

PHOTOFACT[®] with

CIRCUITRACE[®]

For Supplier Address See PHOTOFACT Index

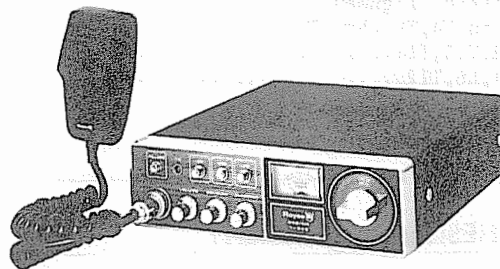
NOTE

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 1-632

MANUFACTURER'S SPECIFICATIONS

ROYCE MODEL 1-632

RECEIVER

- | | | |
|------------------------------|---|--------------------|
| 1. Sensitivity at S/N 10dB | : AM 0.7uV | SSB 0.2uV |
| 2. Selectivity | : AM 5KHz | SSB 2.2KHz |
| 3. AGC Figure of Range | : 80dB | |
| 4. Squelch Range | : 0.5uV — 500uV | |
| 5. Audio Output Power | : 4 Watts | |
| 6. Distortion at input 100uV | : 6% | |
| 7. Audio Frequency Response | : 300 — 2200Hz | |
| 8. Supurious Response | : More than 45dB supurious signal is required to produce the same amount of audio output as the desired receive signal. | |
| 9. IF Frequency | : 1st IF 10.695MHz and 2nd IF 455KHz | |
| 10. Current Drain no audio | : 600mA | |

SSB TRANSMITTER

- | | |
|----------------------------------|------------------|
| 1. RF Output Power | : 12 Watts PEP |
| 2. Carrier Suppression | : More than 40dB |
| 3. Unwanted Sideband Suppression | : More than 60dB |
| 4. Harmonic Suppression | : More than 60dB |
| 5. Current Drain | : 850mA |

AM TRANSMITTER

- | | |
|--------------------------|------------------|
| 1. RF Output Power | : 4 Watts |
| 2. Modulation Capability | : More than 75% |
| 3. Harmonic Suppression | : More than 60dB |
| 4. Current Drain | : 1500mA |

Courtesy of the Manufacturer

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

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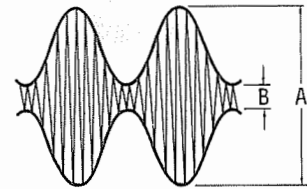
ALIGNMENT INSTRUCTIONS

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-volt DC input. Connect low sides of test equipment to ground unless specified otherwise. Connect 50-ohm dummy load or antenna before keying transmitter. Connect Microphone.

Suggested Alignment Tools:

GC Electronics:

T1 thru T4, T9 thru T11.....9440
T5, T8, T13, T14.....5000, 5009, 8276, 8728, 8728A
L1, L4, L6, T12.....8282, 9304, 8728, 8728A



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

FIGURE 1

SYNTHESIZER ALIGNMENT

TEST EQUIPMENT	TRANSCEIVER	ADJUST	REMARKS
Input of frequency counter to TP1 (PLL Unit Pin 12).	Ch. 19, AM or USB		Check for 10.240MHz.
Input of frequency counter to TP1 (PLL Unit Pin 12).	Ch. 19, LSB		Check for 11.105MHz.
Input of frequency counter to TP2 (PLL Unit Pin 1).	Ch. 1 Clarifier Midrange		Check for 37.660MHz. 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: Clarifier Midrange, Squelch MINIMUM.

TEST EQUIPMENT	TRANSCEIVER	ADJUST	REMARKS
Output of signal generator thru .01uF to TP3 (T5 secondary). 455kHz, 1000Hz @ 30% modulation.	Ch. 19, AM Clarifier Midrange	T8	Adjust for maximum output.
Output of signal generator thru .01uF to antenna input. 27.185MHz, 1000Hz @ 30% modulation.	Ch. 19, AM Clarifier Midrange	T5, T4, T3, T2, T1	Adjust for maximum output. Readjust T8 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:
Clarifier Midrange, Squelch MINIMUM.

TEST EQUIPMENT	TRANSCEIVER	ADJUST	REMARKS
Output of signal generator thru .01uF to antenna input. 27.185MHz, 1000Hz @ 30% modulation. Output 500uV.	Ch. 19, AM Squelch Maximum	VR2	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, AM	VR4	SIGNAL METER Adjust for 9 on SIGNAL scale of meter.

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	TRANSCEIVER	ADJUST	REMARKS
Input of RF wattmeter to antenna input.	Ch. 19, AM	T5, T4, T9, T10, T11, T12	Adjust for maximum RF output.
Input of RF wattmeter to antenna input.	Ch. 19, AM	L6, L4, L1	Adjust for 4.0 watts RF output maximum.
Input of RF wattmeter to antenna input. Inject a two tone, 10mV signal at mic input.	Ch. 19, USB	T5, T4, T13, T14, L1	Adjust for maximum RF output.

TRANSMITTER ADJUSTMENTS

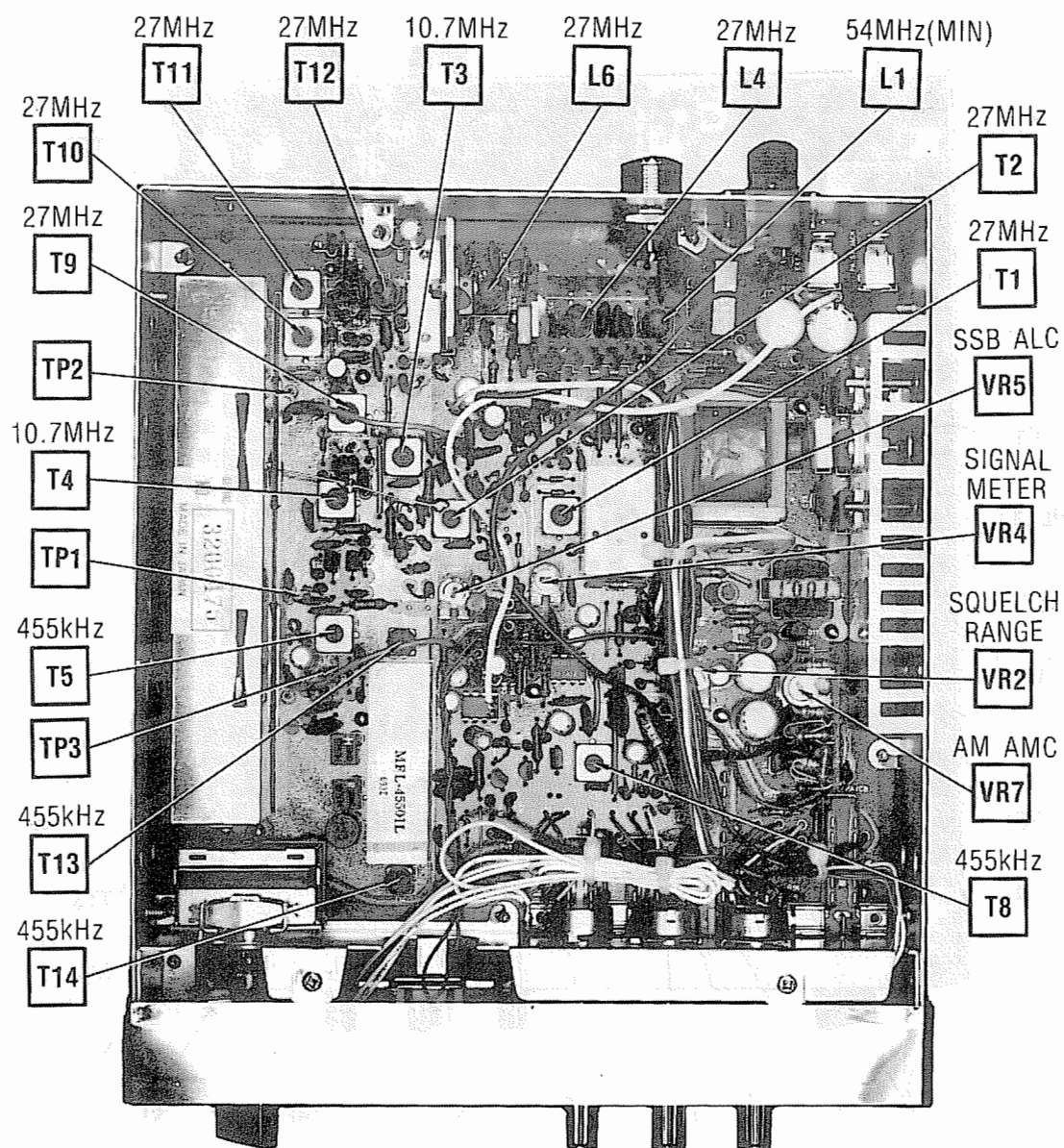
Connect a 50-ohm, 25-watt dummy load to antenna connector.
NOTE: Be sure to check transmit frequency and power on all active channels after adjustment of transmitter.
See page 4 for channel frequencies.

TEST EQUIPMENT	TRANSCEIVER	ADJUST	REMARKS
Input of RF wattmeter to antenna input. Inject a two tone 30mV signal to mic input.	Ch. 19, USB	VR5	SSB ALC Adjust for 11.0 watts. pp RF output maximum.
Input of oscilloscope or modulation meter to antenna input. Inject a 1000Hz, 50mV signal at mic input.	Ch. 19, AM	VR7	AM AMC Adjust for 90% modulation maximum. (See Figure 1.)

