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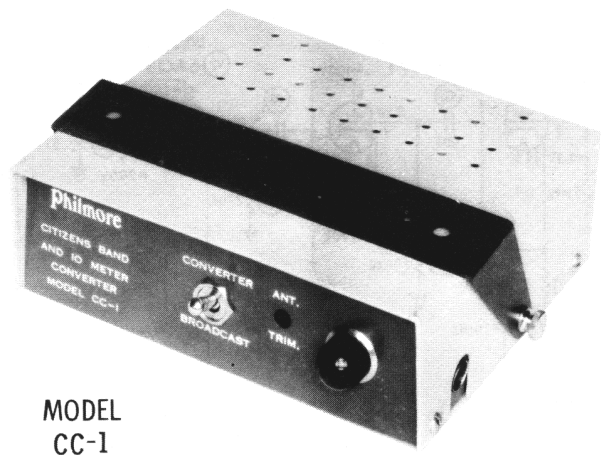
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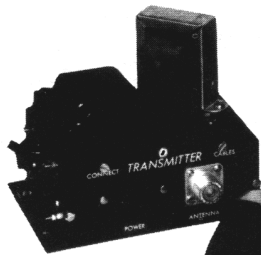
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PHILMORE MODELS CC-1/-1W,
CPA-1/-1W, CPM-1/-1W, CT-1/-1W



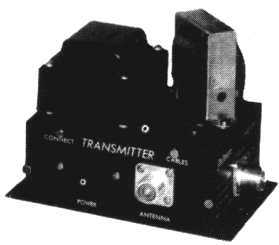
MODEL
CC-1



MODEL
CPM-1



MODEL
CT-1



MODEL
CPA-1

PHILMORE MODELS CC-1/-1W,
CPA-1/-1W, CPM-1/-1W, CT-1/-1W

TRADE NAME	Philmore CC-1, CC-1W (2 Tube Citizens Band Converter) CT-1, CT-1W (3 Tube Citizens Band Transmitter) CPA-1, CPA-1W (AC Power Supply) CPM-1, CPM-1W (2 Transistor DC Power Supply)
MANUFACTURER	Philmore Manufacturing Co., Inc., 130-01 Jamaica Ave., Richmond Hill 18, N. Y.
POWER SUPPLY	110 - 120 Volts AC, 60 Cycles (or) 12 Volt Storage Battery
RATING	38 Watts, .48 Amp. @117 Volts AC (Receive) 3.2 Amp. @12.6 Volts DC (Receive) 60 Watts, .66 Amp. @117 Volts AC (Transmit) 4.5 Amp. @12.6 Volts DC (Transmit)
FREQ. RANGE	Any one of Citizens Band Channels 1 thru 22

