



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.



1011001, McKINLEY

MANUFACTURER'S SPECIFICATIONS

TRANSMITTER

Power Output	AM, 4 watts SSB, 12 watts, P.E.P.
Modulation	AM, high and low level Class B
Intermodulation Distortion	SSB: 3rd and 5th order, better than -25dB. 7th and 9th order, better than -35dB.
SSB Carrier Suppression	Better than -55 dB
Unwanted Sideband	Better than -50 dB
Frequency Response	AM and SSB: 350 to 2500 Hz.
Output Impedance	52 ohms, unbalanced
SSB Filter	7.8 MHz, crystal lattice type 6 dB @ 4.2 KHz 60 dB @ 7.0 KHz
Output Indicators	Meter shows relative RF output power; red transmit LED.

RECEIVER

Sensitivity	SSB: Better than .25 μ V for 10 dB (S+N)/N at greater than 1/2 watt of audio output AM: Better than .5 μ V for 10 dB (S+N)/N at greater than 1/2 watt of audio output
Selectivity	SSB and AM: 6 dB @ 4.2 KHz, 60 dB @ 7.0 KHz.
Cross Modulation	More than 50 dB
Image Rejection	More than 75 dB
I.F. Frequency	AM and SSB: 7.8 MHz
AM and SSB RF Gain Control	Adjustable for optimum signal reception.
Automatic Gain Control	(AGC): Less than 10 dB change in audio output for inputs from 10 to 500,000 microvolts.
Squelch	Adjustable; threshold less than .5 μ V.
Noise Blanker	RF type, effective on AM and SSB.
Clarifier Range	$\pm$ 1.0 KHz
Audio Output Power	3 watts into 8 ohms
Frequency Response	350 to 2500 Hz
Distortion	Less than 10% at 3 watts output.

Courtesy of the Manufacturer

PRESIDENT MODEL 1011001, MCKINLEY

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 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 TP15 (L18 Secondary).	Ch. 19, AM Clarifier 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 Clarifier Midrange	CT3	Adjust for 34.9875MHz +20Hz. Check all channels. (See Truth Chart for correct frequencies.)
Input of frequency counter to TP1.	Ch. 19 LSB Clarifier Midrange	L19	Adjust for 34.9825MHz +20Hz. Check all channels. (See Truth Chart for correct frequencies.)
Input of frequency counter to TP1.	Ch. 19 AM Clarifier Midrange	L20	Adjust for 34.9850MHz +20Hz. Check all channels. (See Truth Chart for correct frequencies.)
Input of frequency counter to TP1.	Ch. 19, XMT LSB	VR3	Adjust for 34.9825MHz +20Hz.
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 +5Hz or -0Hz.
Input of frequency counter to TP3.	Ch. 19 LSB	CT2	Adjust for 7.7975MHz +0Hz or -5Hz.
Input of frequency counter to TP3. Disconnect TP7 and TP8.	Ch. 19, XMT AM	L17	Adjust for 7.8000MHz +5Hz. 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, Clarifier 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.	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.
Input of oscilloscope to TP14 (TR6 Emitter).			

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, Clarifier 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, Clarifier Midrange, NB Off.

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	SIG METER Adjust for 9 on SIG scale of meter.

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TRANSMITTER ALIGNMENT

Connect an RF wattmeter and 50-ohm, 25-watt dummy load to antenna connector.

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

See page 4 for channel frequencies.

TEST EQUIPMENT	TRANSCEIVER	ADJUST	REMARKS
Input of RF wattmeter and 50-ohm, 25 watt dummy load to antenna input. 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.

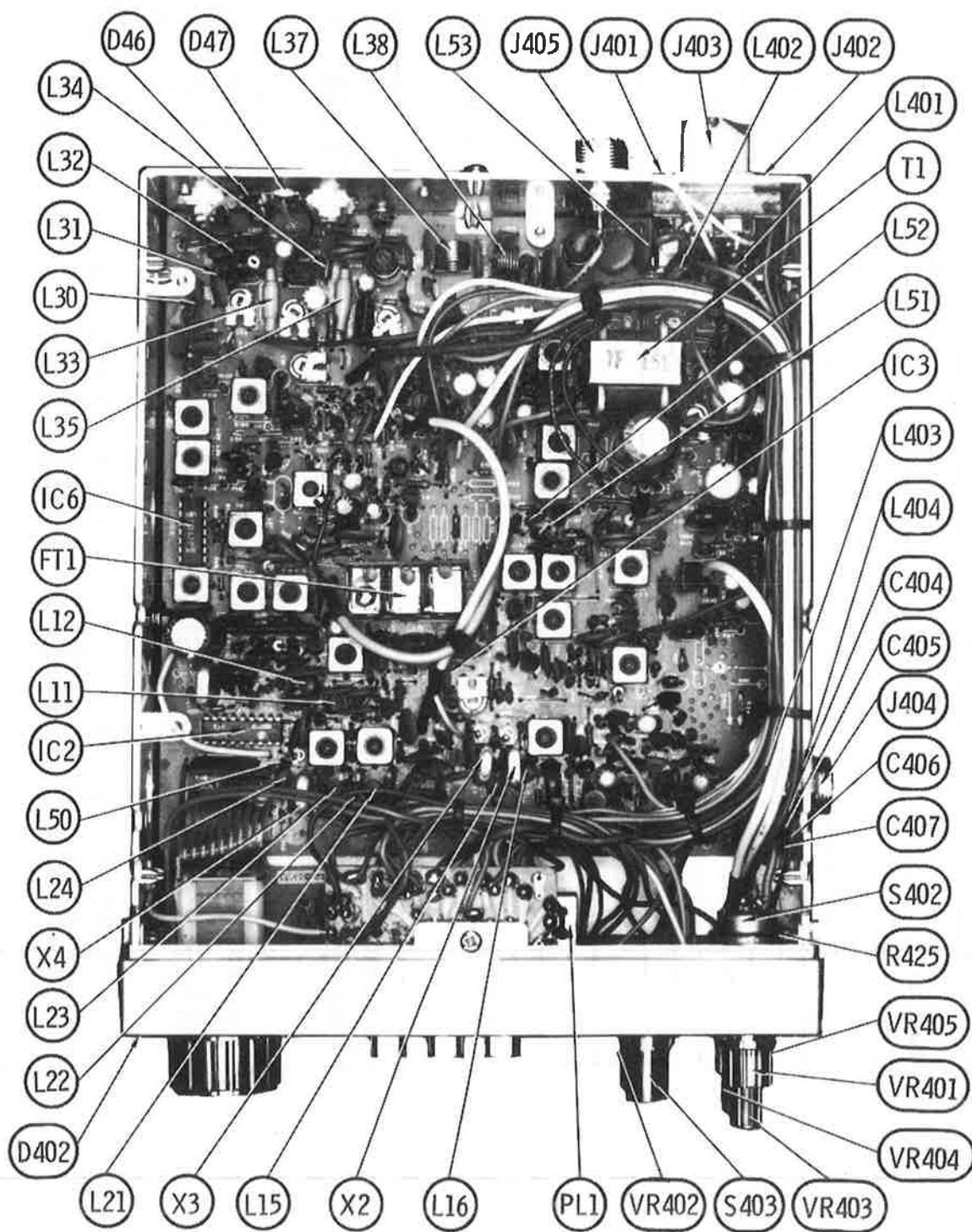
See page 4 for channel frequencies.

TEST EQUIPMENT	TRANSCEIVER	ADJUST	REMARKS
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.

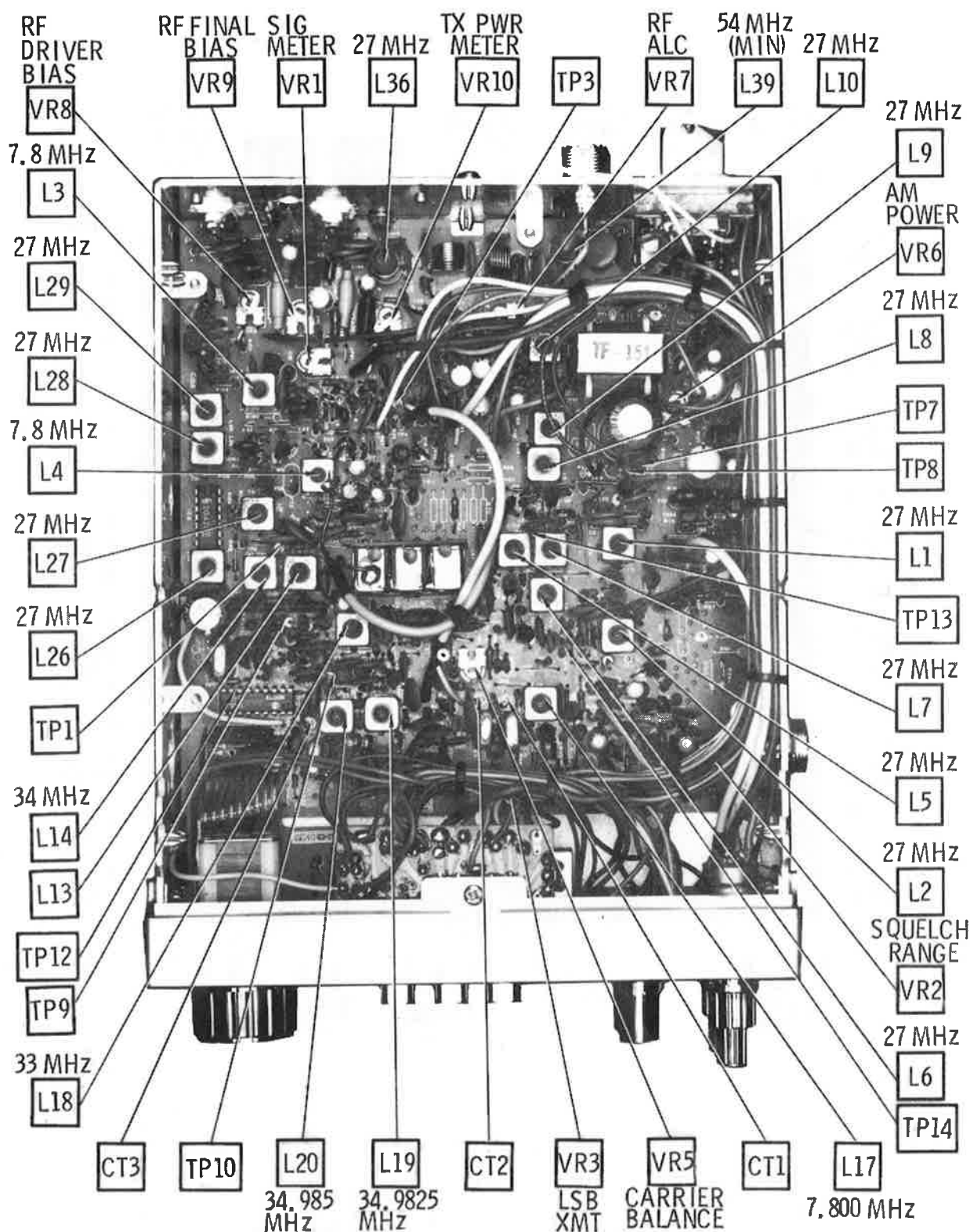
TRUTH CHART

CHANNEL	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			1.640	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	34.005	34.0075	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	34.0275	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	34.0425
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

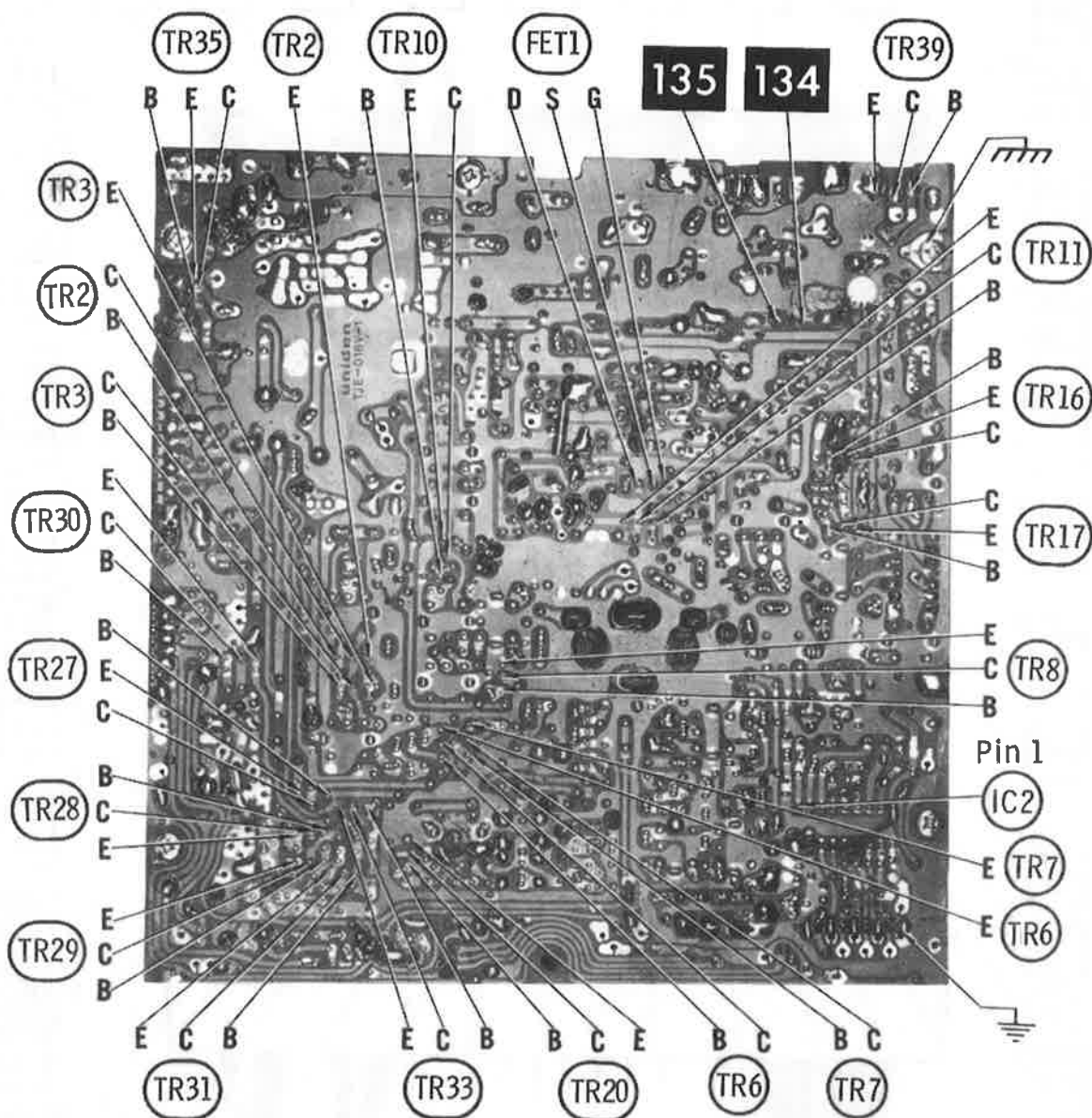
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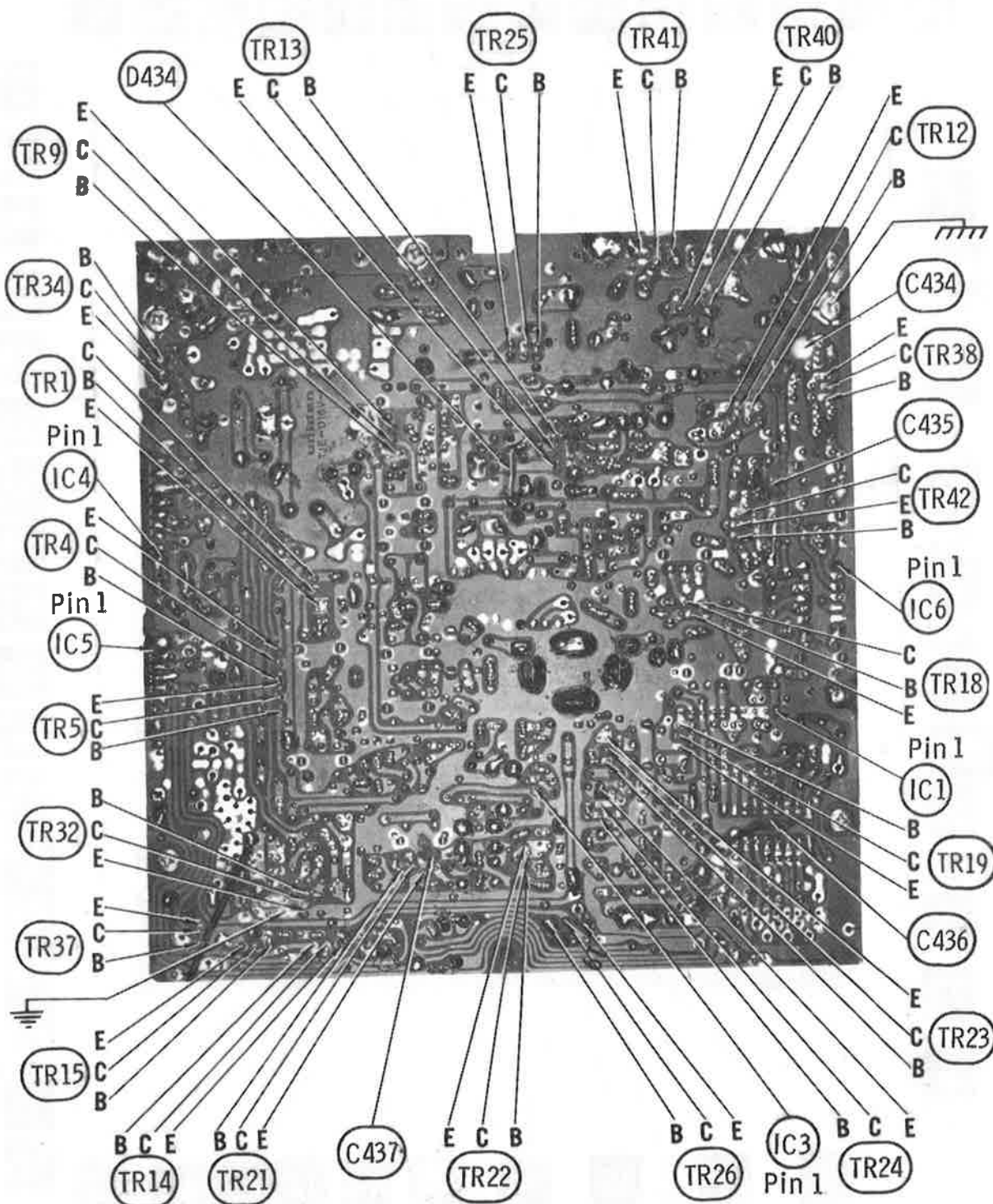
CHASSIS-BOTTOM



