



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 76-863

MANUFACTURER'S SPECIFICATIONS

Circuitry	4 ICs, 26 Transistors, 22 Diodes, 4 Zener Diodes, 1 Vari-cap
Frequency Control	PLL (Phase Lock Loop) Synthesizing System
Channels	40 channels all installed
Mode of Operation	AM
Receiver System	Dual Conversion Superheterodyne
Sensitivity	More than 0.7 μ V (S/N 10 dB)
Selectivity	More than 55 dB down at ± 10 kHz
Intermediate Frequency	1st: 10.695 MHz 2nd: 455 kHz
Frequency Tolerance	$\pm 0.005\%$
Spurious Rejection	More than 60 dB
RF Output Power	Nominal 4.0 W (F.C.C. Maximum)
Squelch Range	0.5 μ V — 500 μ V
Delta Tune	About ± 1 kHz (Receiving only)
Audio Output Power	More than 3 W (EXT. SP at 8 ohms)
Controls	Volume, PA/Squelch, Delta Tune, Channel Selector, ANL-OFF Switch, EXT. CB-OFF Switch, NB-OFF Switch
Jacks and Connectors	Microphone, EXT. SP, Antenna, EXT. CB/PA Speaker, AC and DC Power Connectors
Speaker	3" dynamic, 8 ohms
Microphone	Dynamic CB mike
Power Source	DC 13.8V, AC 105-120V 50/60 Hz
Size	12-13/16 $\times$ 8-19/32 $\times$ 4-11/32 inches
Weight	7.8 lbs

Courtesy of the Manufacturer

MIDLAND MODEL 76-863

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.
 Adjust RV1 for 13.8-volts DC output at TP11.
 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
 L14, T7 thru T10 5009,8728,8728A
 L7, L11, L12 9304,9300,9302
 L1, L2, L5, T1 thru T6 9440
 CT1 5000,8276

SYNTHESIZER ALIGNMENT

TEST EQUIPMENT	TRANSCIVER	ADJUST	REMARKS
Input of frequency counter to TP1. (Emitter of Q1).	Ch. 19	CT1	Adjust for 10.240MHz $\pm$ 50Hz.
Input of Oscilloscope to TP2. (Secondary of T1).	Ch. 19	T1	Adjust for maximum.
Input of DC meter to TP8.	Ch. 1	L1	Adjust for 3.60V $\pm$.1V.
Input of frequency counter to TP3. (Pin 2 of IC3).	Ch. 19, XMT		Check for 10.695MHz.
Input of Oscilloscope to TP4. (Pin 4 of IC3).	Ch. 19	L2,T2	Adjust for maximum.
Input of frequency counter to TP4. (Pin 4 of IC3).	Ch. 1		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.

TEST EQUIPMENT	TRANSCIVER	ADJUST	REMARKS
Output of signal generator thru .01uF to PT10. (Emitter of Q10). 455kHz, 1000Hz @ 30% modulation.	Ch. 19 Delta Tune 0 Squelch MINIMUM ANL Off NB Off	T10,T9,T8	Adjust for maximum output.
Output of signal generator thru .01uF to antenna jack. 27.185MHz, 1000Hz @ 30% modulation.	Ch. 19 Delta Tune 0 Squelch MINIMUM ANL Off NB Off	T7,L14,T6, T5	Adjust for maximum output. If necessary readjust T8, T9 and T10.

RECEIVER ADJUSTMENTS

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

TEST EQUIPMENT	TRANSCIVER	ADJUST	REMARKS
Output of signal generator thru .01uF to antenna jack. 27.185MHz, 1000Hz @ 30% modulation. Output 1000uV.	Ch. 19 Delta Tune 0 ANL Off NB Off Squelch Maximum	RV1	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 Delta Tune 0 ANL Off NB Off Squelch MINIMUM	RV3	S METER Adjust for 9 on S unit scale of meter.

TRANSMITTER ALIGNMENT

Connect an RF wattmeter and 50-ohm, 25-watt dummy load to antenna connector.

NOTE: Be sure to check transmit frequency and power on all active channels after alignment of transmitter.

See page 4 for channel frequencies.

TEST EQUIPMENT	TRANSCIVER	ADJUST	REMARKS
	Ch .19	L5,T3,T4, L7,L11,L12	Adjust for maximum.
	Ch. 19	L12	Adjust for 3.8 watts maximum.

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TRANSMITTER ADJUSTMENTS

Connect an RF wattmeter and 50-ohm, 25-watt dummy load to antenna connector.

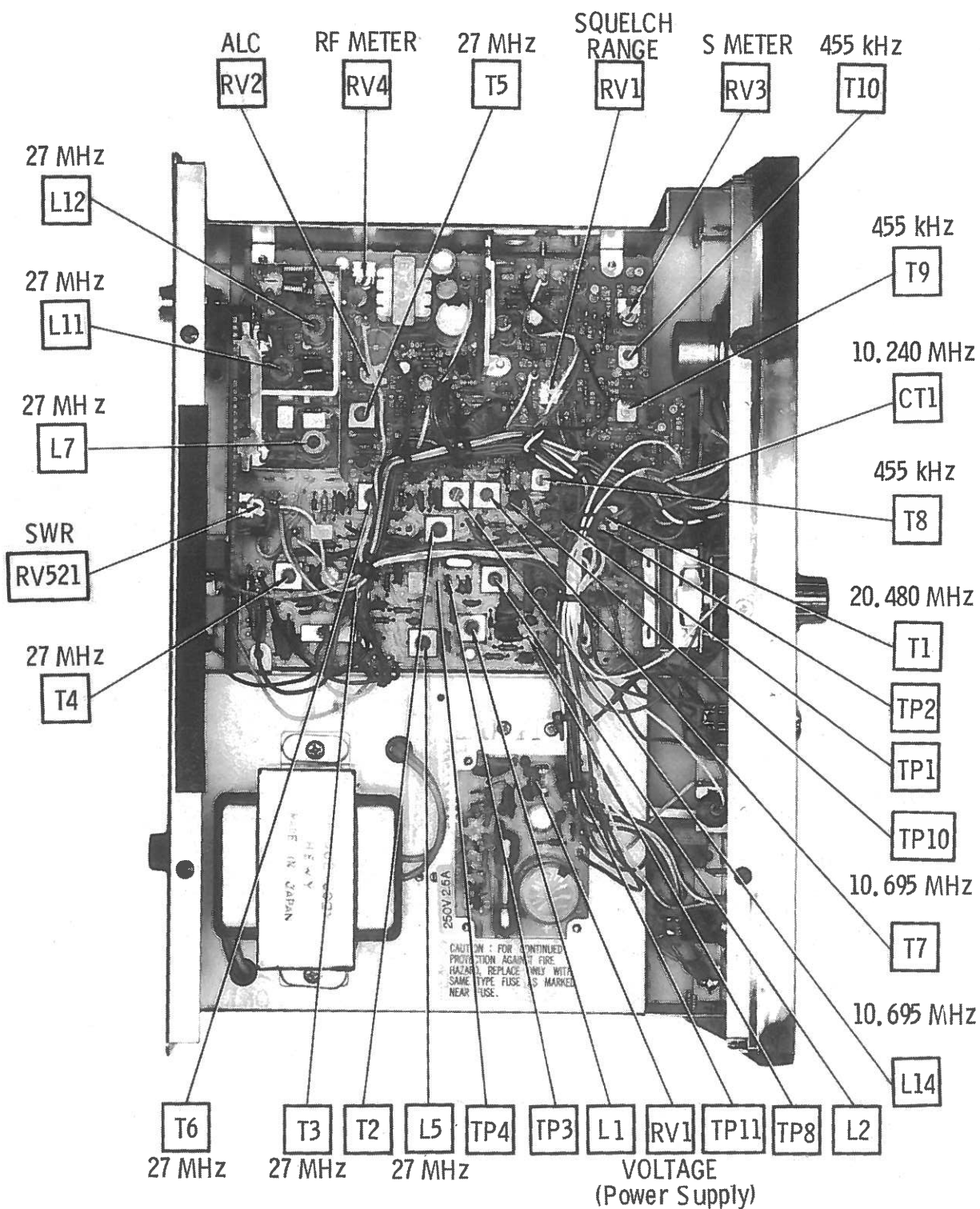
NOTE: Be sure to check transmit frequency and power on all active channels after adjustments of transmitter.

See page 4 for channel frequencies.

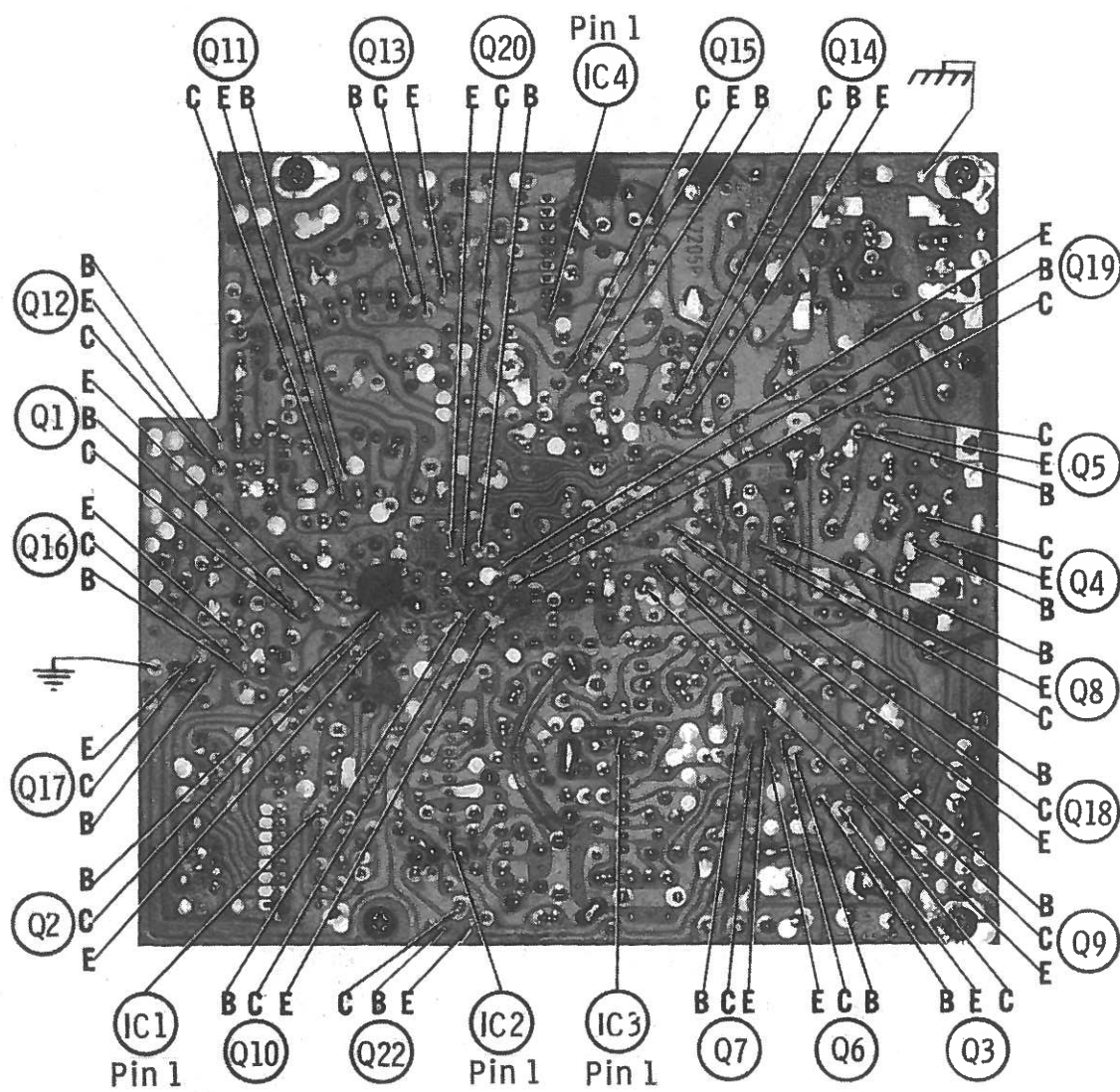
TEST EQUIPMENT	TRANSCIVER	ADJUST	REMARKS
Modulation meter to antenna jack. Inject a 20mV, 1000Hz signal at mic input.	Ch. 19	RV2	ALC Adjust for 80% modulation
	Ch. 19	RV4	RF PANEL METER Adjust so that RF panel meter agrees with RF wattmeter.
Connect a 250-ohm non-inductive resistor to antenna jack.	Ch. 19	RV521	ANTENNA WARNING Adjust so antenna warning indicator lights.

