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POLY COM MODELS
PC-2-6, PC-2-12



POLY COM MODELS
PC-2-6, PC-2-12

TRADE NAME	Poly Com Models PC-2-6, PC-2-12
MANUFACTURER	Polytronics Laboratories, Inc., 253 Crooks Ave., Clifton, N. J.
TYPE SET	AC-Battery Operated 11 Tube Crystal Controlled, Double Conversion Citizens Band Transmitter-Receiver
POWER SUPPLY	Model PC-2-6: 110-120 Volts AC, 60 Cycles (or) 6 Volt Storage Battery Model PC-2-12: 110-120 Volts AC, 60 Cycles (or) 12 Volt Storage Battery
RATING	51 Watts, .5 Amp. @ 117 Volts AC (Receive); 70 Watts, .7 Amp. @ 117 Volts AC (Transmit) 6 Amp. @ 12.6 Volts DC (or) 12 Amp. @ 6.3 Volts DC
TUNING RANGE	Any 4 of Citizens Band Channels 1 thru 22

NOTICE

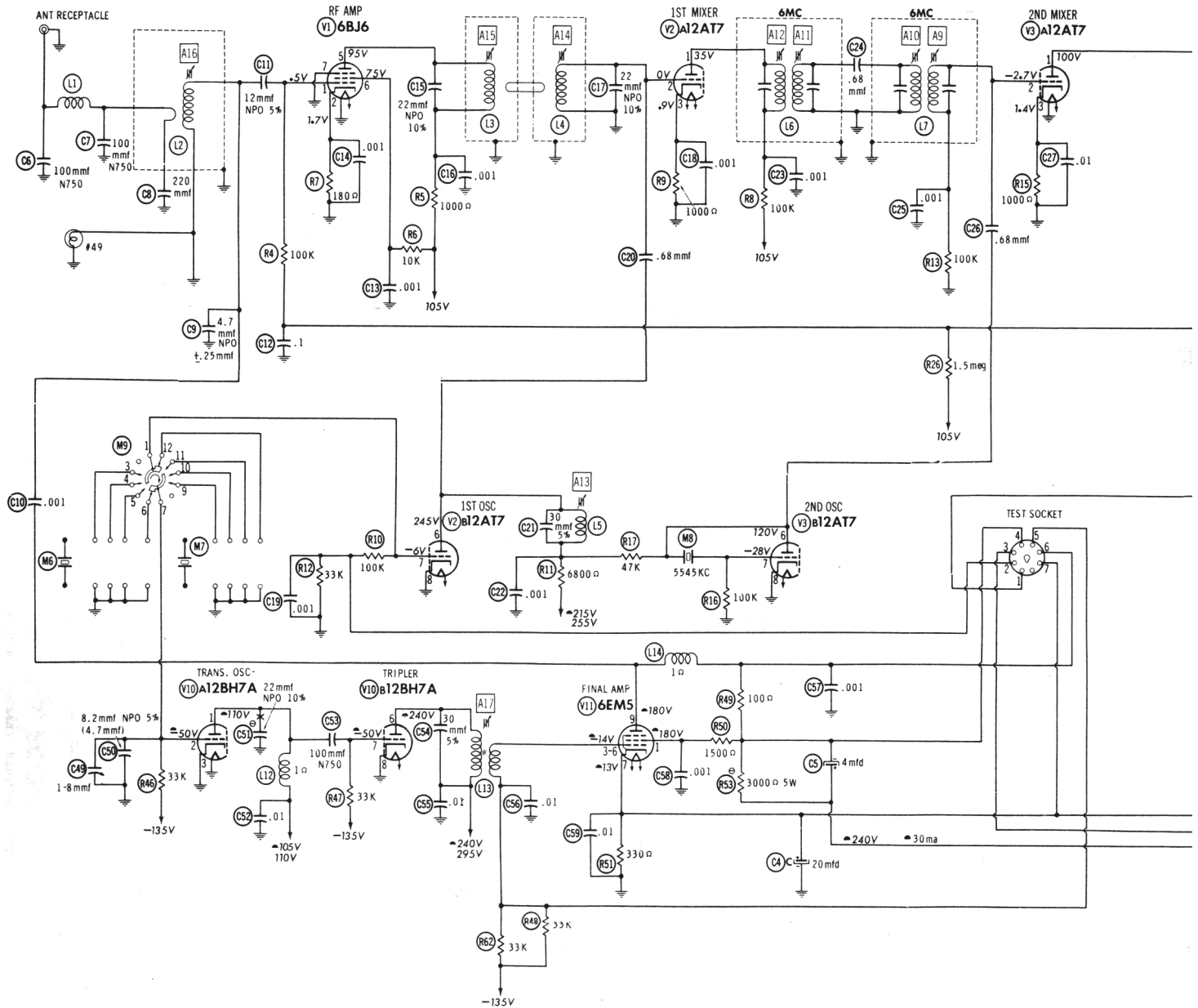
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HOWARD W. SAMS & CO., INC. Indianapolis 6, Indiana



