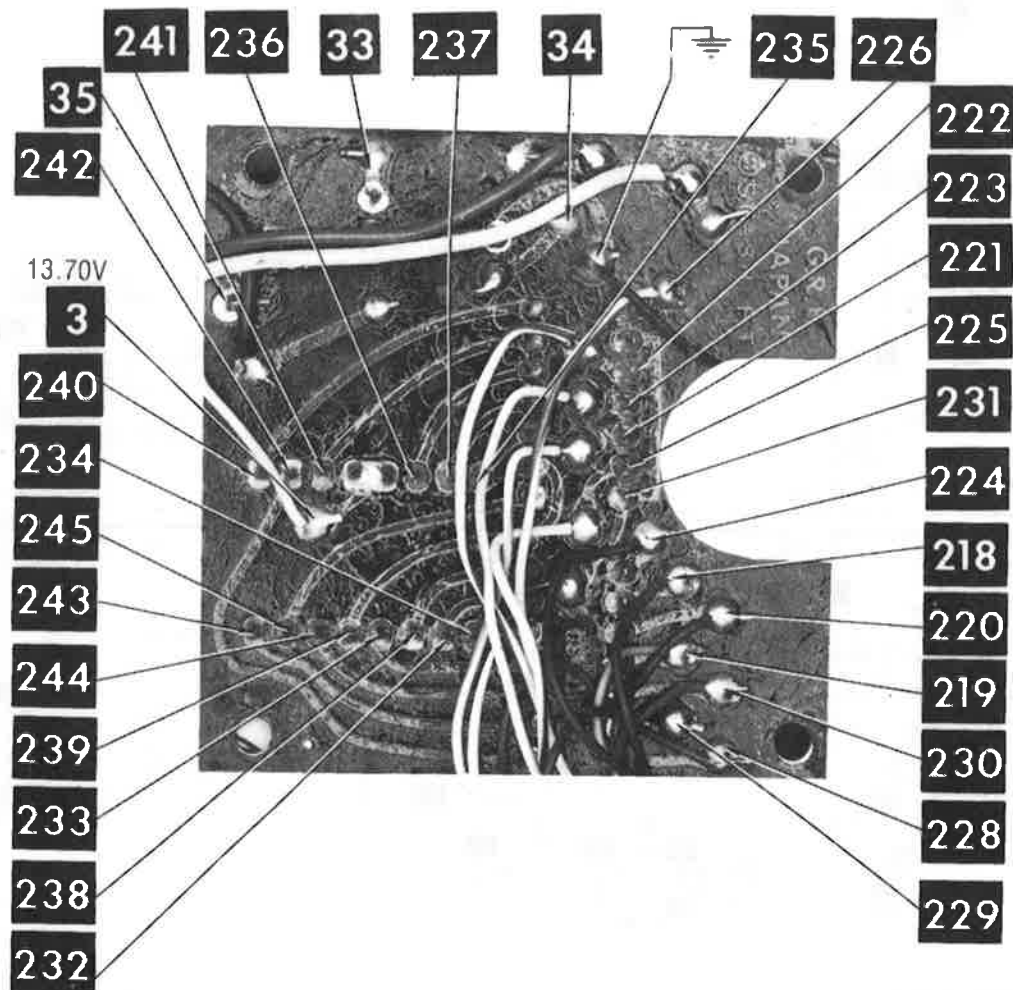
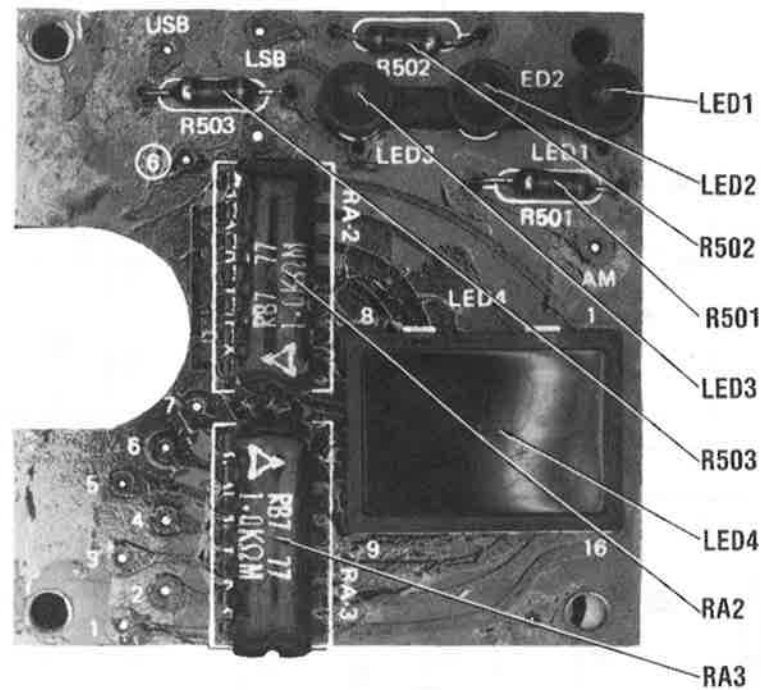
PLL BOARD