TRUTH CHART

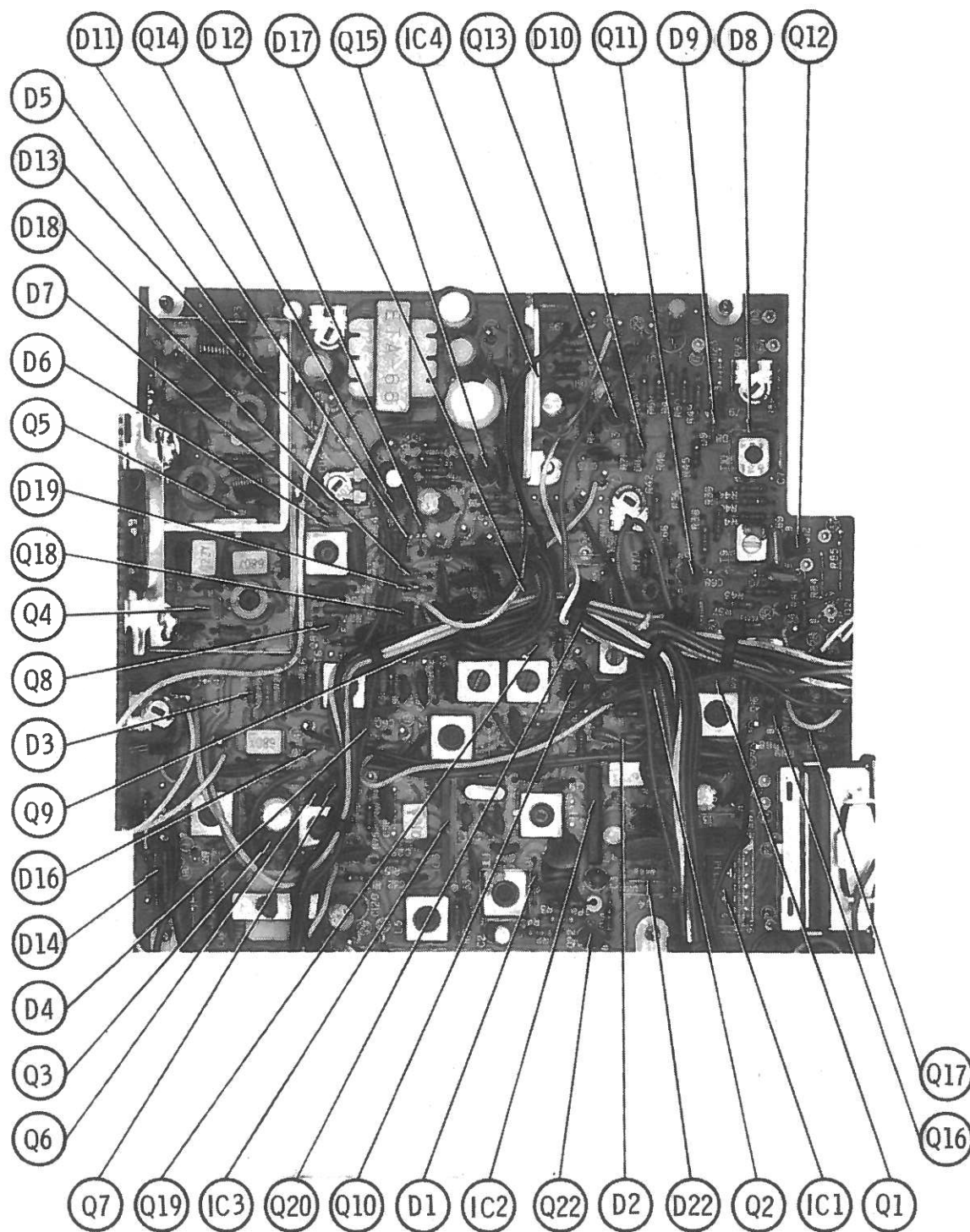
CHANNEL	1= 5.45 Volts 0 = 0 Volts								REC & XMT VCO OUTPUT IN MHz AT TP4		
	IC1 PROGRAM DIVIDER										
	PINS										
	9	10	11	12	13	14	15				
1	1	0	0	1	0	1	0		37.660		
2	1	0	0	1	0	0	1		37.670		
3	1	0	0	1	0	0	0		37.680		
4	1	0	0	0	1	1	0		37.700		
5	1	0	0	0	1	0	1		37.710		
6	1	0	0	0	1	0	0		37.720		
7	1	0	0	0	0	1	1		37.730		
8	1	0	0	0	0	0	1		37.750		
9	1	0	0	0	0	0	0		37.760		
10	0	1	1	1	1	1	1		37.770		
11	0	1	1	1	1	1	0		37.780		
12	0	1	1	1	1	0	0		37.800		
13	0	1	1	1	0	1	1		37.810		
14	0	1	1	1	0	1	0		37.820		
15	0	1	1	1	0	0	1		37.830		
16	0	1	1	0	1	1	1		37.850		
17	0	1	1	0	1	1	0		37.860		
18	0	1	1	0	0	0	1		37.870		
19	0	1	1	0	1	0	0		37.880		
20	0	1	1	0	0	1	0		37.900		
21	0	1	1	0	0	0	1		37.910		
22	0	1	1	0	0	0	0		37.920		
23	0	1	0	1	1	0	1		37.950		
24	0	1	0	1	1	1	1		37.930		
25	0	1	0	1	0	1	0		37.940		
26	0	1	0	1	1	0	0		37.960		
27	0	1	0	1	0	1	1		37.970		
28	0	1	0	1	0	1	0		37.980		
29	0	1	0	1	0	0	1		37.990		
30	0	1	0	1	0	0	0		38.000		
31	0	1	0	0	1	1	1		38.010		
32	0	1	0	0	1	1	0		38.020		
33	0	1	0	0	1	0	1		38.030		
34	0	1	0	0	1	0	0		38.040		
35	0	1	0	0	0	1	1		38.050		
36	0	1	0	0	0	1	0		38.060		
37	0	1	0	0	0	0	1		38.070		
38	0	1	0	0	0	0	0		38.080		
39	0	0	1	1	1	1	1		38.090		
40	0	0	1	1	1	1	0		38.100		



