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 Land Command LCB-8

MANUFACTURER'S SPECIFICATIONS

GENERAL

Channels	:	40
Frequency Range	:	26.965 to 27.405 MHz
Frequency Control	:	Single Crystal, Digitally Synthesized
Frequency Tolerance	:	±0.003%
Operating Temperature Range	:	-30°C to +50°C
Input Voltage	:	99.5V AC to 134.5V AC, 60 Hz. or 11.7V DC to 15.9V DC, positive or negative ground
Mirophone	:	Dynamic
Size	:	4-3/4"(H) x 15"(W) x 11-7/16"(D) [120 x 381 x 290 (mm)]
Weight	:	13 Pounds (5.9 kg)

TRANSMITTER

Power Output	:	4 watts (maximum)
Modulation	:	100% capability
Modulator Response	:	300 Hertz to 3000 Hertz
Output Impedance	:	50 ohms, unbalanced
Output Indicators	:	RF power meter

RECEIVER

Sensitivity	:	0.5 microvolt for 10 dB S + N/N ratio
Selectivity	:	60 dB @ ±10 kHz
IF Frequencies	:	10.695 MHz
Receiver Delta Tune	:	±1500 Hertz, Nominal
Automatic Gain Control	:	Less than 10 d8 change in audio output for signal inputs from 10 to 500.000 μV
Squelch Threshold	:	0.5 μV
Audio Power Output	:	Greater than 4 watts @ 10% T.H.D.
Built-in Speaker	:	16 ohms.
External Speaker	:	(Not supplied) 4 or 8 ohms. Disables internal speaker when connected.
Spurious Rejection		
Image	:	-80 dB or better
IF	:	-60 dB or better

Courtesy of the Manufacturer

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 output at TP10 (TR201 emitter).
Connect low sides of test equipment to ground unless specified otherwise.
Connect 50-ohm dummy load or antenna before keying transmitter.
Connect microphone.

Suggested Alignment Tools: GC ELECTRONICS:

L1, L2, L3, L4, L5, L17 thru L21, L23, L24, L25 9440
L6, L7, L8 ..... 5000, 5009, 8276, 8728, 9089
L10, L13, L16 ..... 8728, 9304, 9089

SYNTHESIZER ALIGNMENT

TEST EQUIPMENT	TRANSCEIVER	ADJUST	REMARKS
Input of oscilloscope to TP6 (L23 Secondary).	Ch. 19	L23	Adjust for maximum RF (720mV p-p typical). (See Figure 1.)
Input of frequency counter to TP6 (L23 Secondary).	Ch. 19 Delta Tune Midrange	L21	Adjust for 10.240MHz.
Input of frequency counter to TP9 (IC4 Pin 10).	Ch. 19 Delta Tune Midrange		Check for 5.120MHz.
Input of DC meter to TP4 (Junction of R70 and R71).	Ch. 1	L20	Adjust for 1.30 volts. Check for approx. 2.10 volts on channel 40.
Input of DC meter to TP4 (Junction of R70 and R71).	Ch. 1, XMT		Check for approx. 2.10 volts. Check for approx. 3.30 volts on channel 40.
Input of oscilloscope to TP5 (IC4 Pin 22).	Ch. 19	L19	Adjust for maximum RF (550mV p-p typical). (See Figure 2.)
Input of frequency counter to TP5 (IC4 Pin 22).	Ch. 1 Delta Tune Midrange		Check for .910MHz. Check all channels. (See Truth Chart for correct frequencies.)
Input of frequency counter to TP5 (IC4 Pin 22).	Ch. 1, XMT		Check for 1.365MHz. Check all channels. (See Truth Chart for correct frequencies.)
Input of oscilloscope to TP2 (L18 Secondary).	Ch. 19	L18	Adjust for maximum RF (108mV p-p typical). (See Figure 3.)
Input of frequency counter to TP2 (L18 Secondary).	Ch. 1 Delta Tune Midrange		Check for 16.270MHz. Check all channels. (See Truth Chart for correct frequencies.)
Input of oscilloscope to TP1 (TR12 Base).	Ch. 19, XMT	L24,L25	Adjust for maximum RF (530mV p-p typical). (See Figure 4.)
Input of frequency counter to TP1 (TR12 Base).	Ch. 1, XMT		Check for 26.965MHz. Check all channels. (See Truth Chart for correct frequencies.)

RECEIVER ALIGNMENT

Connect an AC VTVM or AF wattmeter across speaker voice coil.
Adjust volume control to obtain a suitable indication. Set generator output low enough to prevent AGC limiting. Preset controls as follows, unless otherwise noted:
RF Gain Maximum, Squelch MINIMUM, Tone Fully CW, NL Off, Delta Tune Midrange.

TEST EQUIPMENT	TRANSCEIVER	ADJUST	REMARKS
Output of signal generator thru .01uF to TP11 (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, Tone Fully CW, NL Off, NB Off, Delta Tune Midrange.

TEST EQUIPMENT	TRANSCEIVER	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 (.5 watt) 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 SIGNAL 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 XMT	L17,L16	Adjust for maximum RF output.
Input of RF wattmeter to antenna input.	Ch. 19 XMT	L13	Adjust for 4.0 watts RF output maximum.
Input of spectrum analyzer or harmonic meter to antenna input.	Ch. 19 XMT	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	TRANSCEIVER	ADJUST	REMARKS
Input of oscilloscope or modulation meter to antenna input. Inject a 1000Hz, 100mV audio signal at mic input.	Ch. 19 XMT Mic Gain Maximum	VR6	AMC Adjust for 100% modulation maximum. (See Figure 5.)
Input of RF wattmeter to antenna input.	Ch. 19 XMT Mic Gain MINIMUM	VR4	RF PWR METER At 4.0 watts RF output, adjust so RF PWR meter agrees with RF wattmeter.
Input of oscilloscope or modulation meter to antenna input. Inject a 1000Hz audio signal at mic input.	Ch. 19 XMT Mic Gain Maximum	VR5	MOD METER Set generator output for 100% modulation. Adjust VR5 for 100% on MOD scale of meter.

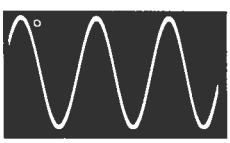


FIGURE 1

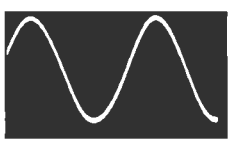


FIGURE 2

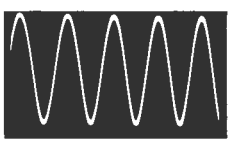


FIGURE 3

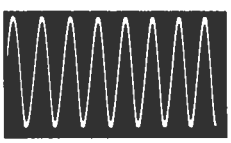
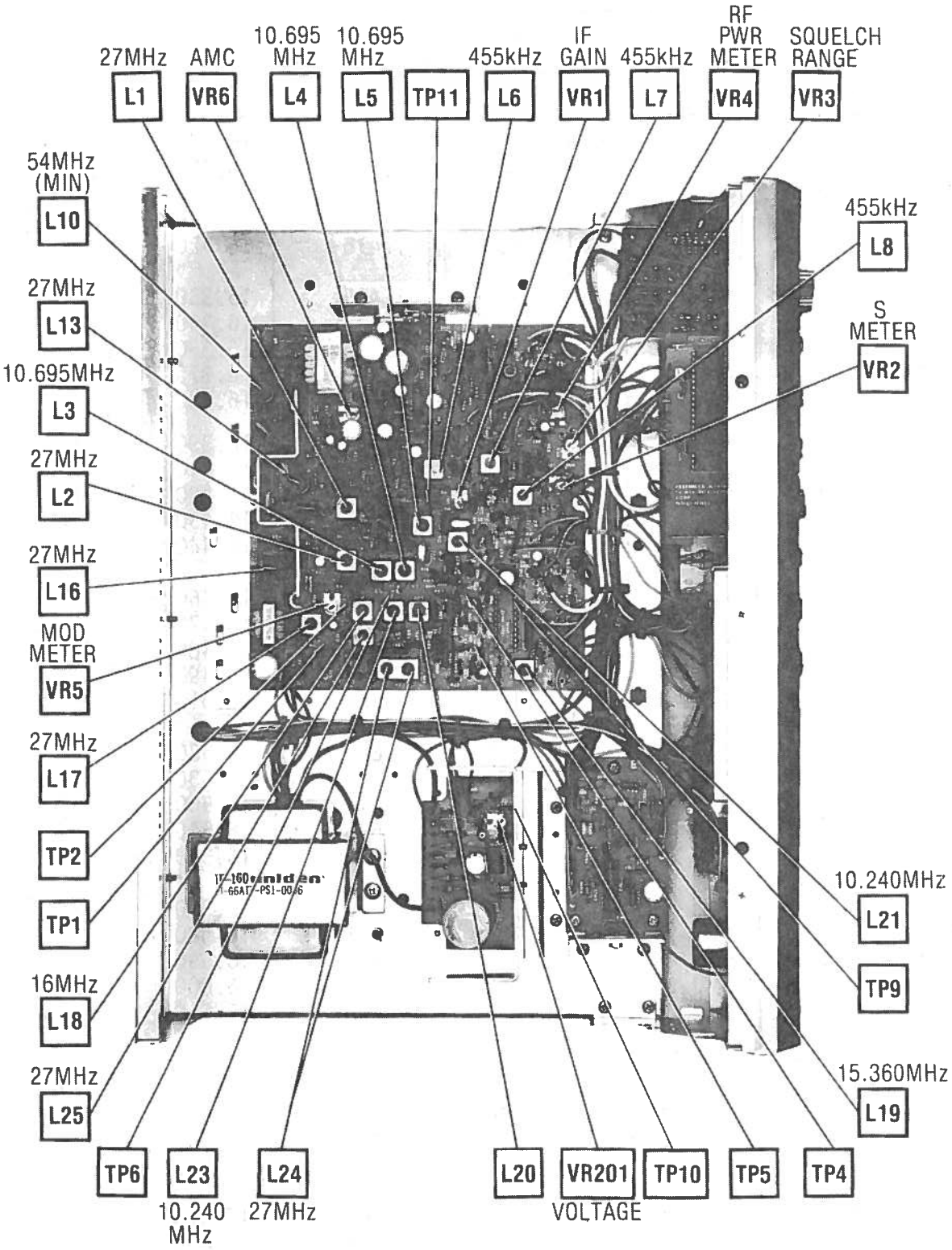


FIGURE 4

FIGURE 5

TRUTH CHART

CHANNEL	1 = 4.70 Volts 0 = 5 Volts CHANNEL INPUT CODES PINS						REC DIVIDER INPUT IN MHz AT TP5	XMT DIVIDER INPUT IN MHz AT TP5	REC VCO OUTPUT IN MHz AT TP2	XMT SYNTH OUTPUT IN MHz AT TP1
	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


27MHz
L1
AMC
VR6
10.695 MHz
L4
10.695 MHz
L5
TP11
455kHz
L6
IF GAIN
VR1
455kHz
L7
RF PWR METER
VR4
SQUELCH RANGE
VR3
54MHz (MIN)
L10
455kHz
L8
27MHz
L13
S METER
VR2
10.695MHz
L3
27MHz
L2
27MHz
L16
MOD METER
VR5
27MHz
L17
TP2
TP1
10.240MHz
L21
TP9
16MHz
L18
15.360MHz
L19
27MHz
L25
TP6
L23
10.240 MHz
L24
27MHz
L20
VR201
VOLTAGE
TP10
TP5
TP4

CHASSIS-TOP

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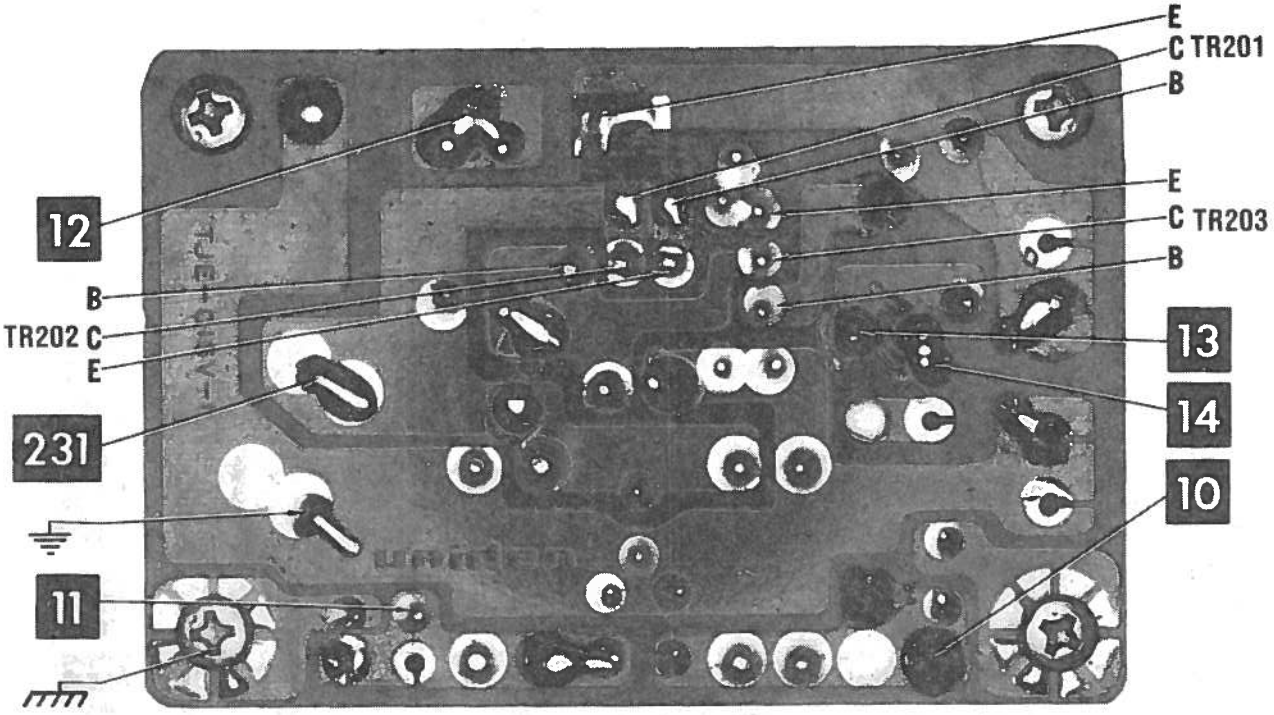

