

PHOTOFACT[®] with

CIRCUITRACE[®]

For Supplier Address See PHOTOFACT Index

NOTE

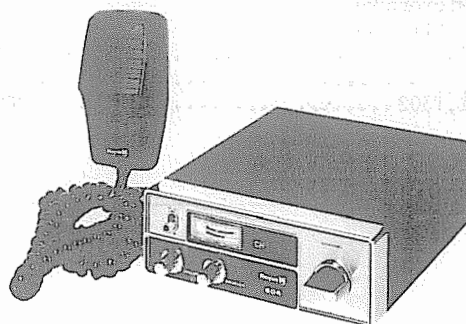
Repair or adjustment of transmitter circuits must be under supervision of a person with first-or second-class radiotelephone license.

(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 604

MANUFACTURER'S SPECIFICATIONS

General

- | | |
|--|--|
| 1. Semiconductors | : 19 transistors, 1 FET, 19 diodes, 3 integrated circuits |
| 2. Self Contained Speaker | : 3 inch, 8 ohms voice coil. |
| 3. Microphone | : Dynamic microphone with push-to-talk switch, 500 ohms. |
| 4. Controls, Indicators and Connectors | : Volume control with power on-off switch.
: Variable Squelch Control.
: Channel Selector.
: L.E.D. Channel Indicator.
: Illuminated S/RF Power Meter
: PA-CB. Slide Switch
: Coaxial type antenna connector.
: Microphone Connector.
: DC Power Connector
: External Speaker Jack.
: Public Address Speaker Jack. |
| 5. Power Supply | : 13.8 Volts DC (positive or negative ground). |
| 6. Cabinet Description | : Plastic front with chrome plating |
| 7. Dimensions | : 7-5/16"(D) x 6-3/16"(W) x 2-1/8"(H) |

Receiver

- | | |
|--|---|
| 1. Frequency Range (MHz) | : 26.965 ~ 27.405. |
| 2. Sensitivity | : 0.5 μ 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
at 4 ohms | : More than 2.5W at 10% distortion.
: 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 μ 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

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

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ROYCE MODELS 1-604, 604

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, 8728-A, 8728
 L303,T301,T302 9091, 8728-A, 8728

SYNTHESIZER ALIGNMENT

TEST EQUIPMENT	TRANSCIEVER	ADJUST	REMARKS
Input of frequency counter to TP1 (PLL pin 1).	Ch. 1		Check for 10.240MHz.
Input of frequency counter to TP2 (PLL pin 11).	Ch. 1		Check for 37.660MHz. 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

TEST EQUIPMENT	TRANSCIEVER	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 readjust T601.

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 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 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
Input of RF wattmeter to antenna input.	Ch. 19	T301,T302 L303	Adjust for maximum.
	Ch. 19	L303	Adjust for 4 watts maximum.

TRANSMITTER ADJUSTMENTS

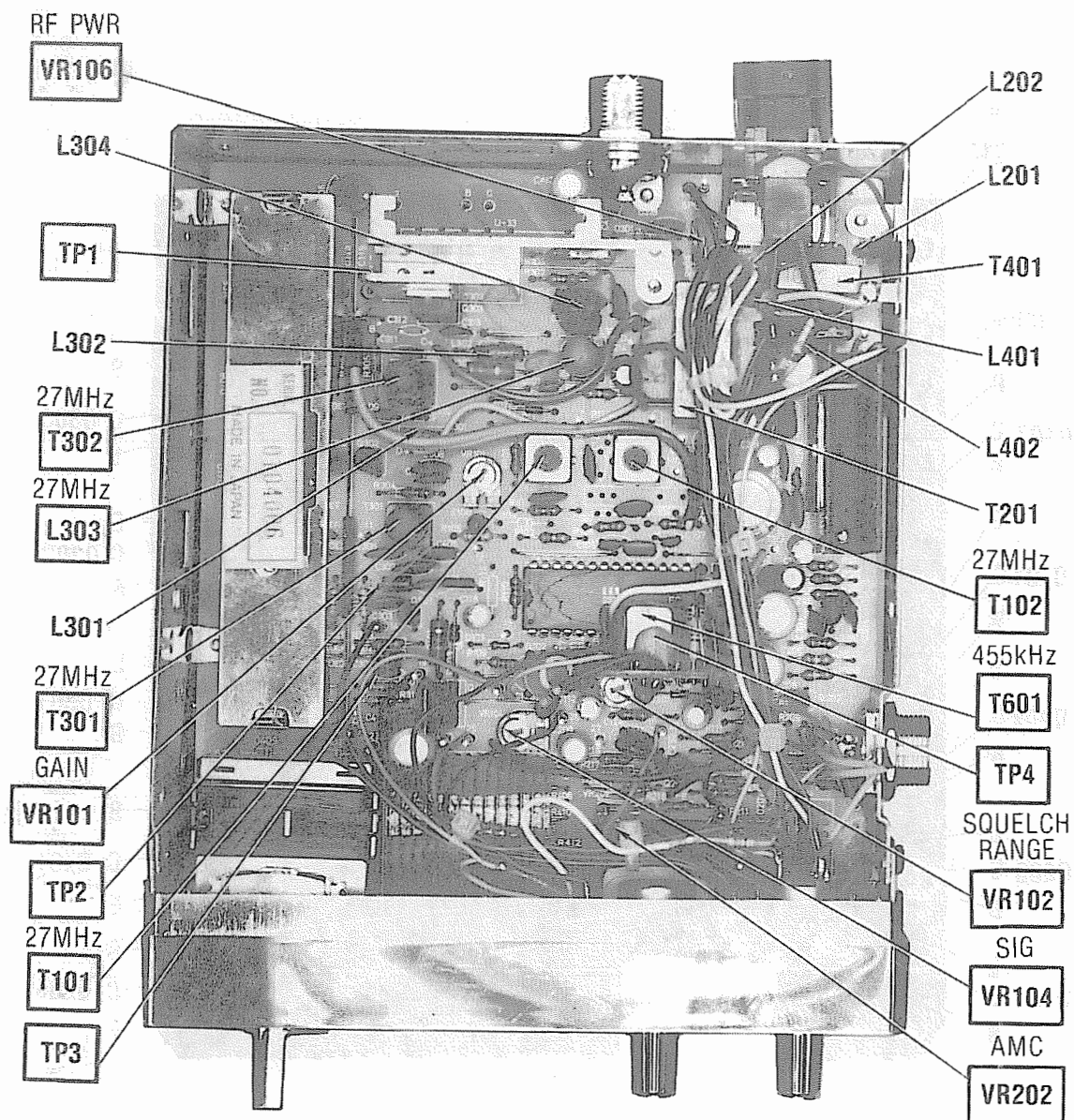
Connect an RF wattmeter and 50-ohm, 25-watt dummy load to antenna connector.
NOTE: Be sure to check transmit frequency and power on all active channels after adjustment of transmitter.
See page 4 for channel frequencies.

TEST EQUIPMENT	TRANSCIVER	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.
Input of RF wattmeter to antenna input.	Ch. 19	VR106	RF METER Adjust so RF meter agrees with RF wattmeter.

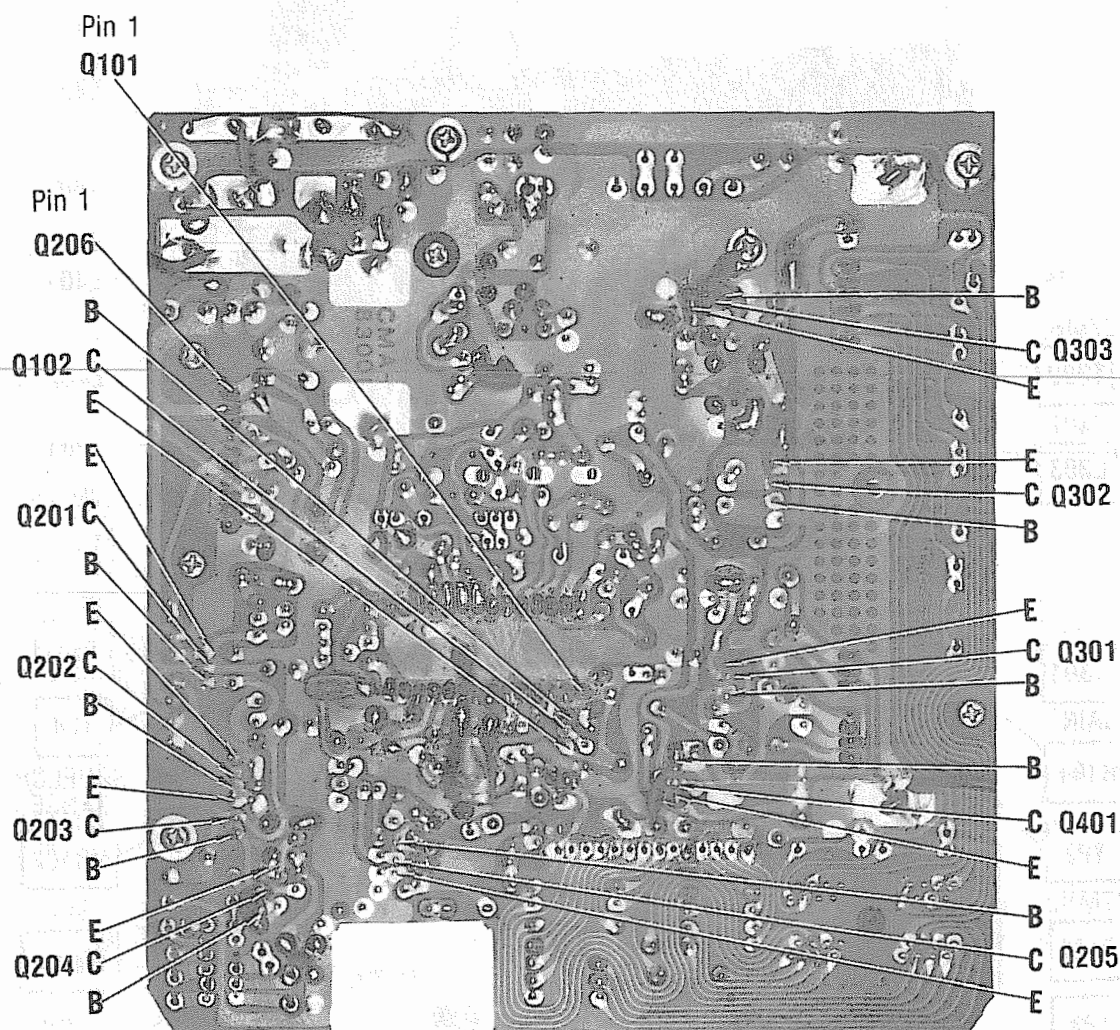
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TRUTH CHART