2
 35
 242
 13.70V
 3
 240
 234
 245
 243
 244
 239
 233
 238
 232

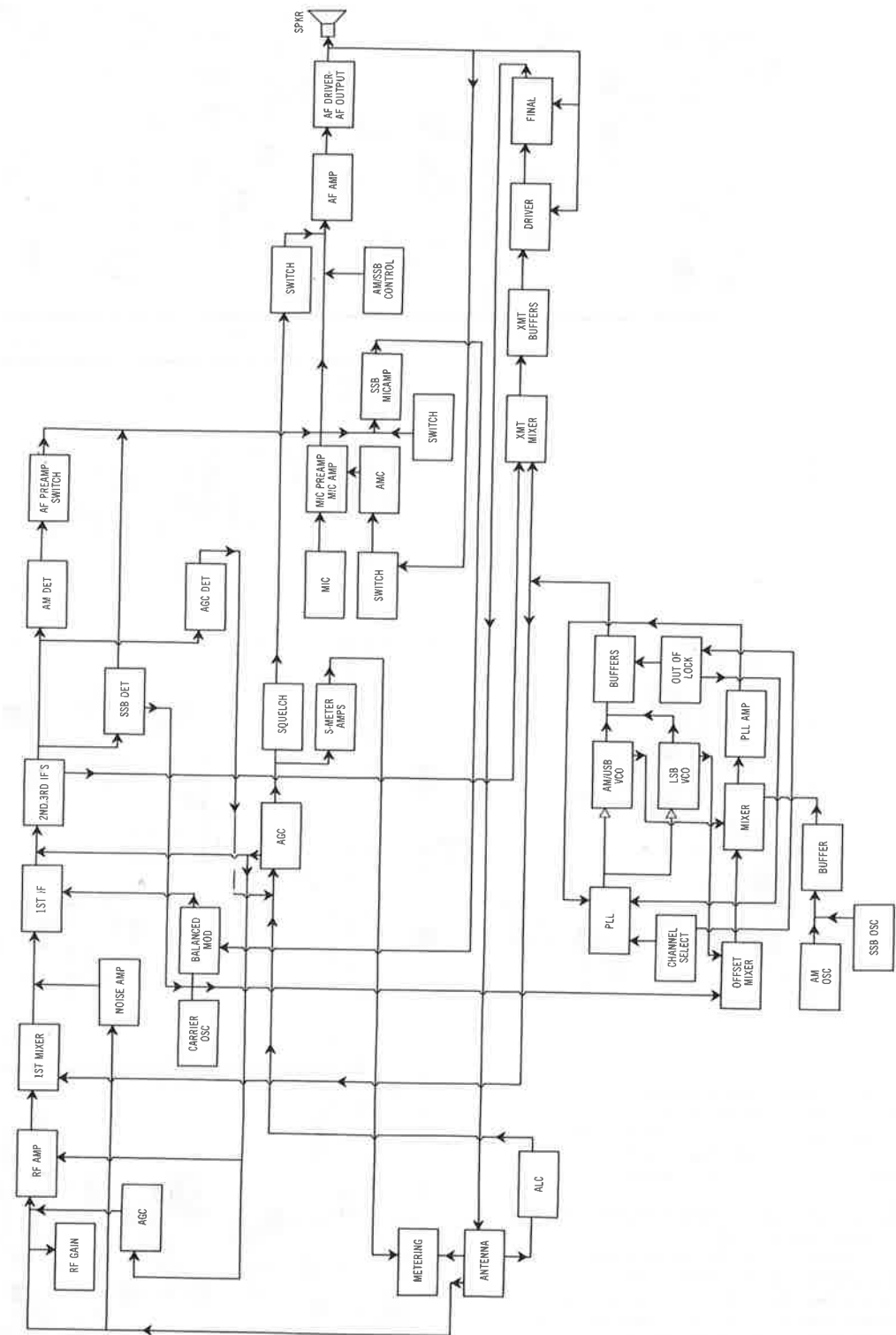
L8 L9
 R4
 L10
 R3

 R31
 R26
 R6
 L3
 L18
 R7
 X4
 R11
 R30
 R9
 R10 L1

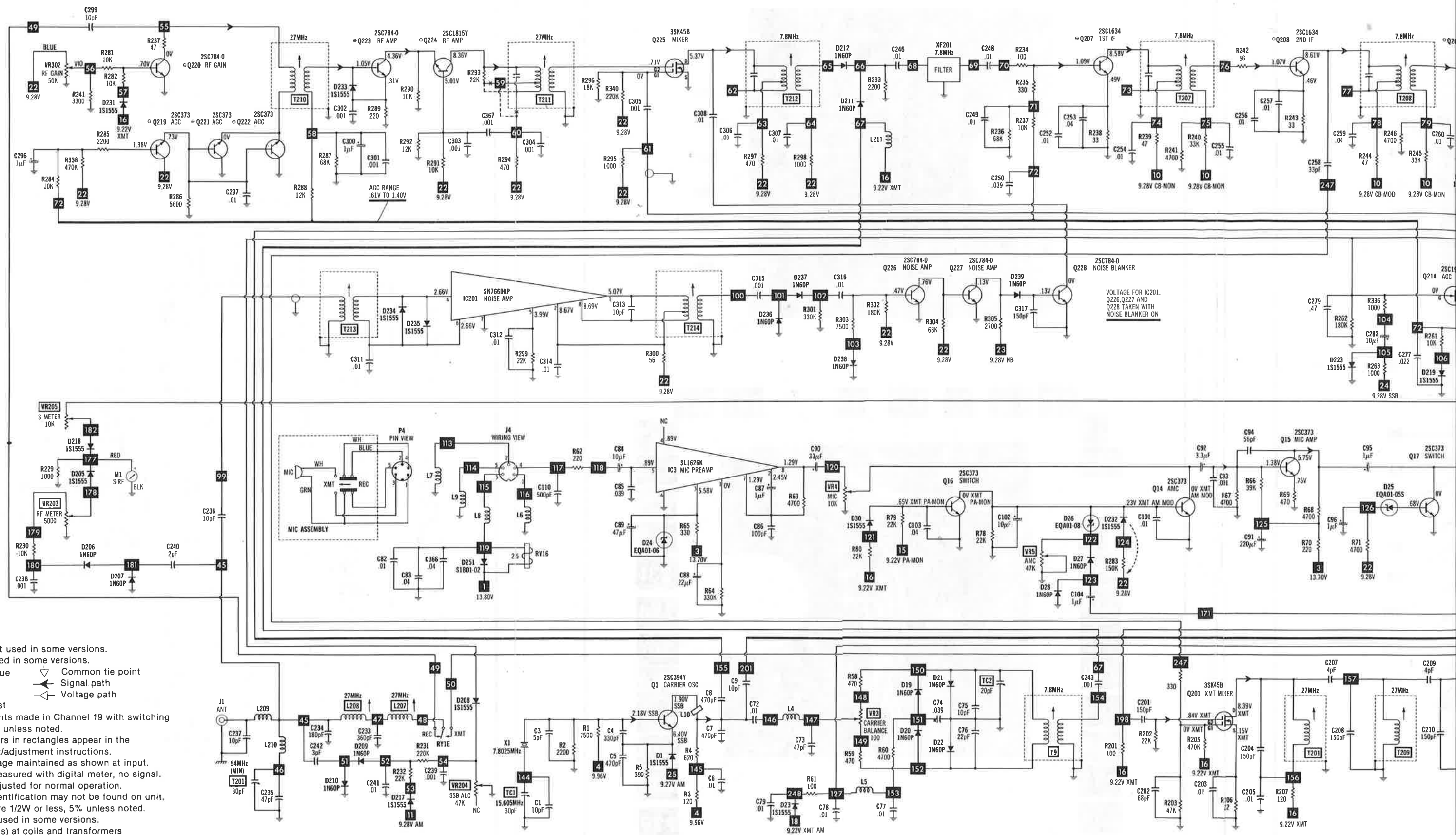
PLL BOARD



LED BOARD



BLOCK DIAGRAM

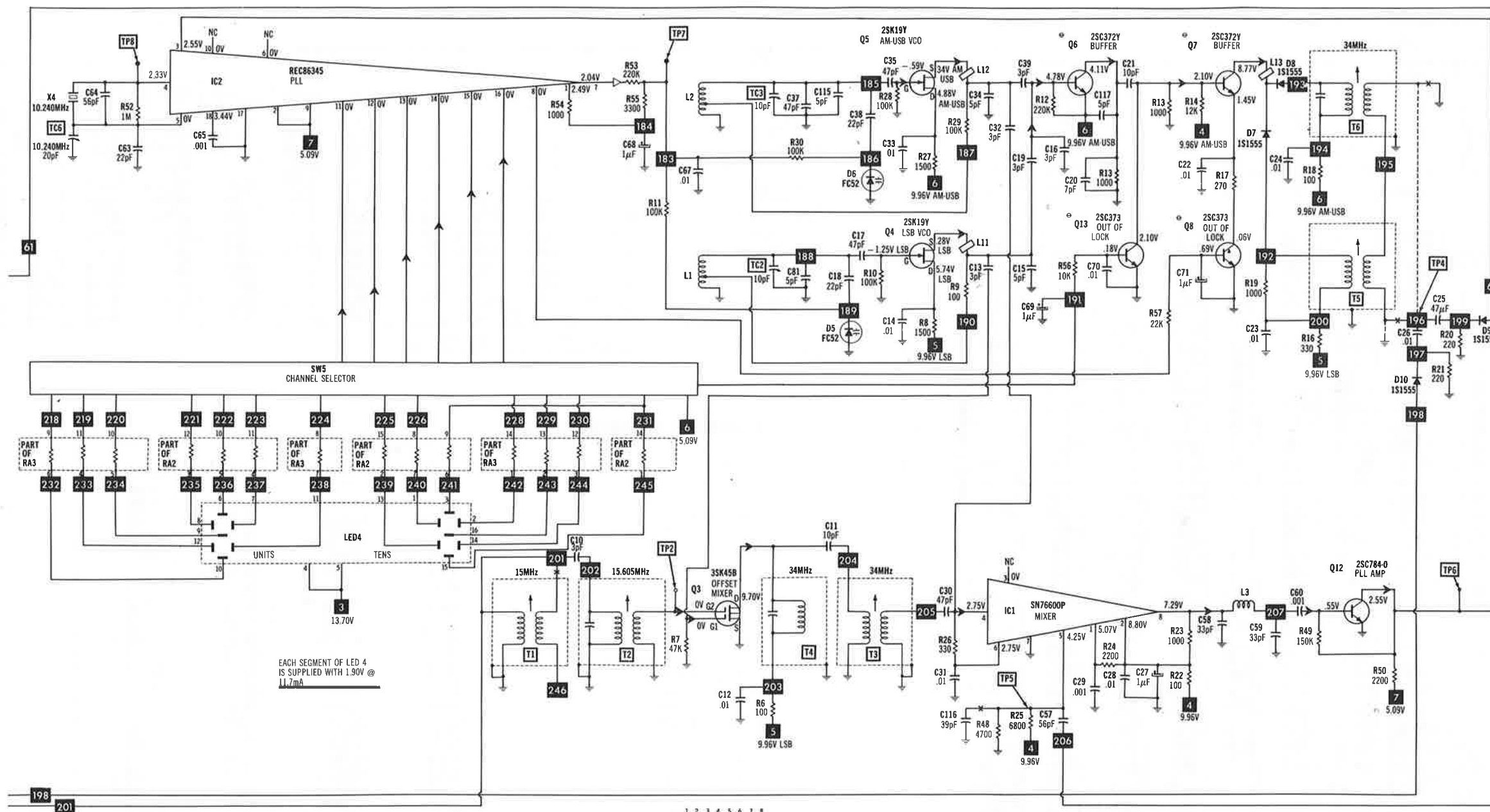


* Circuitry not used in some versions.
 --- Circuitry used in some versions.
 * Nominal value
 Ground
 Chassis
 See parts list
 Measurements made in Channel 19 with switching in receive unless noted.
 Item numbers in rectangles appear in the alignment/adjustment instructions.
 Supply voltage maintained 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).

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 WITH **CIRCUITRACE®**
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MAIN CB SCHEMATIC





