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PHOTOFACT® Folder

POLY-COMM MODELS PC-N-6, PC-N-12

MODEL PC-N-12

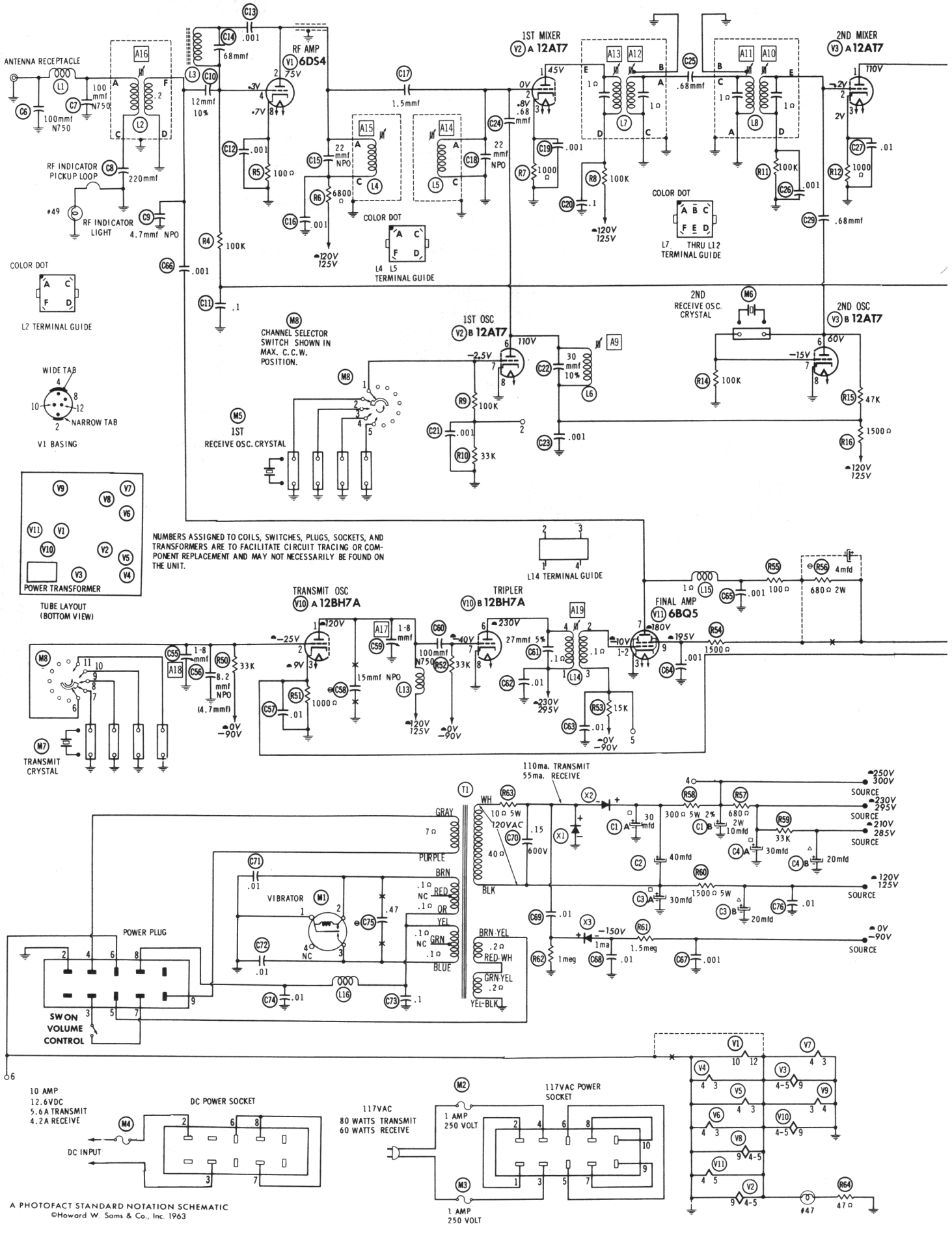
TRADE NAME	Poly-Comm Models PC-N-6, PC-N-12
MANUFACTURER	Polytronics Labratory Inc., 388 Getty Ave., Clifton, N. J.
TYPE SET	AC-Battery Operated 11 Tube Citizens Band Transmitter-Receiver
POWER SUPPLY	110 — 120 Volts AC, 60 Cycles (or) 6 Volt Storage Battery (or) 12 Volt Storage Battery
RATING	Receive: 60 Watts, .55Amp. @117 Volts AC 4.2Amp. @12.6 Volts DC 8.4Amp. @6.3 Volts DC Transmit: 80 Watts, .70 Amp. @117 Volts AC 5.6 Amp. @12.6 Volts DC 11.2 Amp. @6.3 Volts DC
TUNING RANGE	Any 4 of Citizens Band Channels 1 thru 22

