

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 608

MANUFACTURER'S SPECIFICATIONS

Receiver

- | | |
|--|--------------------------------------|
| 1. Frequency Range (MHz) | : 26.965 ~ 27.405. |
| 2. Sensitivity | : $0.5\mu\text{V}$ for 10db S + N/N. |
| 3. Selectivity | : 5KHz minimum at 6db down. |
| 4. Adj. Channel Rejection | : More than 60db. |
| 5. Audio Power output at 8 ohms | : More than 2.5W at 10% distortion. |
| at 4 ohms | : More than 4 W at 10% distortion. |
| 6. Audio fidelity (1KHz = 0db, 6db down) | : 400 Hz ~ 2,000Hz. |
| 7. A.G.C. figure of merit | : More than 80db. |
| 8. Squelch sensitivity (Threshold) | : Less than $0.5\mu\text{V}$. |
| 9. Spurious Rejection | : More than 45db. |

Transmitter

- | | |
|--------------------------|--------------------|
| 1. Frequency Range (MHz) | : 26.965 ~ 27.405. |
| 2. RF Power Output | : 4 W |
| 3. Modulation Capability | : More than 80% |
| 4. Spurious Suppression | : More than 60db. |
| 5. Frequency Tolerance | : $\pm 0.005\%$. |

Courtesy of the Manufacturer

ROYCE MODELS 1-608, 608

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.

Connect microphone.

Suggested Alignment Tools:	GC ELECTRONICS:
T101, T102	9440
T601	5009, 8728A, 8728
L303, T301, T302	9091, 8728A, 8728
VC1	8276, 5000

SYNTHESIZER ALIGNMENT

TEST EQUIPMENT	TRANSCEIVER	ADJUST	REMARKS
Input of frequency counter to TP1 (PLL Pin 1)	Ch. 1 Tune Midrange		Check for 10.240MHz.
Input of frequency counter to TP2 (PLL Pin 11)	Ch. 1 Tune Midrange		Check for 17.180MHz. Check all channels. (See Truth Chart for correct frequencies.)
Input of frequency counter to TP3 (PLL Pin 14).	Ch. 1		Check for 26.965MHz. Check all channels. (See Truth Chart for correct frequencies.)

RECEIVER ALIGNMENT

Connect an AC VTVM or AF wattmeter across speaker voice coil.

Adjust volume control to obtain a suitable indication.

Set generator output low enough to prevent AGC limiting.

Squelch MINIMUM, ANL Off, Tune Midrange

TEST EQUIPMENT	TRANSCEIVER	ADJUST	REMARKS
Output of signal generator thru .01uF to TP4 (Q101, Pin 12). 455kHz, 1000Hz @ 30% modulation.	Ch. 19	T601	Adjust for maximum output.
Output of signal generator thru .01uF to antenna jack. 27.185MHz, 1000Hz @ 30% modulation.	Ch. 19	T102, T101, VR101	Adjust for maximum output. If necessary, adjust T601.

RECEIVER ADJUSTMENTS

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

TEST EQUIPMENT	TRANSCEIVER	ADJUST	REMARKS
Output of signal generator thru .01uF to antenna jack. 27.185MHz, 1000Hz @ 30% modulation. Output 1,000uV.	Ch. 19 Squelch Maximum	VR102	SQUELCH RANGE Adjust so squelch just breaks.
Output of signal generator thru .01uF to antenna jack. 27.185MHz, 1000Hz @ 30% modulation. Output 100uV.	Ch. 19	VR104	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	T301,T302, L303,VC1	Adjust for maximum.
	Ch. 19	L303	Adjust for 4 watts maximum.

TRANSMITTER ADJUSTMENTS

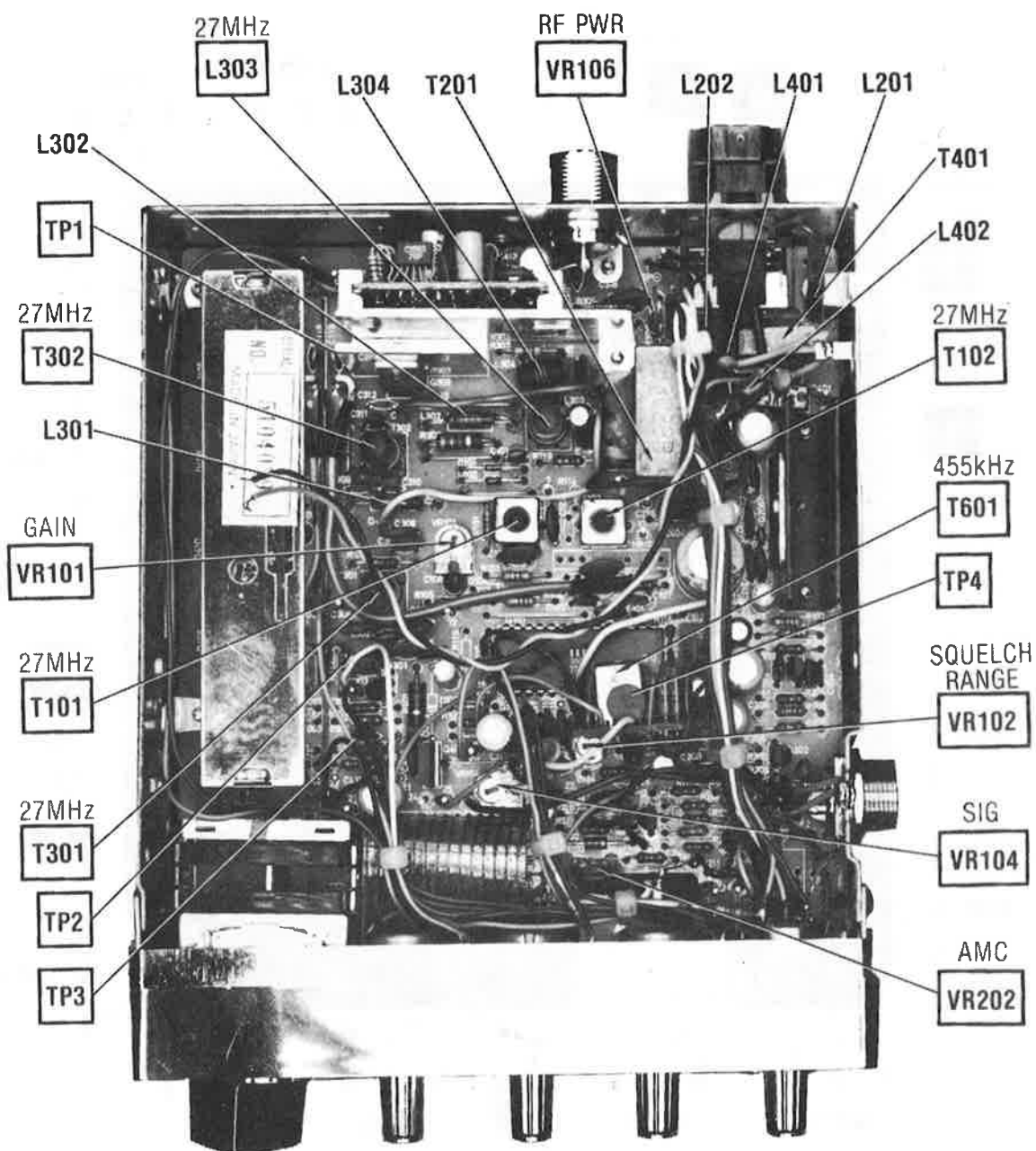
Connect an RF wattmeter and 50-ohm, 25-watt dummy load to antenna connector.
NOTE: Be sure to check transmit frequency and power on all active channels after adjustment of transmitter.
See page 4 for channel frequencies.

TEST EQUIPMENT	TRANSCEIVER	ADJUST	REMARKS
Input of oscilloscope or modulation meter to antenna jack. Inject a 1000Hz, 100mV signal at MIC input.	Ch. 19	VR202	AMC Adjust VR202 for 100% modulation maximum.
Connect a 150 ohm, 5-watt non-inductive resistor to antenna jack.		VR	AWI Adjust so AWI indicator just lights.
Input of RF wattmeter to antenna input.	Ch. 19	VR106	RF METER Adjust so RF Meter agrees with RF wattmeter.

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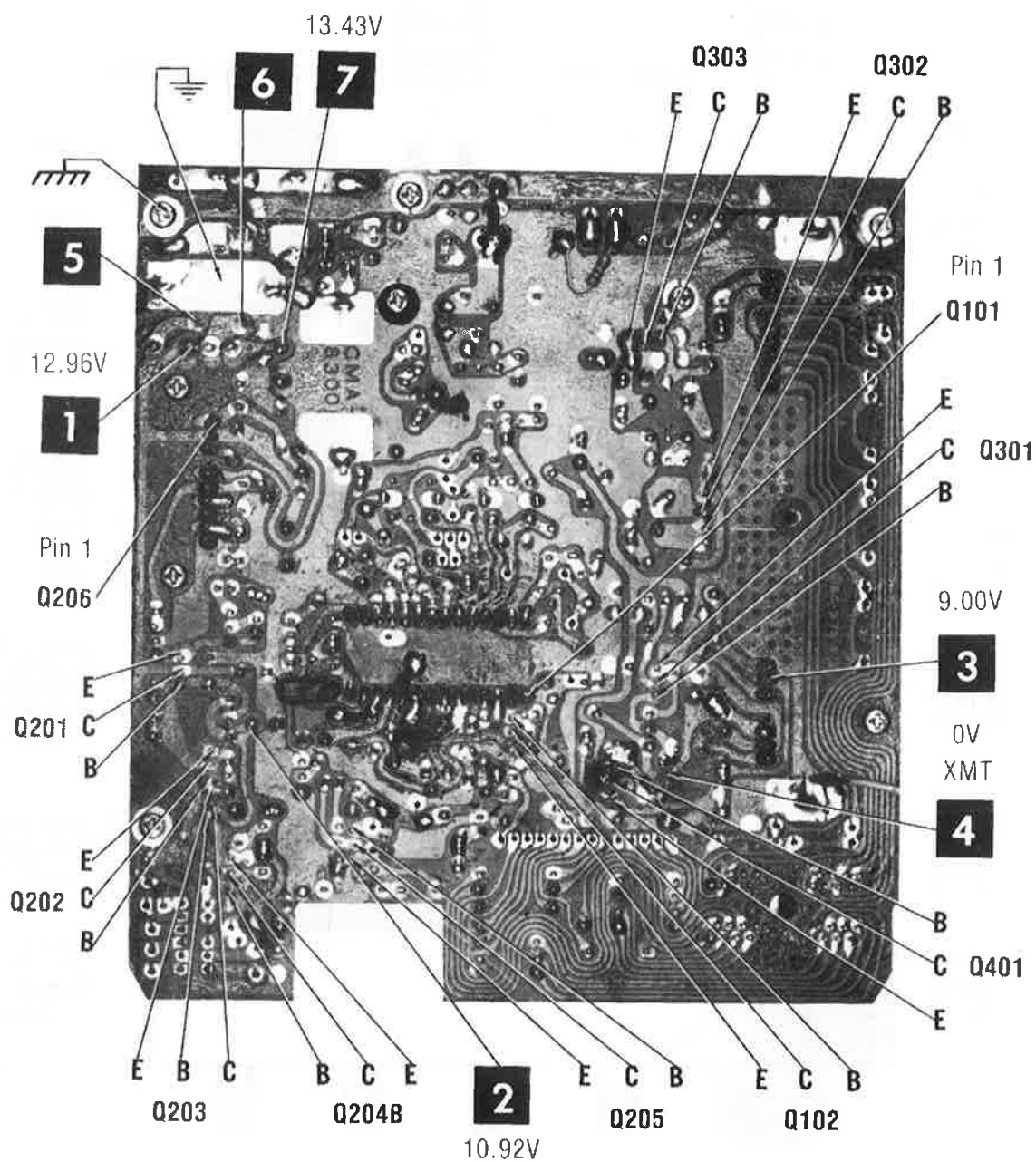
TRUTH CHART

