

PHOTOFACT[®]



TRADE NAME : Heath Models GW-12A, GWW-12A (AC)
GW-12D, GWW-12D (AC-Batt.)

SUPPLIER : Heath Co., Subsidiary of Daystrom, Inc.
Benton Harbor, Michigan

TYPE SET : 7 Tube Transceiver

POWER SUPPLY : 110 - 120 Volts AC, 60 Cycles (or)
6 (or) 12 Volt Storage Battery

RATING : 42 Watts, .42 Amp. @ 117 VAC (Rec.)
48 Watts, .48 Amp. @ 117 VAC (Trans.)
3.3 Amp. @ 12.6 VDC (Rec.)
3.8 Amp. @ 12.6 VDC (Trans.)

TUNING RANGE : Any one CB Channel 1 thru 23

HEATH MODELS GW-12A/D, GWW-12A/D

ALIGNMENT INSTRUCTIONS

Suggested Alignment Tools:

A1 thru A7..... GENERAL CEMENT #8606, 8606-L, 8869, 9295, 9302
WALSCO #2543, 2511, 2544, 2588

RECEIVER ALIGNMENT

Volume control should be at maximum position. Output of signal generator should be no higher than necessary to obtain an output indication. Connect output meter across voice coil.

SIGNAL GENERATOR	CHANNEL	ADJUST	REMARKS
High side thru .01mfd to pin 2 (grid of V1 (Mixer), low side to chassis. Tune to 455KC (400% Mod.).	Channel Used	A1 thru A4	Turn squelch control fully counterclockwise. Adjust for maximum output.
Across antenna jack. Tune to channel frequency (400% Mod.).	Channel Used.	A5	Adjust for maximum output.