POLY-COMM MODELS
PC-N-6, PC-N-12

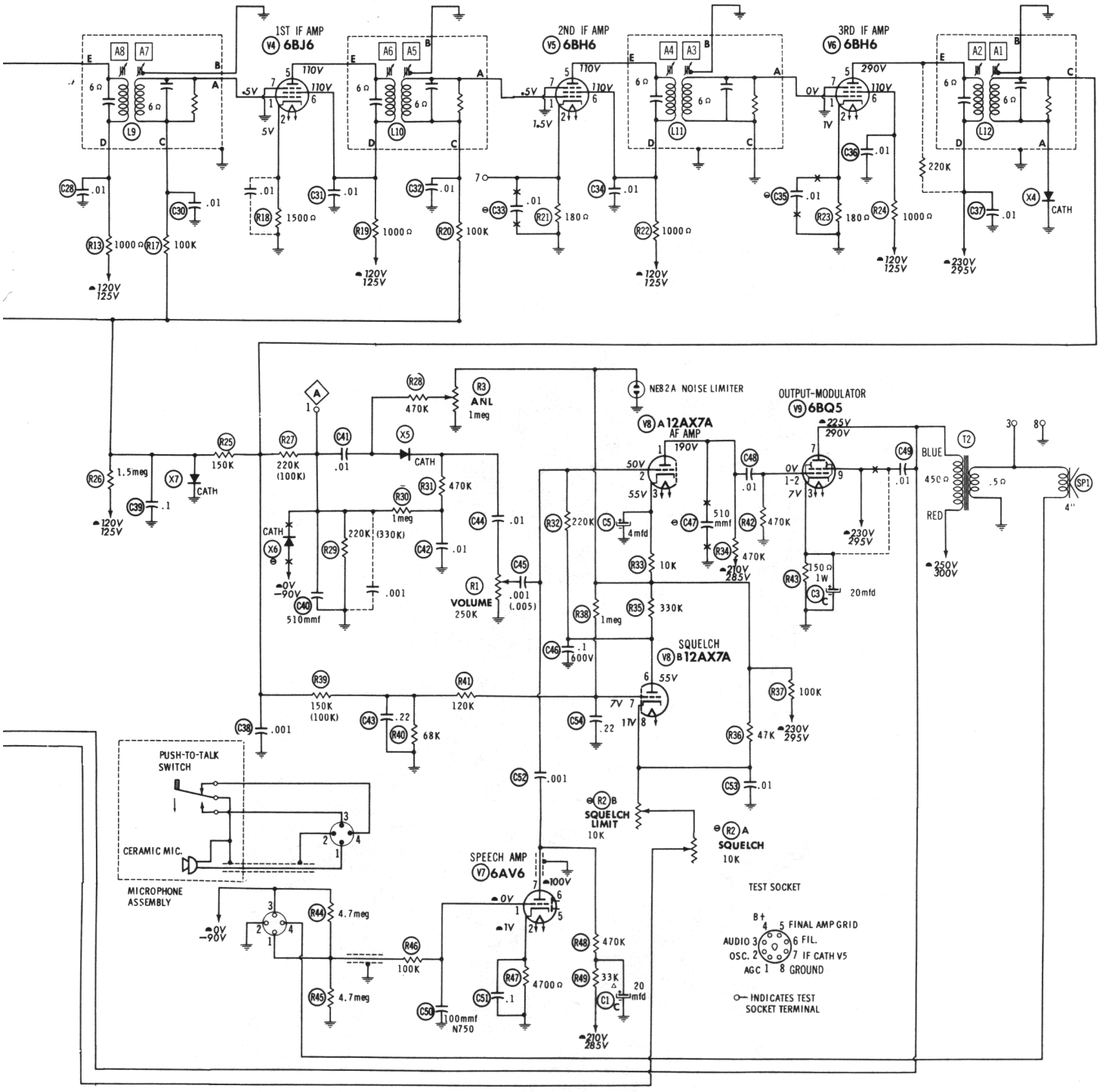
NOTICE

ONLY THOSE PERSONS PROPERLY LICENSED ARE PERMITTED TO MAKE REPAIRS OR ADJUSTMENTS WHICH MAY RESULT IN ILLEGAL OPERATION. (REFER TO FCC RULES & REGULATIONS PART 19, SUBPART D, SECTION 19.71.)

