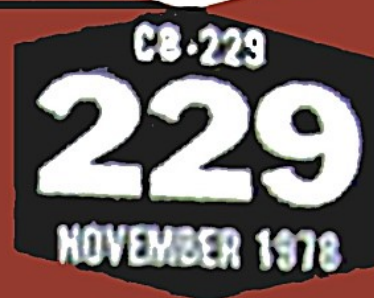


SAMS PHOTOFACT CB RADIO SERIES

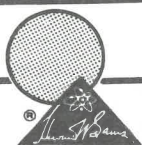


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REALISTIC	TRC-469 (21-1527)	95



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



PHOTOFACT[®] with

CIRCUITRACE[®]

For Supplier Address See PHOTOFACT Index

NOTE

Repair or adjustment of transmitter circuits must be under supervision of a person with first-or second-class radiotelephone license.
(Refer to FCC Rules and Regulations Part 95, Subpart C & D.)

The frequency of the transmitter should be checked periodically with a secondary frequency standard to insure proper and legal operation.

Best results will be obtained when adjusting the final RF output circuit if the antenna normally used is connected and the chassis is as nearly in the cabinet as possible.

Connect either 50-ohm dummy load or the normally used antenna system.



MODEL TRC-469 (21-1527)

MANUFACTURER'S SPECIFICATIONS

GENERAL:

Transmitter/Receiver	Frequency synthesizing circuit with digital phase-locked loop
Communicating frequencies	26.965 MHz to 27.405 MHz (all 40 channels)
Operating voltage	11-16V DC (positive or negative ground)
Temperature and Humidity Range	-20°C to +60°C and 10% to 90%
Transmitter/Receiver switching	Electronic (diode switching)
Antenna	52 ohm (coaxial connector)
Microphone	600 ohm Dynamic Type
Speaker	8 ohm, 2 Watt
Size	2-3/16" x 6-1/4" x 9" (HWD) (approx.) (5.5 x 16 x 22.7 cm [HWD])
Weight	5 lbs. (approx.) (2.3 kg)
Accessories	DC Cord with in-line Fuse, Microphone and Microphone Hanger and Mounting Brackets

STANDARD TEST CONDITIONS:

Battery supply voltage	13.8V DC
Modulation	1000 Hz, 30%
Audio output power	500 mW
Audio output load	8 ohm
Ant. in impedance	50 ohm (non-inductive load)
Ambient conditions	
Temperature	25°C ±5°C
Humidity	50% to 70%

TRANSMITTER:

	UNIT	NOMINAL	LIMIT
Frequency Tolerance 25°C 13.8 V	%	0.0005	0.003
RF Power Output	W	4 (Max.)	3.6 - 4.0
AMC Range 50% - 100% Mod	dB	36	30
Modulation Frequency Response (-6 dB)			
a. Lower Frequency 450 Hz	dB	-6	-6 ± 3 dB
b. Upper Frequency 2500 Hz	dB	-6	-6 ± 3 dB
Microphone Sensitivity 1 kHz 50% Mod	mV	1	2
Modulation Distortion at 1 kHz 80% Mod	%	3	8
RF Power Output Uniformity Ch. to Ch.	W	0.2	0.5
Modulation Capability Positive/Negative	%	95/95	80/85
RF Power Output at 12.0 V	W	2.7	2.2
Battery Drain			
a. at no Modulation	mA	950	1200
b. at 80% Modulation	mA	1550	2000

RECEIVER: (ANL: OUT)

	UNIT	NOMINAL	LIMIT
Maximum Sensitivity	μV	0.3	0.5
Sensitivity for 10 dB S/N	μV	0.5	1
AGC Figure of Merit 50 mV	dB	90	80
Overload AGC 50 mV - 1 V	dB	+4	+6 -2
Squelch Sensitivity at Threshold	μV	0.25	2
Squelch Sensitivity at Tight	μV	1000	355 - 2820
Adjacent Channel Selectivity			
a. at ±10 kHz	dB	70	60
Spurious Radiation	dB	80	60
Spurious Response Attenuation			
a. 455/2 kHz	dB	80	60
Image Rejection Ratio			
a. -910 kHz	dB	90	70
IF Rejection Ratio			
a. 10.695 MHz	dB	90	80
b. 455 kHz	dB	115	90
Cross Modulation	dB	60	50
Desensitization (3 dB Desens.) at 100 μV	dB	60	55
Audio Power Output			
a. Maximum	W	5	4
b. 10% THD	W	4	3
Audio Frequency Response (-6 dB)			
a. Lower Freq. 450 Hz	dB	-6	-6 ± 3 dB
b. Upper Freq. 2500 Hz	dB	-6	-6 ± 3 dB
THD at 500 mW Audio Output			
a. Input 1 mV 30% Mod	%	2	4
b. 50% Mod	%	4	6
c. 80% Mod	%	6	8
Signal-to-Noise Ratio at 1000 μV	dB	45	35
RF Gain Control Range	dB	40	30
S-Meter Sensitivity at "S9"	μV	100	50 - 200
Oscillator Drop-out Voltage	V	7	10
Battery Drain			
a. at no signal	mA	250	600
b. at Max. AF Output	mA	800	1500
PUBLIC ADDRESS:			
Microphone Sensitivity for 4 W Output Power at 1 kHz	mV	4	10
Power Output			
a. Maximum	W	5	4
b. 10% THD	W	4	3
Audio Freq. Response (-6 dB)			
a. Lower Frequency 450 Hz	dB	-6	-6 ± 3 dB
b. Upper Frequency 2500 Hz	dB	-6	-6 ± 3 dB
Battery Drain			
a. at no signal	mA	300	700
b. at Max. AF Output	mA	1000	1500

Courtesy of the Manufacturer

REALISTIC MODEL TRC-469

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

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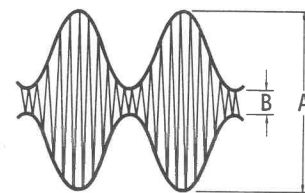
ALIGNMENT INSTRUCTIONS

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:

L1 thru L4, L14 thru L19, L21	9440
VC1	8276,5000
L5,L6,L7	5009,8728-A,8728
L8,L11,L13	9091,8728-A,8728

G.C. ELECTRONICS



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

FIGURE 1

SYNTHESIZER ALIGNMENT

TEST EQUIPMENT	TRANSCIVER	ADJUST	REMARKS
Input of oscilloscope to TP4.	Ch. 19	L21	Adjust for maximum.
Input of frequency counter to TP4.	Ch. 19	VC1	Adjust for 10.240MHz.
Input of oscilloscope to TP10 (L19 Secondary).	Ch. 19	L19	Adjust for maximum.
Input of DC meter to TP2.	Ch. 40	L18	Adjust for 3.50 volts. Check for 1.70 volts on Channel 1.
Input of oscilloscope to TP1.	Ch. 19	L17	Adjust for maximum.
Input of frequency counter to TP1.	Ch. 1		Check for 16.270MHz. Check all Channels (See Truth Chart for correct frequencies.)
	Ch. 1, XMT		Check for 16.725MHz. Check all Channels. (See Truth Chart for correct frequencies.)
Input of frequency counter to TP3.	Ch. 1		Check for .910MHz. Check all Channels. (See Truth Chart for correct frequencies.)
	Ch. 1, XMT		Check for 1.365MHz. Check all Channels. (See Truth Chart for correct frequencies.)

RECEIVER ALIGNMENT

Connect an AC VTVM or AF wattmeter across speaker voice coil. Adjust volume control to obtain a suitable indication. Set generator output low enough to prevent AGC limiting. RF GAIN Max, SQUELCH MINIMUM, ANL OUT

TEST EQUIPMENT	TRANSCIVER	ADJUST	REMARKS
Output of signal generator thru .01uf to TP11 (TR4 base). 455kHz, 1000Hz @ 30% modulation.	Ch. 19	L7,L6,L5	Adjust for maximum output.
Output of signal generator thru .01uf to antenna jack. 27.185MHz, 1000Hz @ 30% modulation.	Ch. 19	L4,L3,L2,L1	Adjust for maximum output. If necessary, readjust L5, L6, and L7.

RECEIVER ADJUSTMENTS

Connect an AC VTVM or AF wattmeter across speaker voice coil.
Adjust volume control to obtain a suitable indication.
RF GAIN Max, SQUELCH MINIMUM, ANL OUT

TEST EQUIPMENT	TRANSCEIVER	ADJUST	REMARKS
Output of signal generator thru .01uf to antenna jack. 27.185MHz, 1000Hz @ 30% modulation output .3uV.	Ch. 19	VR1	AGC Adjust for 2 volts audio.
Output of signal generator thru .01uf to antenna jack. 27.185MHz, 1000Hz @ 30% modulation output 1000uV.	Ch. 19 SQUELCH MAX.	VR2	SQUELCH RANGE Adjust so that squelch just breaks.
Output of signal generator thru .01uf to antenna jack. 27.185MHz, 1000Hz @ 30% modulation.	Ch. 19	VR3	SIG METER Adjust for 9 on SIG scale. of meter.

TRANSMITTER ALIGNMENT

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

TEST EQUIPMENT	TRANSCEIVER	ADJUST	REMARKS
Input of RF wattmeter to antenna input.	Ch. 19	L16,L15,L14, L13,L11	Adjust for maximum.
Input of RF wattmeter to antenna input.	Ch. 19	L11	Adjust for 3.8 watts.
Input of spectrum analyzer or harmonic meter to antenna jack.	Ch. 19	L8	Adjust for MINIMUM at 54MHz.

TRANSMITTER ADJUSTMENTS

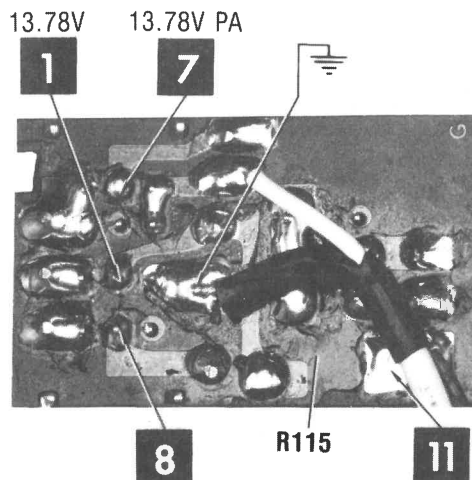
Connect an RF wattmeter and 50-ohm, 25-watt dummy load to antenna connector.
NOTE: Be sure to check transmit frequency and power on all active channels after adjustment of transmitter. See page 4 for channel frequencies.

TEST EQUIPMENT	TRANSCEIVER	ADJUST	REMARKS
Input of oscilloscope or modulation meter to antenna jack. Inject a 1000Hz, 100mV signal at MIC input.	Ch. 19	VR5	AMC Adjust for 95% modulation. (See Figure 1).
Input of RF wattmeter to antenna input.	Ch. 19	VR4	TX PWR METER Adjust so that TX PWR meter agrees with RF wattmeter.

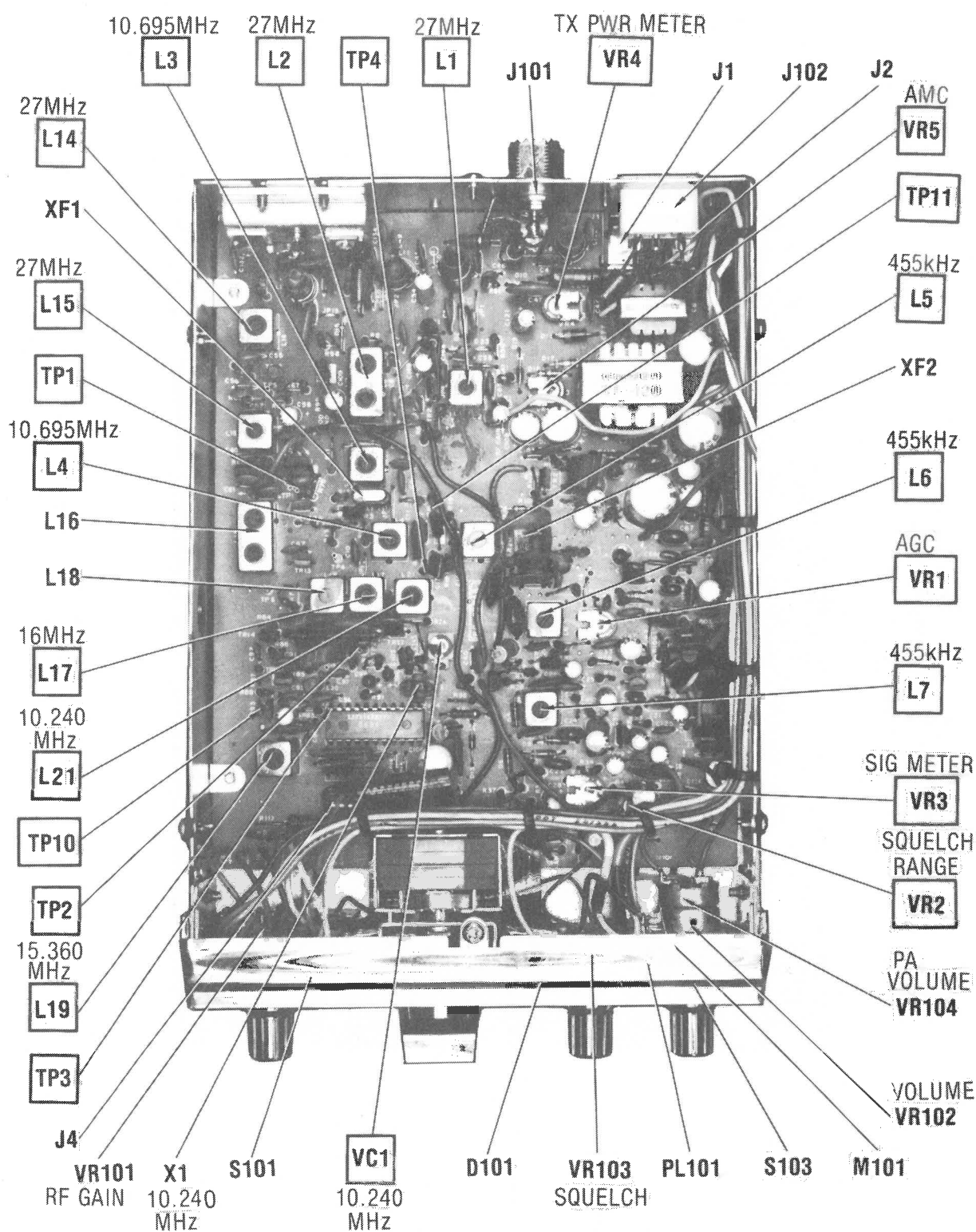
TRUTH CHART

CHANNEL	1 = 4.20 Volts 0 = 0 Volts							REC SYNTHESIZER OUTPUT IN MHz AT TP1	REC DIVIDER INPUT IN MHz AT TP3	XMT SYNTHESIZER OUTPUT IN MHz AT TP1	XMT DIVIDER INPUT OUTPUT IN MHz AT TP3	
	IC4 PROGRAM DIVIDER											
	PINS											
		6	5	4	3	2	1					
1		0	0	0	0	0	1		16.270	.910	16.725	1.365
2		0	0	0	0	1	0		16.280	.920	16.735	1.375
3		0	0	0	0	1	1		16.290	.930	16.745	1.385
4		0	0	0	1	0	0		16.310	.950	16.765	1.405
5		0	0	0	1	0	1		16.320	.960	16.775	1.415
6		0	0	0	1	1	0		16.330	.970	16.785	1.425
7		0	0	0	1	1	1		16.340	.980	16.795	1.435
8		0	0	1	0	0	0		16.360	1.000	16.815	1.455
9		0	0	1	0	0	1		16.370	1.010	16.825	1.465
10		0	1	0	0	0	0		16.380	1.020	16.835	1.475
11		0	1	0	0	0	1		16.390	1.030	16.845	1.485
12		0	1	0	0	1	0		16.410	1.050	16.854	1.505
13		0	1	0	0	1	1		16.420	1.060	16.875	1.515
14		0	1	0	1	0	0		16.430	1.070	16.885	1.525
15		0	1	0	1	0	1		16.440	1.080	16.895	1.535
16		0	1	0	1	1	0		16.460	1.100	16.915	1.555
17		0	1	0	1	1	1		16.470	1.110	16.925	1.565
18		0	1	1	0	0	0		16.480	1.120	16.935	1.575
19		0	1	1	0	0	1		16.490	1.130	16.945	1.585
20		1	0	0	0	0	0		16.510	1.150	16.965	1.605
21		1	0	0	0	0	1		16.520	1.160	16.975	1.615
22		1	0	0	0	1	0		16.530	1.170	16.985	1.625
23		1	0	0	0	1	1		16.560	1.200	17.015	1.655
24		1	0	0	1	0	0		16.540	1.180	16.995	1.635
25		1	0	0	1	0	1		16.550	1.190	17.005	1.645
26		1	0	0	1	1	0		16.570	1.210	17.025	1.665
27		1	0	0	1	1	1		16.580	1.220	17.035	1.675
28		1	0	1	0	0	0		16.590	1.230	17.045	1.685
29		1	0	1	0	0	1		16.600	1.240	17.055	1.695
30		1	1	0	0	0	0		16.610	1.250	17.065	1.705
31		1	1	0	0	0	1		16.620	1.260	17.075	1.715
32		1	1	0	0	1	0		16.630	1.270	17.085	1.725
33		1	1	0	0	1	1		16.640	1.280	17.095	1.735
34		1	1	0	1	0	0		16.650	1.290	17.105	1.745
35		1	1	0	1	0	1		16.660	1.300	17.115	1.755
36		1	1	0	1	1	0		16.670	1.310	17.125	1.765
37		1	1	0	1	1	1		16.680	1.320	17.135	1.775
38		1	1	1	0	0	0		16.690	1.330	17.145	1.785
39		1	1	1	0	0	1		16.700	1.340	17.155	1.795
40		0	0	0	0	0	0		16.710	1.350	17.165	1.805