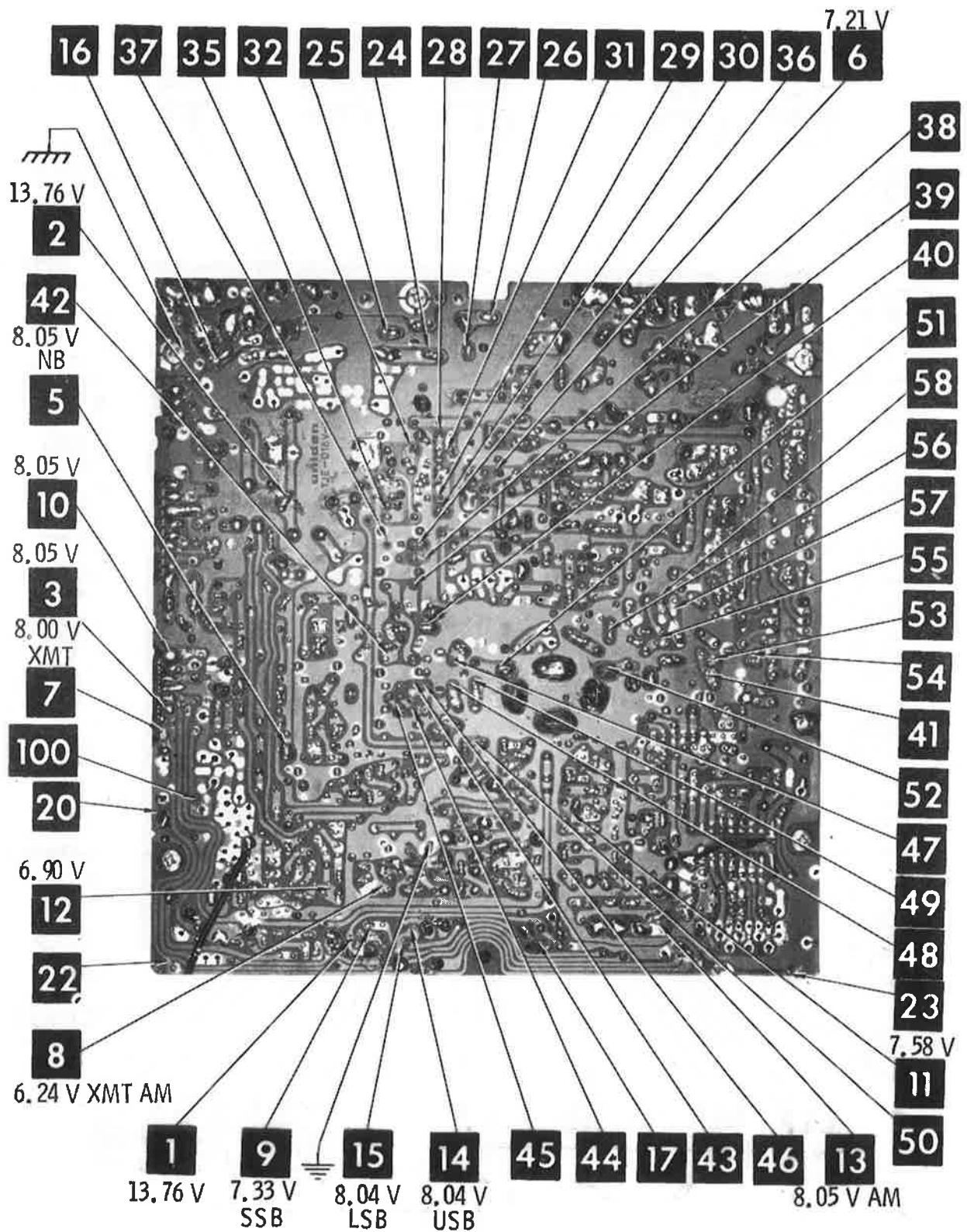
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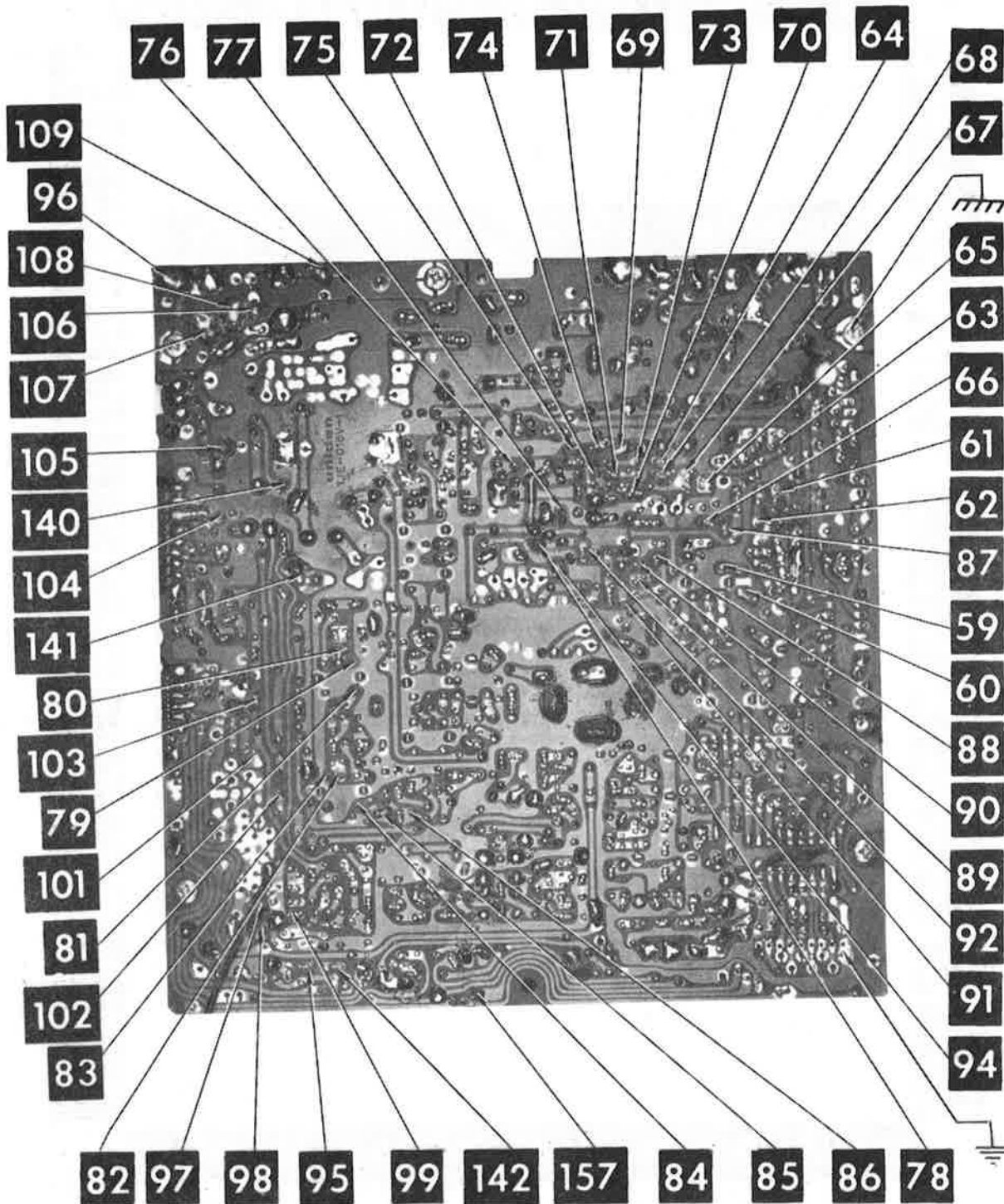
MAIN BOARD



MAIN BOARD

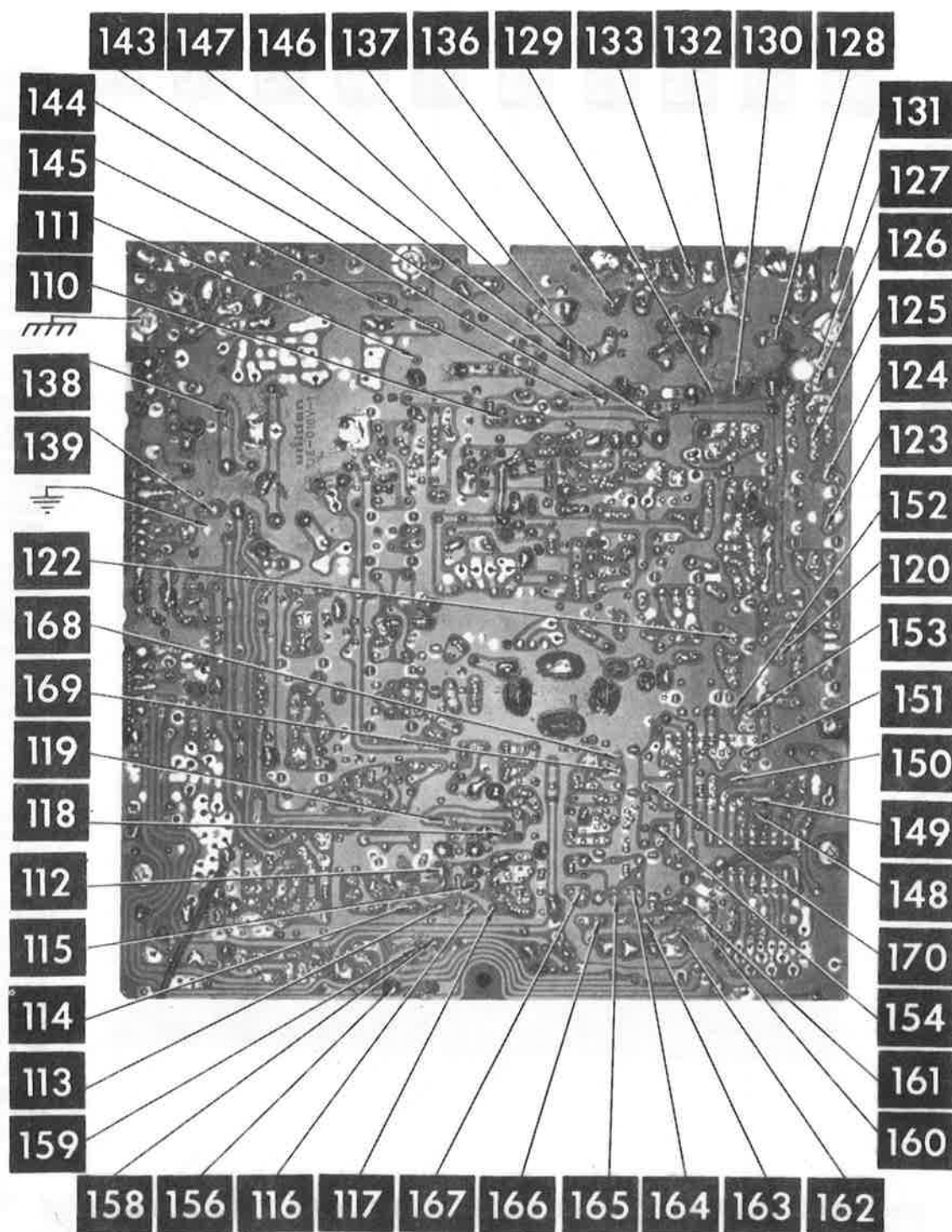


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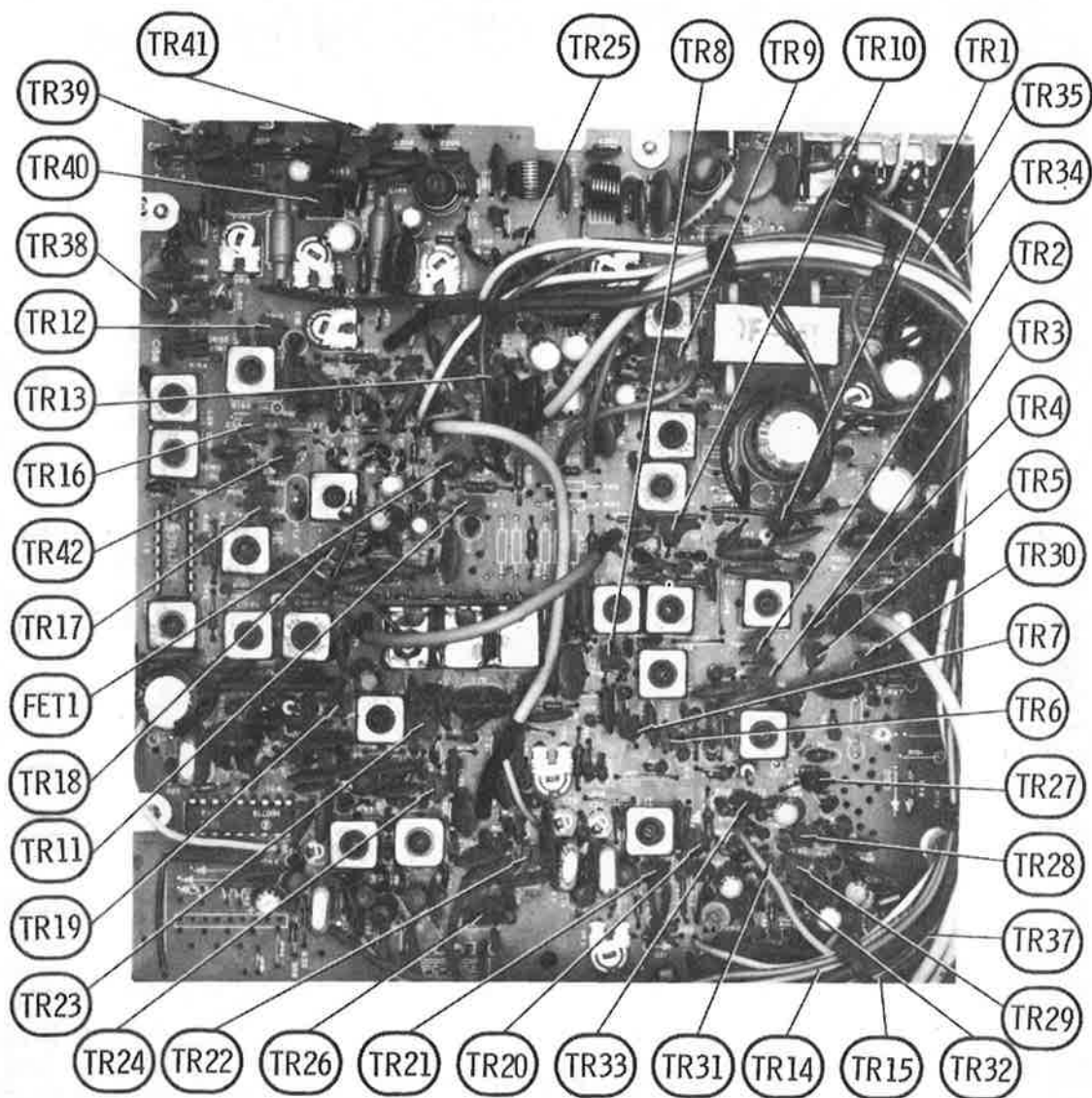