HOWARD W. SAMS & CO., INC. Indianapolis 6, Indiana



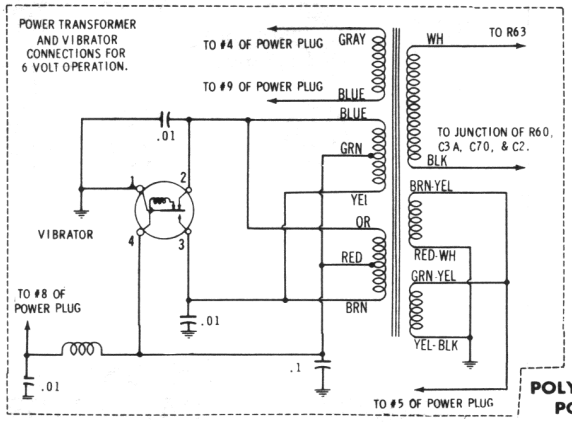
A PHOTOFACT STANDARD NOTATION SCHEMATIC



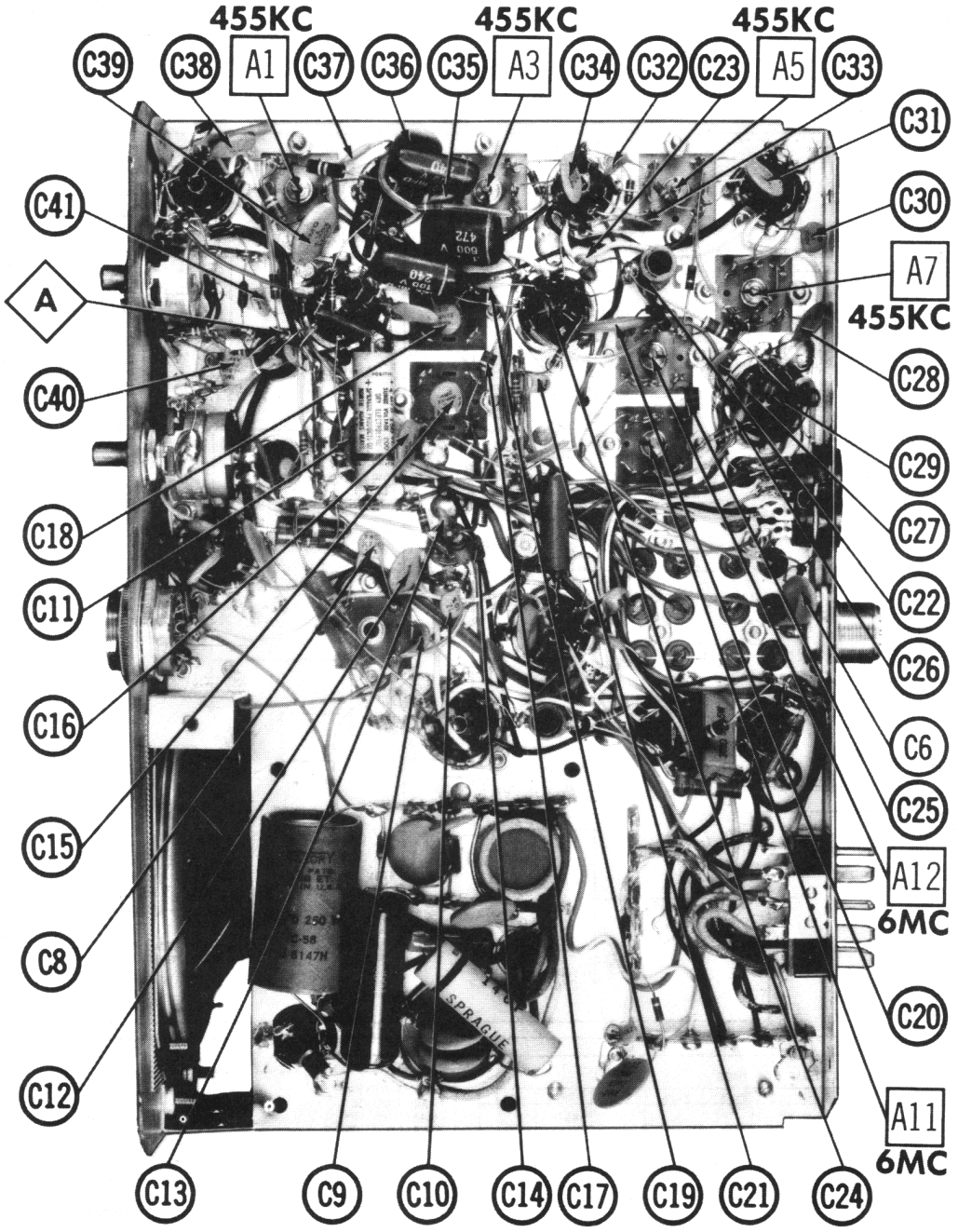
RESISTANCE READINGS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	6DS4		†8300Ω		468K				100Ω	
V2	12AT7	†100K	0Ω	1000Ω	FIL	FIL	†3000Ω	133K	0Ω	FIL
V3	12AT7	†2500Ω	100K	1000Ω	FIL	FIL	†50K	100K	0Ω	FIL
V4	6BJ6	450K	1500Ω	FIL	FIL	†2500Ω	†2500Ω	0Ω		
V5	6BH6	450K	180Ω	FIL	FIL	†2500Ω	†2500Ω	0Ω		
V6	6BH6	6Ω	180Ω	FIL	FIL	†1000Ω	†2500Ω	0Ω		
V7	6AV6	4.8meg	4700Ω	FIL	FIL	NC	NC	†530K		
V8	12AX7A	†500K	†650K	1meg	FIL	FIL	†430K	188K	16K	FIL
V9	6BQ5	NC	470K	150Ω	FIL	FIL	NC	†750Ω	NC	†1000Ω
V10	12BH7A	†1500Ω	◓33K	1000Ω	FIL	FIL	†1000Ω	◓33K	0Ω	FIL
V11	6BQ5	NC	◓15K	0Ω	FIL	FIL	NC	†2000Ω	NC	†2200Ω

