



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 Telsat 1000 (99-33508W)

MANUFACTURER'S SPECIFICATIONS

RECEIVER SECTION

CIRCUIT TYPE.....	Dual conversion superheterodyne with RF stage and 455 KHz ceramic filter.
FREQUENCY.....	23 crystal-controlled channels in the 27 MHz Citizens Band.
SENSITIVITY.....	0.7 μ V for 10 dB S/N.
SQUELCH RANGE.....	0-1mV.
SELECTIVITY.....	45dB down at $\pm$ 10KHz.
IF FREQUENCY.....	1st IF : 10.595 -10.635 MHz 2nd IF : 455 KHz
IMAGE REJECTION.....	55dB
AUDIO OUTPUT.....	2.5W maximum at 16 ohm load.
CURRENT DRAIN(12V DC).....	200mA on standby [no signal].

TRANSMITTER SECTION

POWER OUTPUT.....	Up to 4 Watt Max (at 13.8V DC)
EMISSION.....	6A3
SPURIOUS RESPONSE REJECTION.....	All harmonic and spurious suppression greater than FCC and D. O. T. requirements.
MODULATION.....	AM, 90% typical.
RANGE BOOST.....	Yields high average modulation.
CURRENT DRAIN (12V DC).....	Less than 1.3A
ANTENNA.....	Nominal 50 ohms impedance.
POWER SOURCE.....	AC : 105-120V 50/60 Hz DC : Nominal 12V Source
DIMENSIONS [OVERALL].....	12" [W] $\times$ 10" [D] $\times$ 4 - 1/4" [H] 305mm[W] $\times$ 25mm[D] $\times$ 108mm[H]
WEIGHT.....	7 lbs. 8 oz./3.4kg.

Courtesy of the Manufacturer

LAFAYETTE MODEL TELSAT 1000

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

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Printed in U. S. of America

7CY602

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.
Connect low sides of test equipment to ground unless specified otherwise.
Connect 50-ohm dummy load or antenna before keying transmitter.
Suggested Alignment Tools: GC Electronics:
L101 thru L104, L301 thru L306.....9440
L105, L106, L107.....5009
L307, L308, L309.....9304

SYNTHESIZER ALIGNMENT

TEST EQUIPMENT	TRANSCIVER	ADJUST	REMARKS
Inputs of frequency counter and RF VTVM to TP10.	Ch. 13	L301	Adjust for maximum at 37.750MHz.
Input of frequency counter to TP10.	Ch. 17 Ch. 21 Ch. 1 Ch. 5 Ch. 9		Check for 37.800MHz. Check for 37.850MHz. Check for 37.600MHz. Check for 37.650MHz. Check for 37.700MHz.
Input of frequency counter to TP6.	Ch. 13 Ch. 14 Ch. 15 Ch. 16 Ch. 13, XMT Ch. 14, XMT Ch. 15, XMT Ch. 16, XMT		Check for 10.180MHz. Check for 10.170MHz. Check for 10.160MHz. Check for 10.140MHz. Check for 10.635MHz. Check for 10.625MHz. Check for 10.615MHz. Check for 10.595MHz.

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 TP3. 455kHz, 1000Hz @ 30% modulation.	Ch. 13	L107, L106, L105	Adjust for maximum output.
Output of signal generator thru .01uF to TP11. 10.6MHz, 1000Hz @ 30% modulation.	Ch. 13	L104, L103	Adjust for maximum output.
Output of signal generator thru .01uF to antenna jack. 27.115MHz, 1000Hz @ 30% modulation.	Ch. 13	L102, L101	Adjust for maximum output. Repeat above steps, if necessary.

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 thru .01uF to antenna jack. 27.115MHz, 1000Hz @ 30% modulation. Output 1000uV.	Ch. 13	RV101	SQUELCH RANGE Set Squelch Control RV201 fully clockwise. Adjust RV101 so that squelch just breaks.
Output of signal generator thru .01uF to antenna jack. 27.115MHz, 1000Hz @ 30% modulation. Output 100uV.	Ch. 13	RV102	S METER Adjust RV102 for 9 on S scale of meter.

TRANSMITTER ALIGNMENT

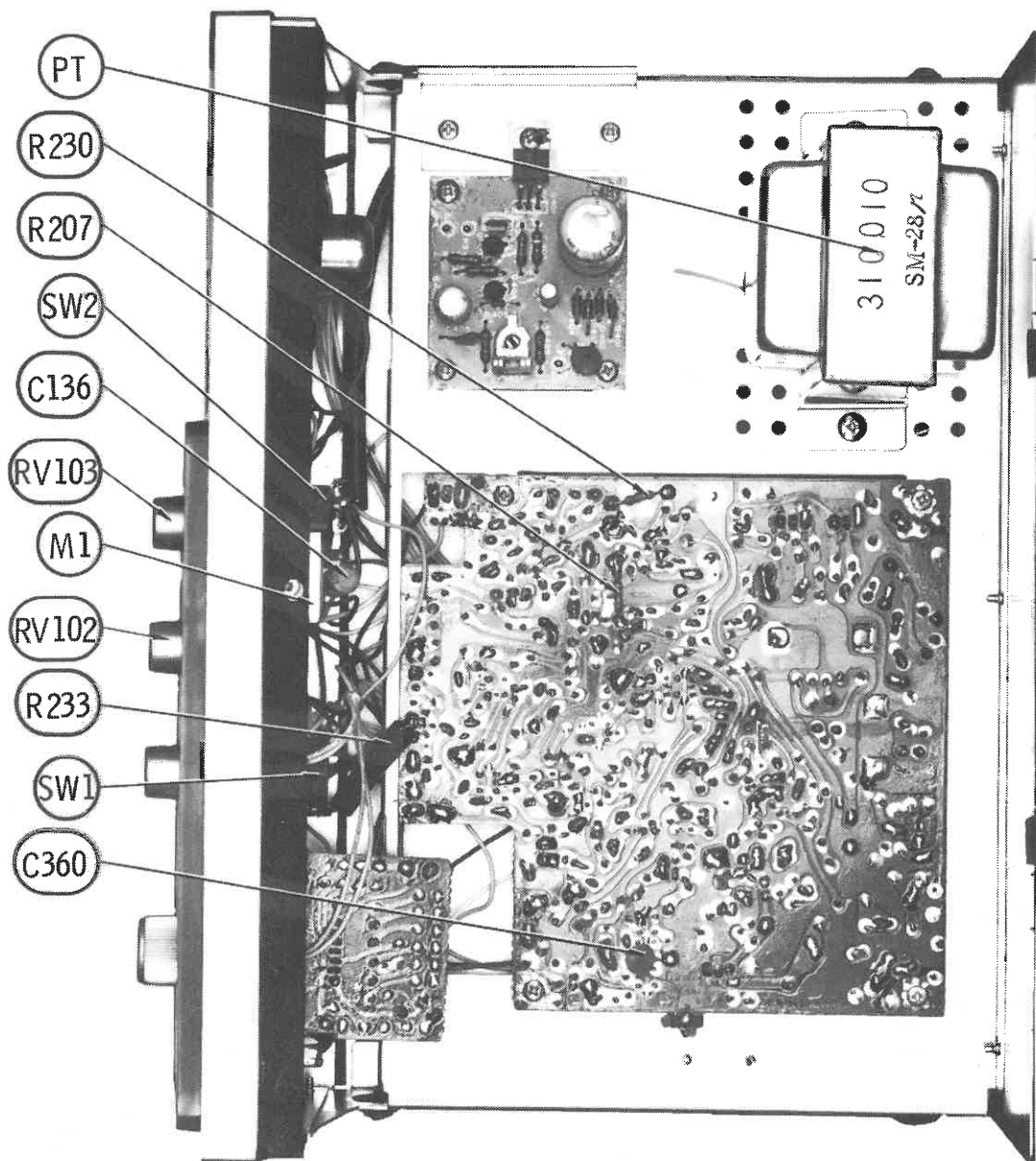
Connect an RF wattmeter and 50-ohm, 25-watt dummy load to antenna connector.
NOTE: Be sure to check transmit frequency and power on all active channels after alignment of transmitter.
See page 4 for channel frequencies.

TEST EQUIPMENT	TRANSCEIVER	ADJUST	REMARKS
Input of Spectrum analyzer to antenna jack.	Ch. 13	L302, L303, L304, L305, L306, L307, L308	Adjust for maximum.
	Ch. 13	L308, L307	Adjust for 4 watts maximum.
	Ch. 13	L309	Adjust for MINIMUM at 54MHz.