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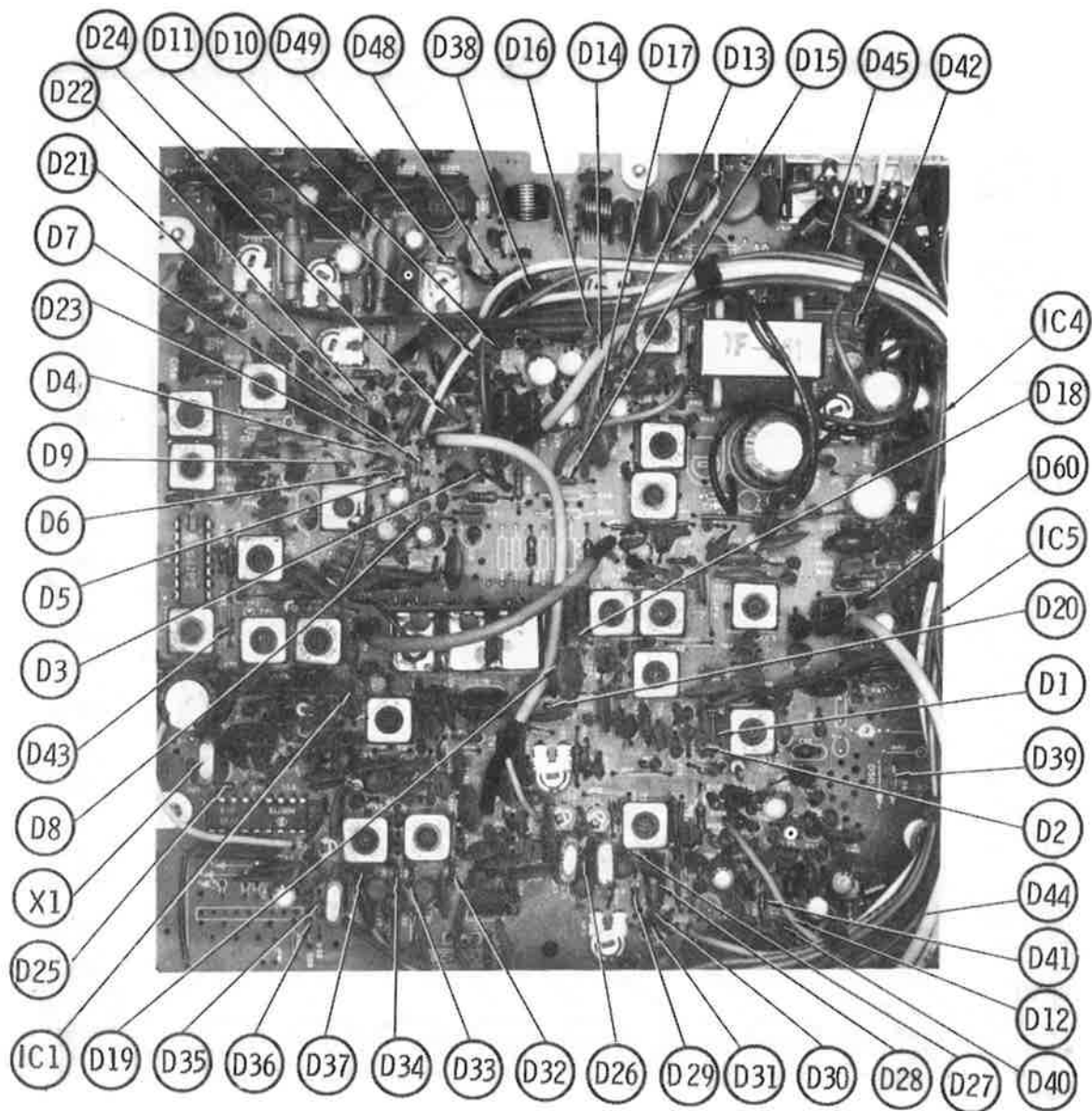
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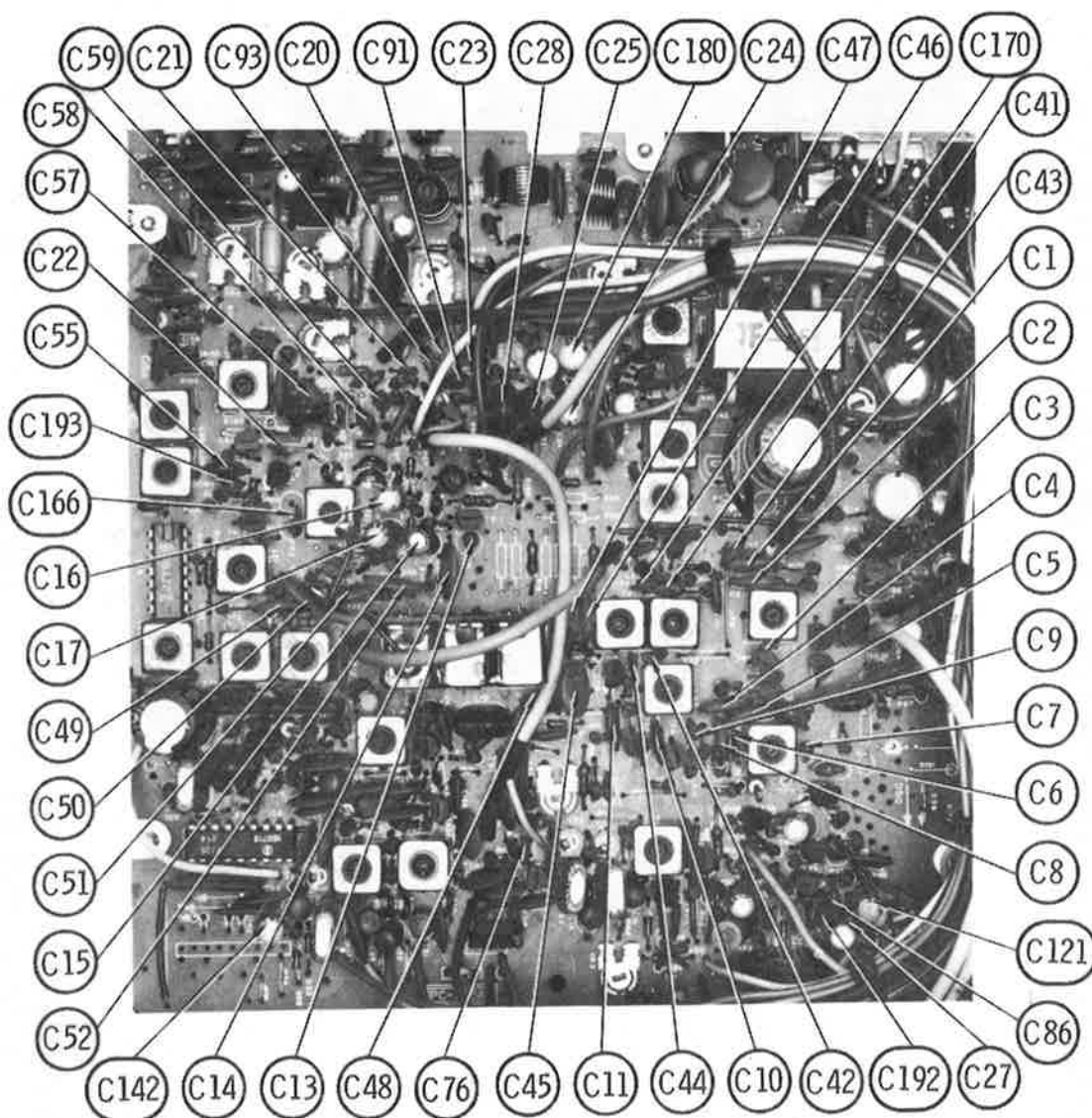
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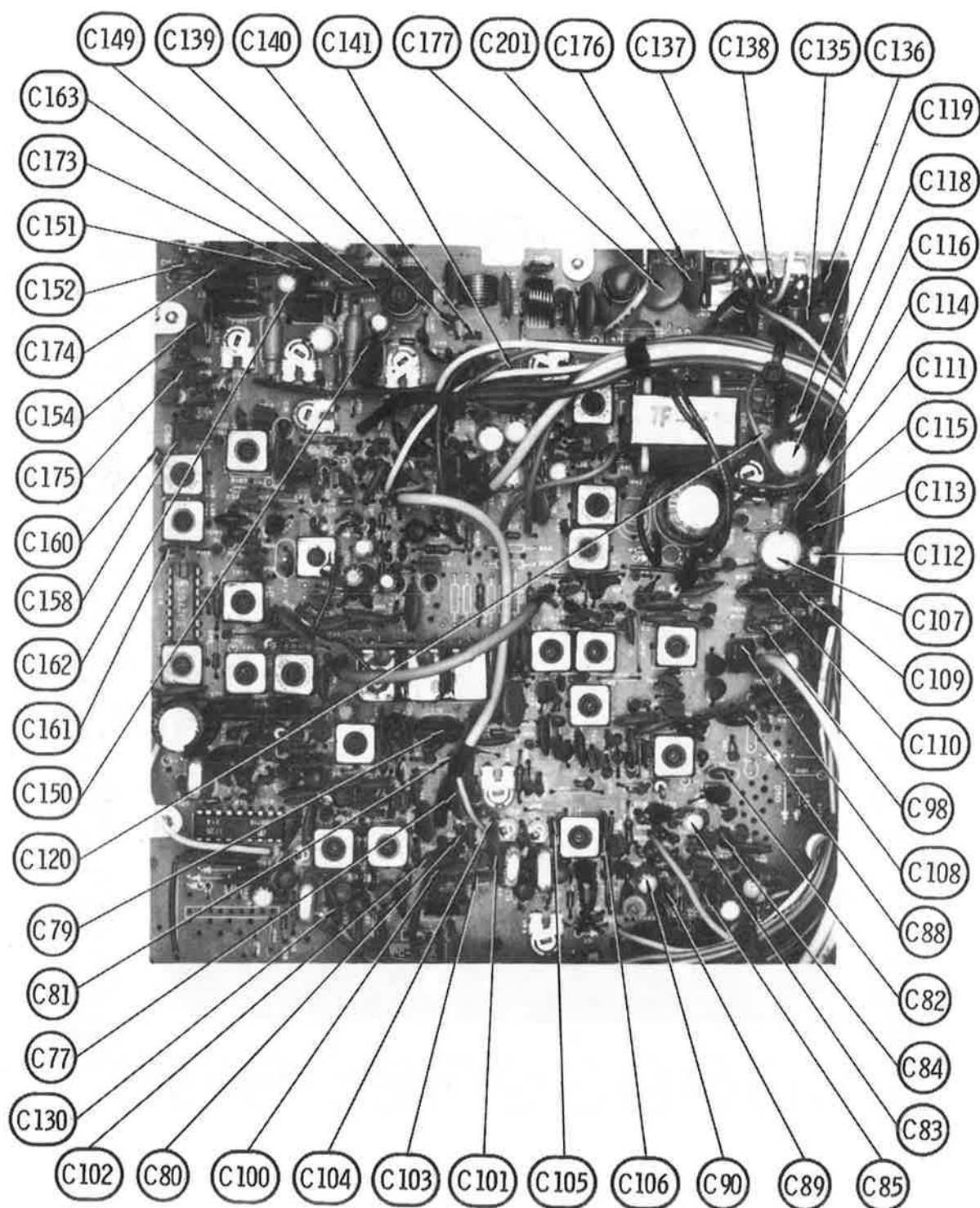
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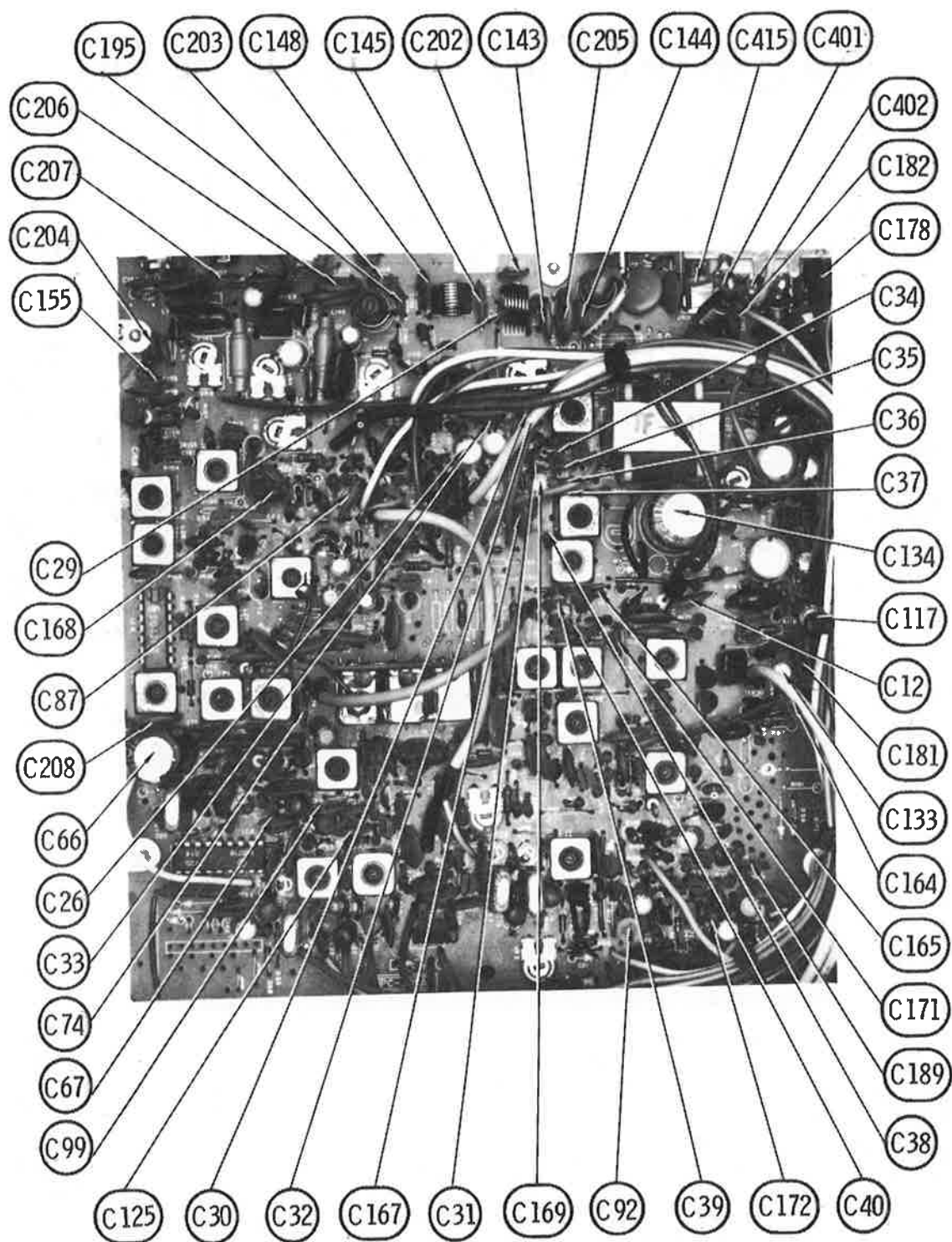
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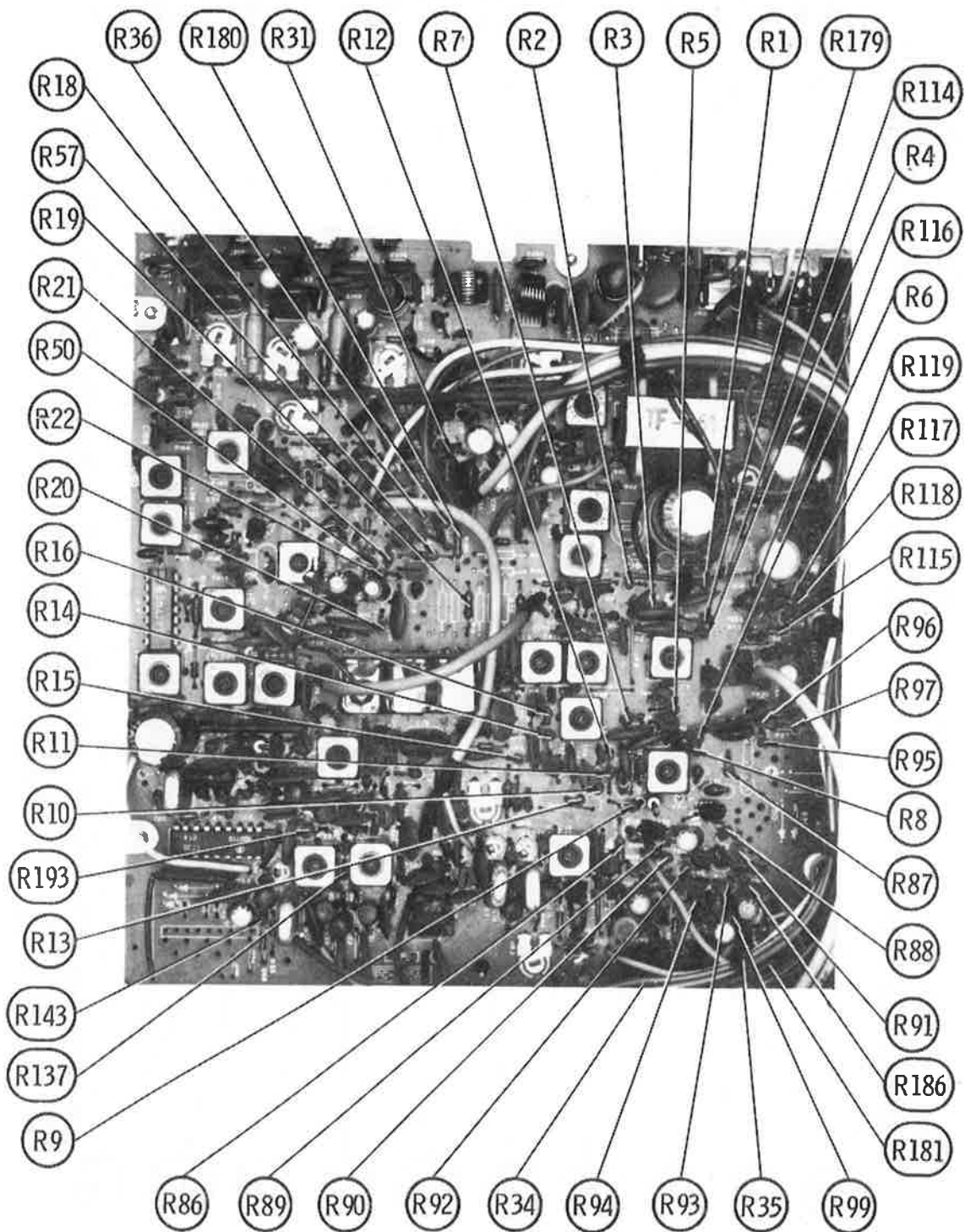
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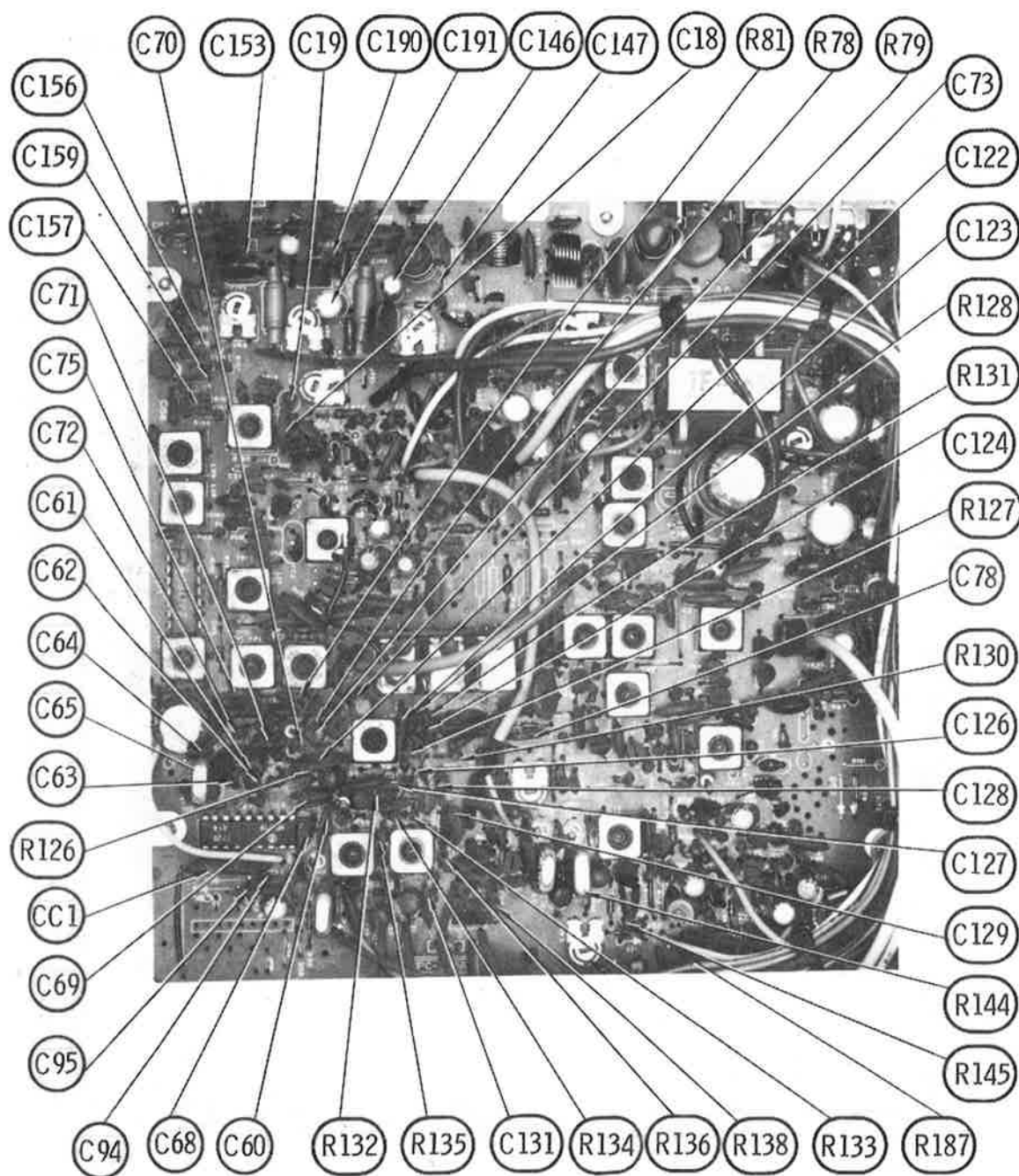
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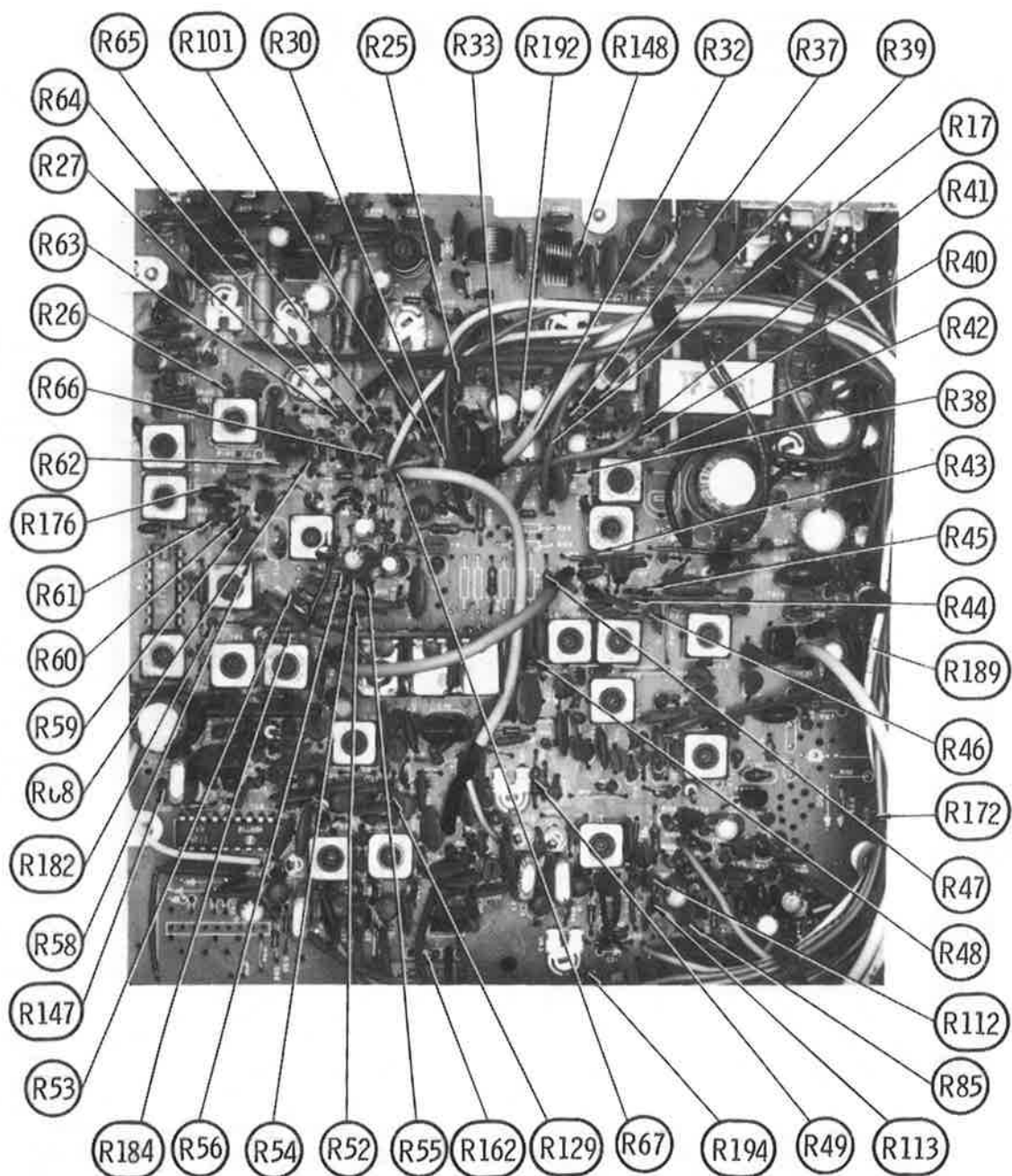
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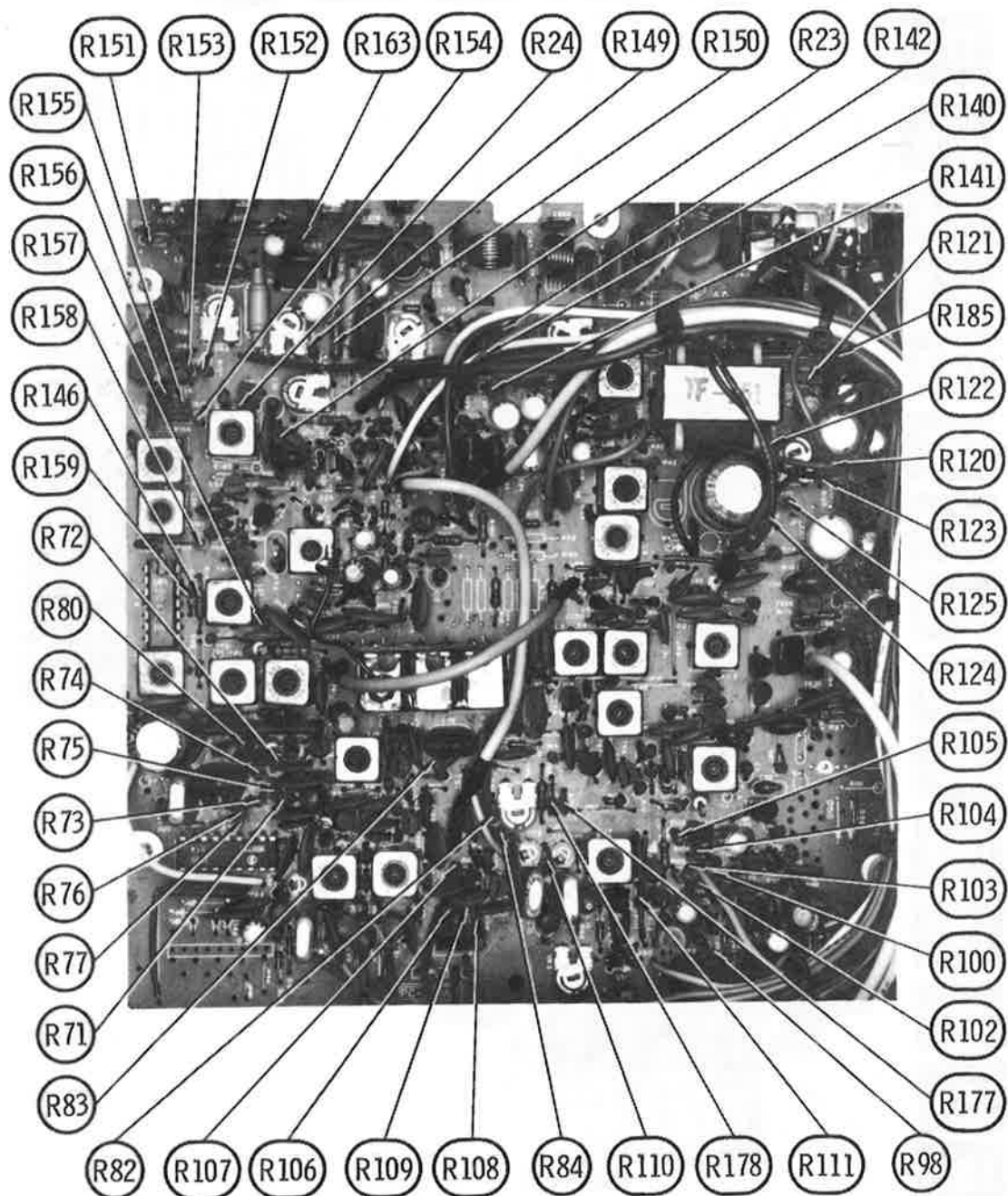
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MAIN BOARD

