

PHOTOFACT®

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.



MODELS GB-11923 (Gem Marine)
GTX-2300 (Gemtronics)

ALIGNMENT INSTRUCTIONS

Suggested Alignment Tools:

GC Electronics:

ALL tunable coils and transformers.....9295

RECEIVER

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

Adjustments made with 14-volt DC input or 120-volt AC input to power supply.

Adjust volume control to obtain suitable reading.

SIGNAL GENERATOR	GEN FREQ	CHANNEL	ADJUST	REMARKS
High side thru .01uF to pin 2 of V2, low side to ground.	455kHz, 1000Hz @ 30% modulation.	Any	T3(Top) T3(Bot) T4(Top) T4(Bot) T5(Top) T5(Bot)	Set generator output low enough to prevent AGC limiting. Adjust for maximum.
VTVM to pin 9 of V7.	None	23	L7	Tune for peak negative reading. Tune clockwise for about 70% of peak.
RF Voltmeter to pin 2 of V8	None	13	T9(Top) T9(Bot)	Adjust for maximum.
High side thru .01uF to antenna jack, low side to ground.	27.115MHz, 1000Hz @ 30% modulation.	13	T1(Top) T1(Bot) T2(Top) T2(Bot)	Set generator output low enough to prevent AGC limiting. Adjust for maximum.

GEMTRONICS/GEM MARINE MODELS GB-11923, GTX-2300

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

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RECEIVER ADJUSTMENTS

Connect an AC VTVM or AF Wattmeter across speaker voice coil.
These adjustments made with 14-volt DC input or 120-volt AC input to power supply.
Adjust volume control to obtain a suitable reading.

SIGNAL GENERATOR	GEN FREQ	CHANNEL	ADJUST	REMARKS
S METER High side thru .01uF to antenna jack, low side to ground.	27.115MHz, 1000Hz @ 30% modulation, output 100uV.	13	RV1	Adjust for a 9 reading.

TRANSMITTER

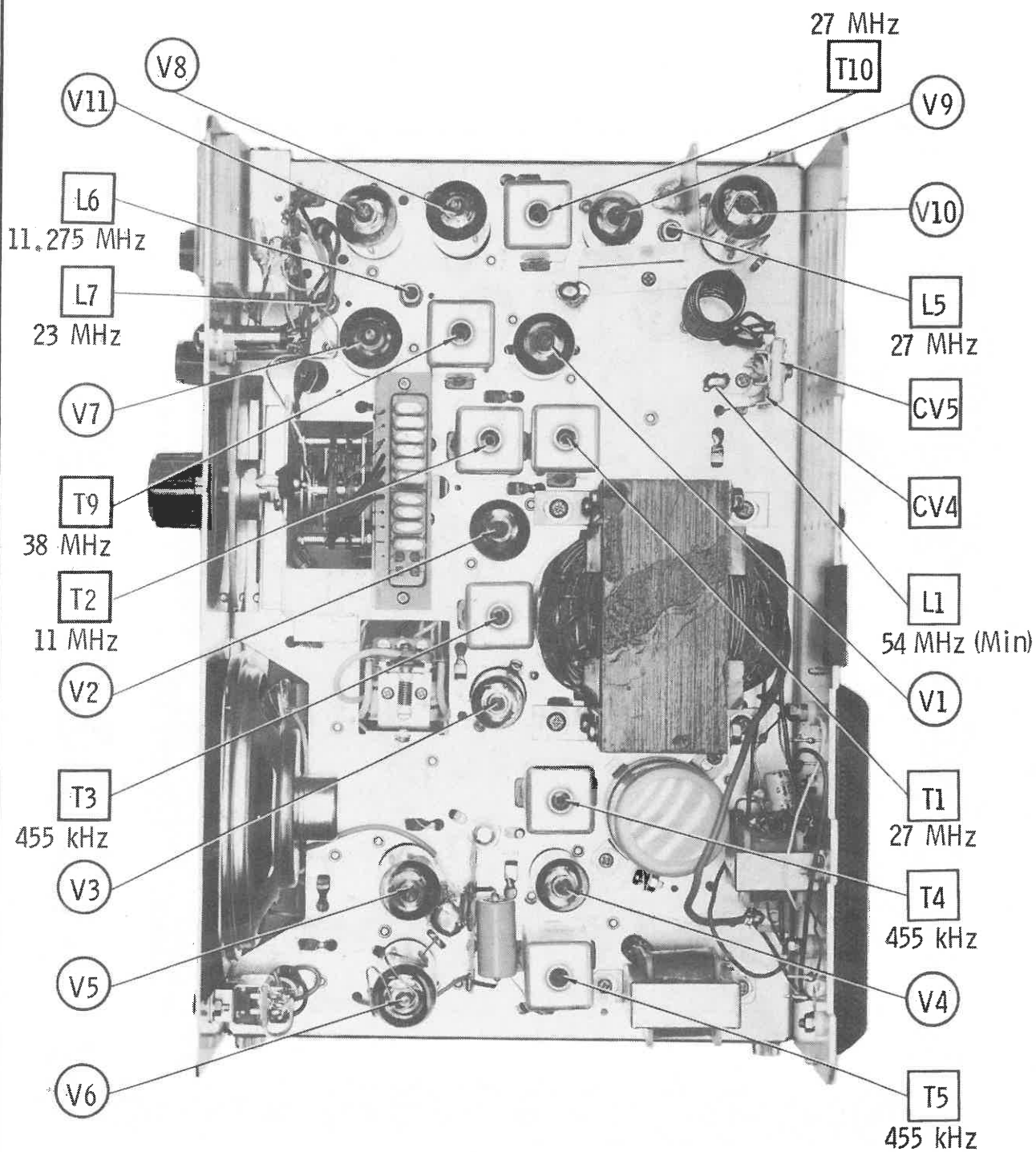
Connect an RF Wattmeter or 50-ohm, 25-watt dummy load to antenna connector.
Adjustments made with 14-volt DC input or 120-volt AC input to power supply.

INDICATOR	ADJUST	REMARKS
MIXER, BUFFER, DRIVER, FINAL RF Wattmeter	L6, T10(Top) T10(Bot) L5, CV4, CV5	Channel selector to Ch. 13. Key transmitter. Adjust for maximum.
OUTPUT POWER RF Wattmeter	CV4, CV5	Key transmitter. Adjust for 4 watts output
TVI TRAP TV (Ch. 2)	L1	Key transmitter. Adjust for MINIMUM interference on TV.
FREQUENCY CHECK Frequency Counter to pin 6 of V8 and ground.	CV1	Adjust for 11.275MHz.