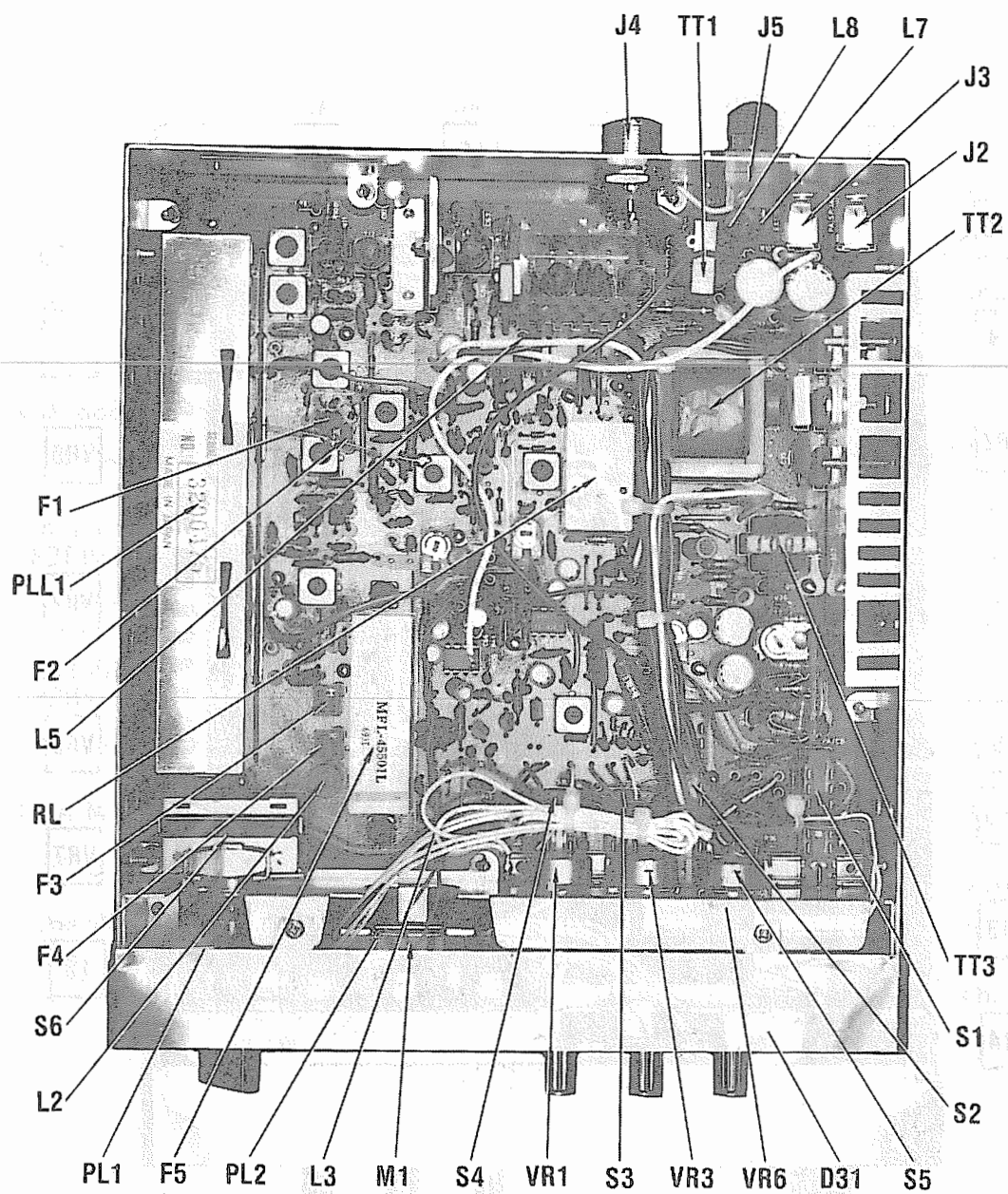
ROYCE MODEL 1-632

TRUTH CHART

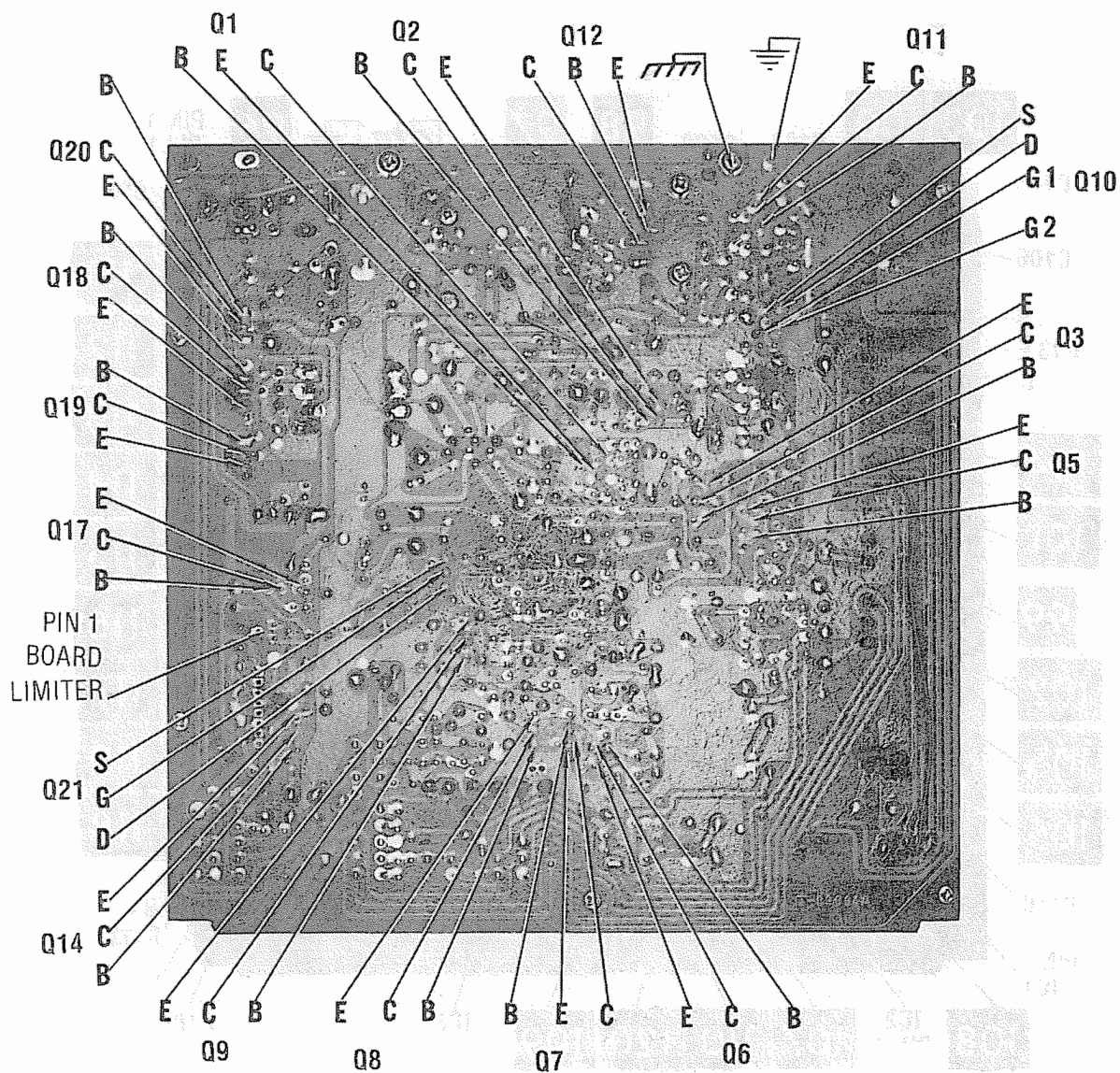
C H A N N E L	1 = 4.05 Volts 0 = 0 Volts CHANNEL INPUT CODES PLL MODULE								Rec and XMT AM/USB/LSB SYNTH IN MHz AT TP2		
	PINS										
	3	9	8	7	6	5	4				
1	1	0	0	0	0	0	0		37.660		
2	1	0	0	0	0	0	1		37.670		
3	1	0	0	0	0	1	0		37.680		
4	1	0	0	0	1	0	0		37.700		
5	1	0	0	0	1	0	1		37.710		
6	1	0	0	0	1	1	0		37.720		
7	1	0	0	0	1	1	1		37.730		
8	1	0	0	1	0	0	1		37.750		
9	1	0	0	1	0	1	0		37.760		
10	1	0	0	1	0	1	1		37.770		
11	1	0	0	1	1	0	0		37.780		
12	1	0	0	1	1	1	0		37.800		
13	1	0	0	1	1	1	1		37.810		
14	1	0	1	0	0	0	0		37.820		
15	1	0	1	0	0	0	1		37.830		
16	1	0	1	0	0	1	1		37.850		
17	1	0	1	0	1	0	0		37.860		
18	1	0	1	0	1	0	1		37.870		
19	1	0	1	0	1	1	0		37.880		
20	1	0	1	1	0	0	0		37.900		
21	1	0	1	1	0	0	1		37.910		
22	1	0	1	1	0	1	0		37.920		
23	1	0	1	1	1	0	1		37.950		
24	1	0	1	1	0	1	1		37.930		
25	1	0	1	1	1	0	0		37.940		
26	1	0	1	1	1	1	0		37.960		
27	1	0	1	1	1	1	1		37.970		
28	1	1	0	0	0	0	0		37.980		
29	1	1	0	0	0	0	1		37.990		
30	1	1	0	0	0	1	0		38.000		
31	1	1	0	0	0	1	1		38.010		
32	1	1	0	0	1	0	0		38.020		
33	1	1	0	0	1	0	1		38.030		
34	1	1	0	0	1	1	0		38.040		
35	1	1	0	0	1	1	1		38.050		
36	1	1	0	1	0	0	0		38.060		
37	1	1	0	1	0	0	1		38.070		
38	1	1	0	1	0	1	0		38.080		
39	1	1	0	1	0	1	1		38.090		
40	1	1	0	1	1	0	0		38.100		