C H A N N E L	1 = 5.80 Volts 0 = 0 Volts								REC SYNTHESIZER OUTPUT IN MHz AT TP2 (PLL, PIN 11)	XMT SYNTHESIZER OUTPUT IN MHz AT TP3 (PLL PIN 4)	
	PLL PROGRAM DIVIDER										
	PINS										
	3	4	5	6	7	8					
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			17.500	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	

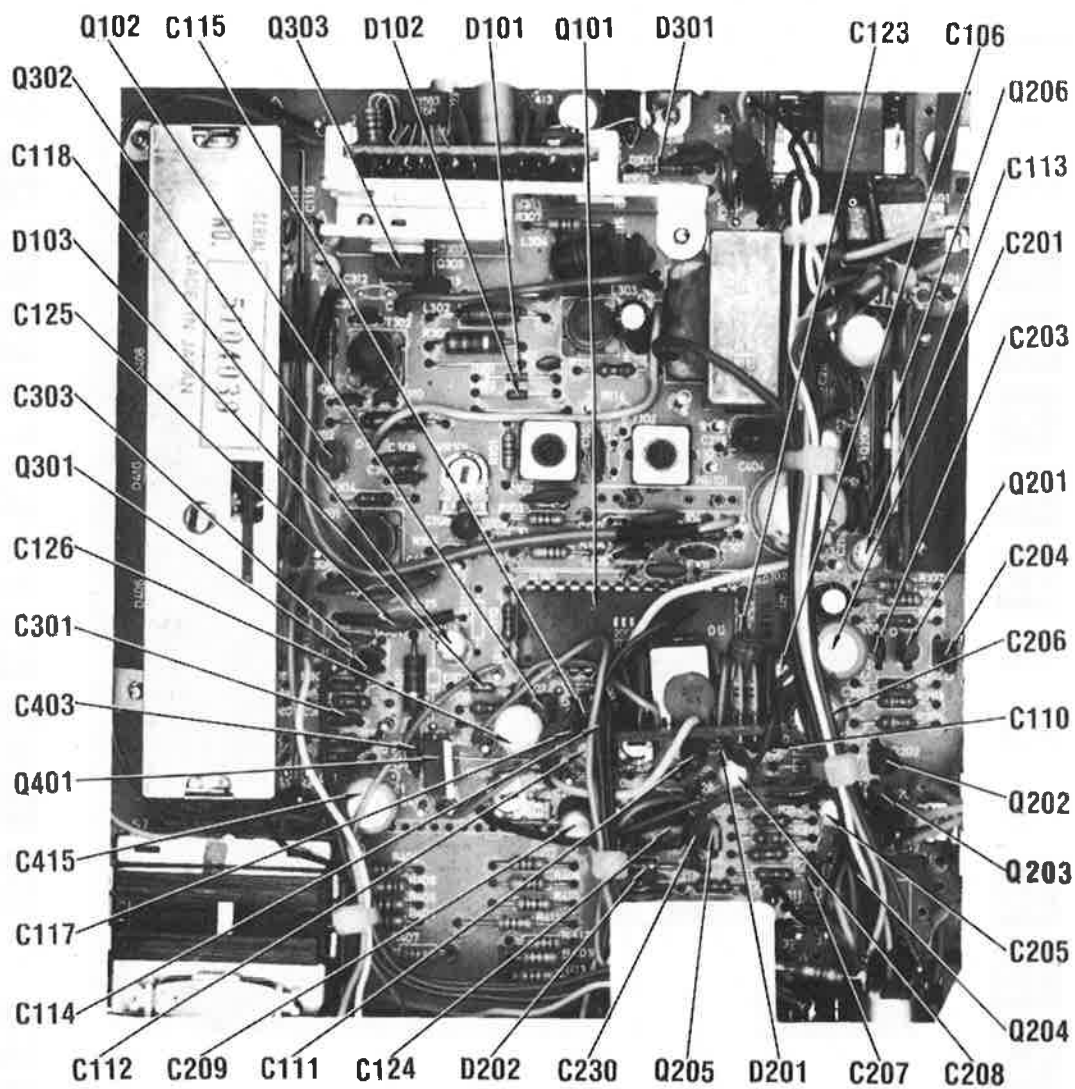


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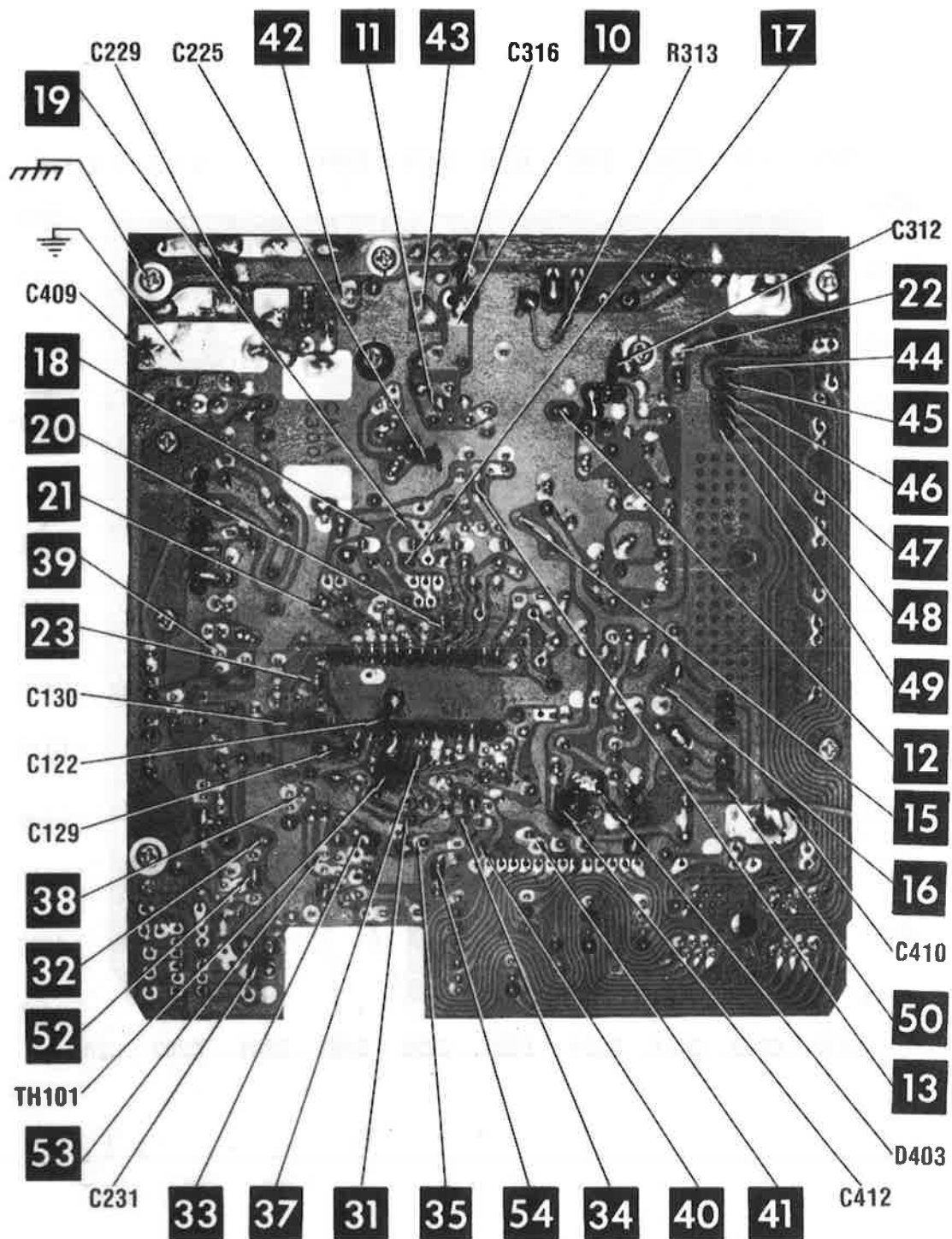
CHASSIS - BOTTOM