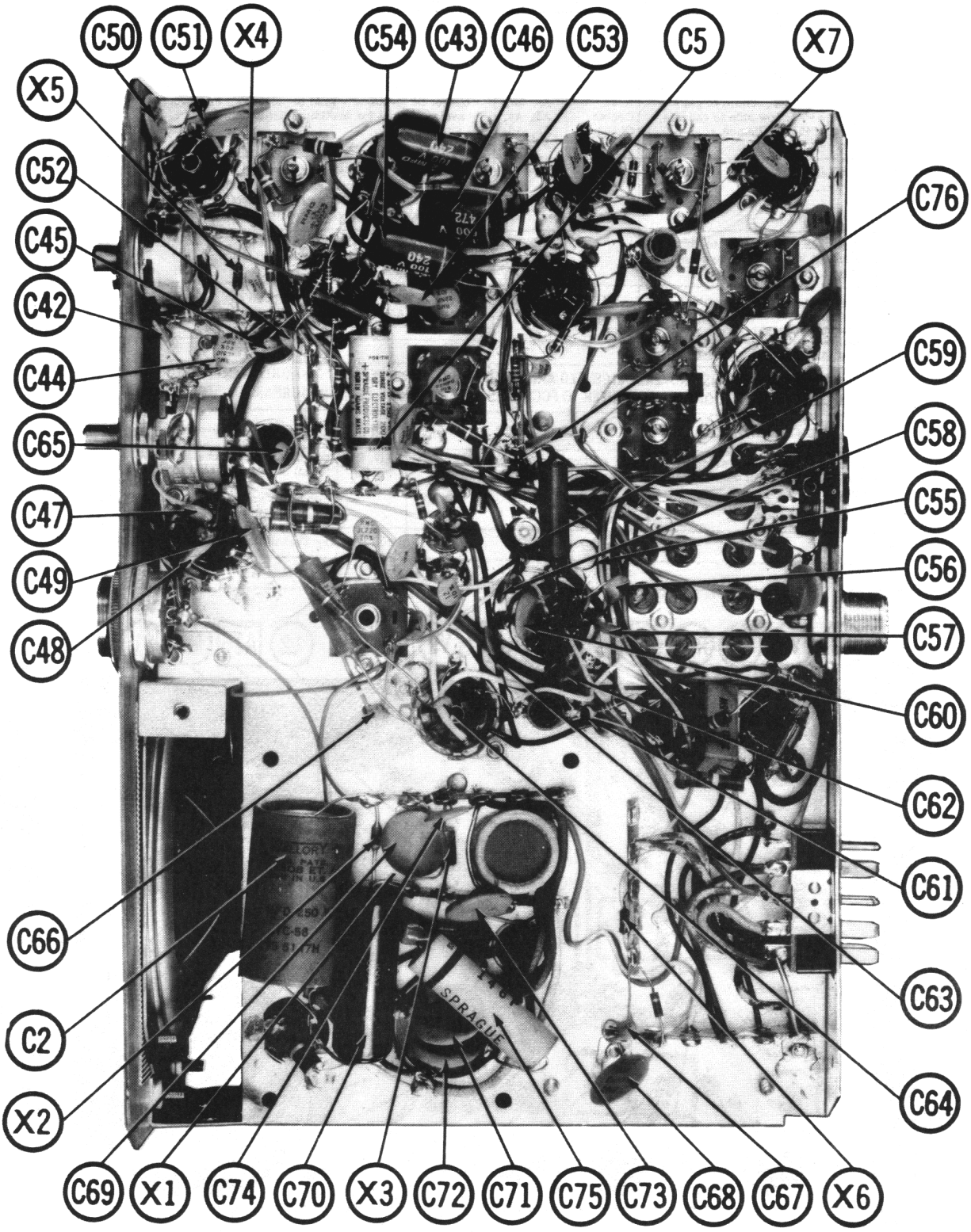
ALL READINGS MADE IN "RECEIVE" POSITION UNLESS OTHERWISE DESIGNATED.
◓ TAKEN IN "TRANSMIT" POSITION, SQUELCH CONTROL FULLY CLOCKWISE. NC NO CONNECTION
† MEASURED FROM OUTPUT OF X2. † MEASURED FROM JUNCTION OF R60, C3A.



POLY-COMM MODELS PC-N-6, PC-N-12



CHASSIS BOTTOM VIEW
ALIGNMENT – CAPACITOR IDENT. (C6, C8 THRU C41)



CHASSIS – BOTTOM VIEW
DIODE & CAPACITOR IDENT. (C2, C5, C42 THRU C76)

ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

Best results will be obtained when adjusting A16 if the antenna normally used is connected and the chassis is as nearly in the cabinet as possible.
Suggested Alignment Tools:
A1 thru A19.....GENERAL CEMENT #5000, 5003, 5066, 8271, 8272, 8276, 8277, 8290, 8609, 8722, 9150, 9298
WALSCO #2515, 2516, 2518, 2519, 2525, 2541

RECEIVER ALIGNMENT

	SIGNAL GENERATOR	CHANNEL	ADJUST	REMARKS
1.	High side thru .001mfd to pin 2 (grid) of V3, low side to chassis. Tune to 455KC (Unmod.)	Near Center Channel	A1, A2, A3, A4, A5, A6, A7, A8	Connect DC probe of VTVM to point (A), common to chassis. Adjust for maximum deflection.
2.	Not Used.	"	A9	Connect DC probe of VTVM to pin 7 of V2, common to chassis. Adjust A9 for maximum deflection. Rock A9 to each side of peak. Note rate of dropoff. Set just below peak on side of gradual dropoff.
3.	High side thru .001mfd to pin 2 (grid) of V2, low side to chassis. Tune to 6MC (Unmod.)	"	A10, A11, A12, A13	Connect DC probe of VTVM to point (A), common to chassis. Adjust for maximum deflection.
4.	High side to antenna terminal, low side to chassis. Tune to channel frequency.	"	A14, A15, A16	Connect DC probe of VTVM to point (A), common to chassis. Adjust for maximum deflection.