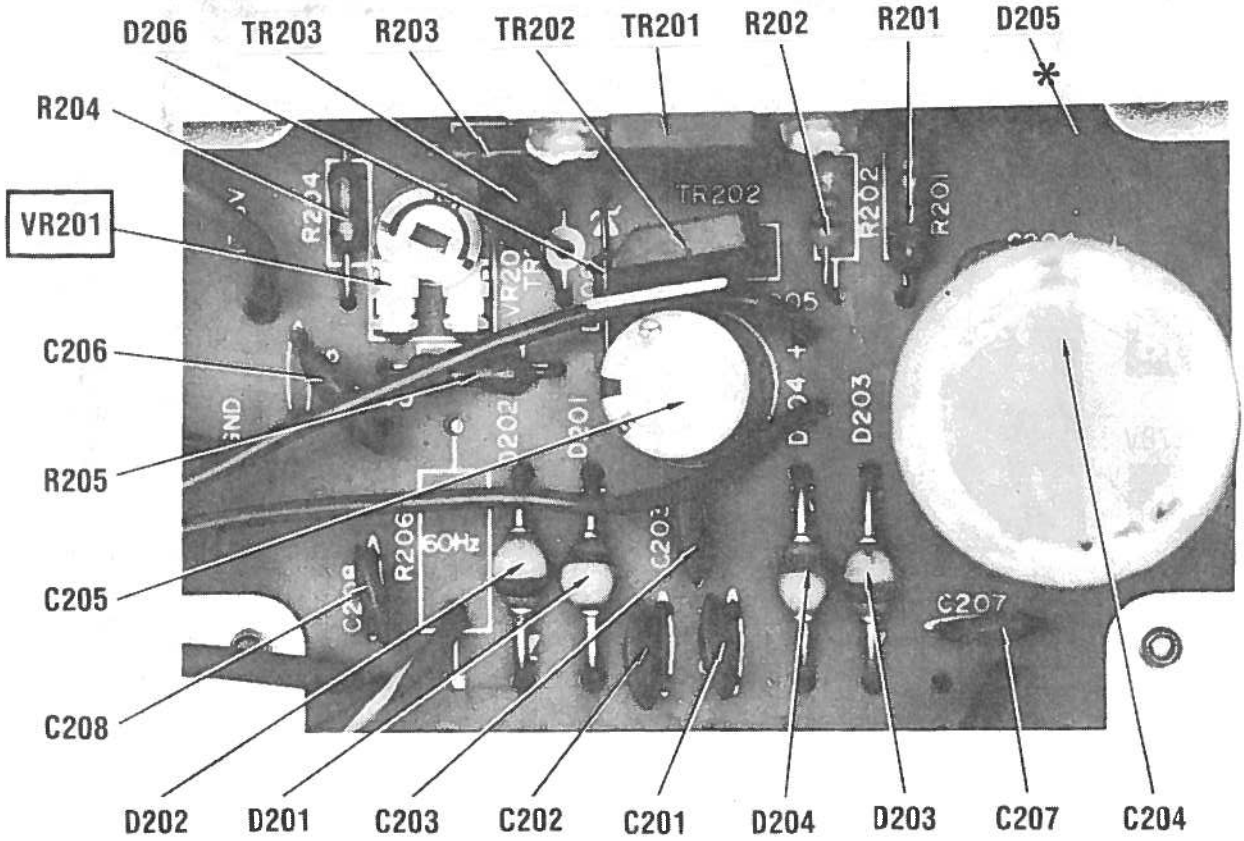

* LOCATED ON OTHER SIDE OF BOARD

POWER SUPPLY BOARD

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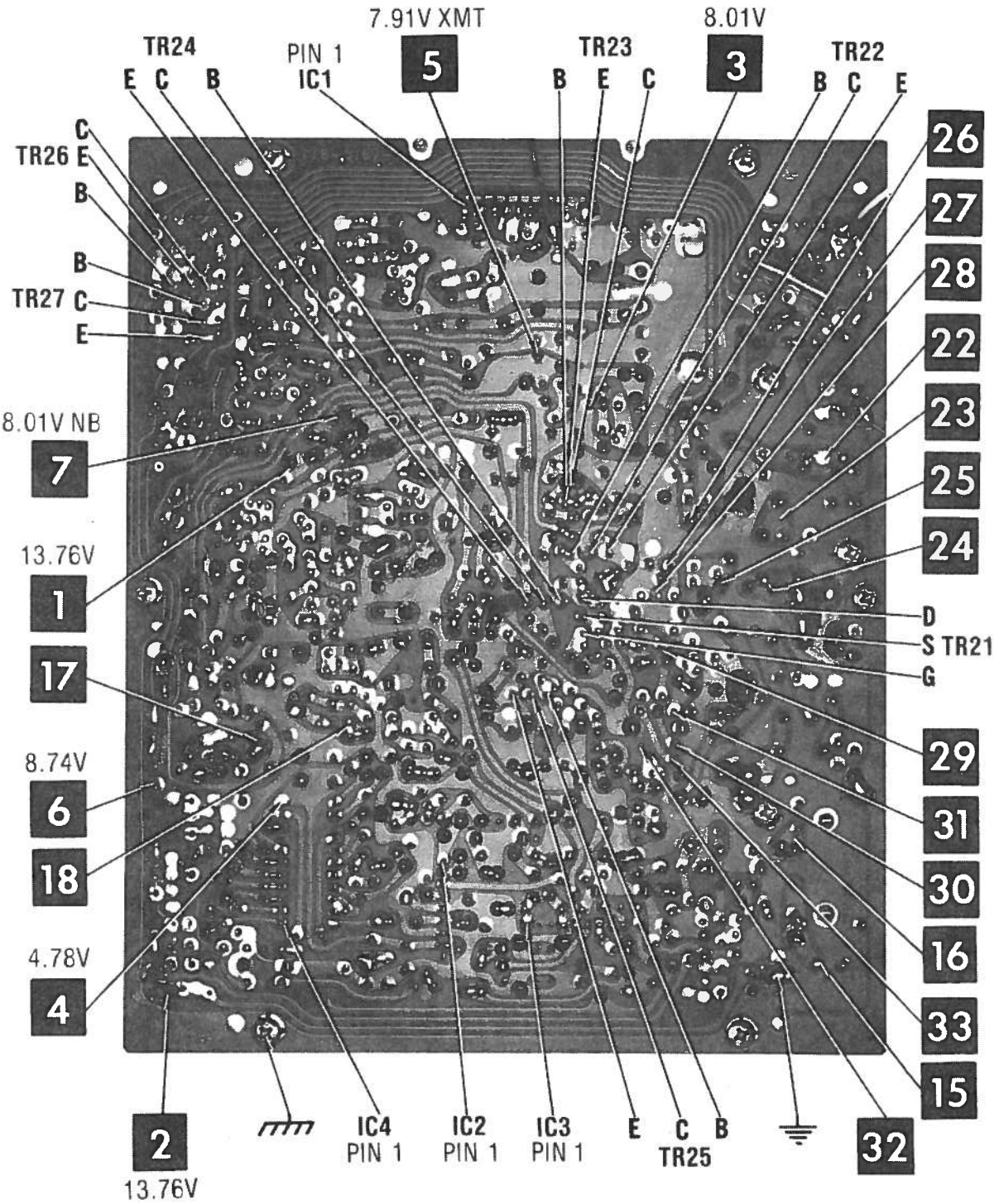
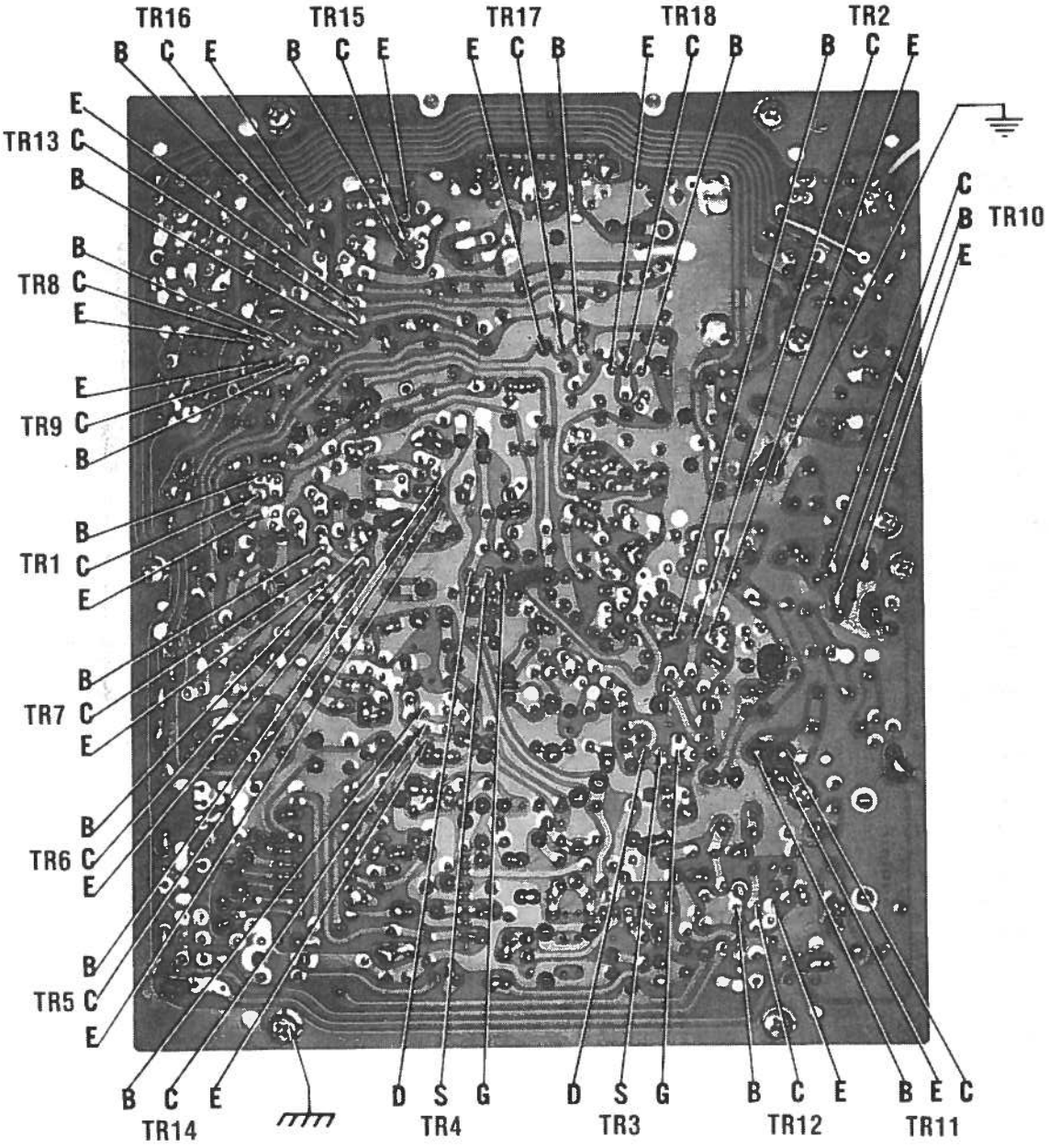


MAIN BOARD


TR16
B C E
TR15
B C E
TR17
E C B
TR18
E C B
TR2
B C E
E
TR13 C
B
B
TR8 C
E
E
TR9 C
B
B
TR1 C
E
B
TR7 C
E
B
TR6 C
E
B
TR5 C
E
C
B TR10
E
B C E
TR14
D S G
TR4
D S G
TR3
B C E
TR12
B E C
TR11

MAIN BOARD

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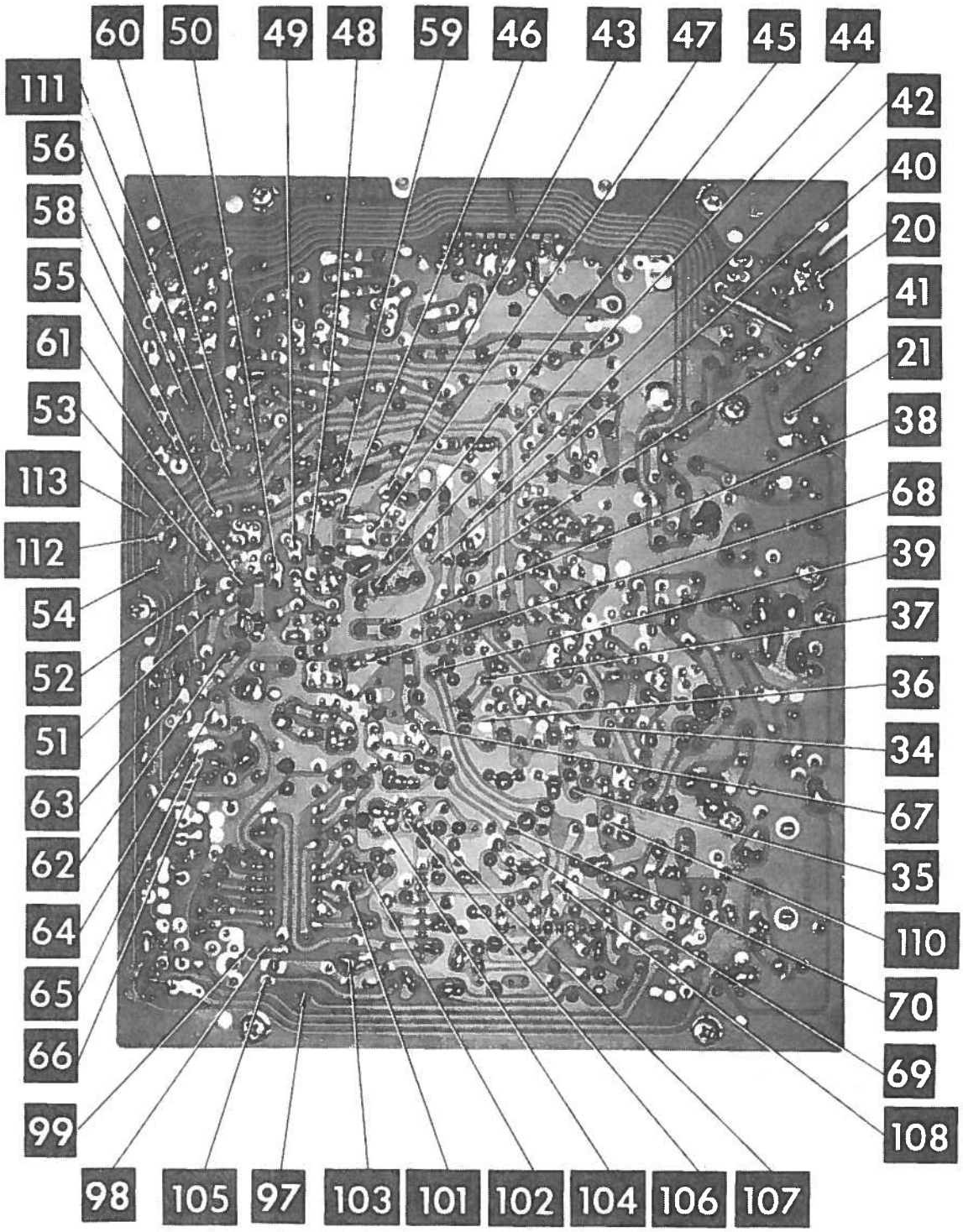

MAIN BOARD

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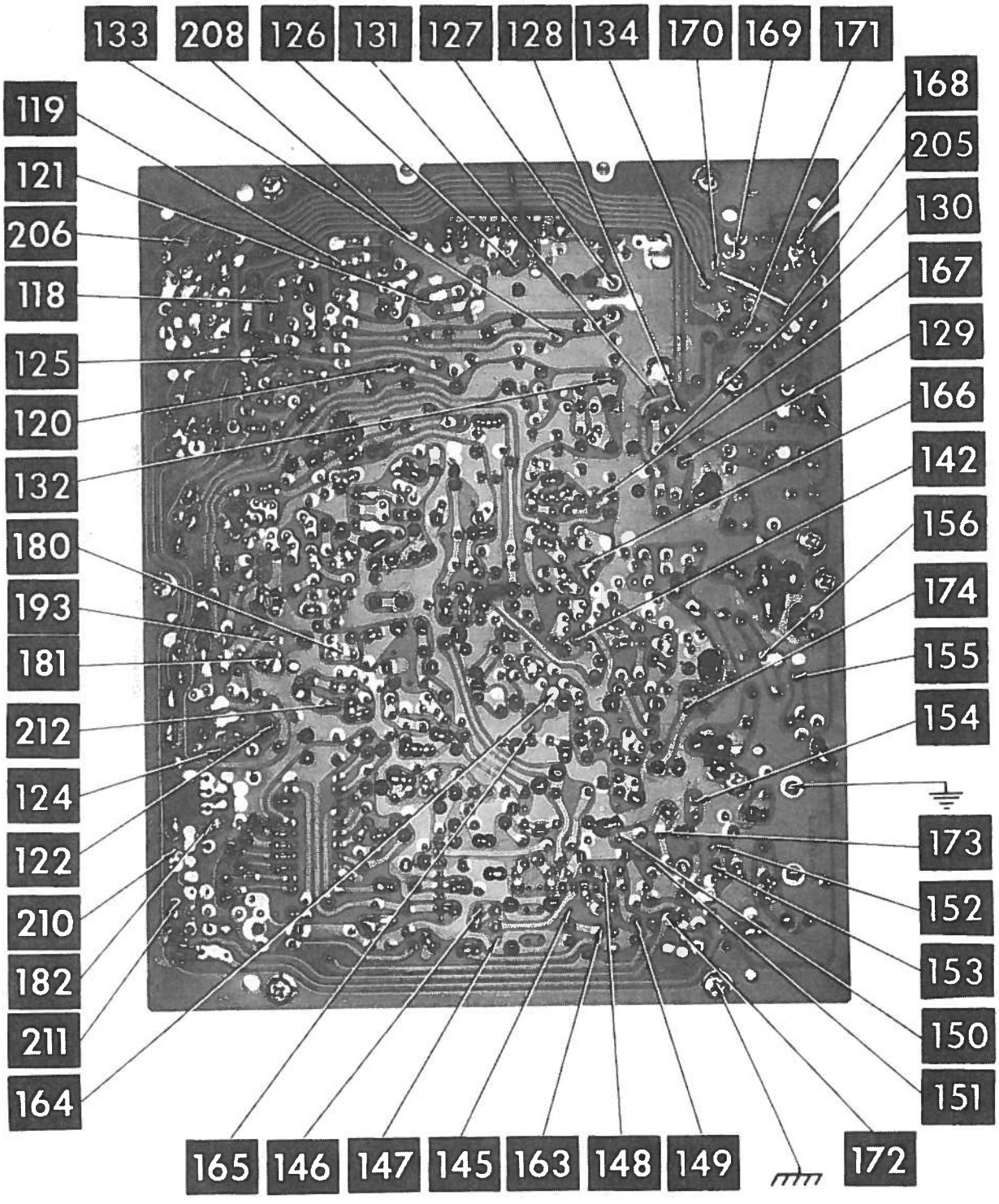

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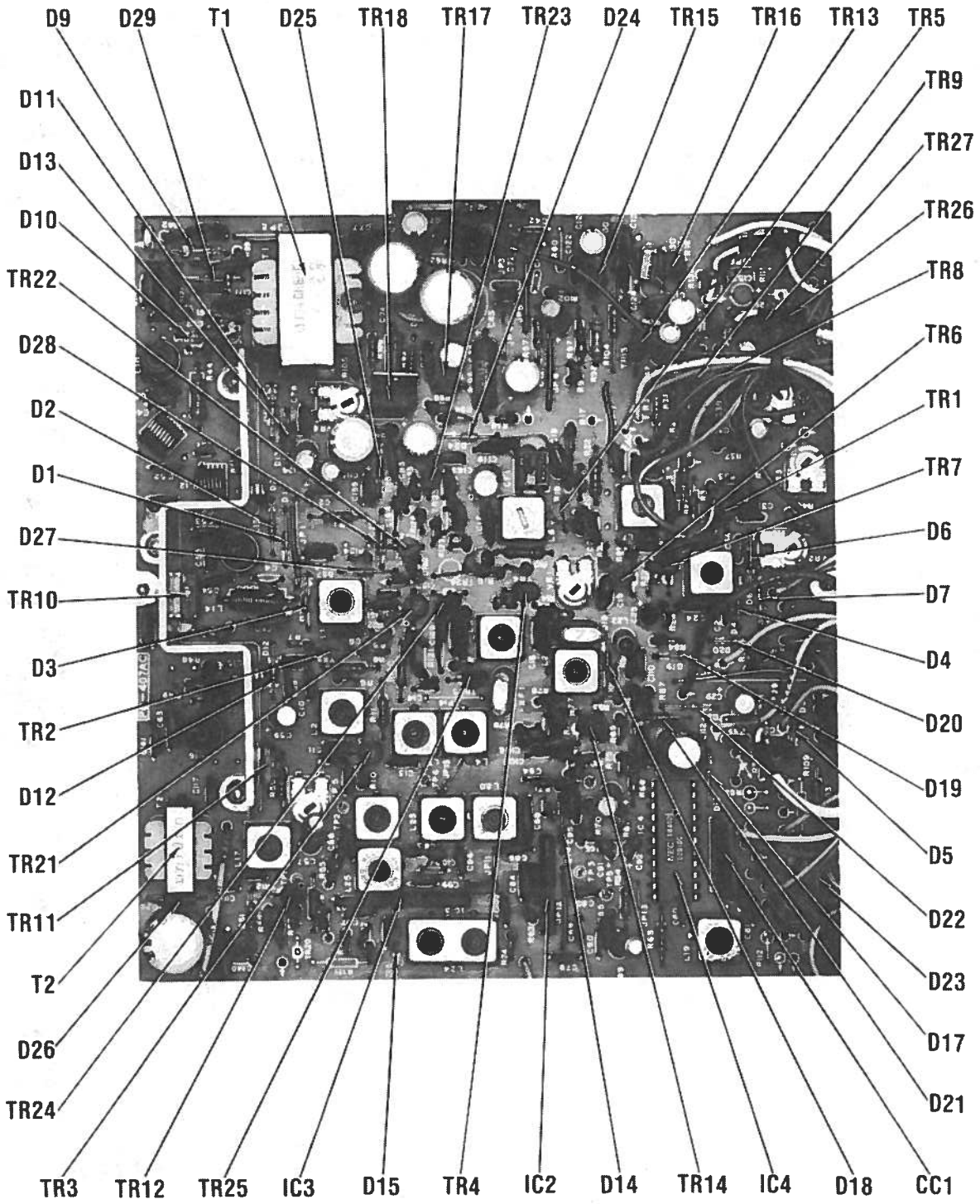
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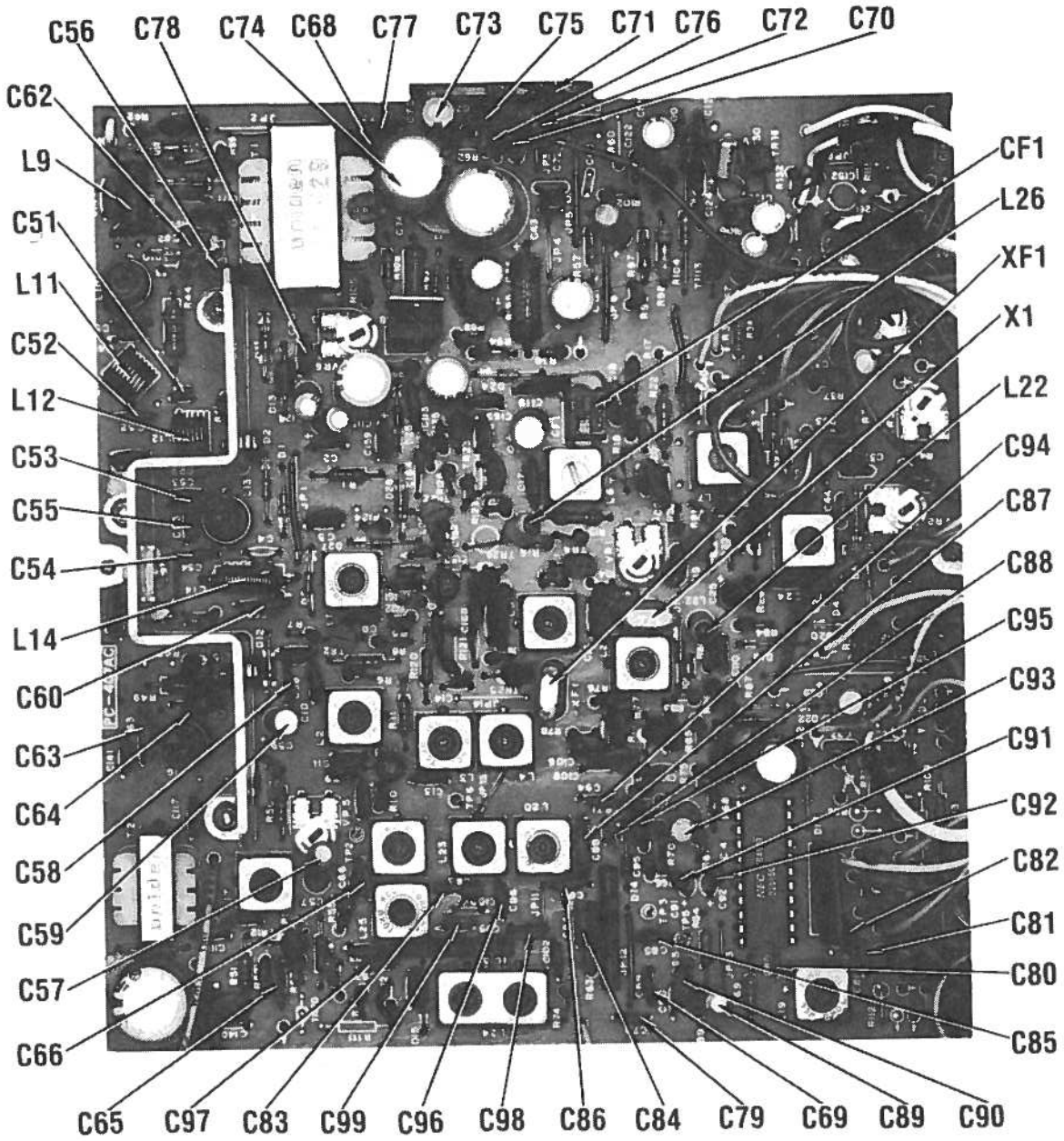
D29
T1
D25
TR18
TR17
TR23
D24
TR15
TR16
TR13
TR5
D11
TR9
D13
TR27
D10
TR26
TR22
TR8
D28
TR6
D2
TR1
D1
TR7
D27
D6
TR10
D7
D3
D4
TR2
D20
D12
D19
TR21
D5
TR11
D22
T2
D23
D26
D17
TR24
D21
TR3
TR12
TR25
IC3
D15
TR4
IC2
D14
TR14
IC4
D18
CC1