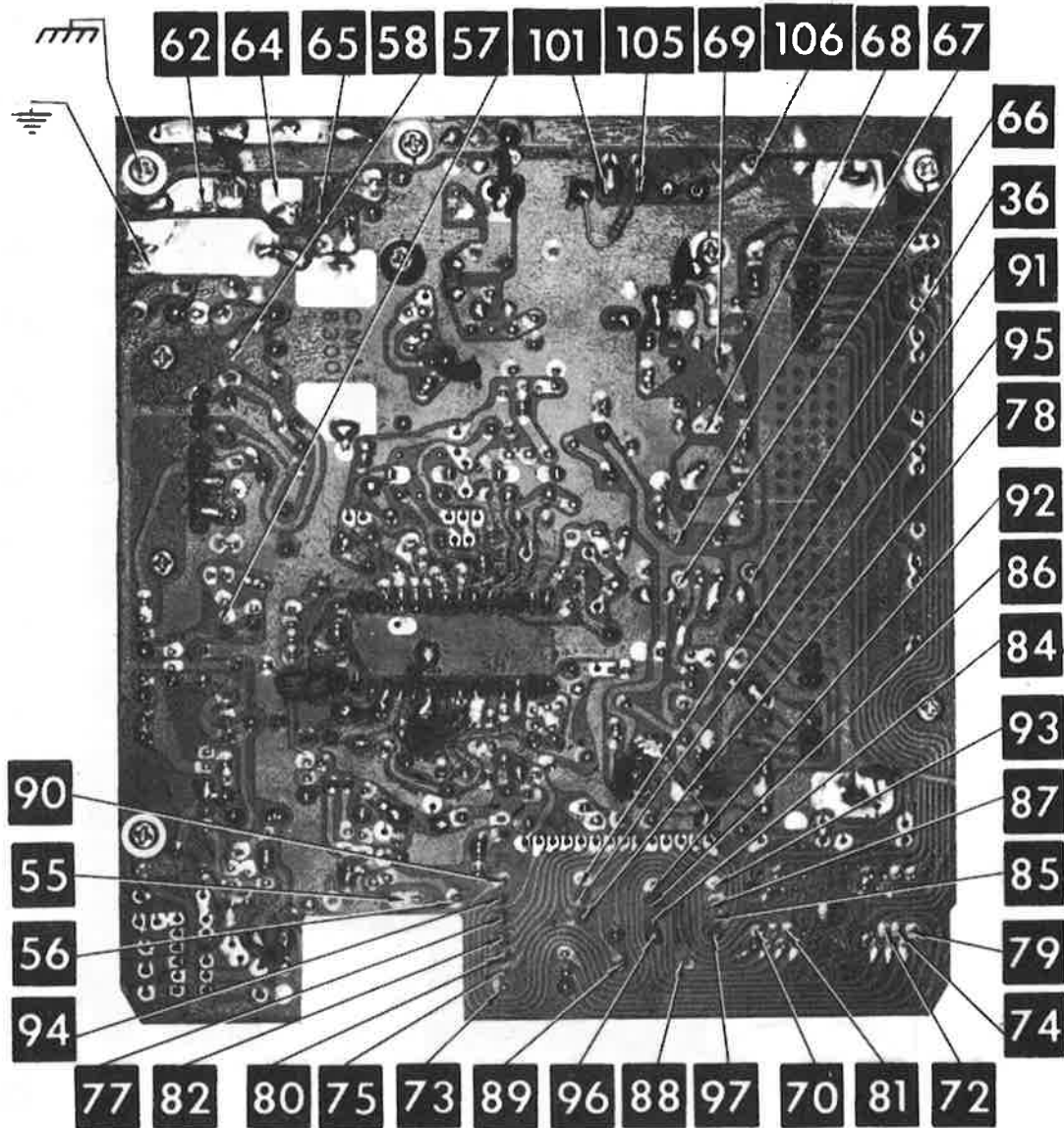
MAIN BOARD



MAIN BOARD

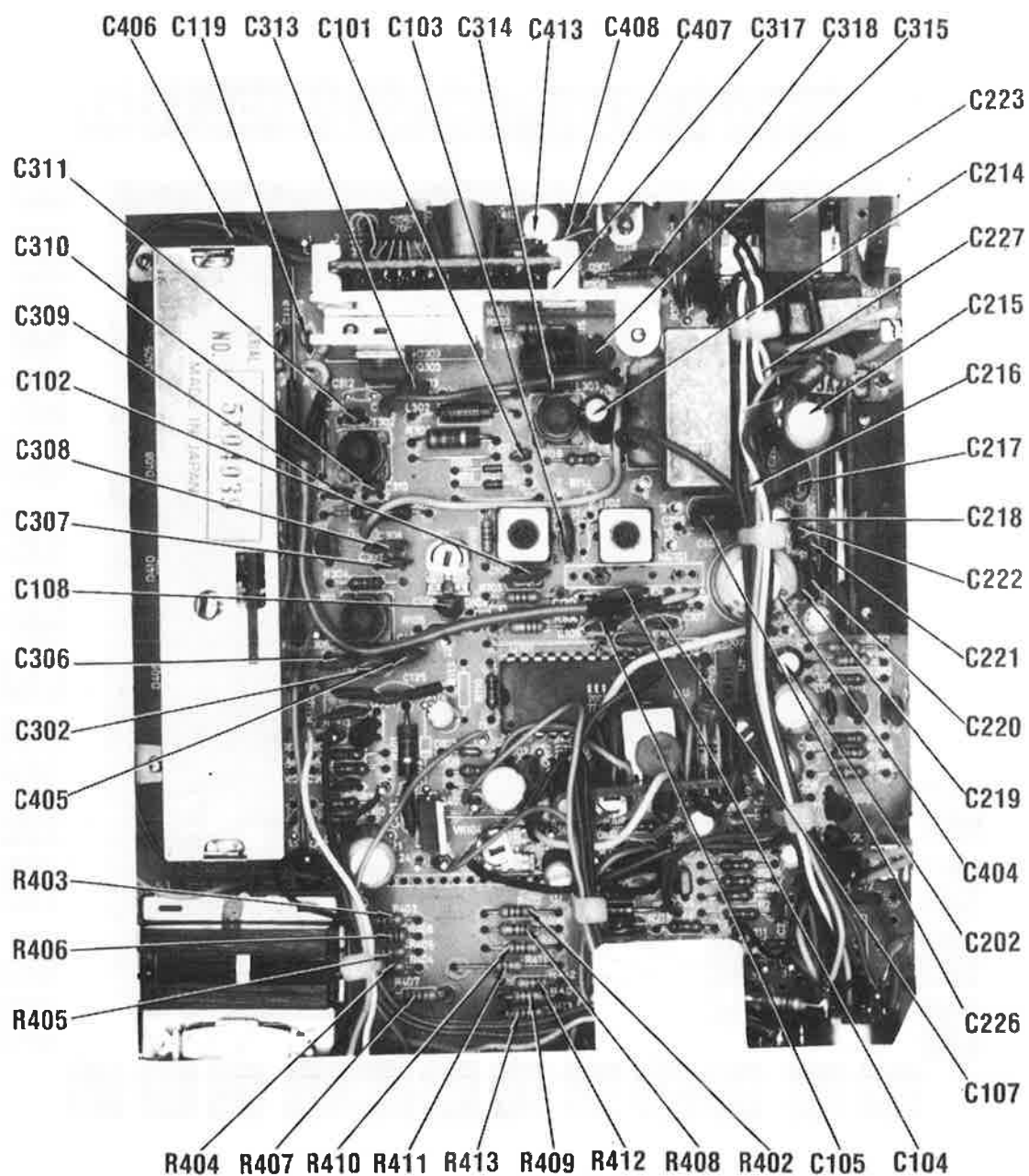


MAIN BOARD

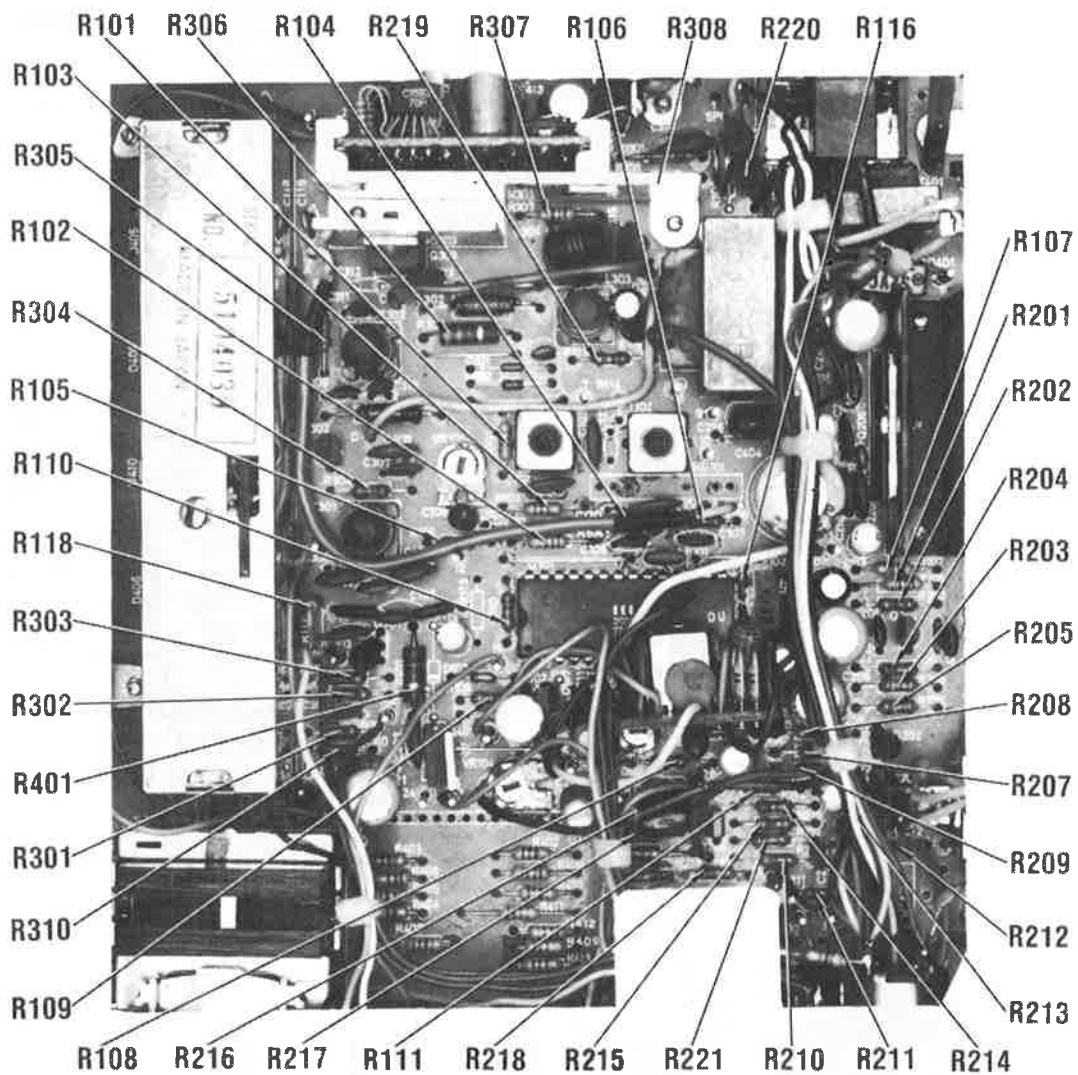


ROYCE MODELS 1-608, 608

