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 JAGUAR 40B

MANUFACTURER'S SPECIFICATIONS

Transmitter

1. Oscillation System	P.L.L. system (3 X'TALS)
2. RF Power Output	3.9watts @ 13.8V DC
3. Final Efficiency	Better than 60%
4. Modulation System	Driver & F.A. collector modulation
5. Modulation	98% or less with modulation limiter
6. Modulation Input Level	2mV @ 70% modulation (−55dBM)
7. Modulation Frequency Characteristics	300 to 2700Hz −6dB, @1000Hz 0dB
8. Occupied Bandwidth	Better than 99.9%
9. Spurious Radiation	Better than 70dB down
10. Frequency Stability	±0.002% @ −30°C to +50°C
11. Microphone	600ohm, −70dBm
12. Battery Consumption	Non modulation 0.7A
	Full modulation 1.1A
13. AC	117V 40VA

Receiver

1. Circuit System	Dual Conversion Superheterodyne
2. I.F. Frequencies	1st I.F. 10.695MHz
	2nd I.F. 455kHz
3. Sensitivity	0.26μV @ EIA SINAD 12dB
4. Frequency Stability	±0.002%
5. Pass Bandwodth	5.6kHz
6. Intermodulation	−60dB down
7. Adjacent Channel Rejection	−70dB at ±10kHz
8. 2 Signal Desensitizing	75dB
9. Spurious Response	Better than 80dB down
10. A.G.C. Characteristics	10dB @ RF input 100dB increase
11. Squelch Gain	Thresholdlevel 0.08μV, maximum 100μV
12. AF Power Output	8ohm, 5 watts @ distortion 10%

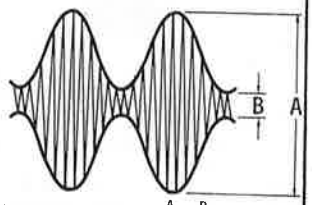
Courtesy of the Manufacturer

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

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.
Check for 12.60 volts at TP12. (See Transmitter Adj.)
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:
L4 thru L10, L22	5000, 5009, 8276, 8728, 8728A
L1, L2, L3, L12, L14, L17 thru L21	9440
L25, L26	9300, 9302, 9304
VC1, VC2, VC3	5000, 8276



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

FIGURE 1

SYNTHESIZER ALIGNMENT

TEST EQUIPMENT	TRANSCEIVER	ADJUST	REMARKS
Input of oscilloscope to TP1.	Ch. 19	L10	Adjust for Maximum RF output.
Input of frequency counter to TP1.	Ch. 19	VC1	Adjust for 10.240MHz.
Input of oscilloscope to TP9 (L12 Secondary).	Ch. 19	L12	Adjust for Maximum RF output.
Input of frequency counter to TP9 (L12 Secondary).	Ch. 19	VC2	Adjust for 36.380MHz.
Input of DC meter to TP5.	Ch. 1	L14	Adjust for 2.75 volts.
Input of frequency counter to TP10 (Junction of C6, C82 and C83).	Ch. 1		Check for 37.660MHz. Check all channels. (See Truth Chart for correct frequencies.)
Input of frequency counter to TP8 (IC1 Pin 2).	Ch. 1		Check for 1.280MHz. Check all channels. (See Truth Chart for correct frequencies.)
Input of frequency counter to TP11 (Q17 Emitter).	Ch. 19, XMT	VC3	Adjust for 10.695MHz.

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.
Check for 12.60 volts at TP12. (See Transmitter Adjustments.)

TEST EQUIPMENT	TRANSCEIVER	ADJUST	REMARKS
Output of signal generator thru .01uF to TP1. 455kHz, 1000Hz @ 30% modulation.	Ch. 19 RF Gain Maximum Squelch MINIMUM Response ANL Off	L9,L8,L7, L6, L5	Adjust for Maximum.
Output of signal generator thru .01uF to antenna jack. 27.185MHz,1000Hz @ 30% modulation.	Ch. 19 RF Gain Maximum Squelch MINIMUM Response ANL Off.	L4,L3,L2, L1	Adjust for Maximum. If necessary readjust L5, L6, L7, L8 and L9.

RECEIVER ADJUSTMENTS

Connect an AC VTVM or AF wattmeter across speaker voice coil.
Adjust volume control to obtain a suitable indication.
Check for 12.60 volts at TP12. (See Transmitter Adjustments.)

TEST EQUIPMENT	TRANSCEIVER	ADJUST	REMARKS
Output of signal generator thru .01uF to antenna jack. 27.185MHz, 1000Hz @ 30% modulation Output 200uV.	Ch. 19 RF Gain Maximum Response ANL Off	FVR1	SQUELCH RANGE Adjust so that squelch just breaks.
Output of signal generator thru .01uF to antenna jack. 27.185MHz, 1000Hz @ 30% modulation Output 100uV.	Ch. 19 RF Gain Maximum Response ANL Off	FVR2	S METER Adjust for 9 on S scale of meter.

TRANSMITTER ALIGNMENT

Connect an RF wattmeter and 50-ohm, 25-watt dummy load to antenna connector.
NOTE: Be sure to check transmit frequency and power on all active channels after alignment of transmitter.
See page 4 for channel frequencies.
Check for 12.60 volts at TP12. (See Transmitter Adjustments.)

TEST EQUIPMENT	TRANSCEIVER	ADJUST	REMARKS
Connect an RF wattmeter and 50-ohm, 25-watt dummy load to antenna connector.	Ch. 19	L17,L18,L19, L20,L21,L22,	Adjust for Maximum.
Connect an RF wattmeter and 50-ohm, 25-watt dummy load to antenna connector.	Ch. 19	L26,L25	Adjust for 4 watts Maximum.

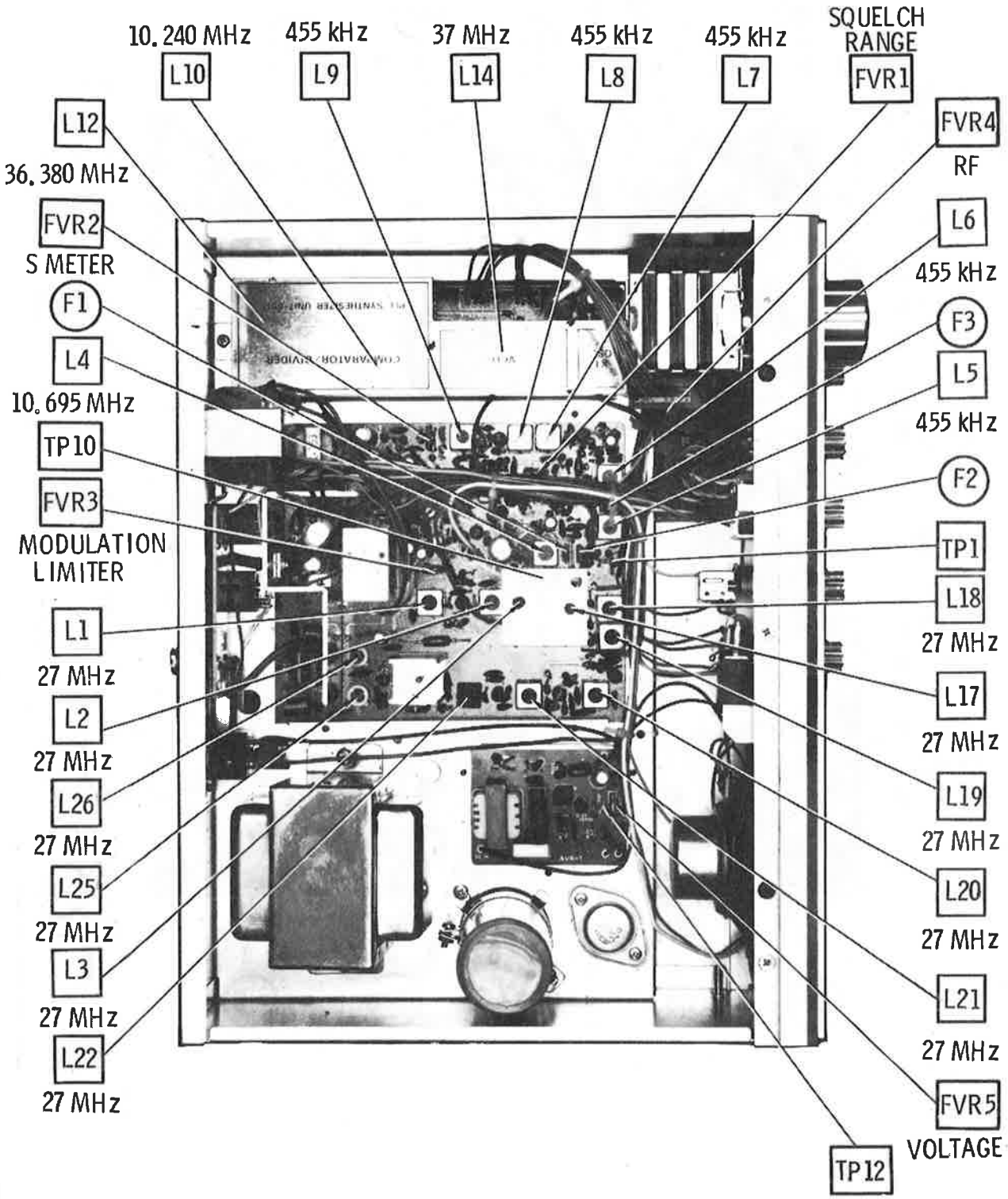
TRANSMITTER ADJUSTMENTS

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.

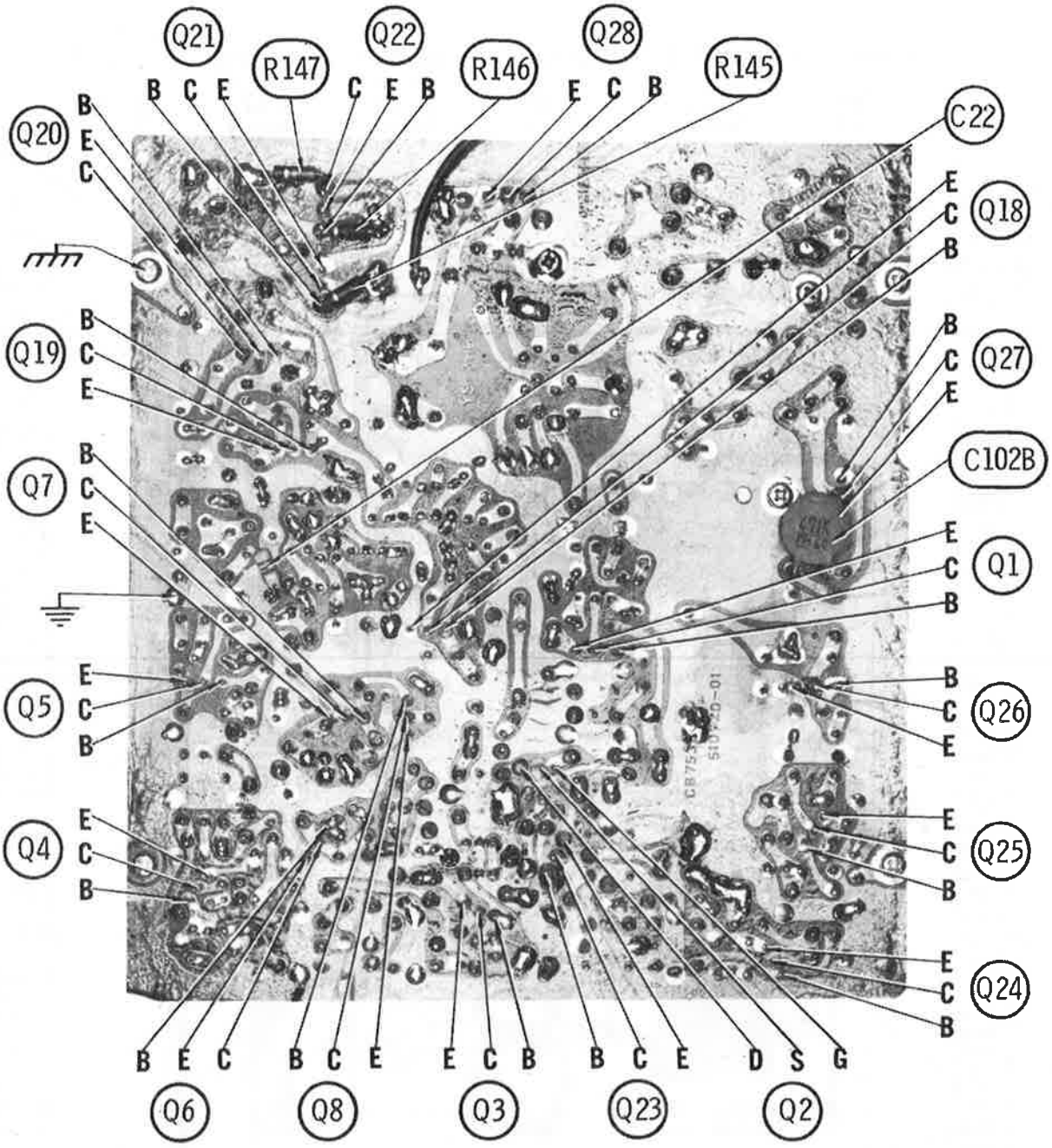
TEST EQUIPMENT	TRANSCEIVER	ADJUST	REMARKS
Input of DC meter to TP12 (Q30 Collector).	Ch. 19	FVR5	VOLT REG. Adjust for 12.60 volts. Voltage should not vary when keying transmitter.
Modulation meter to antenna jack. Inject a 1000Hz, 2mV signal at MIC input.	Ch. 19	FVR3	MODULATION LIMITER Adjust for 100% modulation Maximum. See Figure 1.
Connect an RF wattmeter and 50-ohm, 25-watt dummy load to antenna connector.	Ch. 19	FVR4	RF PANEL METER Adjust so that RF Panel meter agrees with RF wattmeter.

TRUTH CHART

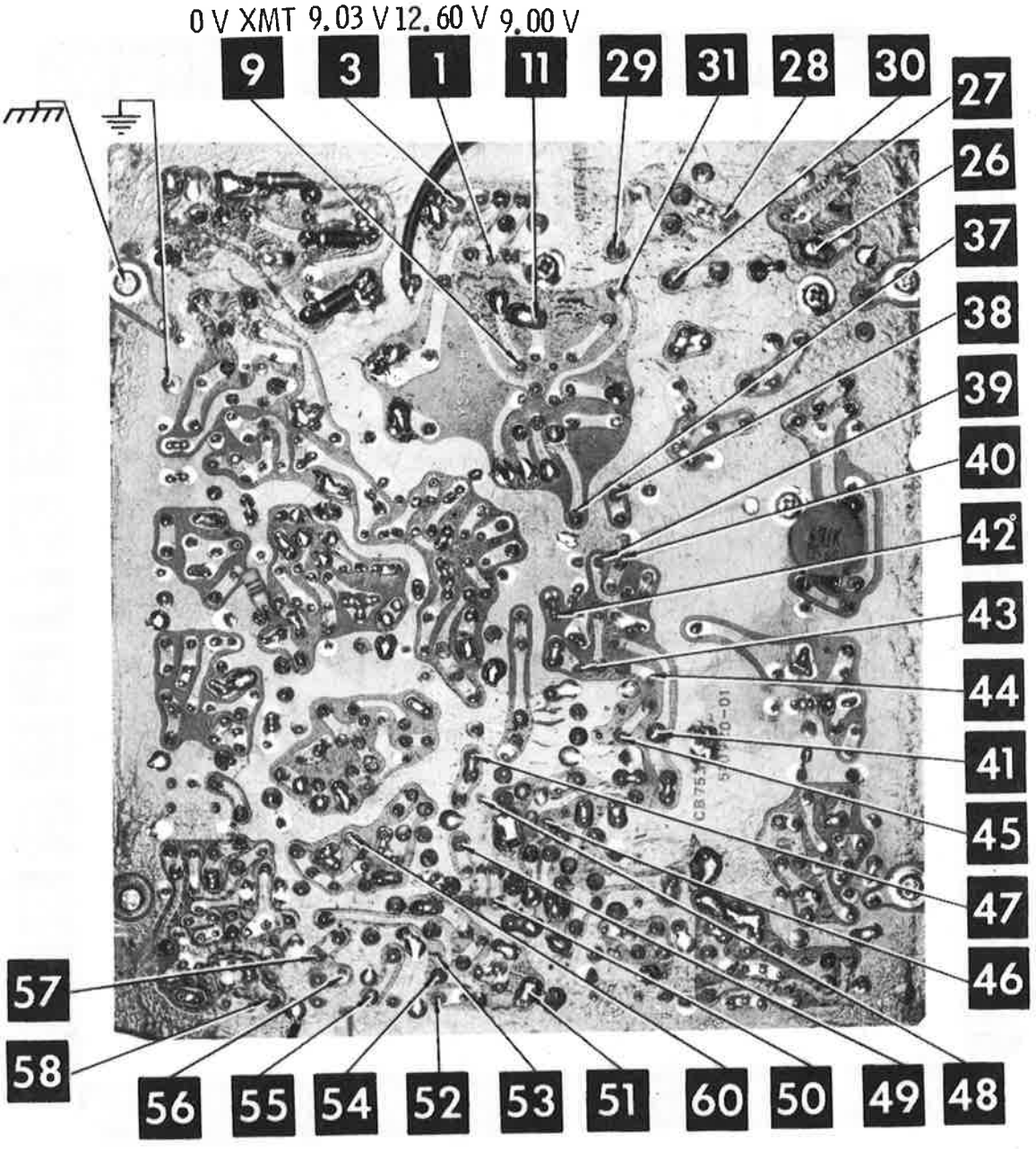
CHANNEL	1 = 5.70 Volts 0 = 0 Volts IC1 PROGRAM DIVIDER PINS								REC & XMT VCO OUTPUT IN MHz AT TP10	DIVIDER INPUT IN MHz AT TP8	
	11	12	13	14	15	16					
1	0	0	0	0	0	0			37.660	1.280	
2	0	0	0	0	0	1			37.670	1.290	
3	0	0	0	0	1	0			37.680	1.300	
4	0	0	0	1	0	0			37.700	1.320	
5	0	0	0	1	0	1			37.710	1.330	
6	0	0	0	1	1	0			37.720	1.340	
7	0	0	0	1	1	1			37.730	1.350	
8	0	0	1	0	0	1			37.750	1.370	
9	0	0	1	0	1	0			37.760	1.380	
10	0	0	1	0	1	1			37.770	1.390	
11	0	0	1	1	0	0			37.780	1.400	
12	0	0	1	1	0	1			37.800	1.420	
13	0	0	1	1	1	0			37.810	1.430	
14	0	1	0	0	0	0			37.820	1.440	
15	0	1	0	0	0	1			37.830	1.450	
16	0	1	0	0	1	1			37.850	1.470	
17	0	1	0	1	0	0			37.860	1.480	
18	0	1	0	1	0	1			37.870	1.490	
19	0	1	0	1	1	0			37.880	1.500	
20	0	1	1	0	0	0			37.900	1.520	
21	0	1	1	0	0	1			37.910	1.530	
22	0	1	1	0	1	0			37.920	1.540	
23	0	1	1	0	1	1			37.950	1.570	
24	0	1	1	1	0	0			37.930	1.550	
25	0	1	1	1	0	1			37.940	1.560	
26	0	1	1	1	1	0			37.960	1.580	
27	0	1	1	1	1	1			37.970	1.590	
28	1	0	0	0	0	0			37.980	1.600	
29	1	0	0	0	0	1			37.990	1.610	
30	1	0	0	0	1	0			38.000	1.620	
31	1	0	0	0	1	1			38.010	1.630	
32	1	0	0	1	0	0			38.020	1.640	
33	1	0	0	1	0	1			38.030	1.650	
34	1	0	0	1	1	0			38.040	1.660	
35	1	0	0	1	1	1			38.050	1.670	
36	1	0	1	0	0	0			38.060	1.680	
37	1	0	1	0	0	1			38.070	1.690	
38	1	0	1	0	1	0			38.080	1.700	
39	1	0	1	0	1	1			38.090	1.710	
40	1	0	1	1	0	0			38.100	1.720	