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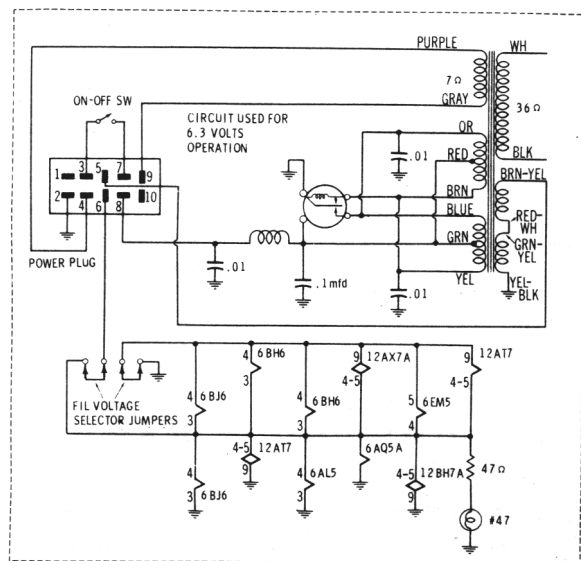
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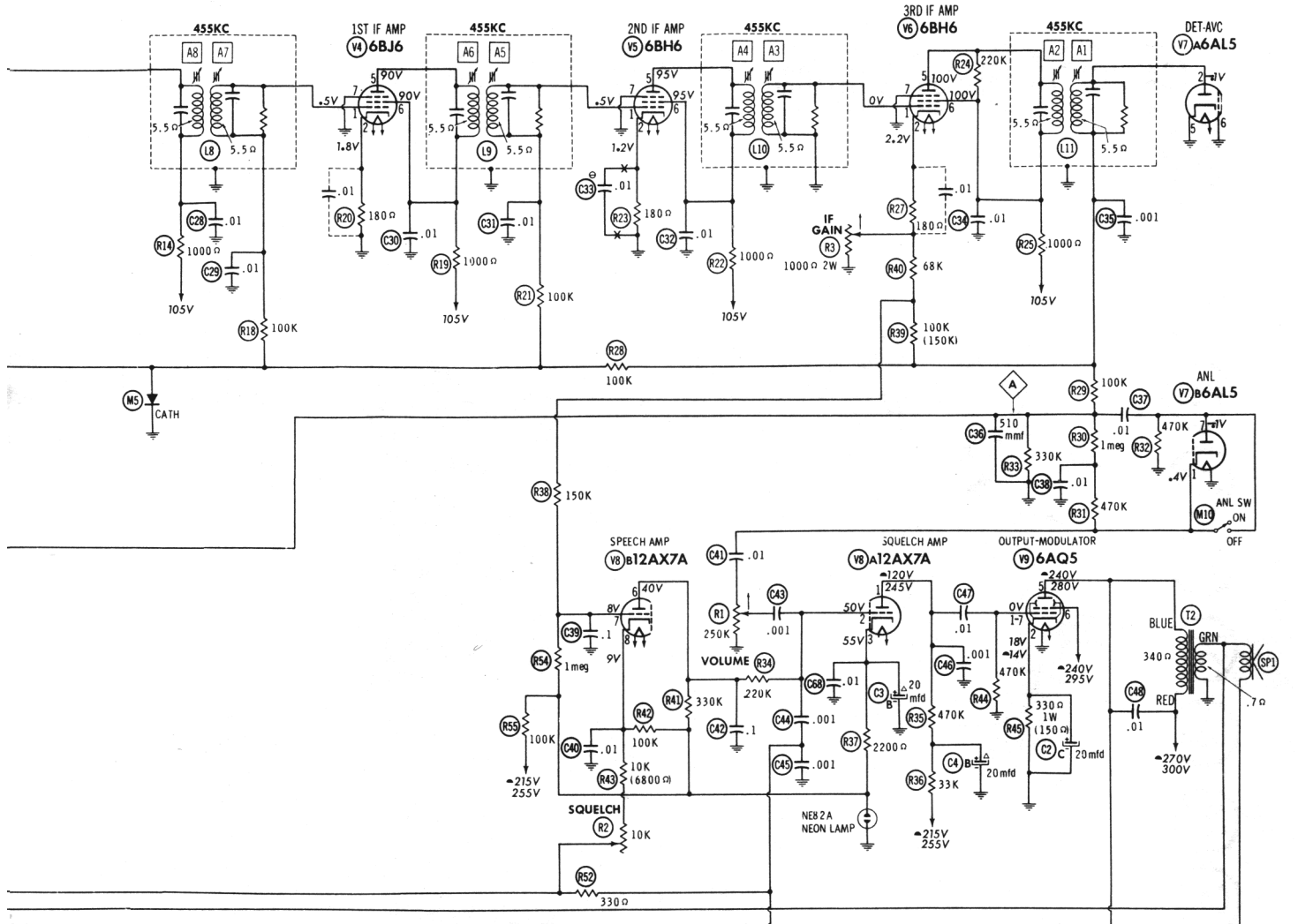