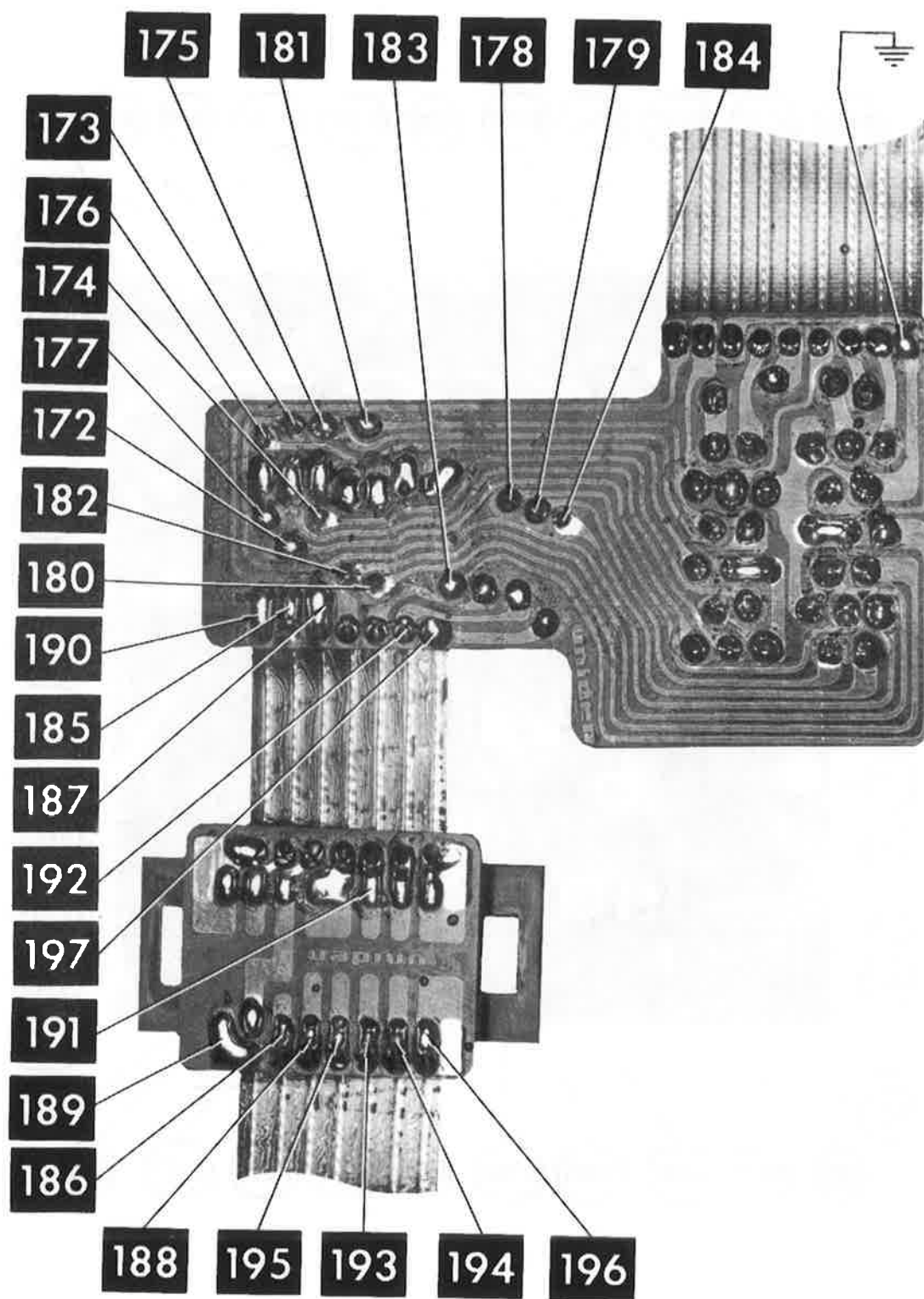


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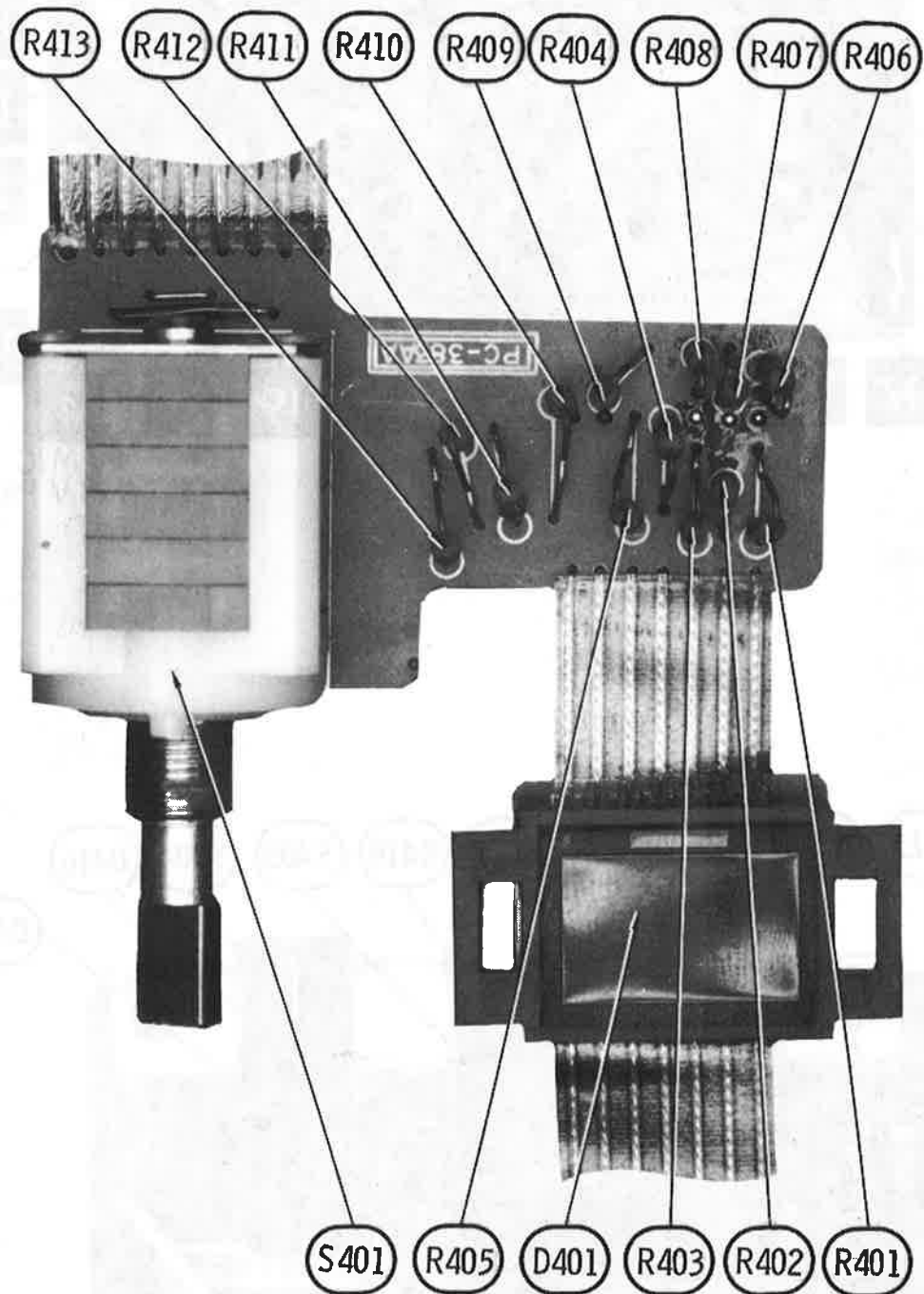