MAIN BOARD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C78
C74
C68
C77
C73
C75
C71
C76
C72
C70
C62
L9
C51
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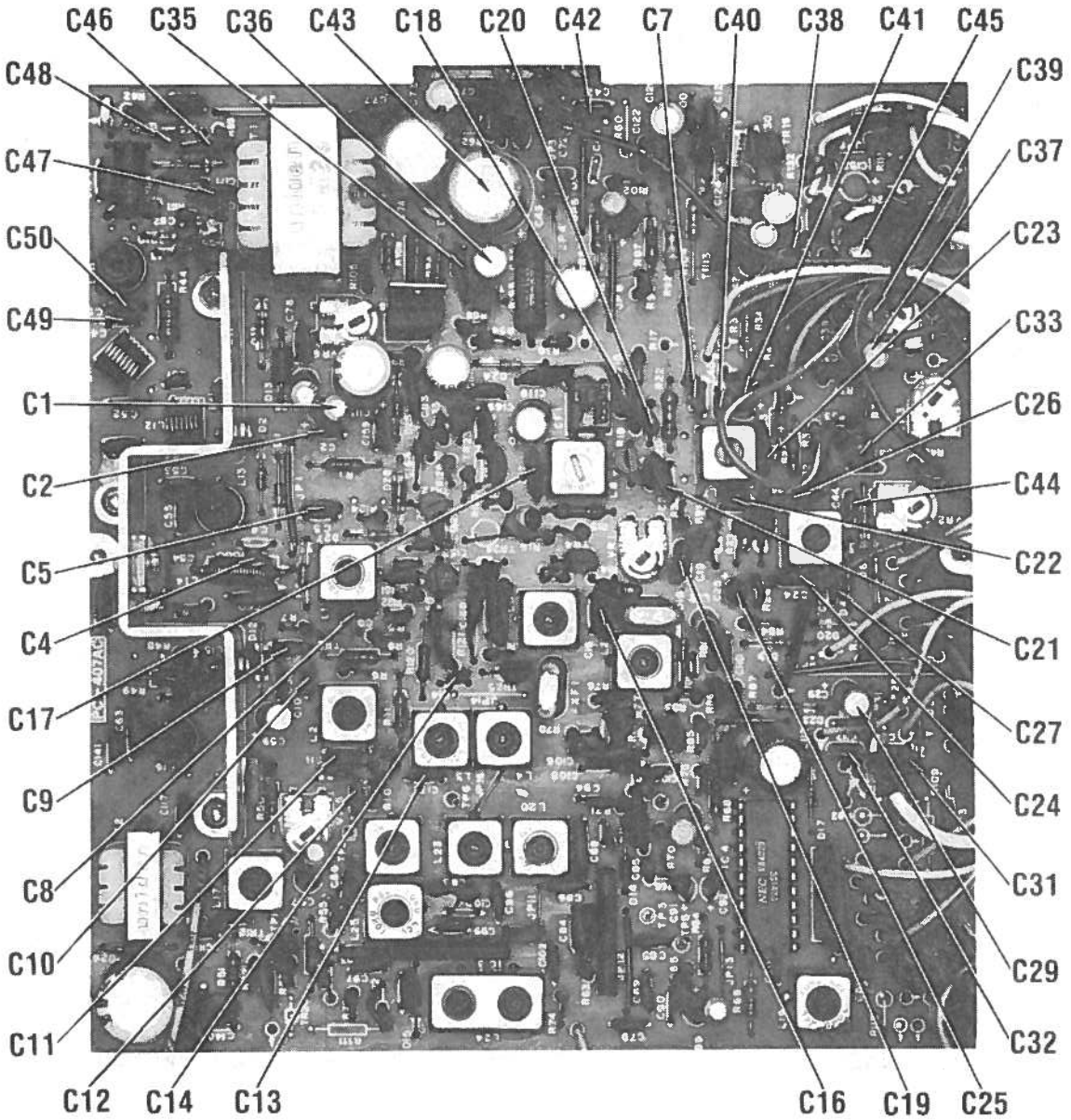
C52
L12
C53
C55
C54
L14
C60
C63
C64
C58
C59
C57
C66
C65
C97
C83
C99
C96
C98
C86
C84
C79
C69
C89
C90
CF1
L26
XF1
X1
L22
C94
C87
C88
C95
C93
C91
C92
C82
C81
C80
C85

MAIN BOARD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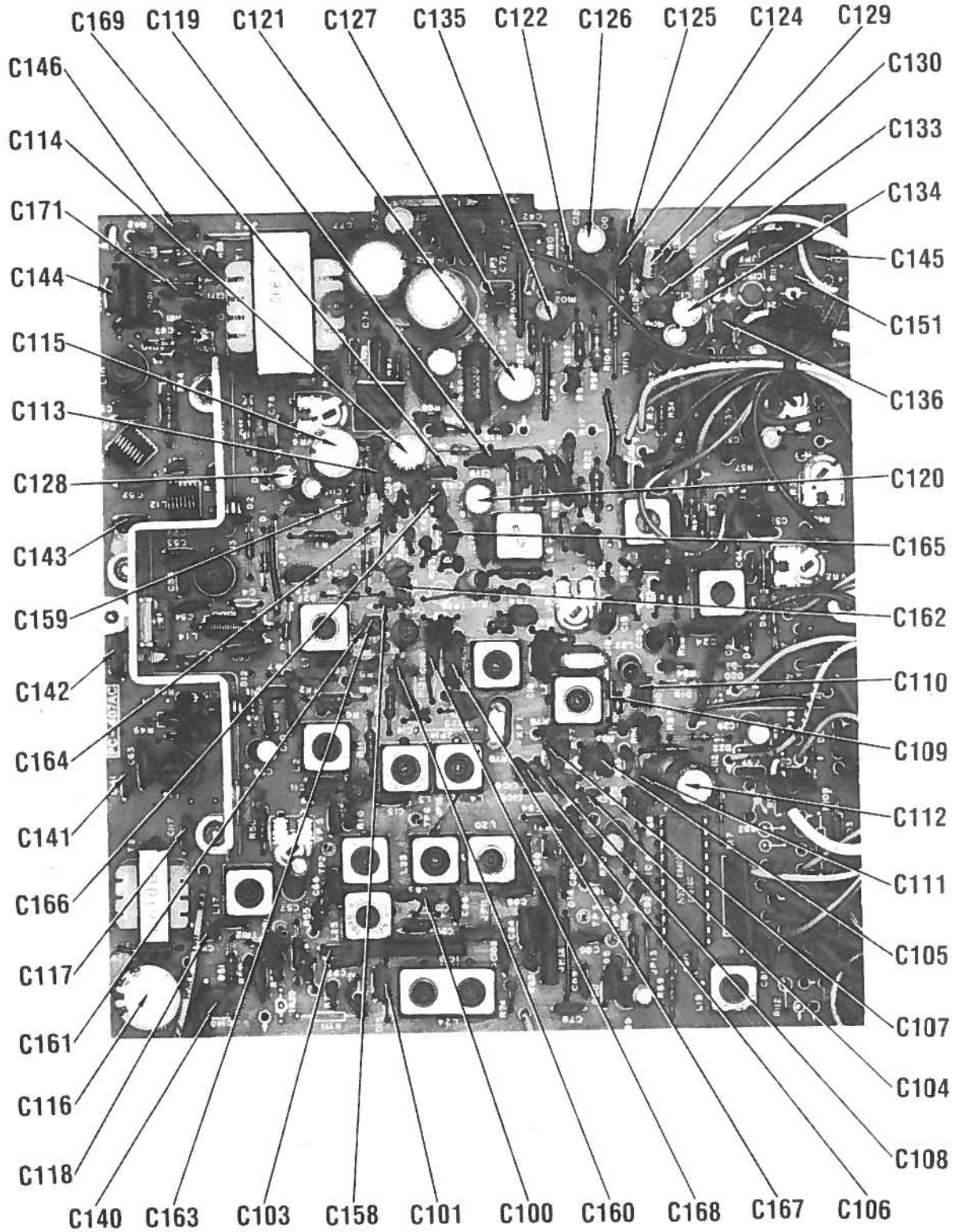
C35
C36
C43
C18
C20
C42
C7
C40
C38
C41
C45
C48
C39
C47
C37
C50
C23
C49
C33
C1
C26
C2
C44
C5
C22
C4
C21
C17
C27
C9
C24
C8
C31
C10
C29
C11
C32
C12
C14
C13
C16
C19
C25

MAIN BOARD


C169
C119
C121
C127
C135
C122
C126
C125
C124
C129
C146
C130
C114
C133
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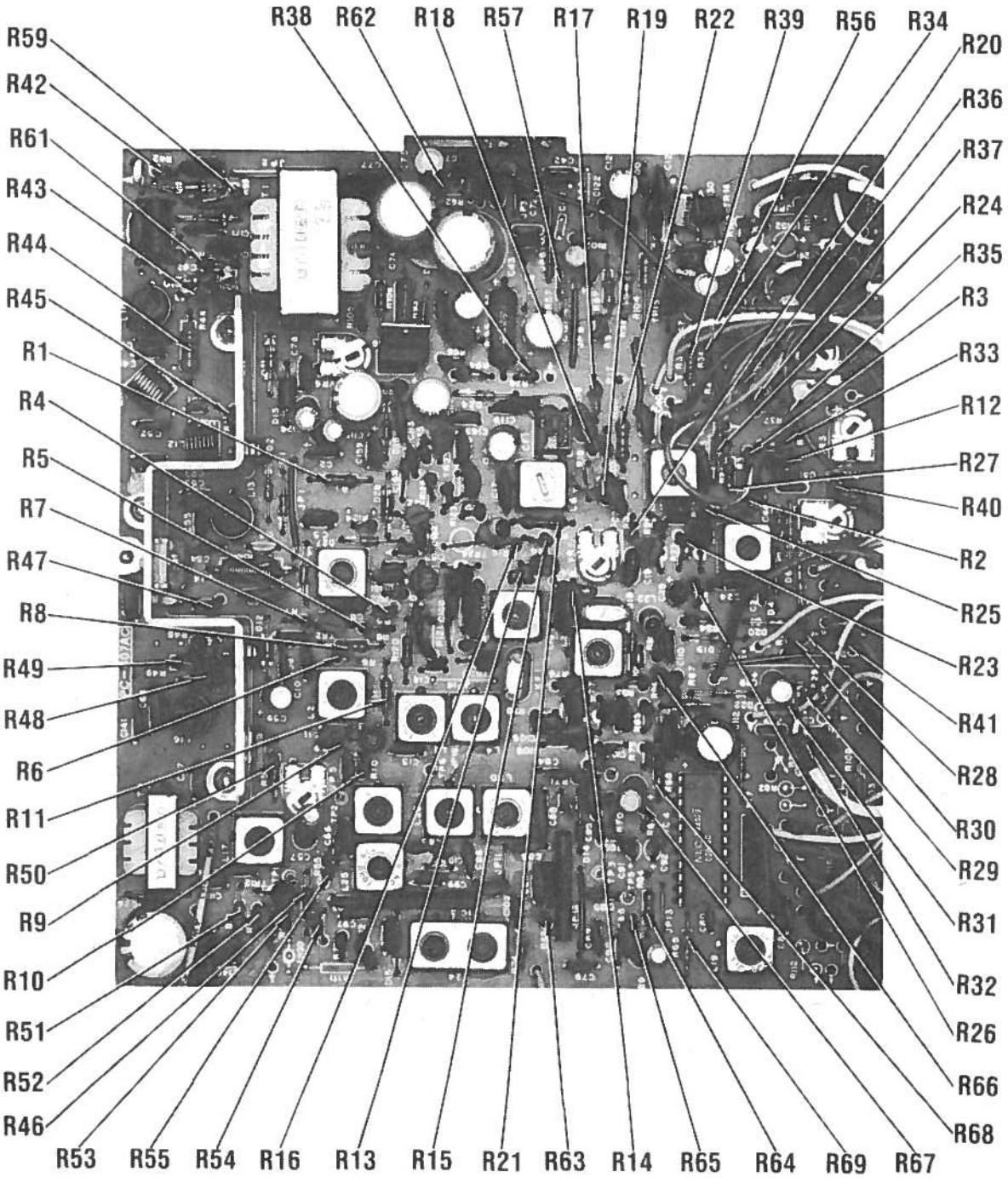
C134
C144
C145
C115
C151
C113
C136
C128
C120
C143
C165
C159
C162
C142
C110
C164
C109
C141
C112
C166
C111
C117
C105
C161
C107
C116
C104
C118
C108
C140
C163
C103
C158
C101
C100
C160
C168
C167
C106

MAIN BOARD


R38
R62
R18
R57
R17
R19
R22
R39
R56
R34
R59
R42
R61
R43
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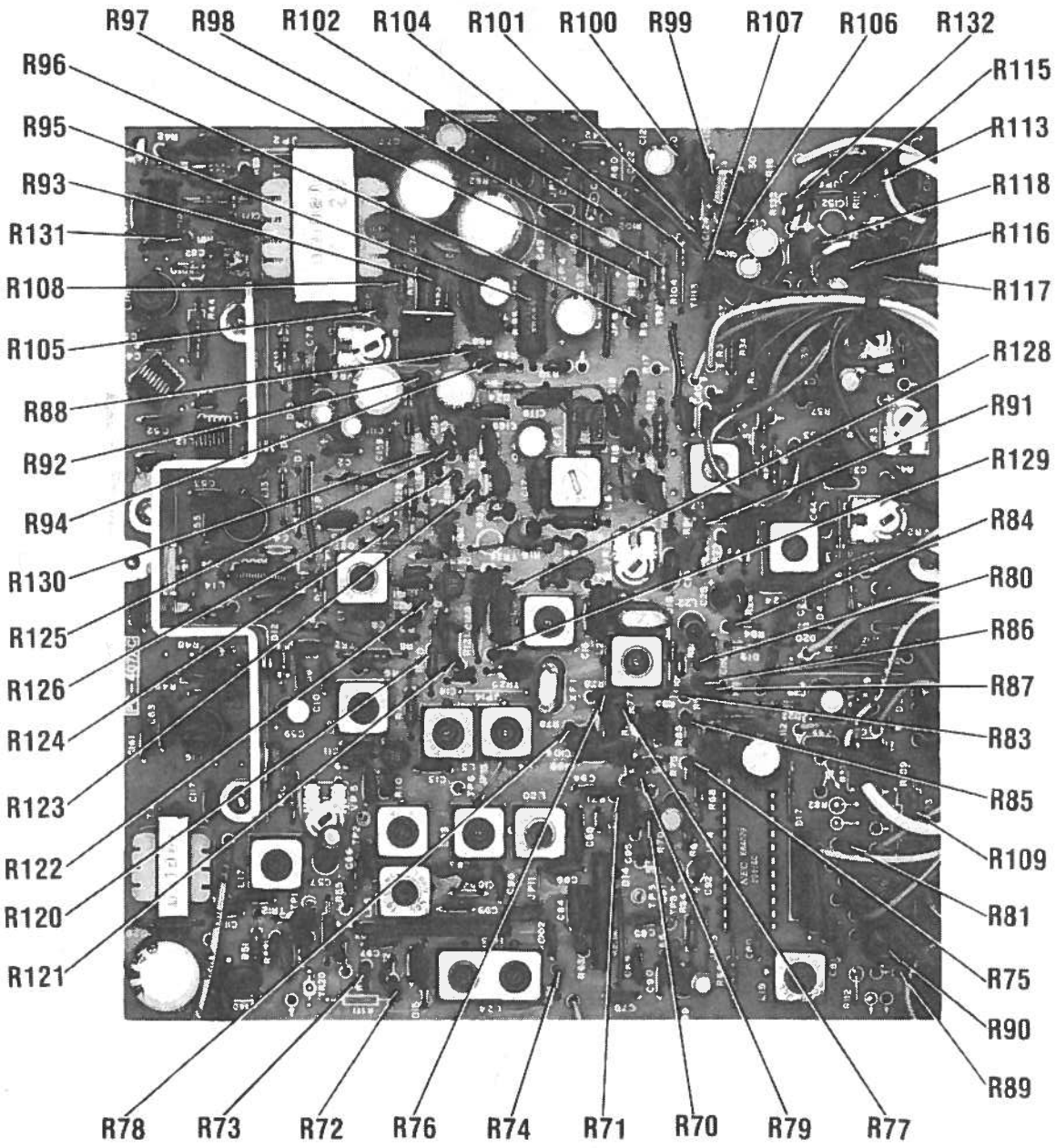
R45
R1
R4
R5
R7
R47
R8
R49
R48
R6
R11
R50
R9
R10
R51
R52
R46
R53
R55
R54
R16
R13
R15
R21
R63
R14
R65
R64
R69
R67
R20
R36
R37
R24
R35
R3
R33
R12
R27
R40
R2
R25
R23
R41
R28
R30
R29
R31
R32
R26
R66
R68

MAIN BOARD


R97
R98
R102
R104
R101
R100
R99
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R106
R132
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R115
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R131
R116
R108
R117
R105
R128
R88
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R92
R129
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R130
R80
R125
R86
R126
R87
R124
R83
R123
R85
R122
R109
R120
R81
R121
R75
R90
R89
R78
R73
R72
R76
R74
R71
R70
R79
R77