NOTICE

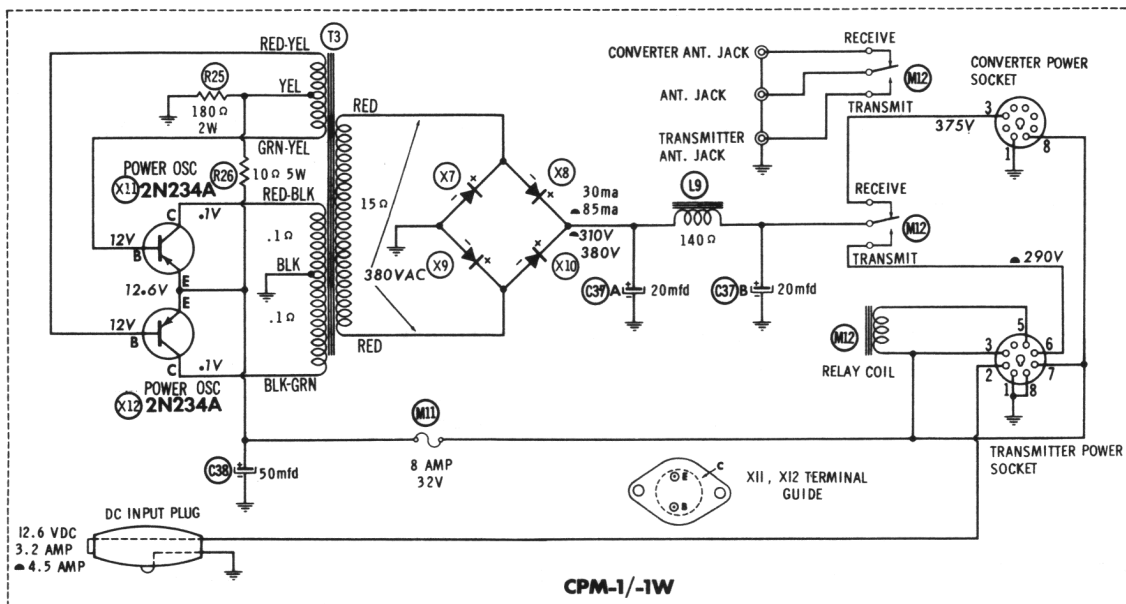
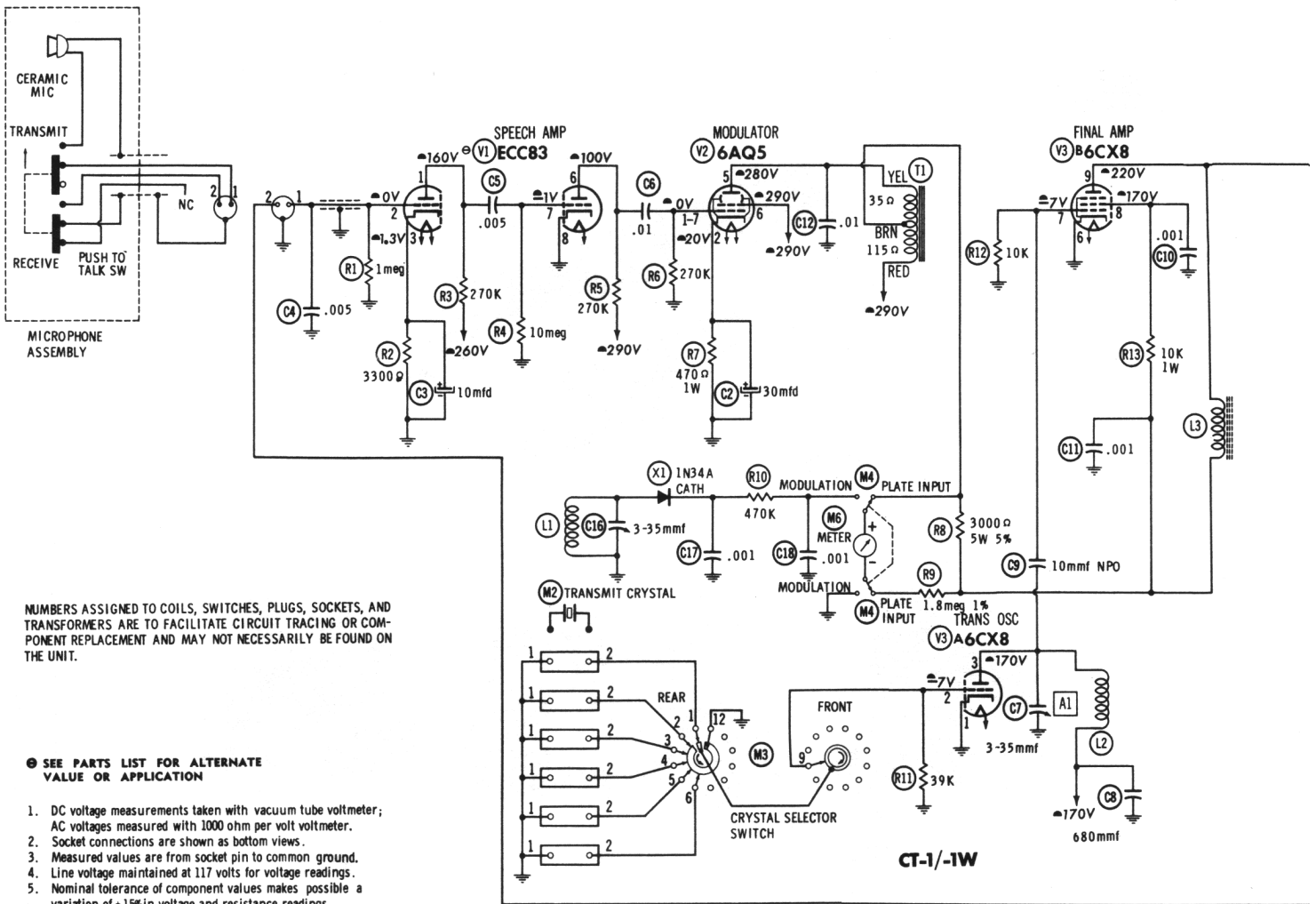
ONLY THOSE PERSONS PROPERLY LICENSED ARE PERMITTED TO MAKE REPAIRS OR ADJUSTMENTS WHICH MAY RESULT IN ILLEGAL OPERATION. (REFER TO FCC RULES & REGULATIONS PART 19, SUBPART D, SECTION 19.71.)