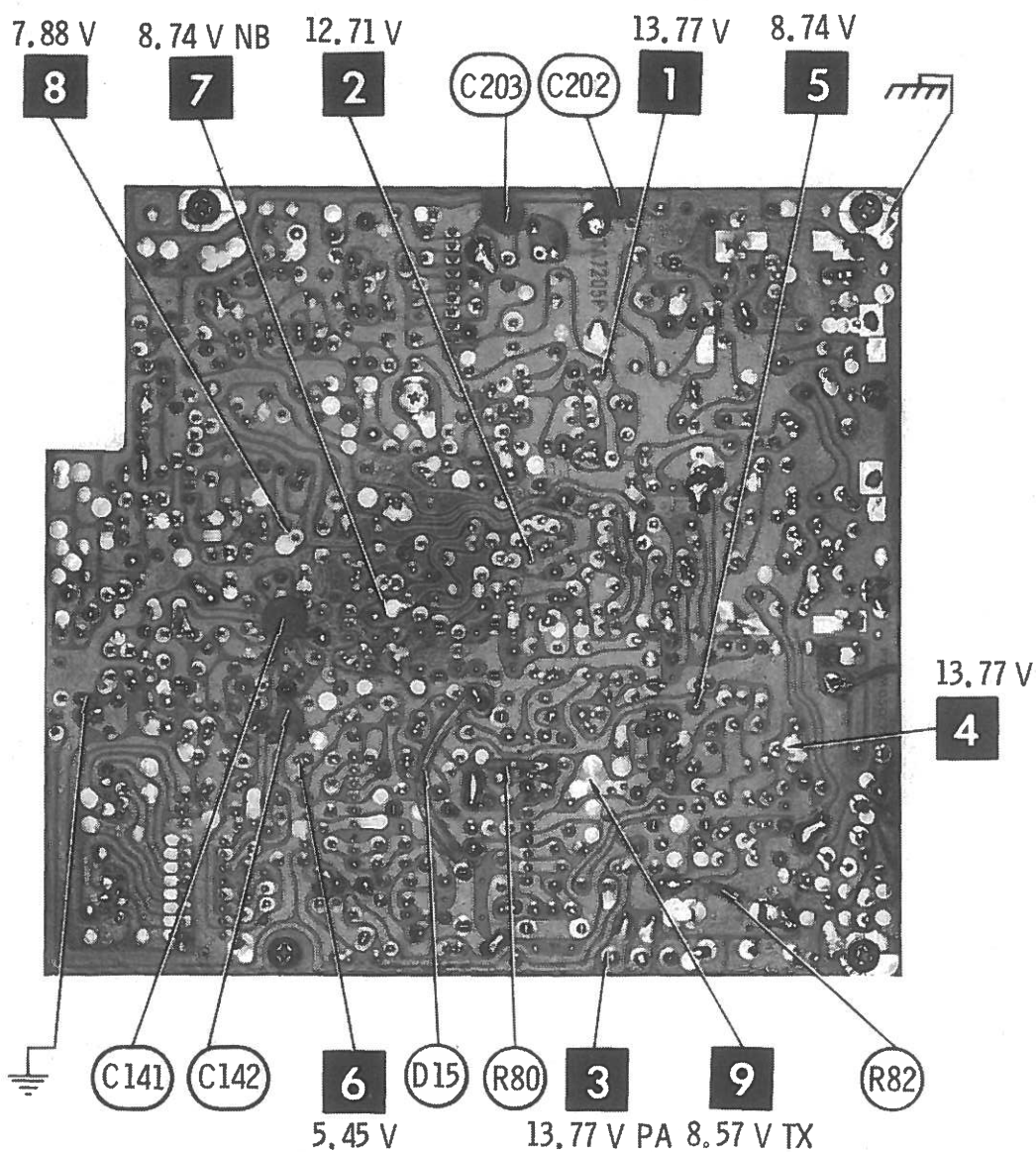
CHASSIS - TOP



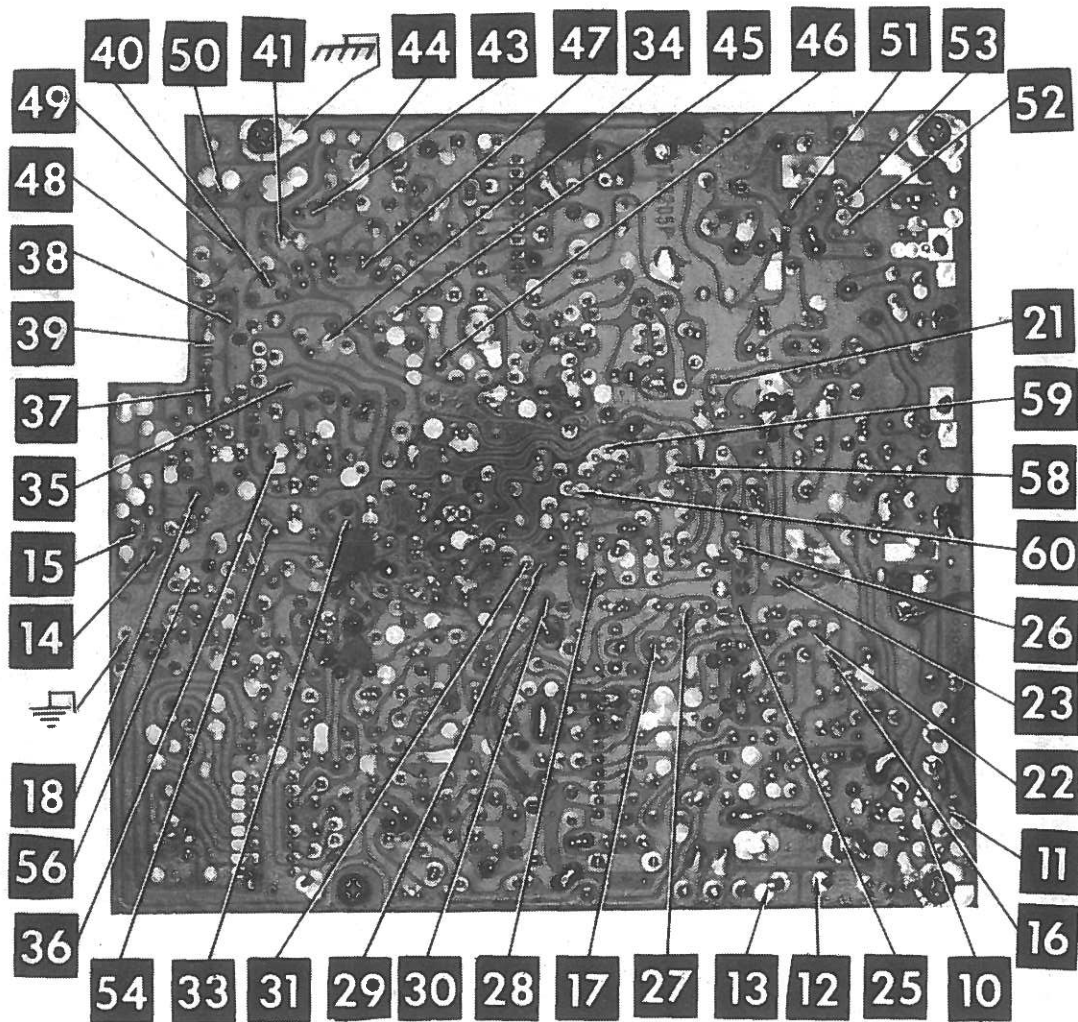
MAIN BOARD



MAIN BOARD

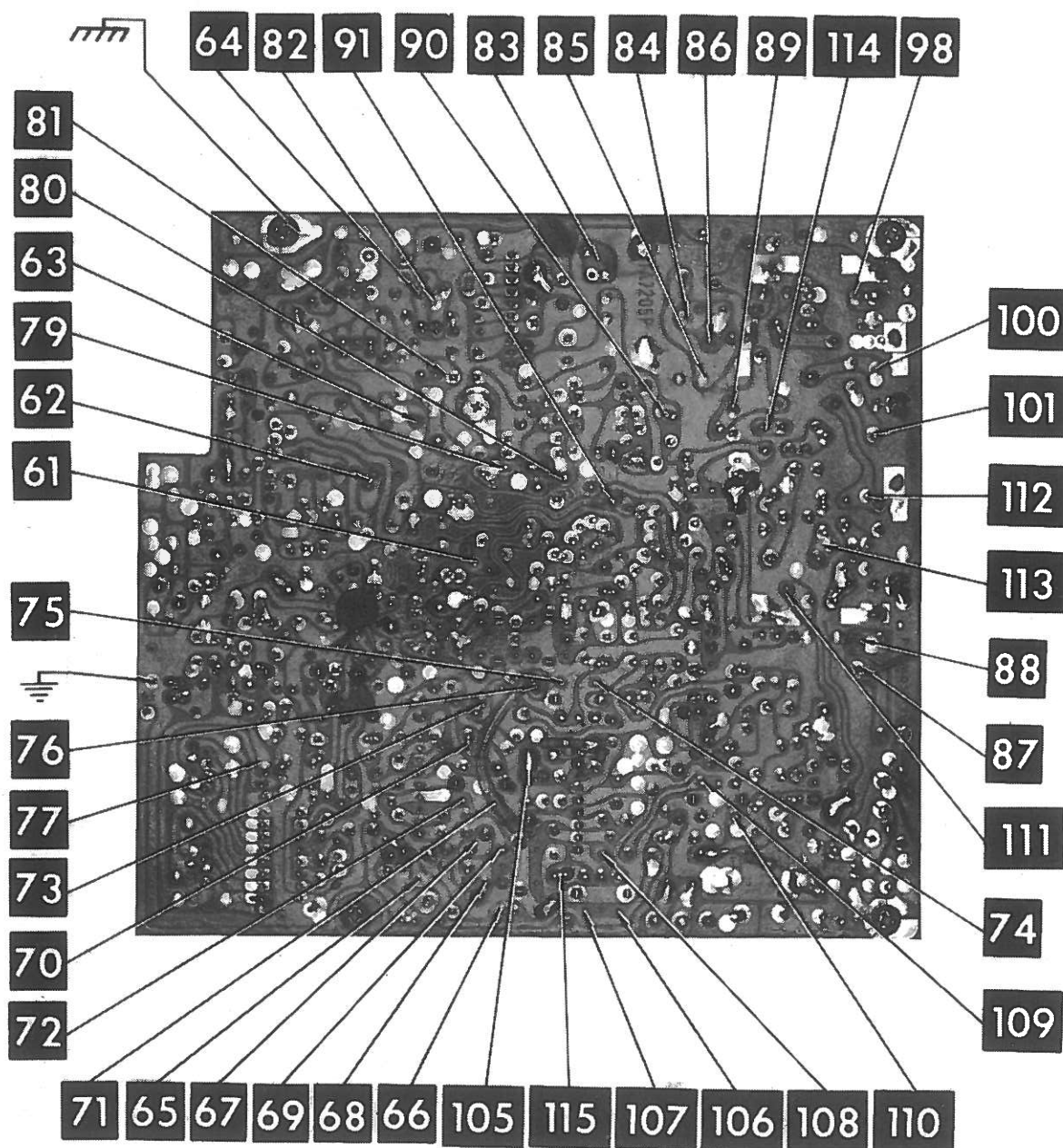


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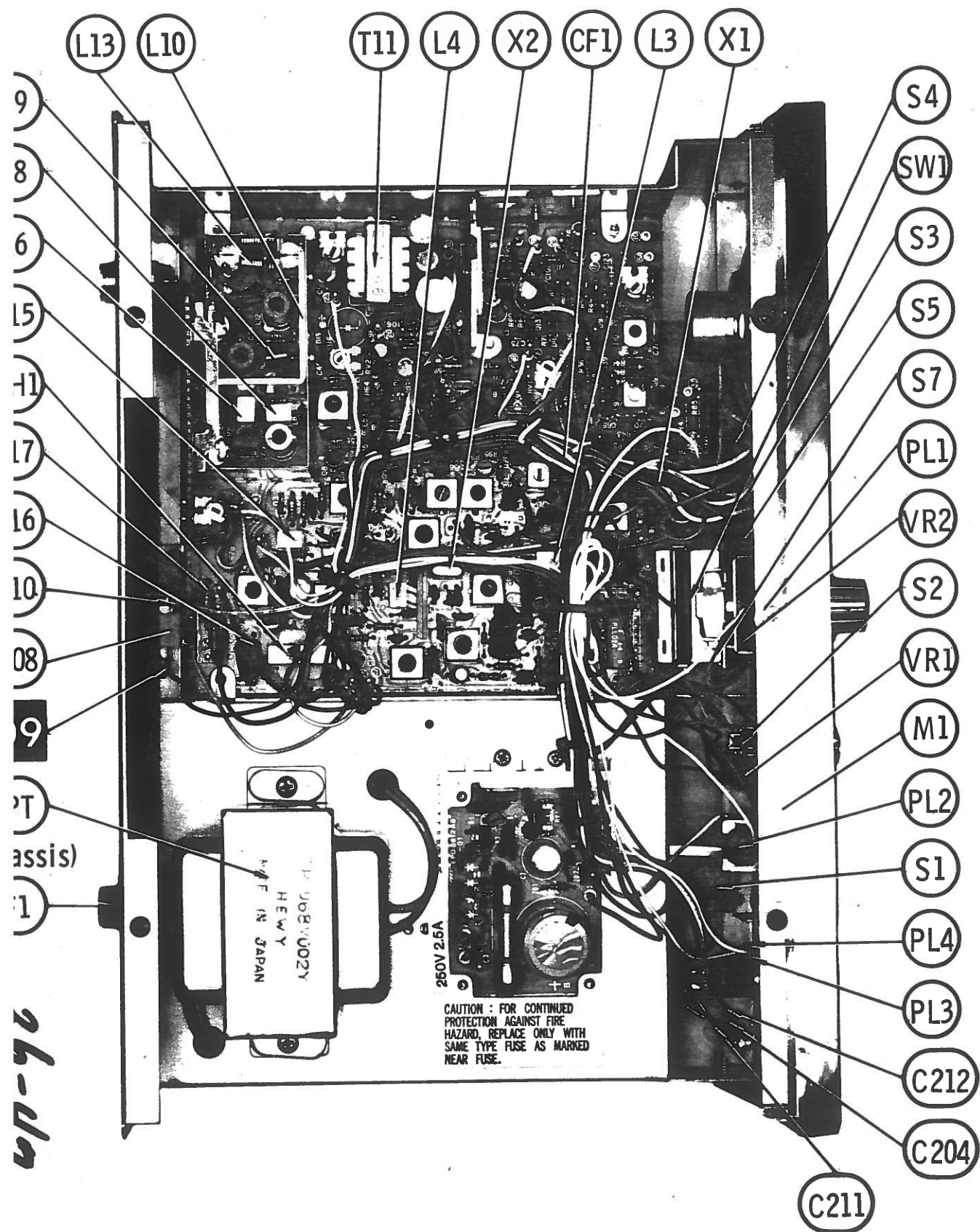


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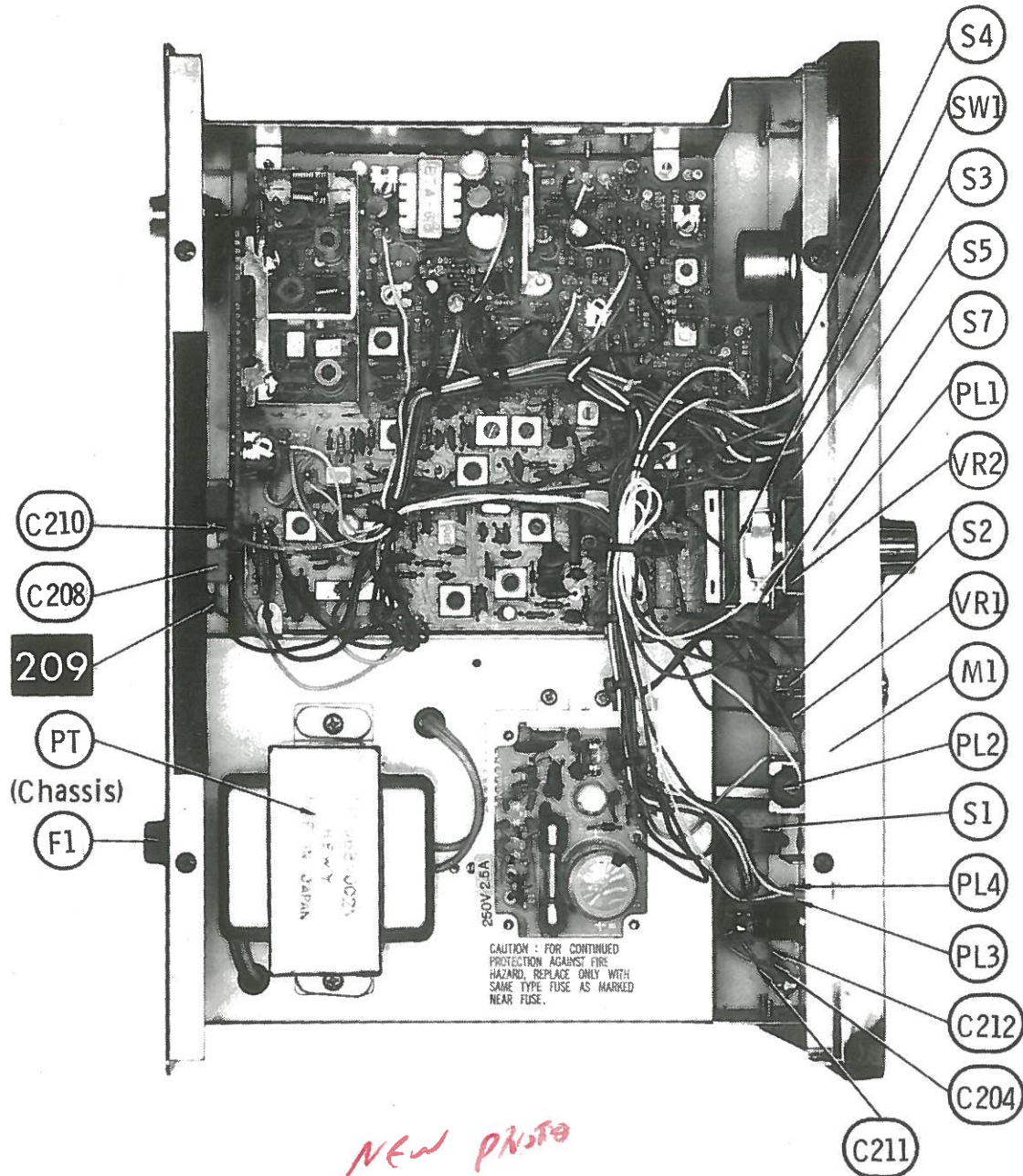
MAIN BOARD