10.240 MHz
L10
455 kHz
L9
37 MHz
L14
455 kHz
L8
455 kHz
L7
SQUELCH RANGE
FVR1
L12
36.380 MHz
FVR2
S METER
F1
L4
10.695 MHz
TP10
FVR3
MODULATION LIMITER
L1
27 MHz
L2
27 MHz
L26
27 MHz
L25
27 MHz
L3
27 MHz
L22
27 MHz
FVR4
RF
L6
455 kHz
F3
L5
455 kHz
F2
TP1
L18
27 MHz
L17
27 MHz
L19
27 MHz
L20
27 MHz
L21
27 MHz
FVR5
VOLTAGE
TP12

CHASSIS-TOP


Q21
R147
Q22
R146
Q28
R145
C22
Q20
Q18
Q19
Q27
C102B
Q7
Q1
Q5
Q26
Q4
Q25
Q24
Q6
Q8
Q3
Q23
Q2

MAIN BOARD


0 V XMT
9.03 V
12.60 V
9.00 V
9
3
1
11
29
31
28
30
27
26
37
38
39
40
42
43
44
41
45
47
46
48
49
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60
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57

MAIN BOARD

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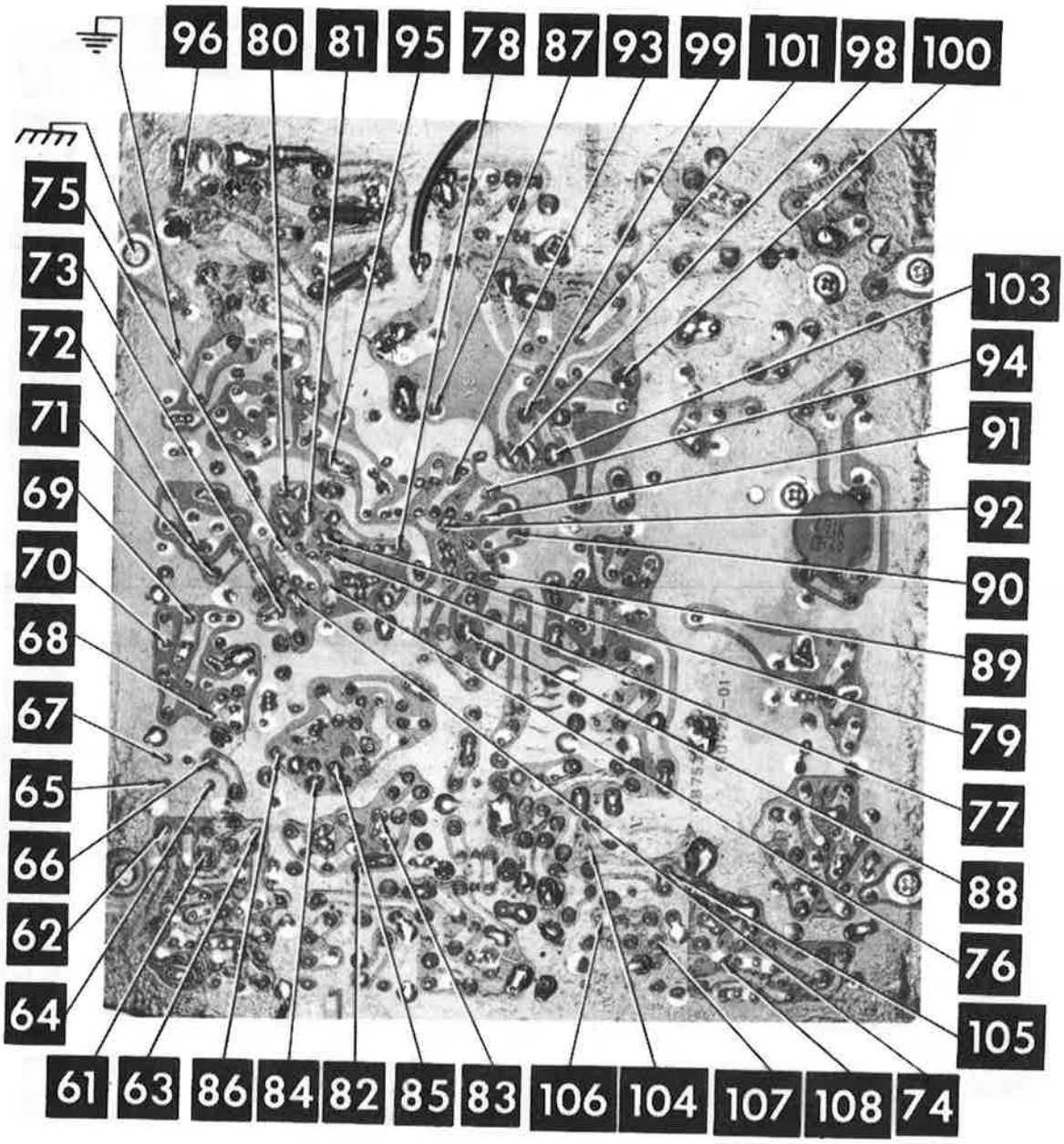
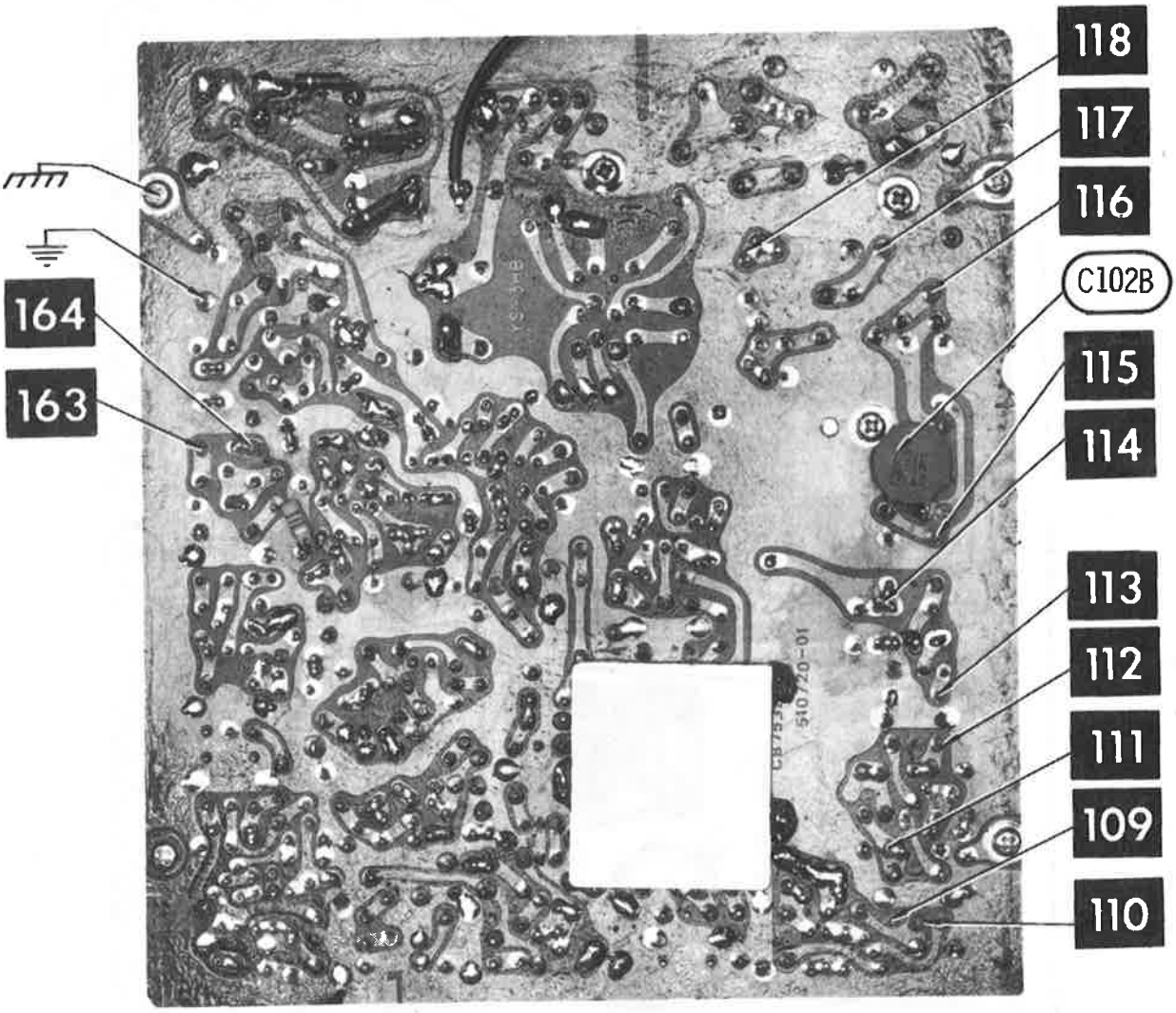


MAIN BOARD



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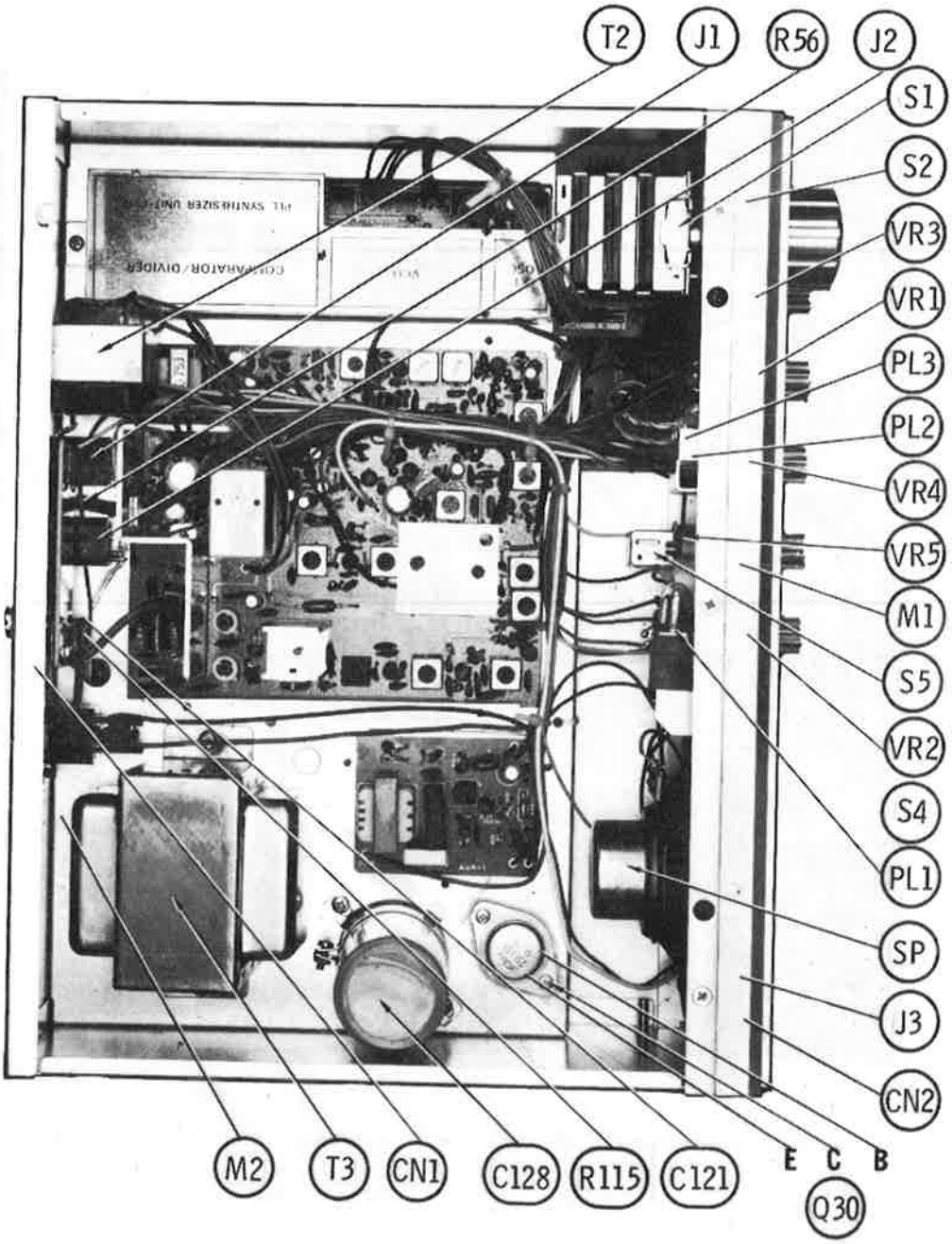
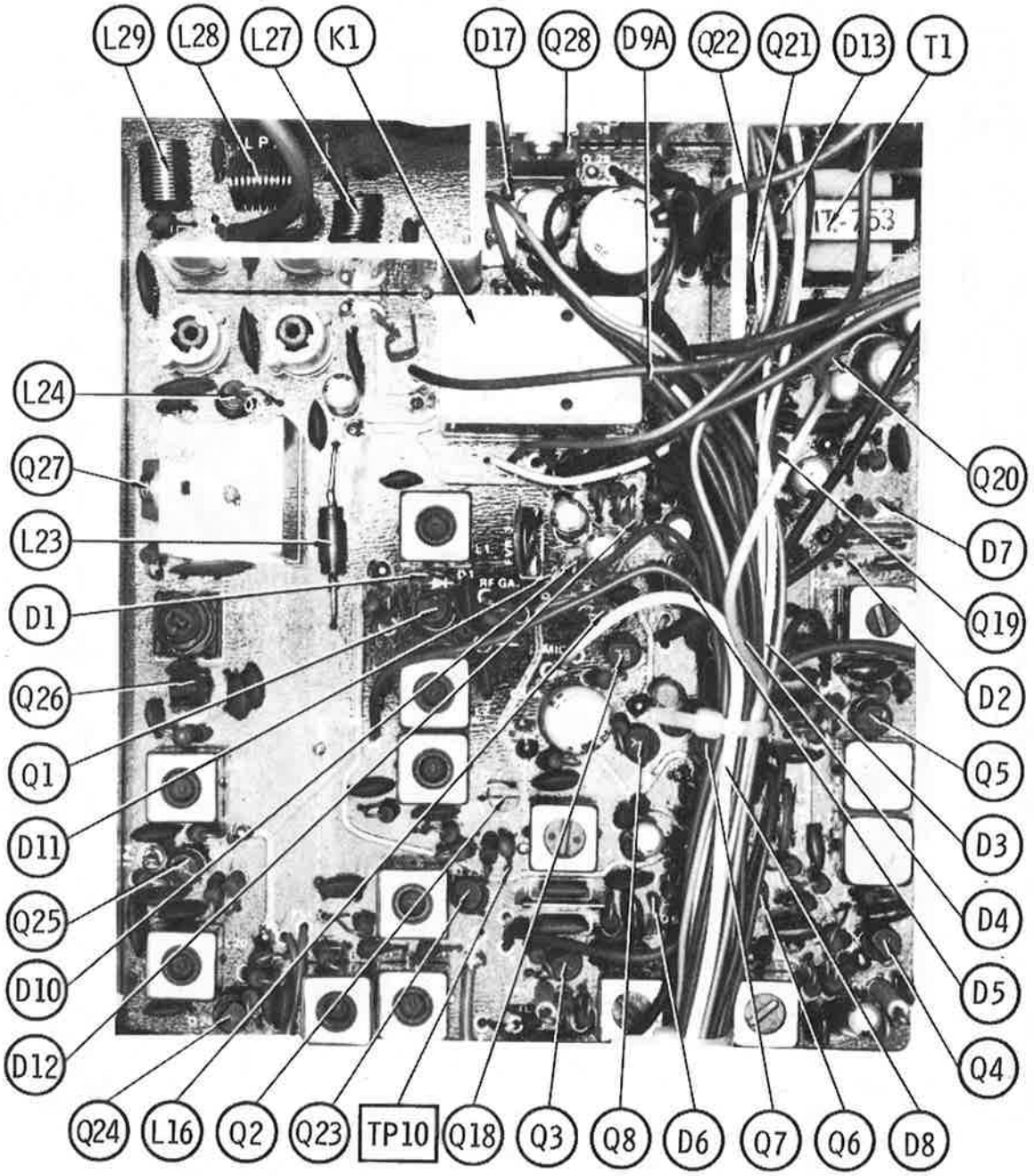
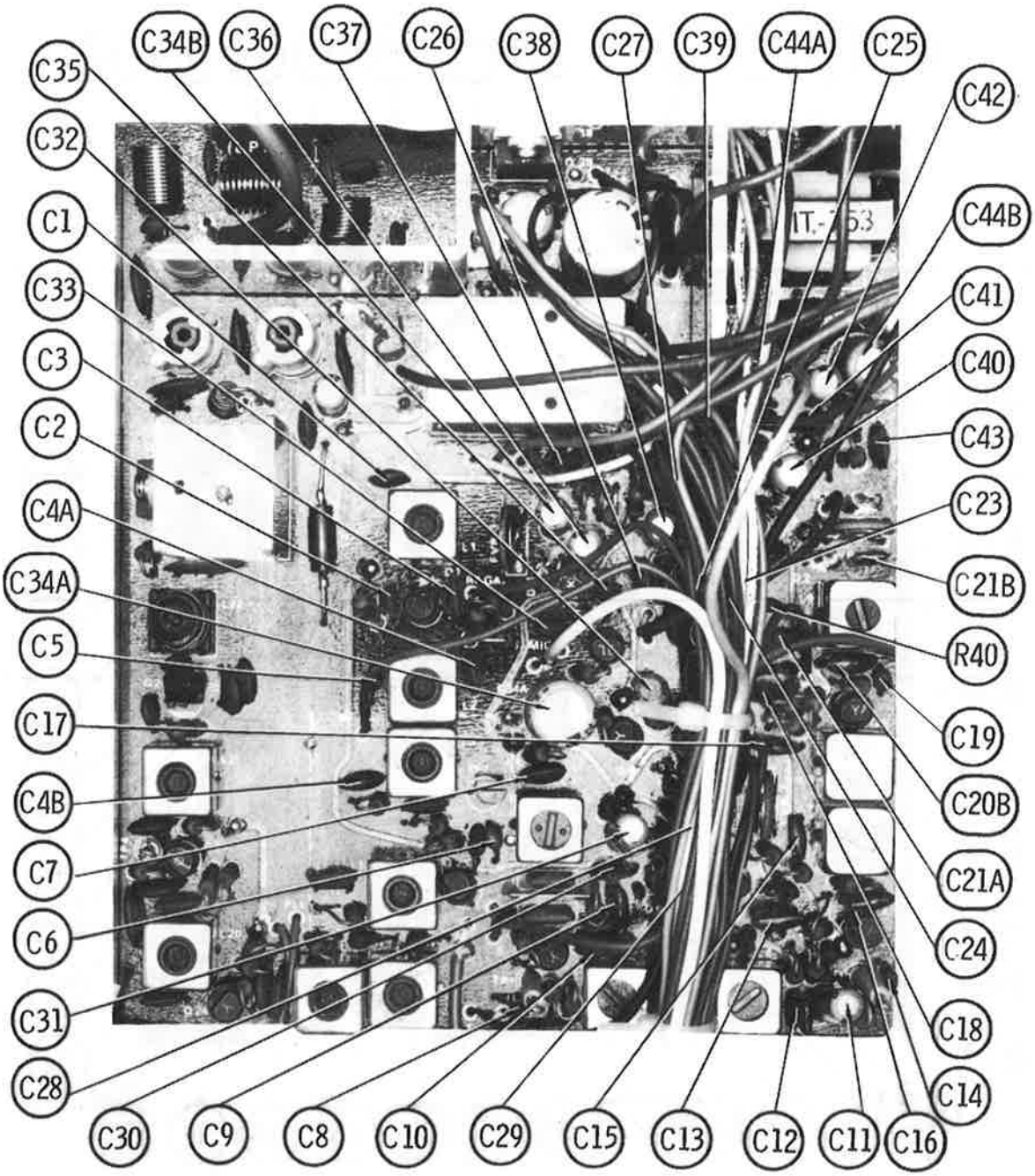