MAIN BOARD

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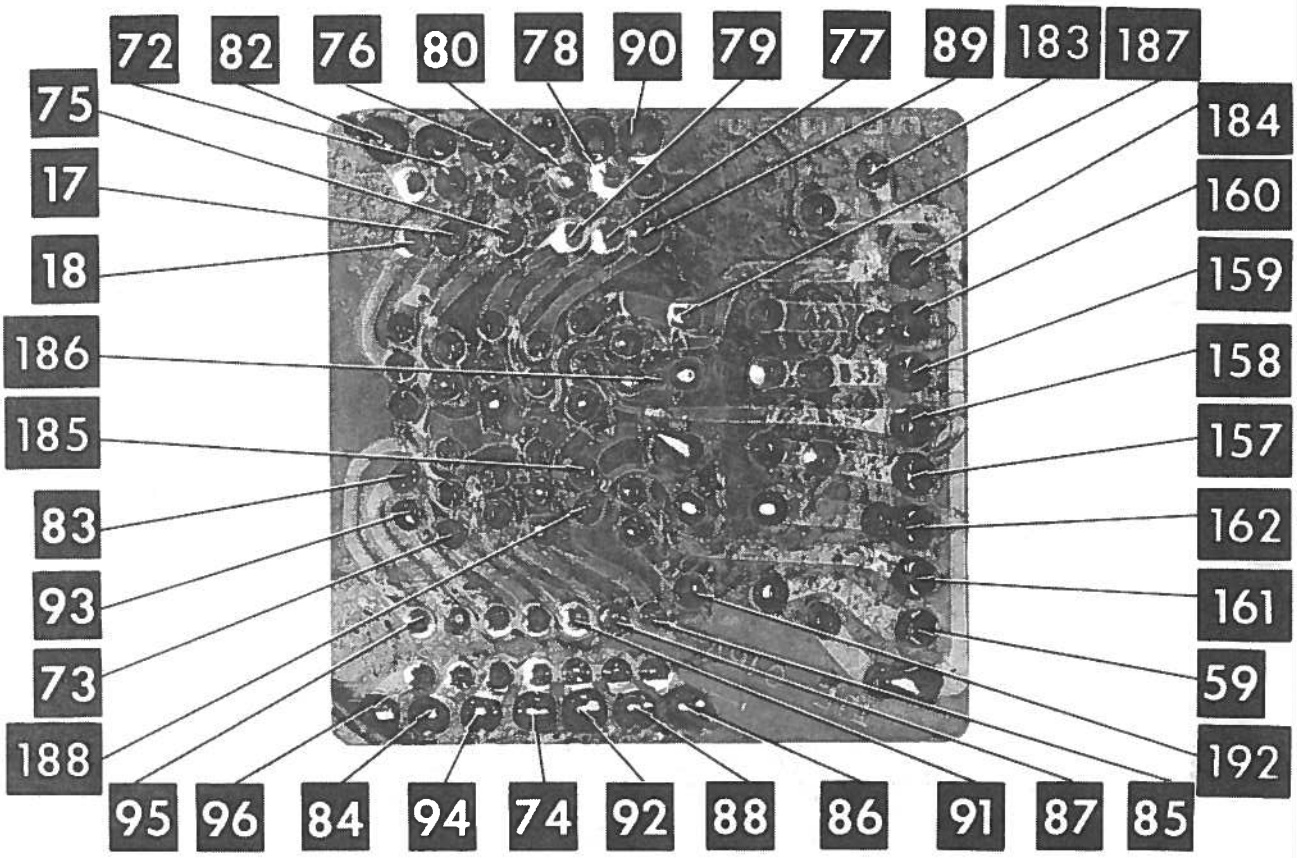
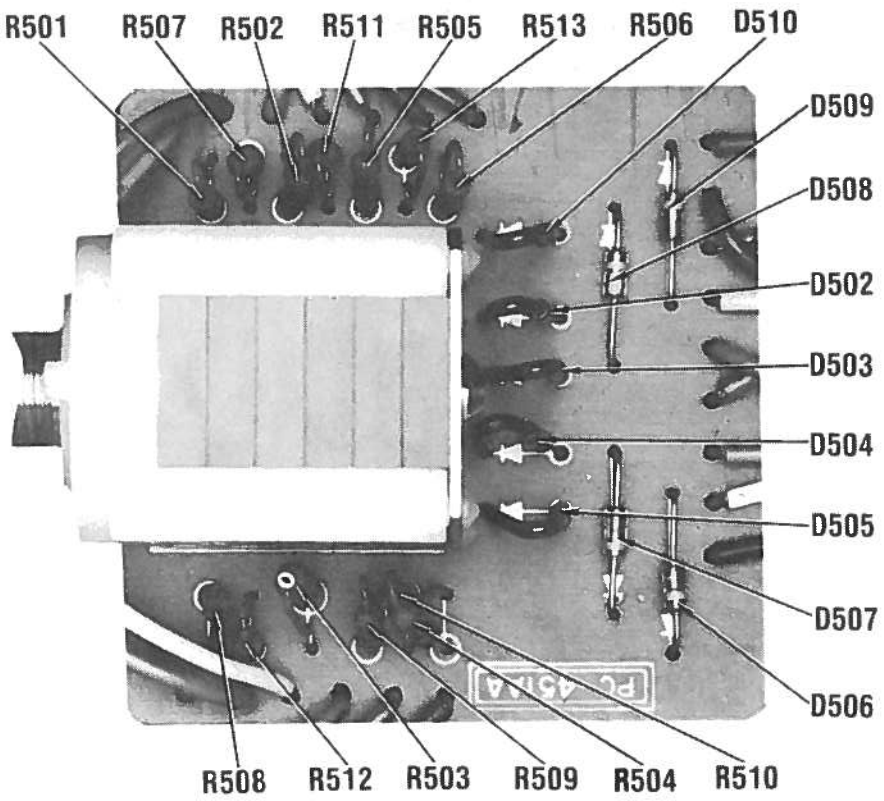
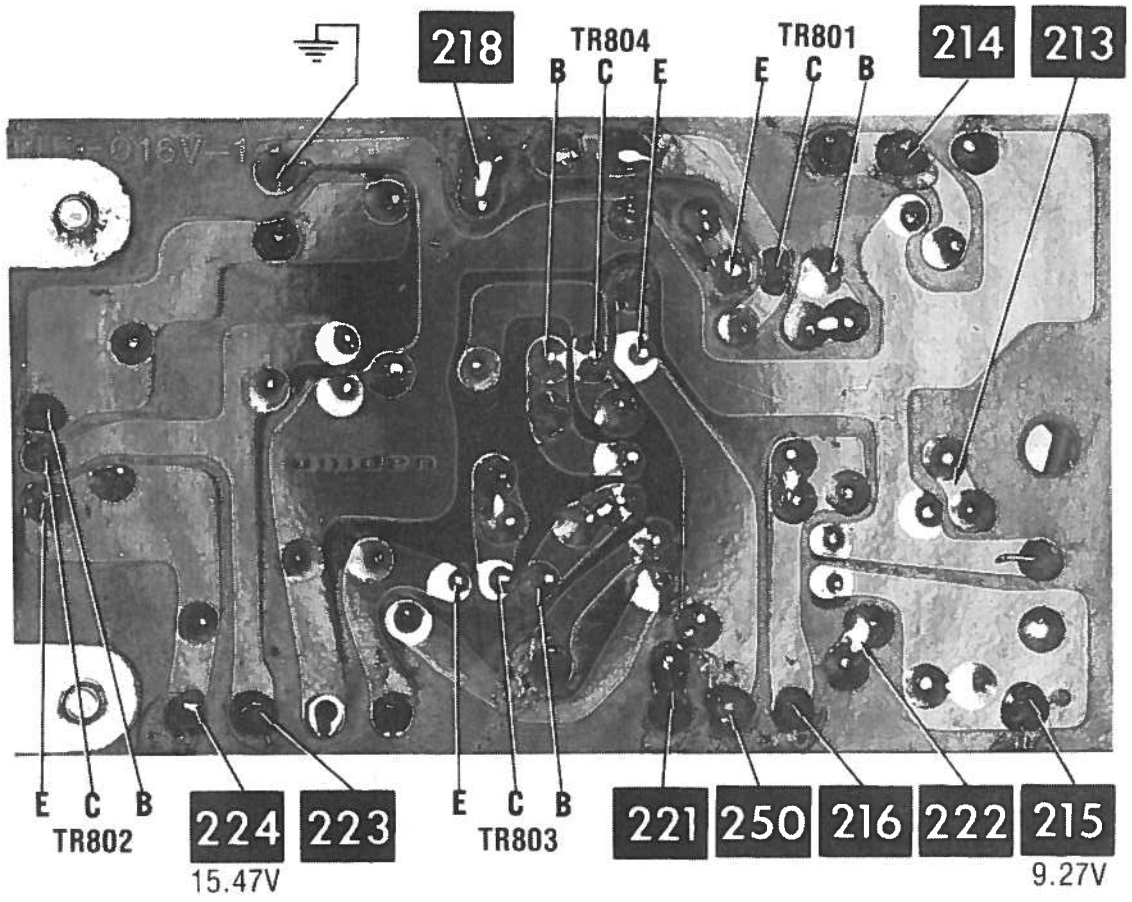
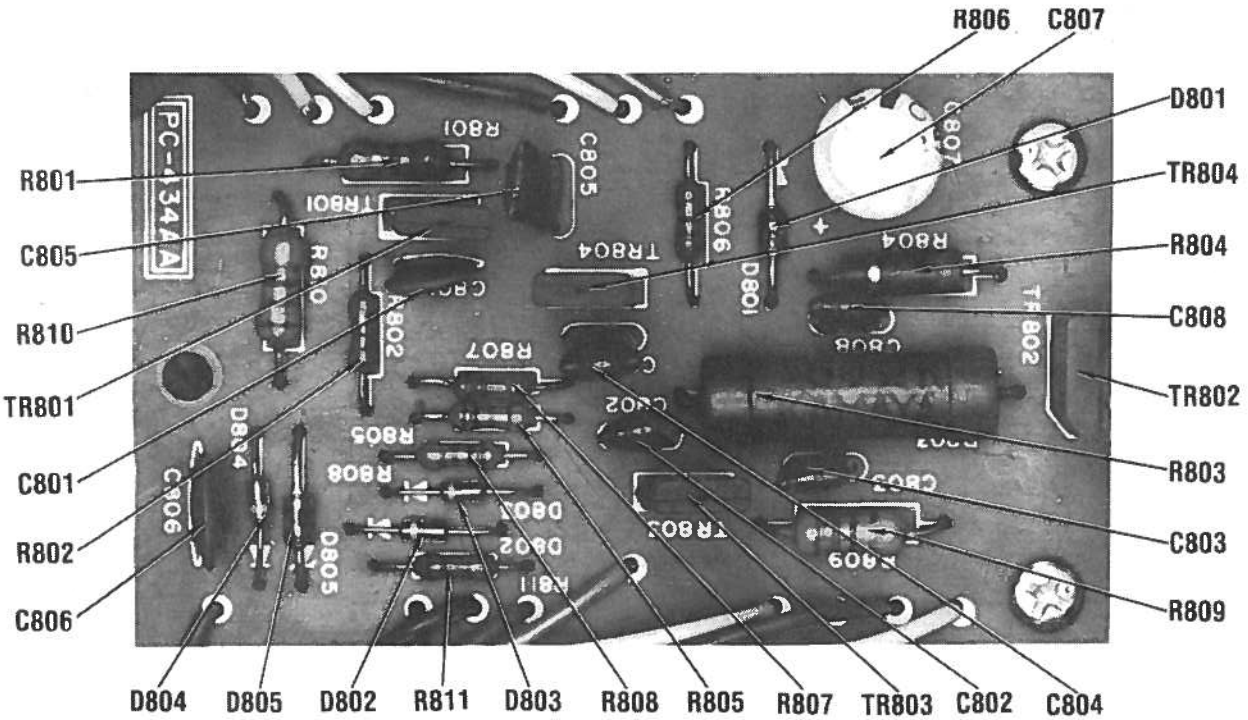