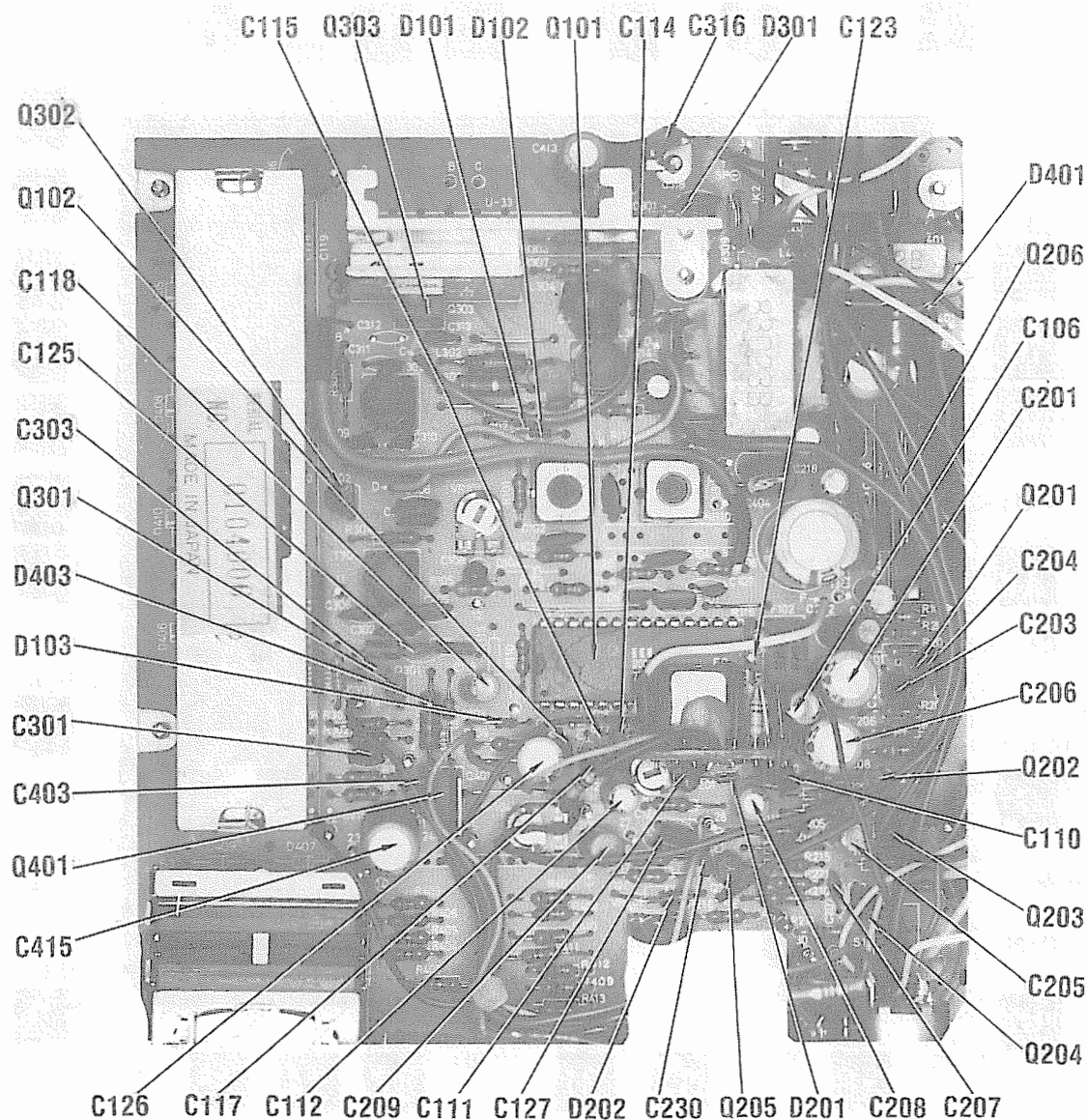
C H A N N E L	1 = 6.00 Volts 0 = 0 Volts PROGRAM DIVIDER								REC SYNTHESIZER OUTPUT IN MHz AT TP2 (PLL,pin 11)	XMT SYNTHESIZER OUTPUT IN MHz AT TP3 (PLL,pin 14)	
	PINS										
			3	4	5	6	7	8			
1			0	0	0	0	0	0	37.660	26.965	
2			0	0	0	0	0	1	37.670	26.975	
3			0	0	0	0	1	0	37.680	26.985	
4			0	0	0	1	0	0	37.700	27.005	
5			0	0	0	1	0	1	37.710	27.015	
6			0	0	0	1	1	0	37.720	27.025	
7			0	0	0	1	1	1	37.730	27.035	
8			0	0	1	0	0	1	37.750	27.055	
9			0	0	1	0	1	0	37.760	27.065	
10			0	0	1	0	1	1	37.770	27.075	
11			0	0	1	1	0	0	37.780	27.085	
12			0	0	1	1	1	0	37.800	27.105	
13			0	0	1	1	1	1	37.810	27.115	
14			0	1	0	0	0	0	37.820	27.125	
15			0	1	0	0	0	1	37.830	27.135	
16			0	1	0	0	1	1	37.850	27.155	
17			0	1	0	1	0	0	37.860	27.165	
18			0	1	0	1	0	1	37.870	27.175	
19			0	1	0	1	1	0	37.880	27.185	
20			0	1	1	0	0	0	37.900	27.205	
21			0	1	1	0	0	1	37.910	27.215	
22			0	1	1	0	1	0	37.920	27.225	
23			0	1	1	1	0	1	37.950	27.255	
24			0	1	1	0	1	1	37.930	27.235	
25			0	1	1	1	0	0	37.940	27.245	
26			0	1	1	1	1	0	37.960	27.265	
27			0	1	1	1	1	1	37.970	27.275	
28			1	0	0	0	0	0	37.980	27.285	
29			1	0	0	0	0	1	37.990	27.295	
30			1	0	0	0	1	0	38.000	27.305	
31			1	0	0	0	1	1	38.010	27.315	
32			1	0	0	1	0	0	38.020	27.325	
33			1	0	0	1	0	1	38.030	27.335	
34			1	0	0	1	1	0	38.040	27.345	
35			1	0	0	1	1	1	38.050	27.355	
36			1	0	1	0	0	0	38.060	27.365	
37			1	0	1	0	0	1	38.070	27.375	
38			1	0	1	0	1	0	38.080	27.385	
39			1	0	1	0	1	1	38.090	27.395	
40			1	0	1	1	0	0	38.100	27.405	



