

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 8003

MANUFACTURER'S SPECIFICATIONS

RECEIVER

Certification	Part 15, Sub-part C
Sensitivity	$0.5 \mu\text{V}$ for $10 \text{ dB } \frac{s+n}{n}$
Selectivity	$\pm 5 \text{ kHz @ } -6 \text{ dB}$
Adjacent Channel Rejection	-55 dB minimum
Spurious Rejection (Major Image)	50 dB minimum
Squelch Sensitivity (Threshold)	$0.5 \mu\text{V minimum}$
Audio Output	2.5 W with 8-ohms (4 W with 4-ohms)

TRANSMITTER

Compliance	FCC DATA 8003, Part 95
Power Output	4 W (maximum legal power)
Modulation	85% minimum guaranteed sine wave (typically 95%)
Harmonic Suppression	
(TV) Interference	-60 dB

Courtesy of the Manufacturer

PAGE MODEL 8003

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

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ALIGNMENT INSTRUCTIONS

CAUTION: Use isolation transformer or observe polarity when connecting test equipment. Maintain line voltage at 120V AC. Allow a 15-minute warm-up period. Adjustments made with 13.8-volt DC input. Connect low sides of test equipment to ground unless specified otherwise. Connect 50-ohm dummy load or antenna before keying transmitter. Correct Microphone.

Suggested Alignment Tools: GC ELECTRONICS:
 T102, T501, T502, T503, T504.....9440
 T103.....5000, 5009, 8276, 8728, 9089
 T301, T302, L303, L304.....8728, 9304, 9089
 CT301, CT501.....5000, 8276, 9089

SYNTHESIZER ALIGNMENT

TEST EQUIPMENT	TRANSCEIVER	ADJUST	REMARKS
Input of frequency counter to TP1 (Junction of C108 and CF501).	Ch. 19	CT501	Adjust for 10.240MHz.
Input of DC meter to TP2 (Junction of R505 and R506).	Ch. 1 XMT	T502	Adjust for 2.00 volts. Check for approximate 2.50 volts on channel 40.
Input of frequency counter to TP3 (IC501 Pin 18).	Ch. 1		Check for 17.180MHz. Check all channels. (See Truth Chart for correct frequencies.)
Input of frequency counter to TP4 (IC501 Pin 1).	Ch. 1 XMT		Check for 26.965MHz. If necessary readjust CT501 for correct frequency. 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.

TEST EQUIPMENT	TRANSCEIVER	ADJUST	REMARKS
Output of signal generator to TP5 (IC101 Pin 17). 455kHz, 1000Hz @ 30% modulation.	Ch. 19	T103	Adjust for maximum audio output.
Output of signal generator to antenna input. 27.185MHz, 1000Hz @ 30% modulation.	Ch. 19	T102, T101	Adjust for maximum audio output. Readjust T103 for maximum.

RECEIVER ADJUSTMENTS

Connect an AC VTVM or AF wattmeter across speaker voice coil. Adjust volume control to obtain a suitable indication.

TEST EQUIPMENT	TRANSCEIVER	ADJUST	REMARKS
Output of signal generator to antenna input. 27.185MHz, 1000Hz @ 30% modulation. Output 1uV.	Ch. 19	VR109	IF AGC Adjust for 2.00 volts rms (.5 watts) audio output.

RECEIVER ADJUSTMENTS (Continued)

TEST EQUIPMENT	TRANSCEIVER	ADJUST	REMARKS
Output of signal generator to antenna input. 27.185MHz, 1000Hz @ 30% modulation. Output 1uV.	Ch. 19	VR101	RF AGC Adjust for maximum audio output.
Output of signal generator to antenna input. 27.185MHz, 1000Hz @ 30% modulation. Output 1000uV.	Ch. 19	VR102	SQUELCH RANGE Adjust so that squelch just breaks.
Output of signal generator to antenna input. 27.185MHz, 1000Hz @ 30% modulation. Output 100uV.	Ch. 19	VR103	SIG METER Adjust for 9 on SIG 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	T503, T504, T301, T302, L303	Adjust for maximum RF output.
Input of RF wattmeter to antenna input.	Ch. 19	CT301, L304	Adjust for 4.0 watts RF output maximum.

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 oscilloscope or modulation meter to antenna input. Inject a 1000Hz, 20mV audio signal to mic input.	Ch. 19	VR201	AMC Adjust for 100% modulation maximum. See Figure 1.
Input of RF wattmeter to antenna input.	Ch. 19	VR301	PWR METER At 4.0 watts RF output adjust so that needle rests at leading edge of red area on PWR scale of meter.

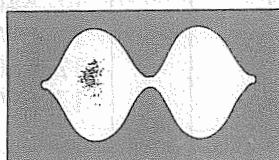
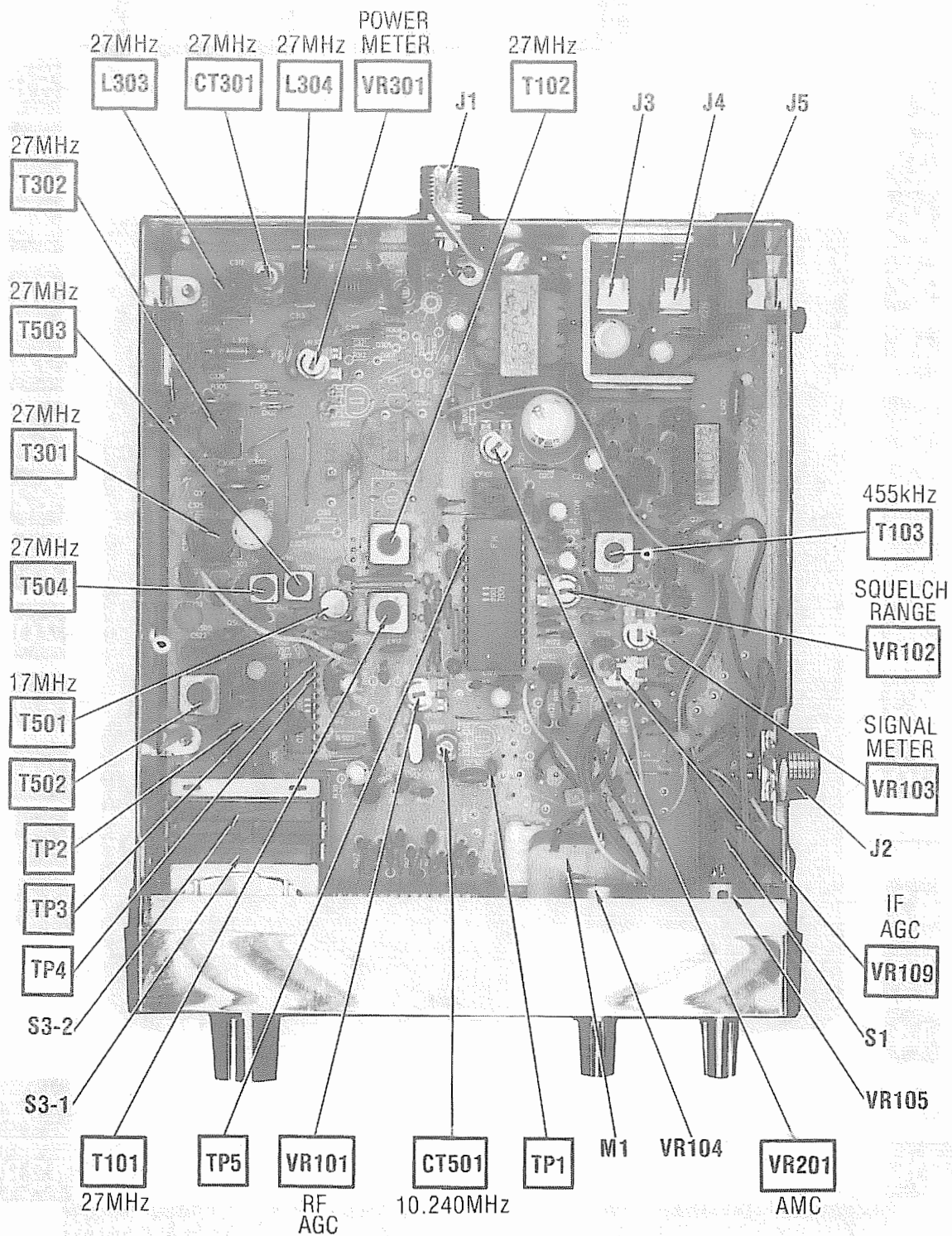


Figure 1.

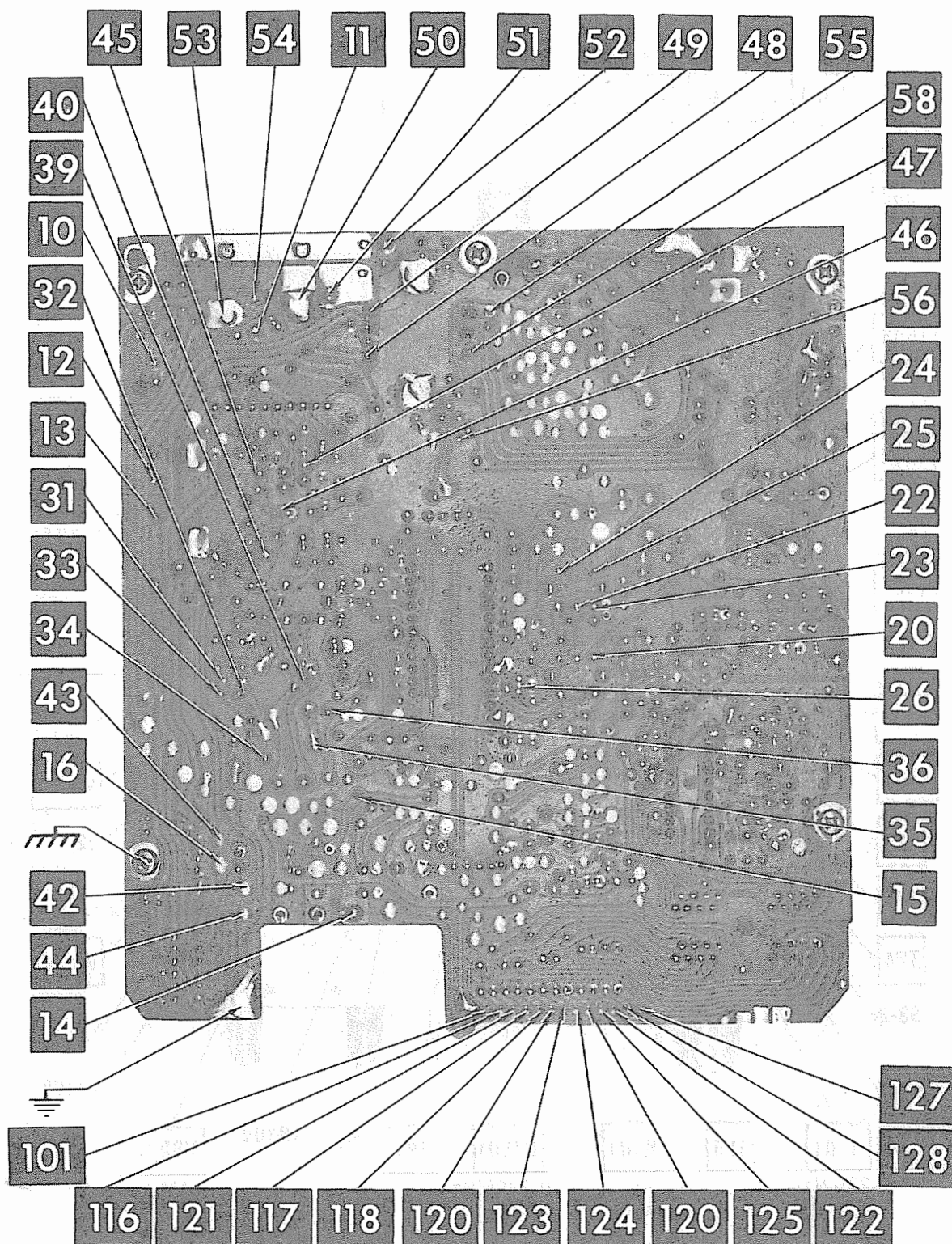
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TRUTH CHART