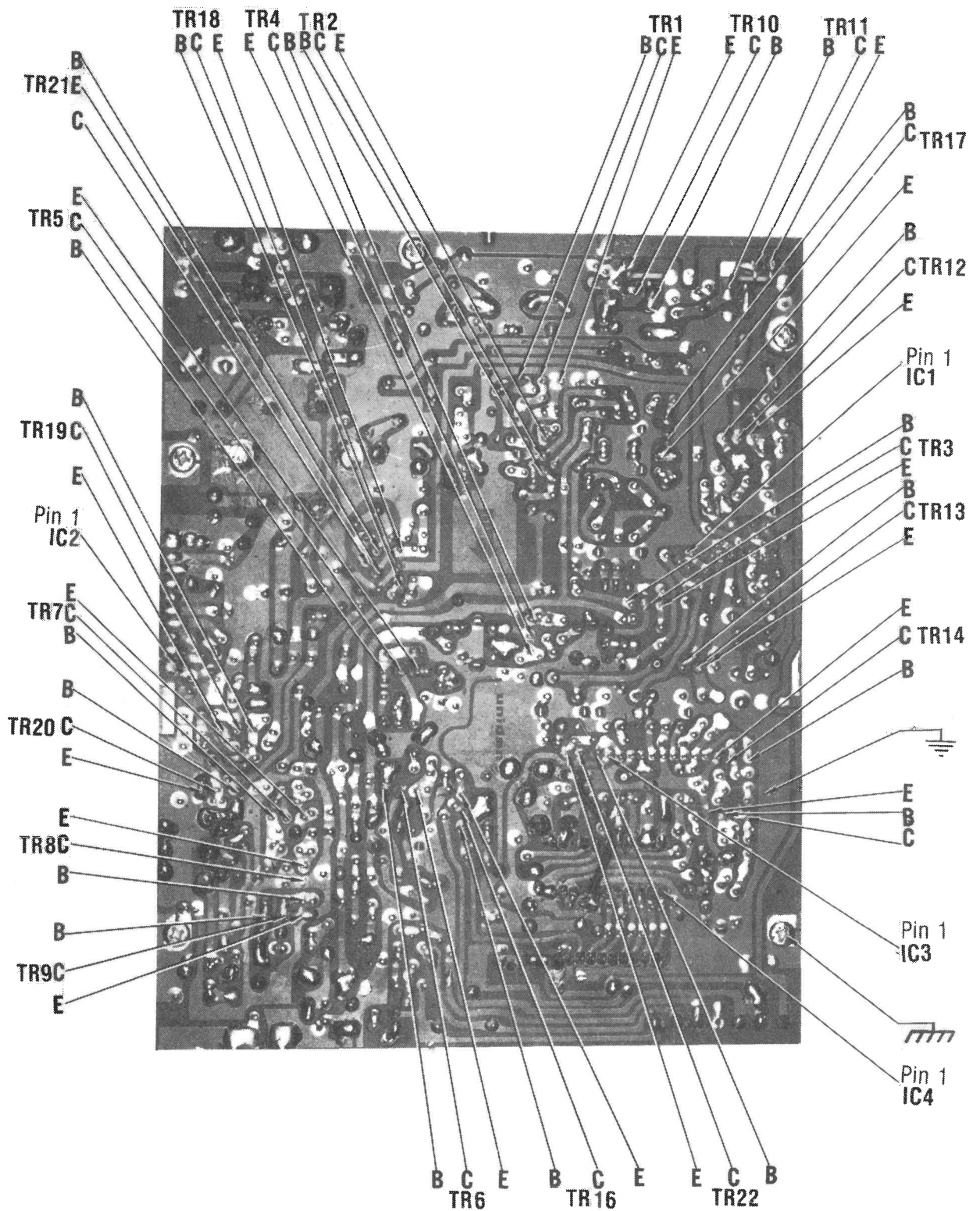
A Howard W. Sams CIRCUITRACE® Photo



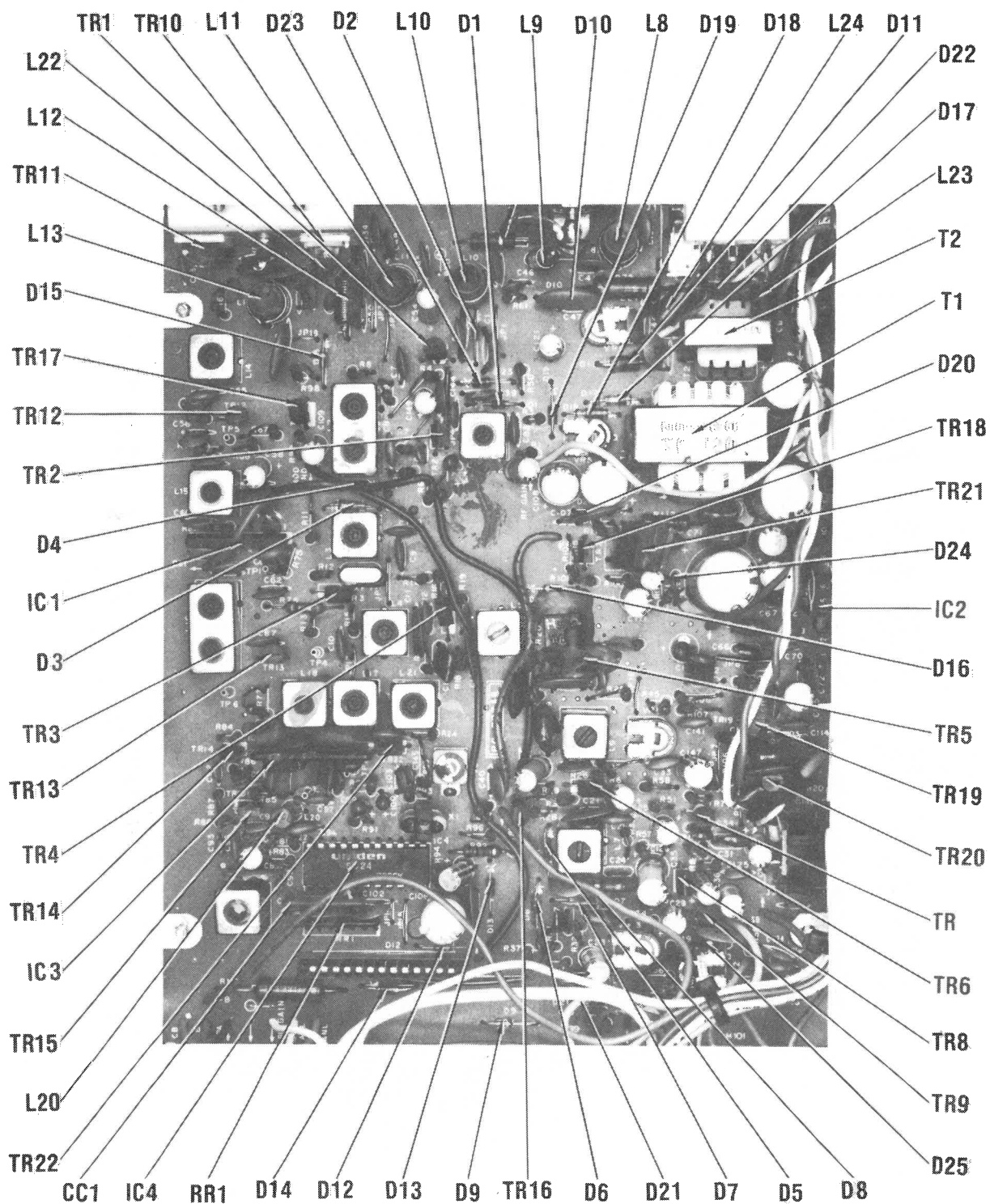
LAMP BOARD



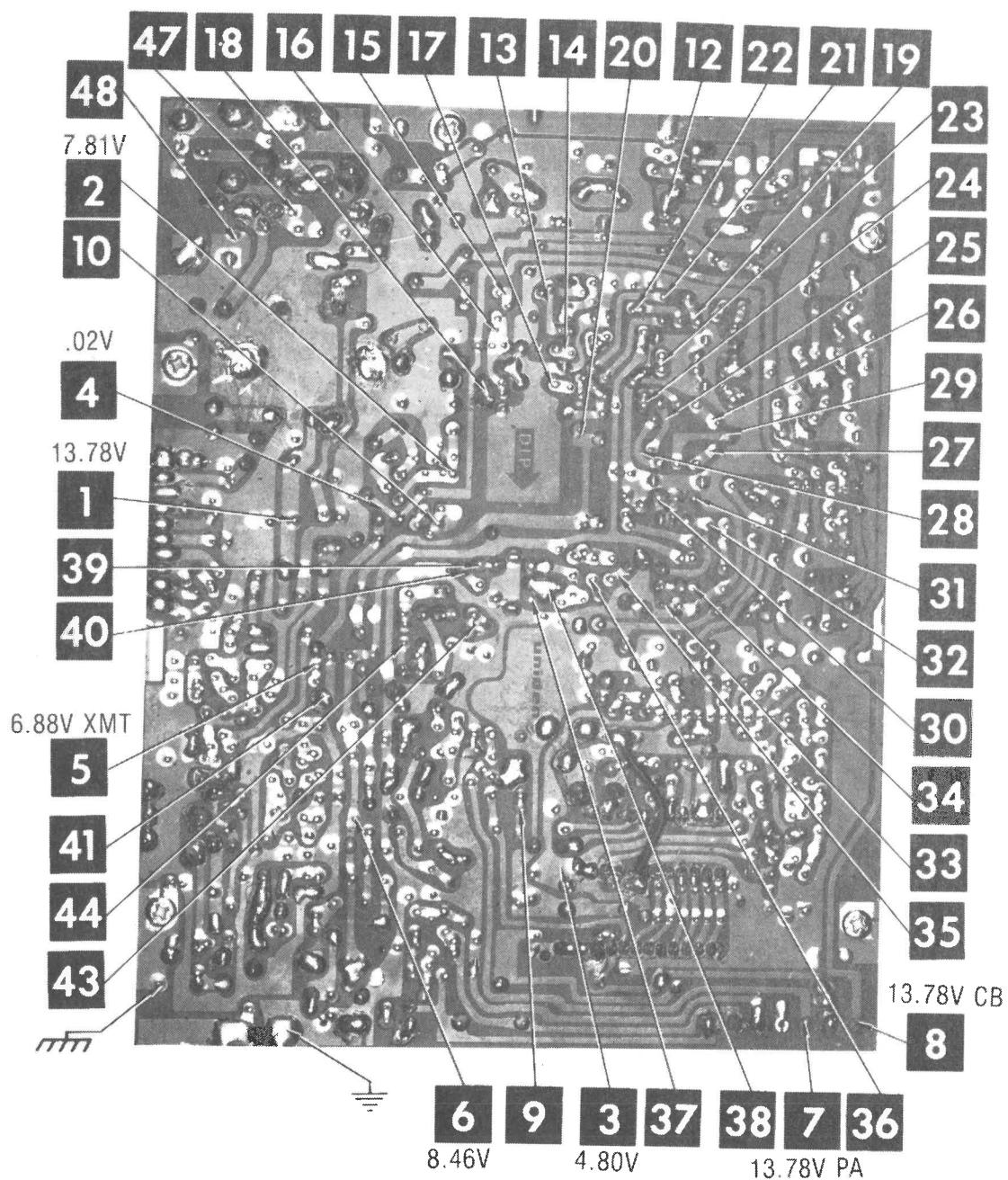
CHASSIS-BOTTOM



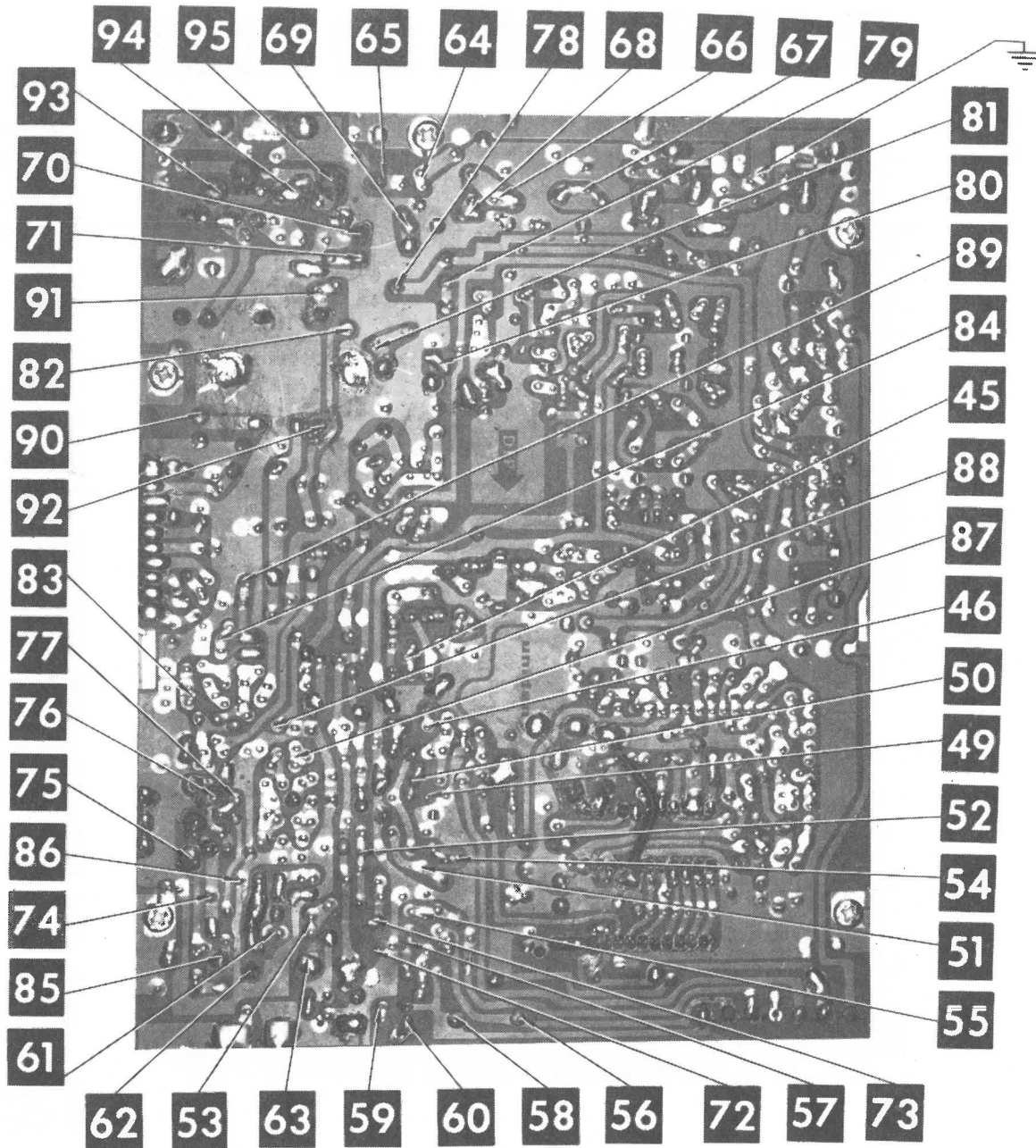
MA IN BOARD



MAIN BOARD

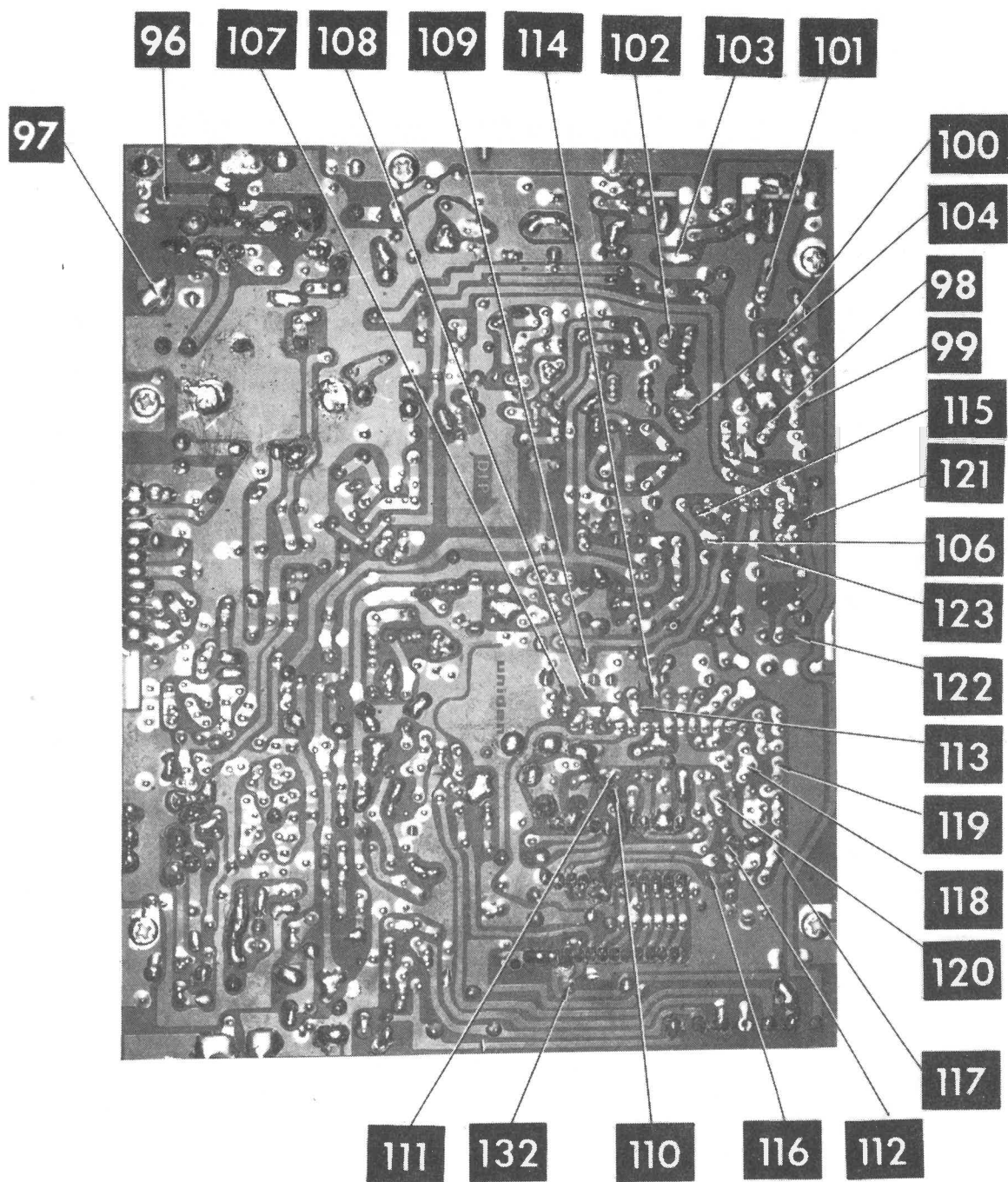


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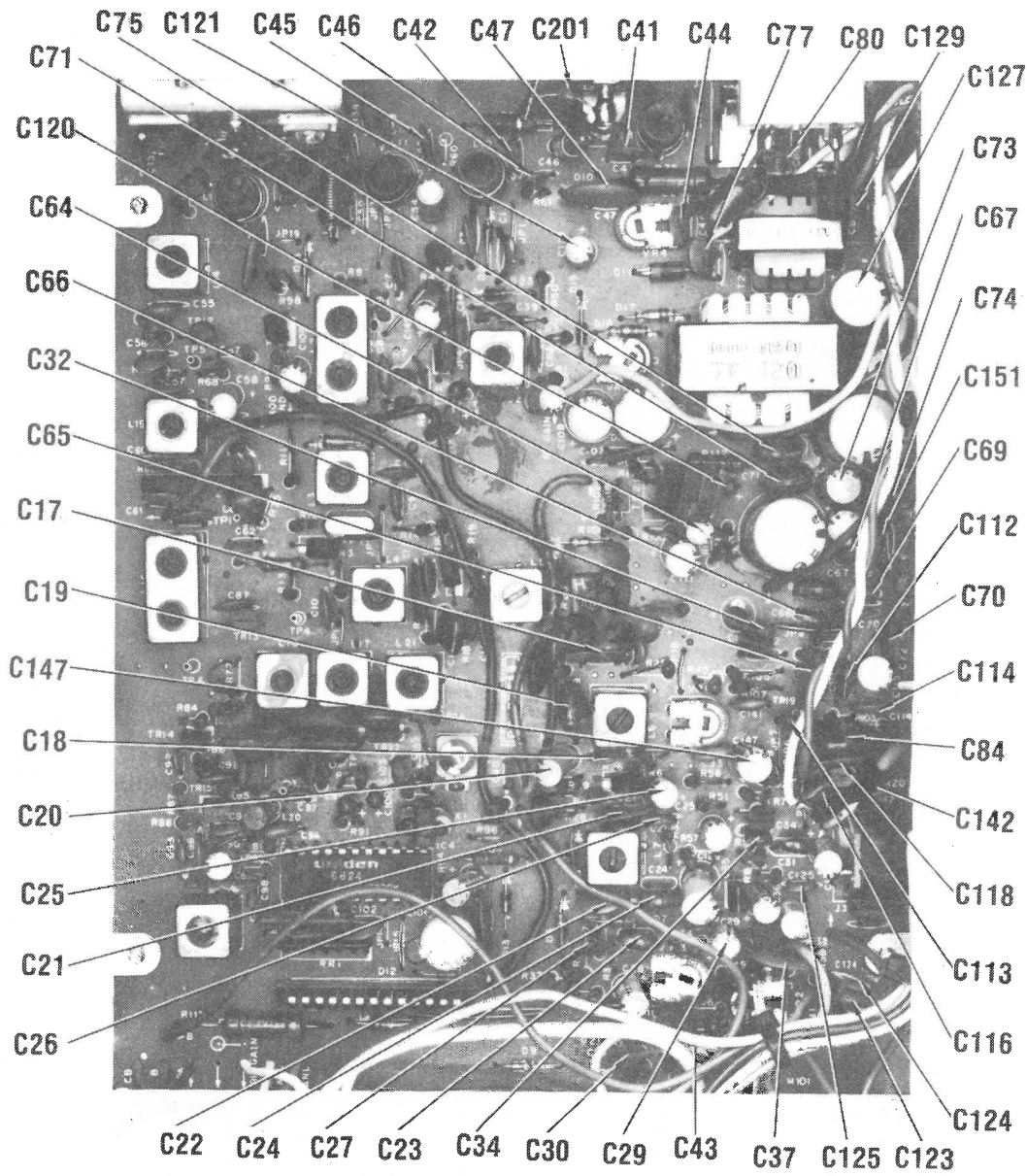


REALISTIC MODEL TRC-469

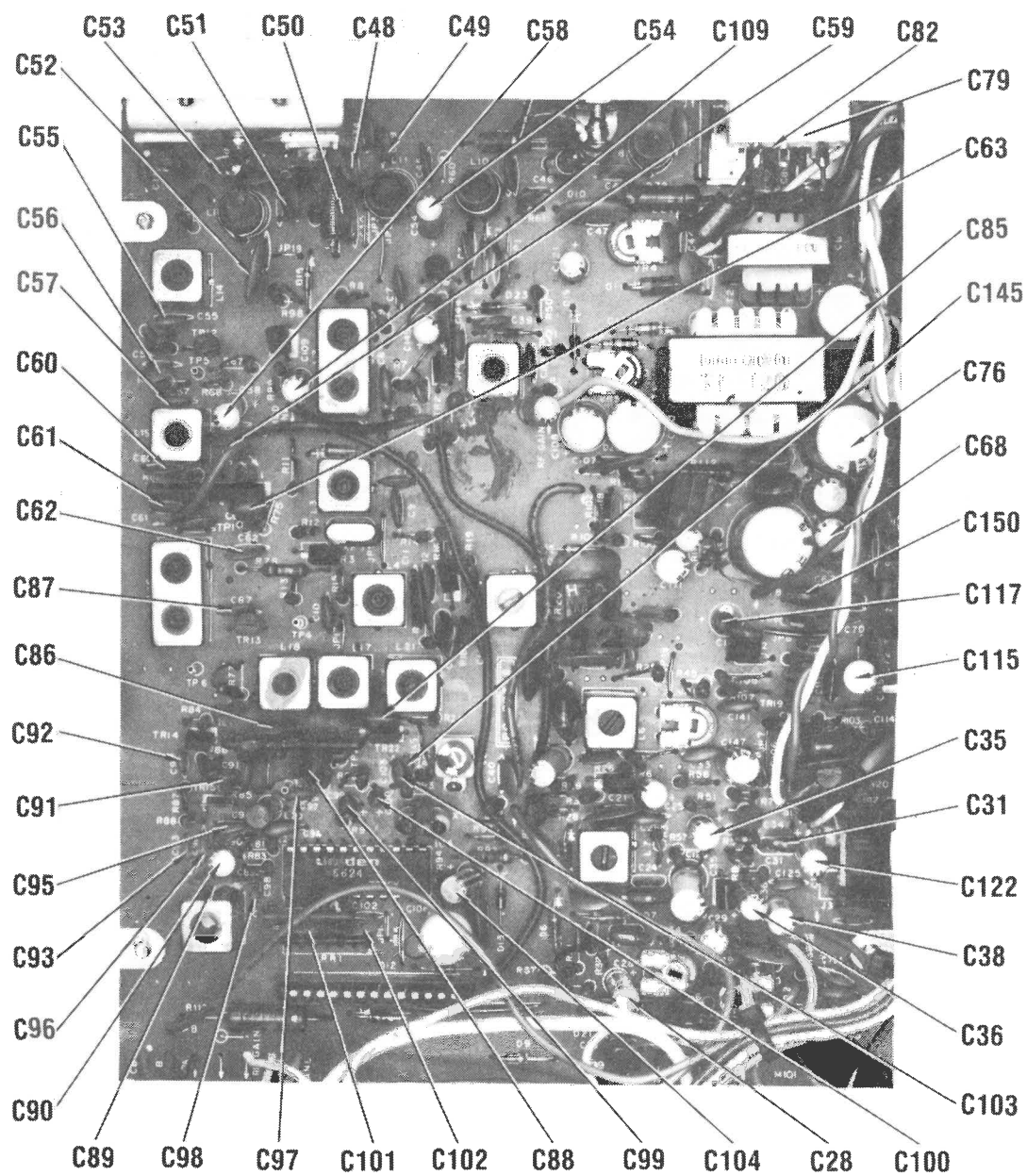
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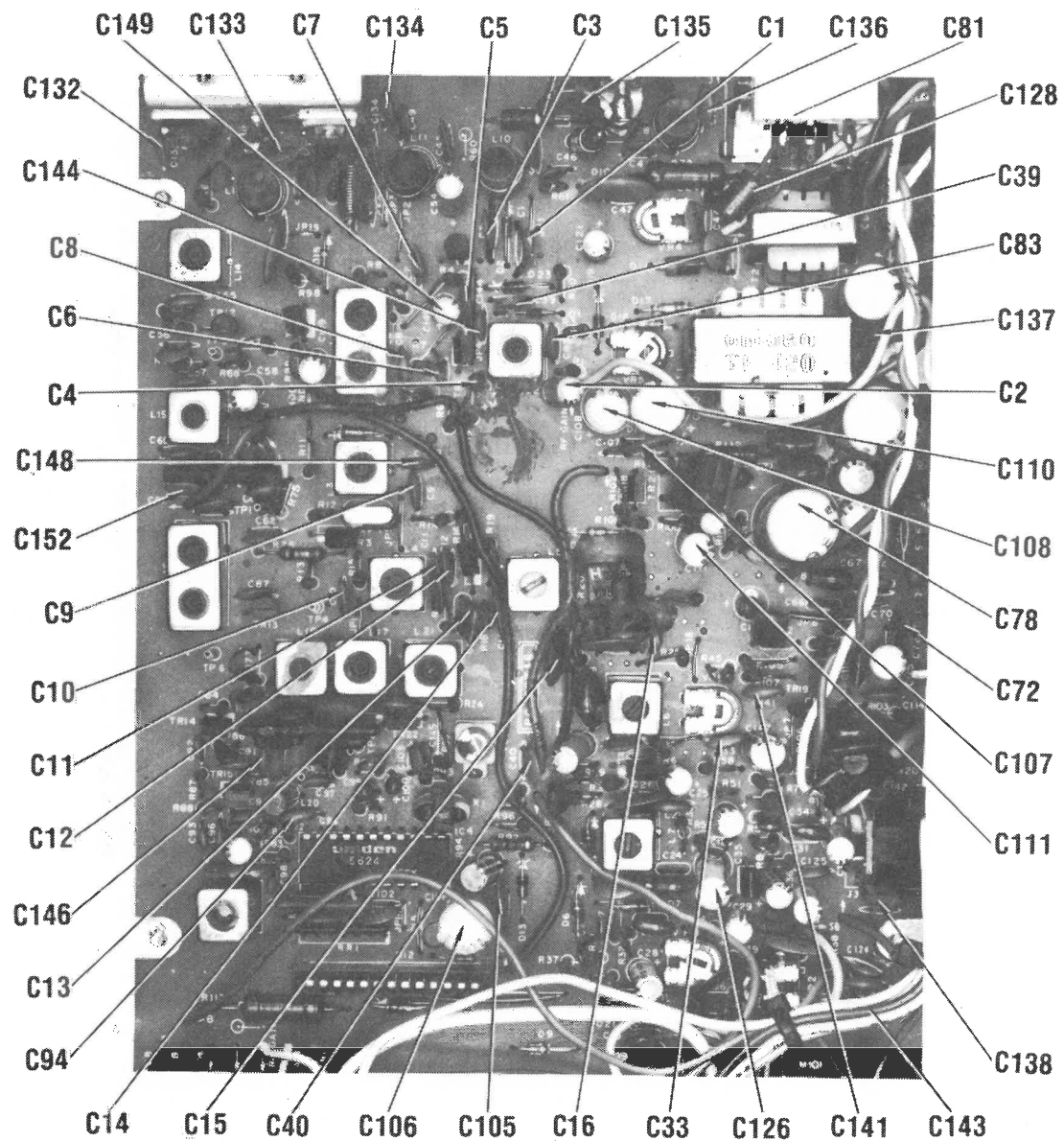
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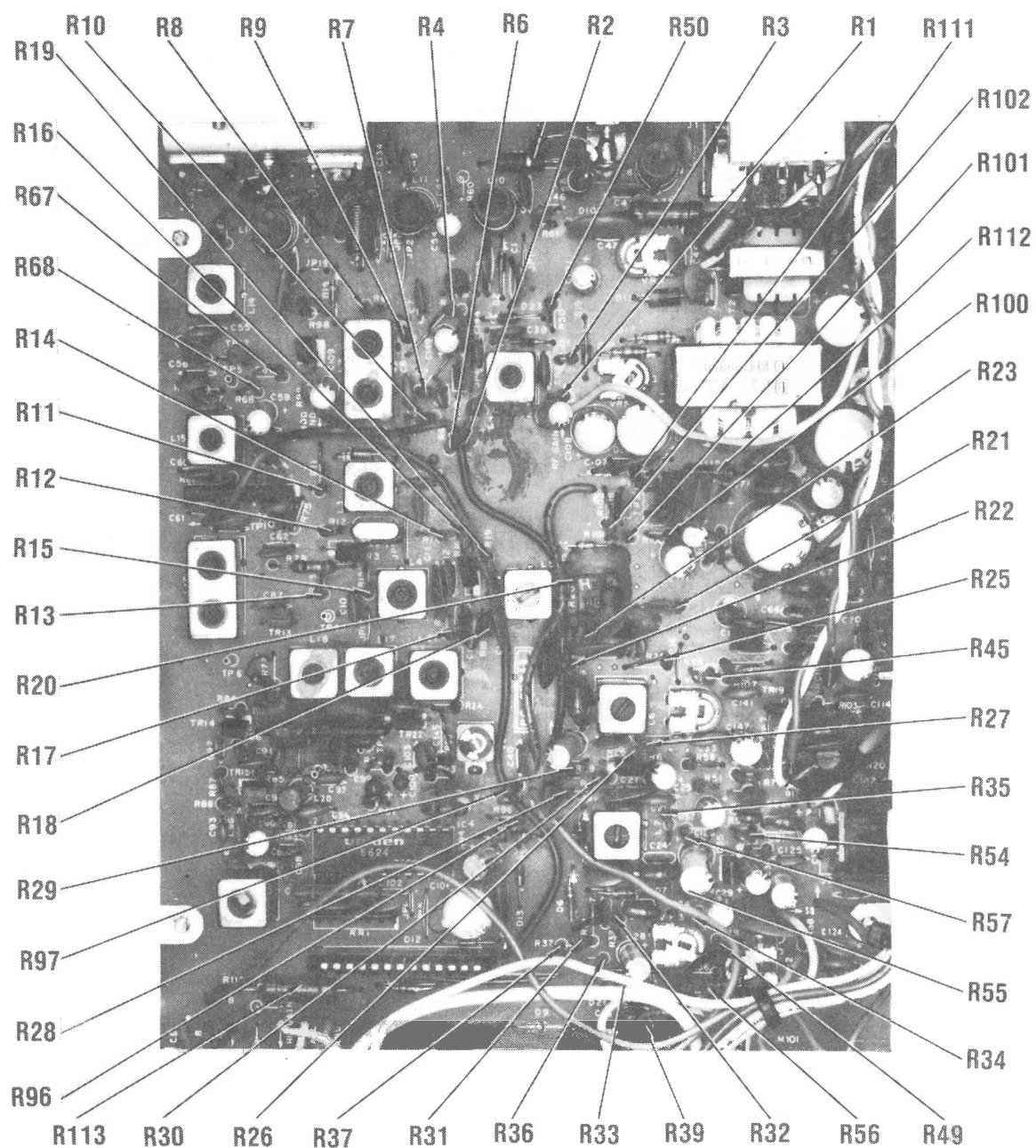
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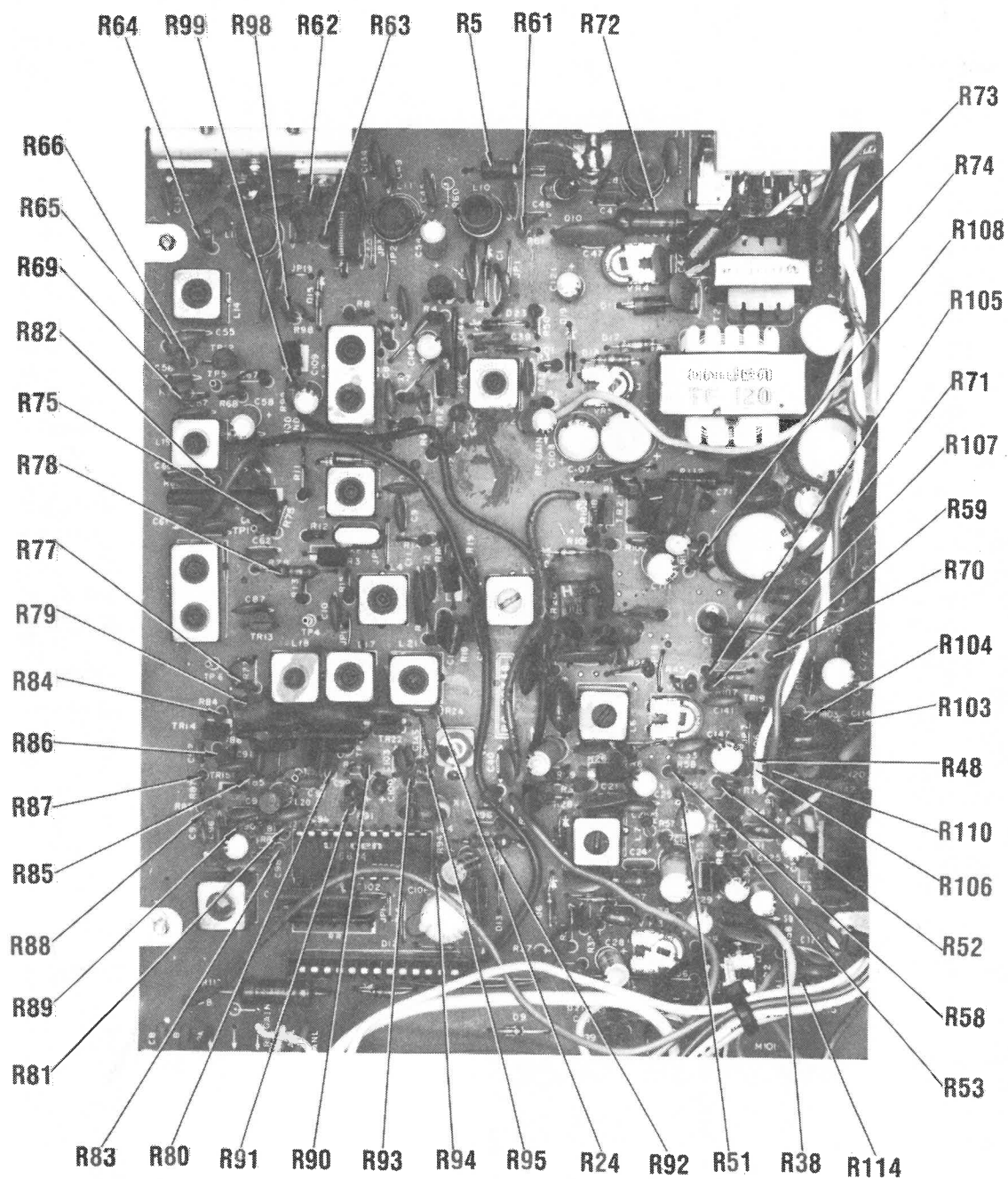
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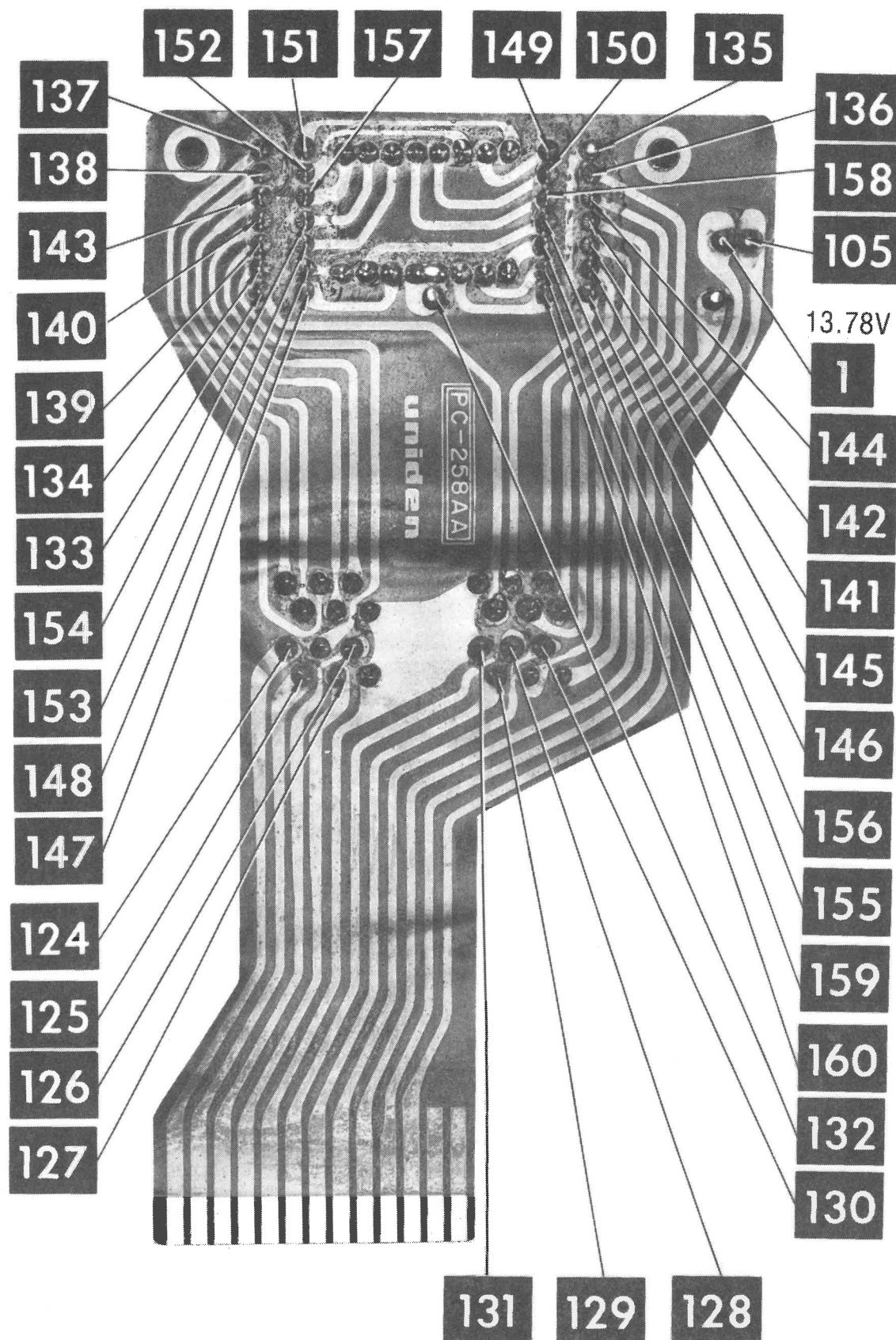
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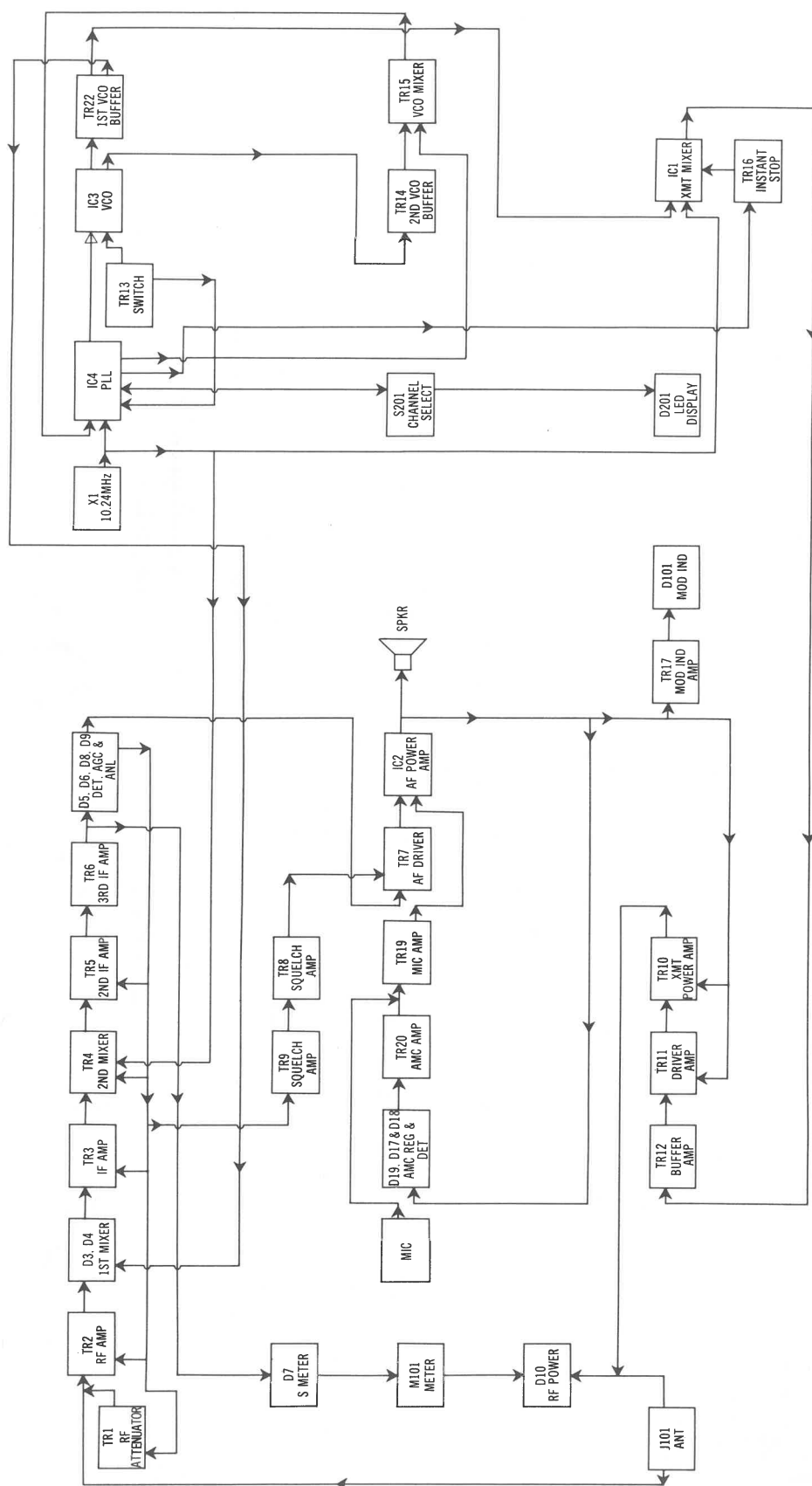
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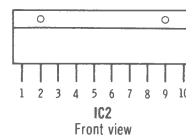
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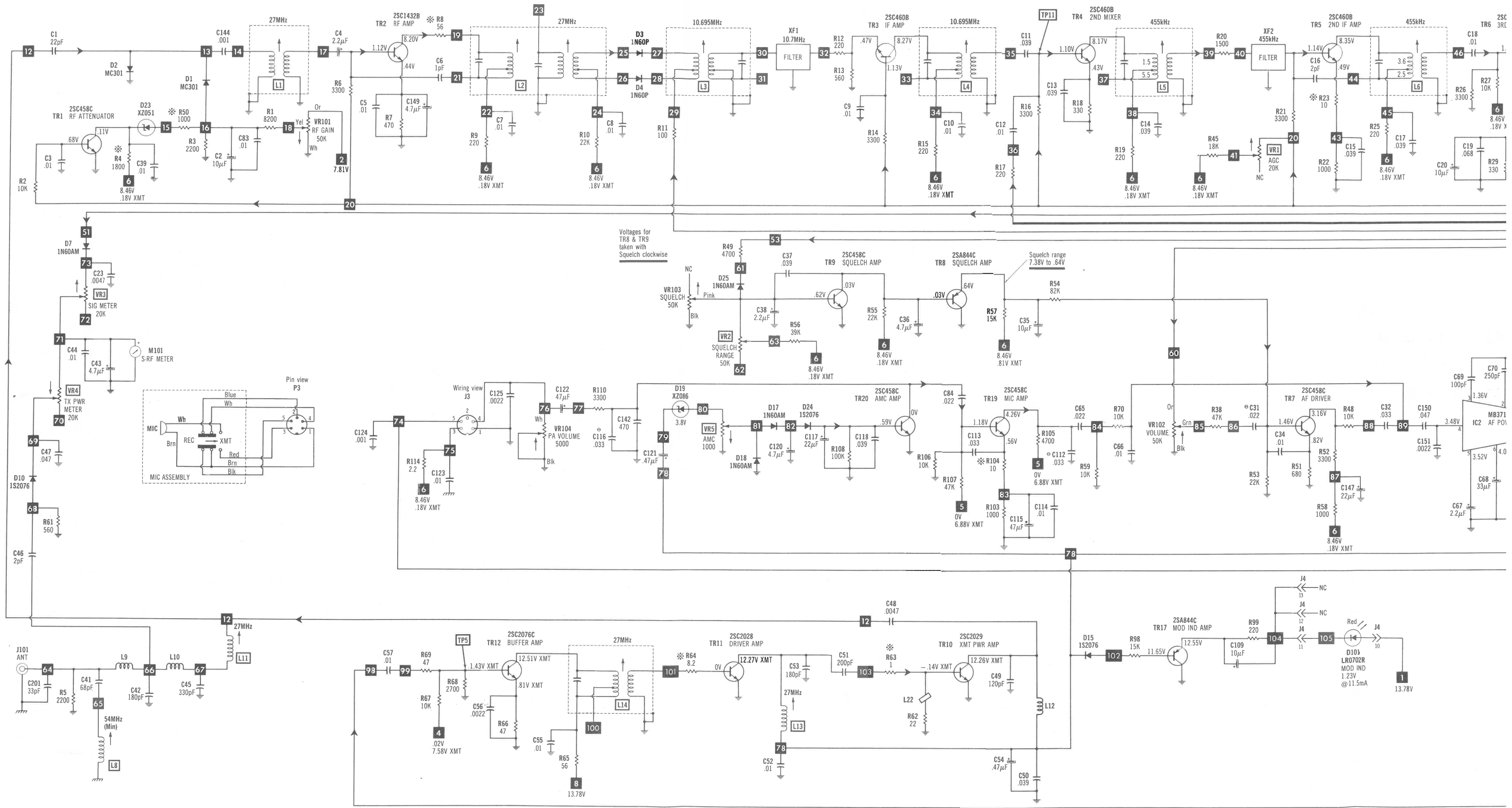
CH. SELECTOR BOARD



