

PHOTOFACT® Folder



HEATH MODELS
GW-10A/D, GWW-10A/D



HEATH MODELS
GW-10A/D, GWW-10A/D

TRADE NAME	Heath Models GW-10A, GW-10D, GWW-10A, GWW-10D
MANUFACTURER	Heath Co., A Subsidiary of Daystrom, Inc., Benton Harbor, Michigan
TYPE SET	AC (or) Battery Operated 7 Tube Citizens Band Transmitter-Receiver
POWER SUPPLY	Models GW-10A, GWW-10A: 110-120 Volts AC, 60 Cycles GW-10D, GWW-10D: 6 (or) 12 Volt Storage Battery
RATING	Models GW-10A, GWW-10A: 38 Watts, .39 Amp. @117 Volts AC (Receive); 44 Watts, .44 Amp. @117 Volts AC (Transmit) GW-10D, GWW-10D: 3.2 Amp. @12.6 Volts DC (Receive); 3.8 Amp. @12.6 Volts DC (Transmit) or 6.4Amp. @6.3 Volts DC (Receive); 7.6 Amp. @6.3 Volts DC (Transmit)
TUNING RANGE	TRANSMITTER: Any 3 of Citizens Band Channels 1 thru 23 RECEIVER: Crystal Controlled on any one of Citizens Band Channels 1 thru 23 or Manually Tuneable