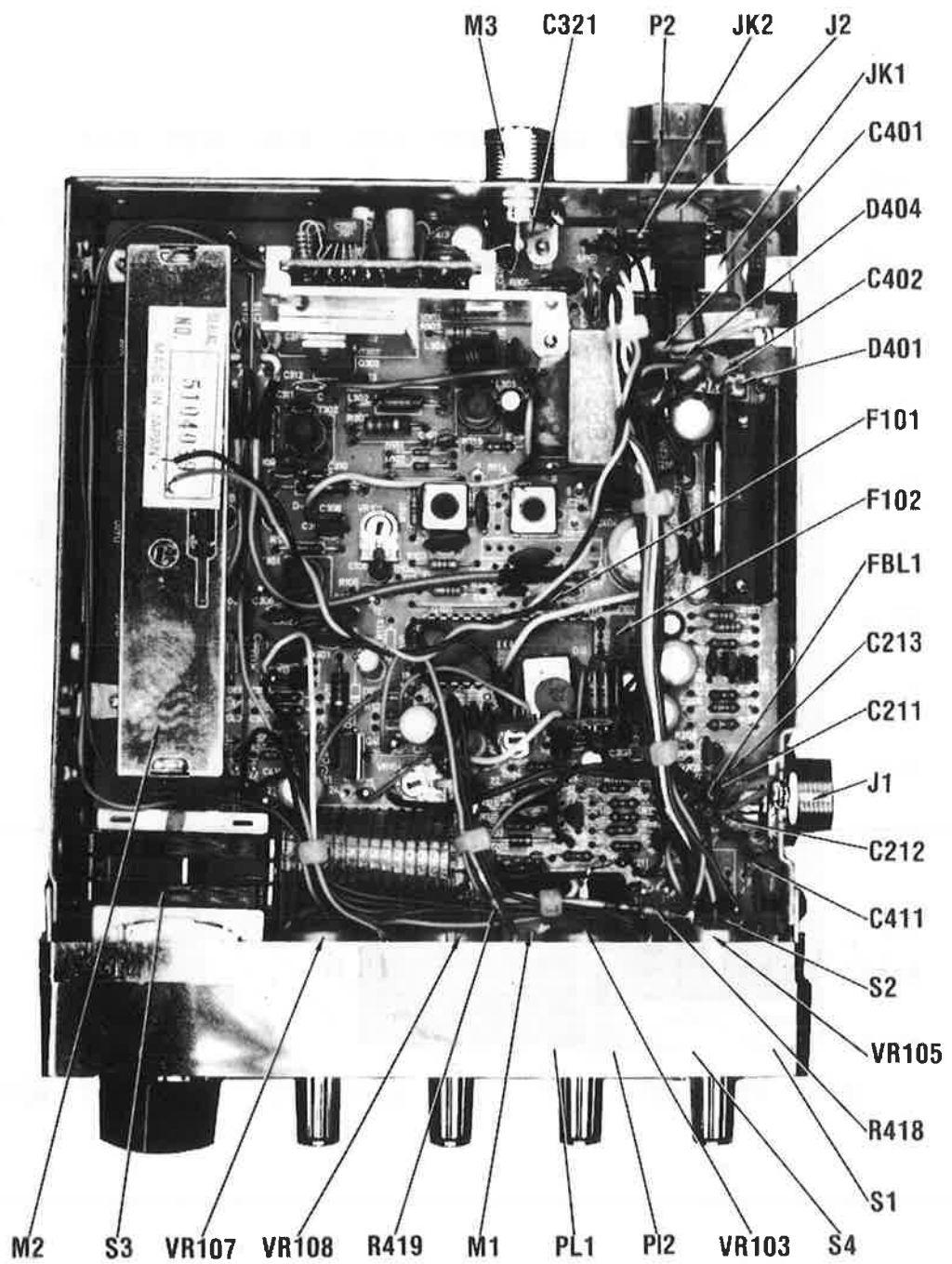
MAIN BOARD



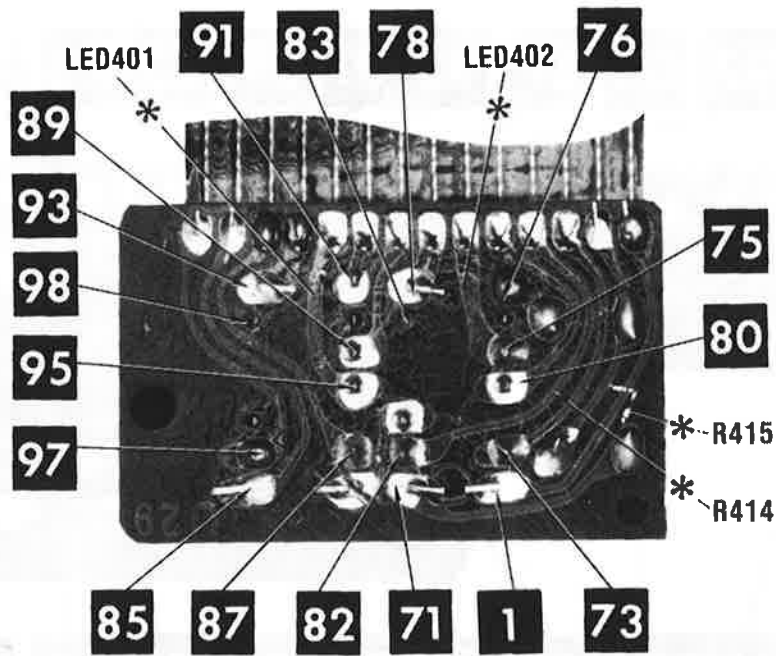
MAIN BOARD



MAIN BOARD



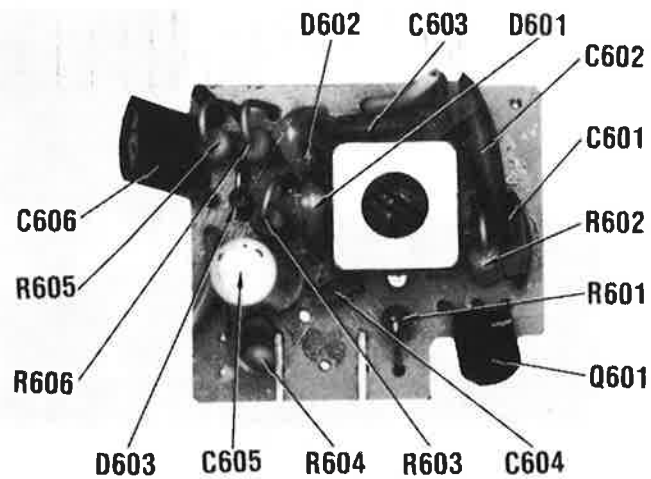
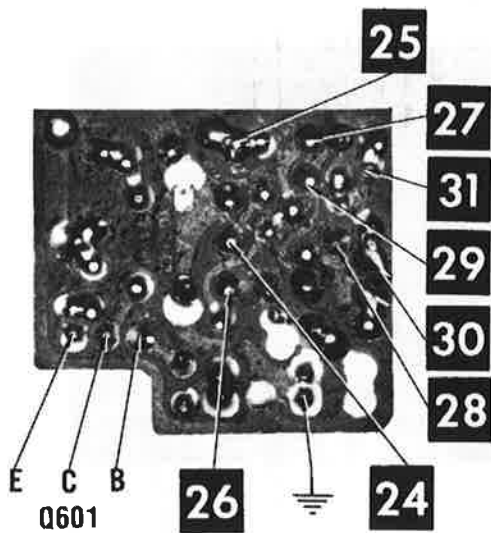
CHASSIS - BOTTOM