BLOCK DIAGRAM



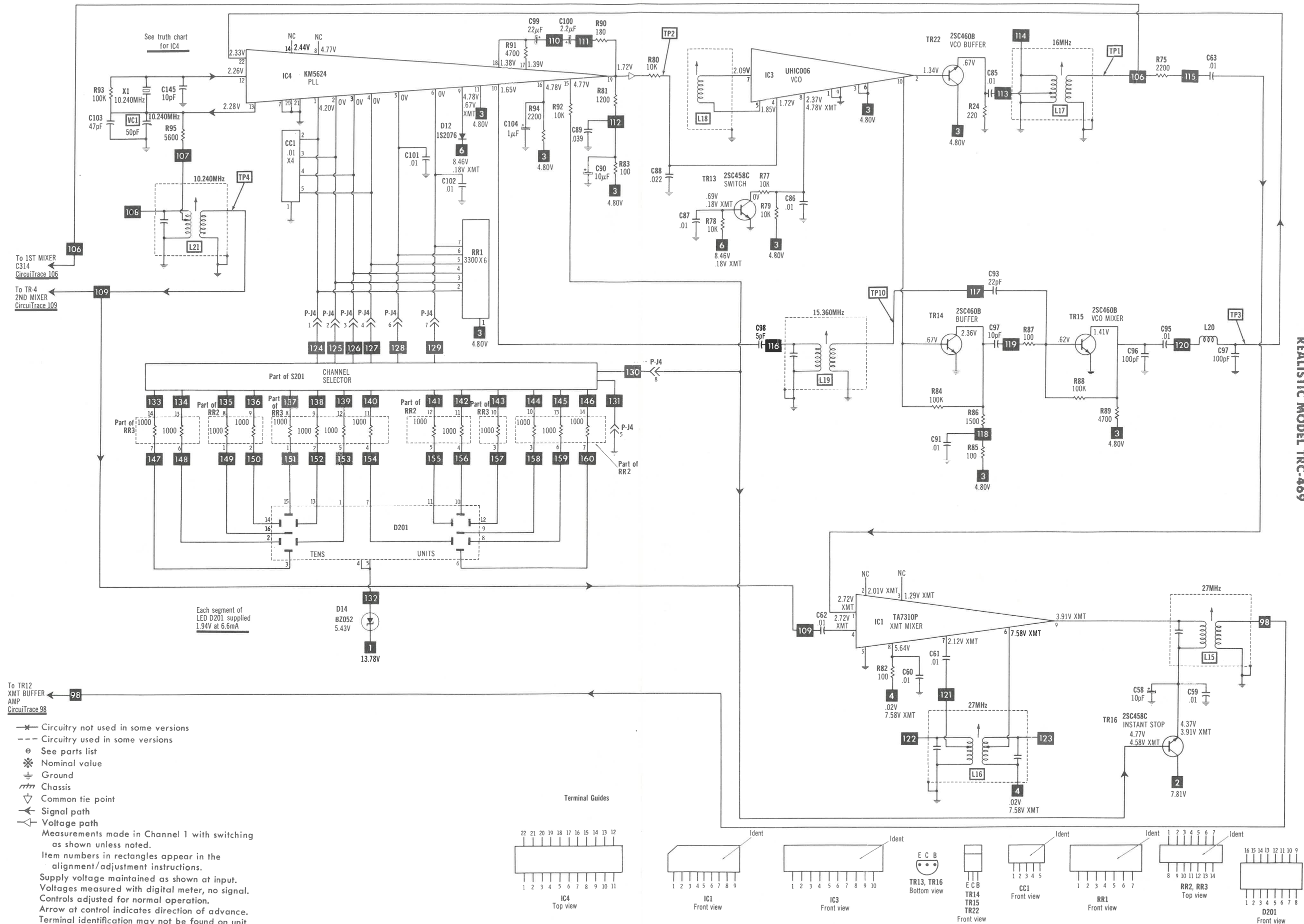
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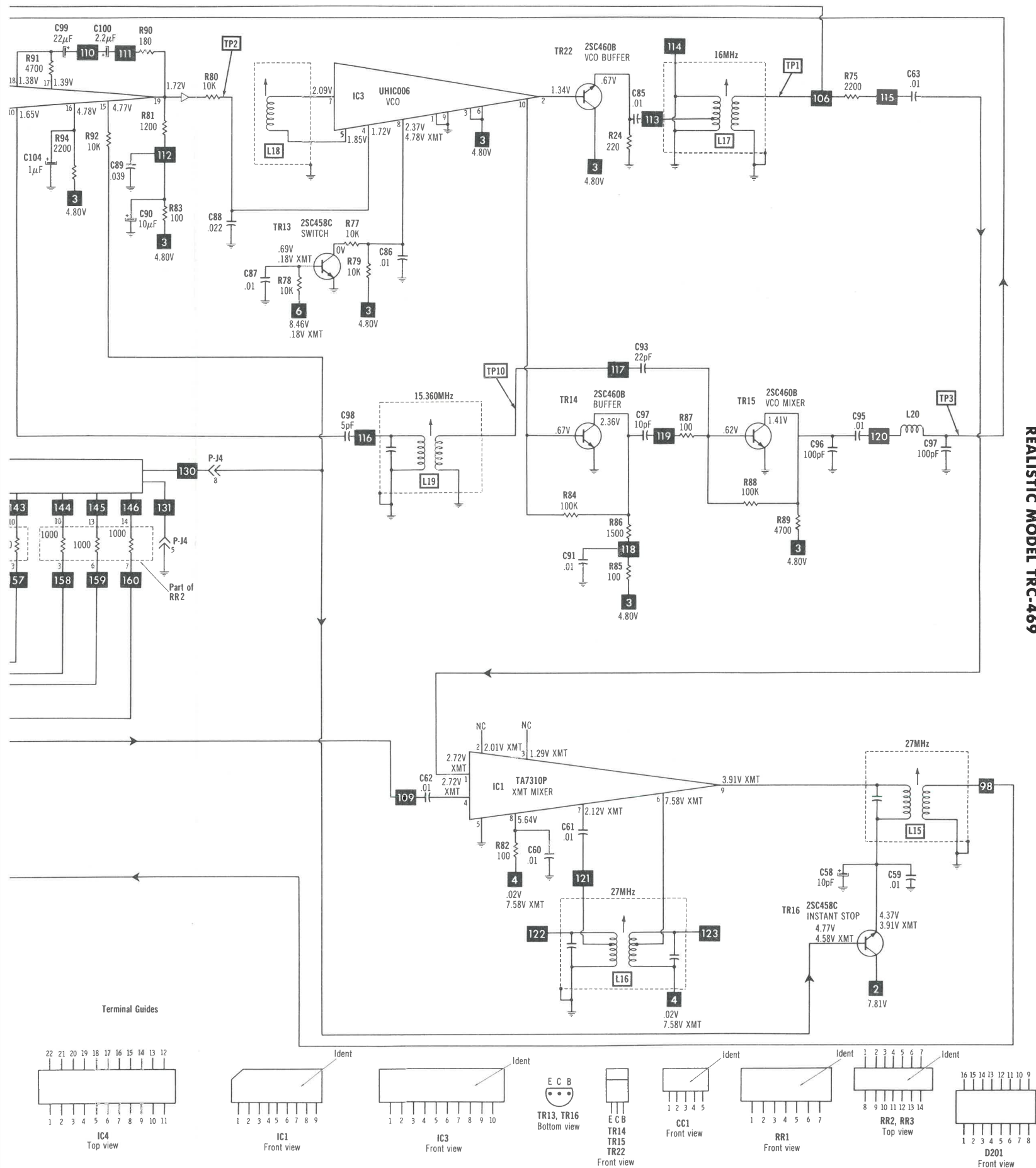


SEMICONDUCTORS (Selected)

ITEM No.	TYPE No.	MFGR. PART No.	C E P
D1	MC-301	DX-0985	GE-
D2	MC-301	DX-0985	GE-
D3	1N60-P	DX-0162	1N
D4	1N60-P	DX-0162	1N
D5	1N60AM	DX-0681	1N
D6	1N60AM	DX-0681	1N
D7	1N60AM	DX-0681	1N
D8	1N60AM	DX-0681	1N
D9	1S2076	DX-0287	GE-
D10	1S2076	DX-0287	GE-
D11	SR1K-1	DX-0475	GE-
D12	1S2076	DX-0287	GE-
D13	XZ-051	DX-0987	GE-
D14	BZ-052	DX-0061	GE-
D15	1S2076	DX-0287	GE-
D16	1S2076	DX-0287	GE-
D17	1N60AM	DX-0681	1N
D18	1N60AM	DX-0681	1N
D19	XZ-086	DX-0986	GE-
D20	XZ-086	DX-0986	GE-
D21	XZ-086	DX-0986	GE-
D22	SR1K-1	DX-0475	GE-
D23	XZ-051	DX-0987	GE-
D24	1S2076	DX-0287	GE-
D25	1N60AM	DX-0681	1N
IC1	TA7310P	MX-3260	
IC2	MB3710	MX-3256	
IC3	UHC-006	MX-3434	
IC4	5624		
	KM5624	MX-3200	
TR1	2SC458C	DBBY273001	GE-
	2SC458		GE-
TR2	2SC1342B	DBBY287001	GE-
	2SC1342		GE-
TR3	2SC460B	DBBY277002	GE-
	2SC460		GE-
TR4	2SC460B	DBBY277002	GE-
	2SC460		GE-
TR5	2SC460B	DBBY277002	GE-
	2SC460		GE-
TR6	2SC460B	DBBY277002	GE-
	2SC460		GE-
TR7	2SC458C	DBBY273001	GE-
	2SC458		GE-
TR8	2SA844C	DBBY008001	GE-
	2SA844		GE-
TR9	2SC458C	DBBY273001	GE-
	2SC458		GE-
TR10	2SC2029		GE-
	2SC2029B/10	DBBY257001	GE-
TR11	2SC2028		GE-
	2SC2028B/20	DBBY256002	GE-
TR12	2SC2076C	DBBY270001	GE-
	2SC2076		GE-
TR13	2SC458C	DBBY273001	GE-
	2SC458		GE-
TR14	2SC460B	DBBY277002	GE-
	2SC460		GE-
TR15	2SC460B	DBBY277002	GE-
	2SC460		GE-
TR16	2SC458C	DBBY273001	GE-
	2SC458		GE-
TR17	2SA844C	DBBY008001	GE-
	2SA844		GE-
TR18	2SA844C	DBBY008001	GE-
	2SA844		GE-
TR19	2SC458C	DBBY273001	GE-
	2SC458		GE-
TR20	2SC458C	DBBY273001	GE-
	2SC458		GE-
TR21	2SC1419C	DBBY278002	GE-
	2SC1419		GE-
TR22	2SC460B	DBBY277002	GE-
	2SC460		GE-

```
* Lead configuration may vary from o
/** Also available as exact type repla
(6) Matched pair.
(7) Two required - select matched pair
```





PARTS LIST AND DESCRIPTION

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

SEMICONDUCTORS (Select replacement transistor for best results)

ITEM No.	TYPE No.	MFR. PART No.	REPLACEMENT DATA									
			GENERAL ELECTRIC PART No.	MALLORY PART No.	MOTOROLA PART No.	RAYTHEON PART No.	RCA PART No.	SPRAGUE PART No.	SYLVANIA PART No.	THORDARSON PART No.	WORKMAN PART No.	ZENITH PART No.
D1	MC-301	DX-0985	GE-300	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG177	TM177	WEP1062	103-131
D2	MC-301	DX-0985	GE-300	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG177	TM177	WEP1062	103-131
D3	1N60-P	DX-0162	1N60(7)	PTC206M(6)	HEPR9135(7)	REN 110(6)	SK3088(7)	RT-263(7)	ECG110(6)	TM110(6)	WEP134(7)	103-29001(7)
D4	1N60-P	DX-0162	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109	WEP134	103-29001
D5	1N60AM	DX-0681	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109	WEP134	103-29001
D6	1N60AM	DX-0681	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109	WEP134	103-29001
D7	1N60AM	DX-0681	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109	WEP134	103-29001
D8	1N60AM	DX-0681	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109	WEP134	103-29001
D9	1S2076	DX-0287	GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D10	1S2076	DX-0287	GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D11	SR1K-1	DX-0475	GE-504A	PTC201	HEPR0052	REN 116	SK3311	RT-213	ECG116	TM116	WEP156	212-76-02
D12	1S2076	DX-0287	GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D13	XZ-051	DX-0987	GEZD-5.1	PTC214	HEPR0602	REN 136	SK3056	RT-235	ECG136A	TM136A	WEP1103	103-29007
D14	BZ-052	DX-0061	GEZD-5.6	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D15	1S2076	DX-0287	GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D16	1S2076	DX-0287	GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D17	1N60AM	DX-0681	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109	WEP134	103-29001
D18	1N60AM	DX-0681	1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109	WEP134	103-29001
D19	XZ-086	DX-0986	GEZD-9.1	ZB9.1B	HEPR0052	REN 139	SK3060	RT-240	ECG139A	TM139A	WEP1109	103-272
D20	XZ-086	DX-0986	GEZD-9.1	ZB9.1B	HEPR0052	REN 139	SK3060	RT-240	ECG139A	TM139A	WEP1109	103-272
D21	XZ-086	DX-0986	GEZD-9.1	ZB9.1B	HEPR0052	REN 139	SK3060	RT-240	ECG139A	TM139A	WEP1109	103-272
D22	SR1K-1	DX-0475	GE-504A	PTC201	HEPR0052	REN 116	SK3311	RT-213	ECG116	TM116	WEP156	212-76-02
D23	XZ-051	DX-0987	GEZD-5.1	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D24	1S2076	DX-0287	GE-514	PTC214	HEPR0602	REN 109	SK3088	RT-263	ECG109	TM109	WEP134	103-29001
D25	1N60AM	DX-0681	1N60	PTC206	HEPR9135	REN 1192	SK3445		ECG1192	TM1192		
IC1	TA7310P	MX-3260	MX-3710									
IC2	UHC-006	MX-3256	UHC-006									
IC3	UHC-006	MX-3434	UHC-006									
IC4	UHC-006	MX-3434	UHC-006									
TR1	2SC458C	DBBY273001	GE-210*	PTC121*	HEPS0009*	REN 123A*	SK3122	RT-187	ECG289	TM289/**	WEP458	121-773
TR2	2SC458C	DBBY287001	GE-210*	PTC121*	HEPS0009*	REN 123A*	SK3122	RT-187	ECG289	TM289/**	WEP458	121-773
TR3	2SC458C	DBBY277002	GE-61*	PTC132	HEPS0014*	REN 229*	SK3018*	RT-108A*	ECG229*	TM229*	WEP956*	121-29021
TR4	2SC460B	DBBY277002	GE-61*	PTC136*	HEPS0014*	REN 107	SK3122	RT-134	ECG107	TM107/**	WEP460	121-522
TR5	2SC460B	DBBY277002	GE-61*	PTC136*	HEPS0014*	REN 107	SK3122	RT-134	ECG107	TM107/**	WEP460	121-522
TR6	2SC460B	DBBY277002	GE-61*	PTC136*	HEPS0014*	REN 107	SK3122	RT-134	ECG107	TM107/**	WEP460	121-522
TR7	2SC458C	DBBY273001	GE-210*	PTC121*	HEPS0009*	REN 123A*	SK3122	RT-187	ECG289	TM289/**	WEP458	121-773
TR8	2SC458C	DBBY008001	GE-210*	PTC121*	HEPS0009*	REN 123A*	SK3122	RT-187	ECG289	TM289/**	WEP458	121-773
TR9	2SC458C	DBBY273001	GE-210*	PTC121*	HEPS0009*	REN 123A*	SK3122	RT-187	ECG289	TM289/**	WEP458	121-773
TR10	2SC2029	DBBY257001	GE-333	PTC186	HEPS0009*	REN 235	SK3197	RT-146	ECG235	TM235	WEP785	121-29039
TR11	2SC2028	DBBY256002	GE-270	PTC180	HEPS3044	REN 295	SK3253		ECG295	TM295	WEP913	200-767
TR12	2SC2076C	DBBY270001	GE-210*	PTC121*	HEPS0015*	REN 123A*	SK3122	RT-308	ECG295	TM295	WEP736	121-722
TR13	2SC458C	DBBY273001	GE-210*	PTC121*	HEPS0009*	REN 123A*	SK3122	RT-187	ECG289	TM289/**	WEP458	121-773
TR14	2SC458C	DBBY277002	GE-210*	PTC121*	HEPS0009*	REN 123A*	SK3122	RT-187	ECG289	TM289/**	WEP458	121-773
TR15	2SC460B	DBBY277002	GE-61*	PTC136*	HEPS0014*	REN 107	SK3122	RT-134	ECG107	TM107/**	WEP460	121-522
TR16	2SC460B	DBBY277002	GE-61*	PTC136*	HEPS0014*	REN 107	SK3122	RT-134	ECG107	TM107/**	WEP460	121-522
TR17	2SC458C	DBBY273001	GE-210*	PTC121*	HEPS0009*	REN 123A*	SK3122	RT-187	ECG289	TM289/**	WEP458	121-773
TR18	2SC458C	DBBY008001	GE-210*	PTC121*	HEPS0009*	REN 123A*	SK3122	RT-187	ECG289	TM289/**	WEP458	121-773
TR19	2SC458C	DBBY273001	GE-210*	PTC121*	HEPS0009*	REN 123A*	SK3122	RT-187	ECG289	TM289/**	WEP458	121-773
TR20	2SC458C	DBBY273001	GE-210*	PTC121*	HEPS0009*	REN 123A*	SK3122	RT-187	ECG289	TM289/**	WEP458	121-773
TR21	2SC1419C	DBBY278002	GE-66	PTC167	HEPS5027	REN 152	SK3054	RT-197	ECG152	TM152	WEP745	121-987-02
TR22	2SC460B	DBBY277002	GE-61*	PTC136*	HEPS0014*	REN 107	SK3122	RT-134	ECG107	TM107/**	WEP460	121-522

* Lead configuration may vary from original.

** Also available as exact type replacement.

(6) Matched pair.

(7) Two required - select matched pair.

PARTS LIST AND DESCRIPTION (CONTINUED)

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

ELECTROLYTIC CAPACITORS

ITEM No.	RATING	REPLACEMENT DATA				
		MFR. PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.	
					Q-LINE	GENERAL LINE
C2	10 16V	CELZ311000	PC10-25	VTT10B25	QV1-41	EV-1222
C4	2.2 16V	CSEZ312296		TDC225M035FL		SD35-2R29
C20	10 16V	CELZ311000	PC10-25	VTT10B25	QV1-41	EV-1222
C25	4.7 16V	CELZ314790	PC5-50	VTT4R7B50	QV1-27	EV-1319
C28	1 16V	CELZ311090	PC1-50	VTT1A50	QV1-9	EV-1315
C29	10 16V	CELZ311000	PC10-25	VTT10B25	QV1-41	EV-1222
C35	10 16V	CELZ311000	PC10-25	VTT10B25	QV1-41	EV-1222
C36	4.7 16V	CELZ314790	PC5-50	VTT4R7B50	QV1-27	EV-1319
C38	2.2 16V	CELZ312290	PC2-100	VTT2R2A50	QV1-19	EV-1517
C43	4.7 16V	CELZ314790	PC5-50	VTT4R7B50	QV1-27	EV-1319
C54	.47 50V	CELZ814780	PC1-50	VTT4R7A63	QV1-3	EV-1610
C58	10 16V	CELZ311000	PC10-25	VTT10B25	QV1-41	EV-1222
C64	10 16V	CELZ311000	PC10-25	VTT10B25	QV1-41	EV-1222
C67	2.2 16V	CSEZ312296		TDC225M035FL		SD35-2R29
C68	33 16V	CELZ313300	PC30-25	VTT33D25	QV1-63	EV-1325
C73	33 16V	CELZ313300	PC30-25	VTT33D25	QV1-63	EV-1325
C76	470 16V	CELZ314710	PC500-16	VTT470K16	QV1-151	EV-1250
C78	1000 16V	CELZ311020	PC1000-16	VTT1000L16	QV1-183	EV-1260
C90	10 16V	CELZ311000	PC10-25	VTT10B25	QV1-41	EV-1222
C99	2.2 16V	CSEZ312296		TDC225M035FL		SD35-2R29
C100	2.2 16V	CSEZ312296	PC2-100	VTT2R2A50	QV1-19	EV-1517
C104	1 16V	CELZ311090	PC1-50	VTT1A50	QV1-9	EV-1315
C106	470 6.3V	CELZ904710	PC500-16	VTT470K16	QV1-149	EV-1150
C108	100 10V	CELZ111010	PC100-10	VTT100E10	QV1-93	EV-1130
C109	10 16V	CELZ311000	PC10-25	VTT10B25	QV1-41	EV-1222
C110	220 10V	CELZ112210	PC250-10	VTT220F10	QV1-115	EV-1140
C111	22 16V	CELZ312200	PC25-25	VTT22B16	QV1-55	EV-1224
C115	47 10V	CELZ114700	PC50-16	VTT47D16	QV1-73	EV-1226
C117	22 6.3V	CSEZ902206		TDC226M025GL		SD25-229
C120	4.7 16V	CSEZ314796		TDC475M035FL		SD35-4R79
C121	.47 50V	CELZ814780	PC1-50	VTT4R7A63	QV1-3	EV-1610
C122	.47 50V	CELZ814780	PC1-50	VTT4R7A63	QV1-3	EV-1610
C126	47 10V	CELZ114700	PC50-16	VTT47D16	QV1-73	EV-1226
C127	220 16V	CELZ312210	PC250-25	VTT220H16	QV1-117	EV-1240
C147	22 16V	CELZ312200	PC25-25	VTT22B16	QV1-55	EV-1224
C149	4.7 16V	CELZ314790	PC5-50	VTT4R7B50	QV1-27	EV-1319

REALISTIC MODEL TRC-469

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
CC1	(1)	HHAY003001			*		10TCR-Q22
C1	22 N220 10%	CCRZ812205					
C3	.01		UK50-103		MAG5011		
C5	.01		UK50-103		MAG5011		
C6	1				CN0510		10TCC-V10
C7	.01		UK50-103		MAG5011		
C8	.01		UK50-103		MAG5011		
C9	.01		UK50-103		MAG5011		
C10	.01		UK50-103		MAG5011		
C10	.01		UK50-103		MAG5011		
C11	.039 25V				GP140		5GA-S40
C12	.01		UK50-103	DPMS6S39	M192P3939R8	QFT2-159	1FT-S39
C13	.039 50V 10%			DPMS6S39	GP140		5GA-S40
C14	.039 25V			DPMS6S39	M192P3939R8	QFT2-159	1FT-S39
C15	.039 10%			NP02P2	CN0522		10TCC-V22
C16	2		DTZ-2R2		GP140		5GA-S40
C17	.039 25V				MAG5011		
C18	.01		UK50-103	WMF1S68	EWFI1A168	QF1-195	1PB-S68
C19	.068 10%				GP140		5GA-S40
C21	.039 25V				CN0456		10TCC-Q56
C22	56 NPO 5%				M192P4729R8	QFT2-63	1FT-D47
C23	.0047 50V			WMF1D47	M192P4729R8	QFT2-63	1FT-D47
C24	.0047 50V 10%			WMF1D47	M192P4729R8		
C26	.01		UK50-103		MAG5011		
C27	.001 50V 10%			DPMS6D1	EWFI1A210	QFT2-1	1FT-D10
C30	.0022 50V 10%			DPMS6D22	M192P2229R8	QFT2-27	1FT-D22
C31	.022 50V 10%			DPMS2S22	M192P2239R8	QFT2-127	1FT-S22
C32	.033 50V 10%			DPMS6S33	M192P3339R8	QFT2-149	1FT-S33
C33	.01		UK50-103		MAG5011		
C34	.01 50V 10%			WMF1S1	EWFI1A110	QFT2-91	1FT-S10
C37	.039 25V				GP140		5GA-S40
C39	.01		UK50-103		MAG5011		
C40	.01		UK50-103		MAG5011		
C41	68 10%		DTZ-68	NP068	CN0468		10TCC-Q68
C42	180		DTZ-180				10TCC-T18

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
C44	.01		UK50-103		MAG5011		10TS-T33
C45	330		DD-331	GP330	GP333		10TCC-V22
C46	2		DTZ-2R2	NPO2P2	CN0522		HY-735
C47	.047		UK25-503		MAG2515		5GA-D47
C48	.0047 10%		DD-472	GP4700	GP247		10TCC-T12
C49	120		DTZ-120		CN0312		5GA-S40
C50	.039 25V				GP140		10TCC-T20
C51	200		DTZ-200				
C52	.01 10%		UK50-103		MAG5011		10TS-T15
C53	180		DD-151		GP315		
C55	.01		UK50-103		MAG5011		10TS-D22
C56	.0022				GP222		
C57	.01		UK50-103		MAG5011		
C59	.01		UK50-103		MAG5011		
C60	.01		UK50-103		MAG5011		
C61	.01		UK50-103		MAG5011		
C62	.01		UK50-103		MAG5011		
C63	.01		UK50-103		MAG5011		
C65	.022 50V 10%			DPMS2S22	M192P2239R8	QFT2-127	1FT-S22
C66	.01 50V 10%			WMF1S1	EW1A110	QFT2-91	1FT-S10
C69	100		DTZ-100	NPO100	CN0310		10TCC-T10
C70	250						
C71	.068 50V 10%			WMF1S68	EW1A168	QF1-195	1PB-S68
C72	.0047 10%		DD-472	GP4700	GP247		5GA-D47
C74	220		DTZ-220				10TCC-T22
C74	220		DTZ-220				10TCC-T22
C75	.068 50V 10%			WMF1S68	EW1A168	QF1-195	1PB-S68
C77	.01		UK50-103		MAG5011		
C79	.001 10%		DD-102		GP210		10TS-D10
C80	.001 10%		DD-102		GP210		10TS-D10
C81	.01		UK50-103		MAG5011		
C82	.01		UK50-103		MAG5011		
C83	.01		UK50-103		MAG5011		
C84	.022 50V 10%			DPMS2S22	M192P2239R8	QFT2-127	1FT-S22
C85	.01		UK50-103		MAG5011		
C86	.01		UK50-103		MAG5011		
C87	.01		UK50-103		MAG5011		
C88	.022 50V 10%			DPMS2S22	M192P2239R8	QFT2-127	1FT-S22
C89	.039 25V				GP140		5GA-S40
C91	.01		UK50-103		MAG5011		
C92	.01		UK50-103		MAG5011		
C93	22		DTZ-22	NPO22	CN0422		10TCC-Q22
C94	.01		UK50-103		MAG5011		
C95	.01		UK50-103		MAG5011		
C96	100		DTZ-100	NPO100	CN0310		10TCC-T10
C97	100		DTZ-100	NPO100	CN0310		10TCC-T10
C98	5		DTZ-4R7	NPO4P7	CN0547		10TCC-V47
C101	.01		UK50-103		MAG5011		
C102	.01		UK50-103		MAG5011		
C103	47 10%		DTZ-47	NPO47	CN0447		10TCC-Q47
C105	.039 25V				GP140		5GA-S40
C107	.039 25V				GP140		5GA-S40
C112	.033 50V 10%			DPMS6S33	M192P3339R8	QFT2-149	1FT-S33
C113	.033 50V 10%			DPMS6S33	M192P3339R8	QFT2-149	1FT-S33
C114	.01		UK50-103		MAG5011		
C116	.033 50V 10%			DPMS6S33	M192P3339R8	QFT2-149	1FT-S33
C118	.039 25V				GP140		5GA-S40
C123	.01		UK50-103		MAG5011		
C124	.001 10%		DD-102		GP210		10TS-D10
C125	.0022				GP222		10TS-D22
C128	.039 25V				GP140		5GA-S40
C129	.01		UK50-103		MAG5011		
C132	.01		UK50-103		MAG5011		
C133	.01		UK50-103		MAG5011		
C134	.01		UK50-103		MAG5011		
C135	.039				GP140		5GA-S40
C136	.01		UK50-103		MAG5011		
C137	.01		UK50-103		MAG5011		
C138	.01		UK50-103		MAG5011		
C141	.01		UK50-103		MAG5011		
C142	470		DD-471	GP470	GP347		10TS-T47
C143	.01		UK50-103		MAG5011		
C144	.001 10%		DD-102		GP210		10TS-D10
C145	10		DTZ-10	NPO10	CN0410		10TCC-Q10
C146	.01		UK50-103		MAG5011		
C148	.01		UK50-103		MAG5011		
C150	.047 50V 10%			DPMS2S47	EW1A147	QFT2-171	1FT-S47
C151	.0022				GP222		10TS-D22
C152	.01		UK50-103		MAG5011		
C201	33		DTZ-33	NPO33	CN0433		10TCC-Q33
VC1	Trimmer	C-0637					

*Not normally in distributor's stock. Available thru distributor on order to manufacturer.
 (1) Capacitor Network, consists of four .01 caps.