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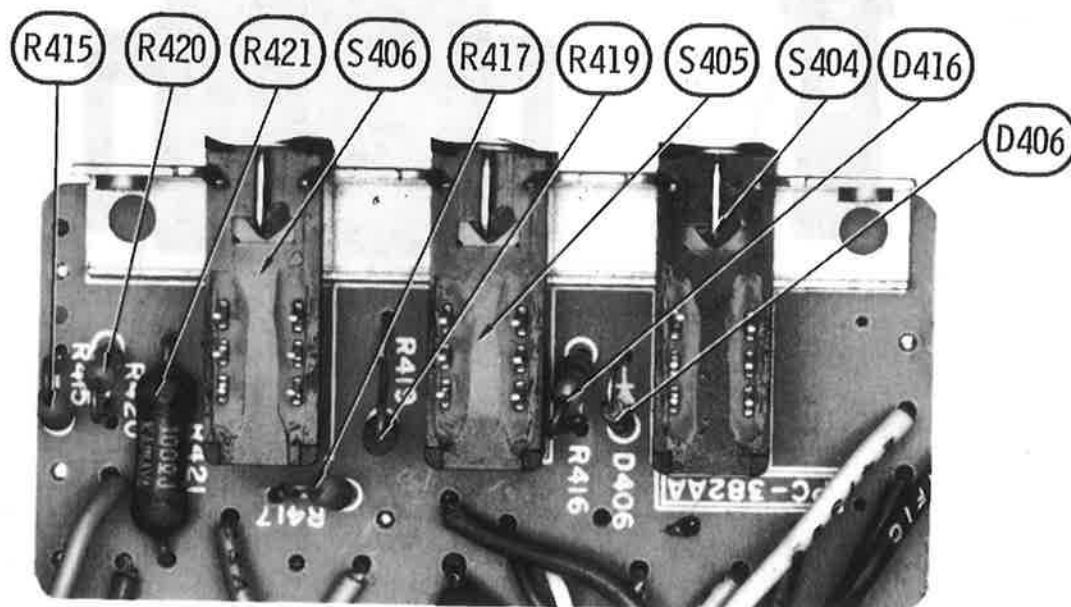
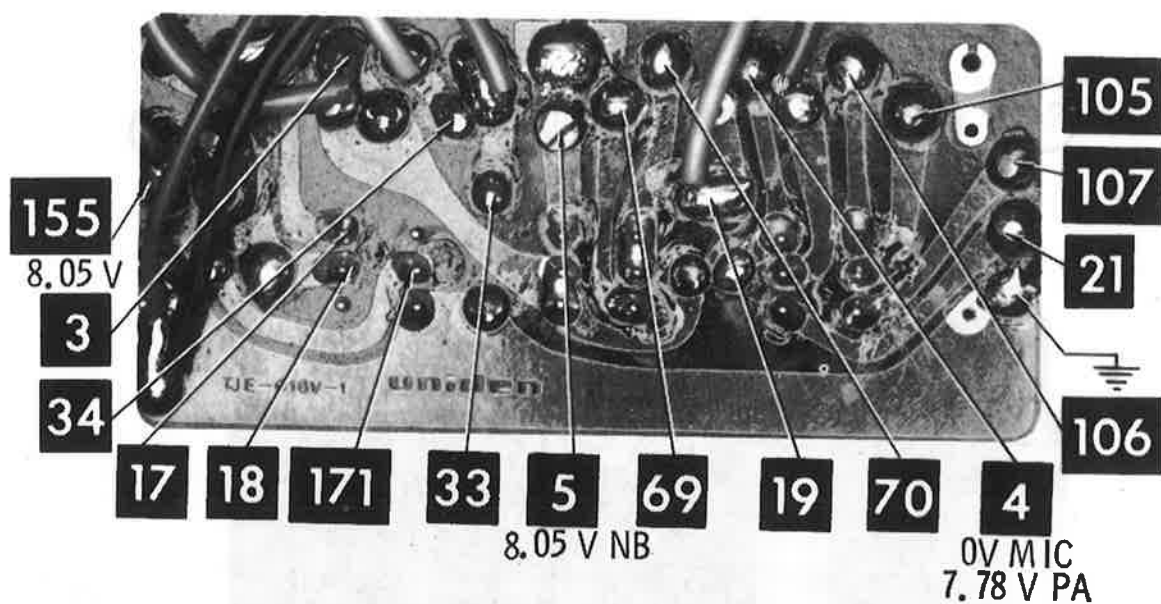
MAIN BOARD



CH. SELECTOR & READOUT BOARD



CH. SELECTOR & READOUT BOARD



SWITCH BOARD



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PARTS LIST AND DESCRIPTION

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

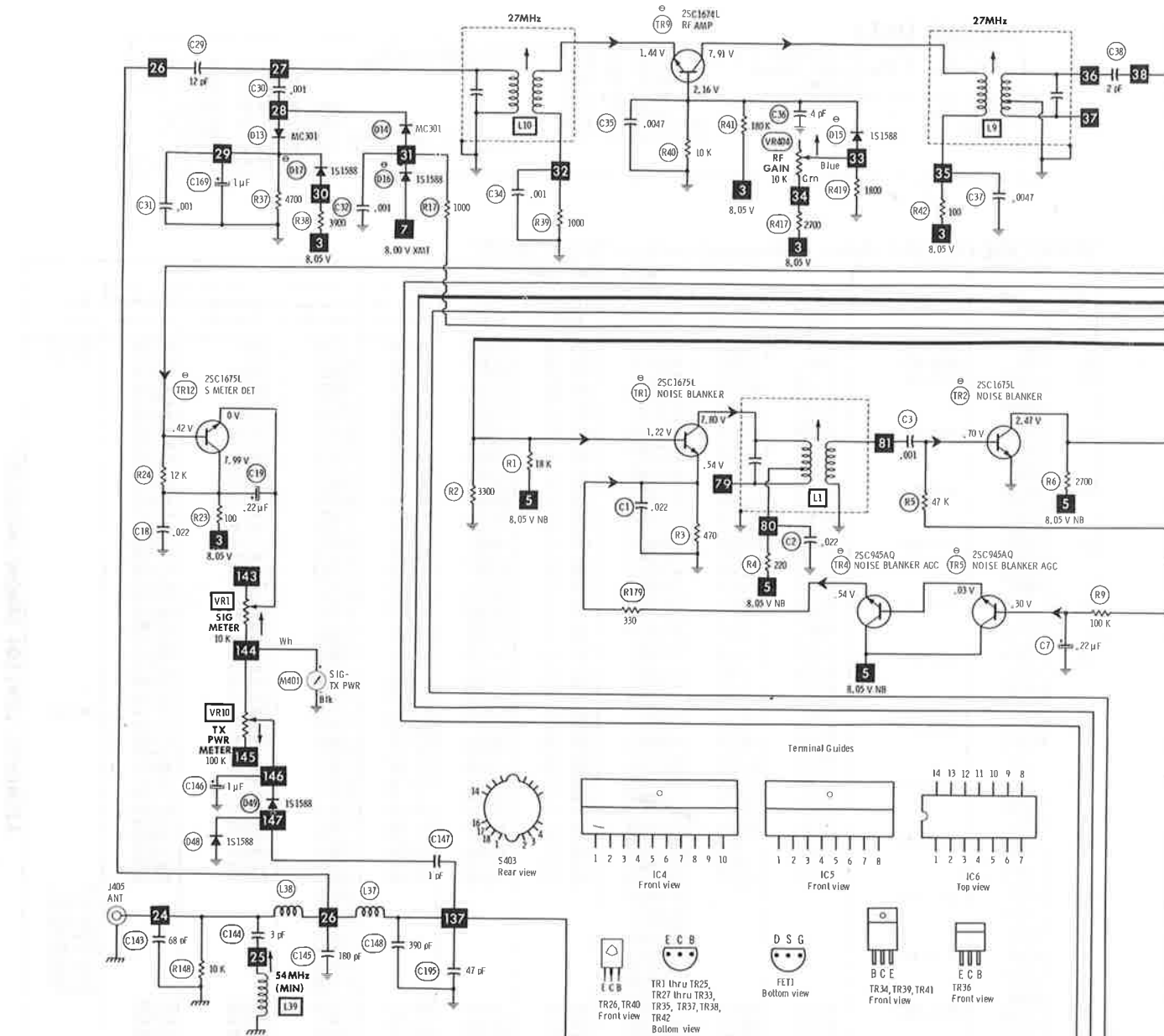
WIRING DATA

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.	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	1N60	2000-318	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	1N60	WEP134	ZEN-430
D2	1N60	2000-318	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	1N60	WEP134	ZEN-430
D3	1S1588	2000-332	GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S2473		GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S2472		GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S953		GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
D4	1S1588	2000-332	GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S2473		GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S2472		GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S953		GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
D5	1S1588	2000-332	GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S2473		GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S2472		GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S953		GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
D6	1S1588	2000-332	GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S2473		GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S2472		GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S953		GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
D7	1S1588	2000-332	GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
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	1S953		GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
D8	1S1588	2000-332	GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S2473		GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S2472		GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S953		GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
D9	1N60	2000-318	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	1N60	WEP134	ZEN-430
D10	1S1588	2000-332	GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S2473		GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S2472		GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S953		GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
D11	1S1588	2000-332	GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S2473		GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S2472		GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S953		GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
D12	1S1588	2000-332	GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S2473		GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S2472		GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S953		GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
D13	MC301	2000-341			HEPR2500				ECG610			ZEN-450
	1S2186				HEPR2500				ECG610			ZEN-450
	BA243				HEPR2500				ECG610			ZEN-450
	BA244				HEPR2500				ECG610			ZEN-450
D14	MC301	2000-341			HEPR2500				ECG610			ZEN-450
	1S2186				HEPR2500				ECG610			ZEN-450
	BA243				HEPR2500				ECG610			ZEN-450
	BA244				HEPR2500				ECG610			ZEN-450
D15	1S1588	2000-332	GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S2473		GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S2472		GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S953		GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
D16	1S1588	2000-332	GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S2473		GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S2472		GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S953		GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
D17	1S1588	2000-332	GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S2473		GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S2472		GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S953		GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
D18	1S1588	2000-332	GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S2473		GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S2472		GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S953		GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
D19	1S1588	2000-332	GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S2473		GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S2472		GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S953		GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
D20	1S1588	2000-332	GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S2473		GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S2472		GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S953		GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
D21	1N60	2000-318	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	1N60	WEP134	ZEN-430
D22	1N60	2000-318	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	1N60	WEP134	ZEN-430
D23	1S1588	2000-332	GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S2473		GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S2472		GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S953		GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
D24	1S1588	2000-332	GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S2473		GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S2472		GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	
	1S953		GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	1N4148	WEP925	

PRESIDENT MODEL 1011001, MCKINLEY

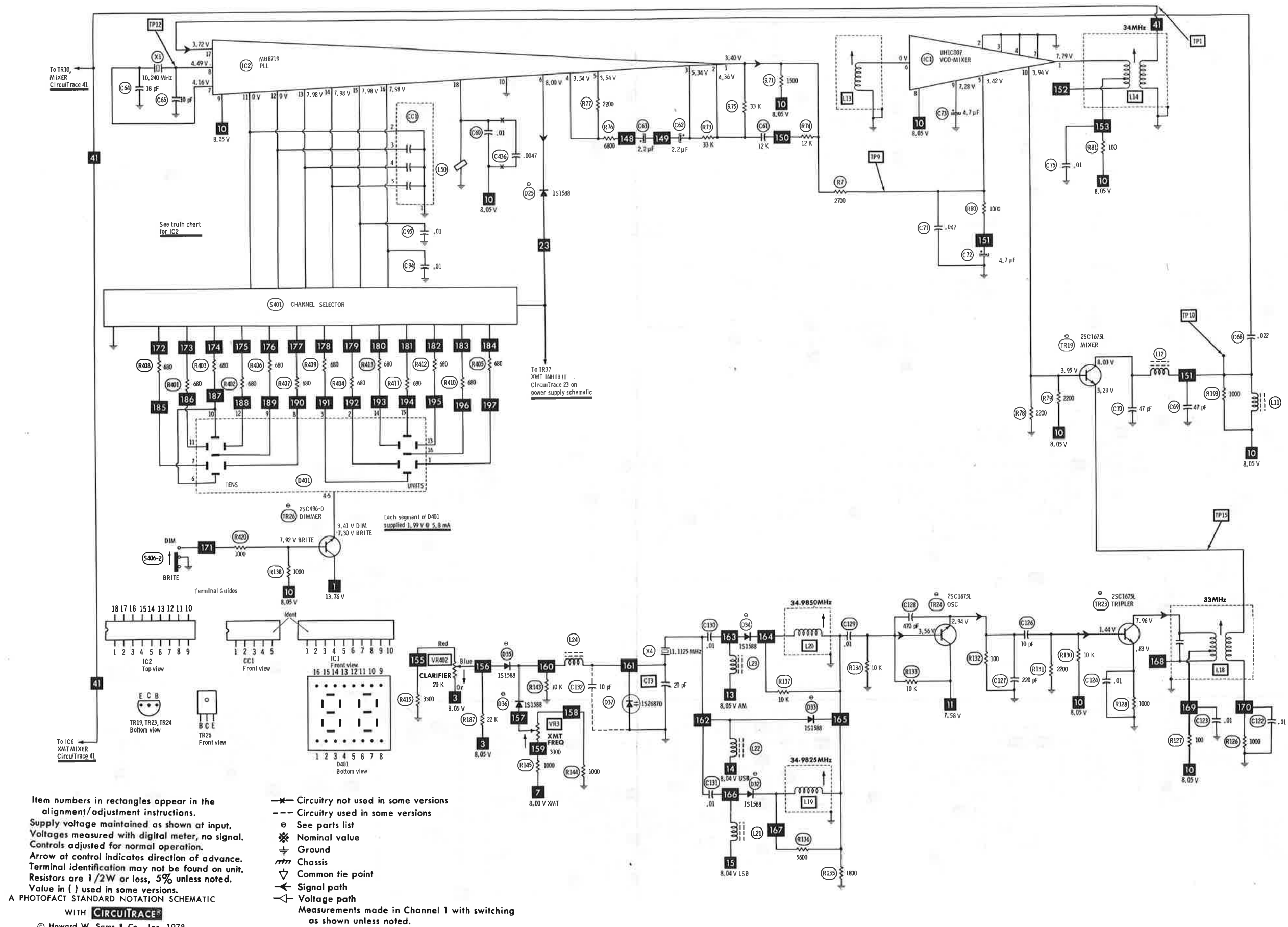




PARTS LIST AND D
(When ordering parts, state Mod)
SEMICONDUCTORS (Select

ITEM No.	TYPE No.	MFR. PART No.	GEN. ELEC. PART
D25	1S1588	2000-332	GE-5
	1S2473		GE-5
	1S2472		GE-5
D26	1S1588	2000-332	GE-5
	1S2473		GE-5
	1S2472		GE-5
D27	1S1588	2000-332	GE-5
	1S2473		GE-5
	1S2472		GE-5
D27	1S1588	2000-332	GE-5
	1S2473		GE-5
	1S2472		GE-5
D28	1S1588	2000-332	GE-5
	1S2473		GE-5
	1S2472		GE-5
D29	1S1588	2000-332	GE-5
	1S2473		GE-5
	1S2472		GE-5
D30	1S1588	2000-332	GE-5
	1S2473		GE-5
	1S2472		GE-5
D31	1S1588	2000-332	GE-5
	1S2473		GE-5
	1S2472		GE-5
D32	1S1588	2000-332	GE-5
	1S2473		GE-5
	1S2472		GE-5
D33	1S1588	2000-332	GE-5
	1S2473		GE-5
	1S2472		GE-5
D34	1S1588	2000-332	GE-5
	1S2473		GE-5
	1S2472		GE-5
D35	1S1588	2000-332	GE-5
	1S2473		GE-5
	1S2472		GE-5
D36	1S1588	2000-332	GE-5
	1S2473		GE-5
	1S2472		GE-5
D37	1S2687	2000-323	GE-5
	1S2687D		GE-5
D38	1S1588	2000-332	GE-5
	1S2473		GE-5
	1S2472		GE-5
D39	1S1588	2000-332	GE-5
	1S2473		GE-5
	1S2472		GE-5
D40	1S1588	2000-332	GE-5
	1S2473		GE-5
	1S2472		GE-5
D41	1S1588	2000-332	GE-5
	1S2473		GE-5
	1S2472		GE-5
D42	1S1588	2000-318	GE-5
D43	1S1588	2000-332	GE-5
	1S2473		GE-5
	1S2472		GE-5
D44	1S1588	2000-332	GE-5
	1S2473		GE-5
	1S2472		GE-5
D45	SR1K2	2000-320	GE-5
D46	MV-1Y	2000-339	GE-5
D47	MV-13YH	2000-342	GE-5
D48	1S1588	2000-332	GE-5
	1S2473		GE-5
	1S2472		GE-5
D49	1S1588	2000-332	GE-5
	1S2473		GE-5
	1S2472		GE-5
	1S952		GE-5
D406	1N60	2000-318	GE-5
FET1	2SK19BL		GE-F
	2SK19K		GE-F
	2SK19	2000-105	GE-F
	JF1033		GE-F
	2N233B		GE-F
	2SK33		GE-F
	2SK55		GE-F
	2SK104		GE-F