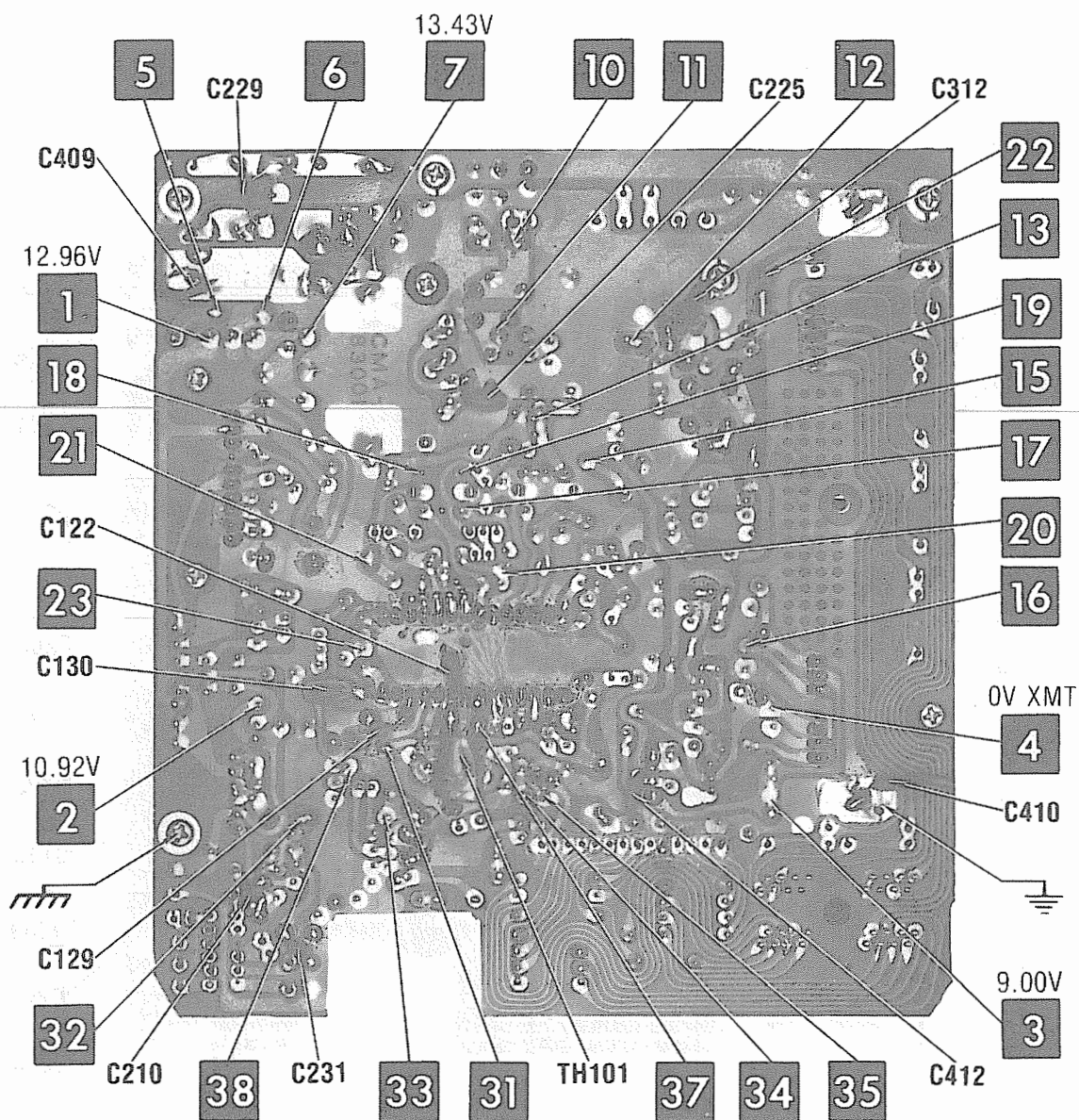
CHASSIS - BOTTOM



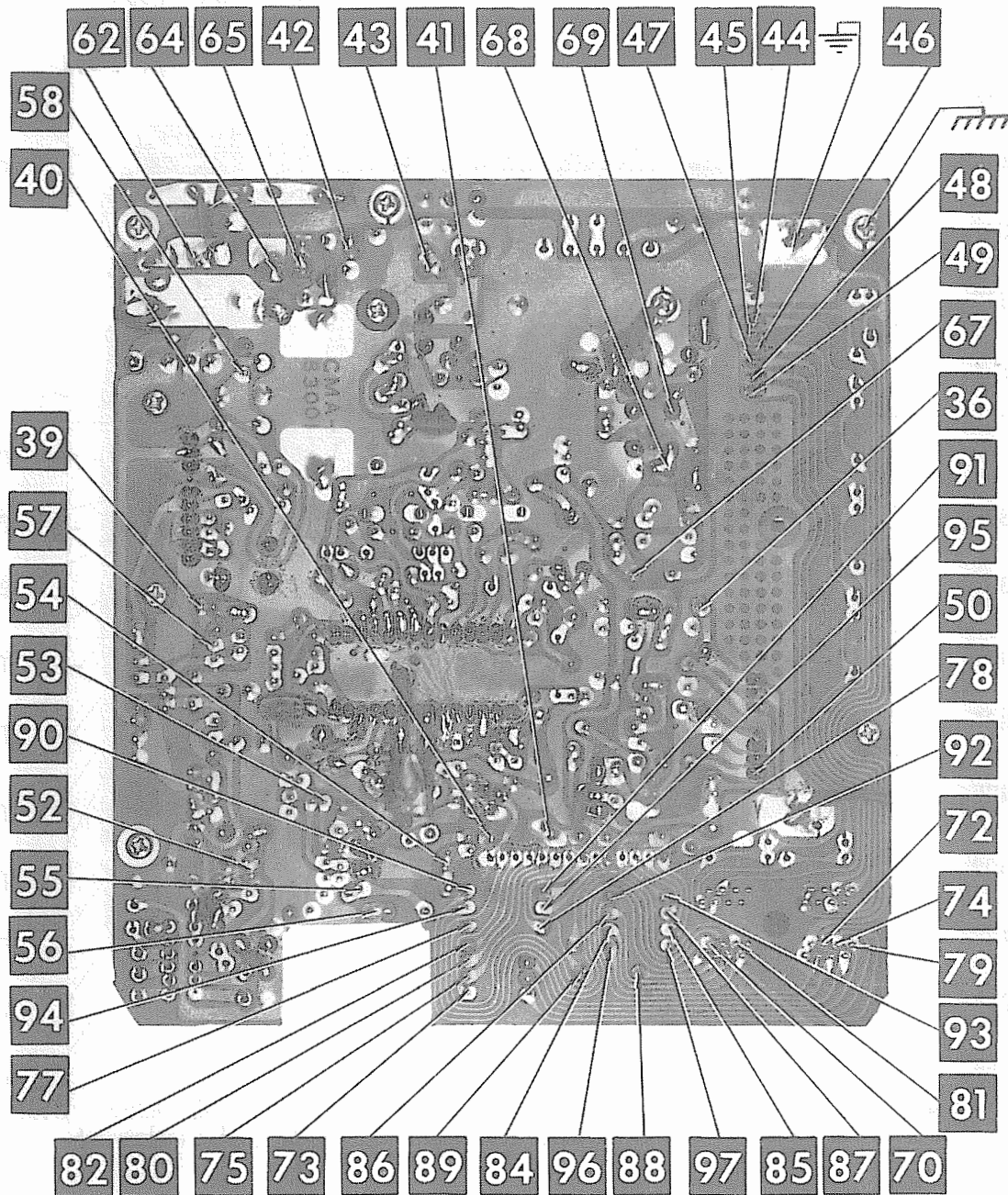
MAIN BOARD



MAIN BOARD

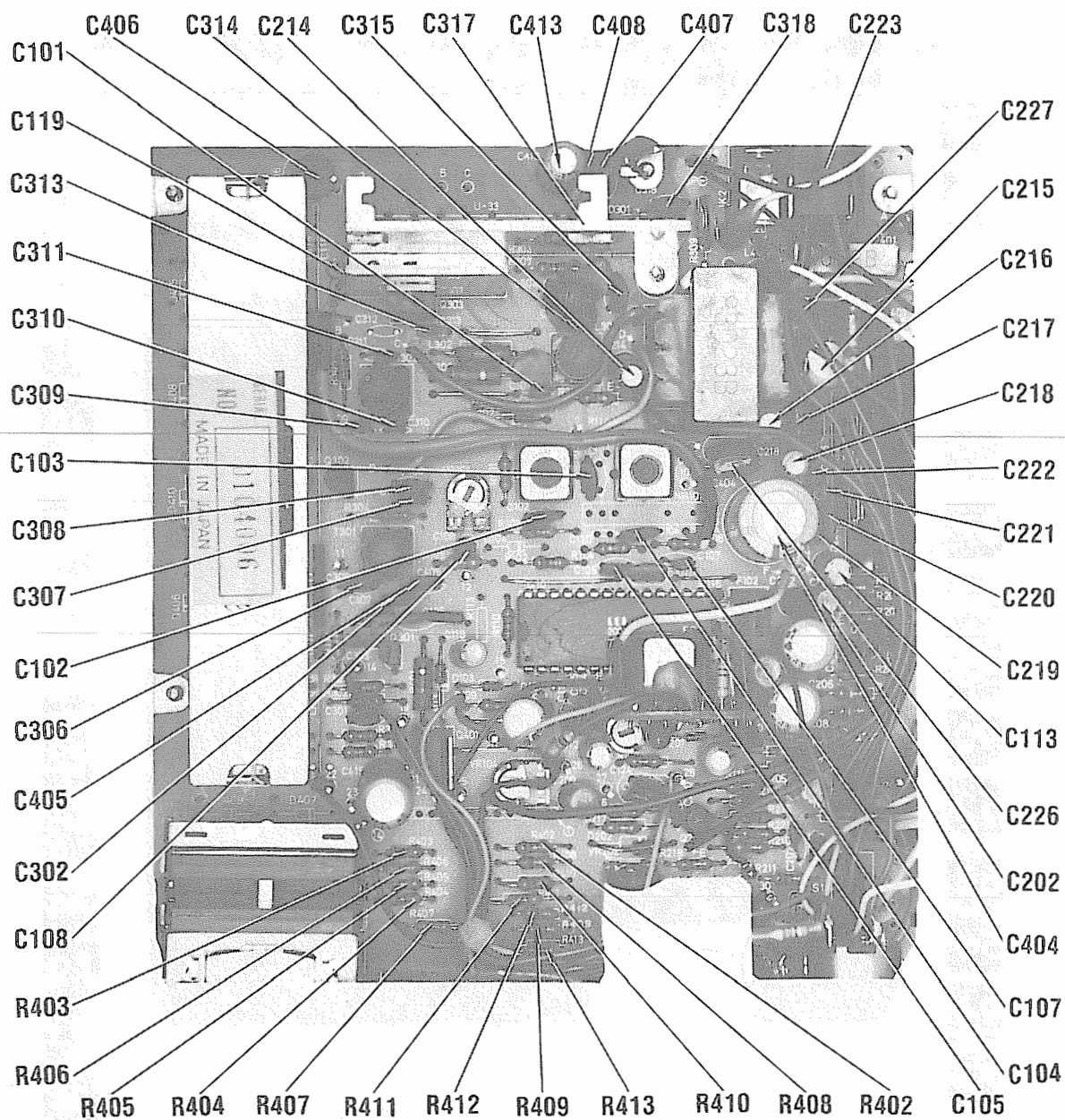