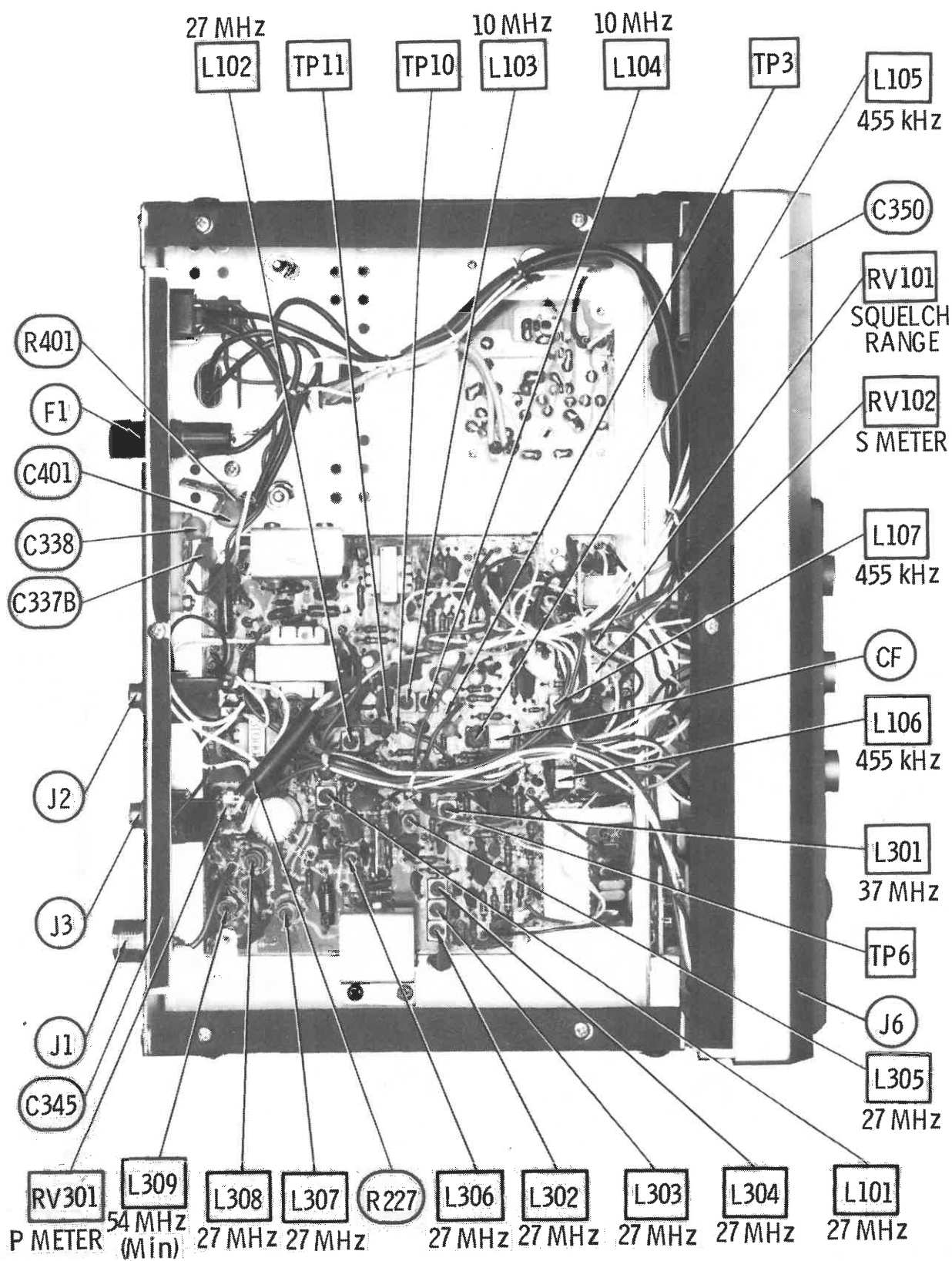
TRANSMITTER ADJUSTMENTS

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 DC meter to TP12.	Ch. 13	R407	VOLT REGULATOR Adjust R407 for 13.8V. Voltage should not vary when keying transmitter.
	Ch. 13	RV301	POWER METER Adjust RV301 so that RF panel meter agrees with RF wattmeter.