T2
J1
R56
J2
S1
S2
VR3
VR1
PL3
PL2
VR4
VR5
M1
S5
VR2
S4
PL1
SP
J3
CN2
M2
T3
CN1
C128
R115
C121
E
C
B
Q30

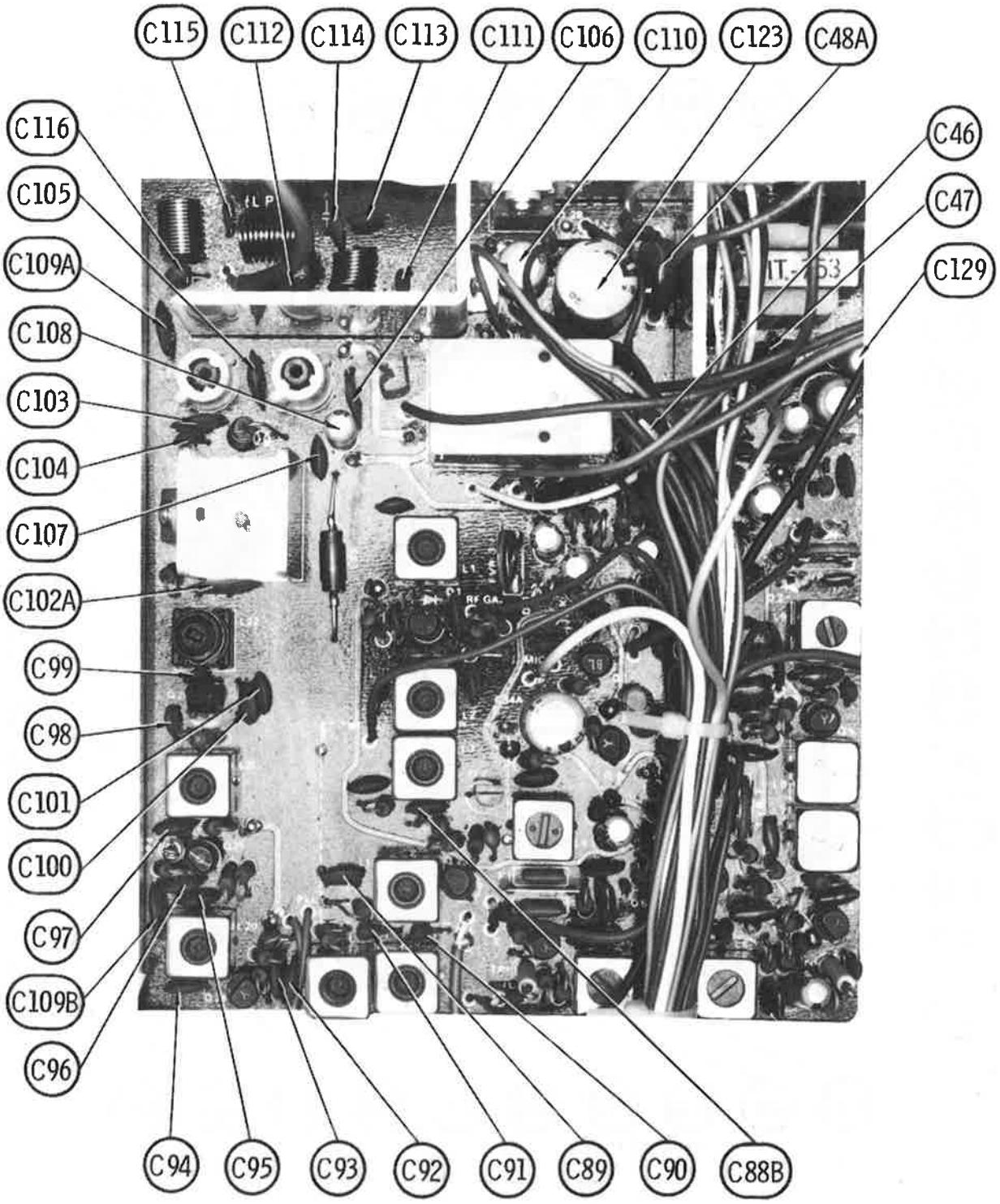
CHASSIS-TOP


L29
L28
L27
K1
D17
Q28
D9A
Q22
Q21
D13
T1
L24
Q27
L23
D1
Q26
Q1
D11
Q25
D10
D12
Q20
D7
Q19
D2
Q5
D3
D4
D5
Q4
Q24
L16
Q2
Q23
TP10
Q18
Q3
Q8
D6
Q7
Q6
D8

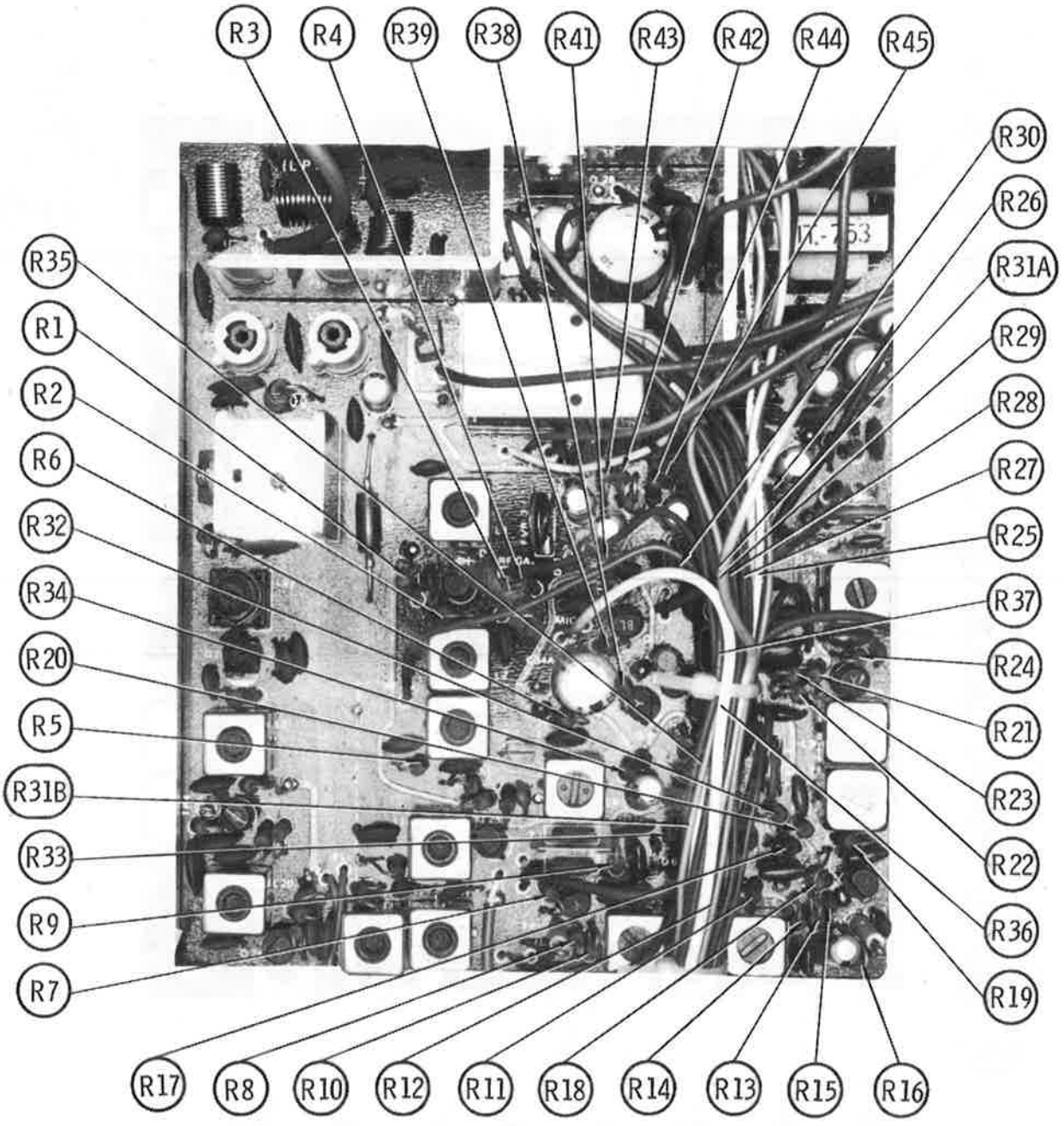
MAIN BOARD


C34B
C36
C37
C26
C38
C27
C39
C44A
C25
C35
C42
C32
C44B
C1
C41
C33
C40
C3
C43
C2
C23
C4A
C21B
C34A
R40
C5
C19
C17
C20B
C4B
C21A
C7
C24
C6
C18
C31
C14
C28
C30
C9
C8
C10
C29
C15
C13
C12
C11
C16

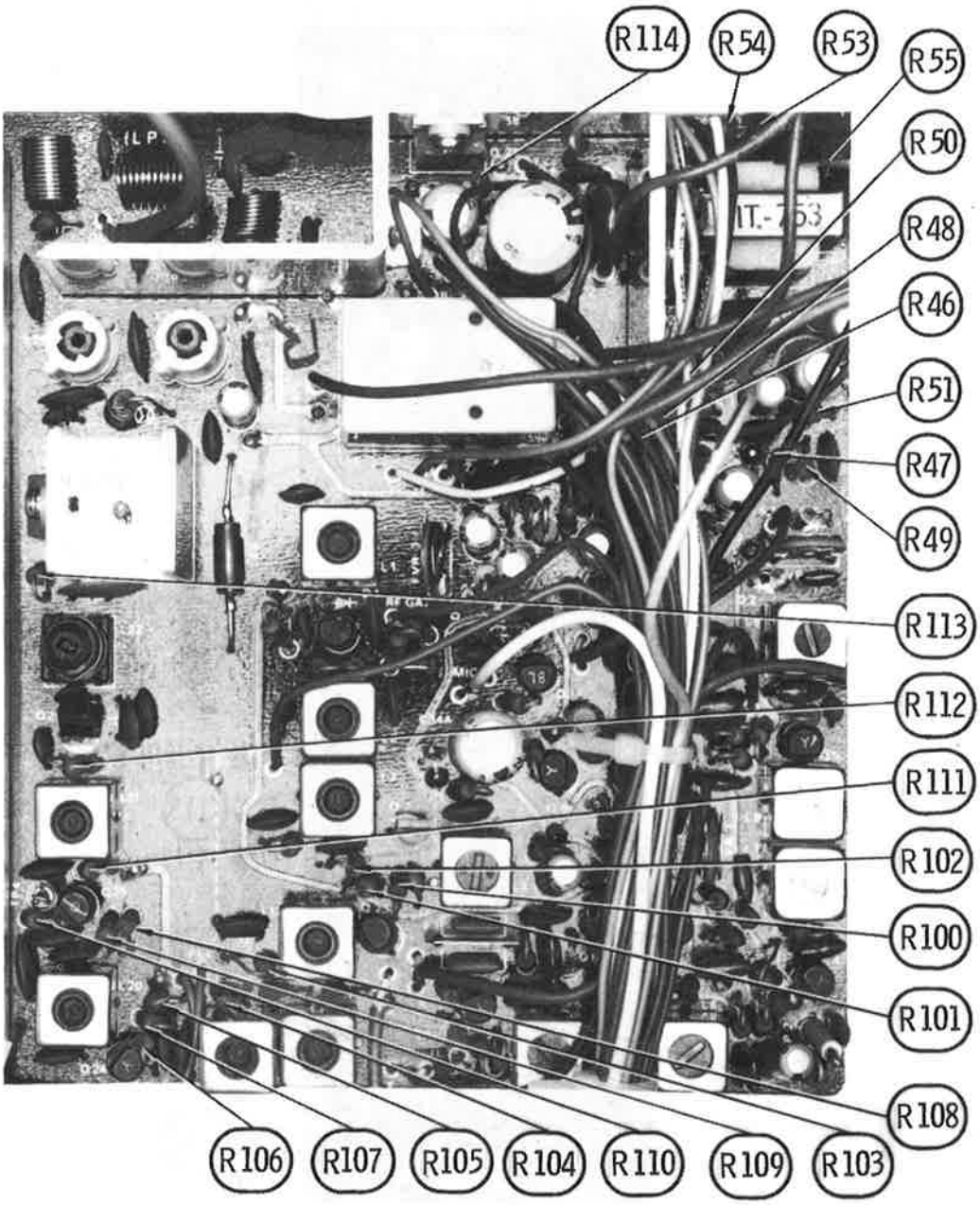
MAIN BOARD


C115
C112
C114
C113
C111
C106
C110
C123
C48A
C116
C105
C109A
C108
C103
C104
C107
C102A
C99
C98
C101
C100
C97
C109B
C96
C46
C47
C129
C94
C95
C93
C92
C91
C89
C90
C88B

MAIN BOARD


R3
R4
R39
R38
R41
R43
R42
R44
R45
R30
R26
R31A
R29
R28
R27
R25
R37
R24
R21
R23
R22
R36
R19
R35
R1
R2
R6
R32
R34
R20
R5
R31B
R33
R9
R7
R17
R8
R10
R12
R11
R18
R14
R13
R15
R16