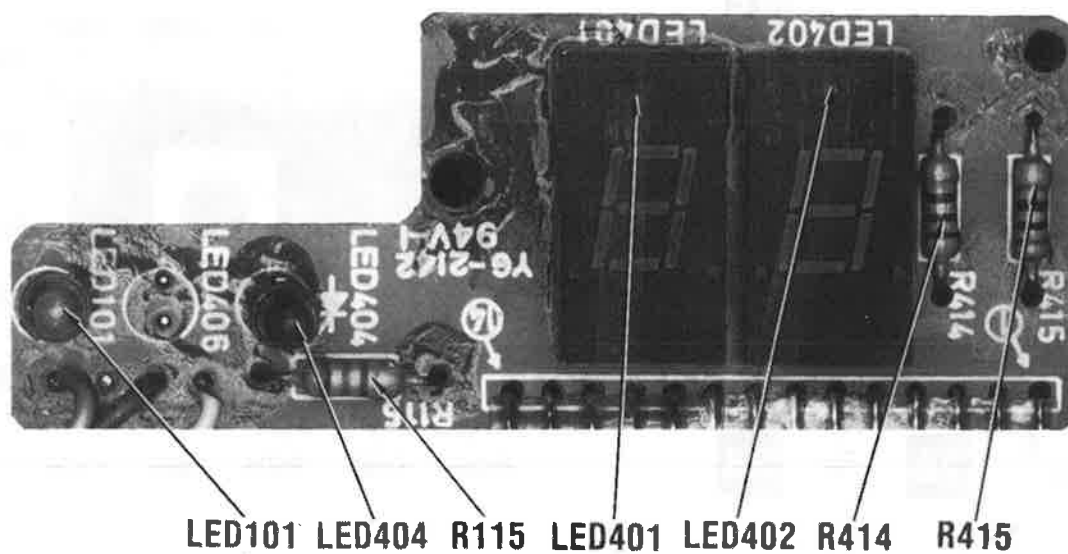
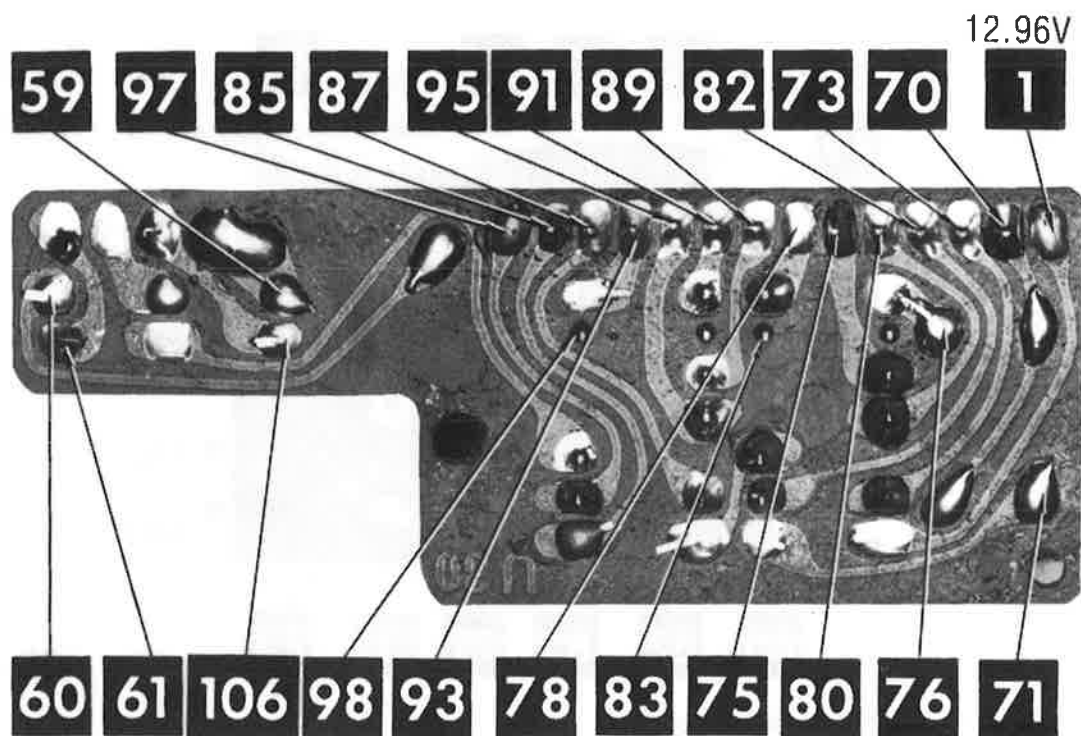
* Located on bottom of board

12.96V

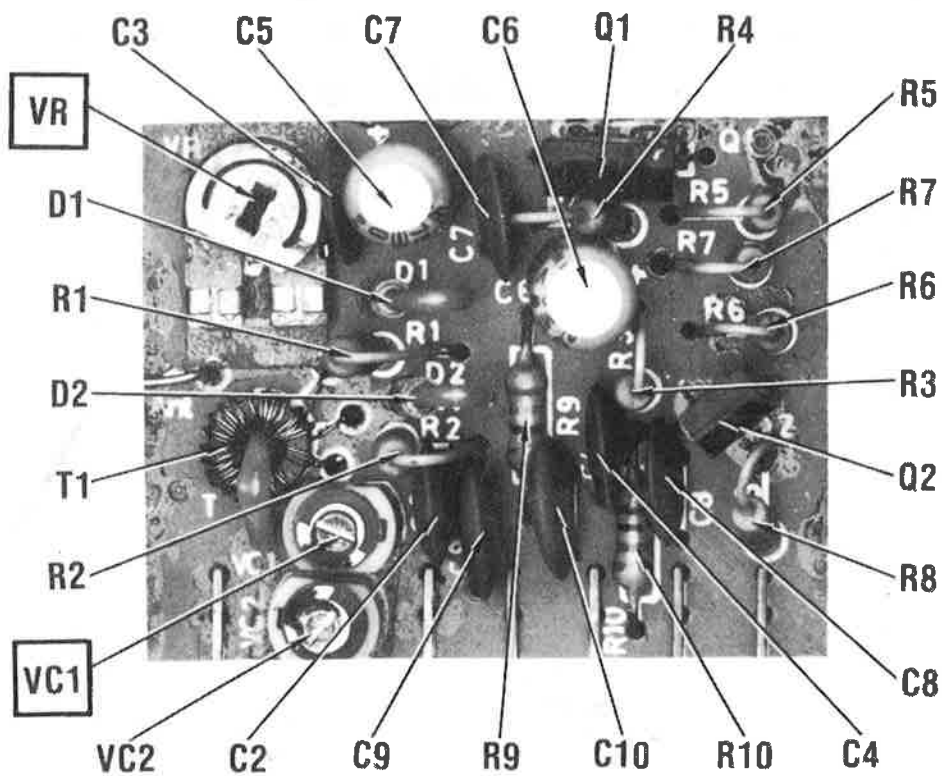
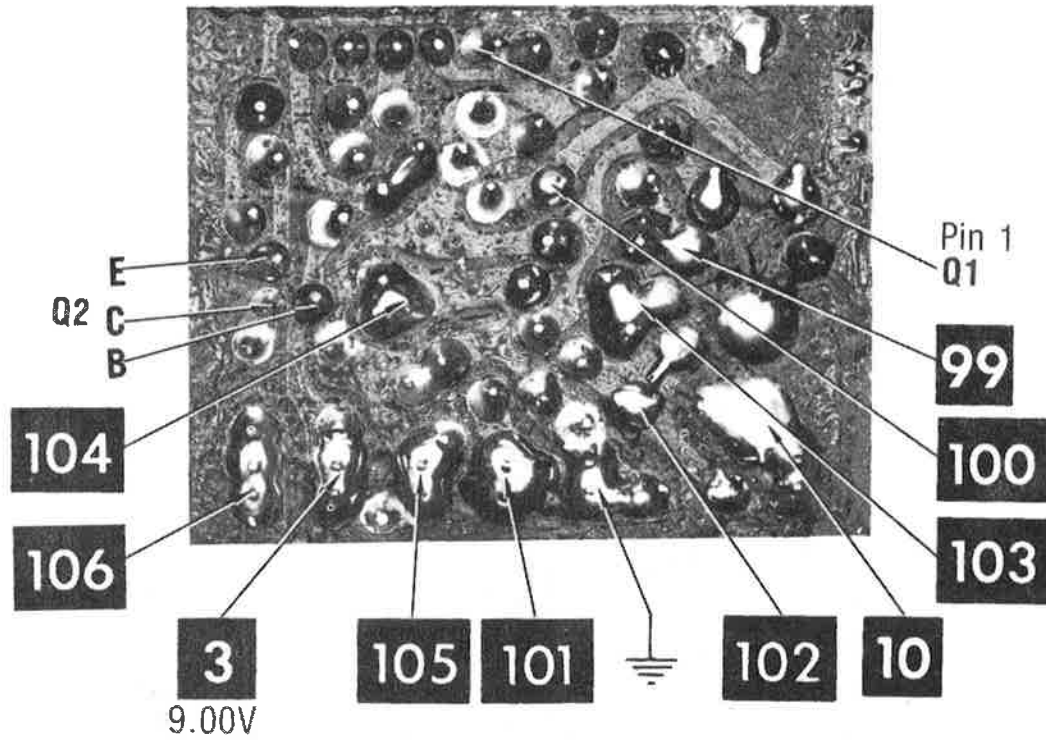
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IF AMP & ANL BOARD

