

SAMS **PHOTOFACT[®]**



CB RADIO SERIES

CB-27
27
APRIL 1970



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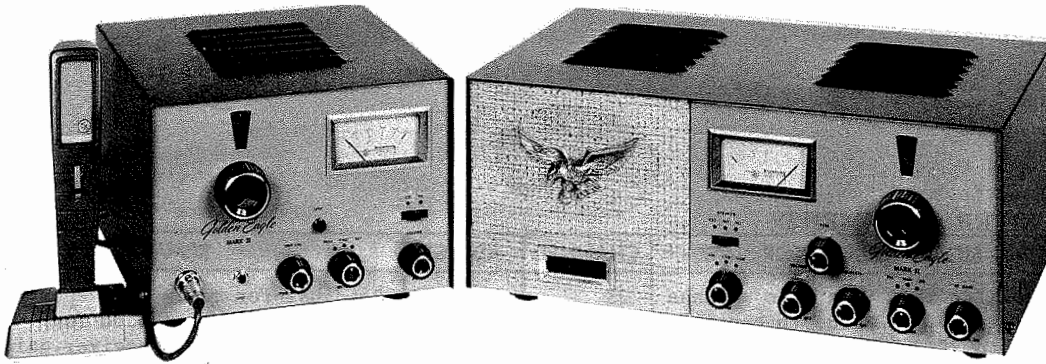
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HOWARD W. SAMS & CO., INC. Indianapolis, Indiana



PHOTOFACT®

For Supplier Address See PHOTOFACT Index



BROWNING GOLDEN EAGLE MARK II Models 69R (Receiver), 69T (Transmitter).

ALIGNMENT INSTRUCTIONS

Suggested Alignment Tools:

A1 thru A9, A11, A12, A17, A18, A21, A22.....General Cement #8868, 9089..Walsco #2528
A10, A13, A14, A15, A16, A19, A20.....General Cement #8606L, 9440.Walsco #2501,
#2544

BROWNING MODELS 69R, 69T

RECEIVER ALIGNMENT

Turn Volume control to any position and squelch fully counter clockwise. Turn RF gain control fully clockwise. Push ANL and AGC to on. Set Main tuning to Channel 12 and Fine tuning for about 90° mesh. Set Mode switch to AM and Tuning switch to manual. Connect VTVM from point Δ to ground.

SIGNAL GENERATOR	CHANNEL	ADJUST	REMARKS
High side thru .01mfd to pin 7 (cathode) of V4B (2nd mixer), low side to chassis. Tune to 455KC (Unmod)	Any	A1 thru A8	Adjust for maximum
High side thru .01mfd to antenna receptacle, low side to chassis. Tune to 27.255MC (Unmod)	23	A11, A12, A14, A15, A16	Adjust for maximum
High side thru .01mfd to antenna receptacle, low side to chassis. Tune to 27.255MC (Unmod)	1	A11, A12	Readjust for maximum.

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ALIGNMENT INSTRUCTIONS (Continued)

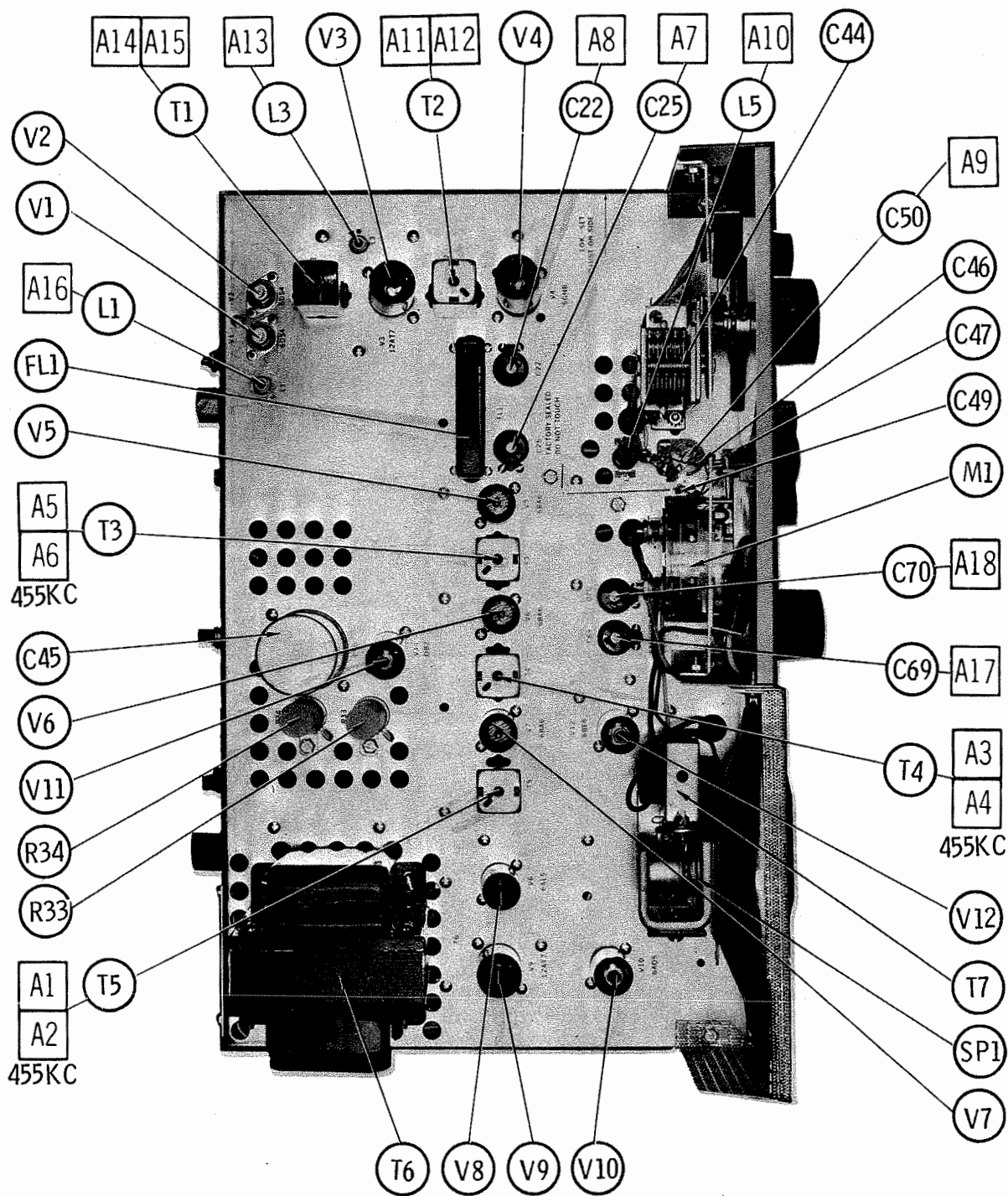
RECEIVER ALIGNMENT

SIGNAL GENERATOR	CHANNEL	ADJUST	REMARKS
High side thru .01mfd to antenna receptacle, low side to chassis. Tune to 27.255MC (Unmod)	23	A14, A15	Readjust for maximum. Repeat A11, A12, A13, A14 as needed for approximate equal receiver gain at both ends of band.
		A9, A10	Adjust for Dial calibration. Adjust A9 for the low frequency channels and A10 for the high frequency channels.
		A13	Connect VTVM from pin 2 (grid) at V3A (1st Rec Oscillator) to ground. Set tuning switch to BB. Turn A13 clockwise until VTVM reads zero. Then turn A13 counterclockwise for maximum meter reading and go 1/4 turn beyond the peak for stability.

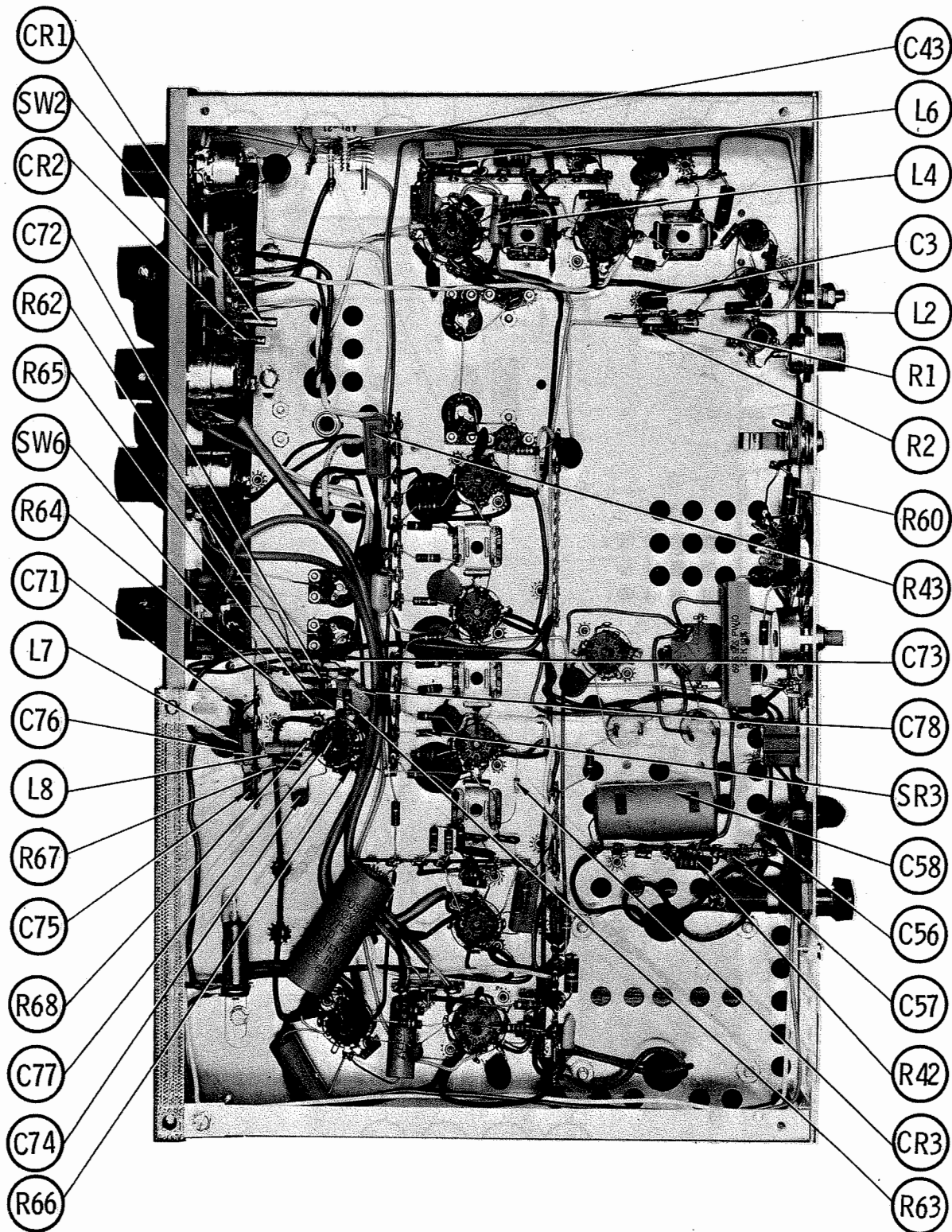
SINGLE SIDEBAND ALIGNMENT

SIGNAL GENERATOR	CHANNEL	ADJUST	REMARKS
High side thru .01mfd to pin 7 (cathode) of V4B (2nd mixer), low side to chassis. Tune to 460KC (Unmod)	Any	A17	Set Mode switch to LSB and adjust for a zero beat from the speaker.
High side thru .01mfd to pin 7 (cathode) of V4B (2nd Mixer), low side to chassis. Tune to 450KC (Unmod)	Any	A18	Set Mode switch to USB and adjust for a zero beat from the speaker.

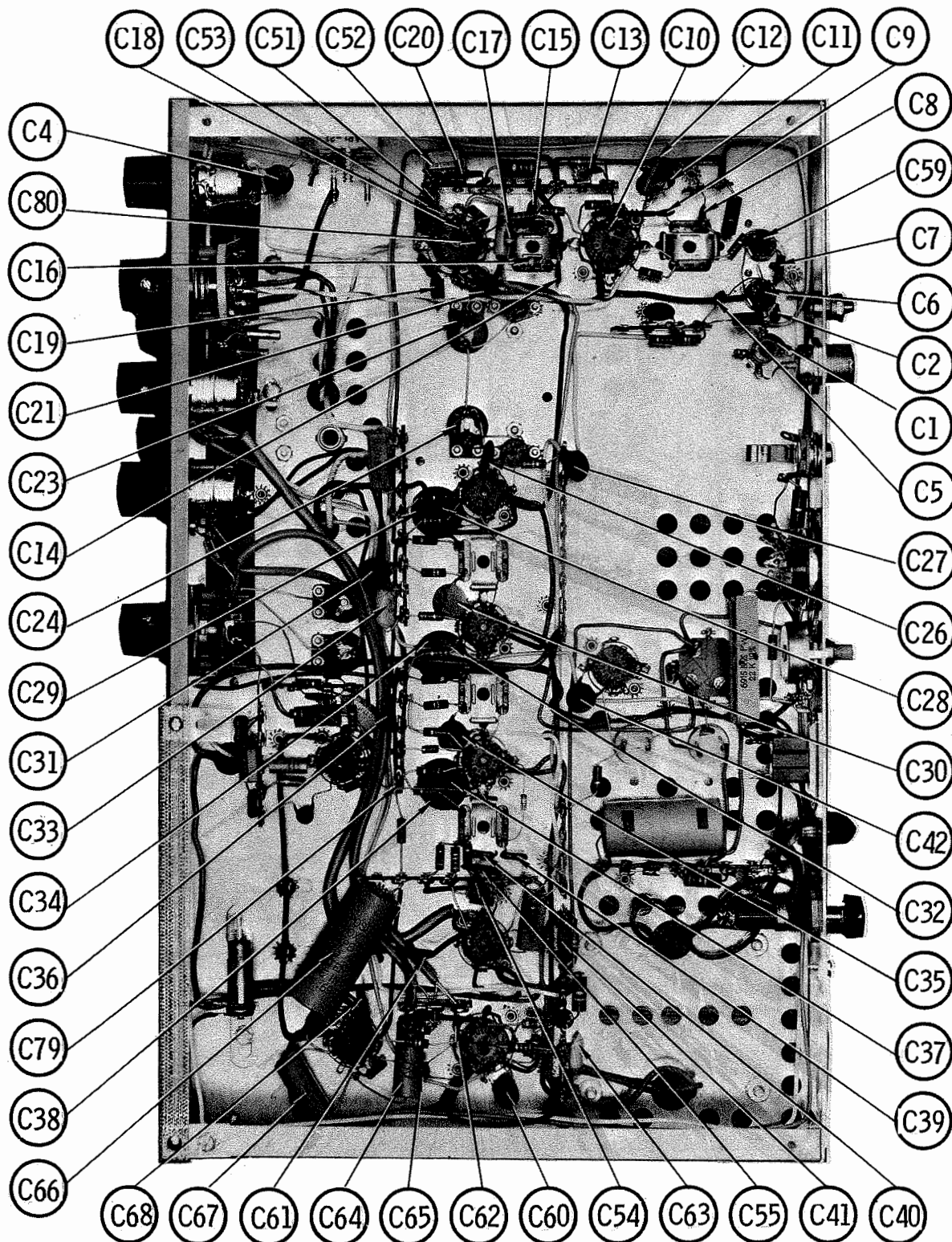
SEE PAGE 23 FOR TRANSMITTER ALIGNMENT & MODULATION ADJUSTMENT

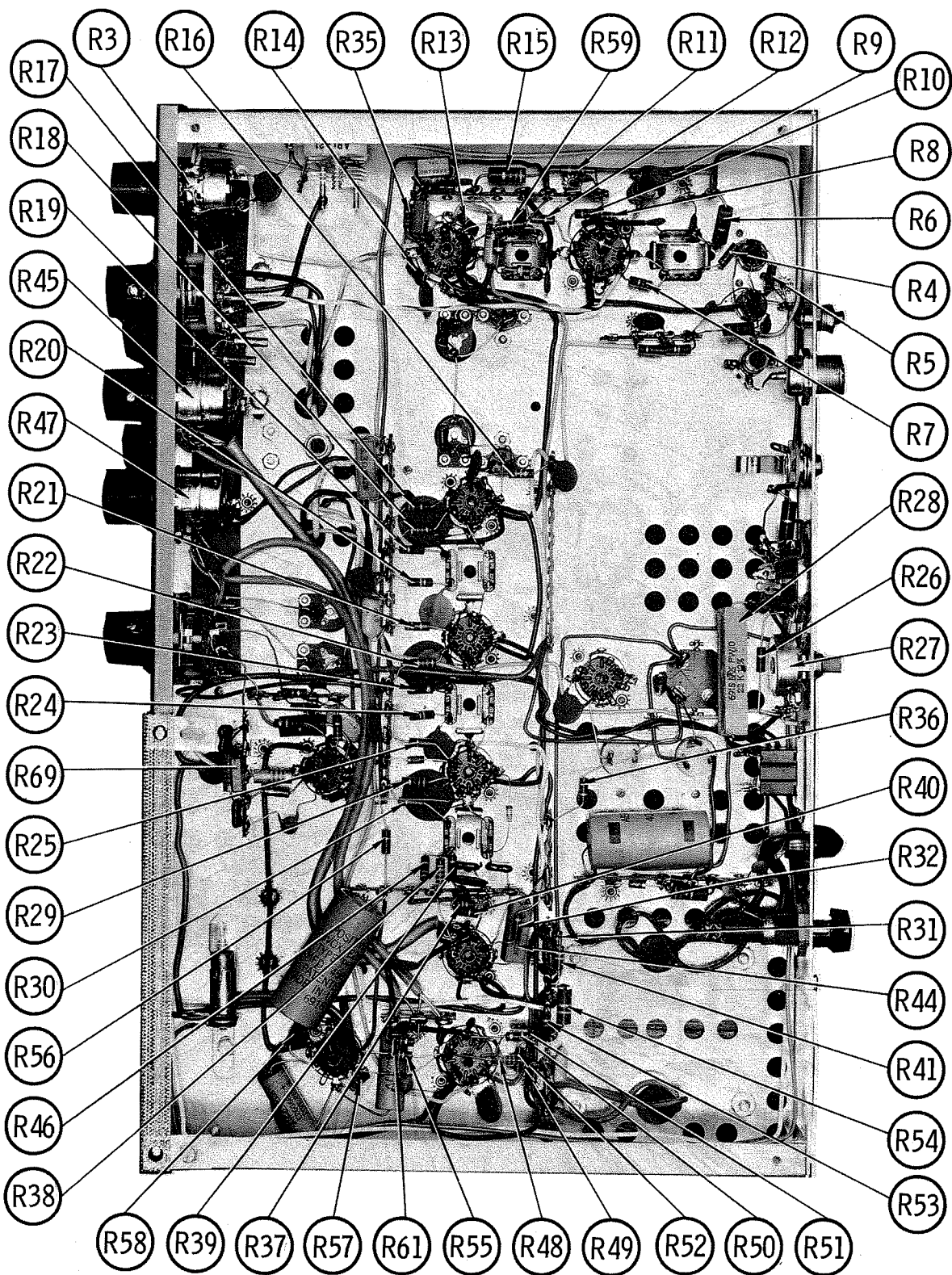


BROWNING MODELS 69R, 69T



BROWNING MODELS 69R, 69T





ALIGNMENT INSTRUCTIONS

NOTE

ONLY THOSE PERSONS PROPERLY LICENSED ARE PERMITTED TO MAKE REPAIRS OR ADJUSTMENTS WHICH MAY RESULT IN ILLEGAL OPERATION. (REFER TO FCC RULES AND REGULATIONS PART 95, SUBPARTS 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.

