



PHOTOFACT[®] with CIRCUITRACE[®]

For Supplier Address See PHOTOFACT Index

NOTE

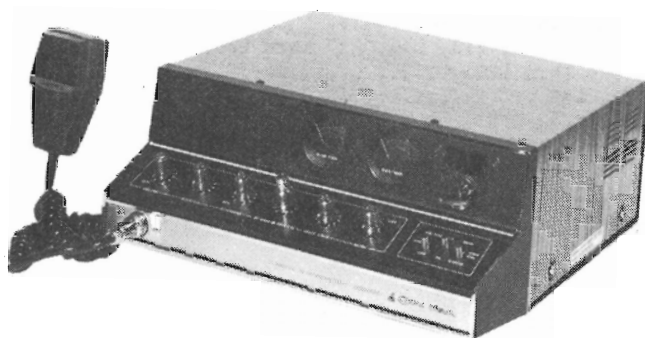
Repair or adjustment of transmitter circuits must be under supervision of a person with first-or second-class radiotelephone license.

(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 142GTL

MANUFACTURER'S SPECIFICATIONS

GENERAL

Channels	40AM, 40LSB, 40USB.
Frequency Range	26.965 to 27.405MHz.
Frequency Control	Phase Locked Loop (PLL) synthesizer.
Frequency Tolerance	0.005%.
Frequency Stability	0.001%.
Operating Temperature Range	-30°C to +50°C.
Microphone	Plug-in type; dynamic with push-to-talk switch and coiled cord.
Power Consumption (120 VAC)	Transmit: Full mod., 100 watts. Receive: Squelched, 80 watts.
Current Drain (13.8 VDC)	Transmit: AM full mod., 3A; SSB, 12 watts PEP output, 3.0A. (MAX) Receive: 1A; full audio output. (MAX)
Size	13"(D) x 13-1/2"(W) x 5"(H)
Weight	10 pounds.
Antenna Connector	UHF, S0239.
Meters	Shows relative power output, received signal strength, modulation percentage and SWR.
Semiconductors	46 transistors, 1 field effect transistor, 6 integrated circuits, 57 diodes and 3 light emitting diodes.

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. Red LED Transmit Indicator.

RECEIVER

Sensitivity	SSB: Less than 0.5 μ V for 10 dB (S+N)/N at greater than 1/2-watt of audio output. AM: Less than 1.0 μ V for 10 dB (S+N)/N at greater than 1/2-watt of audio output.
Selectivity	SSB and AM: 6dB @ 4.2 KHz, 60dB @ 7.0 kHz.
Image Rejection	More than 65 dB.
IF Frequency	AM and SSB: 7.8 MHz.
Adjacent Channel Rejection	AM: -60 dB; SSB: -65 dB.
AM and SSB RF Gain Control	Adjustable for optimum signal reception.
Automatic Gain Control	(AGC): Less than 10dB change in audio output for inputs from 10 to 100,000 microvolts.
Squelch	Adjustable; threshold less than .5 μ V.
Noise Blanker	RF type, effective on AM and SSB.
Voice Lock Range	$\pm$ 1000 Hz.

Courtesy of the Manufacturer

COBRA MODELS 140GTL/142GTL

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 or 13.8 volts at TP15.
 Connect low sides of test equipment to ground unless specified otherwise.
 Connect 50-ohm dummy load or antenna before keying transmitter.
 Connect microphone.

Suggested Alignment Tools:

GC ELECTRONICS:

L1 thru L10, L13, L14, L17 thru L20,

L26 thru L29 9440

L36, L39 8728, 8728A, 9304

CT1, CT2, CT3 5000, 8276

SYNTHESIZER ALIGNMENT

TEST EQUIPMENT	TRANSCEIVER	ADJUST	REMARKS
Input of frequency counter to TP12 (IC2 Pin 8).	Ch. 19, AM		Check for 10.240MHz.
Input of oscilloscope to TP16 (L18 Secondary).	Ch. 19, AM Voice Lock Midrange	L18	Adjust for maximum RF.
Input of DC meter to TP9.	Ch. 40, AM	L13	Adjust for 5.00 volts.
Input of oscilloscope to TP1.	Ch. 19, USB	L14	Adjust for maximum RF.
Input of frequency counter to TP1.	Ch. 19, USB Voice Lock Midrange	CT3	Adjust for 34.9875MHz ± 20 Hz. Check all channels. (See Truth Chart for correct frequencies.)
Input of frequency counter to TP1.	Ch. 19, LSB Voice Lock Midrange	L19	Adjust for 34.9825MHz ± 20 Hz. Check all channels. (See Truth Chart for correct frequencies.)
Input of frequency counter to TP1.	Ch. 19, AM Voice Lock Midrange	L20	Adjust for 34.9850MHz. Check all channels. (See Truth Chart for correct frequencies.)
Input of frequency counter to TP1.	Ch. 19, XMT LSB	VR3	Adjust for 34.9825MHz ± 20 Hz.
Input of frequency counter to TP10.	Ch. 1, USB		Check for 1.430MHz. Check all channels. (See Truth Chart for correct frequencies.)
Input of frequency counter to TP3.	Ch. 19, USB	CT1	Adjust for 7.8025MHz ± 5 Hz or ± 0 Hz.
Input of frequency counter to TP3.	Ch. 19, LSB	CT2	Adjust for 7.7975MHz ± 0 Hz or ± 5 Hz.
Input of frequency counter to TP3. Disconnect TP7 and TP8.	Ch. 19, XMT AM	L17	Adjust for 7.8000MHz ± 5 Hz. Reconnect TP7 and TP8.

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.
Mode AM, RF Gain maximum, Squelch MINIMUM, Voice Lock midrange, NB off.

AM

TEST EQUIPMENT	TRANSCEIVER	ADJUST	REMARKS
Output of signal generator thru .01uF to TP13 (TR10 Collector). 7.8MHz, 1000Hz @ 30% modulation.	Ch. 19	L3,L4	Adjust for maximum output.
Output of signal generator thru .01uF to antenna input. 27.185MHz, 1000Hz @ 30% modulation.	Ch. 19	L5,L6,L7, L8,L9,L10	Adjust for maximum output. If necessary, readjust L3 and L4 for maximum.
Output of signal generator thru .01uF to antenna input. 27.185MHz, 1000Hz @ 30% modulation. Input of oscilloscope to TP14 (TR6 Emitter).	Ch. 19	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 Noise Blanker on and adjust for maximum amplitude pulses.

COBRA MODELS 140GTL/142GTL

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.
Mode USB, RF Gain maximum, Squelch MINIMUM, Voice Lock midrange, NB off.

SSB

TEST EQUIPMENT	TRANSCEIVER	ADJUST	REMARKS
Output of signal generator thru .01uF to TP13 (TR10 Collector). 7.8025MHz, no modulation.	Ch. 19	L3,L4	Adjust for maximum output.
Output of signal generator thru .01uF to antenna input. 27.186MHz, no modulation.	Ch. 19	L5,L6,L7, L8,L9,L10	Adjust for maximum output. If necessary, readjust L3 and L4 for maximum.

RECEIVER ADJUSTMENTS

Connect an AC VTVM or AF wattmeter across speaker voice coil.
Adjust volume control to obtain a suitable indication.
Mode AM, RF Gain maximum, Squelch MINIMUM, Voice Lock midrange, NB off.

AM

TEST EQUIPMENT	TRANSCEIVER	ADJUST	REMARKS
Output of signal generator thru .01uF to antenna input. 27.185MHz, 1000Hz @ 30% modulation. Output 1000uV.	Ch. 19 Squelch Maximum	VR2	SQUELCH RANGE Adjust so that squelch just breaks.
Output of signal generator thru .01uF to antenna input. 27.185MHz, 1000Hz @ 30% modulation. Output 100uV.	Ch. 19	VR1	S METER Adjust for 9 on S scale of meter.

TRANSMITTER ALIGNMENT

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

TEST EQUIPMENT	TRANSCIVER	ADJUST	REMARKS
Input of RF wattmeter and 50-ohm, 25-watt dummy load to antenna input. Inject a two-tone 50mV signal at mic input.	Ch. 19, USB Mike Gain Maximum	L26,L27,L28, L29,L36	Set VR7 to MINIMUM. Adjust for maximum RF output.
Input of spectrum analyzer or harmonic meter to antenna input.	Ch. 19, AM Mike Gain MINIMUM	L39	Adjust for MINIMUM at 54MHz (2nd harmonic).

TRANSMITTER ADJUSTMENTS

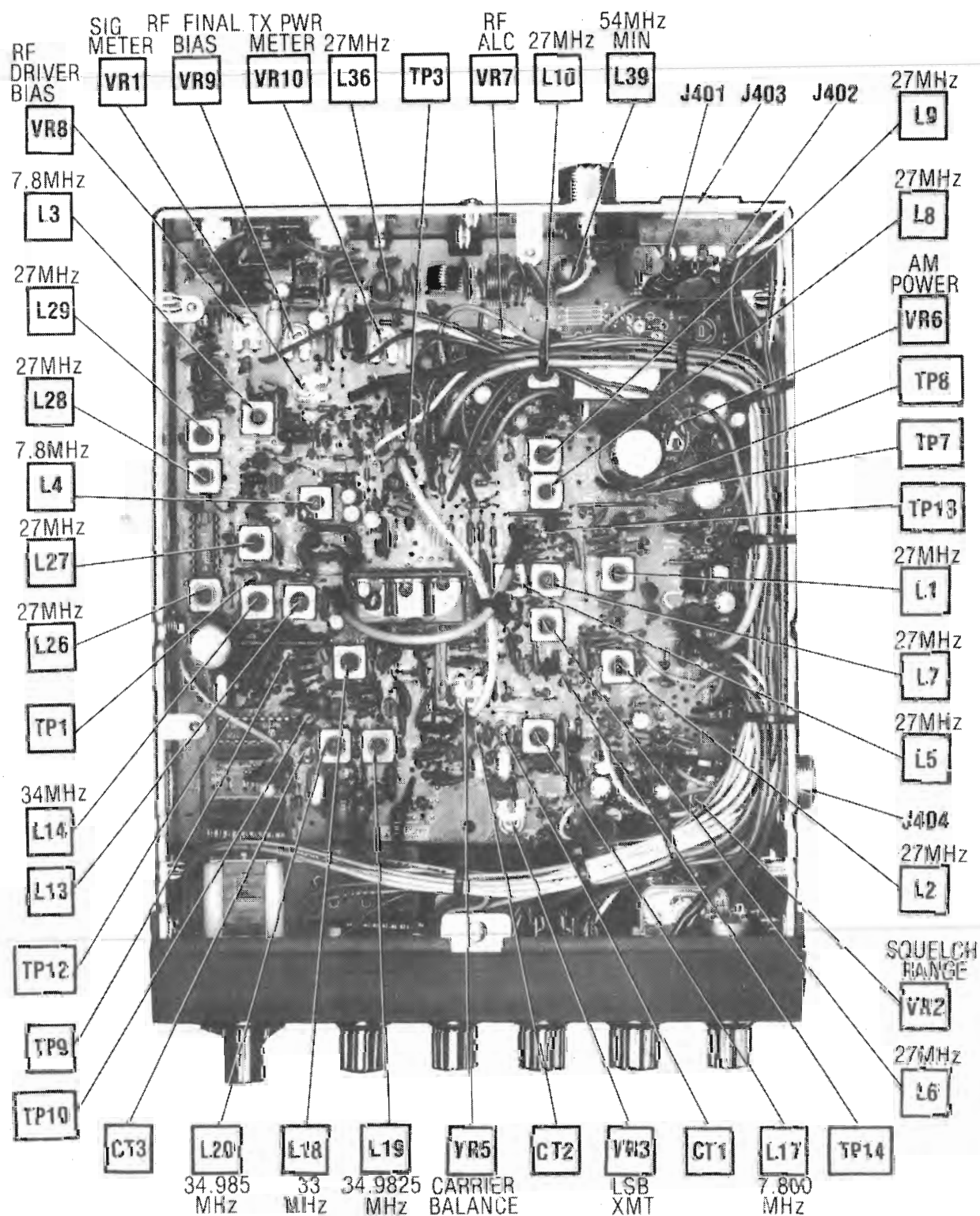
Connect an RF wattmeter and 50-ohm, 25-watt dummy load to antenna connector.
 NOTE: Be sure to check transmit frequency and power on all active channels
 after adjustment of transmitter.
 See page 4 for channel frequencies.

TEST EQUIPMENT	TRANSCIVER	ADJUST	REMARKS
Input of DC meter to TP15 (TR401, Emitter).	Ch. 19, AM	RT301	VOLTAGE REGULATOR Adjust RT301 for 13.80 volts.
Insert a 0-150mA DC current meter at TP8. No modulation.	Ch. 19, USB Mike Gain MINIMUM	VR8	RF DRIVER BIAS Adjust for 35mA idle current. Reconnect TP8.
Insert a 0-150mA DC current meter at TP7. No modulation.	Ch. 19, USB Mike Gain MINIMUM	VR9	RF FINAL BIAS Adjust for 45mA idle current. Reconnect TP7.
Input of RF wattmeter and 50-ohm, 25-watt dummy load to antenna input. No modulation.	Ch. 19, USB Mike Gain MINIMUM	VR5	CARRIER BALANCE Adjust for MINIMUM RF output. Check LSB and readjust if necessary for MINIMUM RF output.
Input of RF wattmeter and 50-ohm, 25-watt dummy load to antenna input. Inject a two-tone, 50mV signal at mic input.	Ch. 19, USB Mike Gain Maximum	VR7	RF ALC Adjust for 11.0 watts PEP RF output maximum.
Input of RF wattmeter and 50-ohm, 25-watt dummy load to antenna input. No modulation.	Ch. 19, AM Mike Gain MINIMUM	VR6	AM POWER Adjust for 4.0 watts RF output maximum.
Input of RF wattmeter and 50-ohm, 25-watt dummy load to antenna input. No modulation.	Ch. 19, AM Mike Gain MINIMUM	VR10	TX PWR METER Adjust so that PWR meter agrees with RF wattmeter.
Input of modulation meter to antenna input.	Ch. 19, AM % MOD/SWR/SWR CAL @ MOD position	VR12	MOD METER Adjust VR12 so that MOD meter agrees with external MOD meter.

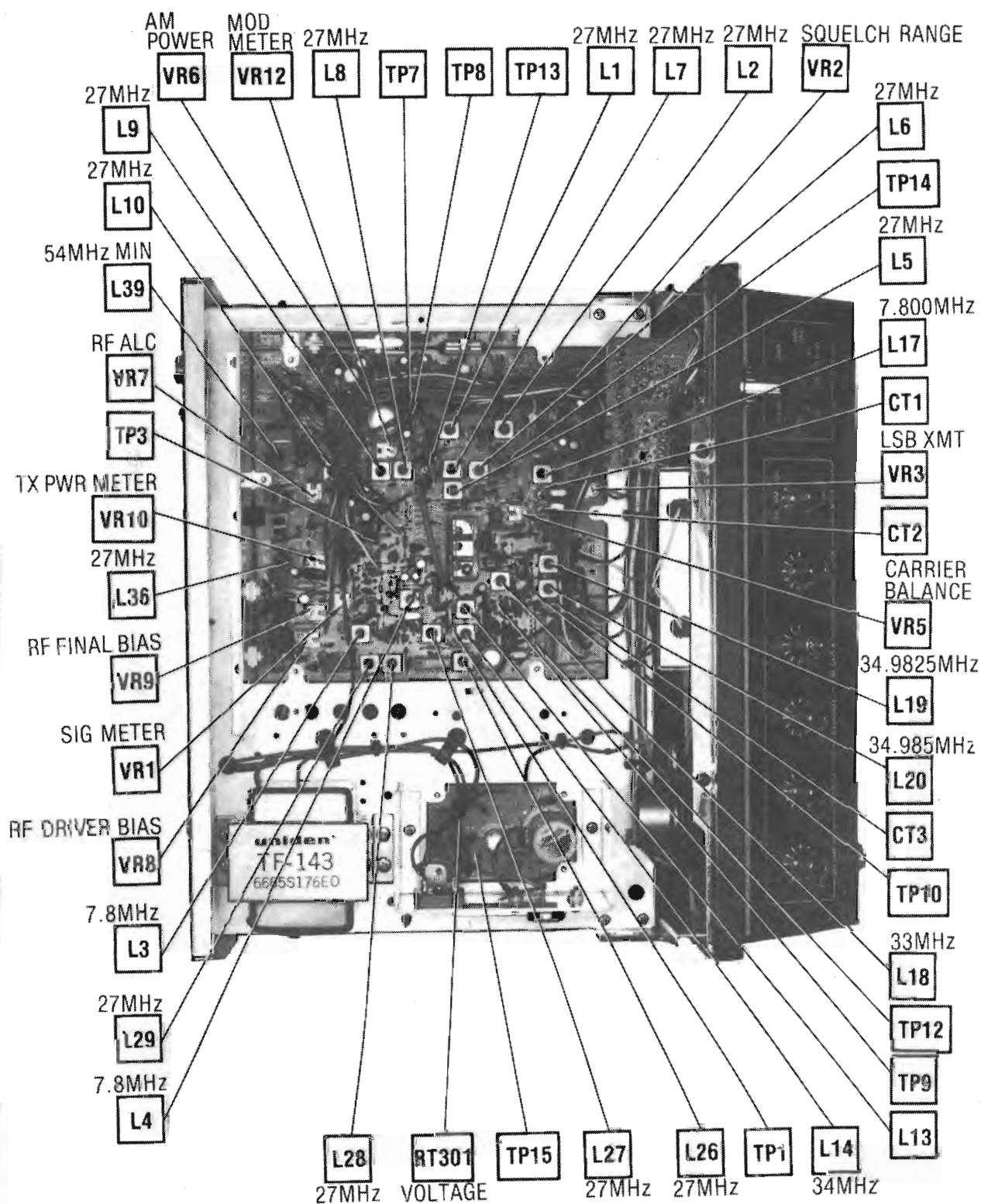
TRUTH CHART

C H A N N E L	1 = 7.98 Volts 0 = 0 Volts								DIVIDER INPUT IN MHz AT TP10	AM REC VCO OUTPUT IN MHz AT TP1	USB REC VCO OUTPUT IN MHz AT TP1	LSB REC VCO OUTPUT IN MHz AT TP1
	IC2 PROGRAM DIVIDER											
	PINS											
	11	12	13	14	15	16						
1	0	0	1	1	1	1			1.430	34.765	34.7675	34.7625
2	0	1	0	0	0	0			1.440	34.775	34.7775	34.7725
3	0	1	0	0	0	1			1.450	34.785	34.7875	34.7825
4	0	1	0	0	1	1			1.470	34.805	34.8075	34.8025
5	0	1	0	1	0	0			1.480	34.815	34.8175	34.8125
6	0	1	0	1	0	1			1.490	34.825	34.8275	34.8225
7	0	1	0	1	1	0			1.500	34.835	34.8375	34.8325
8	0	1	1	0	0	0			1.520	34.855	34.8575	34.8525
9	0	1	1	0	0	1			1.530	34.865	34.8675	34.8625
10	0	1	1	0	1	0			1.540	34.875	34.8775	34.8725
11	0	1	1	0	1	1			1.550	34.885	34.8875	34.8825
12	0	1	1	1	0	1			1.570	34.905	34.9075	34.9025
13	0	1	1	1	1	0			1.580	34.915	34.9175	34.9125
14	0	1	1	1	1	1			1.590	34.925	34.9275	34.9225
15	1	0	0	0	0	0			1.600	34.935	34.9375	34.9325
16	1	0	0	0	1	0			1.620	34.955	34.9575	34.9525
17	1	0	0	0	1	1			1.630	34.965	34.9675	34.9625
18	1	0	0	1	0	0			1.610	34.975	34.9775	34.9725
19	1	0	0	1	0	1			1.650	34.985	34.9875	34.9825
20	1	0	0	1	1	1			1.670	35.005	35.0075	35.0025
21	1	0	1	0	0	0			1.680	35.015	35.0175	35.0125
22	1	0	1	0	0	1			1.690	35.025	35.0275	35.0225
23	1	0	1	1	0	0			1.720	35.055	35.0575	35.0525
24	1	0	1	0	1	0			1.700	35.035	35.0375	35.0325
25	1	0	1	0	1	1			1.710	35.045	35.0475	35.0425
26	1	0	1	1	0	1			1.730	35.065	35.0675	35.0625
27	1	0	1	1	1	0			1.740	35.075	35.0775	35.0725
28	1	0	1	1	1	1			1.750	35.085	35.0875	35.0825
29	1	1	0	0	0	0			1.760	35.095	35.0975	35.0925
30	1	1	0	0	0	1			1.770	35.105	35.1075	35.1025
31	1	1	0	0	1	0			1.780	35.115	35.1175	35.1125
32	1	1	0	0	1	1			1.790	35.125	35.1275	35.1225
33	1	1	0	1	0	0			1.800	35.135	35.1375	35.1325
34	1	1	0	1	0	1			1.810	35.145	35.1475	35.1425
35	1	1	0	1	1	0			1.820	35.155	35.1575	35.1525
36	1	1	0	1	1	1			1.830	35.165	35.1675	35.1625
37	1	1	1	0	0	0			1.840	35.175	35.1775	35.1725
38	1	1	1	0	0	1			1.850	35.185	35.1875	35.1825
39	1	1	1	0	1	0			1.860	35.195	35.1975	35.1925
40	1	1	1	0	1	1			1.870	35.205	35.2075	35.2025

COBRA MODELS 140GTL/142GTL

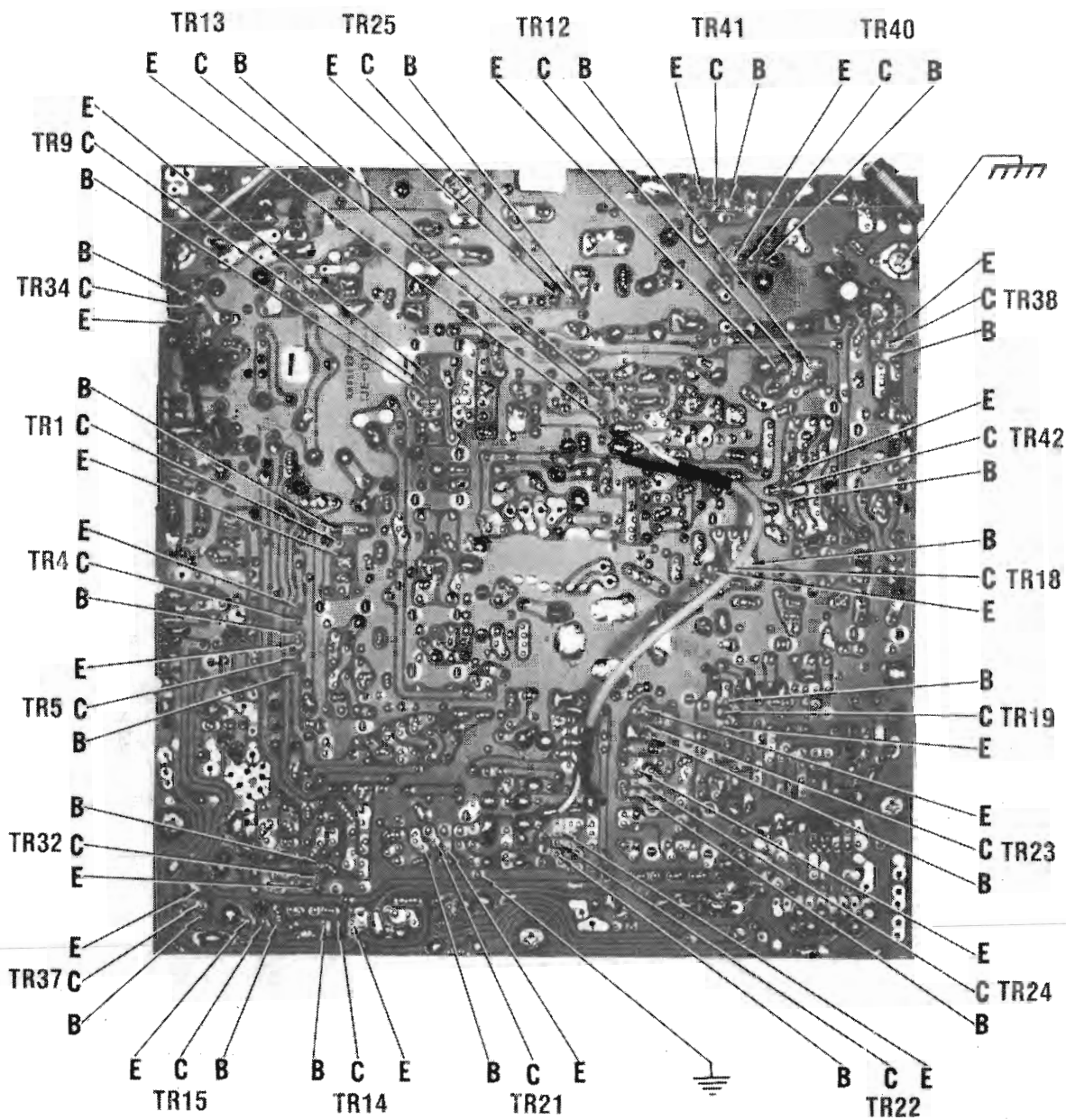


CHASSIS - BOTTOM (140 GTL)