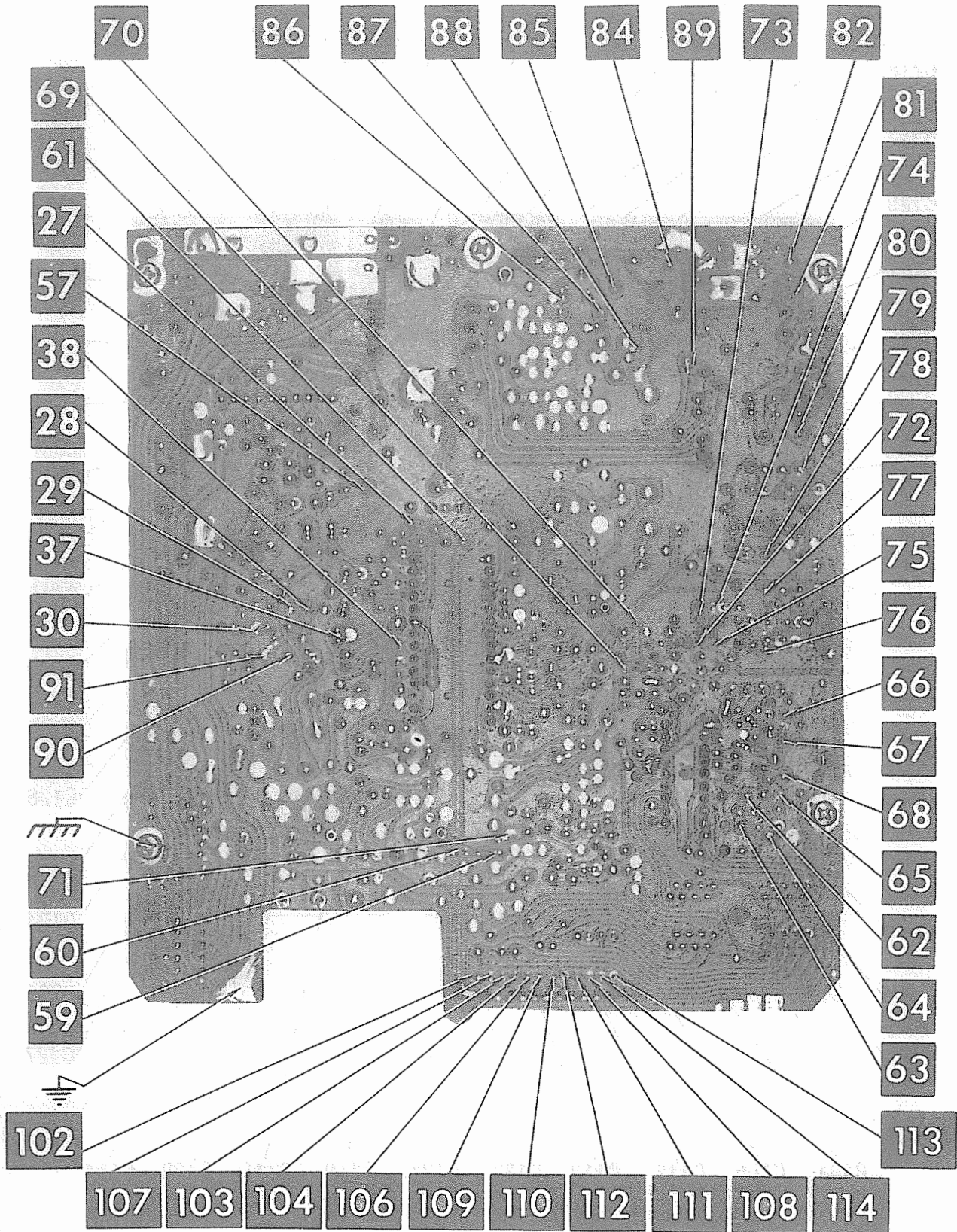
C H A N N E L	1 = 4.88 Volts 0 = 0 Volts							Rec VCO OUTPUT IN MHz AT TP3	XMT VCO OUTPUT IN MHz AT TP4		
	CHANNEL INPUT CODES										
	IC501 PINS										
	7	8	11	12	13	14					
1	0	0	0	0	0	0			17.180	26.965	
2	0	0	0	0	0	1			17.190	26.975	
3	0	0	0	0	1	0			17.200	26.985	
4	0	0	0	1	0	0			17.220	27.005	
5	0	0	0	1	0	1			17.230	27.015	
6	0	0	0	1	1	0			17.240	27.025	
7	0	0	0	1	1	1			17.250	27.035	
8	0	0	1	0	0	1			17.270	27.055	
9	0	0	1	0	1	0			17.280	27.065	
10	0	0	1	0	1	1			17.290	27.075	
11	0	0	1	1	0	0			17.300	27.085	
12	0	0	1	1	1	0			17.320	27.105	
13	0	0	1	1	1	1			17.330	27.115	
14	0	1	0	0	0	0			17.340	27.125	
15	0	1	0	0	0	1			17.350	27.135	
16	0	1	0	0	1	1			17.370	27.155	
17	0	1	0	1	0	0			17.380	27.165	
18	0	1	0	1	0	1			17.390	27.175	
19	0	1	0	1	1	0			17.400	27.185	
20	0	1	1	0	0	0			17.420	27.205	
21	0	1	1	0	0	1			17.430	27.215	
22	0	1	1	0	1	0			17.440	27.225	
23	0	1	1	1	0	1			17.470	27.255	
24	0	1	1	0	1	1			17.450	27.235	
25	0	1	1	1	0	0			17.460	27.245	
26	0	1	1	1	1	0			17.480	27.265	
27	0	1	1	1	1	1			17.490	27.275	
28	1	0	0	0	0	0			17.500	27.285	
29	1	0	0	0	0	1			17.510	27.295	
30	1	0	0	0	1	0			17.520	27.305	
31	1	0	0	0	1	1			17.530	27.315	
32	1	0	0	1	0	0			17.540	27.325	
33	1	0	0	1	0	1			17.550	27.335	
34	1	0	0	1	1	0			17.560	27.345	
35	1	0	0	1	1	1			17.570	27.355	
36	1	0	1	0	0	0			17.580	27.365	
37	1	0	1	0	0	1			17.590	27.375	
38	1	0	1	0	1	0			17.600	27.385	
39	1	0	1	0	1	1			17.610	27.395	
40	1	0	1	1	0	0			17.620	27.405	