MAIN BOARD

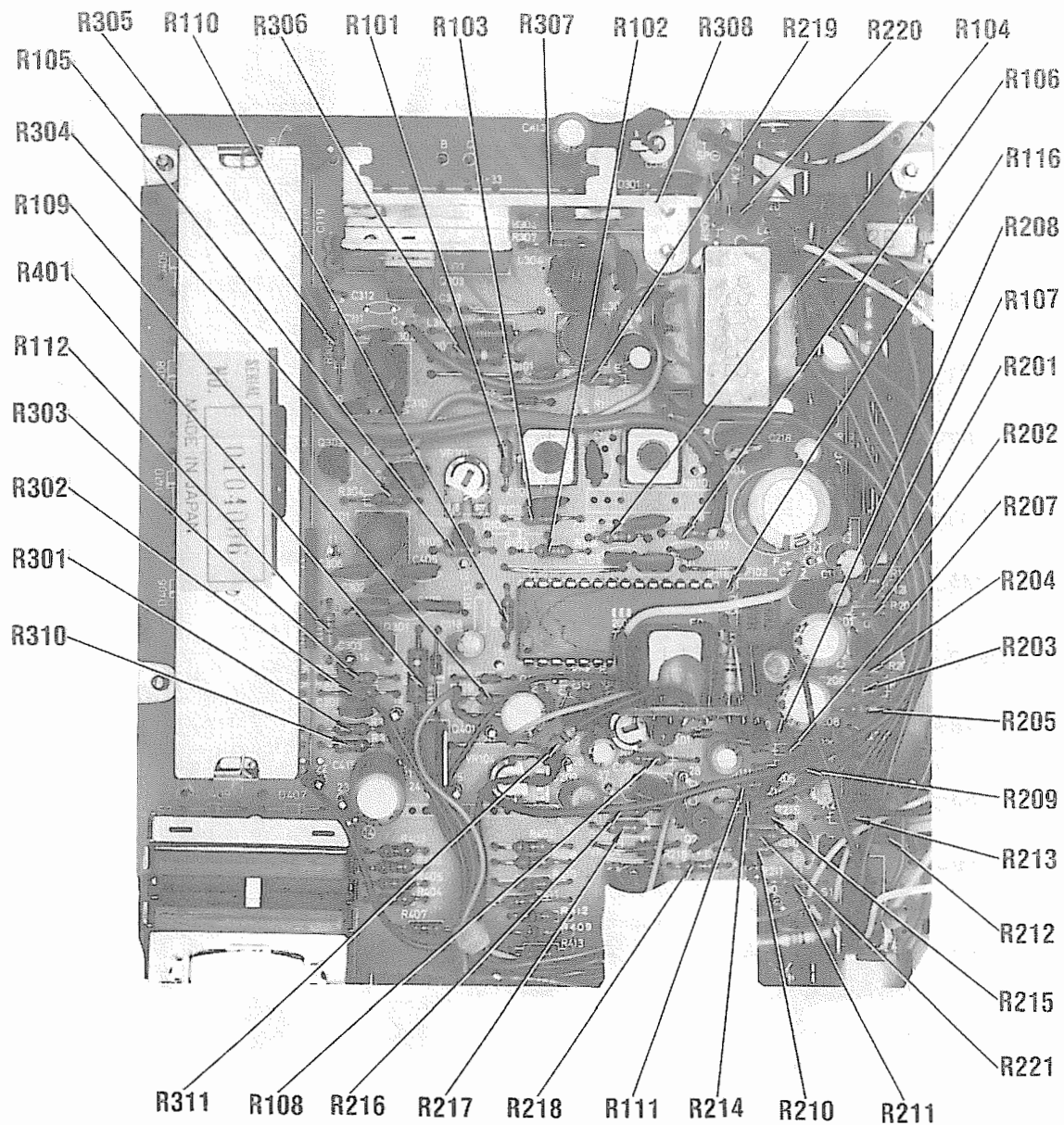


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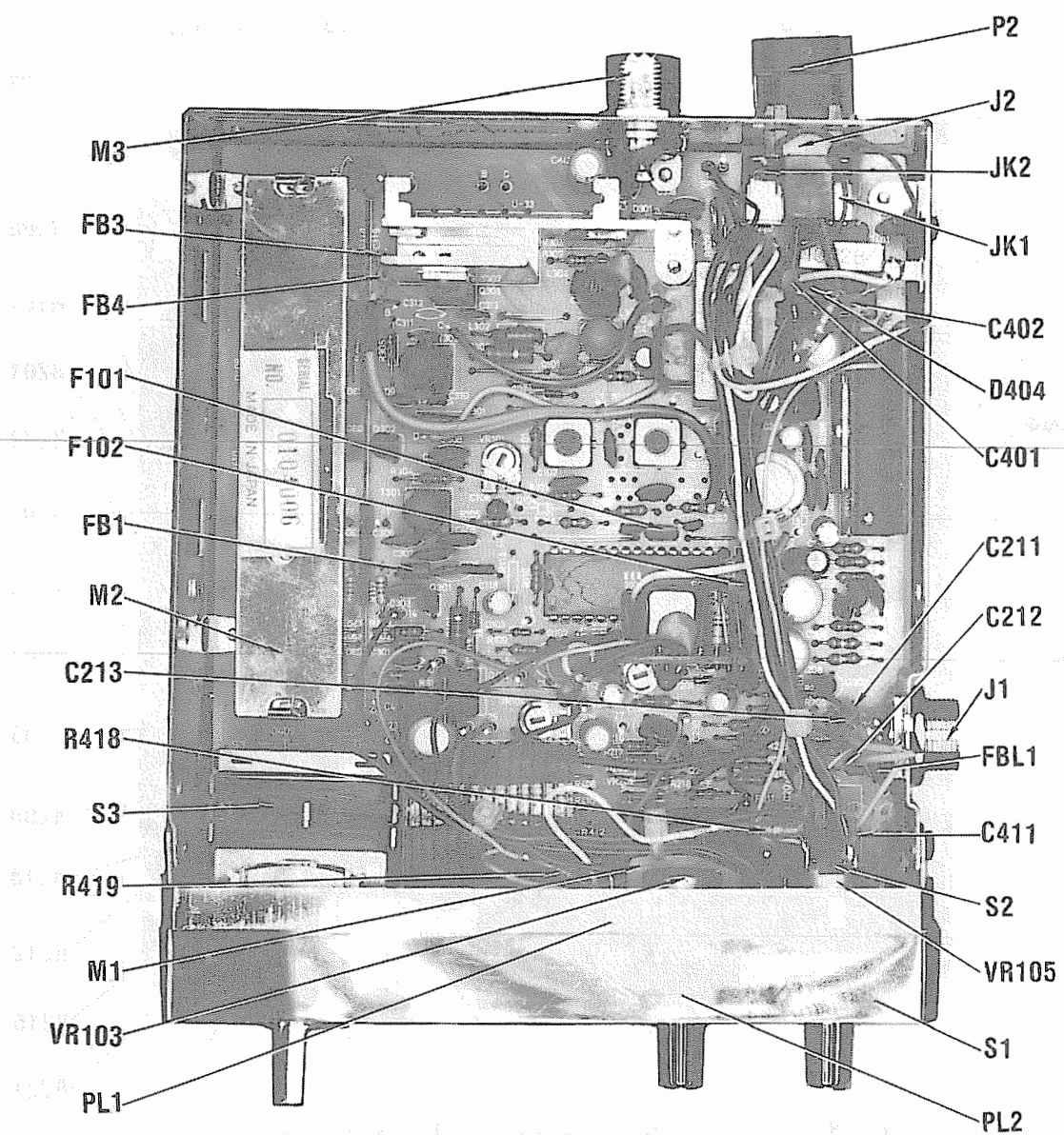
MAIN BOARD