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

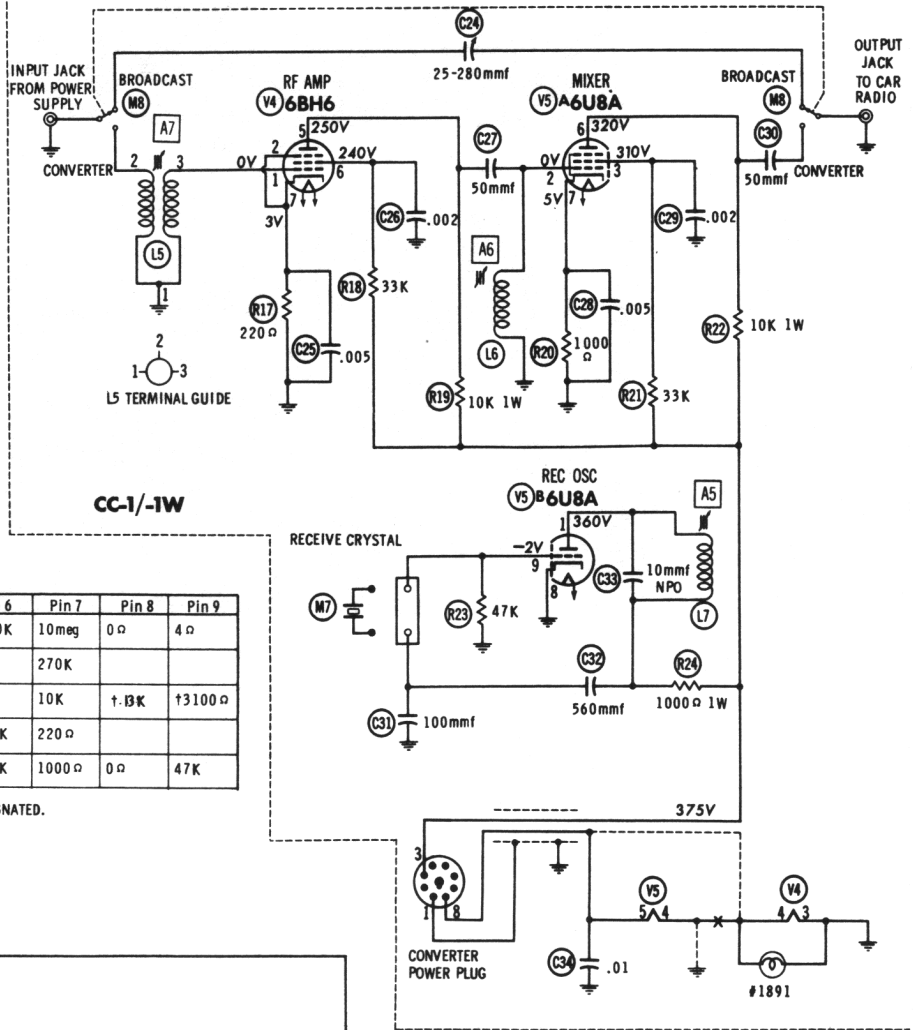
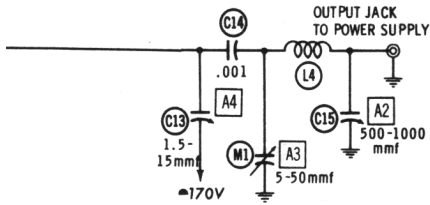


The listing of any available replacement part herein does not constitute in any case a recommendation, warranty or guaranty by Howard W. Sams & Co., Inc., as to the quality and suitability of such replacement part. The numbers of these parts have been compiled from information furnished to Howard W. Sams & Co., Inc., by the manufacturers of LY746