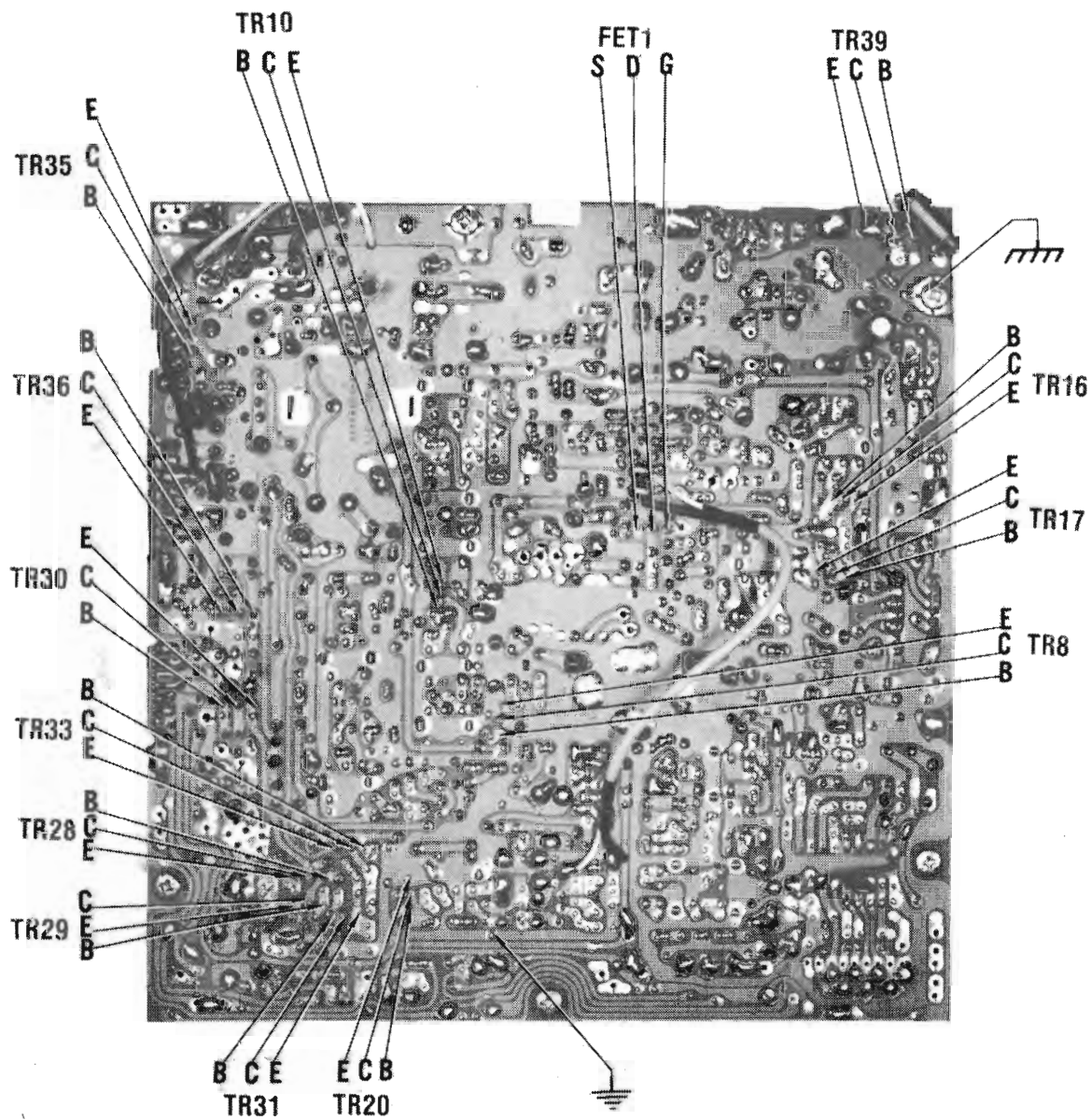


COBRA MODELS 140GTL/142GTL

CHASSIS - TOP (142 GTL)



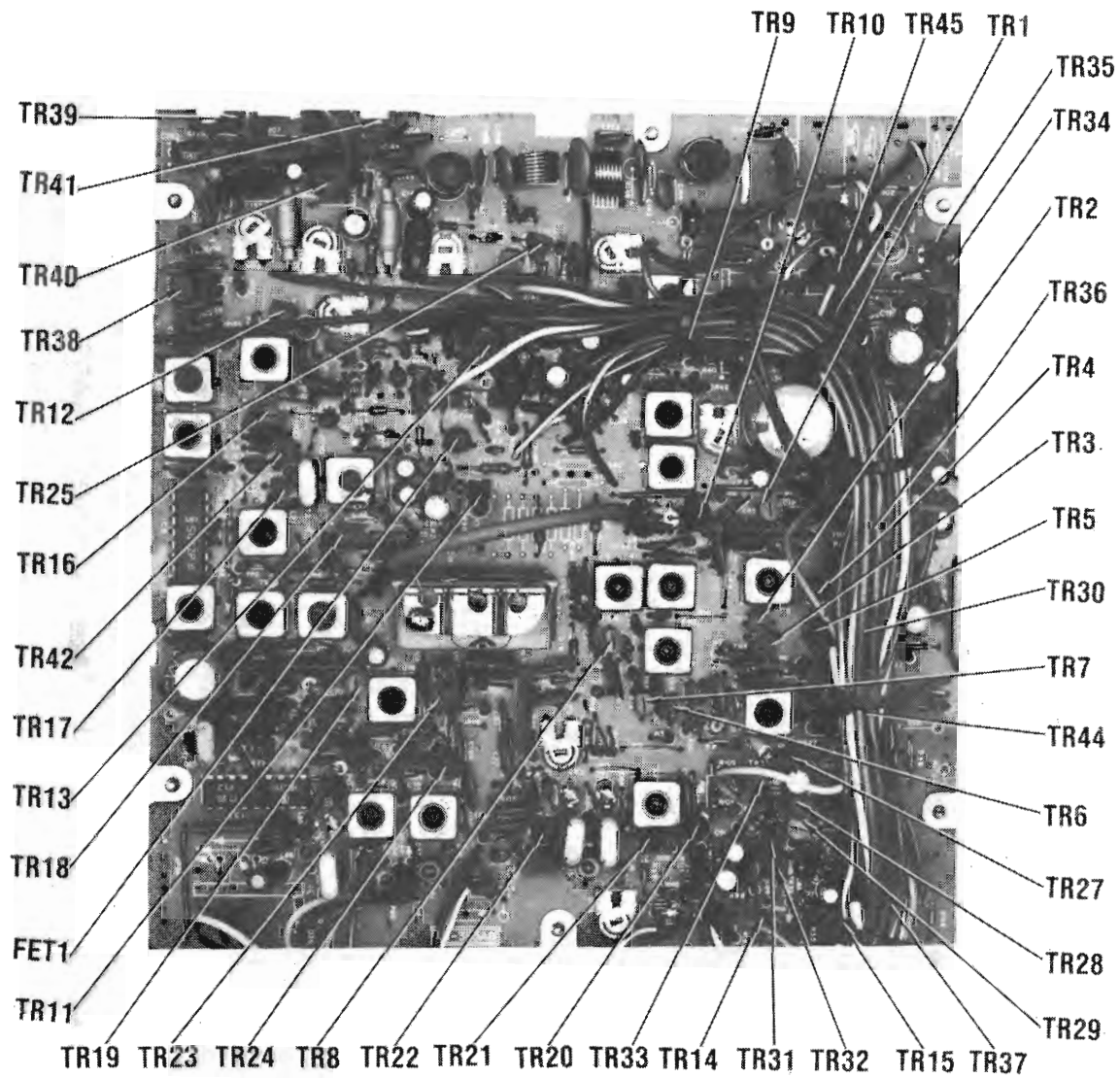
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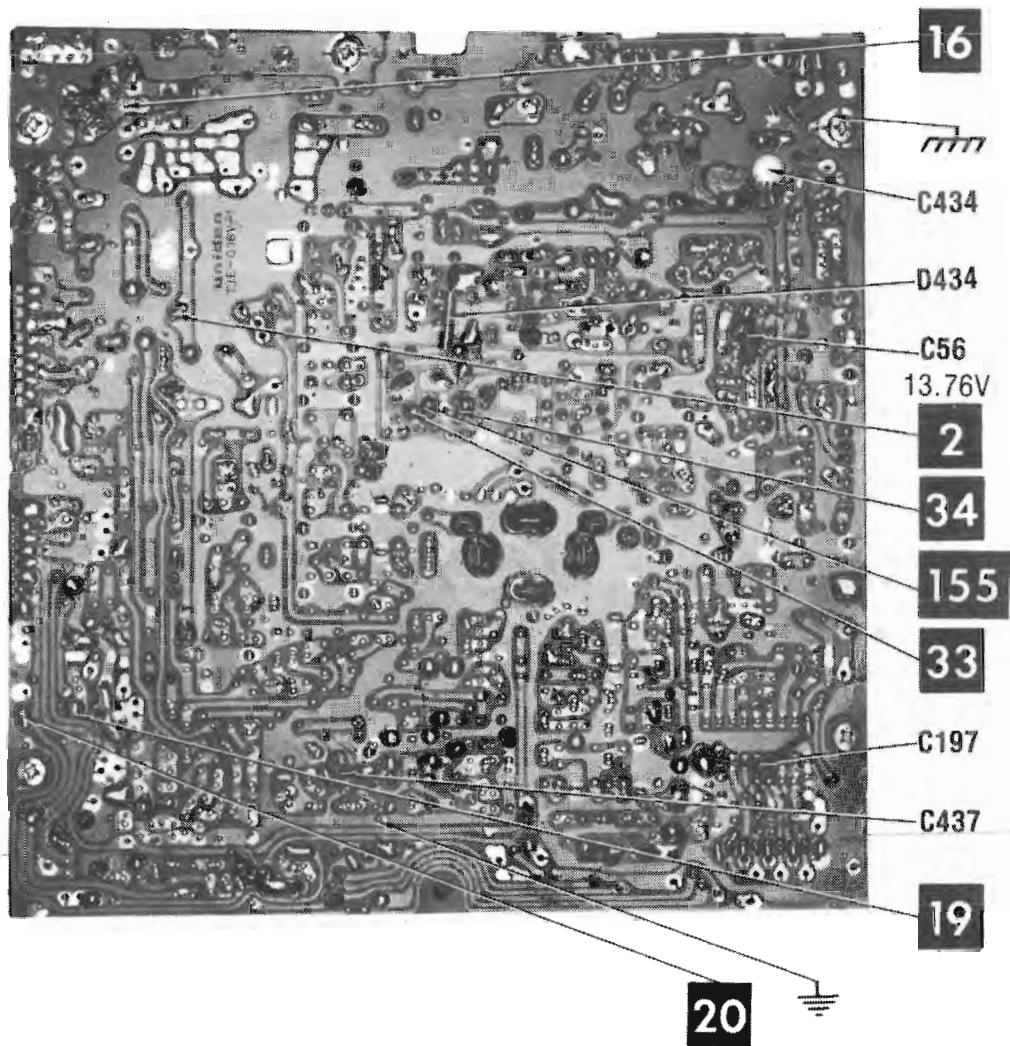
COBRA MODELS 140GT/142GT

MA IN BOARD

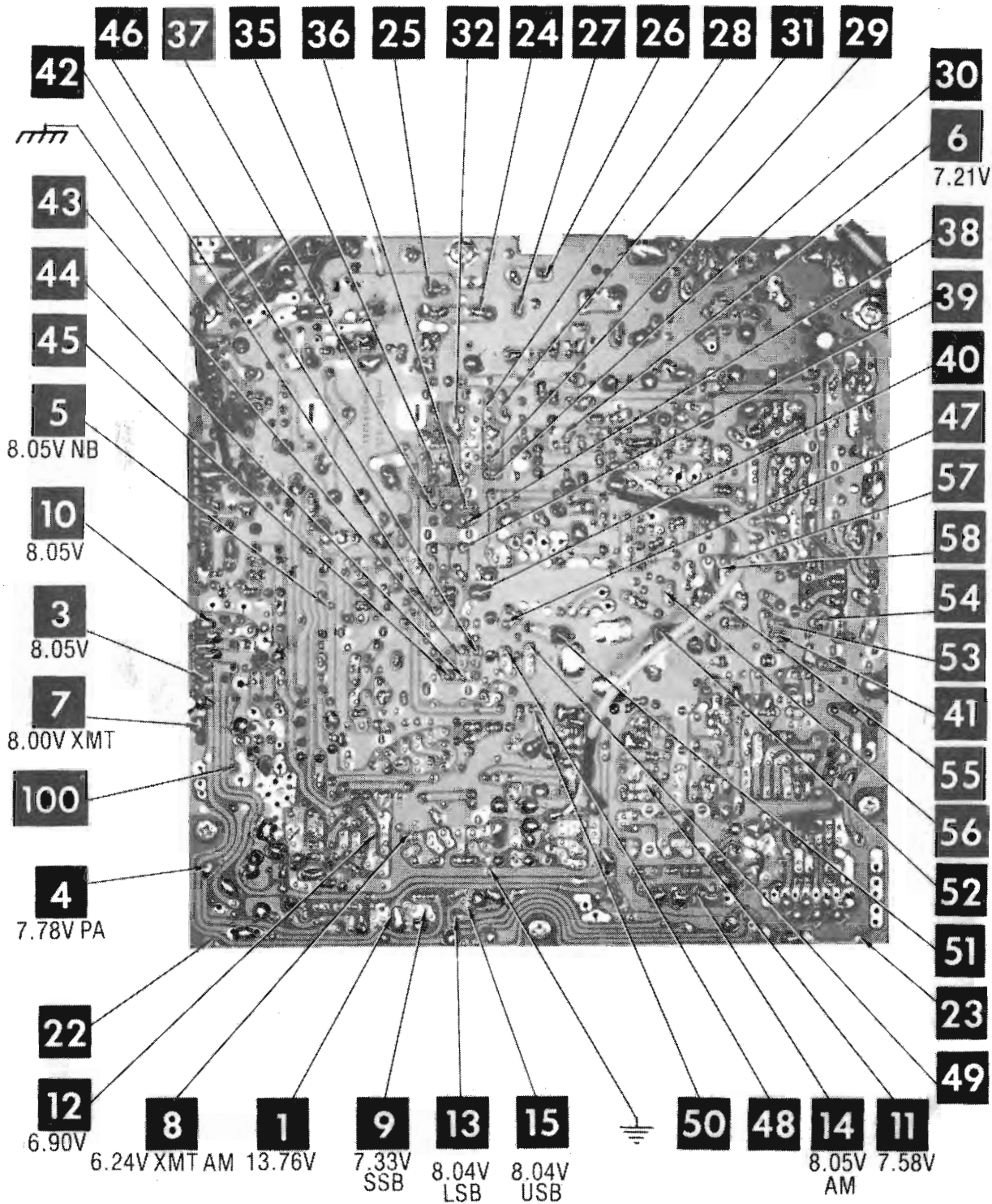




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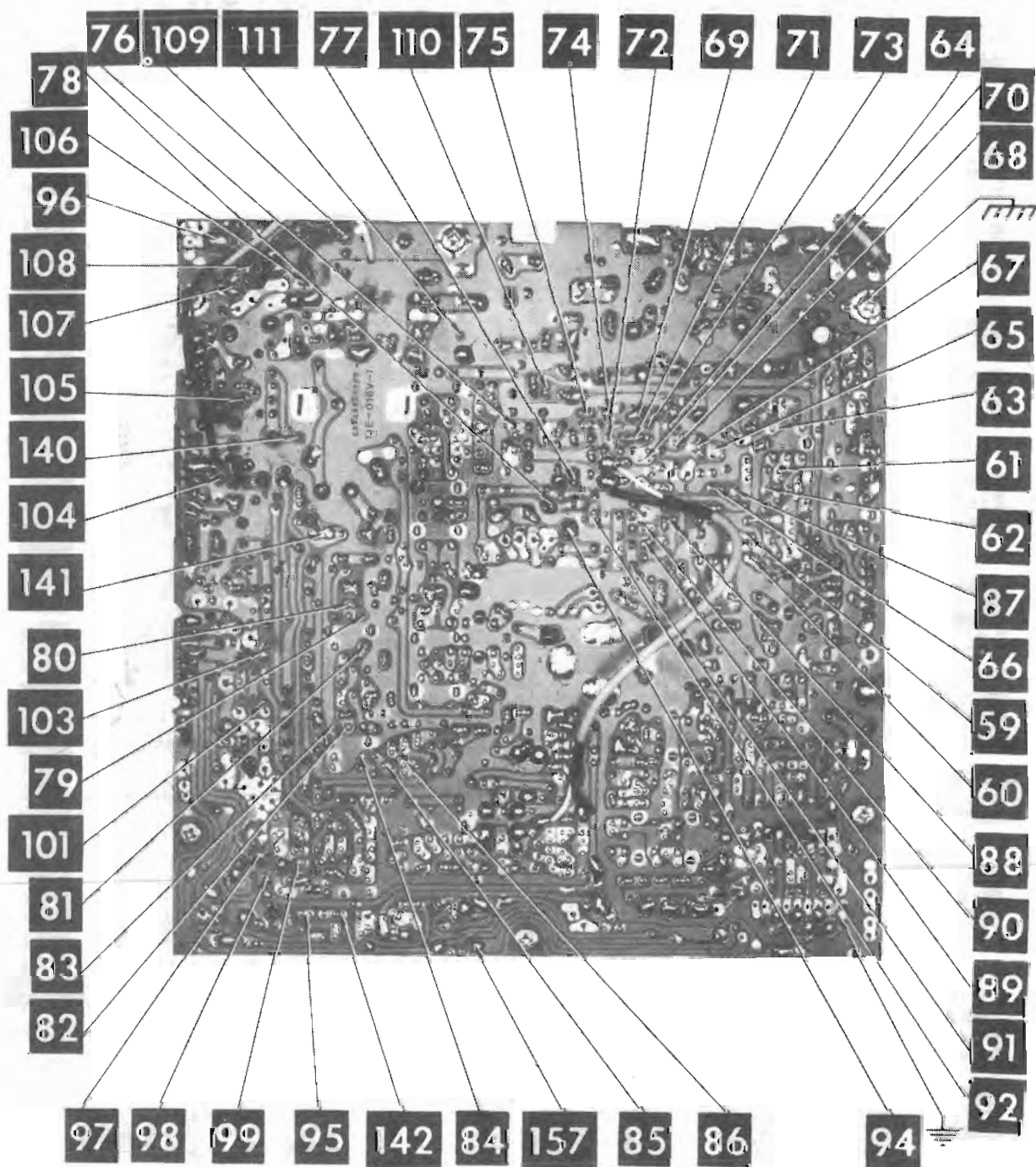


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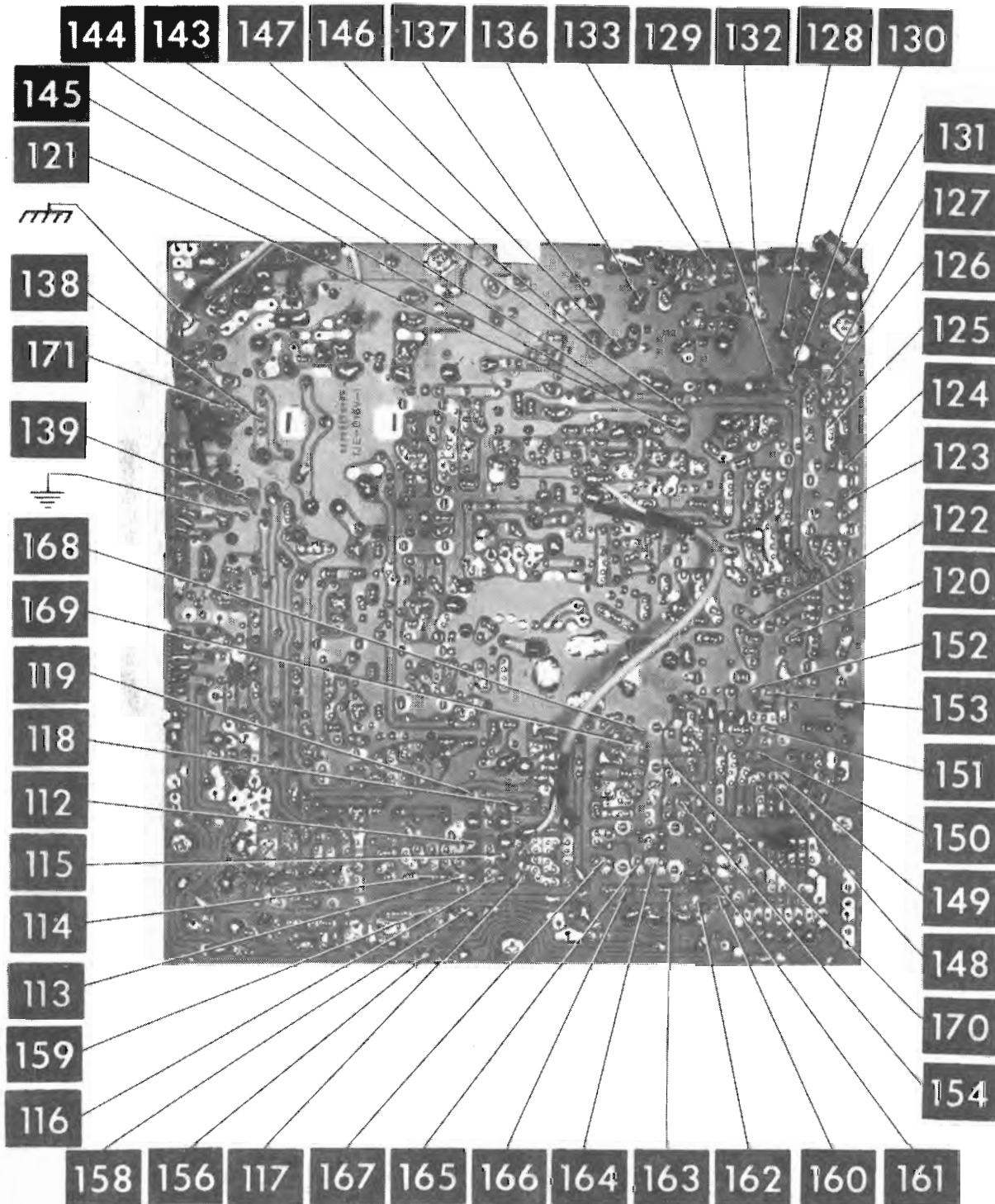