NOTICE

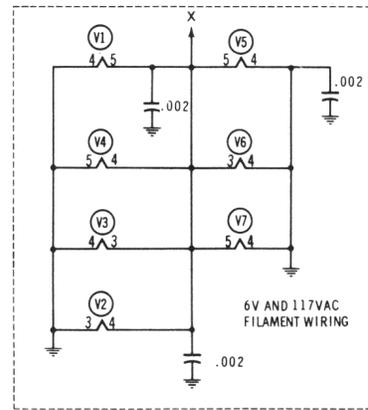
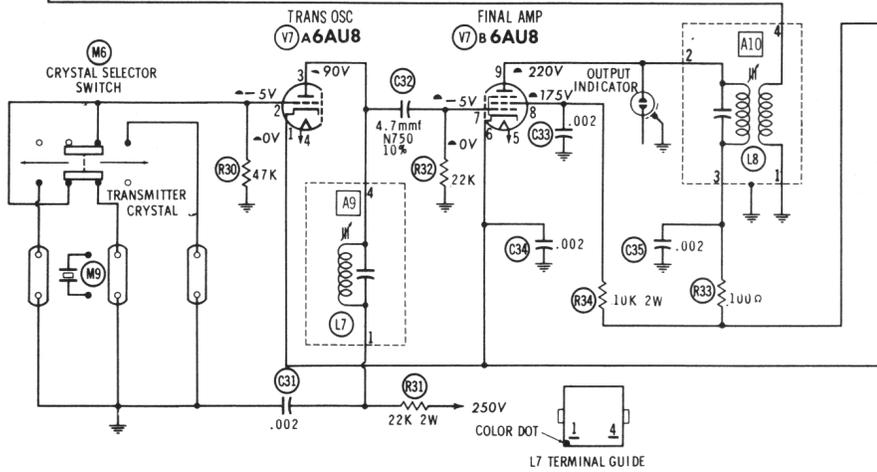
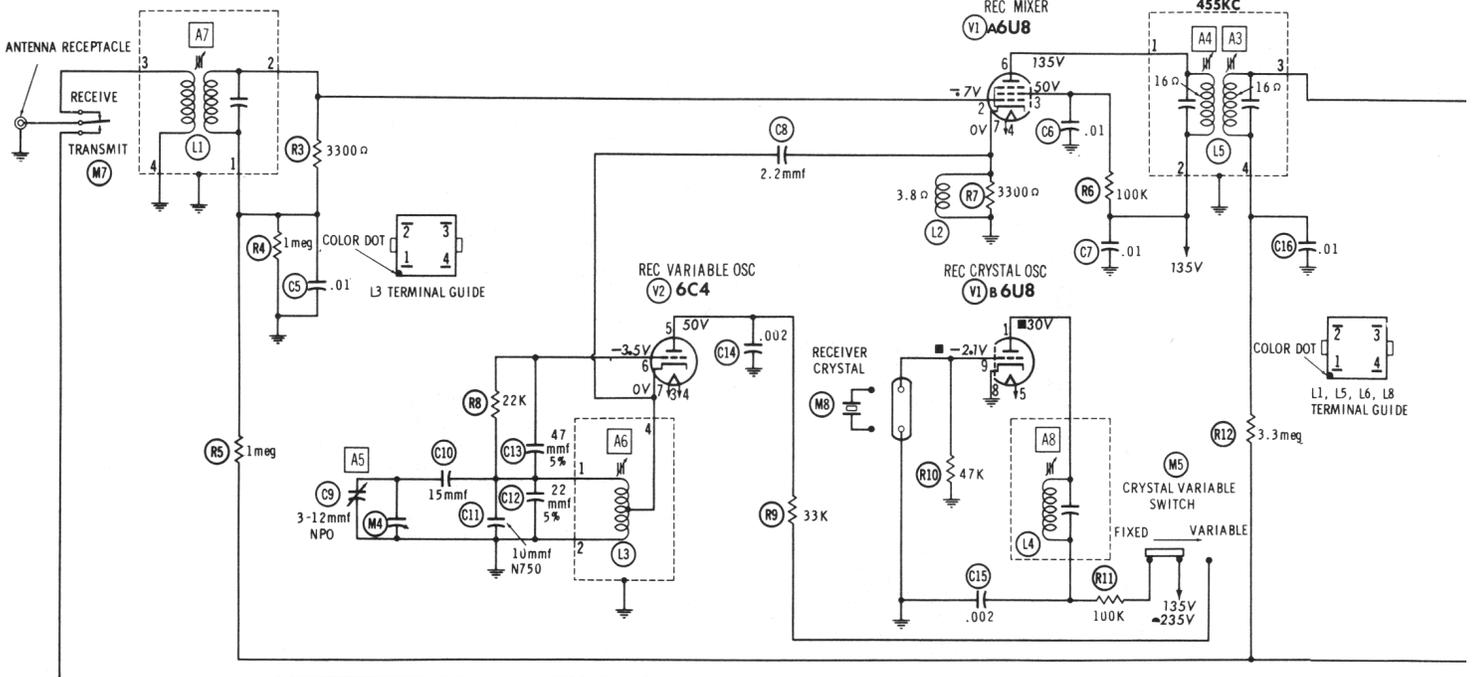
ONLY THOSE PERSONS PROPERLY LICENSED ARE PERMITTED TO MAKE ADJUSTMENTS OR REPAIRS WHICH MAY RESULT IN ILLEGAL OPERATION. (REFER TO FCC RULES & REGULATIONS PART 19, SUBPART D, SECTION 19.71).

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 LZ140

the particular type of replacement part listed. Reproduction or use, without express permission, of editorial or pictorial content, in any manner, is prohibited. No patent liability is assumed with respect to the use of the information contained herein. © 1962 Howard W. Sams & Co., Inc., Indianapolis 6, Indiana. Printed in U.S. of America



RESISTANCE READINGS

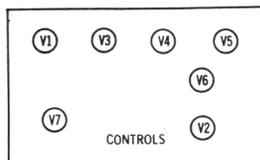
ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	6U8	±110K	700K	±110K	FIL	FIL	±10K	.1Ω	0Ω	47K
V2	6C4	NC	NC	FIL	FIL	±43K	22K	.1Ω		
V3	6BJ6	4meg	0Ω	FIL	FIL	±10K	±66K	0Ω		
V4	6BJ7	0Ω	650K	0Ω	FIL	FIL	630K	2.3meg	±540K	630K
V5	6AN8	±480K	10meg	0Ω	FIL	FIL	±330K	±1.5meg	270K	1500Ω
V6	6AQ5A	270K	470Ω	FIL	FIL	±810Ω	±330Ω	270K		
V7	6AU8	±0Ω	±47K	±22K	FIL	FIL	±0Ω	22K	±10K	±860Ω