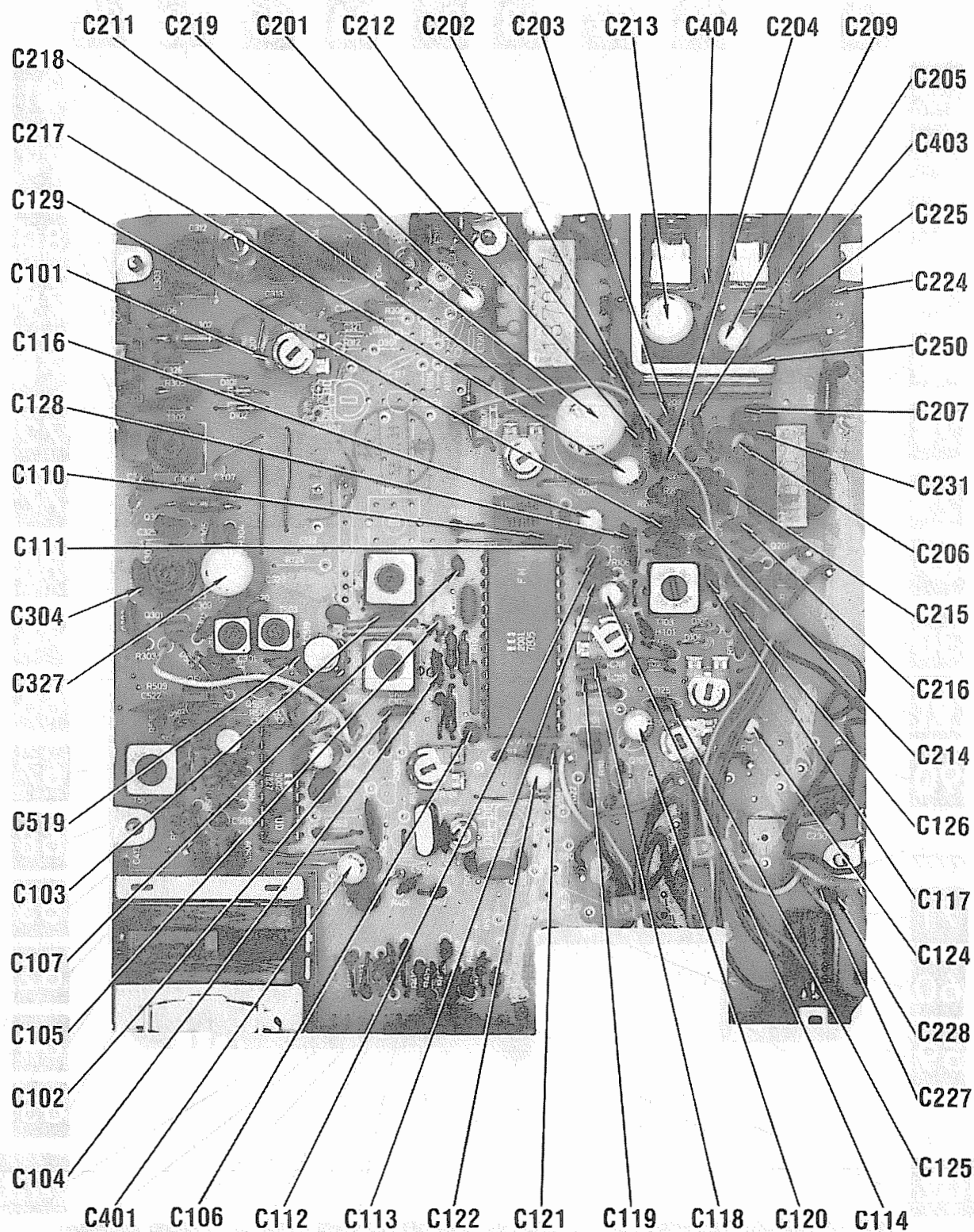
CHASSIS VIEW



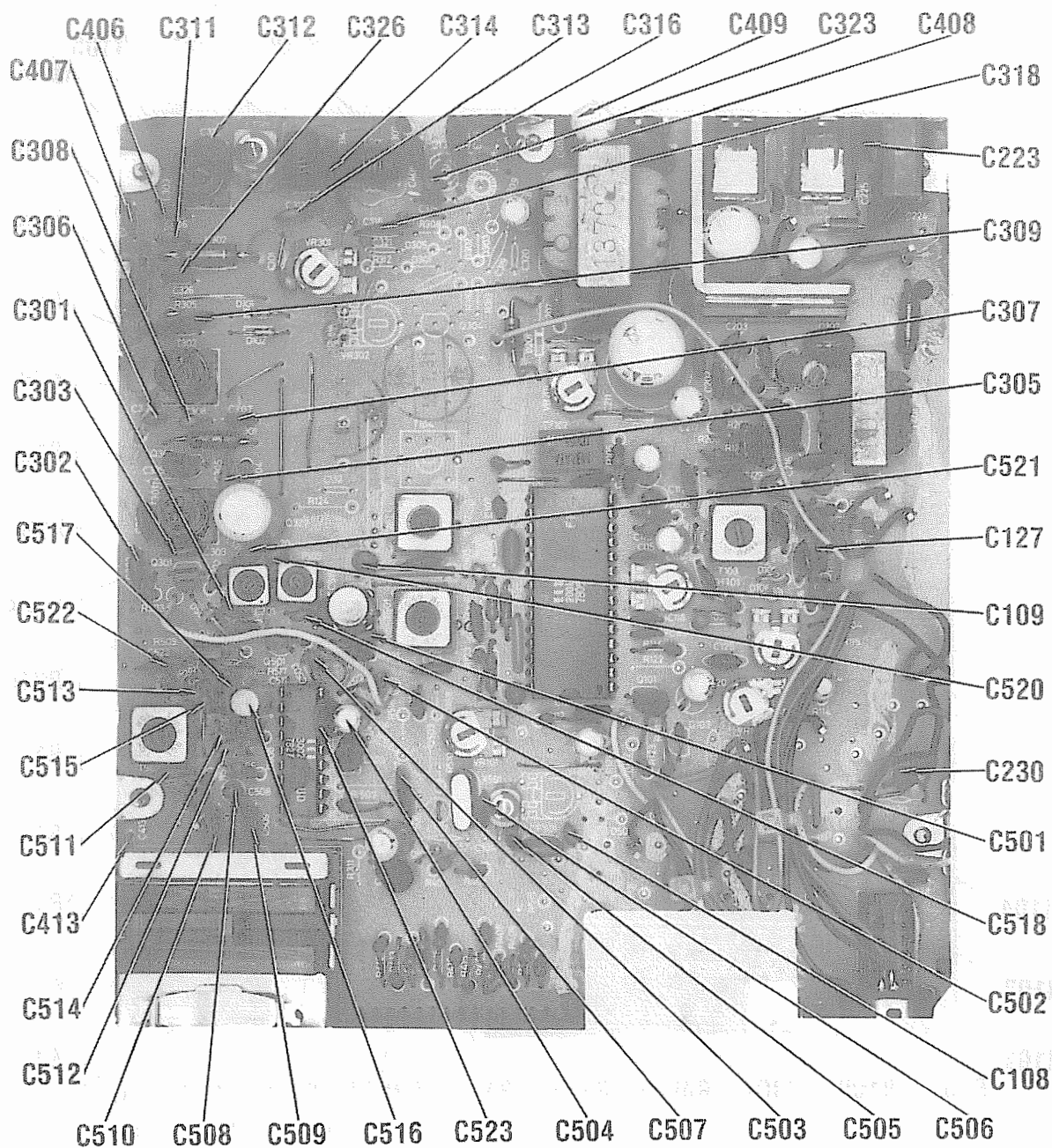
MAIN BOARD



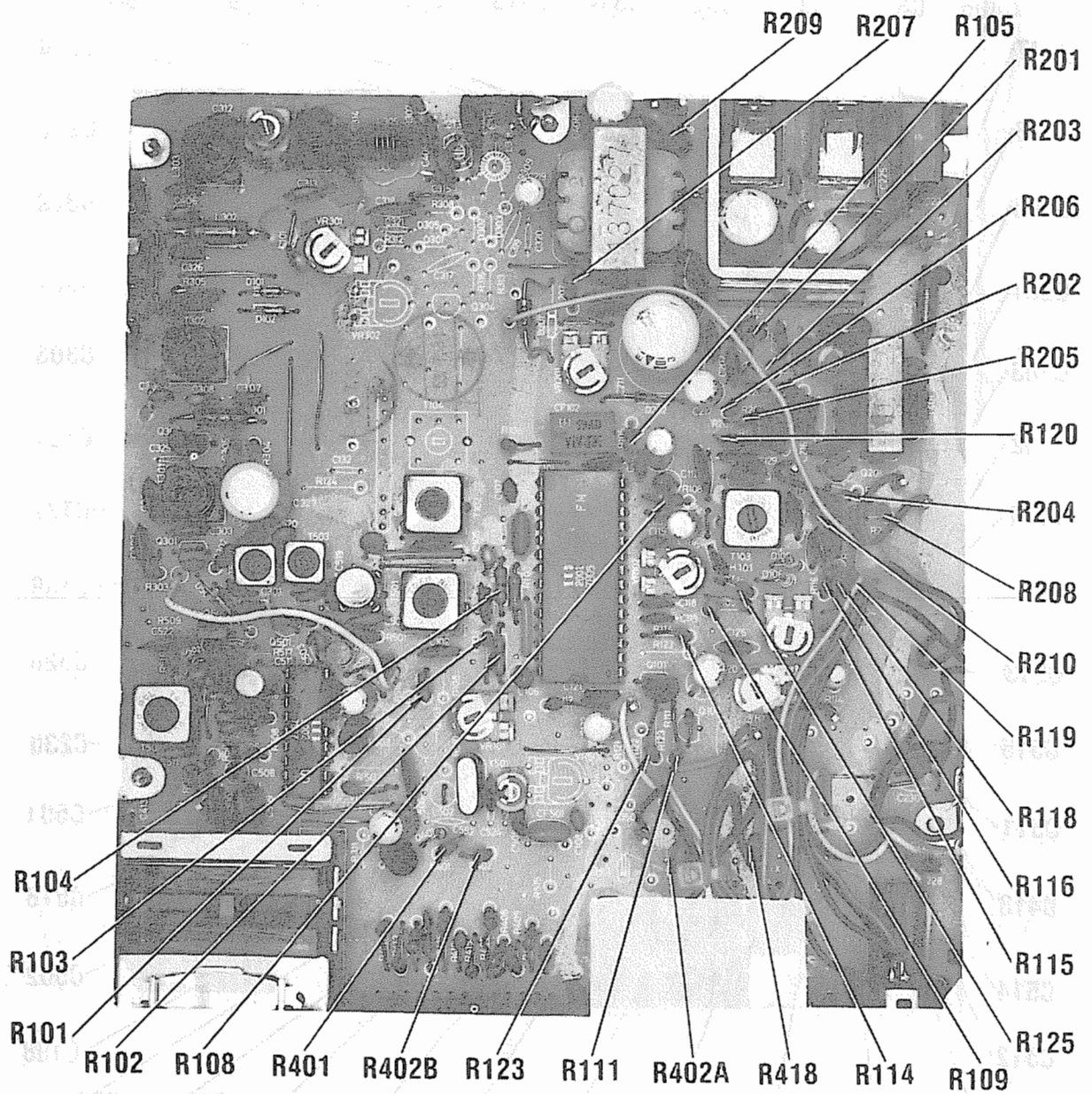
MA IN BOARD



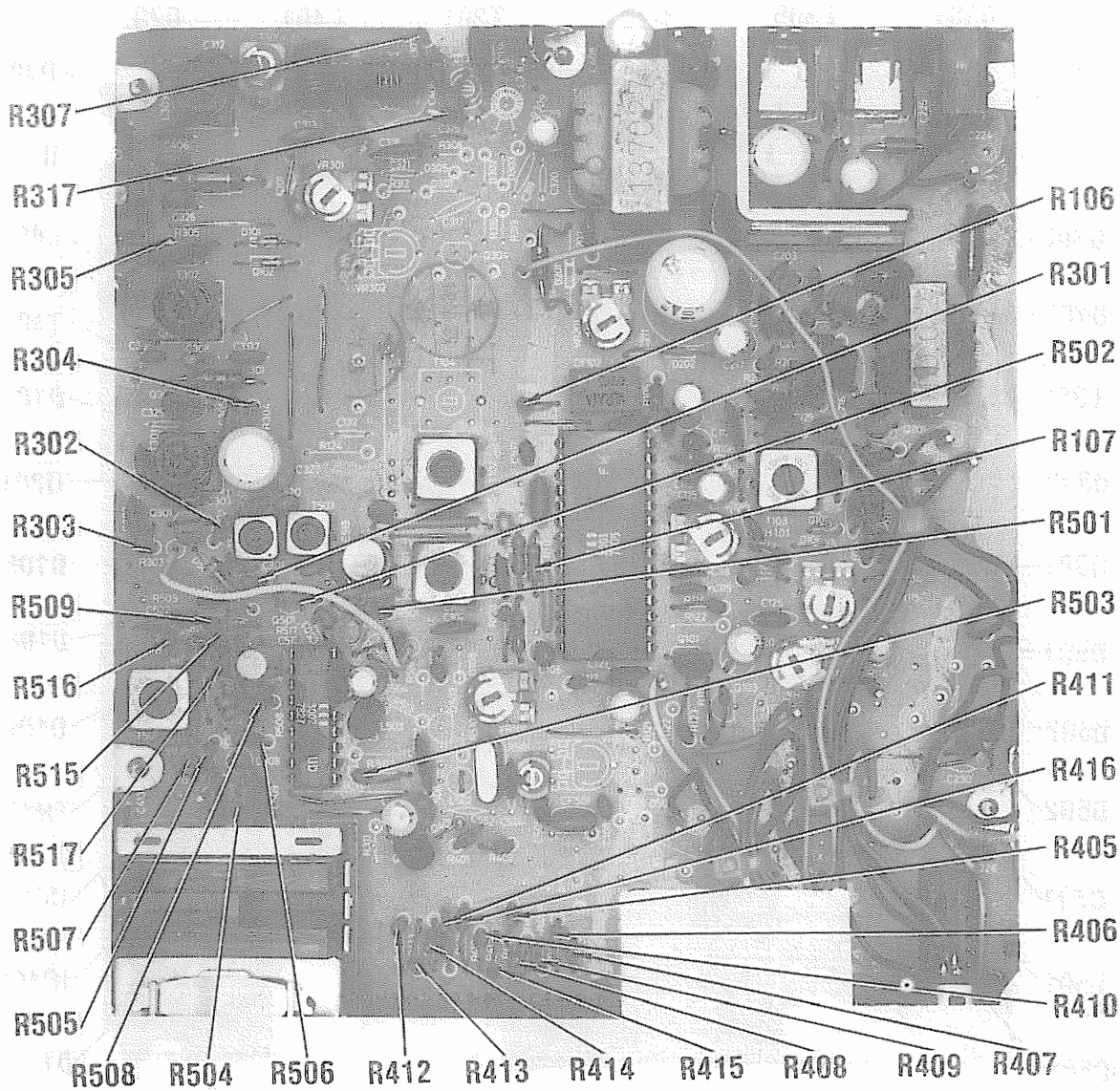