PARTS LIST AND DESCRIPTION (CONTINUED)

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

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

ITEM No.	FUNCTION	RESISTANCE	REPLACEMENT DATA			
			MFGR. PART No.	CENTRALAB PART No.	MALLORY PART No.	TRW PART No.
VR1	AGC	20K	RRVY189006			U260R253B
VR2	Squelch Range	50K	RRVY189007			U260R503B
VR3	Sig Meter	20K	RRVY189006			U260R253B
VR4	TX Power Meter	20K	RRVY189006			U260R253B
VR5	AMC	1000	RRVY189003			U260R102B
VR101	RF Gain	50K	P-0809			
VR102	Volume	50K	P-1823 (18)			
VR104	PA Volume/Power Switch	5000				
VR103	Squelch	50K	P-0809			

(18) Includes VR102, VR104 and Power Switch.

RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA		ITEM No.	RATING	REPLACEMENT DATA	
		WORKMAN PART No.	MFGR. PART No.			WORKMAN PART No.	MFGR. PART No.
RR1	Resistor Network		RX-0046 (1)	RR2	Resistor Network		RX-0047 (2)
				RR3	Resistor Network		RX-0047 (2)

- (1) Consists of six 3300 ohm resistor.
 (2) Consists of seven 1000 ohm resistor.

COILS (RF-IF)

ITEM No.	FUNCTION	REPLACEMENT DATA			REMARKS
		PART No.	OTHER IDENTIFICATION	MILLER PART No.	
L1	Rec RF (27MHz)	CA-3272	LA029	CBS740-T	
L2	RF Amp (27MHz)	CA-3829	LA199		
L3	IF (10.695MHz)	CA-3830	LA200		
L4	IF (10.695MHz)	CA-7442	LA019	CBS508-1TC	
L5	IF (455kHz)	CA-3633	LA163		
L6	IF (455kHz)	CA-3831	LA183		
L7	IF (455kHz)	CA-3635	LA107	8517	
L8	TVI Trap (54MHz)	CA-3640	LC017	CB303	
L9	RF Choke (uH)	CA-3837	LD073		
L10	Pi Filter (3uH)	CA-3702	LC119		
L11	RF Choke (.28uH)	CA-3409	LC018	CB304	
L12	RF Choke (.47uH)	CA-3641	LD012	4588	
L13	Driver Amp (.2uH)	CA-3640	LC017	CB303	
L14	Buffer Amp (27MHz)	CA-3832	LA189		
L15	Xmt Driver (27MHz)	CA-3420	LA088	CBS717-TC	
L16	Xmt Driver (27MHz)	CA-3833	LA198		
L17	VCO Buffer (16MHz)	CA-3834	LA201		
L18	VCO (16.5MHz)	CA-3835	LA202		
L19	PLL Output (17.45MHz)	CA-3627	LA166		
L20	RF Choke (100uH)	C-0632	LZ001		
L21	Mixer (10.240MHz)	CA-3836	LA182		

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA		NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000~)	MFGR. PART No.	THORDARSON PART No.	
T2	1.15A	.8	.86mH	TF-083 (1)	TR516	(1) Number on unit.

REALISTIC MODEL TRC-469

PARTS LIST AND DESCRIPTION (CONTINUED)

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

TRANSFORMER (Audio Output)

ITEM No.	IMPEDANCE		REPLACEMENT DATA			NOTES
	PRI.	SEC.	MFGR. PART No.	THORDARSON PART No.	TRIAD PART No.	
T1	32	8	TD-0163 TF-120 (1)			(1) Number on unit.

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		MFGR. PART No.	QUAM PART No.	
SP101	4" PM 8 ohms	S-4690 10P03S (1)	4A1Z8	(1) Number on unit.

FUSE DEVICES

ITEM No.	DESCRIPTION	REPLACEMENT DATA						
		PART No.		BUSS PART No.		LITTELFUSE PART No.		WORKMAN PART No.
		DEVICE	HOLDER	DEVICE	HOLDER	DEVICE	HOLDER	DEVICE
F101	2A Quick Acting	HF-0043		AGC2	HDJ	312002	150145	F62-2

MICROPHONE

ITEM No.	REPLACEMENT DATA				CONNECTION DATA						
	MFGR. PART No.	GC PART No.	GC NOISE CANCEL	GC POWER	GC CONNECTOR	GC Red	GC Shield	GC Yellow	GC Blue	GC White	GC Black
MIC	M-2222	18-032	18-034	18-010	18-105	4	1	3	5	NC	1

PARTS LIST AND DESCRIPTION (CONTINUED)

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

MISCELLANEOUS

ITEM No.	PART NAME	PART No.	NOTES
D101	LED	L-0777	Modulation Indicator (1.23V @ 11.5mA)
D201	LED	L-0776	Channel Indicator (1.94V @ 6.6mA)(Two used)
J1	Jack	J-0897	PA
J2	Jack	J-0897	Ext Speaker
J3	Jack	J-0896	Mic
J4	Jack	J-0847	Flexible P.C.B. Connector
J101	Jack	J-6421	Antenna
J102	Jack	J-0819	DC Power
L22	Ferrite Bead	CA-3838	
L23	Ferrite Bead	CA-3839	
L24	Ferrite Bead	CA-3839	
M101	Meter	M-0361	S/RF
PL101	Lamp		Meter (10.32V @ 34mA)(Part of M101)
S101	Switch	S-2418	NA
S102	Switch	S-2419	PA/MON/CB
S201	Switch	S-1289	Channel Selector
X1	Crystal	MX-2292	10.240MHz
XF1	Filter	C-0841	10.695MHz
XF2	Filter	C-0840	455kHz
	Printed Circuit Board	PPCY258012	Channel Switch (flexible)
	Printed Circuit Board	PPCY297012	Main
	Printed Circuit Board	PPCY330012	Switch
	Cord	S-1961	DC Power

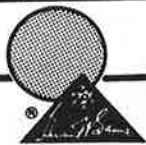
REALISTIC MODEL TRC-469

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

ITEM	PART No.	ITEM	PART No.
Case, Bottom	Z-3825	Chassis, Front	MDBP304797
Case, Top	Z-3724	Knob, Channel	K-2703
Chassis	MDBP204796	Knob, Control	K-2283
		Panel, Front	Z-3726

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')



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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 1003002, DWIGHT D.

PRESIDENT MODEL 1003002, DWIGHT D.

MANUFACTURER'S SPECIFICATIONS

TRANSMITTER

Power Output:	4 watts
Modulation:	100% capability.
Frequency Response:	300 to 2,500 Hz.
Output Impedance:	50 ohms. unbalanced.

RECEIVER

Sensitivity:	Less than 0.5 μ V for 10 dB (S+N)/N.
Selectivity:	6 dB @7 KHz, 60 dB @10 KHz.
Image Rejection:	60 dB
I.F. Frequencies:	Double conversion; 1st: 10.695 MHz 2nd: .455 KHz.
Automatic Gain Control:	Less than 10 dB change, in audio output for inputs from 10 to 50,000 microvolts.
RF Gain Control:	Adjustable for optimum signal.
Noise Blanker:	RF Type.
Delta Tune Range:	± 1.5 KHz, continuously adjustable.
Squelch:	Adjustable; threshold less than 0.5 μ V.
Audio Output Power:	4 watts (maximum).
Frequency Response:	300 to 3,000 Hz.
Distortion:	Less than 10% @3 watts @1000 Hz.
Speaker (supplied in Separate Box):	8 ohms, 4" round.
External Speaker (not supplied):	8 ohms.

Courtesy of the Manufacturer

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

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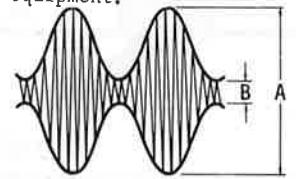
8CE964

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.
 Adjust VR201 for 13.8-volts DC at TP10.
 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:

L1 thru L5, L17 thru L21, L23, L24, L25 GC ELECTRONICS: 9440
 L6, L7, L8 5000,5009,8276,8728,8728A
 L10, L13, L16 8728,8728A,9304



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

FIGURE 1

SYNTHESIZER ALIGNMENT

TEST EQUIPMENT	TRANSCIVER	ADJUST	REMARKS
Input of oscilloscope to TP6.	Ch. 19	L23	Adjust for maximum RF.
Input of frequency counter to TP7 (IC4 Pin 12).	Ch. 19 Delta Tune Detent	L21	Adjust for 10.240MHz.
Input of DC meter to TP4.	Ch. 40	L20	Adjust for 3.50 volts. Check for approximately 2.30 volts on Channel 1.
Input of oscilloscope to TP8 (IC2 Pin 4).	Ch. 19	L19	Adjust for maximum RF.
Input of frequency counter to TP8 (IC2 Pin 4).	Ch. 19		Check for 15.360MHz.
Input of frequency counter to TP5.	Ch. 1		Check for .910MHz. Check all channels. (See Truth Chart for correct frequencies.)
Input of frequency counter to TP5.	Ch. 1, XMT		Check for 1.365MHz. Check all channels. (See Truth Chart for correct frequencies.)
Input of oscilloscope to TP2.	Ch. 19	L18	Adjust for maximum RF.
Input of frequency counter to TP2.	Ch. 1		Check for 16.270MHz. Check all channels. (See Truth Chart for correct frequencies.)
Input of oscilloscope to TP1.	Ch. 19, XMT	L24,L25	Adjust for maximum RF.
Input of frequency counter to TP1.	Ch. 1, XMT		Check for 26.965MHz. Check all channels. (See Truth Chart for correct frequencies.)
Input of frequency counter to antenna input.	Ch. 1, XMT		Check for 26.965MHz. If necessary, readjust L21 for correct frequency. Check all channels. See page 4 for channel frequencies.

RECEIVER ALIGNMENT

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

Adjust volume control to obtain a suitable indication.

Set generator output low enough to prevent AGC limiting.

Preset controls as follows, unless otherwise noted:

RF Gain Maximum, Squelch MINIMUM, Delta Tune Detent, Ch. 9 Off, Tone Fully Clockwise.

TEST EQUIPMENT	TRANSCIVER	ADJUST	REMARKS
Output of signal generator thru .01uF to TP9 (TR4 Gate). 455kHz, 1000Hz @ 30% modulation.	Ch. 19	L8,L7,L6	Adjust for maximum output.
Output of signal generator thru .01uF to antenna input. 27.185MHz, 1000Hz @ 30% modulation.	Ch. 19	L5,L4,L3, L2,L1	Adjust for maximum output. Readjust L6, L7 and L8 for maximum.

RECEIVER ADJUSTMENTS

Connect an AC VTVM or AF wattmeter across speaker voice coil.
Adjust volume control to obtain a suitable indication.
Preset controls as follows, unless otherwise noted:
RF Gain Maximum, Squelch MINIMUM, Delta Tune Detent, Ch. 9 Off, Tone Fully Clockwise.

TEST EQUIPMENT	TRANSCIVER	ADJUST	REMARKS
Output of signal generator thru .01uF to antenna input. 27.185MHz, 1000Hz @ 30% modulation. Output .5uV.	Ch. 19 Volume Maximum	VR1	IF GAIN Adjust for 2.00 volts RMS audio output.
Output of signal generator thru .01uF to antenna input. 27.185MHz, 1000Hz @ 30% modulation. Output 1000uV.	Ch. 19 Squelch Maximum	VR3	SQUELCH RANGE Adjust so squelch just breaks.
Output of signal generator thru .01uF to antenna input. 27.185MHz, 1000Hz @ 30% modulation. Output 100uV.	Ch. 19	VR2	SIGNAL METER Adjust for 9 on S scale of meter.

PRESIDENT MODEL 1003002, DWIGHT D.

TRANSMITTER ALIGNMENT

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

TEST EQUIPMENT	TRANSCIVER	ADJUST	REMARKS
Input of RF wattmeter to antenna input.	Ch. 19	L17,L16	Adjust for maximum RF output.
Input of RF wattmeter to antenna input.	Ch. 19	L13	Adjust for 4.0 watts RF output.
Input of spectrum analyzer or harmonic meter to antenna input.	Ch. 19	L10	Adjust for MINIMUM at 54MHz (2nd harmonic).

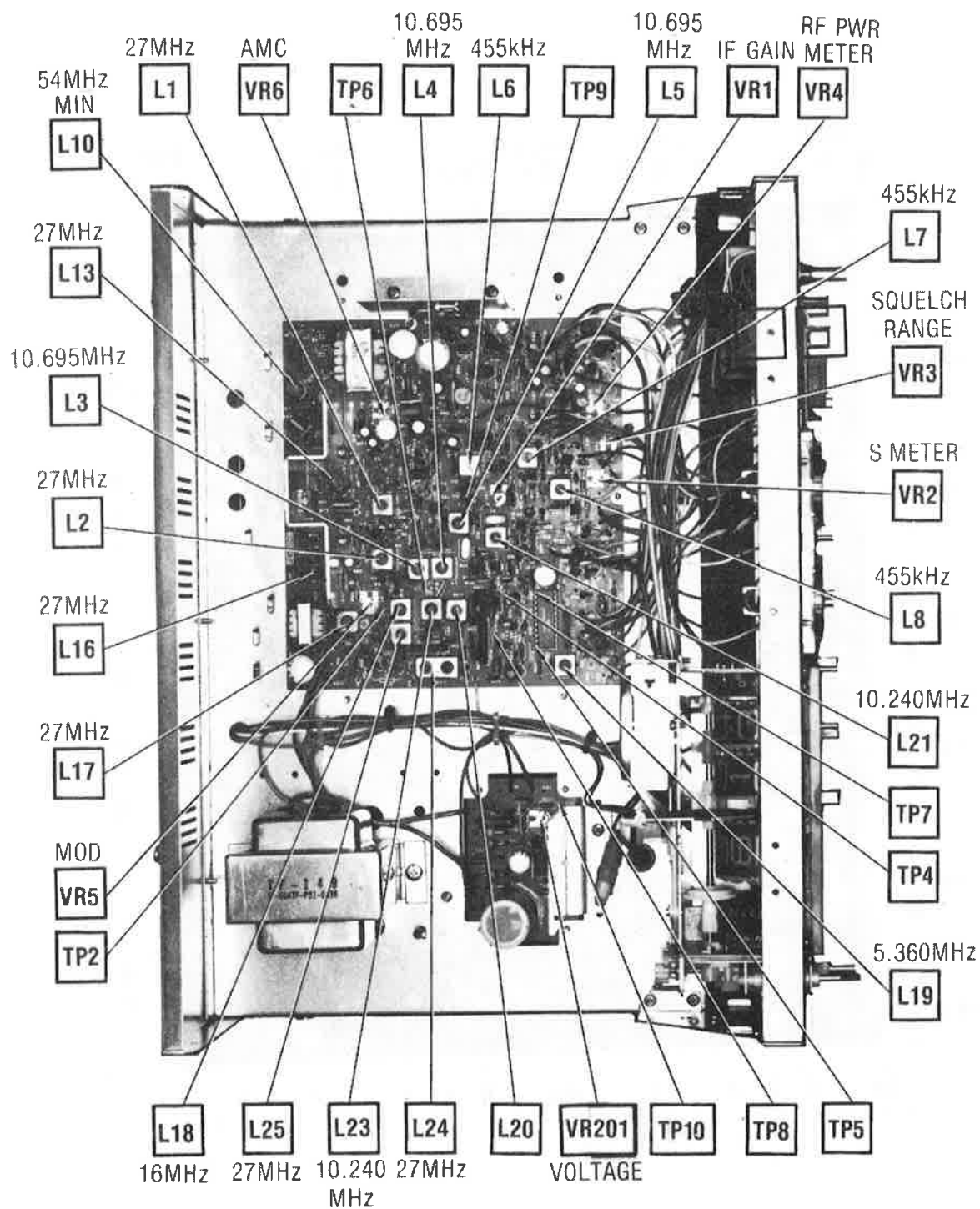
TRANSMITTER ADJUSTMENTS

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

TEST EQUIPMENT	TRANSCIVER	ADJUST	REMARKS
Input of oscilloscope or modulation meter to antenna input. Inject a 1000Hz, 100mV signal at mic input.	Ch. 19 SWR/RF-Mod RF-Mod Mike Gain Maximum	VR6	AMC Adjust for 95% modulation maximum. (See Figure 1.)
Input of oscilloscope or modulation meter to antenna input. Inject a 1000Hz signal at mic input. Set output level to produce 100% modulation.	Ch. 19 SWR/RF-Mod RF-Mod Mike Gain Maximum	VR5	MOD METER Adjust so Mod Meter indicates 100% modulation.
Input of RF wattmeter to antenna input.	Ch. 19 SWR/RF-Mod RF-Mod	VR4	RF PWR METER Adjust so RF Meter agrees with RF wattmeter.

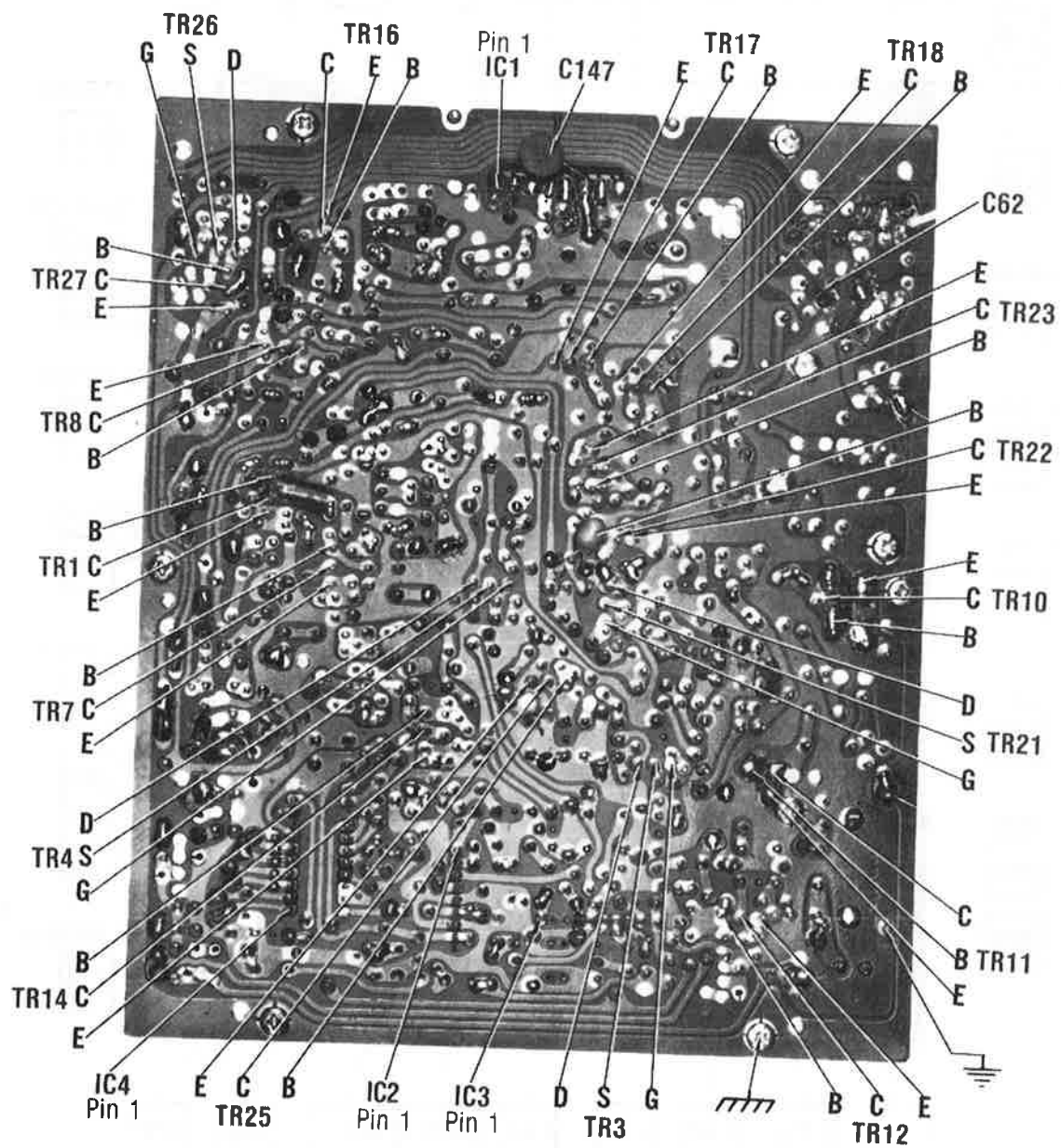
TRUTH CHART

CHANNEL	1 = 4.80 Volts 0 = .50 Volts								REC DIVIDER INPUT IN MHz AT TP5	XMIT DIVIDER INPUT IN MHz AT TP5	REC SYNTH OUTPUT IN MHz AT TP2	XMIT SYNTH OUTPUT IN MHz AT TP1
	PROGRAM DIVIDER											
	IC4											
	PINS											
	6	5	4	3	2	1						
1	0	0	0	0	0	1			.910	1.365	16.270	26.965
2	0	0	0	0	1	0			.920	1.375	16.280	26.975
3	0	0	0	0	1	1			.930	1.385	16.290	26.985
4	0	0	0	1	0	0			.950	1.405	16.310	27.005
5	0	0	0	1	0	1			.960	1.415	16.320	27.015
6	0	0	0	1	1	0			.970	1.425	16.330	27.025
7	0	0	0	1	1	1			.980	1.435	16.340	27.035
8	0	0	1	0	0	0			1.000	1.455	16.360	27.055
9	0	0	1	0	0	1			1.010	1.465	16.370	27.065
10	0	1	0	0	0	0			1.020	1.475	16.380	27.075
11	0	1	0	0	0	1			1.030	1.485	16.390	27.085
12	0	1	0	0	1	0			1.050	1.505	16.410	27.105
13	0	1	0	0	1	1			1.060	1.515	16.420	27.115
14	0	1	0	1	0	0			1.070	1.525	16.430	27.125
15	0	1	0	1	0	1			1.080	1.535	16.440	27.135
16	0	1	0	1	1	0			1.100	1.555	16.460	27.155
17	0	1	0	1	1	1			1.110	1.565	16.470	27.165
18	0	1	1	0	0	0			1.120	1.575	16.480	27.175
19	0	1	1	0	0	1			1.130	1.585	16.490	27.185
20	1	0	0	0	0	0			1.150	1.605	16.510	27.205
21	1	0	0	0	0	1			1.160	1.615	16.520	27.215
22	1	0	0	0	1	0			1.170	1.625	16.530	27.225
23	1	0	0	0	1	1			1.200	1.655	16.560	27.255
24	1	0	0	1	0	0			1.180	1.635	16.540	27.235
25	1	0	0	1	0	1			1.190	1.645	16.550	27.245
26	1	0	0	1	1	0			1.210	1.665	16.570	27.265
27	1	0	0	1	1	1			1.220	1.675	16.580	27.275
28	1	0	1	0	0	0			1.230	1.685	16.590	27.285
29	1	0	1	0	0	1			1.240	1.695	16.600	27.295
30	1	1	0	0	0	0			1.250	1.705	16.610	27.305
31	1	1	0	0	0	1			1.260	1.715	16.620	27.315
32	1	1	0	0	1	0			1.270	1.725	16.630	27.325
33	1	1	0	0	1	1			1.280	1.735	16.640	27.335
34	1	1	0	1	0	0			1.290	1.745	16.650	27.345
35	1	1	0	1	0	1			1.300	1.755	16.660	27.355
36	1	1	0	1	1	0			1.310	1.765	16.670	27.365
37	1	1	0	1	1	1			1.320	1.775	16.680	27.375
38	1	1	1	0	0	0			1.330	1.785	16.690	27.385
39	1	1	1	0	0	1			1.340	1.795	16.700	27.395
40	0	0	0	0	0	0			1.350	1.805	16.710	27.405

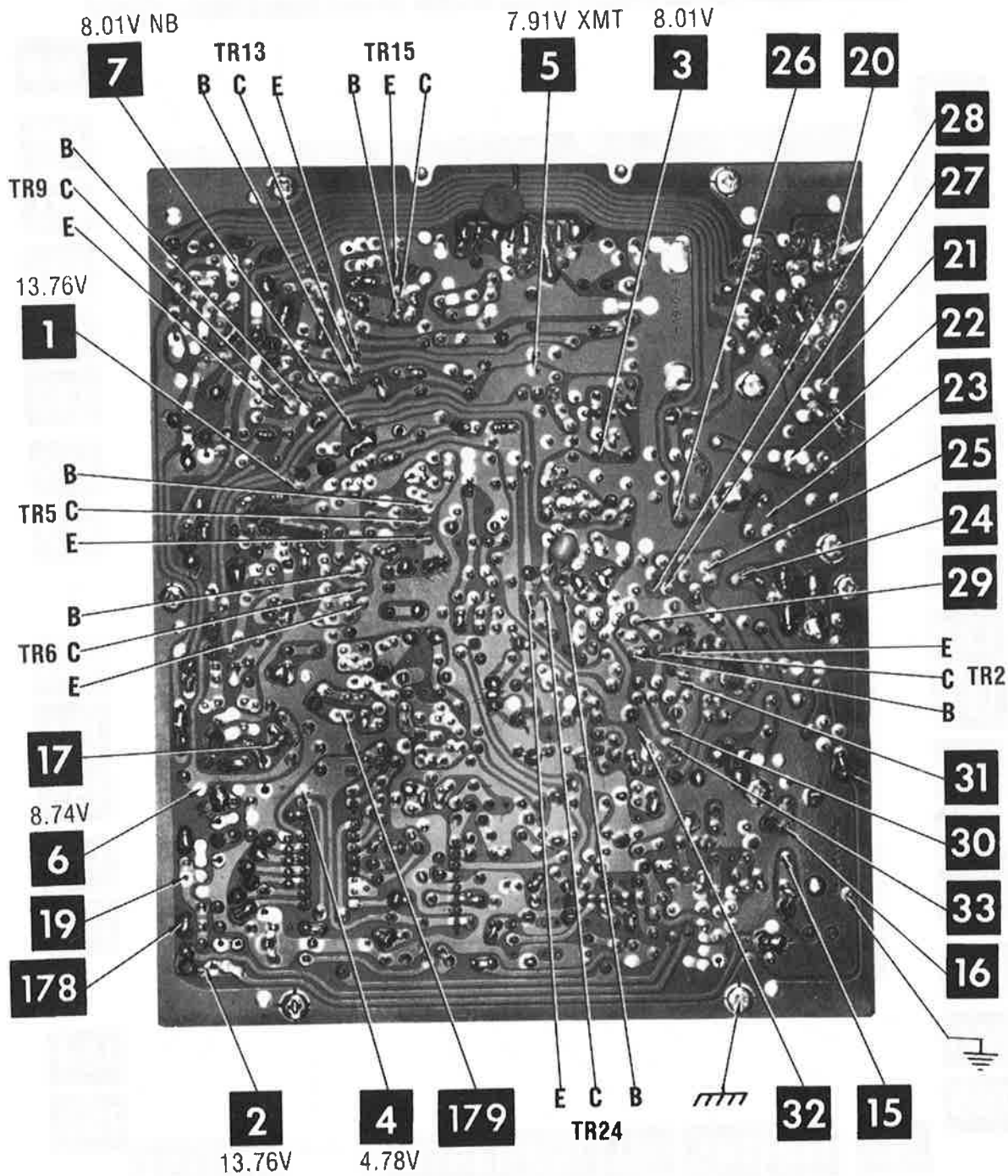


PRESIDENT MODEL 1003002, DWIGHT D.

CHASSIS-TOP

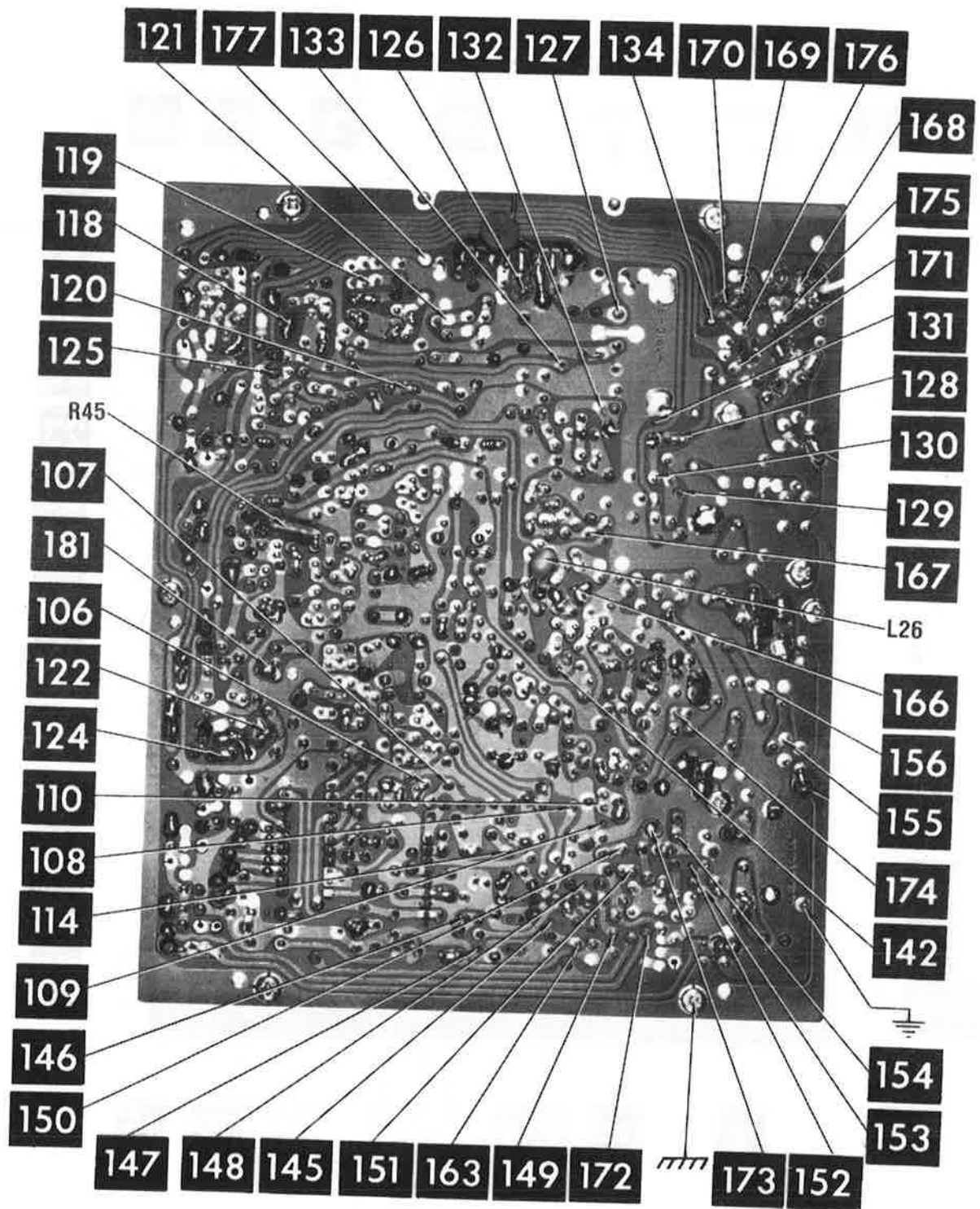


MAIN BOARD

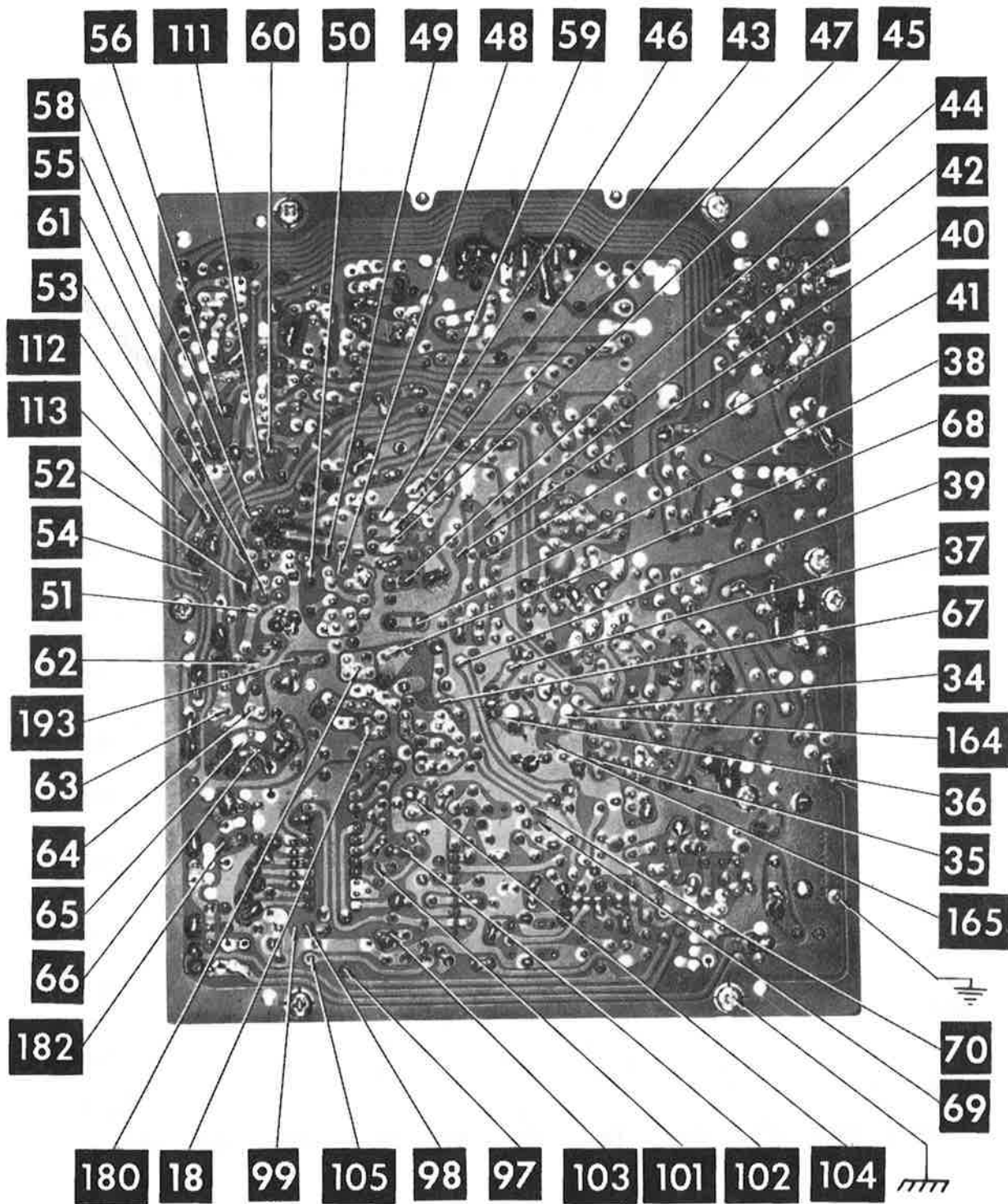


PRESIDENT MODEL 1003002, DWIGHT D.