COBRA MODELS 140GTL/142GTL

MAIN BOARD

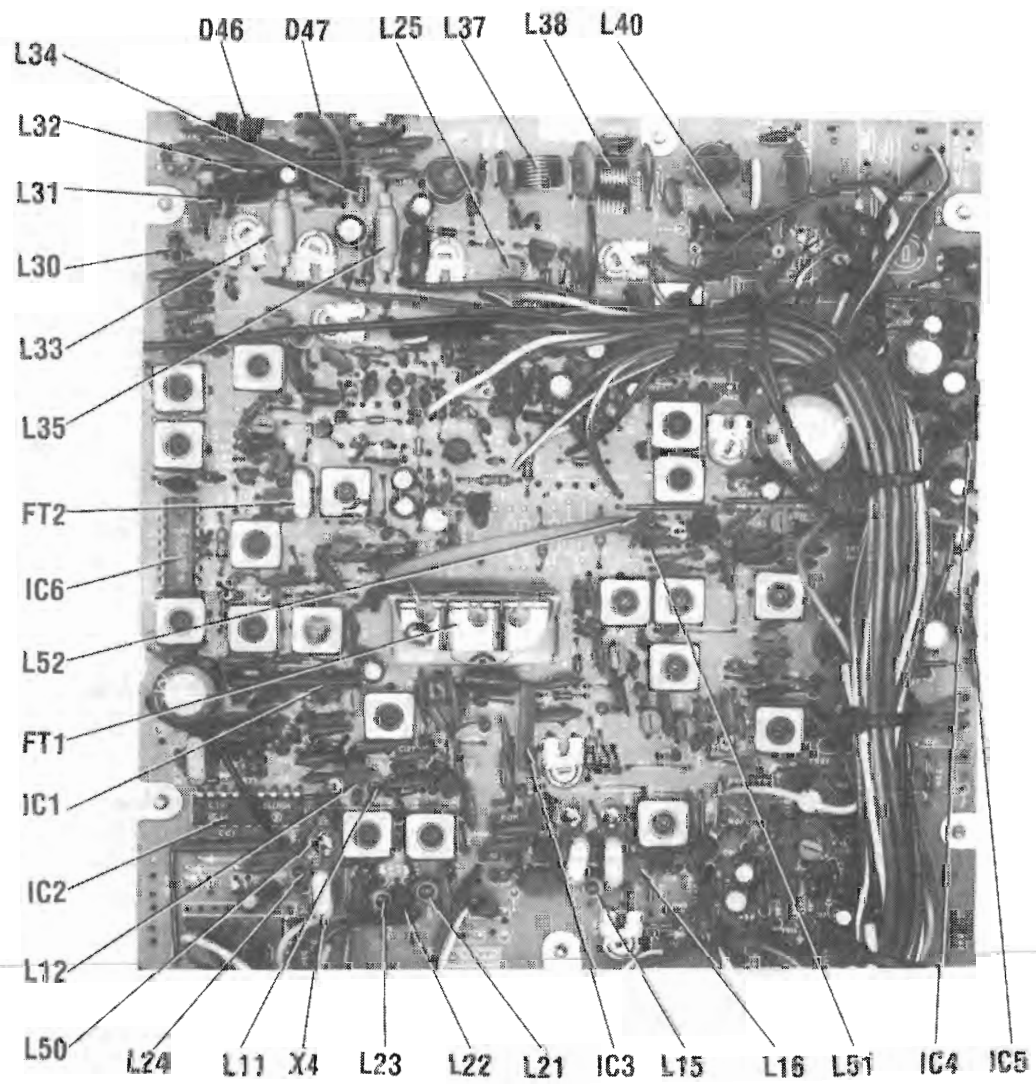


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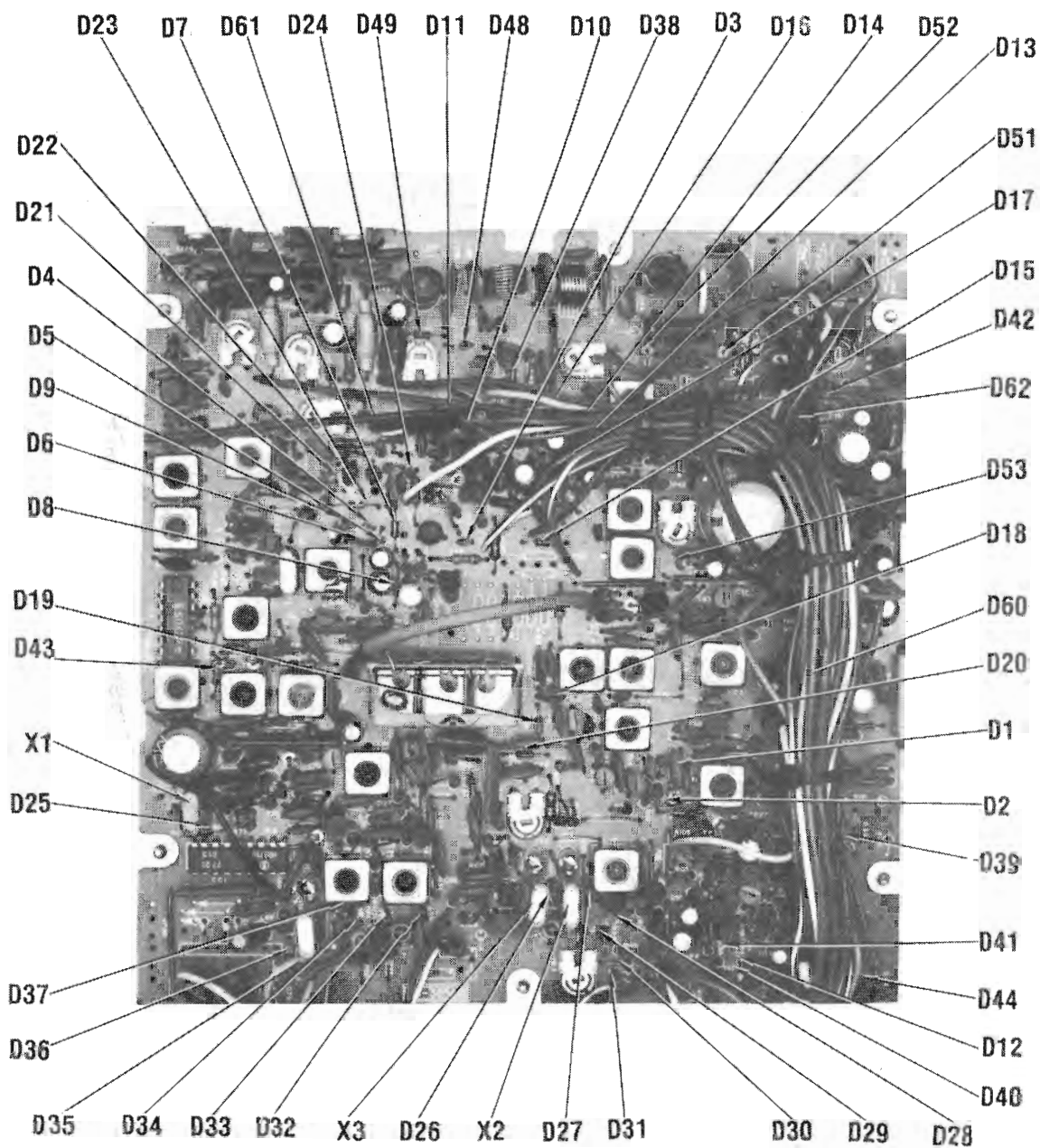


COBRA MODELS 140GTL/142GTL

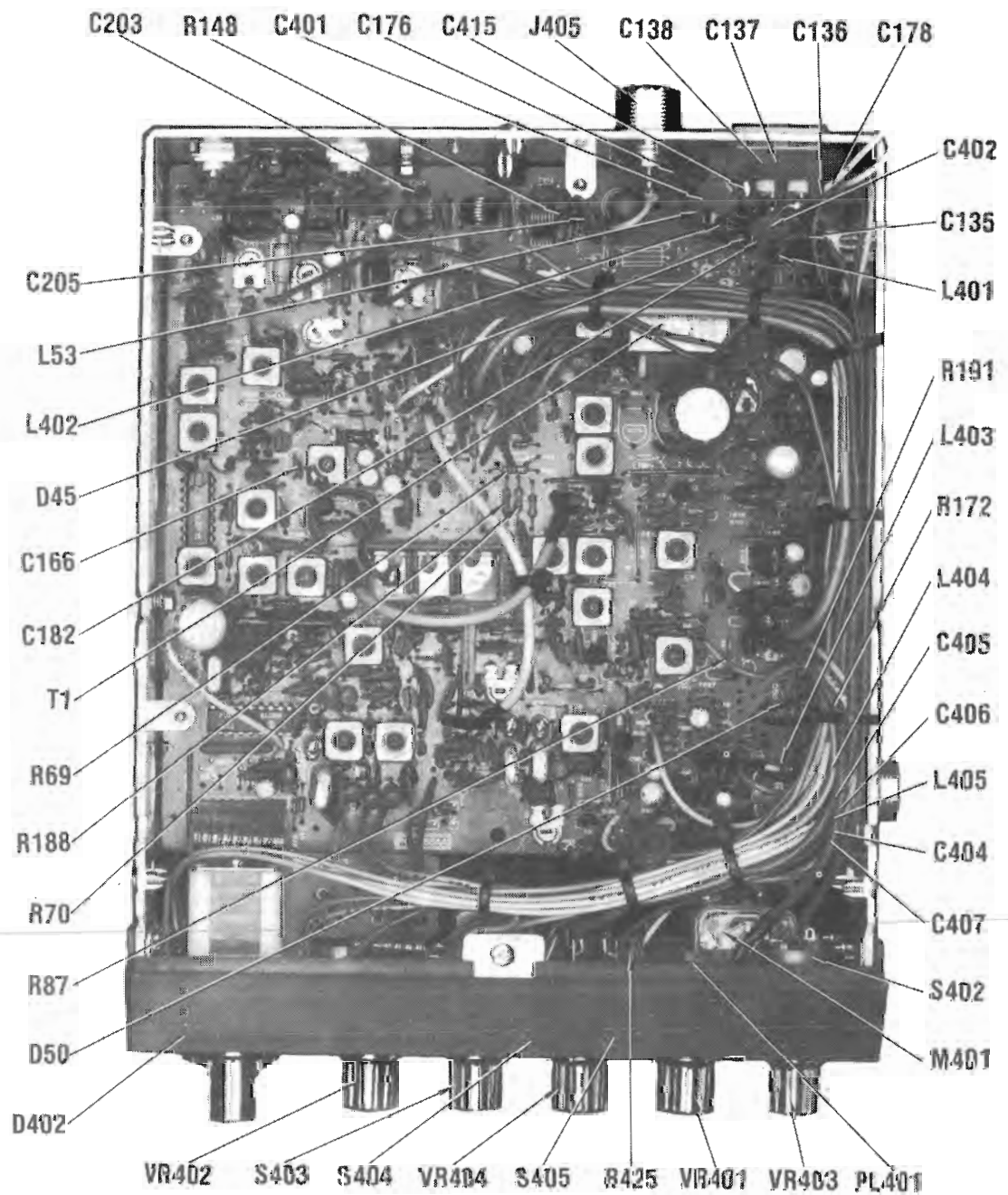
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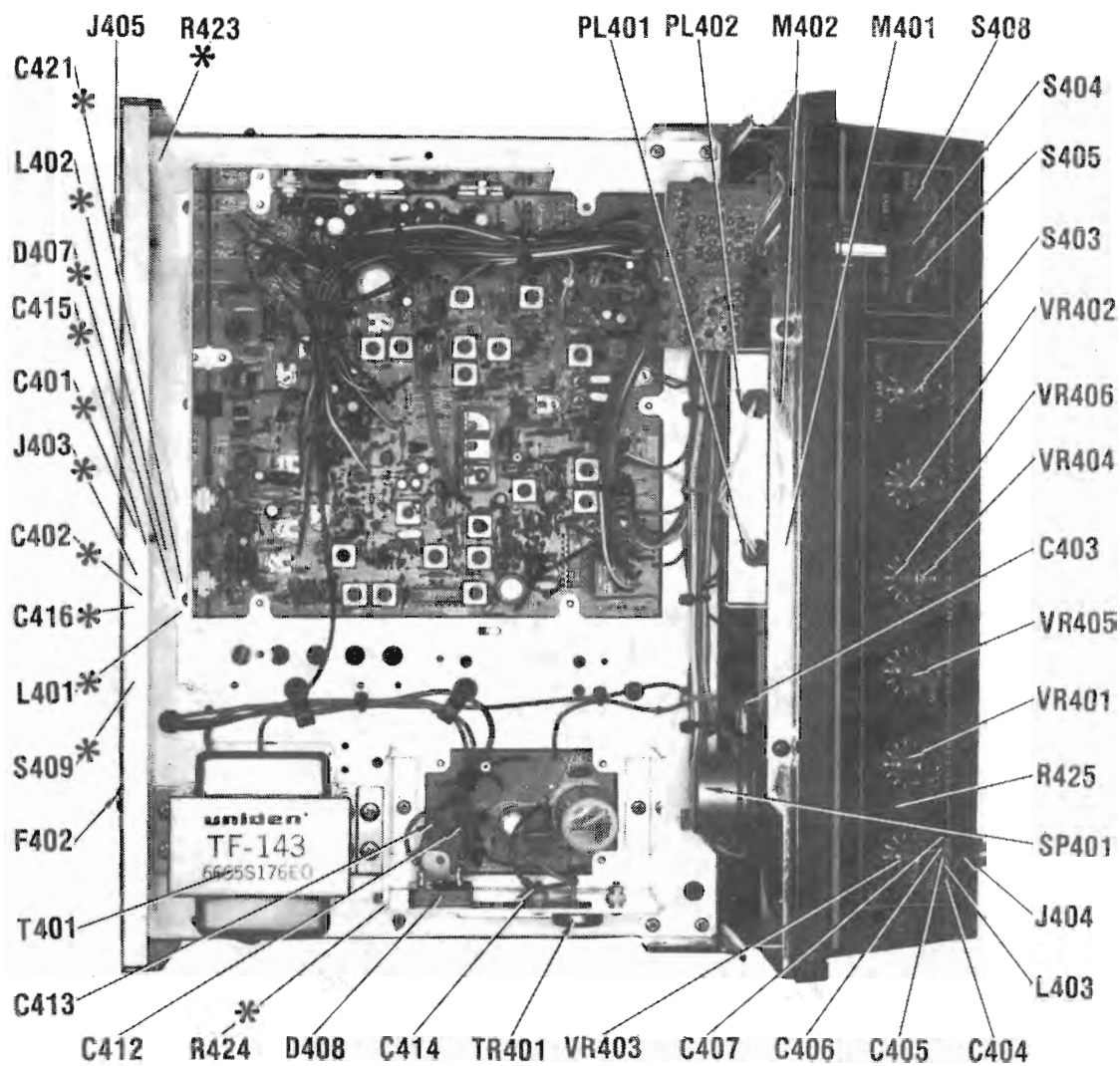
MAIN BOARD



MAIN BOARD

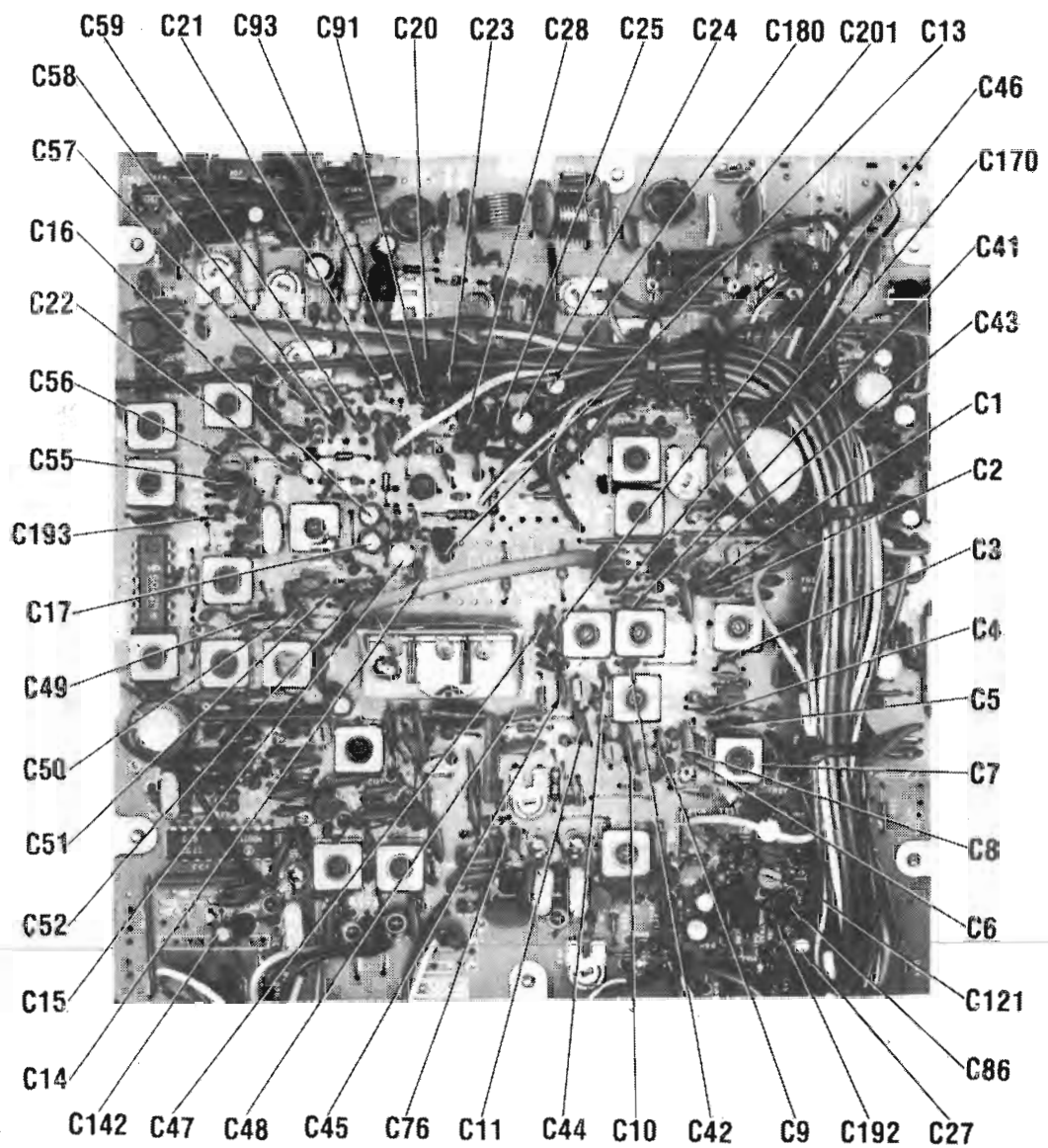


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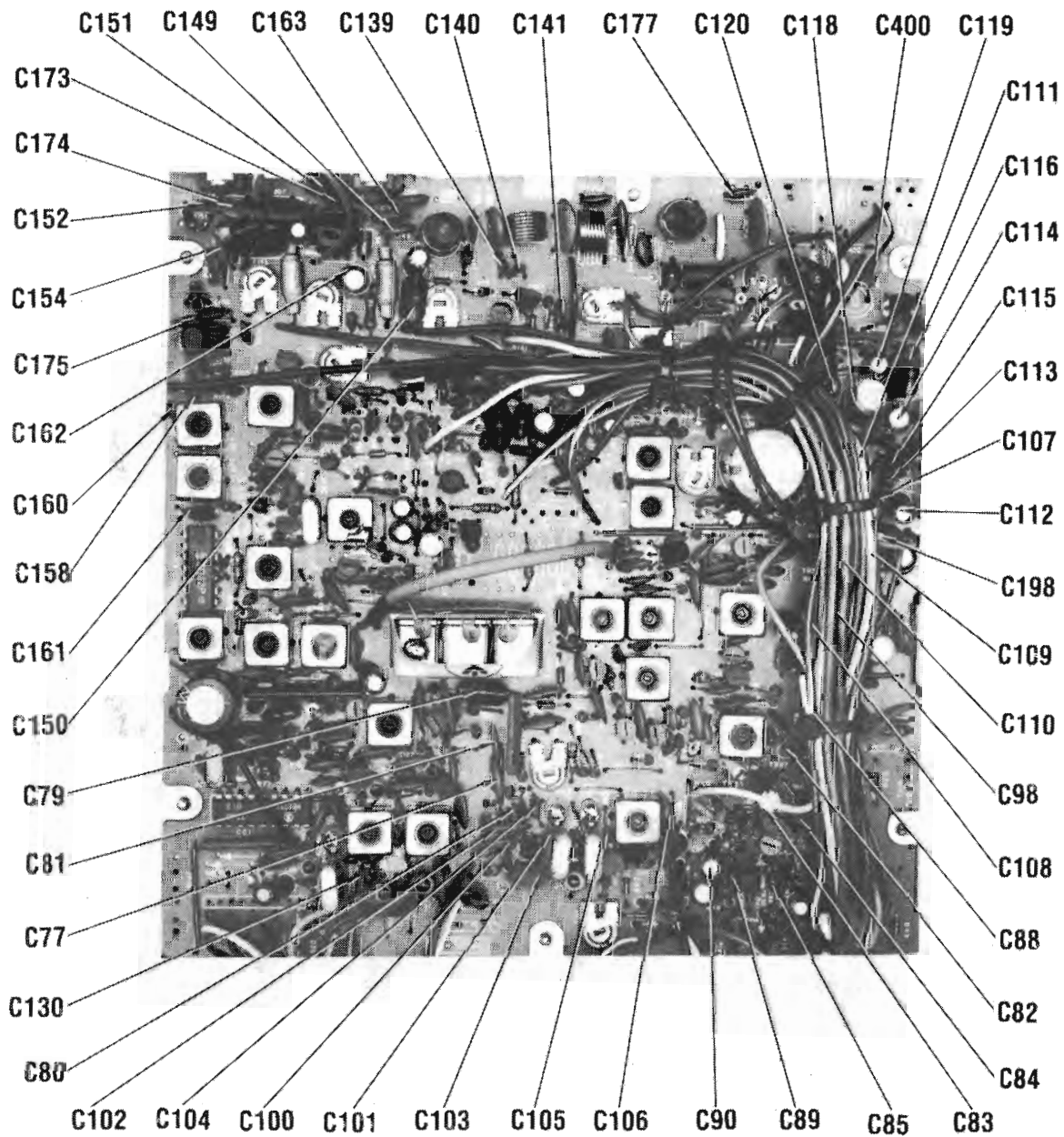