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A PHOTOFAC STANDARD NOTATION SCHEMATIC
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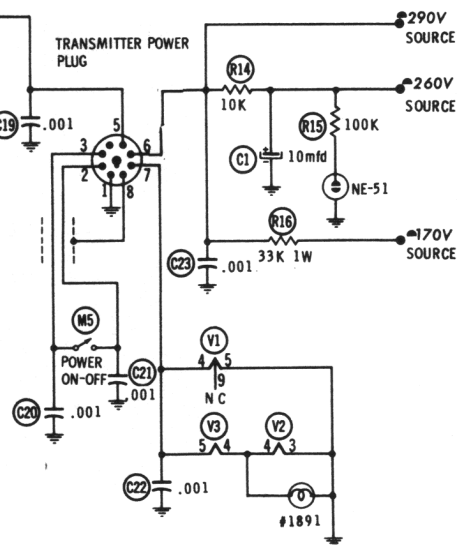
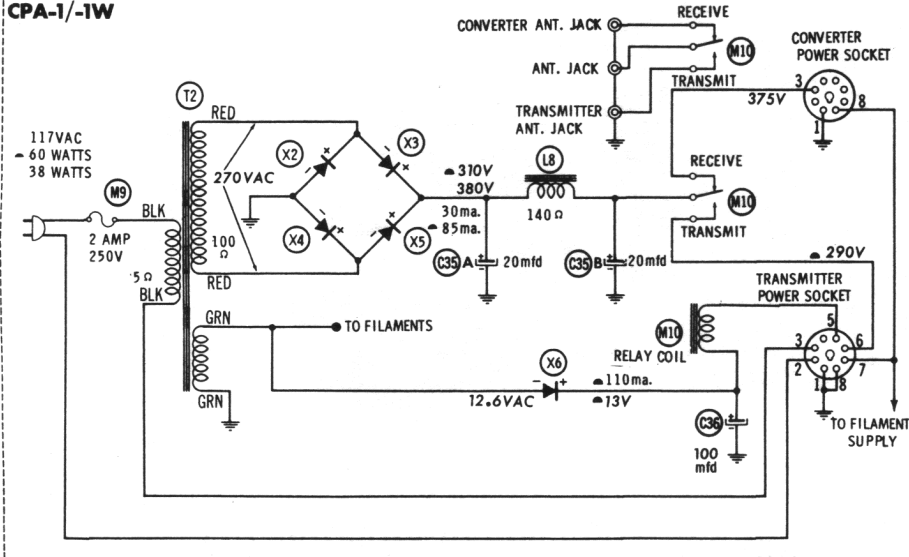
RESISTANCE READINGS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	ECC83	†280K	1meg	3300Ω	2Ω	0Ω	†270K	10meg	0Ω	4Ω
V2	6AQ5A	270K	470Ω	5Ω	1.2Ω	†150Ω	†0Ω	270K		
V3	6CX8	0Ω	39K	†33K	1.2Ω	2Ω	0Ω	10K	†.3K	†3100Ω
V4	6BH6	0Ω	220Ω	0Ω	3Ω	†10K	†33K	220Ω		
V5	6U8A	†1000Ω	0Ω	†33K	3Ω	6Ω	†10K	1000Ω	0Ω	47K

ALL READINGS TAKEN IN "RECEIVE" POSITION UNLESS OTHERWISE DESIGNATED.
 † TAKEN IN "TRANSMIT" POSITION.
 † MEASURED FROM PIN 6 OF POWER PLUG
 † MEASURED FROM PIN 3 OF POWER PLUG.

TRANSISTOR RESISTANCE MEASUREMENTS NOT GIVEN BECAUSE OF THE WIDE VARIATION IN INTERNAL TRANSISTOR RESISTANCE.