MAIN BOARD


R114
R54
R53
R55
R50
R48
R46
R51
R47
R49
R113
R112
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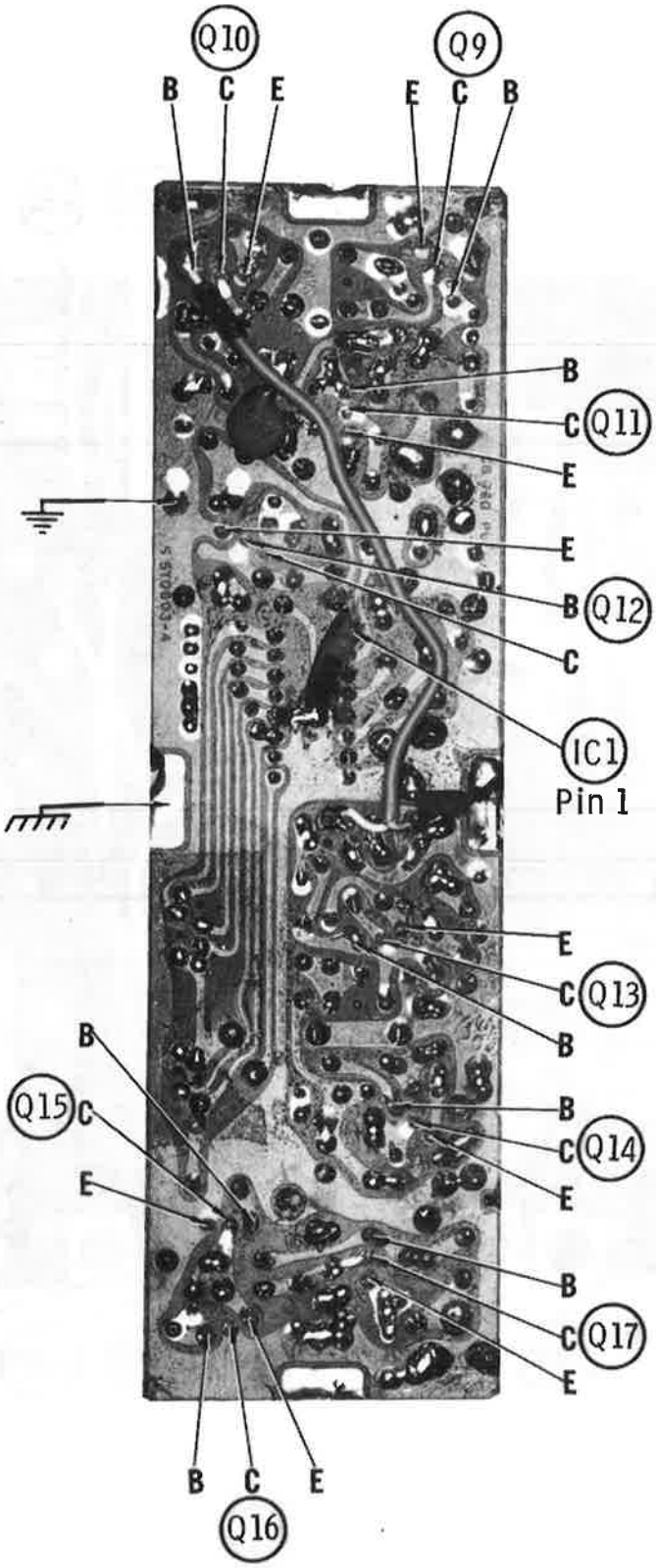
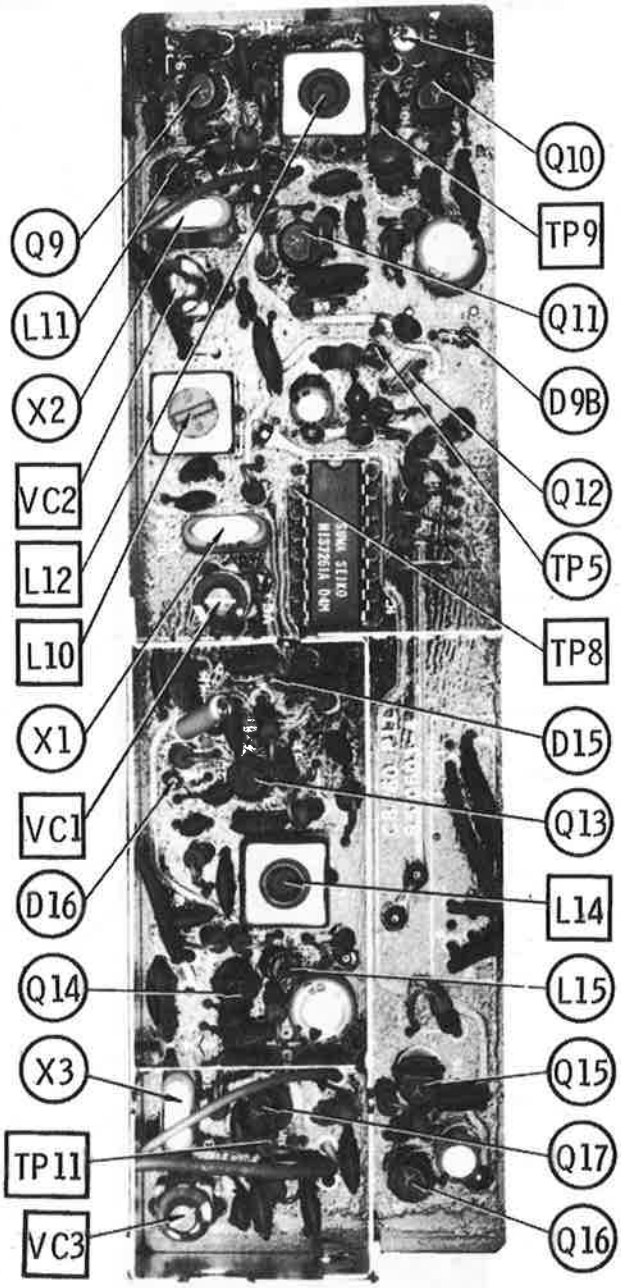
R102
R100
R101
R108
R106
R107
R105
R104
R110
R109
R103

MAIN BOARD


Q10
B C E
Q9
E C B
B
C Q11
E
E
B Q12
C
IC1
Pin 1
E
C Q13
B
B
Q15 C
E
B
C Q14
E
B
C Q17
E
B C E
Q16

PLL BOARD


Q9
L11
X2
VC2
L12
L10
X1
VC1
D16
Q14
X3
TP11
VC3
Q10
TP9
Q11
D9B
Q12
TP5
TP8
D15
Q13
L14
L15
Q15
Q17
Q16

PLL BOARD

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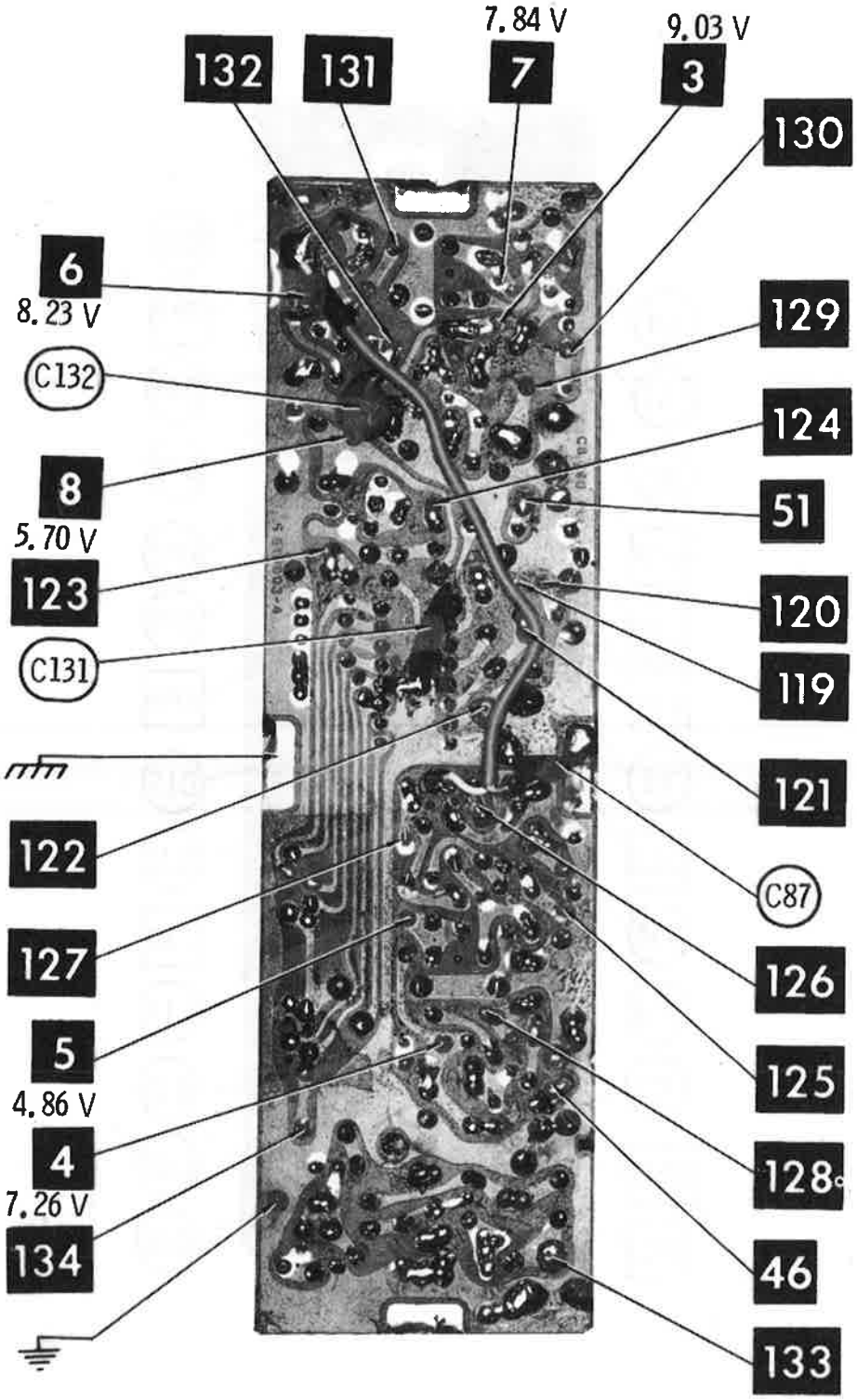

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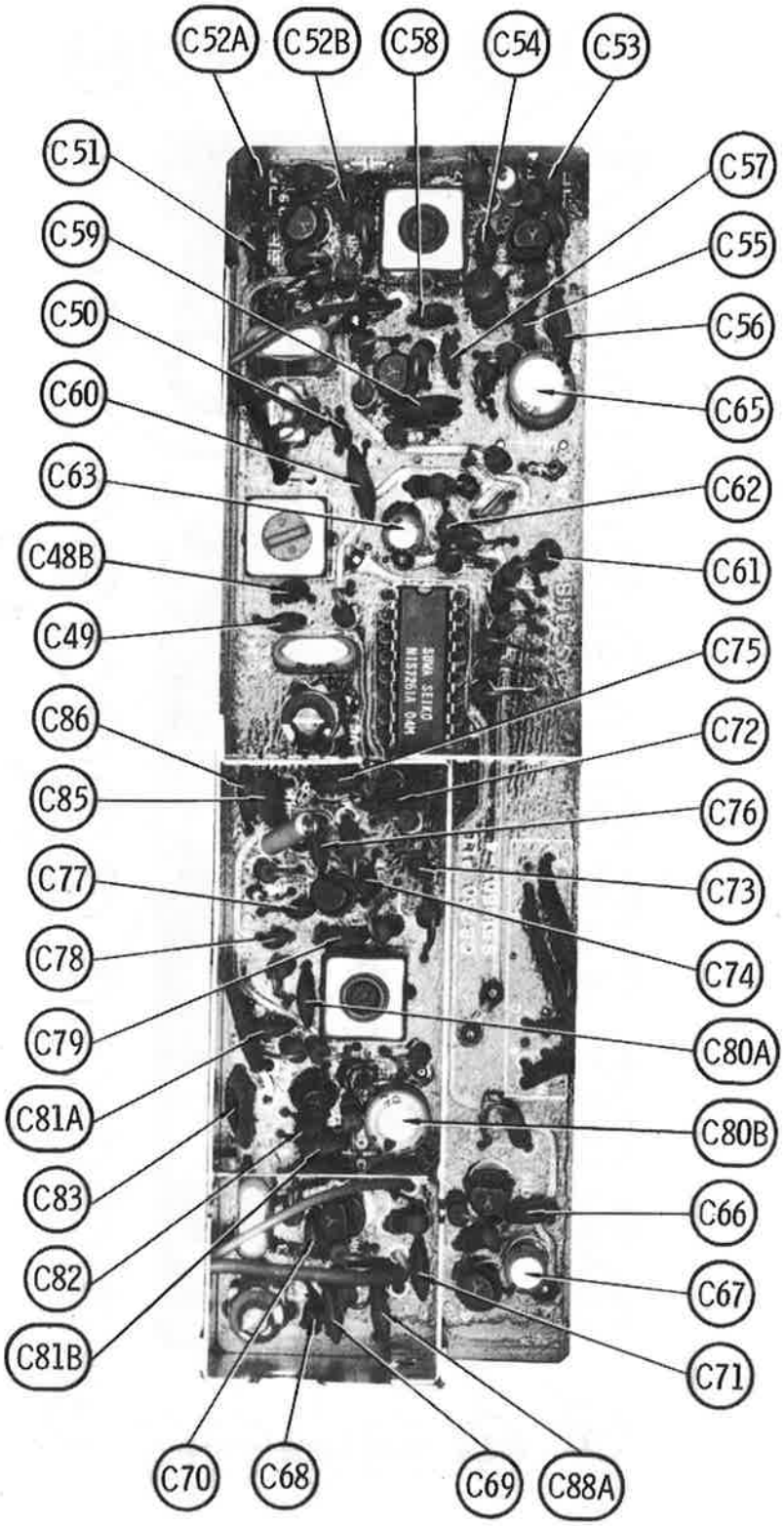
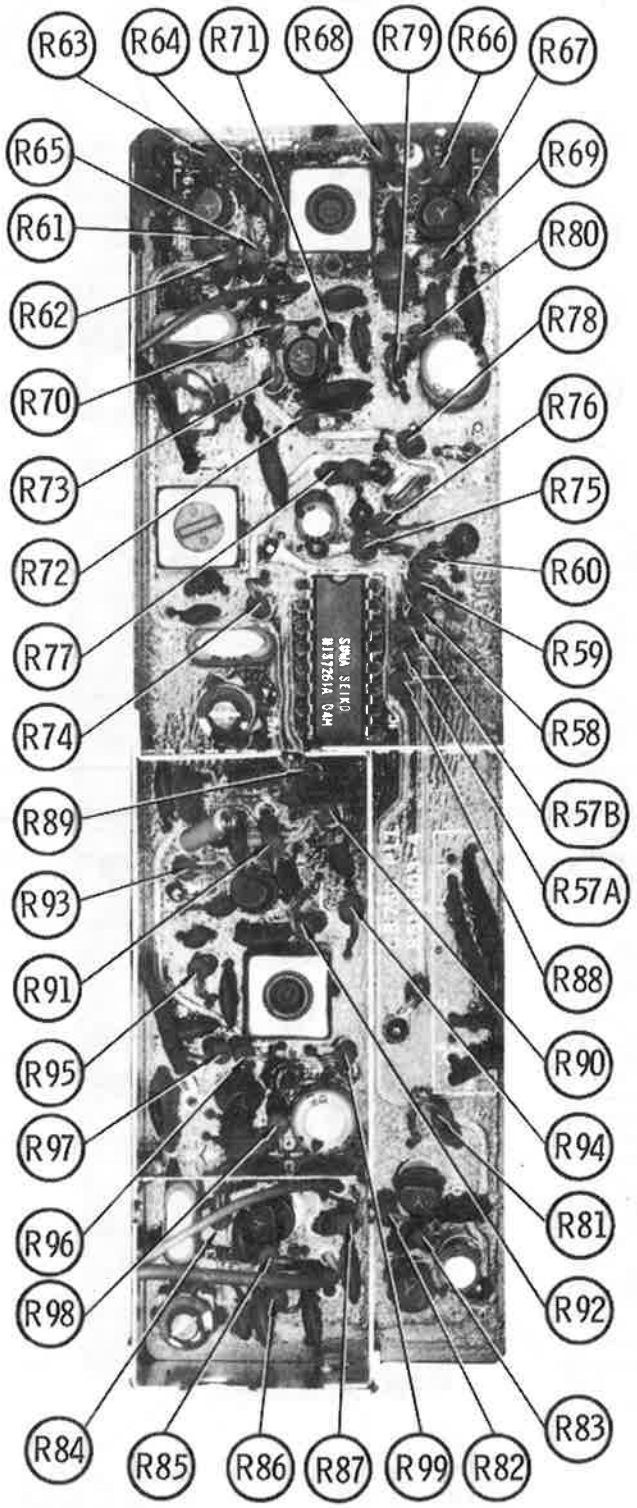
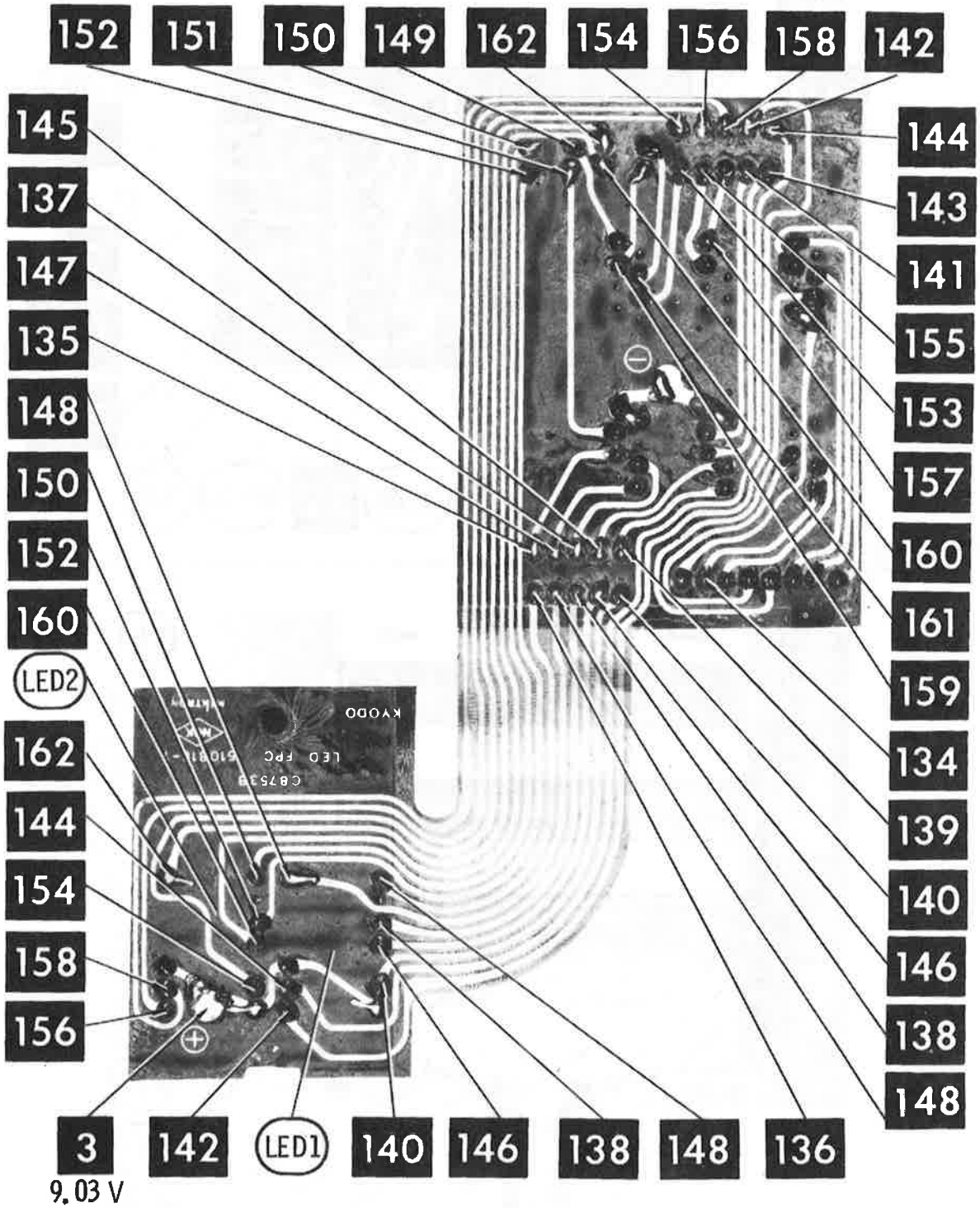

C52A
C52B
C58
C54
C53
C51
C57
C59
C55
C50
C56
C60
C65
C63
C62
C48B
C61
C49
C75
C86
C72
C85
C76
C77
C73
C78
C74
C79
C80A
C81A
C80B
C83
C66
C82
C67
C81B
C71
C70
C68
C69
C88A