* Located on bottom of chassis

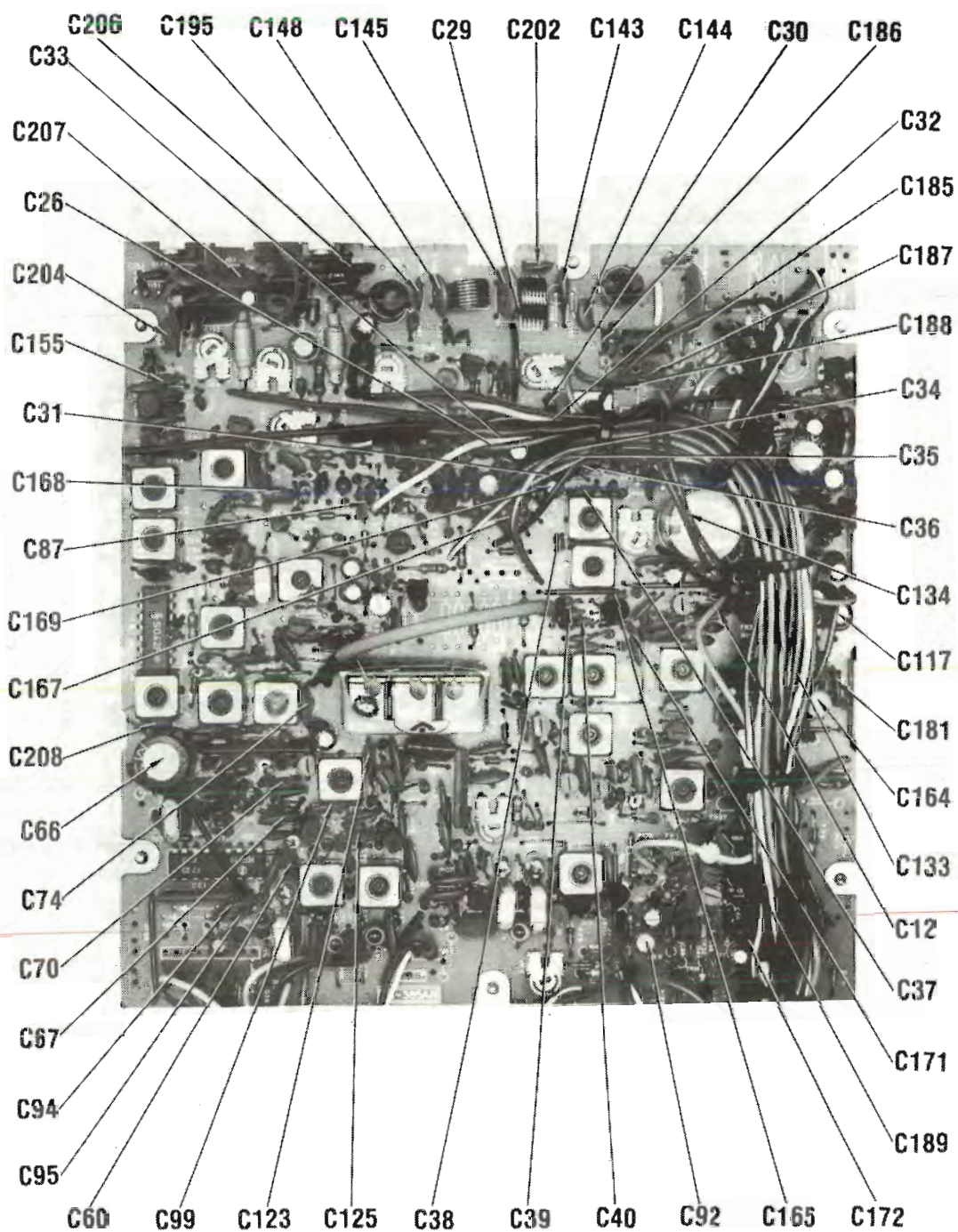
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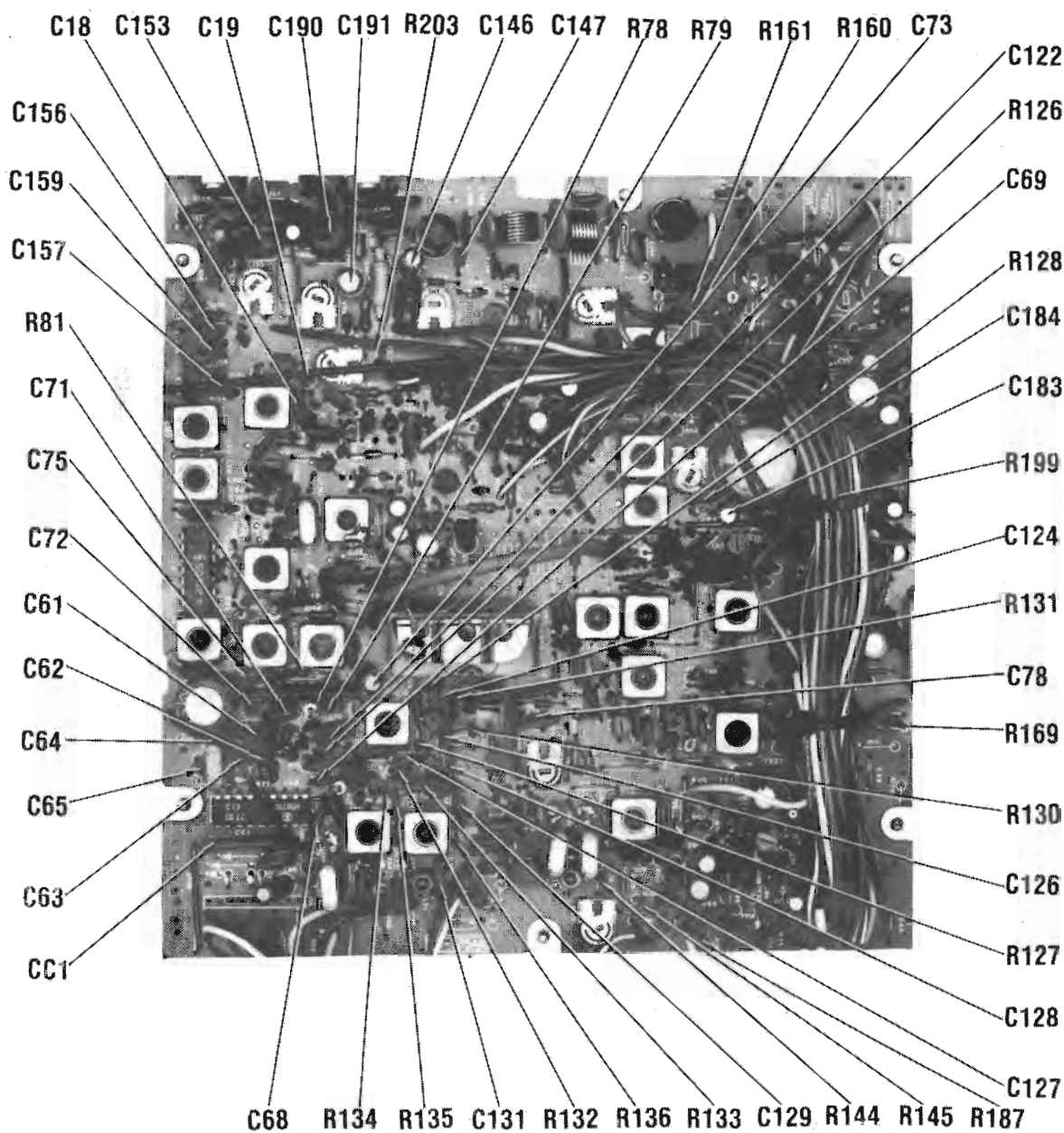
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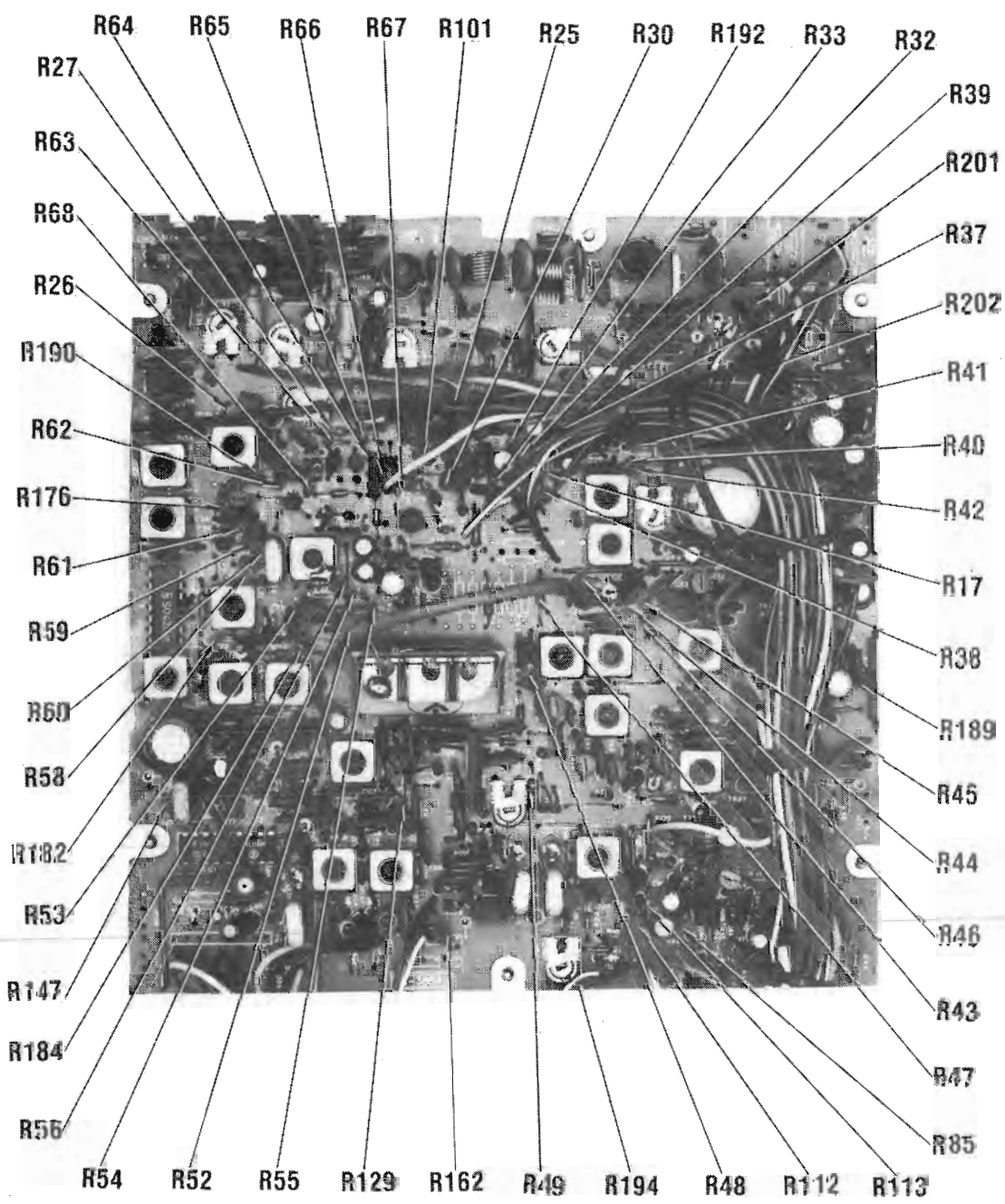
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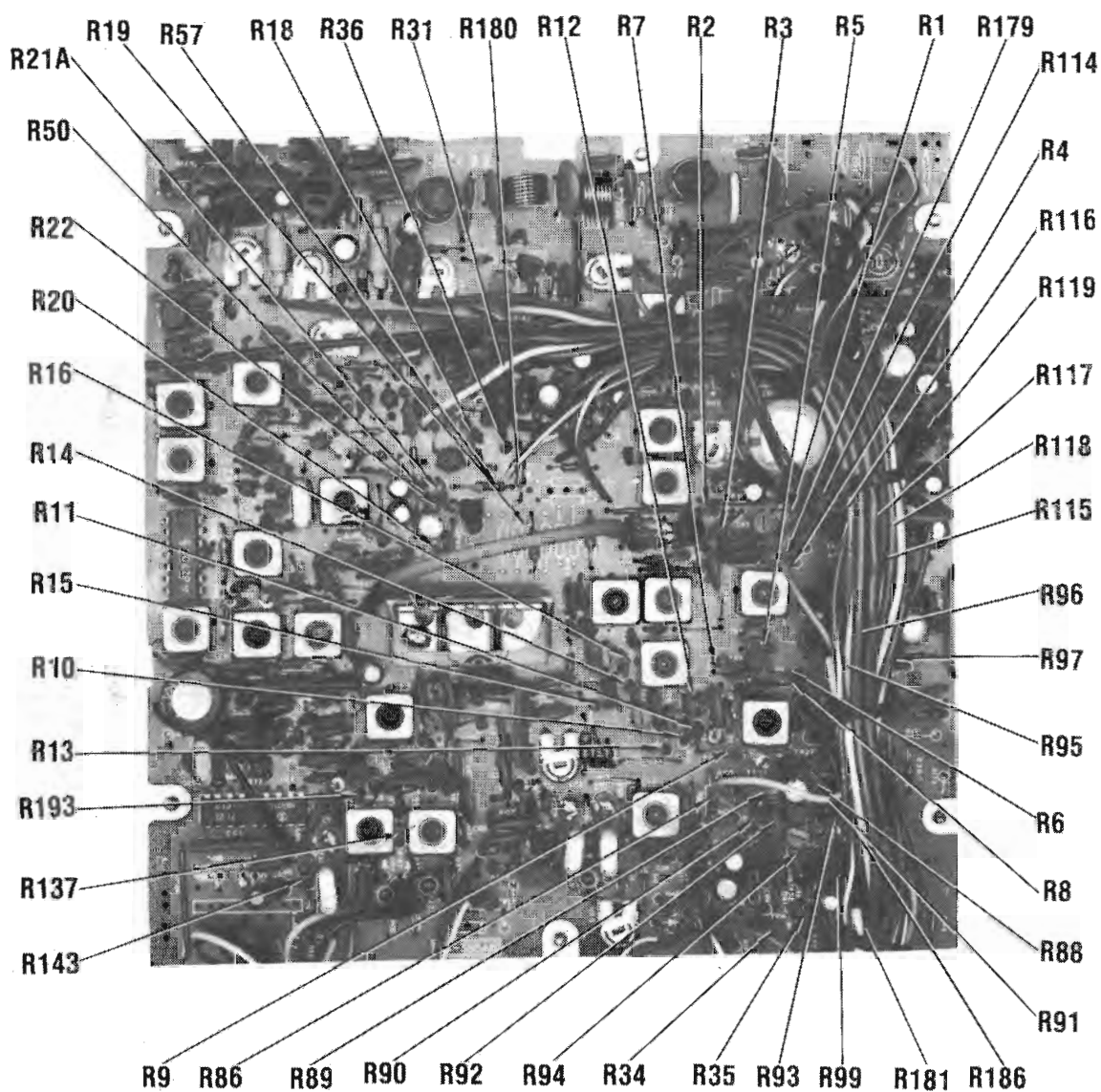
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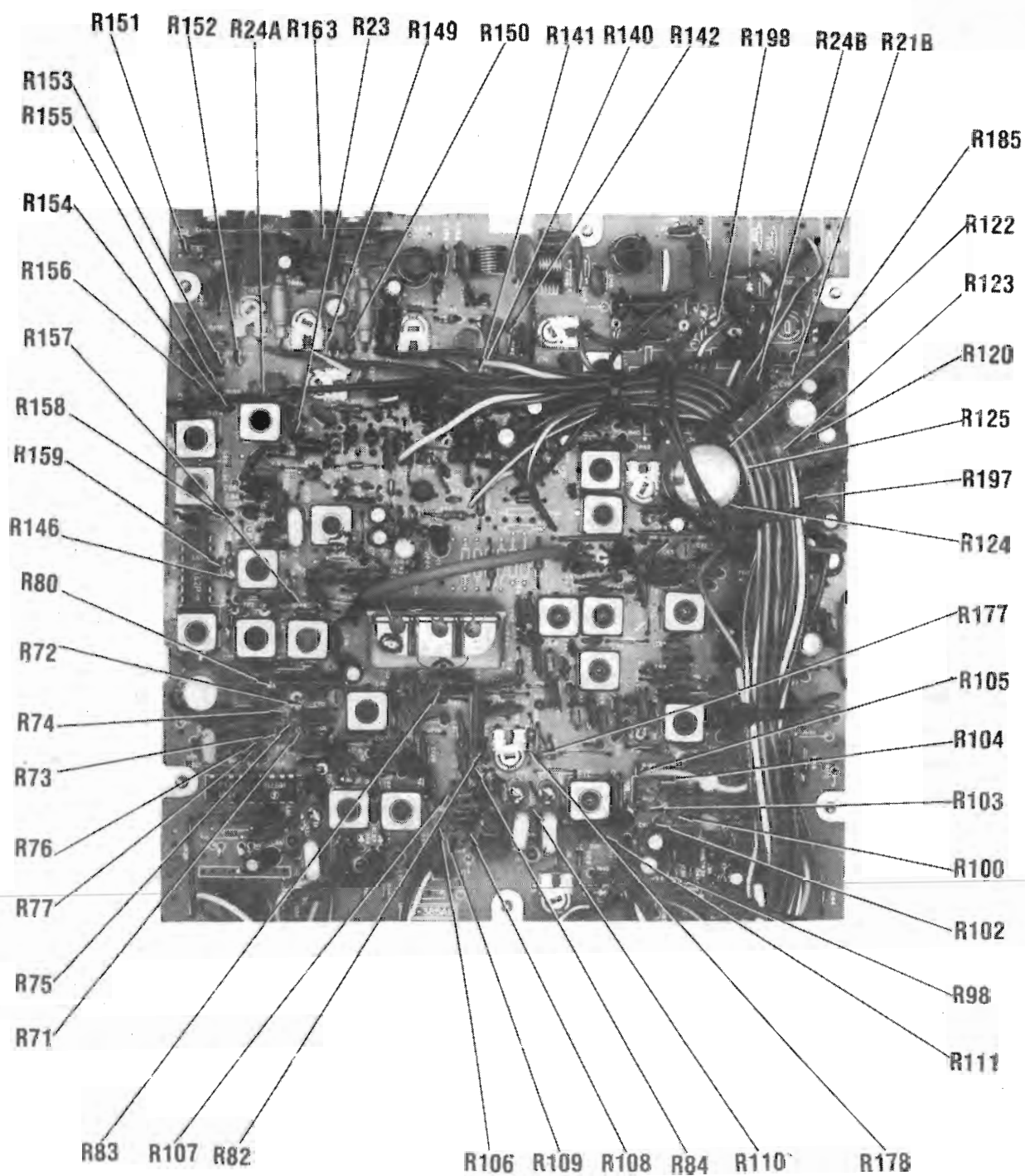
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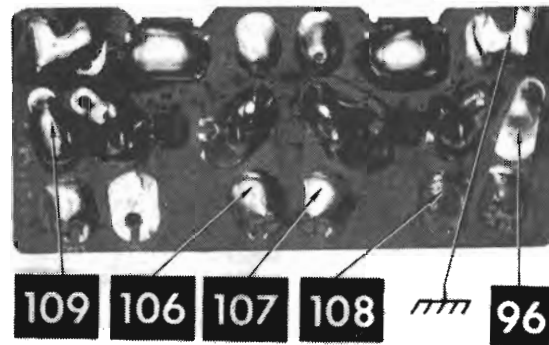
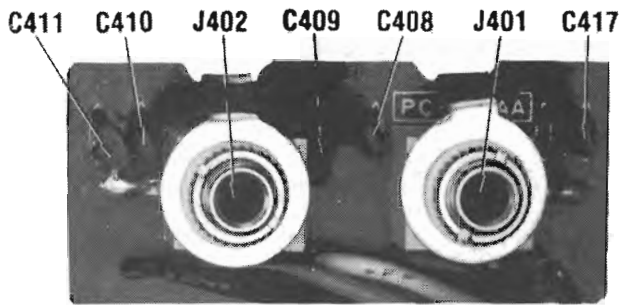
MAIN BOARD



MAIN BOARD

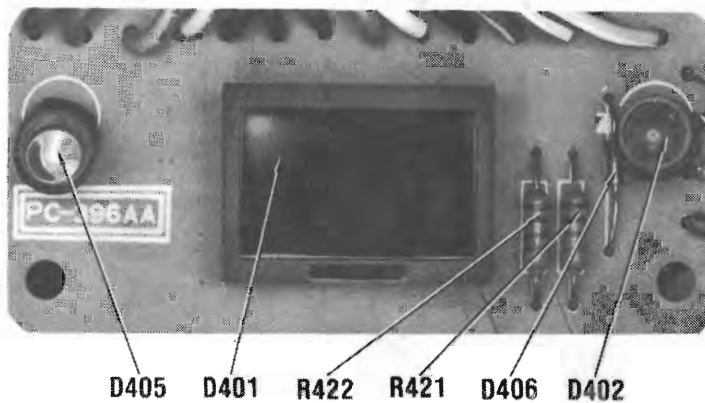
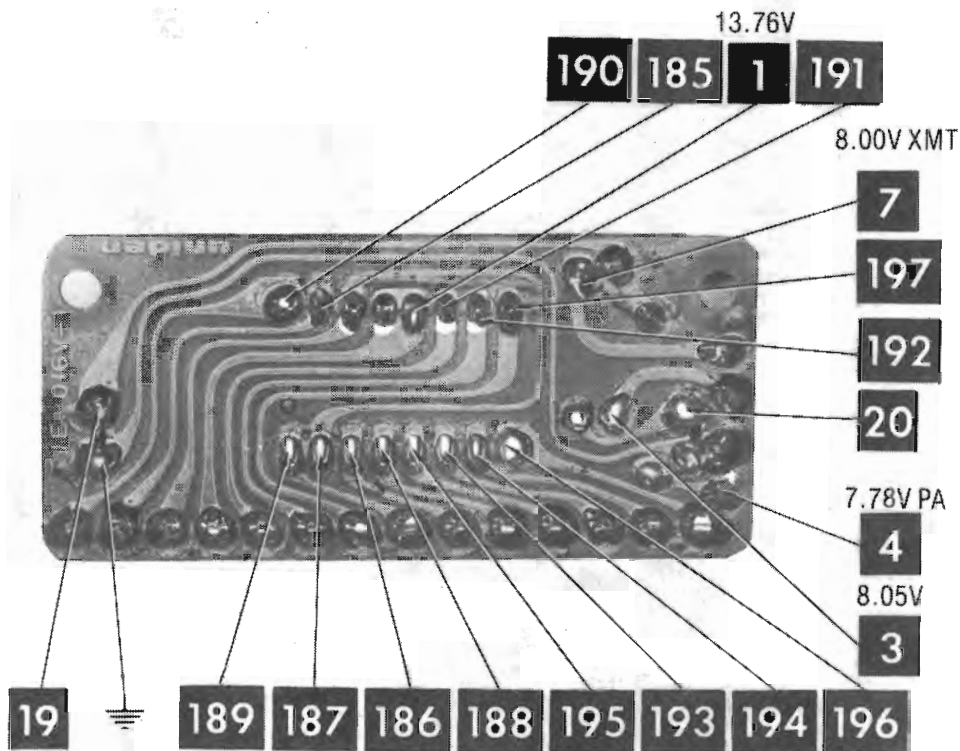


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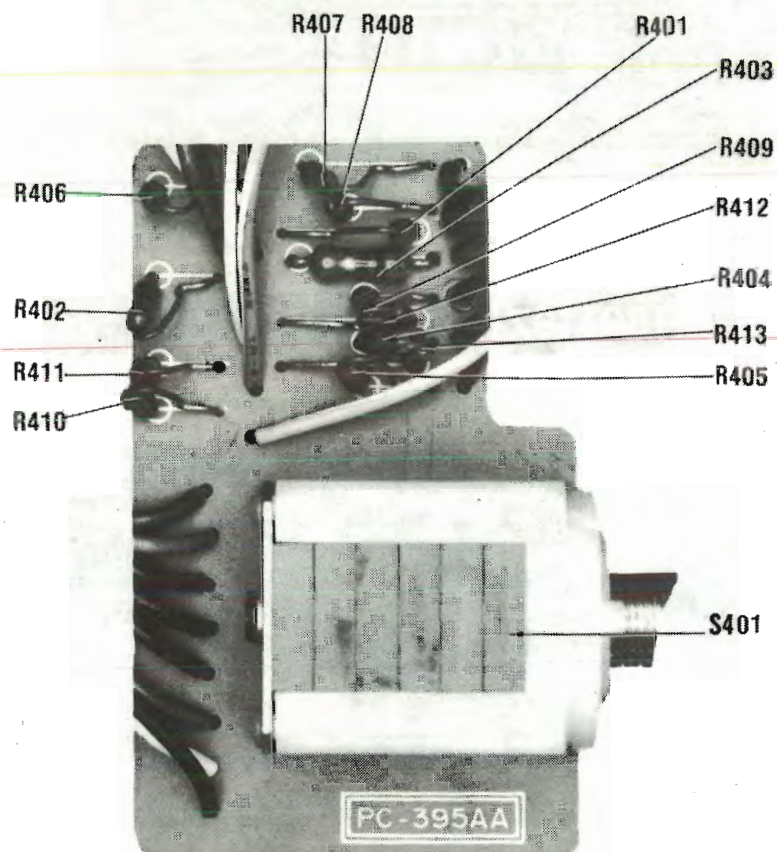
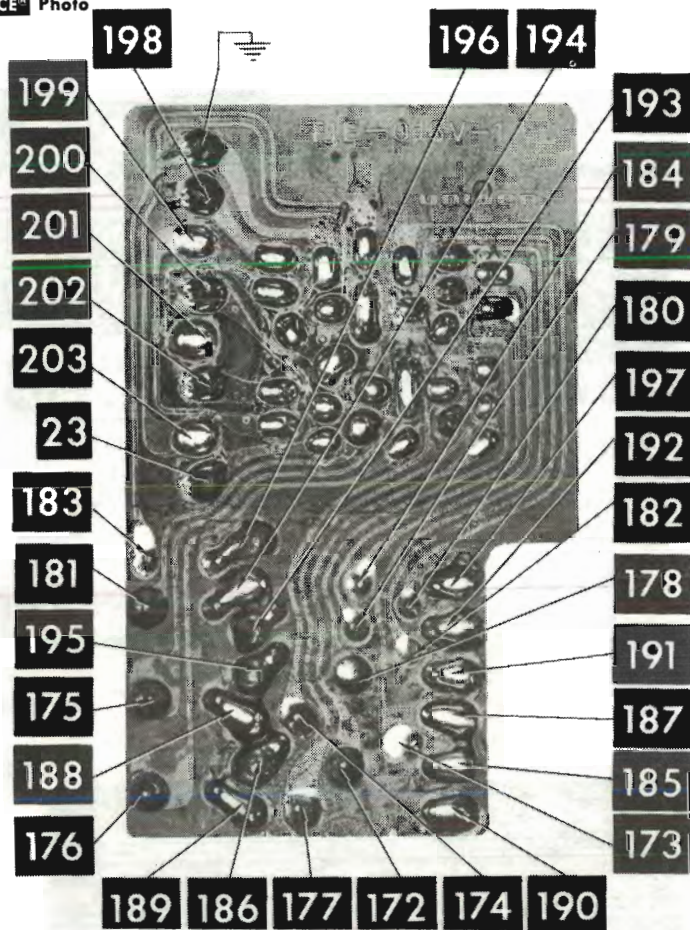
JACK BOARD

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

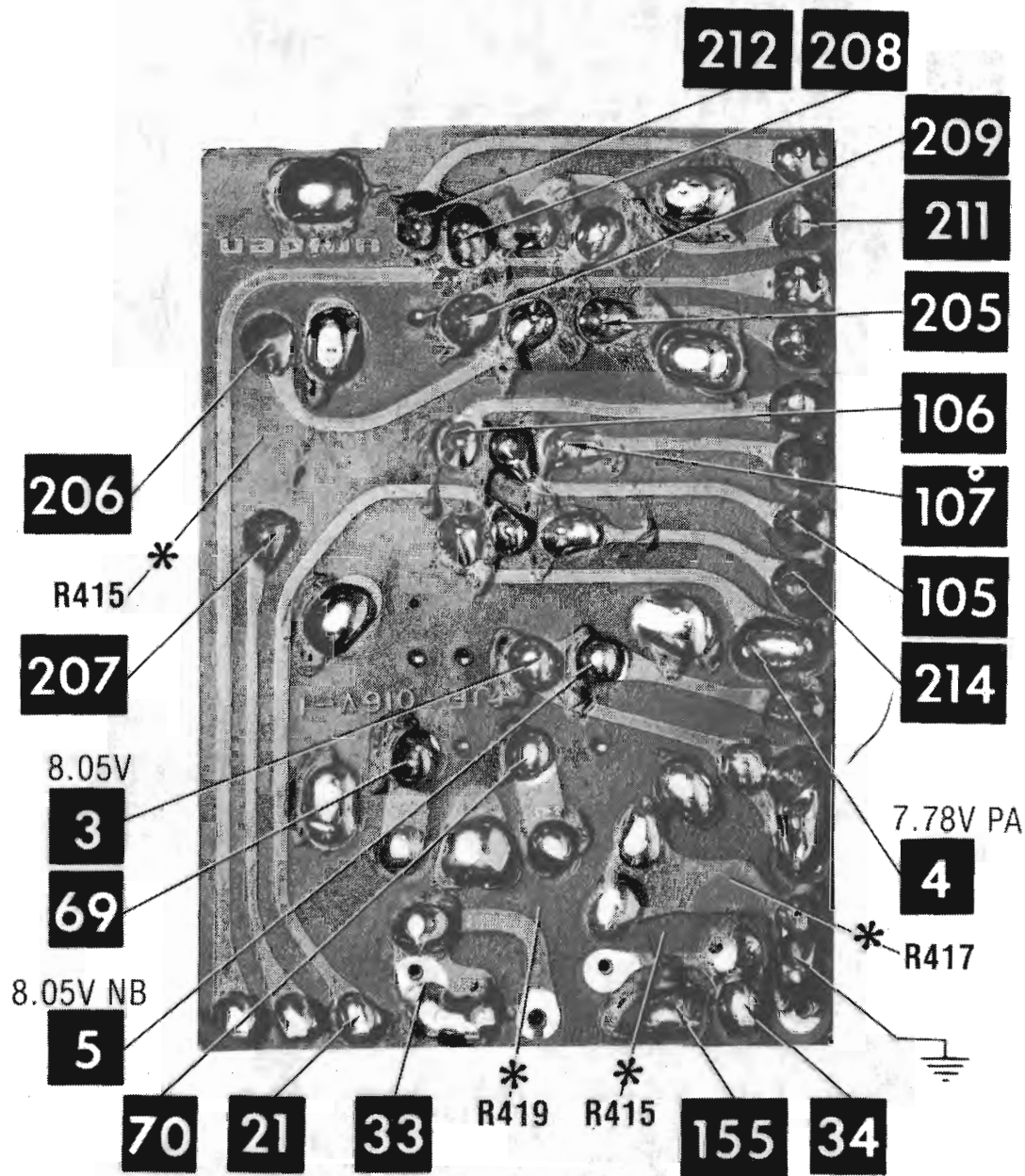


CH. READOUT BOARD (142 GTL)