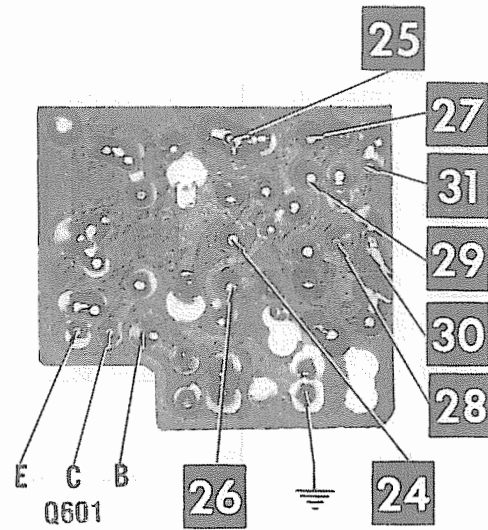
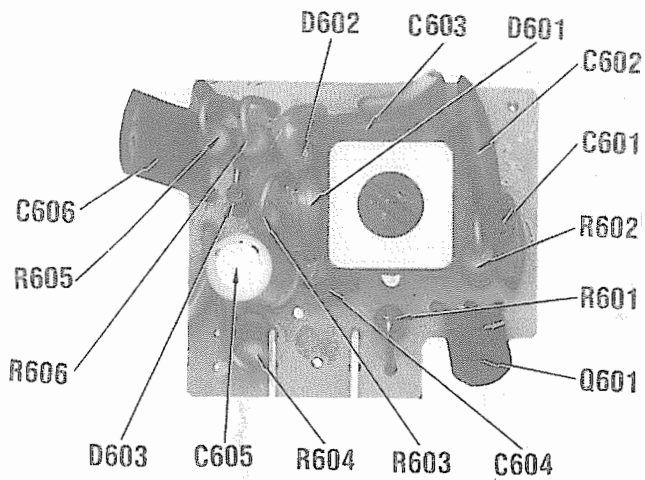
MAIN BOARD



MAIN BOARD

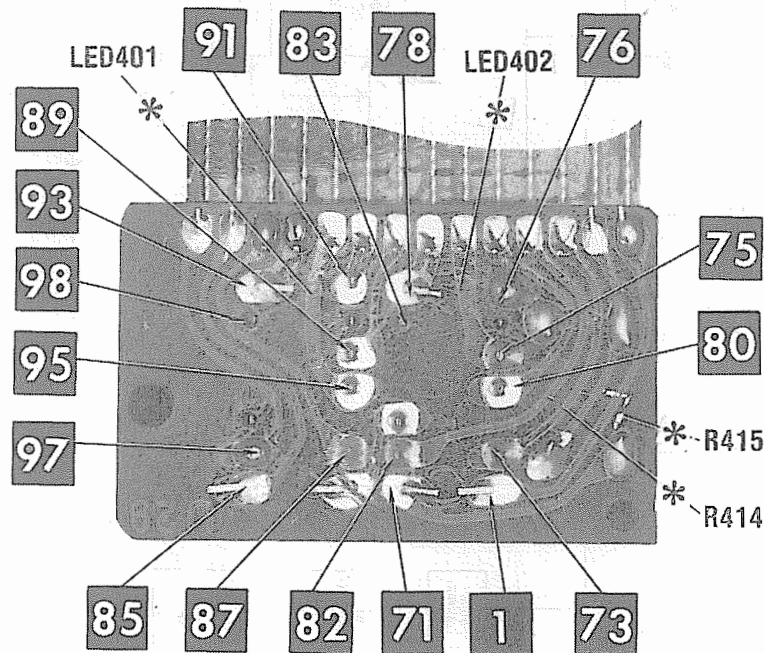


CHASSIS - BOTTOM



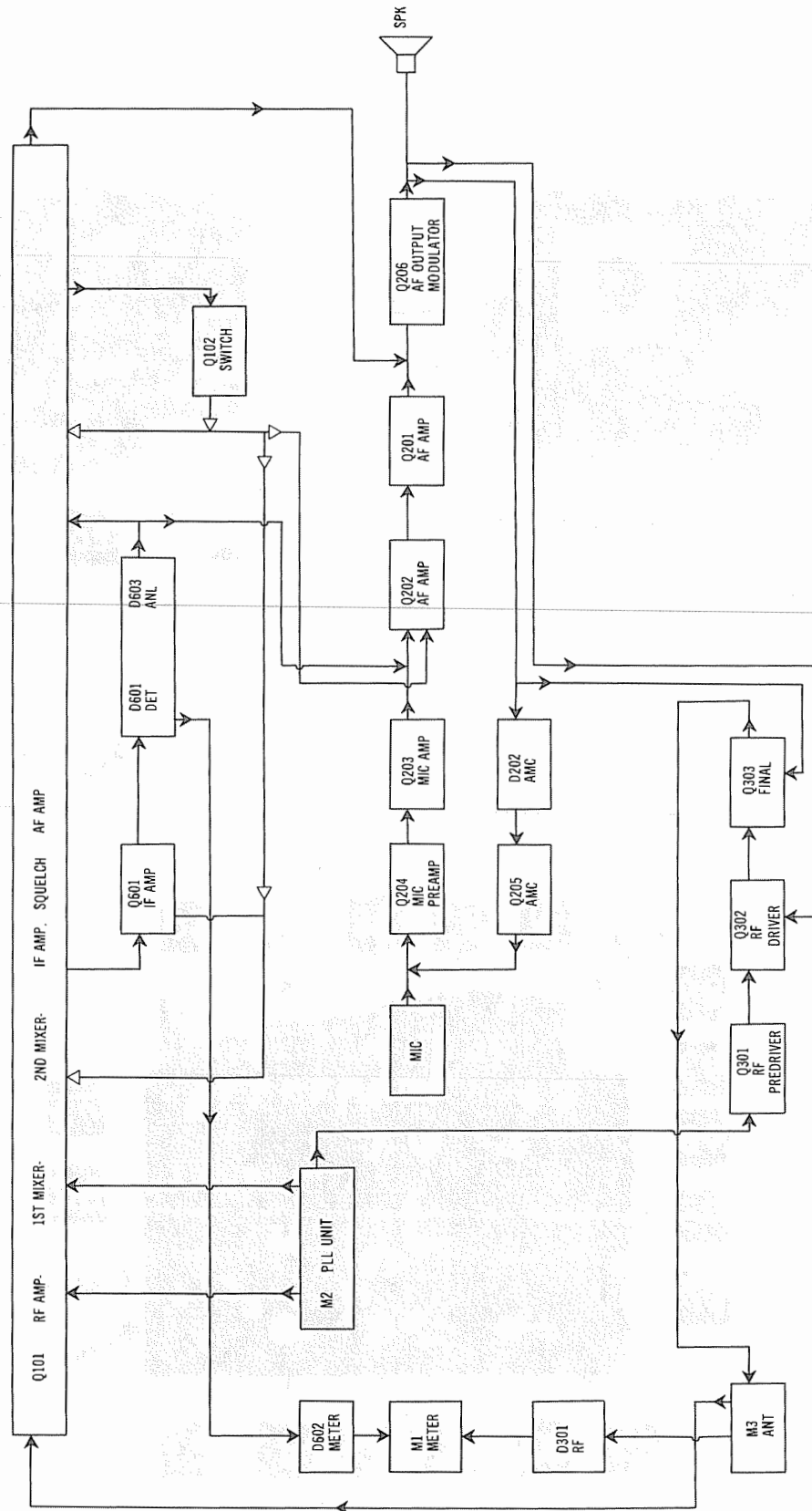
ROYCE MODELS 1-604,604

IF AMP & ANL BOARD



* Located on top of board

LED BOARD



BLOCK DIAGRAM

PARTS LIST AND DESCRIPTION

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

SEMICONDUCTORS (Select replacement transistor for best results)