MAIN BOARD



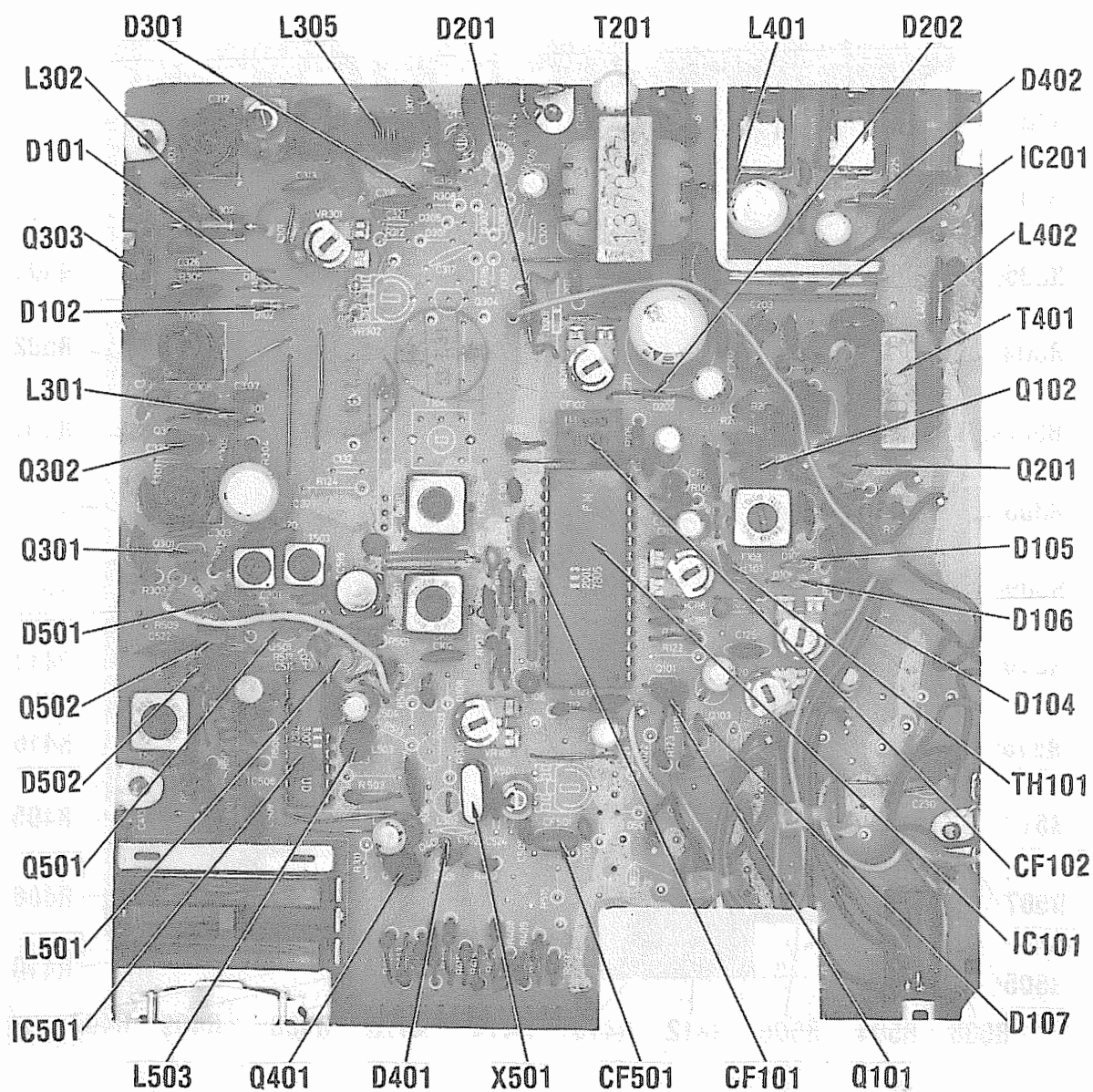
MAIN BOARD



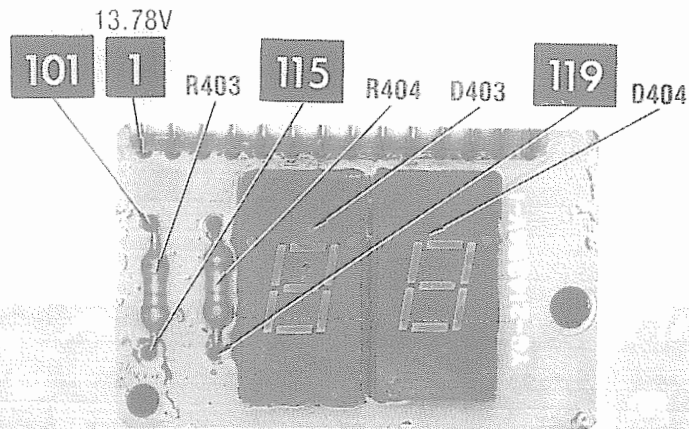
MAIN BOARD



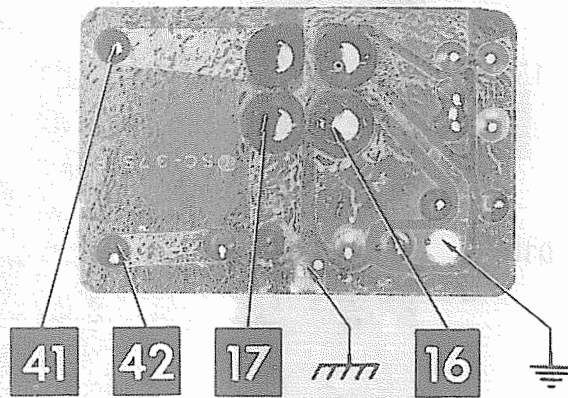
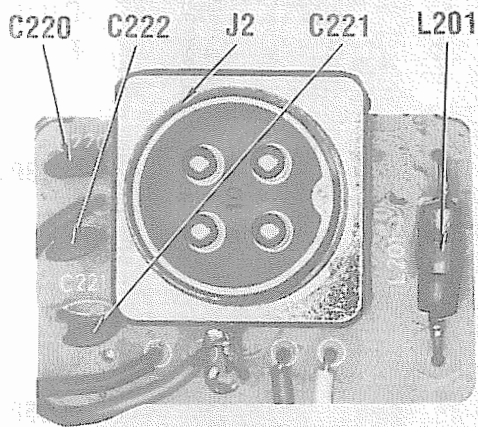
MAIN BOARD