EACH SEGMENT OF LED 4
IS SUPPLIED WITH 1.90V @
11.7mA



Q6 THRU Q13
BOTTOM VIEW



Q3
BOTTOM VIEW



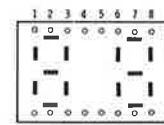
Q4, Q5
BOTTOM VIEW



Q2, Q229
BOTTOM VIEW



SW1
BOTTOM VIEW



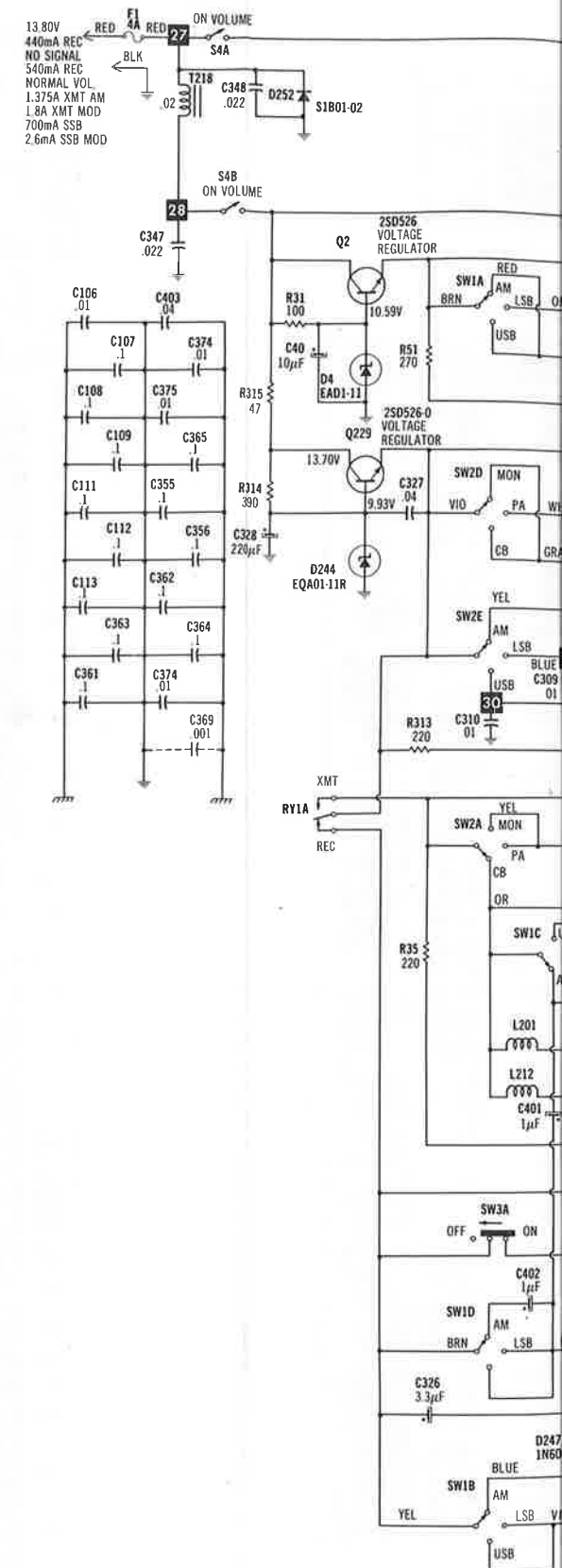
LED 40
BOTTOM VIEW

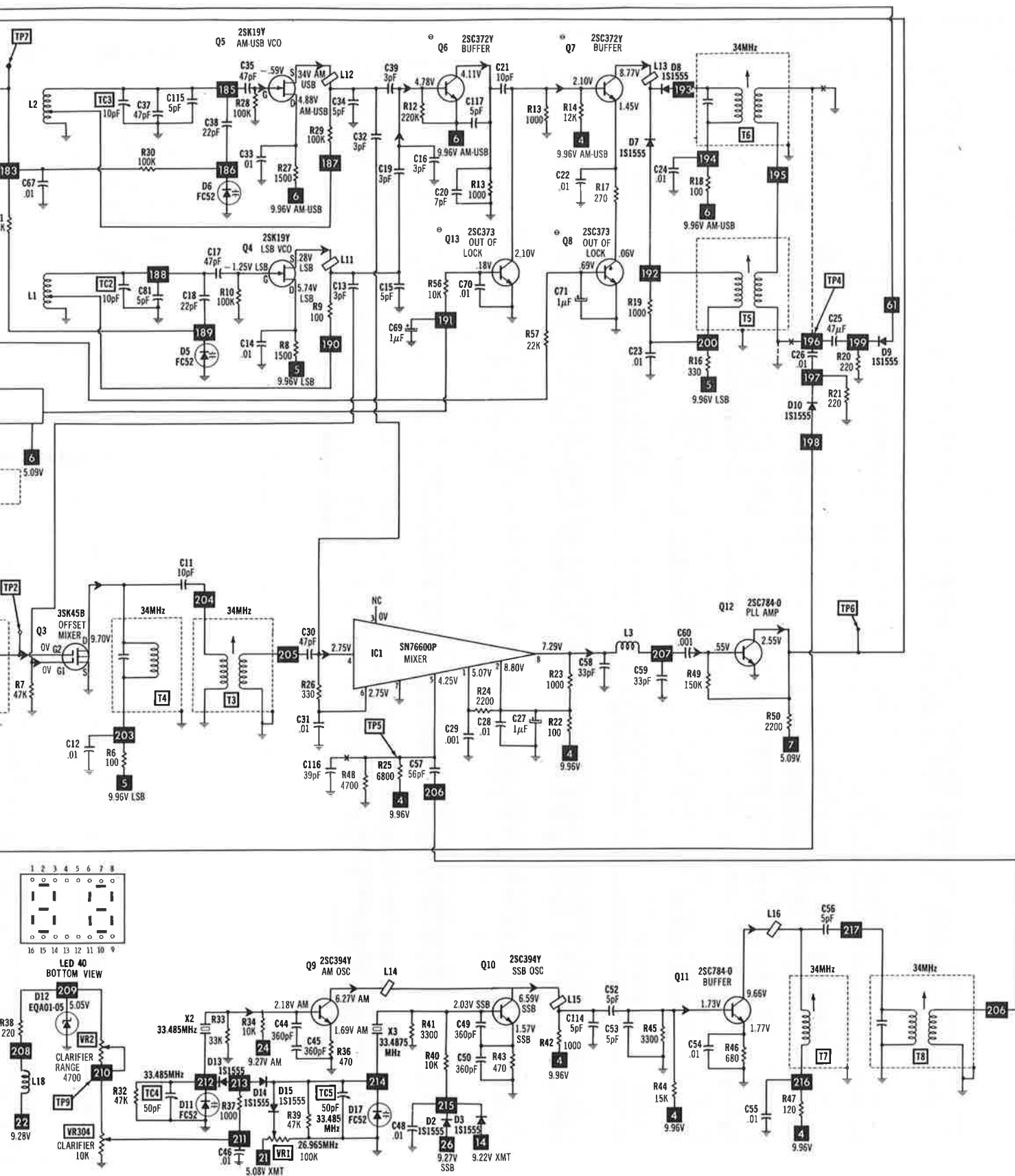
- ✕ Circuitry not used in some versions.
- Circuitry used in some versions.
- ✱ Nominal value
- ⊥ Ground
- ⏏ Chassis
- ⊙ See parts list
- ▽ Common tie point
- Signal path
- ⤴ Voltage path

Measurements made 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).