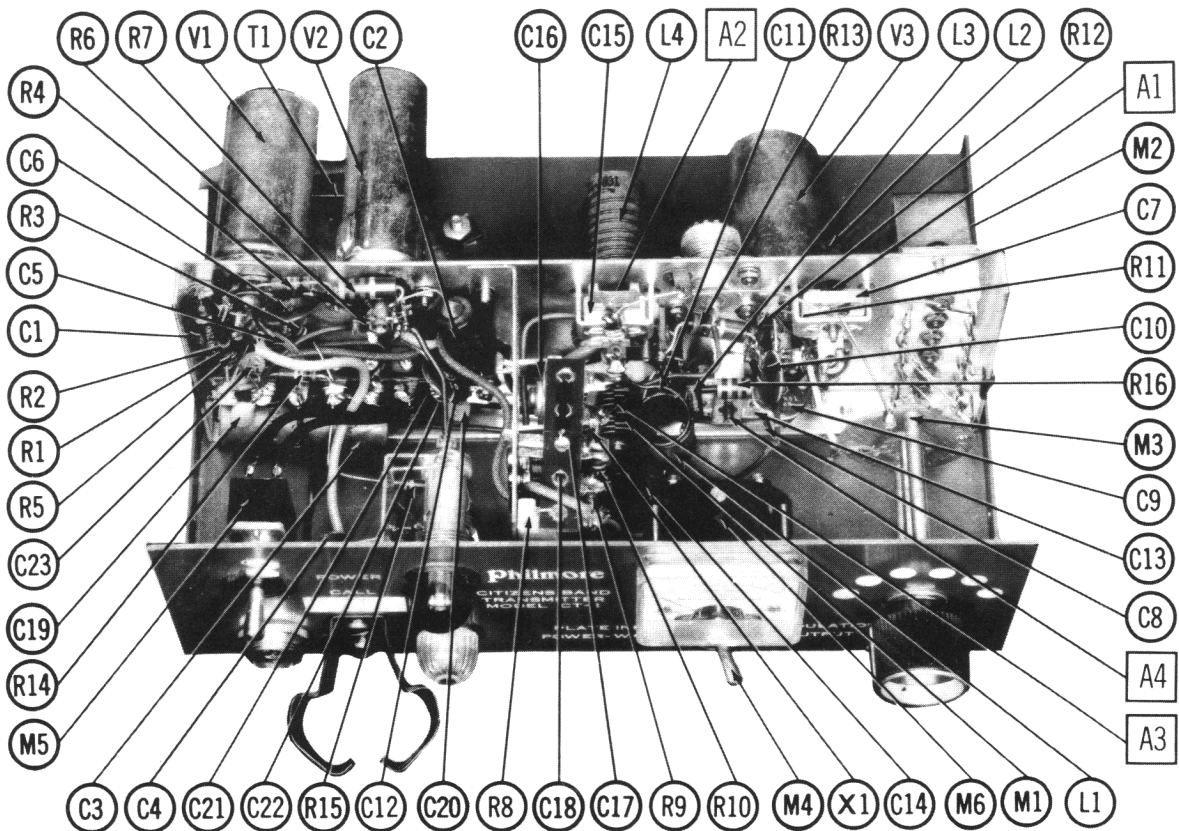
CPA-1/-1W



PHILMORE MODELS CC-1/-1W, CPA-1/-1W, CPM-1/-1W, CT-1/-1W



MODEL CC-1 CONVERTER CHASSIS



MODEL CT-1 TRANSMITTER CHASSIS

ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT
Best results will be obtained when adjusting A2 and A3 if the antenna normally used is connected and the unit is as nearly in the cabinet as possible. Suggested Alignment Tools: A1 thru A7.....GENERAL CEMENT #5000, 5003, 5066, 8271, 8272, 8276, 8277, 8290, 8609, 8722, 9150, 9298 WALSCO #2515, 2516, 2518, 2519, 2525, 2541

TRANSMITTER ALIGNMENT

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)			
If panel meter is used, connect a 1000Ω resistor across meter terminals to prevent damage. Switch should be in "Plate Input Power" for adjustments. Remove resistor after completing adjustments.			
SPECIAL INSTRUCTIONS	INDICATOR	ADJUST	REMARKS
1. Channel Selector to highest channel used. Connect dummy load or antenna.	RF Wattmeter or built-in meter.	A1	Key Transmitter. Adjust for maximum deflection on wattmeter. Rock A1 to each side of peak noting rate of dropoff. Set just below peak on side of gradual dropoff. Panel meter will dip.
2. Channel Selector to mid frequency used.	"	A2, A3	Key Transmitter. Adjust for maximum deflection on wattmeter. Panel meter will dip. Repeat Steps 1 and 2.
3. Channel Selector to highest channel used.	RF Wattmeter.	A4	Key Transmitter. Rotate A3 from full open to full mesh, noting 2 meter peaks. Tune to highest peak. Adjust A4 for maximum deflection. Readjust A3 from full open to full mesh, again noting the 2 peaks. Tune for the highest peak. Repeat adjustments of A3 and A4 until one peak of A3 is sharply reduced.
4. Set meter switch to modulation output. Key Transmitter and adjust C15 for a meter reading of approximately 3.			

CONVERTER ALIGNMENT MODEL CC-1

Connect converter to auto radio antenna input.					
SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
1. Not used.			Connect VTVM across R24	A5	Adjust for MINIMUM meter indication.
2. High side to antenna input, low side to ground.	27.03MC (400% Mod.)	Approximately 635KC on AM receiver.	Across voice coil on auto radio.	A6, A7	Adjust for maximum deflection.

PARTS LIST AND DESCRIPTIONS

TUBES

ITEM No.	USE	TYPE	REMARKS	REPLACEMENT DATA
V1	Speech Amp. Modulator	ECC83 (2AX7)*		
V2		6AQ5A		
V3	Transmit Osc. - Final Amp.		6CX8	

* Alternate

RESISTORS

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

ITEM No.	RATING	REMARKS	REPLACEMENT DATA	REMARKS	REPLACEMENT DATA
R1	1meg				
R2	3300Ω				
R3	270K				
R4	10meg				
R5	270K				
R6	470Ω 1W				
R7	3000Ω 5W				
R8	3000Ω 5W				
R9	1.8meg 1/2				
R10	470K				
R11	39K				
R12	10K				
R13	10K 1W				
R14	10K				
R15	100K				
R16	33K 1W				

POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	CURRENT RATING (Measured)	RECTIFIERS		DIODES	NOTES
		ORIGINAL Part or Type No.	RCA PART No.		
X1		CT1084		Meter Signal (1N34A or 1N296)	

ELECTROLYTIC CAPACITORS

ITEM No.	RATING CAP. VOLT.	REPLACEMENT DATA						
		PHILMORE PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	PYRAMID PART No.	SPRAGUE PART No.
C1	10	CT1021	PTT79	NLW10-25	MT1-5	TT25X10	MLV10-25	TE-1204
C2	30	CT1023	PTT83	NLW30-25	MT1-14	TT50X35	TD-30-150	TE-1208
C3	10	CT1022	PR81620	BR10-450	QTI-6	TC62	TD-10-450	TVA-1804