COBRA MODELS 140GTL/142GTL



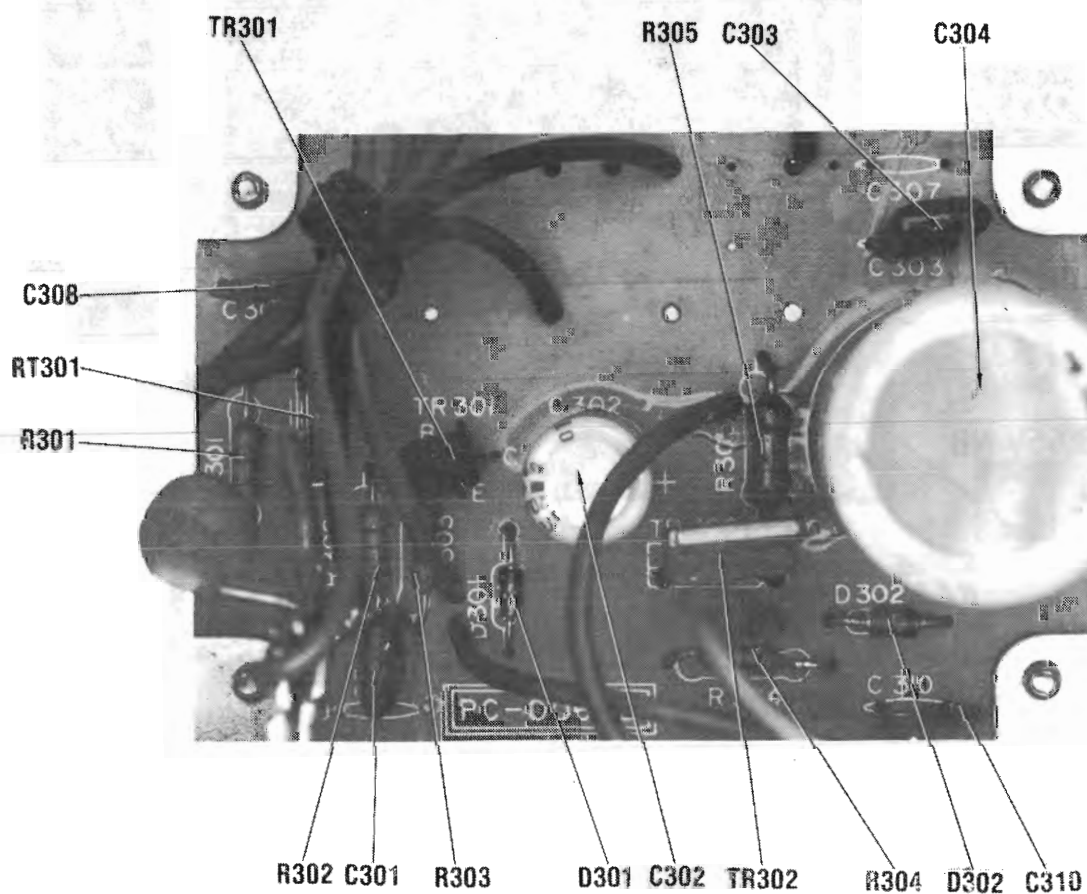
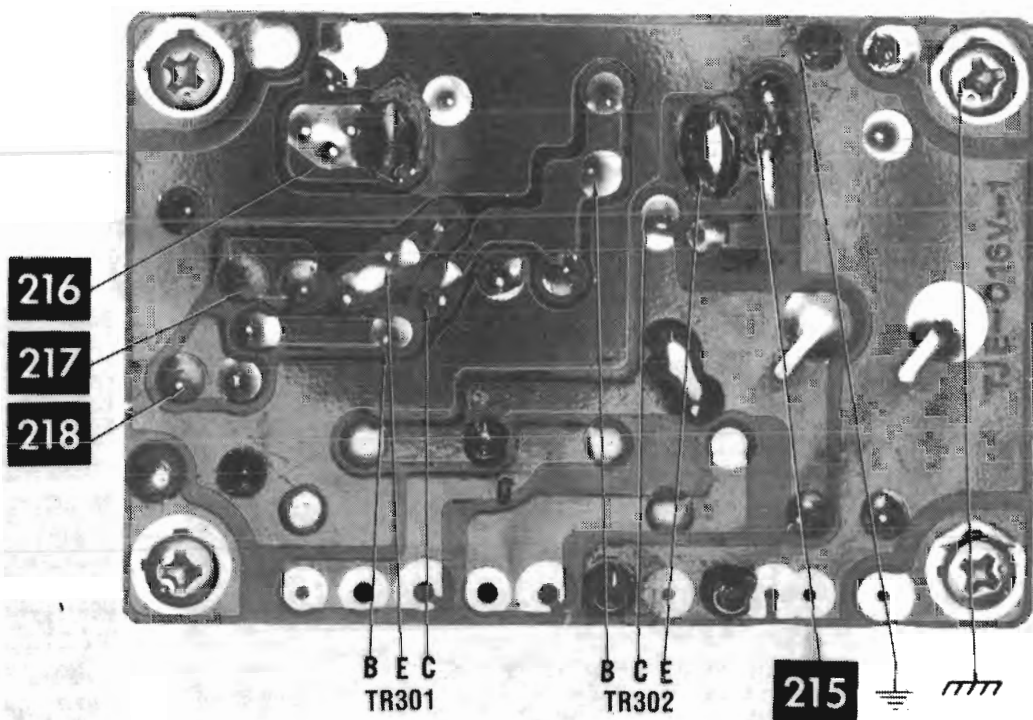
CH. READOUT BOARD (142 GTL)



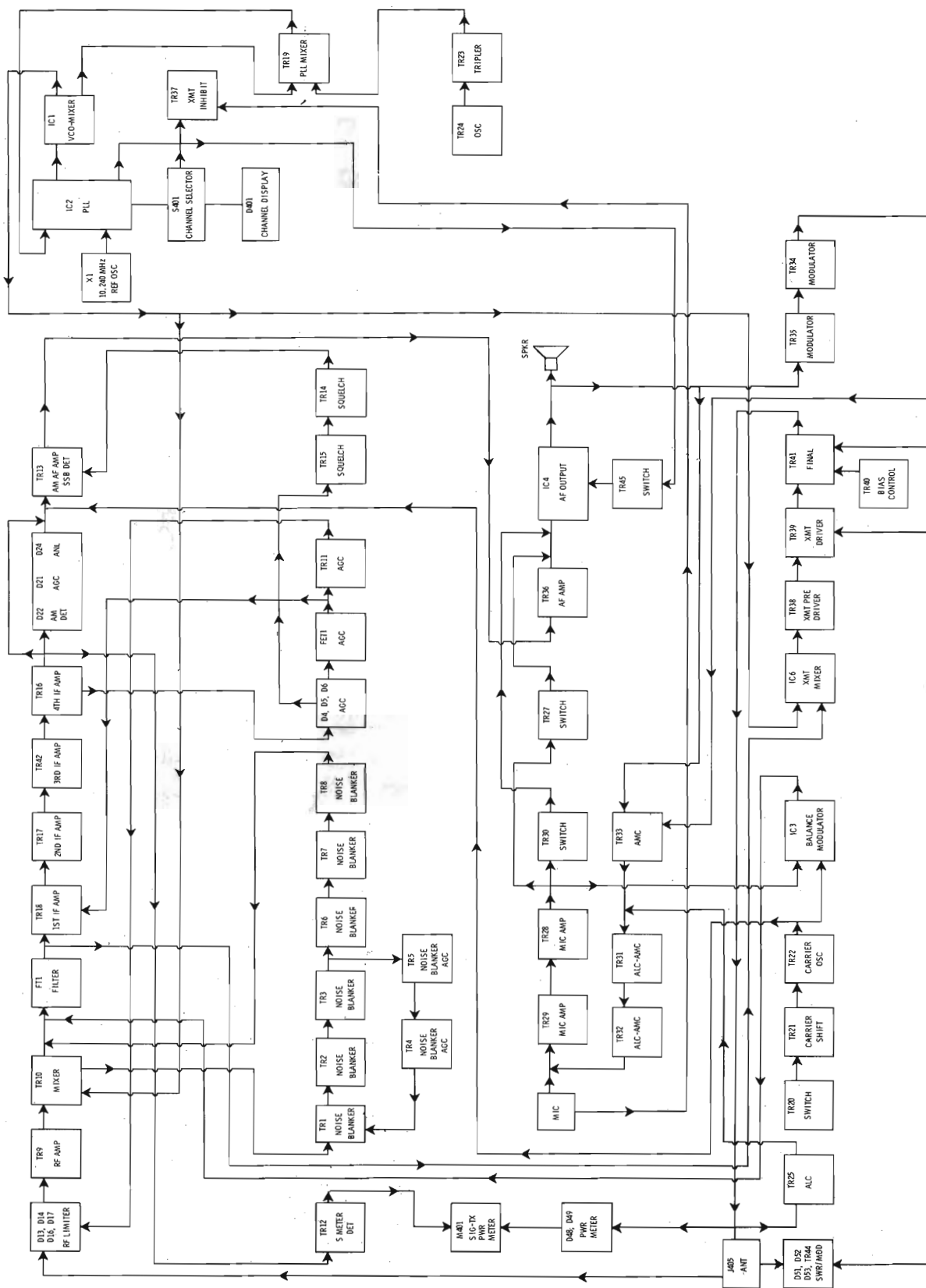
* Located on top of board

COBRA MODELS 140GTL/142GTL

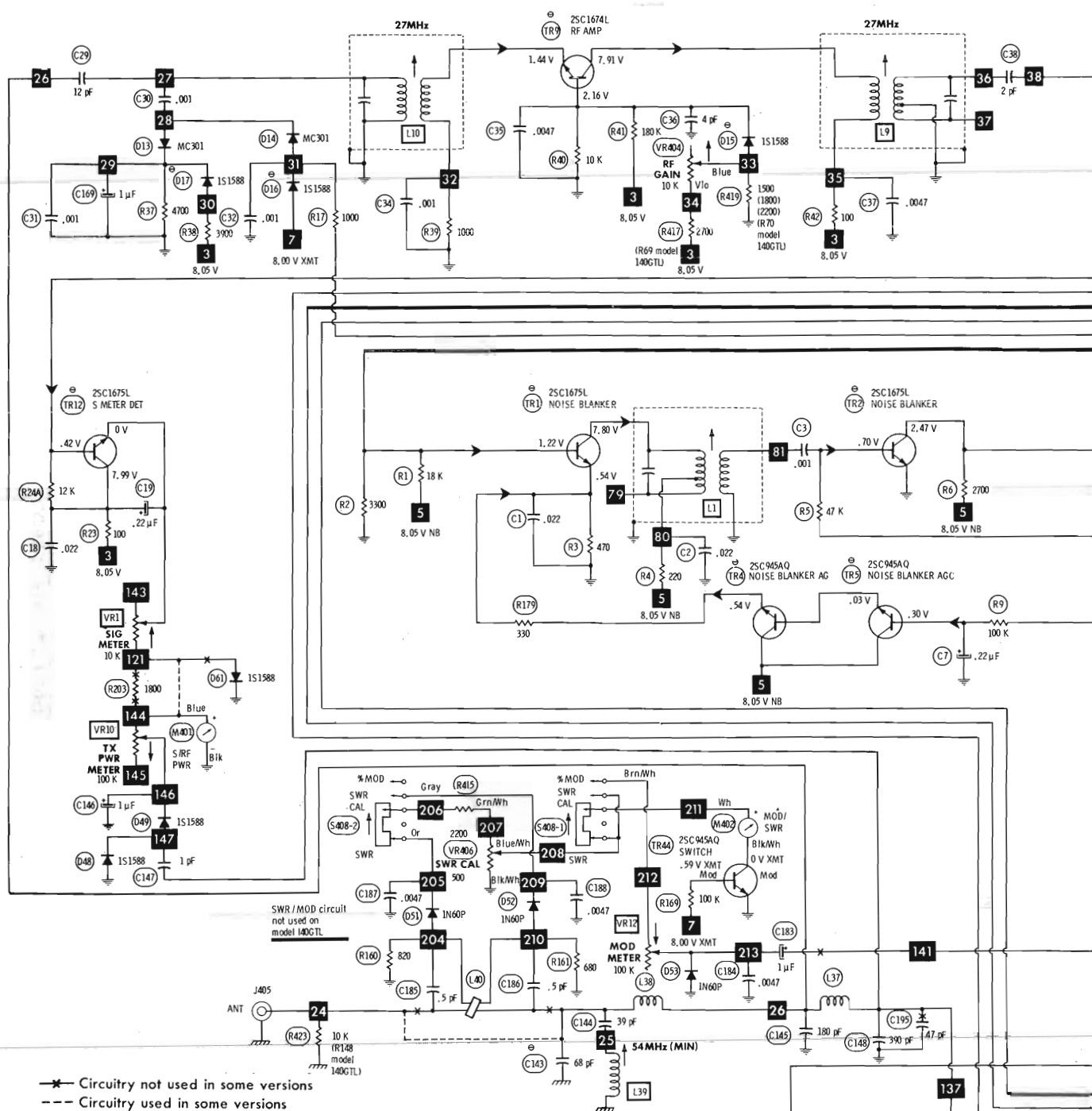
MODE SWITCH BOARD (142 GTL)



AC POWER SUPPLY BOARD (142 GTL)



BLOCK DIAGRAM



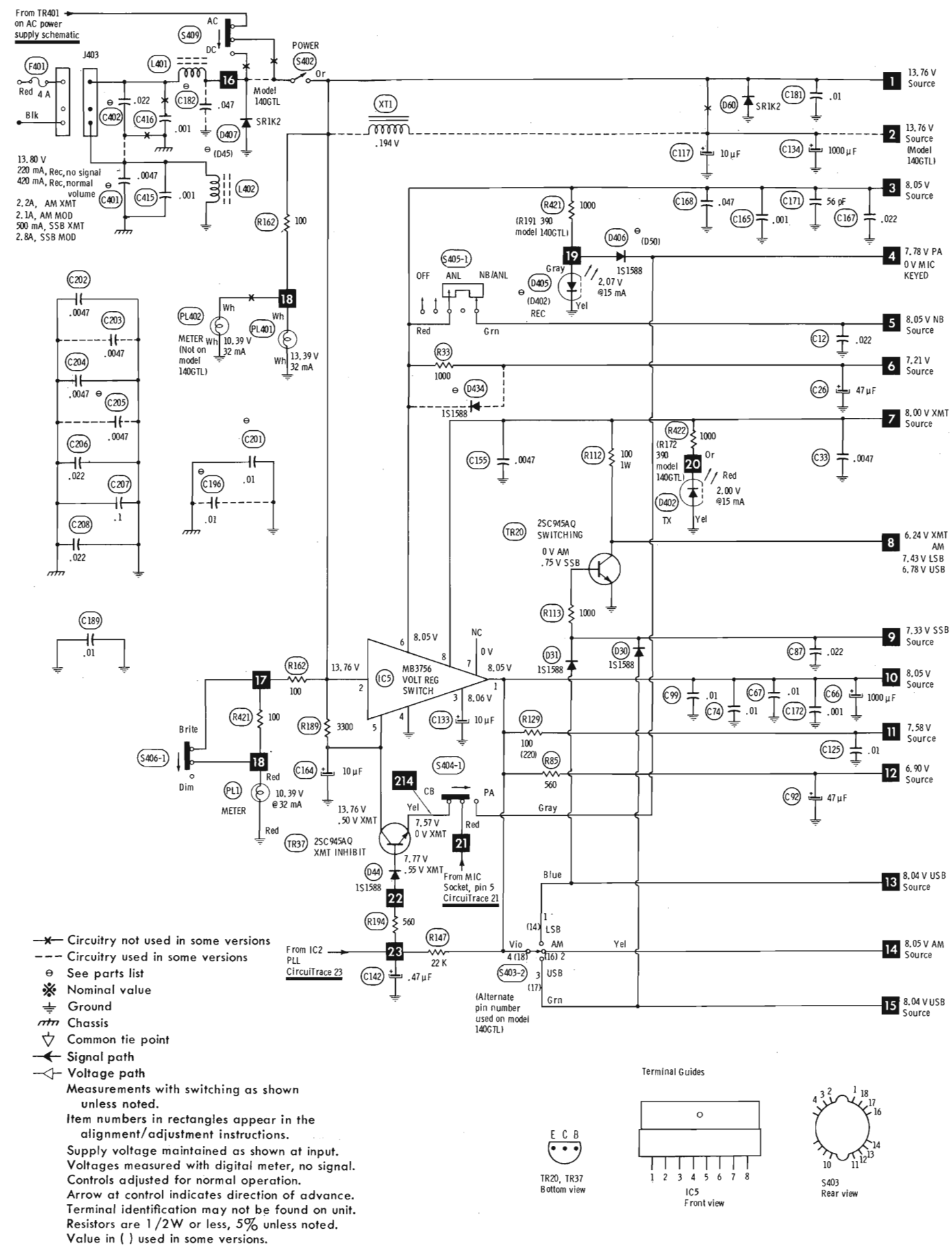
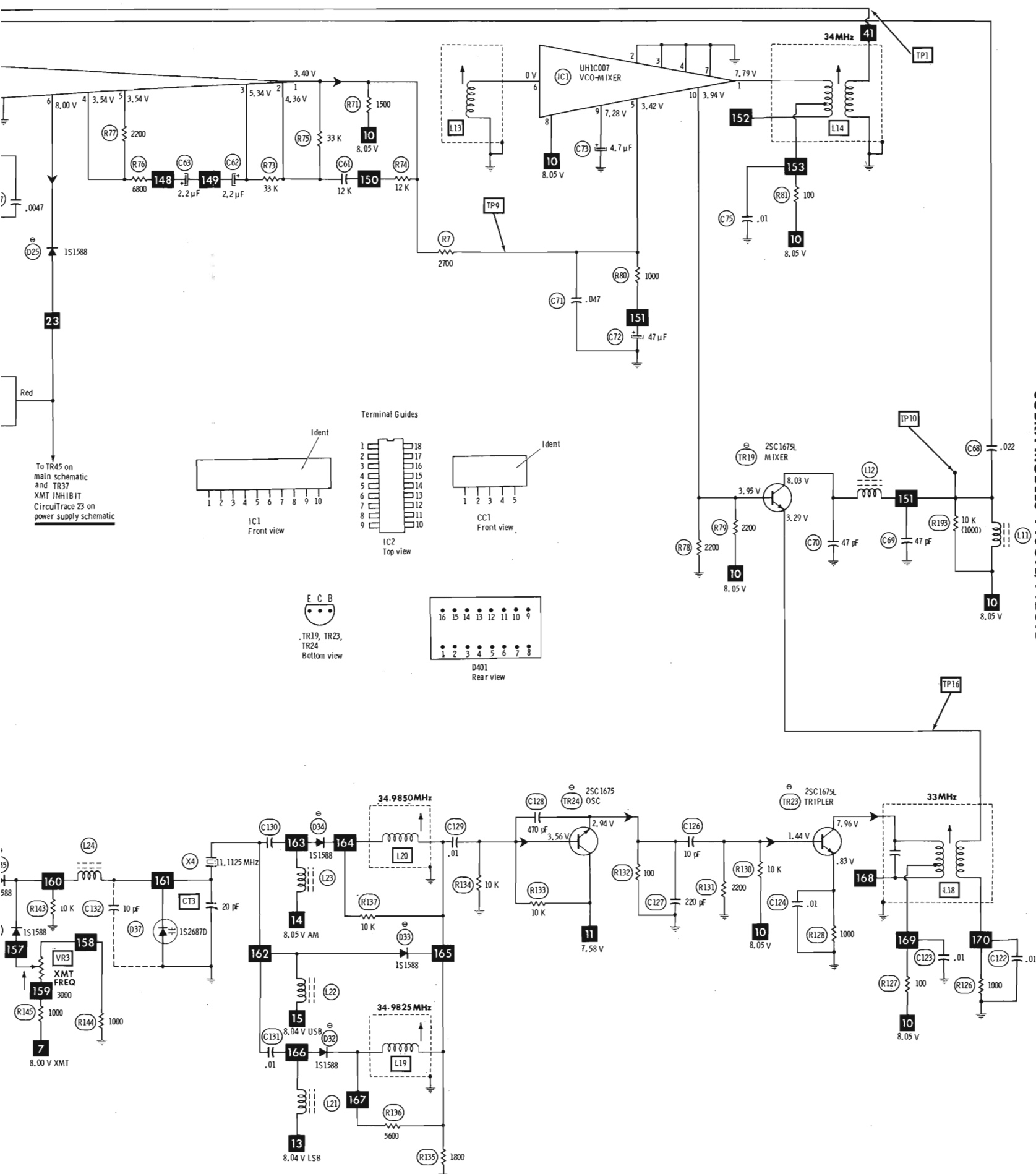
- Circuitry not used in some versions
- - - Circuitry used in some versions
- ⊙ See parts list
- ✱ Nominal value
- ⊥ Ground
- ▭ Chassis
- ▽ Common tie point
- Signal path
- ⤴ Voltage path

Measurements made in Channel 1 with switching as shown unless noted.
Item numbers in rectangles appear in the alignment/adjustment instructions.
Supply voltage maintained as shown at input.
Voltages measured with digital meter, no signal.
Controls adjusted for normal operation.
Arrow at control indicates direction of advance.
Terminal identification may not be found on unit.
Resistors are 1/2W or less, 5% unless noted.
Value in () used in some versions.

A PHOTOFAC STANDARD NOTATION SCHEMATIC
WITH **CIRCUITACE**

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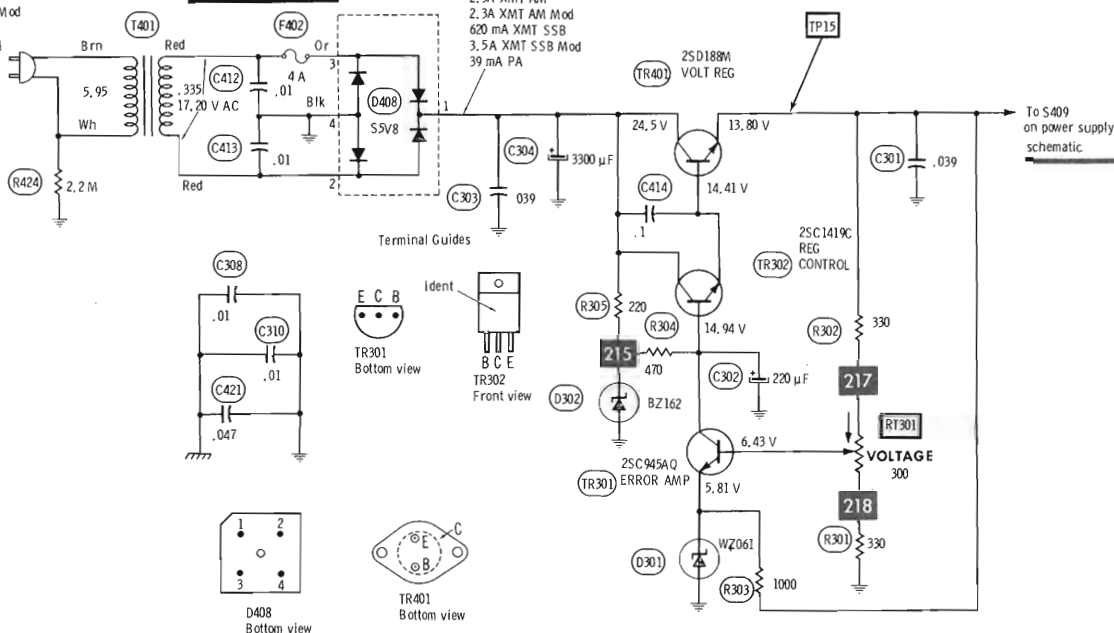


120 V AC

165 mA, Rec, no signal
170 mA, Rec, normal volume
620 mA XMT AM
630 mA XMT AM Mod
250 mA XMT SSB
1A XMT SSB Mod
165 mA PA

Not used on model 140 GTL

380 mA, Rec, no signal
400 mA, Rec, normal volume
2.3A XMT AM
2.3A XMT AM Mod
620 mA XMT SSB
3.5A XMT SSB Mod
39 mA PA



AC POWER SUPPLY

COBRA MODELS 140GTL/142GTL

—*— Circuitry not used in some versions

--- Circuitry used in some versions

⊖ See parts list

* Nominal value

⊥ Ground

Chassis

▽ Common tie point

→ Signal path

↔ Voltage path

Measurements with switching as shown unless noted.

Item numbers in rectangles appear in the alignment/adjustment instructions.

Supply voltage maintained as shown at input.

Voltages measured with digital meter, no signal.

Controls adjusted for normal operation.