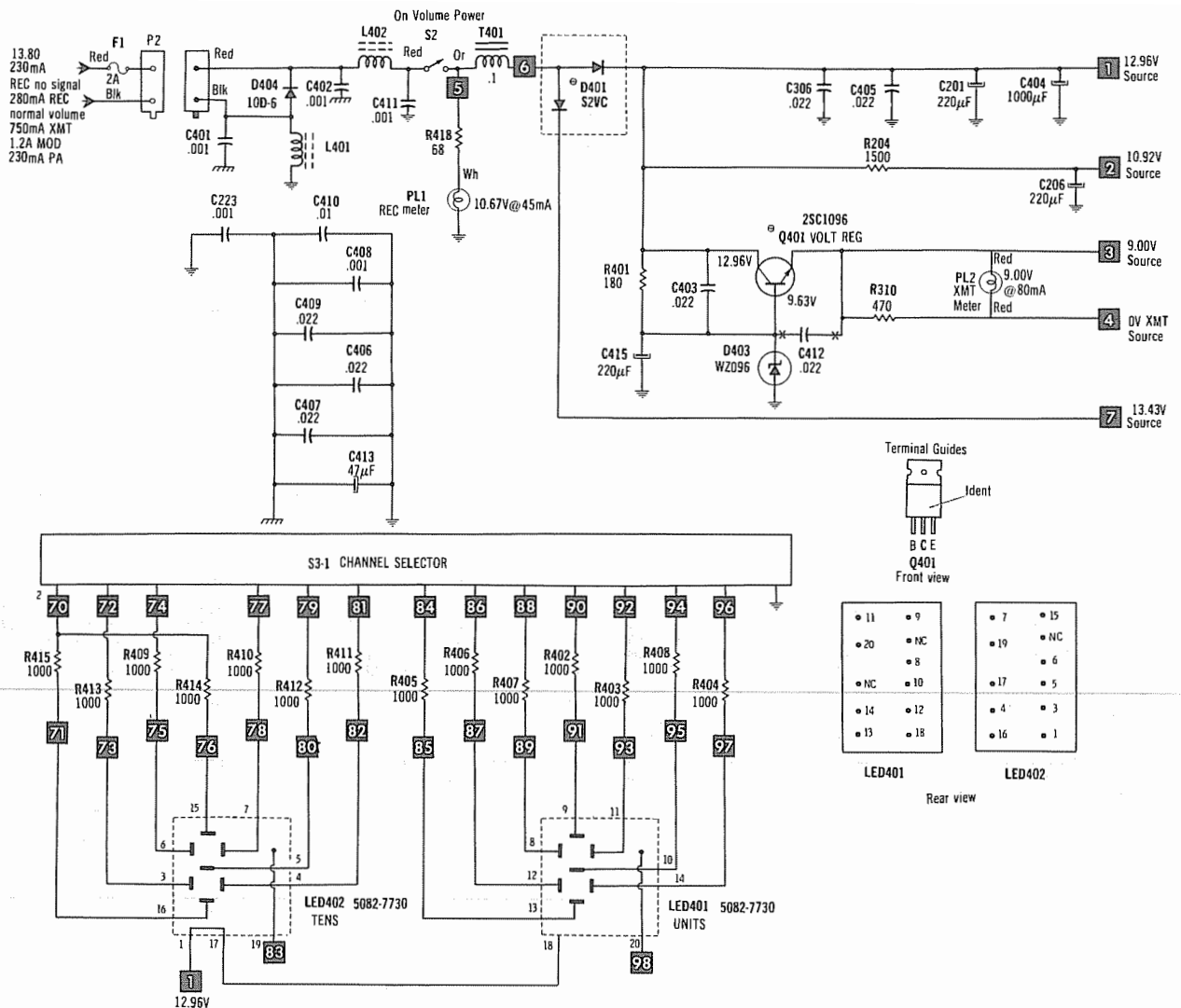
ITEM No.	TYPE No.	MFR. PART No.	REPLACEMENT DATA									
			GENERAL ELECTRIC PART No.	MALLORY PART No.	MOTOROLA PART No.	RAYTHEON PART No.	RCA PART No.	SPRAGUE PART No.	SYLVANIA PART No.	THORDARSON PART No.	WORKMAN PART No.	ZENITH PART No.
0101	BA243 MC301		GE-514 PTC214	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
0102	BA244		GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	BA243		GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
0103	MC301		GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	BA244		GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D201	1S2076		GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S1588		GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
0202	1S2076		GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
	1S1588		GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D301	10D-1		GE-504A	PTC201	HEPRO052	REN 116	SK3311	RT-213	ECG116	TM116	WEP156	212-76-02
	10D-6		GE-504A	PTC201	HEPRO052	REN 116	SK3311	RT-213	ECG116	TM116	WEP156	212-76-02
D401	1N60		1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-29001
	S2VC		GE-504A(2)	PTC201(2)	HEPRO052(2)	REN 116(2)	SK3311(2)	RT-213(2)	ECG116(2)	TM116(2)	WEP157(2)	212-76-02(2)
Q403	100C1		GE-504A(2)	PTC201(2)	HEPRO052(2)	REN 116(2)	SK3311(2)	RT-213(2)	ECG116(2)	TM116(2)	WEP157(2)	212-76-02(2)
	WZ096		GEZD-9.1	ZB9.1B		REN 139	SK3060	RT-240	ECG139A	TM139/**	WEP109	103-272
Q404	10D-1		GE-504A	PTC201	HEPRO052	REN 116	SK3311	RT-213	ECG116	TM116	WEP156	212-76-02
	1N60		1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-29001
Q602	1N60		1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-29001
	1S2075K		GE-514	PTC214	HEPRO602	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
Q101	2001											
	CC2001											
Q102	2SD467C		GE-271	PTC143*	HEPS3011*	REN 297	SK3024*	RT-114*	ECG297	TM297	WEP914	121-1007
	2SD467B		GE-271	PTC143*	HEPS3011*	REN 297	SK3024*	RT-114*	ECG297	TM297	WEP914	121-1007
Q201	2SD467		GE-271	PTC143*	HEPS3011*	REN 297	SK3024*	RT-114*	ECG297	TM297	WEP914	121-1007
	2SC458C		GE-210	PTC121*	HEPS0009*	REN 289	SK3122	RT-187	ECG289	TM289/**	WEP458	121-773
Q202	2SC458D		GE-210	PTC121*	HEPS0009*	REN 289	SK3122	RT-187	ECG289	TM289/**	WEP458	121-773
	2SC458C		GE-210	PTC121*	HEPS0009*	REN 289	SK3122	RT-187	ECG289	TM289/**	WEP458	121-773
Q203	2SC458D		GE-210	PTC121*	HEPS0009*	REN 289	SK3122	RT-187	ECG289	TM289/**	WEP458	121-773
	2SC458C		GE-210	PTC121*	HEPS0009*	REN 289	SK3122	RT-187	ECG289	TM289/**	WEP458	121-773
Q204	2SC458D		GE-210	PTC121*	HEPS0009*	REN 289	SK3122	RT-187	ECG289	TM289/**	WEP458	121-773
	2SA844C		GE-244*	PTC103*	HEPS0019*	REN 129*	SK3114	RT-126A*	ECG129*	TM129*	WEP564	121-29005
Q205	2SA844D		GE-244*	PTC103*	HEPS0019*	REN 129*	SK3114	RT-126A*	ECG129*	TM129*	WEP564	121-29005
	2SA844		GE-244*	PTC103*	HEPS0019*	REN 129*	SK3114	RT-126A*	ECG129*	TM129*	WEP564	121-29005
Q206	2S8561B		GE-244	PTC177	HEPS0019	REN 159	SK3466	RT-126A	ECG159	TM159	WEP62	121-290003
	2S8561		GE-244	PTC177	HEPS0019	REN 159	SK3466	RT-126A	ECG159	TM159	WEP62	121-290003
Q301	M51513L											
	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	
	2SC2166		GE-215	PTC186		REN 235	SK3197	RT-146	ECG235	TM235	WEP736*	121-29039
Q401	2SC1096		GE-28	PTC110	HEPS3041	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
Q601	2SC1173Y		GE-210	PTC121*	HEPS0009*	REN 289	SK3122	RT-187	ECG289	TM289/**	WEP458	121-29008
	2SC458C											

ROYCE MODELS 1-604,604

* 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
C106	4.7 25V		PC5-50	VTT4R7B50	QV1-27	EV-1319
C108	10 10V			TDC106M025FL	QDT1-64	SD25-109
C111	10 10V			TDC106M025FL	QDT1-64	SD25-109
C112	4.7 25V		PC5-50	VTT4R7B50	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			TOC224M050EL	QDT1-10	SD50-R229
C205	1 50V		PC1-50	VTT1A50	QV1-11	EV-1615
C206	220 16V		PC250-25	VTT220H16	QV1-117	EV-1240
C208	.1 50V			TDC104M050EL	QDT1-2	SD50-R109
C209	47 10V		PC50-16	VTT47D16	QV1-73	EV-1226
C214	.22 50V			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



Each segment of LED401, LED402 supplied 1.94V@11mA

- ✖ Circuitry not used in some versions
- Circuitry used in some versions
- ⊙ See parts list
- ⊙ Common tie point
- ✱ Nominal value
- ⚡ Signal path
- ⚡ Ground
- ⚡ Voltage path
- ⚡ Chassis