TRANSMITTER ALIGNMENT

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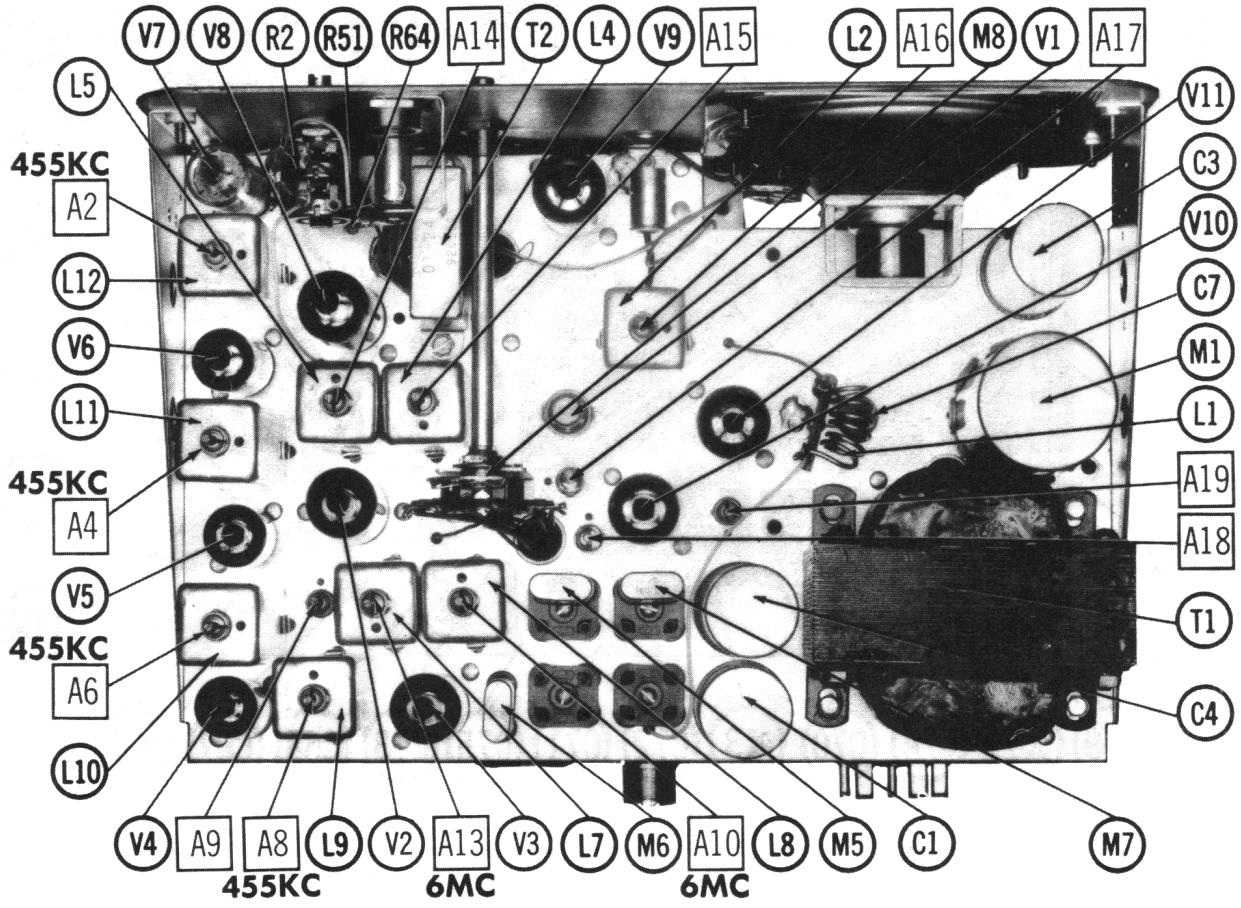
	SPECIAL INSTRUCTIONS	INDICATOR	ADJUST	REMARKS
1.	Set channel selector near center frequency. Connect dummy load or antenna.	RF wattmeter and front panel. Transmitter indicator light.	A17, A18	Connect common probe of VTVM to pin 2 (Grid) of V2. DC probe to chassis, Key transmitter. Adjust A17 and A18 for maximum output. VTVM should indicate -25 V. Disconnect VTVM.
2.	"	"	A19	Key Transmitter. Adjust for maximum output.



CHASSIS—TOP VIEW

PARTS LIST AND DESCRIPTION

TUBES

◆ AMPEREX ◆ GENERAL ELECTRIC ◆ RCA ◆ RAYTHEON ◆ SYLVANIA ◆

ITEM No.	USE	TYPE	ITEM No.	USE	TYPE
V1	RF Amp.	6DS4	V7	Speech Amp.	6AV6
V2	1st Mixer-Osc.	12AT7	V8	AF Amp.-Squelch	12AX7A
V3	2nd Mixer-Osc.	12AT7	V9	Output-Modulator	6BQ5
V4	1st IF Amp.	6BJ6	V10	Trans. Osc.-Tripler	12BH7A
V5	2nd IF Amp.	6BH6	V11	Final Amp.	6BQ5
V6	3rd IF Amp.	6BH6			

POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	CURRENT RATING (Measured)	ORIGINAL Part or Type No.	RECTIFIERS: RCA PART No.	RECTIFIERS: SARKES TARZIAN PART No.	DIODES	NOTES
X1	.110A	PA071	1N3195	F6		HV Rectifier
X2	.090A	PA071	1N3195	F6		HV Rectifier
X3	.001A	PA071	1N3194	10		Bias
X4		HD6226				Detector
X5		HD6226				ANL.
X6		HD6226				ANL. (Not used in some versions)
X7		HD6226				AVC

ELECTROLYTIC CAPACITORS

ITEM No.	RATING CAP.	RATING VOLT.	Poly-Comm PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	PYRAMID PART No.	SPRAGUE PART No.
C1A	■ 30	350							
B	10	350		AFH3-28-30	C0225	XC3-11	FP330.7		TVL-3639.8
C	▲ 20	350							
C2	40	250		PRS1580	BR40-250	QT1-14	TC58	TD-40-250	TVA-1511
C3A	■ 30	350							
B	▲ 20	350		AFH3-109	C0830	XC3-25	FP330	TMT3361	TVL-3636
C	20	25							
C4A	■ 30	350							
B	▲ 20	350		AFH3-109	C0830	XC3-25	FP330	TMT3361	TVL-3636
C	20	25							
C5	4	150		PRS1400	BBR4-150	QT1-3	TC40	TD-4-150	TVA-1402