MAIN BOARD

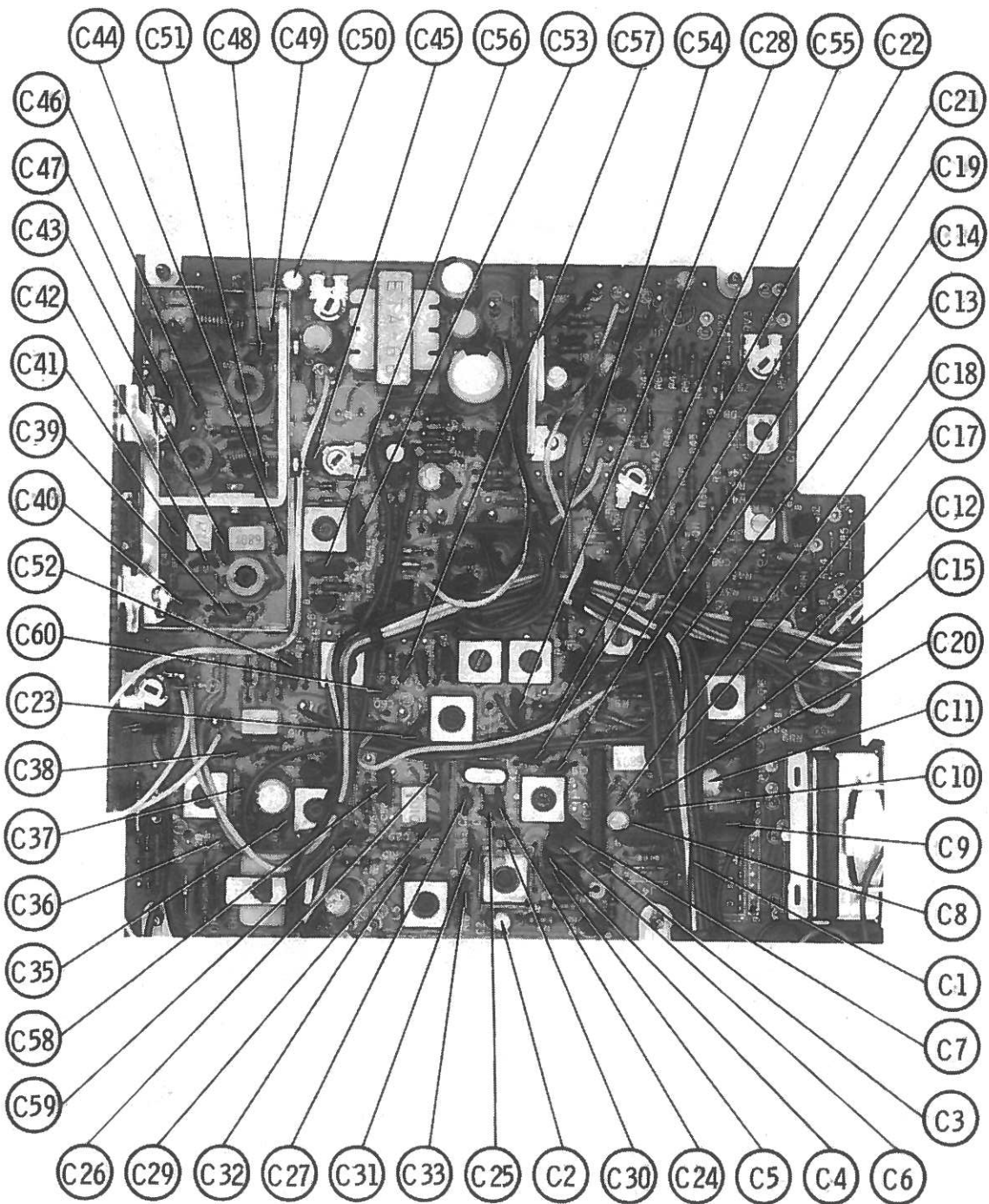


MIDLAND MODEL 76-863

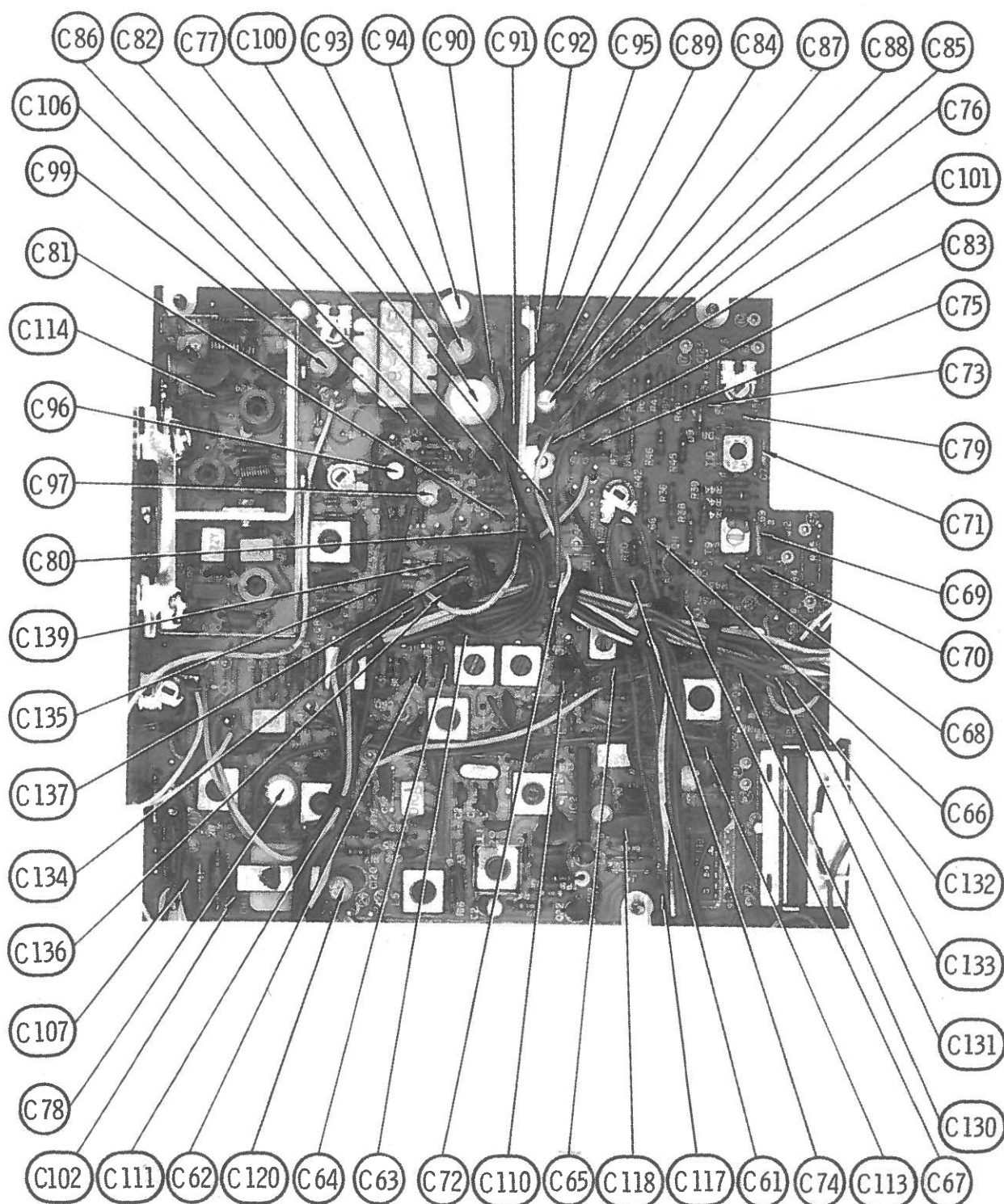


*NEW PHOTO
TO BE SENT
FOR REPRINT
(COPIES FOR FIELD OVERPRINT)*

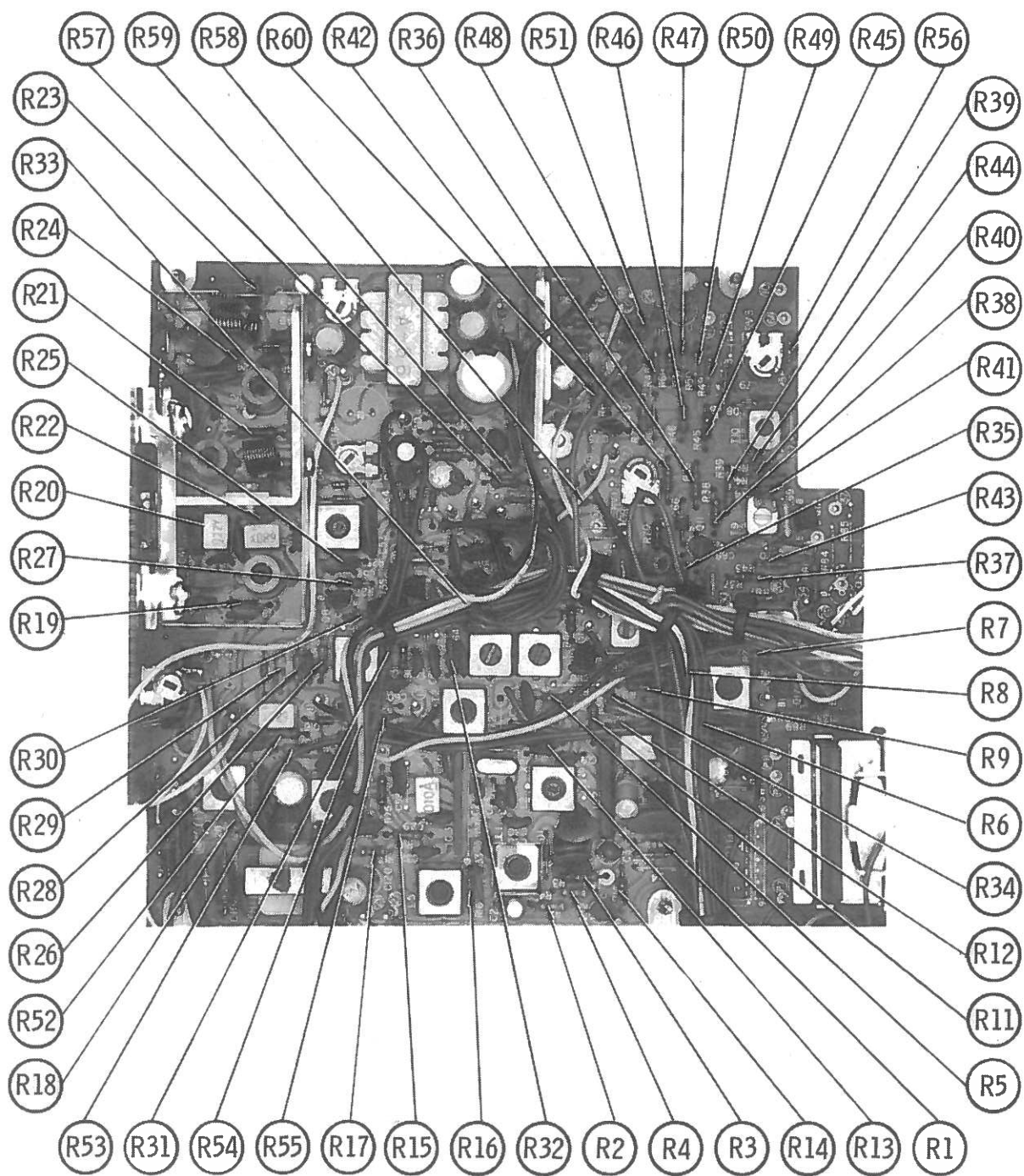
CHASSIS - TOP



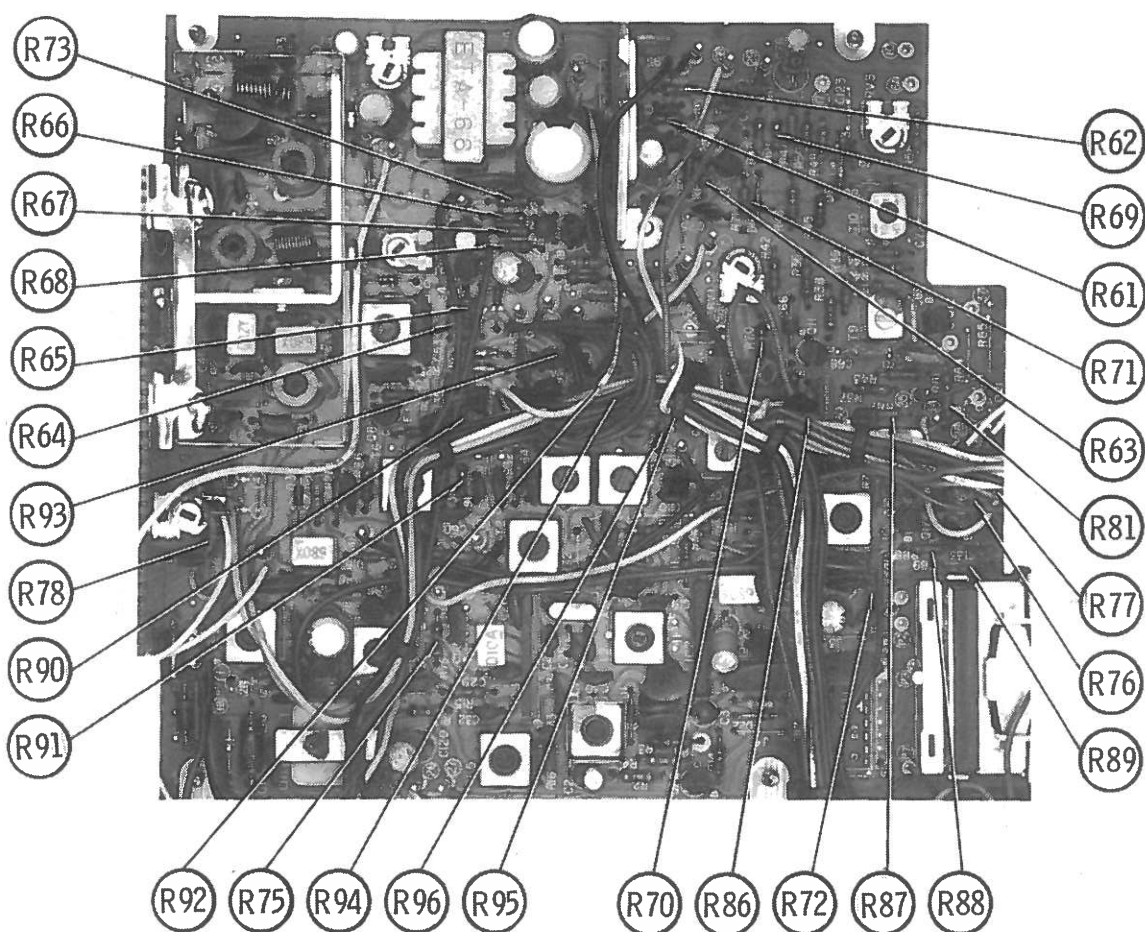