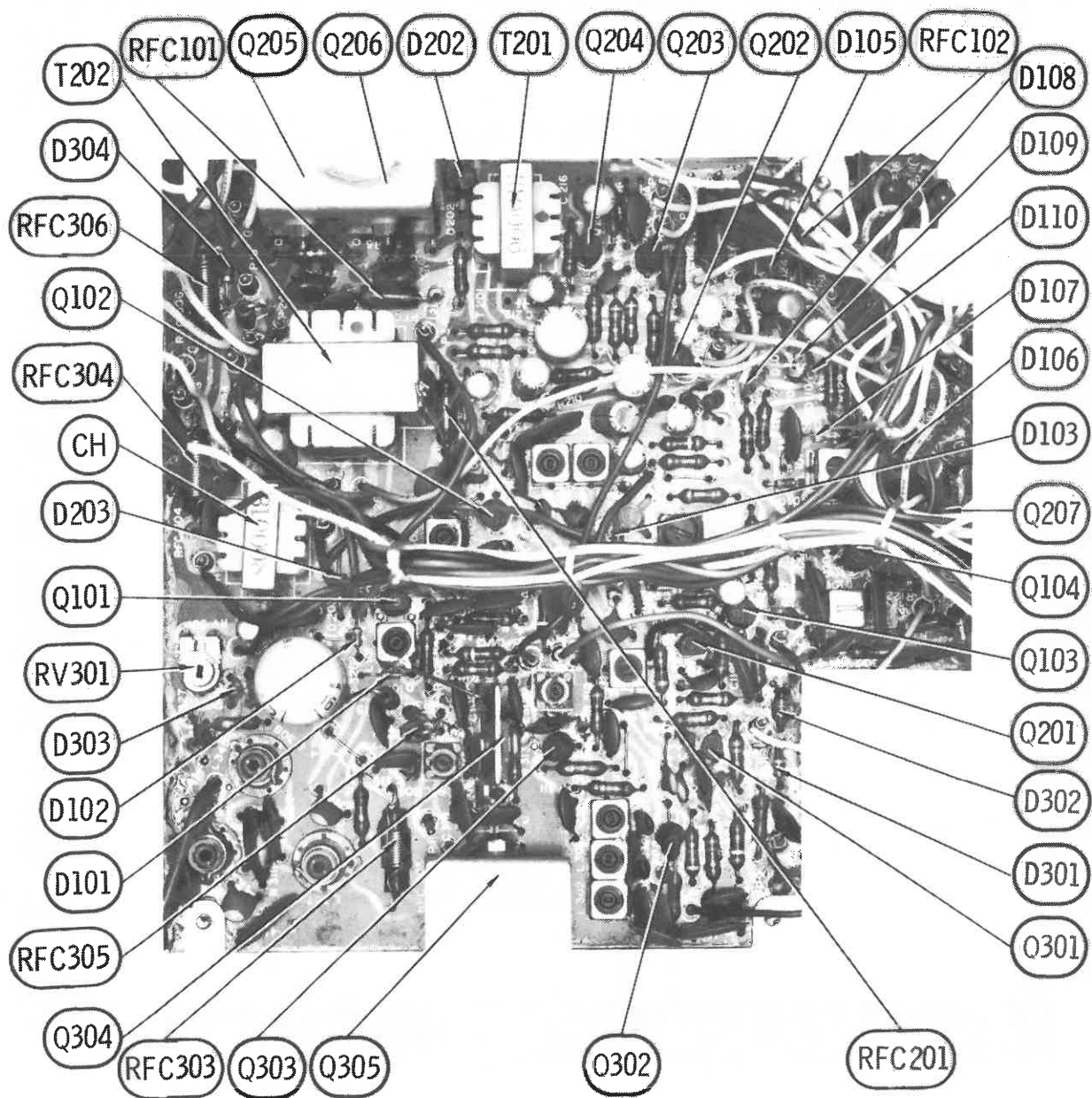


CHASSIS-TOP

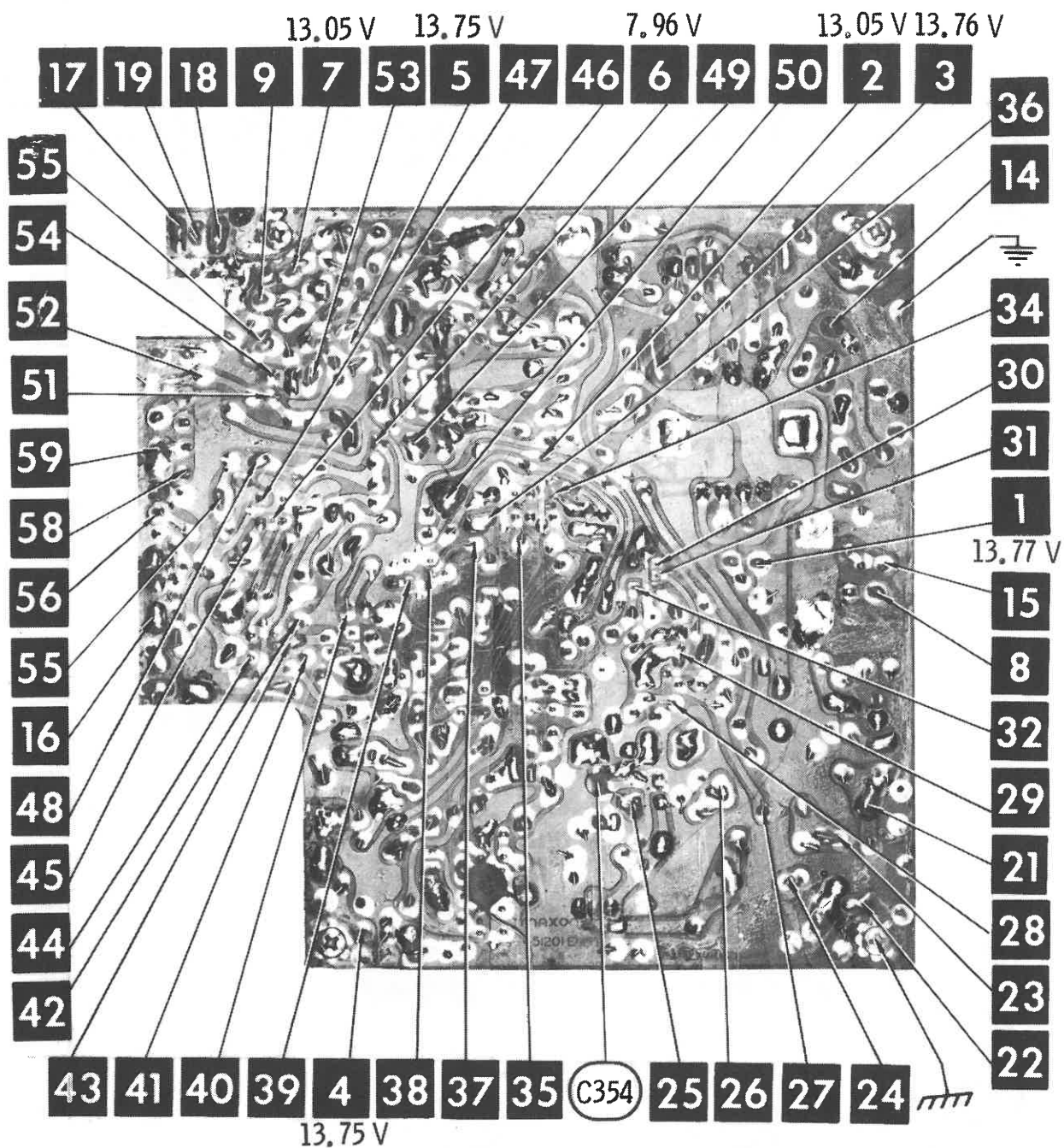


CHASSIS-BOTTOM

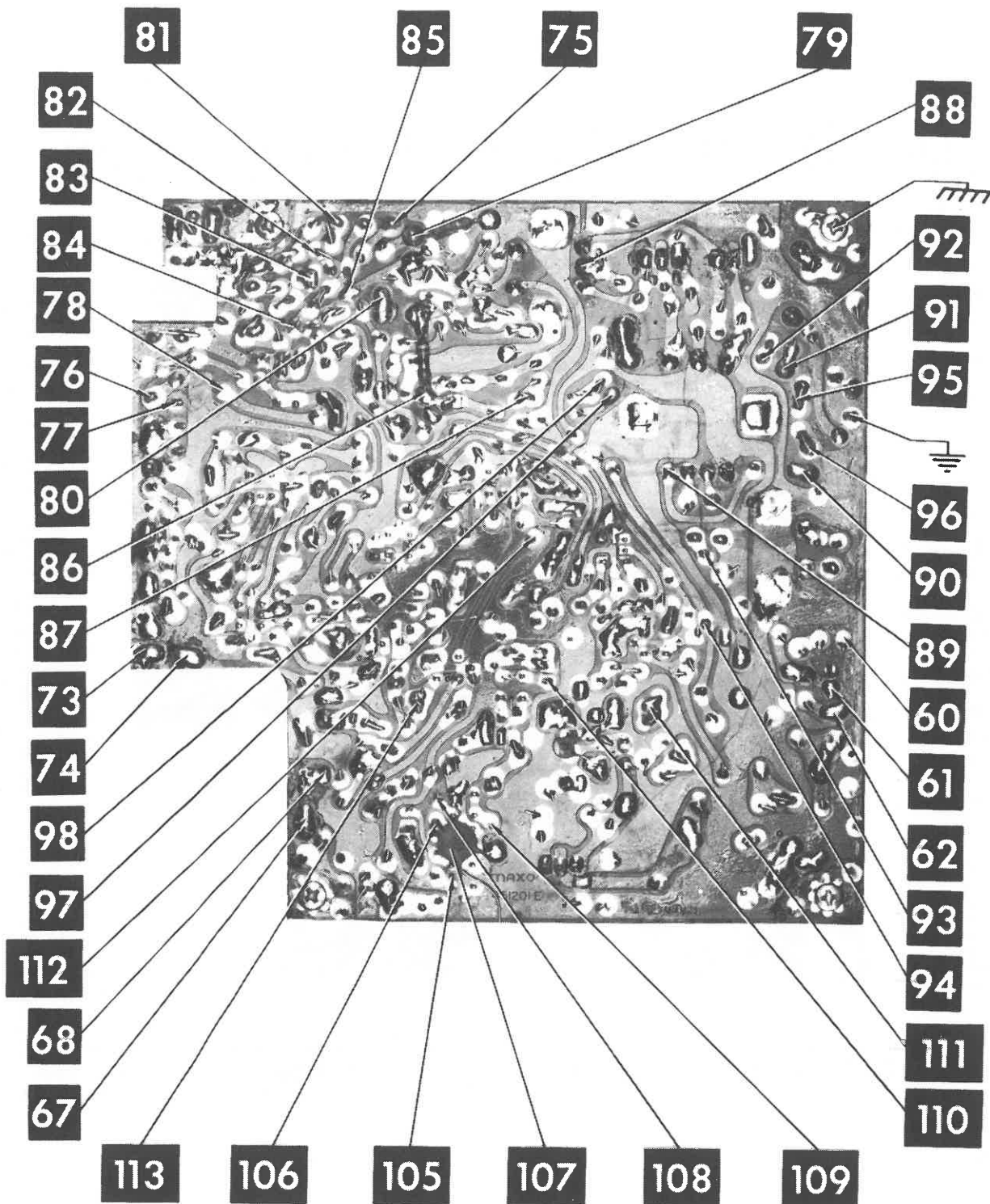




MAIN BOARD

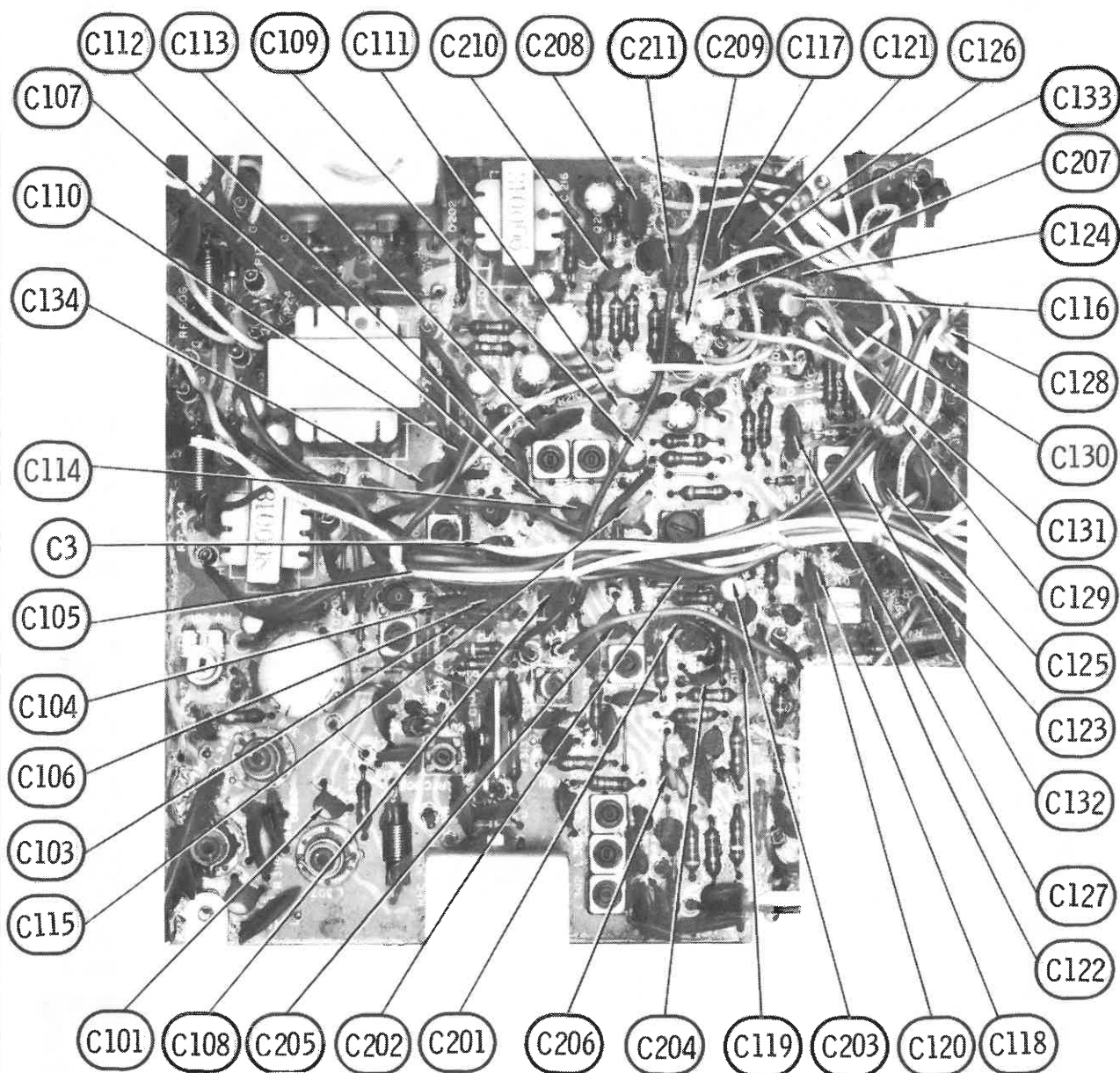