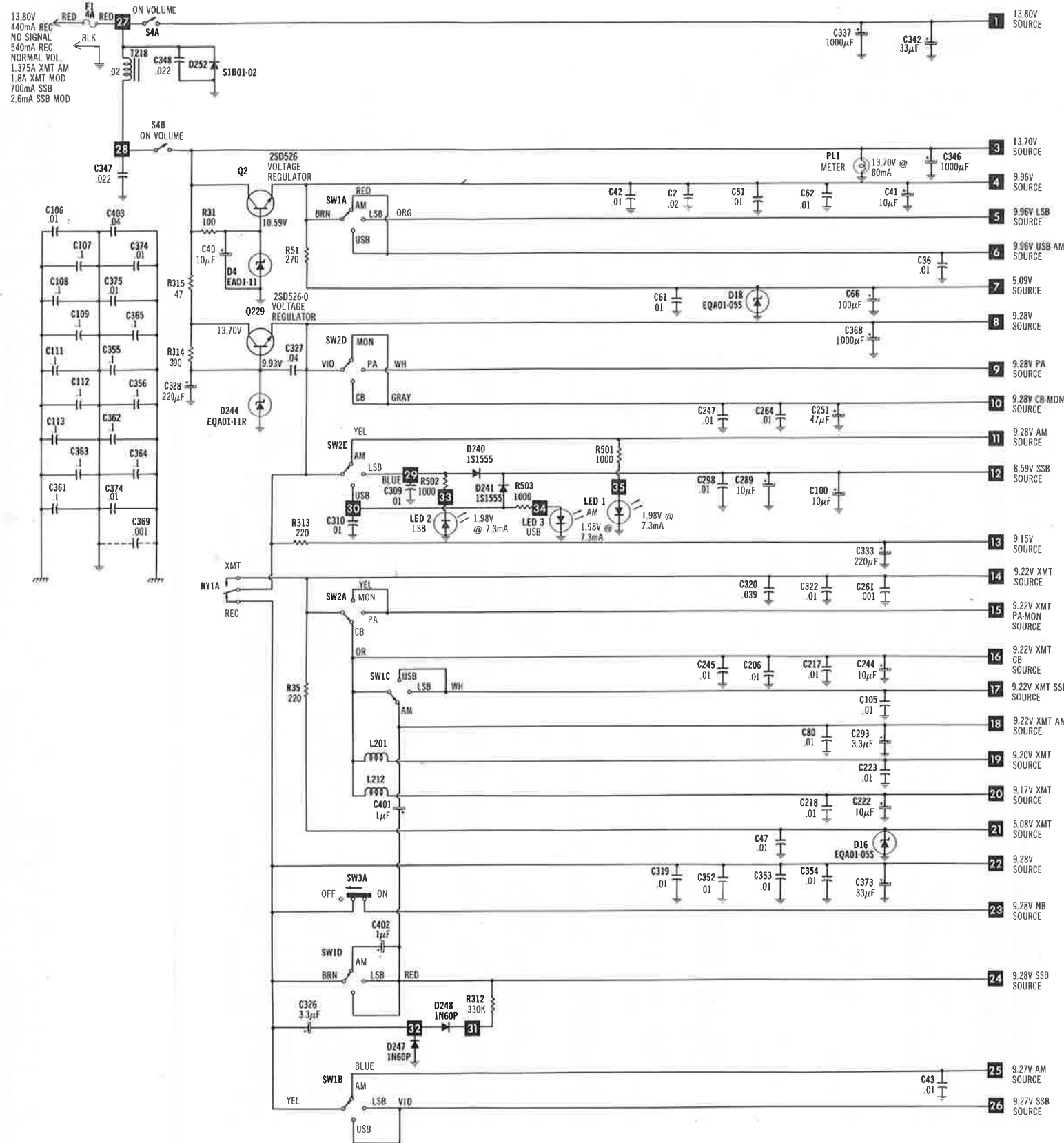
A PHOTOFAC STANDARD NOTATION SCHEMATIC
WITH **CIRCUITRACE**
© Howard W. Sams & Co., Inc. 1979

CHANNEL SELECTOR & PLL SCHEMATIC





CHANNEL SELECTOR & PLL SCHEMATIC



POWER SUPPLY SCHEMATIC

PARTS LIST AND DESCRIPTION (CONTINUED)

(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. 8782	3-conductor (1 shielded) 23AWG BELDEN No. 8497 (6')
Bonding Strap BELDEN No. 8672	3-conductor (1 shielded) 23AWG BELDEN No. 9472 (7-1/2')
AC Power Cord (6') BELDEN No. 17106	31AWG BELDEN No. 9466 (6')
	28AWG BELDEN No. 8415 (6')
	28AWG BELDEN No. 9467 (6')
	BELDEN No. 9465 (7-1/2')
	4-conductor (unshielded) 23AWG BELDEN No. 8415 (6')
	5-conductor (1 shielded) 28AWG BELDEN No. 9467 (6')