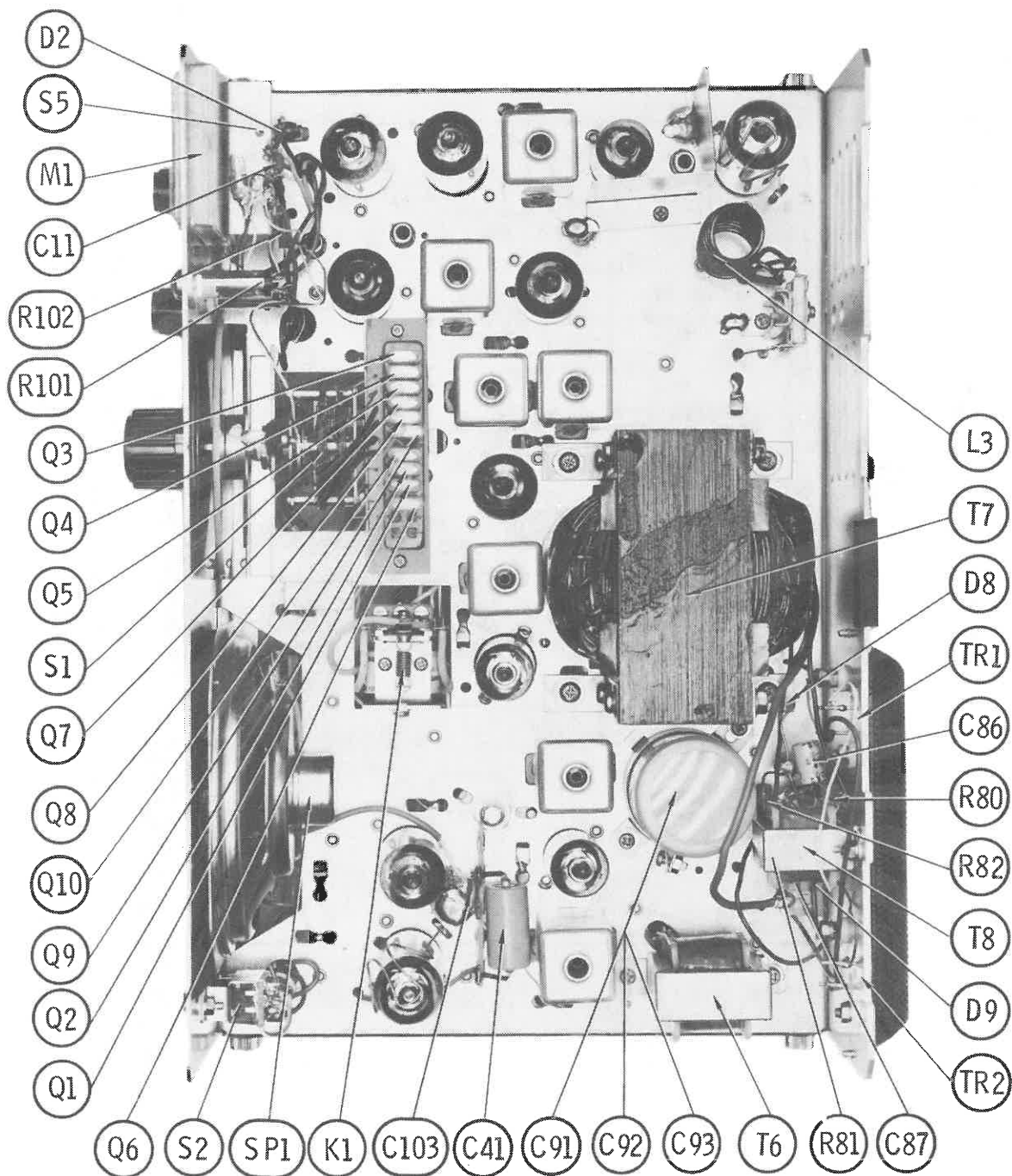
TRANSMITTER ADJUSTMENTS

Connect an RF Wattmeter or 50-ohm, 25-watt dummy load to antenna connector.
Adjustments made with 14-volt DC input or 120-volt AC input to power supply.

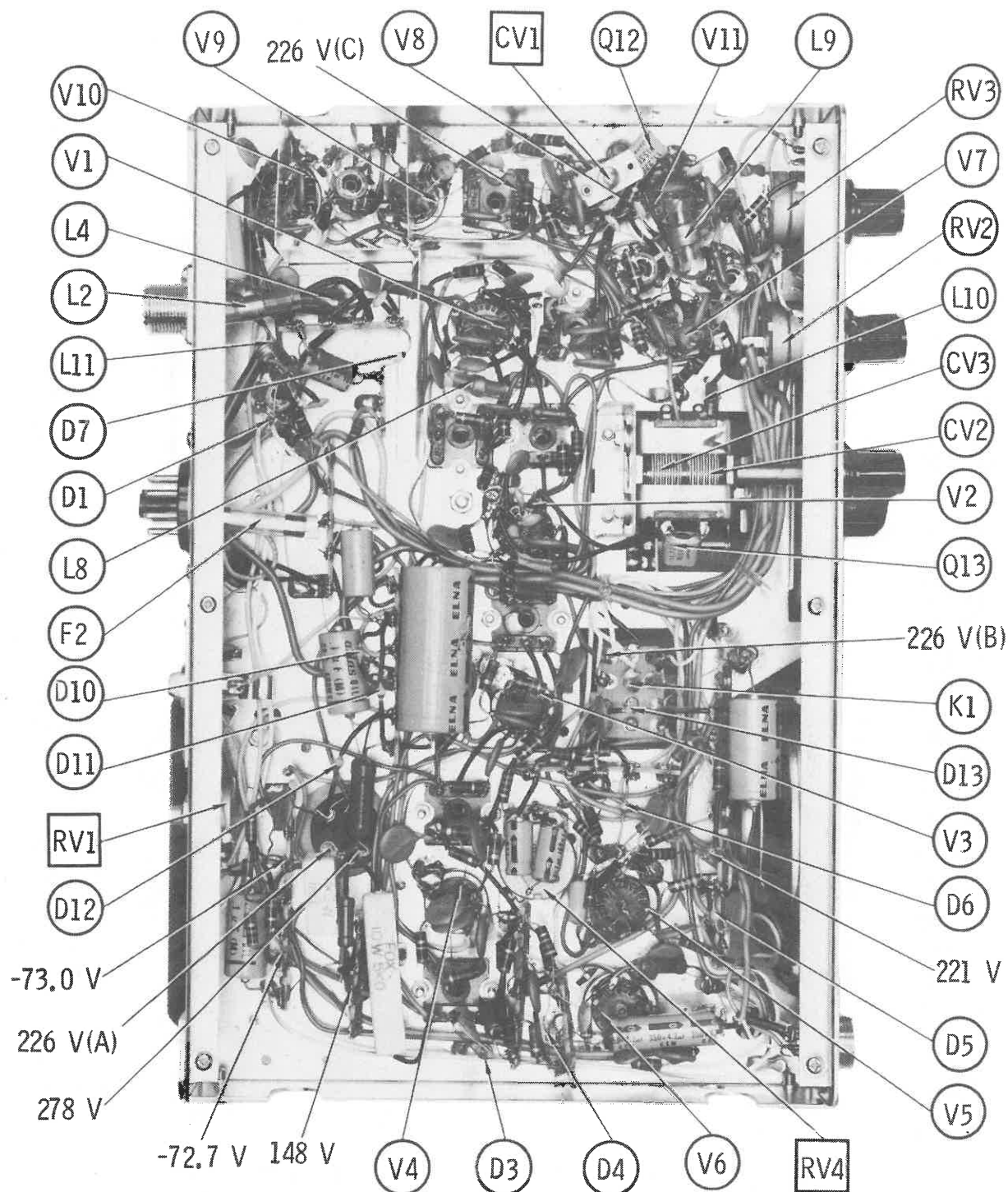
INDICATOR	ADJUST	REMARKS
AMC Modulation Meter connected to antenna jack	RV4	Inject a 1000Hz 40mV audio signal thru .05uF at mic input. Key transmitter. Adjust for 80% modulation maximum.