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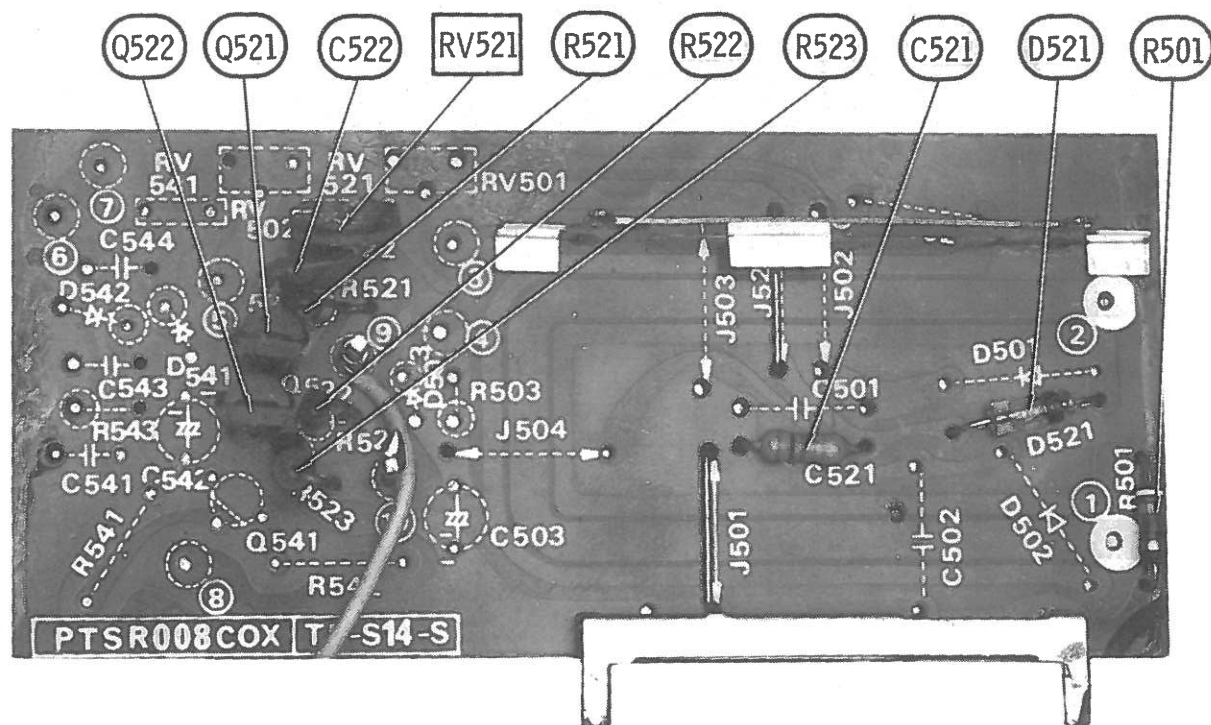
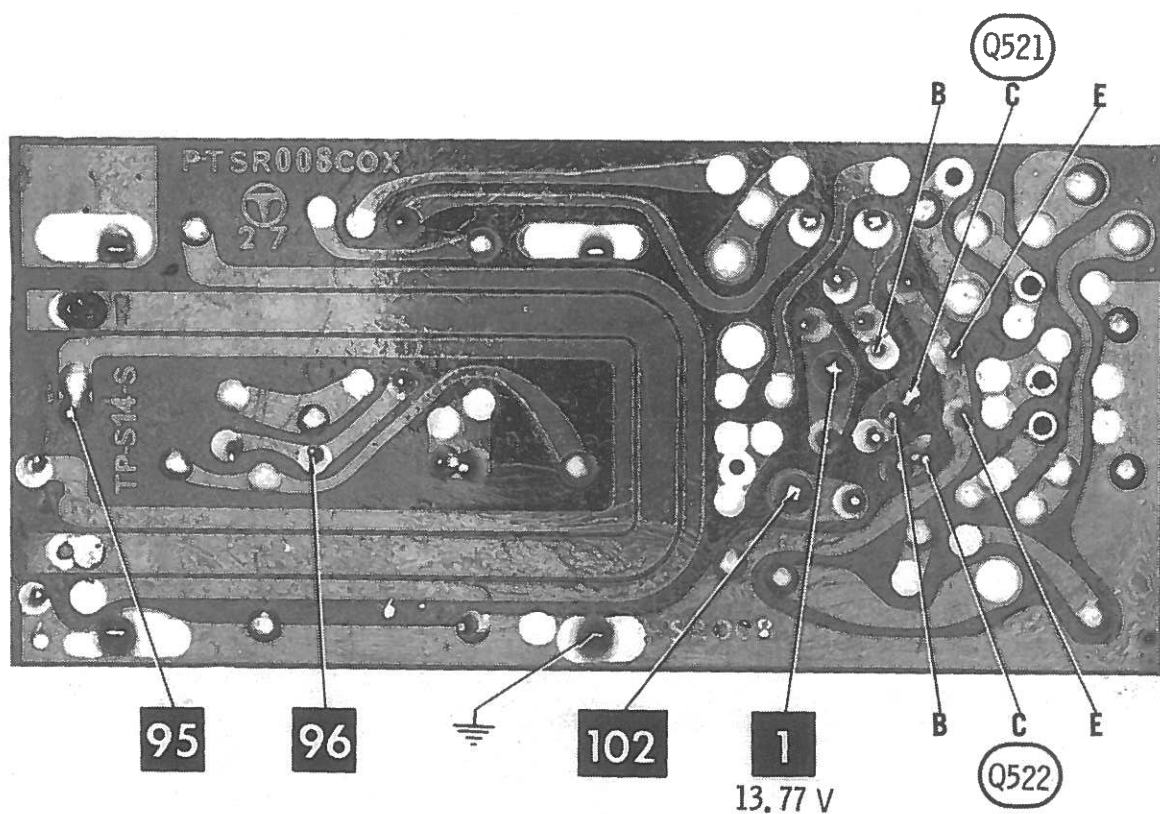
MAIN BOARD



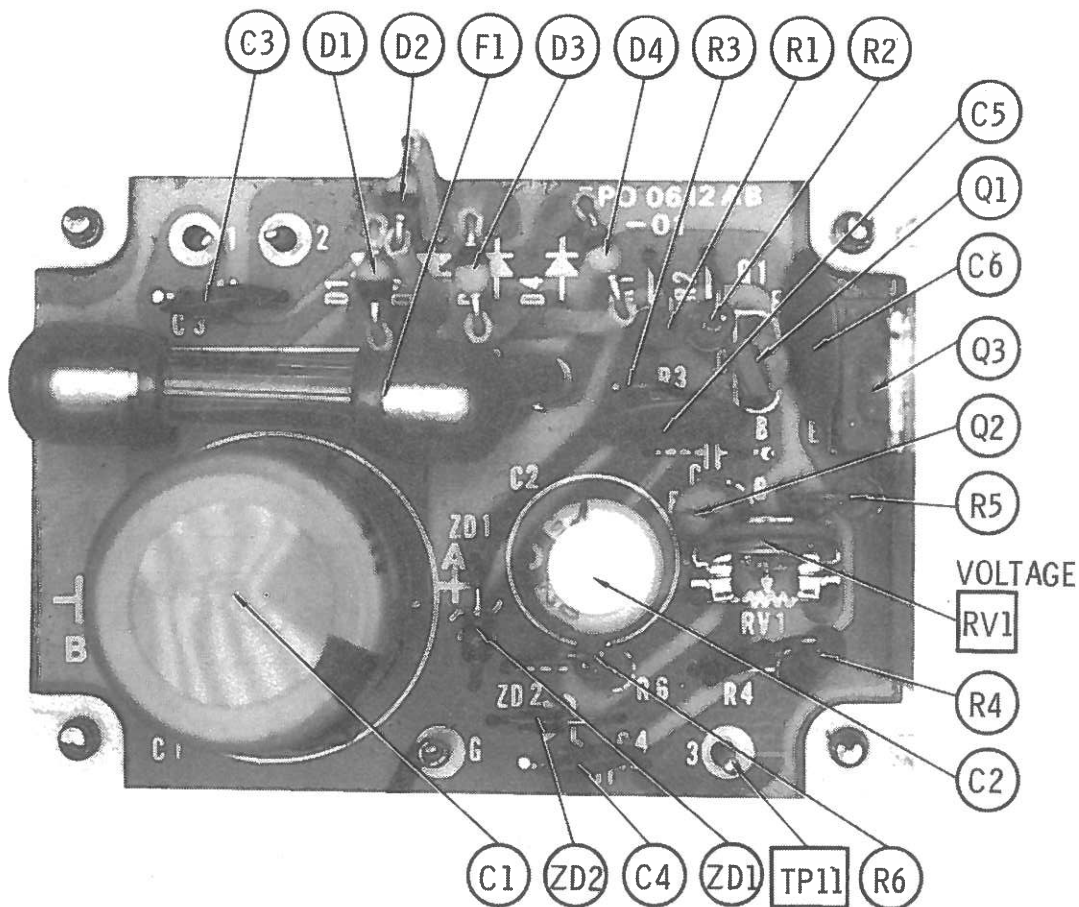
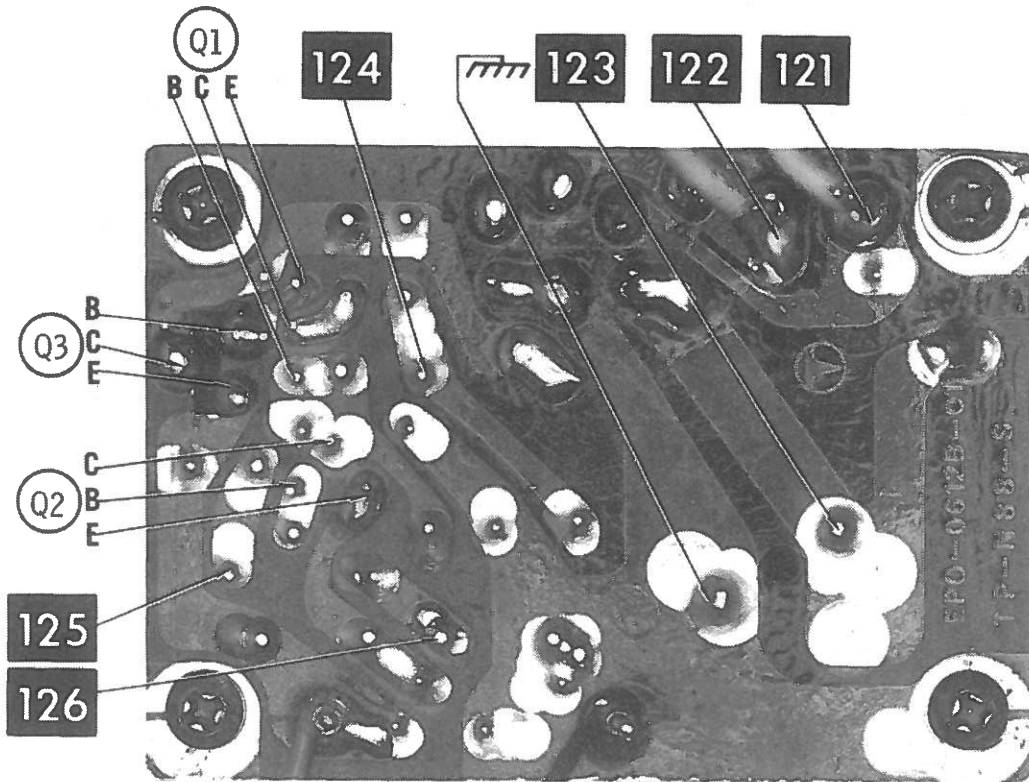
MAIN BOARD