MAIN BOARD

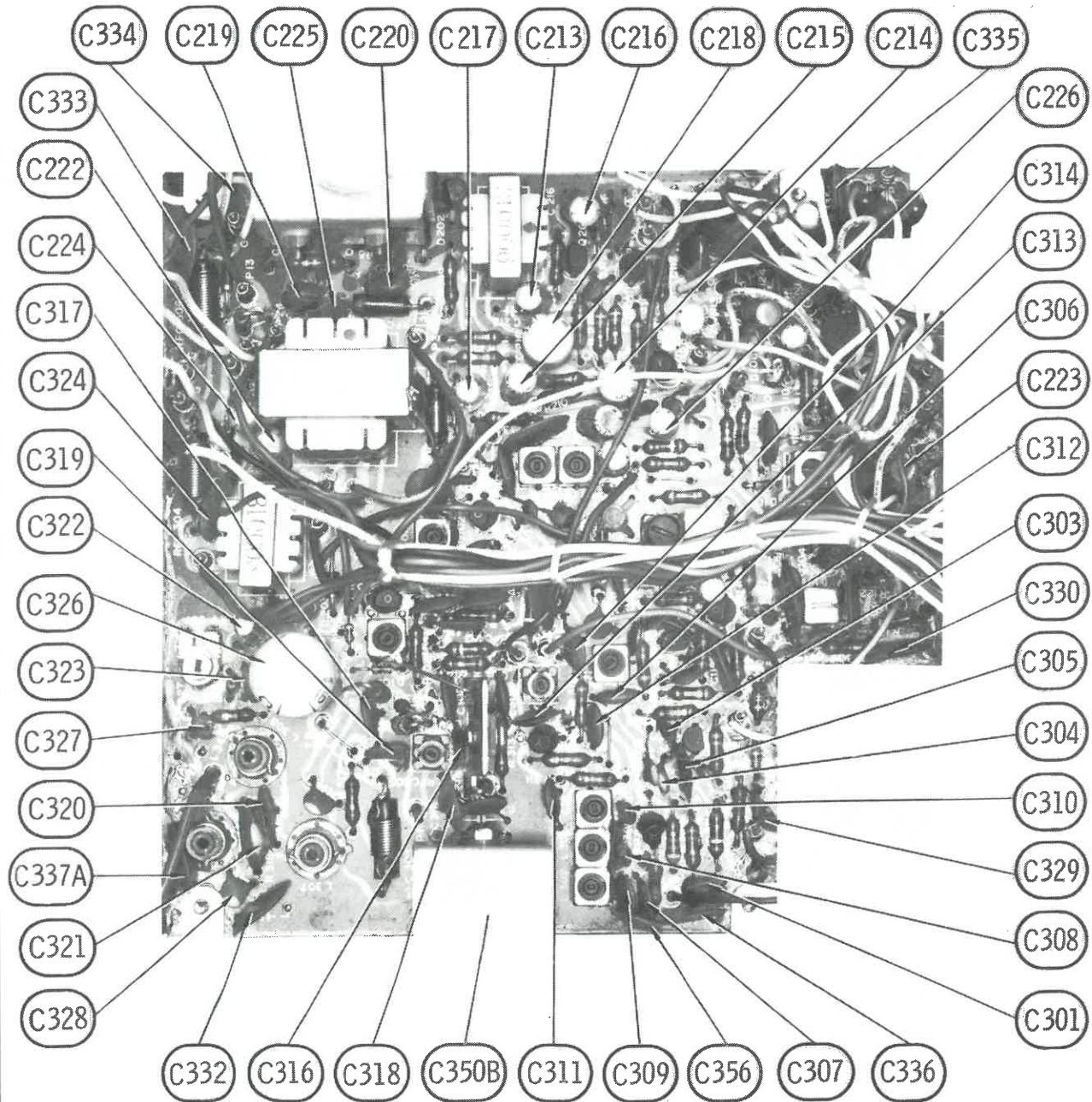


LAFAYETTE MODEL TELSAT 1000

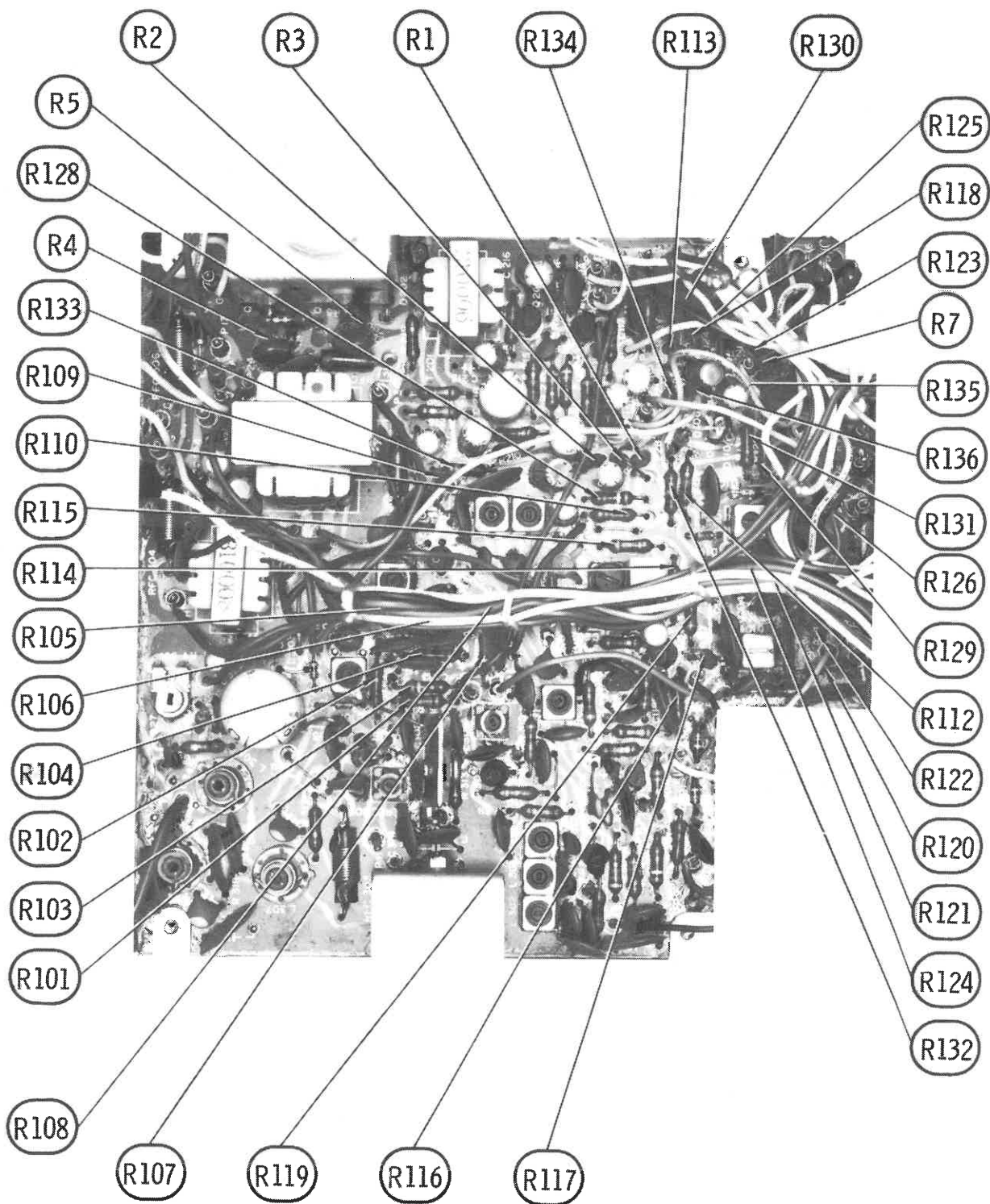
MAIN BOARD



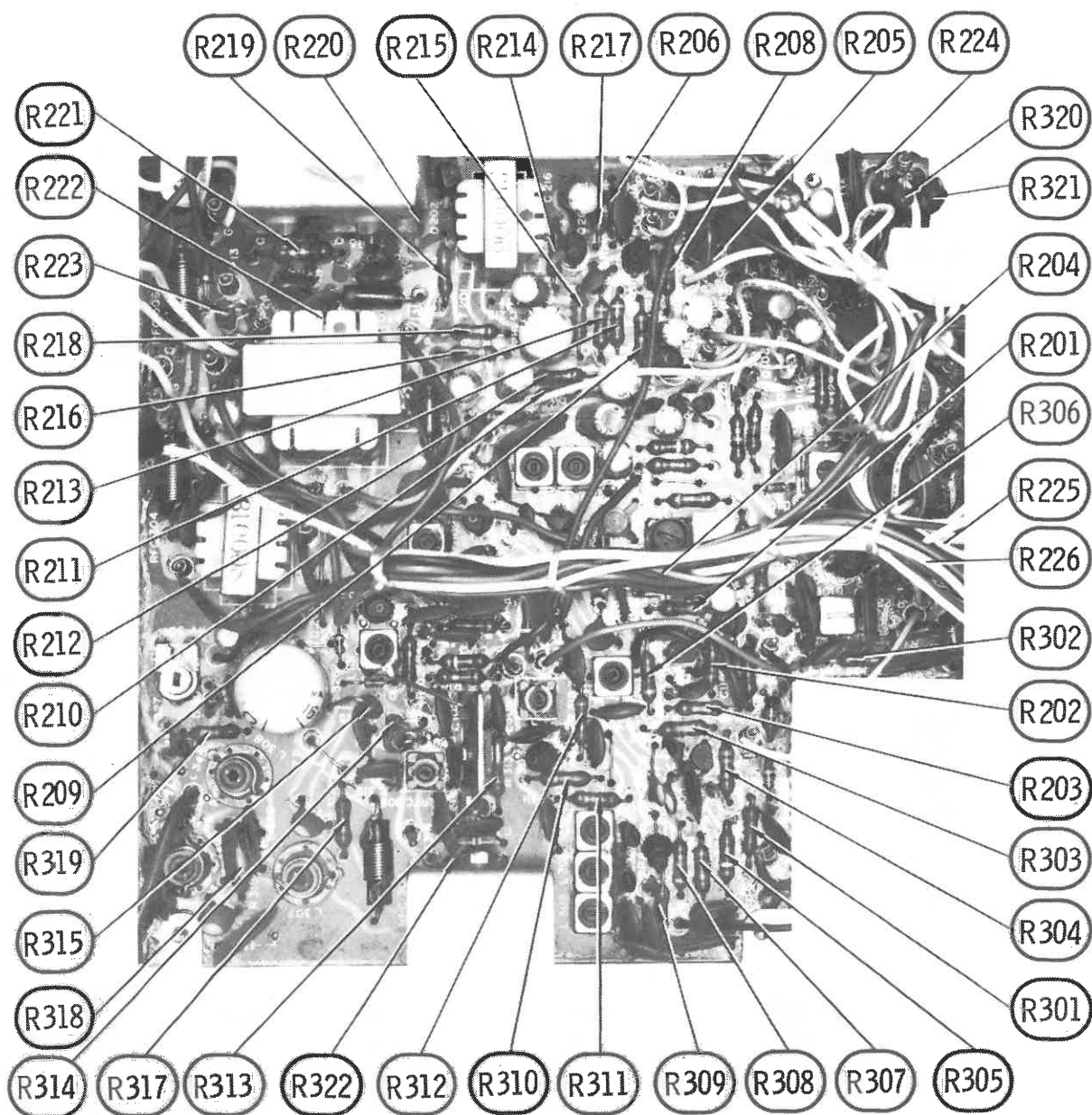