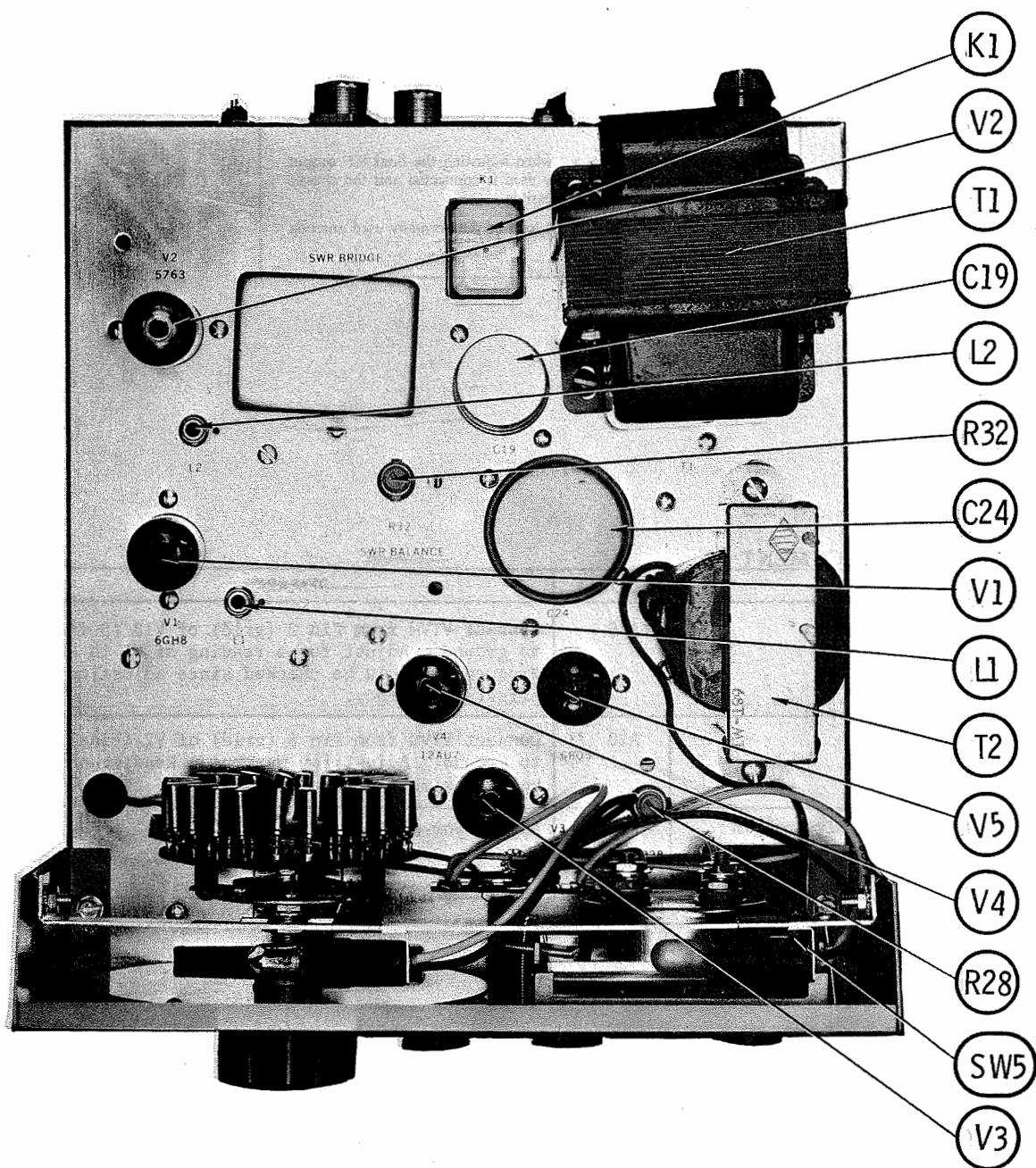
BROWNING MODELS 69R, 69T

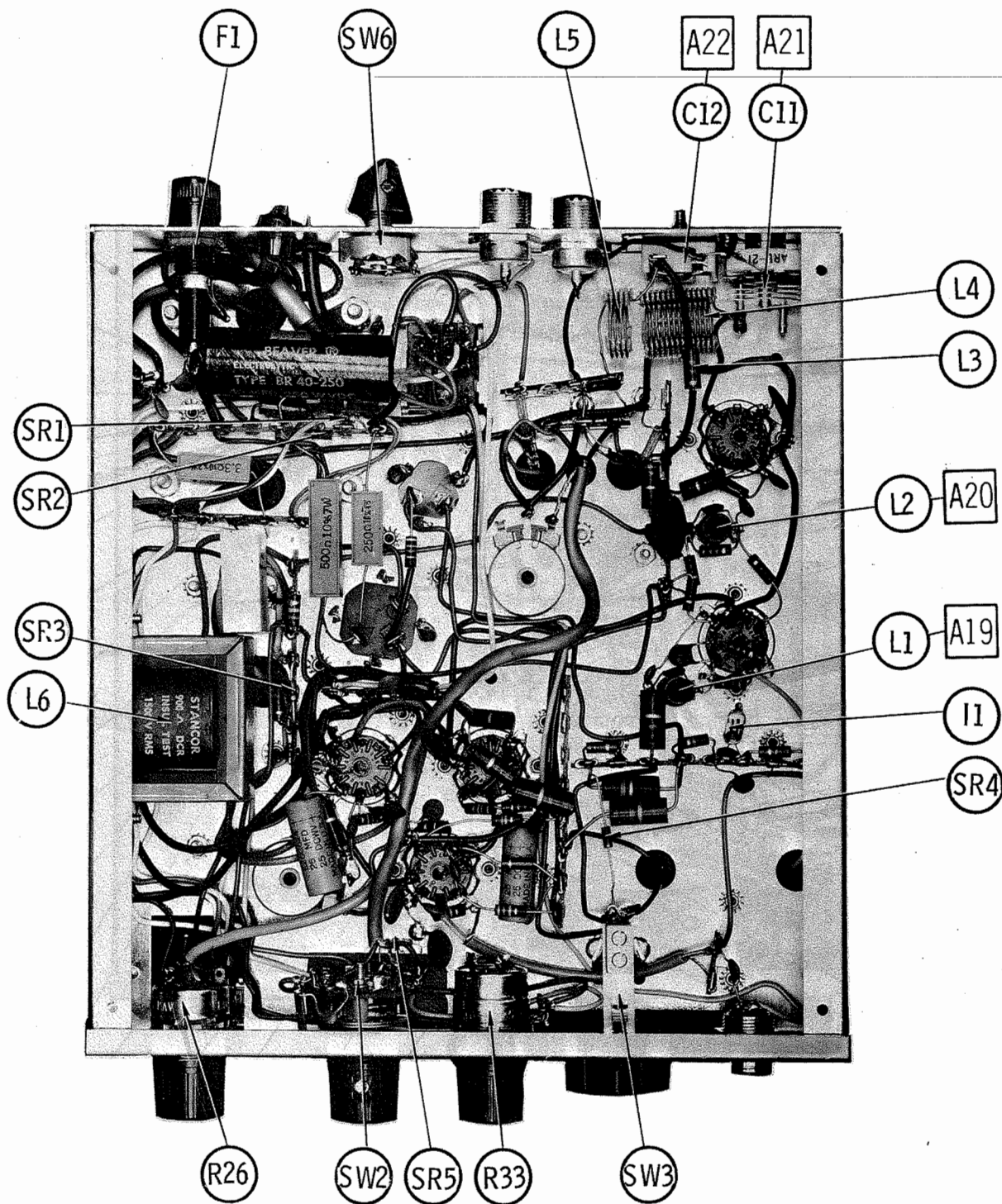
TRANSMITTER ALIGNMENT

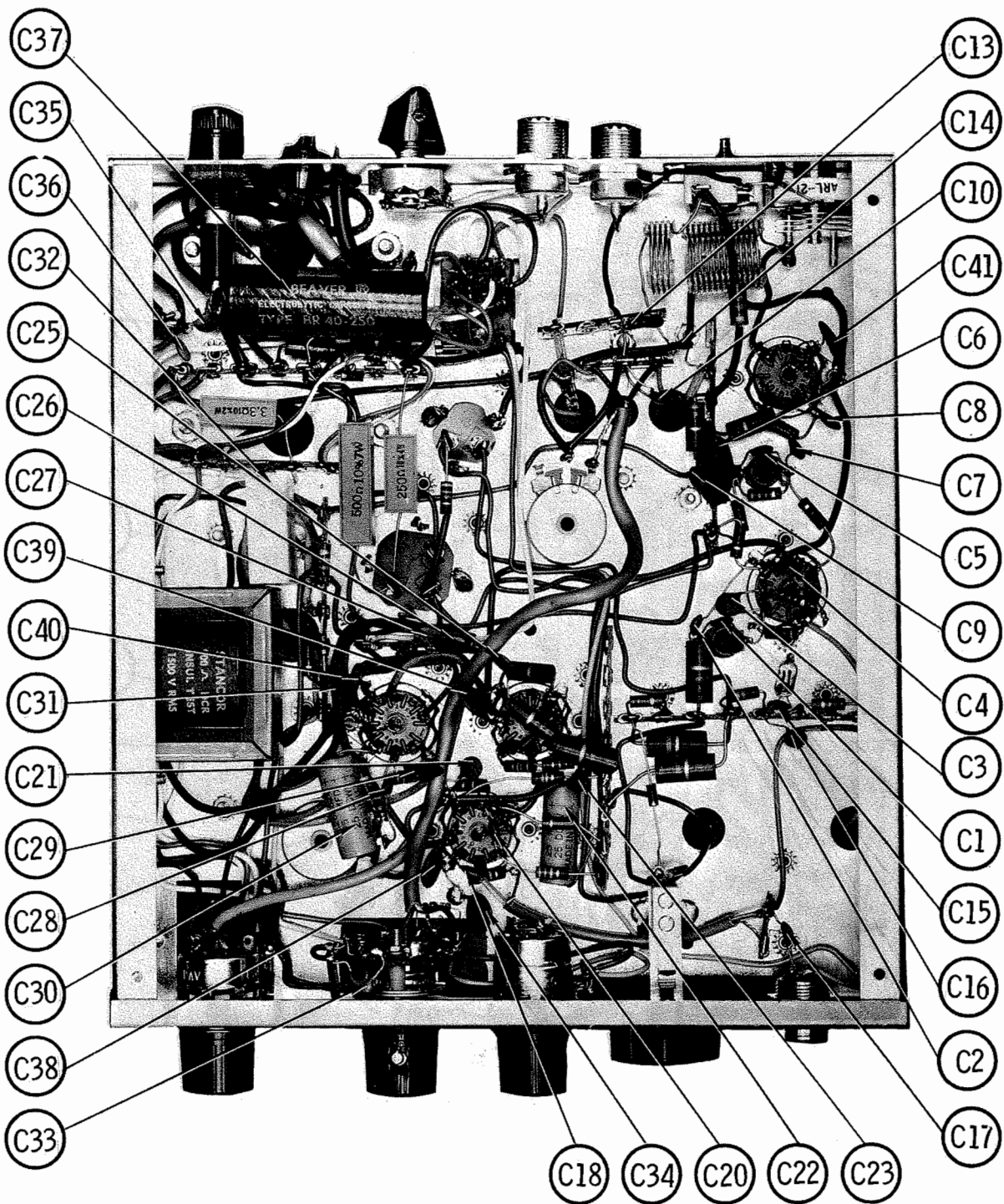
INDICATOR	ADJUST	REMARKS
VTVM	A19	Connect VTVM from Pin 2 (grid) of V1B (Buffer) to ground. Adjust for a reading of -5 to -6VDC. Frequency should be checked since adjusting A19 affects frequency.
VTVM	A20	Connect VTVM from Pin 8 (grid) of V2 (Final Amp) to ground. Adjust for maximum. Reading should be approximately -35 to -40VDC.
RF Wattmeter, Field Strength Meter, or Meter on unit.	A21, A22	Adjust for maximum.

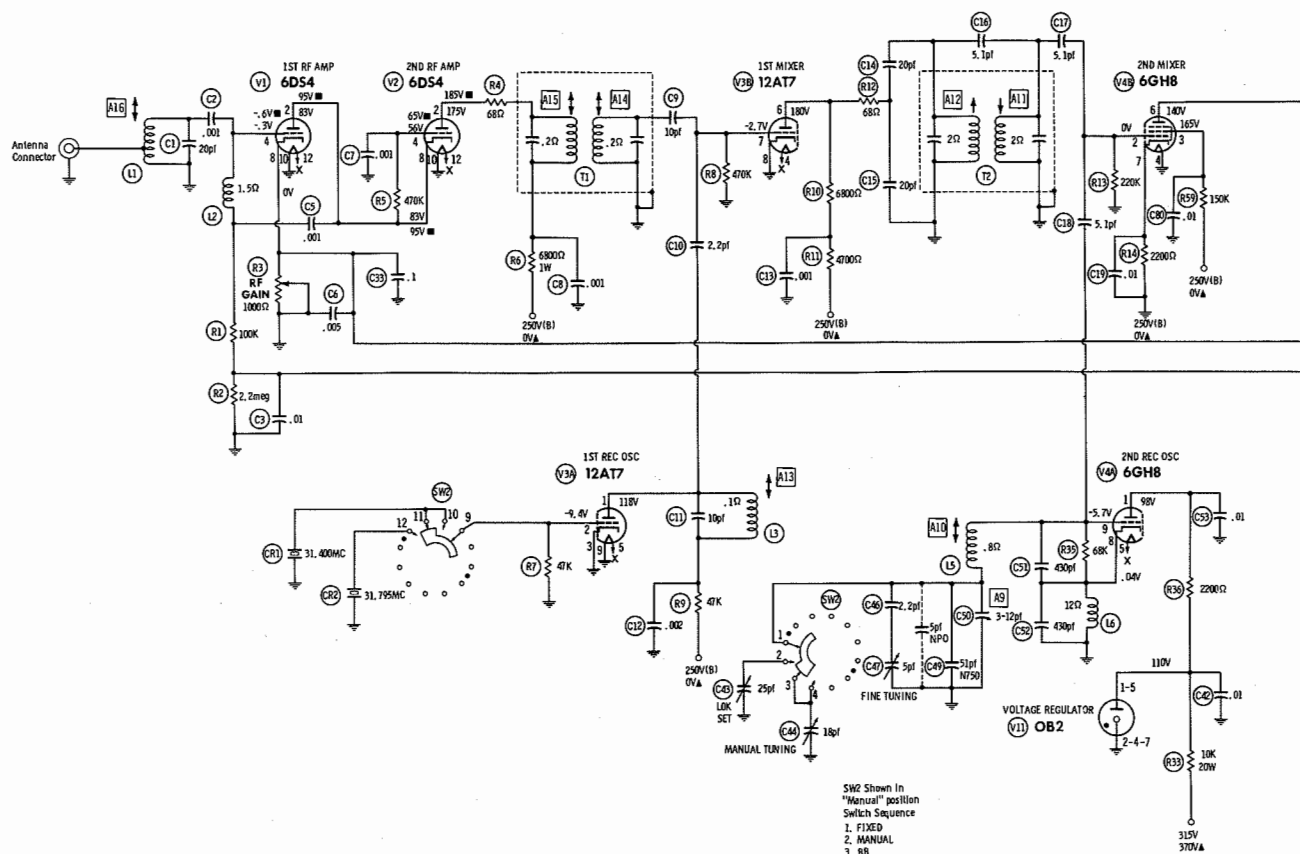
MODULATION ADJUSTMENT

INDICATOR	ADJUST	REMARKS
Modulation Adjustment Modulation meter connected to antenna connector	R28	Adjust so as not to exceed 100% modulation.

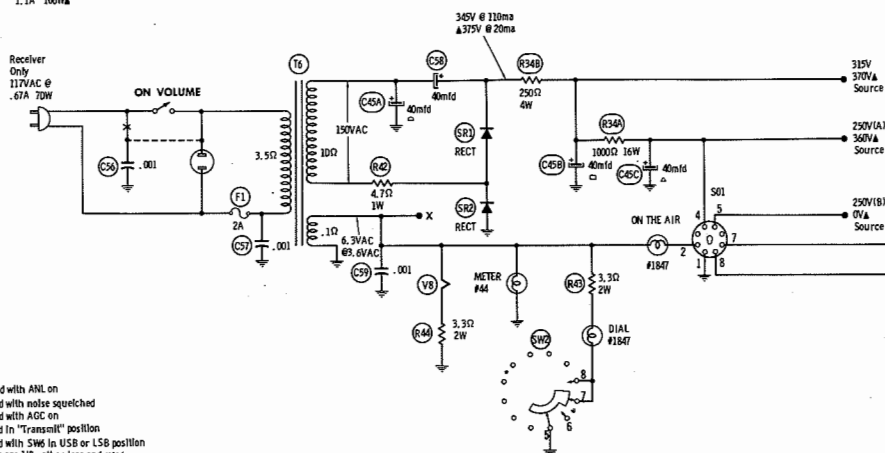








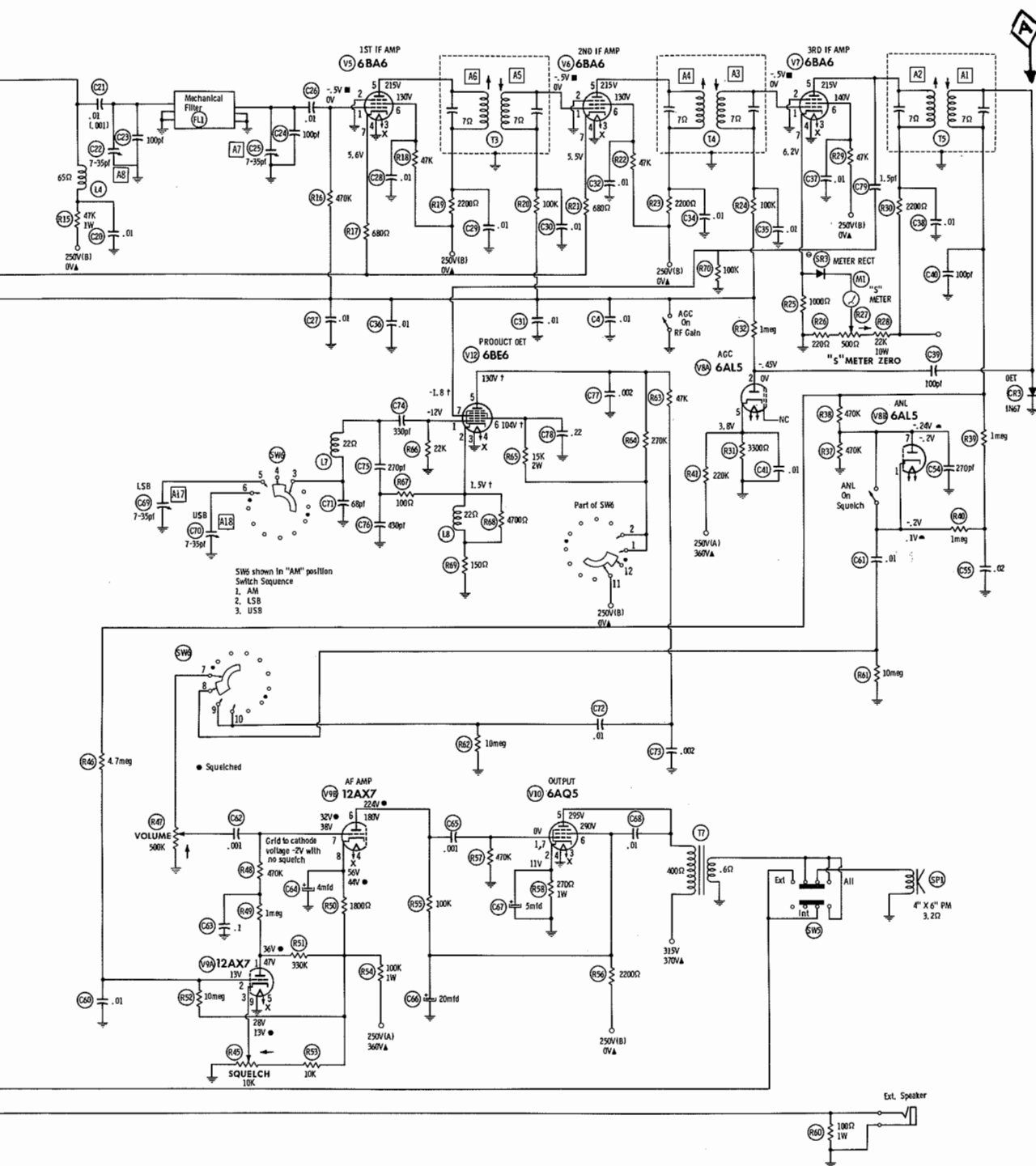
Combined Receiver and VMTA
117 VAC @
1A 100W
1.1A 106W



- ▲ Measured with ANL on
- Measured with noise squelched
- Measured with AGC on
- ▲ Measured in "Transmit" position
- † Measured with SW6 in USB or LSB position
- Resistors are 1/2 watt or less and rated 10% or 20% unless otherwise indicated.
- Controls viewed from actuator end. Arrow indicates clockwise rotation.
- See parts list for alternate value or application.
- 1. Voltage measurements taken with vacuum tube voltmeter.
- 2. All controls set for normal operation, no signal applied.
- 3. Measured values are from socket pin or terminal to common ground.
- 4. All terminals viewed from bottom unless otherwise designated.
- 5. Numbers assigned to terminals may not be found on the unit.
- 6. Supply voltage maintained at rated value for voltage readings.

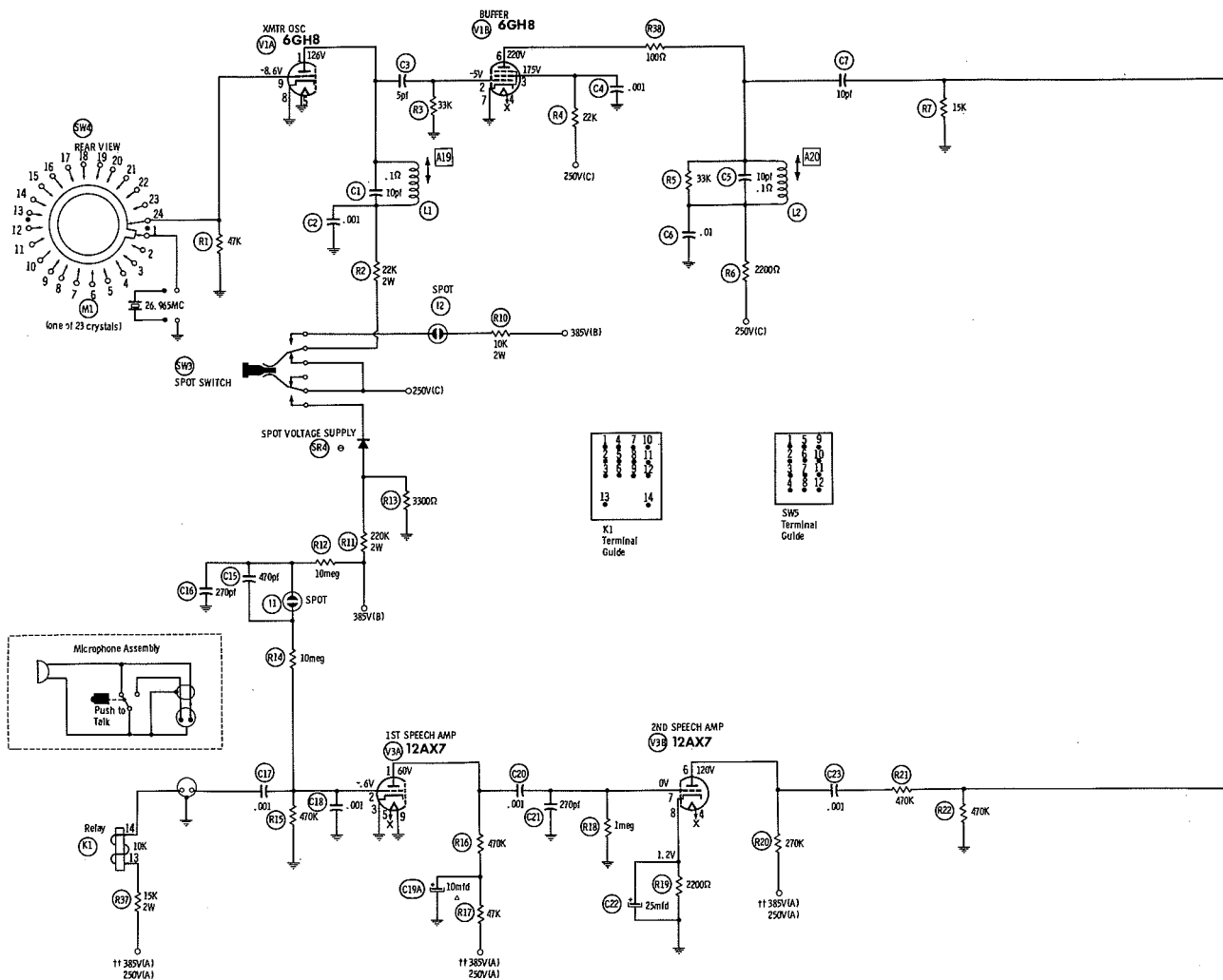
A PHOTOFAC STANDARD NOTATION SCHEMATIC
with CIRCUITRACE

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BROWNING MODEL 69R

SEE PAGES 30 & 31 FOR TRANSMITTER PORTION



†† Measured while receiving only.
Resistors are 1/2 watt or less and rated
10% or 20% unless otherwise indicated.
Controls viewed from actuator end. Arrow indicates
clockwise rotation.