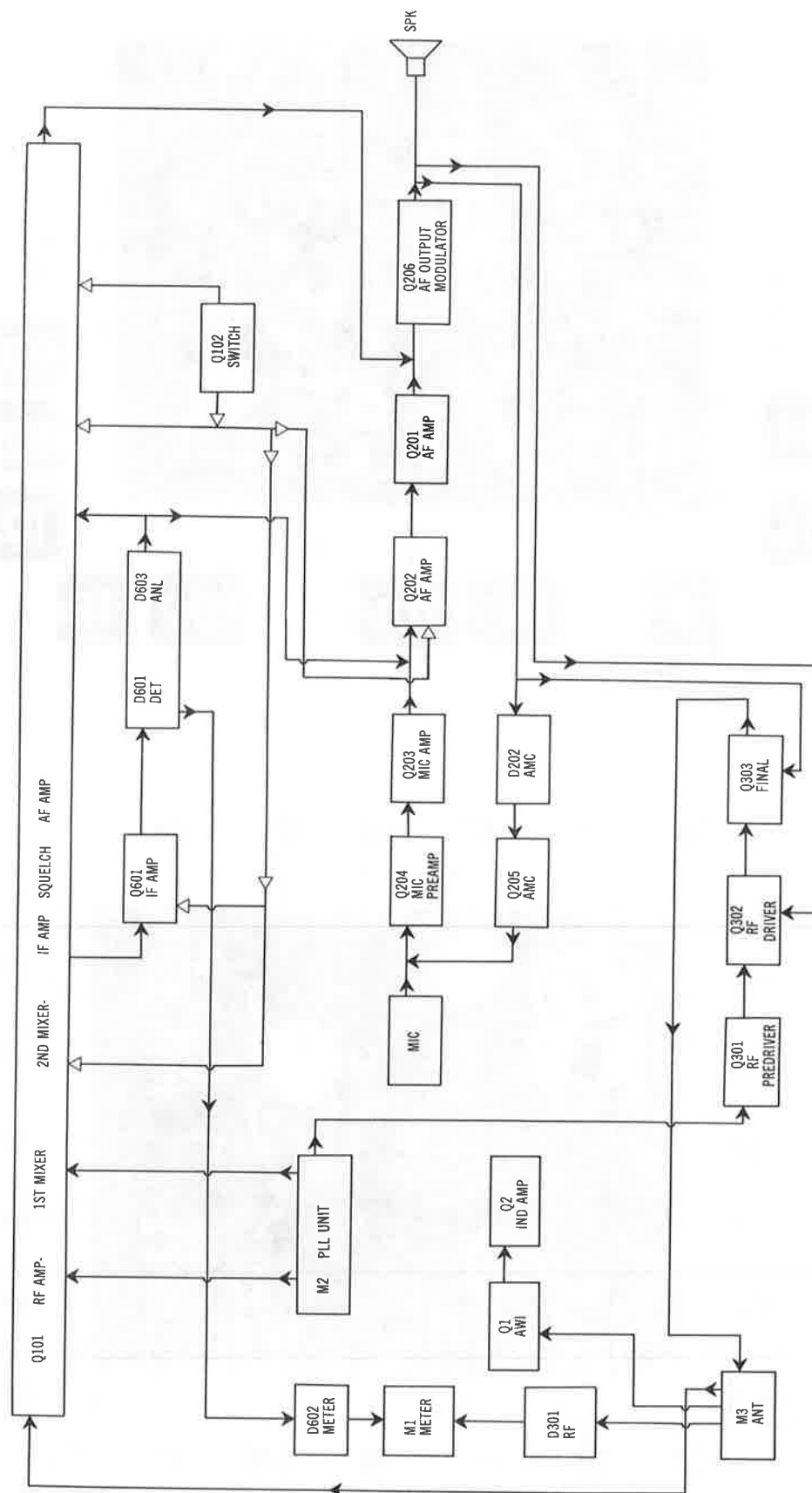


LED BOARD



AWI BOARD

ROYCE MODELS 1-608, 608



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.	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	1N60P		1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-29001
D2	1N60P		1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-29001
D101	BA243A		GE-300	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG177	TM177	WEP1062	103-131
	BA243		GE-300	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG177	TM177	WEP1062	103-131
	BA244		GE-300	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG177	TM177	WEP1062	103-131
	MC301		GE-300	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG177	TM177	WEP1062	103-131
D102	BA243A		GE-300	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG177	TM177	WEP1062	103-131
	BA243		GE-300	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG177	TM177	WEP1062	103-131
	BA244		GE-300	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG177	TM177	WEP1062	103-131
	MC301		GE-300	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG177	TM177	WEP1062	103-131
D103	1S2076		GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S1588		GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D201	1S2076		GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S1588		GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D202	1001		GE-504A	PTC202	HEPR054	REN 116	SK3313	RT-215	ECG116	TM116	WEP158	212-76-02
D301	1N60P		1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-29001
	1N60		1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-29001
D401	S2VC		GE-510(2)	PTC205(2)	HEPR0170(2)	REN 125(2)	SK3081(2)	RT-201(2)	ECG125(2)	TM125(2)	WEP170(2)	212-29000(2)
	S2V		GE-510(2)	PTC205(2)	HEPR0170(2)	REN 125(2)	SK3081(2)	RT-201(2)	ECG125(2)	TM125(2)	WEP170(2)	212-29000(2)
	S2VCTOR		GE-510(2)	PTC205(2)	HEPR0170(2)	REN 125(2)	SK3081(2)	RT-201(2)	ECG125(2)	TM125(2)	WEP170(2)	212-29000(2)
	10DC1		GE-504A(2)	PTC202(2)	HEPR0054(2)	REN 116(2)	SK3313(2)	RT-215(2)	ECG116(2)	TM116(2)	WEP158(2)	212-76-02(2)
D403	WZ096		GEZD-10	ZB108		REN 140	SK3061	RT-241	ECG140A	TM140/**	WEP1110	103-29010
D404	10D-6		GE-504A	PTC202	HEPR0054	REN 116	SK3313	RT-215	ECG116	TM116	WEP158	212-76-02
D601	1N60P		1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-29001
	1N60		1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-29001
D602	1N60P		1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-29001
	1N60		1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-29001
D603	1S2075K		GE-514	PTC214	HEPR0602	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
Q1	2SC1583		GE-269	PTC103*	HEPS0026*	REN 290	SK3114	RT-115*	ECG290	TM290	WEP911	121-1019
Q2	2SA673B											
Q101	CC12001											
Q102	2SD467B		GE-243*	PTC178	HEPS3001*	REN 128*	SK3020	RT-114*	ECG128*	TM128*	WEP59*	121-792
	2SD467C		GE-243*	PTC178	HEPS3001*	REN 128*	SK3020	RT-114*	ECG128*	TM128*	WEP59*	121-792
	2SD467		GE-243*	PTC178	HEPS3001*	REN 128*	SK3020	RT-114*	ECG128*	TM128*	WEP59*	121-792
Q201	2SC458C		GE-210	PTC121*	HEPS0009*	REN 289	SK3122	RT-187	ECG289	TM289/**	WEP458	121-773
	2SC458D		GE-210	PTC121*	HEPS0009*	REN 289	SK3122	RT-187	ECG289	TM289/**	WEP458	121-773
Q202	2SC458C		GE-210	PTC121*	HEPS0009*	REN 289	SK3122	RT-187	ECG289	TM289/**	WEP458	121-773
	2SC458D		GE-210	PTC121*	HEPS0009*	REN 289	SK3122	RT-187	ECG289	TM289/**	WEP458	121-773
Q203	2SC458C		GE-210	PTC121*	HEPS0009*	REN 289	SK3122	RT-187	ECG289	TM289/**	WEP458	121-773
	2SC458D		GE-210	PTC121*	HEPS0009*	REN 289	SK3122	RT-187	ECG289	TM289/**	WEP458	121-773
Q204	2SA644C		GE-244*	PTC103*	HEPS0019*	REN 129*	SK3114	RT-126A*	ECG129*	TM129*	WEP564	121-29005
	2SA644D		GE-244*	PTC103*	HEPS0019*	REN 129*	SK3114	RT-126A*	ECG129*	TM129*	WEP564	121-29005
Q205	2SB61B		GE-244	PTC177	HEPS0019	REN 159	SK3466	RT-126A	ECG159	TM159	WEP62	121-29003
Q206	M61513L											
Q301	2SC1908E		GE-20*	PTC136*	HEPS0015*	REN 229	SK3124*	RT-107A*	ECG229*	TM229*	WEP535*	121-29021*
	2SC1908		GE-20*	PTC136*	HEPS0015*	REN 229	SK3124*	RT-107A*	ECG229*	TM229*	WEP535*	121-29021*
Q302	2SC2086		GE-47*	PTC143*	HEPS3001*	REN 293*	SK3124		ECG293*	TM293*	WEP914	
Q303	2SC2166		GE-215	PTC186		REN 235	SK3197	RT-146	ECG235	TM235	WEP736*	121-29039
Q401	2SC1096		GE-28	PTC110	HEPS3004	REN 186	SK3197	RT-166	ECG186A	TM186A/**	WEP1096	121-29008
	2SC1173-0		GE-215	PTC110		REN 236	SK3197	RT-160	ECG236	TM236/**	WEP745	121-29040
	2SC1173Y		GE-215	PTC110		REN 236	SK3197	RT-160	ECG236	TM236/**	WEP745	121-29040
	2SC1173		GE-215	PTC110		REN 236	SK3197	RT-160	ECG236	TM236/**	WEP745	121-29040
	2SC458C		GE-210	PTC121*	HEPS0009*	REN 289	SK3122	RT-187	ECG289	TM289/**	WEP458	121-773
Q601	2SC458D		GE-210	PTC121*	HEPS0009*	REN 289	SK3122	RT-187	ECG289	TM289/**	WEP458	121-773

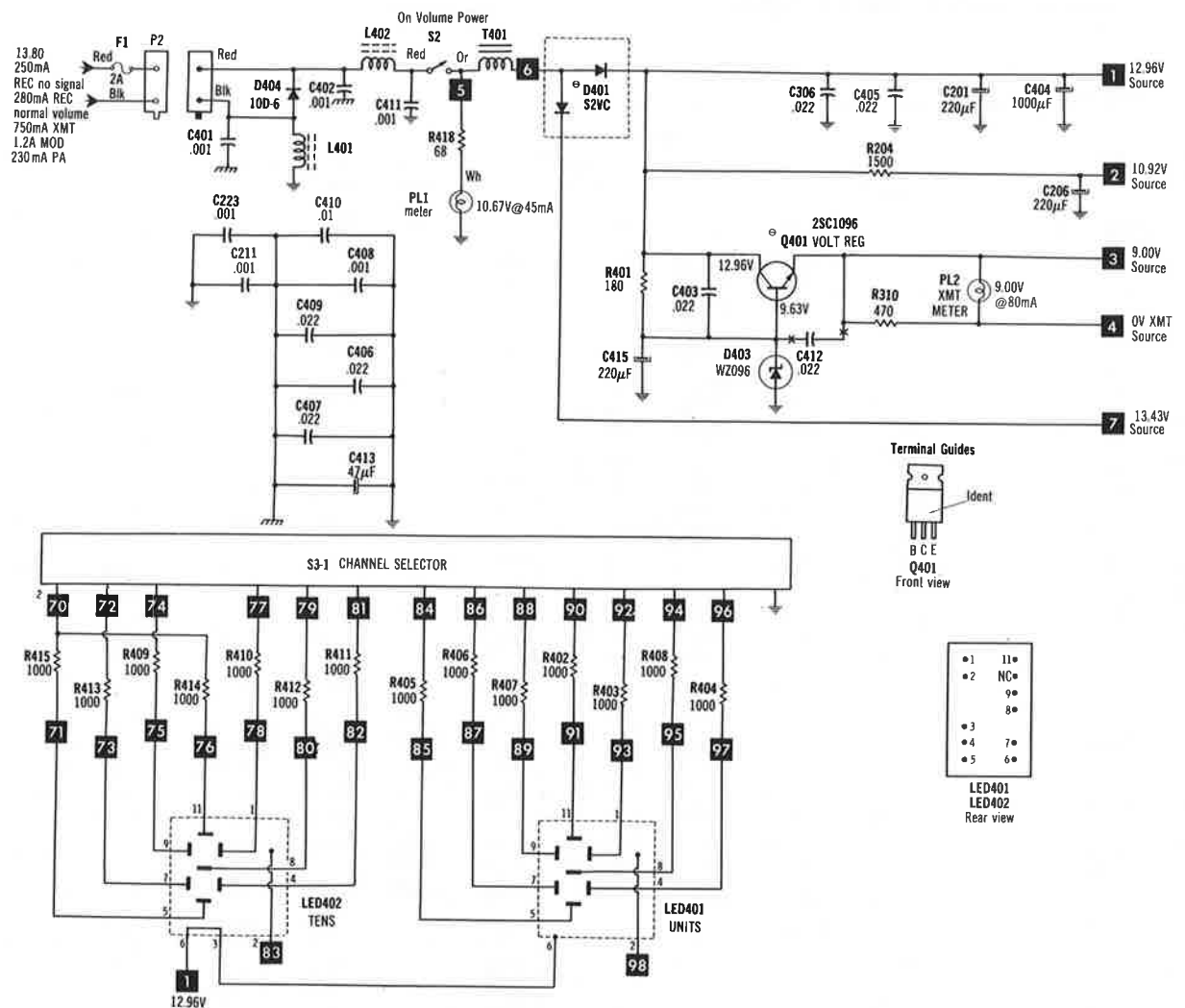
ROYCE MODELS 1-608, 608

* Lead configuration may vary from original.
 /** Also available as exact type replacement
 (2) Two required.