FIXED CAPACITORS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA					
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELEMCO PART No.	MALLORY PART No.	SPRAGUE PART No.
C4	.005	#CT1025	BFD-005	DD-502	L10D5	CCD-502	GP250	5GA-D50
C5	.005		BFD-005	DD-502	L10D5	CCD-502	GP250	5GA-D50
C6	.01		BFD-01	DD-103	BYA10S1	CCD-103	GP110	5GA-S10
C7	3-35		BFD-680	DD-681	L10T68	CCD-681	GP368	5GA-T68
C8	680			TCZ-10	C100QC	CCD-100	CNO-410	10TCC-410
C9	10 NPO			BFD-001	DD-102	L10D1	CCD-102	5GA-D10
C10	.001			BFD-001	DD-102	L10D1	CCD-102	5GA-D10
C11	.001			BFD-01	DD-103	BYA10S1	CCD-103	5GA-S10
C12	.01			BFD-01	DD-103	BYA10S1	CCD-103	5GA-S10
C13	1.5-15		#CT1024	BFD-001	DD-102	L10D1	CCD-102	5GA-D10
C14	.001	#CT1026	BFD-001	DD-102	L10D1	CCD-102	5GA-D10	
C15	500-1000	#CT1025	BFD-001	DD-102	L10D1	CCD-102	5GA-D10	
C16	3-35		BFD-001	DD-102	L10D1	CCD-102	5GA-D10	
C17	.001		BFD-001	DD-102	L10D1	CCD-102	5GA-D10	
C18	.001		BFD-001	DD-102	L10D1	CCD-102	5GA-D10	
C19	.001		BFD-001	DD-102	L10D1	CCD-102	5GA-D10	
C20	.001		BFD-001	DD-102	L10D1	CCD-102	5GA-D10	
C21	.001		BFD-001	DD-102	L10D1	CCD-102	5GA-D10	
C22	.001		BFD-001	DD-102	L10D1	CCD-102	5GA-D10	
C23	.001		BFD-001	DD-102	L10D1	CCD-102	5GA-D10	

Philmore Part Number.

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA			NOTES
		PHILMORE PART No.	Merit PART No.	Miller PART No.	
L1	Meter Coil	CT1032			
L2	Osc.	CT1030			
L3	RF Choke (2.2uh)	CT1033			
L4	Ant. Load	CT1031			

TRANSFORMER (MOD.)

ITEM No.	TURNS RATIO	REPLACEMENT DATA			NOTES
		PHILMORE PART No.	STANCOR PART No.	THORADSON PART No.	
T1	1 .8	CT1035			

MISCELLANEOUS

ITEM No.	PART NAME	PHILMORE PART No.	NOTES
M1	Tuning Cap.	CT1028	
M2	Crystal	CT1041	One Gang 5-50mmf Transmit (27.105MC)
M3	Switch	CT1047	Crystal Selector (Rotary Water Type)
M4	Switch	CT1046	Meter (DPDT Toggle Type)
M5	Switch	CT1045	Power (SPST Toggle Type)
M6	Meter	CT1044	Modulation-Power
	Microphone	CT1042	

WIRING DATA

General-use Hook-up Wire Use BELDEN No. 8530 (Solid) Available in 12 Colors
 Shielded Antenna Lead Use BELDEN No. 8524 (Stranded) Available in 12 Colors
 824 Low Loss (RG-8/U Type)
 8249 Low Loss (RG-8/U Type)
 8259 (Solid) Miniature (RG-58/U)
 Coiled Microphone Cable Use BELDEN No. 8487 3 Conductor- 1 Shielded for Press-to-Talk (Neoprene)
 Ignition Noise Suppression Use BELDEN No. 7300-Series Spark-Plug Sets
 Bonding Strap Use BELDEN No. 8661 (3/8 in.)

PARTS LIST AND DESCRIPTIONS

WIRING DATA

General-use Unshielded Hook-up Wire Use BELDEN No. 8530 (Solid 22AWG) Available in 12 Colors
 8524 (Stranded 22AWG)
 8570 (Stranded 26AWG)

TUBES

ITEM No.	USE	GENERAL ELECTRIC	RCA	RAYTHEON	SYLVANIA	TYPE
V4	R.F. Amp.	6BH6		Mixer - Receiver Osc.	6UBA	