MAIN BOARD

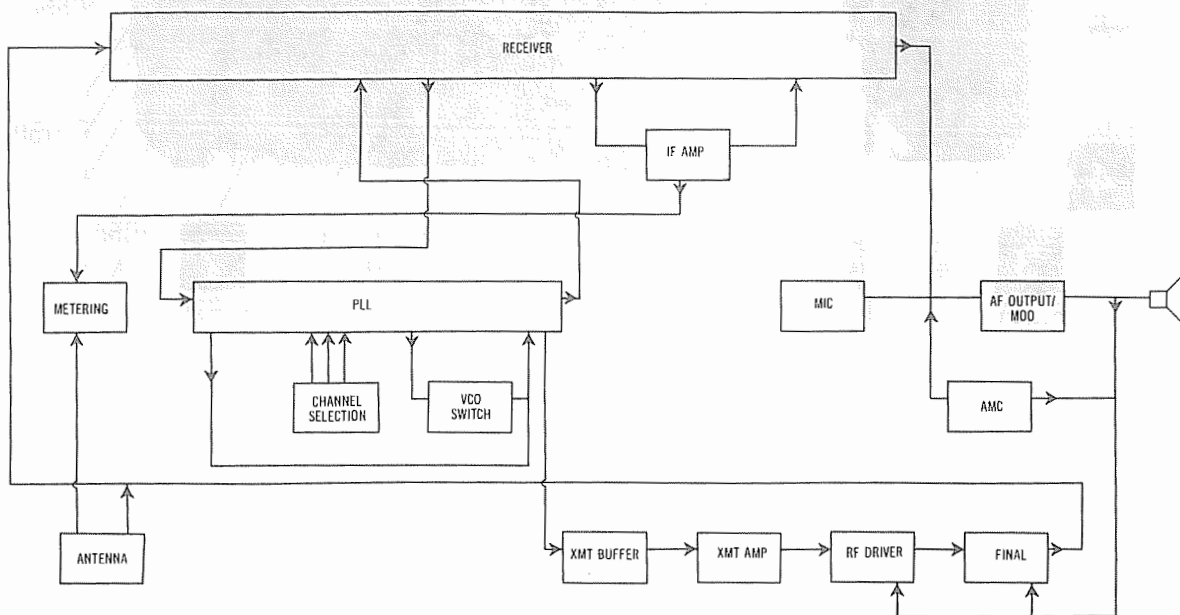


LED BOARD

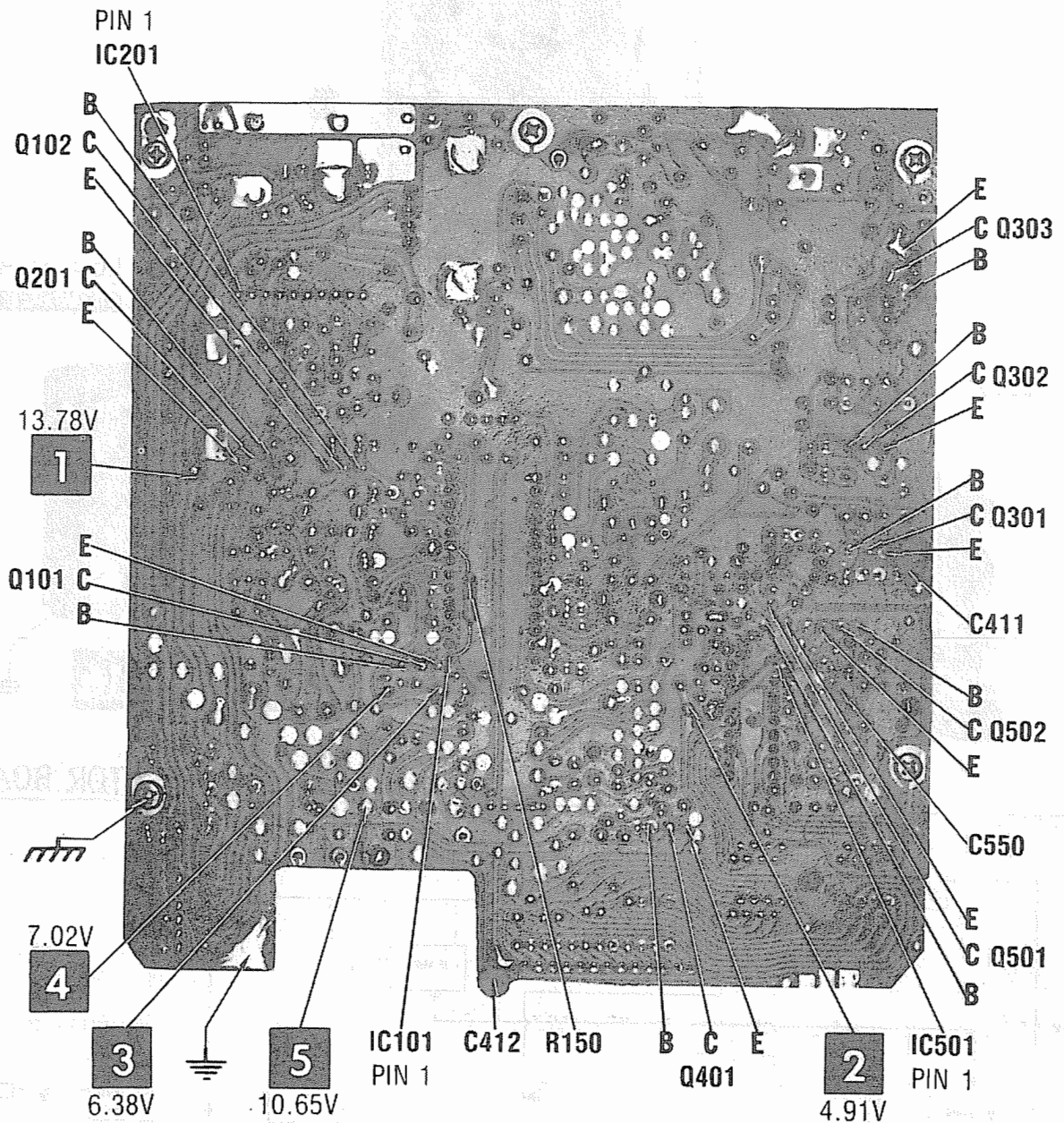


MIC CONNECTOR BOARD

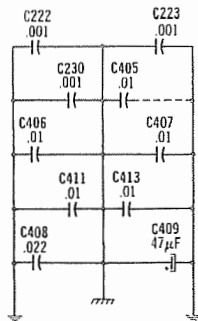
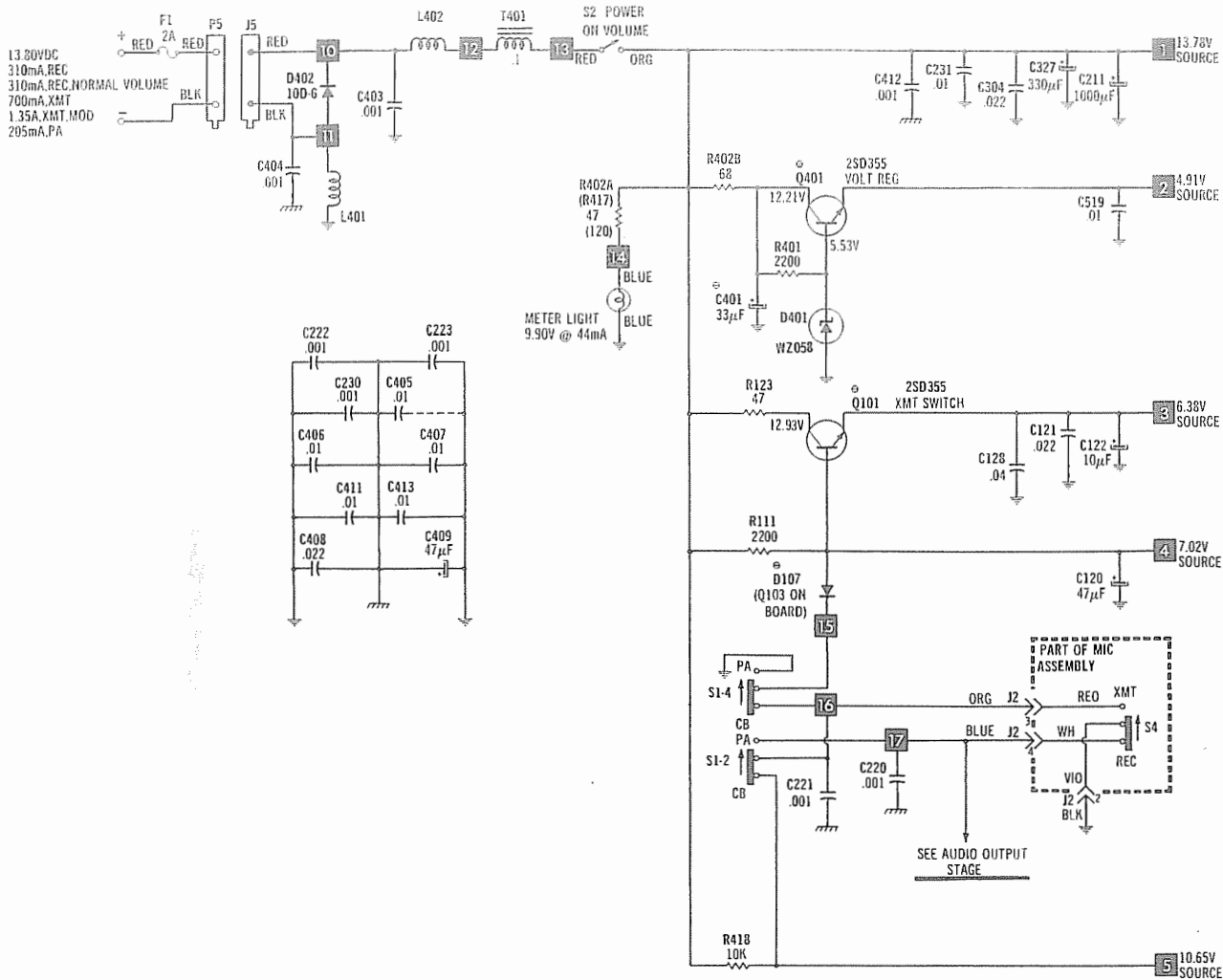
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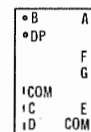
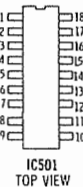
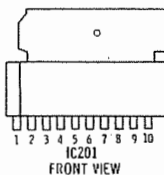
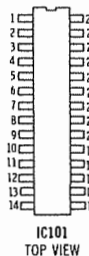
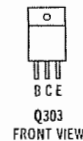
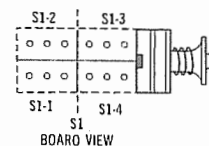
BLOCK DIAGRAM



MAIN BOARD



TERMINAL GUIDES



— Circuitry not used in some versions.

--- Circuitry used in some versions.