RESISTANCE READINGS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	6BJ6	300K	180Ω	FIL	FIL	+2500Ω	+11K	0Ω		
V2	12AT7	+100K	.1Ω	1000Ω	FIL	FIL	+12K	130K	0Ω	FIL
V3	12AT7	+2500Ω	100K	1000Ω	FIL	FIL	+55K	100K	0Ω	FIL
V4	6BJ6	300K	180Ω	FIL	FIL	+2500Ω	+2500Ω	0Ω		
V5	6BH6	300K	180Ω	FIL	FIL	+2500Ω	+2500Ω	0Ω		
V6	6BH6	5.5Ω	900Ω	FIL	FIL	+2500Ω	+2500Ω	0Ω		
V7	6AL5	1.8 meg	120K	FIL	FIL	0Ω	0Ω	470K		
V8	12AX7A	+500K	700K	60K	FIL	FIL	390K	160K	15K	FIL
V9	6AQ5A	NC	330Ω	FIL	FIL	+340Ω	+680Ω	470K		
V10	12BH7A	+1500Ω	.33K	0Ω	FIL	FIL	+680Ω	.33K	0Ω	FIL
V11	6EM5	+6800Ω	NC	.16K	FIL	FIL	NC	330Ω	NC	+5400Ω

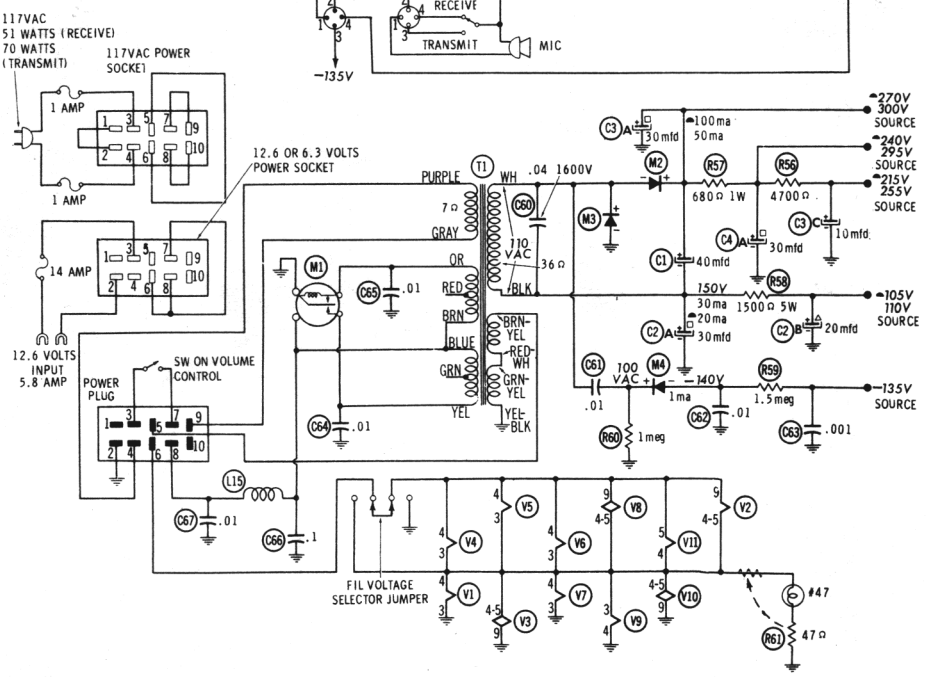
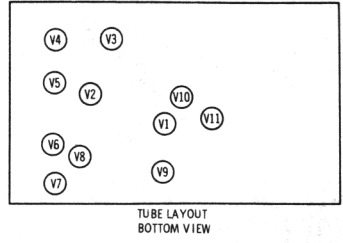
ALL MEASUREMENTS MADE IN "RECEIVE" POSITION WITH ANL ON WITH MICROPHONE UNLESS OTHERWISE DESIGNATED.
 † MEASURED IN "TRANSMIT" POSITION.
 ‡ MEASURED FROM OUTPUT OF M2.
 § MEASURED FROM JUNCTION OF C2A AND R58. NC NO CONNECTION