FIXED CAPACITORS

ITEM No.	RATING	REMARKS	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.
C6	100 N750		N750-DI 100	TCN-100	C10T1U	CCTN-101	CN7-310	10TCU-T10
C7	100 N750		N750-DI 100	TCN-100	C10T1U	CCTN-101	CN7-310	10TCU-T10
C8	220		DI-220	DD-221	L10T22	CCD-221	GP322	10TS-T22
C9	4.7 NPO		NPO-DI 4.7	TCZ-4.7	C10V47C	CCTC-4R7	CNO-547	10TCC-V47
C10	12 10%		DI-12	DD-120	L10Q12	CCD-120	GP412	10TS-Q12
C11	.1 100V		TTD-1	DF-104	CUB2P1	1DP-2-104	GEM-201	2PS-P10
C12	.001		DI-1000	DD-102	L10D1	CCD-102	GP210	10TS-D10
C13	.001		DI-1000	DD-102	L10D1	CCD-102	GP210	10TS-D10
C14	68		DI-68	DD-680	L10Q68	CCD-680	GP468	10TS-Q68
C15	22 NPO		NPO-DI 22	TCZ-22	C10Q22C	CCTC-22	CNO-422	10TCC-Q22
C16	.001		DI-1000	DD-102	L10D1	CCD-102	GP210	10TS-D10
C17	1.5		NPO-SI 1.5	TCZ-1R5	C10V15C		CNO-515	10TCC-V15
C18	22 NPO		NPO-DI 22	TCZ-22	C10Q22C	CCTC-22	CNO-422	10TCC-Q22
C19	.001		DI-1000	DD-102	L10D1	CCD-102	GP210	10TS-D10
C20	.1 500V			DF-104	CUB6P1	6DP-4-104	GEM-601	6PS-P10
C21	.001		DI-1000	DD-102	L10D1	CCD-102	GP210	10TS-D10
C22	30 10%		ADM-15-300	DD-300	L10Q3	CCD-300	GP430	10TS-Q30
C23	.001		DI-1000	DD-102	L10D1	CCD-102	GP210	10TS-D10
C24	.68		NPO-SI .68	TCZ-R68				
C25	.68		NPO-SI .68	TCZ-R68				
C26	.001		DI-1000	DD-102	L10D1	CCD-102	GP210	10TS-D10
C27	.01 100V		BPD-01	DD-103	BYA10S1	CCD-103	GP110	10TS-S10
C28	.01		BPD-01	DD-103	BYA10S1	CCD-103	GP110	10TS-S10

FIXED CAPACITORS (cont)

ITEM No.	RATING	REMARKS	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.
C29	.68		NPO-SI .68	TCZ-R68				
C30	.01		BPD-01	DD-103	BYA10S1	CCD-103	GP110	10TS-S10
C31	.01		BPD-01	DD-103	BYA10S1	CCD-103	GP110	10TS-S10
C32	.01		BPD-01	DD-103	BYA10S1	CCD-103	GP110	10TS-S10
C33	.01	Note 1	BPD-01	DD-103	BYA10S1	CCD-103	GP110	10TS-S10
C34	.01		BPD-01	DD-103	BYA10S1	CCD-103	GP110	10TS-S10
C35	.01	Note 1	BPD-01	DD-103	BYA10S1	CCD-103	GP110	10TS-S10
C36	.01		BPD-01	DD-103	BYA10S1	CCD-103	GP110	10TS-S10
C37	.01		BPD-01	DD-103	BYA10S1	CCD-103	GP110	10TS-S10
C38	.001		DI-1000	DD-102	L10D1	CCD-102	GP210	10TS-D10
C39	.1		TTD-1	DF-104	CUB2P1	1DP-2-104	GEM-201	2PS-P10
C40	510		DI-500	DD-511	L10T51	CCD-501	GP350	10TS-T50
C41	.01		BPD-01	DD-103	BYA10S1	CCD-103	GP110	10TS-S10
C42	.01		BPD-01	DD-103	BYA10S1	CCD-103	GP110	10TS-S10
C43	.22 100V		P188N-22		CUB2P22	1DP-3-224	GEM-2022	2PS-P22
C44	.01		BPD-01	DD-103	BYA10S1	CCD-103	GP110	10TS-S10
C45	.001	(.005) †	DI-1000	DD-102	L10D1	CCD-102	GP210	10TS-D10
C46	.1 600V		P688N-1	DF-104	CUB6P1	6DP-4-104	GEM-601	6PS-P10
C47	510	Note 1	DI-500	DD-511	L10T51	CCD-501	GP350	10TS-T50
C48	.01		BPD-01	DD-103	BYA10S1	CCD-103	GP110	10TS-S10
C49	.01		BPD-01	DD-103	BYA10S1	CCD-103	GP110	10TS-S10
C50	100 N750		N750-DI 100	TCN-100	C10T1U	CCTN-101	CN7-310	10TCU-T10
C51	.1		TTD-1	DF-104	CUB2P1	1DP-2-104	GEM-201	2PS-P10
C52	.001		DI-1000	DD-102	L10D1	CCD-102	GP210	10TS-D10
C53	.01		BPD-01	DD-103	BYA10S1	CCD-103	GP110	10TS-S10
C54	.22 100V		P188N-22		CUB2P22	1DP-3-224	GEM-2022	2PS-P22
C55	1-8							
C56	8.2 NPO	(4.7) †	NPO-DI 8.2		C10V82C			10TCC-V22
C57	.01		BPD-01	DD-103	BYA10S1	CCD-103	GP110	10TS-S10
C58	15 NPO	Note 2	NPO-DI 15	TCZ-15	C10Q15C	CCTC-150	CNO-415	10TCC-Q15
C59	1-8							
C60	100 N750		N750-DI 100	TCN-100	C10T1U	CCTN-101	CN7-310	10TCU-T10
C61	27 5%		CI-27	TCZ-27	C10Q27C	CCD-270	CNO-427	10TCC-Q27
C62	.01		BPD-01	DD-103	BYA10S1	CCD-103	GP110	10TS-S10
C63	.01		BPD-01	DD-103	BYA10S1	CCD-103	GP110	10TS-S10
C64	.001		DI-1000	DD-102	L10D1	CCD-102	GP210	10TS-D10
C65	.001		DI-1000	DD-102	L10D1	CCD-102	GP210	10TS-D10
C66	.001		DI-1000	DD-102	L10D1	CCD-102	GP210	10TS-D10
C67	.001		DI-1000	DD-102	L10D1	CCD-102	GP210	10TS-D10
C68	.01		BPD-01	DD-103	BYA10S1	CCD-103	GP110	10TS-S10
C69	.01		BPD-01	DD-103	BYA10S1	CCD-103	GP110	10TS-S10
C70	.15 600V		P688N-15			6DP-5-154	GEM-6015	6PS-P15
C71	.01		BPD-01	DD-103	BYA10S1	C D-103	GP110	10TS-S10
C72	.01		BPD-01	DD-103	BYA10S1	CCD-103	GP110	10TS-S10
C73	.1		TTD-1	DF-104	CUB2P1	1DP-2-104	GEM-201	2PS-P10
C74	.01		BPD-01	DD-103	BYA10S1	CCD-103	GP110	10TS-S10
C75	.47 200V		P288N-47		CUB2P47	2DP-5-474	GEM-2047	2PS-P47
C76	.01		BPD-01	DD-103	BYA10S1	CCD-103	GP110	10TS-S10