※ Nominal value
 ⏏ Ground
 ⏏ Chassis
 ⏏ See parts list

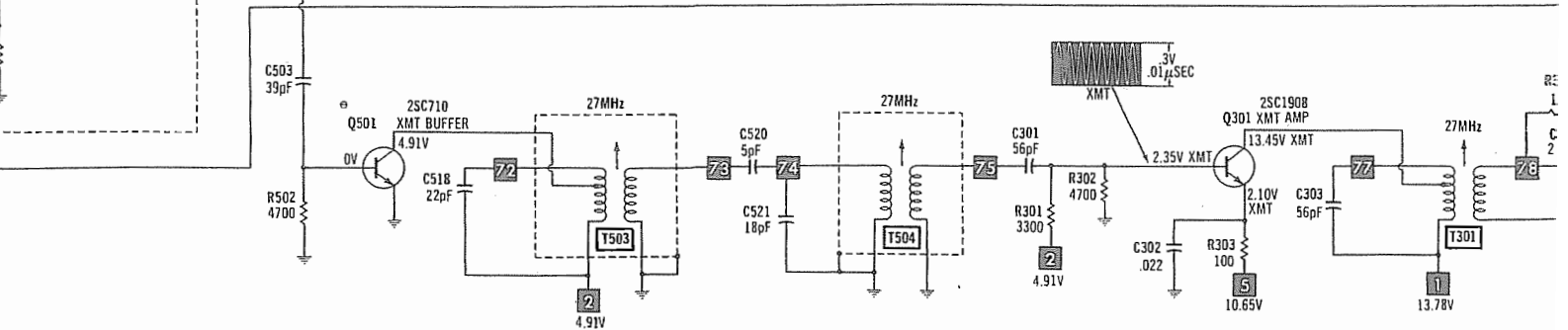
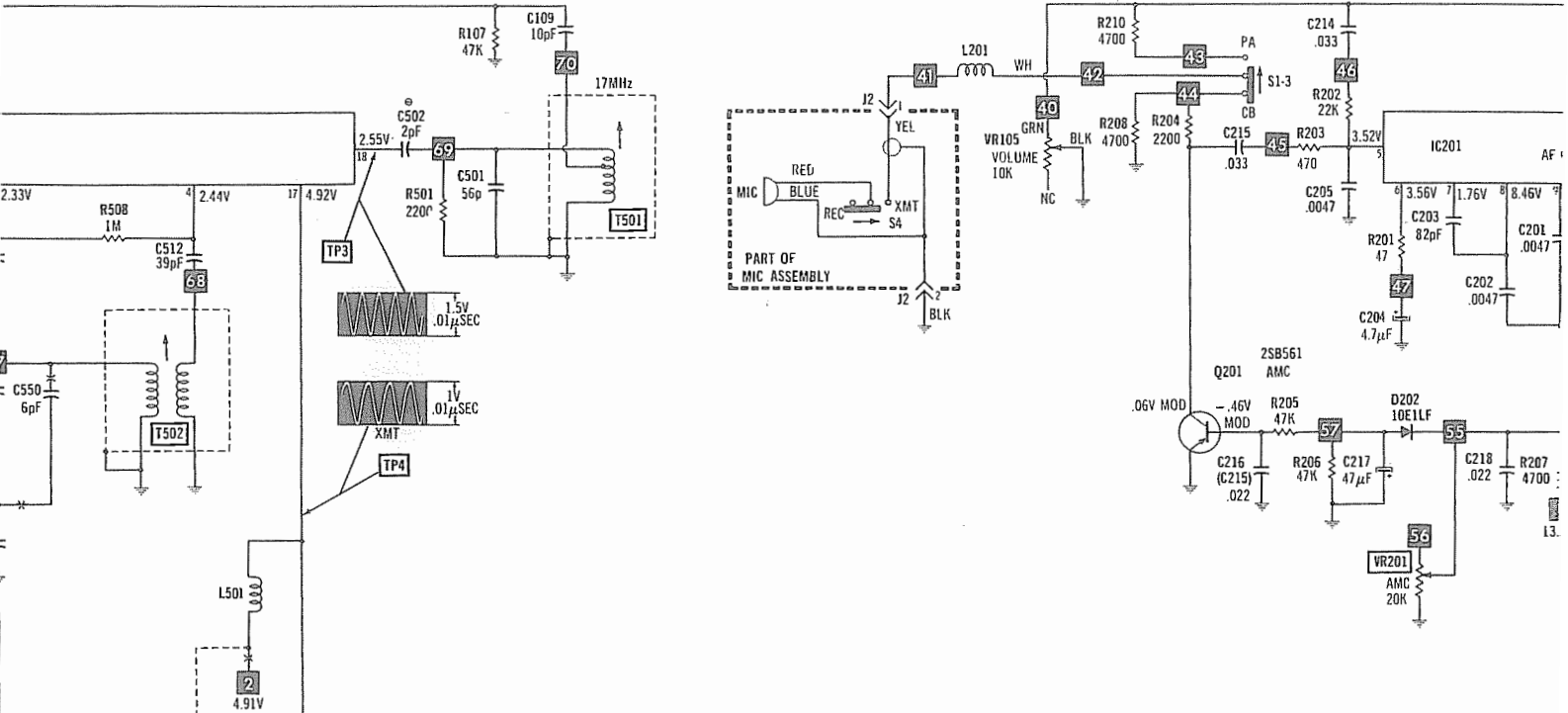
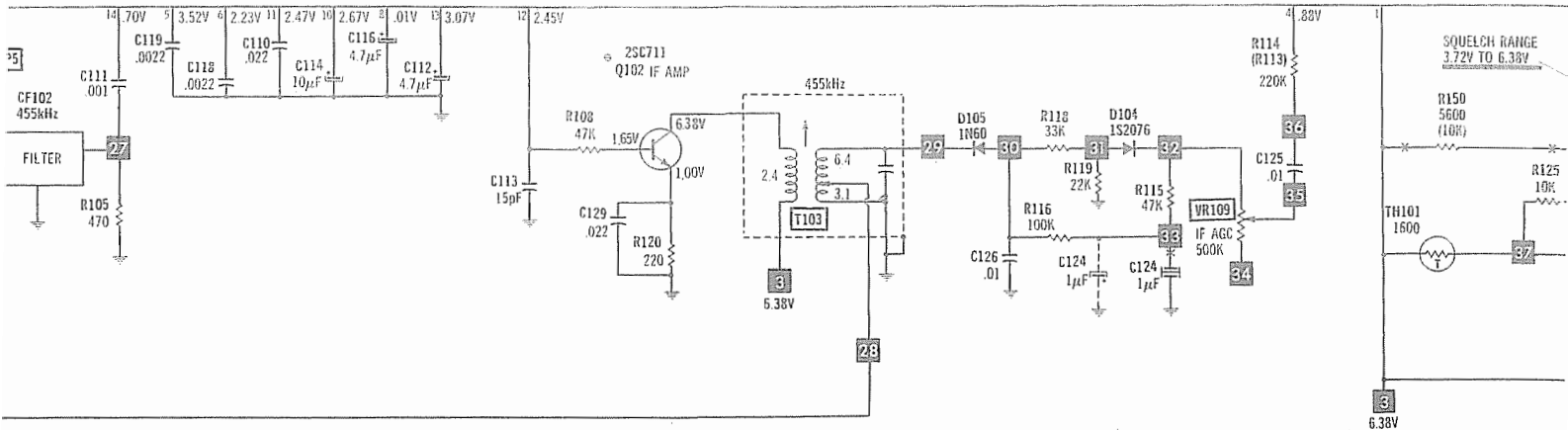
▽ Common tie point
 ⏏ Signal path
 ⏏ Voltage path

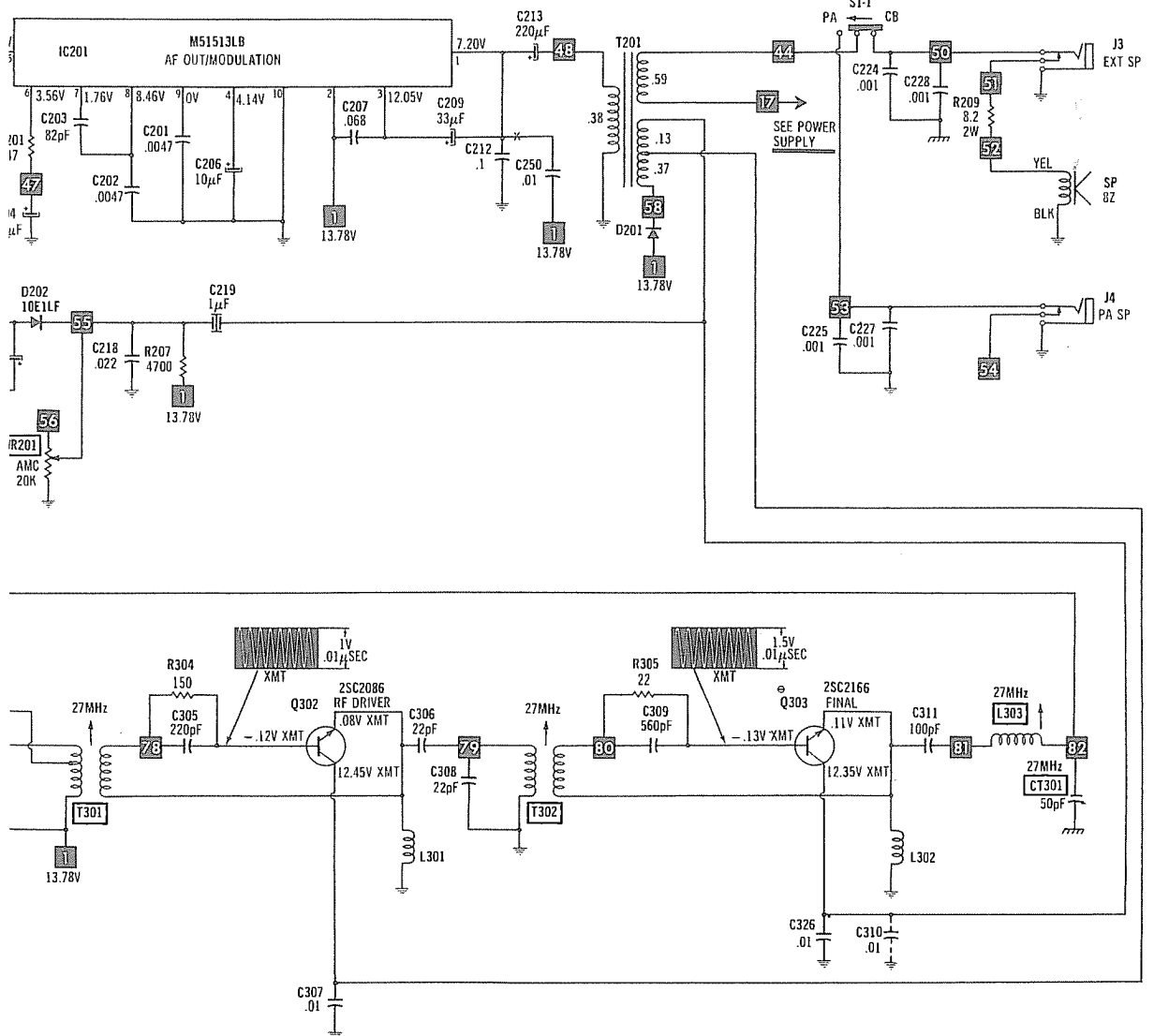
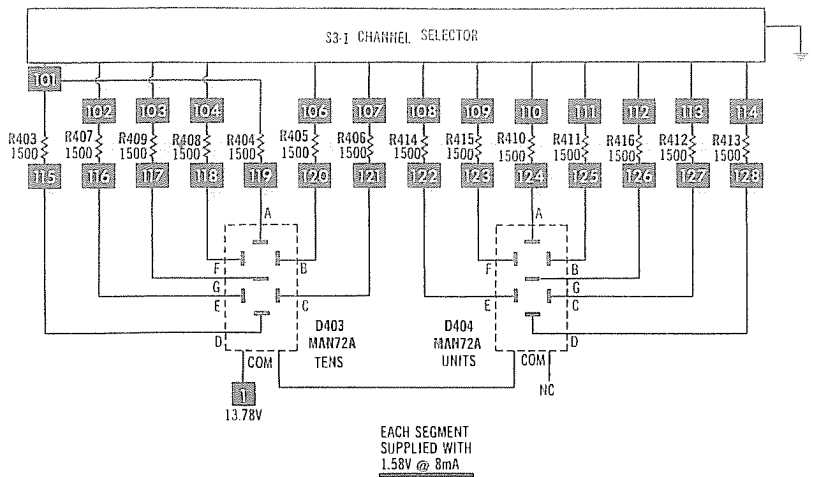
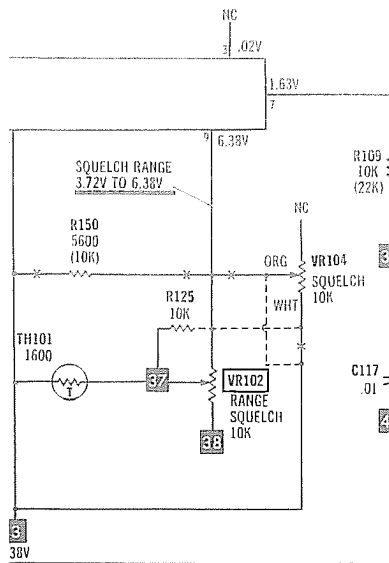
Waveforms and Voltages taken in Channel 19 with switching in receive unless noted. Item numbers in rectangles appear in the alignment/adjustment instructions. Supply voltage maintained as shown at input. Voltages measured with digital meter, no signal. Controls adjusted for normal operation. Terminal 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).