TRANSMITTER ALIGNMENT

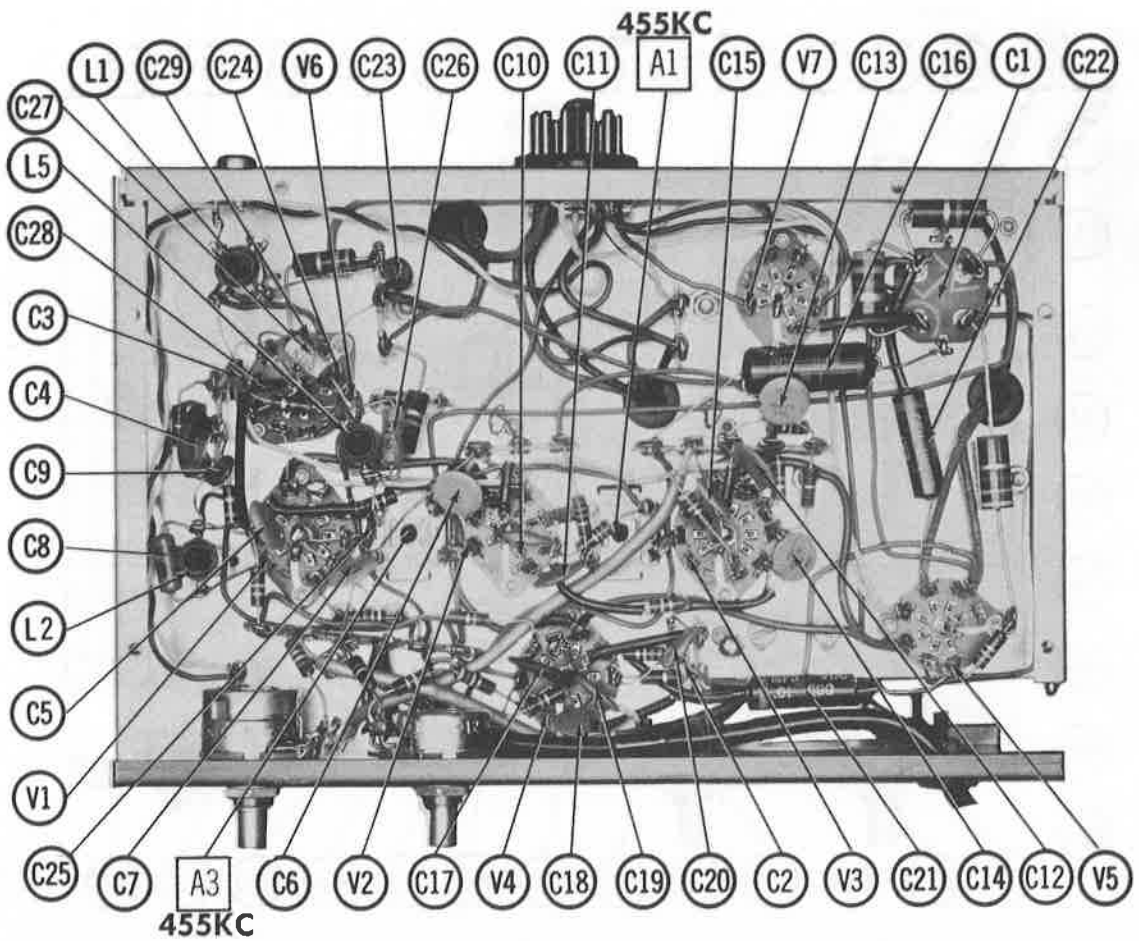
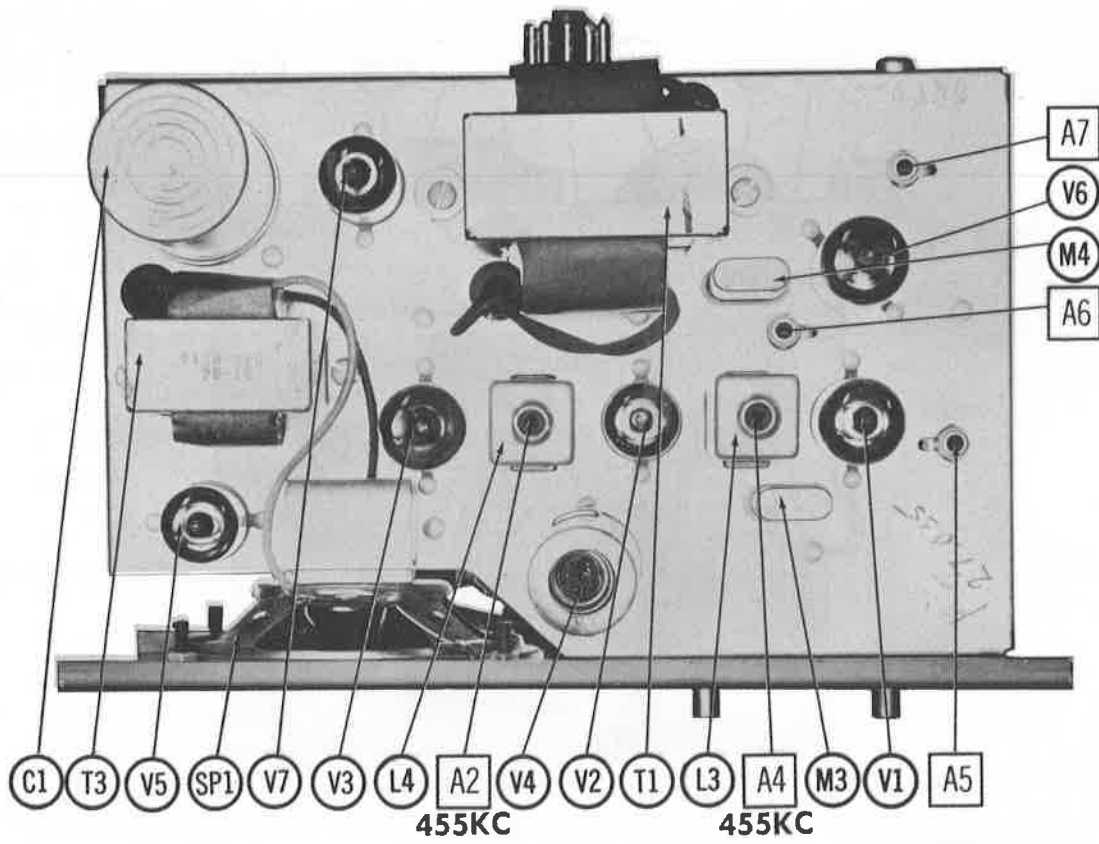
Only those persons properly licensed are permitted to make repairs or adjustments which may result in illegal operation. (Refer to FCC rules and regulations Part 19, Subpart D, Section 19.71).