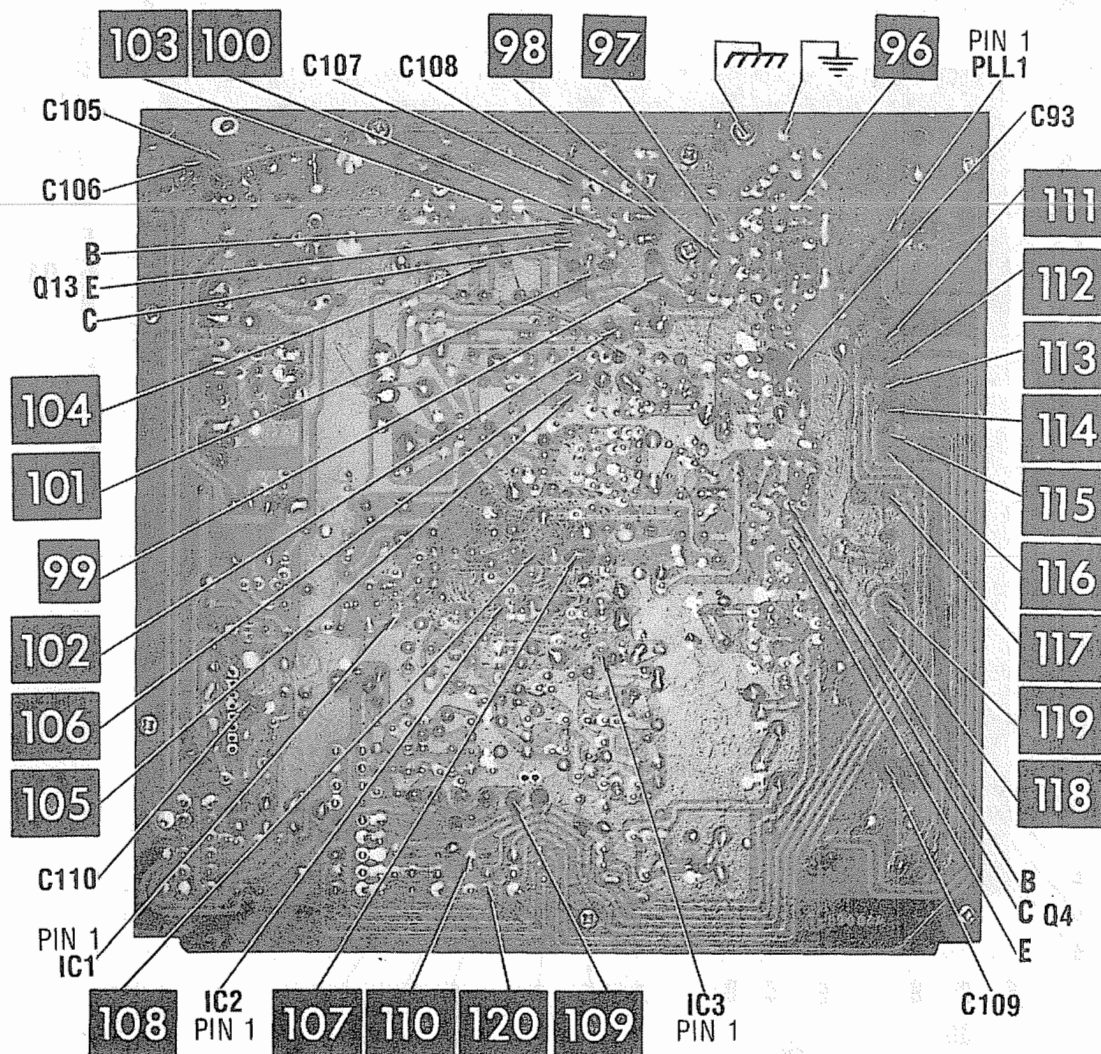
CHASSIS - BOTTOM



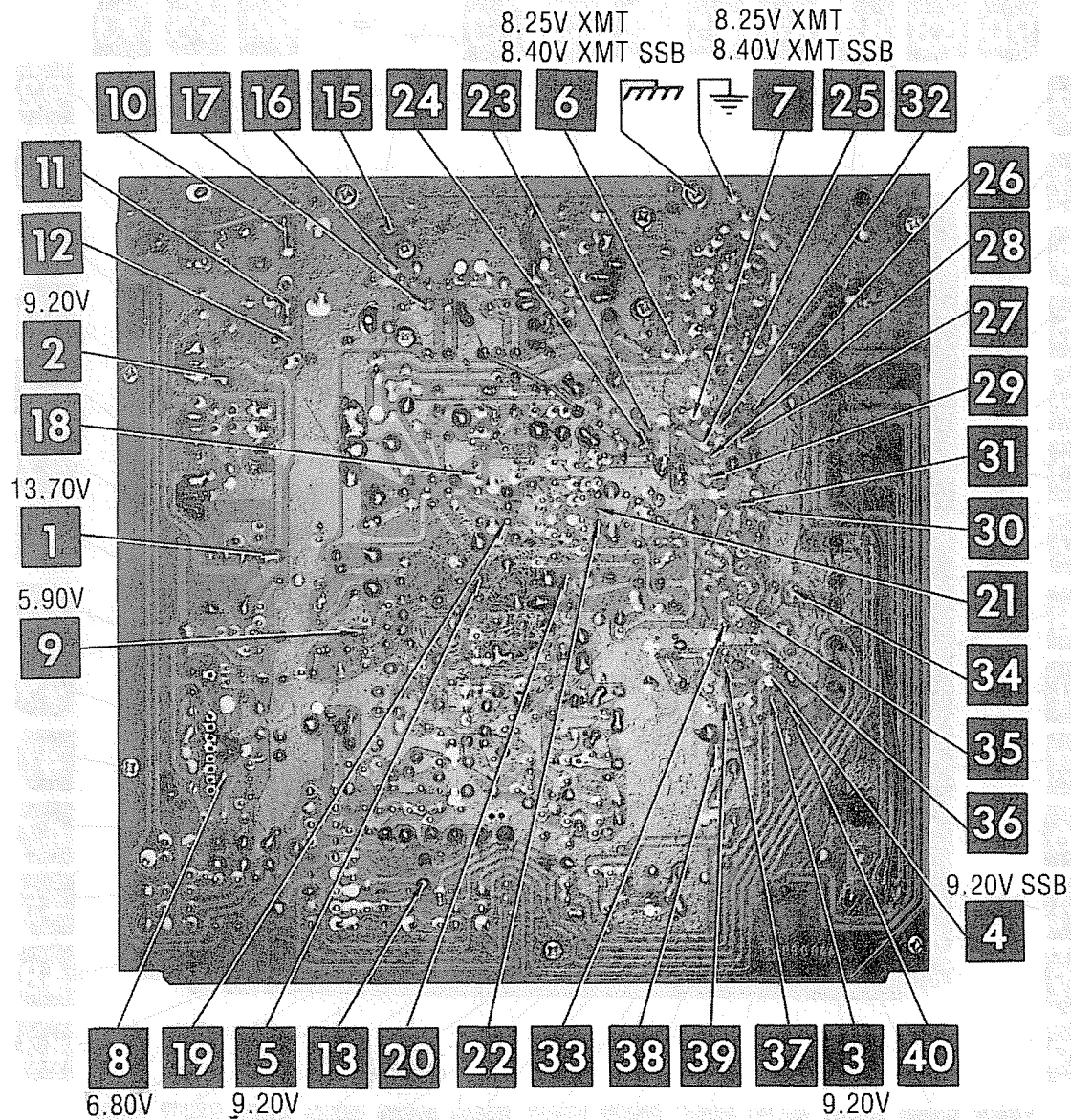
CHASSIS - BOTTOM



MAIN BOARD

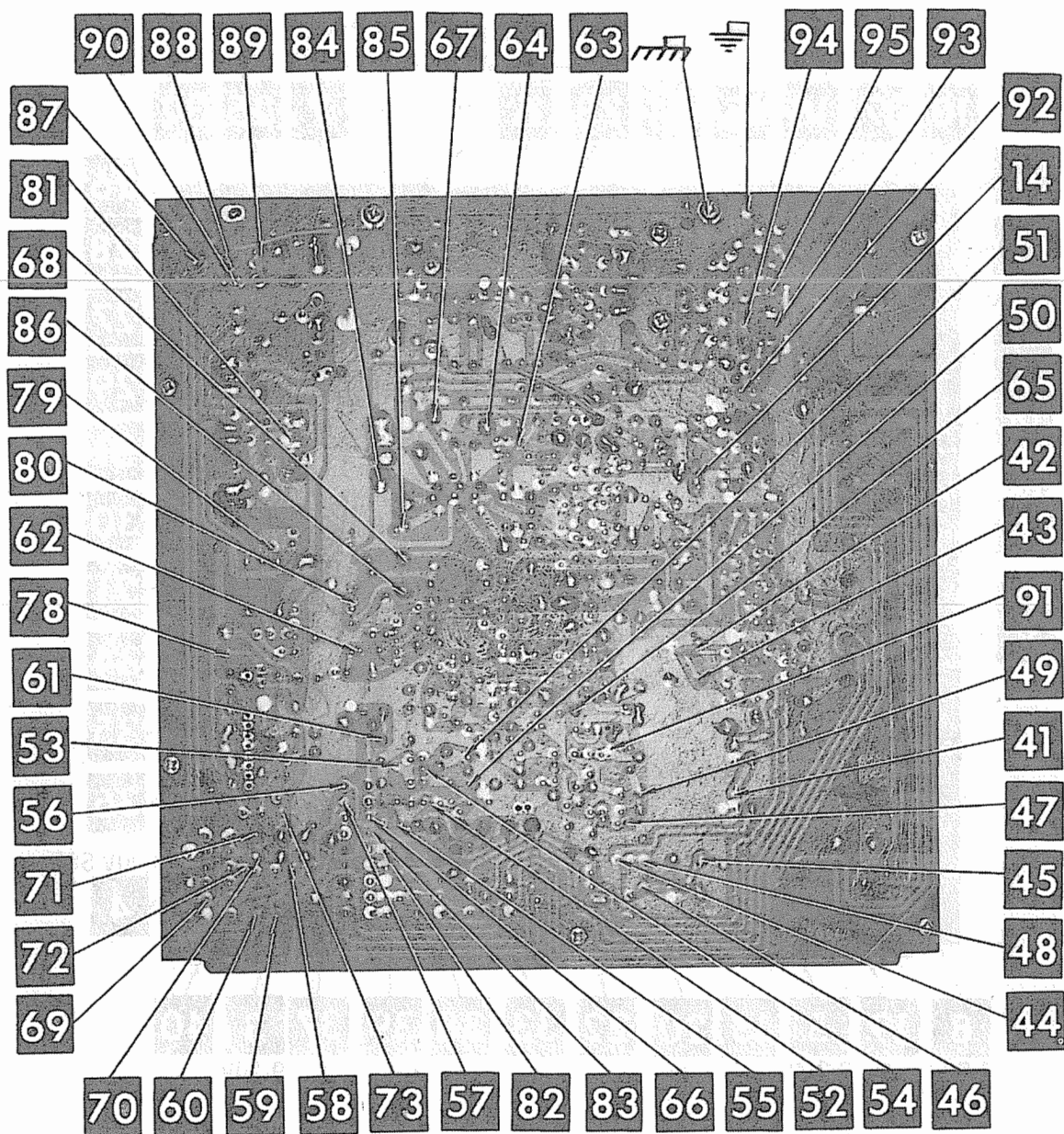


MAIN BOARD

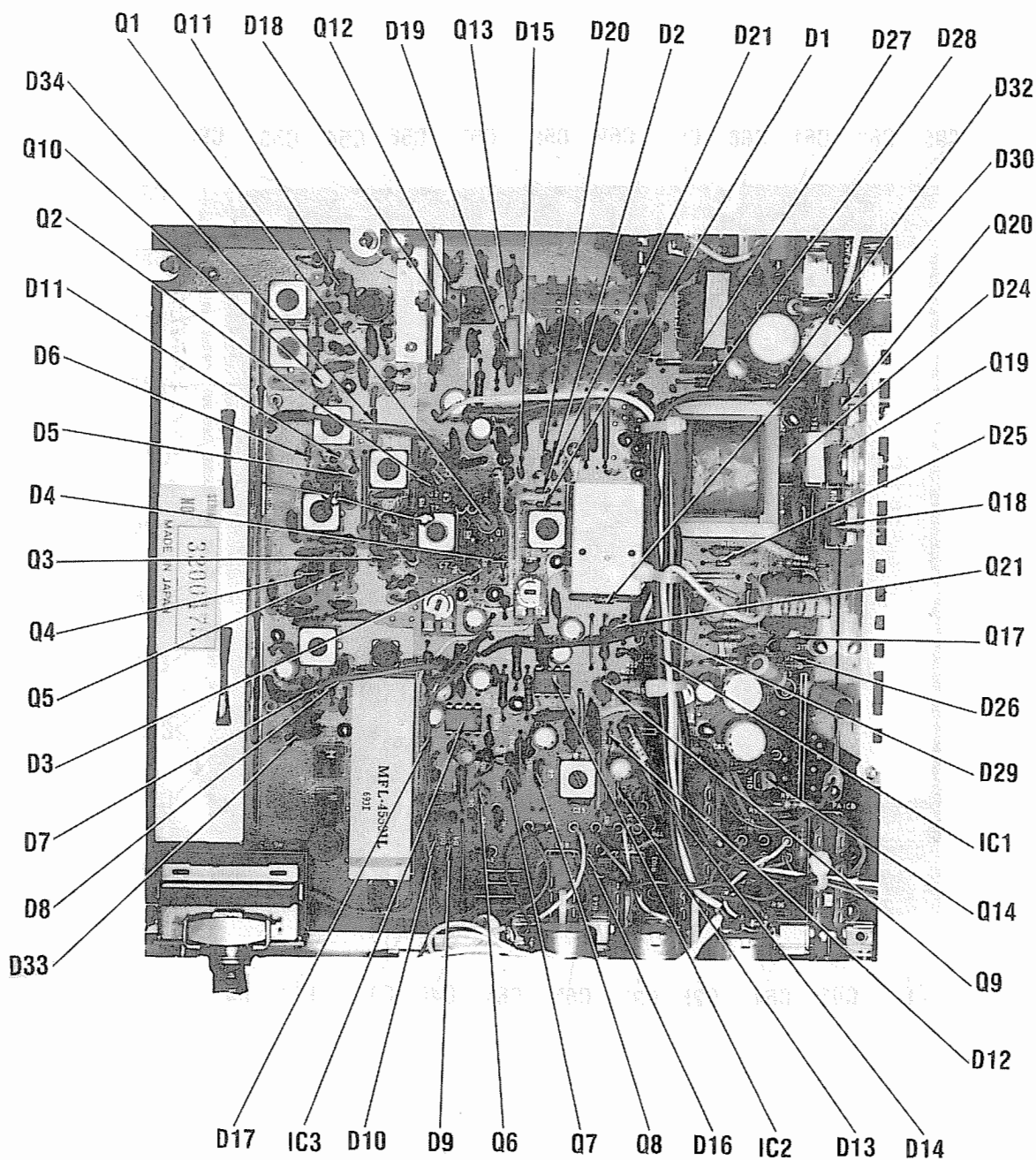


ROYCE MODEL 1-632

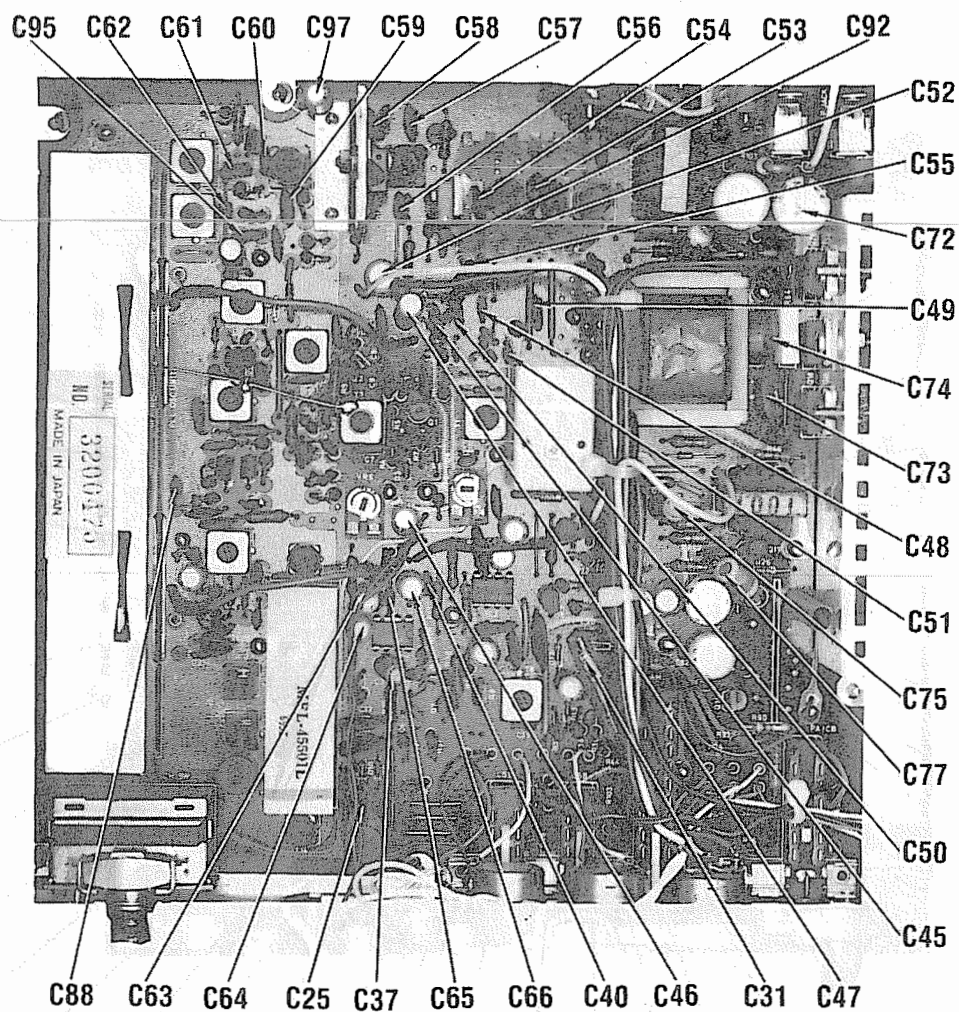
MAIN BOARD



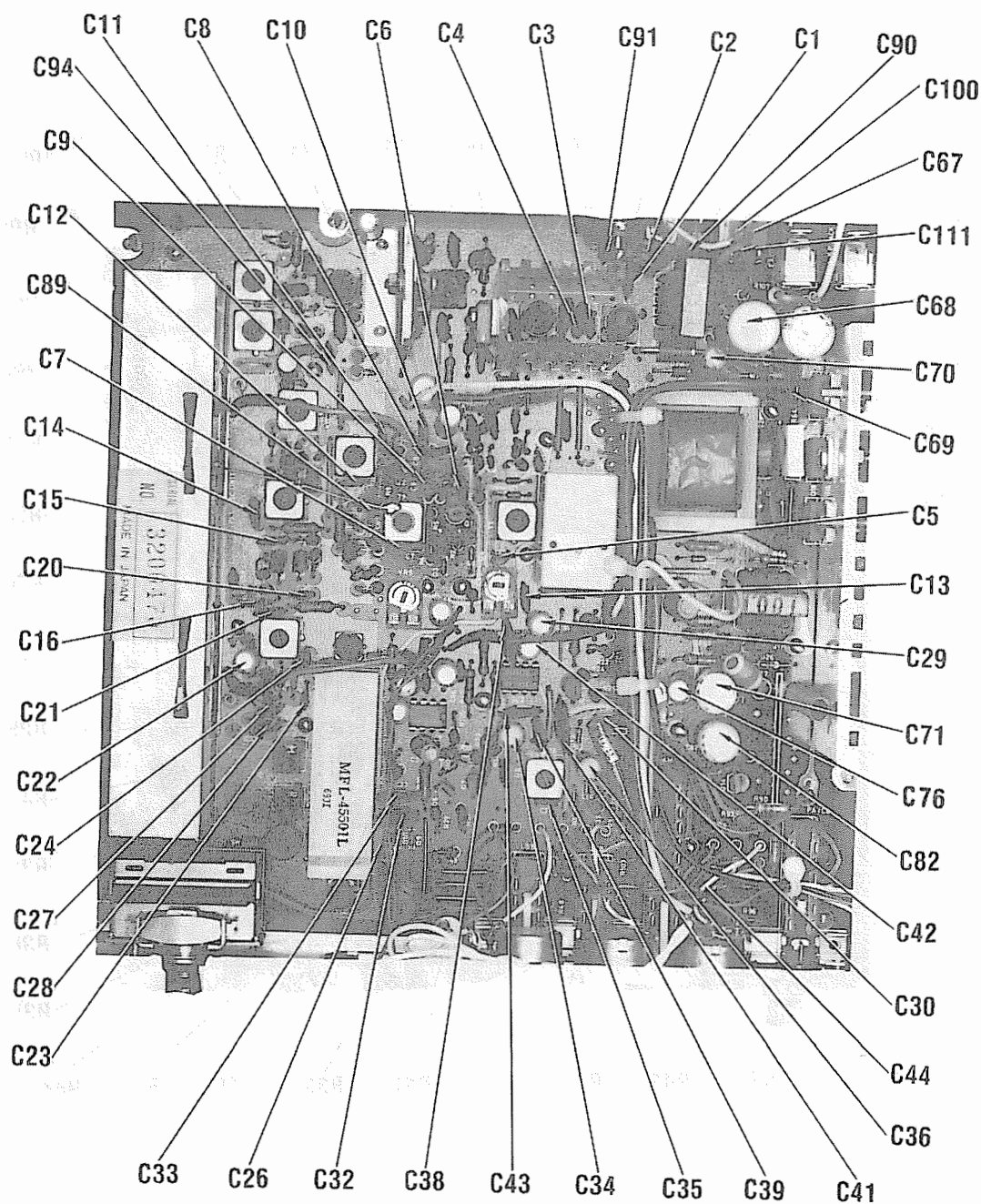
MAIN BOARD