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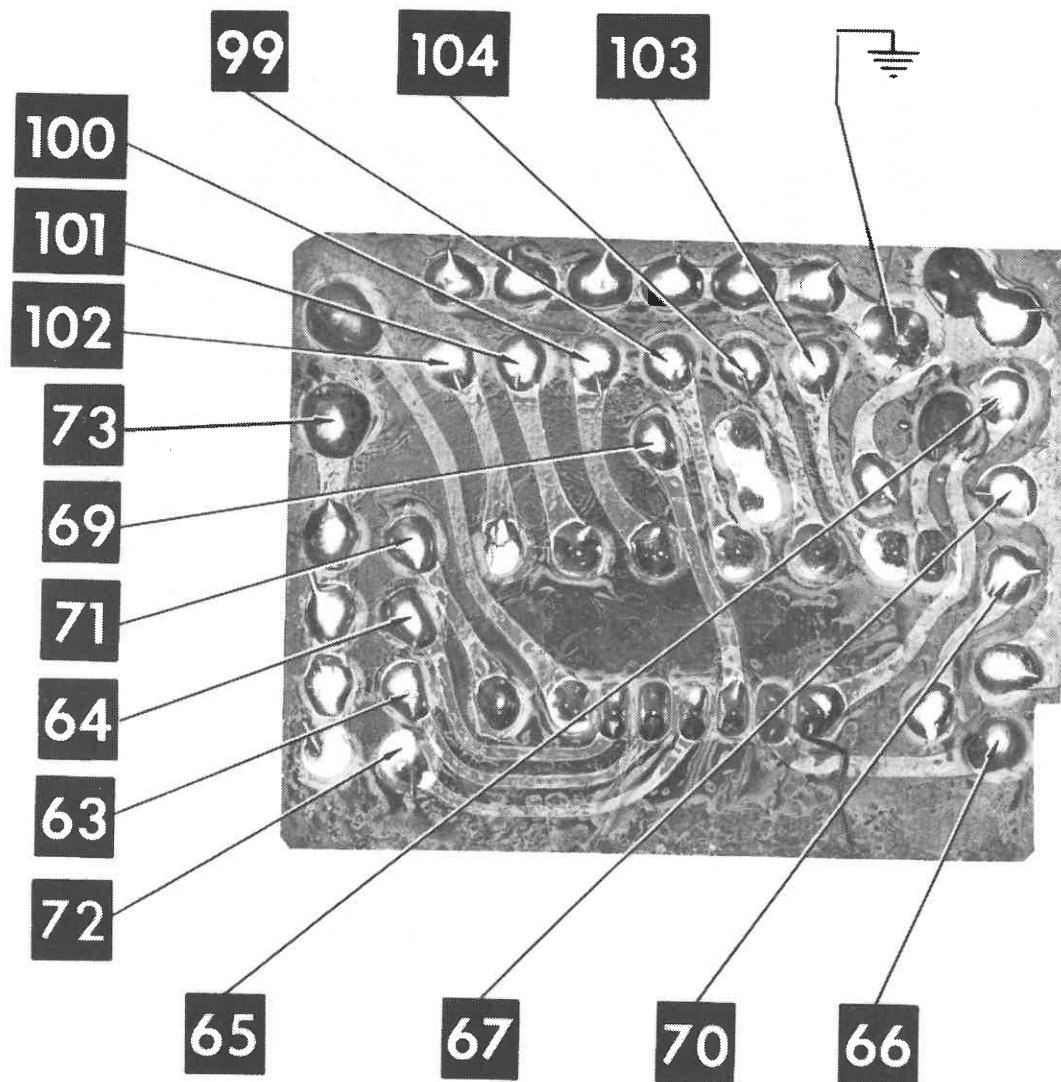
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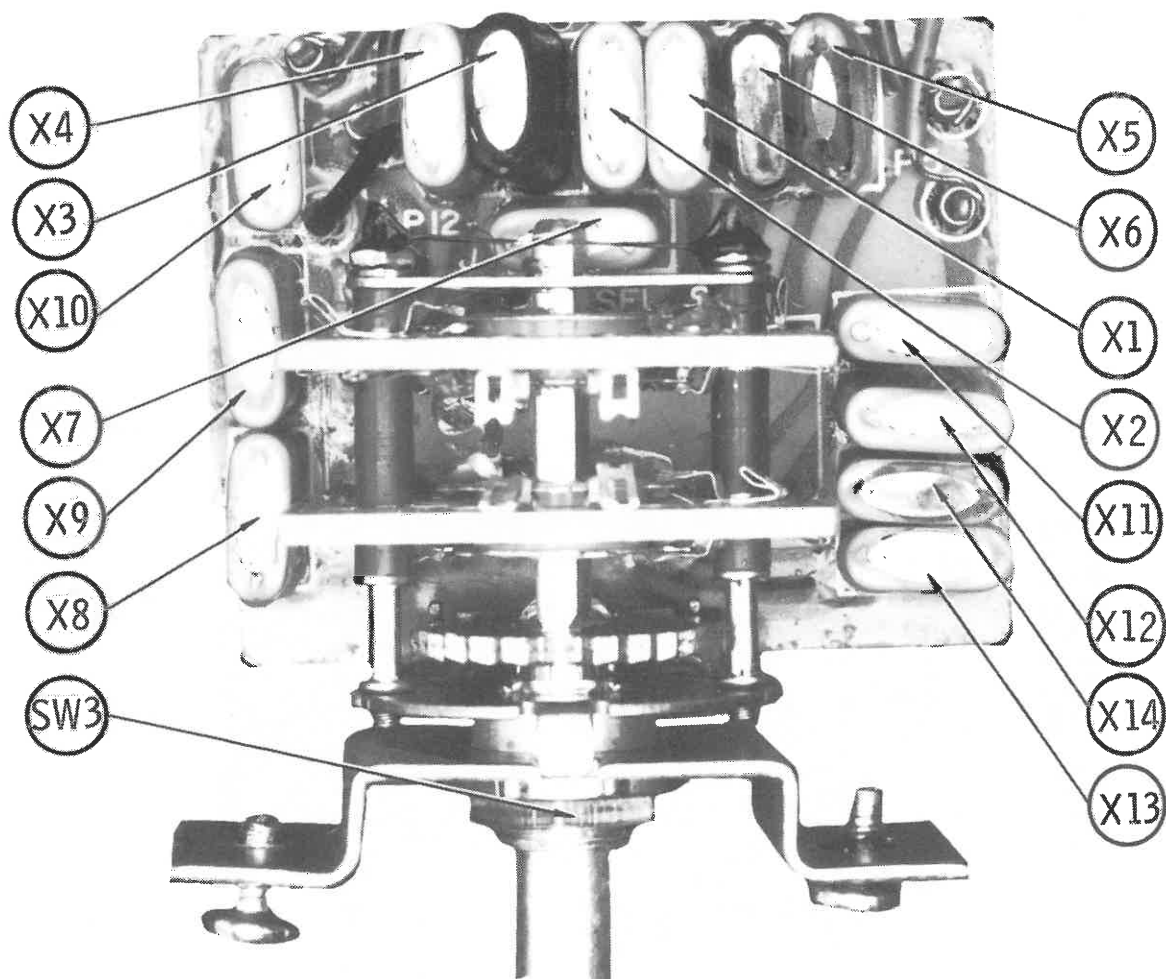
MAIN BOARD