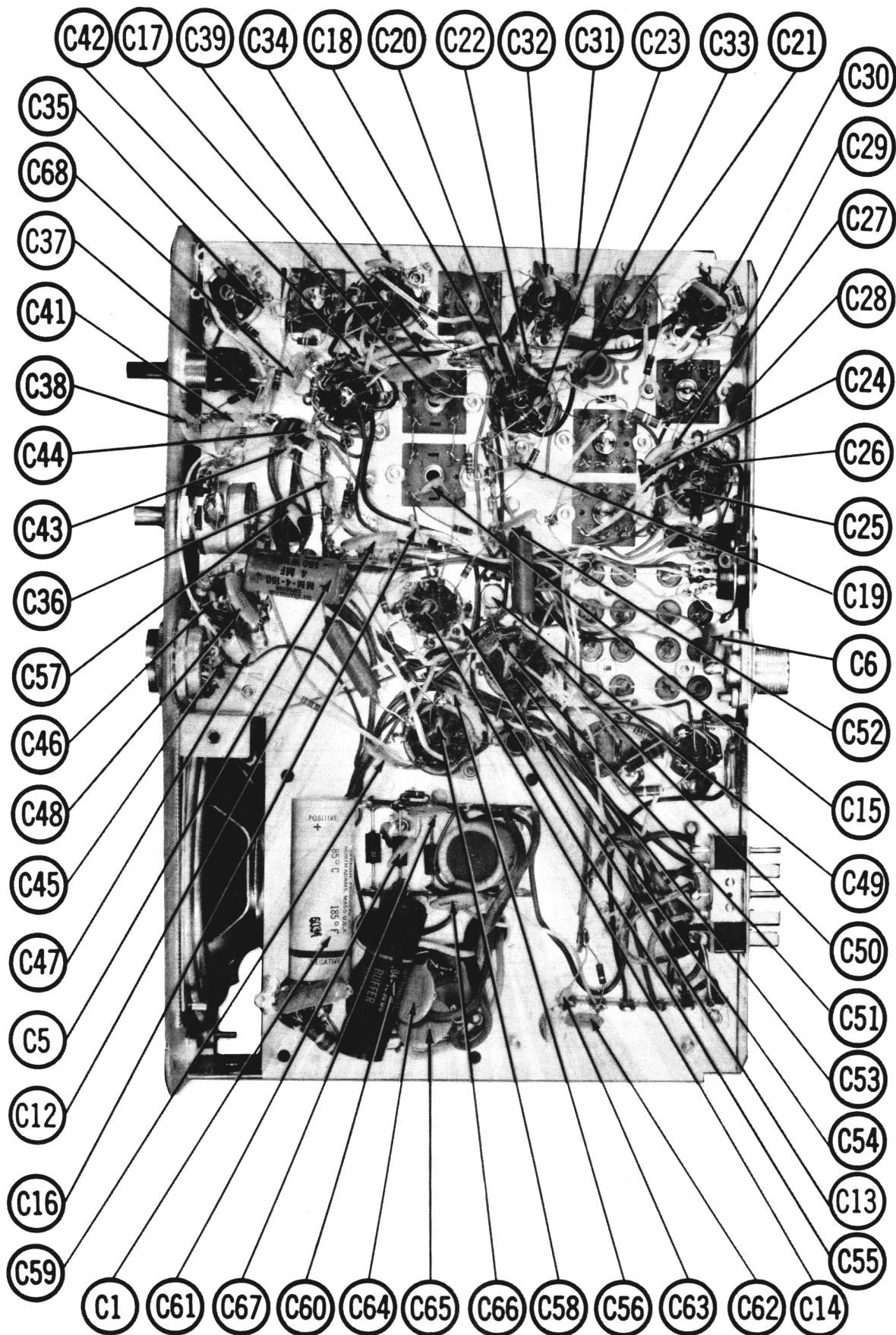




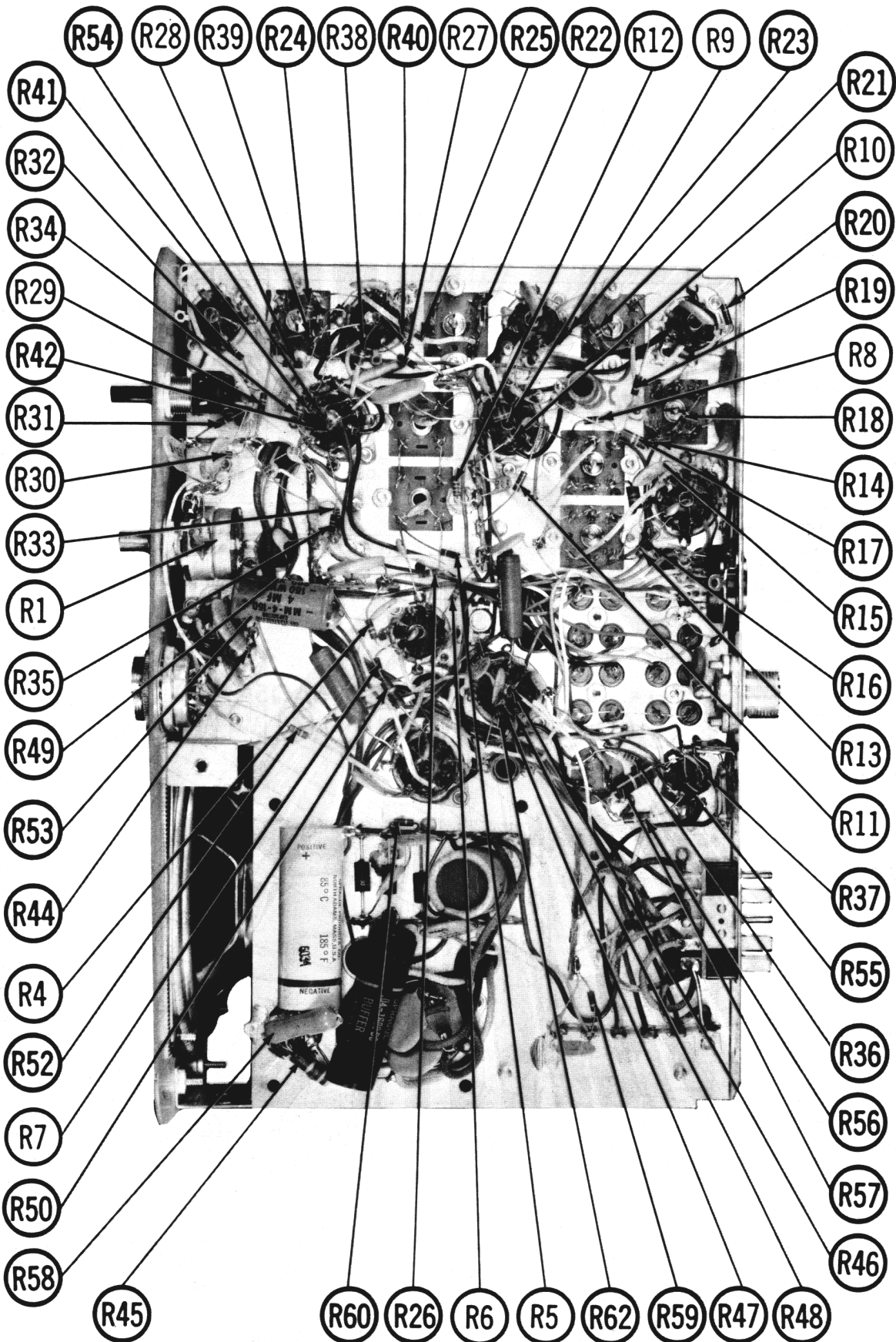
● SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION
 DC COIL RESISTANCE VALUES UNDER ONE OHM NOT SHOWN ON SCHEMATIC DIAGRAM
 ARROWS ON CONTROLS INDICATE CLOCKWISE ROTATION (CONTROL VIEWED FROM SHAFT END)