- 0 See parts list for alternate value or application.
1. Voltage measurements taken with vacuum tube voltmeter.
2. All controls set for normal operation, no signal applied.
3. Measured values are from socket pin or terminal to common ground.
4. All terminals viewed from bottom unless otherwise designated.
5. Numbers assigned to terminals may not be found on the unit.
6. Supply voltage maintained at rated value for voltage readings.

A PHOTOFACT STANDARD NOTATION SCHEMATIC

with CIRCUITRACE

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SEE PAGES 28 & 29 FOR RECEIVER PORTION

RECEIVER

RESISTANCE MEASUREMENTS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9	Pin 10	Pin 11	Pin 12
V1	6DS4	NC	Inf	NC	120K 2.3meg (3)	NC	NC	NC	1200Ω	NC	Fil	NC	Fil
V2	6DS4	NC	8K (1)	NC	Inf	NC	NC	NC	Inf	NC	Fil	NC	Fil
V3	12AT7	50K (1)	47K	0Ω	Fil	Fil	14K (1)	470K	0Ω	Fil			
V4	6GH8	13K (1)	220K	150K (1)	Fil	Fil	50K (1)	2200Ω	12Ω	70K			
V5	6BA6	470K 2.6meg (3)	0Ω	Fil	Fil	3500Ω (1)	55K (1)	1900Ω					
V6	6BA6	100K 2.3meg (3)	0Ω	Fil	Fil	3500Ω (1)	55K (1)	1900Ω					
V7	6BA6	100K 2.3meg (3)	0Ω	Fil	Fil	3500Ω (1)	55K (1)	750Ω					
V8	6AL5	200K 2meg (4)	1meg 3.3meg (3)	Fil	Fil	3500Ω	NC	220K					
V9	12AX7	400K (1)	3.4meg	6000Ω	Fil	Fil	150K (1)	2meg	20K	Fil			
V10	6AQ5	470K	270Ω	Fil	Fil	700Ω (1)	3400Ω (1)	470K					
V11	0B2	10K (1)	0Ω	NC	0Ω	10K (1)	NC	0Ω					
V12	6BE6	22K	170Ω	Fil	Fil	300K (1) (2)	19K (1) (2)	100K					
ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9	Pin 10	Pin 11	Pin 12

(1) Measured from output of X1

(2) Measured with mode switch in USB or LSB position

(3) Measured with AGC on

(4) Measured with ANL on

RESISTANCE MEASUREMENTS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9	Pin 10	Pin 11	Pin 12
V1	6GH8	300K	33K	300K	Fil	Fil	300K	0Ω	0Ω	47K			
V2	5763	300K	NC	0Ω	Fil	Fil	300K	0Ω	15K	15K			
V3	12AX7	500K (1)	470K	0Ω	Fil	Fil	300K (1)	1meg	2200Ω	Fil			
V4	12AU7	12K	470K	1500Ω	Fil	Fil	47K (1)	0Ω	1500Ω	Fil			
V5	6BQ5	470K	470K	150Ω	Fil	Fil	NC	300K	NC				
ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9	Pin 10	Pin 11	Pin 12

(1) Measured from output of X1

TRANSMITTER

RECEIVER

PARTS LIST AND DESCRIPTION

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

TUBES

AMPEREX			GENERAL ELECTRIC			RCA			SYLVANIA		
ITEM No.	USE		TYPE			ITEM No.	USE		TYPE		
V1	1st RF Amp.		6DS4			V7	3rd IF Amp.		6BA6		
V2	2nd RF Amp.		6DS4			V8	AGC-ANL		6AL5		
V3	1st Mixer-1st Rec Oscillator		12AT7			V9	AF Amp-Squelch		12AX7		
V4	2nd Mixer-2nd Rec Oscillator		6GH8			V10	Output		6AQ5		
V5	1st IF Amp.		6BA6			V11	Voltage Regulator		0B2		
V6	2nd IF Amp.		6BA6			V12	Product Det		6BE6		

POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	MFR. PART OR TYPE No.	REPLACEMENT RECTIFIERS & DIODES			REPLACEMENT RECTIFIERS	NOTES
		GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	SYLVANIA PART No.	RCA PART No.	
SR1		GE-504A	806 or 5A6-D	ECG 116 or ECG 117	SK3017A or SK3032	
SR2		GE-504A	806 or 5A6-D	ECG 116 or ECG 117	SK3017A or SK3032	
SR3		GE-504A	806 or 5A6-D	ECG 116 or ECG 117	SK3017A or SK3032	
CR3	1N67	1N60	1N60	ECG 109		

ELECTROLYTIC CAPACITORS

ITEM No.	RATING	REPLACEMENT DATA						
		PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	SPRAGUE PART No.
C45A	40 450V		AFH3-44		CC0350A	XC3-40	FP3771A	TVL3787
B	40 450V							
C	40 450V							
C58	40 250V		PRS1580		WBR40-250	QT1-14	TC58A	TVA-1511
C64	4 150V		PRS1400		WBR5-150	MT1-4	TC40A	TVA-1402
C66	20 450V		PRS1735		WBR20-500	QT1-10	TC75A	TVA-1709
C67	5 50V		PRS1310	EA50-5	WBR5-150	MT1-3	MTA5050	TL-1303

CAPACITORS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA					
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.
C1	20		NPO-DI 20	DTZ-20	NP020	CCT0-200	CN0420	10TCC-Q20
C2	.001		GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-O10
C3	.01		GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C4	.01		GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C5	.001		GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10
C6	.005		GPD X5R502K	DD-502	GP5000	CCO-502	JF250	10TS-D50
C7	.001		GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10
C8	.001		GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10
C9	10		NPO-DI 10	DTZ-10	NP010	CCT0-100	CN0410	10TCC-Q10
C10	2.2			DTZ-2R2	NP02P2		CN0522	10TCC-V22
C11	10		NPO-DI 10	DTZ-10	NP010	CCT0-100	CN0410	10TCC-Q10
C12	.002		GPD X5F202K	DD-202	GP2000	CCD-202	GP220	10TS-D20
C13	.001		GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10
C14	20		NPO-DI 20	DTZ-20	NP020	CCT0-200	CN0420	10TCC-Q20
C15	20		NPO-OI 20	DTZ-20	NP020	CCT0-200	CN0420	10TCC-Q20
C16	5.1				NP05			10TCC-V50
C17	5.1				NP05			10TCC-V50
C18	5.1				NP05			10TCC-V50
C19	.01		GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C20	.01		GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C21	.01		GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C22	7-35			8270				
C23	100		ADM-10-101	CPR-100J	CD15F0101J03	DM-10-101K	SX310	MS-31
C24	100		ADM-10-101	CPR-100J	CD15F0101J03	DM-10-101K	SX310	
C25	7-35			8270				
C26	.01		GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C27	.01		GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C28	.01		GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C29	.01		GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C30	.01		GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C31	.01		GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C32	.01		GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C33	.1		DBE4P1	DD-103	DPMS4P1	4DP-3-104	PVC401	4PS-P10

BROWNING MODELS 69R, 69T

PARTS LIST AND DESCRIPTION (CONTINUED)

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

CAPACITORS (cont)

ITEM No.	RATING	REMARKS	REPLACEMENT DATA					
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL- DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.
C34	.01		GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C35	.01		GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C36	.01		GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C37	.01		GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C38	.01		GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C39	100		ADM-10-101	CPR-100J	CD15FD101J03	DM-10-101K	SX310	MS-31
C40	100		ADM-10-101	CPR-100J	CD15FD101J03	DM-10-101K	SX310	MS-31
C41	.01		GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C42	.01		GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C43	25							
C44	18pf							
C46	2.2			DTZ-2R2	NP02P2		CN0522	10TCC-V22
C47	5							
C49	51 N750							
C50	3-12			822-FZ				
C51	430		ADM-15-431	CPR-430J	CD15FD431J03	DM-15-431K	SX343	MS-343
C52	430		ADM-15-431	CPR-430J	CD15FD431J03	DM-15-431K	SX343	MX-343
C53	.01		GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C54	270		GPD X5F271K	DD-271	GP270	CCS-271	GP327	10TS-T27
C55	.02		GPD Z5U203P	DD-203		CCD-203	GP120	10TS-S20
C56	.001		GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10
C57	.001		GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10
C59	.001		GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10
C60	.01		GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C61	.01		GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C62	.001		GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10
C63	.1		DBE4P1		DPMS4P1	4DP-3-104	PVC401	4PS-P10
C65	.001		GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10
C68	.01		GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C69	7-35			827D				
C70	7-35			827D				
C71	68		NPO-DI68	DTZ-68	NP068	CCT0-680	CN0468	10TCC-Q68
C72	.01		GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C73	.002		GPD X5F202K	DD-202	GP2000	CCD-202	GP220	10TS-D20
C74	330		GPD X5F331K	DD-331	GP330	CCD-331	GP333	10TS-T33
C75	270		ADM-15-271	CPR270J	CD15FD271J03	DM-10-271K	SX327	MS-327
C76	430		ADM-15-431	CPR-430J	CD15FD431J03	DM-15-431K	SX343	MS-343
C77	.002		GPD X5F202K	DD-202	GP2000	CCD-202	GP220	10TS-D20
C78	.22		DBE6P22		DPMS4P22	4DP-5-224	PVC4022	4PS-P22
C79	1.5			DTZ-1R5	NP01P5		CN0515	10TCC-V15
C80	.01		GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10

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

ITEM No.	FUNCTION	RESIST- ANCE	REPLACEMENT DATA				
			MFGR. PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
R3	RF Gain/AGC Switch	1000	[68R-RF]	F1-1000, SPU304, KR-8FR	NP-1000-S, UPP-A-400, NWG-18	B11-108, SK7 (1) or [BU1, CF6, SS10, K (1)]*	P13L, FPP-1, 3014, SL250
R27	"S" Meter Zero	500	[68R-P-2]	F1-500, SRS012	A47-500-S, RN-3 or [NP-500-S, NML-A-300]	Q11-103 or [BU1, CF4, SS6]*	UA52L, SK750 or [RU52L, SL38, SK750] or [U2]
R45	Squelch/ANL Switch	10K	[A-325]	F1-10K, SPU304, KR-8FR	NP-10K-S, UPP-A-400, NWG-18	B11-116, SK7 (1) or [BU2, CF9, SS10, K (1)]*	RUP14L, S135, SL250 or [P14L, 3038, FPP-1, SL250]
R47	Volume/Power Switch	500K	[68R-VC]	F2-500K, SRS014, SRS014, KR-1	A47-500K-Z, RS-2, SWE-12 or [NP-500K-Z, UPP-A-400, NWE-12]	Q13-133, 76-1 or [BU2, CF25, SS5, GC]*	UA14A, SL2500, US41 or [RU14A, SL39, SL2500, US41] or [U18, US26]

* "Snaprol"

(1) Switch must be CTS type 080.

RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA	
		WORKMAN PART No.	MFGR. PART No.
R28	22K 10W	10W-SQ-22.5	
R33	10K 20W	20W-SQ-10K	

ITEM No.	RATING	REPLACEMENT DATA	
		WORKMAN PART No.	MFGR. PART No.
R34A	1000 16W	20W-SQ-1K	
B	250 4W	5W-SQ-250	

PARTS LIST AND DESCRIPTION (CONTINUED)

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

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA			
		PART No.	MEISSNER PART No.	MILLER PART No.	WORKMAN PART No.
L1	Antenna Matching	(A138)	19-2032	72F 185AP	T879
L2	RF Choke (18uh)				
L3	1st Rec Oscillator				
L4	RF Choke (10mh)				
L5	2nd Rec Oscillator				
L6	RF Choke (1mh)				
L7	Product Det. Oscillator (2.2mh)				
L8	RF Choke (2.2mh)	(A-139)	16-6764	12-C30	T876
T1	RF Output	(A141)			T607
T2	Input-Output IF	(1655-2)			
T3	Input IF	(1655-2)			
T4	Interstage IF	(1655-2)			
T5	Output IF	(1655-2)	16-6764	12-C31	T608

TRANSFORMER (Audio Output)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
	PRI.	SEC.	MFGR. PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T7	6500	4		A-2931	A-3850	22S86	S-63X	

TRANSFORMER (Power)

ITEM No.	RATING		REPLACEMENT DATA					NOTES
	PRI.	SEC. 1	MFGR. PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T6	117VAC @ 1A	150VAC @ .11A						
	SEC. 2	SEC. 3						
	6.3VAC @3.6A							

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		PART No.	QUAM PART No.	
SP1	4" X 6" PM 4 ohms	(A146)	46A07	

FUSE DEVICES

ITEM No.		DESCRIPTION	REPLACEMENT DATA						WORKMAN PART No.
			PART No.		BUSS PART No.		LITTELFUSE PART No.		
			DEVICE	HOLDER	DEVICE	HOLDER	DEVICE	HOLDER	
F1	2A 3AG			AGC2	HKP	312.002	342.001	FGC 2-2	

MISCELLANEOUS

ITEM No.	PART NAME	PART No.	NOTES
CR1	Crystal		31.400MC
CR2	Crystal		31.795MC
FL1	Mechanical Filter		455KC
M1	"S" Meter		
SW2	Switch, Function		
SW5	Switch, Speaker		
SW6	Switch, AM-LSB-USB		

BROWNING MODELS 69R, 69T

TRANSMITTER

PARTS LIST AND DESCRIPTION

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

TUBES

AMPEREX			GENERAL ELECTRIC			RCA			SYLVANIA		
ITEM No.	USE		TYPE			ITEM No.	USE		TYPE		
V1	XMTR Oscillator-Buffer		6GH8			V4	Speech Limiter		12AU7		
V2	Final Amp.		5763			V5	Output-Modulator		6BQ5		
V3	1st-2nd Speech Amp.		12AX7								

POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	MFR. PART OR TYPE No.	REPLACEMENT RECTIFIERS & DIODES			REPLACEMENT RECTIFIERS	NOTES
		GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	SYLVANIA PART No.	RCA PART No.	
SR1	1N541	GE-504A	8D6 or 5A6-D	ECG 116 or ECG 117	SK3017A or SK3032	
SR2		GE-504A	8D6 or 5A6-D	ECG 116 or ECG 117	SK3017A or SK3032	
SR3		GE-504A	8D6 or 5A6-D	ECG 116 or ECG 117	SK3017A or SK3032	
SR4		GE-504A	8D6 or 5A6-D	ECG 116 or ECG 117	SK3017A or SK3032	
SR5		1N60	5A6-D 1N60	ECG 117 ECG 109	SK3032	

ELECTROLYTIC CAPACITORS

ITEM No.	RATING	REPLACEMENT DATA						
		PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	SPRAGUE PART No.
C19A	10 450V		AFH2-47		BB0400A	XC2-5	FP231A	TVL-2750
B	10 450V							
C22	25 25V		PRS1260	EA30-25	WBR25-50	MT1-11	MTA25E35	TL-1207
C24A	40 450V		AFH3-44		CC0350A	SC3-40	FP377.1A	TVL3787
B	40 450V							
C	40 450V							
C30	25 25V		PRS1260	EA30-25	WBR25-50	MT1-11	MTA25E35	TL-1207
C37	40 250		PRS1580		WBR40-250	QT1-14	TC58A	TVA-1511

CAPACITORS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA					
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.
C1	10		NPO-DI 10	DTZ-10	NP010	CCT0-100	CN0410	10TCC-Q10
C2	.001		GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10
C3	5		NPO-DI 5.0		NP05			10TCC-V50
C4	.001		GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10
C5	10		NPO-DI 10	DTZ-10	NP010	CCT0-100	CN0410	10TCC-Q10
C6	.01		GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C7	10		NPO-DI 10	DTZ-10	NP010	CCT0-100	CN0410	10TCC-Q10
C8	120		GPD X5F121K	DD-121	GP120	CCD-121	GP312	10TS-T12
C9	.001		GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10
C10	.001		GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10
C11	25pf							
C12	100-500							
C13	100		ADM-10-101	CPR-100J	CD15FD101J03	DM-10-101K	SX310	MS-31
C14	.001		GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10
C15	470		GPD X5F471K	DD-471	GP470	CCD-471	GP347	10TS-T47
C16	270		GPD X5F271K	DD-271	GP270	CCS-271	GP327	10TS-T27
C17	.001		GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10
C18	.001		GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10
C20	.001		GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10
C21	270		GPD X5F271K	DD-271	GP270	CCS-271	GP327	10TS-T27
C23	.001		GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10
C25	.005		GPD X5R502K	DD-502	GP5000	CCD-502	JF250	10TS-D50
C26	100		ADM-10-101	CPR-100J	CD15FD101J03	DM-10-101K	SX310	MS-31
C27	68		NPO-DI68	DTZ-68	NP068	CCT0-680	CN0468	10TCC-Q68
C28	.001		GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10
C29	100		ADM-10-101	CPR-100J	CD15FD101J03	DM-10-101K	SX310	MS-31
C31	.04			DD-403			GP140	
C32	.47		V1616P47		4P47	6MPD-8-474	PVC6047	6TM-P50
C33	.001		GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10
C34	.01		GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C35	.001		GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10
C36	.001		GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10
C38	.01		GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C39	.01		GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C40	.01		GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C41	.01		GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10

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	RESISTANCE	REPLACEMENT DATA				
			MFGR. PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
R26	PA Volume	1meg	[68T-PAV]	F2-1meg, SRS014	A47-1meg-Z, RS-2 or [NP-1meg-Z, UP-A-400]	Q13-137 or [BU2, CF26, SS5, DC1]*	UA16A, SL2500 or [RU16A, SL39, SL2500] or [U53]
R32	SWR Balance	150	68T-P-1	F1-200 SRS012	NP-200-S, NML-A-300	Q11-201 or [BU1, CF2, SS6]*	RU22L, SL38, SK750
R33	SWR Cal./Switch	10K	68T-SWR	F1-10K, SRS014, KR-1	A47-10K-S, RS-2, SWE-12 or [NP-10K-S, UP-A-400, NWE-12]	Q11-116, 76-1 or [BU2, CF9, SS5, GC]*	UA146, SL2500, US41 or [RU14L, SL39, SL2500, US41] or [U20, US26]

* "Snaptrol"

RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA	
		WORKMAN PART No.	MFGR. PART No.
R35	250 4W	5W-SQ-250	

ITEM No.	RATING	REPLACEMENT DATA	
		WORKMAN PART No.	MFGR. PART No.
R36	500 7W	10W-SQ-500	

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA			
		PART No.	MEISSNER PART No.	MILLER PART No.	WORKMAN PART No.
L1	Trans. Oscillator	(A140)		4201-A	
L2	Buffer Plate	(A140)		4201-A	
L3	RF Choke (18yh)			72F185AP	
L4	Pi Network (13 Turns)				
L5	Pi Network (5 Turns)				

FILTER

ITEM No.	RATINGS			REPLACEMENT DATA					NOTES
	RATING	DC RES.	INDUCTANCE (0 CURRENT 1000~)	PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
L6	.015 ADC	900	20H						

TRANSFORMER (Power)

ITEM No.	RATING		REPLACEMENT DATA					NOTES
	PRI.	SEC. 1	MFGR. PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T1	117VAC @ .62A	150VAC @ .11A						
	SEC. 2	SEC. 3						
	6.3VAC @ 3.1A							

BROWNING MODELS 69R, 69T

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.1	MFGR. PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T2	2300	2300						
		SEC.2						
		340						
		SEC.3						
		8						

FUSE DEVICES

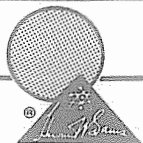
ITEM No.	DESCRIPTION	REPLACEMENT DATA						
		PART No.		BUSS PART No.		LITTELFUSE PART No.		WORKMAN PART No.
		DEVICE	HOLDER	DEVICE	HOLDER	DEVICE	HOLDER	DEVICE
F1	2A 3AG			AGC 2	HKP	312.002	342.001	FGC2-2

MISCELLANEOUS

ITEM No.	PART NAME	PART No.	NOTES
K1	Relay		
M1	Crystal		Channel 1 (26.965MC)
M2	Crystal		Channel 2 (26.975MC)
M3	Crystal		Channel 3 (26.985MC)
M4	Crystal		Channel 4 (27.005MC)
M5	Crystal		Channel 5 (27.015MC)
M6	Crystal		Channel 6 (27.025MC)
M7	Crystal		Channel 7 (27.035MC)
M8	Crystal		Channel 8 (27.055MC)
M9	Crystal		Channel 9 (27.065MC)
M10	Crystal		Channel 10 (27.075MC)
M11	Crystal		Channel 11 (27.085MC)
M12	Crystal		Channel 12 (27.105MC)
M13	Crystal		Channel 13 (27.115MC)
M14	Crystal		Channel 14 (27.125MC)
M15	Crystal		Channel 15 (27.135MC)
M16	Crystal		Channel 16 (27.155MC)
M17	Crystal		Channel 17 (27.165MC)
M18	Crystal		Channel 18 (27.175MC)
M19	Crystal		Channel 19 (27.185MC)
M20	Crystal		Channel 20 (27.205MC)
M21	Crystal		Channel 21 (27.215MC)
M22	Crystal		Channel 22 (27.225MC)
M23	Crystal		Channel 23 (27.255MC)
M24	Modulation Meter		
M25	SWR Can		
SW2	Switch, Meter		
SW3	Switch, Spot		
SW4	Switch, Selector		
SW5	Switch, CB-PA		

WIRING DATA

General-use Hook-up Wire	Use BELDEN No. 8530 (Solid) Available in 12 Colors
	8524 (Stranded) Available in 12 Colors
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)
	8496 3-Conductor, 1 Shielded, for Press-to-Talk (Vinyl)
Ignition Noise Suppression	Use BELDEN No. 7300-Series Spark-Plug Sets
Bonding Strap	Use BELDEN No. 8661 (3/8 In.)