CHANNEL SELECTOR BOARD

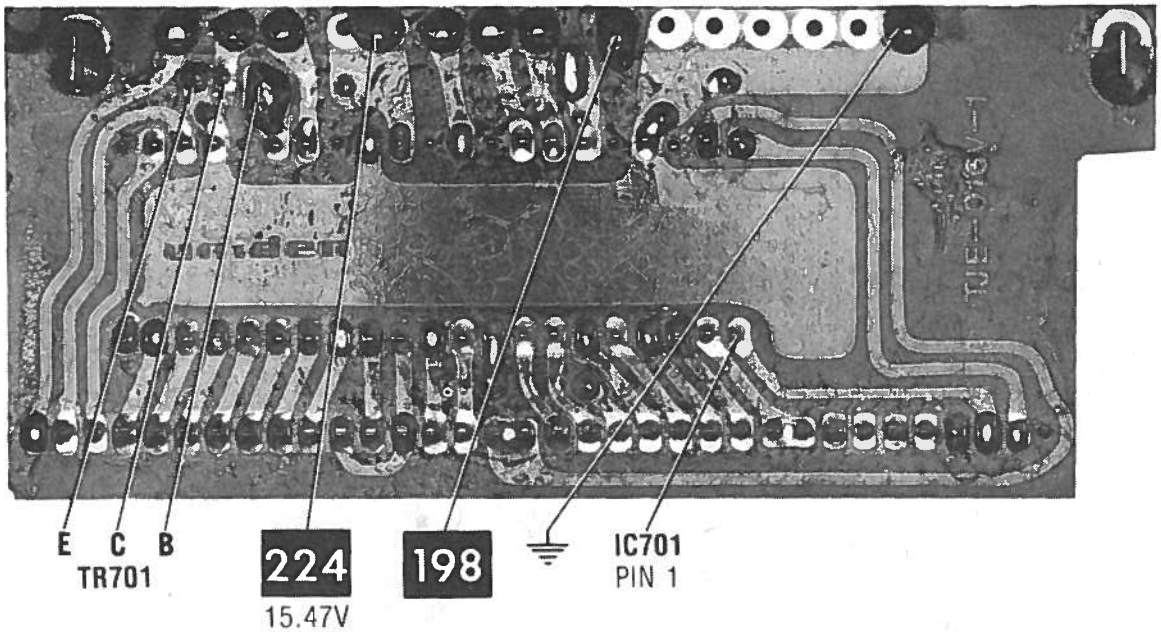
A Howard W. Sams CIRCUITRACE® Photo

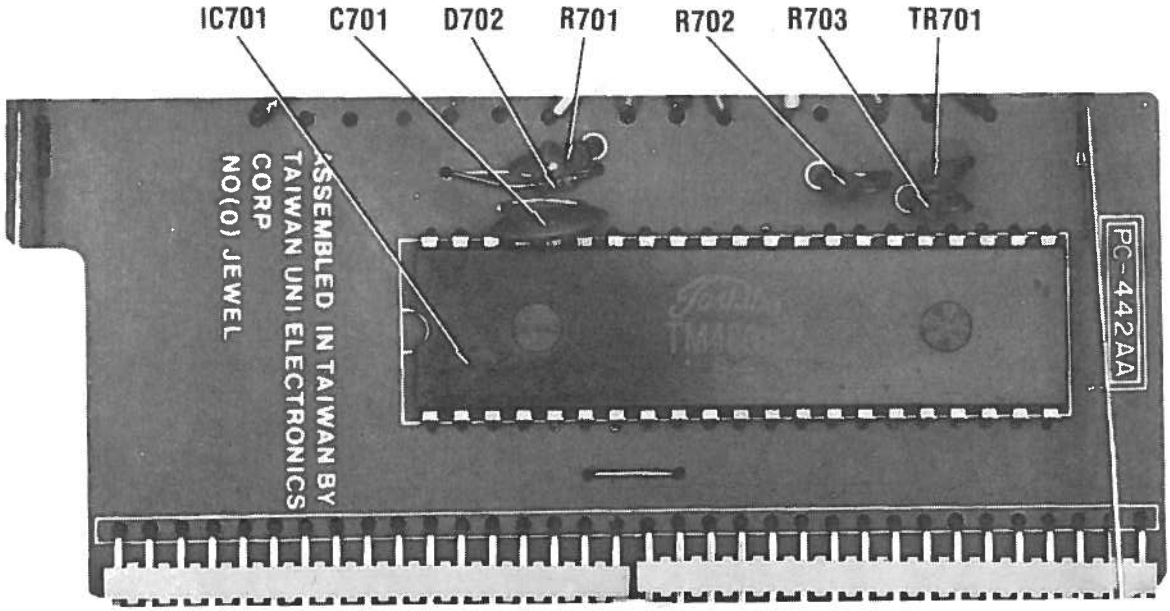




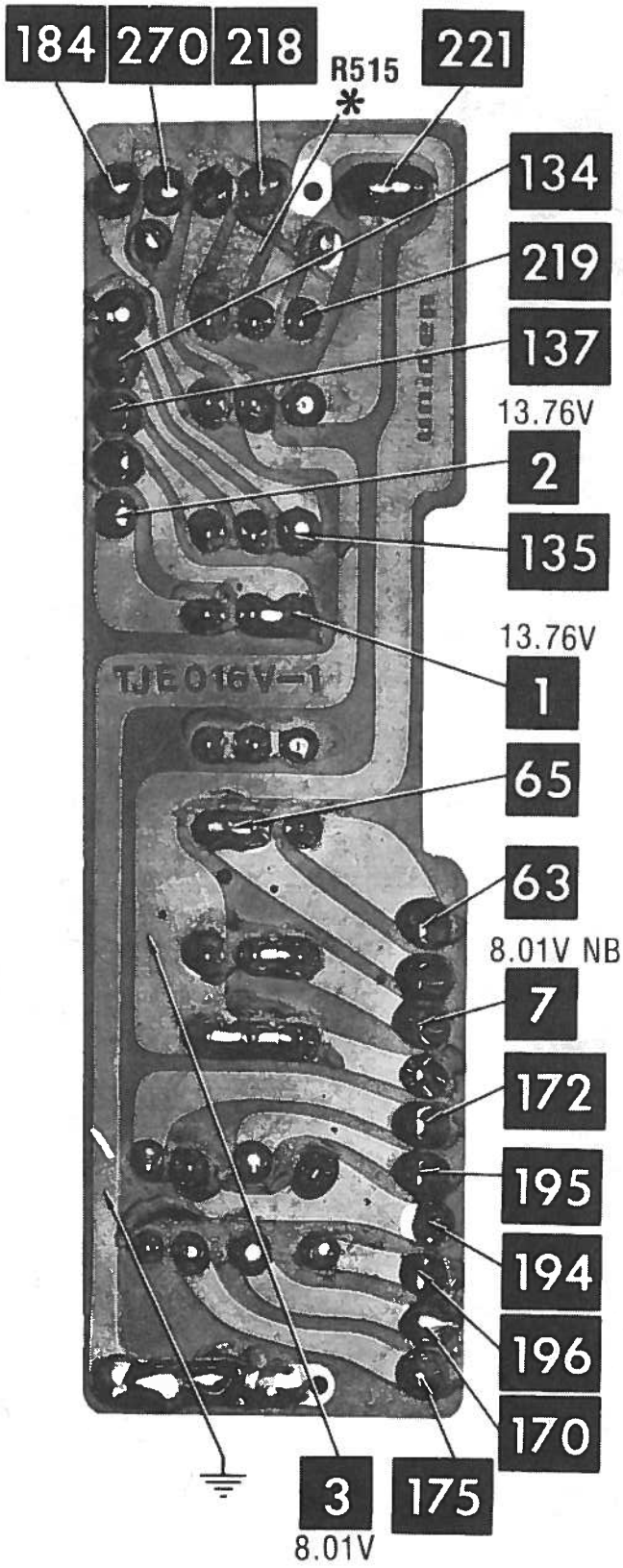
DIMMER BOARD

A Howard W. Sams CIRCUITRACE® Photo





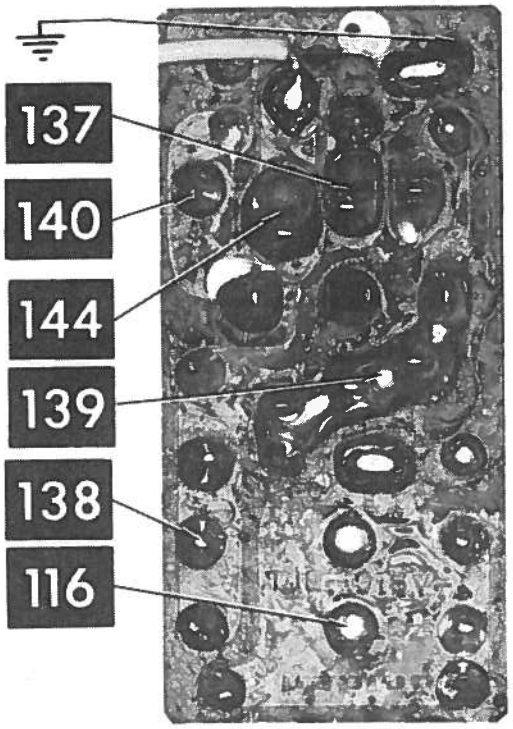
CLOCK BOARD

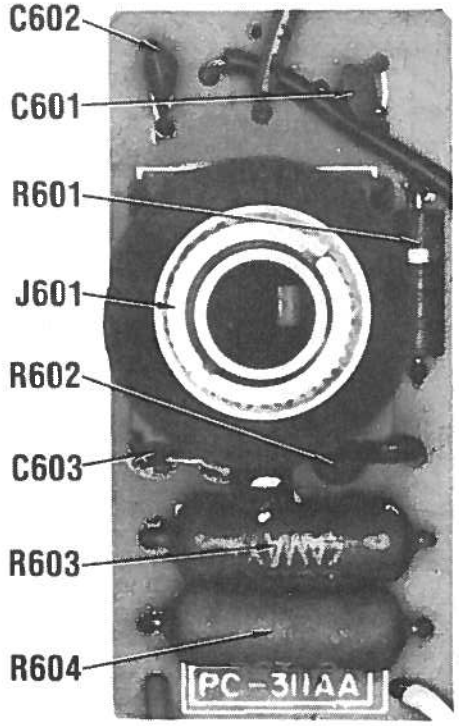


* LOCATED ON OTHER SIDE OF BOARD

SWITCH BOARD

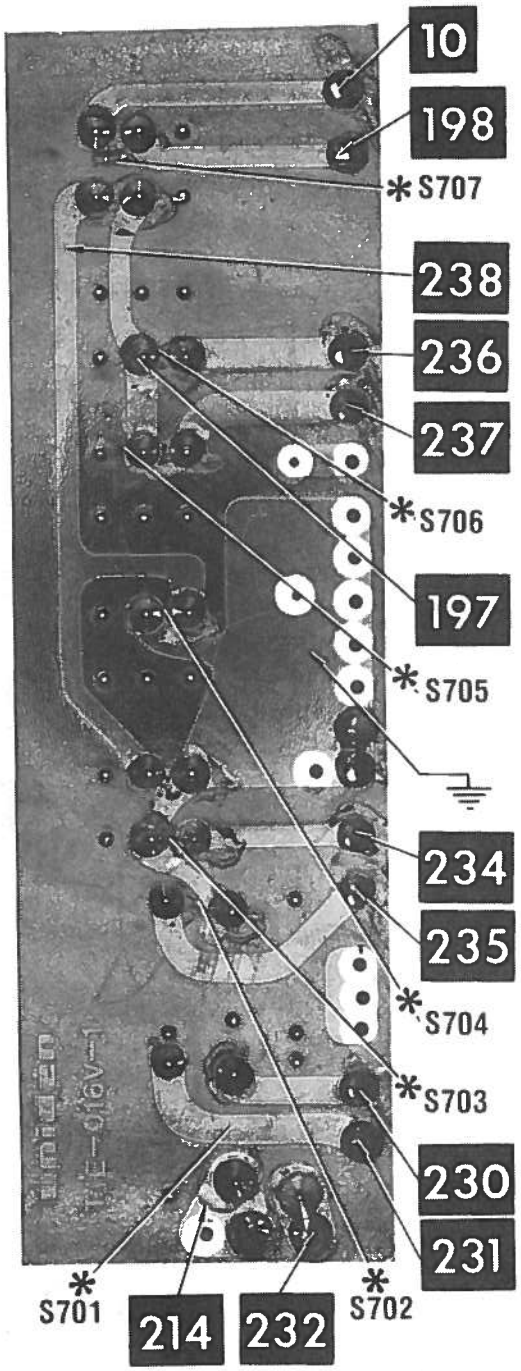
A Howard W. Sams CIRCUITRACE® Photo





PHONE JACK BOARD

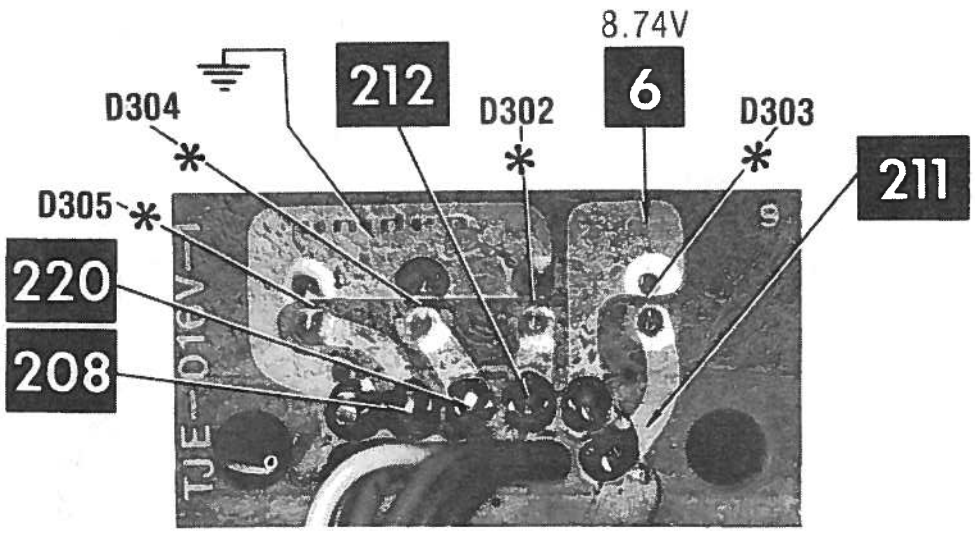
A Howard W. Sams CIRCUITRACE® Photo



* LOCATED ON OTHER SIDE OF BOARD

CLOCK SWITCH BOARD

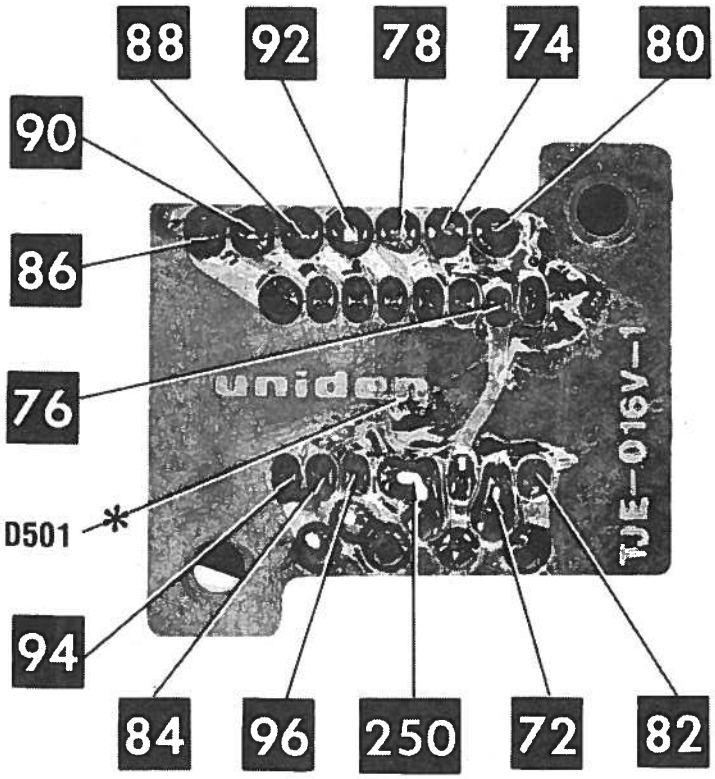
A Howard W. Sams CIRCUITRACE® Photo



*LOCATED ON OTHER SIDE OF BOARD

INDICATORS BOARD

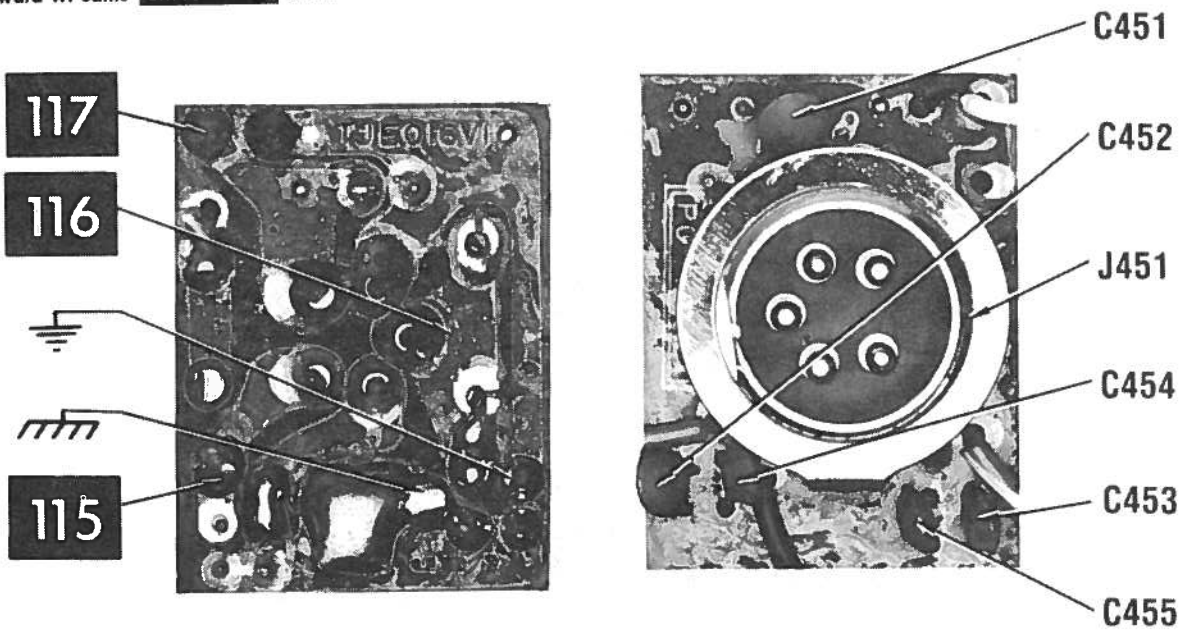
A Howard W. Sams CIRCUITRACE® Photo



* LOCATED ON OTHER SIDE OF BOARD

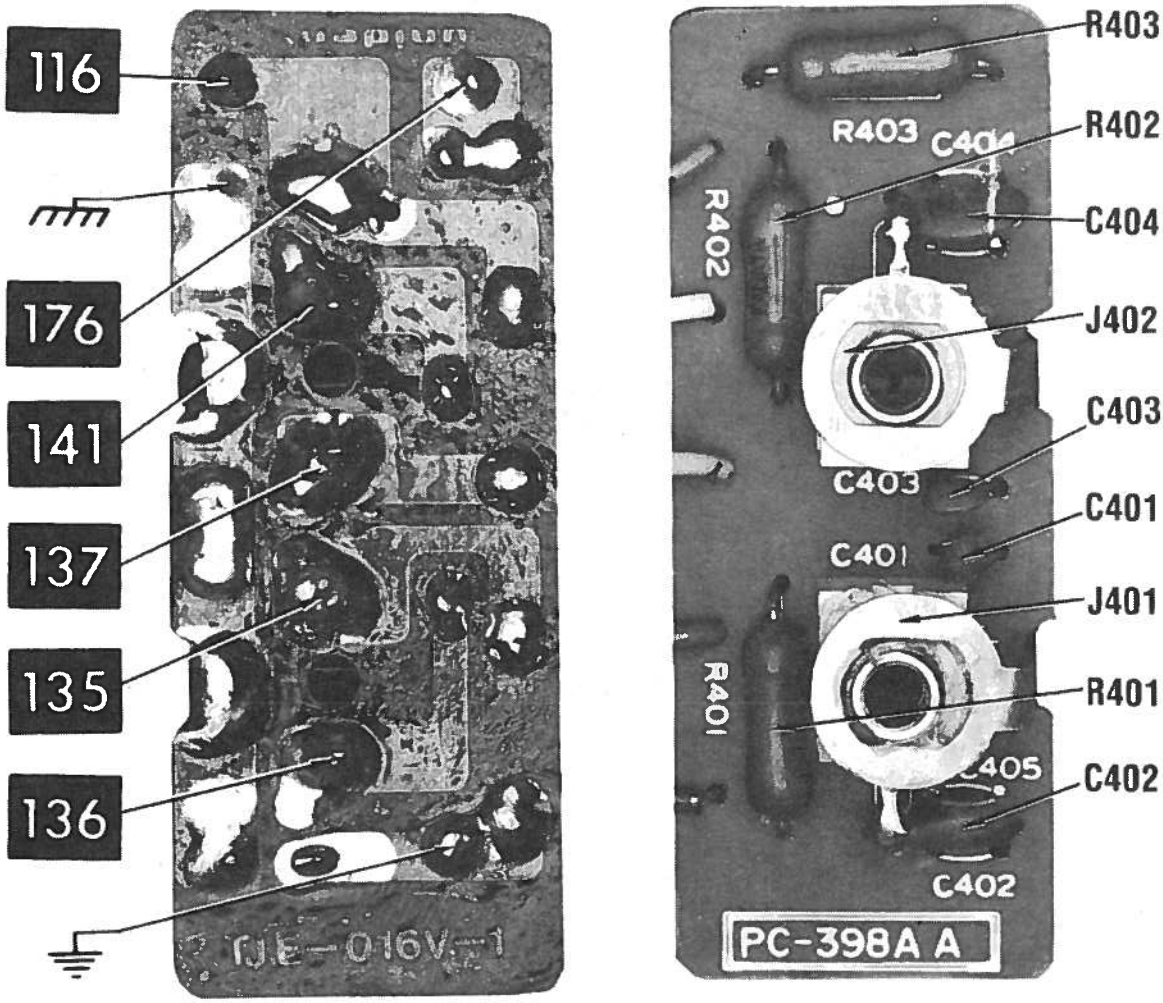
CHANNEL READOUT BOARD

A Howard W. Sams CIRCUITRACE® Photo

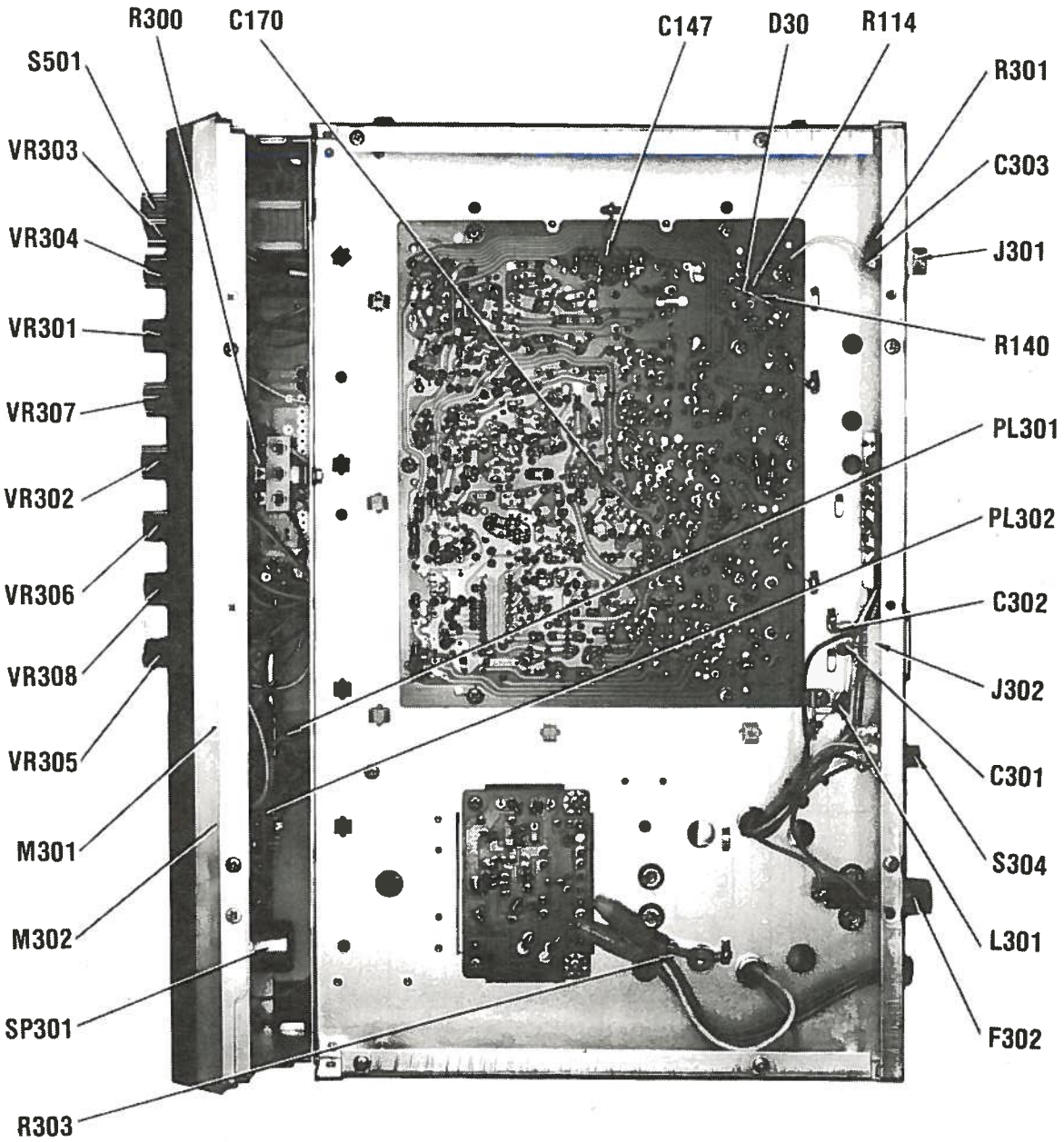


MIC JACK BOARD

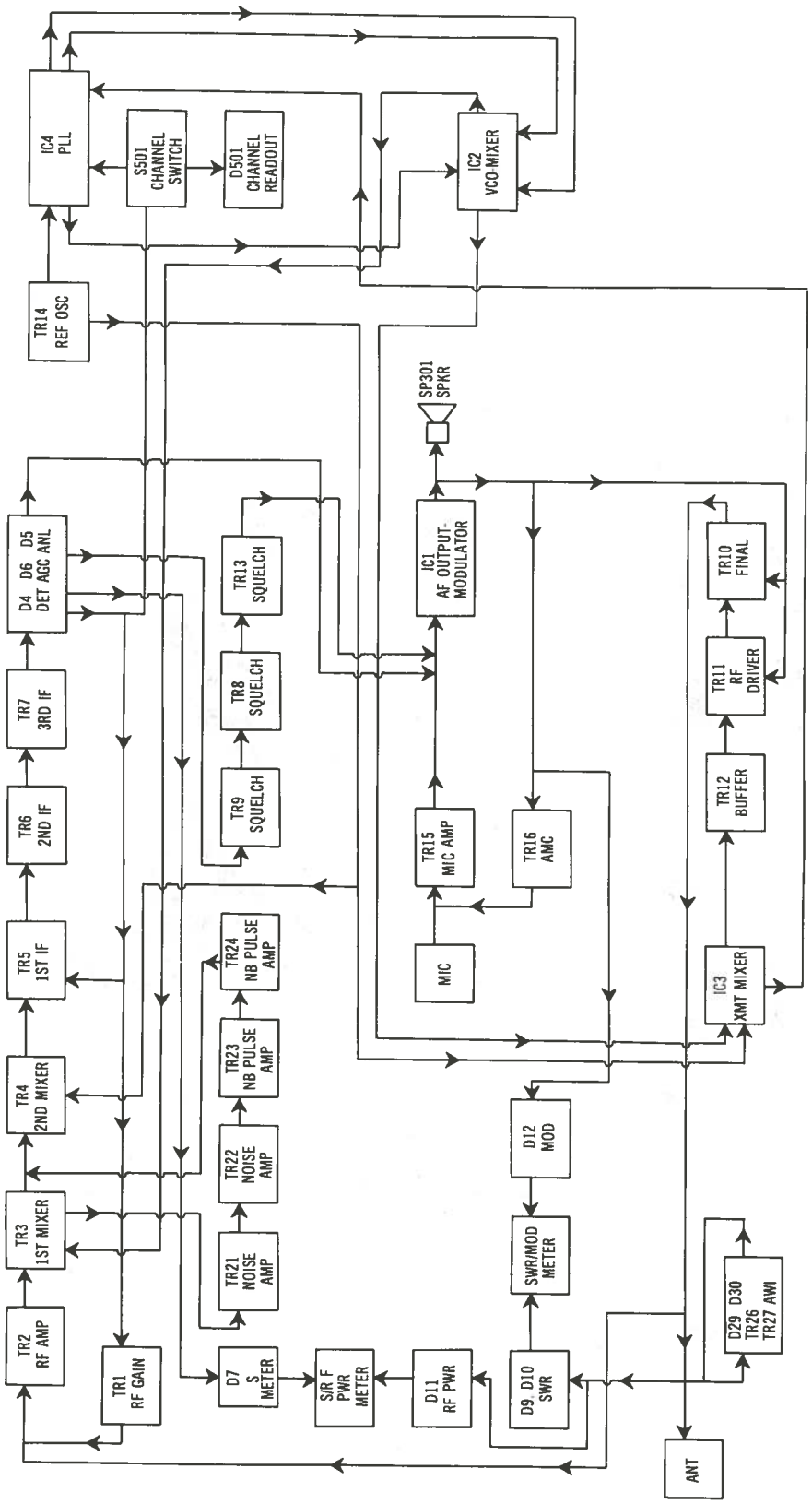
A Howard W. Sams CIRCUITRACE® Photo



SPEAKER JACK BOARD



CHASSIS-BOTTOM



BLOCK DIAGRAM

PARTS LIST AND DESCRIPTION

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

WIRING DATA

Cable (Speaker)(Unshielded).....	Use BELDEN No. 8782 (AWG24)(4 colors)
Shielding Strap.....	Use BELDEN No. 8660 (3/16" width)
Hook-up Wire (General Use).....	Use BELDEN No. 8524 (AWG22)(13 colors)
Hook-up Wire (Shielded).....	Use BELDEN No. 8401 (Braided Shield)(1 conductor)(AWG25)
	Use BELDEN No. 8421 (Spiral Shield)(1 conductor)(AWG25)
	Use BELDEN No. 8737 (Spiral Shield)(2 conductor)(AWG22)
Microphone Cable (Coiled).....	Use BELDEN No. 8491 (4 conductor-2 shielded)(6 ft.)(AWG23)
AC Power Cord.....	Use BELDEN No. 17106 (6 ft.)(2 conductors)
AC Power Cord.....	Use BELDEN No. 17109 (9 ft.)(2 conductors)

SEMICONDUCTORS (Select replacement transistor for best results)

ITEM No.	TYPE No.	MFGR. PART No.	REPLACEMENT DATA							
			GENERAL ELECTRIC PART No.	MALLORY PART No.	RAYTHEON PART No.	RCA PART No.	SYLVANIA PART No.	THORDARSON PART No.	WORKMAN PART No.	ZENITH PART No.
D1	1S2076		GE-514	PTC214	REN 177	SK3100/519	ECG519	TM519	WEP925	103-287
D2	1S2076		GE-514	PTC214	REN 177	SK3100/519	ECG519	TM519	WEP925	103-287
D3	1S2076		GE-514	PTC214	REN 177	SK3100/519	ECG519	TM519	WEP925	103-287
D4	1S34		1N34AS	PTC207	REN 109	SK3087	ECG109	TM109/**	WEP134	103-Z9001
D5	1S2075K		GE-300	PTC214	REN 177	SK3175/177	ECG177	TM177	WEP1062	103-131
D6	1N60AM		1N60	PTC206	REN 109	SK3088	ECG109	TM109/**	WEP134	103-Z9001
D7	1N60AM		1N60	PTC206	REN 109	SK3088	ECG109	TM109/**	WEP134	103-Z9001
D9	1N60P		1N60	PTC206	REN 109	SK3088	ECG109	TM109/**	WEP134	103-Z9001
D10	1N60P		1N60	PTC206	REN 109	SK3088	ECG109	TM109/**	WEP134	103-Z9001
D11	1N60AM		1N60	PTC206	REN 109	SK3088	ECG109	TM109/**	WEP134	103-Z9001
D12	1N60AM		1N60	PTC206	REN 109	SK3088	ECG109	TM109/**	WEP134	103-Z9001
D13	SR1K-1		GE-504A	PTC201	REN 116	SK3311	ECG116	TM116	WEP156	212-76-02
D14	1S2688EA				REN 614	SK3126	ECG613	TM613	WEP200	103-281
D15	1S2076		GE-514	PTC214	REN 177	SK3100/519	ECG519	TM519	WEP925	103-287
D17	1S2076		GE-514	PTC214	REN 177	SK3100/519	ECG519	TM519	WEP925	103-287
D18	1S2687D				REN 612		ECG612	TM612		103-176
D19	1S2076		GE-514	PTC214	REN 177	SK3100/519	ECG519	TM519	WEP925	103-287
D20	1S2076		GE-514	PTC214	REN 177	SK3100/519	ECG519	TM519	WEP925	103-287
D21	XZ051		GEZD-5.1			SK3056/135A		1N4733A	WEP1103	103-290
D22	1S2076		GE-514	PTC214	REN 177	SK3100/519	ECG519	TM519	WEP925	103-287
D23	1S2076		GE-514	PTC214	REN 177	SK3100/519	ECG519	TM519	WEP925	103-287
D24	1S2076		GE-514	PTC214	REN 177	SK3100/519	ECG519	TM519	WEP925	103-287
D25	XZ086		GEZD-8.7		REN 5073	SK3749/5073A	ECG5073A	TM5073A	WEP1155	
D26	SR1K-1		GE-504A	PTC201	REN 116	SK3311	ECG116	TM116	WEP156	212-76-02
D27	1S2076		GE-514	PTC214	REN 177	SK3100/519	ECG519	TM519	WEP925	103-287
D28	1N60AM		1N60	PTC206	REN 109	SK3088	ECG109	TM109/**	WEP134	103-Z9001
D29	1N60P		1N60	PTC206	REN 109	SK3088	ECG109	TM109/**	WEP134	103-Z9001
D30	1N60P		1N60	PTC206	REN 109	SK3088	ECG109	TM109/**	WEP134	103-Z9001
D201	GM-3Y		GE-512	PTC204	REN 156	SK3051/156	ECG156	TM156	WEP4008	212-Z9000
D202	GM-3Y		GE-512	PTC204	REN 156	SK3051/156	ECG156	TM156	WEP4008	212-Z9000
D203	GM-3Y		GE-512	PTC204	REN 156	SK3051/156	ECG156	TM156	WEP4008	212-Z9000
D204	GM-3Y		GE-512	PTC204	REN 156	SK3051/156	ECG156	TM156	WEP4008	212-Z9000
D205	BZ162		GEZD-16	ZB16B	REN 5075	SK3751/5075A	ECG5075A	TM5075A/**	WEP1160	103-Z9013
D206	WZ071			ZM7.5B		SK3781/5015	ECG5015	TM5015	WEP1416	
D502	1S2076		GE-514	PTC214	REN 177	SK3100/519	ECG519	TM519	WEP925	103-287
D503	1S2076		GE-514	PTC214	REN 177	SK3100/519	ECG519	TM519	WEP925	103-287
D504	1S2076		GE-514	PTC214	REN 177	SK3100/519	ECG519	TM519	WEP925	103-287
D505	1S2076		GE-514	PTC214	REN 177	SK3100/519	ECG519	TM519	WEP925	103-287
D506	1S2076		GE-514	PTC214	REN 177	SK3100/519	ECG519	TM519	WEP925	103-287
D507	1S2076		GE-514	PTC214	REN 177	SK3100/519	ECG519	TM519	WEP925	103-287
D508	1S2076		GE-514	PTC214	REN 177	SK3100/519	ECG519	TM519	WEP925	103-287
D509	1S2076		GE-514	PTC214	REN 177	SK3100/519	ECG519	TM519	WEP925	103-287
D510	1S2076		GE-514	PTC214	REN 177	SK3100/519	ECG519	TM519	WEP925	103-287
D801	BZ162		GEZD-16	ZB16B	REN 5075	SK3751/5075A	ECG5075A	TM5075A/**	WEP1160	103-Z9013