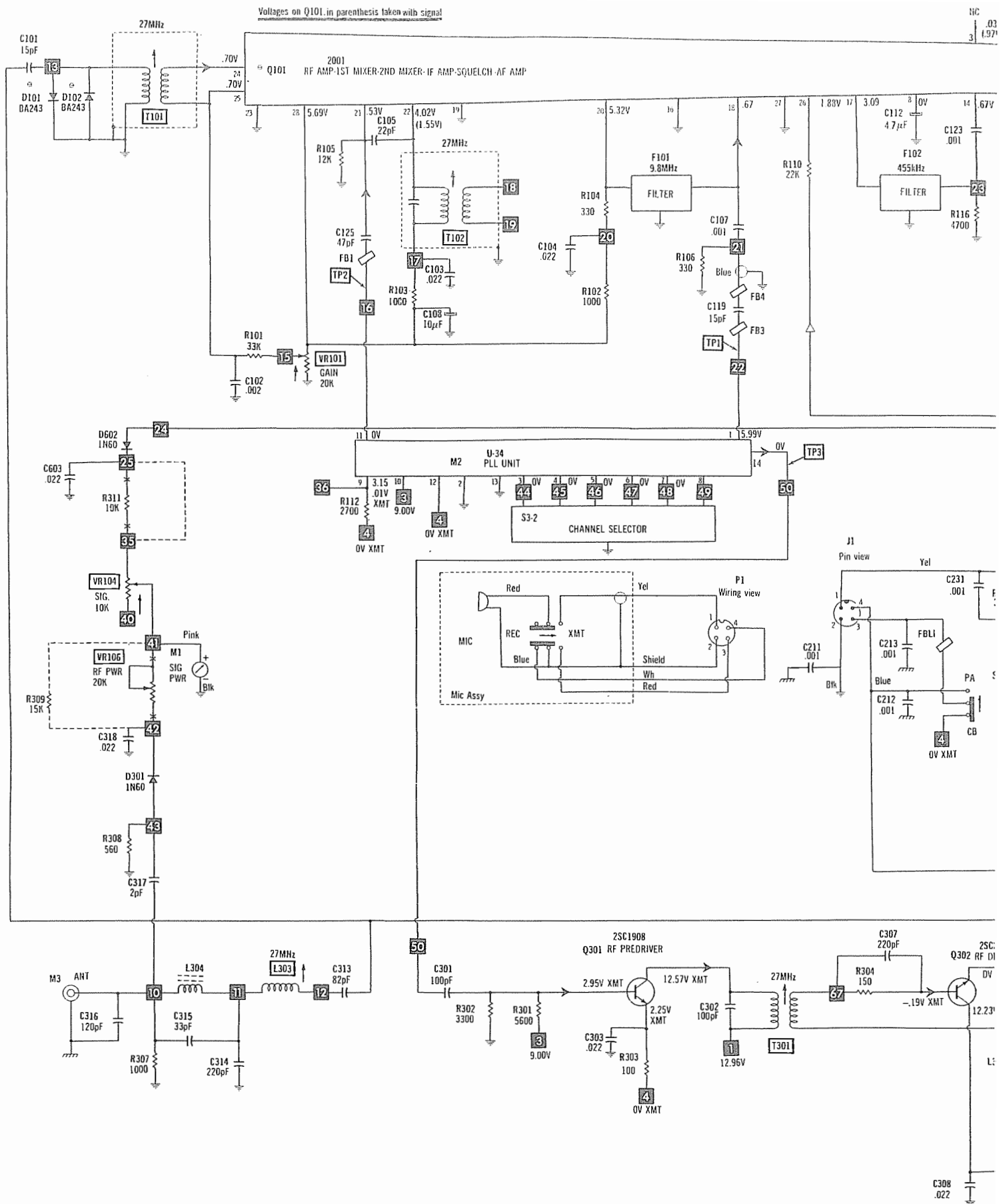
Measurements made in Channel 1 with switching as shown unless noted.
Item numbers in rectangles appear in the alignment/adjustment instructions.
Supply voltage maintained as shown at input.
Voltages measured with digital meter, no signal.
Controls adjusted for normal operation.
Arrow at control indicates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

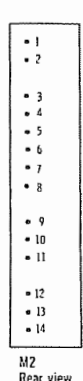
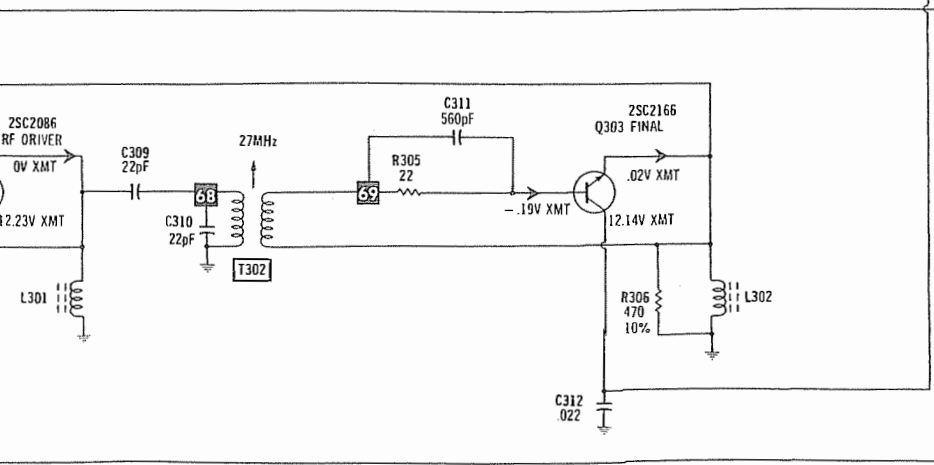
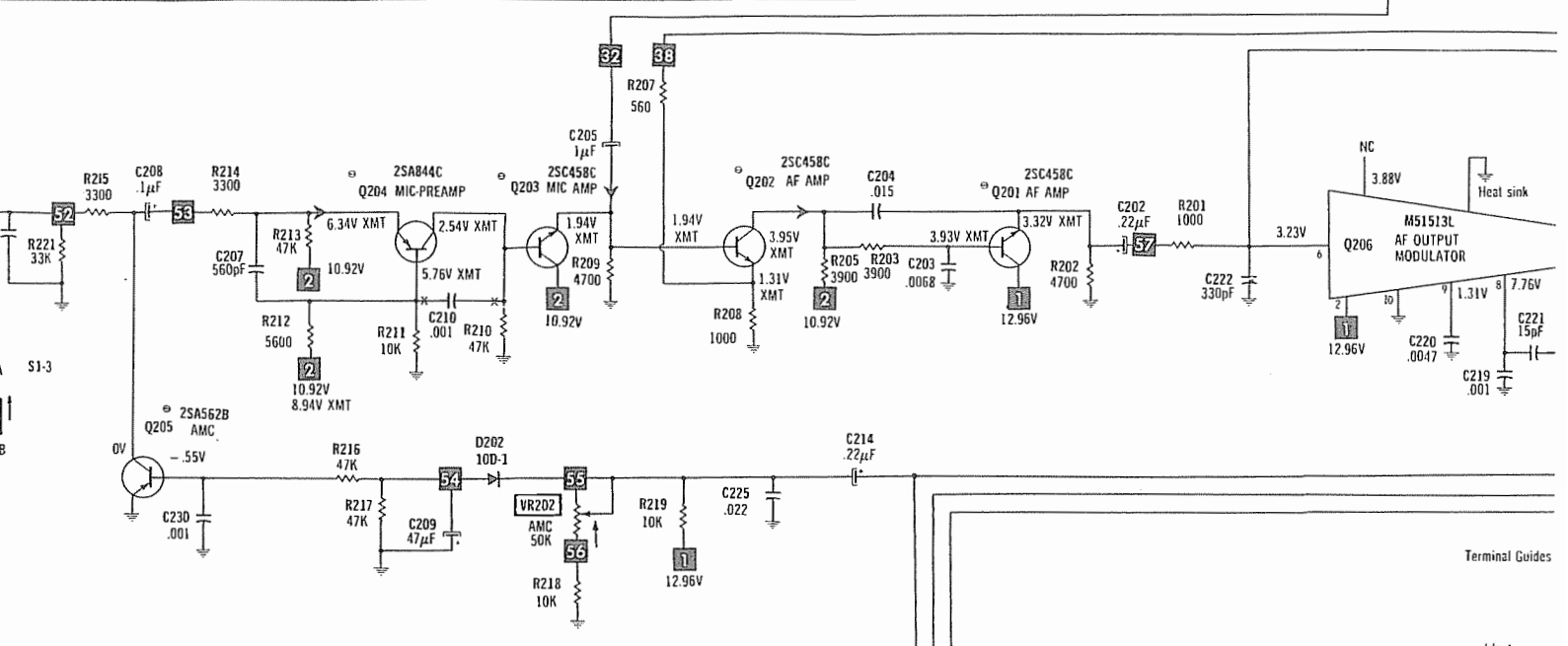
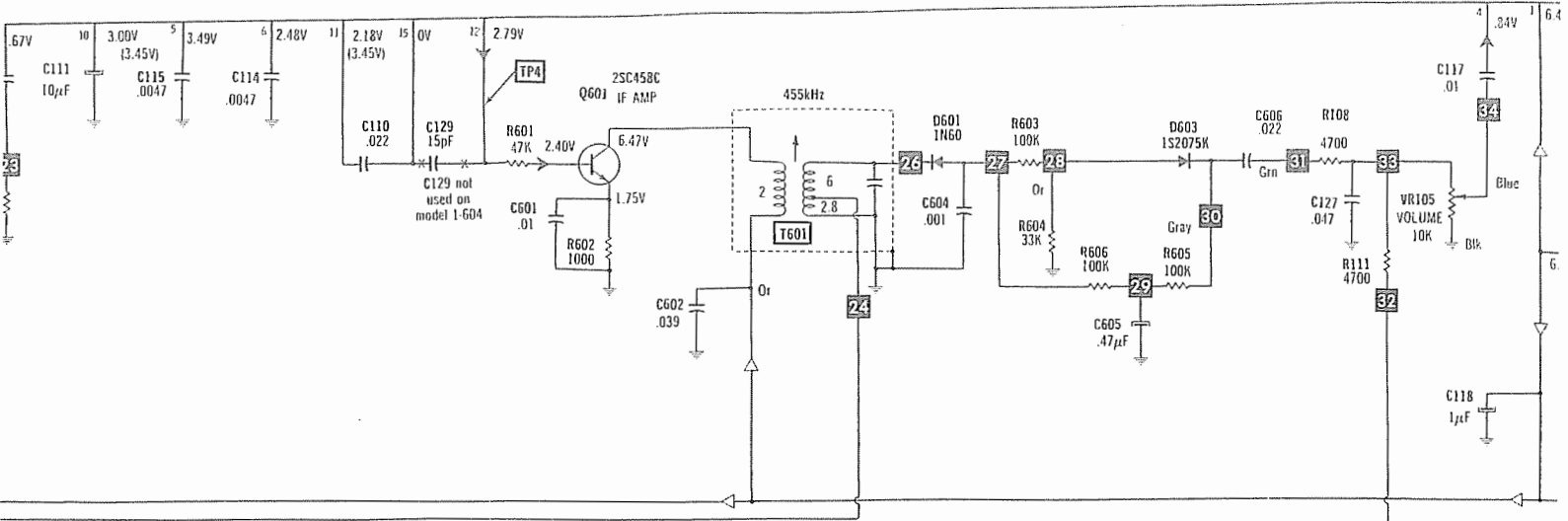
WITH **CIRCUITACE**