Note 1. Not used in some versions.
† Alternate Value.
Note 2. Not used if 13MC Series crystal are used.

CONTROLS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	USE	RESISTANCE	Poly-Comm PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
R1	Volume & Switch	250K	LC250MPOAC	B-51, KR-1 or F2-250K, KR-1, SU204)	A47-250K-Z, SWE-12, RS-2	Q13-130, 76-1, or (BU2, CF23, SS1, GC)*	U44, US-26, or (UA254A, US-41, SL2500)
R2A	Squelch Control	10K					
B	Squelch Control	10K ①					
R3	ANL	1meg		F1-1meg, SS008		Q11-137, (BU1, CF17, SS1, DC1)*	U-54, (UA16L, SL2500)

① Some versions may use 5000Ω in this application.
* "Snaptrol."

PARTS LIST AND DESCRIPTION (CONTINUED)

RESISTORS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING	REPLACEMENT DATA			ITEM No.	RATING	REPLACEMENT DATA		
		IRC PART No.	WORKMAN PART No.	REMARKS			IRC PART No.	WORKMAN PART No.	REMARKS
R4	100K				R35	330K			
R5	100Ω				R36	47K			
R6	6800Ω				R37	100K			
R7	1000Ω				R38	1meg			
R8	100K				R39	150K			(100K) †
R9	100K				R40	68K			
R10	33K				R41	120K			
R11	100K				R42	470K			
R12	1000Ω				R43	150Ω 1W			
R13	1000Ω				R44	4.7meg			
R14	100K				R45	4.7meg			
R15	47K				R46	100K			
R16	1500Ω				R47	4700Ω			
R17	100K				R48	470K			
R18	1500Ω				R49	33K			
R19	1000Ω				R50	33K			
R20	100K				R51	1000Ω			
R21	180Ω				R52	33K			
R22	1000Ω				R53	15K			
R23	180Ω				R54	1500Ω			
R24	1000Ω				R55	100Ω			
R25	150K				R56	680Ω 2W			Note 1
R26	1.5meg				R57	680Ω 2W			
R27	220K			(100K) †	R58	300Ω 5% 5W	PW5-300	5W-SQ-300	
R28	470K				R59	33K			
R29	220K			(330K) †	R60	1500Ω 5W	PW5-1500	5W-SQ-1500	
R30	1meg				R61	1.5meg			
R31	470K				R62	1meg			
R32	220K				R63	10Ω 5W	PW5-10	5W-SQ-10	
R33	10K				R64	47Ω			
R34	470K								

Note 1. Value varies, selected for 4.9 Watts input. † Alternate Value.

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		Poly-Comm PART No.	Merit PART No.	Miller PART No.	Stancor PART No.	Workman PART No.	
L1	Harmonic Filter						
L2	Ant.	P100C					
L3	Choke						
L4	RF	P101C					
L5	RF	P101C					
L6	Osc. Plate						
L7	1st 6MC IF	P101C					
L8	2nd 6MC IF	P101C					
L9	1st 455KC IF	P104E					
L10	2nd 455KC IF	P104E					
L11	3rd 455KC IF	P104E					
L12	4th 455KC IF	P104E					
L13	Plate Choke						
L14	Tripler Plate						
L15	Final Plate						
L16	Hash Choke	4-16854-1					

TRANSFORMER (POWER)

ITEM No.	RATING			REPLACEMENT DATA					NOTES
	PRI.	SEC. 1	SEC. 2	Poly-Comm PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T1	117VAC @ .55A (.7A*) or 12.6VDC @ 2.4A (3.8A*)	120VAC @ .260A (.41A*)	6.3VAC @ 1.8A	P128D					* Transmit
	SEC. 3								
	6.3VAC @ 1.8A								