Arrow at control indicates direction of advance.

Terminal identification may not be found on unit.

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

Value in () used in some versions.

A PHOTOFACIT STANDARD NOTATION SCHEMATIC

WITH **CIRCUITRACE**

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PARTS LIST AND DESCRIPTION

(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	31AWG	BELDEN No. 9468 (10')
	(9') BELDEN No. 17109	4-conductor (unshielded) 23AWG	BELDEN No. 8415 (6')
		5-conductor (1 shielded) 28AWG	BELDEN No. 9467 (6')
			BELDEN No. 9465 (7-1/2')

SEMICONDUCTORS (Select replacement transistor for best results)

ITEM No.	TYPE No.	MFG. PART No.	REPLACEMENT DATA									
			GENERAL ELECTRIC PART No.	MALLORY PART No.	MOTOROLA PART No.	RAYTHEON PART No.	RCA PART No.	SPRAGUE PART No.	SYLVANIA PART No.	THORDARSON PART No.	WORKMAN PART No.	ZENITH PART No.
D1	1N60	150-001-9-005	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	1N60	WEP134	103-Z9001
D2	1N60	150-001-9-005	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	1N60	WEP134	103-Z9001
D3	1S1588	151-051-9-001	GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S2473		GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S2472		GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S953		GE-300	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG177	1N4148	WEP1062	103-131
D4	1S1588	151-051-9-001	GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S2473		GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S2472		GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S953		GE-300	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG177	1N4148	WEP1062	103-131
D5	1S1588	151-051-9-001	GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S2473		GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S2472		GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S953		GE-300	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG177	1N4148	WEP1062	103-131
D6	1S1588	151-051-9-001	GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S2473		GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S2472		GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S953		GE-300	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG177	1N4148	WEP1062	103-131
D7	1S1588	151-051-9-001	GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S2473		GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S2472		GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S953		GE-300	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG177	1N4148	WEP1062	103-131
D8	1S1588	151-051-9-001	GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S2473		GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S2472		GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S953		GE-300	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG177	1N4148	WEP1062	103-131
D9	1N60	150-001-9-005	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	1N60	WEP134	103-Z9001
D10	1S1588	151-051-9-001	GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S2473		GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S2472		GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S953		GE-300	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG177	1N4148	WEP1062	103-131
D11	1S1588	151-051-9-001	GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S2473		GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S2472		GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S953		GE-300	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG177	1N4148	WEP1062	103-131
D12	1S1588	151-051-9-001	GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S2473		GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S2472		GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S953		GE-300	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG177	1N4148	WEP1062	103-131
D13	MC301	151-072-9-001	GE-300	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG177	1N4148	WEP1062	103-131
	TS2186		GE-300	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG177	1N4148	WEP1062	103-131
	BA243		GE-300	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG177	1N4148	WEP1062	103-131
	BA244		GE-300	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG177	1N4148	WEP1062	103-131
D14	MC301	151-072-9-001	GE-300	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG177	1N4148	WEP1062	103-131
	TS2186		GE-300	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG177	1N4148	WEP1062	103-131
	BA243		GE-300	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG177	1N4148	WEP1062	103-131
	BA244		GE-300	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG177	1N4148	WEP1062	103-131
D15	1S1588	151-051-9-001	GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S2473		GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S2472		GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S953		GE-300	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG177	1N4148	WEP1062	103-131
D16	1S1588	151-051-9-001	GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S2473		GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S2472		GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S953		GE-300	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG177	1N4148	WEP1062	103-131
D17	1S1588	151-051-9-001	GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S2473		GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S2472		GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S953		GE-300	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG177	1N4148	WEP1062	103-131
D18	1S1588	151-051-9-001	GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S2473		GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S2472		GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S953		GE-300	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG177	1N4148	WEP1062	103-131
D19	1S1588	151-051-9-001	GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S2473		GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S2472		GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S953		GE-300	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG177	1N4148	WEP1062	103-131
D20	1S1588	151-051-9-001	GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S2473		GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S2472		GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S953		GE-300	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG177	1N4148	WEP1062	103-131
D21	1N60	150-001-9-005	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	1N60	WEP134	103-Z9001
D22	1N60	150-001-9-005	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	1N60	WEP134	103-Z9001
D23	1S1588	151-051-9-001	GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S2473		GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S2472		GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S953		GE-300	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG177	1N4148	WEP1062	103-131
D24	1S1588	151-051-9-001	GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S2473		GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S2472		GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S953		GE-300	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG177	1N4148	WEP1062	103-131
D25	1S1588	151-051-9-001	GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S2473		GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S2472		GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S953		GE-300	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG177	1N4148	WEP1062	103-131
D26	1S1588	151-051-9-001										

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										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.	WORKMAN PART No.		
D27	1S1588 1S2473 1S2472 1S953	151-051-9-001	GE-514 GE-514 GE-514 GE-300	PTC214 PTC214 PTC214 PTC214	HEPRO602 HEPRO602 HEPRO602 HEPRO602	REN 177 REN 177 REN 177 REN 177	SK3100 SK3100 SK3100 SK3100	RT-218 RT-218 RT-218 RT-218	ECG519 ECG519 ECG519 ECG177	1N4148 1N4148 1N4148 1N4148	WEP925 WEP925 WEP925 WEP1062	103-131	
D28	1S1588 1S2473 1S2472 1S953	151-051-9-001	GE-514 GE-514 GE-514 GE-300	PTC214 PTC214 PTC214 PTC214	HEPRO602 HEPRO602 HEPRO602 HEPRO602	REN 177 REN 177 REN 177 REN 177	SK3100 SK3100 SK3100 SK3100	RT-218 RT-218 RT-218 RT-218	ECG519 ECG519 ECG519 ECG177	1N4148 1N4148 1N4148 1N4148	WEP925 WEP925 WEP925 WEP1062	103-131	
D29	1S1588 1S2473 1S2472 1S953	151-051-9-001	GE-514 GE-514 GE-514 GE-300	PTC214 PTC214 PTC214 PTC214	HEPRO602 HEPRO602 HEPRO602 HEPRO602	REN 177 REN 177 REN 177 REN 177	SK3100 SK3100 SK3100 SK3100	RT-218 RT-218 RT-218 RT-218	ECG519 ECG519 ECG519 ECG177	1N4148 1N4148 1N4148 1N4148	WEP925 WEP925 WEP925 WEP1062	103-131	
D30	1S1588 1S2473 1S2472 1S953	151-051-9-001	GE-514 GE-514 GE-514 GE-300	PTC214 PTC214 PTC214 PTC214	HEPRO602 HEPRO602 HEPRO602 HEPRO602	REN 177 REN 177 REN 177 REN 177	SK3100 SK3100 SK3100 SK3100	RT-218 RT-218 RT-218 RT-218	ECG519 ECG519 ECG519 ECG177	1N4148 1N4148 1N4148 1N4148	WEP925 WEP925 WEP925 WEP1062	103-131	
D31	1S1588 1S2473 1S2472 1S953	151-051-9-001	GE-514 GE-514 GE-514 GE-300	PTC214 PTC214 PTC214 PTC214	HEPRO602 HEPRO602 HEPRO602 HEPRO602	REN 177 REN 177 REN 177 REN 177	SK3100 SK3100 SK3100 SK3100	RT-218 RT-218 RT-218 RT-218	ECG519 ECG519 ECG519 ECG177	1N4148 1N4148 1N4148 1N4148	WEP925 WEP925 WEP925 WEP1062	103-131	
D32	1S1588 1S2473 1S2472 1S953	151-051-9-001	GE-514 GE-514 GE-514 GE-300	PTC214 PTC214 PTC214 PTC214	HEPRO602 HEPRO602 HEPRO602 HEPRO602	REN 177 REN 177 REN 177 REN 177	SK3100 SK3100 SK3100 SK3100	RT-218 RT-218 RT-218 RT-218	ECG519 ECG519 ECG519 ECG177	1N4148 1N4148 1N4148 1N4148	WEP925 WEP925 WEP925 WEP1062	103-131	
D33	1S1588 1S2473 1S2472 1S953	151-051-9-001	GE-514 GE-514 GE-514 GE-300	PTC214 PTC214 PTC214 PTC214	HEPRO602 HEPRO602 HEPRO602 HEPRO602	REN 177 REN 177 REN 177 REN 177	SK3100 SK3100 SK3100 SK3100	RT-218 RT-218 RT-218 RT-218	ECG519 ECG519 ECG519 ECG177	1N4148 1N4148 1N4148 1N4148	WEP925 WEP925 WEP925 WEP1062	103-131	
D34	1S1588 1S2473 1S2472 1S953	151-051-9-001	GE-514 GE-514 GE-514 GE-300	PTC214 PTC214 PTC214 PTC214	HEPRO602 HEPRO602 HEPRO602 HEPRO602	REN 177 REN 177 REN 177 REN 177	SK3100 SK3100 SK3100 SK3100	RT-218 RT-218 RT-218 RT-218	ECG519 ECG519 ECG519 ECG177	1N4148 1N4148 1N4148 1N4148	WEP925 WEP925 WEP925 WEP1062	103-131	
D35	1S1588 1S2473 1S2472 1S953	151-051-9-001	GE-514 GE-514 GE-514 GE-300	PTC214 PTC214 PTC214 PTC214	HEPRO602 HEPRO602 HEPRO602 HEPRO602	REN 177 REN 177 REN 177 REN 177	SK3100 SK3100 SK3100 SK3100	RT-218 RT-218 RT-218 RT-218	ECG519 ECG519 ECG519 ECG177	1N4148 1N4148 1N4148 1N4148	WEP925 WEP925 WEP925 WEP1062	103-131	
D36	1S1588 1S2473 1S2472 1S953	151-051-9-001	GE-514 GE-514 GE-514 GE-300	PTC214 PTC214 PTC214 PTC214	HEPRO602 HEPRO602 HEPRO602 HEPRO602	REN 177 REN 177 REN 177 REN 177	SK3100 SK3100 SK3100 SK3100	RT-218 RT-218 RT-218 RT-218	ECG519 ECG519 ECG519 ECG177	1N4148 1N4148 1N4148 1N4148	WEP925 WEP925 WEP925 WEP1062	103-131	
D37	1S2687D 1S2687 1S2686	153-008-9-001			HEPR2502 HEPR2502 HEPR2502	REN 612 REN 612 REN 612			ECG612 ECG612 ECG612				
D38	1S1588 1S2473 1S2472 1S953	151-051-9-001	GE-514 GE-514 GE-514 GE-300	PTC214 PTC214 PTC214 PTC214	HEPRO602 HEPRO602 HEPRO602 HEPRO602	REN 177 REN 177 REN 177 REN 177	SK3100 SK3100 SK3100 SK3100	RT-218 RT-218 RT-218 RT-218	ECG519 ECG519 ECG519 ECG177	1N4148 1N4148 1N4148 1N4148	WEP925 WEP925 WEP925 WEP1062	103-131	
D39	1S1588 1S2473 1S2472 1S953	151-051-9-001	GE-514 GE-514 GE-514 GE-300	PTC214 PTC214 PTC214 PTC214	HEPRO602 HEPRO602 HEPRO602 HEPRO602	REN 177 REN 177 REN 177 REN 177	SK3100 SK3100 SK3100 SK3100	RT-218 RT-218 RT-218 RT-218	ECG519 ECG519 ECG519 ECG177	1N4148 1N4148 1N4148 1N4148	WEP925 WEP925 WEP925 WEP1062	103-131	
D40	1S1588 1S2473 1S2472 1S953	151-051-9-001	GE-514 GE-514 GE-514 GE-300	PTC214 PTC214 PTC214 PTC214	HEPRO602 HEPRO602 HEPRO602 HEPRO602	REN 177 REN 177 REN 177 REN 177	SK3100 SK3100 SK3100 SK3100	RT-218 RT-218 RT-218 RT-218	ECG519 ECG519 ECG519 ECG177	1N4148 1N4148 1N4148 1N4148	WEP925 WEP925 WEP925 WEP1062	103-131	
D41	1S1588 1S2473 1S2472 1S953	151-051-9-001	GE-514 GE-514 GE-514 GE-300	PTC214 PTC214 PTC214 PTC214	HEPRO602 HEPRO602 HEPRO602 HEPRO602	REN 177 REN 177 REN 177 REN 177	SK3100 SK3100 SK3100 SK3100	RT-218 RT-218 RT-218 RT-218	ECG519 ECG519 ECG519 ECG177	1N4148 1N4148 1N4148 1N4148	WEP925 WEP925 WEP925 WEP1062	103-131	
D42	1N60	150-001-9-005	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	1N60	WEP134	103-29001	
D43	1S1588 1S2473 1S2472 1S953	151-051-9-001	GE-514 GE-514 GE-514 GE-300	PTC214 PTC214 PTC214 PTC214	HEPRO602 HEPRO602 HEPRO602 HEPRO602	REN 177 REN 177 REN 177 REN 177	SK3100 SK3100 SK3100 SK3100	RT-218 RT-218 RT-218 RT-218	ECG519 ECG519 ECG519 ECG177	1N4148 1N4148 1N4148 1N4148	WEP925 WEP925 WEP925 WEP1062	103-131	
D44	1S1588 1S2473 1S2472 1S953	151-051-9-001	GE-514 GE-514 GE-514 GE-300	PTC214 PTC214 PTC214 PTC214	HEPRO602 HEPRO602 HEPRO602 HEPRO602	REN 177 REN 177 REN 177 REN 177	SK3100 SK3100 SK3100 SK3100	RT-218 RT-218 RT-218 RT-218	ECG519 ECG519 ECG519 ECG177	1N4148 1N4148 1N4148 1N4148	WEP925 WEP925 WEP925 WEP1062	103-131	
D45	SR1K2	151-045-9-001	GE-504A	PTC201	HEPRO052	REN 116	SK3030	RT-213	ECG116	1N4004	WEP156	103-131	
D46	MV-1Y	004-175-9-001		PTC301		REN 601	SK3463		ECG601			212-76-02	
D47	MV-13YH	153-011-9-001		PTC302					ECG605				
D48	1S1588 1S2473 1S2472 1S953	151-051-9-001	GE-514 GE-514 GE-514 GE-300	PTC214 PTC214 PTC214 PTC214	HEPRO602 HEPRO602 HEPRO602 HEPRO602	REN 177 REN 177 REN 177 REN 177	SK3100 SK3100 SK3100 SK3100	RT-218 RT-218 RT-218 RT-218	ECG519 ECG519 ECG519 ECG177	1N4148 1N4148 1N4148 1N4148	WEP925 WEP925 WEP925 WEP1062	103-131	
D49	1S1588 1S2473 1S2472 1S953	151-051-9-001	GE-514 GE-514 GE-514 GE-300	PTC214 PTC214 PTC214 PTC214	HEPRO602 HEPRO602 HEPRO602 HEPRO602	REN 177 REN 177 REN 177 REN 177	SK3100 SK3100 SK3100 SK3100	RT-218 RT-218 RT-218 RT-218	ECG519 ECG519 ECG519 ECG177	1N4148 1N4148 1N4148 1N4148	WEP925 WEP925 WEP925 WEP1062	103-131	
D50	1S1588 1S2473 1S2472 1S953	151-051-9-001	GE-514 GE-514 GE-514 GE-300	PTC214 PTC214 PTC214 PTC214	HEPRO602 HEPRO602 HEPRO602 HEPRO602	REN 177 REN 177 REN 177 REN 177	SK3100 SK3100 SK3100 SK3100	RT-218 RT-218 RT-218 RT-218	ECG519 ECG519 ECG519 ECG177	1N4148 1N4148 1N4148 1N4148	WEP925 WEP925 WEP925 WEP1062	103-131	
D51	1N60P		1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	1N60	WEP134	103-29001	
D52	1N60P		1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	1N60	WEP134	103-29001	
D53	1N60P		1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	1N60	WEP134	103-29001	
D60	SR1K-2	151-045-9-001	GE-504A	PTC201	HEPRO052	REN 116	SK3030	RT-213	ECG116	1N4004	WEP156	103-29001	
D61	1S1588	151-051-9-001	GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925		
D62	1S1588	151-051-9-001	GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925		
D301	WZ061		GEZD-6, 2	ZB6, 2B		REN 137	SK3058	RT-237	ECG137A	1N4735A	WEP1154	103-29003	
D302	BZ-162		GEZD-16	ZB16B		REN 5075	SK3142	RT-246	ECG5075A	1N4745A	WEP1160		
D406	1S1588	151-051-9-001	GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925		
D407	SR1K-2	151-045-9-001	GE-504A	PTC201	HEPRO052	REN 116	SK3030	RT-213	ECG116	1N4004	WEP156	212-76-02	
D408	SSV8-10		GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP1044		
D434	1S1588	151-051-9-001	GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925		
IC1	UHC-007	307-143-9-001											
IC2	MB8719	307-128-9-002											
IC3	AN612	307-143-9-002											
IC4	TA7222P	307-143-9-003											
IC5	MB3756	307-133-9-005											
IC6	S042P	307-143-9-004											