A PHOTOFAC STANDARD NOTATION SCHEMATIC

WITH **CIRCUITRAGE**

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PARTS LIST AND DESCRIPTION

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

SEMICONDUCTORS (Select replacement transistor for best results)

ITEM No.	TYPE No.	MFR. PART No.	REPLACEMENT DATA							
			GENERAL ELECTRIC PART No.	MALLORY PART No.	RAYTHEON PART No.	RCA PART No.	SYLVANIA PART No.	THORDARSON PART No.	WORKMAN PART No.	ZENITH PART No.
D101	1S2076	IP20-0422	GE-514	PTC214	REN 177	SK3100	ECG519	TH519	WEP925	103-287
D102	1S2076	IP20-0422	GE-514	PTC214	REN 177	SK3100	ECG519	TH519	WEP925	103-287
D104	1S2076	IP20-0422	GE-514	PTC214	REN 177	SK3100	ECG519	TH519	WEP925	103-287
D105	1N60	IP20-0060	1N60	PTC206	REN 109	SK3088	ECG109	TH109/**	WEP134	103-Z9001
D106	1N60	IP20-0060	1N60	PTC206	REN 109	SK3088	ECG109	TH109/**	WEP134	103-Z9001
D107	1S953	IP20-0222	GE-300	PTC214	REN 177	SK3100	ECG177	TH177	WEP1062	103-131
	1S2076		GE-514	PTC214	REN 177	SK3100	ECG519	TH519	WEP925	103-287
	1S853		GE-300	PTC214	REN 177	SK3100	ECG177	TH177	WEP1062	103-131
D201	10E1	IP20-0421	GE-504A	PTC201	REN 116	SK3311	ECG116	TH116	WEP156	212-76-02
	10E1LF		GE-504A	PTC201	REN 116	SK3311	ECG116	TH116	WEP156	212-76-02
D202	1S953	IP20-0222	GE-300	PTC214	REN 177	SK3100	ECG177	TH177	WEP1062	103-131
	1S2076		GE-514	PTC214	REN 177	SK3100	ECG519	TH519	WEP925	103-287
	1S853		GE-300	PTC214	REN 177	SK3100	ECG177	TH177	WEP1062	103-131
D301	1S953	IP20-0222	GE-300	PTC214	REN 177	SK3100	ECG177	TH177	WEP1062	103-131
	1S2076		GE-514	PTC214	REN 177	SK3100	ECG519	TH519	WEP925	103-287
	1S853		GE-300	PTC214	REN 177	SK3100	ECG177	TH177	WEP1062	103-131
D401	1Z058	IP20-0424	GEZD-5.6	PTC204	REN 156	SK3051	ECG156	TH156	WEP4008	212-Z9000
D402	100-6	IP20-0423	GE-512	PTC204	REN 156	SK3051	ECG156	TH156	WEP4008	212-Z9000
D501	1N60	IP20-0060	1N60	PTC206	REN 109	SK3088	ECG109	TH109/**	WEP134	103-Z9001
D502	1S2689	IP20-0425	GE-90	PTC206	REN 614		ECG614		WEP200	103-219
1C101	CC12001	IP20-0416								
1C201	1M51313L	IP20-0448								
1C501	CC13002	IP20-0417								
Q101	2S0355		GE-271	PTC143*	REN 297	SK3849	ECG297	TH297	WEP914	121-Z9014
	2S0468		GE-271	PTC143*	REN 297	SK3849	ECG297	TH297	WEP914	121-Z9014
	2S0355D	IP20-0246	GE-271	PTC143*	REN 297	SK3849	ECG297	TH297	WEP914	121-Z9014
Q102	2SC711	IP20-0034	GE-62*	PTC121	REN 199*	SK3245	ECG199*	TH199*/**	WEP372*	121-972
	2SC711E		GE-62*	PTC121	REN 199*	SK3245	ECG199*	TH199*/**	WEP372*	121-972
	2SC458		GE-210	PTC121*	REN 289	SK3124	ECG289	TH289/**	WEP458	121-Z9000A*
	2SC945		GE-212	PTC121*	REN 199	SK3124	ECG199	TH199/**	WEP1945	121-972
Q201	2S8561B	IP20-0419	GE-244*	PTC177	REN 159*	SK3114	ECG159*	TH159*	WEP62*	121-Z9003*
	2S8561		GE-244*	PTC177	REN 159*	SK3114	ECG159*	TH159*	WEP62*	121-Z9003*
Q301	2SC1908E		GE-20*	PTC136*	REN 229*	SK3124	ECG229*	TH229*	WEP535*	121-Z9021*
	2SC1908	IP20-0420	GE-20*	PTC136*	REN 229*	SK3124	ECG229*	TH229*	WEP535*	121-Z9021*
Q302	2SC2086D		GE-47*	PTC143*	REN 293*	SK3842	ECG293*	TH293*	WEP914	121-Z9014
	2SC2086	IP20-0320	GE-47*	PTC143*	REN 293*	SK3842	ECG293*	TH293*	WEP914	121-Z9014
	2SC1760		GE-276	PTC180	REN 306	SK3251	ECG306	TH306	WEP771	121-Z9039
Q303	2SC2166B		GE-215	PTC186	REN 235	SK3197	ECG235	TH235	WEP736*	121-Z9039
	2SC2166	IP20-0321	GE-215	PTC186	REN 235	SK3197	ECG235	TH235	WEP736*	121-Z9040
	2SC1816		GE-216	PTC186	REN 295	SK3197	ECG295	TH295	WEP914	121-Z9014
Q401	2S0355		GE-271	PTC143*	REN 297	SK3849	ECG297	TH297	WEP914	121-Z9014
	2S0355D	IP20-0246	GE-271	PTC143*	REN 297	SK3849	ECG297	TH297	WEP914	121-Z9014
	2S0468		GE-271	PTC143*	REN 297	SK3024*	ECG297	TH297	WEP914	121-Z9014
Q501	2SC710	IP20-0003	GE-211*	PTC132*	REN 123A*	SK3356	ECG123A*	TH123A*/**	WEP710	121-Z9000A
	2SC710D		GE-211*	PTC132*	REN 123A*	SK3356	ECG123A*	TH123A*/**	WEP710	121-Z9000A
	2SC460		GE-61*	PTC136*	REN 107	SK3122	ECG107	TH107/**	WEP460	121-Z9000*
Q502	2SAB44C	IP20-0217	GE-244*	PTC103*	REN 129*	SK3114	ECG129*	TH129*	WEP564	121-Z9005
	2SAB44		GE-244*	PTC103*	REN 129*	SK3114	ECG129*	TH129*	WEP564	121-Z9005

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

PARTS LIST AI

(When ordering parts, s

CAPACITORS

ITEM No.	RATING
C101	15 N220
C102	.022
C103	.022
C104	.022
C105	22 N220
C107	.001
C108	15 N750
C109	10 N750
C110	.022
C111	.022
C113	15
C117	.01 50V
C118	.0022
C119	.0022
C121	.022
C125	.01 50V
C126	.01 50V
C127	.022
C128	.04
C129	.022
C201	.0047 10%
C202	.0047 10%
C203	82 N750
C205	.0047
C207	.068
C212	.1
C214	.033 50V
C215	.033 50V
C216	.022
C218	.022
C220	.01
C221	.01
C222	.001
C223	.001
C224	.001
C225	.001
C227	.001
C228	.001
C230	.001
C231	.01
C301	56
C302	.022
C303	56
C304	.022
C305	220 N750 1
C306	22 N750
C307	.01
C308	22 N220
C309	560 N750 1
C310	.01
C311	100 N750 5
C312	68 N750
C313	56 N220 5%
C314	100 N750
C316	82 N750 10%
C318	.04
C323	2
C326	.01
C403	.001
C404	.001
C405	.01
C406	.01
C407	.01
C408	.022
C411	.01
C412	.001
C413	.01
C501	56 N220
C502	2
C503	39 N750
C505	5 HPO
C506	27 HPO
C507	82 HPO 10
C509	.01
C510	.01 10%
C511	68 N220 5
C512	39 N750
C513	33 N750
C514	39 N750
C515	.001
C517	.01
C518	22 N470
C519	.01
C520	5 N750
C521	18 N470
C522	.01
CT301	Trimmer 5
CT501	Trimmer 1

ELECTROLYTIC CAPACITORS

ITEM No.	RATING	MFR. PART No.	REPLACEMENT DATA			
			CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.	
					Q-LINE	GENERAL LINE
C106	10 10V	IP22-0231		TDC106M025FL	QDT1-64	SD25-109
C112	4.7 10V	IP22-0050		TDC475M010EL	QDT1-48	SD10-4R79
C114	10 10V	IP22-0227	PC10-25	VTT10B25	QV1-41	EV-1222
C116	4.7 10V	IP22-0228	PC5-50	VTT47B50	QV1-31	EV-1619.1
C120	47 10V	IP22-0061	PC50-16	VTT47D16	QV1-73	EV-1226
C122	10 10V	IP22-0227	PC10-25	VTT10B25	QV1-41	EV-1222
C124	1 50NPV	IP22-0064	WNP1-50	TCN501A	QEN1-20	TVAN-1560
C204	4.7 10V	IP22-0050		TDC475M010EL	QDT1-48	SD10-4R79
C206	10 10V	IP22-0227	PC10-25	VTT10B25	QV1-41	EV-1222
C209	33 10V	IP22-0225	PC30-25	VTT33B10		EV-1225
C211	1000 16V	IP22-0051	PC1000-16	VTT1000L16	QV1-183	EV-1261
C213	220 16V	IP22-0148	PC250-25	VTT220H16	QV1-117	EV-1240
C217	47 10V	IP22-0061	PC50-16	VTT47D16	QV1-73	EV-1226
C219	1 50NPV	IP22-0064	WNP1-50	TCN501A	QEN1-20	TVAN-1560
C327	330 10V	IP22-0039	WBR300-35*	VTT330G10	QV1-131	EV-1145
C401	33 16V	IP22-0226	PC30-25	VTT33D25	QV1-63	EV-1325
C409	47 16V	IP22-0063	PC50-16	VTT47D16	QV1-73	EV-1226
C504	10 10V	IP22-0227	PC10-25	VTT10B25	QV1-41	EV-1222
C508	.47 16V	IP22-0114		TDC474M050EL	QDT1-19	SD50-4R79
C516	10 10V	IP22-0227	PC10-25	VTT10B25	QV1-41	EV-1222