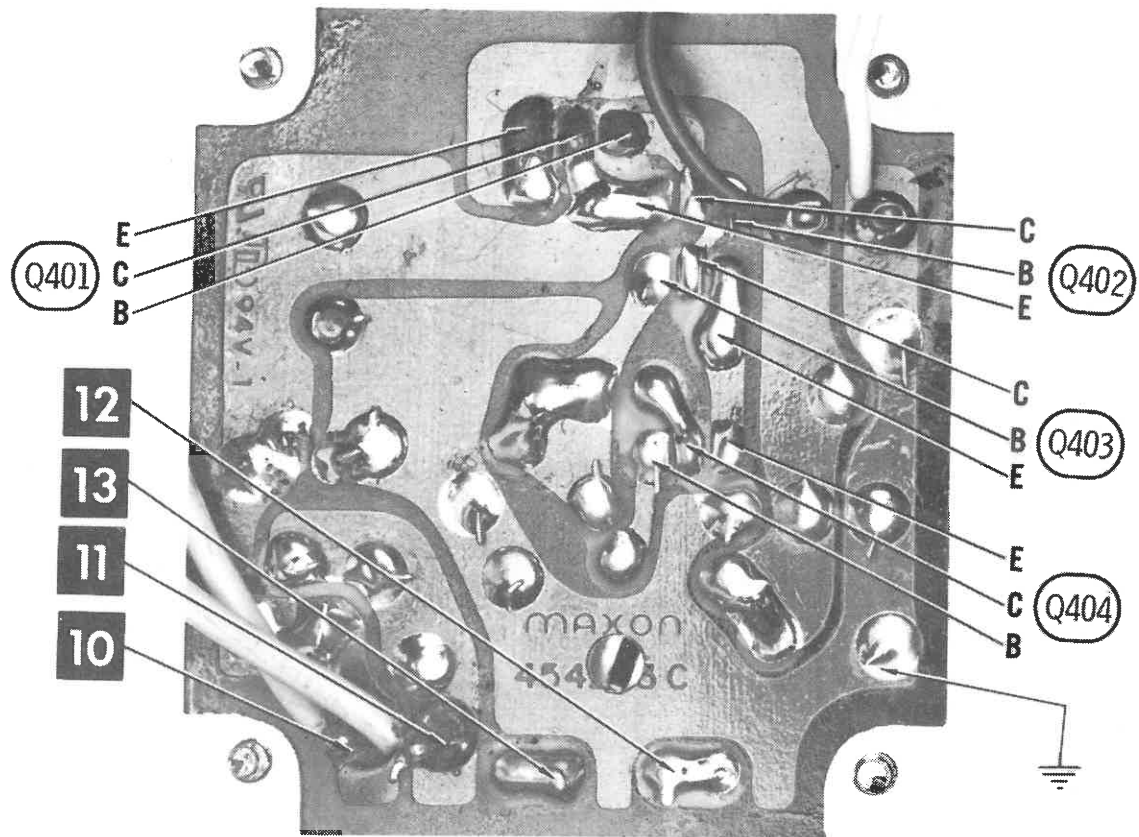
MAIN BOARD



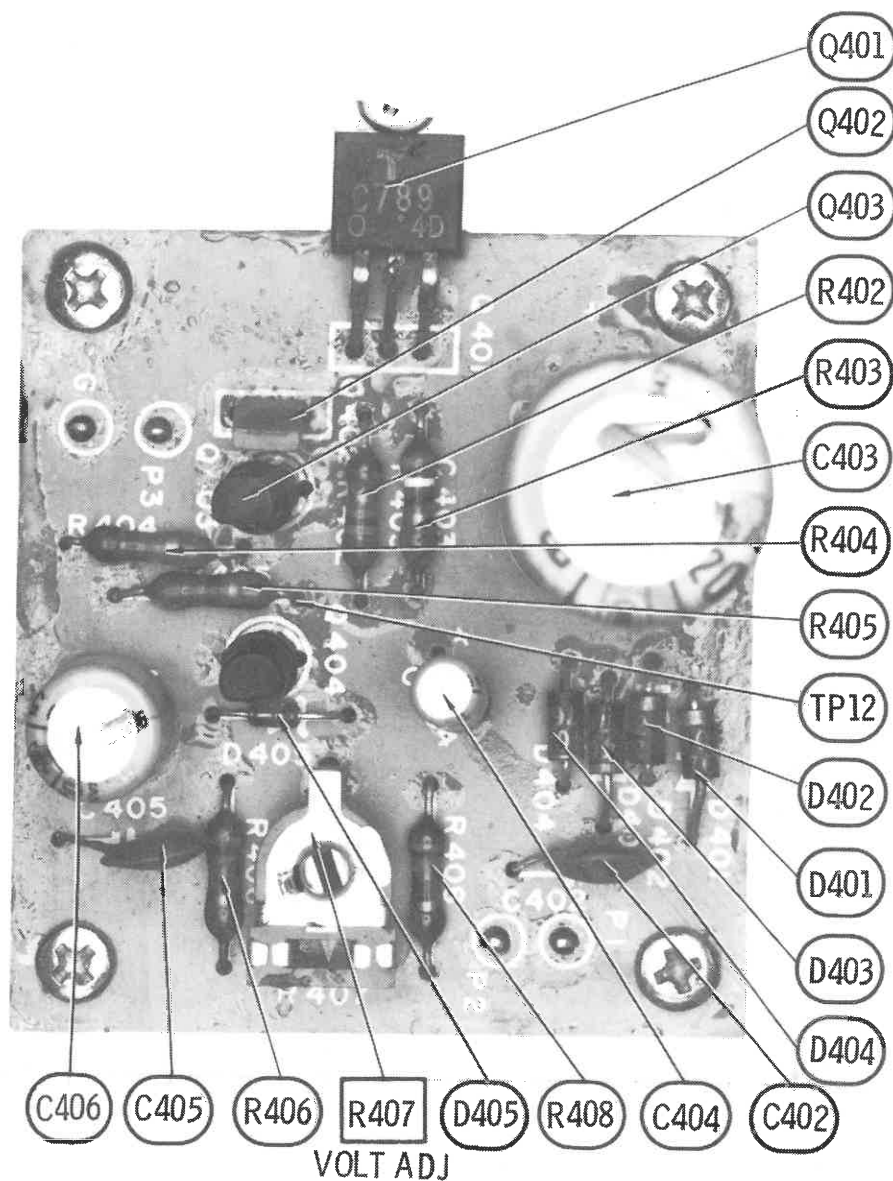
CH. SELECTOR-CRYSTAL BOARD



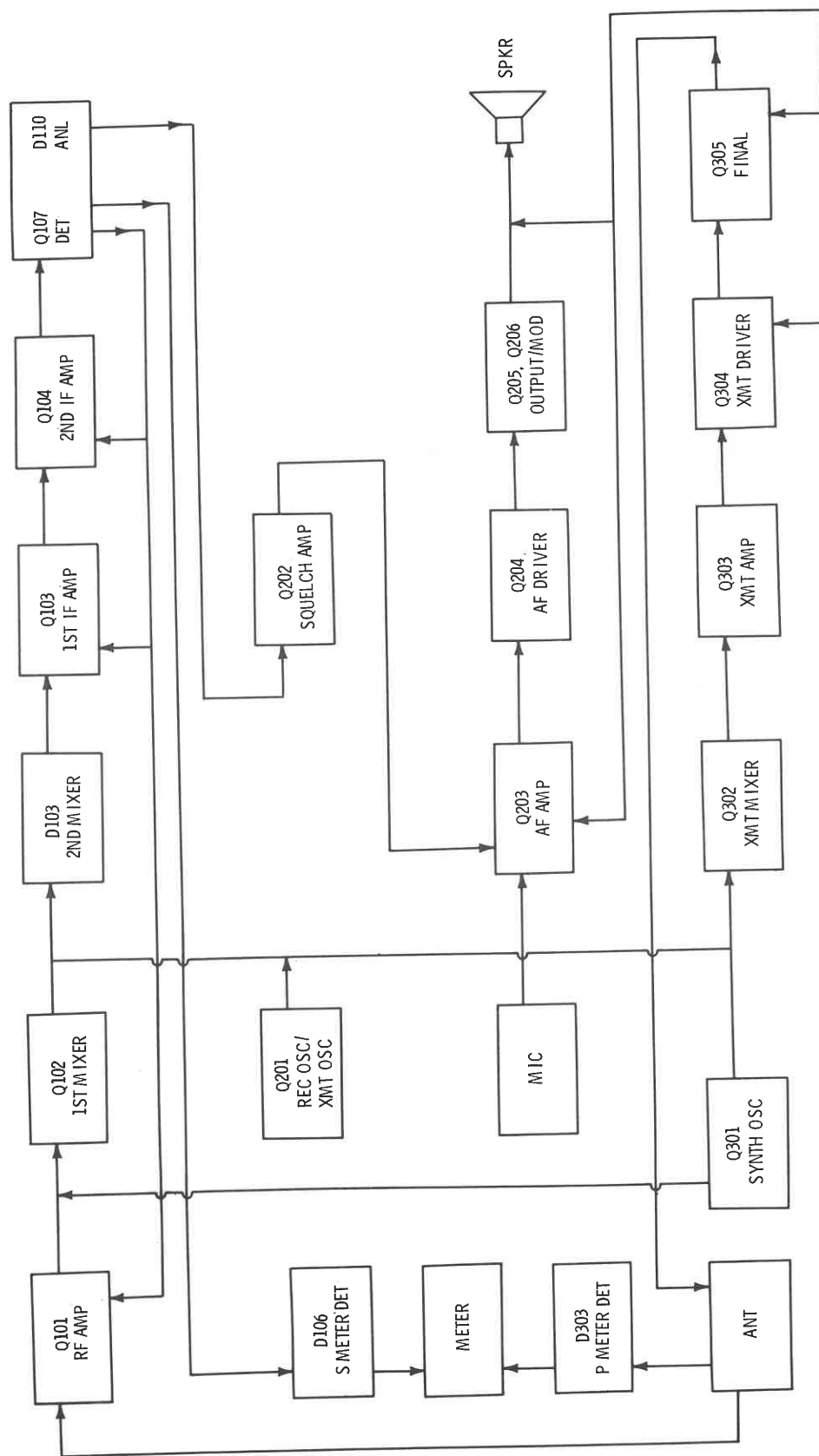
CH. SELECTOR-CRYSTAL BOARD



POWER SUPPLY BOARD



POWER SUPPLY BOARD



BLOCK DIAGRAM

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

COILS (RF-IF)

ITEM No.	FUNCTION	REPLACEMENT DATA			REMARKS
		PART No.	OTHER IDENTIFICATION	MILLER PART No.	
L101	Rec Antenna (27MHz)	284423			
L102	Rec RF (27MHz)	284523			
L103	Rec Mixer (10MHz)	284623			
L104	Rec Mixer (10MHz)	284623			
L105	IF (455kHz)	284723			
L106	IF (455kHz)	284823			
L107	IF (455kHz)	284923			
L301	Synth Oscillator (37MHz)	285023			
L302	Harmonic Suppressor (27MHz)	285123			
L303	Harmonic Suppressor (27MHz)	285123			
L304	XMT Mixer (27MHz)	285223			
L305	XMT Amp (27MHz)	285323			
L306	XMT Driver (27MHz)	285423			
L307	Final Amp (27MHz)	285523			
L308	Antenna Match (27MHz)	385623			
L309	TVI Trap (54MHz)	285723			
RFC101	RF Choke	284323			
RFC102	RF Choke	284323			
RFC201	RF Choke	284223			
RFC303	RF Choke	284023			
RFC304	RF Choke	284123			
RFC305	RF Choke	284323			
RFC306	RF Choke	284123			

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA			NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (O CURRENT 1000~)	MFGR. PART No.	THORDARSON PART No.	TRIAD PART No.	
CH301	1.12A	.05	.51mH	283923 310008 (1)			(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	120V AC @ 300mA AC	17.2V AC @ 1.125A DC	310010 (1)			(1) Number on unit.

TRANSFORMER (Driver)

ITEM No.	TURNS RATIO			REPLACEMENT DATA			NOTES
	PRI.	SEC. 1	SEC. 2	MFGR. PART No.	THORDARSON PART No.	TRIAD PART No.	
T201	1	1		187015 310006 (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.	
T202	64	1 2 16 36	187115 310007 (1)			(1) Number on unit.

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		MFGR. PART No.	QUAM PART No.	
SP	3" PM 16 Ohms	132036	30A05Z16R	

PARTS LIST AND DESCRIPTION

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

SEMICONDUCTORS (Select replacement transistor for best results)