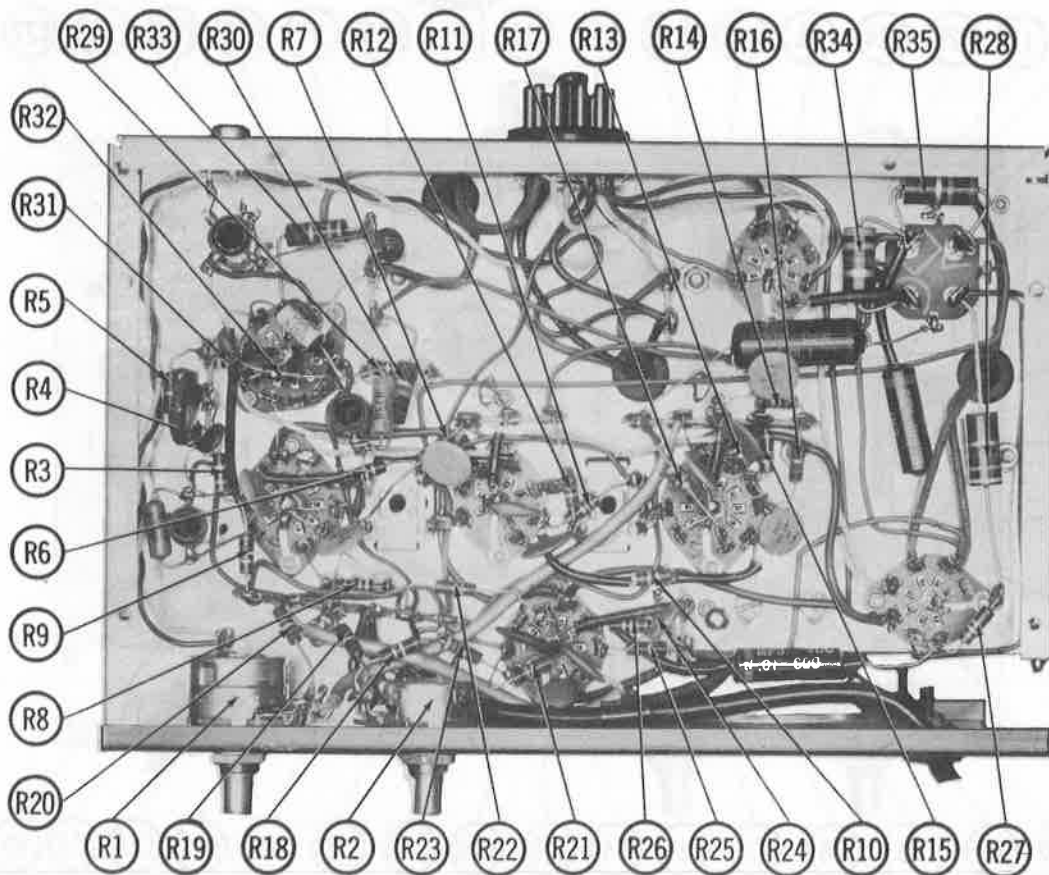
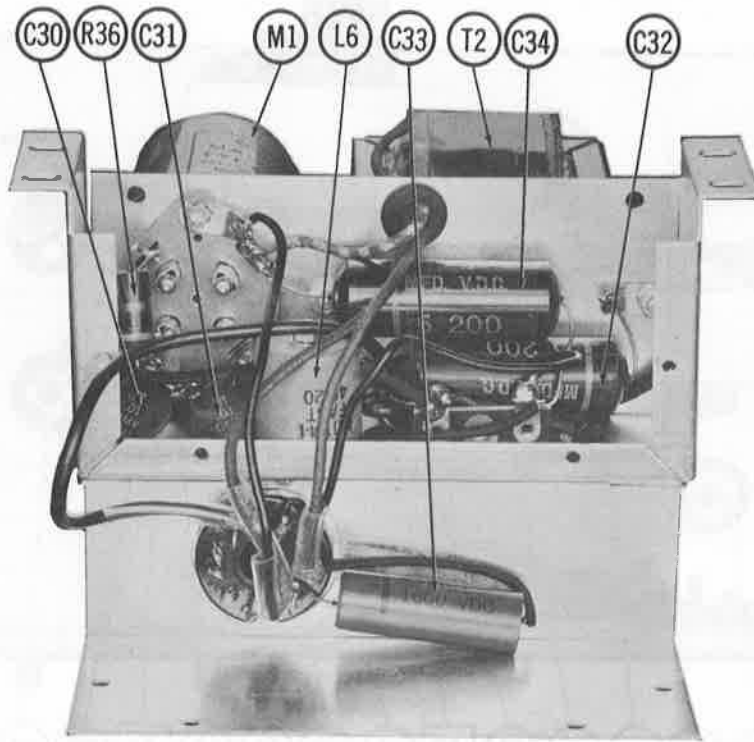
The frequency of the transmitter should be checked periodically with a secondary frequency standard to insure proper and legal operation.