PARTS LIST AND DESCRIPTION (CONTINUED)

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

PART
(When ordered)

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
C101	15 H220						10TCR-Q15
C102	.022		UK25-223				HY-725
C103	.022		UK25-223				HY-725
C104	.022		UK25-223				HY-725
C105	22 H220						10TCR-Q22
C107	.001		DD-102G	GP1000	GP210	QC2-81	5GA-D10
C108	15 H750		DTN-15	H15	CN7415		10TCU-Q15
C109	10 H750		DTN-10	H10	CN7410		10TCU-Q10
C110	.022		UK25-223				HY-725
C111	.022		UK25-223				HY-725
C113	15		DTZ-15	NP015	CN0415		10TCC-Q15
C117	.01 50V			WMF1S1	H1921039R8	QFT2-91	1FT-S10
C118	.0022		DD-222		GP222	QC2-97	5GA-D22
C119	.0022		DD-222		GP222	QC2-97	5GA-D22
C121	.022		UK25-223				HY-725
C125	.01 50V			WMF1S1	H1921039R8	QFT2-91	1FT-S10
C126	.01 50V			WMF1S1	H1921039R8	QFT2-91	1FT-S10
C127	.022		UK25-223				HY-725
C128	.04				GP140		5GA-S40
C129	.022		UK25-223				HY-725
C201	.0047 10%		DD-472	GP4700	GP247		5GA-D47
C202	.0047 10%		DD-472	GP4700	GP247		5GA-D47
C203	82 H750				CN7482		10TCU-Q82
C205	.0047		DD-472	GP4700	GP247		5GA-D47
C207	.068		UK50-683		MAG50168		
C212	.1		CK-104		MAG5001		
C214	.033 50V			DPMS6S33	H192P3339R8	QFT2-149	1FT-S33
C215	.033 50V			DPMS6S33	H192P3339R8	QFT2-149	1FT-S33
C216	.022		UK25-223				HY-725
C218	.022		UK25-223				HY-725
C220	.01		UK50-103		MAG5011		
C221	.01		UK50-103		MAG5011		
C222	.001		DD-102G	GP1000	GP210	QC2-81	5GA-D10
C223	.001		DD-102G	GP1000	GP210	QC2-81	5GA-D10
C224	.001		DD-102G	GP1000	GP210	QC2-81	5GA-D10
C225	.001		DD-102G	GP1000	GP210	QC2-81	5GA-D10
C227	.001		DD-102G	GP1000	GP210	QC2-81	5GA-D10
C228	.001		DD-102G	GP1000	GP210	QC2-81	5GA-D10
C230	.001		DD-102G	GP1000	GP210	QC2-81	5GA-D10
C231	.01		UK50-103		MAG5011		
C301	56				CN0456		10TCC-Q56
C302	.022		UK25-223				HY-725
C303	56				CN0456		10TCC-Q56
C304	.022		UK25-223				HY-725
C305	220 H750 10%		DTN-220	H220	CN7322		10TCU-T22
C306	22 H750		DTN-22	H22	CN7422		10TCU-Q22
C307	.01		UK50-103		MAG5011		
C308	22 H220						10TCR-Q22
C309	560 H750 10%						
C310	.01		UK50-103		MAG5011		
C311	100 H750 5%		DTN-100	N100	CN7310		10TCU-T10
C312	68 H750		DTN-68	N68	CN7468		10TCU-Q68
C313	56 H220 5%		DTN-68	N68	CN7468		10TCU-Q68
C314	100 H750		DTN-100	N100	CN7310		10TCU-T10
C316	82 HPO 10%		DTZ-82	NP082	CN0482		10TCC-Q82
C318	.04				GP140		5GA-S40
C323	2		DTZ-2R2	NP02P2	CN0522		10TCC-V22
C326	.01		UK50-103		MAG5011		
C403	.001		DD-102G	GP1000	GP210	QC2-81	5GA-D10
C404	.001		DD-102G	GP1000	GP210	QC2-81	5GA-D10
C405	.01		UK50-103		MAG5011		
C406	.01		UK50-103		MAG5011		
C407	.01		UK50-103		MAG5011		
C408	.022		UK25-223				HY-725
C411	.01		UK50-103		MAG5011		
C412	.001		DD-102G	GP1000	GP210	QC2-81	5GA-D10
C413	.01		UK50-103		MAG5011		
C501	56 H220						
C502	2		DTZ-2R2	NP02P2	CN0522		10TCC-V22
C503	39 H750				CN7439		10TCU-Q39
C505	5 HPO		DTZ-4R7	NP04P7	CN0547		10TCC-V47
C506	27 HPO				CN0427		10TCC-Q27
C507	82 HPO 10%		DTZ-82	NP082	CN0482		10TCC-Q82
C509	.01		UK50-103		MAG5011		
C510	.01 10%		UK50-103		MAG5011		
C511	68 H220 5%						10TCR-Q68
C512	39 H750				CN7439		10TCU-Q39
C513	33 H750		DTN-33	N33	CN7433		10TCU-Q33
C514	39 H750				CN7439		10TCU-Q39
C515	.001		DD-102G	GP1000	GP210	QC2-81	5GA-D10
C517	.01		UK50-103		MAG5011		
C518	22 H470						10TCT-Q22
C519	.01		UK50-103		MAG5011		
C520	5 H750				CN7547		10TCU-V47
C521	18 H470						10TCT-Q18
C522	.01		UK50-103		MAG5011		
CT301	Trimmer 50pF	IP22-0230					
CT501	Trimmer 18pF	IP22-0229					

CONT

ITEM No.
VR101
VR102
VR103
VR104
VR105
VR109
VR201
VR301

RESIS

ITEM No.
TH101

COILS

ITEM No.
L201
L301
L302
L303
L304
L305
L401
L402
L501
L503
T101
T102
T103
T301
T302
T501
T502
T503
T504

FILTE

ITEM No.
T401

TRAN

ITEM No.
T201

PARTS LIST AND DESCRIPTION (CONTINUED)

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

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

ITEM No.	FUNCTION	RESISTANCE	REPLACEMENT DATA			
			MFGR. PART No.	CENTRALAB PART No.	MALLORY PART No.	TRW PART No.
VR101	RF AGC	20K	IP24-0093			U260R253B
VR102	Squelch Range	10K				U260R103B
VR103	Signal Meter	30K	IP24-0095			U260R503B
VR104	Squelch	10K	IP24-0098			
VR105	Volume/Power Switch	10K	IP24-0097			
VR109	IF AGC	500K	IP24-0096			U260R504B
VR201	AMC	20K	IP24-0093			U260R253B
VR301	Power Meter	50K	IP24-0094			U260R503B

RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA		ITEM No.	RATING	REPLACEMENT DATA	
		MFGR. PART No.	WORKMAN PART No.			MFGR. PART No.	WORKMAN PART No.
TH101	1600 Cold NTC	IP20-0426					

COILS (RF-IF)

ITEM No.	FUNCTION	REPLACEMENT DATA			REMARKS
		PART No.	OTHER IDENTIFICATION	MILLER PART No.	
L201	RF Choke	IP21-0466			
L301	RF Choke (10uH)	IP21-0467			
L302	RF Choke (1uH)	IP21-0468			
L303	Final (27MHz)	IP21-0469			
L304	XMT Antenna (27MHz)	IP21-0470			
L305	Pi Filter	IP21-0471			
L401	RF Choke (3uH)	IP21-0472			
L402	RF Choke (3uH)	IP21-0472			
L501	RF Choke (3.3uH)	IP21-0474			
L503	RF Choke (100uH)	IP21-0475			
T101	Rec Antenna (27MHz)	IP21-0477	ETC15089	CGS774	
T102	Mixer (27MHz)	IP21-0478	ETC15061	CBS708-TC	
T103	IF (455kHz)	IP21-0479	ETC73194		
T301	XMT Amp (27MHz)	IP21-0481			
T302	RF Driver (27MHz)	IP21-0482			
T501	PLL (17MHz)		ETC1093		
T502	VCO	IP21-0483	ETC137217		
T503	XMT Buffer (27MHz)	IP21-0484	ETC83197		
T504	XMT Buffer (27MHz)	IP21-0485	ETC83198		

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.	
T401	1.35A	.10	1.3mH	IP21-0473 1002 (1)	TR509		(1) Number on unit.

TRANSFORMER (Audio Output)

ITEM No.	IMPEDANCE		REPLACEMENT DATA			NOTES
	PRI.	SEC.	MFGR. PART No.	THORDARSON PART No.	TRIAD PART No.	
T201	13.5	1 2 8 2.5	IP21-0480 137027 (1)			(1) Number on unit.

PAGE MODEL 8003

PARTS LIST AND DESCRIPTION (CONTINUED)

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

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		MFGR. PART No.	QUAM PART No.	
SP	3" PM 8 Ohms	IP-29-0031	30A05Z8R	

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
F1	2A Quick-acting	IP28-0009		AGC2	HRK	312002	150145	F62-2

MICROPHONE

ITEM No.	REPLACEMENT DATA				CONNECTION DATA						
	MFGR. PART No.	GC PART No.	GC NOISE CANCEL	GC POWER	GC CONNECTOR	Red	Shield	Yellow	Blue	White	Black
MIC	IP29-0032	18-032	18-034	18-010	18-092	1	2	3	4	HC	2

MISCELLANEOUS

ITEM No.	PART NAME	PART No.	NOTES
CF101	Ceramic Filter	IP31-0126	9.8MHz (SFE-9.8MJ)
CF102	Ceramic Filter	IP31-0125	455kHz (CFW-455HT)
CF501	Ceramic Filter	IP31-0127	10.240MHz (SFE-10.24MA)
D403	LED	IP28-0052	Channel Ind (Tens)
D404	LED	IP28-0052	Channel Ind (Ones)
J1	Socket	IP26-0028	Antenna
J2	Socket	IP26-0014	Mic
J3	Jack	OP27-0143	Ext Speaker
J4	Jack	OP27-0143	PA Speaker
J5	Jack	IP26-0053	Power
M	Meter	IP27-0019	Signal/Power
P5	Plug		Power
S1	Switch	IP25-0094	CB/PA
S2	Switch		Power (On Volume Control)
S3	Switch	IP25-0095	Channel Selector
X501	Crystal	IP31-0124	10.240MHz
	Lamp	IP18-0051	Meter
	P.C. Board	IP37-0041	LEO
	Power Cord	IP35-0013	OC

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

ITEM	PART No.	ITEM	PART No.
Cover, Top	IP30-0642	Knob, Channel Select	IP30-0648
Cover, Bottom	IP30-0643	Knob, Volume/Squelch	IP30-0650
Escutcheon	IP30-0638	Pushbutton, CB/PA	IP30-0651

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)