ITEM No.	TYPE No.	MFGR. PART No.	REPLACEMENT DATA							
			GENERAL ELECTRIC PART No.	IR WORKMAN PART No.	MALLORY PART No.	MOTOROLA PART No.	RAYTHEON PART No.	RCA PART No.	SPRAGUE PART No.	SYLVANIA PART No.
D101	1S953	206617	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
D102	MA150(1)	206617	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
	1S953		1N60	1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109
D103	1N60(1)	120617	1N60	1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109
	1S34		1N60	1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109
D104	1N60(1)	245117	1N60	1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109
D105	1S953	206617	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
	1S34		1N60	1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109
D106	1N60(1)	120617	1N60	1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109
D107	1S34	120617	1N60	1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109
	1N60(1)		1N60	1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109
D108	1S34	120617	1N60	1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109
D109	1N60(1)	120617	1N60	1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109
	1S34		1N60	1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109
D110	1N60(1)	120617	1N60	1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109
D201	1N34	120617	1N60	1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109
D202	S3072C	248817	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
D203	1N4002	248917	GE-504A	5A4D	1N4002	HEPR0052	RE 49	SK3030	RT-213	ECG116
D301	1S953	206617	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
D302	MA-150(1)	206617	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
D303	1S953		GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
D304	MA-153(1)		1N60	1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109
D401	1N4002	248917	GE-504A	5A4D	1N4002	HEPR0052	RE 49	SK3030	RT-213	ECG116
D402	MR9602	249217(1)	GE-504A	5A4D	1N4002	HEPR0052	RE 49	SK3030	RT-213	ECG116
	1N4002		GE-504A	5A4D	1N4002	HEPR0052	RE 49	SK3030	RT-213	ECG116
D403	MR9602	249217(1)	GE-504A	5A4D	1N4002	HEPR0052	RE 49	SK3030	RT-213	ECG116
	1N4002		GE-504A	5A4D	1N4002	HEPR0052	RE 49	SK3030	RT-213	ECG116
D404	MR9602	249217(1)	GE-504A	5A4D	1N4002	HEPR0052	RE 49	SK3030	RT-213	ECG116
D405	MR9602	249217(1)	GE-504A	5A4D	1N4002	HEPR0052	RE 49	SK3030	RT-213	ECG116
Q101	2SC784-0	212717	GE-60 *	(IR)2SC380A	PTC132 *	HEPS0008 *	RE 28 *	SK3018 *	RT-187	ECG229 *
Q102	2SC784-0	212717	GE-60 *	(IR)2SC380A	PTC132 *	HEPS0008 *	RE 28 *	SK3018 *	RT-187	ECG229 *
Q103	2SC380-0	171817	GE-66 *	TR-81	PTC112	HEPS5019 *	RE 34	SK3026	RT-145	ECG175
Q104	2SC380-0	171817	GE-66 *	TR-81	PTC112	HEPS5019 *	RE 34	SK3026	RT-145	ECG175
Q201	2SC1359B	196117(1)	GE-212	(IR)2SC380A	PTC121 *	HEPS0014 *	RE 192	SK3038 *	RT-308	ECG199
	2SC839		GE-61 *	(IR)2SC644	PTC132 *	HEPS0015 *	RE 13 *	SK3018 *	RT-308	ECG123A *
	2SC829(1)		GE-20 *	(IR)2SC829B	PTC121 *	HEPS0015 *	RE 9 *	SK3122	RT-308	ECG229 *
Q202	2SC372Y	150117	GE-61 *	(IR)2SC372	PTC121 *	HEPS0015 *	RE 13 *	SK3122	RT-308	ECG123A *
Q203	2SC373	204117	GE-212	(IR)2SC373	PTC121 *	HEPS0015 *	RE 192	SK3122	RT-105	ECG199
Q204	2SC373	172317	GE-212	(IR)2SC373	PTC121 *	HEPS0015 *	RE 192	SK3122	RT-105	ECG199
	2SC735(1)		GE-210 *	WEP735	PTC123 *	HEPS0014 *	RE 13 *	SK3122	RT-308 *	ECG289
	2SC735G(1)		GE-210 *	WEP735	PTC123 *	HEPS0014 *	RE 13 *	SK3122	RT-308 *	ECG289
	2SC735R(1)		GE-210 *	WEP735	PTC123 *	HEPS0014 *	RE 13 *	SK3122	RT-308 *	ECG289
Q205	2SC1226A	172317	GE-215	WEP900	PTC186		RE 203	SK3197	RT-166	ECG186A
	2SC1226Q		GE-215	WEP900	PTC186		RE 203	SK3197	RT-166	ECG186A
	(1)									
	2SC1226R	216017(1)	GE-215	WEP900	PTC186		RE 203	SK3197	RT-166	ECG186A
	(1)									
Q206	2SC1096	216017(1)	GE-28	WEP1096	PTC110	HEPS5027	RE 42	SK3197	RT-166	ECG186A
	2SC1173(1)		GE-215	WEP1306	PTC186		RE 201	SK3197	RT-160	ECG236
	2SC1226A		GE-215	WEP900	PTC186		RE 203	SK3197	RT-166	ECG186A
	2SC1226Q		GE-215	WEP900	PTC186		RE 203	SK3197	RT-166	ECG186A
	(1)									
	2SC1226R	216017(1)	GE-215	WEP900	PTC186		RE 203	SK3197	RT-166	ECG186A
	(1)									
Q207	2SC1096	216017(1)	GE-28	WEP1096	PTC110	HEPS5027	RE 42	SK3197	RT-166	ECG186A
	2SC1173(1)		GE-215	WEP1306	PTC186		RE 201	SK3197	RT-160	ECG236
	2SC735		GE-210 *	WEP735	PTC123 *	HEPS0014 *	RE 13 *	SK3122	RT-308 *	ECG289
Q301	2SC373	204117(1)	GE-212	(IR)2SC373	PTC121 *	HEPS0015 *	RE 192	SK3122	RT-105	ECG199
	2SC1359B		GE-212	(IR)2SC380A	PTC121 *	HEPS0014 *	RE 192	SK3038 *	RT-308	ECG199
	2SC1359(1)		GE-212	(IR)2SC380A	PTC121 *	HEPS0014 *	RE 192	SK3038 *	RT-308	ECG199
	2SC839		GE-61 *	(IR)2SC644	PTC132 *	HEPS0015 *	RE 13 *	SK3018 *	RT-308	ECG123A *
	2SC829(1)		GE-20 *	(IR)2SC829B	PTC121 *	HEPS0015 *	RE 9 *	SK3122	RT-308	ECG229 *
Q302	2SC394Y	196117(1)	GE-61 *	(IR)2SC372	PTC121 *	HEPS0014 *	RE 9	SK3018 *	RT-309	ECG229 *
	2SC394-0		GE-61 *	(IR)2SC372	PTC121 *	HEPS0014 *	RE 9	SK3018 *	RT-309	ECG229 *
	(1)									
Q303	2SC394	233117(1)	GE-61 *	(IR)2SC372	PTC121 *	HEPS0014 *	RE 9	SK3018 *	RT-309	ECG229 *
	2SC394Y		GE-61 *	(IR)2SC372	PTC121 *	HEPS0014 *	RE 9	SK3018 *	RT-309	ECG229 *
Q304	2SC394	233117(1)	GE-61 *	(IR)2SC372	PTC121 *	HEPS0014 *	RE 9	SK3018 *	RT-309	ECG229 *
	2SC1846Q		GE-336				RE 209			ECG306
	2SC1846(1)		GE-336				RE 209			ECG306
Q305	2SC1957	248717(1)	GE-270	WEP913	PTC180	HEPS3044	RE 209			ECG295
	2SC1306		GE-215	WEP1306	PTC186		RE 203	SK3197	RT-146	ECG235
	2SC1974(1)		GE-337	WEP1306	PTC186		RE 203	SK3197	RT-146	ECG235
Q401	2SC789-0	249017(1)	GE-66 *	TR-76	PTC154		RE 21	SK3054	RT-197	ECG152
	2SD234		GE-66	TR-76		HEPS5027	RE 21	SK3054	RT-197	ECG152
	2SD288(1)		GE-66	TR-76		HEPS5027	RE 21	SK3054	RT-197	ECG152
Q402	2SA509	249117(1)	GE-269	TR-31	PTC127 *	HEPS0026 *	RE 197 *	SK3138	RT-303	ECG290
	MPS-9631		GE-269	TR-31	PTC127 *	HEPS0026 *	RE 197 *	SK3138	RT-303	ECG290
Q403	2SC373	249117(1)	GE-62	(IR)2SC403A	PTC121 *	HEPS0015 *	RE 13 *	SK3124	RT-302	ECG123A *
Q404	2SC373		GE-212	(IR)2SC373	PTC121 *	HEPS0015 *	RE 192	SK3122	RT-105	ECG199

* Lead configuration may vary from original.
(1) Used in some versions.

PARTS LIST AND DESCRIPTION (CONTINUED)

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

ELECTROLYTIC CAPACITORS

ITEM No.	RATING	REPLACEMENT DATA				
		MFR. PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.	
					Q-LINE	GENERAL LINE
C109	33 10V	105752	PC30-25	VTT33B10	QV1-61	EV-1125
C111	33 16V	105852	PC30-25	VTT33D25	QV1-63	EV-1325
C116	10 16V	104352	PC10-25	VTT10B25	QV1-41	EV-1222
C128	10 10V		PC10-25	VTT10B25	QV1-41	EV-1222
	33 10V	105752 (1)	PC30-25	VTT33B10	QV1-61	EV-1125
C131	1 50V	101552	PC1-50	VTT1A50	QV1-11	EV-1615
C133	33 16V	105852	PC30-25	VTT33D25	QV1-63	EV-1325
C136	100 6.3V	107652	PC100-10	VTT100E10	QV1-93	EV-1130
C203	10 16V	104352	PC10-25	VTT10B25	QV1-41	EV-1222
C207	33 10V	105752	PC30-25	VTT33B10	QV1-61	EV-1125
C209	10 16V	104352	PC10-25	VTT10B25	QV1-41	EV-1222
C213	1 50V	101552	PC1-50	VTT1A50	QV1-11	EV-1615
C214	100 6.3V	107652	PC100-10	VTT100E10	QV1-93	EV-1130
C215	33 10V	105752	PC30-25	VTT33B10	QV1-61	EV-1125
C216	33 10V	105752	PC30-25	VTT33B10	QV1-61	EV-1125
C217	1 50V	101552	PC1-50	VTT1A50	QV1-11	EV-1615
C218	100 16V	108052	PC100-16	VTT100F16	QV1-95	EV-1230
C222	33 16V	105852	PC30-25	VTT33D25	QV1-63	EV-1325
C223	1 50V	101552	PC1-50	VTT1A50	QV1-11	EV-1615
C224	33 16V	105852	PC30-25	VTT33D25	QV1-63	EV-1325
C226	10 16V	104352	PC10-25	VTT10B25	QV1-41	EV-1222
C322	1 50V	101552	PC1-50	VTT1A50	QV1-11	EV-1615
C326	1000 16V	111652	PC1000-16	VTT1000L16	QV1-183	EV-1260
C403	2200 25V		WBR2000-25	TC2520A	QE1-645	TVA-1213.5
C404	10 16V	104352	PC10-25	VTT10B25	QV1-41	EV-1222
C406	100 16V	108052	PC100-16	VTT100F16	QV1-95	EV-1230

(1) Used in some versions.