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	1S1555	DX0270	3E-300	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG177	TM177	WEP1062	103-131
D2	1S1555	DX0270	GE-300	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG177	TM177	WEP1062	103-131
D3	1S1555	DX0270	GE-300	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG177	TM177	WEP1062	103-131
D4	EQA01-11R	DX0113	GEZD-11	ZB11B		REN 5074	SK3139	RT-242	ECG5074A	TM5074/**	WEP1156	103-279-20
D5	FC52	DX0718										
D6	1S1555	DX0270	GE-300	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG177	TM177	WEP1062	103-131
D7	1S1555	DX0270	GE-300	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG177	TM177	WEP1062	103-131
D8	1S1555	DX0270	GE-300	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG177	TM177	WEP1062	103-131
D9	1S1555	DX0270	GE-300	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG177	TM177	WEP1062	103-131
D10	1S1555	DX0270	GE-300	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG177	TM177	WEP1062	103-131
D11	FC52	DX0718										
D12	EQA01-05S	DX0989	GEZD-5.0			REN 135			ECG135A	TM135	WEP1103	103-29006
D13	1S1555	DX0270	GE-300	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG177	TM177	WEP1062	103-131
D14	1S1555	DX0270	GE-300	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG177	TM177	WEP1062	103-131
D15	1S1555	DX0270	GE-300	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG177	TM177	WEP1062	103-131
D16	EQA01-05S	DX0989	GEZD-5.1			REN 135	SK3056	RT-235		1N4733A	WEP1103	103-2900
D17	FC52	DX0718										
D18	EQA01-05S	DX0989	GEZD-5.0			REN 135			ECG135A	TM135	WEP1103	103-29006
D19	1N60P	DX0162	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-29001
D20	1N60P	DX0162	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-29001
D21	1N60P	DX0162	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-29001
D22	1N60P	DX0162	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-29001
D23	1S1555	DX0270	GE-300	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG177	TM177	WEP1062	103-131
D24	EQA01-06S	DX0990	GEZD-6.8	ZB6.8A	HEP20409	REN 5071	SK3334	RT-238	ECG5071	TM5071/**	WEP1106	103-29006
D25	EQA01-05S	DX0989	GEZD-5.0			REN 135			ECG135A	TM135	WEP1103	103-29006
D26	EQA01-08S	DX0991	GEZD-8.2	ZB8.2B		REN 5072	SK3136	RT-257	ECG5072A	TM5072/**	WEP1108	103-29001
D27	1N60P	DX0162	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-29001
D28	1N60P	DX0162	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-29001
D29	1S1555	DX0270	GE-300	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG177	TM177	WEP1062	103-131
D30	1S1555	DX0270	GE-300	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG177	TM177	WEP1062	103-131
D31	1S1885	DX0282	GE-504A	PTC201	HEPRO052	REN 116	SK3311	RT-213	ECG116	TM116	WEP156	212-76-02
D32	1S1885	DX0282	GE-504A	PTC201	HEPRO052	REN 116	SK3311	RT-213	ECG116	TM116	WEP156	212-76-02
D33	EQA01-05S	DX0112	GEZD-5.0			REN 135			ECG135A	TM135	WEP1103	103-29006
D34	EQA01-33	DX0121	GEZD-33	ZB33A	HEP20426	REN 147	SK3095	RT-250	ECG147	TM147/**	WEP1122	103-29004
D35	1S1555	DX0270	GE-300	PTC214	HEPR9135	REN 177	SK3100	RT-218	ECG177	TM177	WEP1062	103-131
D36	1N60P	DX0162	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-29001
D37	1N60P	DX0162	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-29001
D38	1S1555	DX0270	GE-300	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG177	TM177	WEP1062	103-131
D39	1S1555	DX0270	GE-300	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG177	TM177	WEP1062	103-131
D40	1S1555	DX0270	GE-300	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG177	TM177	WEP1062	103-131
D41	1S1555	DX0270	GE-300	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG177	TM177	WEP1062	103-131
D42	1S1555	DX0270	GE-300	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG177	TM177	WEP1062	103-131
D43	1S1555	DX0270	GE-300	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG177	TM177	WEP1062	103-131
D44	1N60P	DX0162	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-29001
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D46	1N60P	DX0162	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-29001
D47	1N60P	DX0162	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-29001
D48	1N60P	DX0162	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-29001
D49	1N60P	DX0162	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-29001
D50	1N60P	DX0162	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-29001
D51	1N60P	DX0162	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-29001
D52	1N60P	DX0162	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-29001
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D54	1N60P	DX0162	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-29001
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D56	1N60P	DX0162	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-29001
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D58	1N60P	DX0162	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-29001
D59	1N60P	DX0162	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-29001
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D61	1N60P	DX0162	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-29001
D62	1N60P	DX0162	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-29001
D63	1N60P	DX0162	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-29001
D64	1N60P	DX0162	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-29001
D65	1N60P	DX0162	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-29001
D66	1N60P	DX0162	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-29001
D67	1N60P	DX0162	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-29001
D68	1N60P	DX0162	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-29001
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D70	1N60P	DX0162	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-29001
D71	1N60P	DX0162	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-29001
D72	1N60P	DX0162	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-29001
D73	1N60P	DX0162	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-29001
D74	1N60P	DX0162	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-29001
D75	1N60P	DX0162	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-29001
D76	1N60P	DX0162	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-29001
D77	1N60P	DX0162	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-29001
D78	1N60P	DX0162	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-29001
D79	1N60P	DX0162	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-29001
D80	1N60P	DX0162	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-29001
D81	1N60P	DX0162	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-29001
D82	1N60P	DX0162	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-29001
D83	1N60P	DX0162	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-29001
D84	1N60P	DX0162	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-29001
D85	1N60P	DX0162	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-29001
D86	1N60P	DX0162	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-29001
D87	1N60P	DX0162	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109			

PARTS LIST AND DESCRIPTION (CONTINUED)

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

SEMICONDUCTORS (Select replacement transistor for best results) (cont)