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
	PRI.	SEC.	Poly-Comm PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
T2	5000Ω	3-4Ω	OT-246					

SPEAKER

ITEM No.	TYPE			REPLACEMENT DATA		NOTES
	SIZE	FIELD	V. C. IMP.	Poly-Comm PART No.	QUAM PART No.	
SP1	4"	PM	3-4Ω	4C921	4A07	

VIBRATOR

ITEM No.	TYPE	INPUT VOLTS	FREQUENCY	REPLACEMENT DATA			NOTES
				Poly-Comm PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	
M1	Interrupter	12V	115∿		G8801	G1601	Model PC-N-12
	Interrupter	6V	115∿		1601	1601	Model PC-N-6

FUSES

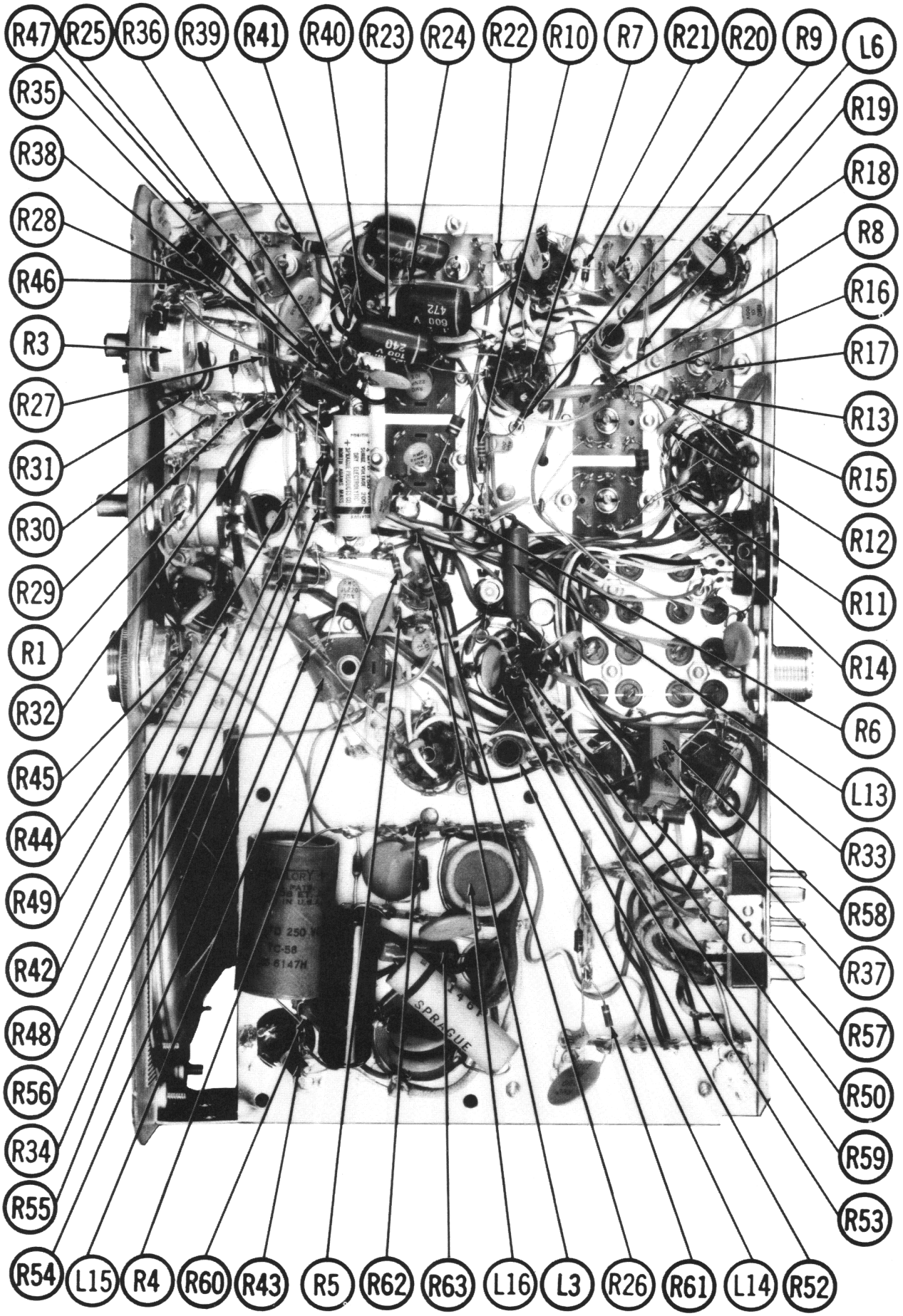
ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			Poly-Comm PART No.		LITTELFUSE PART No.		BUSS PART No.	
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER
M2	AGC	1A 250V			312001. (AGC 1A 250V)		AGC 1	
M3	AGC	1A 250V			312001. (AGC 1A 250V)		AGC 1	
M4	AGC	10A			311010. (AGC 10A)	155020	AGC 10	HDJ-B

MISCELLANEOUS

ITEM No.	PART NAME	Poly-Comm PART No.	NOTES
M5	Crystal		Receive Osc. (Specify Channel and Frequency Desired)
M6	Crystal		Receive Osc. (5545KC)
M7	Crystal		Transmit (Specify Channel and Frequency Desired)
M8	Switch		Channel Selector

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.)



CHASSIS BOTTOM VIEW — RESISTOR & INDUCTOR IDENT.