D802	1S2076		GE-514	PTC214	REN 177	SK3100/519	ECG519	TM519	WEP925	103-287
D803	1S2076		GE-514	PTC214	REN 177	SK3100/519	ECG519	TM519	WEP925	103-287
D804	1S2076		GE-514	PTC214	REN 177	SK3100/519	ECG519	TM519	WEP925	103-287
D805	CZ092		GEZD-9.1	ZB9.1A	REN 139	SK3060/139A	ECG139	TM139/**	WEP1109	103-272
IC1	TA7222P					SK3726				
IC2	TA7310P				REN 1192	SK3445/1192	ECG1192	TM1192	WEP2120	
IC3	TA7310P				REN 1192	SK3445/1192	ECG1192	TM1192	WEP2120	
IC4	UPD2816C									
IC701	TM4801P									
TR1	2SC945AQ		GE-212	PTC121*	REN 199	SK3124/289	ECG199	TM199/**	WEP1945	121-972
TR2	2SC1674L		GE-61*	PTC132*	REN 229*	SK3132	ECG229*	TM229*	WEP784	121-Z9021
TR3	2SK19BL		GE-FET-2	PTC161	REN 132*	SK3834/132	ECG312*	TM312*	WEP920	121-756
TR4	2SK104H		GE-FET-2	PTC161	REN 132*	SK3834/132	ECG312*	TM312*	WEP920	121-756
TR5	2SC1675L		GE-213	PTC132*	REN 229*	SK3122	ECG229*	TM229*	WEP773	121-Z9021
TR6	2SC1675L		GE-213	PTC132*	REN 229*	SK3122	ECG229*	TM229*	WEP773	121-Z9021
TR7	2SC1675L		GE-213	PTC132*	REN 229*	SK3122	ECG229*	TM229*	WEP773	121-Z9021
TR8	2SC945AQ		GE-212	PTC121*	REN 199	SK3124/289	ECG199	TM199/**	WEP1945	121-972
TR9	2SC945AQ		GE-212	PTC121*	REN 199	SK3124/289	ECG199	TM199/**	WEP1945	121-972
TR10	2SC2029/1		GE-333	PTC186	REN 235	SK3197/235	ECG235	TM235	WEP785	121-Z9039
	2SC2029B/10		GE-333	PTC186	REN 235	SK3197/235	ECG235	TM235	WEP785	121-Z9039
TR11	2SC2028/2		GE-270	PTC180	REN 295	SK3253/295	ECG295	TM295	WEP755*	121-880
	2SC2028B/20		GE-270	PTC180	REN 295	SK3253/295	ECG295	TM295	WEP755*	121-880

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.	RAYTHEON PART No.	RCA PART No.	SYLVANIA PART No.	THORDARSON PART No.	WORKMAN PART No.	ZENITH PART No.
TR12	2SC2076C		GE-210	PTC121*	REN 295	SK3122	ECG295	TM295	WEP784	121-Z9000
TR13	2SC945AQ		GE-212	PTC121*	REN 199	SK3124/289	ECG199	TM199/**	WEP1945	121-972
TR14	2SC1675L		GE-213	PTC132*	REN 229*	SK3122	ECG229*	TM229*	WEP773	121-Z9021
TR15	2SC458C		GE-210	PTC121*	REN 289	SK3124/289	ECG289	TM289/**	WEP458	121-Z9000A*
TR16	2SA733P		GE-48	PTC127	REN 294	SK3114/290	ECG294	TM294/**	WEP911	121-952
TR17	2SA733P		GE-48	PTC127	REN 294	SK3114/290	ECG294	TM294/**	WEP911	121-952
TR18	2SC1096		GE-28	PTC110	REN 186A	SK3248	ECG186A	TM186A/**	WEP1096	121-Z9008
	2SC1096-3ZL		GE-28	PTC110	REN 186A	SK3248	ECG186A	TM186A/**	WEP1096	121-Z9008
TR21	2SK19BL		GE-FET-2	PTC161	REN 132*	SK3834/132	ECG312*	TM312*	WEP920	121-756
TR22	2SC1675L		GE-213	PTC132*	REN 229*	SK3122	ECG229*	TM229*	WEP773	121-Z9021
TR23	2SC945AQ		GE-212	PTC121*	REN 199	SK3124/289	ECG199	TM199/**	WEP1945	121-972
TR24	2SA733P		GE-48	PTC127	REN 294	SK3114/290	ECG294	TM294/**	WEP911	121-952
TR25	2SC1675L		GE-213	PTC132*	REN 229*	SK3122	ECG229*	TM229*	WEP773	121-Z9021
TR26	2SC945AQ		GE-212	PTC121*	REN 199	SK3124/289	ECG199	TM199/**	WEP1945	121-972
TR27	2SA733P		GE-48	PTC127	REN 294	SK3114/290	ECG294	TM294/**	WEP911	121-952
TR201	2SD586R					SK3188A/182				
TR202	2SC1906		GE-86	PTC132*	REN 108*	SK3293/107	ECG108*	TM108*	WEP923*	121-Z9021*
	2SC1906 (3ZL)		GE-86	PTC132*	REN 108*	SK3293/107	ECG108*	TM108*	WEP923*	121-Z9021*
TR203	2SC945AQ		GE-212	PTC121*	REN 199	SK3124/289	ECG199	TM199/**	WEP1945	121-972
TR701	2SC945Q		GE-212	PTC121*	REN 199	SK3124/289	ECG199	TM199/**	WEP1945	121-972
	2SC945AQ		GE-212	PTC121*	REN 199	SK3124/289	ECG199	TM199/**	WEP1945	121-972
TR801	2SC496-O		GE-57	PTC163	REN 295	SK3253/295	ECG295	TM295/**	WEP913	121-Z9002
TR802	2SC1096		GE-28	PTC110	REN 186A	SK3248	ECG186A	TM186A/**	WEP1096	121-Z9008
	2SC1096 (3ZL)		GE-28	PTC110	REN 186A	SK3248	ECG186A	TM186A/**	WEP1096	121-Z9008
TR803	2SC496-O		GE-57	PTC163	REN 295	SK3253/295	ECG295	TM295/**	WEP913	121-Z9002
TR804	2SC496-O		GE-57	PTC163	REN 295	SK3253/295	ECG295	TM295/**	WEP913	121-Z9002

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

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		PC10-25	VTT10B25	QV1-41	EV-1222
C25	10 10V			TDC106M025FL	QDT1-64	SD25-109
C29	1 50V		PC1-50	VTT1A50	QV1-11	EV-1615
C36	22 16V		PC25-25	VTT22B16	QV1-55	EV-1224
C37	10 16V		PC10-25	VTT10B25	QV1-41	EV-1222
C39	2.2 25V		PC2-100	VTT2R2A50	QV1-21	EV-1617.1
C41	4.7 16V			TDC105M035EL		SD35-4R79
C43	1000 16V		PC1000-16	VTT1000L16	QV1-183	EV-1261
C45	4.7 25V		PC5-50	VTT4R7B50	QV1-31	EV-1619.1
C57	10 16V		PC10-25	VTT10B25	QV1-41	EV-1222
C59	1 50V		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		PC5-50	VTT4R7B50	QV1-31	EV-1619.1
C73	47 10V		PC50-16	VTT47D16	QV1-73	EV-1226
C74	470 16V		PC500-16	VTT470K16	QV1-151	EV-1251
C89	10 16V		PC10-25	VTT10B25	QV1-41	EV-1222
C91	2.2 16V			TDC225M035FL		SD35-2R29
C92	2.2 16V			TDC225M035FL		SD35-2R29
C93	1 50V		PC1-50	VTT1A50	QV1-11	EV-1615
C112	470 6.3V		PC500-16	VTT470K16	QV1-151	EV-1251
C114	100 10V		PC100-10	VTT100E10	QV1-93	EV-1131
C115	220 16V		PC250-25	VTT220H16	QV1-117	EV-1240
C116	220 25V		PC250-25	VTT220K25	QV1-119	EV-1340
C120	47 10V		PC50-16	VTT47D16	QV1-73	EV-1226
C121	100 10V		PC100-10	VTT100E10	QV1-93	EV-1131
C126	47 10V		PC50-16	VTT47D16	QV1-73	EV-1226
C128	.47 50V		PC1-50	VTTR47A63	QV1-3	EV-1610
C129	.1 16V			TDC104M050EL	QDT1-2	SD50-R109
C134	33 16V		PC30-25	VTT33D25	QV1-63	EV-1325
C135	10 16V		PC10-25	VTT10B25	QV1-41	EV-1222
C150	47 10V		PC50-16	VTT47D16	QV1-73	EV-1226
C204	2200 35V		WDR2000-50*	TC50200A*	QE1-648*	TVA-1318.3*
C205	220 16V		PC250-25	VTT220H16	QV1-117	EV-1240
C807	100 25V		PC100-25	VTT100G25	QV1-97	EV-1331

* Axial replacement for radial device.