PHOTOFACT[®] with CIRCUITRACE[®]

For Supplier Address See PHOTOFACT Index

NOTE

ONLY THOSE PERSONS PROPERLY LICENSED ARE PERMITTED TO MAKE REPAIRS OR ADJUSTMENTS WHICH MAY RESULT IN ILLEGAL OPERATION. (REFER TO FCC RULES AND REGULATIONS PART 95, SUBPARTS 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.



SEARS MODEL 7535 (Ch. 789.10090)

ALIGNMENT INSTRUCTIONS

Suggested Alignment Tools:

A1 thru A8, A10, A11.....GENERAL CEMENT #8606, 8606L, 8869...WALSCO #2543, 2544, 2588
A12, A13, A14.....GENERAL CEMENT #9296, 9297, 9300...WALSCO #2510, 2546, 2547
A9, A15 thru A20.....GENERAL CEMENT #5003, 8196, 8273...WALSCO #2577, 2519, 2525

RECEIVER

Connect a DC VTVM to Δ and an AC VTVM across speaker terminals. Set Volume Control fully clockwise, and Squelch Control clockwise just past "Off" position.

SIGNAL GENERATOR	CHANNEL	ADJUST	REMARKS
High side thru .01mfd to Pin 1 (Grid) of V2 (Rec. Mixer), low side to chassis. Tune to 455KC (Mod.).	Any	A1 thru A8	Adjust for maximum. CAUTION: Do not Key Transmitter during Receiver Alignment.
SEE SYNTHESIZER ALIGNMENT BELOW FOR OSCILLATOR ALIGNMENT			
High side thru a 6db attenuator to an antenna connector, low side to chassis. Tune to 27.105MC (30% Mod.).	12	A9	Adjustment made from core out position. Adjust for maximum on AC VTVM, then peak on DC VTVM at Δ with input signal reduced to give reading of approximately 1 volt at Δ
High side thru a 6db attenuator to an antenna connector, low side to chassis. Tune to 26.965MC (30% Mod.).	1	A10	Adjust top (Primary) slug starting from top of can to second peak near bottom of primary. Slug will be approximately 7/16" from top of can when properly tuned.
High side thru a 6db attenuator to an antenna connector, low side to chassis. Tune to 27.255MC (30% Mod.).	23	A11	Adjust bottom (secondary) slug starting from bottom of can for first peak.
Reduce signal input to produce approximately 1 volt at A			Repeat adjustments of A9 & A11 for maximum at Δ with luv signal input reading at Δ should be at least .6 Volts.

"S" METER ADJUSTMENT

			With Power off, adjust mechanical Zero for reading to extreme left of "S" Meter.
--	--	--	--

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TY745

SEARS MODEL 7535

ALIGNMENT INSTRUCTIONS (Continued)

" S " METER ADJUSTMENT (Cont.)

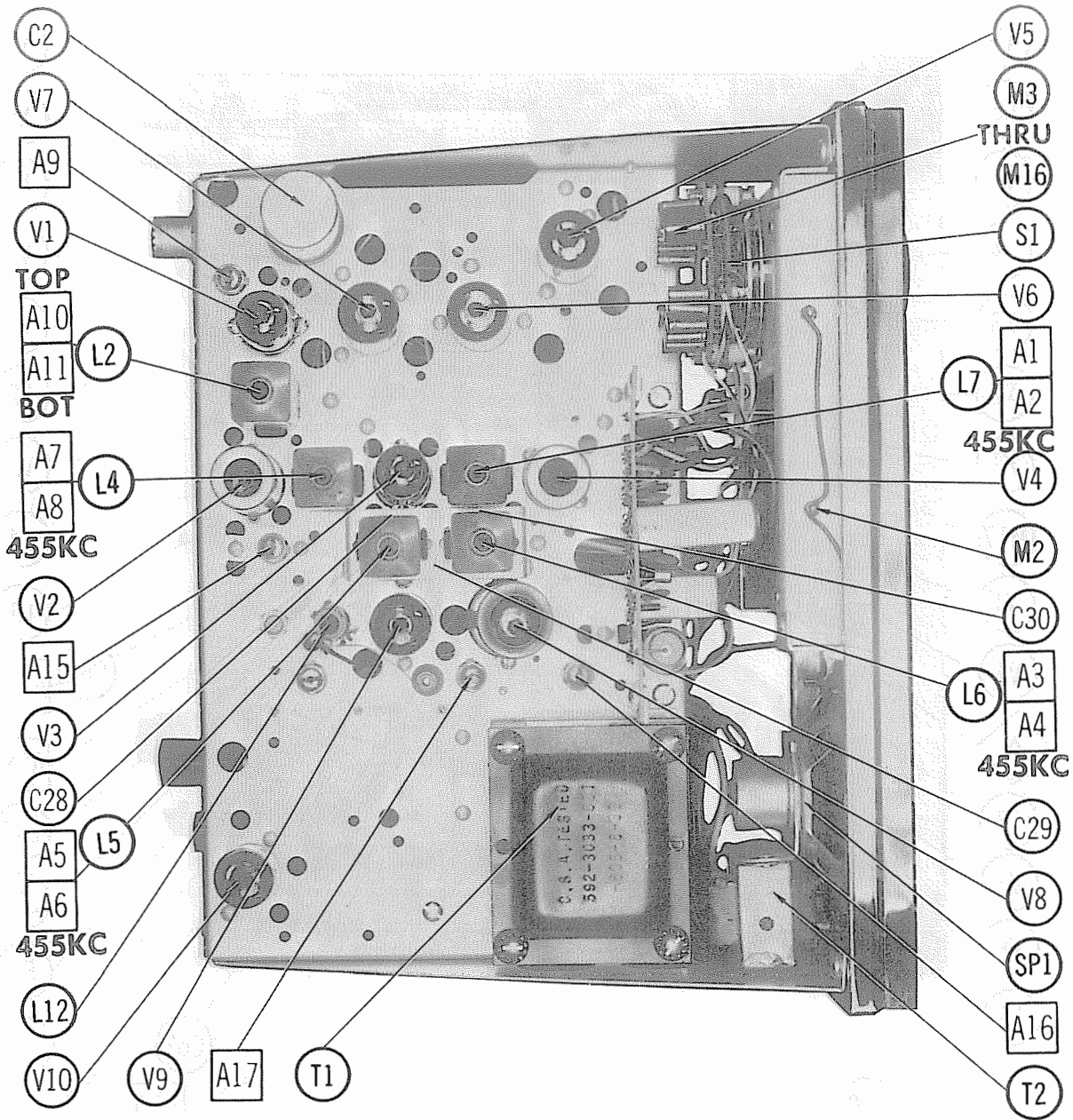
SIGNAL GENERATOR	CHANNEL	ADJUST	REMARKS
No Signal	12	R4	Adjust for Zero Reading on "S" Meter.
High side thru .01mfd to antenna connector, low side to chassis. Tune to 27.105MC with 100uv output.	12		Performance Test. "S" Meter should read between "S8" and 10db above "S9."

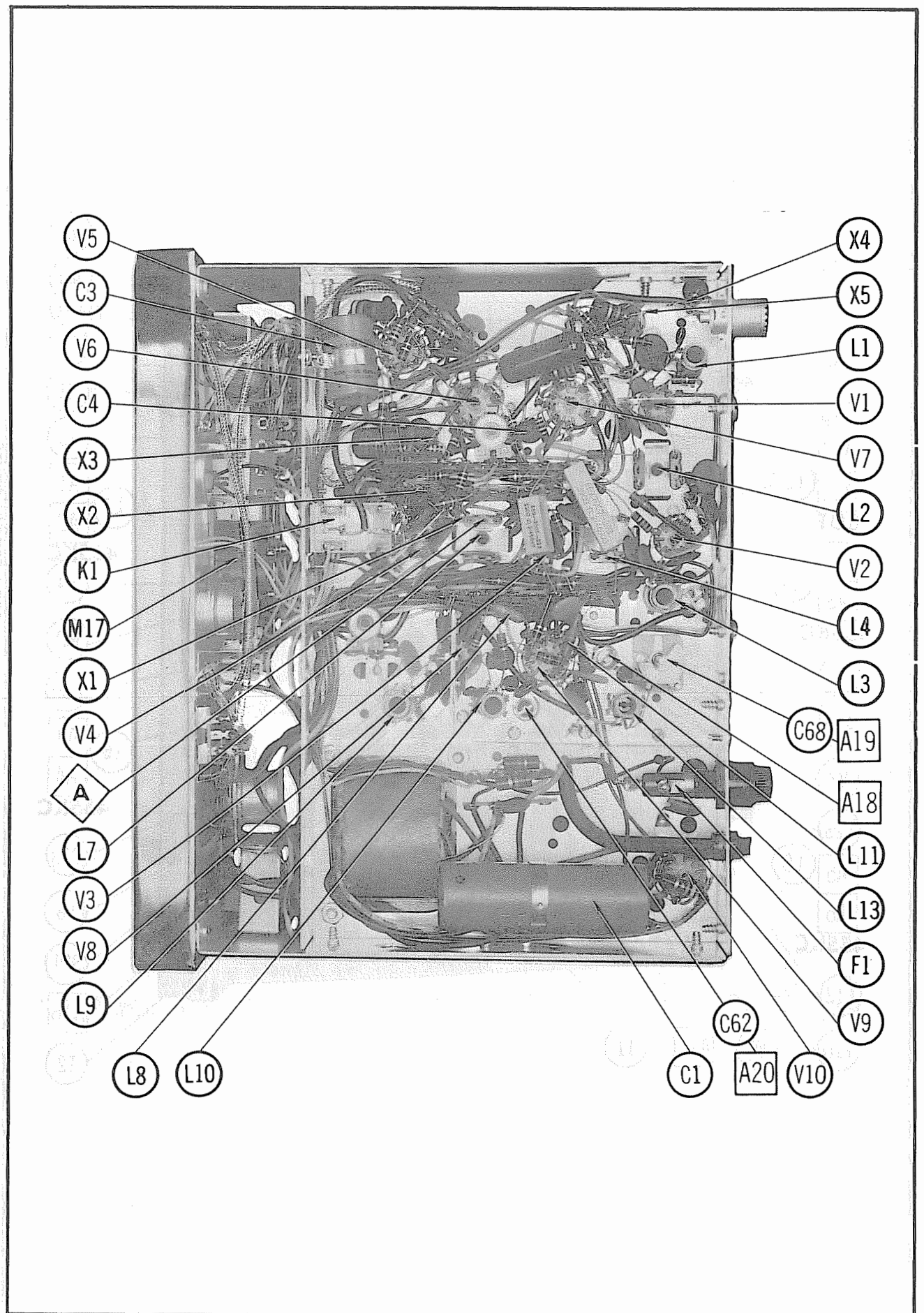
SYNTHESIZER ALIGNMENT

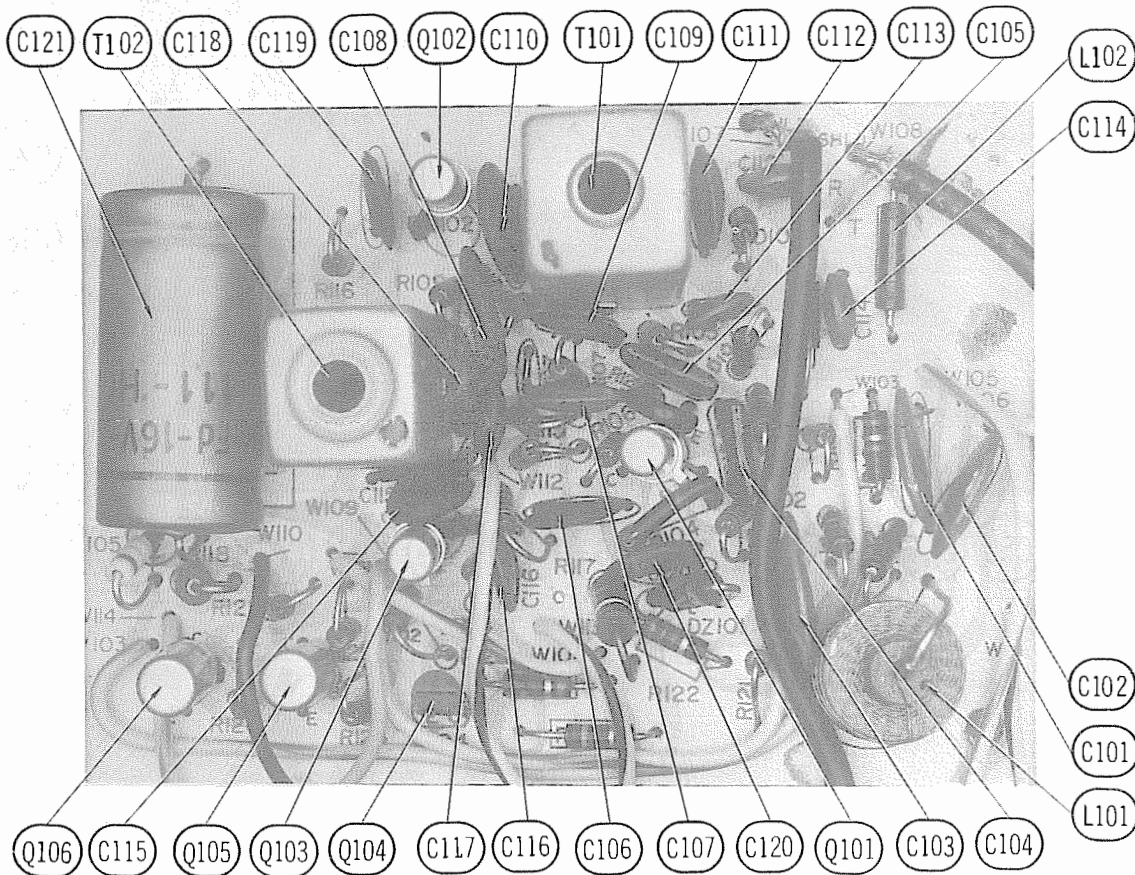
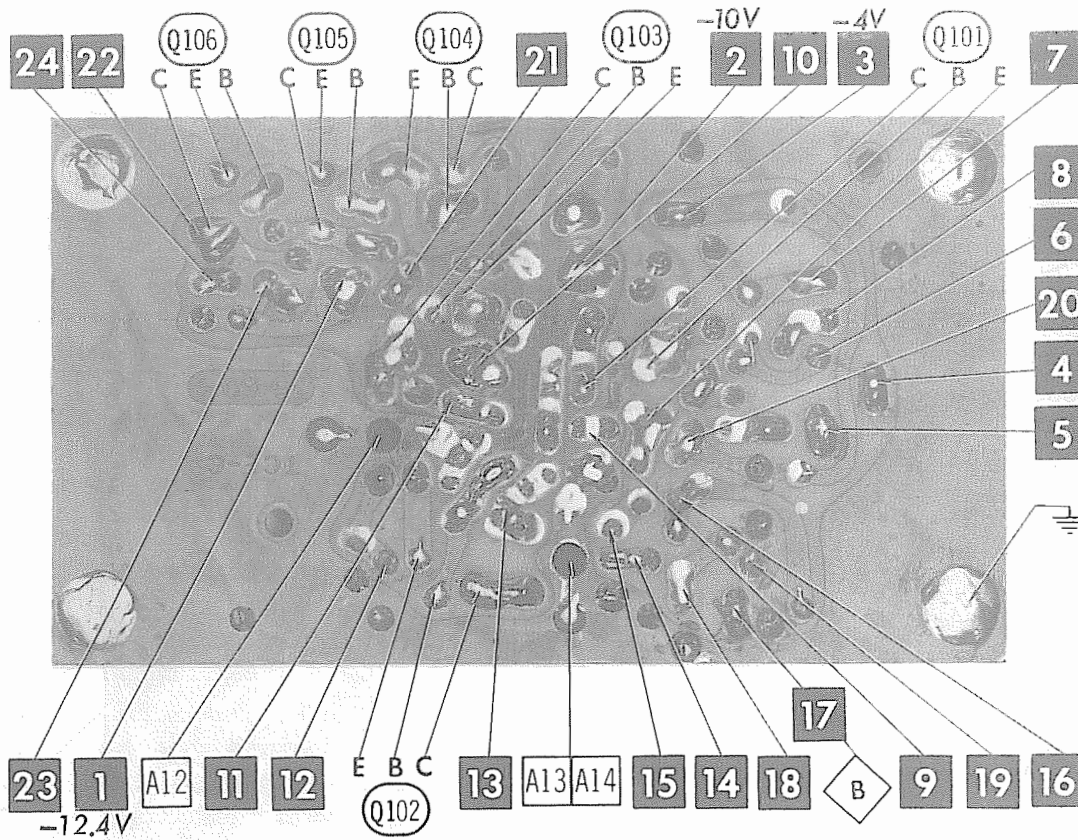
INDICATOR	ADJUST	REMARKS
		Measure Source 2. Voltage should be -10V $\pm$.5V.
RF Voltmeter or DC VTVM with RF Probe.	A12	Connect Meter to $\diamond B$ on Synthesizer Board. Set Channel Selector to 23. Adjust A12 to point where there is an indication of RF on Meter. Back slug off toward top of can. Then adjust slug 1/2 turn beyond the oscillator starting point.
"	A13,A14, A15	With Meter still connected to $\diamond B$, change Channel Selector to 12. Adjust for maximum reading (Approximately 225mv) on meter. (Tune on outside of peaks).