MAIN BOARD

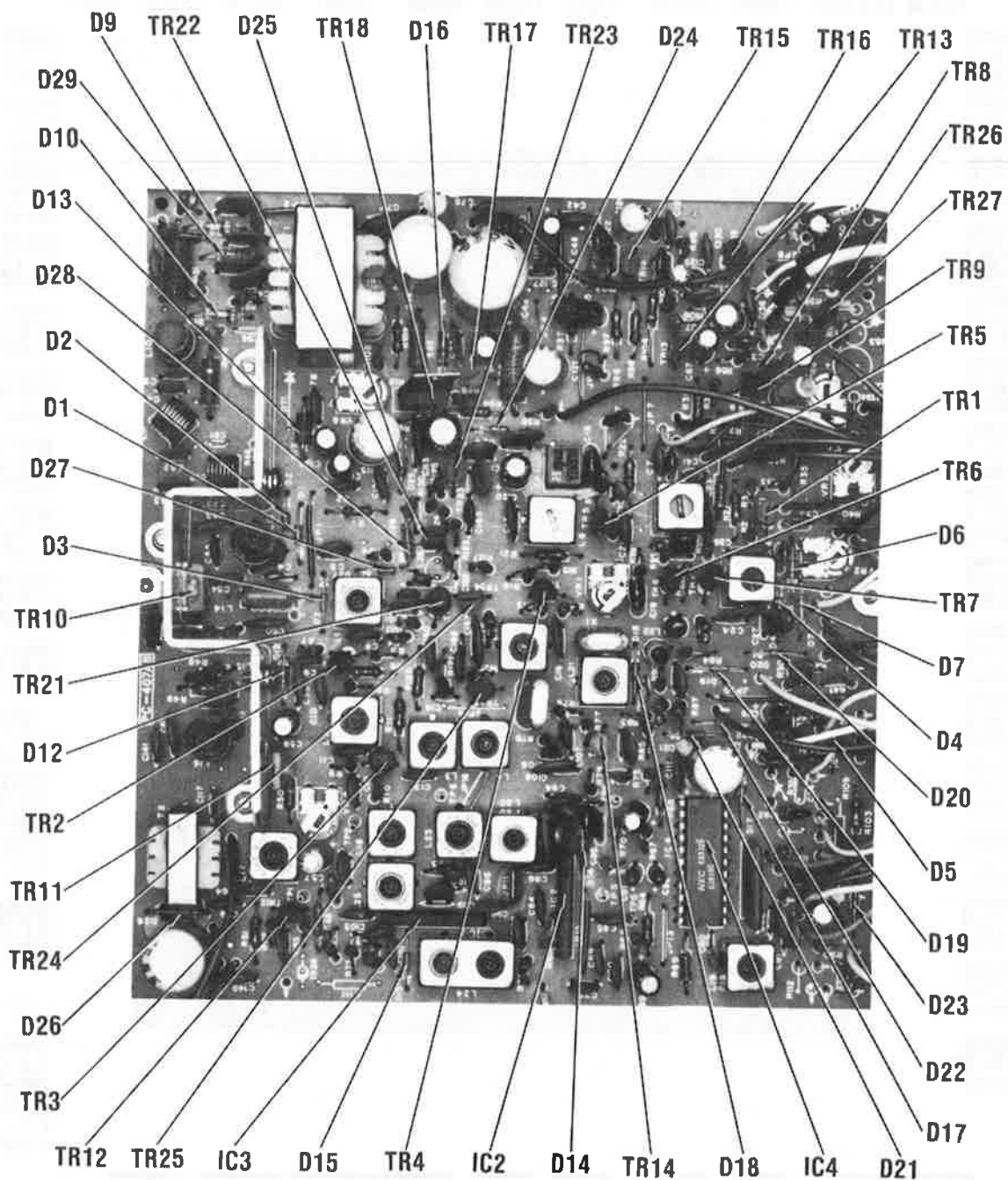


MAIN BOARD



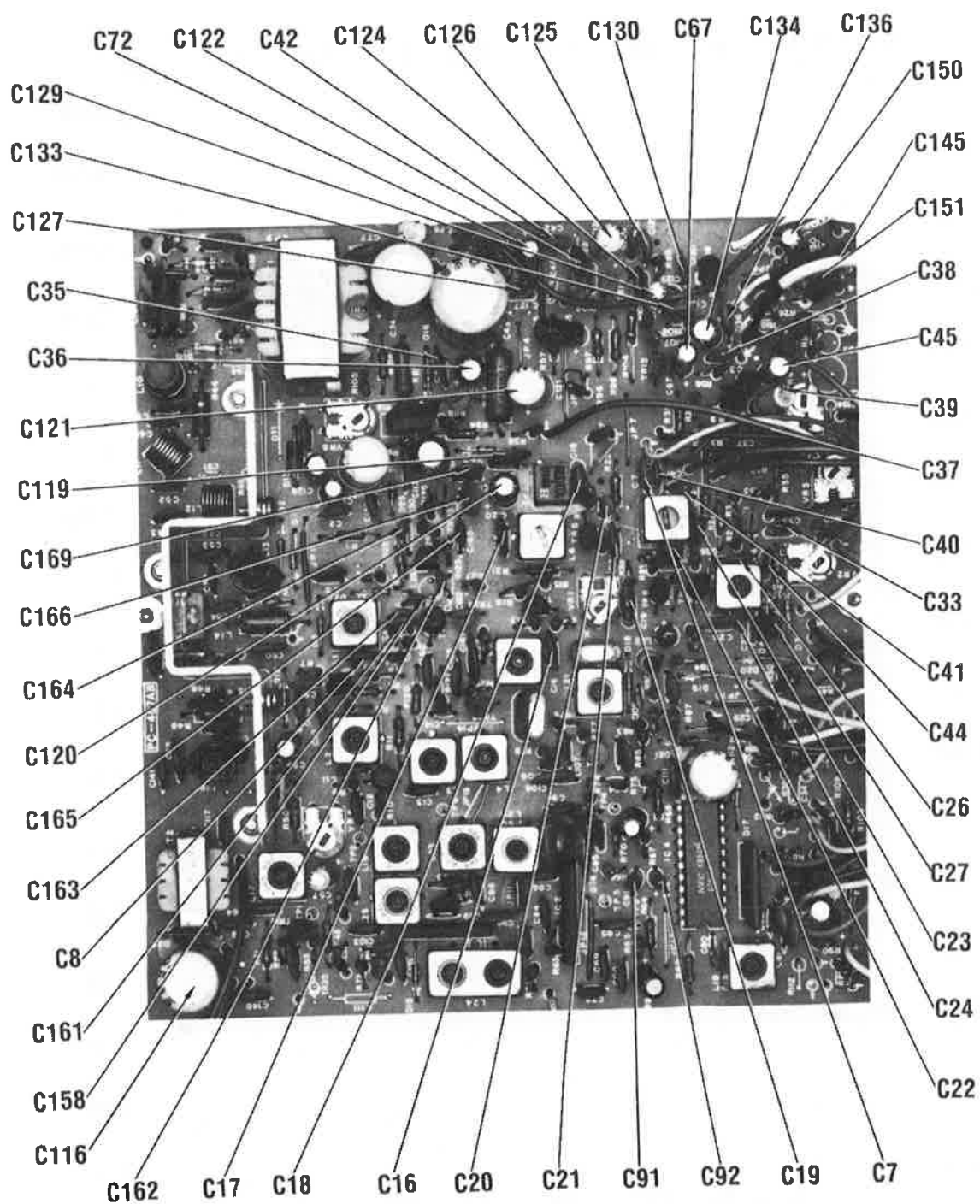
PRESIDENT MODEL 1003002, DWIGHT D.

MAIN BOARD

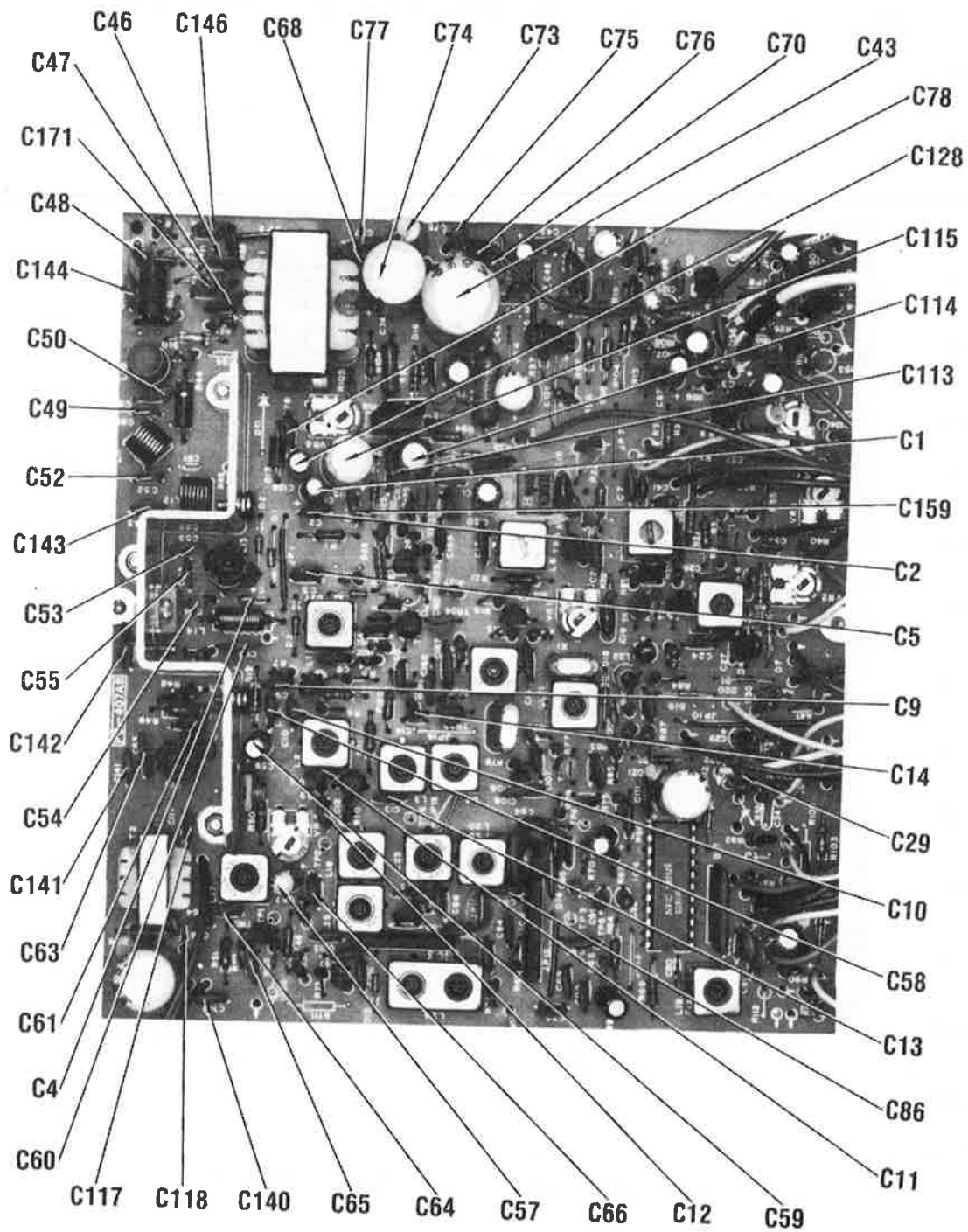


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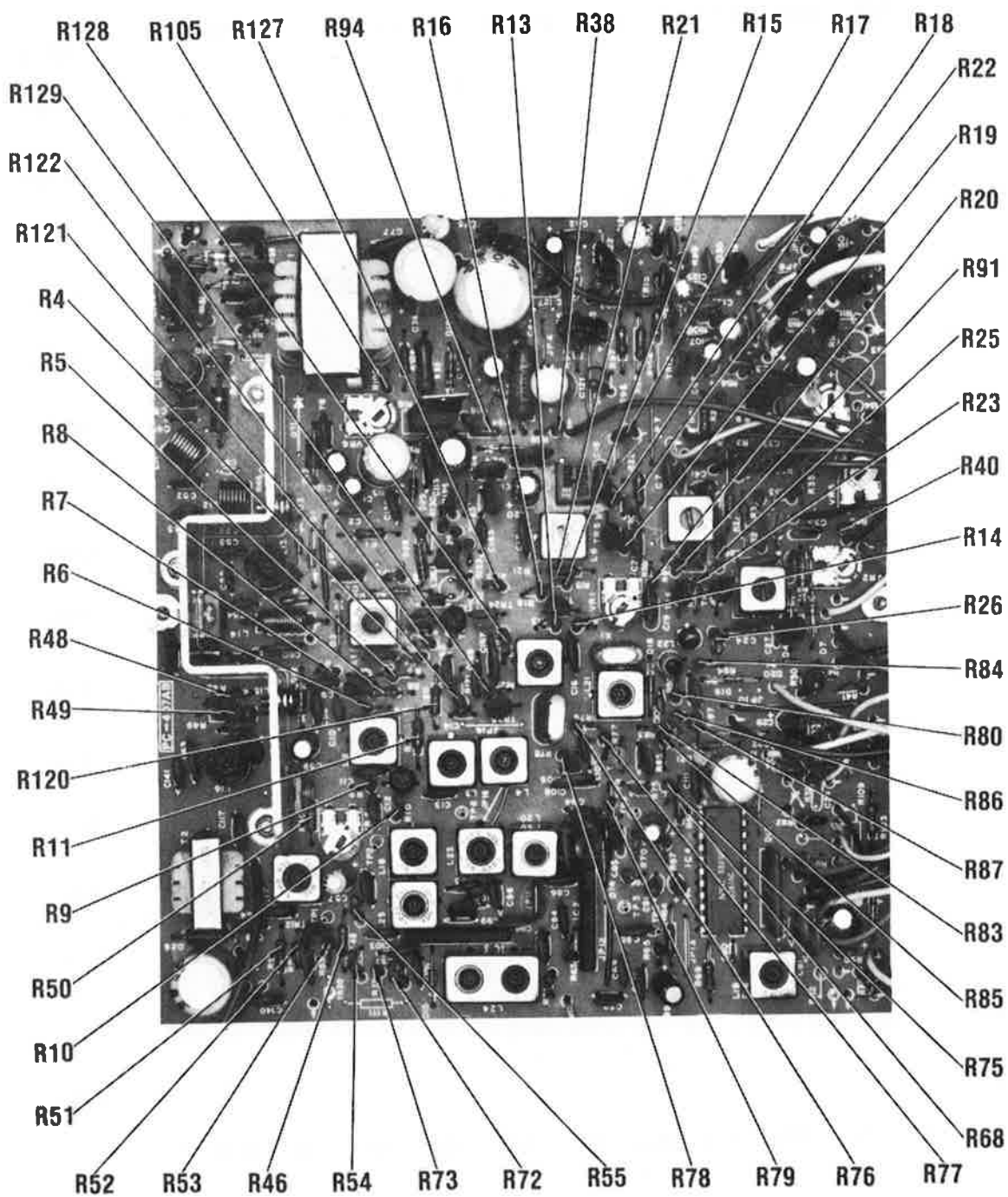
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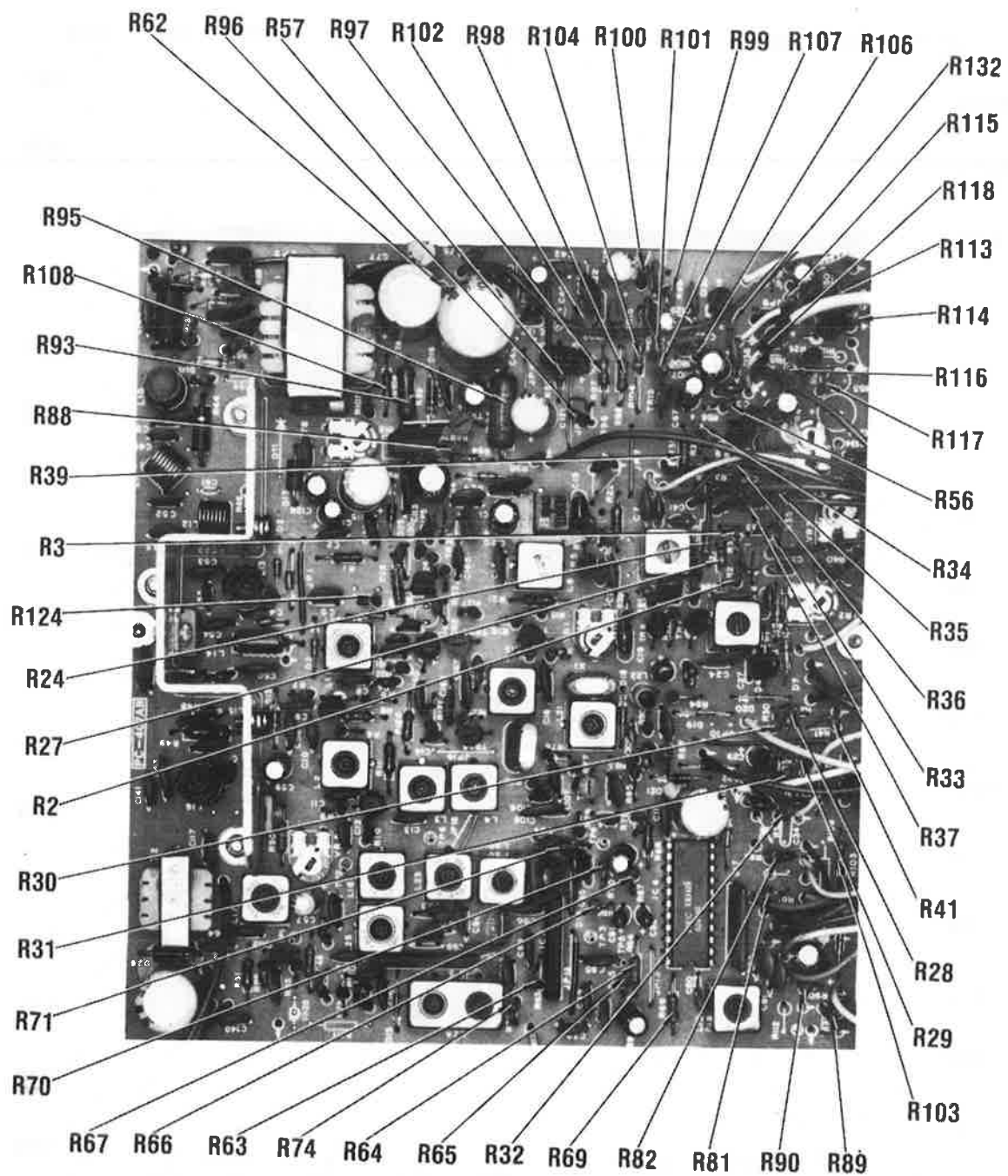
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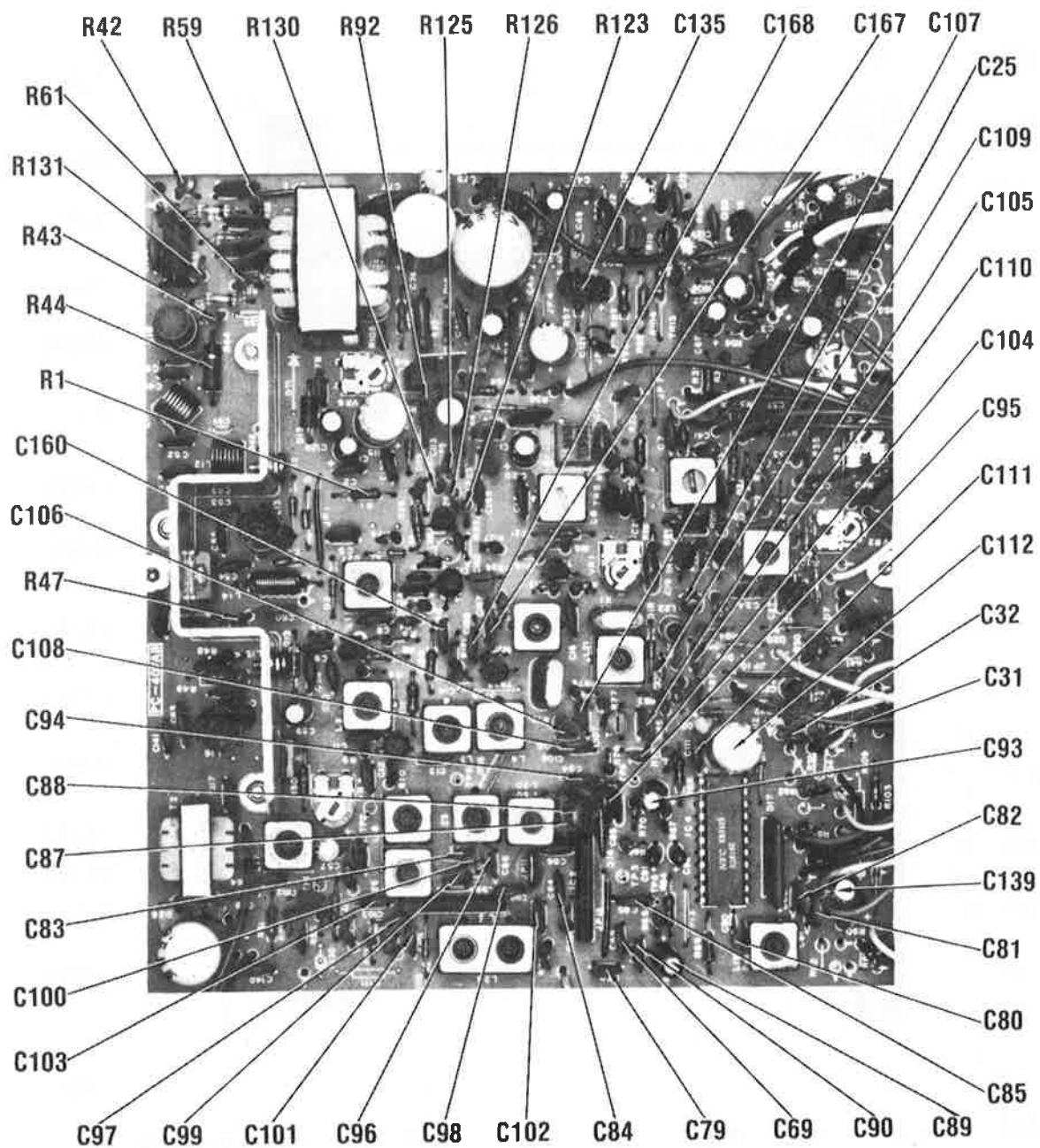
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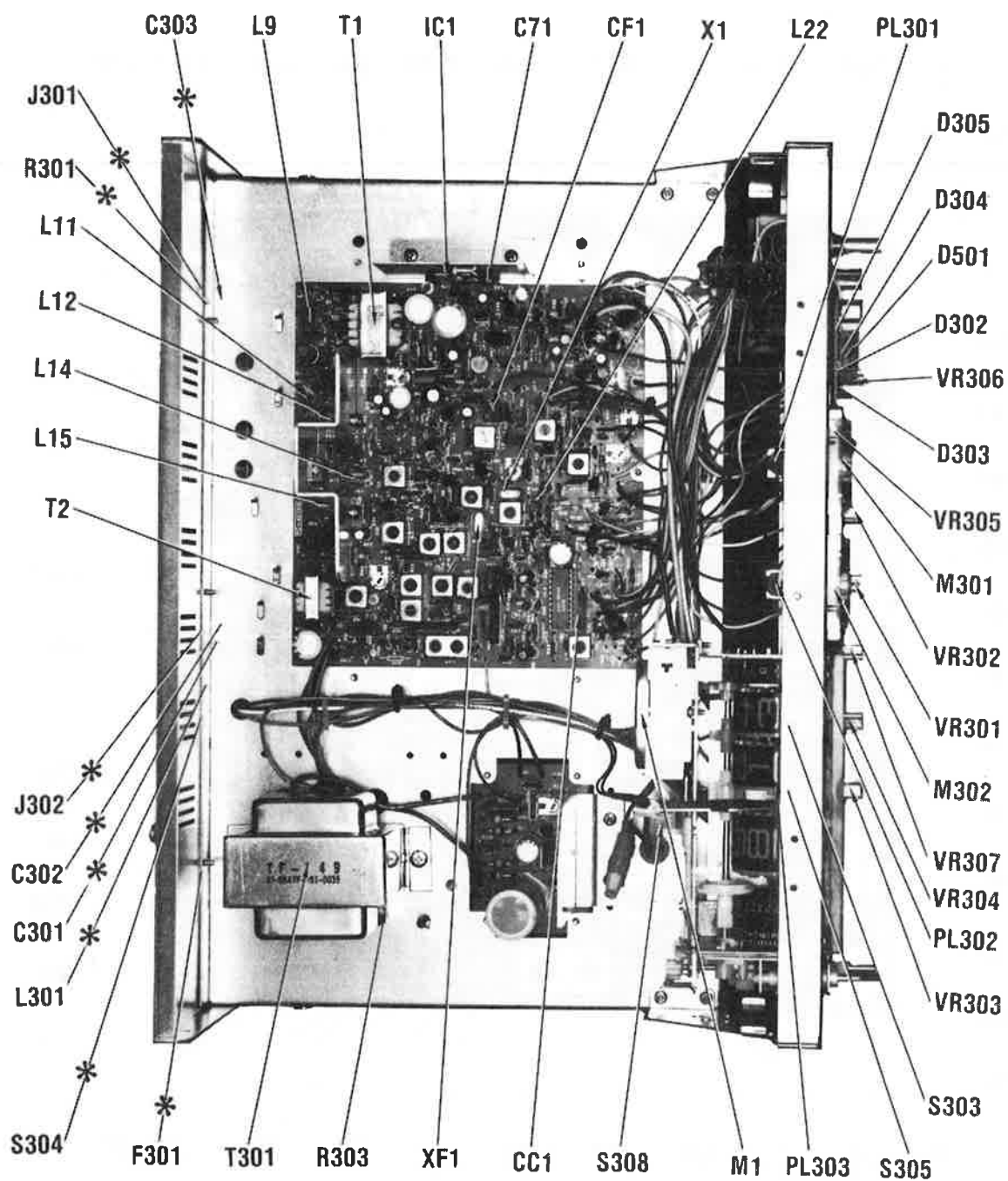
MAIN BOARD



MAIN BOARD

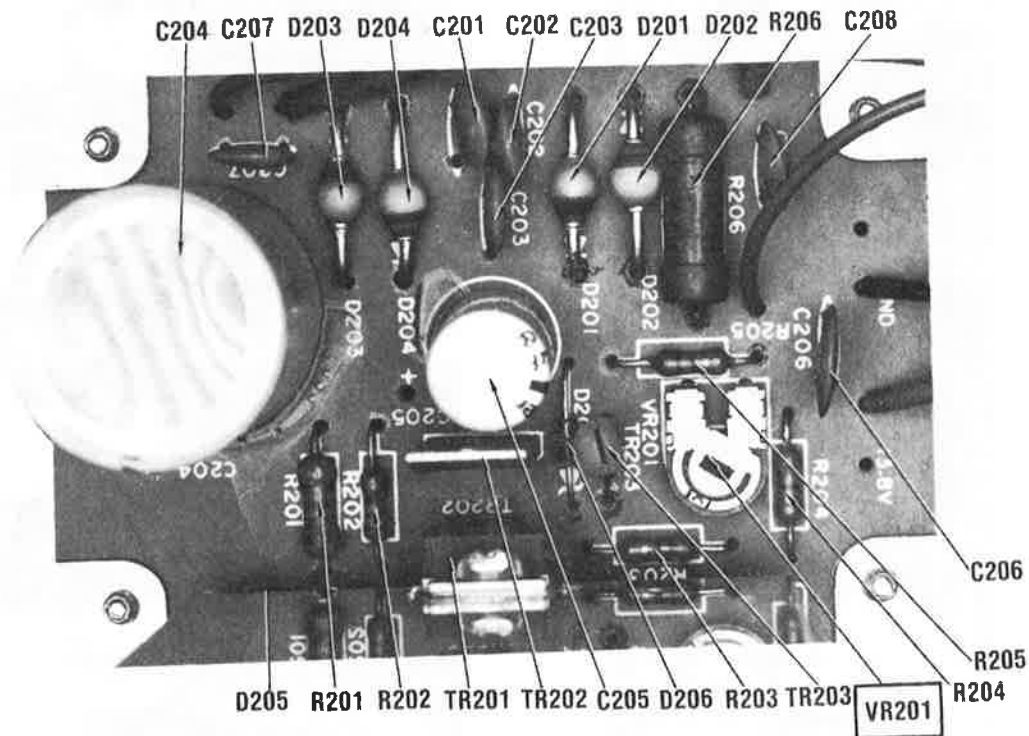
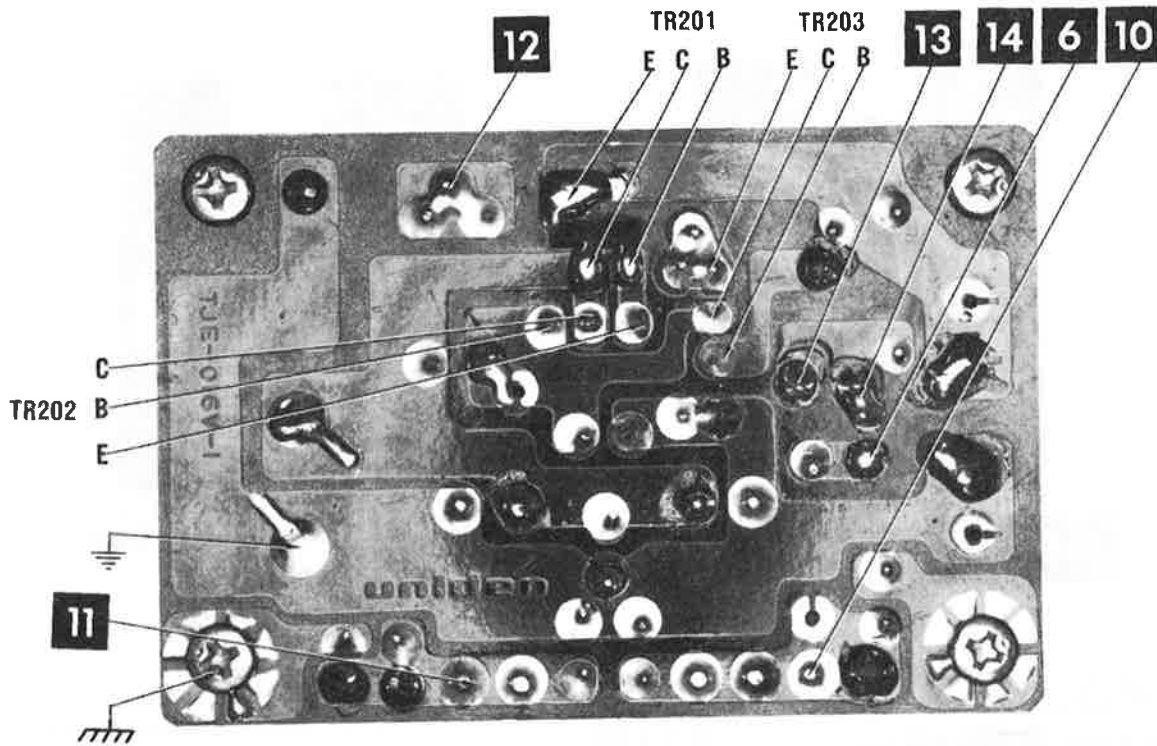