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.

SIGNAL GENERATOR	CHANNEL	ADJUST	REMARKS
Field strength meter or RF wattmeter.	Channel Used.	A6	Key transmitter. Adjust for maximum output. Key transmitter several times to be sure oscillator starts each time. If necessary, back off A6 SLIGHTLY from maximum output.
"	"	A7	Adjust for maximum output.

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





PARTS LIST AND DESCRIPTION

TUBES

ITEM No.	USE	REPLACEMENT DATA	
		HEATH PART No.	AEROVOX PART No.
V1	Mixer-Rec. Osc.	6EA8	
V2	IF Amp.	6BJ6	
V3	Det. -AVC-Noise Limiter-Squelch Amp.	6BJ7	
V4	Speech Amp. -AF Amp.	6AN8	

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	HEATH PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	GENERAL INSTRUMENT PART No.	MALLORY PART No.	SPRAGUE PART No.
C1A	.60	450	25-93		C0365				TVLS-4708.10*
B	.40	350			BR20-250				
C	.20	350							
D	.20	250							
C2	10	10	25-54	PTT39	NLW10-15	MT1-5	MLV10-10	TT12X10	TE-1114

* Not normally in distributor's stock. Available thru distributor on order to manufacturer.

FIXED 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.
C3	3.3 NPO	(,002) †	NPO-DI 3.3	DTZ-3R3	C10V33C	CCTO-3R3	CNO-533	10TCC-V39
C4	.1mfd		TTD-1	CK-104	H6	TA-010	TG-P10	
C5	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C6	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C7	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C8	10 N750		N750-SI 10	TCN-10	C10Q1U	CCTN-100	CN7-410	10TCU-Q10
C9	.002		BPD-002	DD-202	BYA10D1	CCD-202	B-220	5HK-D20
C10	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C11	100 N750		N750-DI 100	DTN-100	C10T1U	CCTN-101	CN7-310	10TCU-T10
C12	100 N750		N750-DI 100	DTN-100	C10T1U	CCTN-101	CN7-310	10TCU-T10