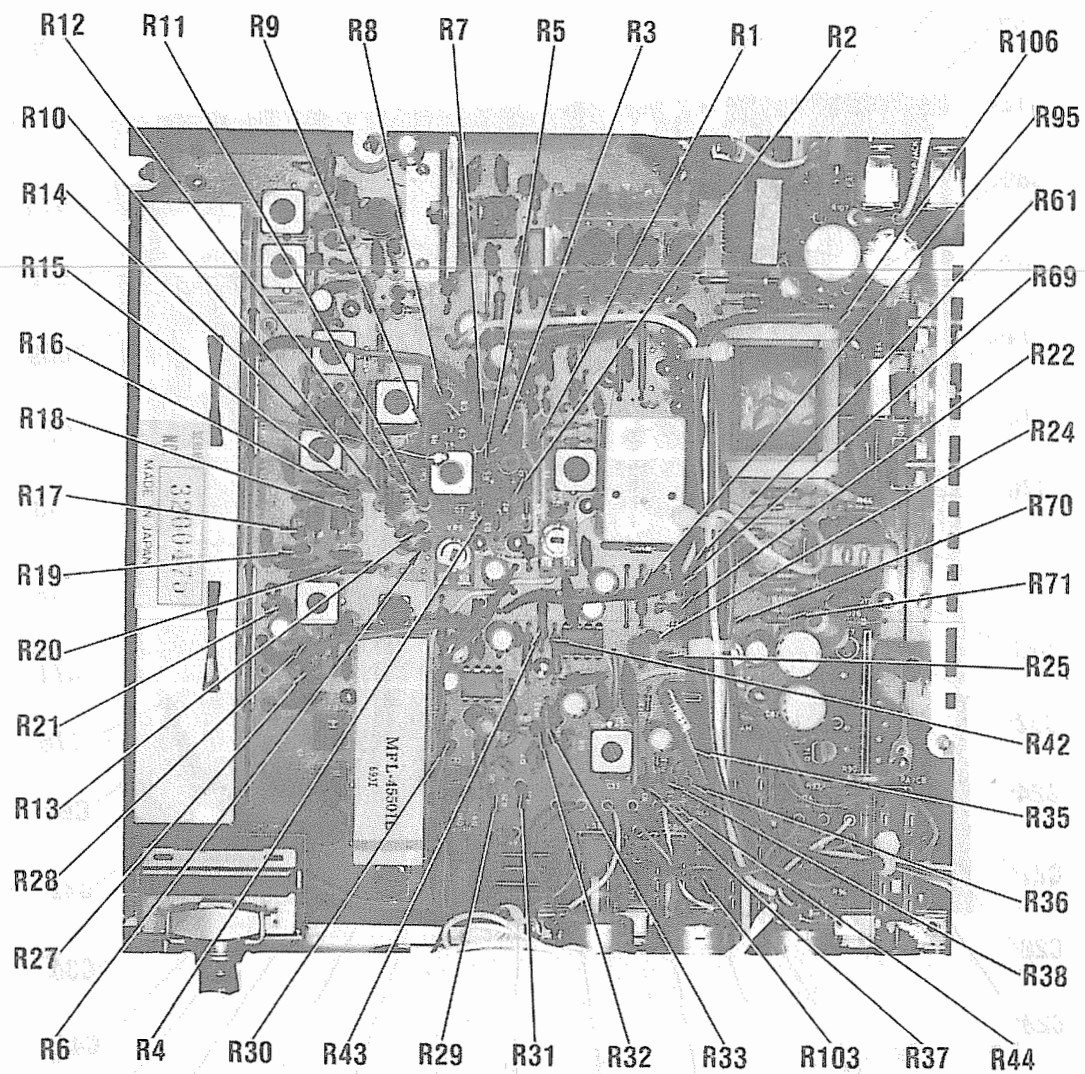
MAIN BOARD



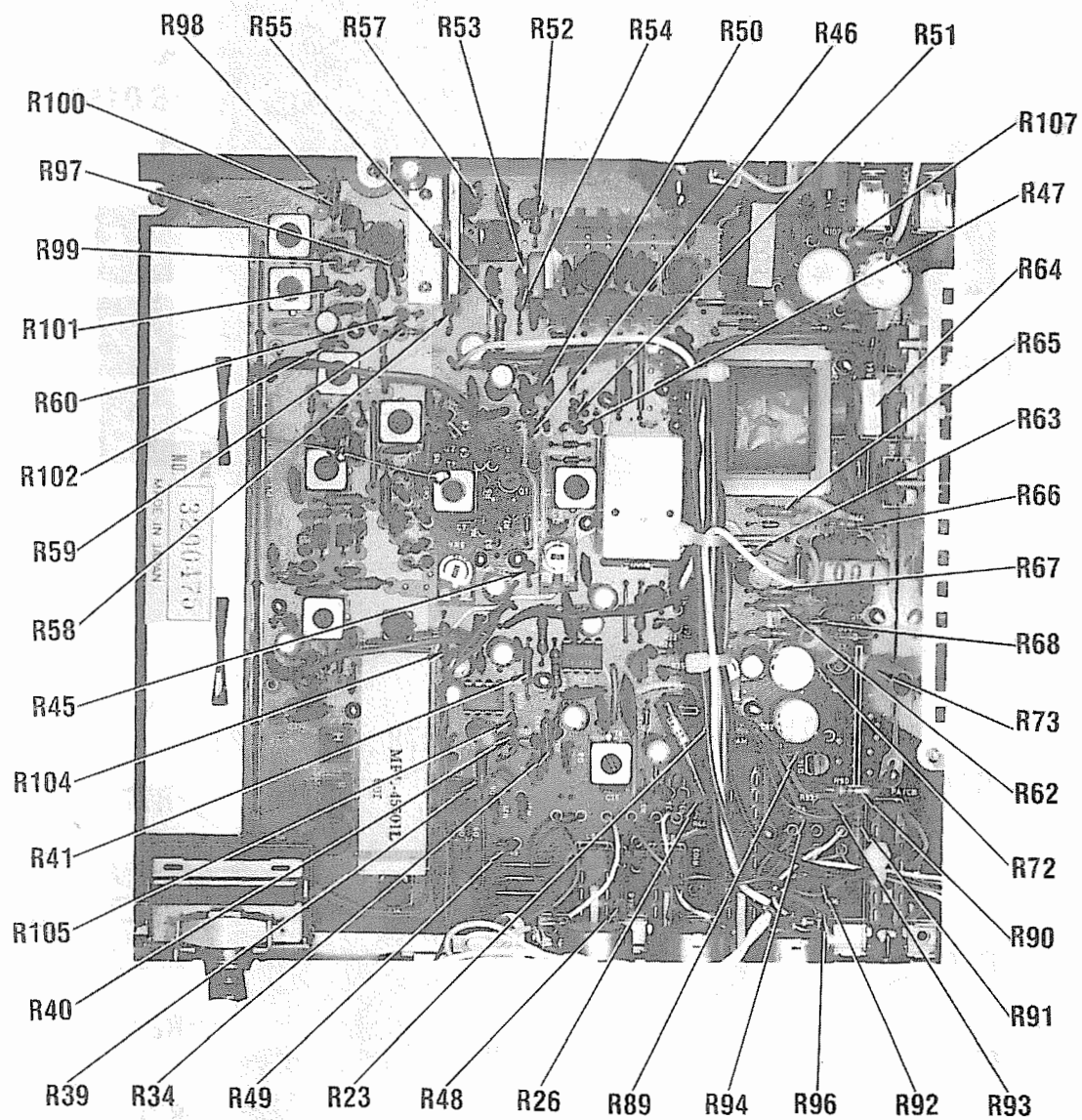
MAIN BOARD



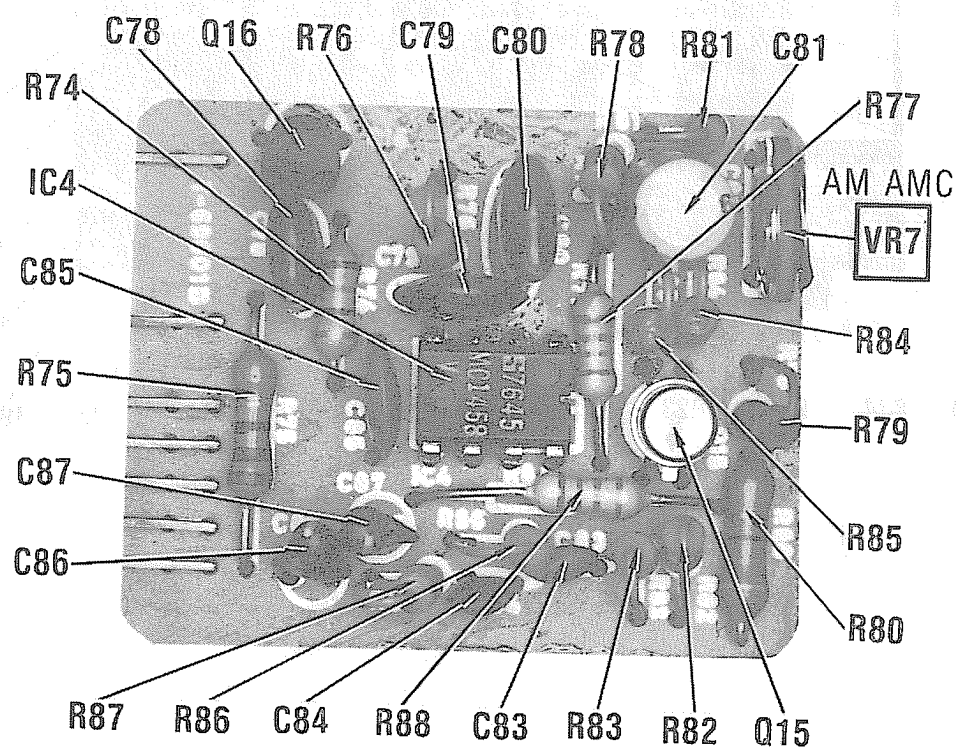
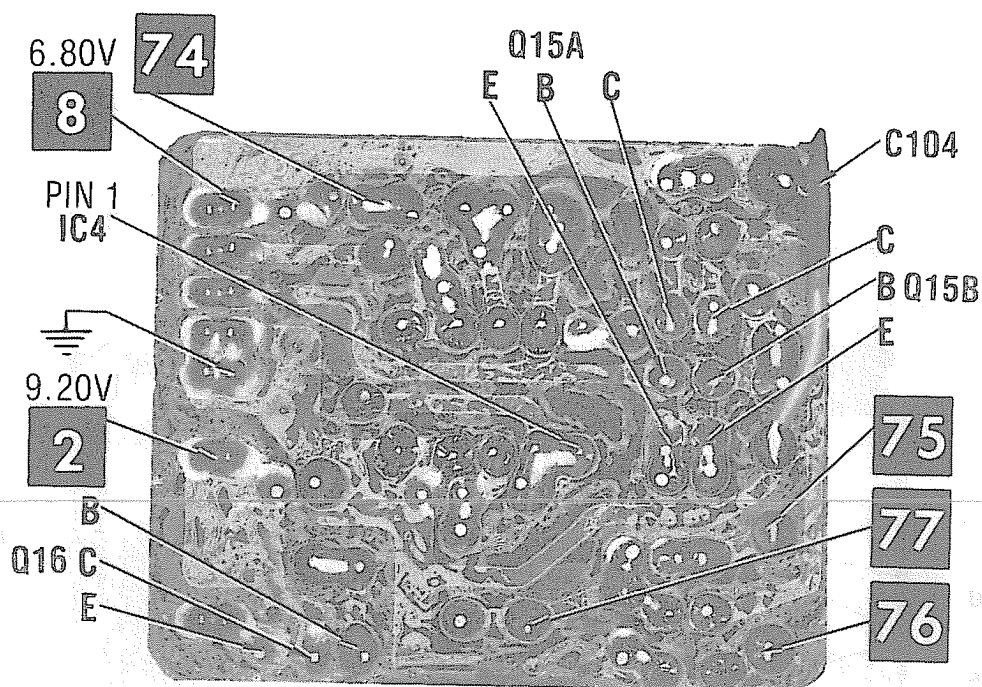
MAIN BOARD



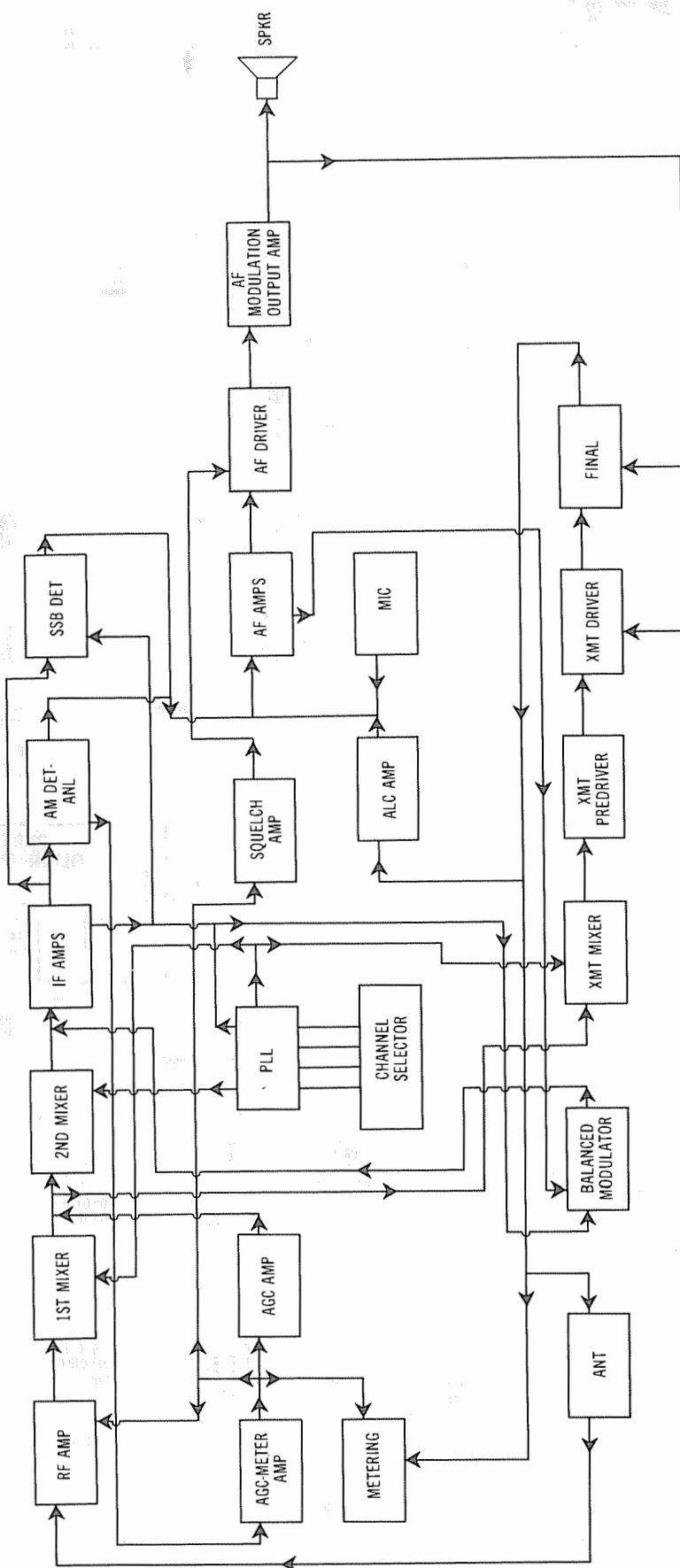
MAIN BOARD



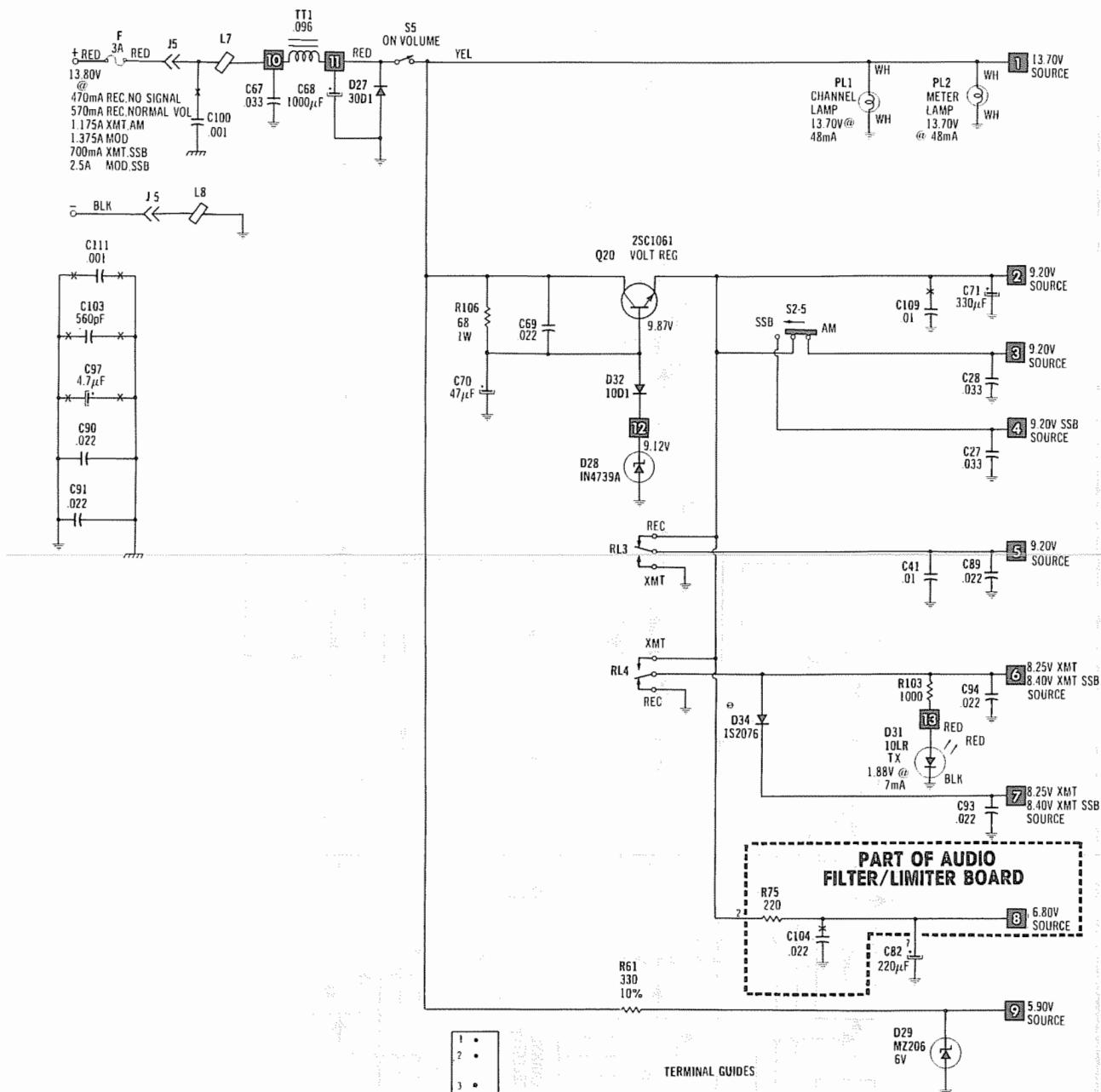
MAIN BOARD



AUDIO FILTER/LIMITER BOARD



BLOCK DIAGRAM

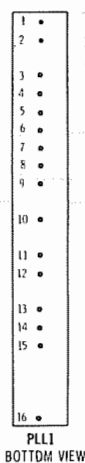


- Circuitry not used in some versions.
 - - - Circuitry used in some versions.
 - ⊗ Nominal value
 - ⊕ Common tie point
 - ⊥ Ground
 - ⊕ Signal path
 - ⊕ Chassis
 - ⊕ Voltage path
 - ⊕ See parts list
- Measurements made in Channel 1 with switching in receive unless noted.
- Item numbers in rectangles 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).