1. DC voltage measurements taken with vacuum tube voltmeter; AC voltages measured with 1000 ohm per volt voltmeter.
2. Socket connections are shown as bottom views.
3. Measured values are from socket pin to common ground.
4. Line voltage maintained at 117 volts for voltage readings.
5. Nominal tolerance on component values makes possible a variation of $\pm 15\%$ in voltage and resistance readings.
6. Volume control at maximum, no signal applied for voltage measurements.





CHASSIS BOTTOM VIEW-CAPACITOR IDENT.




CHASSIS BOTTOM VIEW-RESISTOR IDENT.

ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

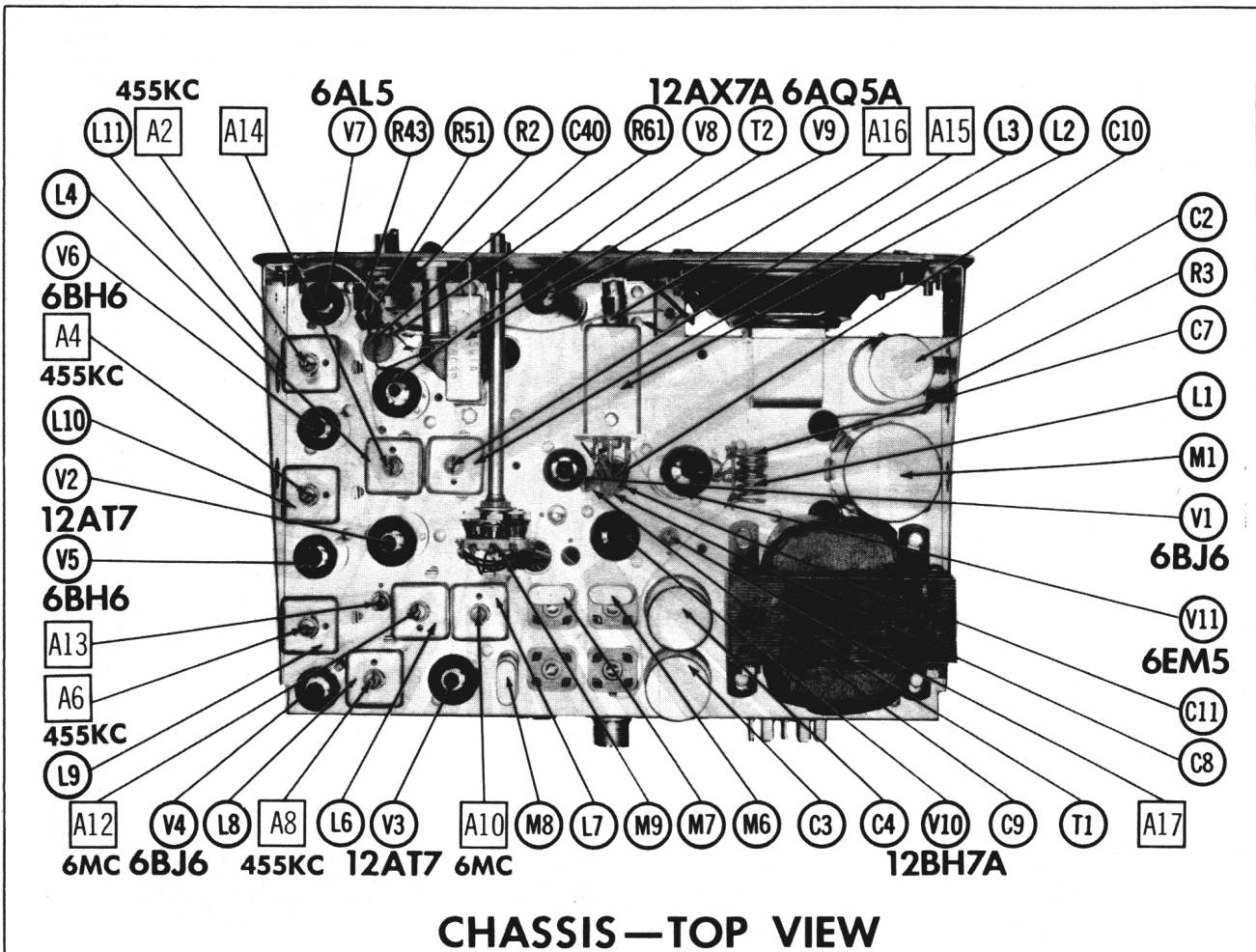
Use only enough generator output to provide a usable indication.
 Suggested Alignment Tools: GENERAL CEMENT #8721, 8722
 WALSCO #2519