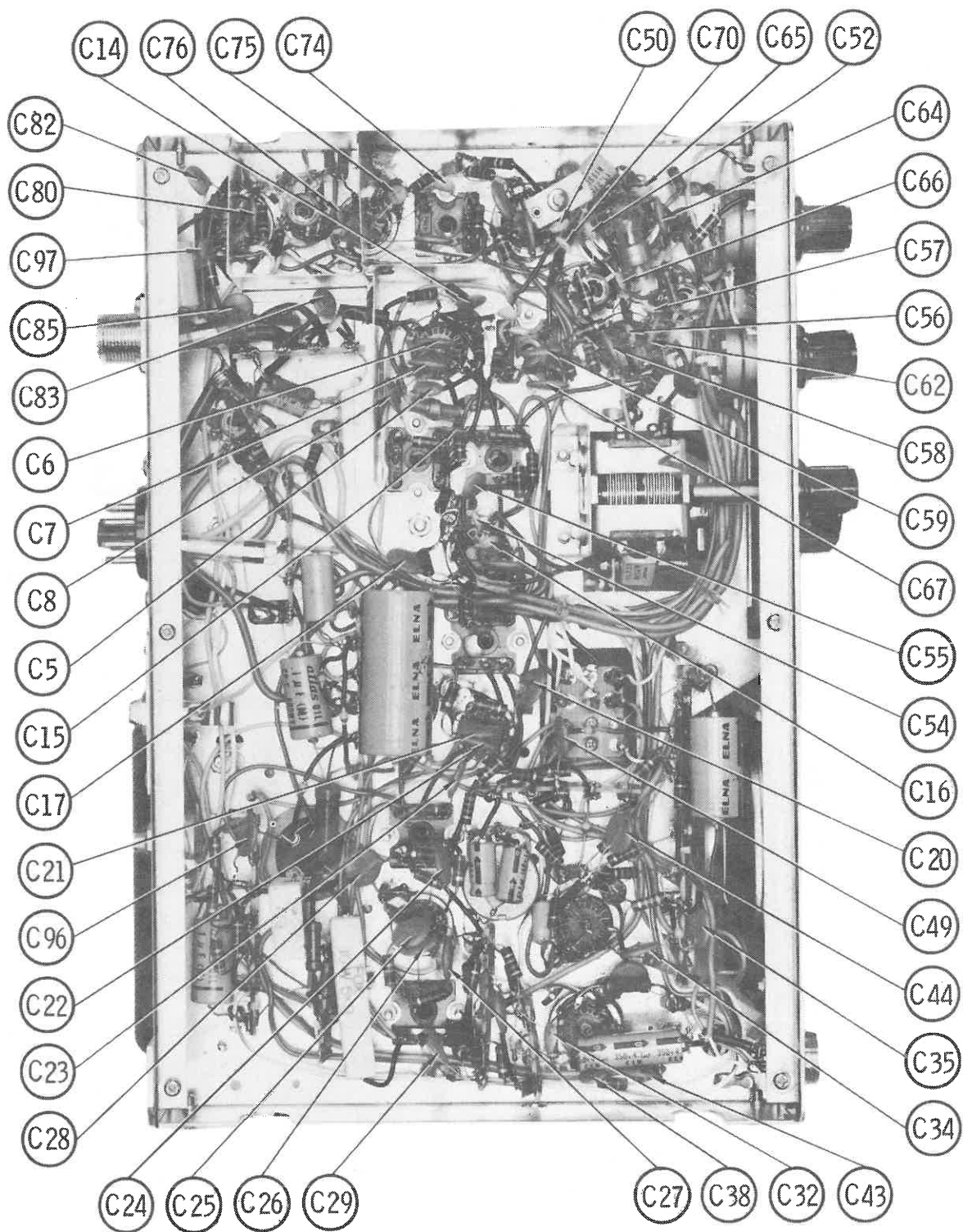
CHASSIS - TOP



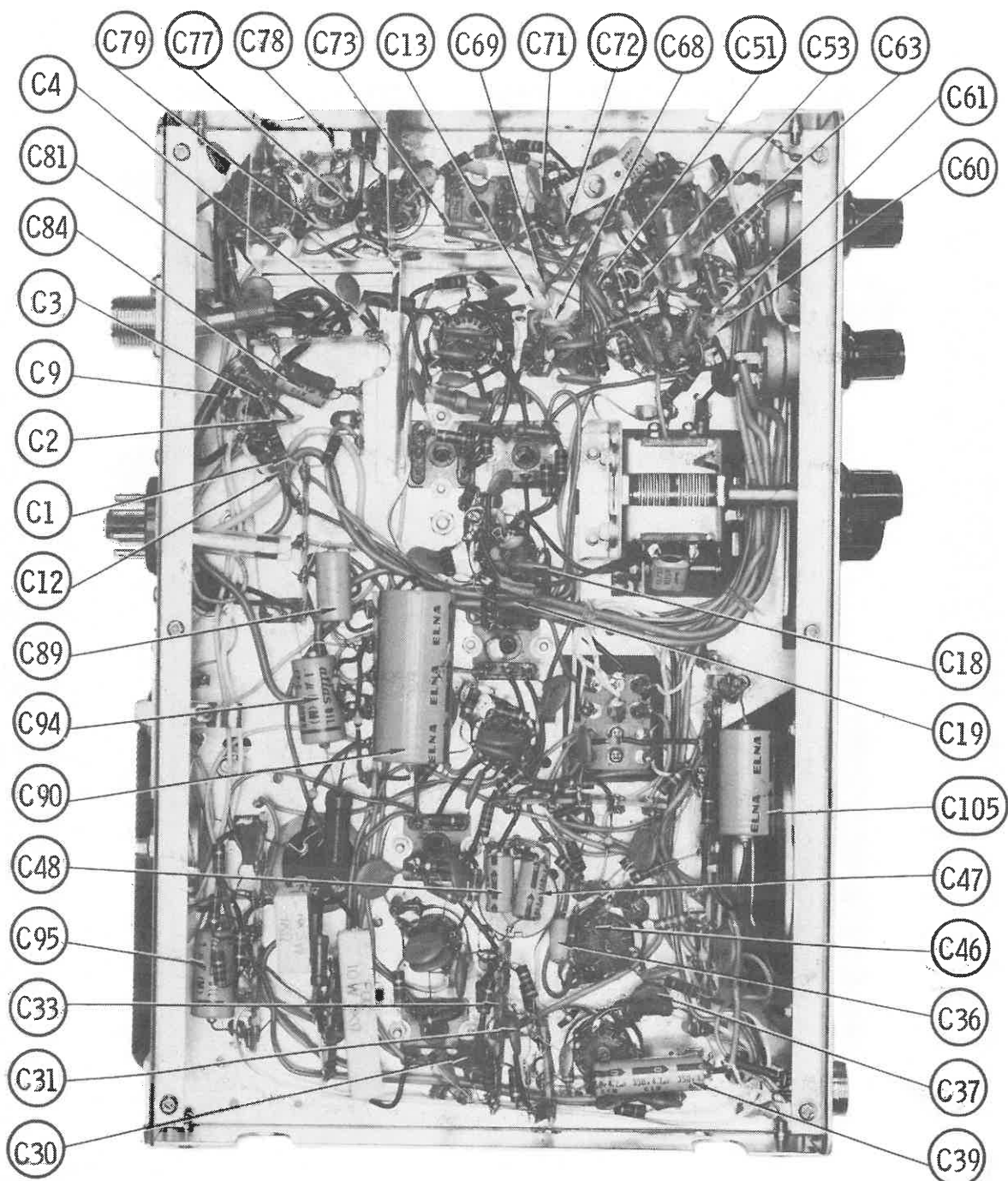
CHASSIS - TOP



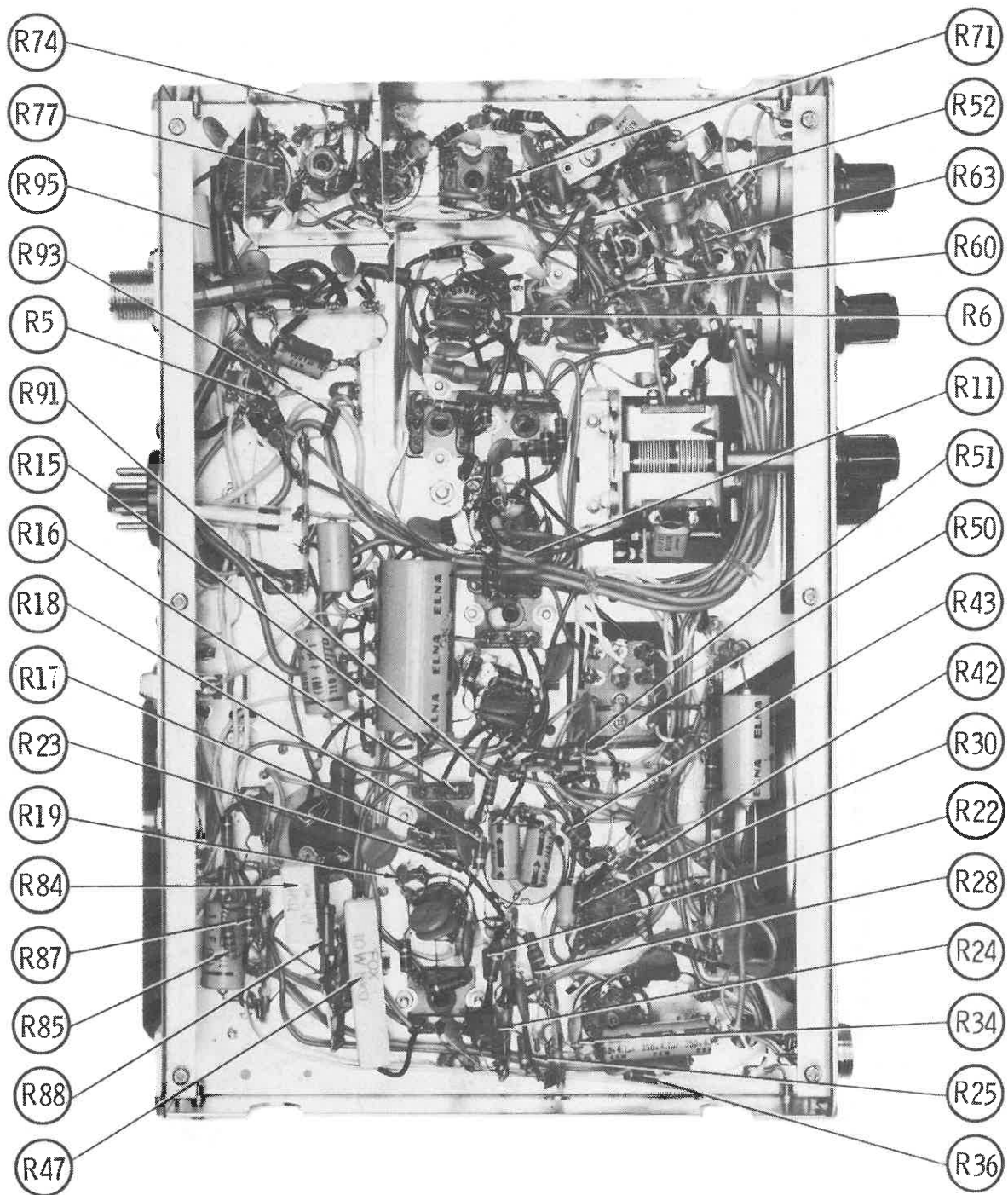
CHASSIS - BOTTOM



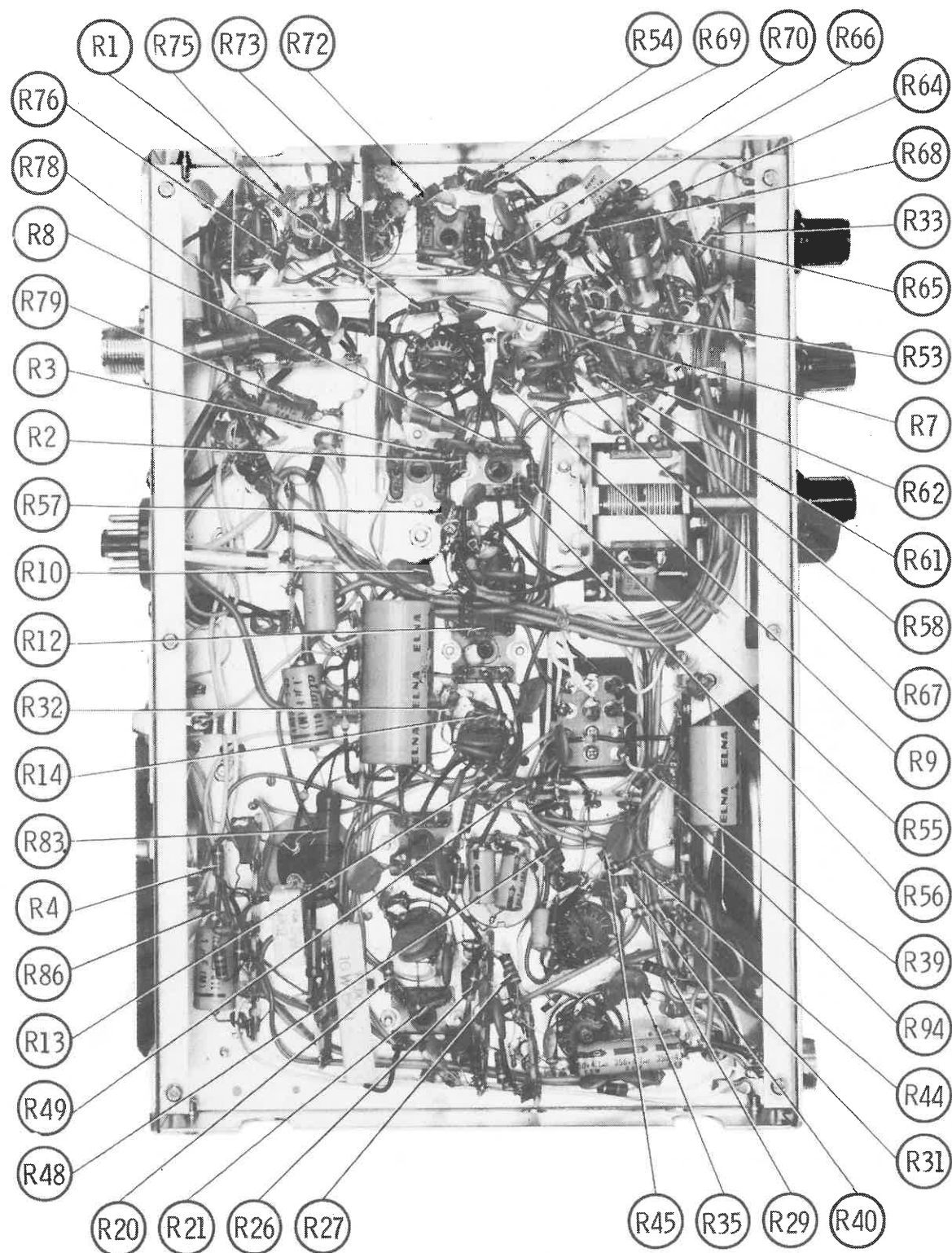
CHASSIS - BOTTOM



CHASSIS - BOTTOM

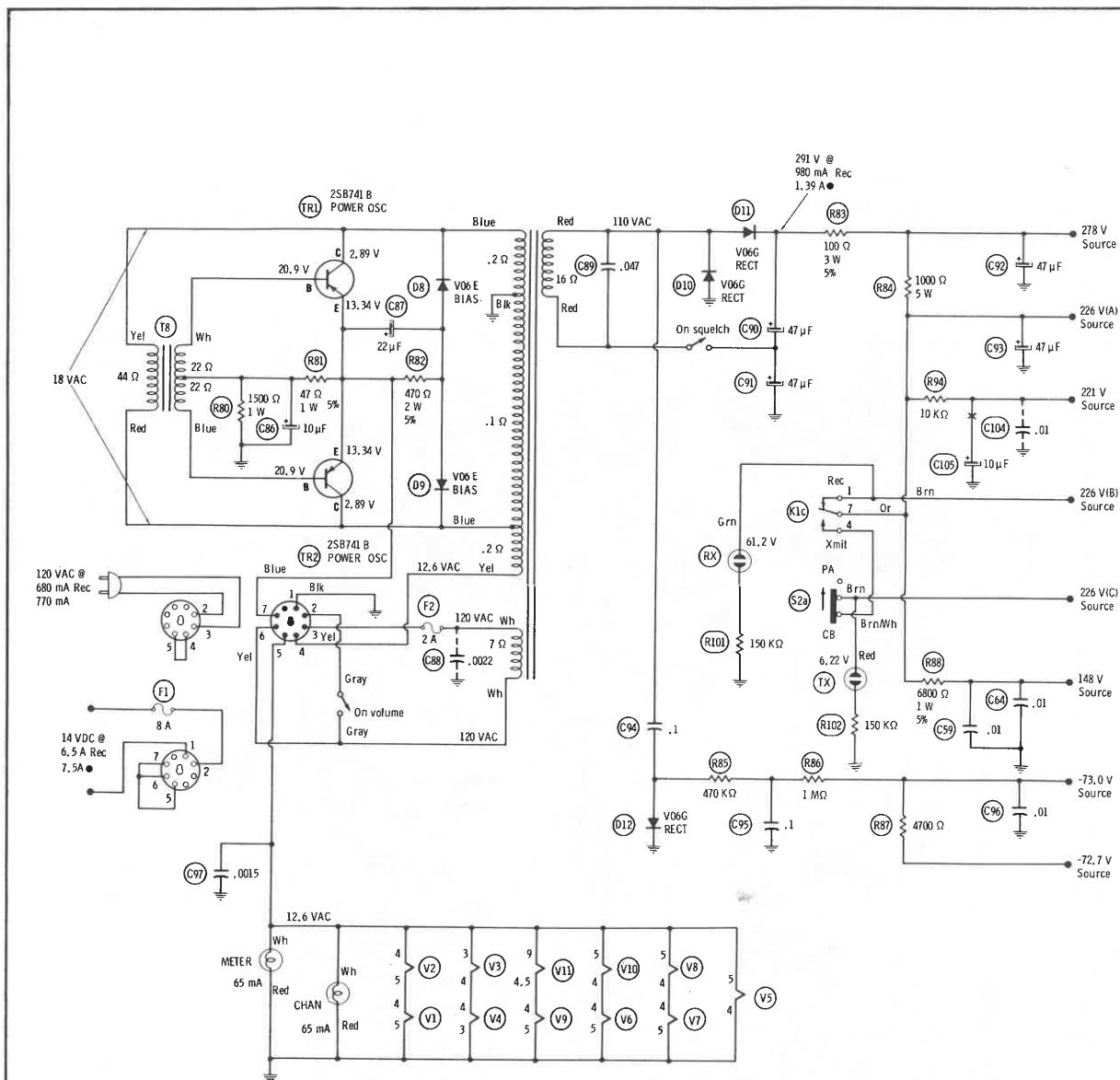


CHASSIS - BOTTOM