PRESIDENT MODEL 1011001, MCKINLEY



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

			REPLACEMENT DATA



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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.	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.
IC1	UHC007	2000-029										
IC2	MB8719	2000-030										
IC3	AN612	2000-031										
IC4	TA7222P	2000-032										
IC5	MP3756	2000-033										
IC6	5042P	2000-034										
TR1	2SC1675L	2000-213	GE-213	PTC132*	HEPS0025*	REN 123A*	SK3246	RT-308	ECG229*		WEP956*	ZEN-127
	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*	121-29000*
	2SC1674		GE-61*	PTC132*	HEPS0010*	REN 107	SK3246	RT-308	ECG229*	2SC535	WEP956*	
	2SC1730		GE-17*	PTC136*	HEPS0025*	REN 107	SK3018*	RT-107A	ECG316*		WEP535	121-888
TR2	2SC1675,L	2000-213	GE-213	PTC132*	HEPS0025*	REN 123A*	SK3246	RT-308	ECG229*		WEP956*	ZEN-127
	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*	121-29000*
	2SC1674		GE-210*	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	2SC373	WEP66	ZEN-119
	2SC1730		GE-17*	PTC136*	HEPS0025*	REN 107	SK3018*	RT-107A	ECG316*		WEP535	121-888
TR3	2SC1730,L	2000-214	GE-17*	PTC136*	HEPS0025*	REN 107	SK3018*	RT-107A	ECG316*		WEP535	121-888
	2SC1675		GE-213	PTC132*	HEPS0025*	REN 123A*	SK3246	RT-308	ECG229*		WEP956*	ZEN-127
	2SC1674		GE-61*	PTC132*	HEPS0010*	REN 107	SK3246	RT-308	ECG229*	2SC535	WEP956*	
	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*	121-29000*
TR4	2SC945AQ	2000-235	GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	2SC945	WEP1945	121-29000*
	2SC945A		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	2SC945	WEP1945	121-29000*
	2SC458		GE-210*	PTC121*	HEPS0009*	REN 123A*	SK3122	RT-187	ECG289	2SC458	WEP458	121-29000*
	2SC372		GE-61*	PTC121*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	2SC372	WEP372	121-29000*
	2SC900		GE-62	PTC139*	HEPS0015*	REN 199	SK3124	RT-302	ECG199	2SC900	WEP66	ZEN-119
	2SC828		GE-61*	PTC139*	HEPS0015*	REN 199	SK3444	RT-302	ECG199	2SC828	WEP828	ZEN-119
	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	121-29000*
TR5	2SC945A	2000-235	GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	2SC945	WEP1945	121-29000*
	2SC458		GE-210*	PTC121*	HEPS0009*	REN 123A*	SK3122	RT-187	ECG289	2SC458	WEP458	121-29000*
	2SC372		GE-61*	PTC121*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	2SC372	WEP372	121-29000*
	2SC900		GE-62	PTC139*	HEPS0015*	REN 199	SK3124	RT-302	ECG199	2SC900	WEP66	ZEN-119
	2SC828		GE-61*	PTC139*	HEPS0015*	REN 199	SK3444	RT-302	ECG199	2SC828	WEP828	ZEN-119
	2SC1740		GE-62	PTC121*	HEPS0015*	REN 123A*	SK3122	RT-109*	ECG123A*		WEP736*	121-972
TR6	2SC1675,L	2000-213	GE-213	PTC132*	HEPS0025*	REN 123A*	SK3246	RT-308	ECG229*		WEP956*	ZEN-127
	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*	121-29000*
	2SC1674		GE-61*	PTC132*	HEPS0010*	REN 107	SK3246	RT-308	ECG229*	2SC535	WEP956*	
	2SC1730		GE-17*	PTC136*	HEPS0025*	REN 107	SK3018*	RT-107A	ECG316*		WEP535	121-888
TR7	2SA733	2000-218	GE-48	PTC144*	HEPS3012*	REN 129*	SK3114	RT-115*	ECG129*		WEP60*	
	2SA495		GE-221*	PTC103*	HEPS0013*	REN 159*	SK3466	RT-303	ECG159*	2SA495	WEP495	ZEN-106
	2SA564		GE-65	PTC103*	HEPS0019*	REN 234	SK3114	RT-303	ECG234	2SA564	WEP564	121-879
TR8	2SC945AQ	2000-235	GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	2SC945	WEP1945	121-29000*
	2SC945A		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	2SC945	WEP1945	121-29000*
	2SC458		GE-210*	PTC121*	HEPS0009*	REN 123A*	SK3122	RT-187	ECG289	2SC458	WEP458	121-29000*
	2SC372		GE-61*	PTC121*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	2SC372	WEP372	121-29000*
	2SC900		GE-62	PTC139*	HEPS0015*	REN 199	SK3124	RT-302	ECG199	2SC900	WEP66	ZEN-119
	2SC828		GE-61*	PTC139*	HEPS0015*	REN 199	SK3444	RT-302	ECG199	2SC828	WEP828	ZEN-119
	2SC1740		GE-62	PTC121*	HEPS0015*	REN 123A*	SK3122	RT-109*	ECG123A*		WEP736*	121-972
TR9	2SC1674,L	2000-240	GE-61	PTC132*	HEPS0010*	REN 107	SK3246	RT-308	ECG229*	2SC535	WEP956*	
	2SC1730		GE-17*	PTC136*	HEPS0025*	REN 107	SK3018*	RT-107A	ECG316*		WEP535	121-888
	2SC1856		GE-17*	PTC136*	HEPS0025*	REN 107	SK3018*	RT-107A	ECG316*		WEP535	121-888
	2SC710		GE-211*	PTC132	HEPS0016*	REN 123A*	SK3444	RT-308	ECG123A*	2SC710	WEP710	121-29000*
TR10	2SC1675,L	2000-213	GE-213	PTC132*	HEPS0025*	REN 123A*	SK3246	RT-308	ECG229*		WEP956*	ZEN-127
	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*	121-29000*
	2SC1674		GE-61*	PTC132*	HEPS0010*	REN 107	SK3246	RT-308	ECG229*	2SC535	WEP956*	
	2SC1730		GE-17*	PTC136*	HEPS0025*	REN 107	SK3018*	RT-107A	ECG316*		WEP535	121-888
TR11	2SC945AQ	2000-235	GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	2SC945	WEP1945	121-29000*
	2SC945A		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	2SC945	WEP1945	121-29000*
	2SC458		GE-210*	PTC121*	HEPS0009*	REN 123A*	SK3122	RT-187	ECG289	2SC458	WEP458	121-29000*
	2SC372		GE-61*	PTC121*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	2SC372	WEP372	121-29000*
	2SC900		GE-62	PTC139*	HEPS0015*	REN 199	SK3124	RT-302	ECG199	2SC900	WEP66	ZEN-119
	2SC828		GE-61*	PTC139*	HEPS0015*	REN 199	SK3444	RT-302	ECG199	2SC828	WEP828	ZEN-119
	2SC1740		GE-62	PTC121*	HEPS0015*	REN 123A*	SK3122	RT-109*	ECG123A*		WEP736*	121-972
TR12	2SC1675,L	2000-213	GE-213	PTC132*	HEPS0025*	REN 123A*	SK3246	RT-308	ECG229*		WEP956*	ZEN-127
	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*	121-29000*
	2SC1674		GE-61*	PTC132*	HEPS0010*	REN 107	SK3246	RT-308	ECG229*	2SC535	WEP956*	
	2SC1730		GE-17*	PTC136*	HEPS0025*	REN 107	SK3018*	RT-107A	ECG316*		WEP535	121-888
TR13	2SC945AQ	2000-235	GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	2SC945	WEP1945	121-29000*
	2SC945A		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	2SC945	WEP1945	121-29000*
	2SC458		GE-210*	PTC121*	HEPS0009*	REN 123A*	SK3122	RT-187	ECG289	2SC458	WEP458	121-29000*
	2SC372		GE-61*	PTC121*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	2SC372	WEP372	121-29000*
	2SC900		GE-62	PTC139*	HEPS0015*	REN 199	SK3124	RT-302	ECG199	2SC900	WEP66	ZEN-119
	2SC828		GE-61*	PTC139*	HEPS0015*	REN 199	SK3444	RT-302	ECG199	2SC828	WEP828	ZEN-119
	2SC1740		GE-62	PTC121*	HEPS0015*	REN 123A*	SK3122	RT-109*	ECG123A*		WEP736*	121-972
TR14	2SA733	2000-218	GE-48	PTC144*	HEPS3012*	REN 129*	SK3114	RT-115*	ECG129*		WEP60*	
	2SA495		GE-221*	PTC103*	HEPS0013*	REN 159*	SK3466	RT-303	ECG159*	2SA495	WEP495	ZEN-106
	2SA564		GE-65	PTC103*	HEPS0019*	REN 234	SK3114	RT-303	ECG234	2SA564	WEP564	121-879
TR15	2SC945AQ	2000-235	GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	2SC945	WEP1945	121-29000*
	2SC945A		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	2SC945	WEP1945	121-29000*
	2SC458		GE-210*	PTC121*	HEPS0009*	REN 123A*	SK3122	RT-187	ECG289	2SC458	WEP458	121-29000*
	2SC372		GE-61*	PTC121*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	2SC372	WEP372	121-29000*
	2SC900		GE-62	PTC139*	HEPS0015*	REN 199	SK3124	RT-302	ECG199	2SC900	WEP66	ZEN-119
	2SC828		GE-61*	PTC139*	HEPS0015*	REN 199	SK3444	RT-302	ECG199	2SC828	WEP828	ZEN-119
	2SC1740		GE-62	PTC121*	HEPS0015*	REN 123A*	SK3122	RT-109*	ECG123A*		WEP736*	121-972

PRESIDENT MODEL 1011001, MCKINLEY

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.
TR16	2SC1730, L	2000-214	GE-17*	PTC136*	HEPS0025*	REN 107	SK3018*	RT-107A	ECG316*		WEP535	121-888
			GE-213	PTC132*	HEPS0025*	REN 123A*	SK3246	RT-308	ECG229*		WEP956*	ZEN-127
			GE-61	PTC132*	HEPS0010*	REN 107	SK3246	RT-308	ECG229*	2SC535	WEP956*	
			GE-61*	PTC136*	HEPS0014*	REN 107	SK3122	RT-134	ECG107	2SC460	WEP460	121-722
TR17	2SC1675, L	2000-213	GE-61*	PTC132*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	2SC839	WEP736*	121-29000*
			GE-213	PTC132*	HEPS0025*	REN 123A*	SK3246	RT-308	ECG229*		WEP956*	ZEN-127
			GE-61*	PTC136*	HEPS0014*	REN 107	SK3122	RT-134	ECG107	2SC460	WEP460	121-722
			GE-61*	PTC132*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	2SC839	WEP736*	121-29000*
TR18	2SC1674, L	2000-240	GE-61*	PTC132*	HEPS0010*	REN 107	SK3246	RT-308	ECG229*	2SC535	WEP956*	
			GE-17*	PTC136*	HEPS0025*	REN 107	SK3018*	RT-107A	ECG316*		WEP535	121-888
			GE-61	PTC132*	HEPS0010*	REN 107	SK3246	RT-308	ECG229*	2SC535	WEP956*	
			GE-213	PTC132*	HEPS0025*	REN 229*	SK3018*	RT-108A*	ECG229*		WEP956*	ZEN-127
TR19	2SC1675	2000-213	GE-60*	PTC132*	HEPS0016*	REN 123A*	SK3246	RT-308	ECG229*	2SC930	WEP956*	ZEN-127
			GE-213	PTC132*	HEPS0025*	REN 123A*	SK3246	RT-308	ECG229*		WEP956*	ZEN-127
			GE-61*	PTC136*	HEPS0014*	REN 107	SK3122	RT-134	ECG107	2SC460	WEP460	121-722
			GE-61*	PTC132*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	2SC839	WEP736*	121-29000*
TR20	2SC1730	2000-235	GE-17*	PTC136*	HEPS0025*	REN 107	SK3018*	RT-107A	ECG316*		WEP535	121-888
			GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	2SC945	WEP1945	121-29000
			GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	2SC945	WEP1945	121-29000
			GE-210*	PTC121*	HEPS0009*	REN 123A*	SK3122	RT-187	ECG289	2SC458	WEP458	121-29000*
TR21	2SC1675, L	2000-213	GE-61*	PTC132*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	2SC372	WEP372	121-29000*
			GE-62	PTC139*	HEPS0015*	REN 199	SK3124	RT-302	ECG199	2SC900	WEP66	ZEN-119
			GE-61*	PTC139*	HEPS0015*	REN 199	SK3444	RT-302	ECG199	2SC828	WEP828	ZEN-119
			GE-62	PTC121*	HEPS0015*	REN 123A*	SK3122	RT-109*	ECG123A*		WEP736*	121-972
TR22	2SC1675, L	2000-213	GE-213	PTC132*	HEPS0025*	REN 123A*	SK3246	RT-308	ECG229*	2SC460	WEP956*	ZEN-127
			GE-61*	PTC136*	HEPS0014*	REN 107	SK3122	RT-134	ECG107	2SC460	WEP460	121-722
			GE-61*	PTC132*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	2SC839	WEP736*	121-29000*
			GE-61*	PTC136*	HEPS0010*	REN 107	SK3246	RT-308	ECG229*	2SC535	WEP956*	
TR23	2SC1675, L	2000-213	GE-213	PTC132*	HEPS0025*	REN 123A*	SK3246	RT-308	ECG229*		WEP535	121-888
			GE-61*	PTC136*	HEPS0014*	REN 107	SK3122	RT-134	ECG107	2SC460	WEP460	121-722
			GE-61*	PTC132*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	2SC839	WEP736*	121-29000*
			GE-61*	PTC136*	HEPS0010*	REN 107	SK3246	RT-308	ECG229*	2SC535	WEP956*	
TR24	2SC1675, L	2000-213	GE-17*	PTC136*	HEPS0025*	REN 107	SK3018*	RT-107A	ECG316*		WEP535	121-888
			GE-213	PTC132*	HEPS0025*	REN 123A*	SK3246	RT-308	ECG229*		WEP956*	ZEN-127
			GE-61*	PTC136*	HEPS0014*	REN 107	SK3122	RT-134	ECG107	2SC460	WEP460	121-722
			GE-61*	PTC132*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	2SC839	WEP736*	121-29000*
TR25	2SC1675, L	2000-213	GE-61	PTC132*	HEPS0010*	REN 107	SK3246	RT-308	ECG229*	2SC535	WEP956*	
			GE-17*	PTC136*	HEPS0025*	REN 107	SK3018*	RT-107A	ECG316*		WEP535	121-888
			GE-213	PTC132*	HEPS0025*	REN 123A*	SK3246	RT-308	ECG229*		WEP956*	ZEN-127
			GE-61*	PTC136*	HEPS0014*	REN 107	SK3122	RT-134	ECG107	2SC460	WEP460	121-722
TR26	2SC496-0	2000-241	GE-57	PTC163	HEPS5000	REN 295	SK3253	RT-162	ECG295	2SC496	WEP880	
			GE-336	PTC904		REN 295	SK3253		ECG295	2SC496	WEP913	800-767
			GE-268	PTC144*	HEPS3001*	REN 289	SK3124	RT-114*	ECG289		WEP910	121-1014
			GE-336	PTC904		REN 295	SK3253		ECG295	2SC496	WEP913	800-767
TR27	2SC945AQ	2000-235	GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	2SC945	WEP1945	121-29000
			GE-210*	PTC121*	HEPS0009*	REN 123A*	SK3122	RT-187	ECG289	2SC458	WEP458	121-29000*
			GE-61*	PTC121*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	2SC372	WEP372	121-29000*
			GE-62	PTC139*	HEPS0015*	REN 199	SK3124	RT-302	ECG199	2SC900	WEP66	ZEN-119
TR28	2SC1740	2000-235	GE-61*	PTC139*	HEPS0015*	REN 199	SK3444	RT-302	ECG199	2SC828	WEP828	ZEN-119
			GE-62	PTC121*	HEPS0015*	REN 123A*	SK3122	RT-109*	ECG123A*		WEP736*	121-972
			GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	2SC945	WEP1945	121-29000
			GE-210*	PTC121*	HEPS0009*	REN 123A*	SK3122	RT-187	ECG289	2SC458	WEP458	121-29000*
TR29	2SC945AQ	2000-235	GE-61*	PTC132*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	2SC372	WEP372	121-29000*
			GE-62	PTC139*	HEPS0015*	REN 199	SK3124	RT-302	ECG199	2SC900	WEP66	ZEN-119
			GE-61*	PTC139*	HEPS0015*	REN 199	SK3444	RT-302	ECG199	2SC828	WEP828	ZEN-119
			GE-62	PTC121*	HEPS0015*	REN 123A*	SK3122	RT-109*	ECG123A*		WEP736*	121-972
TR30	2SC945AQ	2000-218	GE-48	PTC144*	HEPS3012*	REN 129*	SK3114	RT-115*	ECG129*		WEP60*	
			GE-221*	PTC103*	HEPS0013*	REN 159*	SK3466	RT-303	ECG159*	2SA495	WEP495	ZEN-106
			GE-65	PTC103*	HEPS0019*	REN 234	SK3114	RT-303	ECG234	2SA564	WEP564	121-879
			GE-48	PTC144*	HEPS3012*	REN 129*	SK3114	RT-115*	ECG129*		WEP60*	
TR31	2SC945AQ	2000-218	GE-65	PTC103*	HEPS0019*	REN 234	SK3114	RT-303	ECG234	2SA495	WEP495	ZEN-106
			GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	2SC945	WEP1945	121-29000
			GE-210*	PTC121*	HEPS0009*	REN 123A*	SK3122	RT-187	ECG289	2SC458	WEP458	121-29000*
			GE-61*	PTC121*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	2SC372	WEP372	121-29000*
TR32	2SC945AQ	2000-235	GE-62	PTC139*	HEPS0015*	REN 199	SK3124	RT-302	ECG199	2SC900	WEP66	ZEN-119
			GE-61*	PTC139*	HEPS0015*	REN 199	SK3444	RT-302	ECG199	2SC828	WEP828	ZEN-119
			GE-62	PTC121*	HEPS0015*	REN 123A*	SK3122	RT-109*	ECG123A*		WEP736*	121-972
			GE-61*	PTC139*	HEPS0015*	REN 199	SK3444	RT-302	ECG199	2SC828	WEP828	ZEN-119