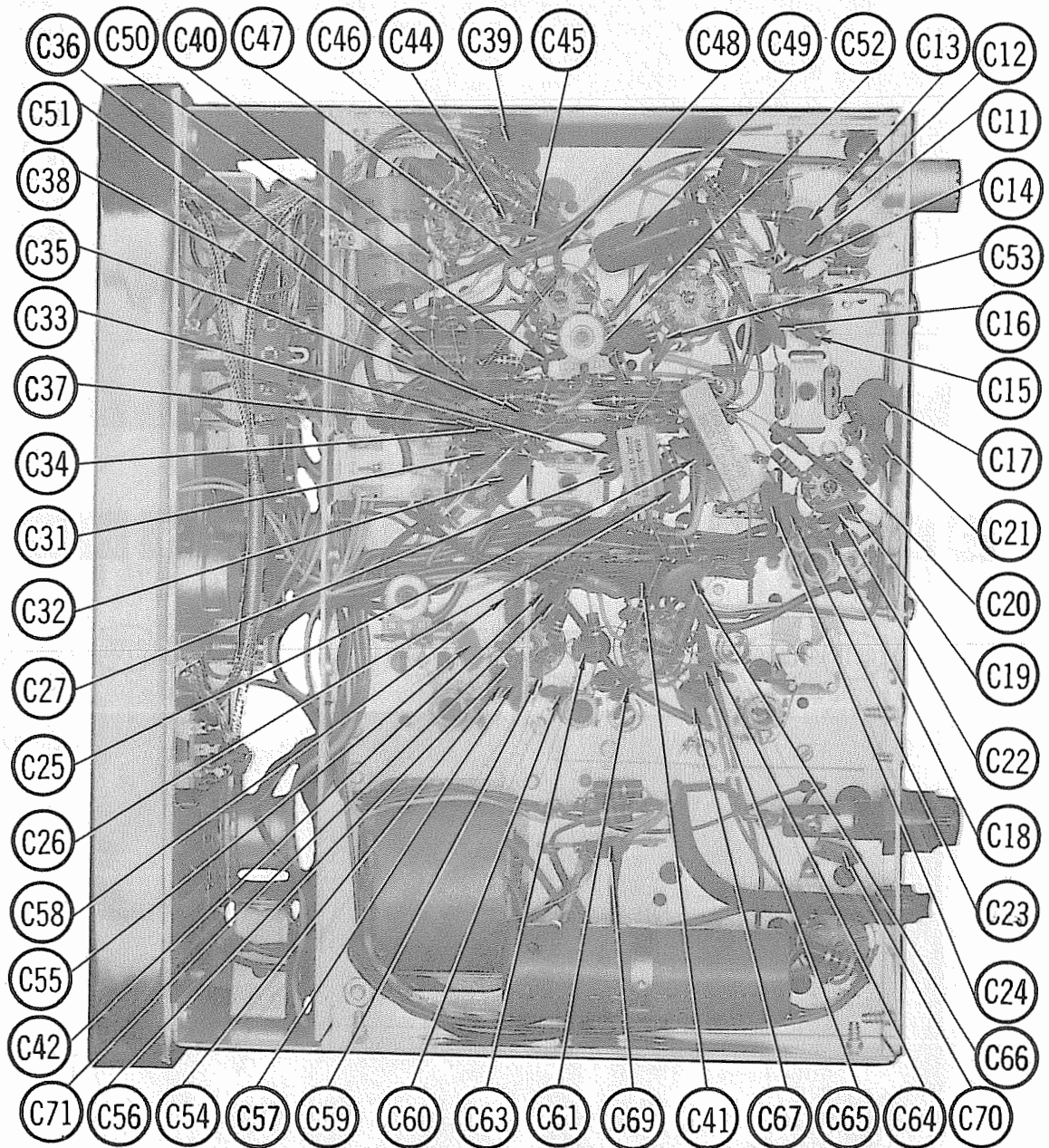
TRANSMITTER

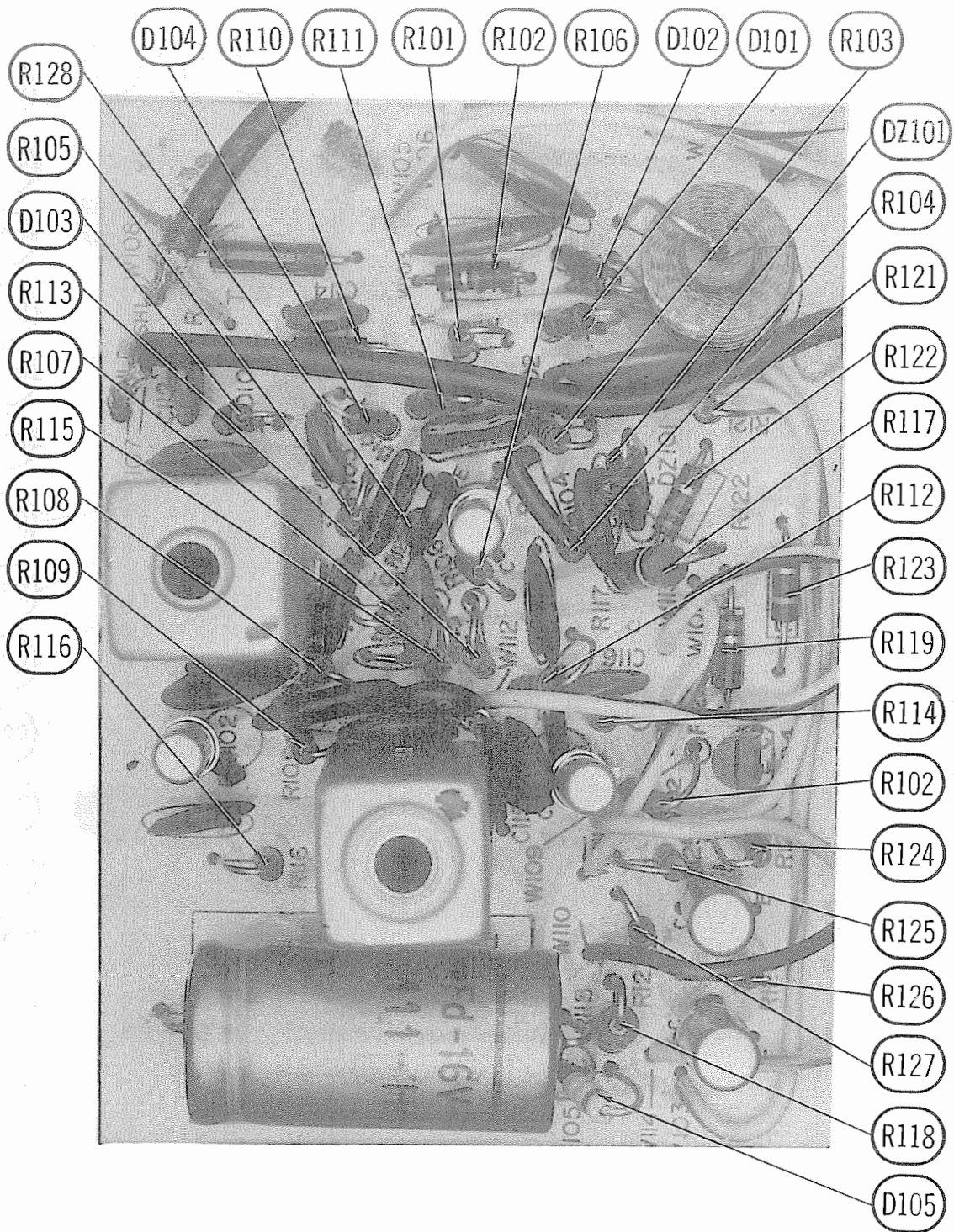
INDICATOR	ADJUST	REMARKS
DC VTVM	A16, A17	Connect DC VTVM to $\diamond C$, Key Transmitter and adjust for maximum negative voltage on grid of V9 (Final Amp). Approximately -20V. Channel Selector to 12.
DC VTVM, RF Wattmeter, DC Voltmeter.	A18, A19	Connect DC VTVM to $\diamond C$ and DC Voltmeter R65 (Meter shunt). 1-volt drop across R65 equals 10ma plate current. Standard Plate Current is 19ma. Key Transmitter. First adjust for maximum and then adjust A18 (Plate Load) for dip in plate current and by adjusting A19 (coupling) for the desired level of the dip. Dip should be at the standard Plate Current or less.
"	A20	Key Transmitter. When adjusting A18 thru dip, note DC VTVM connected at $\diamond C$. If voltage increases as A18 is adjusted, counterclockwise turn A20 (Neutralization) 1/2 turn clockwise and repeat above adjustment. Repeat this step until no increase is noted. If voltage increases as A18 is adjusted clockwise, turn A20 (Neutralization) 1/2 turn counterclockwise and repeat above adjustment. Repeat this step until no increase is noted.
		An adjustment of A20 (neutralization) will be found where there will be a slight increase or no increase on either side of dip.
" Meter on Front Panel	A18,A19 R4	Readjust for equal output on Channels 1, 12, 23. Key Transmitter with no modulation. Adjust for a reading of 4 on black scale of meter.

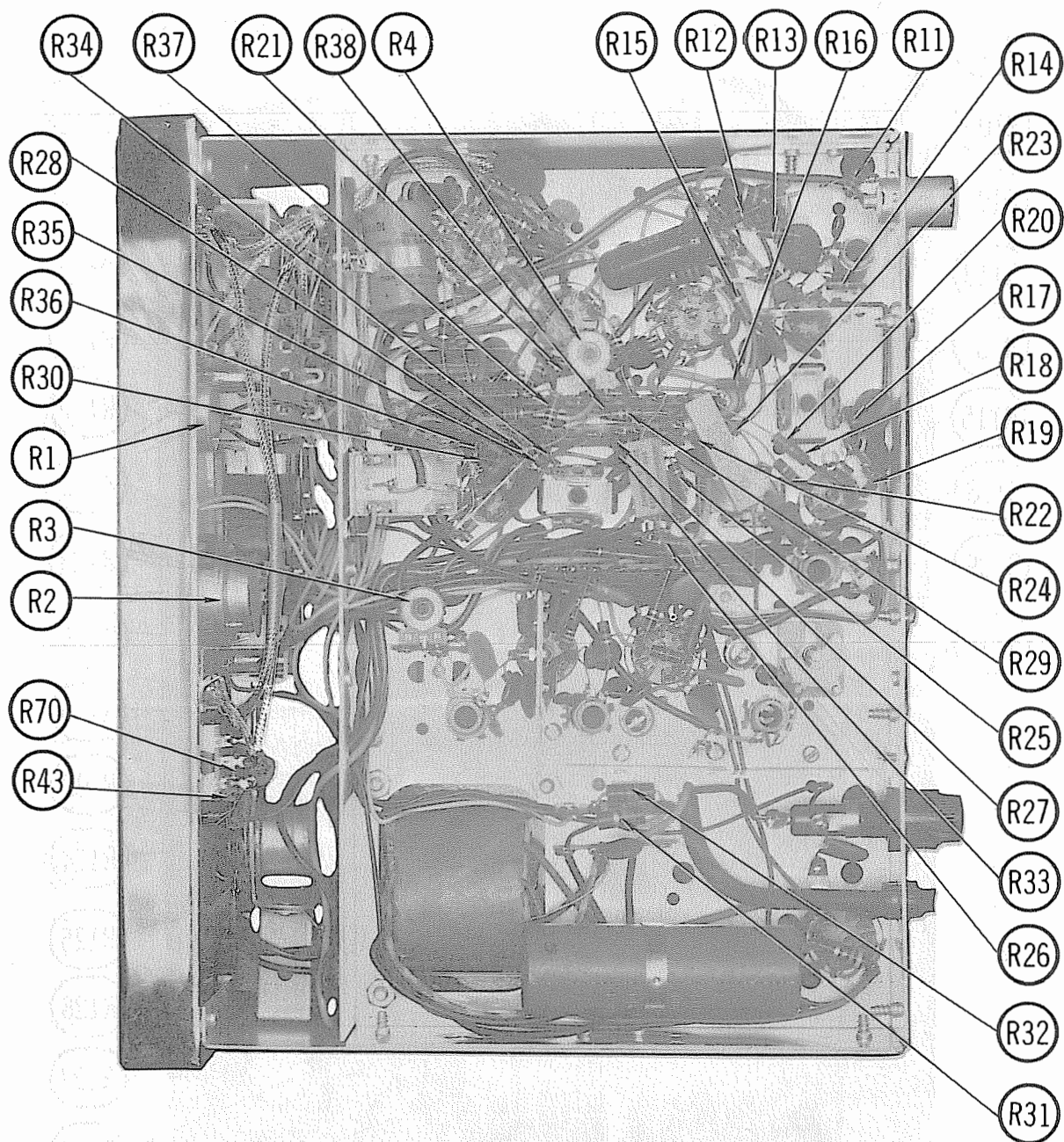


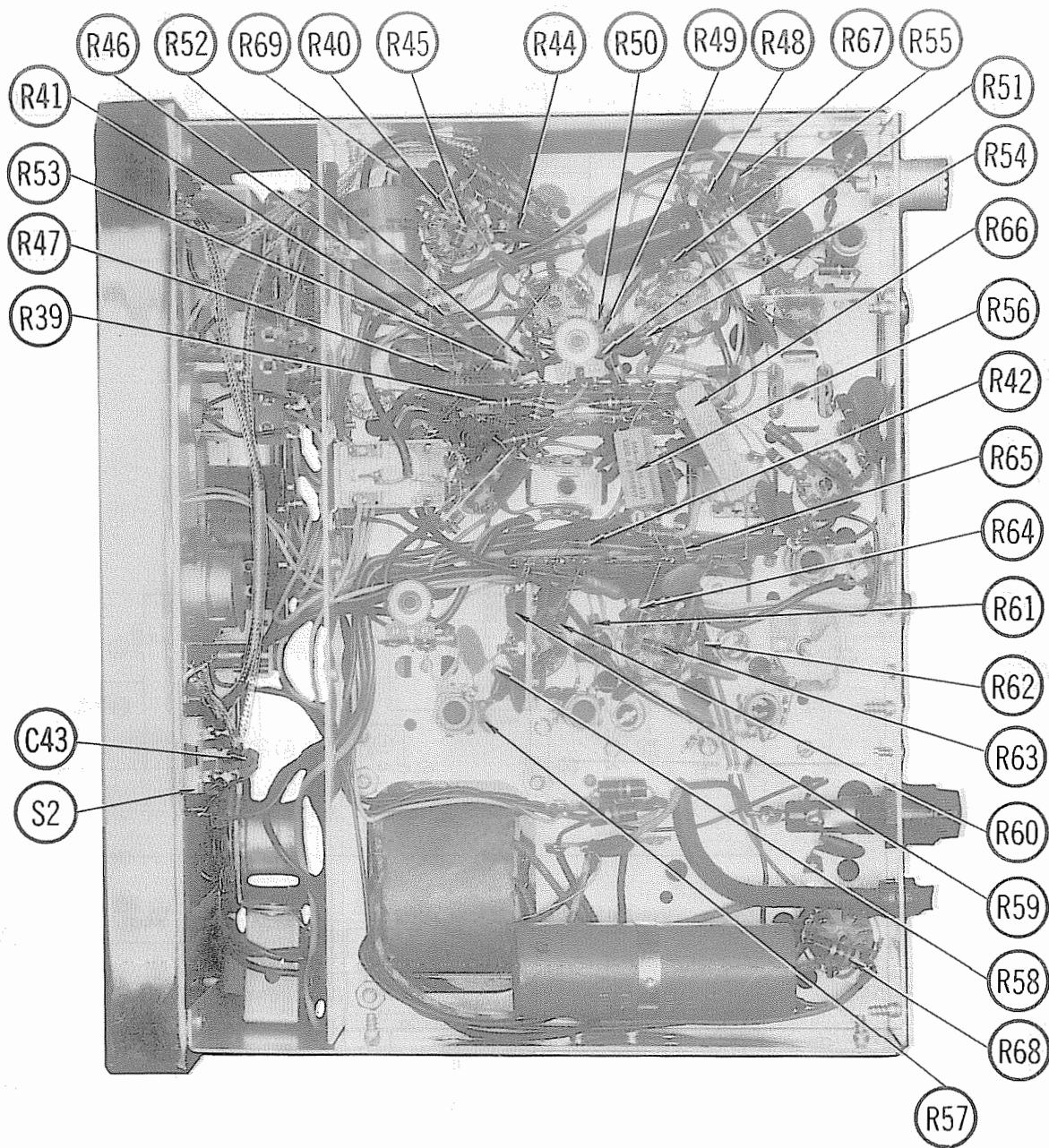


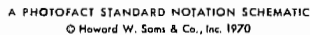


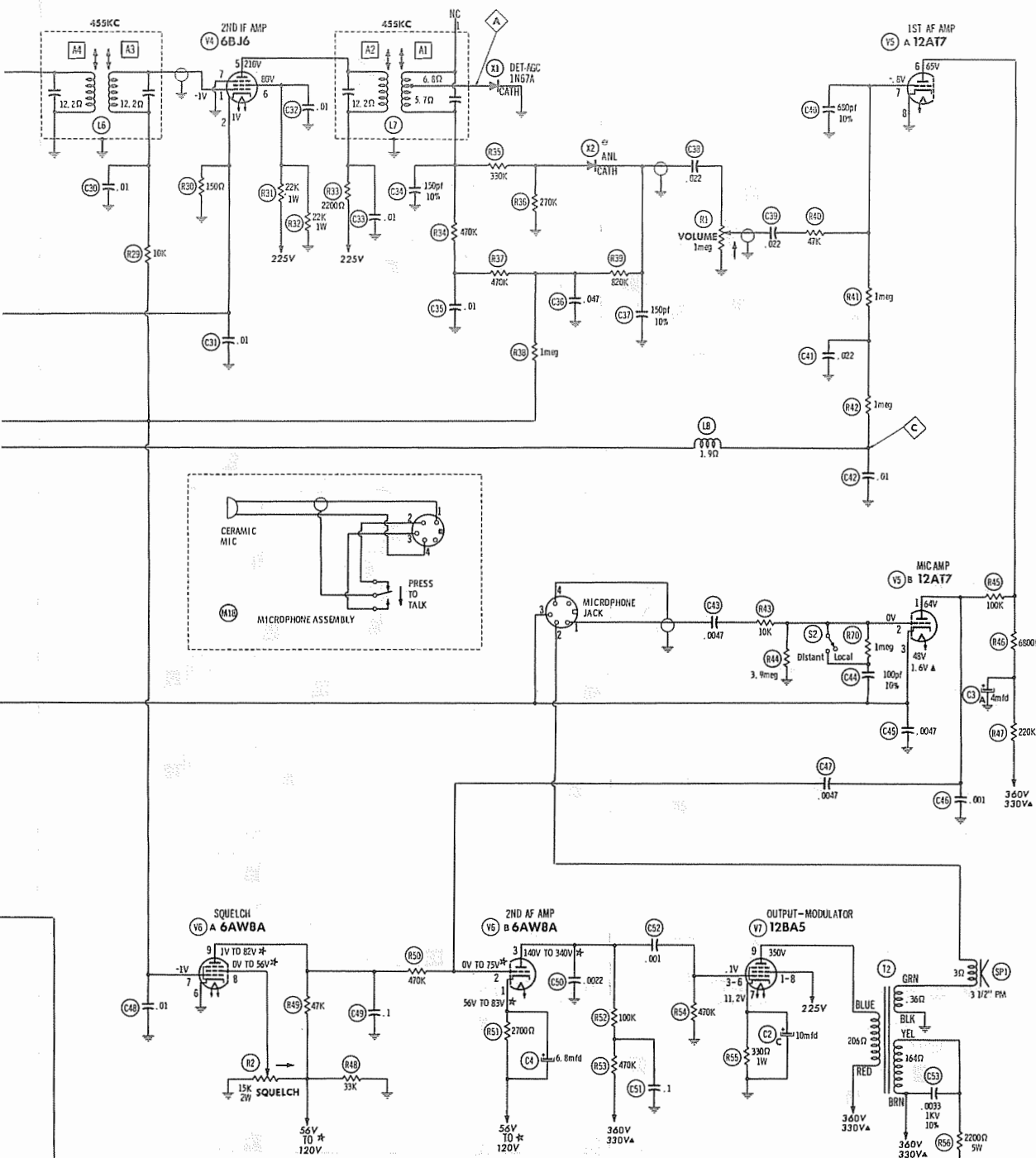












RESISTANCE MEASUREMENTS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	6B6	21K	150Ω	FIL	FIL	6100Ω†	18K †	0Ω		
V2	12DE6	22K	1900Ω	FIL	FIL	6100Ω†	37K †	1meg		
V3	6B6	21K	150Ω	FIL	FIL	6100Ω†	18K †	0Ω		
V4	6BJ6	21K	150Ω	FIL	FIL	6100Ω†	19K †	0Ω		
V5	12A77	300K †	4.7meg	620K †	FIL	FIL	230K †	2meg	0Ω	FIL
V6	6AW8A	19K †	533K †	570K †	FIL	FIL	0Ω	6000Ω	14K *	63K †
V7	12A85	3900Ω†	NC	470K	FIL	FIL	470K	330Ω	3900Ω†	220Ω †
V8	6077 7054	150Ω †	47K	150Ω †	FIL	FIL	NC	10K †	184K †	
V9	7061	125K †	NC	10K	FIL	FIL	NC	290Ω †	125K †	2300Ω †
V10	12BW4	210Ω	NC	NC	FIL	FIL	NC	210Ω	NC	
ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9

† MEASURED FROM PIN 9 OF V10
 * VARIES WITH SETTING OF R2
 † PIN 3 OF MICROPHONE JACK SHORTED TO GROUND.

SEARS MODEL 7535

SEE PAGE 122 FOR SYNTHESIZER & LOCAL OSCILLATOR

PARTS LIST AND DESCRIPTION

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

TUBES

AMPEREX			GENERAL ELECTRIC			RCA			SYLVANIA		
ITEM No.	USE		TYPE			ITEM No.	USE		TYPE		
V1	RF Amp		6BJ6			V6	Squelch - 2nd AF Amp		6AW8A		
V2	Rec Mixer		12BE6			V7	Output - Modulator		12AB5		
V3	1st IF Amp		6BJ6			V8	Xmitr Driver		8077/7054		
V4	2nd IF Amp		6BJ6			V9	Final Amp		7061		
V5	1st AM Amp - Mic Amp		12AT7			V10	Rectifier		12BW4		

TRANSISTORS

ITEM No.	TYPE No.	FUNCTION	REPLACEMENT DATA					
			MFGR. PART No.	GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	MOTOROLA PART No.	RCA PART No.	SYLVANIA PART No.
Q101	2N990	Synthesizer Oscillator	576-0003-024	GE-9	TR-17	HEP3	SK3006	ECG 126
Q102	2N990	Synthesizer Mixer	576-0003-024	GE-9	TR-17	HEP3	SK3006	ECG 126
Q103	2N990	Local Oscillator	576-0003-024	GE-9	TR-17	HEP3	SK3006	ECG 126
Q104	MPS6514	Mode Inverter	567-0003-011	GE-8	TR-09	HEP641	SK3010	ECG 103
Q105	2N406	Switch Driver	567-0001-003	GE-2	TR-14	HEP254	SK3004	ECG 102
Q106	2N406	Switch Driver	567-0001-003	GE-2	TR-14	HEP254	SK3004	ECG 102

POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	MFGR. PART OR TYPE No.	REPLACEMENT RECTIFIERS & DIODES			REPLACEMENT RECTIFIERS	NOTES
		GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	SYLVANIA PART No.	RCA PART No.	
D101	523-1000-881 (1N881)	GE-504A	8D4	ECG 116		60ma 100V
D102	523-1000-881 (1N881)	GE-504A	8D4	ECG 116		60ma 100V
D103	523-1000-881 (1N881)	GE-504A	8D4	ECG 116		60ma 100V
D104	523-1000-881 (1N881)	GE-504A	8D4	ECG 116		60ma 100V
D105	523-0001-002 (1N881)	GE-504A	5A4D or 8D4	ECG 116 or ECG 117	SK3016 or SK3030	1 Amp, 200V
DZ101	523-2003-100		1ZM10T5	ECG 140		Zener 10V, 1W, 5%
X1	523-1000-067 (1N67A)	1N34AS	1N67A	ECG 109		
X2	523-1000-881 (1N881)	GE-504A	8D4	ECG 116		
X3	523-1000-881 (1N881)	GE-504A	8D4	ECG 116		
X4	523-0006-002	GE-504A	8D4	ECG 116		75V, 50ma
X5	523-0006-002	GE-504A	8D4	ECG 116		75V, 50ma

ELECTROLYTIC CAPACITORS

ITEM No.	RATING	REPLACEMENT DATA						
		PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	SPRAGUE PART No.
C1	80 450V	510-4019-004	PRS1780		WBR80-450	QT1-24	TC80A	TVA-1716
C2A	15 300V	022-1541-001	AFH3-35		CC0260A	XC3-23.1	FP330.5A	TVL-3639.6
B	10 150V							
C	10 25V							
C3A	4 350V	510-4051-001	PRS1600		WBR5-500	QT1-2.1	TC697A	TVA-1601
B	8 150V		PRS1405		WBR10-500	QT1-6.1	TC41A	TVA-1405
C4	6.8 15V	510-2023-689			TYR138F685K		TAS685K0	196D685X0035
C121	1000 16V	510-4006-005	PRS1230	EA15-1000	BR1000-15	QT1-32	TC1501A	TL-1166.5