GEMTRONICS / GEM MARINE MODELS GB-1 1935, GTX-2300

CHASSIS - BOTTOM



Terminal Guides



TR1, TR2
Bottom view



K1
Bottom view

✱ Circuitry not used in some versions

--- Circuitry used in some versions

⊙ See parts list

✱ Nominal value

⊥ Ground

Measurements with switching as shown unless noted:

■ Squelch fully clockwise

● Transmit

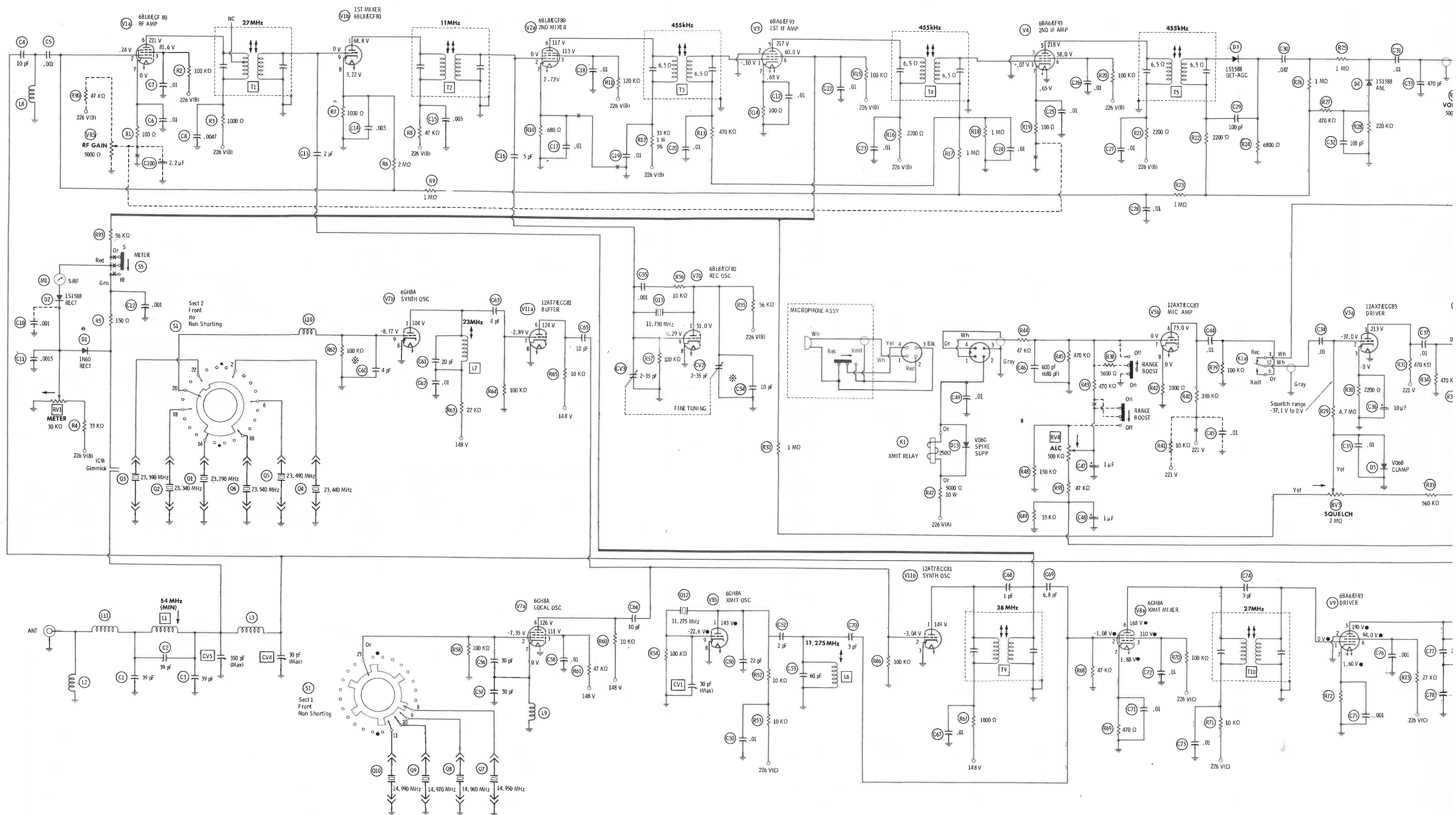
Supply voltage maintained as shown at input.
 Voltages measured with digital meter, no signal.
 Controls adjusted for normal operation.
 Arrow at control indicates direction of advance.
 Terminal identification may not be found on unit.
 Resistors are 1/2W or less, 5% unless noted.
 Value in () used in some versions.