COBRA MODELS 140GTL/142GTL

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.
TR1	25C1675L	176-065-9-001	GE-213	PTC132*	HEPS0025*	REN 123A*	SK3246	RT-308	ECG229*		WEP956*	121-29021
	25C1675		GE-213	PTC132*	HEPS0025*	REN 123A*	SK3246	RT-308	ECG229*		WEP956*	121-29021
	25C460		GE-61*	PTC136*	HEPS0014*	REN 107	SK3122	RT-134	ECG107	25C460	WEP460	121-722
	25C839		GE-61*	PTC132*	HEPS0010*	REN 107	SK3246	RT-308	ECG229*	25C839	WEP736*	121-29000*
	25C1674		GE-61	PTC132*	HEPS0010*	REN 107	SK3246	RT-308	ECG229*	25C535	WEP956*	121-29021
TR2	25C1730	176-065-9-001	GE-17*	PTC136*	HEPS0025*	REN 107	SK3018*	RT-107A	ECG316*		WEP535	121-888
	25C1675L		GE-17*	PTC136*	HEPS0025*	REN 107	SK3246	RT-308	ECG229*		WEP956*	121-29021
	25C1675		GE-213	PTC132*	HEPS0025*	REN 123A*	SK3246	RT-308	ECG229*		WEP956*	121-29021
	25C460		GE-61*	PTC136*	HEPS0014*	REN 107	SK3122	RT-134	ECG107	25C460	WEP460	121-722
	25C839		GE-61*	PTC132*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	25C839	WEP736*	121-29000*
TR3	25C1674	176-073-9-001	GE-61	PTC132*	HEPS0010*	REN 107	SK3246	RT-308	ECG229*	25C535	WEP956*	121-29021
	25C1730L		GE-17*	PTC136*	HEPS0025*	REN 107	SK3018*	RT-107A	ECG316*		WEP535	121-888
	25C1730		GE-17*	PTC136*	HEPS0025*	REN 107	SK3018*	RT-107A	ECG316*		WEP535	121-888
	25C1675		GE-213	PTC132*	HEPS0025*	REN 123A*	SK3246	RT-308	ECG229*		WEP956*	121-29021
	25C1674		GE-61	PTC132*	HEPS0010*	REN 107	SK3246	RT-308	ECG229*	25C535	WEP956*	121-29021
TR4	25C945AQ	176-062-9-001	GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	25C945	WEP1945	121-29000
	25C945A		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	25C945	WEP1945	121-29000
	25C458		GE-210*	PTC121*	HEPS0009*	REN 123A*	SK3122	RT-187	ECG289	25C458	WEP458	121-29000*
	25C372		GE-61*	PTC121*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	25C372	WEP372	121-29000*
	25C900		GE-62	PTC139*	HEPS0015*	REN 199	SK3124	RT-302	ECG199	25C900	WEP66	121-2972
TR5	25C828	176-062-9-001	GE-61*	PTC139*	HEPS0015*	REN 199	SK3444	RT-302	ECG199	25C828	WEP828	121-2972
	25C1740		GE-62	PTC121*	HEPS0015*	REN 123A*	SK3122	RT-109*	ECG123A*		WEP736*	121-2972
	25C945AQ		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	25C945	WEP1945	121-29000
	25C945A		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	25C945	WEP1945	121-29000
	25C458		GE-210*	PTC121*	HEPS0009*	REN 123A*	SK3122	RT-187	ECG289	25C458	WEP458	121-29000*
TR6	25C372	176-065-9-001	GE-61*	PTC121*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	25C372	WEP372	121-29000*
	25C900		GE-62	PTC139*	HEPS0015*	REN 199	SK3124	RT-302	ECG199	25C900	WEP66	121-2972
	25C828		GE-61*	PTC139*	HEPS0015*	REN 199	SK3444	RT-302	ECG199	25C828	WEP828	121-2972
	25C1740		GE-62	PTC121*	HEPS0015*	REN 123A*	SK3122	RT-109*	ECG123A*		WEP736*	121-2972
	25C1675L		GE-61	PTC132*	HEPS0025*	REN 107	SK3246	RT-308	ECG229*	25C535	WEP956*	121-29021
TR7	25A733P	177-020-9-001	GE-48	PTC127	HEPS0019*	REN 294	SK3138	RT-303	ECG294	25A733	WEP916	121-933
	25A733		GE-48	PTC127	HEPS0019*	REN 294	SK3138	RT-303	ECG294	25A733	WEP916	121-933
	25A495		GE-221*	PTC103*	HEPS0013*	REN 159*	SK3466	RT-303	ECG159*	25A495	WEP495	121-29003
	25A564		GE-65	PTC103*	HEPS0019*	REN 234	SK3114	RT-303	ECG234	25A564	WEP564	121-879
	25C945AQ		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	25C945	WEP1945	121-29000
TR8	25C945A	176-062-9-001	GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	25C945	WEP1945	121-29000
	25C458		GE-210*	PTC121*	HEPS0009*	REN 123A*	SK3122	RT-187	ECG289	25C458	WEP458	121-29000*
	25C372		GE-61*	PTC121*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	25C372	WEP372	121-29000*
	25C900		GE-62	PTC139*	HEPS0015*	REN 199	SK3124	RT-302	ECG199	25C900	WEP66	121-2972
	25C828		GE-61*	PTC139*	HEPS0015*	REN 199	SK3444	RT-302	ECG199	25C828	WEP828	121-2972
TR9	25C1740	176-081-9-002	GE-62	PTC121*	HEPS0015*	REN 123A*	SK3122	RT-109*	ECG123A*		WEP736*	121-2972
	25C1674L		GE-61	PTC132*	HEPS0010*	REN 107	SK3246	RT-308	ECG229*	25C535	WEP956*	121-29021
	25C1674		GE-61	PTC132*	HEPS0010*	REN 107	SK3246	RT-308	ECG229*	25C535	WEP956*	121-29021
	25C1730		GE-17*	PTC136*	HEPS0025*	REN 107	SK3018*	RT-107A	ECG316*		WEP535	121-888
	25C1856		GE-86	PTC121	HEPS0010	REN 108	SK3018	RT-107	ECG108		WEP56	121-522
TR10	25C710	176-065-9-001	GE-211*	PTC132	HEPS0016*	REN 123A*	SK3444	RT-308*	ECG123A*	25C710	WEP710	121-29000*
	25C1675L		GE-213	PTC132*	HEPS0025*	REN 123A*	SK3246	RT-308	ECG229*		WEP956*	121-29021
	25C1675		GE-213	PTC132*	HEPS0025*	REN 123A*	SK3246	RT-308	ECG229*		WEP956*	121-29021
	25C460		GE-61*	PTC136*	HEPS0014*	REN 107	SK3122	RT-134	ECG107	25C460	WEP460	121-722
	25C839		GE-61*	PTC132*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	25C839	WEP736*	121-29000*
TR11	25C1674	176-062-9-001	GE-61	PTC132*	HEPS0010*	REN 107	SK3246	RT-308	ECG229*	25C535	WEP956*	121-29021
	25C1730		GE-17*	PTC136*	HEPS0025*	REN 107	SK3018*	RT-107A	ECG316*		WEP535	121-888
	25C945AQ		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	25C945	WEP1945	121-29000
	25C945		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	25C945	WEP1945	121-29000
	25C458		GE-210*	PTC121*	HEPS0009*	REN 123A*	SK3122	RT-187	ECG289	25C458	WEP458	121-29000*
TR12	25C372	176-065-9-001	GE-61*	PTC121*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	25C372	WEP372	121-29000*
	25C900		GE-62	PTC139*	HEPS0015*	REN 199	SK3124	RT-302	ECG199	25C900	WEP66	121-2972
	25C828		GE-61*	PTC139*	HEPS0015*	REN 199	SK3444	RT-302	ECG199	25C828	WEP828	121-2972
	25C1740		GE-62	PTC121*	HEPS0015*	REN 123A*	SK3122	RT-109*	ECG123A*		WEP736*	121-2972
	25C1675L		GE-213	PTC132*	HEPS0025*	REN 123A*	SK3246	RT-308	ECG229*		WEP956*	121-29021
TR13	25C1675	176-062-9-001	GE-213	PTC132*	HEPS0025*	REN 123A*	SK3246	RT-308	ECG229*		WEP956*	121-29021
	25C460		GE-61*	PTC136*	HEPS0014*	REN 107	SK3122	RT-134	ECG107	25C460	WEP460	121-722
	25C839		GE-61*	PTC132*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	25C839	WEP736*	121-29000*
	25C1674		GE-61	PTC132*	HEPS0010*	REN 107	SK3246	RT-308	ECG229*	25C535	WEP956*	121-29021
	25C1730		GE-17*	PTC136*	HEPS0025*	REN 107	SK3018*	RT-107A	ECG316*		WEP535	121-888
TR14	25C945AQ	176-062-9-001	GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	25C945	WEP1945	121-29000
	25C945A		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	25C945	WEP1945	121-29000
	25C458		GE-210*	PTC121*	HEPS0009*	REN 123A*	SK3122	RT-187	ECG289	25C458	WEP458	121-29000*
	25C372		GE-61*	PTC121*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	25C372	WEP372	121-29000*
	25C900		GE-62	PTC139*	HEPS0015*	REN 199	SK3124	RT-302	ECG199	25C900	WEP66	121-2972
TR15	25C828	176-062-9-001	GE-61*	PTC139*	HEPS0015*	REN 199	SK3444	RT-302	ECG199	25C828	WEP828	121-2972
	25C1740		GE-62	PTC121*	HEPS0015*	REN 123A*	SK3122	RT-109*	ECG123A*		WEP736*	121-2972
	25C945AQ		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	25C945	WEP1945	121-29000
	25C945A		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	25C945	WEP1945	121-29000
	25C458		GE-210*	PTC121*	HEPS0009*	REN 123A*	SK3122	RT-187	ECG289	25C458	WEP458	121-29000*
TR16	25C372	176-073-9-001	GE-61*	PTC121*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	25C372	WEP372	121-29000*
	25C900		GE-62	PTC139*	HEPS0015*	REN 199	SK3124	RT-302	ECG199	25C900	WEP66	121-2972
	25C828		GE-61*	PTC139*	HEPS0015*	REN 199	SK3444	RT-302	ECG199	25C828	WEP828	121-2972
	25C1740		GE-62	PTC121*	HEPS0015*	REN 123A*	SK3122	RT-109*	ECG123A*		WEP736*	121-2972
	25C1730L		GE-17*	PTC136*	HEPS0025*	REN 107	SK3018*	RT-107A	ECG316*		WEP535	121-888
TR17	25C1730	176-065-9-001	GE-17*	PTC136*	HEPS0025*	REN 107	SK3018*	RT-107A	ECG316*		WEP535	121-888
	25C1675		GE-213	PTC132*	HEPS0025*	REN 123A*	SK3246	RT-308	ECG229*	25C535	WEP956*	121-29021
	25C1674		GE-61	PTC132*	HEPS0010*	REN 107	SK3246	RT-308	ECG229*	25C535	WEP956*	121-29021
	25C460		GE-61*	PTC136*	HEPS0014*	REN 107	SK3122	RT-134	ECG107	25C460	WEP460	121-722
	25C839		GE-61*	PTC132*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	25C839	WEP736*	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.
TR18	2SC1674L	176-081-9-002	GE-61	PTC132*	HEPS0010*	REN 107	SK3246	RT-308	ECG229*	2SC535	WEP956*	121-Z9021
	2SC1674		GE-61	PTC132*	HEPS0010*	REN 107	SK3246	RT-308	ECG229*	2SC535	WEP956*	121-Z9021
	2SC1342		GE-61*	PTC132	HEPS0014*	REN 229*	SK3018*	RT-108A*	ECG229*		WEP956*	121-Z9021
	2SC1675		GE-213	PTC132*	HEPS0025*	REN 123A*	SK3246	RT-308	ECG229*		WEP956*	121-Z9021
	2SC930		GE-60*	PTC132*	HEPS0016*	REN 229	SK3018	RT-308	ECG229*	2SC930	WEP956*	121-Z9021*
TR19	2SC1675L	176-065-9-001	GE-213	PTC132*	HEPS0025*	REN 123A*	SK3246	RT-308	ECG229*	2SC930	WEP956*	121-Z9021*
	2SC1675		GE-213	PTC132*	HEPS0025*	REN 123A*	SK3246	RT-308	ECG229*		WEP956*	121-Z9021
	2SC460		GE-61*	PTC136*	HEPS0014*	REN 107	SK3122	RT-134	ECG107	2SC460	WEP460	121-722
	2SC839		GE-61*	PTC132*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	2SC839	WEP736*	121-Z9000*
	2SC1674		GE-61	PTC132*	HEPS0010*	REN 107	SK3246	RT-308	ECG229*	2SC535	WEP956*	121-Z9021
TR20	2SC1730	176-062-9-001	GE-17*	PTC136*	HEPS0025*	REN 107	SK3018*	RT-107A	ECG316*		WEP535	121-888
	2SC945AQ		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	2SC945	WEP1945	121-Z9000
	2SC945A		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	2SC945	WEP1945	121-Z9000
	2SC458		GE-210*	PTC121*	HEPS0009*	REN 123A*	SK3122	RT-187	ECG289	2SC458	WEP458	121-Z9000*
	2SC372		GE-61*	PTC121*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	2SC372	WEP372	121-Z9000*
TR21	2SC900	176-065-9-001	GE-62	PTC139*	HEPS0015*	REN 199	SK3124	RT-302	ECG199	2SC900	WEP66	121-972
	2SC828		GE-61*	PTC139*	HEPS0015*	REN 199	SK3444	RT-302	ECG199	2SC828	WEP828	121-972
	2SC1740		GE-62	PTC121*	HEPS0015*	REN 123A*	SK3122	RT-109*	ECG123A*		WEP736*	121-972
	2SC1675L		GE-213	PTC132*	HEPS0025*	REN 123A*	SK3246	RT-308	ECG229*		WEP956*	121-Z9021
	2SC1675		GE-213	PTC132*	HEPS0025*	REN 123A*	SK3246	RT-308	ECG229*		WEP956*	121-Z9021
TR22	2SC460	176-065-9-001	GE-61*	PTC136*	HEPS0014*	REN 107	SK3122	RT-134	ECG107	2SC460	WEP460	121-722
	2SC839		GE-61*	PTC132*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	2SC839	WEP736*	121-Z9000*
	2SC1674		GE-61	PTC132*	HEPS0010*	REN 107	SK3246	RT-308	ECG229*	2SC535	WEP956*	121-Z9021
	2SC1730		GE-17*	PTC136*	HEPS0025*	REN 107	SK3018*	RT-107A	ECG316*		WEP535	121-888
	2SC1675L		GE-213	PTC132*	HEPS0025*	REN 123A*	SK3246	RT-308	ECG229*		WEP956*	121-Z9021
TR23	2SC1675	176-065-9-001	GE-213	PTC132*	HEPS0025*	REN 123A*	SK3246	RT-308	ECG229*		WEP956*	121-Z9021
	2SC1675		GE-213	PTC132*	HEPS0025*	REN 123A*	SK3246	RT-308	ECG229*		WEP956*	121-Z9021
	2SC460		GE-61*	PTC136*	HEPS0014*	REN 107	SK3122	RT-134	ECG107	2SC460	WEP460	121-722
	2SC839		GE-61*	PTC132*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	2SC839	WEP736*	121-Z9000*
	2SC1674		GE-61	PTC132*	HEPS0010*	REN 107	SK3246	RT-308	ECG229*	2SC535	WEP956*	121-Z9021
TR24	2SC1730	176-065-9-001	GE-17*	PTC136*	HEPS0025*	REN 107	SK3018*	RT-107A	ECG316*		WEP535	121-888
	2SC1675L		GE-213	PTC132*	HEPS0025*	REN 123A*	SK3246	RT-308	ECG229*		WEP956*	121-Z9021
	2SC1675		GE-213	PTC132*	HEPS0025*	REN 123A*	SK3246	RT-308	ECG229*		WEP956*	121-Z9021
	2SC460		GE-61*	PTC136*	HEPS0014*	REN 107	SK3122	RT-134	ECG107	2SC460	WEP460	121-722
	2SC839		GE-61*	PTC132*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	2SC839	WEP736*	121-Z9000*
TR25	2SC1674	176-065-9-001	GE-61	PTC132*	HEPS0010*	REN 107	SK3246	RT-308	ECG229*	2SC535	WEP956*	121-Z9021
	2SC1730		GE-17*	PTC136*	HEPS0025*	REN 107	SK3018*	RT-107A	ECG316*		WEP535	121-888
	2SC1675L		GE-213	PTC132*	HEPS0025*	REN 123A*	SK3246	RT-308	ECG229*		WEP956*	121-Z9021
	2SC1675		GE-213	PTC132*	HEPS0025*	REN 123A*	SK3246	RT-308	ECG229*		WEP956*	121-Z9021
	2SC460		GE-61*	PTC136*	HEPS0014*	REN 107	SK3122	RT-134	ECG107	2SC460	WEP460	121-722
TR27	2SC839	176-062-9-001	GE-61*	PTC132*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	2SC839	WEP736*	121-Z9000*
	2SC1674		GE-61	PTC132*	HEPS0010*	REN 107	SK3246	RT-308	ECG229*	2SC535	WEP956*	121-Z9021
	2SC945AQ		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	2SC945	WEP1945	121-Z9000
	2SC945A		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	2SC945	WEP1945	121-Z9000
	2SC458		GE-210*	PTC121*	HEPS0009*	REN 123A*	SK3122	RT-187	ECG289	2SC458	WEP458	121-Z9000*
TR28	2SC372	176-062-9-001	GE-61*	PTC121*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	2SC372	WEP372	121-Z9000*
	2SC900		GE-62	PTC139*	HEPS0015*	REN 199	SK3124	RT-302	ECG199	2SC900	WEP66	121-972
	2SC828		GE-61*	PTC139*	HEPS0015*	REN 199	SK3444	RT-302	ECG199	2SC828	WEP828	121-972
	2SC1740		GE-62	PTC121*	HEPS0015*	REN 123A*	SK3122	RT-109*	ECG123A*		WEP736*	121-972
	2SC945AQ		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	2SC945	WEP1945	121-Z9000
TR29	2SC945A	176-062-9-001	GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	2SC945	WEP1945	121-Z9000
	2SC458		GE-210*	PTC121*	HEPS0009*	REN 123A*	SK3122	RT-187	ECG289	2SC458	WEP458	121-Z9000*
	2SC372		GE-61*	PTC121*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	2SC372	WEP372	121-Z9000*
	2SC900		GE-62	PTC139*	HEPS0015*	REN 199	SK3124	RT-302	ECG199	2SC900	WEP66	121-972
	2SC828		GE-61*	PTC139*	HEPS0015*	REN 199	SK3444	RT-302	ECG199	2SC828	WEP828	121-972
TR30	2SC1740	177-020-9-001	GE-62	PTC121*	HEPS0015*	REN 123A*	SK3122	RT-109*	ECG123A*		WEP736*	121-972
	2SA733P		GE-48	PTC127	HEPS0019*	REN 294	SK3138	RT-303	ECG294	2SA733	WEP916	121-933
	2SA733		GE-48	PTC127	HEPS0019*	REN 294	SK3138	RT-303	ECG294	2SA733	WEP916	121-933
	2SA495		GE-221*	PTC103*	HEPS0013*	REN 159*	SK3466	RT-303	ECG159*	2SA495	WEP495	121-Z9003
	2SA564		GE-65	PTC103*	HEPS0019*	REN 234	SK3114	RT-303	ECG234	2SA564	WEP564	121-879
TR31	2SA733P	177-020-9-001	GE-48	PTC127	HEPS0019*	REN 294	SK3138	RT-303	ECG294	2SA733	WEP916	121-933
	2SA733		GE-48	PTC127	HEPS0019*	REN 294	SK3138	RT-303	ECG294	2SA733	WEP916	121-933
	2SA495		GE-221*	PTC103*	HEPS0013*	REN 159*	SK3466	RT-303	ECG159*	2SA495	WEP495	121-Z9003
	2SA564		GE-65	PTC103*	HEPS0019*	REN 234	SK3114	RT-303	ECG234	2SA564	WEP564	121-879
	2SC945AQ		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	2SC945	WEP1945	121-Z9000
TR32	2SC945A	176-062-9-001	GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	2SC945	WEP1945	121-Z9000
	2SC458		GE-210*	PTC121*	HEPS0009*	REN 123A*	SK3122	RT-187	ECG289	2SC458	WEP458	121-Z9000*
	2SC372		GE-61*	PTC121*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	2SC372	WEP372	121-Z9000*
	2SC900		GE-62	PTC139*	HEPS0015*	REN 199	SK3124	RT-302	ECG199	2SC900	WEP66	121-972
	2SC828		GE-61*	PTC139*	HEPS0015*	REN 199	SK3444	RT-302	ECG199	2SC828	WEP828	121-972
TR33	2SC1740	176-062-9-001	GE-62	PTC121*	HEPS0015*	REN 123A*	SK3122	RT-109*	ECG123A*		WEP736*	121-972
	2SC945AQ		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	2SC945	WEP1945	121-Z9000
	2SC945A		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	2SC945	WEP1945	121-Z9000
	2SC458		GE-210*	PTC121*	HEPS0009*	REN 123A*	SK3122	RT-187	ECG289	2SC458	WEP458	121-Z9000*
	2SC372		GE-61*	PTC121*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	2SC372	WEP372	121-Z9000*
TR34	2SC900	176-062-9-001	GE-62	PTC139*	HEPS0015*	REN 199	SK3124	RT-302	ECG199	2SC900	WEP66	121-972
	2SC828		GE-61*	PTC139*	HEPS0015*	REN 199	SK3444	RT-302	ECG199	2SC828	WEP828	121-972
	2SC1740		GE-62	PTC121*	HEPS0015*	REN 123A*	SK3122	RT-109*	ECG123A*		WEP736*	121-972
	2SC945AQ		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	2SC945	WEP1945	121-Z9000
	2SC945A		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	2SC945	WEP1945	121-Z9000
TR35	2SC458	176-062-9-001	GE-210*	PTC121*	HEPS0009*	REN 123A*	SK3122	RT-187	ECG289	2SC458	WEP458	121-Z9000*
	2SC372		GE-61*	PTC121*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	2SC372	WEP372	121-Z9000*
	2SC900		GE-62	PTC139*	HEPS0015*	REN 199	SK3124	RT-302	ECG199	2SC900	WEP66	121-972
	2SC828		GE-61*	PTC139*	HEPS0015*	REN 199	SK3444	RT-302	ECG199	2SC828	WEP828	121-972
	2SC1740		GE-62	PTC121*	HEPS0015*	REN 123A*	SK3122	RT-109*	ECG123A*		WEP736*	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 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.
TR36	2SC458C	176-048-9-002	GE-210*	PTC121*	HEPS0009*	REN 123A*	SK3122	RT-187	ECG289	2SC458	WEP458	121-29000*
	2SC458		GE-210*	PTC121*	HEPS0009*	REN 123A*	SK3122	RT-187	ECG289	2SC458	WEP458	121-29000*
	2SC945		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	2SC945	WEP1945	121-29000
	2SC900		GE-62	PTC139*	HEPS0015*	REN 199	SK3124	RT-302	ECG199	2SC900	WEP66	121-972
	2SC828		GE-61*	PTC139*	HEPS0015*	REN 199	SK3444	RT-302	ECG199	2SC828	WEP828	121-972
TR37	2SC1740	176-062-9-001	GE-61*	PTC121*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	2SC372	WEP372	121-29000*
	2SC945AQ		GE-62	PTC121*	HEPS0015*	REN 123A*	SK3122	RT-109*	ECG123A*	2SC945	WEP376*	121-972
	2SC945A		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	2SC945	WEP1945	121-29000
	2SC458		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	2SC458	WEP1945	121-29000
	2SC372		GE-210*	PTC121*	HEPS0009*	REN 123A*	SK3122	RT-187	ECG289	2SC372	WEP372	121-29000*
TR38	2SC900	176-073-9-003	GE-61*	PTC121*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	2SC900	WEP66	121-972
	2SC828		GE-62	PTC139*	HEPS0015*	REN 199	SK3124	RT-302	ECG199	2SC828	WEP828	121-972
	2SC1740		GE-62	PTC121*	HEPS0015*	REN 123A*	SK3122	RT-109*	ECG123A*	2SC1740	WEP376*	121-972
	2SC1973		GE-335	PTC186	HEPS0009*	REN 235	SK3197	RT-146	ECG235	2SC1973	WEP922	121-29039
	2SC1306		GE-329	PTC186	HEPS0009*	REN 235	SK3197	RT-146	ECG235	2SC1306	WEP785	121-29039
TR39	2SC2020	176-024-9-002	GE-329	PTC186	HEPS0009*	REN 235	SK3197	RT-146	ECG235	2SC2020	WEP785	121-29039
	2SC2184		GE-215	PTC186	HEPS0009*	REN 235	SK3197	RT-146	ECG235	2SC2184	WEP785	121-29039
	2SC2166		GE-57	PTC163	HEPS5000	REN 295	SK3253	RT-162	ECG295	2SC2166	WEP880	121-29039
	2SC496-0		GE-57	PTC163	HEPS5000	REN 295	SK3253	RT-162	ECG295	2SC496	WEP880	121-29039
	2SC496		GE-336	PTC904	HEPS5000	REN 295	SK3253	RT-162	ECG295	2SC496	WEP880	121-29039
TR40	2SC1846	176-087-9-001	GE-268	PTC144*	HEPS3001*	REN 289	SK3124	RT-114*	ECG289	2SC1846	WEP913	800-767
	2SD471		GE-268	PTC144*	HEPS3001*	REN 289	SK3124	RT-114*	ECG289	2SD471	WEP910	121-1014
	2SC2236		GE-216	PTC186	HEPS3001*	REN 289	SK3124	RT-114*	ECG289	2SC2236	WEP910	121-1014
	2SC1969		GE-216	PTC186	HEPS3001*	REN 289	SK3124	RT-114*	ECG289	2SC1969	WEP910	121-1014
	2SC1969B		GE-216	PTC186	HEPS3001*	REN 289	SK3124	RT-114*	ECG289	2SC1969B	WEP910	121-1014
TR41	2SC1307	176-087-9-002	GE-332	PTC186	HEPS3001*	REN 289	SK3124	RT-114*	ECG289	2SC1307	WEP910	121-1014
	2SC1817		GE-332	PTC186	HEPS3001*	REN 289	SK3124	RT-114*	ECG289	2SC1817	WEP910	121-1014
	2SC2043		GE-332	PTC186	HEPS3001*	REN 289	SK3124	RT-114*	ECG289	2SC2043	WEP910	121-1014
	2SC2195		GE-213	PTC132*	HEPS0025*	REN 123A*	SK3246	RT-308	ECG229*	2SC2195	WEP956*	121-29021
	2SC1675L		GE-213	PTC132*	HEPS0025*	REN 123A*	SK3246	RT-308	ECG229*	2SC1675L	WEP956*	121-29021
TR42	2SC1675	176-065-9-001	GE-61*	PTC136*	HEPS0014*	REN 107	SK3122	RT-134	ECG107	2SC1675	WEP460	121-722
	2SC460		GE-61*	PTC136*	HEPS0014*	REN 107	SK3122	RT-134	ECG107	2SC460	WEP460	121-722
	2SC839		GE-61*	PTC136*	HEPS0014*	REN 107	SK3122	RT-134	ECG107	2SC839	WEP376*	121-29000*
	2SC1674		GE-61	PTC132*	HEPS0010*	REN 107	SK3246	RT-308	ECG229*	2SC1674	WEP956*	121-29021
	2SC1730		GE-17*	PTC136*	HEPS0025*	REN 107	SK3018*	RT-107A	ECG316*	2SC1730	WEP535	121-888
TR44	2SC945AQ	176-062-9-001	GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	2SC945AQ	WEP1945	121-29000
	2SC945A		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	2SC945A	WEP1945	121-29000
	2SA733P		GE-48	PTC127	HEPS0019*	REN 294	SK3138	RT-303	ECG294	2SA733P	WEP916	121-933
	2SA733		GE-48	PTC127	HEPS0019*	REN 294	SK3138	RT-303	ECG294	2SA733	WEP916	121-933
	2SC945AQ		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	2SC945AQ	WEP1945	121-29000
TR45	2SC945A	176-062-9-001	GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	2SC945A	WEP1945	121-29000
	2SC1419C		GE-66	PTC167	HEPS5027	REN 152	SK3054	RT-197	ECG152	2SC1419C	WEP745	121-987-02
	2SC1419		GE-66	PTC167	HEPS5027	REN 152	SK3054	RT-197	ECG152	2SC1419	WEP745	121-987-02
	2SD188M		GE-75	PTC118	HEPS7004	REN 130	SK3027	RT-131	ECG130	2SD188M	WEP704	121-29011
	2SD188		GE-75	PTC118	HEPS7004	REN 130	SK3027	RT-131	ECG130	2SD188	WEP704	121-29011

* Lead configuration may vary from original.

ELECTROLYTIC CAPACITORS

ITEM No.	RATING	REPLACEMENT DATA				
		MFRG. PART No.	CORNELL- DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.	
					Q-LINE	GENERAL LINE
C7	.22 16V	027-035-9-022		TDC224M050EL	QDT1-10	SD50-R229
C13	.1 25V	027-035-9-001		TDC104M050EL	QDT1-2	SD50-R109
C15	2.2 25V	022-158-9-002	PC2-100	VTT2R2A50	QV1-19	EV-1517
C16	4.7 25V	022-157-9-003	PC5-50	VTT4R7B50	QV1-27	EV-1319
C17	.47 50V	022-157-9-001	PC1-50	VTT4R7A63	QV1-3	EV-1610
C19	.22 16V	027-035-9-002		TDC224M050EL	QDT1-10	SD50-R229
C24	.47 10V	022-160-9-002	PC50-16	VTT47D16	QV1-73	EV-1226
C26	.47 10V	022-160-9-002	PC50-16	VTT47D16	QV1-73	EV-1226
C27	.47 50V	022-157-9-001	PC1-50	VTT4R7A63	QV1-3	EV-1610
C59	1 25V	027-035-9-003		TDC105M035EL		SD35-19
C62	2.2 25V	027-031-9-001		TDC225M035FL		SD35-2R29
C63	2.2 25V	027-031-9-001		TDC225M035FL		SD35-2R29
C66	1000 10V	022-171-9-003	PC1000-16	VTT1000L10	QV1-179	EV-1160
C72	4.7 10V	027-026-9-005		TDC475M010EL	QDT1-48	SD10-4R79
C73	4.7 25V	022-157-9-003	PC5-50	VTT4R7B50	QV1-27	EV-1319
C83	2.2 25V	022-158-9-022	PC2-100	VTT2R2A50	QV1-19	EV-1517
C84	22 6.3V	027-035-9-004		TDC226M015FL	QDT1-82	SD15-229
C90	10 16V	022-157-9-004	PC10-25	VTT10B25	QV1-41	EV-1222
C92	.47 10V	022-160-9-002	PC50-16	VTT47D16	QV1-73	EV-1226
C107	220 10V	022-171-9-002	PC250-10	VTT220F10	QV1-115	EV-1140
C109	.1 25V	027-035-9-001		TDC104M050EL	QDT1-2	SD50-R109
C112	4.7 25V	022-157-9-003	PC5-50	VTT4R7B50	QV1-27	EV-1319
C113	22 6.3V	027-035-9-004		TDC226M015FL	QDT1-82	SD15-229
C114	.47 10V	022-160-9-002	PC50-16	VTT47D16	QV1-73	EV-1226
C117	10 25V	022-171-9-001	PC10-25	VTT10B25	QV1-43	EV-1322
C118	470 10V	022-160-9-001	PC500-16	VTT470K16	QV1-149	EV-1150
C119	1 50V	022-157-9-002	PC1-50	VTT1A50	QV1-11	EV-1615
C120	10 16V	022-157-9-004	PC10-25	VTT10B25	QV1-41	EV-1222
C121	.47 50V	022-157-9-001	PC1-50	VTT4R7A63	QV1-3	EV-1610
C133	10 16V	022-157-9-004	PC10-25	VTT10B25	QV1-41	EV-1222
C134	1000 25V	022-171-9-004	WBR1000-25*	VTT1000M25	QV1-185	EV-1360
C142	.47 50V	022-157-9-001	PC1-50	VTT4R7A63	QV1-3	EV-1610
C146	1 50V	022-157-9-002	PC1-50	VTT1A50	QV1-11	EV-1615
C162	1 50V	022-157-9-002	PC1-50	VTT1A50	QV1-11	EV-1615
C164	10 25V	022-171-9-001	PC10-25	VTT10B25	QV1-43	EV-1322
C169	1 50V	022-157-9-002	PC1-50	VTT1A50	QV1-11	EV-1615
C180	22 10V	022-163-9-001	PC25-25	VTT22B16	QV1-55	EV-1224
C183	1 50V	022-157-9-002 (1)	PC1-50	VTT1A50	QV1-11	EV-1615
C191	.47 10V	022-160-9-022	PC50-16	VTT47D16	QV1-73	EV-1226
C193	1 25V	027-035-9-003		TDC105M035EL		SD35-19
C198	.47 50V	022-157-9-001 (1)	PC1-50	VTT4R7A63	QV1-3	EV-1610
C302	220 16V	(1)	TC250-25	VTT220H16	QV1-117	EV-1240
C304	3300 35V	(1)	WBR3000-35	TC50300		TVA-1318.4
C434	.47 10V	022-160-9-022	PC50-16	VTT47D16	QV1-73	EV-1226

(1) Used in Model 142GTL.