PLL BOARD


R63
R64
R71
R68
R79
R66
R67
R65
R69
R61
R80
R62
R78
R70
R76
R73
R75
R72
R60
R77
R59
R74
R58
R89
R57B
R93
R57A
R91
R88
R95
R90
R97
R94
R96
R81
R98
R92
R84
R85
R86
R87
R99
R82
R83

PLL BOARD



CH. SELECTOR & LED BOARD

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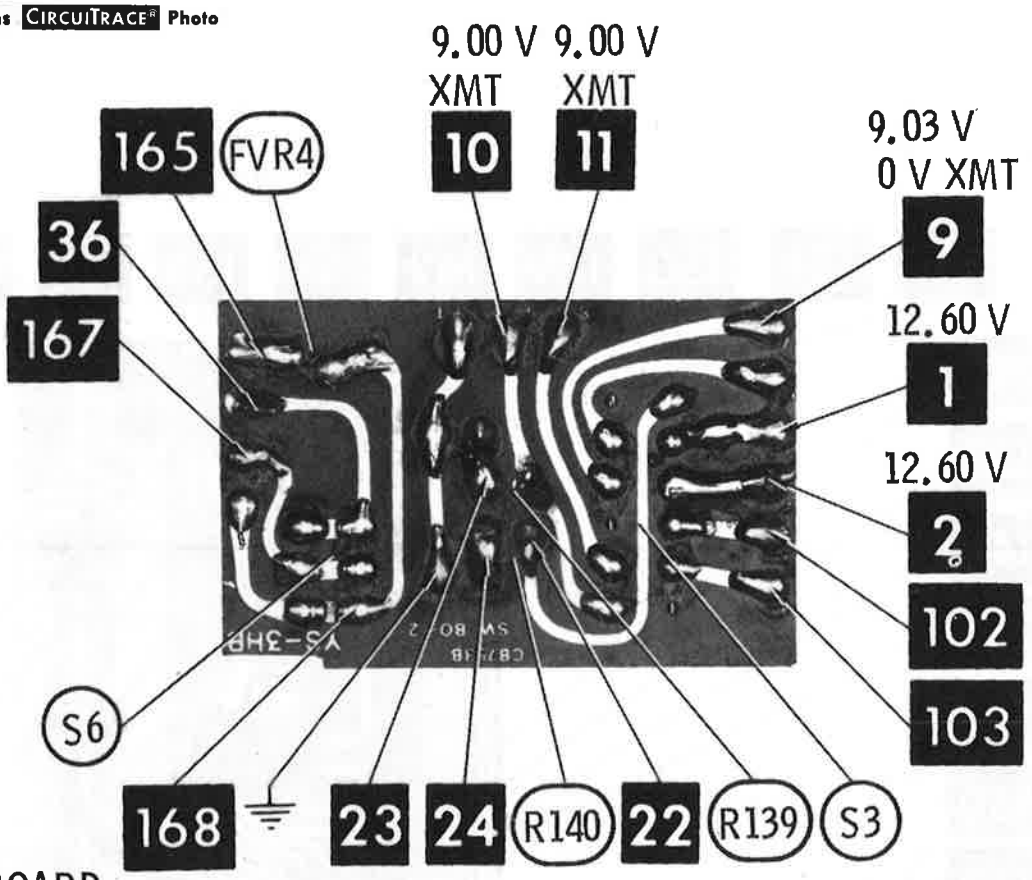
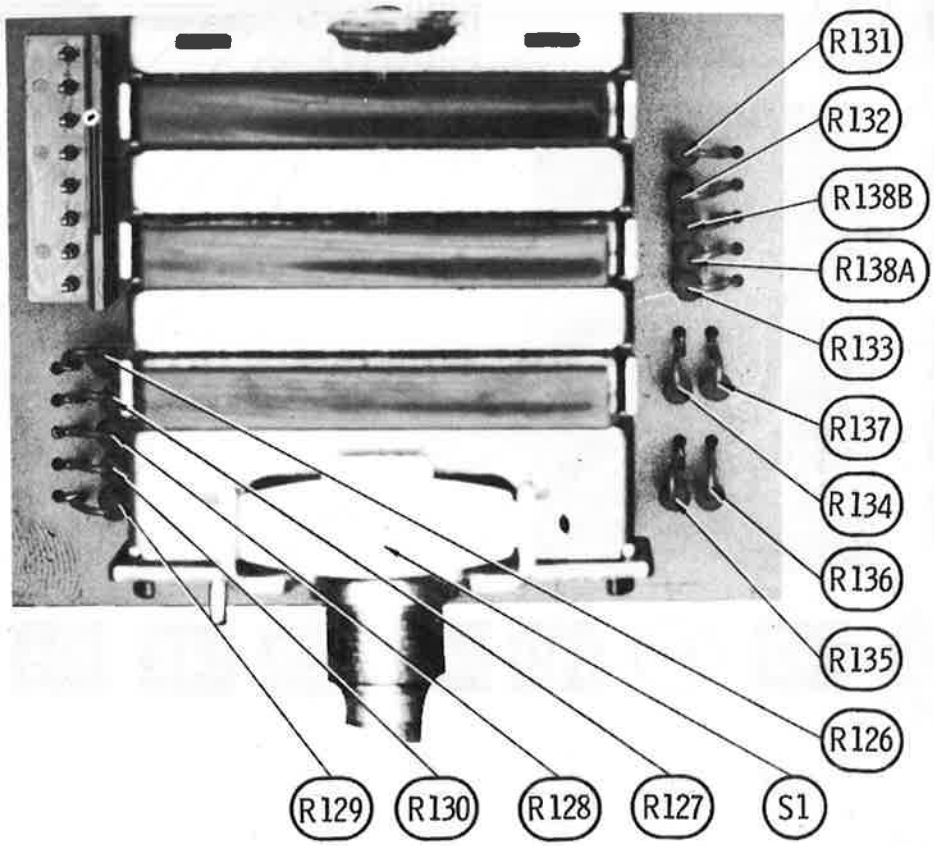


SWITCH BOARD



CH. SELECTOR BOARD

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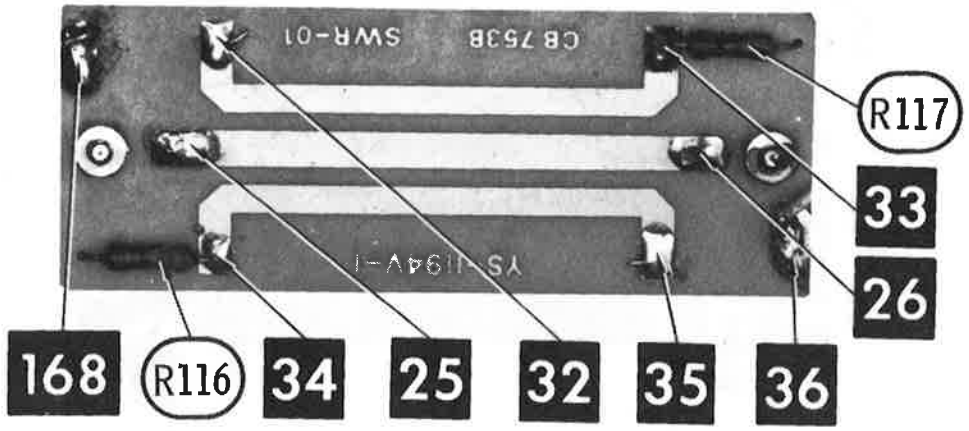

SWR BOARD

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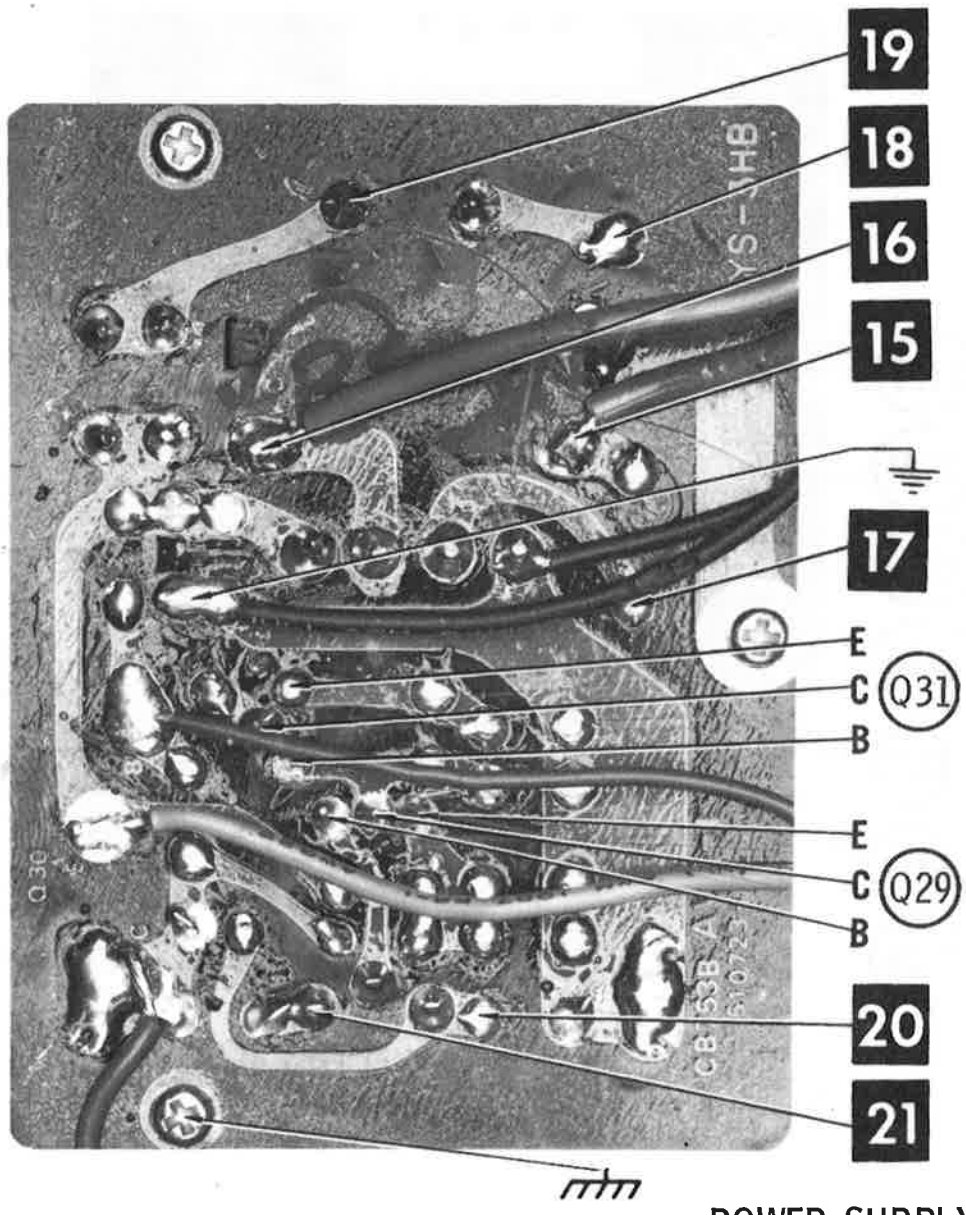
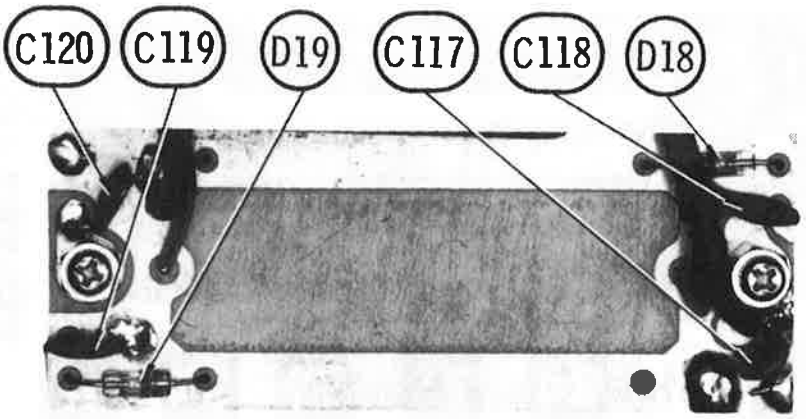
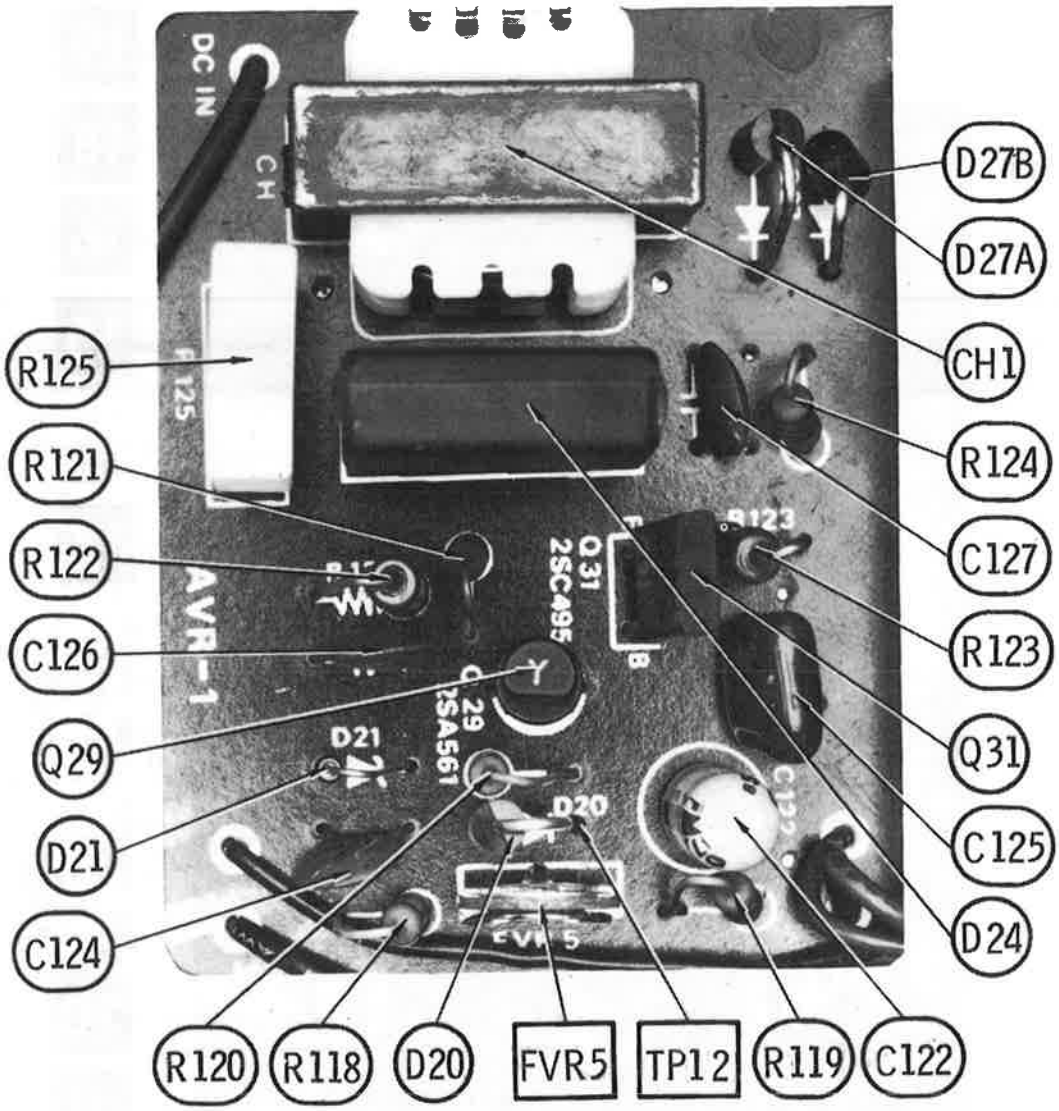