C13	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C14	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C15	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C16	.1 200V		P488N-1	DF-104	PM4P1	4DP-3-104	GEM-401	4TM-P10
C17	.02		BPD-02	DD-202	BYA10S1	CCD-202	B-220	5HK-S10
C18	.001		BPD-001	DD-102	BYA10D1	CCD-102	B-220	5HK-D20
C19	100 N750		N750-DI 100	DTN-100	C10T1U	CCTN-101	CN7-310	10TCU-T10
C20	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C21	.01 200V 10%		BE2S1		PM4S1	4DP-1-103	PVC-211	2TM-S10
C22	.01 200V 10%		BE2S1		PM4S1	4DP-1-103	PVC-211	2TM-S10
C23	.002		BPD-002	DD-202	BYA10D2	CCD-202	B-220	5HK-D20
C24	.002		BPD-002	DD-202	BYA10D2	CCD-202	B-220	5HK-D20
C25	.002		BPD-002	DD-202	BYA10D2	CCD-202	B-220	5HK-D20
C26	10 N750		N750-SI 10	TCN-10	C10Q1U	CCTN-100	CN7-410	10TCU-Q10
C27	4.7 N750		N750-SI 5.0	TCN-5	C10Q5U			
C28	.002		BPD-002	DD-202	BYA10D2	CCD-202	B-220	5HK-D20
C29	.002		BPD-002	DD-202	BYA10D2	CCD-202	B-220	5HK-D20
C30	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C31	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C32	.5 200V		P288N-5		PM2P5	2DP-5-504	GEM-205	2TM-P50
C33	.5 200V		P288N-5		PM2P5	2DP-5-504	GEM-205	2TM-P50
C34	.005 1800V 10%		VBC-8					MB-D5

† Alternate Value.

CONTROLS

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

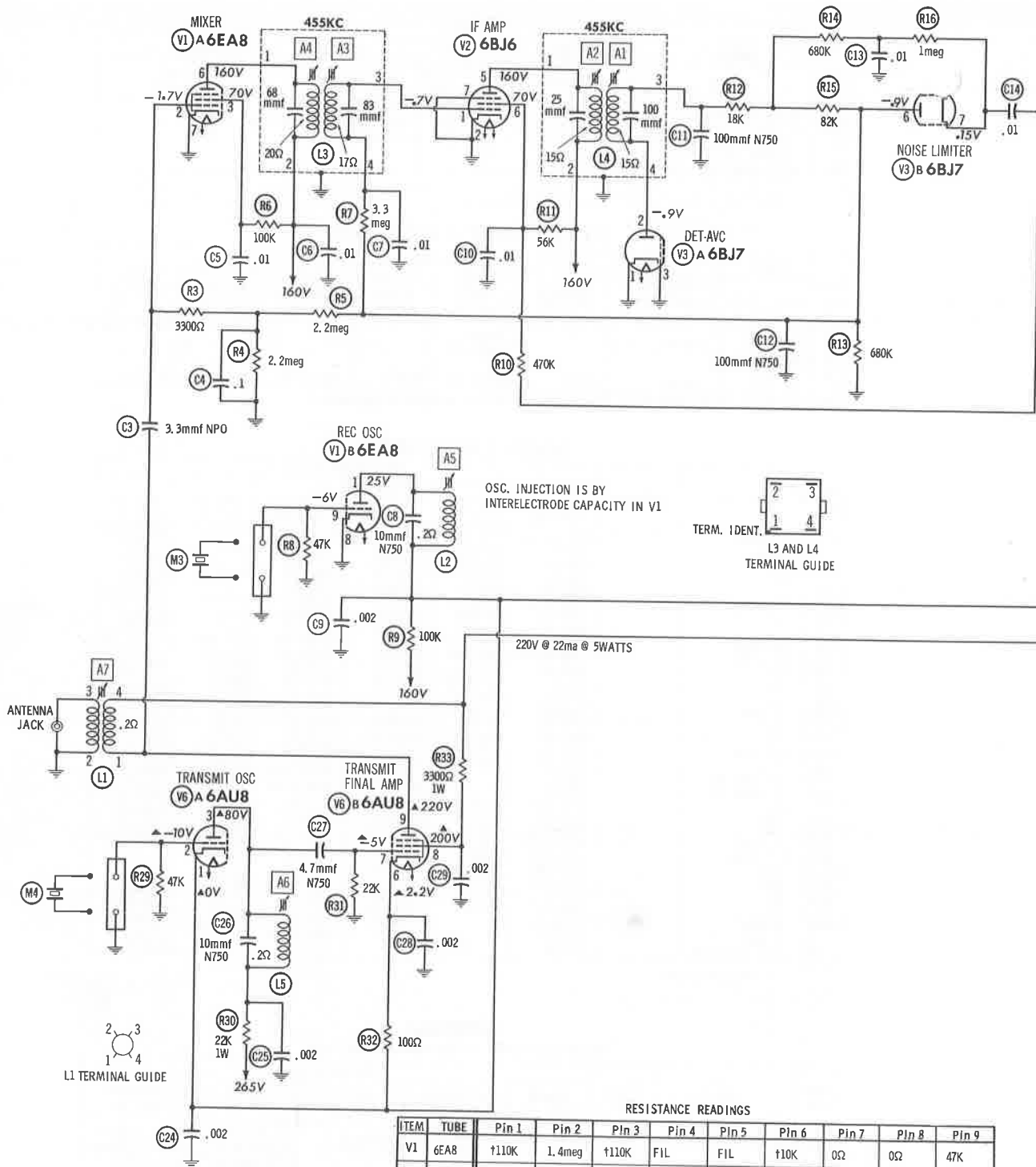
ITEM No.	USE	RESISTANCE	REPLACEMENT DATA				
			HEATH PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
R1	Volume & Switch	1meg	19-26	F2-1meg, SU204, KR-1 or (B-70-S)	A47-1meg-Z RS-2, SWE-12	B13-137, SK3, 76-1 or (BU2, CF25, SS3, GC) *	UA16A, SL2500, US-41 or (RU16A, SL38, SL2500, US-41) or (U53, US-26)
R2	Squelch	100K	10-12	F1-100K, SU204 or (B-40)	A47-100K-S RS-2	B11-128, SK3 or (BU2, CF13, SS3, DC1) *	UA15L, SL2500 or (RU15L, SL38, SL2500) or (U41)