ELECTROLYTIC CAPACITORS

ITEM No.	RATING	REPLACEMENT DATA				
		MFR. PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.	
					Q-LINE	GENERAL LINE
C5	.47 50V		PC1-50	VTT47A63	QV1-3	EV-1610
C6	.47 50V		PC1-50	VTT47A63	QV1-3	EV-1610
C106	4.7 25V		PC1-50	VTT47A63	QV1-3	EV-1610
C108	10 10V			TDC106M025FL	QDT1-64	SD25-109
C111	10 10V			TDC106M025FL	QDT1-64	SD25-109
C112	4.7 25V		PC5-50	VTT47B50	QV1-27	EV-1319
C113	1 50V		PC1-50	VTT1A50	QV1-11	EV-1615
C118	1 50V		PC1-50	VTT1A50	QV1-11	EV-1615
C126	100 10V		PC100-10	VTT100E10	QV1-93	EV-1130
C201	220 16V		PC250-25	VTT220H16	QV1-117	EV-1240
C202	22 50V			TDC224M050EL	QDT1-10	SD50-R229
C205	1 50V	(1)		VTT1A50	QV1-11	EV-1615
C206	220 16V		PC1-50	VTT220H16	QV1-117	EV-1240
C208	.1 50V		WNP1-50	TCN501A	QEN1-20	TVAN-1560
C209	47 10V		PC50-16	VTT47D16	QV1-73	EV-1226
C214	.22 50V	(1)		TDC224M050EL	QDT1-10	SD50-R229
C215	220 16V		PC250-25	VTT220H16	QV1-117	EV-1240
C216	47 10V		PC50-16	VTT47D16	QV1-73	EV-1226
C218	1 50V		PC1-50	VTT1A50	QV1-11	EV-1615
C404	1000 16V		PC1000-16	VTT1000L16	QV1-183	EV-1260
C413	47 16V		PC50-16	VTT47D16	QV1-73	EV-1226
C415	220 16V		PC250-25	VTT220H16	QV1-117	EV-1240
C605	.47 50V		PC1-50	VTT47A63	QV1-3	EV-1610

(1) Tantalum used as a lytic.



Each segment of LED401, LED402 supplied 1.60V@11mA

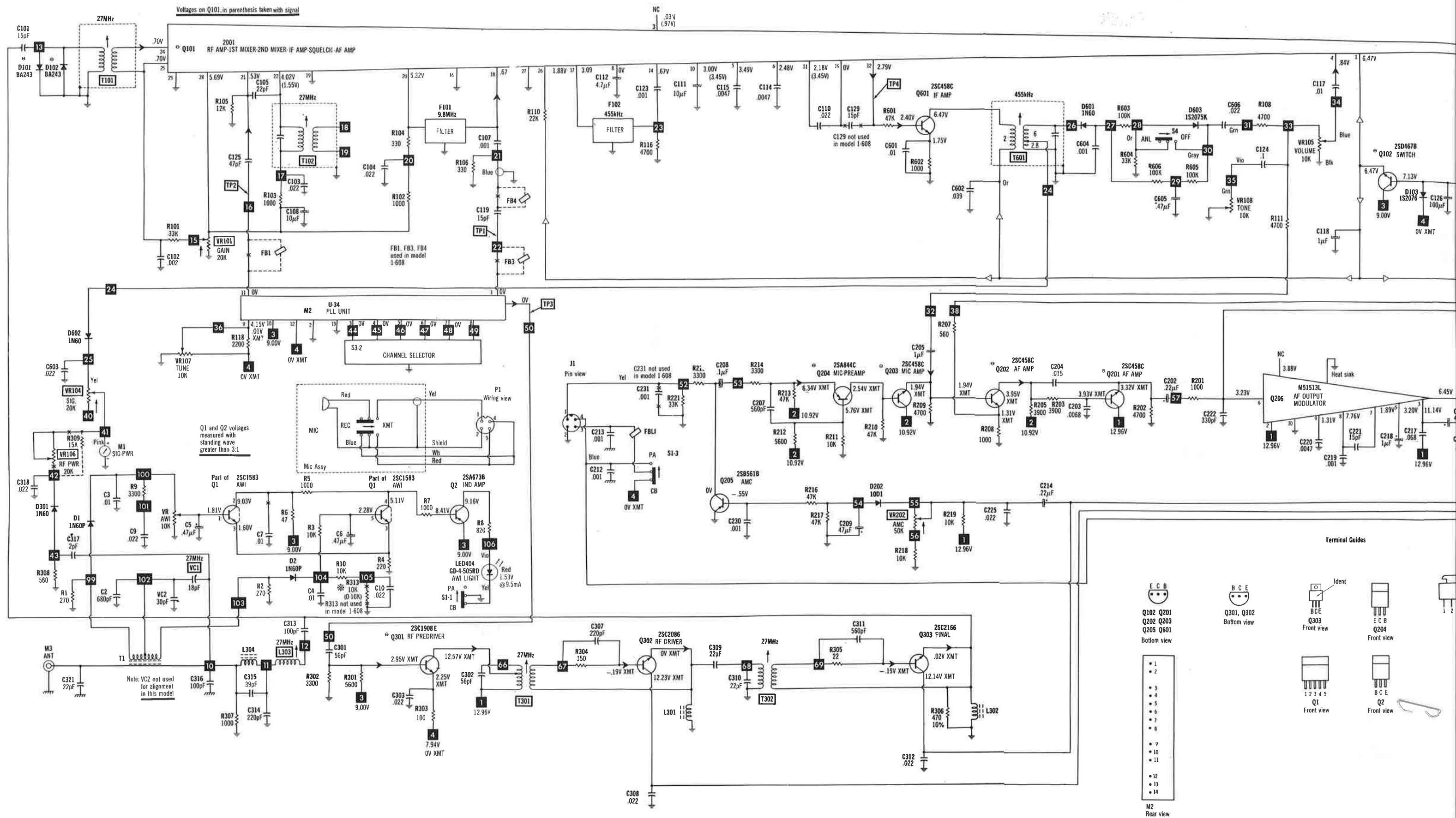
- Circuitry not used in some versions
- - - Circuitry used in some versions
- Chassis
- Common tie point
- Signal path
- Voltage path
- Measurements made in Channel 1 with switching as shown unless noted.
- Item numbers in rectangles appear in the alignment/adjustment instructions.
- Supply voltage maintained 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 PHOTOFACIT STANDARD NOTATION SCHEMATIC:

WITH **CIRCUITRACE**

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POWER SUPPLY SCHEMATIC





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

CAPACITORS

ITEM No.	RATING	MFGR. PART No.	REPLACEMENT DATA			
			CENTRALAB PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.
						Q-LINE GENERAL LINE
C2	68 N330 10%				*	10TCS-Q68
C3	.01		UK50-103		MAG5011	
C4	.01		UK50-103		MAG5011	
C7	.01		UK50-103		MAG5011	
C9	.022		UK25-223			10TCS-Q68
C10	.022		UK25-223			HY-725
C101	15 N220				*	HY-725
C102	.022		UK25-223			10TCR-Q15
C103	.022		UK25-223			HY-725
C104	.022		UK25-223			HY-725
C105	22 NP0 10%		DTZ-22	NP022	CN0422	HY-725
C107	.001		DD-102		GP210	10TCC-Q22
C110	.022 50V 10%			DPMS2S22	M192P2239R8	10TS-D10
C114	.0047 10%			GP4700		1FT-S22
C115	.0047 10%			GP4700		
C117	.01 50V 10%			WMF1S1	EW1A110	
C119	15 N220				*	1FT-S10
C122	.001		DD-102		GP210	10TCR-Q15
C123	.001		DD-102		GP210	10TS-D10
C124	.1 50V 10%			WMF05P1	EW105010	10TS-D10
C125	47 N220 10%				*	1FT-D10
C203	.0068 50V 10%			WMF1D68	EW1A268	10TCR-Q47
C204	.015 50V 10%			WMF1S15	M192P1539R8	1FT-D68
C207	560		DD-561			1FT-S15
C211	.001		DD-102		GP356	10TS-T56
C212	.001		DD-102		GP210	10TS-D10
C213	.001		DD-102		GP210	10TS-D10
C217	.068 50V 10%			WMF1S68	EW1A168	10TS-D10
C219	.001		DD-102		GP210	1PB-S68
C220	.0047 10%			GP4700		10TS-D10
C221	15 N220				*	10TCR-Q15
C222	330		DD-331		GP333	10TS-T33
C223	.001		DD-102		GP210	10TS-D10
C225	.022		UK25-223			HY-725
C226	.1 50V			WMF05P1	EW105010	1FT-P10
C227	.022		UK25-223			HY-725
C229	470		DD-471		GP347	10TS-T47
C230	.001			GP470		
C231	.001		DD-102		GP210	10TS-D10
C301	56 N750 5%				*	10TCU-Q56
C302	56 N220 10%					
C303	.022		UK25-223			HY-725
C306	.022		UK25-223			HY-725
C307	220 N750 10%			N220	CN7322	10TCU-T22
C308	.022		UK25-223			HY-725
C309	22 NP0 10%		DTZ-22	NP022	CN0422	10TCC-Q22
C310	22 N750		DTN-22	N22	CN7422	10TCU-Q22
C311	560		DD-561		GP356	10TS-T56
C312	.022		UK25-223			HY-725
C313	100 N750 10%		DTN-100	N100	CN7310	10TCU-T10
C314	220 N750 10%		DTN-220	N220	CN7322	10TCU-T22
C315	39 N220 10%				*	10TCR-Q39
C316	100 N750 10%		DTN-100	N100	CN7310	10TCU-T10
C317	2				GP533	
C318	.022		UK25-223			HY-725
C321	22 N750		DTN-22	N22	CN7422	10TCU-Q22
C401	.001		DD-102		GP210	10TS-D10
C402	.001		DD-102		GP210	10TS-D10
C403	.022		UK25-223			HY-725
C405	.022		UK25-223			HY-725
C406	.022		UK25-223			HY-725
C407	.022		UK25-223			HY-725
C408	.001		DD-102		GP210	10TS-D10
C409	.022		UK25-223			HY-725
C410	.01		UK50-103		MAG5011	
C411	.001		DD-102		GP210	10TS-D10
C412	.022		UK25-223			HY-725
C601	.01 10%			GP10000		
C602	.039				GP140	5GA-S40
C604	.001		DD-102	DPMS2S22	GP210	10TS-D10
C606	.022 50V 10%				M192P2239R8	1FT-S22
VC1	18					
VC2	30					

*Not normally in distributor's stock. Available thru distributor on order to manufacturer.