FIXED CAPACITORS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA					
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELEMCO PART No.	MALLOY PART No.	SPRAGUE PART No.
C24	25-280	#CC1015	BPD-005	DD-502	L10D5	464	GP250	5GA-D50
C25	.005		BPD-002	DD-202	L10D2	CCD-502	GP220	5GA-D20
C26	.002		BPD-50	DD-500	L10Q5	CCD-202	GP450	5GA-Q50
C27	50		BPD-005	DD-502	L10D5	CCD-500	GP250	5GA-D50
C28	.005		BPD-002	DD-502	L10D2	CCD-202	GP220	5GA-D20
C29	.002		BPD-002	DD-202	L10Q5	CCD-500	GP450	5GA-Q50
C30	50		BPD-50	DD-500	L10Q5	CCD-101	GP310	5GA-T10
C31	100		BPD-100	DD-101	L10T1	CCD-101	GP356	5GA-T56
C32	560			DD-561	L10T56	CCD-561	CNO-410	10TCC-Q10
C33	10 NPO			TCZ-10	C10QIC	CCD-100	GPII0	5GA-S10
C34	.01		BPD-01	DD-103	BYA10S1	CCD-103		

Philmore Part Number.

RESISTORS

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

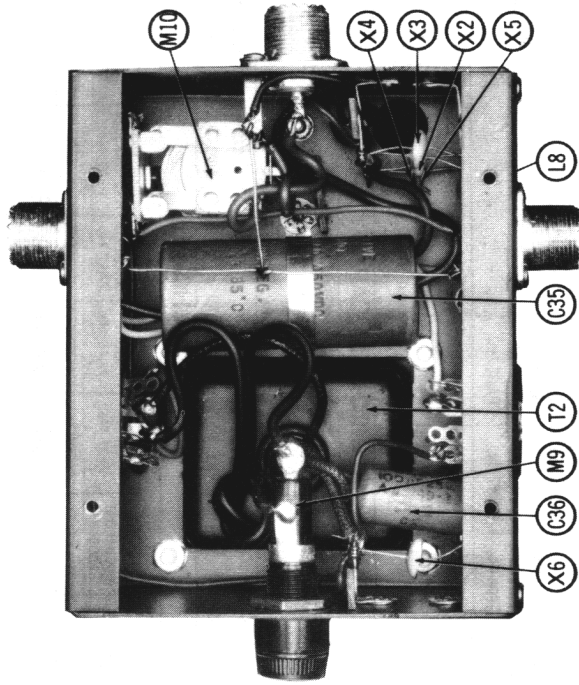
ITEM No.	RATING	REPLACEMENT DATA		ITEM No.	RATING	REPLACEMENT DATA	
		IRC PART No.	WORKMAN PART No.			IRC PART No.	WORKMAN PART No.
R17	220Ω			R21	33K		
R18	33K			R22	10K 1W		
R19	10K 1W			R23	47K		
R20	1000Ω			R24	1000Ω 1W		

COILS (RF-IF)

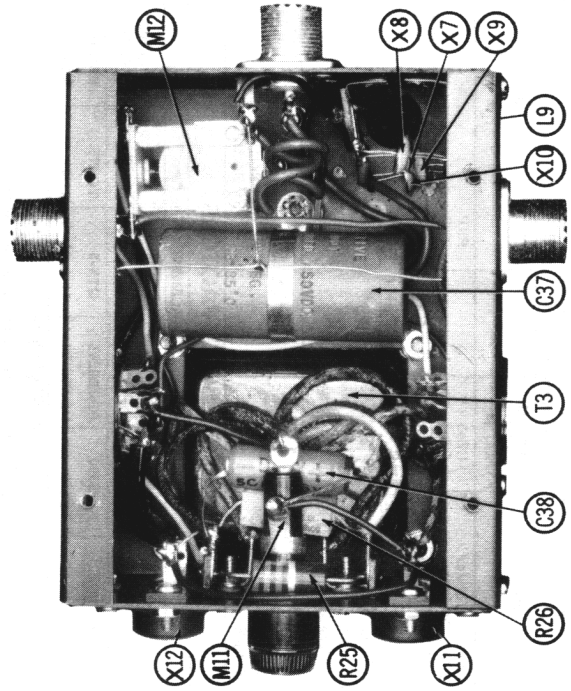
ITEM No.	USE	REPLACEMENT DATA			NOTES
		PHILMORE PART No.	Merit PART No.	Stancor PART No.	
L5	RF Input Mixer	CC1018			
L6	Obs.	CC1019			
L7		CC1020			

MISCELLANEOUS

ITEM No.	PART NAME	PHILMORE PART No.	NOTES
M8		CC1025	



CPA-1/-1W



CPM-1/-1W

PARTS LIST AND DESCRIPTIONS

POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	CURRENT RATING (Measured)	ORIGINAL Part or Type No.	RECTIFIERS		DIODES	NOTES
			RCA PART No.	SARKES TARZIAN PART No.		
X2	.085A	CP1006	2N3194	2F4		HV Rectifier (2E4)
X3	.085A	CP1006	2N3194	2F4		HV Rectifier (2E4)
X4	.085A	CP1006	2N3194	2F4		HV Rectifier (2E4)
X5	.085A	CP1006	2N3194	2F4		HV Rectifier (2E4)
X6	.110A	CP1006	2N3193	2F4		Relay Control (2E4)