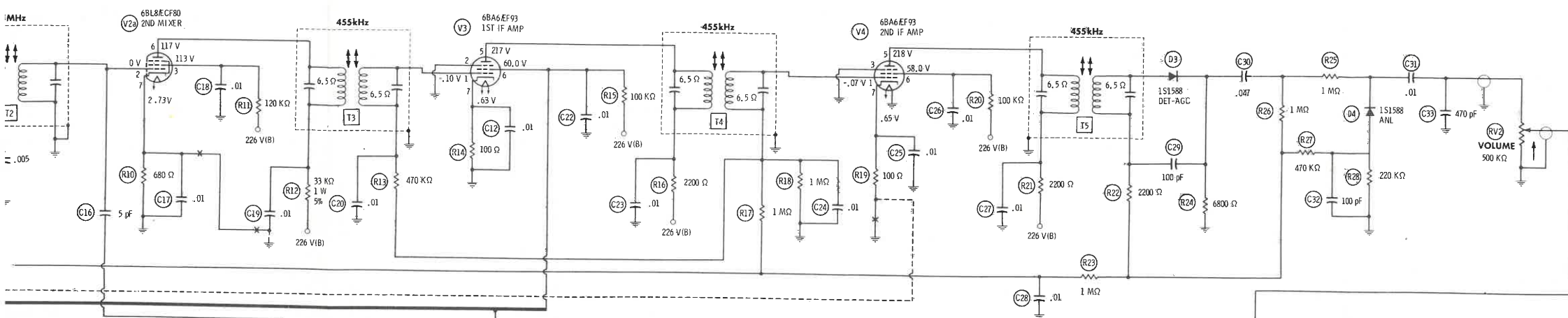
A PHOTOFAC STANDARD NOTATION SCHEMATIC

WITH **CIRCUITACE**

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Chan	Crystal Complement	Chan	Crystal Complement	Chan	Crystal Complement	Chan	Crystal Complement
1	Q1, Q7	7	Q2, Q9	13	Q4, Q7	19	Q5, Q9
2	Q1, Q8	8	Q2, Q10	14	Q4, Q8	20	Q5, Q10
3	Q1, Q9	9	Q3, Q7	15	Q4, Q9	21	Q6, Q7
4	Q1, Q10	10	Q3, Q8	16	Q4, Q10	22	Q6, Q8
5	Q2, Q7	11	Q3, Q9	17	Q5, Q7		
6	Q2, Q8	12	Q3, Q10	18	Q5, Q8	23	Q6, Q10

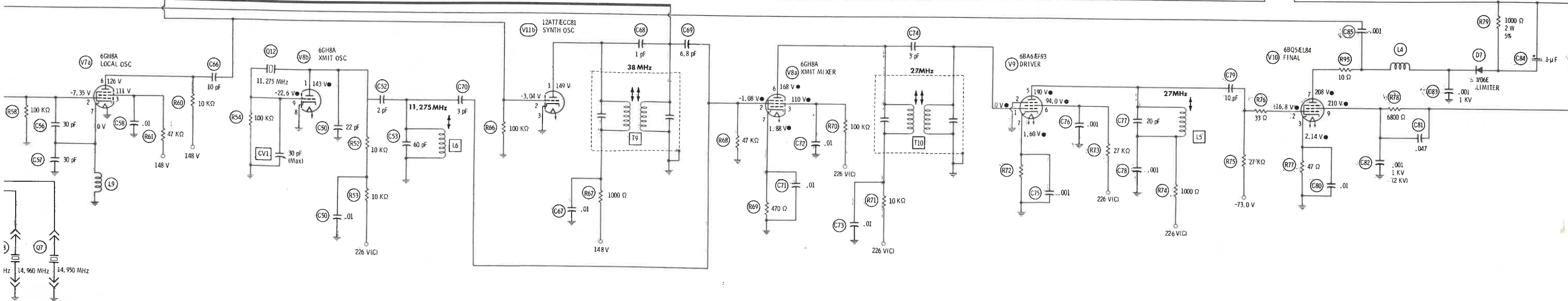
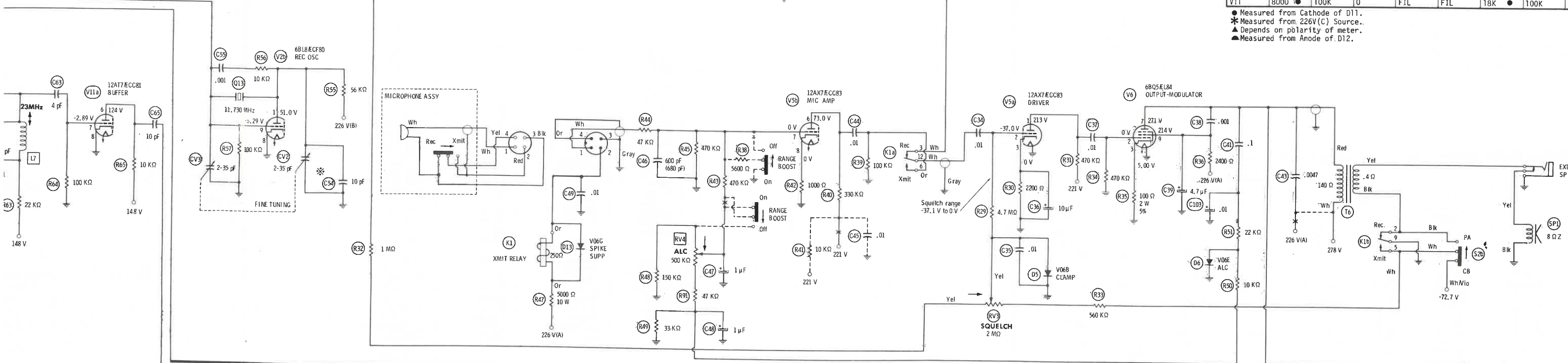




RESISTANCE MEASUREMENTS MEASUREMENTS BELOW TAKEN WITH METER HAVING .08V MAX BETWEEN PROBE TIPS

ITEM	PIN 1	PIN 2	PIN 3	PIN 4	PIN 5	PIN 6	PIN 7	PIN 8	PIN 9
V1	48K	1.2M	100K	FIL	FIL	2000	100	1000	.2
V2	57	0	121	FIL	FIL	34K	680	0	100K
V3	1M	0	FIL	FIL	3000	92K	100		
V4	600K	0	FIL	FIL	3000	92K	100		
V5	460K	10M	2200	FIL	FIL	325K	260K	1000	FIL
V6	NC	470K	100	FIL	FIL	NC	200	NC	3100
V7	28K	100K	52K	FIL	FIL	17K	0	0	100K
V8	21K	47K	100K	FIL	FIL	10K	470	0	100K
V9	0	0	FIL	FIL	1000	27K	100		
V10	NC	1.5M	47	FIL	FIL	NC	700K	NC	7000
V11	8000	100K	0	FIL	FIL	18K	100K	0	FIL

● Measured from Cathode of D11.
* Measured from 226V(C) Source.
▲ Depends on polarity of meter.
■ Measured from Anode of D12.