SEARS MODEL 7535

PARTS LIST AND DESCRIPTION (CONTINUED)

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

CAPACITORS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA					
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.
C11	.001		GPO X5F102K	00-102	JBS601Y102K	CCO-102	GP210	10TS-010
C12	22 10%		ADM-15-220	CPR-22J	CD15E220K500	DM-15-220K	SX422	MS-422
C13	.01		GPO X5S103K	DD-103	BYX601ZU103P	CCD-103	JF110	10TS-S10
C14	.001		GPO X5F102K	DD-102	JBS601Y102K	CCO-102	GP210	10TS-D10
C15	.01		GPD X5S103K	DD-103	BYX601ZU103P	CCO-103	JF110	10TS-S10
C16	.01		GPD X5S103K	DD-103	BYX601ZU103P	CCO-103	JF110	10TS-S10
C17	.01		GPD X5S103K	DD-103	BYX601ZU103P	CCD-103	JF110	10TS-S10
C18	22 10%		ADM-15-220	CPR-22J	CD15E220K500	DM-15-220K	SX422	MS-422
C19	330 N1500 1KV 5%	#510-3041-331						10TCW-T33
C20	.56 5%	#510-9002-568						
C21	.01		GPD X5S103K	TCZ-R5	BYX601ZU103P	CCO-103	JF110	10TS-S10
C22	.01		GPD X5S103K	DD-103	BYX601ZU103P	CCD-103	JF110	10TS-S10
C23	.01		GPD X5S103K	DD-103	BYX601ZU103P	CCD-103	JF110	10TS-S10
C24	.01		GPD X5S103K	DD-103	BYX601ZU103P	CCD-103	JF110	10TS-S10
C25	.01		GPD X5S103K	DD-103	BYX601ZU103P	CCD-103	JF110	10TS-S10
C26	.01		GPD X5S103K	DD-103	BYX601ZU103P	CCD-103	JF110	10TS-S10
C27	.01		GPD X5S103K	DD-103	BYX601ZU103P	CCD-103	JF110	10TS-S10
C28	.01		GPD X5S103K	DD-103	BYX601ZU103P	CCD-103	JF110	10TS-S10
C29	.56 5%	#510-9002-568						
C30	.01		GPD X5S103K	TCZ-R5	BYX601ZU103P	CCO-103	JF110	10TS-S10
C31	.01		GPD X5S103K	DD-103	BYX601ZU103P	CCD-103	JF110	10TS-S10
C32	.01		GPD X5S103K	DD-103	BYX601ZU103P	CCD-103	JF110	10TS-S10
C33	.01		GPD X5S103K	DD-103	BYX601ZU103P	CCD-103	JF110	10TS-S10
C34	150 10%		ADM-15-151	CPR-150J	CD15F151K500	DM-15-151K	SX315	424MC1500J501
C35	.01		GPD X5S103K	DD-103	BYX601ZU103P	CCD-103	JF110	10TS-S10
C36	.047 400V		DBE6S47	DMF4S47	DMF4S47	4DP-3-473	PVC4147	4PS-S47
C37	150 10%		ADM-15-151	CPR-150J	CD15F151K500	DM-15-151K	SX315	424MC1500J501
C38	.022		GPD Z5U203P	DD-203	BYT601ZU203Z	CCD-203	GP120	10TS-S20
C39	.022		GPD Z5U203P	DD-203	BYT601ZU203Z	CCD-203	GP120	10TS-S20
C40	680 10%		ADM-19-681	CPR-680J	CD19F681K500	DM-15-681K	SX368	424ME6800J501
C41	.022		GPD Z5U203P	DD-203	BYT601ZU203Z	CCD-203	GP120	10TS-S20
C42	.01		GPD X5S103K	DD-103	BYX601ZU103P	CCD-103	JF110	10TS-S10
C43	.0047		GPD X5U472P5	DD-472	BYX601ZU472M	CCD-472	GP247	5GA-D47
C44	100 10%		ADM-15-101	CPR-100J	CD15F101K500	DM-15-101K	SX310	424MC1000J501
C45	.0047		GPD X5U472P5	DD-472	BYX601ZU472M	CCD-472	GP247	5GA-D47
C46	.001		GPD X5F102K	DD-102	JBS601Y102K	CCD-102	GP210	10TS-D10
C47	.0047		GPD X5U472P5	DD-472	BYX601ZU472M	CCD-472	GP247	5GA-D47
C48	.01		GPD X5S103K	DD-103	BYX601ZU103P	CCD-103	JF110	10TS-S10
C49	.1 400V		DBE4P1	DMF4P1	DMF4P1	4DP-3-104	PVC401	4PS-P10
C50	.0022		GPD X5F222K	DD-222	JBX601Y222K	CCD-222	GP222	10TS-D22
C51	.1 400V		DBE4P1	DMF4P1	DMF4P1	4DP-3-104	PVC401	4PS-P10
C52	.001		GPD X5F102K	DD-102	JBS601Y102K	CCD-102	GP210	10TS-D10
C53	.0033 1KV 10%		GPD X5R332K	DD-332	JBV601Y332K	CCD-332	JF233	10TS-D33
C54	150 10%		ADM-15-151	CPR-150J	CD15F151K500	DM-15-151K	SX315	424MC1500J501
C55	330 N1500 5%							10TCW-T33
C56	1 5%		NPO-D1 1.0	TCZ-1			CN0510	10TCC-V10
C57	.01		GPD X5S103K	DD-103	BYX601ZU103P	CCD-103	JF110	10TS-S10
C58	.0047		GPD X5U472P5	DD-472	BYX601ZU472M	CCD-472	GP247	5GA-D47
C59	.0047		GPD X5U472P5	DD-472	BYX601ZU472M	CCD-472	GP247	5GA-D47
C60	10 10%		ADM-15-100		CD15C100K500	DM-15-100K	SX410	MS-41
C61	220 10%		ADM-15-221	CPR-220J	CD15F221K500	DM-15-221K	SX322	424ME2200J501
C62	1-7.5	#510-1002-004						
C63	22 10%		ADM-15-220	CPR-22J	CD15E220K500	DM-15-220K	SX422	MS-422
C64	.001		GPD X5F102K	DD-102	JBS601Y102K	CCD-102	GP210	10TS-D10
C65	.001 1500V		HVD-15-1000	DD30-102	HVX162XP102M	3CCD-102	2HV210	30GA-D10
C66	.001 1500V		HVD-15-1000	DD30-102	HVX162XP102M	3CCD-102	2HV210	30GA-D10
C67	.001 1500V		HVD-15-1000	DD30-102	HVX162XP102M	3CCD-102	2HV210	30GA-D10
C68	3.5-65	#148-0009-004						
C69	.0022 1400V		HVD-15-2200	DD30-222	ACX142ZU202P	3CCD-202	UAC220	125L-D20
C70	.0022 1400V		HVD-15-2200	DD30-222	ACX142ZU202P	3CCD-202	UAC222	125L-D20
C71	.01		GPD X5S103K	DD-103	BYX601ZU103P	CCD-103	JF110	10TS-S10
C101	.047 16V		TTP-05	UK16-503	H0V101ZV503Z		TA150	TGL-S50
C102	.047 16V		TTP-05	UK16-503	H0V101ZV503Z		TA150	TGL-S50
C103	.047 16V		TTP-05	UK16-503	H0V101ZV503Z		TA150	TGL-S50
C104	150 5%		ADM-10-151	CPR-150J	CD10E151J500	DM-10-151J	SX315	424MC1500J501
C105	47 5%		ADM-10-470	CPR-47J	CD10E470J500	DM-10-470J	SX447	424MC470J501
C106	.01 50V		TTP-01	CK-103	HOY101ZV103P	CCD-103	TA110	TG-S10
C107	68 N150 5%	#510-3016-680						
C108	120 N750 5%			TCN-120			CN7312	10TCP-Q68
C109	.01 50V		TTP-01	CK-103	HOY101ZV103P	CCD-103	TA110	10TCU-T12
C110	56 N150 5%	#510-3016-560						TG-S10
C111	68 N150 5%	#510-3016-680						10TCP-Q56
C112	.01 16V		TTP-01	UK16-103	HOY101ZV103M		TA110	10TCP-Q68
C113	.01 16V		TTP-01	UK16-103	HOY101ZV103M		TA110	TG-S10
C114	.01 16V		TTP-01	UK16-103	HOY101ZV103M		TA110	TG-S10
C115	6.8 N750 5%	#510-3020-689						10UCU-V68
C116	18 N750 5%			TCN-18			CN7568	10UCU-Q18
C117	22 N750 5%	#510-3020-220					CN7418	10TCU-Q22
C118	.01 50V		TTP-01	DTN-22	HOY101ZV103P	CCD-103	TA110	TG-S10
C119	.01 50V		TTP-01	CK-103	HOY101ZV103P	CCD-103	TA110	TG-S10
C120	.01 50V		TTP-01	CK-103	HOY101ZV103P	CCD-103	TA110	TG-S10

Sears Part Number

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	RESISTANCE	REPLACEMENT DATA				
			MFGR. PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
R1	Volume	1meg	562-0007-052	F2-1meg, SRS012, CA005, BA006	A47-1meg-Z, RS-3 or [NP-1meg-Z, UP-A-400] A58S-15K, RS-3	B13-137, SK1, QCB1(1) or [BU2, CF26, SS5, DC1]*	UA16A, SL2500 or [RU16A, SL39, SL2500] or U53
R2	Squelch/Switch	15K, 2W	562-0011-002 (22-1932)				R15ML, DS36, US30
R3	Relative Output Adjust	5000	562-0004-502	T-5000		X201R502B	MTC53L1
R4	Meter Zero, Adjust	300	562-0004-301	T-300		X201R301B	MTC32L1

* "SNAPTROL"

(1) Use QCB1 Bushing instead of Bushing in SK1.

RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA		
		IRC PART No.	WORKMAN PART No.	MFGR. PART No.
R56	2200 5W	PW5-2250	5W-SQ-2.25K	569-2005-222

ITEM No.	RATING	REPLACEMENT DATA		
		IRC PART No.	WORKMAN PART No.	MFGR. PART No.
R66	3900 7W	PW10-3900	10W-SQ-3.9K	569-2007-392

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA			
		PART No.	MEISSNER PART No.	MILLER PART No.	WORKMAN PART No.
L1	Antenna Matching	023-1700-021			
L2	RF Amp	022-1623-001			
L3	Osc Injection (REC)	023-1176-020			
L4	Input IF	592-5019-001		12-C30	
L5	Interstage IF	592-5019-003		12-C30	
L6	Interstage IF	592-5019-003		12-C30	
L7	Output IF	592-5019-002			
L8	RFC (6.8uh)	022-1832-001		74F686AP	T821
L9	Osc. Injection (Xmtr)	023-1176-019			
L10	Xmtr RF Amp	023-1700-031			
L11	RFC (20uh)	022-1549-001		6152	T300
L12	Plate Tuning	023-1700-024			
L13	Plate Load	023-1700-623			
L101	RFC (2.4mh)	022-1193-001		6152	T300
L102	RFC (20uh)	542-3002-002		4666	T876
T101	Synthesizer Mixer	592-5008-011			
T102	Synthesizer Osc	592-5010-001			

SEARS MODEL 7535

TRANSFORMER (Power)

ITEM No.	RATING		REPLACEMENT DATA					NOTES
	PRI.	SEC. 1	MFGR. PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T1	117VAC .63A .73A *	640V CT 72ma 105ma *	592-3033-001					* Transmit
	SEC. 2	SEC. 3						
	12.8V 2.5A							

TRANSFORMER (Audio Output)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
	PRI.	SEC. 1	MFGR. PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T2	80,000	3.2	592-1029-002					
		SEC. 2						
		164 DC Resistance						

PARTS LIST AND DESCRIPTION (CONTINUED)

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

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		MFGR. PART No.	QUAM PART No.	
SP1	3 1/2" PM 3.2 ohms	589-1004-001		

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	2 Amp 250V	534-0003-024	534-1002-001	AGC 2	HKP	312002	342012		

MISCELLANEOUS

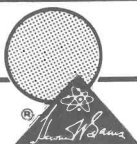
ITEM No.	PART NAME	PART No.	NOTES
K1	Relay	567-0013-002	SPOT
M1	Lamp	147-2103-922	Transmitter Pilot Indicator
M2	Lamp	549-3001-003	(3 used)
M3	Crystal	519-0023-005	6.150MC Receive (Channels 4,8,12,16,20,23)
M4	Crystal	519-0023-008	6.190MC Receive (Channels 1,5,9,13,17,21)
M5	Crystal	519-0023-007	6.180MC Receive (Channels 2,6,10,14,18,22)
M6	Crystal	519-0023-006	6.170MC Receive (Channels 3,7,11,15,19)
M7	Crystal	519-0023-001	5.695MC Transmit (Channels 4,8,12,16,20,23)
M8	Crystal	519-0023-004	5.735MC Transmit (Channels 1,5,9,13,17,21)
M9	Crystal	519-0023-003	5.725MC Transmit (Channels 2,6,10,14,18,22)
M10	Crystal	519-0023-002	5.715MC Transmit (Channels 3,7,11,15,19)
M11	Crystal	519-0024-005	32.900MC Receive & Transmit (Channels 17,18,19,20)
M12	Crystal	519-0024-006	32.950MC Receive & Transmit (Channels 21,22,23)
M13	Crystal	519-0024-001	32.700MC Receive & Transmit (Channels 1,2,3,4)
M14	Crystal	519-0024-002	32.750MC Receive & Transmit (Channels 5,6,7,8)
M15	Crystal	519-0024-003	32.800MC Receive & Transmit (Channels 9,10,11,12)
M16	Crystal	519-0024-004	32.850MC Receive & Transmit (Channels 13,14,15,16)
M17	Meter	554-0014-001	"S" Units 0-200ua DC
M18	Microphone Assembly		Desk, High Impedance Ceramic
S1	Switch	583-2029-101	Includes Crystals
S2	Switch, Local-Distant	583-3004-113	

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

ITEM	PART No.	ITEM	PART No.
Cabinet Assembly	023-0568-021	Grille, Speaker	017-0672-021
Front Panel Assembly	023-2577-021	Channel Indicator Dial	032-0154-002
Panel, Front	015-0798-003	Window, Dial	559-1007-021
Overlay, Panel Lower	559-2034-021	Knob, Channel Selector	547-0009-001
Overlay, Panel Upper	559-2035-021	Knob, Volume, Squelch	547-0009-002

WIRING DATA

General-use Hook-up Wire	Use BELDEN No. 8530 (Solid) Available in 12 Colors
	8524 (Stranded) Available in 12 Colors
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)
	8496 3-Conductor, 1 Shielded, for Press-to-Talk (Vinyl)
Ignition Noise Suppression	Use BELDEN No. 7300-Series Spark-Plug Sets
Bonding Strap	Use BELDEN No. 8661 (3/8 In.)



PHOTOFACT[®] with

CIRCUITRACE[®]

For Supplier Address See PHOTOFACT Index

NOTE

ONLY THOSE PERSONS PROPERLY LICENSED ARE PERMITTED TO MAKE REPAIRS OR ADJUSTMENTS WHICH MAY RESULT IN ILLEGAL OPERATION. (REFER TO FCC RULES AND REGULATIONS PART 95, SUBPARTS 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.



PENNCREST MODEL 985-6050 (Pinto-23)

ALIGNMENT INSTRUCTIONS

Suggested Alignment Tools:

	GENERAL CEMENT	WALSCO
A1 thru A7	8276, 8277, 8290	2512, 2515, 2525
A8 thru A12	8606L, 9440	2501, 2544
A13 thru A19	8868, 9089	2541, 2587

RECEIVER

Connect an AC VTVM across speaker terminals. Turn Volume control to mid-range and Squelch controllly fully clockwise.

SIGNAL GENERATOR	CHANNEL	ADJUST	REMARKS
High side thru .01 to base of Q4 (2nd Rec.Mixer), low side to chassis. Tune to 455KC (mod.)	Any	A1 Thru A7	Adjust for maximum.
High side thru .01 to antenna connector, low side to chassis. Tuner to 27.085MC (Channel 11).	Any	A8 Thru A12	Adjust for maximum.

TRANSMITTER

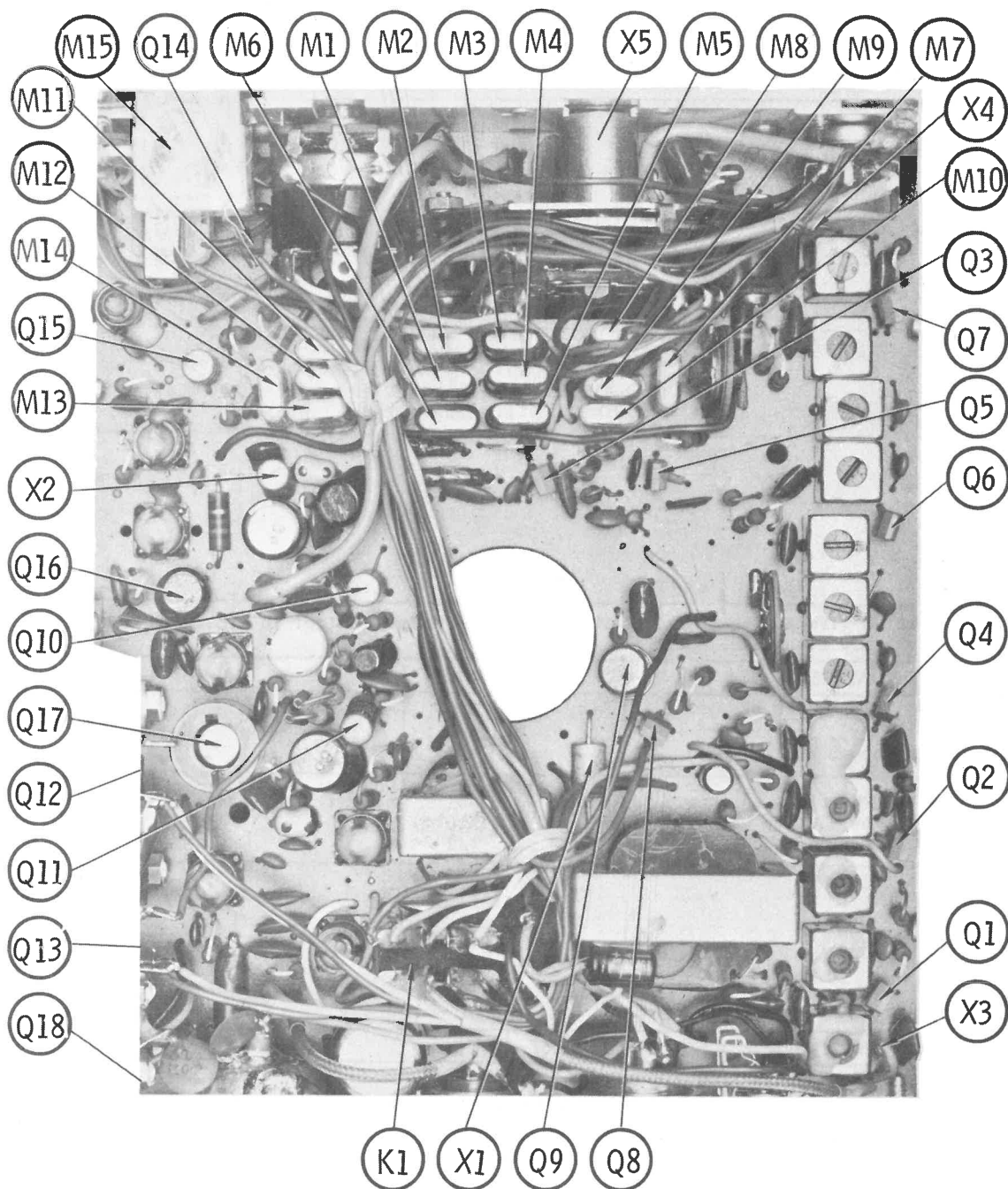
INDICATOR	ADJUST	REMARKS
RF Watt meter or Signal Strength meter.	A14 Thru A19	Adjust for maximum.
0-500ma	A18	Insert meter in emitter of Q18 (Final Amp) at Point Δ . Readjust A18 as required for 5 Watts of DC input power (approximately 420ma).
Signal Strength meter	A13	Adjust so spurious radiation near 26MC is MINIMUM.