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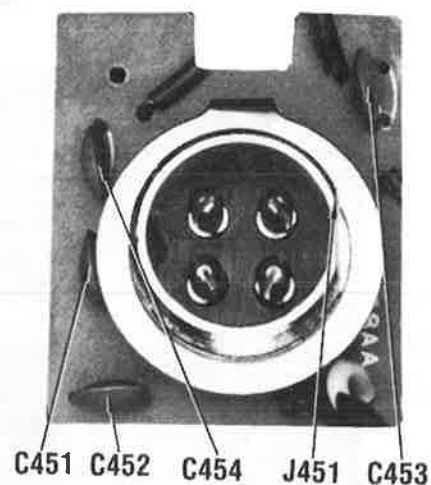
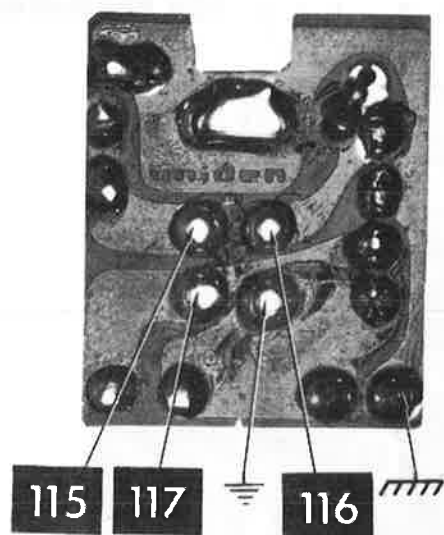
*Located on bottom of chassis

CHASSIS-TOP



POWER SUPPLY

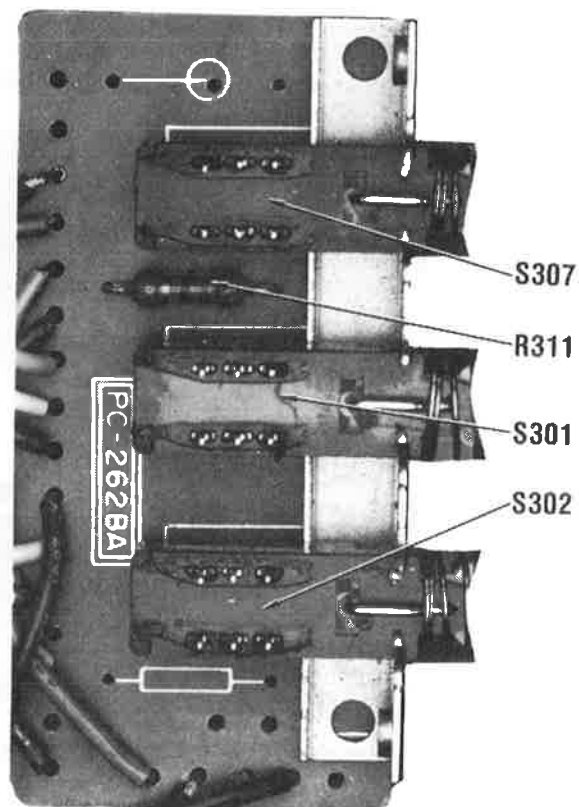
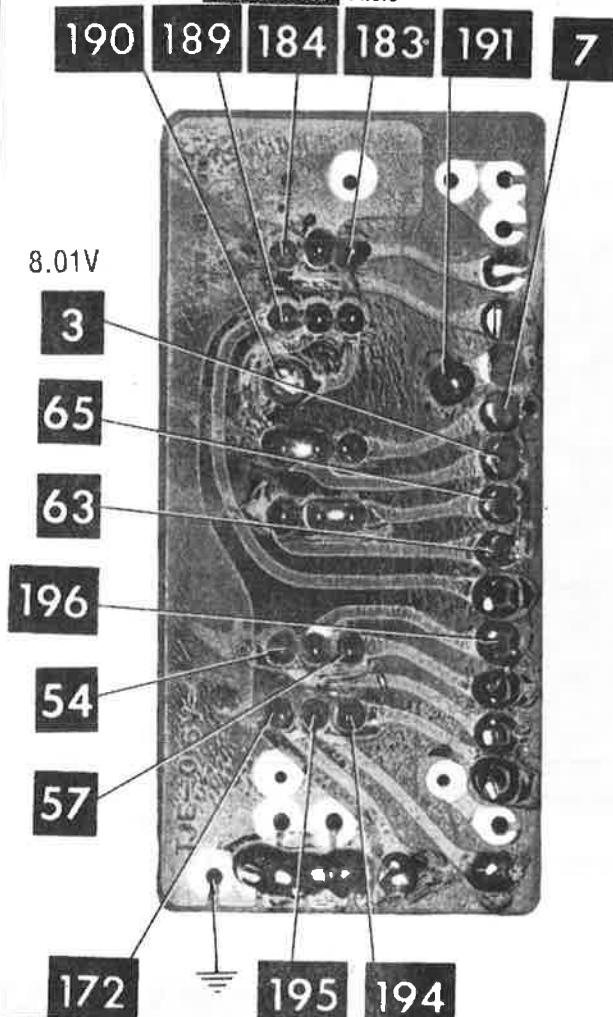
PRESIDENT MODEL 1003002, DWIGHT D.



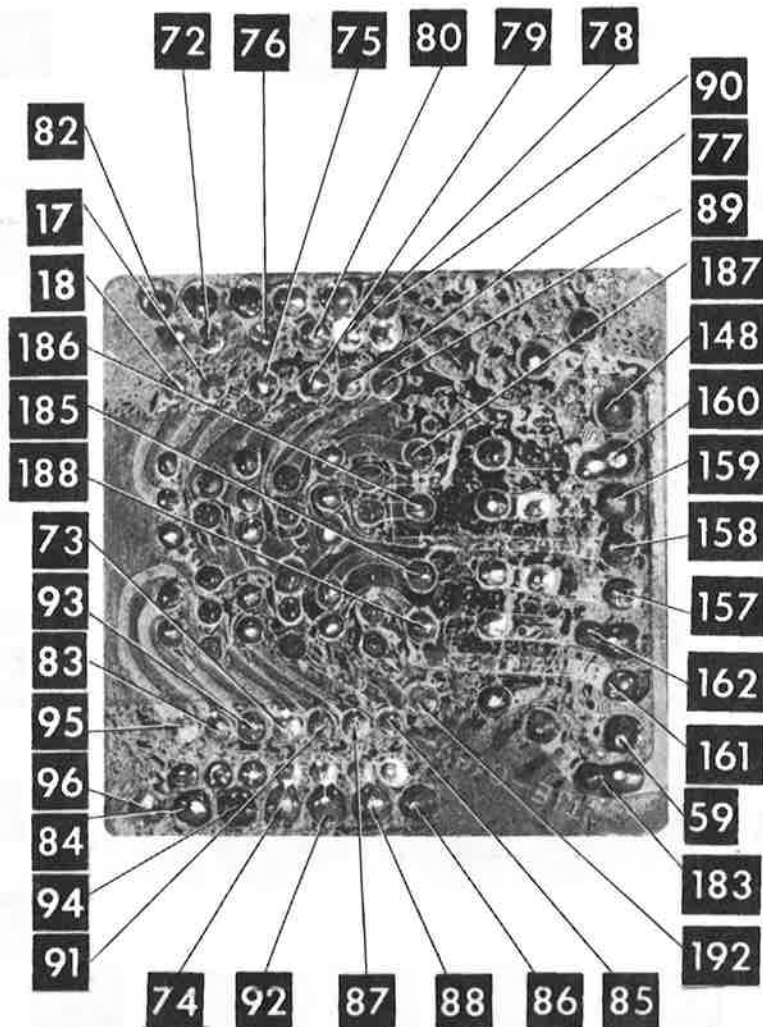
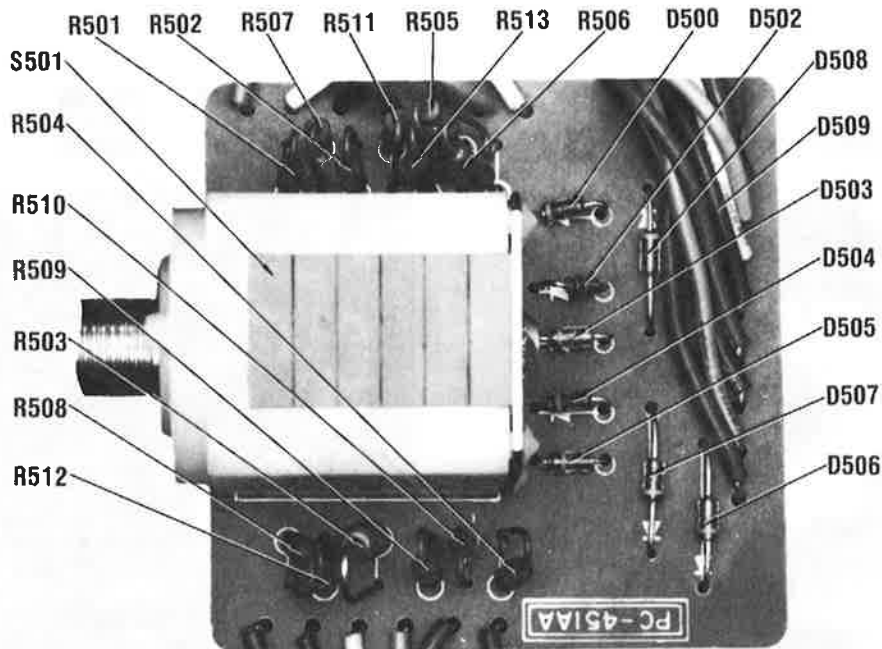
MIC JACK BOARD

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8.01V NB

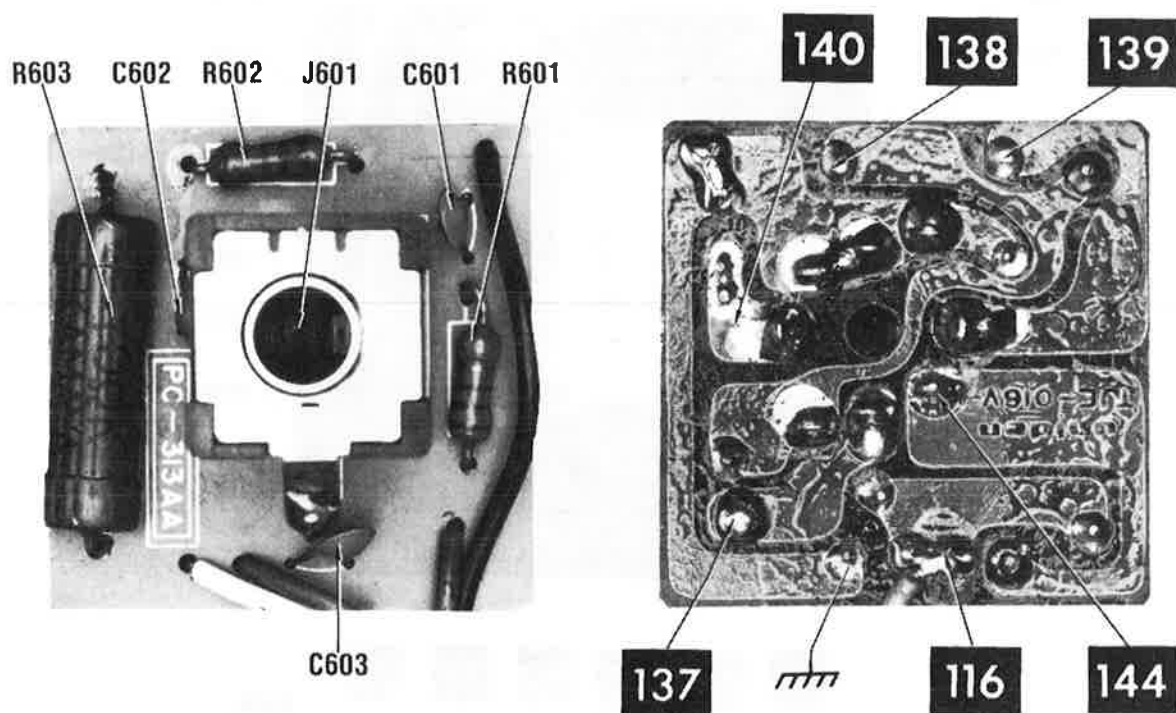


SWITCH CONTROL BOARD



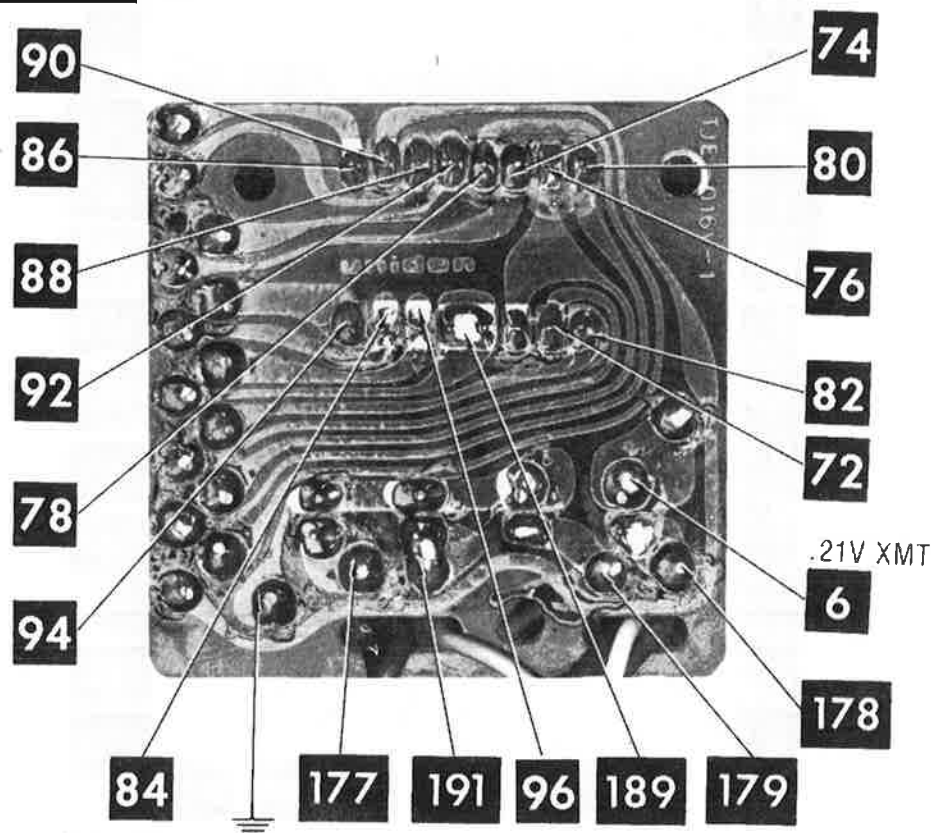
CHANNEL SELECTOR BOARD

PRESIDENT MODEL 1003002, DWIGHT D.

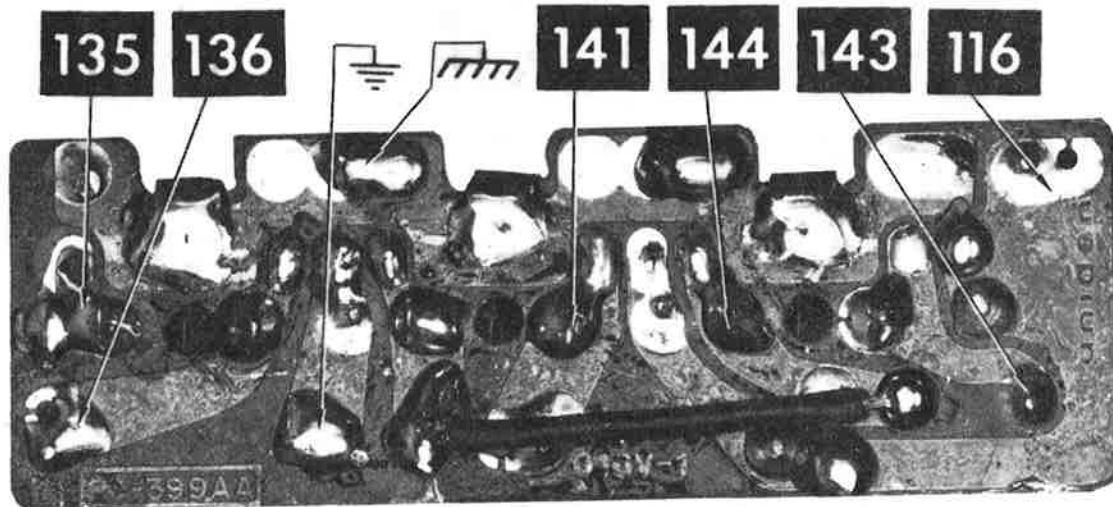


HEADPHONE JACK BOARD

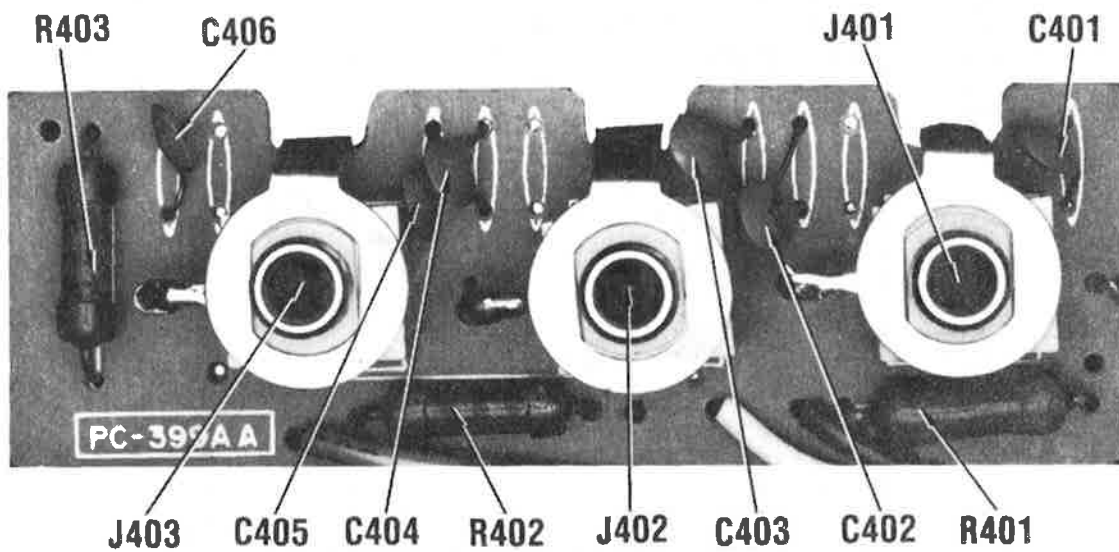
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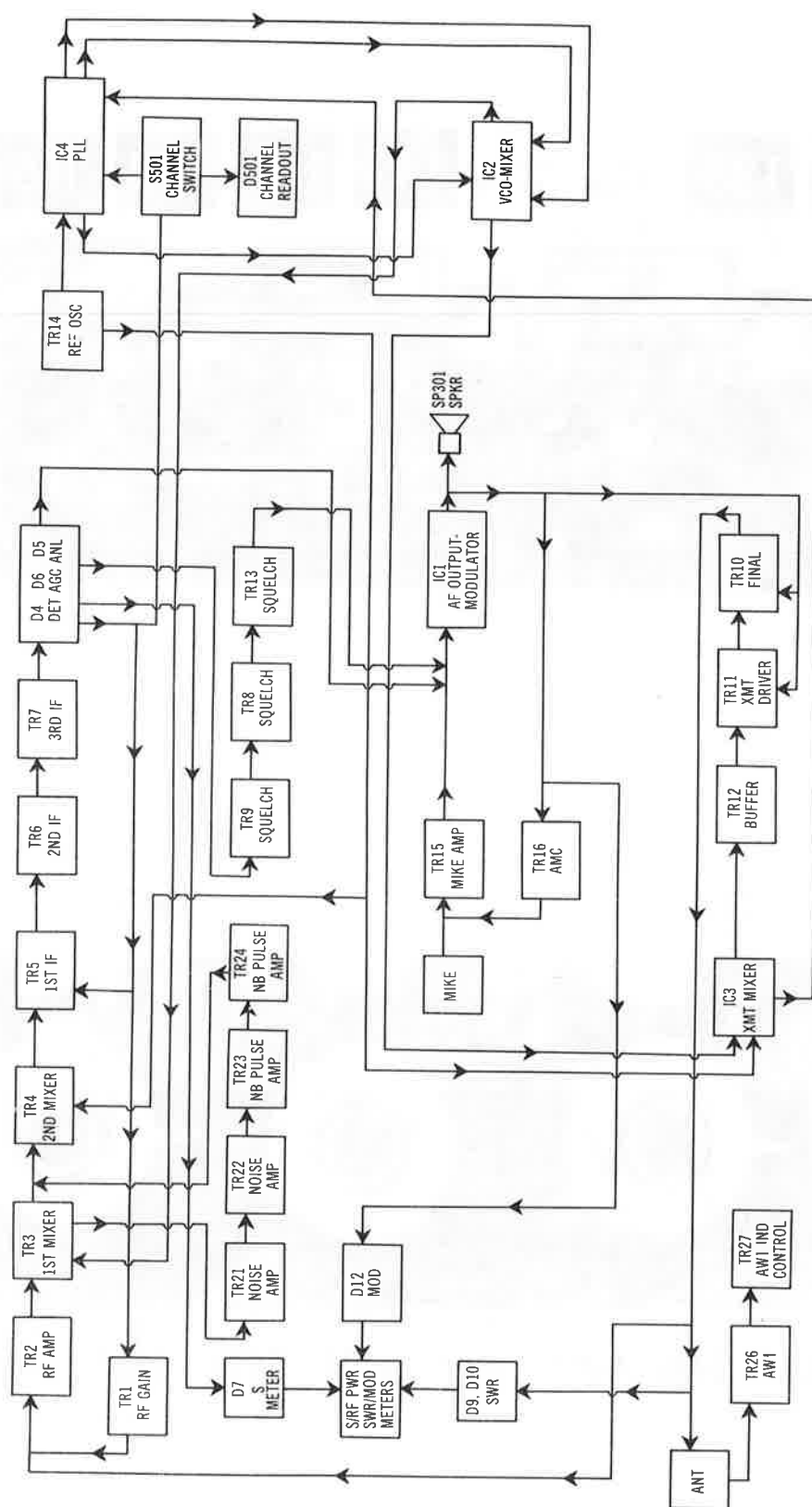
LED READOUT BOARD



PRESIDENT MODEL 1003002, DWIGHT D.



PA/SPEAKER BOARD



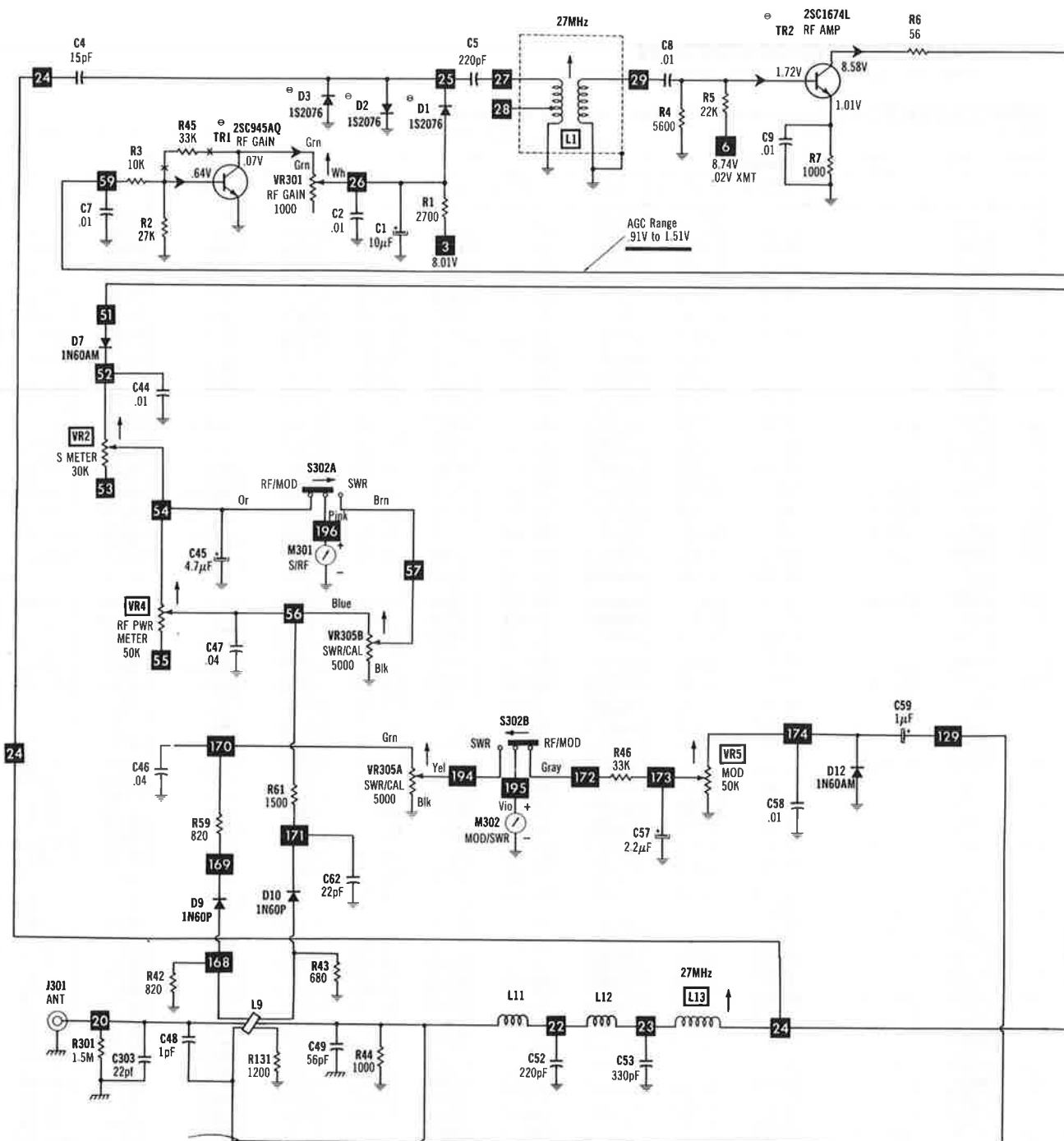
PARTS LIST AND DESCRIPTION

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

SEMICONDUCTORS (Select replacement transistor for best results)