PARTS LIST AND DESCRIPTION (CONTINUED)

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

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
C2	.01 50V		UK50-103		MAG5011		
C4	15 N220 10%				*		10TCR-015
C5	.01 50V		UK50-103		MAG5011		
C7	.01 50V		UK50-103		MAG5011		
C8	220 50V 10%		DTZ-220				10TCC-T22
C9	.01 50V		UK50-103		MAG5011		
C10	.01 50V		UK50-103		MAG5011		
C11	.01 50V		UK50-103		MAG5011		
C12	.01 50V		UK50-103		MAG5011		
C13	.01 50V		UK50-103		MAG5011		
C14	2 NPO						
C16	.039 25V				GP140		5GA-S40
C17	.039 25V				GP140		5GA-S40
C18	.039 50V				M192P3939R8		192P3939R8
C19	.039 50V				M192P3939R8		192P3939R8
C20	1 50V +.25						
C21	.039 25V				GP140		5GA-S40
C22	.001 50V			DPMS6D1	EWF1A210	OF1-1	1PB-D10
C23	.039 25V				GP140		5GA-S40
C24	.039 25V				GP140		5GA-S40
C26	.039 25V				GP140		5GA-S40
C27	.0022 50V				M192P2229R8		192P2229R8
C31	.0047 50V						
C32	.039 50V						
C33	.01 50V			WMF1S1	EWF1A110	OF1-91	1PB-S10
C35	.039 25V				GP140		5GA-S40
C38	.0033 50V				M192P3329R8		192P3329R8
C40	.01 50V			WMF1S1	EWF1A110	OF1-91	1PB-S10
C42	.01 50V		UK50-103		MAG5011		
C44	.01 50V			WMF1S1	EWF1A110	OF1-91	1PB-S10
C46	.039 25V				GP140		5GA-S40
C47	.039 25V				GP140		5GA-S40
C48	1 NPO				CN0510		10TCC-V10
C49	56 50V 10%				CN0456		10TCC-056
C50	56 N220 5%						
C51	2 50V +.25						
C52	220 50V 10%						10TS-T33
C53	330 50V 10%		DD-331	GP330	GP333		5GA-D47
C54	.0047 50V		DD-472	GP4700	GP247		10TCC-T10
C55	100 50V 10%		DTZ-100	NP0100	CN0310		5GA-S40
C56	.039 25V				GP140		
C58	.01 50V		UK50-103		MAG5011		
C60	.01 50V		UK50-103		MAG5011		
C61	220 50V 10%		DTZ-220				10TCC-T22
C62	22 50V						
C63	.01 50V		UK50-103		MAG5011		
C64	.01 50V		UK50-103		MAG5011		
C65	.01 50V		UK50-103		MAG5011		
C66	.01 50V		UK50-103		MAG5011		
C68	.039 25V				GP140		5GA-S40
C69	.01 50V		UK50-103		MAG5011		
C71	.001 50V		DD-102		GP210		10TS-D10
C75	.001 50V		DD-102		GP210		10TS-D10
C76	.0022 50V				M192P2229R8		192P2229R8
C77	.1 25V		UK25-104		MAG2501		HY-750
C78	.01 50V		UK50-103		MAG5011		
C79	100		DTZ-100	NP0100	CN0310		10TCC-T10
C80	8 50V +.5						
C81	.01 50V		UK50-103		MAG5011		
C82	.01 50V		UK50-103		MAG5011		
C83	.001 50V		DD-102		GP210		10TS-D10
C84	330 50V 10%		DD-331	GP330	GP333		10TS-T33
C85	.01 50V		UK50-103		MAG5011		
C86	68 N220 5%				*		10TCR-Q68
C87	150 N220 10%				*		10TCR-T15
C88	15 N220 10%				*		10TCR-015
C90	.022 25V		UK25-223				HY-725
C94	47 N750 5%		DTN-47	N47	CN7447		10TCU-Q47
C95	.022 50V				M192P2239R8		192P2239R8
C96	.01 50V		UK50-103		MAG5011		
C97	.01 50V		UK50-103		MAG5011		
C98	27 NPO 10%				CN0427		10TCC-027
C99	100 50V 10%		DTZ-100	NP0100	CN0310		10TCC-T10
C100	39 50V 10%				CN0439		10TCC-039
C101	.01 50V		UK50-103		MAG5011		
C102	.01 50V		UK50-103		MAG5011		
C103	.01 50V		UK50-103		MAG5011		
C104	10 NPO 50V		DTZ-10	NP010	CN0410		10TCC-010
C105	.01 50V			CD19FD222J03	SX222		MMC-222
C106	10 NPO 50V		DTZ-10	NP010	CN0410		10TCC-010
C107	220 50V 10%		DTZ-220				10TCC-T22
C108	100 N220 10%				*		10TCR-T10
C109	9 N220 10%						
C110	.01 50V		UK50-103		MAG5011		
C111	.039 25V				GP140		5GA-S40
C113	.039 25V				GP140		5GA-S40
C117	.01 50V		UK50-103		MAG5011		
C118	.01 50V		UK50-103		MAG5011		
C119	.039 25V				GP140		5GA-S40
C122	.022 50V				M192P2239R8		192P2239R8
C124	.01 50V			WMF1S1	EWF1A110	OF1-91	1PB-S10
C125	.01 50V		UK50-103		MAG5011		
C127	.0047 50V						
	.0033 50V						
C130	.01 50V		UK50-103		MAG5011		
C133	.01 50V		UK50-103		MAG5011		
C136	.01 50V		UK50-103		MAG5011		
C140	.01 50V		UK50-103		MAG5011		
C141	.01 50V		UK50-103		MAG5011		

PARTS LIST AND DESCRIPTION (CONTINUED)

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

CAPACITORS (cont)

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
C142	.01 50V		UK50-103		MAG5011		
C143	.01 50V		UK50-103		MAG5011		
C144	.01 50V		UK50-103		MAG5011		
C145	.01 50V		UK50-103		MAG5011		
C146	.039 25V				GP140		5GA-S40
C147	.039 25V				GP140		5GA-S40
C151	.01 50V						
C158	.001 50V		DD-102		GP210		10TS-D10
C159	.01 50V		UK50-103		MAG5011		
C160	.01 50V		UK50-103		MAG5011		
C161	.001 50V		DD-102		GP210		10TS-D10
C162	.001 50V		DD-102		GP210		10TS-D10
C163	22 50V 10%		DTZ-22	NP022	CN0422		10TCC-022
C164	.001 50V		DD-102		GP210		10TS-D10
C165	100 50V 10%		DTZ-100	NP0100	CN0310		10TCC-T10
C166	150 50V 10%		DTZ-150		CN0315		10TCC-T15
C167	680 50V 10%		DD-681	GP680	GP368		10TS-T68
C168	.01 50V		UK50-103		MAG5011		
C169	.01 50V		UK50-103		MAG5011		
C170	.01 50V		UK50-103		MAG5011		
C171	.01 50V		UK50-103		MAG5011		
C201	.01 50V		UK50-103		MAG5011		
C202	.01 50V		UK50-103		MAG5011		
C203	.01 50V		UK50-103		MAG5011		
C206	.039 25V				GP140		5GA-S40
C207	.01 50V		UK50-103		MAG5011		
C208	.01 50V		UK50-103		MAG5011		
C301	.01 50V		UK50-103		MAG5011		
C302	.01 50V		UK50-103		MAG5011		
C303	22 50V 10%		DTZ-22	NP022	CN0422		10TCC-022
C401	.001 50V		DD-102		GP210		10TS-D10
C402	.01 50V		UK50-103		MAG5011		
C403	.001 50V		DD-102		GP210		10TS-D10
C404	.01 50V		UK50-103		MAG5011		
C451	.001 50V 10%		DD-102		GP210		10TS-D10
C452	.001 50V		DD-102		GP210		10TS-D10
C453	.001 50V		DD-102		GP210		10TS-D10
C454	.001 50V		DD-102		GP210		10TS-D10
C455	.001 50V		DD-102		GP210		10TS-D10
C601	.001 50V		DD-102		GP210		10TS-D10
C602	.001 50V		DD-102		GP210		10TS-D10
C603	.001 50V		DD-102		GP210		10TS-D10
C701	560 50V						
C801	.01 50V		UK50-103		MAG5011		
C802	.022 50V				M192P2239R8		192P2239R8
C803	.022 50V				M192P2239R8		192P2239R8
C804	.022 50V				M192P2239R8		192P2239R8
C805	.022 50V				M192P2239R8		192P2239R8
C806	.039 50V				M192P3939R8		192P3939R8
C808	.022 50V				M192P2239R8		192P2239R8
CC1	.01						

*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	RESISTANCE	REPLACEMENT DATA			
			MFGR. PART No.	CENTRALAB PART No.	MALLORY PART No.	TRW PART No.
VR1	IF Gain	300				
	IF Gain	200				
VR2	S Meter	30K				U260R503B
VR3	Squelch Range	100K				U260R104B
VR4	RF Power Meter	20K				U260R253B
VR5	Mod Meter	50K				U260R503B
VR6	AMC	5000				U260R502B
VR201	Voltage	500				U260R501B
VR301	RF Gain	1000				
VR302	Tone	50K				
VR303	Volume	50K				
VR304	Squelch	50K				
VR305	SWR CAL	5000				
VR306	Delta Tune	20K				
VR307	Mic Gain	5000				
VR308	Dimmer	5000				

PARTS LIST AND DESCRIPTION (CONTINUED)

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

RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA	
		MFGR. PART No.	WORKMAN PART No.
R803	150 3W 10% Metal Film		

ITEM No.	RATING	REPLACEMENT DATA	
		MFGR. PART No.	WORKMAN PART No.

COILS (RF-IF)

ITEM No.	FUNCTION	REPLACEMENT DATA			REMARKS
		PART No.	OTHER IDENTIFICATION	MILLER PART No.	
L1	Rec RF (27MHz)		LA-029	CBS740-T	
L2	RF Amp (27MHz)		LA-138		
L3	Mixer (10.695MHz)		LA-277		
L4	Mixer (10.695MHz)		LA-180	CBS715-TC	
L5	Mixer (10.695MHz)		LA-274		
L6	IF (455kHz)		LA-106	8517	
L7	IF (455kHz)		LA-204		
L8	IF (455kHz)		LA-207		
L10	TVI Trap (54MHz)		LC-018	CB304	
L11	RF Choke		LE-089		
L12	Pi Filter		LE-088		
L13	Loading Final (27MHz)		LC-019	CB305	
L14	RF Choke		LD-012	4588	
L16	XMT Driver (27MHz)		LC-018	CB304	
L17	Buffer (27MHz)		LA-208		
L18	Mixer (16MHz)		LA-201		
L19	Programmable Diver (15.360MHz)		LA-166		
L20	VCO		LA-275		
L21	Ref Oscillator (10.240MHz)		LA-217		
L22	RF Choke (100uH)		LZ-001		
L23	Ref Oscillator (10.240MHz)		LA-182		
L24	XMT Mixer (27MHz)		LA-198		
L25	XMT Mixer (27MHz)		LA-088	CBS717-TC	
L26	RF Choke (10uH)		LZ-001		

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA			NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE @ CURRENT 1000~)	MFGR. PART No.	THORDARSON PART No.	TRIAD PART No.	
T2	1.2A	.14	.85mH	TF-083(1)	TR507		(1) Number on unit.

TRANSFORMER (Power)

ITEM No.	RATING		REPLACEMENT DATA			NOTES
	PRI.	SEC. !	MFGR. PART No.	THORDARSON PART No.	TRIAD PART No.	
T301	120V AC @ .45A AC	18.50V AC @ 2.5A AC @ 1.3A DC	TF-160(1)		PCB-5(2)	(1) Number on unit. (2) Requires new mounting holes.

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	21	1 2 8 11	TF-129(1)			(1) Number on unit.

SPEAKER

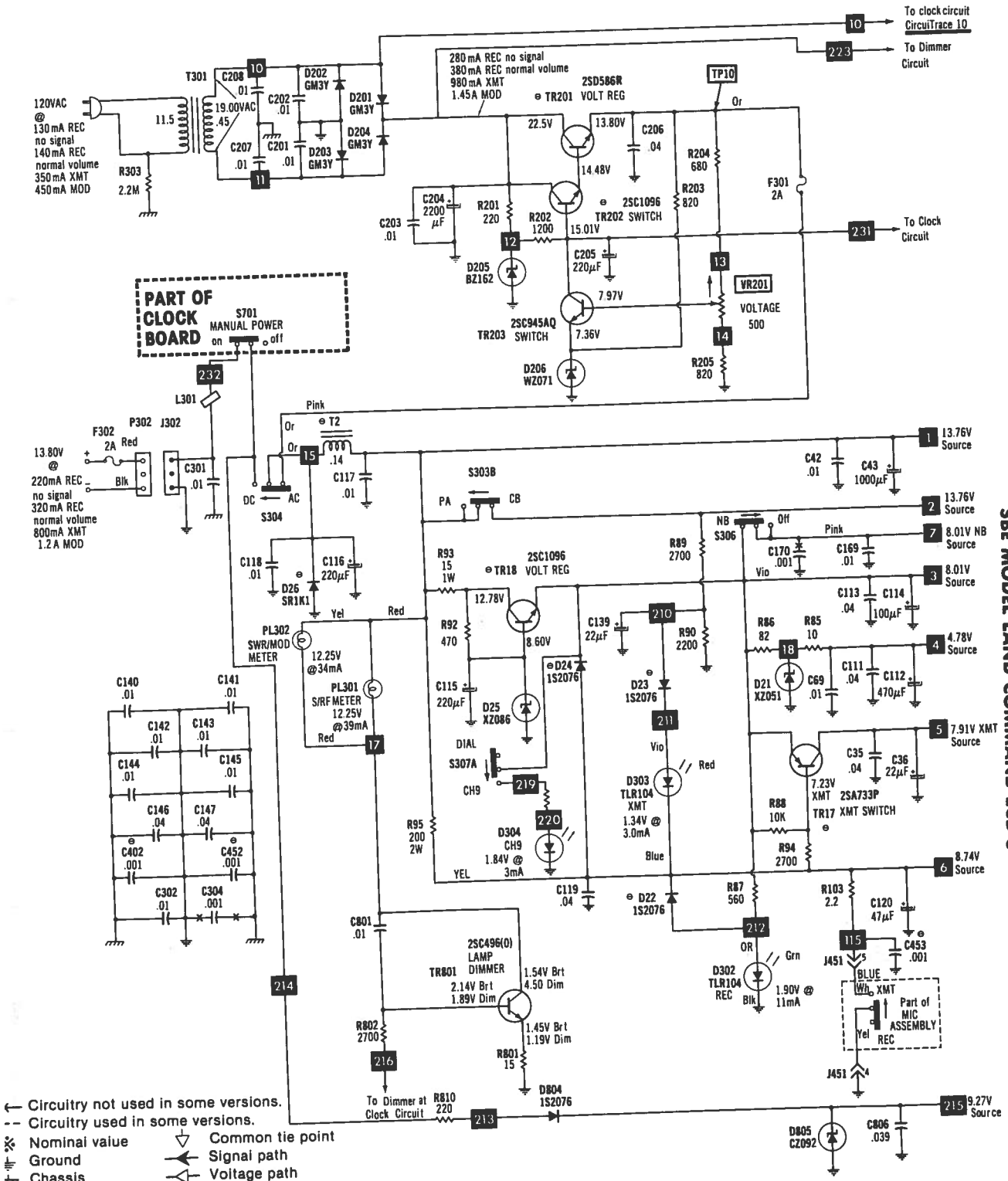
ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		MFGR. PART No.	QUAM PART No.	
SP301	3 1/2" PM 8 Ohms		3025Z16R	

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			AGC2	HRK	312002	150145	FG2-2
F301	2A Quick Acting			AGC2	HKP	312002	342013AL	FG2-2

MISCELLANEOUS

ITEM No.	PART NAME	PART No.	NOTES
CF1	Filter		455kHz (FL-009)
D302	LED		RX (TLY124) (1.84V @ 3mA)
D303	LED		TX (TLR124)(1.84V @ 3mA)
D304	LED		CH9 (TLR124) (1.84V @ 3mA)
D305	LED		AWI (TLR124) (1.84V @ 3mA)
D501	LED		Tens & Units (Each segment supplied with 1.85V @ 3.3mA)
D702	LED		Clock (TLR2077) (2.12V @ 73mA)
MIC			
M301	Meter		S/RF (MT-165)
M302	Meter		SWR/MOD (MT-164)
PL301	Lamp		S/RF Meter (12.25V @ 35mA)
PL302	Lamp		SWR/MOD Meter (12.25V @ 35mA)
S301	Switch		Off/ANL
S302	Switch		SWR CAL/MOD
S303	Switch		PA/CB
S304	Switch		DC/AC
S306	Switch		NB/OFF
S307	Switch		CH9/Dial
S308	Switch		SP1/SP1&2/SP2
S701	Switch		Manual Power
S702	Switch		Auto Power
S703	Switch		Auto Power
S704	Switch		Clock Set
S705	Switch		Fast
S706	Switch		Slow
S707	Switch		Hold
X-1	Crystal		10.240MHz (QX-074)
XF-1	Filter		10.7MHz (FL-009)
	AC Power Cord		WZ-022
	DC Power Cord		W-070101
	P.C. Board		Main
	P.C. Board		Pwr Supply
	P.C. Board		Clock
	P.C. Board		Dimmer
	P.C. Board		Ch SW
	P.C. Board		SW
	P.C. Board		CH LED
	P.C. Board		Mic Jack
	P.C. Board		SP Jack
	P.C. Board		Phone
	P.C. Board		LED
	P.C. Board		Clock SW

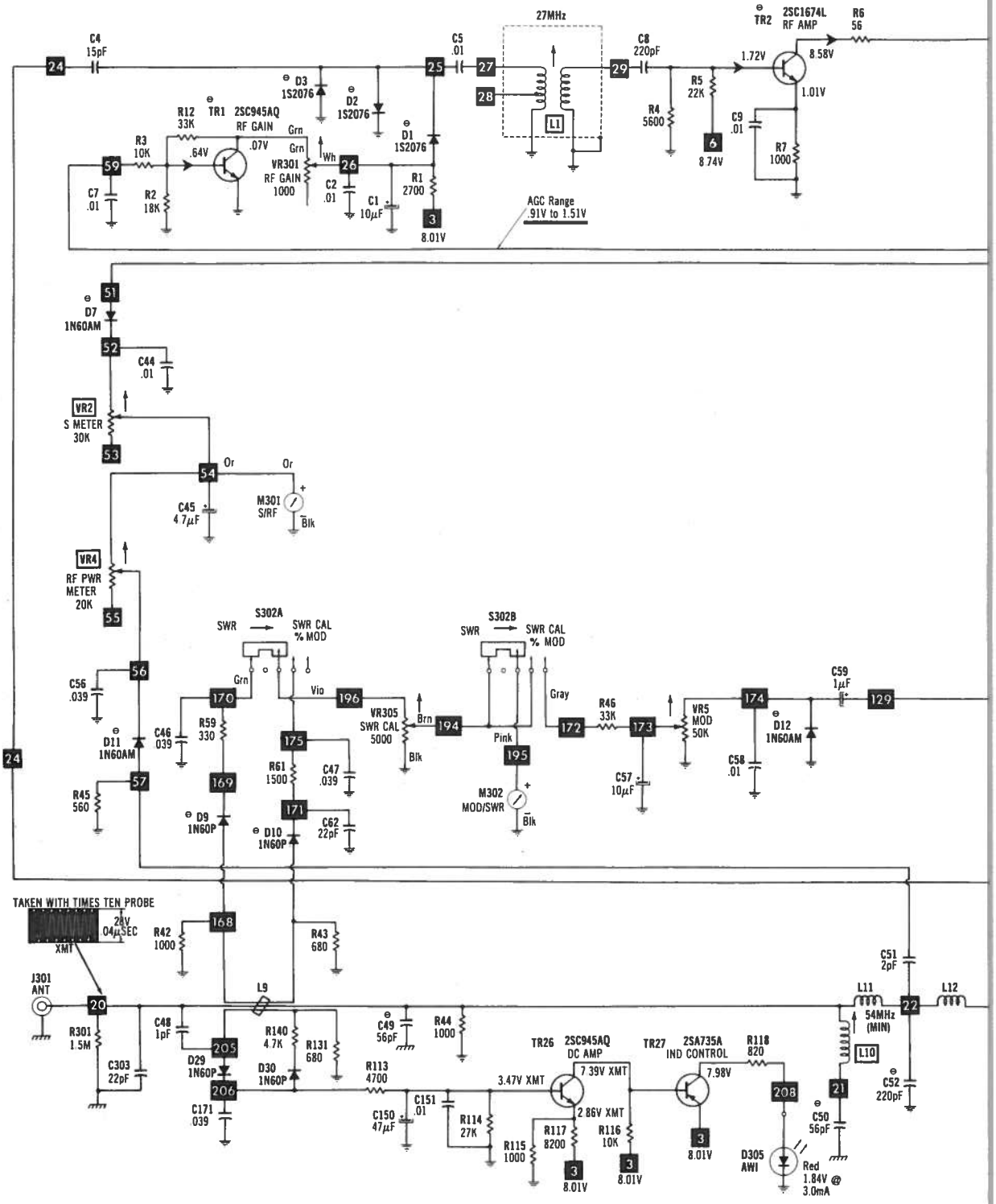


← Circuitry not used in some versions.
-- Circuitry used in some versions.
※ Nominal value
⏚ Ground
⏚ Chassis
⊖ See parts list
▽ Common tie point
◄— Signal path
◄— Voltage path