MAIN BOARD

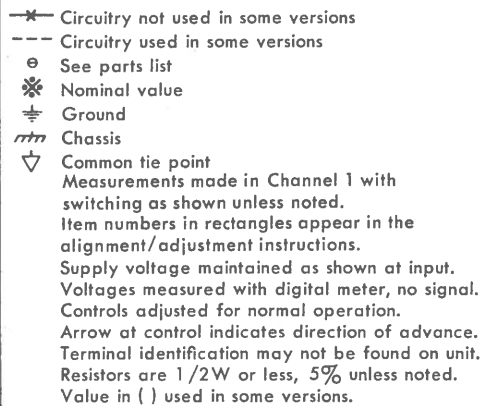


ANT. WARNING BOARD



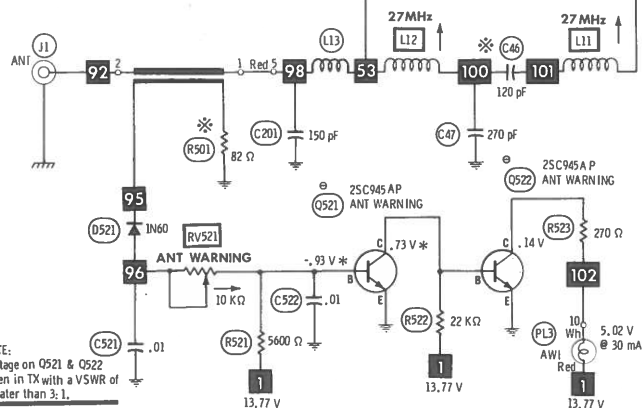
POWER SUPPLY BOARD

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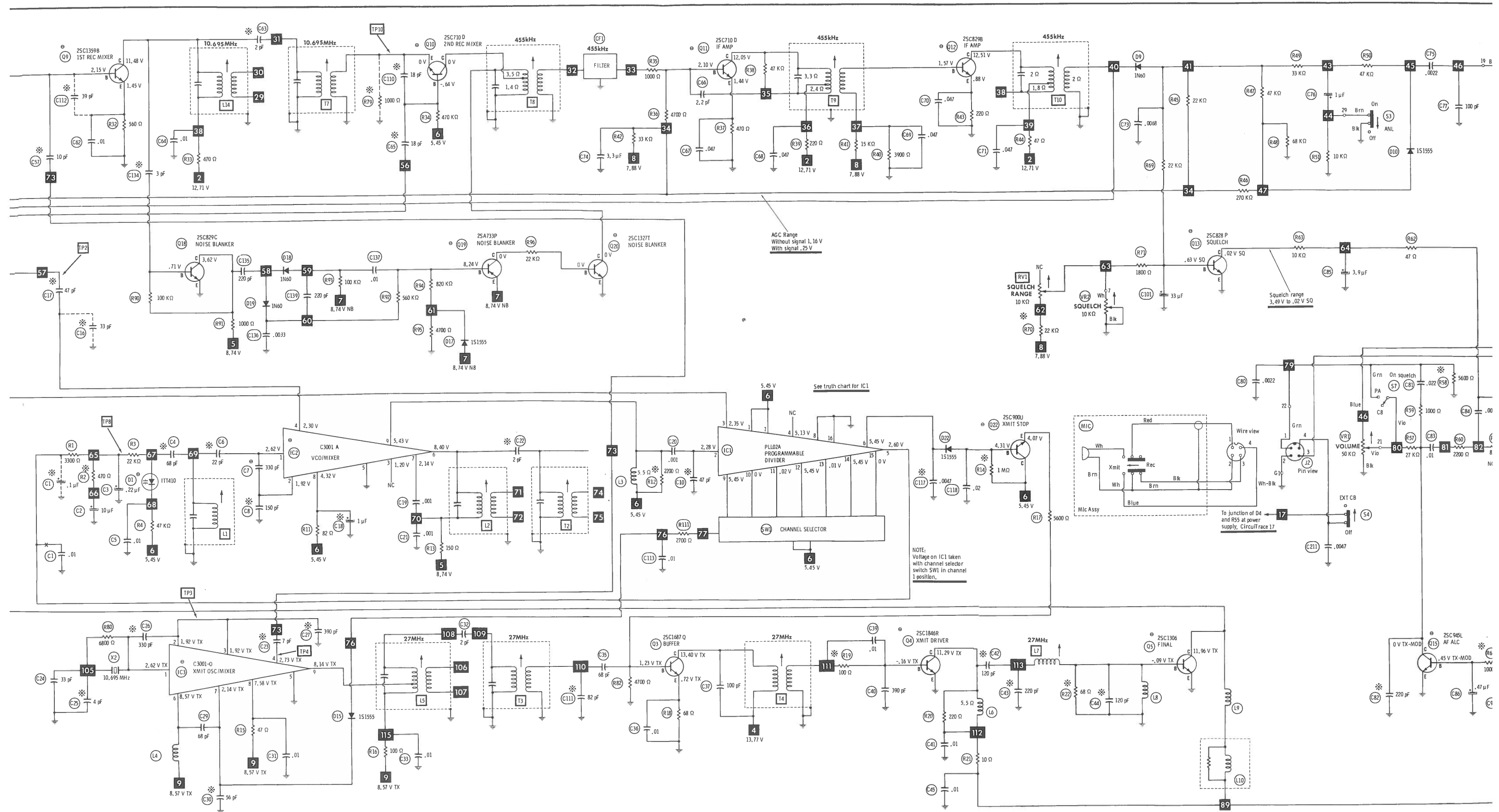


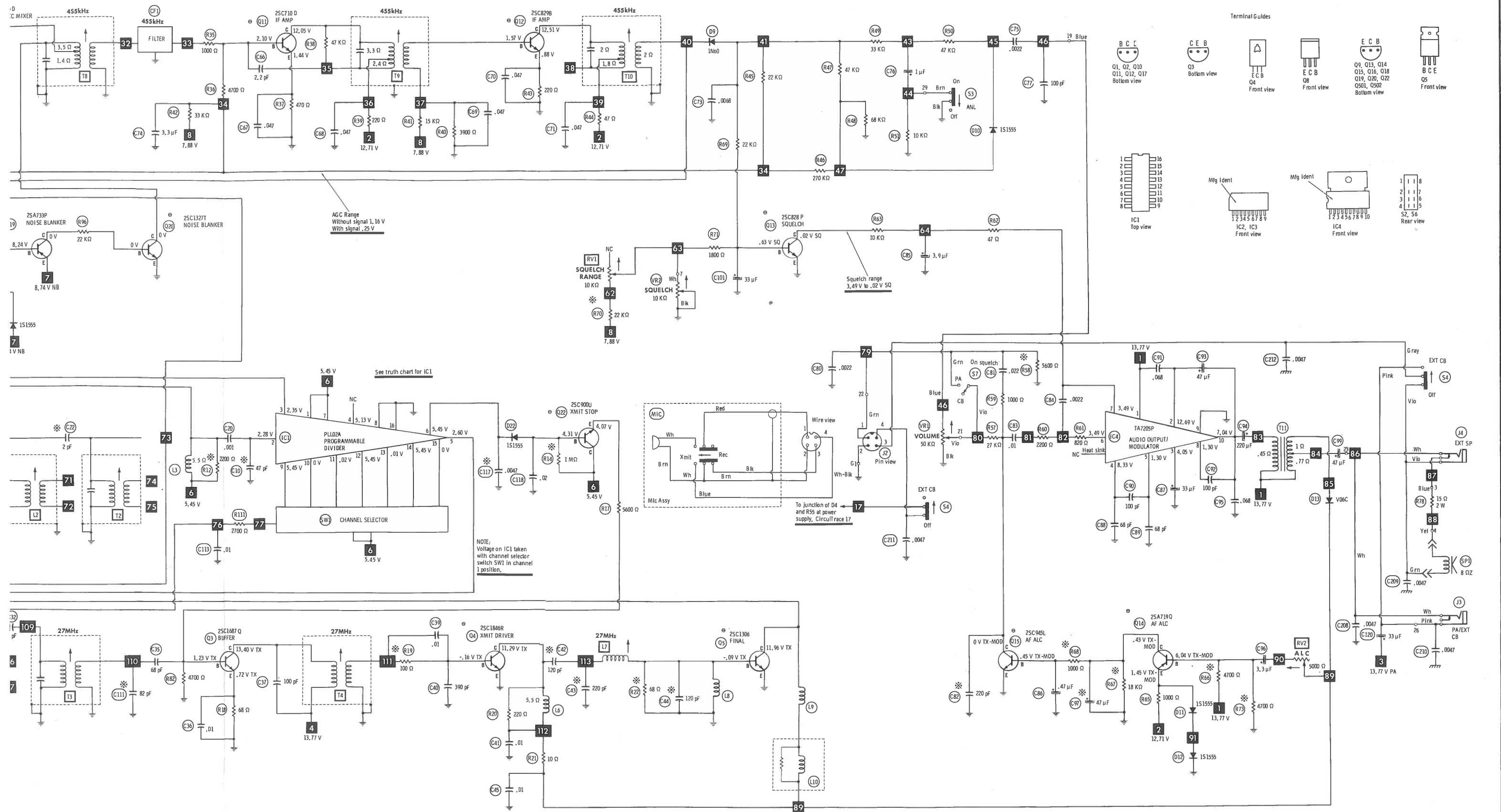
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- A PHOTOFACIT STANDARD NOTATION SCHEMATIC

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PARTS LIST AND DESCRIPTION
(When ordering parts, state Model, Part Number, and Description.)

SEMICONI

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) 2BAWG	BELDEN No. 9467 (6')
			BELDEN No. 9465 (7-1/2')

[illegible]

ITEM No.	TYPE No.
Q14	25A719Q 25A719 25A720 25A564
Q15	25C945L 25C945 25C900 25C945L
Q16	25C710E 25C710 25C829 25C839 25C710D1
Q17	25C710E 25C710 25C829 25C839
Q18	25C710D1 25C829C 25C829
Q19	25A733P 25A733 25A733P1
Q20	25C1327 25C1327 25C900
Q22	25C1327 25C900 25C900U 25C900U1
Q521	25C945A1 25C945 25C828
Q522	25C945A1 25C945 25C828
POWER SUPPLY	
D1	F1A4 V06C 1S1885
D2	F1A4 V06C 1S1885
D3	F1A4 V06C 1S1885
D4	F1A4 V06C 1S1885
Q1	25C900F 25C900
Q2	25C900F 25C900
Q3	25D313D 25C313
ZD1	BZ162
ZD2	RD5 R06.6EC

* Lead con1
(12) 1.2 WATT

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C1
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C97
C99
C101
C10
C12

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C1
C2

PARTS LIST AND DESCRIPTION (CONTINUED)