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.
D247	1N60P	DX0162	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-29001
D248	1N60P	DX0162	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-29001
D249	S1B-01-02	DX0445	GE-504A	PTC201	HEPR0052	REN 116	SK3311	RT-213	ECG116	TM116	WEP156	212-76-02
D250	S1B-01-02	DX0445	GE-504A	PTC201	HEPR0052	REN 116	SK3311	RT-213	ECG116	TM116	WEP156	212-76-02
D251	S1B-01-02	DX0445	GE-504A	PTC201	HEPR0052	REN 116	SK3311	RT-213	ECG116	TM116	WEP156	212-76-02
D252	S1B-01-02	DX0445	GE-504A	PTC201	HEPR0052	REN 116	SK3311	RT-213	ECG116	TM116	WEP156	212-76-02
D253	1N60P	DX0162	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-29001
D254	1N60P	DX0162	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-29001
D255	1S1555	DX0270	GE-300	PTC214	HEPR0052	REN 177	SK3100	RT-218	ECG177	TM177	WEP1062	103-131
IC1	5N76600P	MX3336	GEIC-217		HEPC6059P		SK3234	TVM-59	ECG746	TM746	WEP2024	221-29028
IC2	5N76600P	MX3336	GEIC-217		HEPC6059P		SK3234	TVM-59	ECG746	TM746	WEP2024	221-29028
IC3	5N76600P	MX3336	GEIC-217		HEPC6059P		SK3234	TVM-59	ECG746	TM746	WEP2024	221-29028
IC201	5N76600P	MX3336	GEIC-217		HEPC6059P		SK3234	TVM-59	ECG746	TM746	WEP2024	221-29028
Q1	25D526		GE-61*	PTC121*	HEPS0014*	REN 229*	SK3018*	RT-309	ECG229*	TM229*	WEP394	121-970
Q2	25D526		GE-241	PTC167	HEPS3060	REN 196	SK3054	RT-152	ECG196	TM196	WEP756	121-970
Q3	35K458		GE-FET-4	PTC182	HEPF2007	REN 222	SK3065	RT-181	ECG222	TM222	WEP905	121-826
Q4	35K458		GE-FET-4	PTC182	HEPF2007	REN 222	SK3065	RT-181	ECG222	TM222	WEP905	121-826
Q5	25K19Y		GE-FET-2	PTC161	HEPF0021	REN 132	SK3448	RT-175	ECG312	TM312	WEP920	121-756
Q6	25K19Y		GE-FET-2	PTC161	HEPF0021	REN 132	SK3448	RT-175	ECG312	TM312	WEP920	121-756
Q7	25C372Y		GE-61*	PTC121*	HEPS0015*	REN 199	SK3245	RT-304	ECG199	TM199	WEP66	121-29000
Q8	25C372Y		GE-61*	PTC121*	HEPS0015*	REN 199	SK3245	RT-304	ECG199	TM199	WEP66	121-29000
Q9	25C372Y		GE-61*	PTC121*	HEPS0015*	REN 199	SK3245	RT-304	ECG199	TM199	WEP66	121-29000
Q10	25C372Y		GE-61*	PTC121*	HEPS0015*	REN 199	SK3245	RT-304	ECG199	TM199	WEP66	121-29000
Q11	25C372Y		GE-61*	PTC121*	HEPS0015*	REN 199	SK3245	RT-304	ECG199	TM199	WEP66	121-29000
Q12	25C372Y		GE-61*	PTC121*	HEPS0015*	REN 199	SK3245	RT-304	ECG199	TM199	WEP66	121-29000
Q13	25C372Y		GE-61*	PTC121*	HEPS0015*	REN 199	SK3245	RT-304	ECG199	TM199	WEP66	121-29000
Q14	25C372Y		GE-61*	PTC121*	HEPS0015*	REN 199	SK3245	RT-304	ECG199	TM199	WEP66	121-29000
Q15	25C372Y		GE-61*	PTC121*	HEPS0015*	REN 199	SK3245	RT-304	ECG199	TM199	WEP66	121-29000
Q16	25C372Y		GE-61*	PTC121*	HEPS0015*	REN 199	SK3245	RT-304	ECG199	TM199	WEP66	121-29000
Q17	25C372Y		GE-61*	PTC121*	HEPS0015*	REN 199	SK3245	RT-304	ECG199	TM199	WEP66	121-29000
Q18	25C372Y		GE-61*	PTC121*	HEPS0015*	REN 199	SK3245	RT-304	ECG199	TM199	WEP66	121-29000
Q19	25C372Y		GE-61*	PTC121*	HEPS0015*	REN 199	SK3245	RT-304	ECG199	TM199	WEP66	121-29000
Q20	25C372Y		GE-61*	PTC121*	HEPS0015*	REN 199	SK3245	RT-304	ECG199	TM199	WEP66	121-29000
Q201	25C372Y		GE-61*	PTC121*	HEPS0015*	REN 199	SK3245	RT-304	ECG199	TM199	WEP66	121-29000
Q202	25C372Y		GE-61*	PTC121*	HEPS0015*	REN 199	SK3245	RT-304	ECG199	TM199	WEP66	121-29000
Q203	25C372Y		GE-61*	PTC121*	HEPS0015*	REN 199	SK3245	RT-304	ECG199	TM199	WEP66	121-29000
Q204	25C372Y		GE-61*	PTC121*	HEPS0015*	REN 199	SK3245	RT-304	ECG199	TM199	WEP66	121-29000
Q205	25C372Y		GE-61*	PTC121*	HEPS0015*	REN 199	SK3245	RT-304	ECG199	TM199	WEP66	121-29000
Q207	25C372Y		GE-61*	PTC121*	HEPS0015*	REN 199	SK3245	RT-304	ECG199	TM199	WEP66	121-29000
Q208	25C372Y		GE-61*	PTC121*	HEPS0015*	REN 199	SK3245	RT-304	ECG199	TM199	WEP66	121-29000
Q209	25C372Y		GE-61*	PTC121*	HEPS0015*	REN 199	SK3245	RT-304	ECG199	TM199	WEP66	121-29000
Q210	25C372Y		GE-61*	PTC121*	HEPS0015*	REN 199	SK3245	RT-304	ECG199	TM199	WEP66	121-29000
Q211	25C372Y		GE-61*	PTC121*	HEPS0015*	REN 199	SK3245	RT-304	ECG199	TM199	WEP66	121-29000
Q212	25C372Y		GE-61*	PTC121*	HEPS0015*	REN 199	SK3245	RT-304	ECG199	TM199	WEP66	121-29000
Q213	25C372Y		GE-61*	PTC121*	HEPS0015*	REN 199	SK3245	RT-304	ECG199	TM199	WEP66	121-29000
Q214	25C372Y		GE-61*	PTC121*	HEPS0015*	REN 199	SK3245	RT-304	ECG199	TM199	WEP66	121-29000
Q215	25C372Y		GE-61*	PTC121*	HEPS0015*	REN 199	SK3245	RT-304	ECG199	TM199	WEP66	121-29000
Q216	25C372Y		GE-61*	PTC121*	HEPS0015*	REN 199	SK3245	RT-304	ECG199	TM199	WEP66	121-29000
Q217	25C372Y		GE-61*	PTC121*	HEPS0015*	REN 199	SK3245	RT-304	ECG199	TM199	WEP66	121-29000
Q218	25C372Y		GE-61*	PTC121*	HEPS0015*	REN 199	SK3245	RT-304	ECG199	TM199	WEP66	121-29000
Q219	25C372Y		GE-61*	PTC121*	HEPS0015*	REN 199	SK3245	RT-304	ECG199	TM199	WEP66	121-29000
Q220	25C372Y		GE-61*	PTC121*	HEPS0015*	REN 199	SK3245	RT-304	ECG199	TM199	WEP66	121-29000
Q221	25C372Y		GE-61*	PTC121*	HEPS0015*	REN 199	SK3245	RT-304	ECG199	TM199	WEP66	121-29000
Q222	25C372Y		GE-61*	PTC121*	HEPS0015*	REN 199	SK3245	RT-304	ECG199	TM199	WEP66	121-29000
Q223	25C372Y		GE-61*	PTC121*	HEPS0015*	REN 199	SK3245	RT-304	ECG199	TM199	WEP66	121-29000
Q224	25C372Y		GE-61*	PTC121*	HEPS0015*	REN 199	SK3245	RT-304	ECG199	TM199	WEP66	121-29000
Q225	25C372Y		GE-61*	PTC121*	HEPS0015*	REN 199	SK3245	RT-304	ECG199	TM199	WEP66	121-29000
Q226	25C372Y		GE-61*	PTC121*	HEPS0015*	REN 199	SK3245	RT-304	ECG199	TM199	WEP66	121-29000
Q227	25C372Y		GE-61*	PTC121*	HEPS0015*	REN 199	SK3245	RT-304	ECG199	TM199	WEP66	121-29000