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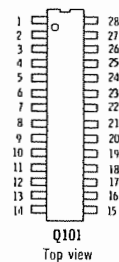
POWER SUPPLY SCHEMATIC



C
.03V
(.97V)



MAIN SCHEMATIC



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

PARTS LIS (When ordering)

CONTROL

ITEM No.	
VR101	Gain
VR102	Squelch
VR103	Squelch
VR104	Sig
VR105	Volume/
VR106	RF Powe
VR202	AMC

(2) Cut off one
(6) Alternate p

RESISTOR

ITEM No.	R
TH101	2000 Co

COILS (RF

ITEM No.	F
L201	RF Chok
L202	RF Chok
L301	RF Chok
L302	Final
L303	Loading
L304	Antenna
L401	RF Chok
L402	RF Chok
T101	RF (27M
T102	Mixer (
T301	RF Pred
T302	RF Driv
T601	IF (455

FILTER CH

ITEM No.	CURRENT (Measured)
T401	1.15A

CAPACITORS

ITEM No.	RATING	MFR. PART No.	REPLACEMENT DATA				PART No.
			CENTRALAB PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE Q-LINE	
C101	15 N220		UK25-223		*		10TCR-Q15
C102	.022		UK25-223				HY-725
C103	.022		UK25-223				HY-725
C104	.022		DTZ-22				HY-725
C105	22		DD-102	NP022	CN0422		10TCC-Q22
C107	.001				GP210		10TS-D10
C110	.022 50V			DPMS2S22	M192P2239R8	QFT2-127	1FT-S22
C114	.0041		DD-472	GP4700	GP247		5GA-D47
C115	.0047		DD-472	GP4700	GP247		5GA-D47
C117	.01 50V 10%			WMF1S1	M192P1039R8	QFT2-91	1FT-S10
C119	15 N220				*		10TCR-Q15
C122	.001		DD-102		GP210		10TS-D10
C123	.001		DD-102		GP210		10TS-D10
C125	47		DTZ-47	NP047	CN0447		10TCC-Q47
C127	.047 50V 10%			DPMS2S47	M192P4739R8	QFT2-171	1FT-S47
C129	15 N220				*		10TCR-Q15
C130	.1 50V 10%			WMF05P11	M192P1049R8	QFT20215	1FT-P10
C203	.0068 50V 10%			WMF1D68	M192P6829R8	QFT2-73	1FT-D68
C204	.015 50V 10%			WMF1S15	M192P1539R8	QFT2-105	1FT-S15
C207	560		DD-561		GP356		10TS-T56
C210	.001		DD-102		GP210		10TS-D10
C211	.001		DD-102		GP210		10TS-D10
C212	.001		DD-102		GP210		10TS-D10
C213	.001		DD-102		GP210		10TS-D10
C217	.068 50V 10%			WMF1S68	EFW1A168	QF1-195	1PB-S68
C219	.001		DD-102		GP210		10TS-D10
C220	.0047		DD-472	GP4700	GP247		5GA-D47
C221	15 N220				*		10TCR-Q15
C222	330		DD-331	GP330	GP333		10TS-T33
C223	.001		DD-102		GP210		10TS-D10
C225	.022		UK25-223				HY-725
C226	.1 50V 10%			WMF05P1	M192P1049R8	QFT2-215	1FT-P10
C227	.022		UK25-223				HY-725
C229	470		DD-471	GP470	GP347		10TS-T47
C230	.001		DD-102		GP210		10TS-D10
C231	.001		DD-102		GP210		10TS-D10
C301	100		DTZ-100	NP0100	CN0310		10TCC-T10
C302	100		DTZ-100	NP0100	CN0310		10TCC-T10
C303	.022		UK25-223				HY-725
C306	.022		UK25-223				HY-725
C307	220		DTZ-220				10TCC-T22
C308	.022		UK25-223				HY-725
C309	22		DTZ-22	NP022	CN0422		10TCC-Q22
C310	22 N150		DTN-22	N22	CN7422		10TCU-Q22
C311	560		DD-561		GP356		10TS-T56
C312	.022		UK25-223				HY-725
C313	82 N750				CN7482		10TCU-Q82
C314	220 N750		DTN-220	N220	CN7322		10TCU-T22
C315	33 N220				*		10TCR-Q33
C316	120		DTZ-120	NP02P2	CN0312		10TCC-T12
C317	2		DTZ-2R2		CN0522		10TCC-V22
C318	.022		UK25-223				HY-725
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		UK50-103		MAG5011		
C602	.039				M192P3939R8		192P3939R8
C603	.022		UK25-223				HY-725
C604	.001		DD-102		GP210		10TS-D10
C606	.022 50V 10%			DPMS2S22	192P2239R8	QFT2-127	1FT-S22

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

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	RESIST-ANCE	REPLACEMENT DATA			
			MFGR. PART No.	CENTRALAB PART No.	MALLORY PART No.	TRW PART No.
VR101	Gain	20K	01-518			U260R253B
VR102	Squelch Range	20K	01-518			U260R253B
	Squelch Range	10K	09-053(6)			U260R103B
VR103	Squelch	10K	09-064			
VR104	Sig	10K	09-053			U260R103B
VR105	Volume/Power Switch	10K	09-022			
VR106	RF Power	20K				X260R253B(2)
VR202	AMC	50K	01-520			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.

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						

ROYCE MODELS 1-604,604

COILS (RF-IF)

ITEM No.	FUNCTION	REPLACEMENT DATA			REMARKS
		PART No.	OTHER IDENTIFICATION	MILLER PART No.	
L201	RF Choke	02-075	ETC-83202		
L202	RF Choke	02-075	ETC-83202		
L301	RF Choke	02-070	AMPL-06		
L302	Final	02-011	ETC-4056		
L303	Loading Final (27MHz)	02-068	AMPL-04		
L304	Antenna Matching	02-079	ETC-83199		
L401	RF Choke	02-011	ETC-4056		
L402	RF Choke	02-011	ETC-4056		
T101	RF (27MHz)	02-016	ETC-15089	CBS774	
T102	Mixer (27MHz)	02-012	ETC-15061	CBS708-TC	
T301	RF Predriver (27MHz)	02-045	ETC-49167		
T302	RF Driver (27MHz)	02-065	AMPL-01		
T601	IF (455kHz)	02-073	ETC-73194		

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	02-027 1002B(1)			(1) Number on unit.

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.	
T201	5.12	1 28.88 2 8	02-42 83023B(1)			(1) Number on unit.

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		MFGR. PART No.	QUAM PART No.	
SP	3" PM 8 Ohms		30A0528	

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			AGC2	HRK	312 002	150 145	F62-2

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	21-001	18-032	18-034	18-010	18-092	1	2	3	4	NC	2

PARTS LIST AND DESCRIPTION (CONTINUED)

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

MISCELLANEOUS

ITEM No.	PART NAME	PART No.	NOTES
FBL1	Ferrite Bead	02-074	ETC-83200
F101	Filter	01-902	9.8MHz
F102	Filter	01-903	455kHz (CF455A or CRW455HT)
J1	Jack	10-001	Microphone
J2	Jack	10-016	DC Power
JK1	Jack	10-003	PA Speaker
JK2	Jack	10-003	External Speaker
LED401	LED		Units (5082-7730)(Each segment supplied with 1.94V @ 11mA)
LED402	LED		Tens (5082-7730)(Each segment supplied with 1.94V @ 11mA)
M1	Meter	05-014	S/R
M2	PLL Unit	12-019	
M3	Jack	10-002	Antenna
PL1	Lamp	07-001	Meter, Receive (10.67V @ 45mA)
PL2	Lamp	07-010	Meter, XMT (9.00V @ 80mA)
S1	Switch	09-128	PA/CB
S2	Switch		Power, On/Off (Part of Volume Control)
S3	Switch	09-119	Channel Selector
	Cord	08-015	OC Power

ROYCE MODELS 1-604,604

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

ITEM	PART No.	ITEM	PART No.
Cabinet, Bottom	19-150A	Channel Window	19-732
Cabinet, Top	19-150	Knob, Control	19-610
Knob, Channel Selector	19-628	Front Panel	19-225

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')