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
C1	.022	020-204-9-010	DC-203	MGP02	TA120	QC2-157	TG-S20
C2	.022		DC-203	MGP02	TA120	QC2-157	TG-S20
C3	.001		DD-102G	GP1000	GP210	QC2-81	5GA-D10
C4	.022		DC-203	MGP02	TA120	QC2-157	TG-S20
C5	.022		DC-203	MGP02	TA120	QC2-157	TG-S20
C6	.001		DD-102G	GP1000	GP210	QC2-81	5GA-D10
C8	82 NPO		DTZ-82	NP082	CNO482		10TCC-Q82
C9	.001		DC-103	MGP01	TA110	QC2-141	TG-S10
C10	100 N220				*		10TCR-T10
C11	.022		DC-203	MGP02	TA120	QC2-157	TG-S20
C12	.022		DC-203	MGP02	TA120	QC2-157	TG-S20
C14	.022		DC-203	MGP02	TA120	QC2-157	TG-S20
C18	.022		DC-203	MGP02	TA120	QC2-157	TG-S20
C20	.022			DPMS2S22	EWFA1A122	QF1-127	1PB-S22
C21	5 NPO		DTZ-4R7	NP04P7	CNO547		10TCC-V47
C22	3 NPO		DTZ-3R3	NP03P3	CNO533		10TCC-V33
C23	3 NPO		DTZ-3R3	NP03P3	CNO533		10TCC-V33
C25	.033			DPMS6S33	EWFA1A1010	QF1-215	6PS-S33
C28	.1			DPMS2P1			1PB-P10
C29	12 NPO				CNO412		10TCC-Q12
C30	.001		DD-102G	GP1000	GP210	QC2-81	5GA-D10
C31	.001		DD-102G	GP1000	GP210	QC2-81	5GA-D10
C32	.001		DD-102G	GP1000	GP210	QC2-81	5GA-D10
C33	.0047		DD-472	GP4700	GP247		5GA-D47
C34	.001		DD-102G	GP1000	GP210	QC2-81	5GA-D10
C35	.0047		DD-472	GP4700	GP247		5GA-D47
C36	4 NPO		DTZ-4R7	NP04P7	CNO547		10TCC-V47
C37	.0047		DD-472	GP4700	GP247		5GA-D47
C38	2 NPO		DTZ-2R2	NP02P2	CNO522		10TCC-V22
C39	.001		DD-102G	GP1000	GP210	QC2-81	5GA-D10
C40	.001		DD-102G	GP1000	GP210	QC2-81	5GA-D10
C41	.001		DD-102G	GP1000	GP210	QC2-81	5GA-D10
C42	2 NPO		DTZ-2R2	NP02P2	CNO522		10TCC-V22
C43	33 NPO		DTZ-33	NP033	CNO433		10TCC-Q33
C44	2 NPO		DTZ-2R2	NP02P2	CNO522		10TCC-V22
C45	.022		DC-203	MGP02	TA120	QC2-157	TG-S20
C46	.022		DC-203	MGP02	TA120	QC2-157	TG-S20
C47	.022		DC-203	MGP02	TA120	QC2-157	TG-S20
C48	.01		DC-103	MGP01	TA110	QC2-141	TG-S10
C49	.022		DC-203	MGP02	TA120	QC2-157	TG-S20
C50	.022		DC-203	MGP02	TA120	QC2-157	TG-S20
C51	.022		DC-203	MGP02	TA120	QC2-157	TG-S20
C52	.022		DC-203	MGP02	TA120	QC2-157	TG-S20
C53	.5pF	(1)		DPMS2S22	EWFA1A122	QF1-127	1PB-S22
C54	.022			DPMS2S22	EWFA1A122	QF1-127	1PB-S22
C55	.022			MGP02	TA120	QC2-157	TG-S20
C56	.022		DC-203		CNO427		10TCC-Q27
C57	27 NPO			DPMS6D1	EWFA1A210	QF1-1	1PB-D10
C58	.001			MGP01	TA110	QC2-141	TG-S10
C60	.01		DC-103	DPMS2P1	EWFA1A010	QF1-215	1PB-P10
C61	.1				CNO418		10TCC-Q18
C64	18 NPO				CNO410		10TCC-Q10
C65	10 NPO		DTZ-10	NP010	TA110	QC2-141	TG-S10
C67	.01		DC-103	MGP01	TA120	QC2-157	TG-S20
C68	.022		DC-203	MGP02	TA120		10TCC-Q47
C69	47 NPO		DTZ-47	NP047	CNO447		10TCC-Q47
C70	47 NPO		DTZ-47	NP047	CNO447		10TCC-Q47
C71	.047			DPMS2S47	EWFA1A147	QF1-171	1PB-S47
C74	.01		DC-103	MGP01	TA110	QC2-141	TG-S10
C75	.01		DC-103	MGP01	TA110	QC2-141	TG-S10
C76	15 NPO		DTZ-15	NP015	CNO415		10TCC-Q15
C77	.01		DC-103	MGP01	TA110	QC2-141	TG-S10
C78	.01		DC-103	MGP01	TA110	QC2-141	TG-S10
C79	.1			DPMS2P1	EWFA1A010	QF1-215	1PB-P10
C80	4 NPO		DTZ-4R7	NP04P7	CNO547		10TCC-V47
C81	270 N750				CN7327		10TCU-T27
C82	.01	(1) (2)		WMF1S1	EWFA1A110	QF1-91	1PB-S10
C82	.0047			WMF1D47	EWFA1A247	QF1-57	1PB-D47
C85	.0047			WMF1D47	EWFA1A247	QF1-57	1PB-D47
C86	.033			DPMS6S33	EWFA1A133		6PS-S33
C87	.022		DC-203	MGP02	TA120	QC2-157	TG-S20
C88	.01			WMF1S1	EWFA1A110	QF1-91	1PB-S10
C88	.047			DPMS2S47	EWFA1A147	QF1-171	1PB-S47
C89	.01			WMF1S1	EWFA1A110	QF1-91	1PB-S10
C91	.0022			DPMS6D22	EWFA1A222		6PS-D22
C93	.01			WMF1S1	EWFA1A110	QF1-91	1PB-S10
C94	.01		DC-103	MGP01	TA110	QC2-141	TG-S10
C95	.01		DC-103	MGP01	TA110	QC2-141	TG-S10
C96	.047			DPMS2S47	EWFA1A147	QF1-171	1PB-S47
C97	.047			DPMS2S47	EWFA1A147	QF1-171	1PB-S47
C98	.001		DD-102G	GP1000	GP210	QC2-81	5GA-D10
C99	.01		DC-103	MGP01	TA110	QC2-141	TG-S10
C100	.01		DC-103	MGP01	TA110	QC2-141	TG-S10
C101	470	(1) (2)	DD-471	GP470	GP347		10TS-T47
C101	.001		DD-102G	GP1000	GP210	QC2-81	5GA-D10
C102	100 NPO		DTZ-100	NP0100	CNO310		10TCC-T10
C103	.01		DC-103	MGP01	TA110	QC2-141	TG-S10
C104	18 NPO				CNO418		10TCC-Q18
C105	10 NPO		DTZ-10	NP010	CNO410		10TCC-Q10
C106	.01		DC-103	MGP01	TA110	QC2-141	TG-S10
C108	.022		DC-203	MGP02	TA120	QC2-157	TG-S20
C108	.047			DPMS2S47	EWFA1A147	QF1-171	1PB-S47
C110	.1			DPMS2P1	EWFA1A010	QF1-215	1PB-P10
C111	.022			DPMS2S22	EWFA1A122	QF1-127	1PB-S22
C115	.001			DPMS6D1	EWFA1A210	QF1-1	1PB-D10
C116	.1			DPMS2P1	EWFA1A010	QF1-215	1PB-P10
C122	.01		DC-103	MGP01	TA110	QC2-141	TG-S10
C123	.01		DC-103	MGP01	TA110	QC2-141	TG-S10
C124	.01		DC-103	MGP01	TA110	QC2-141	TG-S10
C125	.01		DC-103	MGP01	TA110	QC2-141	TG-S10

COBRA MODELS 140GTL/142GTL

PARTS LIST AND DESCRIPTION (CONTINUED)

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

CAPACITORS (cont)

ITEM No.	RATING	MFG. PART No.	REPLACEMENT DATA				
			CENTRALAB PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.	
						Q-LINE	GENERAL LINE
C126	10 NPO		DTZ-10	NP010	CN0410		10TCC-Q10
C127	220		DD-221		GP322		10TS-T22
C128	470		DD-471	GP470	GP347		10TS-T47
C129	.01		DC-103	MGP01	TA110	QC2-141	TG-S10
C130	.01		DC-103	MGP01	TA110	QC2-141	TG-S10
C131	.01		DC-103	MGP01	TA110	QC2-141	TG-S10
C132	10		DTZ-10	NP010	CN0410		10TCC-Q10
C135	.0047	(2)	DD-472	GP4700	GP247		5GA-D47
C136	.0047	(2)	DD-472	GP4700	GP247		5GA-D47
C137	.0047	(2)	DD-472	GP4700	GP247		5GA-D47
C138	.0047	(2)	DD-472	GP4700	GP247		5GA-D47
C139	1 NPO				CN0510		10TCC-V10
C140	10 NPO		DTZ-10	NP010	CN0410		10TCC-Q10
C141	.0047		DD-472	GP4700	GP247		5GA-D47
C143	100	(1)	DTZ-100	NP0100	CN0310		10TCC-T10
C143	68 NPO	(2)	DTZ-68	NP068	CN0468		10TCC-Q68
C144	39 NPO				CN0439		10TCC-Q39
C145	180 N220				*		10TCR-Q18
C147	1 NPO				CN0510		10TCC-V10
C148	390 N750		DTN-390				10TCU-T39
C149	330 N750			DPMS6D1	EWF6210		6PS-D10
C150	1			DPMS2P1	EWFA1010	QF1-215	1PB-P10
C151	470 N750		DTN-470				10TCU-T47
C152	.0047		DD-472	GP4700	GP247		5GA-D47
C153	1			DPMS2P1	EWFA1010	QF1-215	1PB-P10
C154	.0047		DD-472	GP4700	GP247		5GA-D47
C155	.0047		DD-472	GP4700	GP247		5GA-D47
C156	.0047		DD-472	GP4700	GP247		5GA-D47
C157	.0047		DD-472	GP4700	GP247		5GA-D47
C158	47 NPO		DTZ-47	NP047	CN0447		10TCC-Q47
C159	330 N750		DTN-330	N330	CN7333		10TCU-T33
C160	2	(1)	DTZ-2R2	NP02P2	CN0522		10TCC-V22
C160	1.5 NPO	(2)	DTZ-1R5	NP01P5	CN0515		10TCC-V15
C161	.01			WMF1S1	EWFA1110	QF1-91	1PB-S10
C163	120 N220				*		10TCR-T12
C165	.001		DD-102G	GP1000	GP210	QC2-81	5GA-D10
C166	.022		DC-203	MGP02	TA120	QC2-157	TG-S20
C167	.022		DC-203	MGP02	TA120	QC2-157	TG-S20
C168	.047			DPMS2S47	EWFA1A17	QF1-171	1PB-S47
C170	100		DD-101	GP100	GP310		10TS-T10
C171	56 NPO				CN0456		10TCC-Q56
C172	.001		DD-102G	GP1000	GP210	QC2-81	5GA-D10
C173	.0047		DD-472	GP4700	GP247		5GA-D47
C174	330 N750		DTN-330	N330	CN7333		10TCU-T33
C175	33 NPO		DTZ-33	NP033	CN0433		10TCC-Q33
C176	.001	(2)	DD-102G	GP1000	GP210	QC2-81	5GA-D10
C177	.022		DC-203	MGP02	TA120	QC2-157	TG-S20
C178	.001		DD-102G	GP1000	GP210	QC2-81	5GA-D10
C181	.01		DC-103	MGP01	TA110	QC2-141	TG-S10
C182	.047	(2)	DC-503	MGP05	TA150	QC2-207	TG-S50
C184	.0047	(1)	DD-472	GP4700	GP247		5GA-D47
C185	.5pF	(1)					
C186	.5pF	(1)					
C187	.0047	(1)	DD-472	GP4700	GP247		5GA-D47
C188	.0047	(1)	DD-472	GP4700	GP247		5GA-D47
C189	.01		DC-103	MGP01	TA110	QC2-141	TG-S10
C190	.047		DC-503	MGP05	TA150	QC2-207	TG-S50
C192	.001		DD-102G	GP1000	GP210	QC2-81	5GA-D10
C194	.033			DPMS6S33	EWFA1133		6PS-S33
C195	47 NPO		DTZ-47	NP047	CN0447		10TCC-Q47
C196	.01	(1)	DC-103	MGP01	TA110	QC2-141	TG-S10
C197	.0047	(1)	DD-472	GP4700	GP247		5GA-D47
C201	.01	(2)	DC-103	MGP01	TA110	QC2-141	TG-S10
C202	.0047		DD-472	GP4700	GP247		5GA-D47
C203	.0047		DD-472	GP4700	GP247		5GA-D47
C204	.0047		DD-472	GP4700	GP247		5GA-D47
C205	.0047		DD-472	GP4700	GP247		5GA-D47
C206	.022		DC-203	MGP02	TA120	QC2-157	TG-S20
C207	1		DC-104	MGP1	TA010	QC2-233	TG-P10
C208	.022	(2)	DC-203	MGP02	TA120	QC2-157	TG-S20
C208	.022		DC-203	MGP02	TA120	QC2-157	TG-S20
C301	.039	(1)		DPMS6S39	PVC6139		6PS-S39
C303	.039	(1)		DPMS6S39	PVC6139		6PS-S39
C308	.01	(1)	DC-103	MGP01	TA110	QC2-141	TG-S10
C310	.01	(1)	DC-103	MGP01	TA110	QC2-141	TG-S10
C400	.0047	(1)	DD-472	GP4700	GP247		5GA-D47
C401	.0047	(1)	DD-472	GP4700	GP247		5GA-D47
C401	.01	(2)	DC-103	MGP01	TA110	QC2-141	TG-S10
C402	.0047	(1)	DD-472	GP4700	GP247		5GA-D47
C402	.022	(2)	DC-203	MGP02	TA120	QC2-157	TG-S20
C403	.001		DD-102G	GP1000	GP210	QC2-81	5GA-D10
C404	.001		DD-102G	GP1000	GP210	QC2-81	5GA-D10
C405	.001		DD-102G	GP1000	GP210	QC2-81	5GA-D10
C406	.001		DD-102G	GP1000	GP210	QC2-81	5GA-D10
C407	.001		DD-102G	GP1000	GP210	QC2-81	5GA-D10
C408	.001	(1)	DD-102G	GP1000	GP210	QC2-81	5GA-D10
C409	.001	(1)	DD-102G	GP1000	GP210	QC2-81	5GA-D10
C410	.001	(1)	DD-102G	GP1000	GP210	QC2-81	5GA-D10
C411	.001	(1)	DD-102G	GP1000	GP210	QC2-81	5GA-D10
C412	.01	(1)	DC-103	MGP01	TA110	QC2-141	TG-S10
C413	.01	(1)	DC-103	MGP01	TA110	QC2-141	TG-S10
C414	1	(1)	255	DPMS2P1	EWFA1010	QF1-215	1PB-P10
C415	.001	(1)	DD-102G	GP1000	GP210	QC2-81	5GA-D10
C416	.001	(1)	DD-102G	GP1000	GP210	QC2-81	5GA-D10
C417	.001	(1)	DD-102G	GP1000	GP210	QC2-81	5GA-D10
C421	.047	(1)	244	DPMS2S47	EWFA1A17	QF1-171	1PB-S47
C435	.022		DC-203	MGP02	TA120	QC2-157	TG-S20
C436	.0047		217	WMF1D47	EWFA247	QF1-57	1PB-D47
C437	22		120	DTZ-22	CN0422		10TCC-Q22

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.
CC1		527-077-9-002(3)				
CT1		028-051-9-001				
CT2		028-051-9-001				
CT3		028-051-9-001				

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

(1) Used in Model 142GTL.

(2) Used in Model 140GTL.

(3) Consists of five 1000pF capacitors.

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

ITEM No.	FUNCTION	RESISTANCE	REPLACEMENT DATA			
			MFR. PART No.	CENTRALAB PART No.	MALLORY PART No.	TRW PART No.
RT301	Voltage	300	(18)	T-300	MTC32L1	X201R351B
VR1	Signal Meter	10K	008-342-9-002			U260R103B
VR2	Squelch Range	1000	008-334-9-011			U260R102B
VR3	LSB Xmt	3000	008-333-9-001			
VR5	Carrier Balance	10K	008-342-9-002			U260R103B
VR6	AM Power	5000	008-316-9-004			U260R104B
VR7	RF ALC	10K	008-342-9-002			U260R103B
VR8	RF Driver Bias	500	008-342-9-001			U260R501B
VR9	RF Final Bias	5000	008-316-9-004			U260R502B
VR10	TX PWR Meter	100K	008-316-9-001			U260R104B
VR12	MOD Meter	100K	008-316-9-001(18)			U260R104B
VR401	Squelch	100K	008-342-9-003(20)			
	Squelch	100K	008-342-9-003(18)			
VR402	Voice Lock	20K	008-342-9-004(20)	F1-100K(1), SSK100	RU15L, SL36, SL1500	BU1(1), CF13, SS1, DC1
	Voice Lock	20K	008-342-9-004(18)	F1-25K(1), SSK1000	RU253L, SL36, SL1500	BU1(1), CF62, SS1, DC1
VR403	Volume/Power Switch	10K	008-342-9-005(20)			
	Volume/Power Switch	10K	008-342-9-005(18)	F2-10K(1), SSK100, KR1	RU14A, SL36, SL1500, US41	BU1(1), CF61, SS1, GC
VR404	RF Gain	10K	008-342-9-006(20)			
VR404	RF Gain	10K	(18)(19)			
VR406	SWR/CAL	5000				
VR405	Dynamike	10K	(18)	F2-10K(1), SSK100	RU14A, SL36, SL1500	BU1(1), CF61, SS1, DC1

(1) Enlarge mounting hole.

(18) Used in Model 142GTL.

(19) Includes VR404 and VR406.

(20) Used in Model 140GTL.

COILS (RF-IF)

ITEM No.	FUNCTION	REPLACEMENT DATA			REMARKS
		PART No.	OTHER IDENTIFICATION	MILLER PART No.	
L1	Noise Blanker (23MHz)	060-018-9-001	LA038	CB5512-7TC	
L2	Noise Blanker (23MHz)	060-025-9-010	LA179		
L3	IF (7.8MHz)	060-030-9-009	LA255		
L4	IF (7.8MHz)	060-030-9-017	LA263		
L5	IF (7.8MHz)	060-030-9-016	LA262		
L6	IF (7.8MHz)	060-030-9-011	LA257		
L7	IF (7.8MHz)	060-030-9-012	LA258		
L8	Rec RF (27MHz)	060-030-9-013	LA259		
L9	Rec RF (27MHz)	060-030-9-014	LA260		
L10	Rec Ant (27MHz)	060-030-9-015	LA261		
L11	RF Choke (470uH)	041-088-9-004	LZ012		
L12	RF Choke (100uH)	041-088-9-003	LZ012		
L13	VCO	060-030-9-002	LA216		
L14	VCO (34MHz)	060-030-9-001	LA195		
L15	RF Choke (470uH)	041-088-9-004	LZ012		
L16	RF Choke (470uH)	041-088-9-004	LZ012		
L17	Carrier Shift (7.8MHz)	060-030-9-007	LA223		
L18	Tripler (33MHz)	060-030-9-010	LA256		
L19	Osc (11.1125MHz)	060-030-9-003	LA217		
L20	Osc (11.1125MHz)	060-030-9-004	LA218		
L21	RF Choke (470uH)	041-088-9-004	LZ012		
L22	RF Choke (470uH)	041-088-9-004	LZ012		
L23	RF Choke (470uH)	041-088-9-004	LZ012		
L24	RF Choke (470uH)	041-088-9-004	LZ012		
L25	RF Choke (100uH)	041-088-9-003	LZ012		
L26	Balance Mix (7.8MHz)	060-030-9-005	LA219		
L27	Balance Mix (35MHz)	060-025-9-003	LA160		
L28	Mixer (27MHz)	060-030-9-006	LA220		
L29	Mixer (27MHz)	060-030-9-008	LA254		
L30	Xmt Driver (27MHz)	044-053-9-002	LD096		
L33	RF Choke	044-053-9-003	LD098		
L35	RF Choke	044-053-9-003	LD098		
L36	Final	044-053-9-001	LD019		
L37	RF Choke	044-043-9-008	LE051		
L38	RF Choke	044-043-9-008	LE051		
L39	TVI Trap (54MHz)	044-053-9-007	LD019		
L401	RF Choke	044-043-9-022	LD013		
L402	RF Choke	044-043-9-022	LD013		
L403	RF Choke	044-048-9-002	LD089		

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA			NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (10 CURRENT 1000~)	MFR. PART No.	THORDARSON PART No.	TRIAD PART No.	
T1	2.8A	.194	2.25mH	TF-151(1)			(1) Number on unit.

COBRA MODELS 140GTL/142GTL

PARTS LIST AND DESCRIPTION (CONTINUED)

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

TRANSFORMER (Power)

ITEM No.	RATING		REPLACEMENT DATA			NOTES
	PRI.	SEC. 1	MFGR. PART No.	THORDARSON PART No.	TRIAD PART No.	
T401	120V AC @ 1A AC	17.20V AC @ 3.78A AC	TF-143(1)			(1) Number on unit.

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		MFGR. PART No.	QUAM PART No.	
SP401	3 1/2" PM, 8 Ohms 2 1/2" X 4" PM, 8 Ohms	580-027-9-001	3A05Z8	Used in Model 140GTL. Used in Model 142GTL.

FUSE DEVICES

ITEM No.	DESCRIPTION	REPLACEMENT DATA							WORKMAN PART No.
		PART No.		BUSS PART No.		LITTELFUSE PART No.			
		DEVICE	HOLDER	DEVICE	HOLDER	DEVICE	HOLDER	DEVICE	
F401	4A	191-251-3-004	426-035-9-004	AGC4	HDJ	311004	150145		
F402	4A	191-251-3-004(1)		AGC4	HKP	311004	342001		

(1) Used in Model 142GTL.

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		1	2	5	3	NC	4

MISCELLANEOUS

ITEM No.	PART NAME	PART No.	NOTES
D401	LED	158-014-9-001	Channel Display (TLR321)
D402	LED	158-020-9-001	RX/TX (Model 140GTL) (TLRG101)
D402	LED	158-020-9-001	TX (Model 142GTL)
D405	LED		RX (Model 142GTL)
FT1	Filter	143-008-9-001	7.8MHz
FT2	Filter		7.8MHz (Model 142GTL)
J401	Jack	773-086-9-001	PA
J402	Jack	773-086-9-001	External Speaker
J403	Jack	762-020-9-001	DC Power
J404	Jack	771-029-9-001	Microphone
J405	Jack	772-036-9-001	Antenna
L31	Ferrite Bead	044-053-9-002	LD087
L32	Ferrite Bead	044-053-9-004	LD101
L34	Ferrite Bead	044-053-9-002	LD087
L40	Ferrite Bead		LD071
L50	Ferrite Bead	763-084-9-001	LD077
L51	Ferrite Bead	763-084-9-001	LD077
L52	Ferrite Bead	763-084-9-001	LD077
L53	Ferrite Bead	763-084-9-001	LD077
L404	Ferrite Bead	763-084-9-001	LD077
L405	Ferrite Bead	763-084-9-001	LD077
M401	Meter	320-092-9-001	S/Rf (Model 140GTL)
M401	Meter		S/Rf (Model 142GTL)
M402	Meter		SWR/MOD (Model 142GTL)
PL401	Lamp		Meter S/Rf (10.39V @ 32mA)
PL402	Lamp		Meter SWR/MOD (10.39V @ 32mA) (Model 142GTL)
S401	Switch	083-235-9-002	Channel Selector
S402	Switch		Power (Part of Volume Control)
S403	Switch	083-235-9-001	Mode
S404	Switch	084-063-9-002	CB/PA
S405	Switch	084-063-9-001	NB/ANL
S408	Switch		SWR/CAL/% MOD (Model 142GTL)
S409	Switch		AC/DC Power Conversion (Model 142GTL)
X1	Crystal	133-014-9-001	10.240MHz
X2	Crystal	133-019-9-003	7.8025MHz
X3	Crystal	133-019-9-002	7.7975MHz
X4	Crystal	133-019-9-001	11.1125MHz
	Printed Circuit Board	302-309-9-001	Main
	Printed Circuit Board	302-310-9-001	Channel Selector
	Printed Circuit Board	302-311-9-001	LED
	Printed Circuit Board	302-312-9-001	Microphone Jack

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

ITEM	PART No.	ITEM	PART No.
MODEL 140GTL		MODEL 142GTL	
Cabinet Top	272-127-9-001	Cabinet Top	
Cabinet Bottom	272-127-9-002	Cabinet Bottom	
Mounting Bracket	251-351-9-001	Mounting Bracket	
Microphone Hanger	741-074-9-001	Microphone Hanger	
Escutcheon	255-167-9-001	Escutcheon	
Knob, Channel Selector	751-151-9-001	Knob, Channel Selector	
Knob, Control	751-095-9-002	Knob, Control	
Channel Display Window	380-304-9-001	Channel Display Window	