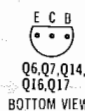
A PHOTOFAC STANDARD NOTATION SCHEMATIC

WITH **CIRCUITRACE**

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PLL1 BOTTOM VIEW



Q6, Q7, Q14, Q16, Q17 BOTTOM VIEW



Q1 BOTTOM VIEW



Q9 BOTTOM VIEW



IC1 FRONT VIEW

TERMINAL GUIDES



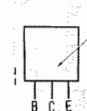
Q21 BOTTOM VIEW



Q10 BOTTOM VIEW



Q15 BOTTOM VIEW



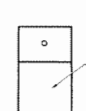
Q2, Q3, Q4, Q5, Q8, Q11 FRONT VIEW



Q18, Q19, Q20 FRONT VIEW



J5 PIN VIEW



Q12 FRONT VIEW

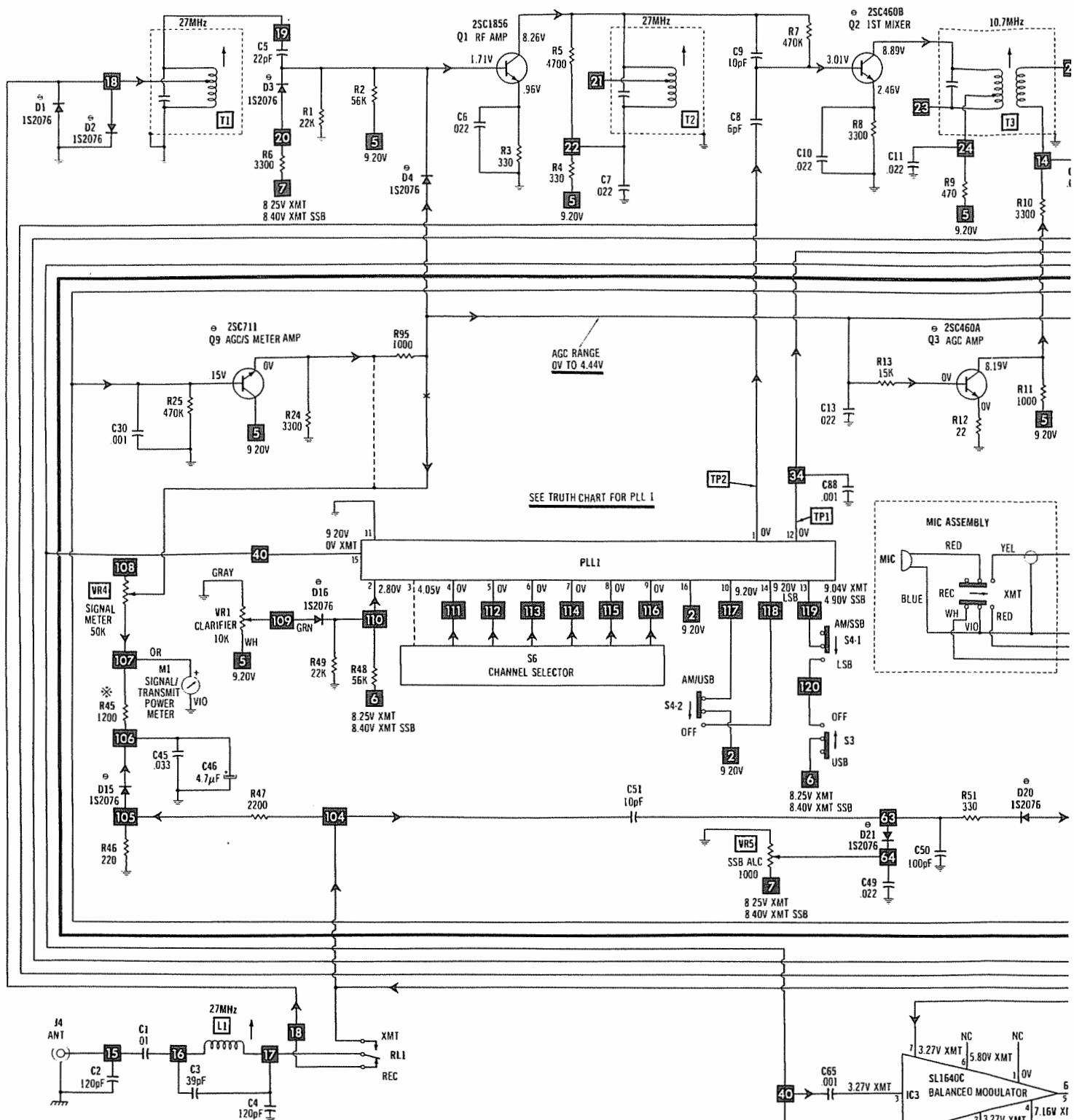


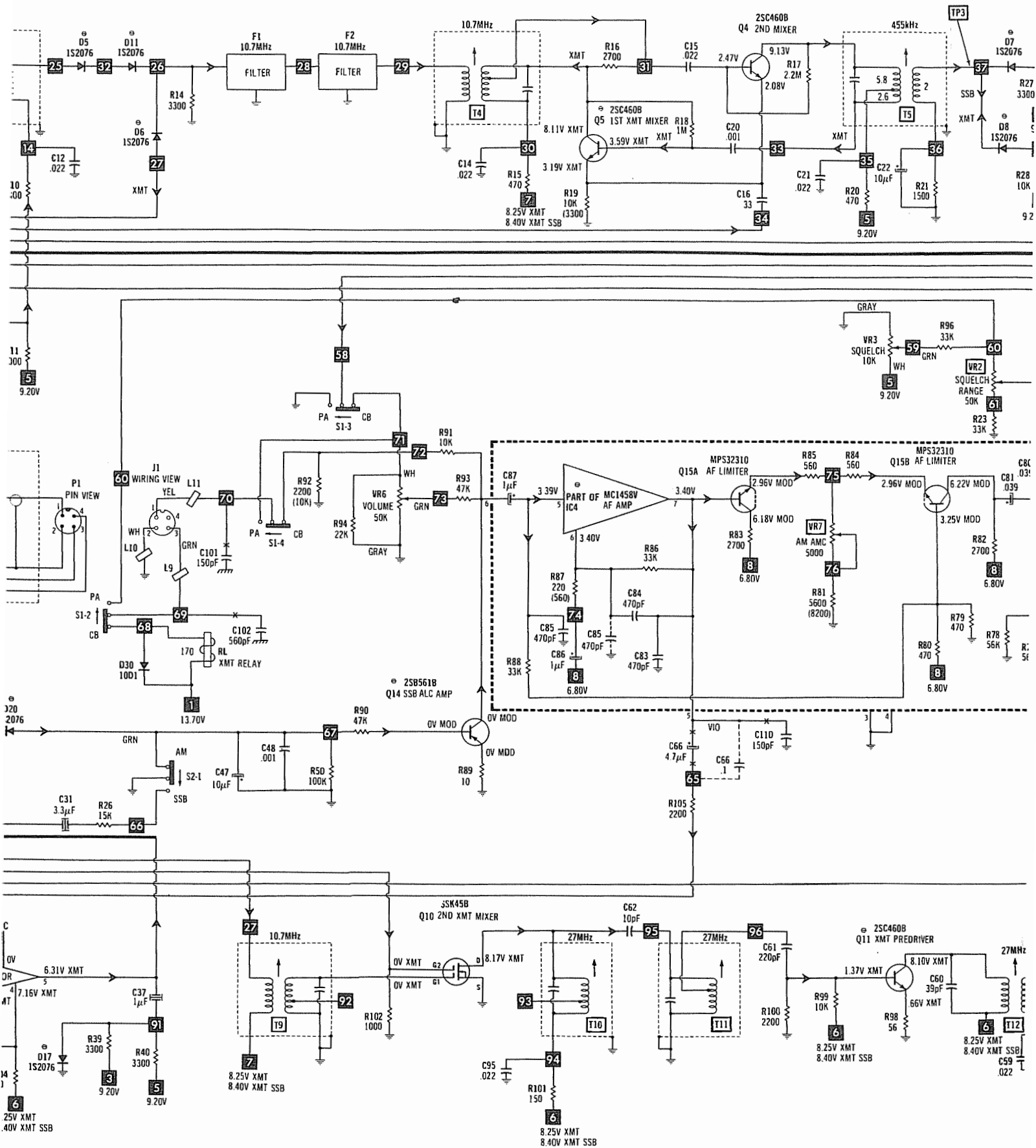
Q13 FRONT VIEW

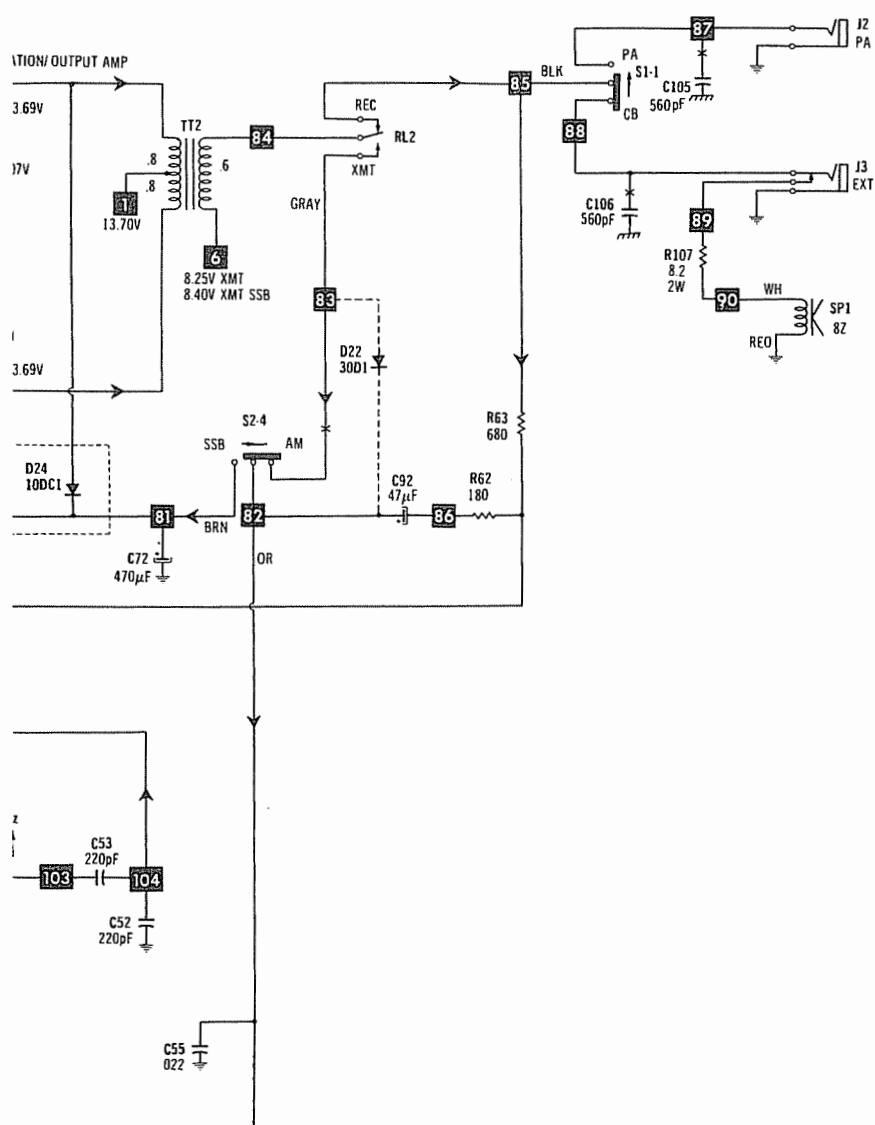
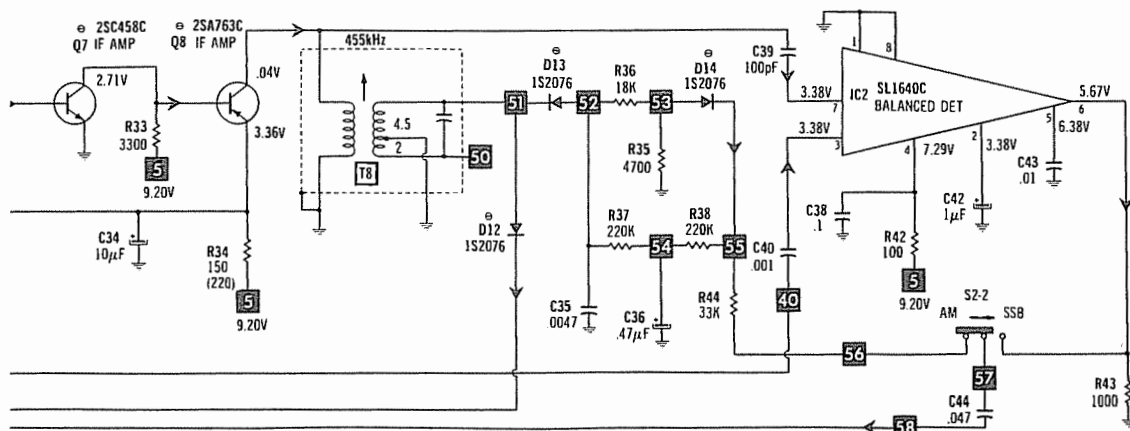