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
C3	.01		DC-103	MGP01	TA110	QC2-141	TG-S10
C101	39 N220 5% 50V	103151					10TCR-Q82
C102	.022		DC-203	MGP02	TA120	QC2-157	TG-S20
C103	.022		DC-203	MGP02	TA120	QC2-157	TG-S20
C104	.022		DC-203	MGP02	TA120	QC2-157	TG-S20
C105	.022		DC-203	MGP02	TA120	QC2-157	TG-S20
C106	.022		DC-203	MGP02	TA120	QC2-157	TG-S20
C107	22 50V		DTZ-22	NP022	CN0422	10TCC-Q22	
C108	.022		DC-203	MGP02	TA120	QC2-157	TG-S20
C110	.047		UK50-503		MAG5015		
C112	.022		DC-203	MGP02	TA120	QC2-157	TG-S20
C113	.047		UK50-503		MAG5015		
C114	2 NPO		DTZ-2R2	NP02P2	CN0522		10TCC-V22
C115	510 5%			CD15FD511J03	SX351	QW1-43	MWA-511
C117	.047			DPMS2S47	EWf1A147	QF1-171	1PB-S47
C118	2.5 50V			NP02P2	CN0522		10TCC-V22
C119	.047		DTZ-2R2		MAG5015		
C120	.047		UK50-503		MAG5015		
C121	.1 10V		UK12-104		MAG1201		HY-360
C122	.047		UK50-503		MAG5015		
C123	.047		UK50-503		MAG5015		
C124	220 NPO 10% 50V		DTZ-220		MAG5015		10TCC-T22
C125	.047		UK50-503		MAG5015		
C126	.047 10%		UK50-503		MAG5015		
C127	.022		DC-203	MGP02	TA120	QC2-157	TG-S20
C129	.022		DC-203	MGP02	TA120	QC2-157	TG-S20
C130	.047		UK50-503		MAG5015		
C132	1.8				CN0510		10TCC-V10
C134	.047		UK50-503		MAG5015		
C201	.001 10% 50V		DD-102		GP210		10TS-D10
C202	.01		DC-103	MGP01	TA110	QC2-141	TG-S10
C204	68 NPO 50V		DTZ-68	NP068	CN0468		10TCC-Q68
C205	56 NPO 50V				CN0456		10TCC-Q56
C206	39 N220 5%	103151					10TCR-Q39
C208	.01		DC-103	MGP01	TA110	QC2-141	TG-S10
C210	33 50V		DTZ-33	NP033	CN0433		10TCC-Q33
C211	.0047 50V		DD-472	GP4700	GP247		56A-D47
C219	.047			DPMS2S47	EWf1A147	QF1-171	1PB-S47
C220	.047			DPMS2S47	EWf1A147	QF1-171	1PB-S47
C225	.01		DC-103	MGP01	TA110	QC2-141	TG-S10
C301	.01		DC-103	MGP01	TA110	QC2-141	TG-S10
C303	3 NPO 50V		DTZ-3R3	NP03P3	CN0533		10TCC-V33

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
C304	27 N220 5% 50V	102351	DTZ-150		CN0315		10TCR-Q27
C305	150 NPO 10% 50V		DC-103	MGP01	TA110	QC2-141	10TCC-T15
C306	.01		DC-103	MGP01	TA110	QC2-141	TG-S10
C307	.01		DTZ-2R2	NP02P2	CN0522		10TCC-V22
C308	2 NPO 50V		DC-103	MGP01	TA110	QC2-141	TG-S10
C309	.01		DTZ-2R2	NP02P2	CN0522		10TCC-V22
C310	2 NPO 50V		DC-103	MGP01	TA110	QC2-141	TG-S10
C311	.01		DC-103	MGP01	TA110	QC2-141	TG-S10
C312	.01		DC-103	MGP01	TA110	QC2-141	TG-S10
C313	82 NPO 10% 50V	(1)	DTZ-82	NP082	CN0482		10TCC-Q82
	100		DTZ-100	NP0100	CN0310		10TCC-T10
C314	.01		DC-103	MGP01	TA110	QC2-141	TG-S10
C315	330 NPO 10% 50V		DD-331	GP330	GP333		10TS-T33
C316	60 NPO 50V				CN0456		10TCC-Q56
C317	.01		DC-103	MGP01	TA110	QC2-141	TG-S10
C318	470 10% 50V		DD-471	GP470	GP347		10TS-T47
C319	.01		DC-103	MGP01	TA110	QC2-141	TG-S10
C320	120 NPO 10% 50V		DTZ-120		CN0312		10TCC-T12
C321	270 N220 10% 50V						10TCR-T27
C323	.004 50V		DD-392		GP239	QC2-111	56A-D39
C324	.01		DC-103	MGP01	TA110	QC2-141	TG-S10
C325	.022		DC-203	MGP02	TA120	QC2-157	TG-S20
C327	2 NPO 50V		DTZ-2R2	NP02P2	CN0522		10TCC-V22
C328	47 N220 5% 50V	103651					10TCR-Q47
C329	82 NPO 10% 50V						10TCC-Q82
C330	240 NPO 10% 50V	119751	DTZ-82	NP082	CN0482		
C331	.047	(1)					
C332	.047		UK50-503		MAG5015		
C333	.047		UK50-503		MAG5015		
C334	.047		UK50-503		MAG5015		
C335	.047		UK50-503		MAG5015		
C336	.047		UK50-503		MAG5015		
C337A	.047		UK50-503		MAG5015		
C337B	.01		DC-103	MGP01	TA110	QC2-141	TG-S10
C338	.01		DC-103	MGP01	TA110	QC2-141	TG-S10
C341	.01	(1)	DC-103	MGP01	TA110	QC2-141	TG-S10
C342	.01	(1)	DC-103	MGP01	TA110	QC2-141	TG-S10
C344	220 NPO 10% 50V		DTZ-220				10TCC-T22
C345	180 NPO 10% 50V		DTZ-180				10TCC-T18
C346	33 50V		DTZ-33	NP033	CN0433		10TCC-Q33
C349	220		DTZ-220				10TCC-T22
C350A	.01		DC-103	MGP01	TA110	QC2-141	TG-S10
C350B	33		DTZ-33	NP033	CN0433		10TCC-Q33
C351	.01	(1)	DC-103	MGP01	TA110	QC2-141	TG-S10
C352	.01	(1)	DC-103	MGP01	TA110	QC2-141	TG-S10
C353	.01	(1)	DC-103	MGP01	TA110	QC2-141	TG-S10
C354	47		DTZ-47	NP047	CN0447		10TCC-Q47
C355	39	(1)			CN0439		10TCC-Q39
C356	.01		DC-103	MGP01	TA110	QC2-141	TG-S10
C360	.01		DC-103	MGP01	TA110	QC2-141	TG-S10
C401	.0022				GP222		10TS-D22
C402	.0047		DD-472	GP4700	GP247		56A-D47
C405	.01		DC-103	MGP01	TA110	QC2-141	TG-S10

(1) Used in some versions.

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

ITEM No.	FUNCTION	RESIST-ANCE	REPLACEMENT DATA				
			MFR. PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	MALLORY PART No.	TRW PART No.
RV101	Squelch Range	5000					
RV102	S Meter	10K	286913				
RV103	Volume/Switch	10K	181511	F2-10K,SSK014, KR2	NP-10K-Z, UP-C-400,NWE-20	UA14A,SK1000,US27	BU1,CF61,SS1,Wf
RV201	Squelch	10K	181611	F1-10K,SSK014	NP-10K-S, UP-C-400	UA14L,SK1000	BU1,CF61,SS1,DC1
RV301	Power Meter	20K	286813				
R407	Volt	5000		T-5000 (2)	C-502 (2)	MTC53L1 (2)	X201R502B (2)

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



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	1A Fast Acting		567420	AGC1	HKP	312001	342012AL	F61-2
F2	1.5A Fast Acting			AGC1-1/2	HDJ	31201.5	150145	F61-1/2-2

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		18-032	18-034	18-010	18-105	1	4	2	5	NC	3

CRYSTALS

ITEM No.	CRYSTAL FREQUENCY IN MHz	MFGR. PART No.	CTS KNIGHTS PART No.	CHANNEL	ITEM No.	CRYSTAL FREQUENCY IN MHz	MFGR. PART No.	CTS KNIGHTS PART No.	CHANNEL
X1	37.600	136235	DA14W37600	1,2,3,4	X8	10.170	137335	DB80W10170	2,6,10,14,18,22
X2	37.650	136335	DA14W37650	5,6,7,8	X9	10.160	137435	DB80W10160	3,7,11,15,19
X3	37.700	136435	DA14W37700	9,10,11,12	X10	10.140	137535	DB80W10140	4,8,12,16,20,23
X4	37.750	136535	DA14W37750	13,14,15,16	X11	10.635	136835	DC80W10635	1,5,9,13,17,21
X5	37.800	136635	DA14W37800	17,18,19,20	X12	10.625	136935	DC80W10625	2,6,10,14,18,22
X6	37.850	136735	DA14W37850	21,22,23	X13	10.615	137035	DC80W10615	3,7,11,15,19
X7	10.180	137235	DB80W10180	1,5,9,13,17,21	X14	10.595	137135	DC80W10595	4,8,12,16,20,23

MISCELLANEOUS

ITEM No.	PART NAME	PART No.	NOTES
CF	Filter	140535	455kHz
J1	Jack	234119	Antenna
J2	Jack		PA Speaker
J3	Jack		External Speaker
J4	Jack	234419	DC Power
J5	Jack	234719	AC Power
J6	Jack	234619	Headphone
J7	Jack	234219	Microphone
M1	Meter	122827	S/Power
PL1	Lamp		Meter Illumination (10.07V @ 38mA)
PL2	Lamp		Channel (4.90V @ 35mA)
PL3	Lamp		XMT Indicator (4.60V @ 36mA)
PL4	Lamp		REC Indicator (4.55V @ 36mA)
SW1	Switch	217514	PA/Local/DX
SW2	Switch		Power (Part of Volume Control)
SW3	Switch	217014	Channel Selector
SW4	Switch		DC (Part of AC Power Jack, J5.)
	Power Cord	133238	DC
	Power Cord	133338	AC

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

ITEM	PART No.	ITEM	PART No.
Escutcheon, Front	191880	Holder, Microphone	566720
Cover, Top	567720	Knob, Channel	206218
Cover, Bottom	567820	Knob, Control	206318

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')