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

WIRING DATA

General-use Hook-up Wire	Use BELDEN No. 8530 (Solid) Available in 12 Colors 8524 (Stranded) Available in 12 Colors
Power Cord, 2-Wire	Use BELDEN No. 17106 (Plastic) or 17126 (Rubber) -6 feet 17109 (Plastic) or 17129 (Rubber) -9 feet
Shielded Antenna Lead	Use BELDEN No. 8214 Lowest-loss (RG-8/U Type) 8237 Low-loss (RG-8/U) 8240 (Solid) Miniature (RG-58/U) 8259 (Stranded) Miniature (RG-58A/U)
Coiled Microphone Cable	Use BELDEN No. 8497 3-Conductor (1 shielded for Press-to-Talk) Neoprene
Ignition Noise Suppression	Use BELDEN No. 7300-Series Spark-Plug Sets

TUBES

AMPEREX			GENERAL ELECTRIC			RCA			SYLVANIA		
ITEM No.	USE	TYPE	ITEM No.	USE	TYPE	ITEM No.	USE	TYPE	ITEM No.	USE	TYPE
V1	RF Amp/1st Mixer	6BL8/ECF80	V7	Local Osc/Synth Osc	6GH8A	V8	Xmit Osc/Xmit Mixer	6GH8A	V9	Xmit Driver	6BA6/EF93
V2	2nd Mixer/Rec Osc	6BL8/ECF80	V10	Final	6BQ5/EL84	V11	Synth Osc/Buffer	12AT7/ECC81			
V3	1st IF Amp	6BA6/EF93									
V4	2nd IF Amp	6BA6/EF93									
V5	Mic Amp/Audio Driver	12AX7/ECC83									
V6	Output Modulator	6BQ5/EL84									

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.
D1	1N60 1N34 1S34	094-014	1N60 1N34AS 1N34AS	PTC206 PTC207 PTC207	HEPR9135 HEPR9134 HEPR9134	RE 47 RE 47 RE 47	SK3088 SK3087 SK3087	RT-263 RT-200 RT-200	ECG109 ECG109 ECG109
D2	1S1588	094-007	GE-300	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
D3	1S1588	094-007	GE-300	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
D4	1S1588	094-007	GE-300	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
D5	V06B	094-010	GE-504A	PTC202	HEPR0054	RE 49	SK3017A	RT-215	ECG116
D6	V06E	094-011	GE-509	PTC203	HEPR0056	RE 51	SK3080	RT-210	ECG125
D7	V06E	094-011	GE-509	PTC203	HEPR0056	RE 51	SK3080	RT-210	ECG125
D8	V06E	094-011	GE-509	PTC203	HEPR0056	RE 51	SK3080	RT-210	ECG125
D9	V06E	094-011	GE-509	PTC203	HEPR0056	RE 51	SK3080	RT-210	ECG125
D10	V06G	094-012	GE-509	PTC203	HEPR0056	RE 51	SK3080	RT-210	ECG125
D11	V06G	094-012	GE-509	PTC203	HEPR0056	RE 51	SK3080	RT-210	ECG125
D12	V06G	094-012	GE-509	PTC203	HEPR0056	RE 51	SK3080	RT-210	ECG125
D13	V06G	094-012	GE-509	PTC203	HEPR0056	RE 51	SK3080	RT-210	ECG125
TR1	2SB471B	094-013	GE-16	PTC105	HEPG6005	RE 11	SK3009	RT-127A	ECG121
TR2	2SB471B	094-013	GE-16	PTC105	HEPG6005	RE 11	SK3009	RT-127A	ECG121

ELECTROLYTIC CAPACITORS

ITEM No.	RATING	REPLACEMENT DATA			
		MFR. PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.
C36	10 16V	094-044	WBR10-25	TT15X10	TVA-1145
C39	47 350V	094-040	WBR50-450	TC79B	TVA-1713
C47	1 160V	094-041	WBR1-450	TC56A	TVA-1500
C48	1 160V	094-041	WBR1-450	TC56A	TVA-1500
C84	1 160V	094-041	WBR1-450	TC56A	TVA-1500
C86	10 50V	094-043	PC10-50	MTV10CB50	EV-1622
C87	22 50V	094-042	WBR25-50	VTT22E63	EV-1324
C90	47 350V	094-039	WBR50-450	TC79B	TVA-1713
C91	47 350V	094-038	CC0236A	FP330.9A	TVL-3639.9
C92	47 350V	094-038	CC0236A	FP330.9A	TVL-3639.9
C93	47 350V	094-038	CC0236A	FP330.9A	TVL-3639.9
C105	10 35V	094-038	WBR10-50	MTA10D50	TVA-1304

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.
C1	39 10%				CN0439	10TCC-Q39
C2	39 10%				CN0439	10TCC-Q39
C3	39 10%				CN0439	10TCC-Q39
C4	10		DTZ-10	NP010	CN0410	10TCC-Q10
C5	.001		DD-102		GP210	10TS-D10
C6	.01		DD-1032	GP10000	GP110	10TS-S10
C7	.01		DD-1032	GP10000	GP110	10TS-S10
C8	.0047					10TS-D47
C9	Gimmick					
C10	.001		DD-102		GP210	10TS-D10
C11	.0015		DD-152		GP215	2SS-D15
C12	.001		DD-102		GP210	10TS-D10
C13	2 +.5		DTZ-2R2	NP02P2	CN0522	10TCC-V22
C14	.005					10TS-D50
C15	.005					10TS-D50
C16	5 10%					10TCC-V50
C17	.01		DD-1032	GP10000	GP110	10TS-S10
C18	.01		DD-1032	GP10000	GP110	10TS-S10
C19	.01		DD-1032	GP10000	GP110	10TS-S10
C20	.01		DD-1032	GP10000	GP110	10TS-S10
C21	.01		DD-1032	GP10000	GP110	10TS-S10
C22	.01		DD-1032	GP10000	GP110	10TS-S10
C23	.01		DD-1032	GP10000	GP110	10TS-S10
C24	.01		DD-1032	GP10000	GP110	10TS-S10
C25	.01		DD-1032	GP10000	GP110	10TS-S10
C26	.01		DD-1032	GP10000	GP110	10TS-S10
C27	.01		DD-1032	GP10000	GP110	10TS-S10
C28	.01		DD-1032	GP10000	GP110	10TS-S10
C29	100 10%		DD-101	GP100	GP310	10TS-T10
C30	.047			DPMS6S47	EWF6147	6PS-S47
C31	.01		DD-1032	GP10000	GP110	10TS-S10
C32	100 10%		DD-101	GP100	GP310	10TS-T10
C33	470		DD-471	GP470	GP347	10TS-T47
C34	.01		DD-1032	GP10000	GP110	10TS-S10
C35	.01		DD-1032	GP10000	GP110	10TS-S10
C37	.01		DD-1032	GP10000	GP110	10TS-S10
C38	.001		DD-102		GP210	10TS-D10
C41	.1 600V			DPMS6P1	EWF6010	6PS-P10
C43	.0047					10TS-D47
C44	.01		DD-1032	GP10000	GP110	10TS-S10
C45	.01		DD-1032	GP10000	GP110	10TS-S10
C46	680		DD-681	GP680	GP368	10TS-T68
C49	.01		DD-1032	GP10000	GP110	10TS-S10
C50	22 10%		DTZ-22	NP022	CN0422	10TCC-Q22
C51	.01		DD-1032	GP10000	GP110	10TS-S10
C52	2 +.5		DTZ-2R2	NP02P2	CN0522	10TCC-V22
C53	60 10%			CD6ED620J03	SX462	424MC62R0J501
C54	10 10%		DTZ-10	NP010	CN0410	10TCC-Q10
C55	.001		DD-102		GP210	10TS-D10
C56	30					10TCC-Q30
C57	30					10TCC-Q30
C58	.01		DD-1032	GP10000	GP110	10TS-S10
C59	.01		DD-1032	GP10000	GP110	10TS-S10
C60	4 +.5		DTZ-4R7	NP04P7	CN0537	10TCC-V47
C61	20		DTZ-20	NP020	CN0420	10TCC-Q20
C62	.01		DD-1032	GP10000	GP110	10TS-S10
C63	4 +.5		DTZ-4R7	NP04P7	CN0537	10TCC-V47
C64	.01		DD-1032	GP10000	GP110	10TS-S10
C65	10 10%		DTZ-10	NP010	CN0410	10TCC-Q10
C66	10 10%		DTZ-10	NP010	CN0410	10TCC-Q10
C67	.01		DD-1032	GP10000	GP110	10TS-S10
C68	1 +.5				CN0510	10TCC-V10
C69	6.8 +.5		DTZ-6R8	NP06P8		10TCC-V68
C70	3 +.5		DTZ-3R3	NP03P3	CN0533	10TCC-V33
C71	.01		DD-1032	GP10000	GP110	10TS-S10
C72	.01		DD-1032	GP10000	GP110	10TS-S10
C73	.01		DD-1032	GP10000	GP110	10TS-S10
C74	3 +.5		DTZ-3R3	NP03P3	CN0533	10TCC-V33
C75	.001		DD-102		GP210	10TS-D10
C76	.001		DD-102		GP210	10TS-D10
C77	20 10%			CD6CD200J03	SX420	
C78	.001		DD-102		GP210	10TS-D10
C79	10 10%		DD-1032	NP010	CN0410	10TCC-Q10
C80	.01			GP10000	GP110	10TS-S10
C81	.047 400V			DPMS4S47	EWF4147	4PB-S47
C82	.01		DD-1032	GP10000	GP110	10TS-S10
C83	.001		DD-102		GP210	10TS-D10
C85	.001		DD-102		GP210	10TS-D10
C89	.047 600V			DPMS6S47	EWF6147	6PS-S47
C94	.1 600V			DPMS6P1	EWF6010	6PS-P10