RECEIVER ALIGNMENT

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1.	High side thru .1mfd to pin 2 (grid) of 2nd Mixer. Low side to chassis.	455KC (Unmod.)		DC probe to point  . Common to chassis.	A1, A2, A3, A4, A5, A6, A7, A8	Adjust for maximum deflection.
2.	High side thru .01mfd to pin 2 (grid) of 1st Mixer. Low side to chassis.	6.0MC		"	A9, A10, A11, A12	"
3.	"	Freq. of highest channel.		"	A13	Adjust for maximum deflection then detune 2 turns counterclockwise.
4.	High side thru .001mfd to pin 1 (grid) of RF Amp. Low side to chassis.	"		"	A14, A15	Adjust for maximum deflection.
5.	High side to antenna jack. Low side to chassis.	"		"	A16	"
6.	With the Squelch control fully counterclockwise, adjust the IF Gain control (R3) so that the receiver just breaks squelch with 5 microvolts signal applied to antenna jack.					

TRANSMITTER ALIGNMENT

Connect a dummy load, antenna or RF wattmeter to the antenna jack.
 Select the center-most channel to be used.
 Press the Transmitt button and adjust A17 for maximum output indication. Recheck A16 for peak.



PARTS LIST AND DESCRIPTIONS

TUBES

ITEM No.	USE	TYPE	RAYTHEON		SYLVANIA	
			ITEM No.	USE	TYPE	
V1	RF Amplifier	6B76	V7	Det. -AVC-ANL	6AL5	
V2	1st Mixer-Osc.	12AT7	V8	AF Amp. -Squelch Amp. - Speech Amp.	12AX7A	
V3	2nd Mixer-Osc.	12AT7	V9	Output-Modulator	6AQ5A	
V4	1st IF Amplifier	6B76	V10	Trans. Osc. -Tripler	12BH7A	
V5	2nd IF Amplifier	6B76	V11	Final Amplifier	6EM5	
V6	3rd IF Amplifier	6B76				

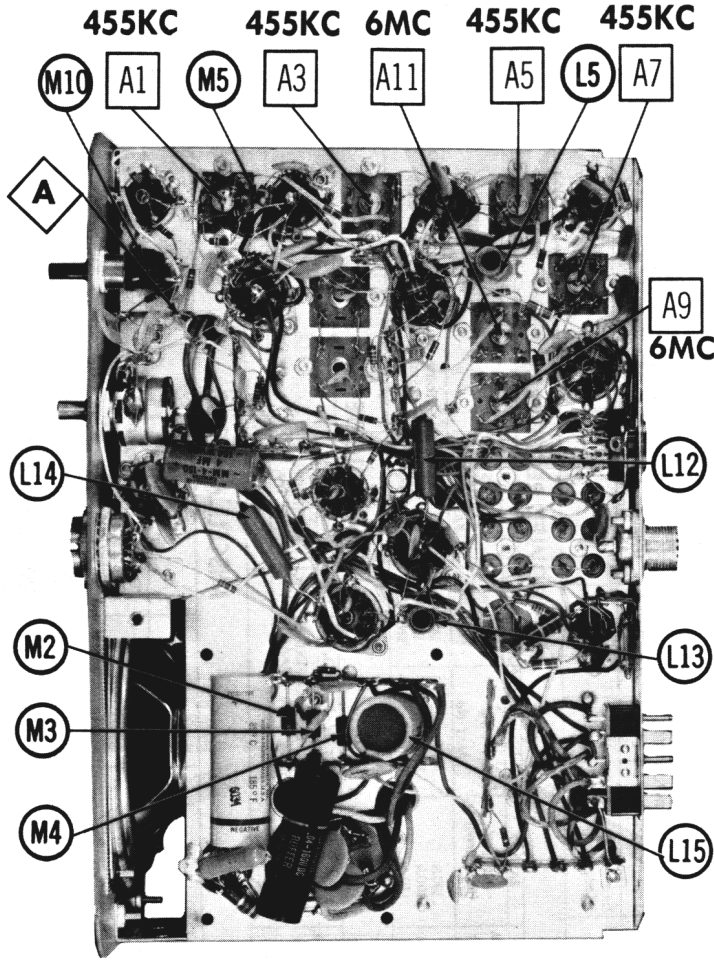
ELECTROLYTIC CAPACITORS

ITEM No.	RATING	CAP.	VOL.	REPLACEMENT DATA		
				Poly-Com PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.
C1	40	250		PR5180	Q71-14	TC58
C2A	30	350		AFH3-109	XC3-25	FP330
C2B	30	350				
C2C	20	25				
C3A	30	350		AFH3-28-30	XC3-11	FP330. 7
C3B	30	350				
C3C	10	350				
C4A	30	350		AFH3-109	XC3-25	FP330
C4B	30	350				
C4C	20	25		PR51400	Q71-2	TT150X4
C5	4	150				TD-4-150