ITEM No.	TYPE No.	MFR. PART No.	REPLACEMENT DATA									
			GENERAL ELECTRIC PART No.	MALLORY PART No.	MOTOROLA PART No.	RAYTHEON PART No.	RCA PART No.	SPRAGUE PART No.	SYLVANIA PART No.	THORDARSON PART No.	WORKMAN PART No.	ZENITH PART No.
D1	1S2076 WG713 1S1588 1S2473 1N4448	2000-345	GE-514 GE-300 GE-514 GE-514 GE-514	PTC214 PTC214 PTC214 PTC214 PTC214	HEPR0602 HEPR0602 HEPR0602 HEPR0602 HEPR0602	REN 177 REN 177 REN 177 REN 177 REN 177	SK3100 SK3100 SK3100 SK3100 SK3100	RT-218 RT-218 RT-218 RT-218 RT-218	ECG519 ECG177 ECG519 ECG519 ECG519	TM519 TM177 TM519 TM519 TM519	WEP925 WEP1062 WEP925 WEP925 WEP925	103-287 103-131 103-287 103-287 103-287
D2	1S2076 WG713 1S1588 1S2473 1N4448	2000-345	GE-514 GE-300 GE-514 GE-514 GE-514	PTC214 PTC214 PTC214 PTC214 PTC214	HEPR0602 HEPR0602 HEPR0602 HEPR0602 HEPR0602	REN 177 REN 177 REN 177 REN 177 REN 177	SK3100 SK3100 SK3100 SK3100 SK3100	RT-218 RT-218 RT-218 RT-218 RT-218	ECG519 ECG177 ECG519 ECG519 ECG519	TM519 TM177 TM519 TM519 TM519	WEP925 WEP1062 WEP925 WEP925 WEP925	103-287 103-131 103-287 103-287 103-287
D3	1S2076 WG713 1S1588 1S2473 1N4448	2000-345	GE-514 GE-300 GE-514 GE-514 GE-514	PTC214 PTC214 PTC214 PTC214 PTC214	HEPR0602 HEPR0602 HEPR0602 HEPR0602 HEPR0602	REN 177 REN 177 REN 177 REN 177 REN 177	SK3100 SK3100 SK3100 SK3100 SK3100	RT-218 RT-218 RT-218 RT-218 RT-218	ECG519 ECG177 ECG519 ECG519 ECG519	TM519 TM177 TM519 TM519 TM519	WEP925 WEP1062 WEP925 WEP925 WEP925	103-287 103-131 103-287 103-287 103-287
D4	1S2075K 1S2473K 1S2076	2000-346	GE-514 GE-514 GE-514	PTC214 PTC214 PTC214	HEPR0602 HEPR0602 HEPR0602	REN 177 REN 177 REN 177	SK3100 SK3100 SK3100	RT-218 RT-218 RT-218	ECG519 ECG519 ECG519	TM519 TM519 TM519	WEP925 WEP925 WEP925	103-287 103-287 103-287
D5	1S2076 1N60AM 1N60AM 1N60P 1N60P 1N60P 1N60AM 1N60AM SR1K-1 10D1	2000-301 2000-301 2000-318 2000-318 2000-318 2000-301 2000-301 2000-304	1N60 1N60 1N60 1N60 1N60 1N60 1N60 GE-504A GE-504A	PTC206 PTC206 PTC206 PTC206 PTC206 PTC206 PTC206 PTC201 PTC201	HEPR9135 HEPR9135 HEPR9135 HEPR9135 HEPR9135 HEPR9135 HEPR9135 HEPR0052 HEPR0052	REN 109 REN 109 REN 109 REN 109 REN 109 REN 109 REN 109 REN 116 REN 116	SK3088 SK3088 SK3088 SK3088 SK3088 SK3088 SK3088 SK3311 SK3311	RT-263 RT-263 RT-263 RT-263 RT-263 RT-263 RT-263 RT-213 RT-213	ECG109 ECG109 ECG109 ECG109 ECG109 ECG109 ECG109 ECG116 ECG116	TM109/** TM519 TM519 TM519 TM519 TM519 TM519 TM116 TM116	WEP134 WEP925 WEP925 WEP925 WEP925 WEP925 WEP925 WEP156 WEP156	103-29001 103-287 103-287 103-287 103-287 103-287 103-287 212-76-02 212-76-02
D14	1S2688EA 1S2076 WG713 1S1588 1S2473 1N4448	2000-344 2000-345	GE-514 GE-300 GE-514 GE-514 GE-514	PTC214 PTC214 PTC214 PTC214 PTC214	HEPR0602 HEPR0602 HEPR0602 HEPR0602 HEPR0602	REN 177 REN 177 REN 177 REN 177 REN 177	SK3100 SK3100 SK3100 SK3100 SK3100	RT-218 RT-218 RT-218 RT-218 RT-218	ECG519 ECG177 ECG519 ECG519 ECG519	TM519 TM177 TM519 TM519 TM519	WEP925 WEP1062 WEP925 WEP925 WEP925	103-287 103-131 103-287 103-287 103-287
D16	1N60AM 1S2076 WG713 1S1588 1S2473 1N4448	2000-301 2000-345	1N60 GE-514 GE-300 GE-514 GE-514	PTC206 PTC214 PTC214 PTC214 PTC214	HEPR9135 HEPR0602 HEPR0602 HEPR0602 HEPR0602	REN 109 REN 177 REN 177 REN 177 REN 177	SK3088 SK3100 SK3100 SK3100 SK3100	RT-263 RT-218 RT-218 RT-218 RT-218	ECG109 ECG177 ECG519 ECG519 ECG519	TM109/** TM519 TM177 TM519 TM519	WEP134 WEP925 WEP1062 WEP925 WEP925	103-29001 103-287 103-131 103-287 103-287
D18	1S2687D 1S2076 WG713 1S1588 1S2473 1N4448	2000-323 2000-345	GE-514 GE-300 GE-514 GE-514 GE-514	PTC214 PTC214 PTC214 PTC214 PTC214	HEPR0602 HEPR0602 HEPR0602 HEPR0602 HEPR0602	REN 177 REN 177 REN 177 REN 177 REN 177	SK3100 SK3100 SK3100 SK3100 SK3100	RT-218 RT-218 RT-218 RT-218 RT-218	ECG519 ECG177 ECG519 ECG519 ECG519	TM519 TM177 TM519 TM519 TM519	WEP925 WEP1062 WEP925 WEP925 WEP925	103-287 103-131 103-287 103-287 103-287
D20	1S2076 WG713 1S1588 1S2473 1N4448	2000-323	GE-514 GE-300 GE-514 GE-514 GE-514	PTC214 PTC214 PTC214 PTC214 PTC214	HEPR0602 HEPR0602 HEPR0602 HEPR0602 HEPR0602	REN 177 REN 177 REN 177 REN 177 REN 177	SK3100 SK3100 SK3100 SK3100 SK3100	RT-218 RT-218 RT-218 RT-218 RT-218	ECG519 ECG177 ECG519 ECG519 ECG519	TM519 TM177 TM519 TM519 TM519	WEP925 WEP1062 WEP925 WEP925 WEP925	103-287 103-131 103-287 103-287 103-287
D21	XZ-051 1S2076 WG713 1S1588 1S2473 1N4448	2000-333 2000-345	GEZD-5-1 GE-514 GE-300 GE-514 GE-514	PTC214 PTC214 PTC214 PTC214 PTC214	HEPR0602 HEPR0602 HEPR0602 HEPR0602 HEPR0602	REN 177 REN 177 REN 177 REN 177 REN 177	SK3100 SK3100 SK3100 SK3100 SK3100	RT-218 RT-218 RT-218 RT-218 RT-218	ECG519 ECG177 ECG519 ECG519 ECG519	TM519 TM177 TM519 TM519 TM519	WEP925 WEP1062 WEP925 WEP925 WEP925	103-287 103-131 103-287 103-287 103-287
D22	1S2076 WG713 1S1588 1S2473 1N4448	2000-345	GE-514 GE-300 GE-514 GE-514 GE-514	PTC214 PTC214 PTC214 PTC214 PTC214	HEPR0602 HEPR0602 HEPR0602 HEPR0602 HEPR0602	REN 177 REN 177 REN 177 REN 177 REN 177	SK3100 SK3100 SK3100 SK3100 SK3100	RT-218 RT-218 RT-218 RT-218 RT-218	ECG519 ECG177 ECG519 ECG519 ECG519	TM519 TM177 TM519 TM519 TM519	WEP925 WEP1062 WEP925 WEP925 WEP925	103-287 103-131 103-287 103-287 103-287
D23	1S2076 WG713 1S1588 1S2473 1N4448	2000-345	GE-514 GE-300 GE-514 GE-514 GE-514	PTC214 PTC214 PTC214 PTC214 PTC214	HEPR0602 HEPR0602 HEPR0602 HEPR0602 HEPR0602	REN 177 REN 177 REN 177 REN 177 REN 177	SK3100 SK3100 SK3100 SK3100 SK3100	RT-218 RT-218 RT-218 RT-218 RT-218	ECG519 ECG177 ECG519 ECG519 ECG519	TM519 TM177 TM519 TM519 TM519	WEP925 WEP1062 WEP925 WEP925 WEP925	103-287 103-131 103-287 103-287 103-287
D24	1S2076 WG713 1S1588 1S2473 1N4448	2000-345	GE-514 GE-300 GE-514 GE-514 GE-514	PTC214 PTC214 PTC214 PTC214 PTC214	HEPR0602 HEPR0602 HEPR0602 HEPR0602 HEPR0602	REN 177 REN 177 REN 177 REN 177 REN 177	SK3100 SK3100 SK3100 SK3100 SK3100	RT-218 RT-218 RT-218 RT-218 RT-218	ECG519 ECG177 ECG519 ECG519 ECG519	TM519 TM177 TM519 TM519 TM519	WEP925 WEP1062 WEP925 WEP925 WEP925	103-287 103-131 103-287 103-287 103-287
D25	XZ-086 SR1K-1 10D1 1S2076 WG713 1S1588 1S2473 1N4448	2000-334 2000-304 2000-345	GEZD-8-7 GE-504A GE-504A GE-514 GE-300 GE-514 GE-514 GE-514	PTC201 PTC201 PTC201 PTC214 PTC214 PTC214 PTC214 PTC214	HEPR0052 HEPR0052 HEPR0052 HEPR0602 HEPR0602 HEPR0602 HEPR0602 HEPR0602	REN 116 REN 116 REN 177 REN 177 REN 177 REN 177 REN 177 REN 177	SK3749 SK3311 SK3311 SK3100 SK3100 SK3100 SK3100 SK3100	RT-213 RT-213 RT-213 RT-218 RT-218 RT-218 RT-218 RT-218	ECG116 ECG116 ECG116 ECG519 ECG177 ECG519 ECG519 ECG519	TM116 TM116 TM116 TM519 TM177 TM519 TM519 TM519	WEP156 WEP156 WEP156 WEP925 WEP1062 WEP925 WEP925 WEP925	212-76-02 212-76-02 212-76-02 103-287 103-131 103-287 103-287 103-287
D26	1S2076 WG713 1S1588 1S2473 1N4448	2000-345	GE-514 GE-300 GE-514 GE-514 GE-514	PTC214 PTC214 PTC214 PTC214 PTC214	HEPR0602 HEPR0602 HEPR0602 HEPR0602 HEPR0602	REN 177 REN 177 REN 177 REN 177 REN 177	SK3100 SK3100 SK3100 SK3100 SK3100	RT-218 RT-218 RT-218 RT-218 RT-218	ECG519 ECG177 ECG519 ECG519 ECG519	TM519 TM177 TM519 TM519 TM519	WEP925 WEP1062 WEP925 WEP925 WEP925	103-287 103-131 103-287 103-287 103-287
D27	1S2076 WG713 1S1588 1S2473 1N4448	2000-345	GE-514 GE-300 GE-514 GE-514 GE-514	PTC214 PTC214 PTC214 PTC214 PTC214	HEPR0602 HEPR0602 HEPR0602 HEPR0602 HEPR0602	REN 177 REN 177 REN 177 REN 177 REN 177	SK3100 SK3100 SK3100 SK3100 SK3100	RT-218 RT-218 RT-218 RT-218 RT-218	ECG519 ECG177 ECG519 ECG519 ECG519	TM519 TM177 TM519 TM519 TM519	WEP925 WEP1062 WEP925 WEP925 WEP925	103-287 103-131 103-287 103-287 103-287
D28	1N60AM 1N60AM GM-3Y GM-3Y GM-3Y GM-3Y GM-3Y BZ-162 WZ-071	2000-301 2000-301 2000-348 2000-348 2000-348 2000-348 2000-348 2000-312 2000-311	1N60 1N60 GE-512 GE-512 GE-512 GE-512 GE-512 GEZD-16 GEZD-7-5	PTC206 PTC206 PTC204 PTC204 PTC204 PTC204 PTC204 ZB168 ZB7-5B	HEPR9135 HEPR9135 HEPR0098 HEPR0098 HEPR0098 HEPR0098 HEPR0098 HEPR0602 HEPR0602	REN 109 REN 109 REN 156 REN 156 REN 156 REN 156 REN 156 REN 5075 REN 138	SK3088 SK3088 SK3051 SK3051 SK3051 SK3051 SK3051 SK3751 SK3059	RT-263 RT-263 RT-201 RT-201 RT-201 RT-201 RT-201 RT-246 RT-239	ECG109 ECG109 ECG156 ECG156 ECG156 ECG156 ECG156 ECG5075A ECG138A	TM109/** TM109/** TM156 TM156 TM156 TM156 TM156 TM5075/** TM138/**	WEP134 WEP134 WEP4008 WEP4008 WEP4008 WEP4008 WEP4008 WEP1160 WEP1107	103-29001 103-29001 212-29000 212-29000 212-29000 212-29000 212-29000 103-29013 103-29002
D502	1S2076 WG713 1S1588 1S2473 1N4448	2000-345	GE-514 GE-300 GE-514 GE-514 GE-514	PTC214 PTC214 PTC214 PTC214 PTC214	HEPR0602 HEPR0602 HEPR0602 HEPR0602 HEPR0602	REN 177 REN 177 REN 177 REN 177 REN 177	SK3100 SK3100 SK3100 SK3100 SK3100	RT-218 RT-218 RT-218 RT-218 RT-218	ECG519 ECG177 ECG519 ECG519 ECG519	TM519 TM177 TM519 TM519 TM519	WEP925 WEP1062 WEP925 WEP925 WEP925	101-287 103-131 103-287 103-287 103-287
D503	1S2076 WG713 1S1588 1S2473 1N4448	2000-345	GE-514 GE-300 GE-514 GE-514 GE-514	PTC214 PTC214 PTC214 PTC214 PTC214	HEPR0602 HEPR0602 HEPR0602 HEPR0602 HEPR0602	REN 177 REN 177 REN 177 REN 177 REN 177	SK3100 SK3100 SK3100 SK3100 SK3100	RT-218 RT-218 RT-218 RT-218 RT-218	ECG519 ECG177 ECG519 ECG519 ECG519	TM519 TM177 TM519 TM519 TM519	WEP925 WEP1062 WEP925 WEP925 WEP925	103-287 103-131 103-287 103-287 103-287
D504	1S2076 WG713 1S1588 1S2473 1N4448	2000-345	GE-514 GE-300 GE-514 GE-514 GE-514	PTC214 PTC214 PTC214 PTC214 PTC214	HEPR0602 HEPR0602 HEPR0602 HEPR0602 HEPR0602	REN 177 REN 177 REN 177 REN 177 REN 177	SK3100 SK3100 SK3100 SK3100 SK3100	RT-218 RT-218 RT-218 RT-218 RT-218	ECG519 ECG177 ECG519 ECG519 ECG519	TM519 TM177 TM519 TM519 TM519	WEP925 WEP1062 WEP925 WEP925 WEP925	103-287 103-131 103-287 103-287 103-287

PRESIDENT MODEL 1003002, DWIGHT D.



- ✗ 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 **CIRCUITRACE**

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Terminal Guides



TR1, TR2,
TR5 thru TR9
TR12 thru TR16
TR22 thru TR25
TR27 Bottom view



TR3, TR21
Bottom view



TR4, TR26
Bottom view



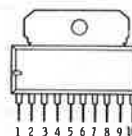
TR10
Front view



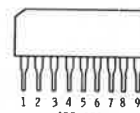
TR11
Front view



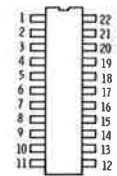
J451
Pin view



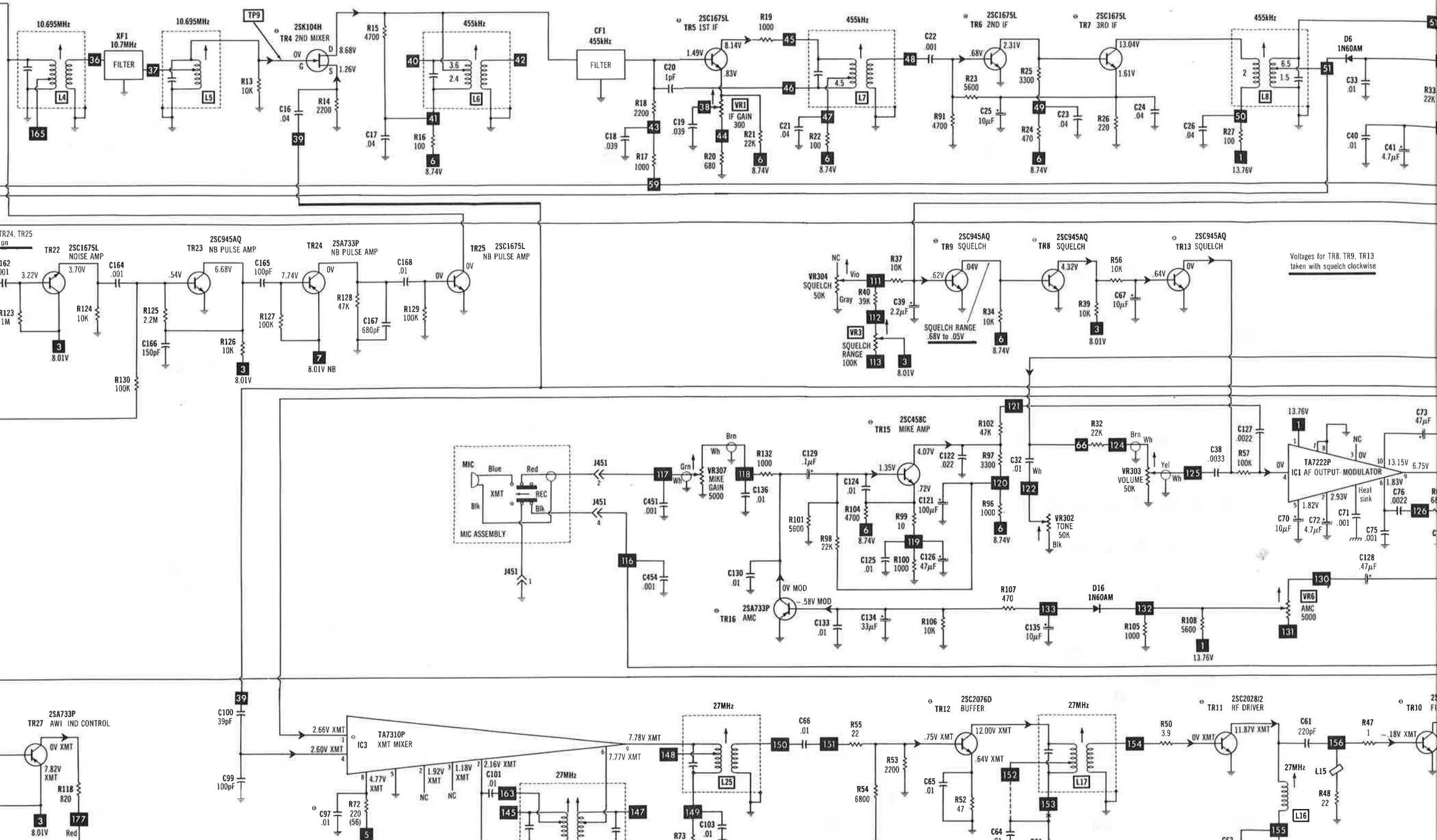
IC1
Front view

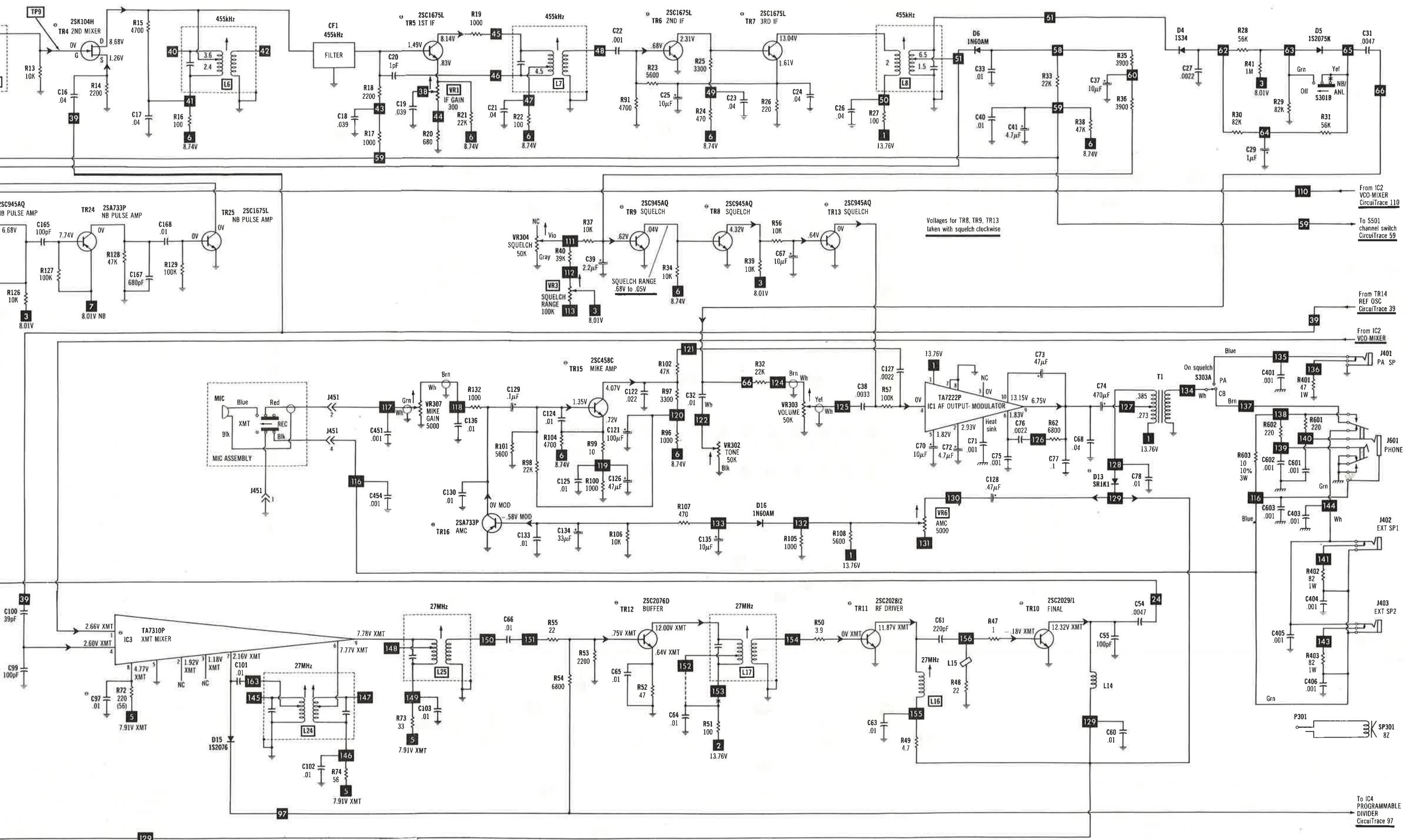


IC2, IC3
Front view



IC4
Top view

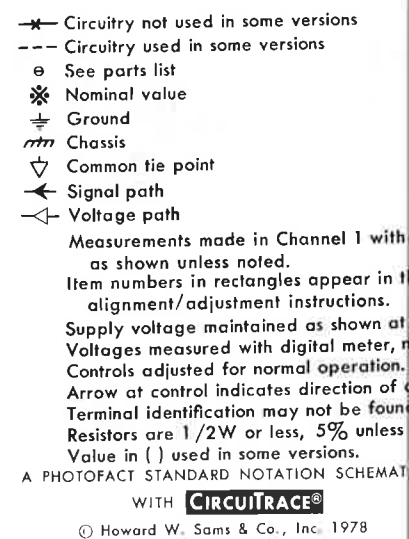




MAIN CB SCHEMATIC



PRESIDENT MODEL 1003002, DWIGHT D.



PARTS LIST AND DESCRIPTION (CONTINUED)

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

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

REPLACEMENT DATA													
ITEM No.	TYPE No.	MFR. 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.	ZENITH PART No.	
D506	1S2076	2000-345	GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287	
	WG713		GE-300	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG177	TM177	WEP1062	103-131	
	1S1588		GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287	
	1S2473		GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287	
D507	1N4448	2000-345	GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287	
	1S2076		GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287	
	WG713		GE-300	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG177	TM177	WEP1062	103-131	
	1S1588		GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287	
D508	1S2473	2000-345	GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287	
	1N4448		GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287	
	1S2076		GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287	
	WG713		GE-300	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG177	TM177	WEP1062	103-131	
D509	1S1588	2000-345	GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287	
	1S2473		GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287	
	1N4448		GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287	
	1S2076		GE-300	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG177	TM177	WEP1062	103-131	
IC1	TA7222P	2000-032	GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287	
	TA7310P		GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287	
	AN103		GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287	
	TA7310P		GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287	
IC2	AN103	2000-017	GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287	
	TA7310P		GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287	
	AN103		GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287	
	D2B16C		GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287	
TR1	UPD2816C	2000-036	GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	TM199/**	WEP1945	121-972	
	25C945AQ		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	TM199/**	WEP1945	121-972	
	25C945		GE-61*	PTC136*	HEPS0016*	REN 107	SK3018*	RT-107A	ECG107	TM107	WEP380	121-522	
	25C380		GE-61*	PTC136*	HEPS0015*	REN 199	SK3444	RT-302	ECG199	TM199/**	WEP828	121-972	
TR2	25C828	2000-235	GE-212	PTC121*	HEPS0016*	REN 199	SK3124	RT-107A	ECG199	TM199	WEP536	121-972	
	25C536		GE-210*	PTC121*	HEPS0009*	REN 123A*	SK3122	RT-187	ECG289	TM289/**	WEP458	121-773	
	25C458		GE-61	PTC132*	HEPS0010*	REN 107	SK3246	RT-308	ECG229*	TM229*	WEP956*	121-29021	
	25C1674L		GE-61	PTC132*	HEPS0010*	REN 107	SK3246	RT-308	ECG229*	TM229*	WEP956*	121-29021	
TR3	25C1674	2000-240	GE-211*	PTC139*	HEPS0024*	REN 229	SK3018	RT-187	ECG229*	TM229*	WEP66	121-29021	
	25C668		GE-214	PTC115*	HEPS0020	REN 161	SK3039	RT-113*	ECG161	TM161	WEP63	121-889	
	25C787		GE-86	PTC132*	HEPS0016*	REN 108*	SK3039*	RT-113*	ECG108*	TM108*	WEP56*	121-522*	
	25C1906		GE-FET-2	PTC161	HEPF0021	REN 132	SK3448	RT-175	ECG312	TM312	WEP956*	121-756	
TR4	25K198L	2000-105	GE-FET-2	PTC161	HEPF0021	REN 132	SK3448	RT-175	ECG312	TM312	WEP956*	121-756	
	25K19		GE-FET-2	PTC161	HEPF0021	REN 132	SK3448	RT-175	ECG312	TM312	WEP956*	121-756	
	25K104		GE-FET-2	PTC161	HEPF0021	REN 132	SK3448	RT-175	ECG312	TM312	WEP956*	121-756	
	25K104H		GE-FET-2	PTC161	HEPF0021	REN 132	SK3448	RT-175	ECG312	TM312	WEP956*	121-756	
TR5	25K104	2000-107	GE-FET-2	PTC161	HEPF0021	REN 132	SK3448	RT-175	ECG312	TM312	WEP956*	121-756	
	25K19		GE-FET-2	PTC161	HEPF0021	REN 132	SK3448	RT-175	ECG312	TM312	WEP956*	121-756	
	25C1675L		GE-213	PTC132*	HEPS0025*	REN 123A*	SK3122	RT-308	ECG229*	TM229*	WEP956*	121-29021	
	25C1675		GE-213	PTC132*	HEPS0025*	REN 123A*	SK3122	RT-308	ECG229*	TM229*	WEP956*	121-29021	
TR6	25C1684	2000-213	GE-62*	PTC139*	HEPS0024*	REN 199*	SK3122*	RT-108A*	ECG199*	TM199*	WEP66*	121-972	
	25C460		GE-61*	PTC136*	HEPS0014*	REN 107	SK3122	RT-134	ECG107	TM107/**	WEP460	121-522	
	25C930		GE-60*	PTC132*	HEPS0016*	REN 229	SK3018	RT-308	ECG229*	TM229*/**	WEP956*	121-29021*	
	25C380		GE-61*	PTC136*	HEPS0016*	REN 107	SK3018*	RT-107A	ECG107	TM107	WEP380	121-522	
TR7	25C1675L	2000-213	GE-213	PTC132*	HEPS0025*	REN 123A*	SK3122	RT-308	ECG229*	TM229*	WEP956*	121-29021	
	25C1675		GE-213	PTC132*	HEPS0025*	REN 123A*	SK3122	RT-308	ECG229*	TM229*	WEP956*	121-29021	
	25C1684		GE-62*	PTC139*	HEPS0024*	REN 199*	SK3122*	RT-108A*	ECG199*	TM199*	WEP66*	121-972	
	25C460		GE-61*	PTC136*	HEPS0014*	REN 107	SK3122	RT-134	ECG107	TM107/**	WEP460	121-522	
TR8	25C930	2000-235	GE-60*	PTC132*	HEPS0016*	REN 229	SK3018	RT-308	ECG229*	TM229*/**	WEP956*	121-29021*	
	25C380		GE-61*	PTC136*	HEPS0016*	REN 107	SK3018*	RT-107A	ECG107	TM107	WEP380	121-522	
	25C1675L		GE-213	PTC132*	HEPS0025*	REN 123A*	SK3122	RT-308	ECG229*	TM229*	WEP956*	121-29021	
	25C1675		GE-213	PTC132*	HEPS0025*	REN 123A*	SK3122	RT-308	ECG229*	TM229*	WEP956*	121-29021	
TR9	25C1684	2000-235	GE-62*	PTC139*	HEPS0024*	REN 199*	SK3122*	RT-108A*	ECG199*	TM199*	WEP66*	121-972	
	25C460		GE-61*	PTC136*	HEPS0014*	REN 107	SK3122	RT-134	ECG107	TM107	WEP460	121-522	
	25C930		GE-60*	PTC132*	HEPS0016*	REN 229	SK3018	RT-308	ECG229*	TM229*/**	WEP956*	121-29021	
	25C380		GE-61*	PTC136*	HEPS0016*	REN 107	SK3018*	RT-107A	ECG107	TM107	WEP380	121-522	
TR10	25C945AQ	2000-208	GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	TM199/**	WEP1945	121-972	
	25C945		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	TM199/**	WEP1945	121-972	
	25C1815		GE-62	PTC136*	HEPS0015*	REN 199	SK3245	RT-304	ECG199	TM199	WEP66	121-972	
	25C1359		GE-212	PTC121*	HEPS0014*	REN 199	SK3122	RT-308	ECG229*	TM229*	WEP66	121-29021	
TR11	25C536	2000-209	GE-212	PTC121*	HEPS0016*	REN 199	SK3124	RT-107A	ECG199	TM199	WEP536	121-972	
	25C2029/1		GE-333	PTC186	HEPS0016*	REN 199	SK3124	RT-107A	ECG199	TM199	WEP536	121-972	
	25C2029		GE-333	PTC186	HEPS0016*	REN 199	SK3124	RT-107A	ECG199	TM199	WEP536	121-972	
	25C2029B/10		GE-333	PTC186	HEPS0016*	REN 199	SK3124	RT-107A	ECG199	TM199	WEP536	121-972	
TR12	25C2092	2000-206	GE-215	PTC186	HEPS0016*	REN 199	SK3124	RT-107A	ECG199	TM199	WEP536	121-972	
	25C2075		GE-215	PTC186	HEPS0016*	REN 199	SK3124	RT-107A	ECG199	TM199	WEP536	121-972	
	25C1909		GE-215	PTC186	HEPS0016*	REN 199	SK3124	RT-107A	ECG199	TM199	WEP536	121-972	
	25C2028/2		GE-215	PTC186	HEPS0016*	REN 199	SK3124	RT-107A	ECG199	TM199	WEP536	121-972	
TR13	25C2028B/20	2000-209	GE-270	PTC180	HEPS3044	REN 295	SK3253	RT-310	ECG306	TM306	WEP771	121-880	
	25C2028		GE-270	PTC180	HEPS3044	REN 295	SK3253	RT-310	ECG306	TM306	WEP771	121-880	
	25C2028B/20		GE-270	PTC180	HEPS3044	REN 295	SK3253	RT-310	ECG306	TM306	WEP771	121-880	
	25C1760		GE-270	PTC180	HEPS3044	REN 295	SK3253	RT-310	ECG306	TM306	WEP771	121-880	
TR14	25C1957	2000-206	GE-270	PTC180	HEPS3044	REN 295	SK3253	RT-310	ECG306	TM306	WEP771	121-880	
	25C1957		GE-270	PTC180	HEPS3044	REN 295	SK3253	RT-310	ECG306	TM306	WEP771	121-880	
	25C1957		GE-270	PTC180	HEPS3044	REN 295	SK3253	RT-310	ECG306	TM306	WEP771	121-880	
	25C1957		GE-270	PTC180	HEPS3044	REN 295	SK3253	RT-310	ECG306	TM306	WEP771	121-880	
TR15	25C1957	2000-206	GE-270	PTC180	HEPS3044	REN 295	SK3253	RT-310	ECG306	TM306	WEP771	121-880	
	25C1957		GE-270	PTC180	HEPS3044	REN 295	SK3253	RT-310	ECG306	TM306	WEP771	121-880	
	25C1957		GE-270	PTC180	HEPS3044	REN 295	SK3253	RT-310	ECG306	TM306	WEP771	121-880	
	25C1957		GE-270	PTC180	HEPS3044	REN 295	SK3253	RT-310	ECG306	TM306	WEP771	121-880	
TR16	25C1957	2000-206	GE-270	PTC180	HEPS3044	REN 295	SK3253	RT-310	ECG306	TM306	WEP771	121-880	
	25C1957		GE-270	PTC180	HEPS3044	REN 295	SK3253	RT-310	ECG306	TM306	WEP771	121-880	
	25C1957		GE-270	PTC180	HEPS3044	REN 295	SK3253	RT-310	ECG306	TM306	WEP771	121-880	
	25C1957		GE-270	PTC180	HEPS3044	REN 295	SK3253	RT-310	ECG306	TM306	WEP771	121-880	
TR17	25C1957	2000-206	GE-270	PTC180	HEPS3044	REN 295	SK3253	RT-310	ECG306	TM306	WEP771	121-880	
	25C1957		GE-270	PTC180	HEPS3044	REN 295	SK3253	RT-310	ECG306	TM306	WEP771	121-880	
	25C1957		GE-270	PTC180	HEPS3044	REN 295	SK3253	RT-310	ECG306	TM306	WEP771	121-880	
	25C1957		GE-270	PTC180	HEPS3044	REN 295	SK3253	RT-310	ECG306	TM306	WEP771	121-880	
TR18	25C1957	2000-206	GE-270	PTC180	HEPS3044	REN 295	SK3253	RT-310	ECG306	TM306	WEP771	121-880	
	25C1957		GE-270	PTC180	HEPS3044	REN 295	SK3253	RT-310	ECG306	TM306	WEP771	121-880	
	25C1957		GE-270	PTC180	HEPS3044	REN 295	SK3253	RT-310	ECG306	TM306	WEP771	121-880	
	25C1957		GE-270	PTC180	HEPS3044	REN 295	SK3253	RT-310	ECG306	TM306			

PRESIDENT MODEL 1003002, DWIGHT D.