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

ITEM No.	FUNCTION	RESIST-ANCE	REPLACEMENT DATA			
			MFGR. PART No.	CENTRALAB PART No.	MALLORY PART No.	TRW PART No.
VR	AWI	10K				
VR101	AWI	20K	01-57B(6)			U260R253B
VR102	Gain	20K	01-57B			U260R253B
VR103	Squelch Range	20K	01-57B			U260R253B
VR104	Squelch	10K	09-053			
VR104	Sig	20K	01-57B			U260R253B
VR104	Sig	10K	01-516(6)			
VR105	Volume/Power Switch	10K	09-022			
VR106	RF Power	20K		T-25K(2)	MT24L1(2)	X260R253B(2)
VR107	Tune	10K	09-064			
VR108	Tone	10K	09-064			
VR202	AMC	50K	01-520	T-50K(2)	MT54L1(2)	X260R503B(2)

(2) Cut off one of the end terminals and bend to fit PC board.
(6) Alternate part, may be used in some versions.

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

RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA		ITEM No.	RATING	REPLACEMENT DATA	
		WORKMAN PART No.	MFGR. PART No.			WORKMAN PART No.	MFGR. PART No.
TH101	2000 Cold NTC						

COILS (RF-IF)

ITEM No.	FUNCTION	REPLACEMENT DATA			REMARKS
		PART No.	OTHER IDENTIFICATION	MILLER PART No.	
L201	RF Choke	02-075	ETC83202		
L202	RF Choke	02-075	ETC83202		
L301	RF Choke	02-070	AMPL-06		
	Final	02-011	ETC-4056B		
L303	Loading (27MHz)	02-068	AMPL-04		
L304	Antenna Matching	02-079	ETC38199		
L401	RF Choke	02-011	ETC-4056B		
L402	RF Choke	02-011	ETC-4056B		
T101	RF (27MHz)	02-016	ETC15089	CBS774	
T102	RF Amp (27MHz)	02-012	ETC15061	CBS708-TC	
T301	RF Predriver (27MHz)	02-045	ETC49167		
T302	RF Driver (27MHz)	02-065	AMPL-01		
T601	IF Amp (455kHz)	02-073	ETC73194		

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	1.15A	.1	1.45mH	02-127 1002B(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.	
T201	5.12	28.88 2 8	02-042 83023B(1)			(1) Number on unit.

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		MFGR. PART No.	QUAM PART No.	
SP	3" PM 8 Ohms	06-004 A77AP13092F(1)	30A05Z8R	(1) Number on unit.

PARTS LIST AND DE
(When ordering parts, state Mode

FUSE DEVICES

ITEM No.	DESCRIPTION
F1	2A Quick Acting

MICROPHONE

ITEM No.	REPLACEMENT DATA	
	MFGR. PART No.	GC PART No.
M1c	21-004	18-032

MISCELLANEOUS

ITEM No.	PART NAME
FBL1	Ferrite Bead
F101	Filter
F102	Filter
J1	Jack
J2	Jack
JK1	Jack
JK2	Jack
LED101	LED
LED401	LED
LED402	LED
LED404	LED
M1	Meter
M2	PLL
M3	Connector
PL1	Lamp
PL2	Lamp
S1	Switch
S2	Switch
S3	Switch
S4	Switch Cord

CABINETS & CABINETS

ITEM
Cabinet, Bottom
Cabinet, Top
Channel Window & Indicator Plate (Black)

WIRING DATA

General-use Hook-up Wire (avail
Shielded Hook-up Wire (spiral
Speaker Cable (available in 4
Bonding Strap
AC Power Cord

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

SPRAGUE	PART No.
Q-LINE	GENERAL LINE
	10TCS-Q68
	10TCS-Q68
	HY-725
	HY-725
	10TCR-Q15
	HY-725
	HY-725
	HY-725
	10TCC-Q22
	10TS-D10
	1FT-S22
QFT2-127	
QFT2-91	1FT-S10
	10TCR-Q15
	10TS-D10
	10TS-D10
QFT2-215	1FT-D10
	10TCR-Q47
	1FT-D68
QFT2-73	1FT-S15
QFT2-105	10TS-T56
	10TS-D10
	10TS-D10
QFT-195	10TS-D10
	1PB-S68
	10TS-U10
	10TCR-Q15
	10TS-T33
	10TS-D10
	HY-725
QFT2-215	1FT-P10
	HY-725
	10TS-T47
	10TS-D10
	10TCU-Q56
	HY-725
	HY-725
	10TCU-T22
	HY-725
	10TCC-Q22
	10TCU-Q22
	10TS-T56
	HY-725
	10TCU-T10
	10TCU-T22
	10TCR-Q39
	10TCU-T10
	HY-725
	10TCU-Q22
	10TS-D10
	10TS-D10
	HY-725
	HY-725
	HY-725
	HY-725
	10TS-D10
	HY-725
	10TS-D10
	HY-725
QFT2-127	5GA-S40
	10TS-D10
	1FT-S22

RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA		ITEM No.	RATING	REPLACEMENT DATA	
		WORKMAN PART No.	MFR. PART No.			WORKMAN PART No.	MFR. PART No.
TH101	2000 Cold NTC						

COILS (RF-IF)

ITEM No.	FUNCTION	REPLACEMENT DATA			REMARKS
		PART No.	OTHER IDENTIFICATION	MILLER PART No.	
L201	RF Choke	02-075	ETC83202		
L202	RF Choke	02-075	ETC83202		
L301	RF Choke	02-070	AMPL-06		
L302	Final	02-011	ETC-4056B		
L303	Loading (27MHz)	02-068	AMPL-04		
L304	Antenna Matching	02-079	ETC38199		
L401	RF Choke	02-011	ETC-4056B		
L402	RF Choke	02-011	ETC-4056B		
T101	RF (27MHz)	02-016	ETC15089		
T102	RF Amp (27MHz)	02-012	ETC15061		
T301	RF Predriver (27MHz)	02-045	ETC49167		
T302	RF Driver (27MHz)	02-065	AMPL-01		
T601	IF Amp (455kHz)	02-073	ETC73194		
				CBS774 CBS708-TC	

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.	
T401	1.15A	.1	1.45mH	02-127 1002B(1)			(1) Number on unit.

TRANSFORMER (Audio Output)

ITEM No.	IMPEDANCE		REPLACEMENT DATA			NOTES
	PRI.	SEC.	MFR. PART No.	THORDARSON PART No.	TRIAD PART No.	
T201	5.12	1 28.88 2 8	02-042 83023B(1)			(1) Number on unit.

SPEAKER

ITEM No.	TYPE		REPLACEMENT DATA		NOTES
			MFR. PART No.	QUAM PART No.	
SP	3" PM	8 Ohms	06-004 A77AP13092F(1)	30A05Z8R	(1) Number on unit.

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

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			AGC-2	HRK	312002	150145	F62-2

MICROPHONE

ITEM No.	REPLACEMENT DATA				CONNECTION DATA						
	MFR. 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	21-004	18-032	18-034	18-010	18-092	1	2	3	4	NC	2

MISCELLANEOUS

ITEM No.	PART NAME	PART No.	NOTES
FBL1	Ferrite Bead	02-074	ETC83200
F101	Filter	01-902	9.8MHz (SFE 10.7MJ)
F102	Filter	01-903	455kHz (CFW 455HI)
J1	Jack	10-001	Microphone
J2	Jack	10-016	DC Power
JK1	Jack	10-003	PA Speaker
JK2	Jack	10-003	External Speaker
LED101	LED	6D-4-5056D	Receive (Green) (2.12V @ 16mA GD-4-5056D)
LED401	LED	5082-7730	Channel Readout, UNITS (Each segment supplied 1.60V @ 11mA)
LED402	LED	5082-7730	Channel Readout, TENS (Each segment supplied 1.60V @ 11mA)
LED404	LED	6D-4-505RD	AWI (Red) (GD4-505RD) 1.53V @ 9.5mA)
M1	Meter	05-014	Signal/Power
M2	PLL	12-019	Oscillator Unit
M3	Connector	10-002	Antenna
PL1	Lamp	07-001	Meter (10.76V @ 45mA)
PL2	Lamp	07-010	XMT Meter Red (1.00V @ 80mA)
S1	Switch	09-128	PA/CB
S2	Switch		Power On/Off (Part of volume control)
S3	Switch	09-119	Channel Selector
S4	Switch	09-137	ANL/Off
	Cord	08-015	DC Power

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

ITEM	PART No.	ITEM	PART No.
Cabinet, Bottom	19-150A	Knob, Channel	19-629
Cabinet, Top	19-150	Knob, Control	19-610
Channel Window & Indicator	19-734	Front Panel	16-227
Plate (Black)			

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		BELDEN No. 9466 (6')
AC Power Cord	(6') BELDEN No. 17106		28AWG BELDEN No. 9466 (6')
	(9') BELDEN No. 17109		31AWG BELDEN No. 9468 (10')
		4-conductor (unshielded) 23AWG	BELDEN No. 8415 (6')
		5-conductor (1 shielded) 28AWG	BELDEN No. 9467 (6')
			BELDEN No. 9465 (7-1/2')

ROYCE MODELS 1-608, 608