FIXED CAPACITORS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA				
			AEROVOX PART No.	CORNELL-DUBILIER PART No.	ELMENC0 PART No.	MALLORY PART No.	SPRAGUE PART No.
C6	100 NT50		DTN-100	C10T10	CCTN-101	CN7-310	10TCU-T10
C7	100 NT50		DTN-100	C10T10	CCTN-101	CN7-310	10TCU-T10
C8	220		DI-220	L10T22	CCD-221	B-322	10T5-T22
C9	4.7 NPO ± .25mmf		NPO-DI 4.7	C10V47C	CCTO-4R7	CNO-547	10TCC-V47
C10	.001		BPD-001	BYA10D1	CCD-102	B-210	5HK-D10
C11	12 NPO 5%			C10Q2C	CCTO-120	CNO-412	10TCC-Q2
C12	.1			CUB2P1	LFP-2-104	BT-010	2TM-P10
C13	.001			BYA10D1	CCD-102	B-210	5HK-D10
C14	.001			BYA10D1	CCD-102	B-210	5HK-D10
C15	22 NPO 10%			C10Q2C	CCTO-220	CNO-422	10TCC-Q22
C16	.001			BPD-001	CCD-102	B-210	5HK-D10
C17	22 NPO 10%			C10Q2C	CCTO-220	CNO-422	10TCC-Q22
C18	.001			BPD-001	CCD-102	B-210	5HK-D10
C19	.68mmf			BYA10D1	CCD-102	B-210	5HK-D10
C20	30 5%			NPO-SI .68	TCZ-R68		MS-43
C21	.001			1469-00003	CCTO-102	CCTO-102	5HK-D10
C22	.001			BPD-001	CCD-102	B-210	5HK-D10
C23	.001			BPD-001	CCD-102	B-210	5HK-D10
C24	.68mmf			NPO-SI .68	TCZ-R68		5HK-D10
C25	.68mmf			NPO-SI .68	TCZ-R68		5HK-D10
C26	.68mmf			NPO-SI .68	TCZ-R68		5HK-D10
C27	.01			BPD-01	DD-103	B-110	5HK-S10
C28	.01			BPD-01	DD-103	B-110	5HK-S10
C29	.01			BPD-01	DD-103	B-110	5HK-S10
C30	.01			BPD-01	DD-103	B-110	5HK-S10
C31	.01			BPD-01	DD-103	B-110	5HK-S10
C32	.01			BPD-01	DD-103	B-110	5HK-S10
C33	.01			BPD-01	DD-103	B-110	5HK-S10
C34	.01			BPD-01	DD-103	B-110	5HK-S10
C35	50			DI-500	CCD-501	B-350	10T5-T50
C36	.01			BPD-01	DD-103	B-110	5HK-S10
C37	.01			BPD-01	DD-103	B-110	5HK-S10
C38	.01			BPD-01	DD-103	B-110	5HK-S10
C39	.1			DF-104	CCD-103	BT-010	2TM-P10
C40	.01			BYA10S1	CCD-103	B-110	5HK-S10
C41	.01			BYA10S1	CCD-103	B-110	5HK-S10
C42	.1			CUB2P1	IDP-2-104	BT-010	2TM-P10
C43	.001			BYA10D1	CCD-102	B-210	5HK-D10
C44	.001			BYA10D1	CCD-102	B-210	5HK-D10
C45	.001			BYA10D1	CCD-102	B-210	5HK-D10
C46	.001			BYA10D1	CCD-102	B-210	5HK-D10
C47	.001			BYA10S1	CCD-103	B-110	5HK-S10
C48	.01						

CHASSIS—BOTTOM VIEW



FIXED CAPACITORS (cont)

ITEM No.	RATING	REMARKS	REPLACEMENT DATA				
			AEROVOX PART No.	CORNELL-DUBILIER PART No.	ELMENC0 PART No.	MALLORY PART No.	SPRAGUE PART No.
C48	.01		BPD-01	BYA10S1	CCD-103	B-110	5HK-S10
C49	1-8		NPO-DI 8.2	C10V82C	CCTO-220	CNO-422	10TCC-V82
C50	8.2 NPO 5%	(4.7) † Note 2	NPO-DI 22	C10Q22C	CCD-103	B-110	10TCC-Q22
C51	22 NPO 10%		BPD-01	BYA10S1	CCTN-101	CNT-310	10TCU-T10
C52	.01		BPD-01	C10T10	CCTN-101	CNT-310	10TCU-T10
C53	100 NT750		1469-00003	22R503	CCTN-101	CNT-310	MS-43
C54	30 5%			BYA10S1	CCD-103	B-110	5HK-S10
C55	.01		BPD-01	BYA10S1	CCD-103	B-110	5HK-S10
C56	.01		BPD-01	BYA10S1	CCD-103	B-110	5HK-S10
C57	.001		BPD-01	BYA10D1	CCD-102	B-210	5HK-D10
C58	.001		BPD-01	BYA10D1	CCD-102	B-210	5HK-D10
C59	.01	1600V	BPD-01	BYA10S1	CCD-103	B-110	5HK-S10
C60	.04		BPD-01	CUB2P1	160P-5-403	CEM-1614	MB-54
C61	.01		BPD-01	BYA10S1	CCD-103	B-110	5HK-S10
C62	.01		BPD-01	BYA10S1	CCD-103	B-110	5HK-S10
C63	.001		BPD-01	BYA10D1	CCD-102	B-210	5HK-D10
C64	.01		BPD-01	BYA10S1	CCD-103	B-110	5HK-S10
C65	.01		BPD-01	BYA10S1	CCD-103	B-110	5HK-S10
C66	.1		BPD-01	CUB2P1	IDP-2-104	BT-010	2TM-P10
C67	.01		BPD-01	BYA10S1	CCD-103	B-110	5HK-S10
C68	.01		BPD-01	BYA10S1	CCD-103	B-110	5HK-S10