PARTS LIST AND DESCRIPTION (CONTINUED)

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

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

ITEM No.	TYPE No.	MFG. PART No.	REPLACEMENT DATA										WORKMAN PART No.	ZENITH PART No.
			GENERAL ELECTRIC PART No.	MALLORY PART No.	MOTOROLA PART No.	RAYTHEON PART No.	RCA PART No.	SPRAGUE PART No.	SYLVANIA PART No.	THORDARSON PART No.				
TR13	2SC945AQ	2000-235	GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	TM199/**	WEP1945	121-972		
	2SC945		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	TM199/**	WEP1945	121-972		
	2SC545		GE-11	PTC132	HEPS0016	REN 161	SK3018	RT-308	ECG107	TM107	WEP63	121-29000		
	2SC828		GE-61*	PTC139*	HEPS0015*	REN 199	SK3444	RT-302	ECG199	TM199/**	WEP828	121-972		
	2SC536		GE-212	PTC121*	HEPS0016*	REN 199	SK3124	RT-107A	ECG199	TM199	WEP536	121-972		
TR14	2SC458	2000-213	GE-210*	PTC121*	HEPS0009*	REN 123A*	SK3122	RT-187	ECG289	TM289/**	WEP458	121-773		
	2SC1675L		GE-213	PTC132*	HEPS0025*	REN 123A*	SK3122	RT-308	ECG229*	TM229*	WEP956*	121-29021		
	2SC1675		GE-213	PTC132*	HEPS0025*	REN 123A*	SK3122	RT-308	ECG229*	TM229*	WEP956*	121-29021		
	2SC380		GE-61*	PTC136*	HEPS0016*	REN 107	SK3018*	RT-107A	ECG107	TM107	WEP380	121-522		
	2SC1684		GE-62*	PTC139*	HEPS0024*	REN 199*	SK3122*	RT-108A*	ECG199*	TM199*	WEP66*	121-972		
TR15	2SC903	2000-203	GE-220	PTC123	HEPS0014	REN 123A	SK3244	RT-102A	ECG287	TM287	WEP735A	121-9000A		
	2SC460		GE-61*	PTC136*	HEPS0014*	REN 107	SK3122	RT-134	ECG107	TM107/**	WEP460	121-522		
	2SC458C		GE-210*	PTC121*	HEPS0009*	REN 123A*	SK3122	RT-187	ECG289	TM289/**	WEP458	121-773		
	2SC458		GE-210*	PTC121*	HEPS0009*	REN 123A*	SK3122	RT-187	ECG289	TM289/**	WEP458	121-773		
	2SC945		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	TM199/**	WEP1945	121-972		
TR16	2SC828	2000-218	GE-61*	PTC139*	HEPS0015*	REN 199	SK3444	RT-302	ECG199	TM199/**	WEP828	121-972		
	2SC536		GE-212	PTC121*	HEPS0016*	REN 199	SK3124	RT-107A	ECG199	TM199	WEP536	121-972		
	2SA733P		GE-48	PTC127	HEPS0019*	REN 294	SK3138	RT-303	ECG294	TM294/**	WEP916	121-952		
	2SA733		GE-48	PTC127	HEPS0019*	REN 294	SK3138	RT-303	ECG294	TM294/**	WEP916	121-952		
	2SA495		GE-221*	PTC103*	HEPS0013*	REN 159*	SK3114	RT-303	ECG159*	TM159/**	WEP495	121-29003		
TR17	2SA564	2000-218	GE-65	PTC103*	HEPS0019*	REN 234	SK3114	RT-303	ECG234	TM234	WEP564	121-879		
	2SA659		GE-89	PTC103	HEPS0029	REN 159	SK3466	RT103A	ECG159	TM159	WEP62	121-29003		
	2SA844		GE-244*	PTC103*	HEPS0019*	REN 129*	SK3114	RT-126A*	ECG129*	TM129*	WEP60*	121-29005		
	2SA733P		GE-48	PTC127	HEPS0019*	REN 294	SK3138	RT-303	ECG294	TM294/**	WEP916	121-952		
	2SA733		GE-48	PTC127	HEPS0019*	REN 294	SK3138	RT-303	ECG294	TM294/**	WEP916	121-952		
TR18	2SA495	2000-251	GE-221*	PTC103*	HEPS0013*	REN 159*	SK3114	RT-303	ECG159*	TM159/**	WEP495	121-29003		
	2SA564		GE-65	PTC103*	HEPS0019*	REN 234	SK3114	RT-303	ECG234	TM234	WEP564	121-879		
	2SC1096		GE-28	PTC110	HEPS3041	REN 186	SK3197	RT-166	ECG186A	TM186A/**	WEP1096	121-29008		
	2SC2236		GE-270	PTC180	HEPS3044	REN 295	SK3253		ECG295	TM295	WEP913	200-767		
	2SC2028		GE-270	PTC180	HEPS3044	REN 295	SK3253		ECG295	TM295	WEP913	121-880		
TR21	2SC2091	2000-105	GE-336	PTC904		REN 295	SK3253		ECG295	TM295	WEP913	121-880		
	2SC1846		GE-337	PTC186		REN 235	SK3197	RT-146	ECG235	TM235	WEP785	121-29039		
	2SC1974		GE-276	PTC180		REN 306	SK3197	RT-310	ECG306	TM306	WEP771			
	2SK198L		GE-FET-2	PTC161	HEPF0021	REN 132	SK3448	RT-175	ECG312	TM312		121-756		
	2SK19		GE-FET-2	PTC161	HEPF0021	REN 132	SK3448	RT-175	ECG312	TM312		121-756		
TR22	2SK104	2000-213	GE-FET-2	PTC161	HEPF0021	REN 132	SK3448	RT-175	ECG312	TM312		121-756		
	2SC1675L		GE-213	PTC132*	HEPS0025*	REN 123A*	SK3122	RT-308	ECG229*	TM229*	WEP956*	121-29021		
	2SC1675		GE-213	PTC132*	HEPS0025*	REN 123A*	SK3122	RT-308	ECG229*	TM229*	WEP956*	121-29021		
	2SC460		GE-61*	PTC136*	HEPS0014*	REN 107	SK3122	RT-134	ECG107	TM107/**	WEP460	121-522		
	2SC1815		GE-62	PTC136*	HEPS0015*	REN 199	SK3245	RT-304	ECG199	TM199	WEP66	121-972		
TR23	2SC829	2000-235	GE-20*	PTC139*	HEPS0015*	REN 123A	SK3444	RT-308	ECG229*	TM229/**	WEP829	121-29021*		
	2SC930		GE-60*	PTC132*	HEPS0016*	REN 229	SK3018	RT-308	ECG229*	TM229/**	WEP956*	121-29021*		
	2SC945AQ		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	TM199/**	WEP1945	121-972		
	2SC945		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	TM199/**	WEP1945	121-972		
	2SC828		GE-61*	PTC139*	HEPS0015*	REN 199	SK3444	RT-302	ECG199	TM199/**	WEP828	121-972		
TR24	2SC458	2000-218	GE-210*	PTC121*	HEPS0009*	REN 123A*	SK3122	RT-187	ECG289	TM289/**	WEP458	121-773		
	2SC900		GE-62	PTC139*	HEPS0015*	REN 199	SK3124	RT-302	ECG199	TM199/**	WEP66	121-972		
	2SC1815		GE-48	PTC127	HEPS0019*	REN 294	SK3138	RT-303	ECG294	TM294/**	WEP916	121-952		
	2SA733P		GE-48	PTC127	HEPS0019*	REN 294	SK3138	RT-303	ECG294	TM294/**	WEP916	121-952		
	2SA733		GE-221*	PTC103*	HEPS0013*	REN 159*	SK3114	RT-303	ECG159*	TM159/**	WEP495	121-29003		
TR25	2SA495	2000-213	GE-65	PTC103*	HEPS0019*	REN 234	SK3114	RT-303	ECG234	TM234	WEP564	121-879		
	2SA564		GE-89	PTC103	HEPS0029	REN 159	SK3466	RT-103A	ECG159	TM159	WEP62	121-29003		
	2SA659		GE-244*	PTC103*	HEPS0019*	REN 129*	SK3114	RT-126A*	ECG129*	TM129*	WEP60*	121-29005		
	2SC1061C		GE-213	PTC132*	HEPS0025*	REN 123A*	SK3122	RT-308	ECG229*	TM229*	WEP956*	121-29021		
	2SC1675		GE-213	PTC132*	HEPS0025*	REN 123A*	SK3122	RT-308	ECG229*	TM229*	WEP956*	121-29021		
TR26	2SC460	2000-107	GE-61*	PTC136*	HEPS0014*	REN 107	SK3122	RT-134	ECG107	TM107/**	WEP460	121-522		
	2SC1815		GE-62	PTC136*	HEPS0015*	REN 199	SK3245	RT-304	ECG199	TM199	WEP66	121-972		
	2SC829		GE-20*	PTC139*	HEPS0015*	REN 123A	SK3444	RT-308	ECG229*	TM229/**	WEP829	121-29021*		
	2SC930		GE-60*	PTC132*	HEPS0016*	REN 229	SK3018	RT-308	ECG229*	TM229/**	WEP956*	121-29021*		
	2SK104H		GE-FET-2	PTC161	HEPF0021	REN 132	SK3448	RT-175	ECG312	TM312		121-756		
TR27	2SK19	2000-218	GE-FET-2	PTC161	HEPF0021	REN 132	SK3448	RT-175	ECG312	TM312		121-756		
	2SK104		GE-FET-2	PTC161	HEPF0021	REN 132	SK3448	RT-175	ECG312	TM312		121-756		
	2SA733P		GE-48	PTC127	HEPS0019*	REN 294	SK3138	RT-303	ECG294	TM294/**	WEP916	121-952		
	2SA733		GE-48	PTC127	HEPS0019*	REN 294	SK3138	RT-303	ECG294	TM294/**	WEP916	121-952		
	2SA495		GE-221*	PTC103*	HEPS0013*	REN 159*	SK3114	RT-303	ECG159*	TM159/**	WEP495	121-29003		
TR201	2SA564	2000-219	GE-65	PTC103*	HEPS0019*	REN 234	SK3114	RT-303	ECG234	TM234	WEP564	121-879		
	2SA659		GE-89	PTC103	HEPS0029	REN 159	SK3466	RT103A	ECG159	TM159	WEP62	121-29003		
	2SA844		GE-244*	PTC103*	HEPS0019*	REN 129*	SK3114	RT-126A*	ECG129*	TM129*	WEP60*	121-29005		
	2SC1061C		GE-66	PTC167	HEPS3061	REN 152	SK3054	RT-197	ECG152	TM152/**	WEP745	121-987-02		
	2SC1361		GE-241	PTC154	HEPS3061	REN 196	SK3054	RT-154	ECG196	TM196	WEP756	121-987-02		
TR202	2SD313	2000-251	GE-66	PTC154	HEPS3061	REN 152	SK3054	RT-197	ECG152	TM152/**	WEP745	121-987-02		
	2SD235		GE-241	PTC154	HEPS3061	REN 196	SK3054	RT-197	ECG196	TM196	WEP756	121-987-02		
	2SD570		GE-28	PTC110	HEPS3041	REN 186	SK3197	RT-166	ECG186A	TM186A/**	WEP1096	121-29008		
	2SC1096		GE-66	PTC167	HEPS5027	REN 152	SK3054	RT-197	ECG152	TM152	WEP745	121-987-02		
	2SC1419		GE-215	PTC110		REN 236	SK3197	RT-160	ECG236	TM236/**	WEP840	121-29040		
TR203	2SC1173	2000-235	GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	TM199/**	WEP1945	121-972		
	2SC945AQ		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	TM199/**	WEP1945	121-972		
	2SC945		GE-210*	PTC121*	HEPS0009*	REN 123A*	SK3122	RT-187	ECG289	TM289/**	WEP458	121-773		
	2SC458		GE-61*	PTC121*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	TM123A/**	WEP372	121-29000A		
	2SC372		GE-61*	PTC139*	HEPS0015*	REN 199	SK3444	RT-302	ECG199	TM199/**	WEP828	121-972		

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

PARTS LIST AND DESCRIPTION (CONTINUED)

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

ELECTROLYTIC CAPACITORS

ITEM No.	RATING	REPLACEMENT DATA				
		MFGR. PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.	
					Q-LINE	GENERAL LINE
C1	10 16V	1800-306	PC10-25	VTT10B25	QV1-41	EV-1222
C25	10 10V			TDC106M025FL	QDT1-64	SD25-109
C29	1 50V	1800-302	PC1-50	VTT1A50	QV1-11	EV-1615
C36	22 16V	4000-047	PC25-25	VTT22B16	QV1-55	EV-1224
C37	10 16V	1800-306	PC10-25	VTT10B25	QV1-41	EV-1222
C39	2.2 25V	1800-303	PC2-100	VTT2R2A50	QV1-19	EV-1517
C41	4.7 16V	1800-607		TDC475M035FL	QDT1-49	SD35-4R79
C43	1000 16V	1800-328	PC1000-16	VTT1000L16	QV1-183	EV-1260
C45	4.7 25V	1800-304	PC5-50	VTT4R7B50	QV1-27	EV-1319
C57	2.2 25V		PC2-100	VTT2R2A50	QV1-19	EV-1517
C59	1 50V	1800-302	PC1-50	VTT1A50	QV1-11	EV-1615
C67	10 16V		PC10-25	VTT10B25	QV1-41	EV-1222
C70	10 10V			TDC106M025FL	QDT1-64	SD25-109
C72	4.7 25V	1800-304	PC5-50	VTT4R7B50	QV1-27	EV-1319
C73	47 10V	1800-324	PC50-16	VTT47D16	QV1-73	EV-1226
C74	470 16V	1800-309	PC500-16	VTT470K16	QV1-151	EV-1250
C89	10 16V	1800-306	PC10-25	VTT10B25	QV1-41	EV-1222
C91	2.2 16V	1800-601		TDC225M035FL		SD35-2R29
C92	2.2 16V	1800-601		TDC225M035FL		SD35-2R29
C93	1 50V	1800-302	PC1-50	VTT1A50	QV1-11	EV-1615
C112	470 6.3V	1800-311	PC500-16	VTT470K16	QV1-149	EV-1150
C114	100 10V	1800-310	PC100-10	VTT100E10	QV1-93	EV-1130
C115	220 16V	1800-308	PC250-25	VTT220H16	QV1-117	EV-1240
C116	220 25V	1800-305	PC250-25	VTT220K25	QV1-119	EV-1340
C120	47 10V	1800-324	PC50-16	VTT47D16	QV1-73	EV-1226
C121	100 10V	1800-310	PC100-10	VTT100E10	QV1-93	EV-1130
C126	47 10V	1800-324	PC50-16	VTT47D16	QV1-73	EV-1226
C128	47 50V	1800-301	PC1-50	VTT47A63	QV1-3	EV-1610
C129	1 16V	1800-501		TDC104M050EL	QDT1-2	SD50-R109
C134	33 16V	1800-307	PC30-25	VTT33D25	QV1-63	EV-1325
C135	10 16V		PC10-25	VTT10B25	QV1-41	EV-1222
C139	22 16V	4000-047	PC25-25	VTT22B16	QV1-55	EV-1224
C150	10 16V	1800-306	PC10-25	VTT10B25	QV1-41	EV-1222
C204	2200 25V		WBR2000-25*	TC2520A	QET-645	TVA-1213.5
C205	220 16V	1800-308	PC250-25	VTT220H16	QV1-117	EV-1240

* Axial used as a radial.

CAPACITORS

ITEM No.	RATING	MFGR. PART No.	REPLACEMENT DATA				
			CENTRALAB PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.	
						Q-LINE	GENERAL LINE
CC1	.01 X 4	1800-103	UK50-103		MAG5011		10TCR-Q15
C2	.01				*		
C4	15 N220		UK50-103		MAG5011		
C5	.01		UK50-103		MAG5011		10TS-T22
C7	.01		DD-221		GP322		
C8	220		UK50-103		MAG5011		
C9	.01		UK50-103		MAG5011		
C10	.01		UK50-103		MAG5011		
C11	.01		UK50-103		MAG5011		
C12	.01		UK50-103		MAG5011		10TCC-V22
C13	.01		UK50-103		MAG5011		5GA-S40
C14	2 NPO		DTZ-2R2	NP02P2	CN0522		5GA-S40
C16	.04				GP140		1FT-S39
C17	.04			DPMS6S39	M192P3939R8	QFT2-159	1FT-S39
C18	.039 50V			DPMS6S39	M192P3939R8	QFT2-159	10TCC-V10
C19	.039 50V				CN0510		5GA-S40
C20	1 NPO 50V				GP140		1FT-D10
C21	.04			DPMS6D1	EWFI A210	QFT2-1	5GA-S40
C22	.001 50V				GP140		5GA-S40
C23	.04				GP140		5GA-S40
C24	.04				GP140		1FT-D22
C26	.04			DPMS6D22	M192P2229R8	QFT2-27	1FT-D47
C27	.0022 50V			WMF1047	M192P4729R8	QFT2-63	1FT-S10
C31	.0047 50V 10%			WMF1S1	EWFI A110	QFT2-91	1FT-S10
C32	.01 50V			WMF1S1	EWFI A110	QFT2-91	5GA-S40
C33	.01 50V 10%				GP140		1FT-D33
C35	.04			WMF1D33	M192P3329R8	QFT2-43	1FT-S10
C38	.0033			WMF1S1	EWFI A110	QFT2-91	
C40	.01 50V 10%		UK50-103		MAG5011		1FT-S10
C42	.01			WMF1S1	EWFI A110	QFT2-91	5GA-S40
C44	.01 50V 10%				GP140		5GA-S40
C46	.04				GP140		10TCC-V10
C47	.04				CN0510		10TS-Q56
C48	1 NPO 50V		DD-560		GP456		
C49	56						10TS-T22
C50	56 N220 5%				GP322		10TS-T33
C52	220		DD-331	GP330	GP333		5GA-D47
C53	330		DD-472	GP4700	GP247		10TS-T10
C54	.0047 50V		DD-101	GP100	GP310		
C55	100		UK50-103		MAG5011		
C58	.01		UK50-103		MAG5011		10TS-T22
C60	.01		DD-221		GP322		
C62	22		UK50-103		MAG5011		
C63	.01		UK50-103		MAG5011		
C64	.01		UK50-103		MAG5011		
C65	.01		UK50-103		MAG5011		5GA-S40
C66	.01				GP140		10TS-D10
C68	.04		DD-102		GP210		10TS-D10
C71	.001		DD-102	DPMS6D22	M192P2229R8	QFT2-27	1FT-D22
C75	.001				GP210		HY-750
C76	.0022 50V		UK25-104		MAG2501		
C77	.1 25V		UK50-103		MAG5011		
C78	.01						

PRESIDENT MODEL 1003002, DWIGHT D.

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
C79	100	1800-096	DD-101	GP100	GP310		10TS-T10
C80	8 NPO 50V						
C81	.01		UK50-103		MAG5011		
C82	.01		UK50-103		MAG5011		
C83	.001 50V		DD-102		GP210		10TS-D10
C84	330		DD-331	GP330	GP333		10TS-T33
C85	.01		UK50-103		MAG5011		
C86	68 N220 10%				*		10TCR-Q68
C87	150 N220 10%				*		10TCR-T15
C88	15 N220				*		10TCR-Q15
C90	.02	1800-066 1800-128 1800-006	DC-203	MGP02	TA120	QC2-157	TG-S20
C94	47 N750 10%		DTN-47	N47	CN7447		10TCU-Q47
C95	.022 50V 10%			DPMS2S22	M192P2239R8	QFT2-127	1FT-S22
C96	.01		UK50-103		MAG5011		
C97	.01		UK50-103		MAG5011		
C98	27 NPO 5%				CN0427		10TCC-Q27
C99	100 NPO		DTZ-100	NP0100	CN0310		10TCC-T10
C100	39 NPO				CN0439		10TCC-Q39
C101	.01				CN0439		10TCC-Q39
C102	.01		UK50-103		MAG5011		
C103	.01	1800-009 1800-135	UK50-103		MAG5011		
C104	10 NPO		UK50-103		MAG5011		
C105	.01		DTZ-10	NP010	CN0410		10TCC-Q10
C106	10 NPO		UK50-103		MAG5011		
C107	220		DTZ-10	NP010	CN0410		10TCC-Q10
C108	100 N220 5%		DD-221		GP322		10TS-T22
C109	9 N220				*		10TCR-T10
C110	.01		UK50-103		*		10TCR-Q10
C111	.04				MAG5011		
C113	.04				GP140		5GA-S40
C117	.01	1800-009 1800-135	UK50-103		GP140		5GA-S40
C118	.01		UK50-103		MAG5011		
C119	.04		UK50-103		MAG5011		
C122	.022 50V 10%			DPMS2S22	GP140		5GA-S40
C124	.01 50V			WMF1S1	M192P2239R8	QFT2-127	1FT-S22
C125	.01		UK50-103		EWFA1110	QFT2-91	1FT-S10
C127	.0022 50V			DPMS6D22	MAG5011		
C130	.01		UK50-103		M192P2229R8	QFT2-27	1FT-D22
C133	.01		UK50-103		MAG5011		
C136	.01		UK50-103		MAG5011		
C140	.01	1800-009 1800-135	UK50-103		MAG5011		
C141	.01		UK50-103		MAG5011		
C142	.01		UK50-103		MAG5011		
C143	.01		UK50-103		MAG5011		
C144	.01		UK50-103		MAG5011		
C145	.01		UK50-103		MAG5011		
C146	.04		UK50-103		MAG5011		
C147	.04				GP140		5GA-S40
C151	.01		UK50-103		GP140		5GA-S40
C158	.001		DD-102		MAG5011		
C159	.01	1800-009 1800-135	UK50-103		GP210		10TS-D10
C160	.01		UK50-103		MAG5011		
C161	.01		UK50-103		MAG5011		
C162	.001		DD-102		GP210		10TS-D10
C163	22			GP22	GP422	QC2-19	5GA-Q22
C164	.001		DD-102		GP210		10TS-D10
C165	100		DD-101	GP100	GP310		10TS-T10
C166	150		DD-151		GP315		10TS-T15
C167	680		DD-681	GP680	GP368		10TS-T68
C168	.01		UK50-103		MAG5011		
C169	.01	1800-009 1800-135	UK50-103		MAG5011		
C171	.04				GP140		5GA-S40
C201	.01		UK50-103		MAG5011		
C202	.01		UK50-103		MAG5011		
C203	.01		UK50-103		MAG5011		
C206	.04			DPMS6D1	EWFA210		6PS-D10
C207	.01		UK50-103		MAG5011		
C208	.01		UK50-103		MAG5011		
C301	.01		UK50-103		MAG5011		
C302	.01		UK50-103		MAG5011		
C303	22	1800-009 1800-135		GP22	GP422	QC2-19	5GA-Q22
C401	.001		DD-102		GP210		10TS-D10
C402	.001		DD-102		GP210		10TS-D10
C403	.001		DD-102		GP210		10TS-D10
C404	.001		DD-102		GP210		10TS-D10
C405	.001		DD-102		GP210		10TS-D10
C406	.001		DD-102		GP210		10TS-D10
C451	.001		DD-102		GP210		10TS-D10
C452	.001		DD-102		GP210		10TS-D10
C453	.001		DD-102		GP210		10TS-D10
C454	.001		DD-102		GP210		10TS-D10
C601	.001	1800-009 1800-135	DD-102		GP210		10TS-D10
C602	.001		DD-102		GP210		10TS-D10
C603	.001		DD-102		GP210		10TS-D10

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

PARTS LIST AND DESCRIPTION (CONTINUED)

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

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

ITEM No.	FUNCTION	RESIST-ANCE	REPLACEMENT DATA			
			MFGR. PART No.	CENTRALAB PART No.	MALLORY PART No.	TRW PART No.
VR1	IF Gain	300	1900-206			U260R501B
VR2	S Meter	30K	1900-227			U260R503B
VR3	Squelch Range	100K	1900-211			U260R104B
VR4	RF Power Meter	50K	1900-202			U260R503B
VR5	Mod	50K	1900-202			U260R503B
VR6	AMC	5000	1900-201			U260R502B
VR201	Voltage	500	1900-205			U260R501B
VR301	RF Gain	1000	1900-124	F1-1000(1), SSK012	RU13L,SL36,SL1500	BU1(1),CF6,SS1, DC1
VR302	Tone	50K	1900-143	F2-50K(1), SSK012	RU54A,SL36,SL1500	BU(1),CF63,SS1, DC1
VR303	Volume/On-Off Switch	50K	1900-128	F2-50K(1),KR1	RU54A,SL36,SL1500, US41	BU1(1),CF63,SS1, GC
VR304	Squelch/PA Switch	50K	1900-144			
VR305A	SWR/CAL	5000	1900-116	F1-5000(1), R1-5000,SSK012, CPL2	P53L,3014(1),RU53L, CS3500	BU1(1),CF8,CR4, SS1,SS7A,DC1
VR305B	SWR/CAL	5000		F1-25K(1), SSK012	P24L,SL36,SL1500	BU1(1),CF62,SS1, DC1
VR306	Delta Tune	20K	1900-134	F2-5000(1), SSK012	RU53A,SL36,SL1500	BU1,CF60,SS1,DC1
VR307	Mike Gain	5000	1900-131			

(1) Enlarge mounting hole.

RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA		ITEM No.	RATING	REPLACEMENT DATA	
		WORKMAN PART No.	MFGR. PART No.			WORKMAN PART No.	MFGR. PART No.
R603	10 Ohms 3W		1900-308				

COILS (RF-IF)

ITEM No.	FUNCTION	REPLACEMENT DATA			REMARKS
		PART No.	OTHER IDENTIFICATION	MILLER PART No.	
L1	Antenna Matching (27MHz)	2200-001	LA-029	CBS740-T	
L2	RF Amp (27MHz)	2200-082	LA-138		
L3	Mixer (10.695MHz)	2200-084	LA-277		
L4	Mixer (10.695MHz)	2200-003	LA-180	CBS715-TC	
L5	Mixer (10.695MHz)	2200-090	LA-274		
L6	IF (455kHz)	2200-081	LA-106	8517	
L7	IF (455kHz)	2200-048	LA-204		
L8	IF (455kHz)	2200-091	LA-207		
L10	TVI Trap (54MHz)				
L11	RF Choke	2200-087	LE-089		
L12	Pi Filter	2200-088	LE-088		
L13	Loading Final (27MHz)	2200-034	LC-019	CB305	
L14	Final	2200-017	LD-012	4588	
L16	RF Driver (27MHz)	2200-020	LC-018	CB304	
L17	Buffer (27MHz)	2200-085	LA-208		
L18	VCO (16MHz)	2200-047	LA-201		
L19	VCO Buffer (15.360MHz)	2200-044	LA-166		
L20	Mixer	2200-092	LA-275		
L21	Ref Oscillator	2200-075	LA-217		
L22	RF Choke (100uH)	2200-202	LA-182		
L23	Loc Oscillator	2200-005	LA-198		
L24	XMT Mixer (27MHz)	2200-045	LA-088		
L25	XMT Mixer (27MHz)	2200-004		CBS717-TC	
L26	RF Choke (10uH)	2200-205			

FILTER CHOKE

ITEM No.	RATINGS		REPLACEMENT DATA			NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000~)	MFGR. PART No.	THORDARSON PART No.	TRIAD PART No.
T2	1.4A	.8	.86mH	2300-001 TF-083(1)	TR516	

(1) Number on unit.

TRANSFORMER (Audio Output)

ITEM No.	IMPEDANCE		REPLACEMENT DATA			NOTES
	PRI.	SEC.	MFGR. PART No.	THORDARSON PART No.	TRIAD PART No.	
T1	18	8	2600-005 TF-129(1)			(1) Number on unit.

PRESIDENT MODEL 1003002, DWIGHT D.

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.	
T301	120V AC @ 400mA AC	19,00V AC @ 2.6A AC	2600-009 TF-149(1)		PCB-2	(1) Number on unit.

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		MFGR. PART No.	QUAM PART No.	
SP301	4" PM, 8 Ohms	3100-001	4A1Z8	

FUSE DEVICES

ITEM No.	DESCRIPTION	REPLACEMENT DATA						
		PART No.		BUSS PART No.		LITTELFUSE PART No.		WORKMAN PART No.
		DEVICE	HOLDER	DEVICE	HOLDER	DEVICE	HOLDER	DEVICE
F302	2A Quick Acting		1100-816	AGC(2A)	HRK	312002	150145	FG2-2

MICROPHONE

ITEM No.	REPLACEMENT DATA				CONNECTION DATA						
	MFGR. PART No.	GC PART No.	GC NOISE CANCEL	GC POWER	GC CONNECTOR	GC Red	GC Shield	GC Yellow	GC Blue	GC White	GC Black
MIC	3200-005	18-032	18-034	18-010	18-092	2	1	3	4	NC	1

MISCELLANEOUS

ITEM No.	PART NAME	PART No.	NOTES
CF1	Filter	2200-309	455kHz (FL055)
D302	LED	2000-350	Rec (2.00V @ 10mA) (TLG103)
D303	LED	2000-314	XMT (2.00V @ 10mA) (TLR104)
D304	LED	2000-314	Ch. 9 (2.00V @ 10mA) (TLR104)
D305	LED	2000-314	AWI (TLR104)
D501	LED	2000-306	Units & Tens Readout (TR321)
J301	Jack	1100-002	Antenna Connector
J302	Jack	1100-003	DC Power
J401	Jack	1100-001	PA Speaker
J402	Jack	1100-001	Ext. Speaker
J403	Jack	1100-001	Ext. Speaker
J451	Jack	1100-004	Microphone (4 Pin Male)
L9	Ferrite Bead	2200-109	LD-104
L15	Ferrite Bead	2200-052	LD-087
L301	Ferrite Bead	2200-101	LD-088
M301	Meter	2900-007	S/Rf
M302	Meter	2900-005	Mod/SWR
P301	Plug	1200-004	Ext. Speaker Plug Assembly
P302	Plug		DC Power
PL301	Lamp	2500-002	S/Rf Meter (11.71V @ 34mA)
PL302	Lamp	2500-002	SWR/Mod Meter (11.71V @ 34mA)
PL303	Lamp	3600-001	Clock (8.50V AC @ 83mA)
S301	Switch	3000-008	Off/NB/ANL (SW144)
S302	Switch	3000-008	RF/Mod Swr (SW144)
S303	Switch		PA/CB (Part of Squelch Control)
S304	Switch	3000-012	AC/DC (SW-099)
S305	Switch		On/Off (Part of Volume Control)
S307	Switch	3000-008	Ch. 9 (SW144)
S308	Switch		On/Clock
S501	Switch	3000-119	Channel Selector (SR218)
X1	Crystal	2100-013	10.240MHz (QX-074)
XF1	Filter	2200-308	10.7MHz (FL055)

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

ITEM	PART No.	ITEM	PART No.
Cover, Top	3300-125	Knob, Clock (Inside)	1300-014
Cover, Speaker	3300-126	Knob, Clock (Outside)	1300-013
Control Plate, Metal	1700-509	Knob, Clock Time Set	1300-015
Front Panel	3300-517	Knob, Control	1300-002
Front Panel, Speaker Plastic	3300-510	Knob-Push Switch	1300-003
Knob, Channel Selector	1300-004		

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')