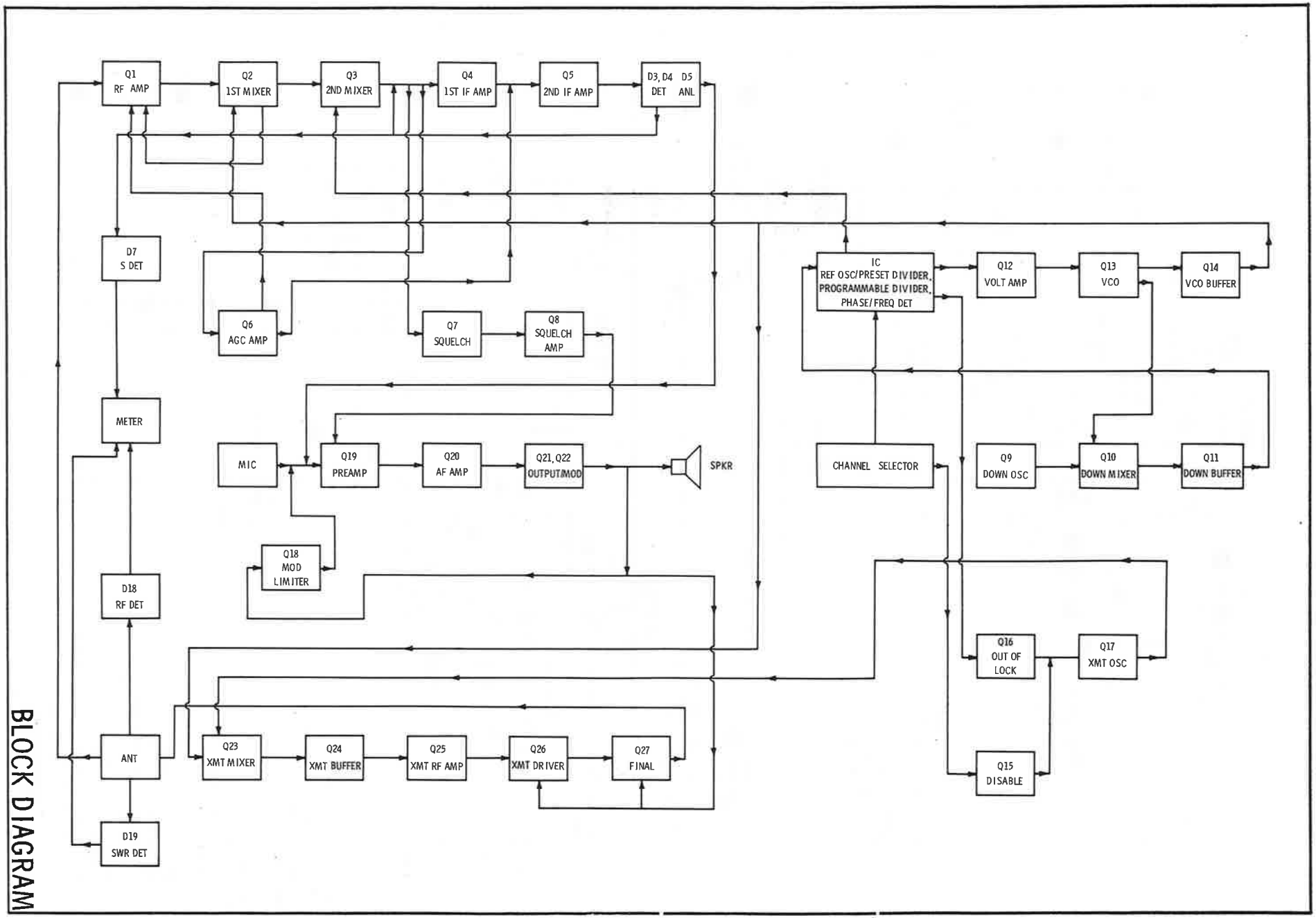
POWER SUPPLY BOARD



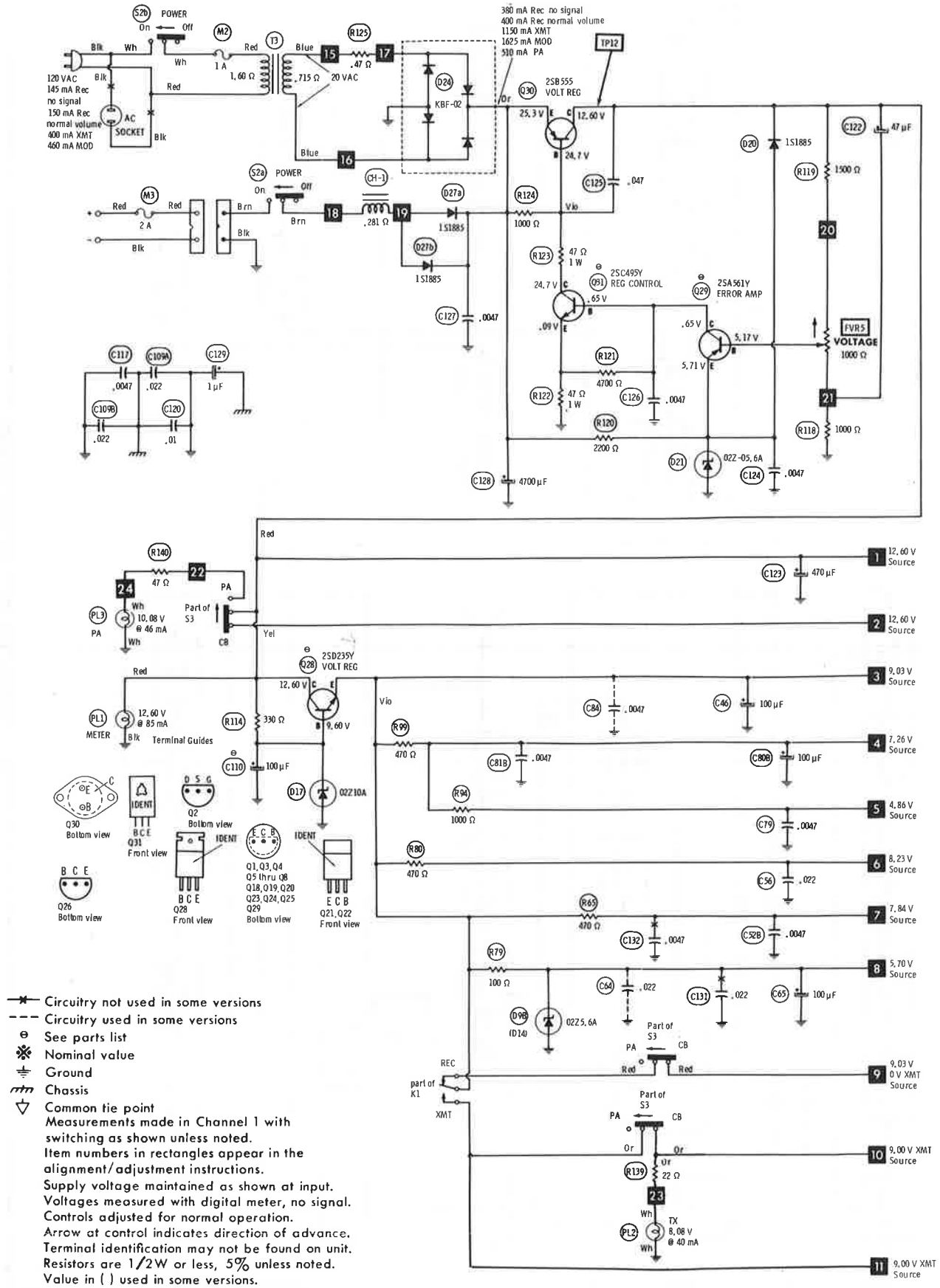
SWR BOARD



POWER SUPPLY BOARD



BLOCK DIAGRAM

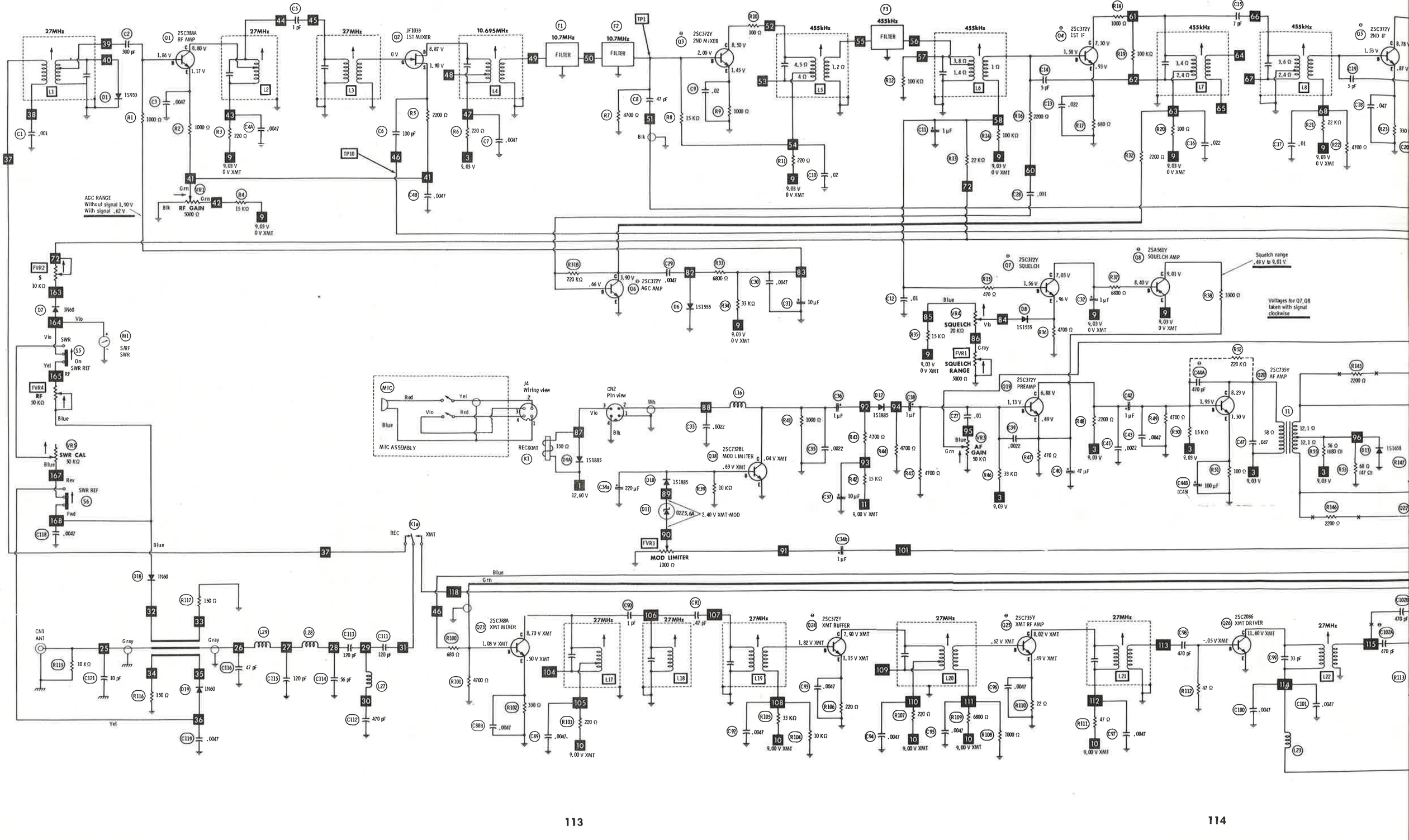


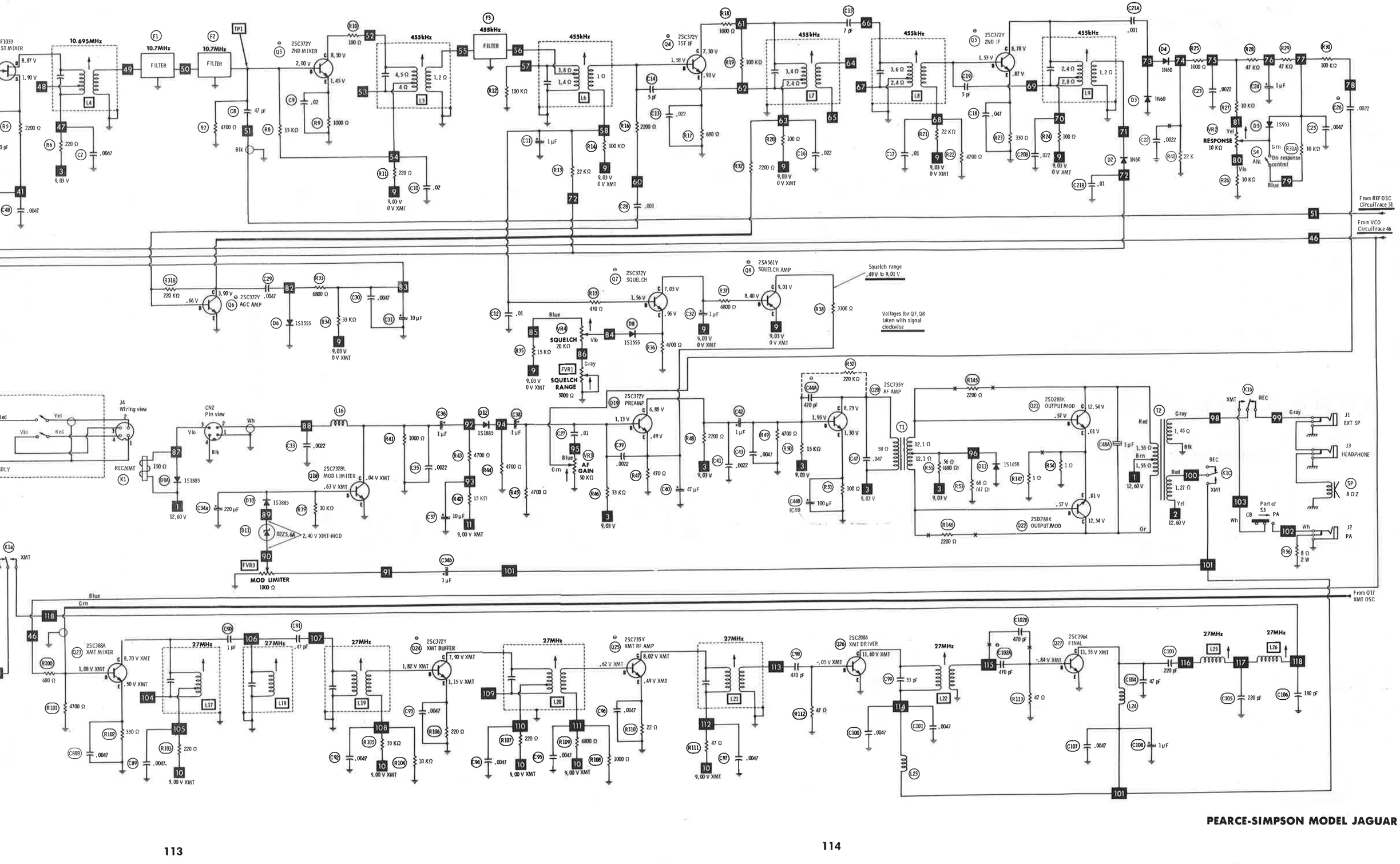
- Circuitry not used in some versions
- Circuitry used in some versions
- ⊖ See parts list
- ※ Nominal value
- Ground
- Chassis
- Common tie point

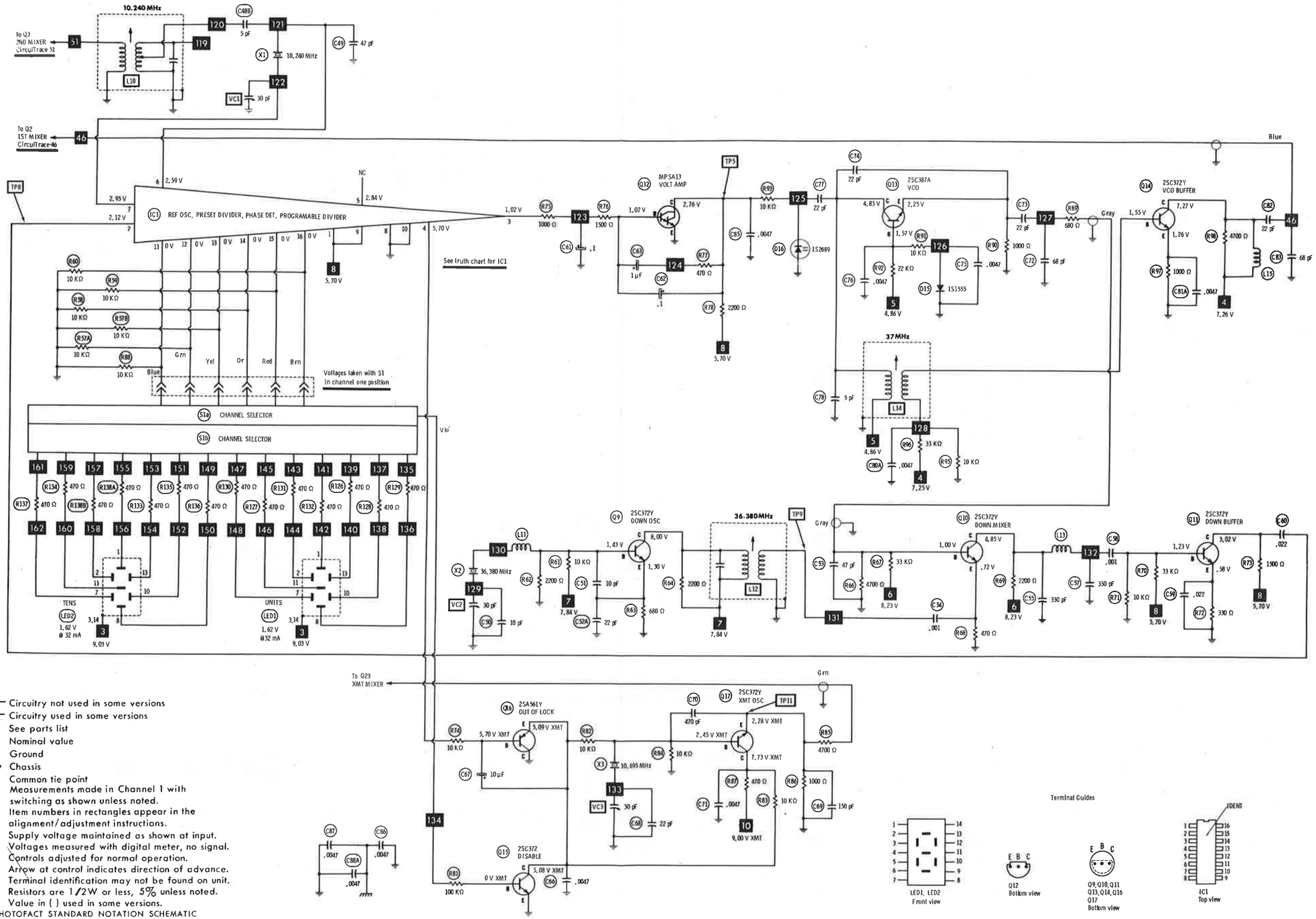
Measurements made in Channel 1 with switching as shown unless noted.
Item numbers in rectangles appear in the alignment/adjustment instructions.
Supply voltage maintained as shown at input.
Voltages measured with digital meter, no signal.
Controls adjusted for normal operation.
Arrow at control indicates 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 PHOTOFACT STANDARD NOTATION SCHEMATIC

WITH CIRCUITRACE®


27MHz
2SC388A RF AMP
JF1033 1ST MIXER
10.695MHz
10.7MHz FILTER
2SC372Y 2ND MIXER
455kHz
455kHz FILTER
2SC372Y 1ST IF
2SC372Y 2ND IF
AGC RANGE
Without signal 1.90 V
With signal .62 V
RF GAIN 5000 Ω
2SC372Y AGC AMP
2SA561Y SQUELCH AMP
Squelch range .49 V to 9.01 V
Voltages for Q7, Q8 taken with signal clockwise
2SC372Y SQUELCH
SQUELCH 20 KΩ
SQUELCH RANGE 5000 Ω
2SC372Y PREAMP
AF GAIN 50 KΩ
2SC735Y AF AMP
FVR2 S 10 KΩ
1N60
SWR CAL 50 KΩ
SWR REF
FVR4 RF 50 KΩ
S/RF SWR
MIC ASSEMBLY
J4 Wiring view
CN2 Pin view
REC/XMT
2SC732BL MOD LIMITER
0.63 V XMT
0223, 6A
2.40 V XMT-MOD
FVR3 MOD LIMITER 1000 Ω
REC
XMT
CN1 ANT
2SC388A XMT MIXER
2SC372Y XMT BUFFER
2SC735Y XMT RF AMP
2SC2086 XMT DRIVER
Blue
Gray
Yel
Grn
Red
Wht
Blk
Vio