AUDIO FILTER/LIMITER BOARD BOTTOM VIEW

POWER SUPPLY SCHEMATIC







PARTS LIST AND DESCRIPTION

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

SEMICONDUCTORS (Select replacement transistor for best results)

ITEM No.	TYPE No.	MFG. PART No.	REPLACEMENT DATA								
			GENERAL ELECTRIC PART No.	MALLORY 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		GE-514	PTC214	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D2	1S1588		GE-514	PTC214	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D3	1S2076		GE-514	PTC214	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D4	1S1588		GE-514	PTC214	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D5	1S2076		GE-514	PTC214	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D6	1S1588		GE-514	PTC214	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D7	1S2076		GE-514	PTC214	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D8	1S1588		GE-514	PTC214	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D9	1S2076		GE-514	PTC214	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D10	1S1588		GE-514	PTC214	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D11	1S2076		GE-514	PTC214	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D12	1S1588		GE-514	PTC214	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D13	1S2076		GE-514	PTC214	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D14	1S1588		GE-514	PTC214	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D15	1S2076		GE-514	PTC214	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D16	1S1588		GE-514	PTC214	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D17	1S2076		GE-514	PTC214	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D18	1S1588		GE-514	PTC214	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D19	STV-3H		PTC302					ECG605			
D20	1S2076		GE-514	PTC214	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D21	1S1588		GE-514	PTC214	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D22	1S2076		GE-514	PTC214	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D23	1S1588		GE-514	PTC214	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D24	3001		GE-510	PTC205	REN 125	SK3081	RT-201	ECG125	TM125	WEP170	212-29000
D25	100C1		GE-504A(2)	PTC201(2)	REN 116(2)	SK3111(2)	RT-213(2)	ECG116(2)	TM116(2)	WEP157(2)	212-76-02(2)
D26	SV-9		GE-300	PTC214	REN 177	SK3100	RT-218	ECG177	TM177	WEP1062	103-131
D27	3001		GE-510	PTC205	REN 125	SK3081	RT-201	ECG125	TM125	WEP170	212-29000
D28	1N4739A		GEZD-9.1	Z89.1B	REN 139	SK3060	RT-240	ECG139A	TM139/**	WEP1109	103-272
D29	MZD06		GEZD-6.0		REN 5070			ECG5070A	TM5070	WEP1153	103-29008
D30	1001		GE-504A	PTC201	REN 116	SK3111	RT-213	ECG116	TM116	WEP156	212-76-02
D31	1001		GE-504A	PTC201	REN 116	SK3111	RT-213	ECG116	TM116	WEP156	212-76-02
D32	1S2076		GE-514	PTC214	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D33	1S1588		GE-514	PTC214	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D34	1S2076		GE-514	PTC214	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D35	1S1588		GE-514	PTC214	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
IC1	M51202										
IC2	M51202L										
IC3	SL1640C										
IC4	SL1640C										
Q1	MCL458V		GEIC-220	PTC763		SK3465	TVCH-61	ECG778	TM778	WEP2053	
Q2	MCL458		GEIC-220	PTC763		SK3465	TVCH-61	ECG778	TM778	WEP2053	
Q3	25C1856		GE-61*	PTC136*	REN 107	SK3122	RT-134	ECG107	TM107/**	WEP460	121-29000*
Q4	25C4608		GE-61*	PTC136*	REN 107	SK3122	RT-134	ECG107	TM107/**	WEP460	121-29000*
Q5	25C460		GE-61*	PTC136*	REN 107	SK3122	RT-134	ECG107	TM107/**	WEP460	121-29000*
Q6	25C460A		GE-61*	PTC136*	REN 107	SK3122	RT-134	ECG107	TM107/**	WEP460	121-29000*
Q7	25C460B		GE-61*	PTC136*	REN 107	SK3122	RT-134	ECG107	TM107/**	WEP460	121-29000*
Q8	25C460C		GE-61*	PTC136*	REN 107	SK3122	RT-134	ECG107	TM107/**	WEP460	121-29000*
Q9	25C460D		GE-61*	PTC136*	REN 107	SK3122	RT-134	ECG107	TM107/**	WEP460	121-29000*
Q10	25C460E		GE-61*	PTC136*	REN 107	SK3122	RT-134	ECG107	TM107/**	WEP460	121-29000*
Q11	25C460F		GE-61*	PTC136*	REN 107	SK3122	RT-134	ECG107	TM107/**	WEP460	121-29000*
Q12	25C460G		GE-61*	PTC136*	REN 107	SK3122	RT-134	ECG107	TM107/**	WEP460	121-29000*
Q13	25C460H		GE-61*	PTC136*	REN 107	SK3122	RT-134	ECG107	TM107/**	WEP460	121-29000*
Q14	25C460I		GE-61*	PTC136*	REN 107	SK3122	RT-134	ECG107	TM107/**	WEP460	121-29000*
Q15	25C460J		GE-61*	PTC136*	REN 107	SK3122	RT-134	ECG107	TM107/**	WEP460	121-29000*
Q16	25C460K		GE-61*	PTC136*	REN 107	SK3122	RT-134	ECG107	TM107/**	WEP460	121-29000*
Q17	25C460L		GE-61*	PTC136*	REN 107	SK3122	RT-134	ECG107	TM107/**	WEP460	121-29000*
Q18	25C460M		GE-61*	PTC136*	REN 107	SK3122	RT-134	ECG107	TM107/**	WEP460	121-29000*
Q19	25C460N		GE-61*	PTC136*	REN 107	SK3122	RT-134	ECG107	TM107/**	WEP460	121-29000*
Q20	25C460O		GE-61*	PTC136*	REN 107	SK3122	RT-134	ECG107	TM107/**	WEP460	121-29000*
Q21	25C460P		GE-61*	PTC136*	REN 107	SK3122	RT-134	ECG107	TM107/**	WEP460	121-29000*
Q22	25C460Q		GE-61*	PTC136*	REN 107	SK3122	RT-134	ECG107	TM107/**	WEP460	121-29000*
Q23	25C460R		GE-61*	PTC136*	REN 107	SK3122	RT-134	ECG107	TM107/**	WEP460	121-29000*
Q24	25C460S		GE-61*	PTC136*	REN 107	SK3122	RT-134	ECG107	TM107/**	WEP460	121-29000*
Q25	25C460T		GE-61*	PTC136*	REN 107	SK3122	RT-134	ECG107	TM107/**	WEP460	121-29000*
Q26	25C460U		GE-61*	PTC136*	REN 107	SK3122	RT-134	ECG107	TM107/**	WEP460	121-29000*
Q27	25C460V		GE-61*	PTC136*	REN 107	SK3122	RT-134	ECG107	TM107/**	WEP460	121-29000*
Q28	25C460W		GE-61*	PTC136*	REN 107	SK3122	RT-134	ECG107	TM107/**	WEP460	121-29000*
Q29	25C460X		GE-61*	PTC136*	REN 107	SK3122	RT-134	ECG107	TM107/**	WEP460	121-29000*
Q30	25C460Y		GE-61*	PTC136*	REN 107	SK3122	RT-134	ECG107	TM107/**	WEP460	121-29000*
Q31	25C460Z		GE-61*	PTC136*	REN 107	SK3122	RT-134	ECG107	TM107/**	WEP460	121-29000*
Q32	25C460A		GE-61*	PTC136*	REN 107	SK3122	RT-134	ECG107	TM107/**	WEP460	121-29000*
Q33	25C460B		GE-61*	PTC136*	REN 107	SK3122	RT-134	ECG107	TM107/**	WEP460	121-29000*
Q34	25C460C		GE-61*	PTC136*	REN 107	SK3122	RT-134	ECG107	TM107/**	WEP460	121-29000*
Q35	25C460D		GE-61*	PTC136*	REN 107	SK3122	RT-134	ECG107	TM107/**	WEP460	121-29000*
Q36	25C460E		GE-61*	PTC136*	REN 107	SK3122	RT-134	ECG107	TM107/**	WEP460	121-29000*
Q37	25C460F		GE-61*	PTC136*	REN 107	SK3122	RT-134	ECG107	TM107/**	WEP460	121-29000*
Q38	25C460G		GE-61*	PTC136*	REN 107	SK3122	RT-134	ECG107	TM107/**	WEP460	121-29000*
Q39	25C460H		GE-61*	PTC136*	REN 107	SK3122	RT-134	ECG107	TM107/**	WEP460	121-29000*
Q40	25C460I		GE-61*	PTC136*	REN 107	SK3122	RT-134	ECG107	TM107/**	WEP460	121-29000*
Q41	25C460J		GE-61*	PTC136*	REN 107	SK3122	RT-134	ECG107	TM107/**	WEP460	121-29000*
Q42	25C460K		GE-61*	PTC136*	REN 107	SK3122	RT-134	ECG107	TM107/**	WEP460	121-29000*
Q43	25C460L		GE-61*	PTC136*	REN 107	SK3122	RT-134	ECG107	TM107/**	WEP460	121-29000*
Q44	25C460M		GE-61*	PTC136*	REN 107	SK3122	RT-134	ECG107	TM107/**	WEP460	121-29000*
Q45	25C460N		GE-61*	PTC136*	REN 107	SK3122	RT-134	ECG107	TM107/**	WEP460	121-29000*
Q46	25C460O		GE-61*	PTC136*	REN 107	SK3122	RT-134	ECG107	TM107/**	WEP460	121-29000*
Q47	25C460P		GE-61*	PTC136*	REN 107	SK3122	RT-134	ECG107	TM107/**	WEP460	121-29000*
Q48	25C460Q		GE-61*	PTC136*	REN 107	SK3122	RT-134	ECG107	TM107/**	WEP460	121-29000*
Q49	25C460R		GE-61*	PTC136*	REN 107	SK3122	RT-134	ECG107	TM107/**	WEP460	121-29000*
Q50	25C460S		GE-61*	PTC136*	REN 107	SK3122	RT-134	ECG107	TM107/**	WEP460	121-29000*
Q51	25C460T		GE-61*	PTC136*	REN 107	SK3122	RT-134	ECG107	TM107/**	WEP460	121-29000*
Q52	25C460U		GE-61*	PTC136*	REN 107	SK3122	RT-134	ECG107	TM107/**	WEP460	121-29000*
Q53	25C460V		GE-61*	PTC136*	REN 107	SK3122	RT-134	ECG107	TM107/**	WEP460	121-29000*
Q54	25C460W		GE-61*	PTC136*	REN 107	SK3122	RT-134	ECG107	TM107/**	WEP460	121-29000*
Q55	25C460X		GE-61*	PTC136*	REN 107	SK3122	RT-134	ECG107	TM107/**	WEP460	121-29000*
Q56	25C460Y		GE-61*	PTC136*	REN 107	SK3122	RT-134	ECG107	TM107/**	WEP460	121-29000*
Q57	25C460Z		GE-61*	PTC136*	REN 107	SK3122	RT-134	ECG107	TM107/**	WEP460	121-29000*
Q58	25C460A		GE-61*	PTC136*	REN 107	SK3122	RT-134	ECG107	TM107/**	WEP460	121-29000*
Q59	25C460B		GE-61*	PTC136*	REN 107	SK3122	RT-134	ECG107	TM107/**	WEP460	121-29000*
Q60	25C460C		GE-61*	PTC136*	REN 107	SK3122	RT-134	ECG107	TM107/**	WEP460	121-29000*
Q61	25C460D		GE-61*	PTC136*	REN 107	SK3122	RT-134	ECG107	TM107/**	WEP460	121-29000*
Q62	25C460E		GE-61*	PTC136*	REN 107	SK3122	RT-134	ECG107	TM107/**	WEP460	121-290