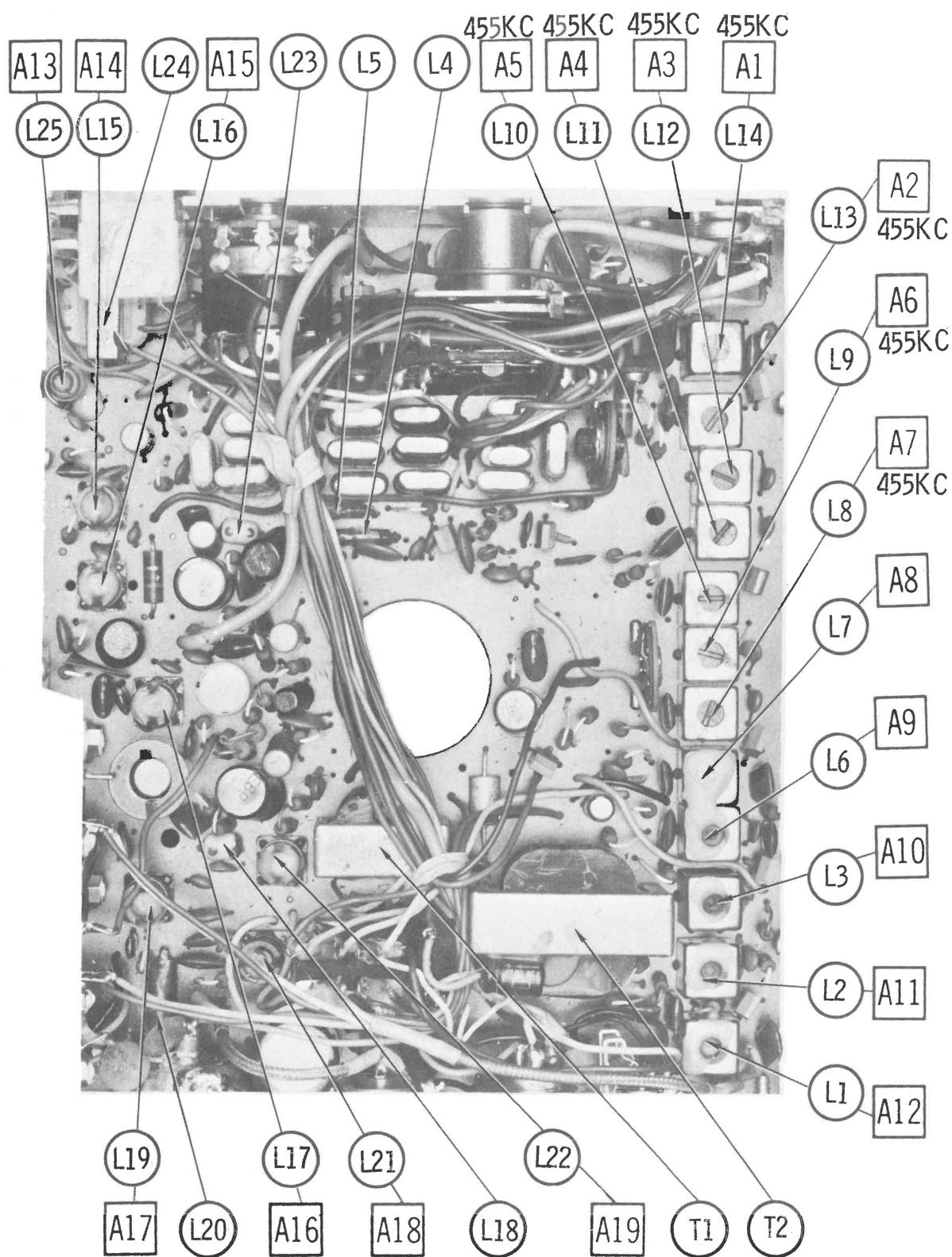
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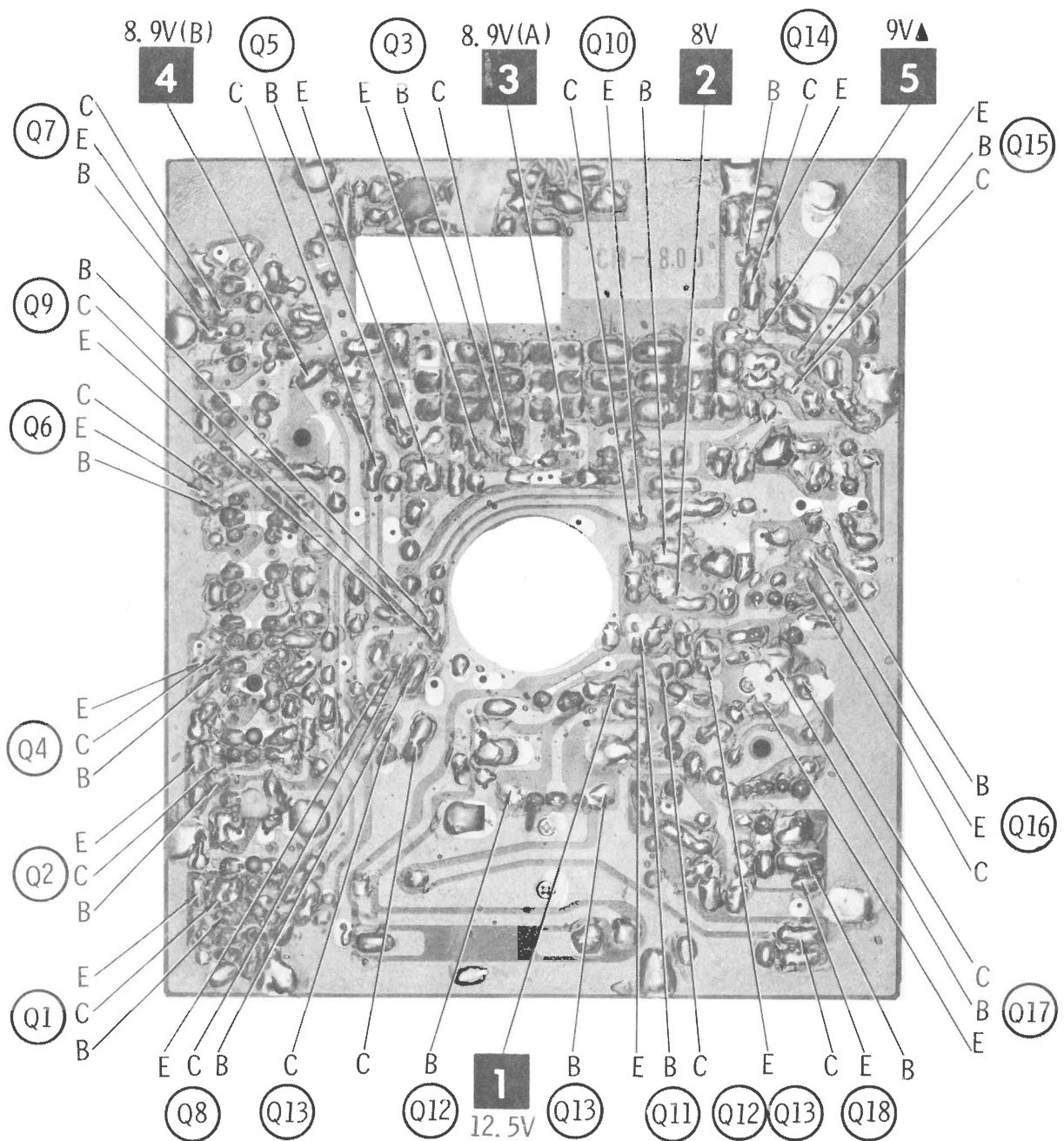
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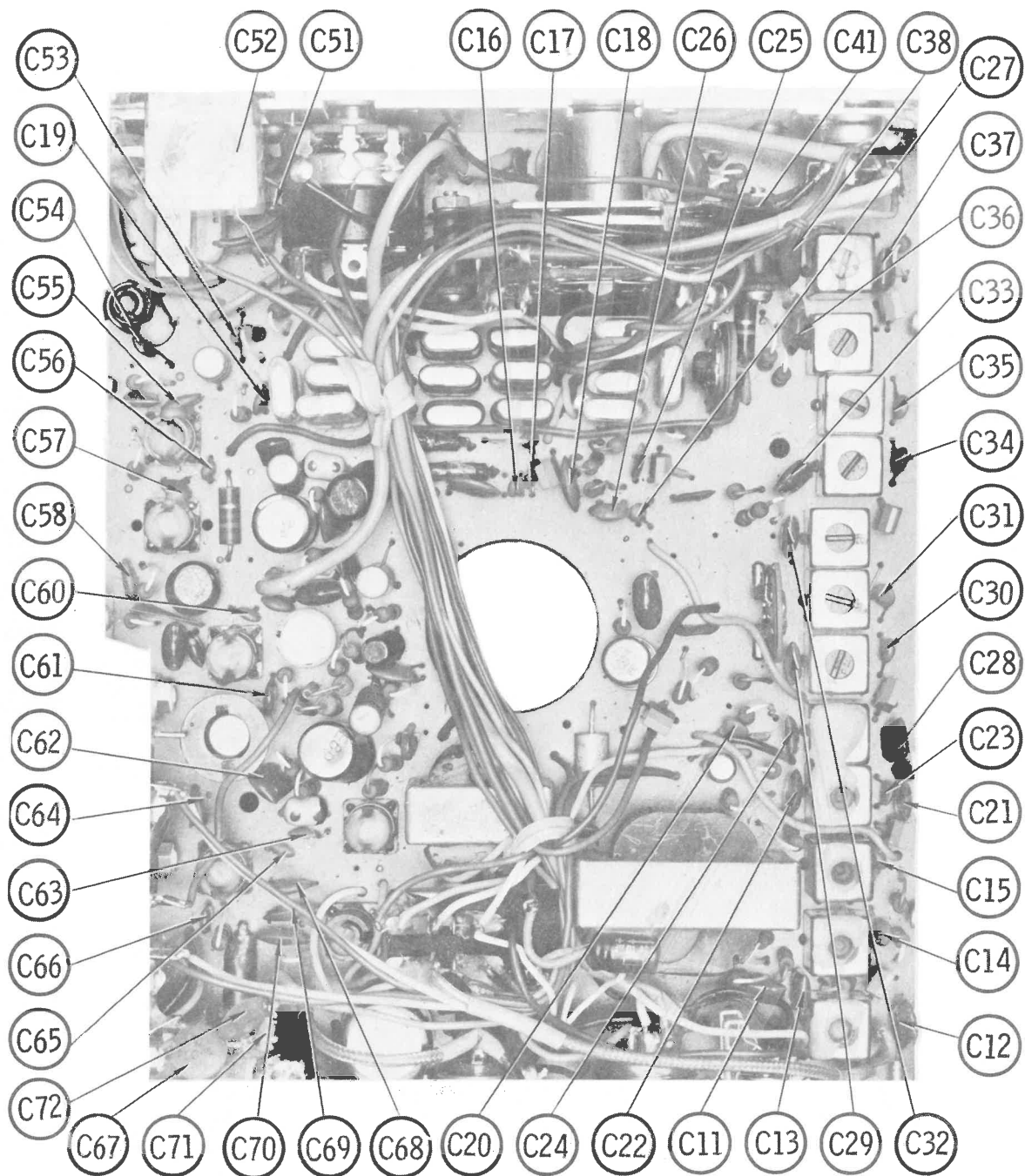
PENNCREST MODEL 985-6050



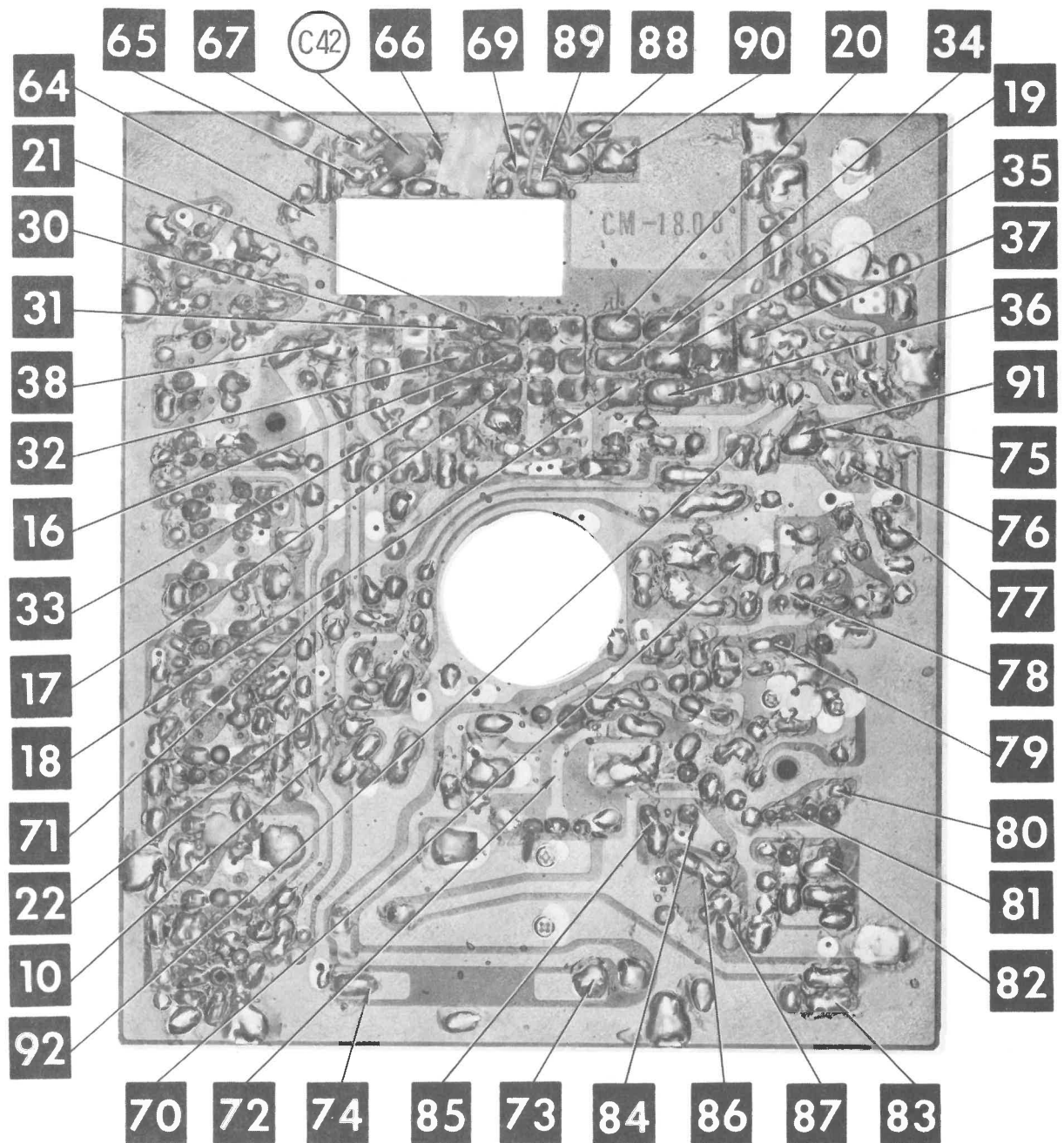


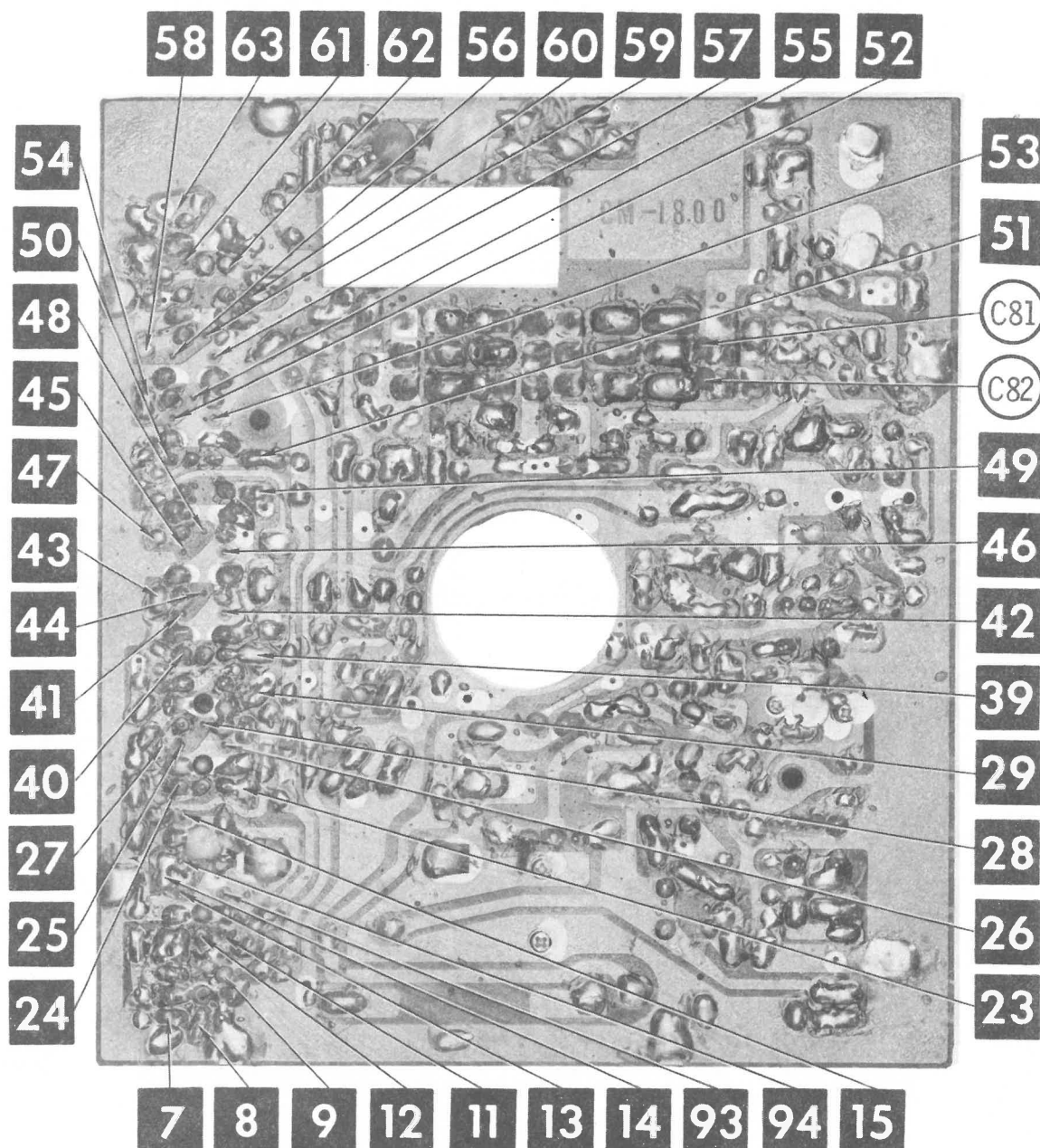
PENNCREST MODEL 985-6050

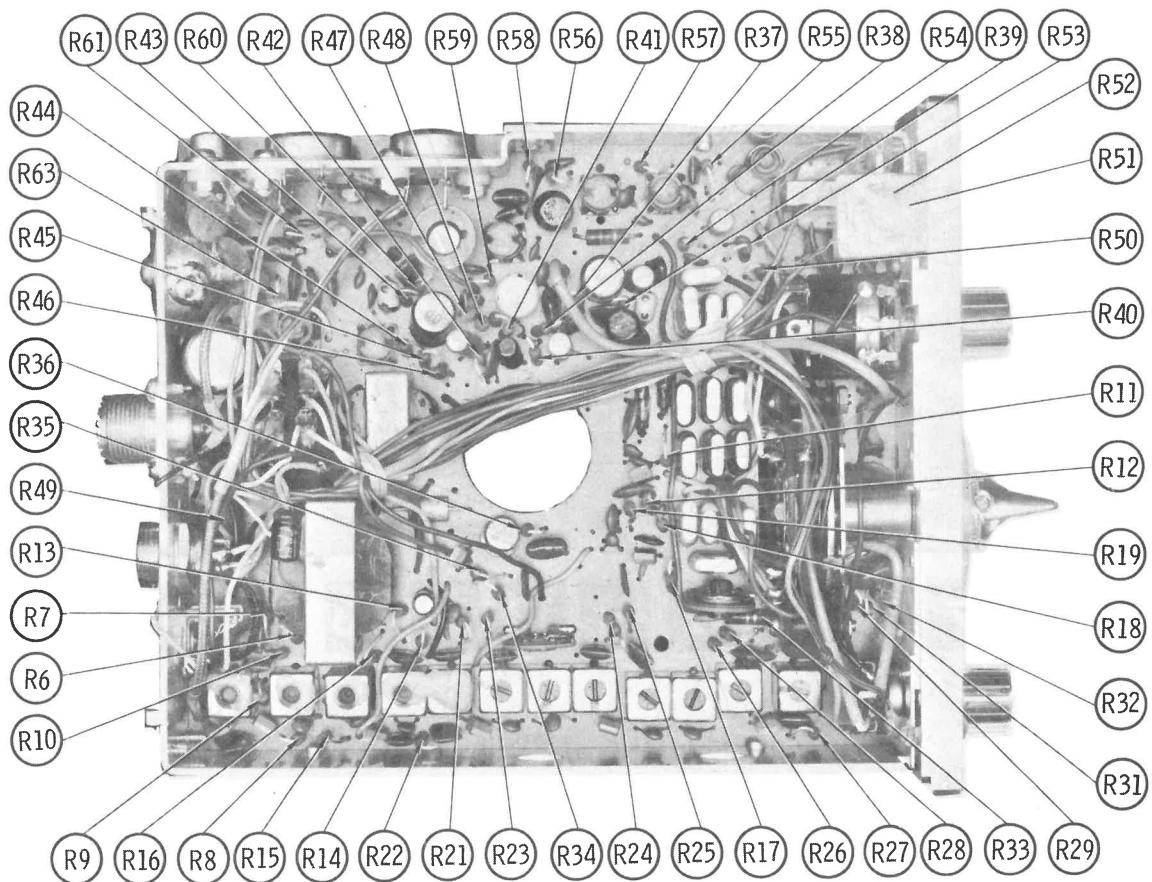
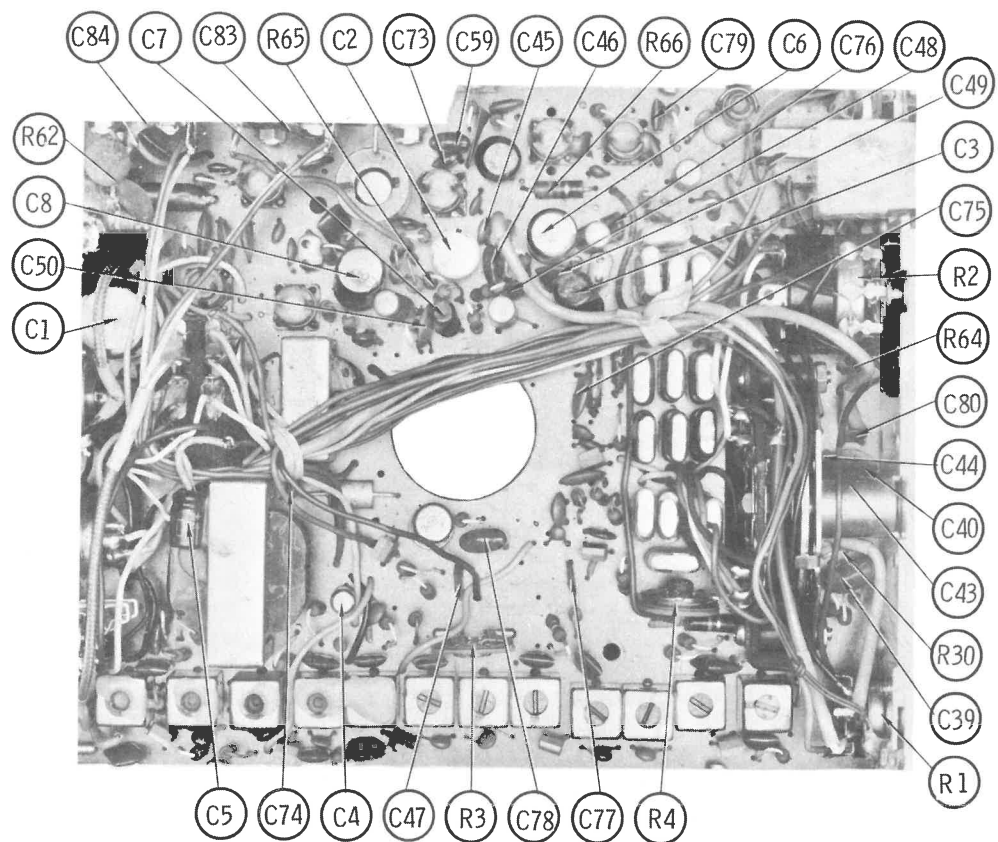