PARTS LIST AND DESCRIPTION (CONTINUED)

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

SEMICONDUCTORS (Select replacement transistor for best results) (cont)

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.
Q228	25C784-0		GE-60*	PTC132*	HEPS0008*	REN 229*	SK3122	RT-187	ECG229*	TM229*/**	WEP784	121-29021
	25C1923-0		GE-61	PTC132	HEPS0016	REN 229	SK3018	RT-107	ECG229	TM229	WEP784	121-29000A*
	25C372Y		GEPS0015*	PTC121*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	TM123A*/**	WEP372	121-29000A*
Q229	25C1815Y		GE-62	PTC136*	HEPS0015*	REN 199	SK3245	RT-304	ECG199	TM199	WEP66	121-29000
	25D526-0		GE-241	PTC167	HEPS3060	REN 196	SK3054	RT-152	ECG196	TM196	WEP756	121-970
	25D526		GE-241	PTC167	HEPS3060	REN 196	SK3054	RT-152	ECG196	TM196	WEP756	121-970
Q230	25A455Y		GE-221*	PTC103*	HEPS0013*	REN 159*	SK3114	RT-303	ECG159*	TM159*/**	WEP495	121-29003
Q231	25C373		GE-212	PTC121*	HEPS0015*	REN 199	SK3122	RT-105	ECG199	TM199/**	WEP373	121-972
	25C1815GR		GE-62	PTC136*	HEPS0015*	REN 199	SK3245	RT-304	ECG199	TM199	WEP66	121-29000
Q232	25C373		GE-212	PTC121*	HEPS0015*	REN 199	SK3122	RT-105	ECG199	TM199/**	WEP373	121-972
	25C1815GR		GE-62	PTC136*	HEPS0015*	REN 199	SK3245	RT-304	ECG199	TM199	WEP66	121-29000
Q233	25C373		GE-212	PTC121*	HEPS0015*	REN 199	SK3122	RT-105	ECG199	TM199/**	WEP373	121-972
	25C1815GR		GE-62	PTC136*	HEPS0015*	REN 199	SK3245	RT-304	ECG199	TM199	WEP66	121-29000
Q234	25D526Y		GE-241	PTC167	HEPS3060	REN 196	SK3054	RT-152	ECG196	TM196	WEP756	121-970
	25D526		GE-241	PTC167	HEPS3060	REN 196	SK3054	RT-152	ECG196	TM196	WEP756	121-970
Q235	25D526Y		GE-241	PTC167	HEPS3060	REN 196	SK3054	RT-152	ECG196	TM196	WEP756	121-970
	25D526		GE-241	PTC167	HEPS3060	REN 196	SK3054	RT-152	ECG196	TM196	WEP756	121-970
Q236	25D526-0		GE-241	PTC167	HEPS3060	REN 196	SK3054	RT-152	ECG196	TM196	WEP756	121-970
	25D526		GE-241	PTC167	HEPS3060	REN 196	SK3054	RT-152	ECG196	TM196	WEP756	121-970

PARTS LIST AND DESCRIPTION (CONTINUED)

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

TRANSFORMER (Audio Output)

ITEM No.	IMPEDANCE		REPLACEMENT DATA			NOTES
	PRI.	SEC.	MFGR. PART No.	THORDARSON PART No.	TRIAD PART No.	
T216	50	1 8 2 18	TD-0162	TR644		(1) Number on unit.

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		MFGR. PART No.	QUAM PART No.	
SP	3 1/2" PM, 8 Ohms	S-4709	3A05Z8	

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
F1	4A Quick Acting			AGC4	HRK	312004	150145	

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-2287	18-032	18-034	18-010	18-105	4	1	3	NC	NC	1	

MISCELLANEOUS

ITEM No.	PART NAME	PART No.	NOTES
F201	Filter	C-0843	7.8MHz
J1	Jack	J6480	Antenna
J2	Jack	J6385	PA Speaker
J3	Jack	J6385	External Speaker
J4	Jack	J-0533	Microphone
L10	Ferrite Bead	FBH-2.6/1.3/1.3/40L	
L11	Ferrite Bead	FBH-2.6/1.3/1.3/40L	
L12	Ferrite Bead	FBH-2.6/1.3/1.3/40L	
L13	Ferrite Bead	FBH-2.6/1.3/1.3/40L	
L14	Ferrite Bead	FBH-2.6/1.3/1.3/40L	
L15	Ferrite Bead	FBH-2.6/1.3/1.3/40L	
L16	Ferrite Bead	FBH-2.6/1.3/1.3/40L	
LED1	LED	L0832	AM (1.98V @ 7.3mA)
LED2	LED	L0832	LSB (1.98V @ 7.3mA)
LED3	LED	L0832	USB (1.98V @ 7.3mA)
LED4	LED	L0831	Tens & Units (Each Segment 1.90V @ 11.7mA)
M1	Meter	M-0354	S/R/F Meter
PL2	Lamp	L-0263	Modulation (14V @ 50mA)
RY16	Relay	R-8090	
SW1	Switch	S-0814	AM/LSB/USB
SW2	Switch	S-2403	MON/PA/CB
SW3	Switch		Noise Blanker, On/Off
SW5	Switch	S-1284	Channel Selector
S4	Switch		Power On/Off (Part of Volume Control)
X1	Crystal		7.805MHz
X2	Crystal		33.485MHz
X3	Crystal		33.4875MHz
X4	Crystal		10.240MHz

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

ITEM		PART No.	ITEM		PART No.
Cabinet, Bottom		Z-3671	Knob, RF Gain		K-2728
Cabinet, Top		Z-3670	Smoked Panel		HB-6658
Escutcheon		X-7534			

REALISTIC MODEL TRC-448