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.	MFGR. 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.
TR33	2SC945AQ	2000-235	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*
	2SC900		GE-62	PTC139*	HEPS0015*	REN 199	SK3124	RT-302	ECG199	2SC900	WEP66	ZEN-119
	2SC828		GE-61*	PTC139*	HEPS0015*	REN 199	SK3444	RT-302	ECG199	2SC828	WEP828	ZEN-119
	2SC1740		GE-62	PTC121*	HEPS0015*	REN 123A*	SK3122	RT-109*	ECG123A*		WEP736*	121-972
	2SC1419C		GE-66	PTC167	HEPS0027	REN 152	SK3054	RT-197	ECG152		WEP745	
	2SD325		GE-28	PTC110	HEPS0027	REN 186	SK3197	RT-197	ECG186	2SD325	WEP751	
	2SC1096		GE-28	PTC110	HEPS3041	REN 186	SK3197	RT-166	ECG186A	2SC1096	WEP1096	
TR34	2SD235	2000-216	GE-66	PTC154	HEPS0061	REN 152	SK3054	RT-197	ECG152	2SD235	WEP745	121-987-02
	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*
	2SC900		GE-62	PTC139*	HEPS0015*	REN 199	SK3124	RT-302	ECG199	2SC900	WEP66	ZEN-119
	2SC828		GE-61*	PTC139*	HEPS0015*	REN 199	SK3444	RT-302	ECG199	2SC828	WEP828	ZEN-119
	2SC1740		GE-62	PTC121*	HEPS0015*	REN 123A*	SK3122	RT-109*	ECG123A*		WEP736*	121-972
	2SC458C		GE-210*	PTC121*	HEPS0009*	REN 123A*	SK3122	RT-187	ECG289	2SC458	WEP458	121-Z9000*
	2SC458		GE-210*	PTC121*	HEPS0009*	REN 123A*	SK3122	RT-187	ECG289	2SC458	WEP458	121-Z9000*
TR35	2SC945AQ	2000-235	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*
	2SC900		GE-62	PTC139*	HEPS0015*	REN 199	SK3124	RT-302	ECG199	2SC900	WEP66	ZEN-119
	2SC828		GE-61*	PTC139*	HEPS0015*	REN 199	SK3444	RT-302	ECG199	2SC828	WEP828	ZEN-119
	2SC1740		GE-62	PTC121*	HEPS0015*	REN 123A*	SK3122	RT-109*	ECG123A*		WEP736*	121-972
	2SC458C		GE-210*	PTC121*	HEPS0009*	REN 123A*	SK3122	RT-187	ECG289	2SC458	WEP458	121-Z9000*
	2SC458		GE-210*	PTC121*	HEPS0009*	REN 123A*	SK3122	RT-187	ECG289	2SC458	WEP458	121-Z9000*
	2SC945		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	2SC945	WEP1945	121-Z9000
TR36	2SC900	2000-203	GE-62	PTC139*	HEPS0015*	REN 199	SK3124	RT-302	ECG199	2SC900	WEP66	ZEN-119
	2SC828		GE-61*	PTC139*	HEPS0015*	REN 199	SK3444	RT-302	ECG199	2SC828	WEP828	ZEN-119
	2SC1740		GE-62	PTC121*	HEPS0015*	REN 123A*	SK3122	RT-109*	ECG123A*		WEP736*	121-972
	2SC458C		GE-210*	PTC121*	HEPS0009*	REN 123A*	SK3122	RT-187	ECG289	2SC458	WEP458	121-Z9000*
	2SC458		GE-210*	PTC121*	HEPS0009*	REN 123A*	SK3122	RT-187	ECG289	2SC458	WEP458	121-Z9000*
	2SC945		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	2SC945	WEP1945	121-Z9000
	2SC900		GE-62	PTC139*	HEPS0015*	REN 199	SK3124	RT-302	ECG199	2SC900	WEP66	ZEN-119
	2SC828		GE-61*	PTC139*	HEPS0015*	REN 199	SK3444	RT-302	ECG199	2SC828	WEP828	ZEN-119
	2SC1740		GE-62	PTC121*	HEPS0015*	REN 123A*	SK3122	RT-109*	ECG123A*		WEP736*	121-972
	2SC1973		GE-335	PTC186		REN 235	SK3197	RT-146	ECG235	2SC1973	WEP922	
TR37	2SC1306	2000-215	GE-215	PTC186		REN 235	SK3197	RT-146	ECG235	2SC1306	WEP785	
	2SC2020		GE-215	PTC186		REN 235	SK3197	RT-146	ECG235	2SC2020	WEP785	
	2SC2184		GE-215	PTC186		REN 235	SK3197	RT-146	ECG235	2SC2184	WEP785	
	2SC2166		GE-215	PTC186		REN 235	SK3197	RT-146	ECG235	2SC2166	WEP785	
	2SC496-0		GE-57	PTC163	HEPS5000	REN 295	SK3253	RT-162	ECG295	2SC496	WEP880	
	2SC496		GE-57	PTC163	HEPS5000	REN 295	SK3253	RT-162	ECG295	2SC496	WEP880	
	2SC1846		GE-336	PTC904		REN 295	SK3253		ECG295		WEP913	800-767
	2SD471		GE-268	PTC144*	HEPS3001*	REN 289	SK3124	RT-114*	ECG289		WEP910	121-1014
	2SC2236		GE-268	PTC144*	HEPS3001*	REN 289	SK3124	RT-114*	ECG289		WEP910	121-1014
	2SC1969B		GE-216	PTC186		REN 236	SK3197	RT-158	ECG236		WEP840	
TR40	2SC1969	2000-242	GE-216	PTC186		REN 236	SK3197	RT-158	ECG236		WEP840	
	2SC1307		GE-216	PTC186		REN 236	SK3239	RT-158	ECG236		WEP840	
	2SC1817		GE-216	PTC186		REN 236	SK3239	RT-158	ECG236		WEP840	
	2SC2043		GE-216	PTC186		REN 236	SK3239	RT-158	ECG236		WEP840	
	2SC2195		GE-216	PTC186		REN 236	SK3239	RT-158	ECG236		WEP840	
	2SC1675L		GE-213	PTC132*	HEPS0025*	REN 123A*	SK3246	RT-308	ECG229*		WEP956*	ZEN-127
	2SC1675		GE-213	PTC132*	HEPS0025*	REN 123A*	SK3246	RT-308	ECG229*		WEP956*	ZEN-127
	2SC460		GE-214	PTC132*	HEPS0020*	REN 161	SK3039*	RT-134	ECG316*	2SC460	WEP556*	ZEN-104
	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*	2SC1674	WEP956*	
TR42	2SC1730	2000-213	GE-62	PTC121*	HEPS0015*	REN 123A*	SK3122	RT-109*	ECG123A*		WEP736*	121-972

* Lead configuration may vary from original.

PRESIDENT MODEL 1011001, MCKINLEY

ELECTROLYTIC CAPACITORS

ITEM No.	RATING	REPLACEMENT DATA				
		MFGR. PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.	
					Q-LINE	GENERAL LINE
C7	.22 16V	1800-608		TDC224M050EL	QDT1-10	SD50-R229
C13	.1 25V	1800-609		TDC104M050EL	QDT1-2	SD50-R109
C15	2.2 25V	1800-303	PC2-100	VTT2R2A50	QV1-19	EV-1517
C16	.47 50V	1800-301	PC1-50	VTT47A63	QV1-3	EV-1610
C17	.47 50V	1800-301	PC1-50	VTT47A63	QV1-3	EV-1610
C19	.22 16V	1800-608		TDC224M050EL	QDT1-10	SD50-R229
C24	47 10V	1800-324	PC50-16	VTT47D16	QV1-73	EV-1226
C26	47 10V	1800-324	PC50-16	VTT47D16	QV1-73	EV-1226
C27	.47 50V	1800-301	PC1-50	VTT47A63	QV1-3	EV-1610
C59	1 25V	1800-606		TDC105M035EL		SD35-19
C62	2.2 25V	1800-603		TDC225M035FL		SD35-2R29
C63	2.2 25V	1800-603		TDC225M035FL		SD35-2R29
C66	1000 10V	1800-332	PC1000-16	VTT1000L10	QV1-179	EV-1160
C72	4.7 10V	1800-607		TDC475M010EL	QDT1-48	SD10-4R79
C73	4.7 25V	1800-304	PC5-50	VTT4R7B50	QV1-27	EV-1319
C83	2.2 25V	1800-303	PC2-100	VTT2R2A50	QV1-19	EV-1517
C84	22 6.3V	1800-610		TDC226M015FL	QDT1-82	SD15-229
C90	10 16V	1800-306	PC10-25	VTT10B25	QV1-41	EV-1222
C92	47 10V	1800-324	PC50-16	VTT47D16	QV1-73	EV-1226
C107	220 10V	1800-325	PC250-10	VTT220F10	QV1-115	EV-1140
C109	.1 25V	1800-609		TDC104M050EL	QDT1-2	SD50-R109

PARTS LIST AND DESCRIPTION (CONTINUED)

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

ELECTROLYTIC CAPACITORS (cont)

ITEM No.	RATING	REPLACEMENT DATA				
		MFR. PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.	
					Q-LINE	GENERAL LINE
C112	4.7 25V	1800-304	PC5-50	VTT4R7B50	QV1-27	EV-1319
C113	22 6.3V	1800-610		TDC226M015FL	QV1-82	SD15-229
C114	47 10V	1800-324	PC50-16	VTT47D16	QV1-73	EV-1226
C117	10 25V	1800-330	PC10-25	VTT10B25	QV1-43	EV-1322
C118	470 10V	1800-327	PC500-16	VTT470K16	QV1-149	EV-1150
C119	1 50V	1800-302	PC1-50	VTT1A50	QV1-11	EV-1615
C120	10 16V	1800-306	PC10-25	VTT10B25	QV1-41	EV-1222
C121	.47 50V	1800-301	PC1-50	VTT47A63	QV1-3	EV-1610
C133	10 16V	1800-306	PC10-25	VTT10B25	QV1-41	EV-1222
C134	1000 25V	1800-333	WBR1000-25*	VTT1000M25	QV1-185	EV-1360
C142	.47 50V	1800-301	PC1-50	VTT47A63	QV1-3	EV-1610
C146	1 50V	1800-302	PC1-50	VTT1A50	QV1-11	EV-1615
C162	1 50V	1800-302	PC1-50	VTT1A50	QV1-11	EV-1615
C164	10 25V	1800-330	PC10-25	VTT10B25	QV1-43	EV-1322
C169	1 50V	1800-302	PC1-50	VTT1A50	QV1-11	EV-1615
C180	22 10V	1800-331	PC25-25	VTT22B16	QV1-55	EV-1224
C191	47 10V	1800-324	PC50-16	VTT47D16	QV1-73	EV-1226
C193	1 25V	1800-606		TDC105M035EL		SD35-19
C434	47 10V	1800-324	PC50-16	VTT47D16	QV1-73	EV-1226

* Axial replacement for radial device.

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 50V	1800-009	DC-203	MGP02	TA120	QC2-157	TG-S20
C2	.022 50V		DC-203	MGP02	TA120	QC2-157	TG-S20
C3	.001 50V		DD-102G	GP1000	GP210	QC2-81	5GA-D10
C4	.022 50V		DC-203	MGP02	TA120	QC2-157	TG-S20
C5	.022 50V		DC-203	MGP02	TA120	QC2-157	TG-S20
C6	.001 50V		DD-102G	GP1000	GP210	QC2-81	5GA-D10
C8	82 NPO 50V		DTZ-82	NP082	CN0482	QC2-81	5GA-D10
C9	.001 50V		DC-103	MGP01	TA110	QC2-141	10TCC-Q82
C10	100 N220 50V				*		TG-S10
C11	.022 50V		DC-203	MGP02	TA120	QC2-157	10TCC-T10
C12	.022 50V		DC-203	MGP02	TA120	QC2-157	TG-S20
C14	.022 50V		DC-203	MGP02	TA120	QC2-157	TG-S20
C18	.022 50V		DC-203	MGP02	TA120	QC2-157	TG-S20
C20	.022 50V			DPMS2S22	EWFTA122	QF1-127	TG-S20
C21	5 NPO 50V		DTZ-4R7	NP04P7	CN0547		1PB-S22
C22	3 NPO 50V		DTZ-3R3	NP03P3	CN0533		10TCC-V47
C23	3 NPO 50V		DTZ-3R3	NP03P3	CN0533		10TCC-V33
C25	.033 50V			DPMS6S33	EWFA133		10TCC-V33
C28	.1 50V			DPMS2P1	EWFA1010	QF1-215	6PS-S33
C29	12 NPO 50V				CN0412		1PB-P10
C30	.001 50V		DD-102G	GP1000	GP210	QC2-81	10TCC-Q12
C31	.001 50V		DD-102G	GP1000	GP210	QC2-81	5GA-D10
C32	.001 50V		DD-102G	GP1000	GP210	QC2-81	5GA-D10
C33	.0047 50V		DD-472	GP4700	GP247	QC2-81	5GA-D10
C34	.001 50V		DD-102G	GP1000	GP210	QC2-81	5GA-D10
C35	.0047 50V		DD-472	GP4700	GP247	QC2-81	5GA-D10
C36	4 NPO 50V		DTZ-4R7	NP04P7	CN0547		5GA-D47
C37	.0047 50V		DD-472	GP4700	GP247		10TCC-V47
C38	2 NPO 50V		DTZ-2R2	NP02P2	CN0522		5GA-D47
C39	.001 50V		DD-102G	GP1000	GP210	QC2-81	10TCC-V22
C40	.001 50V		DD-102G	GP1000	GP210	QC2-81	5GA-D10
C41	.001 50V		DD-102G	GP1000	GP210	QC2-81	5GA-D10
C42	2 NPO 50V		DTZ-2R2	NP02P2	CN0522		5GA-D10
C43	33 NPO 50V		DTZ-33	NP033	CN0433		10TCC-V22
C44	2 NPO 50V		DTZ-2R2	NP02P2	CN0522		10TCC-Q33
C45	.022 50V		DC-203	MGP02	TA120	QC2-157	10TCC-V22
C46	.022 50V		DC-203	MGP02	TA120	QC2-157	TG-S20
C47	.022 50V		DC-203	MGP02	TA120	QC2-157	TG-S20
C48	.01 50V		DC-103	MGP01	TA110	QC2-141	TG-S20
C49	.022 50V		DC-203	MGP02	TA120	QC2-157	TG-S10
C50	.022 50V		DC-203	MGP02	TA120	QC2-157	TG-S20
C51	.022 50V		DC-203	MGP02	TA120	QC2-157	TG-S20
C52	.022 50V		DC-203	MGP02	TA120	QC2-157	TG-S20
C54	.047 50V			DPMS2S47	EWFTA147		TG-S20
C55	.022 50V			DPMS2S22	EWFTA122	QF1-171	1PB-S47
C56	.022 50V			MGP02	TA120	QF1-127	1PB-S22
C57	27 NPO 50V		DC-203		CN0427	QC2-157	TG-S20
C58	.001 50V			DPMS6D1	EWFTA210	QF1-1	10TCC-Q27
C60	.01 50V			MGP01	TA110	QC2-141	1PB-D10
C61	.1 50V		DC-103	DPMS2P1	EWFTA010	QF1-215	TG-S10
C64	18 NPO 50V				CN0418		1PB-P10
C65	10 NPO 50V				CN0410		10TCC-Q18
C67	.01 50V		DTZ-10	NP010	TA110	QC2-141	10TCC-Q10
C68	.022 50V		DC-103	MGP01	TA110	QC2-157	TG-S10
C69	47 NPO 50V		DTZ-47	NP047	CN0447		TG-S20