10.695MHz
10.7MHz
F1
FILTER
10.7MHz
F2
FILTER
TP1
Blk
2SC372Y
2ND MIXER
455kHz
455kHz
F3
455kHz
FILTER
2SC372Y
1ST IF
455kHz
455kHz
2SC372Y
2ND IF
455kHz
1S1033
ST MIXER
8.87 V
1.90 V
2200 Ω
.0047
220 Ω
.0047
9.03 V
47 pF
4700 Ω
15 KΩ
.02
1000 Ω
100 Ω
4.5 Ω
4 Ω
1.2 Ω
220 Ω
.02
9.03 V
0 V XMT
100 KΩ
3.8 Ω
1.4 Ω
1 Ω
1 µF
22 KΩ
100 KΩ
9.03 V
0 V XMT
1000 Ω
100 KΩ
7.30 V
1.58 V
.93 V
5 pF
.022
680 Ω
2200 Ω
9.03 V
0 V XMT
7 pF
3.4 Ω
2.4 Ω
100 Ω
.022
2200 Ω
9.03 V
0 V XMT
3.6 Ω
2.4 Ω
22 K Ω
.01
4700 Ω
9.03 V
0 V XMT
.001
8.78 V
1.53 V
.87 V
5 pF
.047
330 Ω
.022
100 Ω
9.03 V
0 V XMT
2.4 Ω
2.8 Ω
1.2 Ω
.01
1N60
1N60
1N60
1000 Ω
.0022
22 K
47 KΩ
10 KΩ
1 µF
RESPONSE
10 KΩ
Yel
Grn
Blue
1S953
S4
ANL
On response control
10 KΩ
Vlo
10 KΩ
.0022
.0047
From REF OSC
CircuitTrace 51
From VCO
CircuitTrace 46
2SC1815Y
AGC AMP
3.90 V
.66 V
220 KΩ
.0047
6800 Ω
33 KΩ
1S1555
.0047
10 µF
9.03 V
0 V XMT
2SC372Y
SQUELCH
7.05 V
1.56 V
.96 V
470 Ω
1 µF
9.03 V
0 V XMT
2SA561Y
SQUELCH AMP
9.01 V
8.40 V
6800 Ω
9.03 V
0 V XMT
3300 Ω
Squelch range
.49 V to 9.01 V
Voltages for Q7, Q8
taken with signal
clockwise
.01
Blue
SQUELCH
20 KΩ
Vlo
15 KΩ
9.03 V
0 V XMT
1S1555
4700 Ω
Gray
SQUELCH
RANGE
5000 Ω
2SC372Y
PREAMP
6.88 V
1.13 V
.49 V
.01
Grn
AF
GAIN
50 KΩ
1000 Ω
1 µF
.0022
4700 Ω
33 KΩ
470 Ω
47 µF
2200 Ω
1 µF
.0047
4700 Ω
15 KΩ
100 µF
220 KΩ
2SC735Y
AF AMP
8.23 V
1.95 V
1.30 V
470 pF
58 Ω
.047
3
9.03 V
2SD288K
OUTPUTMOD
12.54 V
.57 V
.01 V
12.1 Ω
12.1 Ω
56 Ω
(680 Ω)
68 Ω
(47 Ω)
1S1658
1 Ω
1 Ω
1 µF
1.55 Ω
Brn
1.55 Ω
12.60 V
Red
1.27 Ω
Yel
2
12.60 V
Gray
1.46 Ω
Blk
Red
1.27 Ω
Yel
2
12.60 V
2200 Ω
2200 Ω
XMT
REC
REC
XMT
J1
EXT SP
J3
HEADPHONE
8 Ω Z
J2
PA
Part of
S3
CB
PA
8 Ω
2 W
J4
Wiring view
Yel
Red
Vio
Red
CN2
Pin view
Vio
Blk
Wh
RECXMT
150 Ω
1S1885
12.60 V
2SC732BL
MOD LIMITER
.04 V XMT
.63 V XMT
220 µF
1S1885
10 KΩ
2.40 V XMT-MOD
MOD LIMITER
1000 Ω
1 µF
XMT
Blue
Grn
From Q17
XMT OSC
2SC388A
XMT MIXER
8.70 V XMT
1.08 V XMT
.50 V XMT
680 Ω
4700 Ω
330 Ω
.0047
220 Ω
.0047
9.00 V XMT
27MHz
1 pF
.47 pF
27MHz
27MHz
2SC372Y
XMT BUFFER
7.90 V XMT
1.82 V XMT
1.15 V XMT
.0047
220 Ω
.0047
9.00 V XMT
27MHz
2SC735Y
XMT RF AMP
8.02 V XMT
.62 V XMT
.49 V XMT
.0047
22 Ω
.0047
9.00 V XMT
27MHz
47 Ω
.0047
9.00 V XMT
2SC2086
XMT DRIVER
11.60 V XMT
-.05 V XMT
470 pF
47 Ω
27MHz
33 pF
.0047
27MHz
470 pF
2SC1964
FINAL
11.55 V XMT
-.84 V XMT
47 Ω
27MHz
220 pF
47 pF
220 pF
27MHz
180 pF
1 µF



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- Circuitry used in some versions
- See parts list
- Nominal value
- Ground
- Chassis
- Common tie point

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Value in ( ) used in some versions.

A PHOTOFACT STANDARD NOTATION SCHEMATIC WITH CIRCUITRACE®

PARTS LIST AND DES

(When ordering parts, state Model,

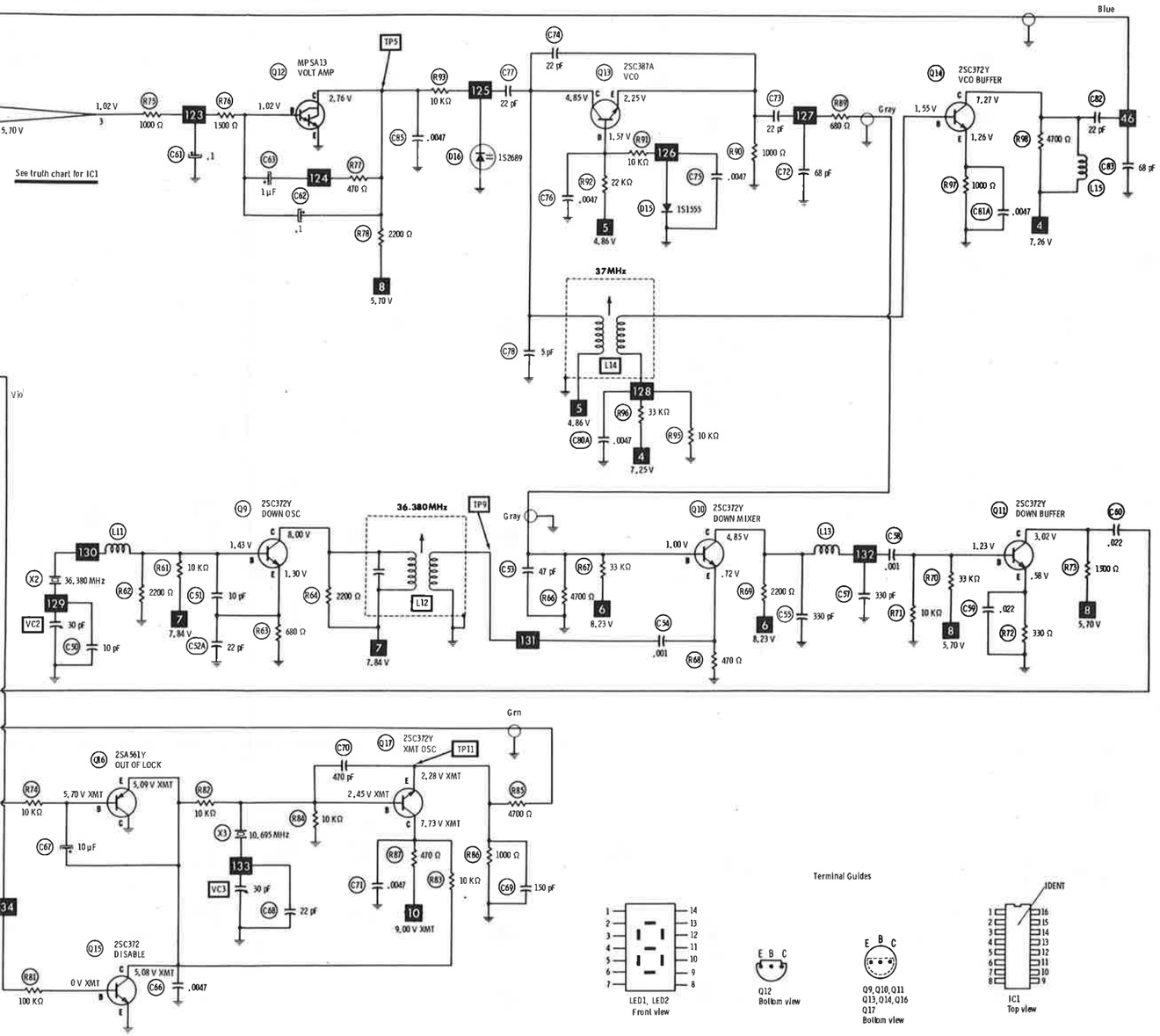
WIRING DATA

General-use Hook-up Wire (availa
Shielded Hook-up Wire (spiral wr
(braided)
Speaker Cable (available in 4 co
Bonding Strap . . . . . .
AC Power Cord . . . . . .

SEMICONDUCTORS (Select repl

ITEM No.	TYPE No.	MFGR. PART No.	GENERAL ELECTRIC PART No.
D1	1S953		GE-300
D2	1N60		1N60
D3	1N60		1N60
D4	1N60		1N60
D5	1S953		GE-300
D6	1S1555		GE-300
D7	1N60		1N60
D8	1S1555		GE-300
D9A	1S1885		GE-504A
D9B	02Z-5.6A		GEZD-5.6
(D14)	02Z-5.6A		GEZD-5.6
D10	1S1885		GE-504A
D11	02Z-5.6A		GEZD-5.6
D12	1S1885		GE-504A
D13	1S1658		GE-90
	M8513		
D15	1S1555		GE-300
D16	1S2689		GE-90
D17	02Z-10A		GEZD-10
D18	1N60		1N60
D19	1N60		1N60
D20	1S1885		GE-504A
D21	02Z-5.6A		GEZD-5.6
D24	KBF-02		GE-510
D27A	1S1885		GE-504A
D27B	1S1885		GE-504A
IC1	NIS7261A		
Q1	2SC388A		GE-61*
Q2	JF1033		GE-FET-2
Q3	2SC372Y		GE-61*
	2SC372		GE-61*
Q4	2SC372Y		GE-61*
	2SC372		GE-61*
Q5	2SC372Y		GE-61*
	2SC372		GE-61*
Q6	2SC372Y		GE-61*
	2SC372		GE-61*
Q7	2SC372Y		GE-61*
	2SC372		GE-61*
Q8	2SA561Y		GE-82*
	2SA561		GE-82*
Q9	2SC372Y		GE-61*
	2SC372		GE-61*
Q10	2SC372Y		GE-61*
	2SC372		GE-61*
Q11	2SC372Y		GE-61*
	2SC372		GE-61*
Q12	MPS-A13		GE-64
Q13	2SC387A		GE-214
Q14	2SC372Y		GE-61*
	2SC372		GE-61*
Q15	2SC372Y		GE-61*
	2SC372		GE-61*
Q16	2SA561Y		GE-82*
	2SA561		GE-82*
Q17	2SC372Y		GE-61*
	2SC372		GE-61*
Q18	2SC732BL		GE-62
	2SC372		GE-61*
Q19	2SC372Y		GE-61*
	2SC372		GE-61*
Q20	2SC735Y		GE-210*
	2SC735		GE-210*
Q21	2SD288K		GE-66
	2SD235		GE-66
Q22	2SD288K		GE-66
	2SD235		GE-66
Q23	2SC388A		GE-61*
Q24	2SC372Y		GE-61*
	2SC372		GE-61*
Q25	2SC735Y		GE-210*
	2SC735		GE-210*
Q26	2SC2086		GE-47*
Q27	2SC1964		GE-215
Q28	2SD235Y		GE-66
	2SD235		GE-66
Q29	2SA561Y		GE-82*
	2SA561		GE-82*
Q30	2SB555		GE-263
Q31	2SC495Y		GE-270
	2SC495		GE-270

* Lead co



PARTS LIST AND DESCRIPTION

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

WIRING DATA

General-use Hook-up Wire (available in 5 colors)	BELDEN No. 8523	Coiled Microphone Cable	
Shielded Hook-up Wire (spiral wrapped)	BELDEN No. 8421	3-conductor (1 shielded) 23AWG	BELDEN No. 9471 (5')
(braided)	BELDEN No. 8401		BELDEN No. 8497 (6')
Speaker Cable (available in 4 colors)	BELDEN No. 8782		BELDEN No. 9472 (7-1/2')
Bonding Strap	BELDEN No. 8672	28AWG	BELDEN No. 9466 (6')
AC Power Cord (6')	BELDEN No. 17106	31AWG	BELDEN No. 9468 (10')
(9')	BELDEN No. 17109	4-conductor (unshielded) 23AWG	BELDEN No. 8415 (6')
		5-conductor (1 shielded) 28AWG	BELDEN No. 9467 (6')
			BELDEN No. 9465 (7-1/2')

SEMICONDUCTORS (Select replacement transistor for best results)

ITEM No.	TYPE No.	MFGR. PART No.	REPLACEMENT DATA									
			GENERAL ELECTRIC PART No.	MALLORY PART No.	MOTOROLA PART No.	RAYTHEON PART No.	RCA PART No.	SPRAGUE PART No.	SYLVANIA PART No.	THORDARSON PART No.	WORKMAN PART No.	ZENITH PART No.
D1	1S953		GE-300	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG177		WEP1062	
D2	1N60		1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	1N60	WEP134	ZEN-430
D3	1N60		1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	1N60	WEP134	ZEN-430
D4	1N60		1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	1N60	WEP134	ZEN-430
D5	1S953		GE-300	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG177		WEP1062	
D6	1S1555		GE-300	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG177		WEP1062	
D7	1N60		1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	1N60	WEP134	ZEN-430
D8	1S1555		GE-300	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG177		WEP1062	
D9A	1S1885		GE-504A	PTC201	HEPR0052	REN 116	SK3030	RT-213	ECG116	1N4004	WEP156	212-76-02
D9B	02Z-5.6A		GEZD-5.6	ZB5.6B		REN 136	SK3057	RT-236	ECG136A	1N4734A	WEP1104	
(D14)	02Z-5.6A		GEZD-5.6	ZB5.6B		REN 136	SK3057	RT-236	ECG136A	1N4734A	WEP1104	
D10	1S1885		GE-504A	PTC201	HEPR0052	REN 116	SK3030	RT-213	ECG116	1N4004	WEP156	212-76-02
D11	02Z-5.6A		GEZD-5.6	ZB5.6B		REN 136	SK3057	RT-236	ECG136A	1N4734A	WEP1104	
D12	1S1885		GE-504A	PTC201	HEPR0052	REN 116	SK3030	RT-213	ECG116	1N4004	WEP156	212-76-02
D13	1S1658		GE-90		HEPR2503	REN 614		RT-262	ECG614		WEP200	ZEN-453
	M8513			PTC301		REN 601	SK3463		ECG601			
D15	1S1555		GE-300	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG177		WEP1062	
D16	1S2689		GE-90	PTC311	HEPR2503	REN 614		RT-262	ECG614		WEP200	ZEN-453
D17	02Z-10A		GEZD-10	ZB10A	HEPZ0413	REN 140	SK3061	RT-241	ECG140	1N4740A	WEP1110	
D18	1N60		1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	1N60	WEP134	ZEN-430
D19	1N60		1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	1N60	WEP134	ZEN-430
D20	1S1885		GE-504A	PTC201	HEPR0052	REN 116	SK3030	RT-213	ECG116	1N4004	WEP156	212-76-02
D21	02Z-5.6A		GEZD-5.6	ZB5.6B		REN 136	SK3057	RT-236	ECG136A	1N4734A	WEP1104	
D24	KBF-02		GE-510	PTC205	HEPR0170	REN 125	SK3081	RT-201	ECG125		WEP170	
D27A	1S1885		GE-504A	PTC201	HEPR0052	REN 116	SK3030	RT-213	ECG116	1N4004	WEP156	212-76-02
D27B	1S1885		GE-504A	PTC201	HEPR0052	REN 116	SK3030	RT-213	ECG116	1N4004	WEP156	212-76-02
IC1	NIS7261A											
Q1	2SC388A		GE-61*	PTC101*	HEPS0020*	REN 161	SK3018*	RT-308	ECG233*	2SC735	WEP535	ZEN-127
Q2	JF1033		GE-FET-2	PTC161	HEPF0021	REN 132	SK3448	RT-175	ECG312			ZEN-123
Q3	2SC372Y		GE-61*	PTC121*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	2SC372	WEP372	121-Z9000*
	2SC372		GE-61*	PTC121*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	2SC372	WEP372	121-Z9000*
Q4	2SC372Y		GE-61*	PTC121*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	2SC372	WEP372	121-Z9000*
	2SC372		GE-61*	PTC121*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	2SC372	WEP372	121-Z9000*
Q5	2SC372Y		GE-61*	PTC121*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	2SC372	WEP372	121-Z9000*
	2SC372		GE-61*	PTC121*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	2SC372	WEP372	121-Z9000*
Q6	2SC372Y		GE-61*	PTC121*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	2SC372	WEP372	121-Z9000*
	2SC372		GE-61*	PTC121*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	2SC372	WEP372	121-Z9000*
Q7	2SC372Y		GE-61*	PTC121*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	2SC372	WEP372	121-Z9000*
	2SC372		GE-61*	PTC121*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	2SC372	WEP372	121-Z9000*
Q8	2SA561Y		GE-82*	PTC103	HEPS0019*	REN 159*	SK3466	RT-103A*	ECG159*		WEP62*	121-879*
	2SA561		GE-82*	PTC103	HEPS0019*	REN 159*	SK3466	RT-103A*	ECG159*		WEP62*	121-879*
Q9	2SC372Y		GE-61*	PTC121*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	2SC372	WEP372	121-Z9000*
	2SC372		GE-61*	PTC121*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	2SC372	WEP372	121-Z9000*
Q10	2SC372Y		GE-61*	PTC121*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	2SC372	WEP372	121-Z9000*
	2SC372		GE-61*	PTC121*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	2SC372	WEP372	121-Z9000*
Q11	2SC372Y		GE-61*	PTC121*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	2SC372	WEP372	121-Z9000*
	2SC372		GE-61*	PTC121*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	2SC372	WEP372	121-Z9000*
Q12	MPS-A13		GE-64	PTC153	HEPS9100	REN 172	SK3156	RT-144	ECG172		WEP970	ZEN-128
Q13	2SC387A		GE-214	PTC132*	HEPS0020*	REN 161	SK3039*	RT-134	ECG316*	2SC717*	WEP56*	ZEN-104
Q14	2SC372Y		GE-61*	PTC121*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	2SC372	WEP372	121-Z9000*
	2SC372		GE-61*	PTC121*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	2SC372	WEP372	121-Z9000*
Q15	2SC372Y		GE-61*	PTC121*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	2SC372	WEP372	121-Z9000*
	2SC372		GE-61*	PTC121*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	2SC372	WEP372	121-Z9000*
Q16	2SA561Y		GE-82*	PTC103	HEPS0019*	REN 159*	SK3466	RT-103A*	ECG159*		WEP62*	121-879*
	2SA561		GE-82*	PTC103	HEPS0019*	REN 159*	SK3466	RT-103A*	ECG159*		WEP62*	121-879*
Q17	2SC372Y		GE-61*	PTC121*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	2SC372	WEP372	121-Z9000*
	2SC372		GE-61*	PTC121*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	2SC372	WEP372	121-Z9000*
Q18	2SC732BL		GE-62	PTC139*	HEPS0024*	REN 199	SK3122	RT-302	ECG199	2SC732	WEP66	ZEN-128
	2SC372		GE-61*	PTC121*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	2SC372	WEP372	121-Z9000*
Q19	2SC372Y		GE-61*	PTC121*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	2SC372	WEP372	121-Z9000*
	2SC372		GE-61*	PTC121*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	2SC372	WEP372	121-Z9000*
Q20	2SC735Y		GE-210*	PTC123*	HEPS0014*	REN 289	SK3122	RT-308*	ECG289	2SC735	WEP735A	ZEN-127
	2SC735		GE-210*	PTC123*	HEPS0014*	REN 289	SK3122	RT-308*	ECG289	2SC735	WEP735A	ZEN-127
Q21	2SD288K		GE-66	PTC154	HEPS3061	REN 152	SK3054	RT-197	ECG152	2SD235	WEP745	121-987-02
	2SD235		GE-66	PTC154	HEPS3061	REN 152	SK3054	RT-197	ECG152	2SD235	WEP745	121-987-02
Q22	2SD288K		GE-66	PTC154	HEPS3061	REN 152	SK3054	RT-197	ECG152	2SD235	WEP745	121-987-02
	2SD235		GE-66	PTC154	HEPS3061	REN 152	SK3054	RT-197	ECG152	2SD235	WEP745	121-987-02
Q23	2SC388A		GE-61*	PTC101*	HEPS0020*	REN 161	SK3018*	RT-308	ECG233*	2SC735	WEP535	ZEN-127
Q24	2SC372Y		GE-61*	PTC121*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	2SC372	WEP372	121-Z9000*
	2SC372		GE-61*	PTC121*	HEPS0015*	REN 123A*	SK3444	RT-308	ECG123A*	2SC372	WEP372	121-Z9000*
Q25	2SC735Y		GE-210*	PTC123*	HEPS0014*	REN 289	SK3122	RT-308*	ECG289	2SC735	WEP735A	ZEN-127
	2SC735		GE-210*	PTC123*	HEPS0014*	REN 289	SK3122	RT-308*	ECG289	2SC735	WEP735A	ZEN-127
Q26	2SC2086		GE-47*	PTC143*	HEPS3001*	REN 293*			ECG293*		WEP912*	
Q27	2SC1964		GE-215	PTC186		REN 235	SK3197	RT-146	ECG235		WEP785	
Q28	2SD235Y		GE-66	PTC154	HEPS3061	REN 152	SK3054	RT-197	ECG152	2SD235	WEP745	121-987-02
	2SD235		GE-66	PTC154	HEPS3061	REN 152	SK3054	RT-197	ECG152	2SD235	WEP745	121-987-02
Q29	2SA561Y		GE-82*	PTC103	HEPS0019*	REN 159*	SK3466	RT-103A*	ECG159*		WEP62*	121-879*
	2SA561		GE-82*	PTC103	HEPS0019*	REN 159*	SK3466	RT-103A*	ECG159*		WEP62*	121-879*
Q30	2SB555		GE-263	PTC149			SK3359		ECG281		WEP769	
Q31	2SC495Y		GE-270	PTC180		REN 295	SK3253	RT-162	ECG295		WEP913	ZEN-209
	2SC495		GE-270	PTC180		REN 295	SK3253	RT-162	ECG295		WEP913	ZEN-209