† Alternate Value.
Note 1. Not used in some versions.
Note 2. Not used in Modelis using 13MC Series Crystals.

PARTS LIST AND DESCRIPTIONS (Continued)

CONTROLS

ITEM No.	RATING		REPLACEMENT DATA		INSTALLATION NOTES
	RESISTANCE	WATTS	Poly-Com PART No.	CLAROSTAT PART No.	
R1A	250K	1/2	B-51	A47-250K-Z	Volume Power Off-On
B	Shaft		Not Req.	RS-2	
C	Switch		KR-1	SWE-12	
R2A	10K	1/2	B-15	A47-10K-Z	Squelch
B	Shaft		Not Req.	RS-2	
R3	10000Ω	2(WW)	Not Req.	39-1000	IF Gain

RESISTORS

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

ITEM No.	RATING	REPLACEMENT DATA		REPLACEMENT DATA	
		WORKMAN TV PART No.	REMARKS	IRC PART No.	REMARKS
R4	100K				
R5	1000Ω				
R6	10K				
R7	180Ω				
R8	100K				
R9	1000Ω				
R10	100K				
R11	6800Ω				
R12	33K				
R13	100K				
R14	1000Ω				
R15	1000Ω				
R16	100K				
R17	47K				
R18	100K				
R19	1000Ω				
R20	180Ω				
R21	100K				
R22	1000Ω				
R23	180Ω				
R24	220K				
R25	1000Ω				
R26	1.5meg				
R27	180Ω				
R28	100K				
R29	100K				
R30	1meg				
R31	470K				
R32	470K				
R33	330K				

Note 1. Value may vary. Selected for 4.9W input power to final amp.

* Alternate Value

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA			NOTES
		Poly-Com PART No.	Merit PART No.	Workman TV PART No.	
L1	Ant. Loading(5uh)				
L2	Ant.				
L3	RF				
L4	Mixer Grid				
L5	Osc. Plate				
L6	1st 6MC IF				
L7	2nd 6MC IF				
L8	1st 455KC IF				
L9	2nd 455KC IF				
L10	3rd 455KC IF				
L11	4th 455KC IF				
L12	Rf Choke (10uh)				
L13	Tripler Plate				
L14	Rf Choke (10uh)				
L15	Flash Choke (12uh)				

TRANSFORMER (POWER)

ITEM No.	RATING		REPLACEMENT DATA				NOTES
	PRI.	SEC.	Poly-Com PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	
T1	117V@ 121V@ 127V@	110V@ -420A AC	P128C				
	5.8A						
	SEC. 3	SEC. 4					
	6.3V@						
	4.8A						

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA				NOTES
	PRI.	SEC.	Poly-Com PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	
T2	14K	3-4Ω	T15W1A				

SPEAKER

ITEM No.	TYPE		REPLACEMENT DATA		NOTES
	FIELD	V. C. IMP.	Poly-Com PART No.	QUAM PART No.	
SP1	4"	P.M. 3-4Ω	P4-WA *	4A10T *	*Weather-proof Speaker

VIBRATOR

ITEM No.	TYPE	INPUT VOLTS	FREQUENCY	REPLACEMENT DATA			NOTES
				Poly Com PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	
M1	Interrupter	12.6V	115v			1609	12 Volt Versions 6 Volt Versions
	Interrupter	6.3V	115v				

POWER RECTIFIERS

ITEM No.	RATING		REPLACEMENT DATA		NOTES
	CURRENT (Measured)	Poly-Com PART No.	RCA PART No.	SARKES TAZZIAN PART No.	
M2	.100A	F6 *	1N1763	F6	* Some versions may use 60E5
M3	.100A	F6 *	1N1763	F6	† Some versions may use 40E5
M4	.001A	K200 †	1N1763	2F4	

SIGNAL DIODES

ITEM No.	ORIG. TYPE	REPLACEMENT DATA		NOTES
		Poly-Com PART No.	GENERAL ELECTRIC PART No.	
M5	BD6226		RAYTHEON PART No.	

MISCELLANEOUS

ITEM No.	PART NAME	Poly-Com PART No.	NOTES
M7	Crystal		
M8	Crystal		
M9	Switch		
M10	Switch		

WIRING DATA

General-use Unshielded Hook-up Wire Use BELDEN No. 8530 (Solid) Available in Ten Colors
8524 (Stranded) Available in Ten Colors
Power Cord Use BELDEN No. 1765-B (6 Ft. Length)
1725-K (7½ Ft. Length)