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
C70	47 NPO 50V		DTZ-47	NP047	CN0447		10TCC-Q47
C71	.047 50V			DPMS2S47	EWFA1A147	QF1-171	1PB-S47
C74	.01 50V		DC-103	MGP01	TA110	QC2-141	TG-S10
C75	.01 50V		DC-103	MGP01	TA110	QC2-141	TG-S10
C76	15 NPO 50V		DTZ-15	NP015	CN0415		10TCC-Q15
C77	.01 50V		DC-103	MGP01	TA110	QC2-141	TG-S10
C78	.01 50V		DC-103	MGP01	TA110	QC2-141	TG-S10
C79	.1 50V			DPMS2P1	EWFA1A010	QF1-215	1PB-P10
C80	4 NPO 50V		DTZ-4R7	NP04P7	CN0547		10TCC-V47
C81	270 N750 50V				CN7327		10TCU-T27
C82	.0047 50V			WMF1D47	EWFA1A247	QF1-57	1PB-D47
C85	.0047 50V			WMF1D47	EWFA1A247	QF1-57	1PB-D47
C86	.033 50V			DPMS6S33	EWFA1A133		6PS-S33
C87	.022 50V		DC-203	MGP02	TA120	QC2-157	TG-S20
C88	.047 50V			DPMS2S47	EWFA1A147	QF1-171	1PB-S47
C89	.01 50V			WMF1S1	EWFA1A110	QF1-91	1PB-S10
C91	.0022 50V			DPMS6D22	EWFA1A110		6PS-D22
C93	.01 50V			WMF1S1	EWFA1A110	QF1-91	1PB-S10
C94	.01 50V		DC-103	MGP01	TA110	QC2-141	TG-S10
C95	.01 50V		DC-103	MGP01	TA110	QC2-141	TG-S10
C98	.001 50V		DD-102G	GP1000	GP210	QC2-81	5GA-D10
C99	.01 50V		DC-103	MGP01	TA110	QC2-141	TG-S10
C100	.01 50V		DC-103	MGP01	TA110	QC2-141	TG-S10
C101	.001 50V		DD-102G	GP1000	GP210	QC2-81	5GA-D10
C102	100 NPO 50V		DTZ-100	NP0100	CN0310		10TCC-T10
C103	.01 50V		DC-103	MGP01	TA110	QC2-141	TG-S10
C104	18 NPO 50V				CN0418		10TCC-Q18
C105	10 NPO 50V		DTZ-10	NP010	CN0410		10TCC-Q10
C106	.01 50V		DC-103	MGP01	TA110	QC2-141	TG-S10
C108	.047 50V			DPMS2S47	EWFA1A147	QF1-171	1PB-S47
C110	.1 50V			DPMS2P1	EWFA1A010	QF1-215	1PB-P10
C111	.022 50V			DPMS2S22	EWFA1A122	QF1-127	1PB-S22
C115	.001 50V			DPMS6D1	EWFA1A210	QF1-1	1PB-D10
C116	.1 50V			DPMS2P1	EWFA1A010	QF1-215	1PB-P10
C122	.01 50V		DC-103	MGP01	TA110	QC2-141	TG-S10
C123	.01 50V		DC-103	MGP01	TA110	QC2-141	TG-S10
C124	.01 50V		DC-103	MGP01	TA110	QC2-141	TG-S10
C125	.01 50V		DC-103	MGP01	TA110	QC2-141	TG-S10
C126	10 NPO 50V		DTZ-10	NP010	CN0410		10TCC-Q10
C127	220 50V		DD-221		GP322		10TS-T22
C128	470 50V		DD-471	GP470	GP347		10TS-T47
C129	.01 50V		DC-103	MGP01	TA110	QC2-141	TG-S10
C130	.01 50V		DC-103	MGP01	TA110	QC2-141	TG-S10
C131	.01 50V		DC-103	MGP01	TA110	QC2-141	TG-S10
C132	10 50V		DTZ-10	NP010	CN0410		10TCC-Q10
C135	.0047 50V		DD-472	GP4700	GP247		5GA-D47
C136	.0047 50V		DD-472	GP4700	GP247		5GA-D47
C137	.0047 50V		DD-472	GP4700	GP247		5GA-D47
C138	.0047 50V		DD-472	GP4700	GP247		5GA-D47
C139	1 NPO 50V				CN0510		10TCC-V10
C140	10 NPO 50V		DTZ-10	NP010	CN0410		10TCC-Q10
C141	.0047 50V		DD-472	GP4700	GP247		5GA-D47
C143	68 NPO 50V		DTZ-68	NP068	CN0468		10TCC-Q68
C144	39 NPO 50V				CN0439		10TCC-Q39
C145	180 N220 50V				*		10TCR-Q18
C147	1 NPO 50V				CN0510		10TCC-V10
C148	390 N750 50V		DTN-390				10TCU-T39
C149	330 N750 50V			DPMS6D1	EWFA1A010	QF1-215	6PS-D10
C150	.1 50V			DPMS2P1			1PB-P10
C151	470 N750 50V		DTN-470				10TCU-T47
C152	.0047 50V		DD-472	GP4700	GP247		5GA-D47
C153	.1 50V			DPMS2P1	EWFA1A010	QF1-215	1PB-P10
C154	.0047 50V		DD-472	GP4700	GP247		5GA-D47
C155	.0047 50V		DD-472	GP4700	GP247		5GA-D47
C156	.0047 50V		DD-472	GP4700	GP247		5GA-D47
C157	.0047 50V		DD-472	GP4700	GP247		5GA-D47
C158	47 NPO 50V		DTZ-47	NP047	CN0447		10TCC-Q47
C159	330 N750 50V		DTN-330	N330	CN7333		10TCU-T33
C160	1.5 NPO 50V		DTZ-1R5	NP01P5	CN0515		10TCC-V15
C161	.01 50V			WMF1S1	EWFA1A110	QF1-91	1PB-S10
C163	120 N220 50V				*		10TCR-T12
C165	.001 50V		DD-102G	GP1000	GP210	QC2-81	5GA-D10
C166	18 NPO 50V		DC-203	MGP02	CN0418		10TCC-Q18
C167	.022 50V			DPMS2S47	TA120	QC2-157	TG-S20
C168	.047 50V			GP100	EWFA1A147	QF1-171	1PB-S47
C170	100 50V		DD-101		GP310		10TS-T10
C171	56 NPO 50V				CN0456		10TCC-Q56
C172	.001 50V		DD-102G	GP1000	GP210	QC2-81	5GA-D10
C173	.0047 50V		DD-472	GP4700	GP247		5GA-D47
C174	330 N750 50V		DTN-330	N330	CN7333		10TCU-T33
C175	33 NPO 50V		DTZ-33	NP033	CN0433		10TCC-Q33
C176	.001 50V		DD-102G	GP1000	GP210	QC2-81	5GA-D10
C177	.022 50V		DC-203	MGP02	TA120	QC2-157	TG-S20
C178	.001 50V		DD-102G	GP1000	GP210	QC2-81	5GA-D10
C181	.01 50V		DC-103	MGP01	TA110	QC2-141	TG-S10

PRESIDENT MODEL 1011001, MCKINLEY

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
C182	.047 50V		DC-503	MGP05	TA150	QC2-207	TG-S50
C189	.01 50V		DC-103	MGP01	TA110	QC2-141	TG-S10
C190	.047 50V		DC-503	MGP05	TA150	QC2-207	TG-S50
C192	.001 50V		DD-102G	GP1000	GP210	QC2-81	5GA-D10
C194	.033 50V			DPMS6S33	EW6133		6PS-S33
C195	47 NPO 50V		DTZ-47	NP047	CN0447		10TCC-Q47
C202	.0047 50V		DD-472	GP4700	GP247		5GA-D47
C203	.0047 50V		DD-472	GP4700	GP247		5GA-D47
C204	.0047 50V		DD-472	GP4700	GP247		5GA-D47
C205	.0047 50V		DD-472	GP4700	GP247		5GA-D47
C206	.022 50V		DC-203	MGP02	TA120	QC2-157	TG-S20
C207	.1 50V		DC-104	MGP1	TA010	QC2-233	TG-P10
C208	.022 50V		DC-203	MGP02	TA120	QC2-157	TG-S20
C401	.01 50V		DC-103	MGP01	TA110	QC2-141	TG-S10
C402	.022 50V		DC-203	MGP02	TA120	QC2-157	TG-S20
C403	.001 50V		DD-102G	GP1000	GP210	QC2-81	5GA-D10
C404	.001 50V		DD-102G	GP1000	GP210	QC2-81	5GA-D10
C405	.001 50V		DD-102G	GP1000	GP210	QC2-81	5GA-D10
C406	.001 50V		DD-102G	GP1000	GP210	QC2-81	5GA-D10
C407	.001 50V		DD-102G	GP1000	GP210	QC2-81	5GA-D10
C415	.001 50V		DD-102G	GP1000	GP210	QC2-81	5GA-D10
C435	.022 50V		DC-203	MGP02	TA120	QC2-157	TG-S20
C436	.0047 50V			WMF1D47	EWF1A247	QF1-57	1PB-D47
C437	22 50V		DTZ-22	NP022	CN0422		10TCC-Q22
CC1	50V	1800-103					
CT1	20 50V	1800-203					
CT2	20 50V	1800-203					
CT3	20 50V	1800-203					

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

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

ITEM No.	FUNCTION	RESIST-ANCE	REPLACEMENT DATA			
			MFR. PART No.	CENTRALAB PART No.	MALLORY PART No.	TRW PART No.
VR1	Sig Meter	10K	1900-203	T-10K(3)	MTC14L1(3)	U260R103B
VR2	Squelch Range	1000	1900-220			U260R102B
VR3	LSB XMT	3000	1900-215			U260R503B
VR5	Carrier Balance	10K	1900-203	T-10K(3)	MTC14L1(3)	U260R103B
VR6	AM Power	5000	1900-201			U260R502B
VR7	RF ALC	10K	1900-203	T-10K(3)	MTC14L1(3)	U260R103B
VR8	RF Driver Bias	500	1900-205			U260R501B
VR9	RF Final Bias	5000	1900-201			U260R502B
VR10	TX Power Meter	100K	1900-211			U260R104B
VR401	Squelch	100K	1900-121(18)			
VR403	Volume/Power Switch	10K				
VR402	Clarifier	20K	1900-126			
VR404	RF Gain	10K	1900-127(19)			
VR405	Mike Gain	10K				

(3) For horizontal mounting, bend the two outside terminals to fit PC board. Use jumper to connect center terminal to PC board.

(18) Includes VR401, VR403 and Power Switch.

(19) Includes VR404 and VR405.

COILS (RF-IF)

ITEM No.	FUNCTION	REPLACEMENT DATA			REMARKS
		PART No.	OTHER IDENTIFICATION	MILLER PART No.	
L1	Noise Blanker (23MHz)	2200-022	LA038		
L2	Noise Blanker (23MHz)	2200-029	LA179		
L3	IF (7.8MHz)	2200-064	LA255		
L4	IF (7.8MHz)	2200-065	LA263		
L5	IF (7.8MHz)	2200-066	LA262		
L6	IF (7.8MHz)	2200-067	LA257		
L7	IF (7.8MHz)	2200-068	LA258		
L8	Rec RF (27MHz)	2200-069	LA259		
L9	Rec RF (27MHz)	2200-070	LA260		
L10	Rec Ant (27MHz)	2200-071	LA261		

PARTS LIST AND DESCRIPTION (CONTINUED)

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

COILS (RF-IF) (cont)

ITEM No.	FUNCTION	REPLACEMENT DATA			REMARKS
		PART No.	OTHER IDENTIFICATION	MILLER PART No.	
L11	RF Choke (470uH)	2200-040	LZ012-4		
L12	RF Choke (100uH)	2200-202	LZ012-1		
L13	VCO	2200-072	LA216		
L14	VCO (34MHz)	2200-055	LA195		
L15	RF Choke (470uH)	2200-040	LZ012-4		
L16	RF Choke (470uH)	2200-040	LZ012-4		
L17	Carrier Shift (7.8MHz)	2200-073	LA223		
L18	Trippier (35MHz)	2200-074	LA256		
L19	Osc (11.1125MHz)	2200-075	LA217		
L20	Osc (11.1125MHz)	2200-076	LA218		
L21	RF Choke (470uH)	2200-040	LZ012-4		
L22	RF Choke (470uH)	2200-040	LZ012-4		
L23	RF Choke (470uH)	2200-040	LZ012-4		
L24	RF Uchoke (470uH)	2200-040	LZ012-4		
L25	RF Choke (100uH)	2200-202	LZ012-1		
L26	Balance Mix (78MHz)	2200-077	LA219		
L27	Balance Mix (35 Hz)	2200-028	LA160		
L28	Mixer (27MHz)	2200-078	LA220		
L29	Mixer (27MHz)	2200-079	LA254		
L30	XMT Driver (27MHz)	2200-061	LD096		
L33	RF Choke	2200-080	LD098	CB305	
L35	RF Choke	2200-080	LC019		
L36	Final	2200-034	LE051		
L37	RF Choke	2200-038	LE051		
L38	RF Choke	2200-038	LC019	CB305	
L39	TVI Trap (54MHz)	2200-034	LD013		
L401	RF Choke	2200-035	LD013		
L402	RF Choke	2200-035	LD013		
L403	RF Choke	2200-059	LD089		

PRESIDENT MODEL 1011001, MCKINLEY

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA			NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000~)	MFGR. PART No.	THORDARSON PART No.	TRIAD PART No.	
T1	2.8	.194	2.25mH	TF-151 (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	3100-007	3A05Z8	

PARTS LIST AND DESCRIPTION (CONTINUED)

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

FUSE DEVICES

ITEM No.	DESCRIPTION	REPLACEMENT DATA					
		PART No.		BUSS PART No.		LITTELFUSE PART No.	
		DEVICE	HOLDER	DEVICE	HOLDER	DEVICE	HOLDER
F401	4 AMP		2700-001	AGC4	HDJ	311004	150145

MICROPHONE

ITEM No.	REPLACEMENT DATA				CONNECTION DATA						
	MFG. 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	3200-004	18-032	18-034	18-010		1	2	5	3	NC	4

MISCELLANEOUS

ITEM No.	PART NAME	PART No.	NOTES
D401	LED	2000-306	Channel Display TLR321
D402	LED	2000-343	TX/RX (2.07V @ 15mA) TLRG101
FL1	Filter	2200-306	7.8MHz
J401	Jack	1100-021	PA
J402	Jack	1100-021	External Speaker
J403	Jack	1100-003	Power
J404	Jack	1100-022	Microphone
J405	Jack	1100-018	Antenna
L31	Ferrite Bead	2200-052	LD-087
L32	Ferrite Bead	2200-108	LD101-1
L34	Ferrite Bead	2200-052	LD-087
L50	Ferrite Bead	2200-103	LD077
L51	Ferrite Bead	2200-103	LD077
L52	Ferrite Bead	2200-103	LD077
L53	Ferrite Bead	2200-103	LD077
L404	Ferrite Bead	2200-103	LD077
L405	Ferrite Bead	2200-103	LD077
M401	Meter	2900-009	S/R
S401	Switch	3000-110	Channel Selector
S402	Switch		Power (Part of Volume Control)
S403	Switch	3000-111	AM/USB/LSB
S404	Switch	3000-008	CB/PA
S405	Switch	3000-008	NB/ANL
S406	Switch	3000-008	Dimmer
X1	Crystal	2100-001	10.240MHz
X2	Crystal	2100-010	7.8025MHz
X3	Crystal	2100-011	7.7975MHz
X4	Crystal	2100-012	11.1125MHz
	Printed Circuit Board	3500-026	Channel Selector Switch
	Printed Circuit Board	3500-027	Channel Display
	Printed Circuit Board	3500-028	Push Switch
	Printed Circuit Board	3500-029	Microphone

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

ITEM	PART No.	ITEM	PART No.
Cabinet, Top	3300-116	Knob, Channel Selector	1300-001
Cabinet, Bottom	3300-117	Knob, Volume or RF Gain	1300-012
Mounting Bracket	3300-209	Knob, Squelch or Mike Gain	1300-011
Microphone Hanger	3300-401	Knob, Mode	1300-004
Escutcheon	3300-511	Knob, Clarifier	1300-002
Channel Display Window	3400-107	Knob, Push Switch	1300-003