* "SNAPTROL"

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		HEATH PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.	
L1	Antenna Coupling	40-471					
L2	Receive Osc.	40-470					
L3	1st IF	52-38	BC-352	14-C1	RTC-8632	T807	
L4	2nd IF	52-39	BC-353	14-C2	RTC-8633	T808	
L5	Transmit Osc.	40-470					
L6	Hash Choke	45-20					

HEATH MODELS GW-12A/D, GWW-12A/D



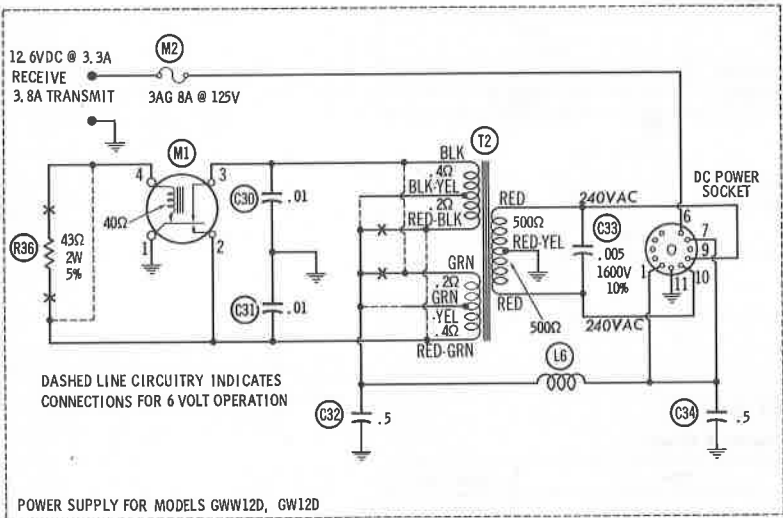
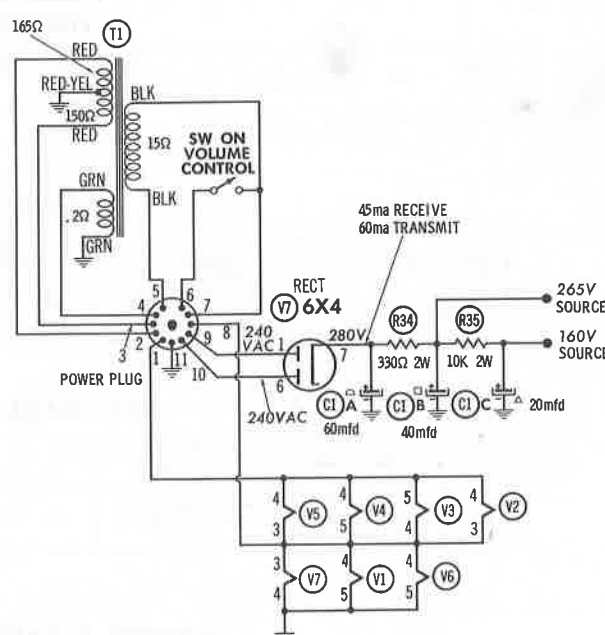
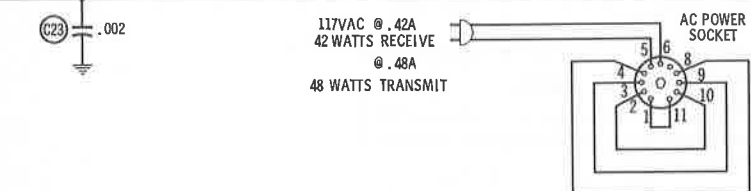
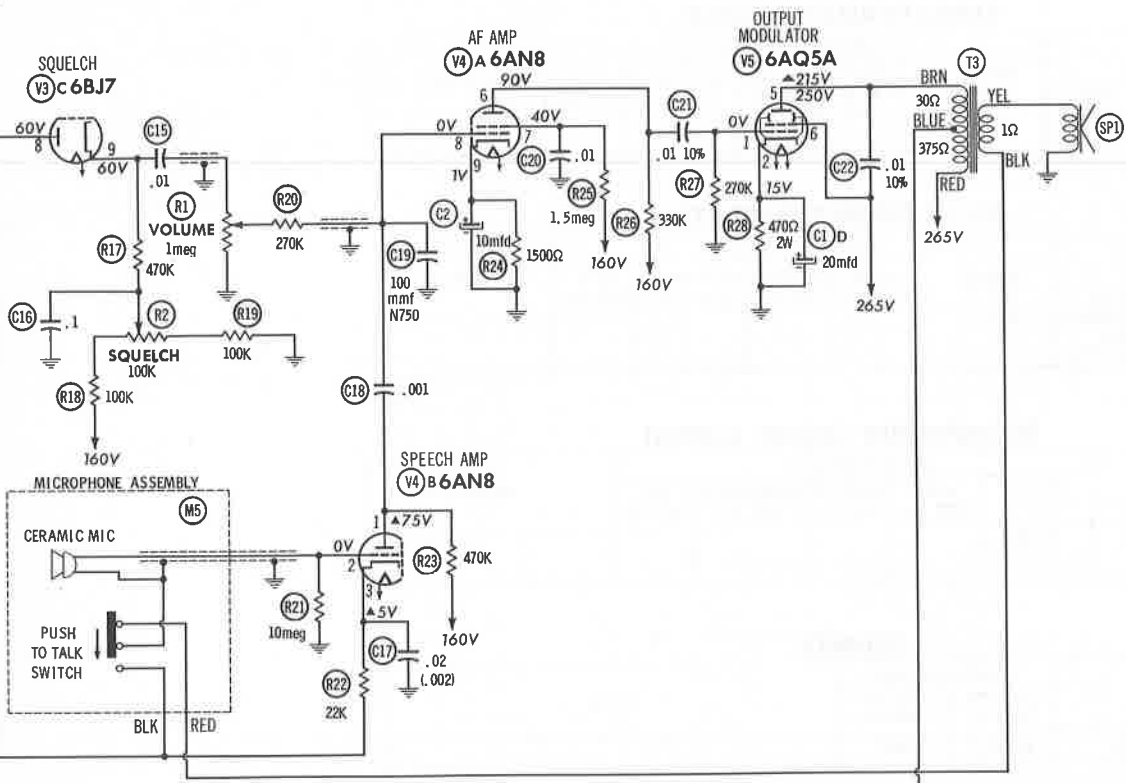
1. Voltage measurements taken with vacuum tube voltmeter.
2. All controls set for normal operation, no signal applied.
3. Measured values are from socket pin or terminal to common ground.
4. All terminals viewed from bottom unless otherwise designated.
5. Numbers assigned to terminals may not be found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