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

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

ITEM No.	TYPE No.	MFR. PART No.	REPLACEMENT DATA									
			GENERAL ELECTRIC PART No.	MALLORY PART No.	MOTOROLA PART No.	RAYTHEON PART No.	RCA PART No.	SPRAGUE PART No.	SYLVANIA PART No.	THORDARSON PART No.	WORKMAN PART No.	ZENITH PART No.
Q14	2SA719Q 2SA719 2SA720 2SA564	01-010719	GE-269 GE-269 GE-267 GE-65	PTC103* PTC103* PTC102 PTC103*	HEPS0019* HEPS0019* HEPS0019 2SA564	RE 26* RE 26* RE 26 RE 193	SK3114 SK3114 SK3114 SK3114	RT-305 RT-305 RT-305 RT-303	ECG290 ECG290 ECG298 ECG234	2SA564 25C945 25C945 25C945	WEP911 WEP911 WEP925 WEP564	121-879 121-879 121-879 121-879
Q15	2SC945L 2SC945 2SC900 2SC945LPQ	01-030945	GE-212 GE-212 GE-62 GE-212	PTC121* PTC121* PTC139* PTC121*	2SC945 2SC945 2SC900 2SC945	RE 192 RE 192 RE 192 RE 192	SK3124 SK3124 SK3124 SK3124	RT-107A RT-107A RT-302 RT-107A	ECG199 ECG199 ECG199 ECG199	25C945 25C945 25C900 25C945	WEP1945 WEP1945 WEP66 WEP1945	121-29000 121-29000 ZEN-119 121-29000
Q16	2SC710E 2SC710 2SC829 2SC839	01-030710	GE-211* GE-211* GE-20* GE-61*	PTC132 PTC132 PTC121* PTC132*	2SC710 2SC710 2SC829 2SC839	RE 13* RE 13* RE 9* RE 13*	SK3444* SK3444* SK3444 SK3444*	RT-308* RT-308* RT-308 RT-308	ECG123A* ECG123A* ECG229* ECG123A*	2SC710 2SC710 2SC829 2SC839	WEP710 WEP710 WEP829 WEP736*	ZEN-114 ZEN-114 ZEN-127 ZEN-120
Q17	2SC710E 2SC710 2SC710 2SC829 2SC839	01-030710	GE-211* GE-211* GE-211* GE-20* GE-61*	PTC132 PTC132 PTC132 PTC121* PTC132*	2SC710 2SC710 2SC710 2SC829 2SC839	RE 13* RE 13* RE 13* RE 9* RE 13*	SK3444* SK3444* SK3444* SK3444 SK3444*	RT-308* RT-308* RT-308* RT-308 RT-308	ECG123A* ECG123A* ECG123A* ECG229* ECG123A*	2SC710 2SC710 2SC710 2SC829 2SC839	WEP710 WEP710 WEP710 WEP829 WEP736*	ZEN-114 ZEN-114 ZEN-114 ZEN-127 ZEN-120
Q18	2SC710E 2SC829C 2SC829	01-030829	GE-211* GE-20* GE-20*	PTC132 PTC121* PTC121*	2SC710 2SC829 2SC829	RE 13* RE 9* RE 9*	SK3444* SK3444 SK3444	RT-308* RT-308 RT-308	ECG123A* ECG229* ECG229*	2SC710 2SC829 2SC829	WEP710 WEP829 WEP829	ZEN-114 ZEN-127 ZEN-127
Q19	2SA733P 2SA733 2SA733PQ	01-010733	GE-48 GE-48 GE-48	PTC103* PTC103* PTC103*	2SA733 2SA733 2SA733	RE 219 RE 219 RE 219	SK3138 SK3138 SK3138	RT-303 RT-303 RT-303	ECG294 ECG294 ECG294	2SA733 2SA733 2SA733	WEP916 WEP916 WEP916	
Q20	2SC1327T 2SC1327 2SC900 2SC1327TU	01-031327	GE-85* GE-85* GE-62 GE-85*	PTC139* PTC139* PTC139* PTC139*	HEPS0024* HEPS0024* 2SC900 HEPS0024*	RE 192 RE 192 RE 192 RE 192	SK3245 SK3245 SK3124 SK3245	RT-107A RT-107A RT-302 RT-107A	ECG199 ECG199 ECG199 ECG199	25C900 25C900 25C900 25C900	WEP66 WEP66 WEP66 WEP66	121-972 121-972 ZEN-119 121-972
Q22	2SC900U 2SC900 2SC900UE	01-030900	GE-62 GE-62 GE-62	PTC139* PTC139* PTC139*	2SC900 2SC900 2SC900	RE 192 RE 192 RE 192	SK3124 SK3124 SK3124	RT-302 RT-302 RT-302	ECG199 ECG199 ECG199	25C900 25C900 25C900	WEP66 WEP66 WEP66	ZEN-119 ZEN-119 ZEN-119
Q521	2SC900UE 2SC945AP 2SC945 2SC828	01-030945	GE-62 GE-212 GE-212 GE-61*	PTC139* PTC121* PTC121* PTC121*	2SC900 2SC945 2SC945 2SC828	RE 192 RE 192 RE 192 RE 192	SK3124 SK3124 SK3124 SK3444	RT-302 RT-107A RT-107A RT-302	ECG199 ECG199 ECG199 ECG199	25C945 25C945 25C945 25C828	WEP1945 WEP1945 WEP1945 WEP828	121-29000 121-29000 ZEN-119 ZEN-119
Q522	2SC945AP 2SC945 2SC828	01-030945	GE-212 GE-212 GE-61*	PTC121* PTC121* PTC121*	2SC945 2SC945 2SC828	RE 192 RE 192 RE 192	SK3124 SK3124 SK3444	RT-107A RT-107A RT-302	ECG199 ECG199 ECG199	25C945 25C945 25C828	WEP1945 WEP1945 WEP828	121-29000 121-29000 ZEN-119
POWER SUPPLY BOARD												
D1	F14A V06C		GE-504A GE-504A	PTC201 PTC201	HEPRO052 HEPRO052	RE 49 RE 49	SK3030 SK3030	RT-213 RT-213	ECG116 ECG116	1N4004 1N4004	WEP156 WEP156	212-61 212-61
D2	1S1885 F14A V06C		GE-504A GE-504A GE-504A	PTC201 PTC201 PTC201	HEPRO052 HEPRO052 HEPRO052	RE 49 RE 49 RE 49	SK3030 SK3030 SK3030	RT-213 RT-213 RT-213	ECG116 ECG116 ECG116	1N4004 1N4004 1N4004	WEP156 WEP156 WEP156	212-61 212-61 212-61
D3	1S1885 F14A V06C		GE-504A GE-504A GE-504A	PTC201 PTC201 PTC201	HEPRO052 HEPRO052 HEPRO052	RE 49 RE 49 RE 49	SK3030 SK3030 SK3030	RT-213 RT-213 RT-213	ECG116 ECG116 ECG116	1N4004 1N4004 1N4004	WEP156 WEP156 WEP156	212-61 212-61 212-61
D4	1S1885 F14A V06C		GE-504A GE-504A GE-504A	PTC201 PTC201 PTC201	HEPRO052 HEPRO052 HEPRO052	RE 49 RE 49 RE 49	SK3030 SK3030 SK3030	RT-213 RT-213 RT-213	ECG116 ECG116 ECG116	1N4004 1N4004 1N4004	WEP156 WEP156 WEP156	212-61 212-61 212-61
Q1	1S1885 2SC900F 2SC900	01-030900	GE-62 GE-62 GE-62	PTC139* PTC139* PTC139*	2SC900 2SC900 2SC900	RE 192 RE 192 RE 192	SK3124 SK3124 SK3124	RT-302 RT-302 RT-302	ECG199 ECG199 ECG199	25C900 25C900 25C900	WEP66 WEP66 WEP66	ZEN-119 ZEN-119 ZEN-119
Q2	2SC900F 2SC900	01-030900	GE-62 GE-62	PTC139* PTC139*	2SC900 2SC900	RE 192 RE 192	SK3124 SK3124	RT-302 RT-302	ECG199 ECG199	25C900 25C900	WEP66 WEP66	ZEN-119 ZEN-119
Q3	2SD313D 2SC313	01-040313	GE-241 GE-241	PTC154 PTC154	2SC900 ZB16B	RE 192 RE 205	SK3124 SK3054	RT-302 RT-154	ECG199 ECG196	25C900 1N4745A	WEP66 WEP756	ZEN-119 ZEN-119
ZD1	BZ162		GEZD-16	ZB16B		RE 122	SK3054	RT-154	ECG196		WEP1160	
ZD2	RD6A RD5.6EC			ZM6A ZM6B		RE 108 RE 108		RT-246	ECG5012 ECG5012		WEP1413 WEP1413	

* Lead configuration may vary from original. (12) 1.2 WATT @ 1.0 AMP. (13) 12 WATT @ 3.0 AMP.

MIDLAND MODEL 76-863

ELECTROLYTIC CAPACITORS

ITEM No.	RATING	REPLACEMENT DATA				
		MFR. PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.	
					Q-LINE	GENERAL LINE
C1	.1 10V			TDC104M050EL	QDT1-2	SD50-R109
C2	10 16V			VTT10B25	QV1-41	EV-1222
C3	.22 10V		PC10-25	TDC224M050EL	QDT1-10	SD50-R229
C11	47 10V			VTT47D16	QV1-73	EV-1226
C18	1 50V		PC50-16	VTT1A50	QV1-11	EV-1615
C50	1 50V		PC1-50	VTT1A50	QV1-11	EV-1615
C72	10 16V		PC10-25	VTT10B25	QV1-41	EV-1222
C74	3.3 25V		PC5-50	VTT3R3A50	QV1-23	EV-1318
C76	1 50V		PC1-50	VTT1A50	QV1-11	EV-1615
C78	47 16V		PC50-16	VTT47D16	QV1-73	EV-1226
C85	3.9 25V			TDC475M010EL	QDT1-48	SD10-4R79
C86	.47 10V			TDC474M050EL	QDT1-19	SD50-R479
C87	33 63V		PC30-25	VTT33B10	QV1-61	EV-1125
C93	47 16V		PC50-16	VTT47D16	QV1-73	EV-1226
C94	220 16V		PC250-25	VTT220H16	QV1-117	EV-1240
C96	3.3 25V		PC5-50	VTT3R3A50	QV1-23	EV-1318
C97	47 10V		PC50-16	VTT47D16	QV1-73	EV-1226
C99	47 25V		PC50-25	VTT47E25	QV1-75	EV-1326
C100	1000 16V		PC1000-16	VTT1000L16	QV1-183	EV-1260
C101	33 6.3V		PC30-25	VTT33B10	QV1-61	EV-1125
C120	33 16V		PC30-25	VTT33D25	QV1-63	EV-1325
POWER SUPPLY BOARD						
C1	2200 25V		WBR2000-25	TC2520A	QE1-645	TVA-1213.5
C2	100 25V		PC100-25	VTT100625	QV1-97	EV-1330

PARTS LIST AND DESCRIPTION (CONTINUED)