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
C22	10 25V		PC10-25	VTT10B25		EV-1422
C29	22 16V		PC25-25	VTT22B16	QV1-55	EV-1224
C31	3.3 10V		WNP4-50	TCN504A		TVAN-1302.5
C34	10 25V		PC10-25	VTT10B25		EV-1422
C36	.47 50V		PC1-50	VTT47A63	QV1-3	EV-1610
C37	1 50V		WNP1-50	TCN501A	QEN1-20	TVAN-1560
C42	1 50V		PC1-50	VTT1A50	QV1-11	EV-1615
C46	4.7 50V		PC5-50	VTT4R7B50	QV1-31	EV-1619.1
C47	10 25V		PC10-25	VTT10B25		EV-1422
C63	10 25V		PC10-25	VTT10B25		EV-1422
C64	1 50V		PC1-50	VTT1A50	QV1-11	EV-1615
C66	4.7 50V		PC5-50	VTT4R7B50	QV1-31	EV-1619.1
C68	1000 16V		PC1000-16	VTT1000L16	QV1-183	EV-1261
C70	47 10V		PC50-16	VTT47D16	QV1-73	EV-1226
C71	330 10V		WBR300-35*	VTT330G10	QV1-131	EV-1145
C72	470 25V		WBR500-25*	VTT470M25	QV1-157	EV-1451
C75	33 16V		PC30-25	VTT33D25	QV1-63	EV-1325
C76	47 10V		PC50-16	VTT47D16	QV1-73	EV-1226
C77	33 16V		WBR500-25*	VTT470M25	QV1-157	EV-1451
C81	10 35V		PC10-50	VTT10063	QV1-45	EV-1622
C82	220 16V		PC250-25	VTT220H16	QV1-117	EV-1240
C86	1 10V			TOC105M035EL		SD35-19
C87	1 10V			TOC105M035EL		SD35-19
C92	47 25V		PC50-25	VTT47E25	QV1-77	EV-1426.1
C97	4.7 50V		PC5-50	VTT4R7B50	QV1-31	EV-1619.1

CAPACITORS

ITEM No.	RATING	MFR. PART No.	REPLACEMENT DATA				
			CENTRALAB PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.	
						Q-LINE	GENERAL LINE
C1	.01 10%			GP10000	MAG5011		MWA-121
C2	120 10%			.CD15FD121J03	SX312	QW1-29	10TCC-Q39
C3	39 NP0 10%				CN0439		MWA-121
C4	120 10%			.CD15FD121J03	SX312	QW1-29	10TCU-Q22
C5	22 N750		DTN-22	N22	CN7422		HY-725
C6	.022		JK25-223				HY-725
C7	.022		UK25-223				HY-725
C8	6 N750				CN7568		10TCU-V68
C9	10 N750		DTN-10	N10	CN7410		10TCU-Q10
C10	.022		UK25-223				HY-725
C11	.022		UK25-223				HY-725
C12	.022		UK25-223				HY-725
C13	.022		UK25-223				HY-725
C14	.022		UK25-223				HY-725
C15	.022		UK25-223				HY-725
C16	.033		UK50-333				HY-725
C20	.001 10%		DO-102		MAG50133		10TS-D10
C21	.022		UK25-223		GP210		HY-725
C23	560		DO-561		GP356		10TS-T56
C24	.0012 50V 5%			.CD19F0122J03	SX212		MWC-122
C25	.0012 50V 5%			.CD19F0122J03	SX212		MWC-122
C26	560		DO-561		GP356		10TS-T56
C27	.033		UK50-333		MAG50133		
C28	.033		UK50-333		MAG50133		
C30	.001 10%		DO-102		GP210		10TS-D10
C32	.01 10%			GP10000	MAG5011		
C33	.01 10%			GP10000	MAG5011		
C35	.0047		DO-472		GP247		5GA-D47
C38	.1		CK-104		MAG5001		
C39	100 N220 10%				GP210		10TCR-T10
C40	.001 10%		DO-102		MAG5001		10TS-D10
C41	.1		CK-104		MAG5011		
C43	.01 10%			GP10000	MAG5011		
C44	.047 50V			OPMS2547	EW1A147	QFT2-171	1FT-S47
C45	.033		UK50-333		MAG50133		
C48	.001 10%		DO-102		GP210		10TS-D10
C49	.022		UK25-223				HY-725
C50	100 N220 10%						10TCR-T10
C51	10 N750		DTN-10	N10	CN7410		10TCU-Q10
C52	220 10%			.CD15FD221J03	SX322	QW1-35	MWA-221
C53	220 10%			.CD15FD221J03	SX322	QW1-35	MWA-221
C54	68		DO-680		GP468		10TS-Q68
C55	.022		UK25-223				HY-725
C56	150 N750 10%		DTN-150	N150	CN7315		10TCU-T15
C57	.022		UK25-223				HY-725
C58	.022		UK25-223				HY-725
C59	.022		UK25-223				HY-725
C60	39 NP0 10%				CN0439		10TCC-Q39
C61	220 N750 10%		DTN-220	N220	CN7322		10TCU-T22
C62	10 10%			GP10	GP410		
C65	.001 10%		DO-102		GP210		10TS-D10
C66	.1		CK-104		MAG5001		
C67	.033		UK50-333		MAG50133		
C69	.022		UK25-223				HY-725
C73	.022		UK25-223				HY-725
C74	.022		UK25-223				HY-725
C78	.022 50V 10%			DPMS2522	M192P2239R8	QFT2-127	1FT-S27
C79	.01 50V 10%			WMF151	EW1A110	QFT2-91	1FT-S10
C80	.039 50V 10%			DPMS6539	M192P3939R8	QFT2-159	1FT-S39
C83	470		DO-471		GP347		10TS-T47
C84	470		DO-471		GP347		10TS-T47
C85	470		DO-471		GP347		10TS-T47
C88	.001 10%		DO-102		GP210		10TS-D10
C89	.022		UK25-223				HY-725
C90	.022		UK25-223				HY-725
C91	.022		UK25-223				HY-725

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 Q-LINE	PART No. GENERAL LINE
C93	.022		UK25-223				HY-725
C94	.022		UK25-223				HY-725
C95	.022		UK25-223				HY-725
C100	.001		00-102		GP210		10TS-010
C101	150						
C102	560						
C103	560						
C104	.022		UK25-223				HY-725
C105	560		DD-561		GP356		10TS-T56
C106	560		DD-561		GP356		10TS-T56
C107	330 N750 10%		DTH-330	H330	CN7333		10TCU-T33
C108	22 10%			GP22	GP422		
C109	.01 10%			GP10000	MAG5011		
C110	150 N750 10%		DTH-150	N150	CN7315		10TCU-T15
C111	.001		00-102		GP210		10TS-010

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

ITEM No.	FUNCTION	RESISTANCE	REPLACEMENT DATA			
			MFR. PART No.	CENTRALAB PART No.	MALLORY PART No.	TRW PART No.
VR1	Clarifier	10K	09-063			
VR2	Squelch Range	50K	01-521			U260R503B
VR3	Squelch	10K	09-063			
VR4	Signal Meter	50K	01-521			U260R503B
VR5	SSB ALC	1000	01-510			U260R102B
VR6	Volume/Power Switch	50K	09-016			
VR7	AM AMC	5000	01-513			X260R502B (2)

(2) Cut off one of the end terminals and bend to fit PC board.

RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA		ITEM No.	RATING	REPLACEMENT DATA	
		MFR. PART No.	WORKMAN PART No.			MFR. PART No.	WORKMAN PART No.
R64	1 Fusible		(FU-68) (1)				

(1) Number on unit.

COILS (RF-IF)

ITEM No.	FUNCTION	REPLACEMENT DATA			REMARKS
		PART No.	OTHER IDENTIFICATION	MILLER PART No.	
L1	TVI Trap (54MHz)	02-059	ETC69191		
L2	Filter (22MHz)	02-109	LFK-223K		
L3	Filter (22MHz)	02-109	LFK-223K		
L4	Final (27MHz)	02-072	ETC69195		
L5	RF Choke	02-058	ETC69190		
L6	XMT Driver (27MHz)	02-060	ETC69193		
T1	Antenna Matching (27MHz)	02-054	ETC69172		
T2	RF Amp (27MHz)	02-012	ETC15061	CBS708-TC	
T3	Mixer (10.7MHz)	02-013	ETC15062	CBS508-1TC	
T4	Mixer (10.7MHz)	02-056	ETC69176		
T5	IF (455kHz)	02-073	ETC73194		
T8	IF (455kHz)	02-017	ETC15090	CBS506-4TC	
T9	Mixer (27MHz)	02-013	ETC15062	CBS508-1TC	
T10	XMT Mixer (27MHz)	02-055	ETC69175		
T11	XMT Mixer (27MHz)	02-055	ETC69175		
T12	XMT Pre-driver (27MHz)	02-022	ETC20105		
T13	IF (455kHz)	02-026	ETC20192		
T14	IF (455kHz)	02-026	ETC20192		

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA			NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000~)	MFR. PART No.	THORDARSON PART No.	TRIAD PART No.	
TT1	2.5A	.096	1.3mH	ETT-1002	TR509		

TRANSFORMER (Audio Output)

ITEM No.	IMPEDANCE		REPLACEMENT DATA			NOTES
	PRI.	SEC.	MFR. PART No.	THORDARSON PART No.	TRIAD PART No.	
TT2	32CT	8	ETT-69016			

ROYCE MODEL 1-632

PARTS LIST AND DESCRIPTION (CONTINUED)

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

TRANSFORMER (Driver)

ITEM No.	TURNS RATIO			REPLACEMENT DATA			NOTES
	PRI.	SEC. 1	SEC. 2	MFGR. PART No.	THORDARSON PART No.	TRIAD PART No.	
TT3	1	1.2		ETT-1001	TR612		

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		MFGR. PART No.	QUAM PART No.	
SP	3 1/2" PH 8 Ohms	06-006	3A05Z8	

FUSE DEVICES

ITEM No.	DESCRIPTION	REPLACEMENT DATA					
		PART No.		BUSS PART No.		LITTELFUSE PART No.	
		DEVICE	HOLDER	DEVICE	HOLDER	DEVICE	HOLDER
F1	3A Quick Acting			AGC3	HRK	312003	150145

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	21-001	18-032	18-034	18-010	18-092	1	2	3	NC	NC	2

MISCELLANEOUS

ITEM No.	PART NAME	PART No.	NOTES
031	LEO		Transmit (Red) (1.88V @ 7MA)
F1	Filter		(10.7MHz) (SFE10.7MA or ETCF69004)
F2	Filter		(10.7MHz) (SFE10.7MA or ETCF69004)
F3	Filter		(455kHz) (CFU455H)
F4	Filter		(455kHz) (CFU455H)
F5	Filter		(455kHz) (MFL-45501L Mech. Filter)
J1	Jack	10-001	Microphone
J2	Jack	10-003	PA Speaker
J3	Jack	10-003	External Speaker
J4	Jack	10-002	Antenna
J5	Jack	10-005	DC Power
M1	Meter	05-020	Signal/Transmit Power
PL1	Lamp	07-001	Channel Selector (13.70V @ 48MA)
PL2	Lamp	07-001	Meter (13.70V @ 48MA)
RL	Relay	15-002	XMT (107 Ohms)
S1	Switch	09-150	PA/CB (Includes: S2,S3,S4)
S2	Switch		SSB/AM
S3	Switch		USB/Off
S4	Switch		AM/Off
S5	Switch		Power On/Off (Part of Volume Control)
S6	Switch		Channel Selector
	Cord	08-002	DC Power

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

ITEM	PART No.	ITEM	PART No.
Case, Bottom	19-136	Knob, Control	19-610
Case, Top	19-135	Front Panel	19-224
Disc, Channel Selector	19-716	Push-Button	19-637
Knob, Channel	19-625		

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')