RESISTANCE READINGS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	6EA8	†110K	1.4meg	†110K	FIL	FIL	†10K	0Ω	0Ω	47K
V2	6BJ6	4meg	0Ω	FIL	FIL	†10K	†66K	0Ω		
V3	6BJ7	0Ω	780K	0Ω	FIL	FIL	680K	2.5meg	†535K	610K
V4	6AN8	†480K	10meg	▲22K	FIL	FIL	†340K	†1.5meg	380K	1500Ω
V5	6AQ5A	270K	470Ω	FIL	FIL	†735Ω	†330Ω	NC		
V6	6AU8	▲0Ω	47K	†22K	FIL	FIL	▲100Ω	22K	†4100Ω	†705Ω
V7	6X4	150Ω	NC	FIL	FIL	NC	165Ω	50K		

ALL MEASUREMENTS MADE IN RECEIVE POSITION UNLESS OTHERWISE DESIGNATED.
 ▲ MEASURED IN TRANSMIT POSITION.
 † MEASURED FROM PIN 7 OF V7.
 NC NO CONNECTION.

A PHOTOFAC STANDARD NOTATION SCHEMATIC
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HEATH MODELS GW-12A/D, GWW-12A/D

PARTS LIST AND DESCRIPTION (CONTINUED)

TRANSFORMER (POWER)

ITEM No.	RATING			REPLACEMENT DATA					NOTES
				HEATH PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
	PRI.	SEC. 1	SEC. 2						
T1	117VAC ④ .48A	480VCT ④ .080A	6.3VAC ④ 3.2A	54-34					

TRANSFORMER (VIBRATOR)

ITEM No.	RATING			REPLACEMENT DATA					NOTES
				HEATH PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
	PRI.1	PRI. 2	SEC. 1						
T2	6.3VCT ④ 1A DC	6.3VCT ④ 1A DC	480VCT ④ .080A	55-2					

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
			HEATH PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
	PRI.	SEC.						
T3	5000Ω Tap ④ 300 DC Res.	3-4Ω	51-94					

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		HEATH PART No.	QUAM PART No.	
SP1	3 1/2" PM 3-4Ω	401-72	3A05	

VIBRATOR

ITEM No.	TYPE	INPUT VOLTS	FRE-QUENCY	REPLACEMENT DATA			NOTES
				HEATH PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	
M1	Interrupter	6V	115%	68-5	5372	1810	

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			HEATH PART No.		LITTELFUSE PART No.		BUSS PART No.	
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER
M2	3AG	8A	421-4	423-6	312008	155020	GLH8	HHJ-B

MISCELLANEOUS

ITEM No.	PART NAME	HEATH PART No.	NOTES
M3	Crystal (Rec.)	404-14 thru 404-36	
M4	Crystal (Trans.)	404-44 thru 404-66	
M5	Microphone	480-31	

CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

ITEM	PART No.	ITEM	PART No.
Knob - Volume, Squeech	462-159	Cabinet	90-M229F

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
	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. 8499 Single Conductor Shielded (Neoprene)
	8488 Single Conductor Shielded (Vinyl)
Ignition Noise Suppression	Use BELDEN No. 7300-Series Spark-Plug Sets
Bonding Strap	Use BELDEN No. 8661 (3/8 In.)