ELECTROLYTIC CAPACITORS

ITEM No.	RATING CAP. VOLT.	PHILMORE PART No.	REPLACEMENT DATA				NOTES
			AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLOY PART No.	
C354	450	CP1001	PRS2390	BBRD2245	QT2-6	TC2501	TVA-2730
B	450	CP1002	PTT86	NLW100-25	MTI-20	TC2501	TE-1211
C36	25						

FILTER CHOKE

ITEM No.	RATING DC RES. (0 CURRENT 1000-)	INDUCTANCE (0 CURRENT 1000-)	REPLACEMENT DATA				NOTES
			PHILMORE PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	
L8	.085A	1503	4.8 HY	CP1005			

TRANSFORMER (POWER)

ITEM No.	RATING	REPLACEMENT DATA				NOTES
		PHILMORE PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	
T2	117VAC @ 270VAC 12.6V @ .86A @ .085A	CP1004				

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA				NOTES
			PHILMORE PART No.	LITELFUSE PART No.	FUSE	HOLDER	
M9	3AG	2A 250V	CP1046	312002 (3AG 2A 250V)	155020	AGC2	HKCP

MISCELLANEOUS

ITEM No.	PART NAME	PHILMORE PART No.	NOTES
M10	Relay	CP1008	Receive-Transmit (DPDT 12V DC)

WIRING DATA

General-use Unshielded Hook-up Wire Use BELDEN No. 8530 (Solid) Available in 12 Colors
 Power Cord Use BELDEN No. 8524 (Stranded) Available in 12 Colors
 Power Cord (Interlock Type) Use BELDEN No. 17106 (Plastic) or 17126 (Rubber) - 6 FT.
 Use BELDEN No. 17109 (Plastic) or 17129 (Rubber) - 9 FT.
 Use BELDEN No. 8874 (Rubber) or 8895 (Plastic)

WIRING DATA

General-use Unshielded Hook-up Wire Use BELDEN No. 8530 (Solid) Available in 12 Colors
 Shielded Hook-up Wire Use BELDEN No. 8885
 Rear Seat Speaker Extension Cable Use BELDEN No. 8782 (Stranded) Coded Parallel Leads
 Bonding Strap Use BELDEN No. 8661 (3/8 in.) or 8670 (3/4 in.)

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA		NOTES
			GENERAL ELECTRIC PART No.	RCA PART No.	
X11	2N234A	Power Oscillator	GE-3		PNP
X12	2N234A	Power Oscillator	GE-3		PNP

POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	CURRENT RATING (Measured)	ORIGINAL Part or Type No.	RECTIFIERS		DIODES	NOTES
			RCA PART No.	SARKES TARZIAN PART No.		
X7	.085A	CP1006	2N3194	2F4		HV Rectifier (2E4)
X8	.085A	CP1006	2N3194	2F4		HV Rectifier (2E4)
X9	.085A	CP1006	2N3194	2F4		HV Rectifier (2E4)
X10	.085A	CP1006	2N3194	2F4		HV Rectifier (2E4)

ELECTROLYTIC CAPACITORS

ITEM No.	RATING CAP. VOLT.	PHILMORE PART No.	REPLACEMENT DATA				SPRAGUE PART No.
			AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLOY PART No.	
C37A	450	CP1001	PRS2390	BBRD2245	QT2-6	TC2501	TVA-2730
B	450	CP1002	PTT86	NLW100-25	MTI-20	TC2501	TE-1209
C38	25						

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.			IRC PART No.	WORKMAN PART No.
R25	1800 2W			R26	100 5W	PW5-100	5W-SQ-10

FILTER CHOKE

ITEM No.	CURRENT (Measured)	INDUCTANCE (0 CURRENT 1000-)	REPLACEMENT DATA				NOTES
			PHILMORE PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	
L9	.085A	1400	4.8HY	CP1005			

TRANSFORMER (POWER)

ITEM No.	RATING	REPLACEMENT DATA				NOTES
		PHILMORE PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	
T3	12.6VDC 380VAC @ 4.5A @ .085A	CP1025				

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA				BUSS PART No.
			PHILMORE PART No.	FUSE	HOLDER	HOLDER	
M11	3AG	8A 32V	CP1011	CP1022	CP1011 (3AG 8A 32V)	155020	AGC 8 HKP

MISCELLANEOUS

ITEM No.	PART NAME	PHILMORE PART No.	NOTES
M12	Relay	CP1008	Receive-Transmit (DPDT 12V DC)