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

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 50V		DC-103	MGP01	TA110	QC2-141	TG-S10
C4	68 N150 10%				*		10TCP-Q68
C5	.01 50V		DC-103	MGP01	TA110	QC2-141	TG-S10
C6	22 N150 10%				*		10TCP-Q22
C7	330 50V		DD-331	GP330	GP333		10TS-T33
C8	150 50V		DD-151		GP315		10TS-T15
C9	.047 50V		UK50-503		MAG5015		
C10	47 50V		DTZ-47	NP047	CN0447		10TCC-Q47
C12	4 N150				*		10TCP-V47
C13	.001 50V			DPMS6D1	EWFA1A210	QF1-1	1PB-D10
C14	68 N150 10%				*		10TCP-Q68
C15	.01 50V		DC-103	MGP01	TA110	QC2-141	TG-S10
C16	33 50V		DTZ-33	NP033	CN0433		10TCC-Q33
C17	47 N150 10%				*		10TCP-Q47
C19	.001 50V			DPMS6D1	EWFA1A210	QF1-1	1PB-D10
C20	.001 50V			DPMS6D1	EWFA1A210	QF1-1	1PB-D10
C21	.001 100V			CD19FD102J03	SX210		MWC-102
C22	2 5% 50V		DTZ-2R2	NP02P2	CN0522		10TCC-V22
C23	7 50V		DTZ-6R8	NP06P8	CN0568		10TCC-V68
C24	33 N150 10%				*		10TCP-Q33
C25	4 NP0		DTZ-4R7	NP04P7	CN0547		10TCC-V47
C26	330 100V		DD-331	GP330	GP333		10TS-T33
C27	390 50V		DD-391	GP390	GP339		10TS-T39
C28	.01 50V		DC-103	MGP01	TA110	QC2-141	TG-S10
C29	68 50V		DD-680	GP68	GP468		10TS-Q68
C30	56 50V		DD-560		GP456		10TS-Q56
C31	.01 50V		DC-103	MGP01	TA110	QC2-141	TG-S10
C32	2 5% 50V		DTZ-2R2	NP02P2	CN0522		10TCC-V22
C33	.01 50V		DC-103	MGP01	TA110	QC2-141	TG-S10
C35	68 50V		DD-680	GP68	GP468		10TS-Q68
C36	.01 50V		DC-103	MGP01	TA110	QC2-141	TG-S10
C37	100 N150 10%				*		10TCP-T10
C38	.01 50V		DC-103	MGP01	TA110	QC2-141	TG-S10
C39	.01 50V			WMF1S1	EWFA1A110	QF1-91	1PB-S10
C40	390 50V		DD-391	GP390	GP339		10TS-T39
C41	.01 50V		DC-103	MGP01	TA110	QC2-141	TG-S10
C42	120 50V		DTZ-120		CN0312		10TCC-T12
C43	220 50V		DD-221		GP322		10TS-T22
C44	120 50V		DTZ-120		CN0312		10TCC-T12
C45	.01 50V		DC-103	MGP01	TA110	QC2-141	TG-S10
C46	120 50V		DTZ-120		CN0312		10TCC-T12
C47	270 10% 500V			CD15FD271J03	SX327	QW1-37	MWB-271
C48	2 500V		DTZ-2R2	NP02P2	CN0522		10TCC-V22
C49	.0047 50V		DD-472	GP4700	GP247		5GA-D47
C51	27 50V				CN0427		10TCC-Q27
C52	.01 50V		DC-103	MGP01	TA110	QC2-141	TG-S10
C53	.047 50V		UK50-503		MAG5015		
C54	.047 50V		UK50-503		MAG5015		
C55	.047 50V			DPMS2S47	EWFA1A147	QF1-171	1PB-S47
C56	.01 50V		DC-103	MGP01	TA110	QC2-141	TG-S10
C57	10 50V		DTZ-10	NP010	CN0410		10TCC-Q10
C58	.01 50V		DC-103	MGP01	TA110	QC2-141	TG-S10
C59	.01 50V		DC-103	MGP01	TA110	QC2-141	TG-S10
C60	.01 50V		DC-103	MGP01	TA110	QC2-141	TG-S10
C61	.01 50V		DC-103	MGP01	TA110	QC2-141	TG-S10
C62	.01 50V		DC-103	MGP01	TA110	QC2-141	TG-S10
C63	2 2% 50V		DTZ-2R2	NP02P2	CN0522		10TCC-V22
C64	.01 50V		DC-103	MGP01	TA110	QC2-141	TG-S10
C65	18 10% N150				*		10TCP-Q18
C66	2.2 10% 500V		DTZ-2R2	NP02P2	CN0522		10TCC-V22
C67	.047 50V			DPMS2S47	EWFA1A147	QF1-171	1PB-S47
C68	.047 50V			DPMS2S47	EWFA1A147	QF1-171	1PB-S47
C69	.047 50V			DPMS2S47	EWFA1A147	QF1-171	1PB-S47
C70	.047 50V			DPMS2S47	EWFA1A147	QF1-171	1PB-S47
C71	.047 50V			DPMS2S47	EWFA1A147	QF1-171	1PB-S47
C73	.0068 50V			DPMS6S12	PVC6112		6PS-S12
C75	.0047 50V			WMF1D47	EWFA1A247	QF1-57	1PB-D47
C77	100 50V		DD-101	GP100	GP310		10TS-T10
C79	.022 50V			DPMS2S22	EWFA1A122	QF1-127	1PB-S22
C80	.0022 50V		DD-222		GP222	QC2-97	5GA-D22
C81	.022 50V			DPMS2S22	EWFA1A122	QF1-127	1PB-S22
C82	220 50V		DD-221		GP322		10TS-T22
C83	.01 50V			WMF1S1	EWFA1A110	QF1-91	1PB-S10
C84	.0022 50V		DD-222		GP222	QC2-97	5GA-D22
C88	68 50V		DD-680	GP68	GP468		10TS-Q68
C89	68 50V		DD-680	GP68	GP468		10TS-Q68
C90	100 50V		DD-101	GP100	GP310		10TS-T10
C91	068 50V			WMF1S68	EWFA1A168	QF1-195	1PB-S68
C92	100 50V		DD-101	GP100	GP310		10TS-T10
C95	.068 50V			WMF1S68	EWFA1A168	QF1-195	1PB-S68
C102	.01 50V		DC-103	MGP01	TA110	QC2-141	TG-S10
C106	.047 50V		UK50-503		MAG5015		
C107	.047 50V		UK50-503		MAG5015		
C110	18 50V				CN0418		10TCC-Q18
C111	82 50V		DD-820		GP482		10TS-Q82
C112	39 50V				CN0439		10TCC-Q39
C113	.01 50V		DC-103	MGP01	TA110	QC2-141	TG-S10
C114	390 500V		DD-391	GP390	GP339		10TS-T39
C117	.0047 50V		DD-472	GP4700	GP247		5GA-D47
C118	.022 50V		DC-253	MGP025	TA125		TG-S25
C123	.068 50V			WMF1S68	EWFA1A168	QF1-195	1PB-S68
C130	.0022 50V		DD-222		GP222	QC2-97	5GA-D22
C131	39 N150				*		10TCP-Q39
C132	15 N150				*		10TCP-Q15
C133	.0022 50V		DD-222		GP222	QC2-97	5GA-D22
C134	3 50V		DTZ-3R3		CN0533		10TCC-V33
C135	220 50V		DD-221		GP322		10TS-T22
C136	.0033 50V			CD19FD332J03	SX233		MWC-332
C137	.01 50V		DC-103	MGP01	TA110	QC2-141	TG-S10
C138	.01 50V		DC-103	MGP01	TA110	QC2-141	TG-S10
C139	220 50V		DD-221		GP322		10TS-T22
C141	.01 50V		DC-103	MGP01	TA110	QC2-141	TG-S10
C142	100 50V		DD-101	GP100	GP310		10TS-T10
C201	150 50V			CD15FD151J03	SX315	QW1-31	MWA-151
C201A	180 50V			CD15FD181J03	SX318	QW1-33	MWA-181

PARTS LIST AND DESCRIPTION (CONTINUED)

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

CAPACITORS (cont)

ITEM No.	RATING	MFR. PART No.	REPLACEMENT DATA					
			CENTRALAB PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.		
						Q-LINE	GENERAL LINE	
C201B	7 50V	13-123069	DTZ-6R8	NP06P8	CN0568		10TCC-V68	
C202	.01 50V		DC-103	MGP01	TA110	QC2-141	TG-S10	
C203	.01 50V		DC-103	MGP01	TA110	QC2-141	TG-S10	
C204	.01 50V		DC-103	MGP01	TA110	QC2-141	TG-S10	
C205	.047 50V		UK50-503		MAG5015			
C206	.01 50V		DC-103	MGP01	TA110	QC2-141	TG-S10	
C207	.01 50V		DC-103	MGP01	TA110	QC2-141	TG-S10	
C208	.0047 50V		DD-472	GP4700	GP247		56A-D47	
C209	.0047 50V		DD-472	GP4700	GP247		56A-D47	
C210	.0047 50V		DD-472	GP4700	GP247		56A-D47	
C211	.0047 50V		DD-472	GP4700	GP247		56A-D47	
C212	.0047 50V		DD-472	GP4700	GP247		56A-D47	
C213	.0047 50V		DD-472	GP4700	GP247		56A-D47	
C214	.0047 50V		DD-472	GP4700	GP247		56A-D47	
C215	.0047 50V		DD-472	GP4700	GP247		56A-D47	
C521	.01 50V		DC-103	MGP01	TA110	QC2-141	TG-S10	
C522	.01 50V		DC-103	MGP01	TA110	QC2-141	TG-S10	
CT1	20							
POWER SUPPLY BOARD								
C3	.022 50V			DC-253	MGP025	TA125	QC2-141	TG-S25
C4	.01 50V			DC-103	MGP01	TA110		TG-S10
C5	.047 50V			UK50-503		MAG5015		
C6	.022 50V			DC-253	MGP025	TA125		TG-S25

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

ITEM No.	FUNCTION	RESIST-ANCE	REPLACEMENT DATA				
			MFRG. PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	MALLORY PART No.	TRW PART No.
CHASSIS							
RV1	Volume	50K	76-160002				
RV2	Squelch/Switch	10K	76-166002				
POWER SUPPLY BOARD							
RV1	Voltage	500	76-164001	T-500	C-501	MTC52L1	X201R501B
MAIN BOARD							
RV1	Squelch Range	10K	13-164132				U260R103B
RV2	ALC	5000	13-164146				U260R502B
RV3	S Meter	20K	13-164134				U260R253B
RV4	RF Meter	20K	13-164134				U260R253B
ANTENNA WARNING BOARD							
RV521	SWR	10K	76-164002				X260R103B (2)

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

COILS (RF-IF)

ITEM No.	FUNCTION	REPLACEMENT DATA			REMARKS
		PART No.	OTHER IDENTIFICATION	MILLER PART No.	
L1	VCO (18MHz)	77-176001			
L2	VCO Mixer (37MHz)	13-090405			
L3	RF Choke (68uH)	13-178210			
L4	RF Choke (1uH)	77-178007			
L5	Xmit Osc (27MHz)	77-176003			
L6	RF Choke (2.2uH)	13-176564			
L7	Xmit Driver (27MHz)	13-176508			
L8	RF Choke (68uH)	13-178210			
L9	RF Choke (.55uH)	13-176567			
L10	RF Choke (1uH)	13-176565			
L11	Final (27MHz)	13-176510			
L12	Pi Filter (27MHz)	13-176510			
L13	RF Choke (.4uH)	77-176004			
L14	IF (10.695MHz)	77-090003			
L15	RF Choke (68uH)	13-178210			
L16	RF Choke (.75uH)	77-178003			
L17	RF Choke (.75uH)	77-178003			
T1	REF Osc. (21MHz)	77-176010			
T2	VCO Mixer (38MHz)	77-176011			
T3	Xmit Mixer (27MHz)	13-094232			
T4	Xmit Buffer (27MHz)	13-094233			
T5	Rec Ant (27MHz)	13-094234			
T6	Rec RF (27MHz)	13-176512			
T7	IF (10.695MHz)	77-090003			
T8	IF (455kHz)	13-090371			
T9	IF (455kHz)	13-090375			
T10	IF (455kHz)	13-090372			

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.	
CH1	1.3A	.116	.48mh	13-178208 ELA-16 (1)	TR523		(1) Number on unit.

MIDLAND MODEL 76-863

PARTS LIST AND DESCRIPTION (CONTINUED)

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

TRANSFORMER (Audio Output)

ITEM No.	IMPEDANCE		REPLACEMENT DATA			NOTES
	PRI.	SEC.	MFGR. PART No.	THORDARSON PART No.	TRIAD PART No.	
T11	2.88	1 2 8 13.52	13-096200 ETA-66 (1)	TR723	MCB-16	(1) Number on unit.

TRANSFORMER (Power)

ITEM No.	RATING		REPLACEMENT DATA			NOTES
	PRI.	SEC. 1	MFGR. PART No.	THORDARSON PART No.	TRIAD PART No.	
PT	120VAC @ 360ma AC	17.50VAC @ 2.34A DC	76-098002 TP-D68V0024 (1)		PCB-3	(1) Number on unit.

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		MFGR. PART No.	QUAM PART No.	
SP	3" PM, 8 ohms	13-060118	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 F2 POWER SUPPLY BOARD F1	.75 Amp 2 Amp 2.5 Amp PT	13-24010 13-204011	13-158522 76-034001	AGC 3/4 AGC2 GJV3	HKP HDJ	312.750 312002 31802.5	342001AL 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	13-038100	1B-032	1B-034	1B-010	1B-092	1	2	4	3	NC	2	

MISCELLANEOUS

ITEM No.	PART NAME	PART No.	NOTES
CF1	Ceramic Filter	77-179001	455kHz
CR1	Component Comb.	13-130020	AC Isolation
J1	Jack	13-159213	Antenna
J2	Jack	13-153174	Microphone
J3	Jack	13-153168	PA
J4	Jack	13-153168	Ext Sp
J5	Jack	13-159235	DC Power
J6	Jack	13-159236	AC Power
M1	Meter	76-200001	S/R/F
PL1	Lamp	13-201078	Channel Lamp (4.98V @ 32ma)
PL2	Lamp	13-201078	Meter (4.98V @ 56ma)
PL3	Lamp	76-201002	AWI (5.02V @ 30ma)
PL4	Lamp	76-201002	TX (4.76V @ 30ma)
S1	Switch	13-183237	Power
S2	Switch	13-183243	Delta Tune
S3	Switch	76-183001	ANL
S4	Switch	76-183001	Ext CB
S5	Switch	76-183001	NB
S6	Switch	13-159236	Power Change Over (Part AC Jack)
S7	Switch		CB/PA (Part of Squelch Control)
SW1	Switch	77-180001	Channel Selector
X1	Crystal	77-128006	10.240MHz
X2	Crystal	77-128007	10.695MHz
	Printed Circuit Board	76-075002	Main (PTB050COX)
	Printed Circuit Board	76-075001	AWI (PTSR008COX)
	Printed Circuit Board		Power Supply (EP00612AB-01)

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

ITEM	PART No.	ITEM	PART No.
Escutcheon	76-010004	Knob, Channel Selector	13-115141
Knob, Power	76-110003	Disc, Channel Indicator	76-115003
Knob, Control	13-110201	Cabinet	76-010005