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

PHOTOFACT STANDARD NOTATION SCHEMATIC
WITH CIRCUITRACE®

POWER SUPPLY SCHEMATIC



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⏚ Ground
Chassis
⊖ See parts list
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Signal path
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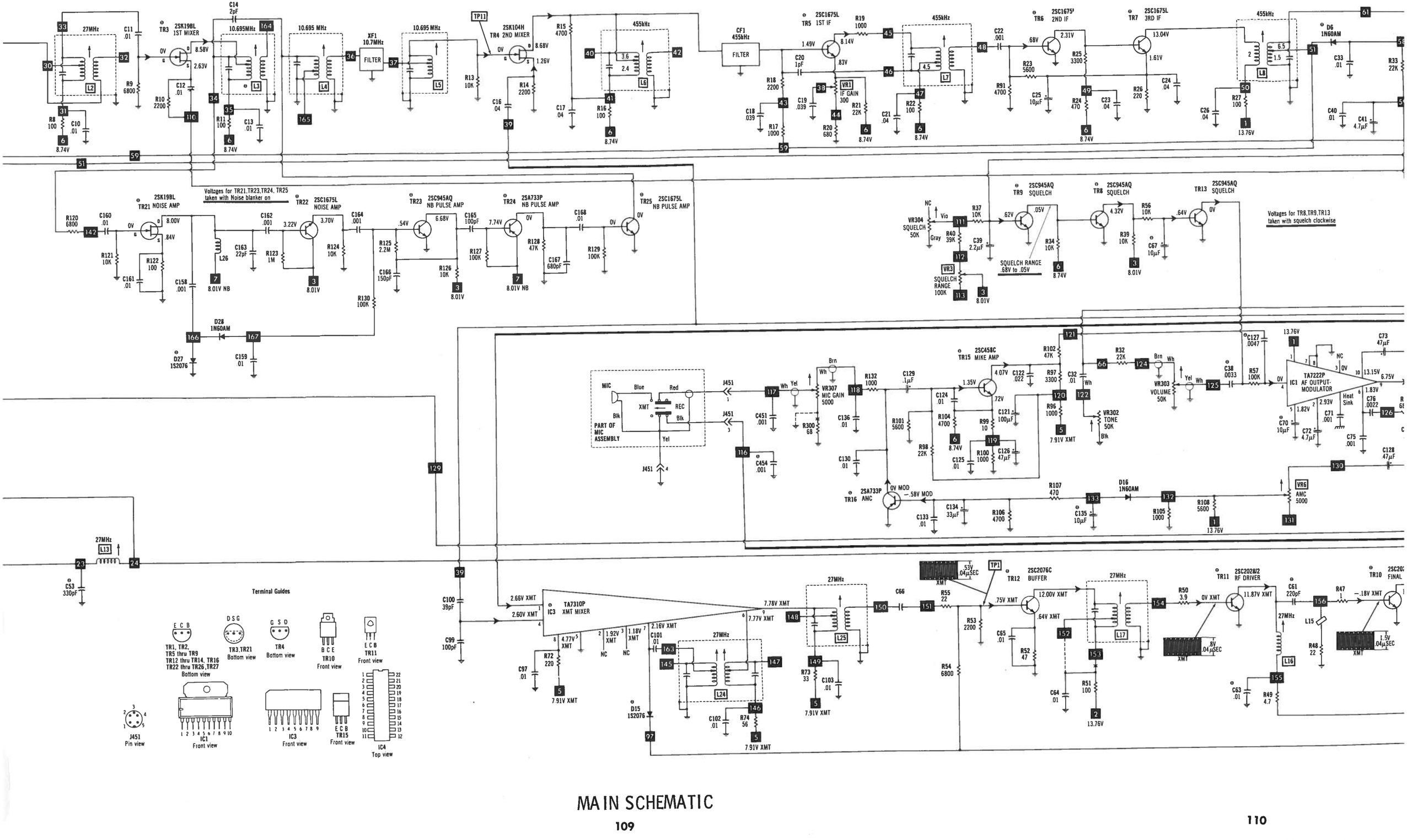
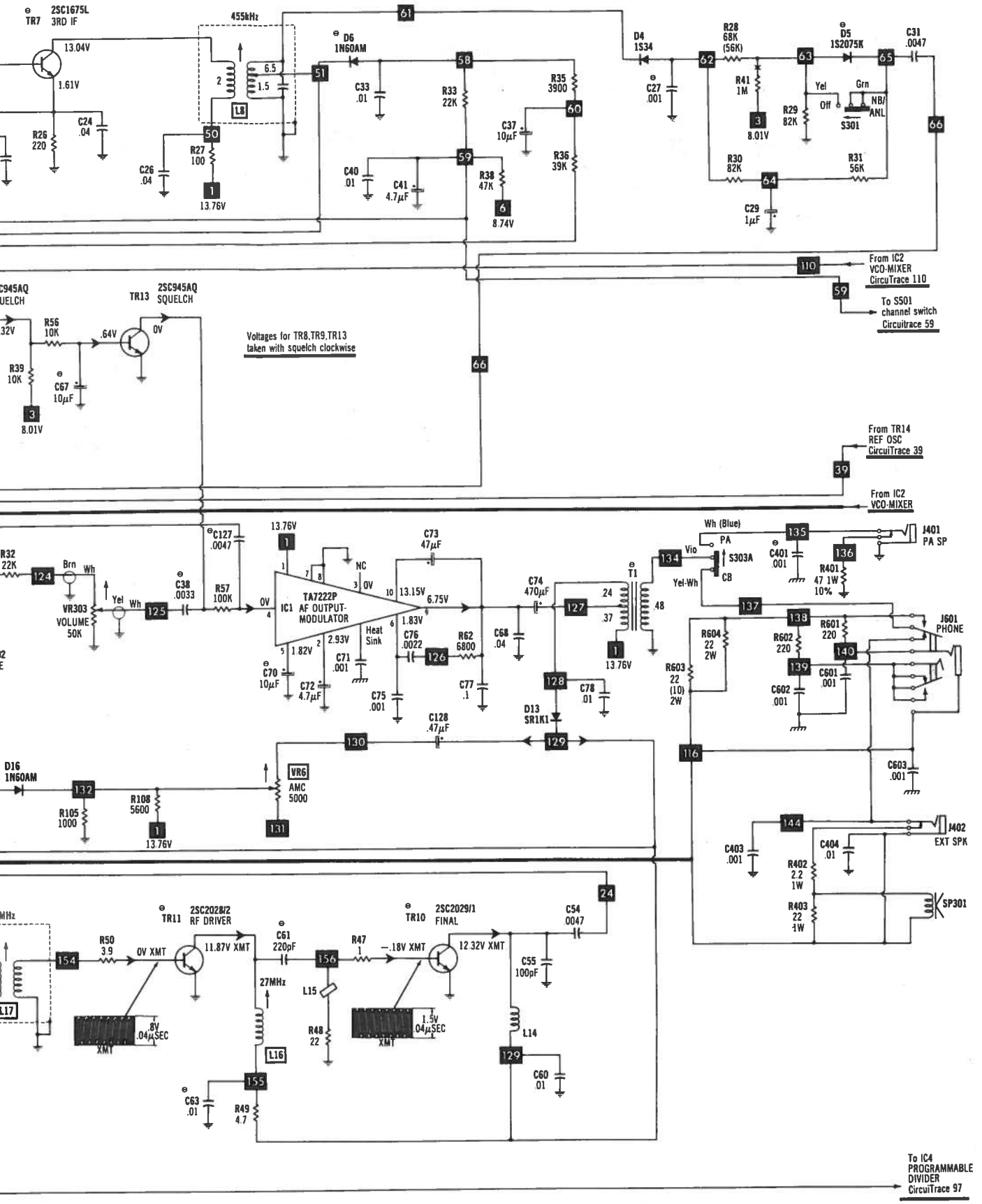
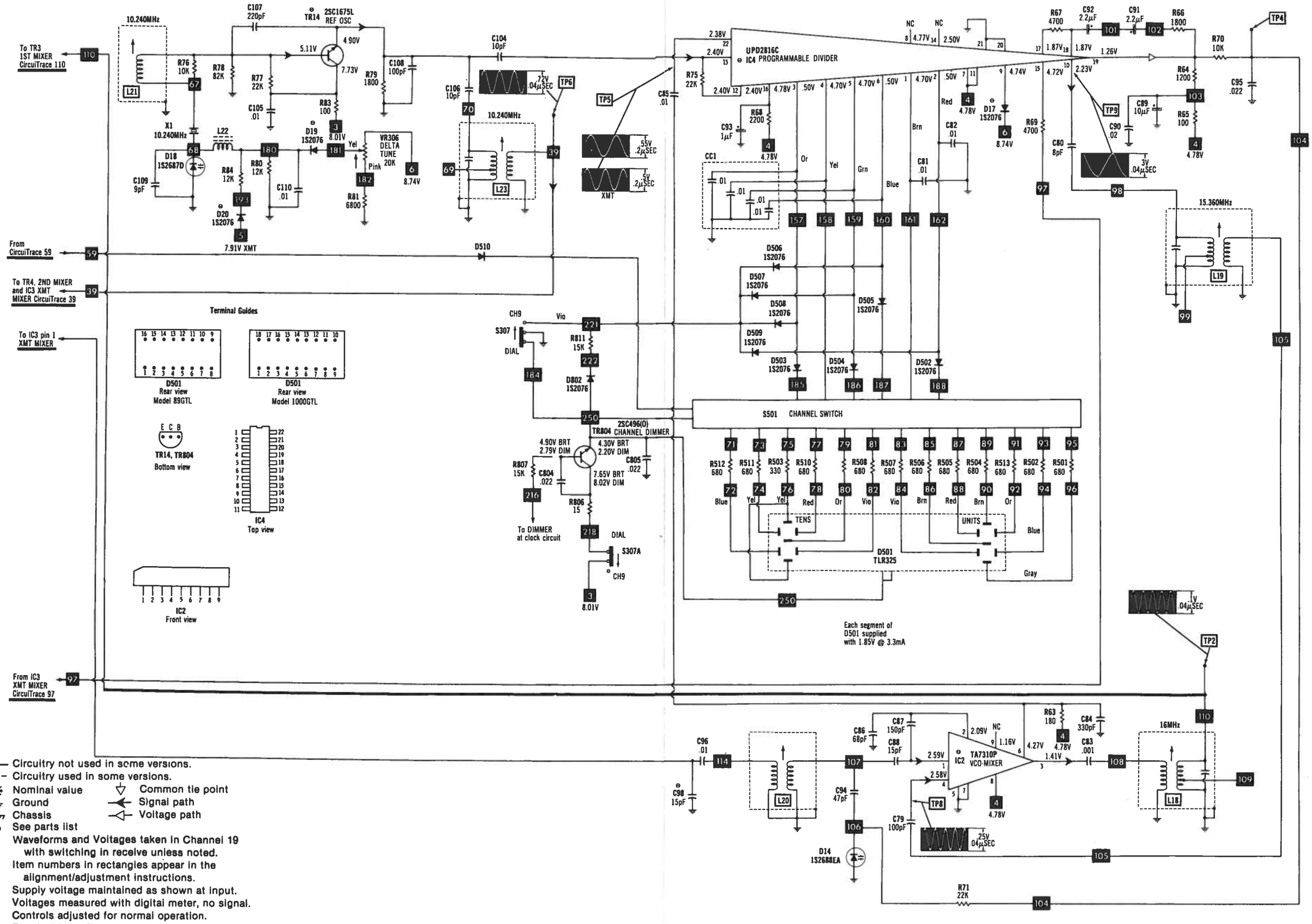
A PHOTOFACT STANDARD NOTATION SCHEMATIC WITH CIRCUITRACE™



MAIN SCHEMATIC


TR7 2SC1675L 3RD IF
455kHz
13.04V
1.61V
L8
R26 220
C24 .04
C26 .04
R27 100
13.76V
D6 1N60AM
C33 .01
R33 22K
C40 .01
C41 4.7µF
R35 3900
C37 10µF
R36 39K
R38 47K
8.74V
D4 1S34
C27 .001
R28 68K (56K)
R41 1M
8.01V
D5 1S2075K
C31 .0047
Yel
Grn
Off
NB/ ANL
S301
R29 82K
R30 82K
R31 56K
C29 1µF
From IC2 VCO-MIXER CircuTrace 110
To S501 channel switch Circuitrace 59
TR13 2SC945AQ SQUELCH
R56 10K
.64V
0V
R39 10K
C67 10µF
8.01V
Voltages for TR8,TR9,TR13 taken with squelch clockwise
From TR14 REF OSC CircuiTrace 39
From IC2 VCO-MIXER
C127 .0047
13.76V
C73 47µF
NC
0V
TA7222P AF OUTPUT-MODULATOR
IC1
13.15V
6.75V
1.83V
2.93V
1.82V
Heat Sink
C74 470µF
T1
C76 .0022
R62 6800
C68 .04
C71 .001
C70 10µF
C72 4.7µF
C75 .001
C77 .1
C78 .01
D13 SR1K1
C128 .47µF
Wh (Blue)
PA
Vio
S303A
CB
Yel-Wh
C401 .001
J401 PA SP
R401 47 1W 10%
R32 22K
Brn
Wh
VR303 VOLUME 50K
Yel
C38 .0033
R57 100K
R604 22 2W
R602 220
R601 220
J601 PHONE
R603 22 (10) 2W
C602 .001
C601 .001
C603 .001
D16 1N60AM
R105 1000
R108 5600
VR6 AMC 5000
J402 EXT SPK
C403 .001
C404 .01
R402 2.2 1W
R403 22 1W
SP301
TR11 2SC2028/2 RF DRIVER
TR10 2SC2029/1 FINAL
R50 3.9
0V XMT
11.87V XMT
C61 220pF
R47 1
-.18V XMT
12.32V XMT
C54 0047
C55 100pF
27MHz
L15
L16
L14
R48 22
.8V .04µSEC
XMT
1.5V .04µSEC
XMT
C63 .01
R49 4.7
C60 .01
To IC4 PROGRAMMABLE DIVIDER CircuiTrace 97



- Circuitry not used in some versions.
- Circuitry used in some versions.
- Nominal value
- Ground
- Chassis
- See parts list
- Common tie point
- Signal path
- Voltage path

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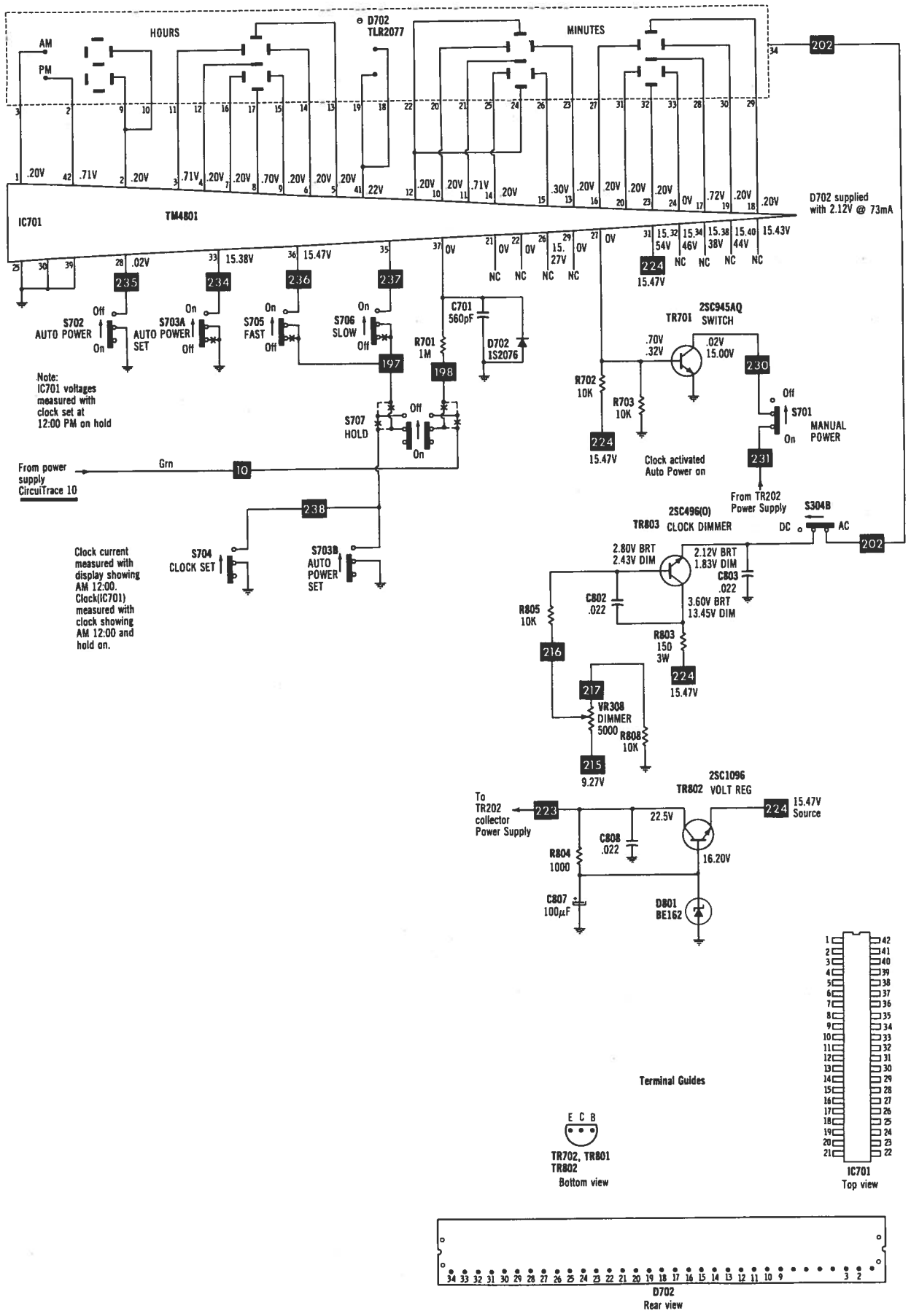
PLL SCHEMATIC



CLOCK SCHEMATIC

SBE MODEL LAND COMMAND LCB-8