PENNCREST MODEL 985-6050







PARTS LIST AND DESCRIPTION

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

TRANSISTORS

ITEM No.	TYPE No.	FUNCTION	REPLACEMENT DATA					
			MFGR. PART No.	GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	MOTOROLA PART No.	RCA PART No.	SYLVANIA PART No.
Q1	2SC535A	RF Amp	0573509	GE-17	TR-24	HEP56	SK3018	ECG 108
Q2	2SC460B	1st Rec Mixer	0573486	GE-11	TR-21	HEP53	SK3018	ECG 107
Q3	2SC460B	Synthesizer Oscillator	0573486	GE-11	TR-21	HEP53	SK3018	ECG 107
Q4	2SC460B	2nd Rec Mixer	0573486	GE-11	TR-21	HEP53	SK3018	ECG 107
Q5	2SC460B	Rec Oscillator	0573486	GE-11	TR-21	HEP53	SK3018	ECG 107
Q6	2SC454B	1st IF Amp	0573491	GE-20	TR-21	HEP53	SK3018	ECG 128
Q7	2SC454B	2nd IF Amp	0573491	GE-20	TR-21	HEP53	SK3018	ECG 128
Q8	2SC458B	Squelch	0573480	GE-10	TR-21	HEP53	SK3020	ECG 123A
Q9	2SA537	Squelch	0573542	GE-21	TR-20	HEP708	SK3025	ECG 106
Q10	2SC650B	AF Amp	0573202	GE-10	TR-21	HEP50	SK3020	ECG 123A
Q11	(2SC458LGB) 2SC281A (2SC458A)	Driver	(5320022) 0573468	GE-17	TR-21	HEP719	SK3020	ECG 123A
Q12	2SB337	Output-Modulator	0573040	GE-3	TR-01	HEP232	SK3009	ECG 121
Q13	2SB337	Output-Modulator	0573040	GE-3	TR-01	HEP232	SK3009	ECG 121
Q14	2SC460B	XMTR Oscillator	0573486	GE-11	TR-21	HEP53	SK3018	ECG 107
Q15	2SC464	XMTR Mixer	0573475	GE-20	TR-22	HEP56	SK3018	ECG 108
Q16	2SC150T	XMTR Buffer	0573517	GE-17	TR-24	HEP53	SK3047	ECG 128
Q17	2SC116T	XMTR Driver	0573519	GE-18			SK3047	ECG 128
Q18	2SC609T	Final Amp	0573541			HEP243	SK3048	

POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	MFGR. PART OR TYPE No.	REPLACEMENT RECTIFIERS & DIODES			REPLACEMENT RECTIFIERS	NOTES
		GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	SYLVANIA PART No.	RCA PART No.	
X1	1S310	GE-504A	8D4 or 5A4-D	ECG 116 or ECG 117	SK3030 or SK3031	Zener
X2	TR9S	GEZD-9.1	1ZM9.1-T10	ECG 139		
X3	1N60	1N60	1N60	ECG 109		
X4	1N60	1N60	1N60	ECG 109		
X5	1N60	1N60	1N60	ECG 109		

ELECTROLYTIC CAPACITORS

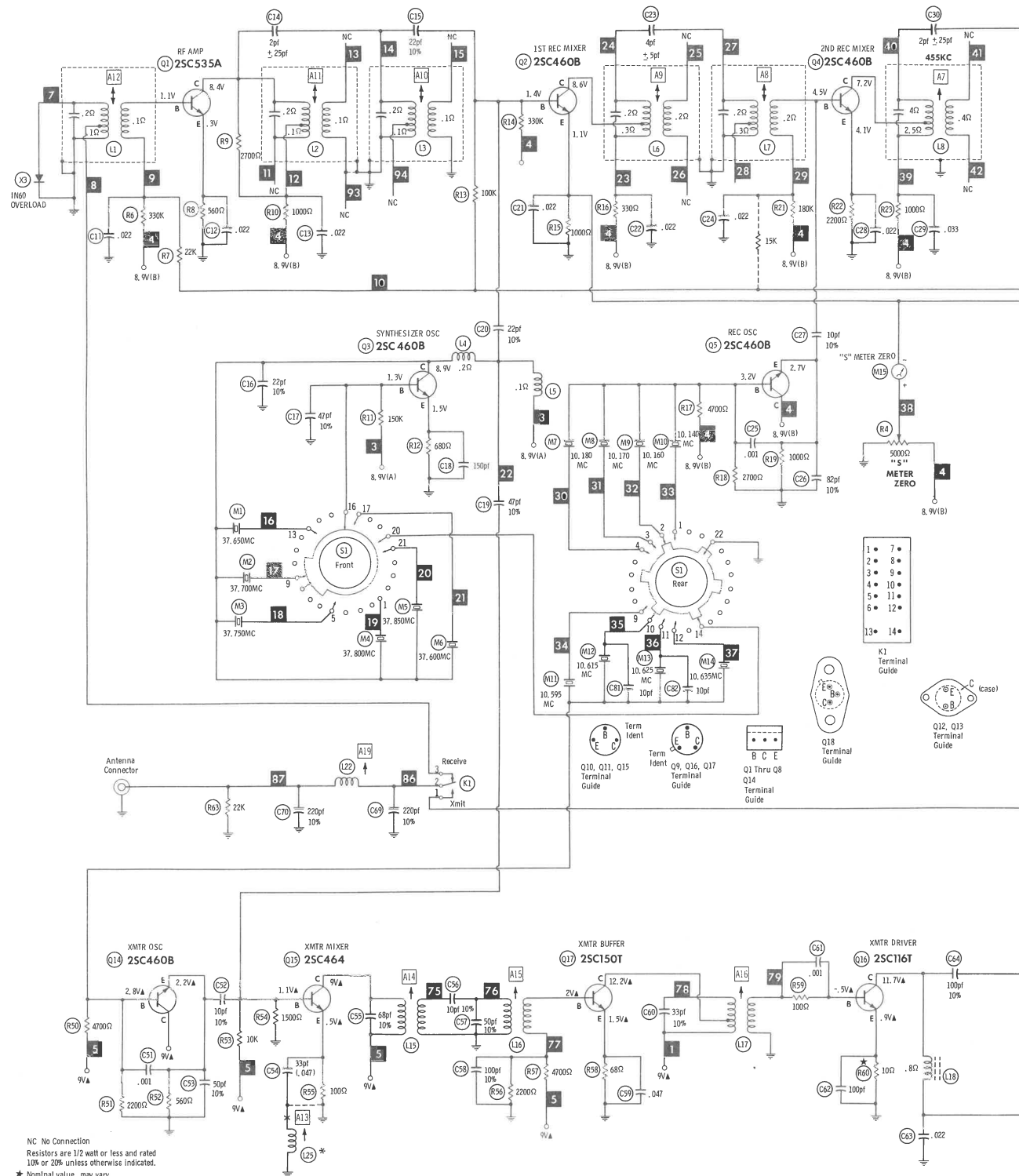
ITEM No.	RATING	REPLACEMENT DATA						
		PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	SPRAGUE PART No.
C1	500 15V	0252535	BCD15500	EP15-100	PC500-16			
C2	100 10V	0252331	BCD10100	EP30-50	PC100-16	MT1-19	MTV100CD10	TE-1135
C3	50 15V	0252525	BCD15050	EP30-2	PC50-25	MT1-16.5	MTV50CD25	TE-1209
C4	3 15V	0252513	BCD50003	EP30-10	PC5-100	MT1-3	MTV3CB50	TL-1150
C5	10 25V	0252621	BCD25010	EP15-25	PC10-50	MT1-5	MTV10CB50	TE-1204
C6	33 16V	0251080	BCD15035	EP30-2	PC30-35	MT1-13.5	MTV30CB25	TE-1158
C7	3 15V	0252513	BCD50003	EP15-25	PC5-100	MT1-3	MTV3CB50	TL-1150
C8	33 16V	0251080	BCD15035		PC30-35	MT1-13.5	MTV30CB25	TE-1158

CAPACITORS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA					
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.
C11	.022		TTP-02	CK-203	MGP02	CCD-203	TA120	TG-S20
C12	.022		TTP-02	CK-203	MGP02	CCD-203	TA120	TG-S20
C13	.022		TTP-02	CK-203	MGP02	CCD-203	TA120	TG-S20
C14	2 +.25		NPO-DI 2.2	DTZ-2R2	NPO2P2		CN0522	10TCC-V22
C15	22 10%		NPO-DI 20	DTZ-20	NPO20	CCT0-200	CN0420	10TCC-Q20
C16	22 10%		NPO-DI 20	DTZ-20	NPO20	CCT0-200	CN0420	10TCC-Q20
C17	47 10%		NPO-DI 50	DTZ-50	NPO50	CCT0-510	CN0450	10TCC-Q50
C18	150		GPD X5F151K	DD-151	GP150	CCD-151	GP315	10TS-T15
C19	47 10%		NPO-DI 50	DTZ-50	NPO50	CCT0-510	CN0450	10TCC-Q50
C20	22 10%		NPO-DI 20	DTZ-20	NPO20	CCT0-200	CN0420	10TCC-Q20
C21	.022		TTP-02	CK-203	MGP02	CCD-203	TA120	TG-S20
C22	.022		TTP-02	CK-203	MGP02	CCD-203	TA120	TG-S20
C23	5 +.5				NPO3P9			10TCC-V39
C24	.022		TTP-02	CK-203	MGP02	CCD-203	TA120	TG-S20
C25	.001		GPD X5F102K	DM-102	GP1000	CCD-102	SM210	2SS-D10
C26	82 10%			DTZ-82	NPO82	CCT0-820	CN0482	10TCC-Q82
C27	10 10%		NPO-DI 10	DTZ-10	NPO10	CCT0-100	CN0410	10TCC-Q10
C28	.022		TTP-02	CK-203	MGP02	CCD-203	TA120	TG-S20
C29	.033		TTP-03	CK-303		CCD-303	GP130	TG-S30
C30	2 +.25		NPO-DI 2.2	DTZ-2R2	NPO2P2		CN0522	10TCC-V22
C31	2 +.25		NPO-DI 2.2	DTZ-2R2	NPO2P2		CN0522	10TCC-V22
C32	.033		TTP-03	CK-303		CCD-303	GP130	TG-S30
C33	.033		TTP-03	CK-303		CCD-303	GP130	TG-S30

(CONTINUED ON PAGE 92)

PENNCREST MODEL 985-6050



- NC No Connection
Resistors are 1/2 watt or less and rated 10% or 20% unless otherwise indicated.
- ★ Nominal value, may vary
* May not be used in some versions
▲ Measured In "Transmit" position
S1 Shown In Channel 11 position
Controls viewed from actuator end. Arrow Indicates clockwise rotation.
- ① See parts list for alternate value or application.
1. Voltage measurements taken with vacuum tube voltmeter.
2. All controls set for normal operation, no signal applied.
3. Measured values are from socket pin or terminal to common ground.
4. All terminals viewed from bottom unless otherwise designated.
5. Numbers assigned to terminals may not be found on the unit.
6. Supply voltage maintained at rated value for voltage readings.
7. Resistance measurements not given because of the wide variation in internal resistance of transistor.

A PHOTOFAC STANDARD NOTATION SCHEMATIC
with **CIRCUITRACE**
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PARTS LIST AND DESCRIPTION (CONTINUED)

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

CAPACITORS(cont)

ITEM No.	RATING	REMARKS	REPLACEMENT DATA					
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.
C34	2	+ .25	NPO-DI 2.2	DTZ-2R2	NP02P2		CN0522	10TCC-V22
C35	2	+ .25	NPO-DI 2.2	DTZ-2R2	NP02P2		CN0522	10TCC-V22
C36	.033		TTP-03	CK-303		CCD-303	GP130	TG-S30
C37	.033		TTP-03	CK-303		CCD-303	GP130	TG-S30
C38	.1		TTP-1	CK-104			TA010	TG-P10
C39	.1		TTP-1	CK-104			TA010	TG-P10
C40	.005		TTP-005	CK-502	MGP005	CCD-502	TA250	TG-D50
C41	.005		TTP-005	CK-502	MGP005	CCD-502	TA250	TG-D50
C42	100		GPD X5F101K	DD-101	GP100	CCD-101	GP310	10TS-T10
C43	.022		TTP-02	CK-203	MGP02	CCD-203	TA120	TG-S20
C44	.02		TTP-02	CK-203	MGP02	CCD-203	TA120	TG-S20
C45	.001		GPD X5F102K	DM-102	GP1000	CCD-102	SM210	2SS-D10
C46	.047		TTP-05	CK-503	MGP05	CCD-503	TA150	TGL-S50
C47	.02		TTP-02	CK-203	MGP02	CCD-203	TA120	TG-S20
C48	.0068		GPD X5R682K	DD-682	GP6800	CCD-682	GP268	10TS-D68
C49	.002		GPD X5F202K	DM-202	GP2000	CCD-202	GP220	2SS-D20
C50	.005		TTP-005	CK-502	MGP005	CCD-502	TA250	TG-D50
C51	.001		GPD X5F102K	DM-102	GP1000	CCD-102	SM210	2SS-D10
C52	50	10%	NPO-DI 50	DTZ-50	NP050	CCTO-510	CN0450	10TCC-Q50
C53	10	10%	NPO-DI 10	DTZ-10	NP010	CCTO-100	CN0410	10TCC-Q10
C54	33		NPO-DI 33	DTZ-33	NP033	CCTO-330	CN0433	10TCC-Q33
C55	68	10%	GPD X5F680K	DD-680	NP068	CCD-680	GP468	10TS-D68
C56	10	10%	NPO-DI 10	DTZ-10	NP010	CCTO-100	CN0410	10TCC-Q10
C57	50	10%	NPO-DI 50	DTZ-50	NP050	CCTO-510	CN0450	10TCC-Q50
C58	100	10%	GPD X5F101K	DD-101	GP100	CCD-101	GP310	10TS-T10
C59	.047		TTP-05	CK-503	MGP05	CCD-503	TA150	TGL-S50
C60	33	10%	NPO-DI 33	DTZ-33	NP033	CCTO-330	CN0433	10TCC-Q33
C61	.001		GPD X5F102K	DM-102	GP1000	CCD-102	SM210	2SS-D10
C62	.022		TTP-02	CK-203	MGP02	CCD-203	TA120	TG-S20
C63	.002		GPD X5F202K	DM-202	GP2000	CCD-202	GP220	2SS-D20
C64	100	10%	GPD X5F101K	DD-101	GP100	CCD-101	GP310	10TS-T10
C65	22	10%	NPO-DI 20	DTZ-20	NP020	CCTO-200	CN0420	10TCC-Q20
C66	.001		GPD X5F102K	DM-102	GP1000	CCD-102	SM210	2SS-D10
C67	.04			DD-403			GP140	
C68	100	10%	GPD X5F101K	DD-101	GP100	CCD-101	GP310	10TS-T10
C69	220	10%	GPD X5F221K	DD-221	GP220	CCD-221	GP322	10TS-T22
C70	220	10%	GPD X5F221K	DD-221	GP220	CCD-221	GP322	10TS-T22
C71								
C72	.04			DD-403			GP140	
C73	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C74	.022		TTP-02	CK-203	MGP02	CCD-203	TA120	TG-S20
C75	.005		TTP-005	CK-502	MGP005	CCD-502	TA250	TG-D50
C76	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C77	.02		TTP-02	CK-203	MGP02	CCD-203	TA120	TG-S20
C78	.1		TTP-1	CK-104			TA010	TG-P10
C79	.022		TTP-02	CK-203	MGP02	CCD-203	TA120	TG-S20
C80	.001		GPD X5F102K	DM-102	GP1000	CCD-102	SM210	2SS-D10
C81	10		NPO-DI 10	DTZ-10	NP010	CCTO-100	CN0410	10TCC-Q10
C82	10		NPO-DI 10	DTZ-10	NP010	CCTO-100	CN0410	10TCC-Q10
C83	.033		TTP-03	CK-303		CCD-303	GP130	TG-S30
C84	.033		TTP-03	CK-303		CCD-303	GP130	TG-S30

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

ITEM No.	FUNCTION	RESISTANCE	REPLACEMENT DATA				
			MFGR. PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
R1	Volume/Power Switch	10K	0151627				
R2	Squelch-PA Switch	10K	0153631				
R3	Bias	500	0151083	T-500		X201R501B	MTC52L1
R4	Meter Adjust	5000	0151060	T-5000		X201R502B	MTC53L1

RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA		
		IRC PART No.	WORKMAN PART No.	MFGR. PART No.
R46	27 (Cold)		FR26.5	0576031 (13D27)

ITEM No.	RATING	REPLACEMENT DATA		
		IRC PART No.	WORKMAN PART No.	MFGR. PART No.

PARTS LIST AND DESCRIPTION (CONTINUED)

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

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA			
		PART No.	MEISSNER PART No.	MILLER PART No.	WORKMAN PART No.
L1	Antenna Matching	0317175			
L2	RF Amp	0317175			
L3	RF Amp	0317175			
L4	RF Choke (1uh)	0318545	19-1000	74F106AP	T806
L5	RF Choke (.22uh)	9138544	19-2003	4584	T957
L6	Input IF	0322341			
L7	Output IF	0322341			
L8	Input IF	0322146	16-9026	8517	
L9	Interstage IF	0322146	16-9027	8517	
L10	Interstage IF	0322146	16-9027	8517	
L11	Interstage IF	0322146	16-9027	8517	
L12	Interstage IF	0322146	16-9027	8517	
L13	Interstage IF	0322146	16-9027	8517	
L14	Output IF	0322147	16-9028	8518	
L15	XMTR Mixer Output	0317192			
L16	Buffer Input	0317193			
L17	Buffer Output	0317194			
L18	RF Choke (12uh)	0333086			
L19	XMTR Driver	0317195			
L20	RF Choke (2.2uh)	0318546		74F226AP	T812
L21	Final Amp	0317196			
L22	Pi Network	0317197			
L23	RF Choke (12uh)	0333086			

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA					NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000~)	MFGR. PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
L24	.70A	.3	1.5mh	0422018					

TRANSFORMER (Driver)

ITEM No.	TURNS RATIO			REPLACEMENT DATA					NOTES
	PRI.	SEC. 1	SEC. 2	MFGR. PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T1	2.2	1CT		0441114					

TRANSFORMER (Audio Output)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
	PRI.	SEC. 1	MFGR. PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T2	50 CT	8	0452047					
		SEC. 2						
		.9DC Resistance						

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		MFGR. PART No.	QUAM PART No.	
SP1	3" x 4 3/4" PM 8 ohms	0526170	35A05Z8	

PENNCREST MODEL 985-6050

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			AGC 2	HDJ	312002	155020	FG2-2

MISCELLANEOUS

ITEM No.	PART NAME	PART No.	NOTES
K1	Relay	0535018	
M1	Crystal	0599784	37.650MC
M2	Crystal	0599785	37.700MC
M3	Crystal	0599786	37.750MC
M4	Crystal	0599787	37.800MC
M5	Crystal	0599788	37.850MC
M6	Crystal	0599783	37.600MC
M7	Crystal	0599792	10.180MC
M8	Crystal	0599791	10.170MC
M9	Crystal	0599790	10.160MC
M10	Crystal	0599789	10.140MC
M11	Crystal	0599793	10.595MC
M12	Crystal	0599794	10.615MC
M13	Crystal	0599795	10.625MC
M14	Crystal	0599796	10.635MC
M15	"S" Meter	0515017	
S1	Switch, Selector	5610015	

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

ITEM	PART No.	ITEM	PART No.
Cabinet	0681293	Knob, Volume, Squelch	6260144
Escutcheon Assembly	0044362	Knob, Channel Selector	6260151

ACCESSORIES

ITEM	MFGR. PART No.	REMARKS
Microphone	0592103	

WIRING DATA

General-use Hook-up Wire	Use BELDEN No. 8530 (Solid) Available in 12 Colors
Shielded Antenna Lead	8524 (Stranded) Available in 12 Colors
	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)
	8496 3-Conductor, 1 Shielded, for Press-to-Talk (Vinyl)
Ignition Noise Suppression	Use BELDEN No. 7300-Series Spark-Plug Sets
Bonding Strap	Use BELDEN No. 8661 (3/8 In.)