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

CAPACITORS (continued)

ITEM No.	RATING
C95	.1 600V
C96	.01
C97	.0015
C103	.01
VC1	30
VC2	2-35
VC3	2-35
VC4	30
VC5	350

CONTROLS (All with 100 ohm resistors)

ITEM No.	FUNCTION
RV1	Meter
RV2	Volume/Power Switch
RV3	Squelch/Stand By Switch
RV4	ALC

RESISTORS (Power and 1/2 watt)

ITEM No.	RATING
R47	5 10W WW
R83	100 3W WW

COILS (RF-IF)

ITEM No.	FUNCTION
L1	Pi Filter (54MHz)
L2	RF Choke (5.6uH)
L3	Pi Filter
L4	RF Choke (30uH)
L5	Xmit Driver (27MHz)
L6	Xmit Osc (11.275MHz)
L7	Synth. Osc (23MHz)
L8	RF Choke (22uH)
L9	RF Choke (500uH)
L10	RF Choke (1.1uH)
L11	Ant Load
T1	Rec RF (27MHz)
T2	Rec Mixer (11MHz)
T3	IF (455kHz)
T4	IF (455kHz)
T5	IF (455kHz)
T9	Synth Osc (38MHz)
T10	Xmit Mixer (27MHz)

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.
C95	.1 600V					
C96	.01					
C97	.0015					
C103	.01		DD-1032	DPMS6P1	EW6010	6PS-P10
VC1	30	094-048	DD-152	GP10000	GP110	10TS-S10
VC2	2-35	094-046	DD-1032	GP10000	GP215	10TS-D15
VC3	2-35	094-046			GP110	10TS-S10
VC4	30	094-048				
VC5	350	094-049				

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

ITEM No.	FUNCTION	RESISTANCE	REPLACEMENT DATA				
			MFR. PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	MALLORY PART No.	TRW PART No.
RV1	Meter	30K	094-092	F1-50K, SRS006	A47-30K-S, RS-2 or [NP-30K-S, UP-A-400]	UA34L, SN750 or [RU34L, SL36, SL1500]	BU1, CF12, SS2, DC1
RV2	Volume/Power Switch	500K	094-096	F2-500K, SRS012, KR1	A47-500K-Z, RS-2, SWE-12 or [NP-500K-Z, UP-A-400, NWE-12]	UA55A, SN750, US41 or [RU55A, SL36, SL1500, US41]	BU1, CF25, SS3, GC
RV3	Squelch/Stand By Switch	2meg	094-095	F1-2Meg, SRS012, KR1	A47-2Meg-S, RS-2, SWE-12 or [NP-2Meg-S, UP-A-400, NWE-12]	UA26L, SN750, US41 or [RU26L, SL36, SL1500, US41]	BU1, CF19, SS3, GC
RV4	ALC	500K	094-093	F1-500K, SRS006	A47-500K-S, RS-2 or [NP-500K-S, UP-A-400]	UA55L, SN750 or [RU55L, SL36, SL1500]	BU1, CF16, SS2, DC1

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.
R47	5 10W WW	WR5	094-085	R84	1000 5W WW	WR1000	094-085
R83	100 3W WW	WR100	094-084				

COILS (RF-IF)

ITEM No.	FUNCTION	REPLACEMENT DATA			REMARKS
		PART No.	OTHER IDENTIFICATION	MILLER PART No.	
L1	Pi Filter (54MHz)	094-098	L0019		
L2	RF Choke (5.6uH)	094-103	L0020		
L3	Pi Filter	094-099	L0021		
L4	RF Choke (30uH)	094-105	L0022		
L5	Xmit Driver (27MHz)	094-102	L0023		
L6	Xmit Osc (11.275MHz)	094-100	L0024		
L7	Synth. Osc (23MHz)	094-101	L0025		
L8	RF Choke (22uH)	094-104	L0026		
L9	RF Choke (500uH)	094-113	L0009		
L10	RF Choke (1.1uH)	094-114	L0006		
L11	Ant Load				
T1	Rec RF (27MHz)	094-110	T0025		
T2	Rec Mixer (11MHz)	094-109	T0026		
T3	IF (455kHz)	094-106	L0027		
T4	IF (455kHz)	094-107	L0028		
T5	IF (455kHz)	094-108	L0029		
T9	Synth Osc (38MHz)	094-112	T0030		
T10	Xmit Mixer (27MHz)	094-111	T0031		

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.	
T6	3872	8	094-116			

TRANSFORMER (Power)

ITEM No.	RATING		REPLACEMENT DATA			NOTES
	PRI.	SEC. 1	MFGR. PART No.	THORDARSON PART No.	TRIAD PART No.	
T7	120V AC @ 720mA AC	110V AC @ 480mA AC	094-117			
	SEC. 2	SEC. 3				
	18V AC (Power Osc.)	12.6V AC @ 2.5A				

TRANSFORMER (POWER OSCILLATOR)

ITEM No.	TURNS RATIO			REPLACEMENT DATA			NOTES
	PRI.	SEC. 1	SEC. 2	MFGR. PART No.	THORDARSON PART No.	TRIAD PART No.	
T8	1	1		094-118			

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		MFGR. PART No.	QUAM PART No.	
SP1	4" PM 8 Ohms	094-148	4A05Z8	

GEMTRONICS/GEM MARINE MODELS GB-11935, GTX-2300

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 F2	8 Amp Fast Acting 2A Fast Acting	094-154		AGC8 GJV2	HDJ	312008 318002	150145	

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
Q1	23.290	094-119	MA32M23.290	1,2,3,4	Q7	14.950	094-125	MA20M14.950	1,5,9,13,17,21
Q2	23.340	094-120	MA32M23.340	5,6,7,8	Q8	14.960	094-126	MB20M14.960	2,6,10,14,18,22
Q3	23.390	094-121	MA32M23.390	9,10,11,12	Q9	14.970	094-127	MB20M14.970	3,7,11,15,19
Q4	23.440	094-122	MA32M23.440	13,14,15,16	Q10	14.990	094-128	MB20M14.990	4,8,12,16,20,23
Q5	23.490	094-123	MA32M23.490	17,18,19,20	Q12	11.275	094-129	MC60M11.275	Xmit Osc.
Q6	23.540	094-124	MA32M23.540	21,22,23	Q13	11.730	094-130	MC20M11.730	Rec Osc.

MISCELLANEOUS

ITEM No.	PART NAME	PART No.	NOTES
M1	Meter	094-146	S/RF
K1	Relay	094-150	Xmit/Rec (100V DC)
S1	Switch	094-133	Channel Selector
S2	Switch	094-161	PA/CB
S5	Switch	094-135	Meter (S/RF)
	Crystal Socket	094-134	
	Printed Circuit Board	094-132	Crystal

ACCESSORIES

ITEM	MFGR. PART No.	REMARKS
Microphone	094-147	