* Lead configuration may vary from original.

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
C11	1 50V		PC1-50	VTT1A50	QV1-11	EV-1615
C24	1 50V		PC1-50	VTT1A50	QV1-11	EV-1615
C31	10 16V		PC10-25	VTT10B25	QV1-41	EV-1222
C32	1 50V		PC1-50	VTT1A50	QV1-11	EV-1615
C34A	220 6.3V		PC250-10	VTT220F10	QV1-115	EV-1140
C34B	1 50V		PC1-50	VTT1A50	QV1-11	EV-1615
C36	1 50V		PC1-50	VTT1A50	QV1-11	EV-1615
C37	10 16V		PC10-25	VTT10B25	QV1-41	EV-1222
C38	1 50V		PC1-50	VTT1A50	QV1-11	EV-1615
C40	47 10V		PC50-16	VTT47D16	QV1-73	EV-1226
C42	1 50V		PC1-50	VTT1A50	QV1-11	EV-1615
C44B	100 10V		PC100-10	VTT100E10	QV1-93	EV-1130
C46	100 10V		PC100-10	VTT100E10	QV1-93	EV-1130
C48A	1 50V NP		WNP1-50	TCN501A	QEN1-20	TVAN-1560
C61	.1 35V			TDC104M050EL	QDT1-2	SD50-R109
C62	.1 35V			TDC104M050EL	QDT1-2	SD50-R109
C63	1 50V		PC1-50	VTT1A50	QV1-11	EV-1615
C65	100 10V		PC100-10	VTT100E10	QV1-93	EV-1130
C67	10 16V		PC10-25	VTT10B25	QV1-41	EV-1222
C80B	100 10V		PC100-10	VTT100E10	QV1-93	EV-1130
C108	1 50V		PC1-50	VTT1A50	QV1-11	EV-1615
C110	100 10V		PC100-10	VTT100E10	QV1-93	EV-1130
	10 16V		PC10-25	VTT10B25	QV1-41	EV-1222
C122	47 10V		PC50-16	VTT47D16	QV1-73	EV-1226
C123	470 10V		PC500-16	VTT470K16	QV1-149	EV-1150
C128	4700 35V		BB0072B(1)	FP202(1)	TVLU-1129	TVLU-2065(1)
C129	1 50V		PC1-50	VTT1A50	QV1-11	EV-1615

(1) Parallel sections.

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
C1	.001 50V		DD-102G	GP1000	GP210	QC2-81	5GA-D10
C2	300 50V		DD-301	GP300	GP330		10TS-T30
C3	.0047 50V		DD-472	GP4700	GP247		5GA-D47
C4A	.0047 50V		DD-472	GP4700	GP247		5GA-D47
C4B	.0047 50V		DD-472	GP4700	GP247		5GA-D47
C5	1 50V				CN0510		10TCC-V10
C6	100 50V		DD-101	GP100	GP310		10TS-T10
C7	.0047 50V		DD-472	GP4700	GP247		5GA-D47
C8	47 50V		DTZ-47	NP047	CN0447		10TCC-Q47
C9	.02 50V			DPMS2S2	PVC212		2PS-S20
C10	.02 50V			DPMS2S2	PVC212		2PS-S20
C12	.01 50V			WMF1S1	EWF1A110	QF1-91	1PB-S10
C13	.022 50V			DPMS2S22	EWF1A122	QF1-127	1PB-S22
C14	5 50V		DTZ-4R7	NP04P7	CN0547		10TCC-V47
C15	7 50V		DTZ-6R8	NP06P8	CN0568		10TCC-V68
C16	.022 50V			DPMS2S22	EWF1A122	QF1-127	1PB-S22
C17	.01 50V			WMF1S1	EWF1A110	QF1-91	1PB-S10
C18	.047 50V			DPMS2S47	EWF1A147	QF1-171	1PB-S47
C19	5 50V		DTZ-4R7	NP04P7	CN0547		10TCC-V47
C20B	.022 50V			DPMS2S22	EWF1A122	QF1-127	1PB-S22
C21A	.001 50V		DD-102G	GP1000	GP210	QC2-81	5GA-D10
C21B	.01 50V			WMF1S1	EWF1A110	QF1-91	1PB-S10
C22	.0022 50V		DD-222		GP222	QC2-97	5GA-D22
C23	.0022 50V		DD-222		GP222	QC2-97	5GA-D22
C25	.0047 50V		DD-472	GP4700	GP247		5GA-D47
C26	.0022 50V			DPMS6D22	EWF6222		6PS-D22
C27	.01 50V			WMF1S1	EWF1A110	QF1-91	1PB-S10
C28	.001		DD-102G	GP1000	GP210	QC2-81	5GA-D10
C29	.0047 50V		DD-472	GP4700	GP247		5GA-D47
C30	.0047 50V		DD-472	GP4700	GP247		5GA-D47
C33	.0022 50V		DD-222		GP222	QC2-97	5GA-D22
C35	.0022 50V		DD-222		GP222	QC2-97	5GA-D22
C39	.0022 50V		DD-222		GP222	QC2-97	5GA-D22
C41	.0022 50V		DD-222		GP222	QC2-97	5GA-D22
C43	.0047 50V		DD-472	GP4700	GP247		5GA-D47
C44A	470 50V		DD-471	GP470	GP347		10TS-T47
C47	.047 50V			DPMS2S47	EWF1A147	QF1-171	1PB-S47
C48B	5 50V		DTZ-4R7	NP04P7	CN0547		10TCC-V47
C49	47 50V		DTZ-47	NP047	CN0447		10TCC-Q47
C50	10 50V		DTZ-10	NP010	CN0410		10TCC-Q10
C51	10 50V		DTZ-10	NP010	CN0410		10TCC-Q10
C52A	22 50V		DTZ-22	NP022	CN0422		10TCC-Q22
C52B	.0047 50V		DD-472	GP4700	GP247		5GA-D47
C53	47 50V		DTZ-47	NP047	CN0447		10TCC-Q47
C54	.001 50V		DD-102G	GP1000	GP210	QC2-81	5GA-D10
C55	330 50V		DD-331	GP330	GP333		10TS-T33
C56	.022 50V				GP120		5GA-S20
C57	330 50V		DD-331	GP330	GP333		10TS-T33
C58	.001 50V		DD-102G	GP1000	GP210	QC2-81	5GA-D10
C59	.022 50V				GP120		5GA-S20
C60	.022 50V				GP120		5GA-S20
C64	.022 50V				GP120		5GA-S20
C66	.0047 50V		DD-472	GP4700	GP247		5GA-D47
C68	22 50V		DTZ-22	NP022	CN0422		10TCC-Q22
C69	150 50V		DD-151		GP315		10TS-T15

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
C70	470 50V		DD-471	GP470	GP347		10TS-T47
C71	.0047 50V		DD-472	GP4700	GP247		5GA-D47
C72	68 50V		DD-680	GP68	GP468		10TS-Q68
C73	22 50V		DTZ-22	NP022	CN0422		10TCC-Q22
C74	22 50V		DTZ-22	NP022	CN0422		10TCC-Q22
C75	.0047 50V		DD-472	GP4700	GP247		5GA-D47
C76	.0047 50V		DD-472	GP4700	GP247		5GA-D47
C77	22 50V		DTZ-22	NP022	CN0422		10TCC-Q22
C78	5 50V		DTZ-4R7	NP04P7	CN0547		10TCC-V47
C79	.0047 50V		DD-472	GP4700	GP247		5GA-D47
C80A	.0047 50V		DD-472	GP4700	GP247		5GA-D47
C81A	.0047 50V		DD-472	GP4700	GP247		5GA-D47
C81B	.0047 50V		DD-472	GP4700	GP247		5GA-D47
C82	22 50V		DTZ-22	NP022	CN0422		10TCC-Q22
C83	68 50V		DD-680	GP68	GP468		10TS-Q68
C84	.0047 50V		DD-472	GP4700	GP247		5GA-D47
C85	.0047 50V		DD-472	GP4700	GP247		5GA-D47
C86	.0047 50V		DD-472	GP4700	GP247		5GA-D47
C87	.0047 50V		DD-472	GP4700	GP247		5GA-D47
C88A	.0047 50V		DD-472	GP4700	GP247		5GA-D47
C88B	.0047 50V		DD-472	GP4700	GP247		5GA-D47
C89	.0047 50V		DD-472	GP4700	GP247		5GA-D47
C90	1 50V				CN0510		10TCC-V10
C91	.47 50V pF						
C92	.0047 50V		DD-472	GP4700	GP247		5GA-D47
C93	.0047 50V		DD-472	GP4700	GP247		5GA-D47
C94	.0047 50V		DD-472	GP4700	GP247		5GA-D47
C95	.0047 50V		DD-472	GP4700	GP247		5GA-D47
C96	.0047 50V		DD-472	GP4700	GP247		5GA-D47
C97	.0047 50V		DD-472	GP4700	GP247		5GA-D47
C98	470 50V		DD-471	GP470	GP347		10TS-T47
C99	33 50V		DTZ-33	NP033	CN0433		10TCC-Q33
C100	.0047 50V		DD-472	GP4700	GP247		5GA-D47
C101	.0047 50V		DD-472	GP4700	GP247		5GA-D47
C102A	470 50V		DD-471	GP470	GP347		10TS-T47
C102B	470 50V		DD-471	GP470	GP347		10TS-T47
C103	220 50V		DD-221		GP322		10TS-T22
C104	47 50V		DTZ-47	NP047	CN0447		10TCC-Q47
C105	220 50V		DD-221		GP322		10TS-T22
C106	180 50V		DD-181		GP318		10TS-T18
C107	.0047 50V		DD-472	GP4700	GP247		5GA-D47
C109A	.022 50V				GP120		5GA-S20
C109B	.022 50V				GP120		5GA-S20
C111	120 50V		DD-221		GP322		10TS-T22
C112	470 50V		DD-471	GP470	GP347		10TS-T47
C113	120 50V		DD-221		GP322		10TS-T22
C114	56 50V				CN0456		10TCC-Q56
C115	120 50V		DD-221		GP322		10TS-T22
C116	47 50V		DTZ-47	NP047	CN0447		10TCC-Q47
C117	.0047 50V		DD-472	GP4700	GP247		5GA-D47
C118	.0047 50V		DD-472	GP4700	GP247		5GA-D47
C119	.0047 50V		DD-472	GP4700	GP247		5GA-D47
C120	.01 50V		DC-103	MGP01	TA110	QC2-141	TG-S10
C121	10 50V		DTZ-10	NP010	CN0410		10TCC-Q10
C124	.0047 50V		DD-472	GP4700	GP247		5GA-D47
C125	.047 50V			DPMS2S47	EWF1A147	QF1-171	1PB-S47
C126	.0047 50V		DD-472	GP4700	GP247		5GA-D47
C127	.0047 50V		DD-472	GP4700	GP247		5GA-D47
C131	.022 50V				GP120		5GA-S20
C132	.0047 50V		DD-472	GP4700	GP247		5GA-D47
VC1	30 50V						
VC2	30 50V						
VC3	30 50V						

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.
FVR1	Squelch Range	5000		T-5000	MTC53L1	X201R502B
FVR2	S	10K		T-10K	MTC14L1	X201R103B
FVR3	Mod. Limiter	1000		T-1000	MTC13L1	X201R102B
FVR4	RF	50K		T-50K	MTC54L1	X201R503B
FVR5	Voltage	1000		T-1000	MTC13L1	X201R102B
VR1	RF Gain	5000				
VR2	Response/ANL SW	10K				
VR3	AF Gain	50K				
VR4	Squelch	20K				
VR5	SWR CAL/SWR SW	50K				

COILS (RF-IF)

ITEM No.	FUNCTION	REPLACEMENT DATA			REMARKS
		PART No.	OTHER IDENTIFICATION	MILLER PART No.	
L1	Rec Antenna (27MHz)				
L2	Rec RF (27MHz)				
L3	Rec RF (27MHz)				
L4	IF (10.695MHz)				
L5	IF (455kHz)				
L6	IF (455kHz)				
L7	IF (455kHz)				
L8	IF (455kHz)				
L9	IF (455kHz)				
L10	Ref Osc (10.240MHz)				
L11	RF Choke (.9uH)				
L12	Down Osc (36.380MHz)				
L13	RF Choke (47uH)				
L14	VCO (37MHz)				
L15	RF Choke (.9uH)				
L16	RF Choke (.9uH)				
L17	XMT Mixer (27MHz)				
L18	XMT Mixer (27MHz)				
L19	XMT Mixer (27MHz)				
L20	XMT Buffer (27MHz)				
L21	XMT AMP (27MHz)				
L22	XMT Driver (27MHz)				
L23	RF Choke (.9uH)				
L24	RF Choke (.9uH)				
L25	Final (27MHz)				
L26	Pi Filter (27MHz)				
L27	RF Choke				
L28	RF Choke				
L29	RF Choke				

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.	
CH1	1.5A	.3	4mH	CH-753(1)			(1) Number on unit.

TRANSFORMER (Driver)

ITEM No.	TURNS RATIO			REPLACEMENT DATA			NOTES
	PRI.	SEC. 1	SEC. 2	MFGR. PART No.	THORDARSON PART No.	TRIAD PART No.	
T1	1	.5		IT-753(1)			(1) Number on unit.

TRANSFORMER (Audio Output)

ITEM No.	IMPEDANCE			REPLACEMENT DATA			NOTES
	PRI.	SEC.		MFGR. PART No.	THORDARSON PART No.	TRIAD PART No.	
T2	8	1 .6	2 1	MT-753(1)			(1) Number on unit.

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.	
T3	120V AC @ 460mA AC	20V AC @ 25.25A AC	PT-753(1)			(1) Number on unit.

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		MFGR. PART No.	QUAM PART No.	
SP	2 3/4" X 4" PM 8 Ohms			

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
M2	1 Amp			AGC1	HKP	312001	342012	FG1-2
M3	2 Amp			AGC2	HDJ	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		18-032	18-034	18-010	18-092	2	1	3	NC	NC	1

MISCELLANEOUS

ITEM No.	PART NAME	PART No.	NOTES
F1	Ceramic Filter		10.7MHz SFE-10.7mA
F2	Ceramic Filter		10.7MHz SFE-10.7mA
F3	Ceramic Filter		455kHz CFU-455Hz
K1	Relay		TX/RX 4-TR
LED1	LED		Channel Display UNITS
LED2	LED		Channel Display TENS
M1	Meter		S/RF 8000HM-200UA
PL1	Lamp		Meter (12.60V @ 85mA)
PL2	Lamp		TX (8.08V @ 40mA)
PL3	Lamp		PA (10.08V @ 46mA)
S1	Switch		Channel Selector
S2	Switch		Power SUE-32D0Y
S3	Switch		CB/PA
S4	Switch		ANL (Part of Response Control)
S5	Switch		SWR (Part of SWR CAL Control)
S6	Switch		SWR REF/FWD