ALL MEASUREMENTS MADE IN "RECEIVE", VARIABLE POSITION UNLESS OTHERWISE DESIGNATED.
 ▲ MEASURED IN "TRANSMIT" POSITION. † MEASURED FROM OUTPUT OF X.1.
 ■ MEASURED IN "FIXED" POSITION. NC NO CONNECTION

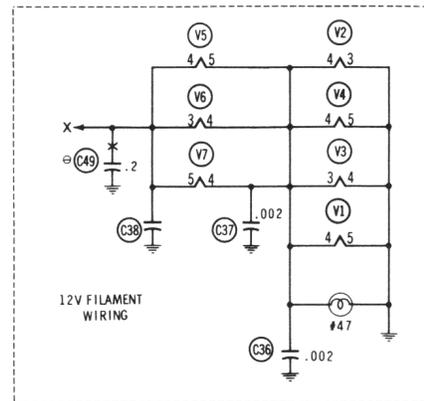
⊙ SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION

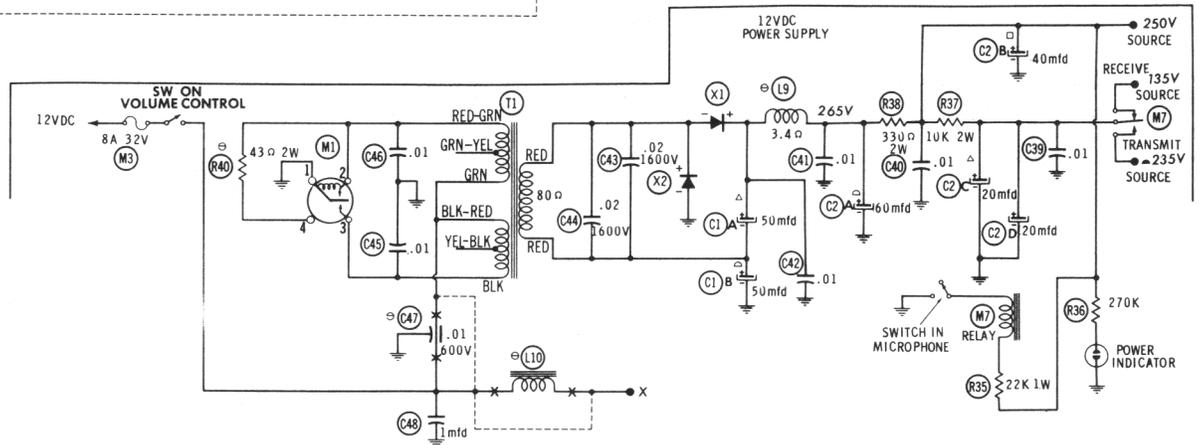
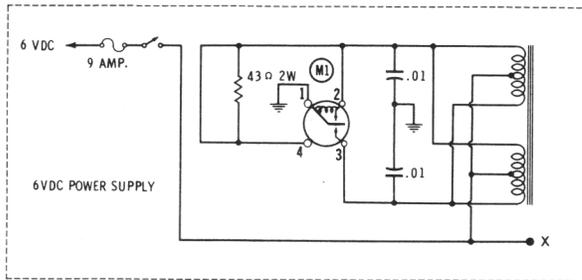
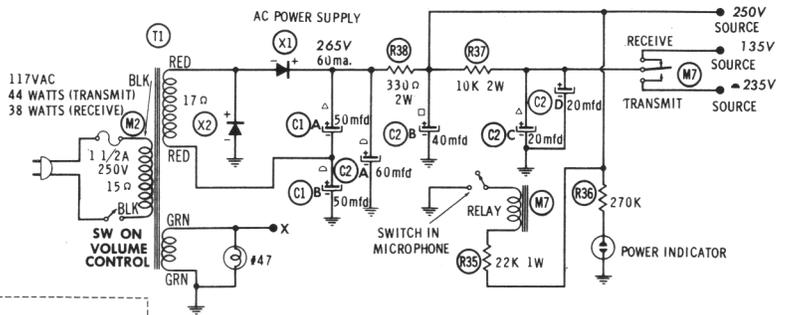
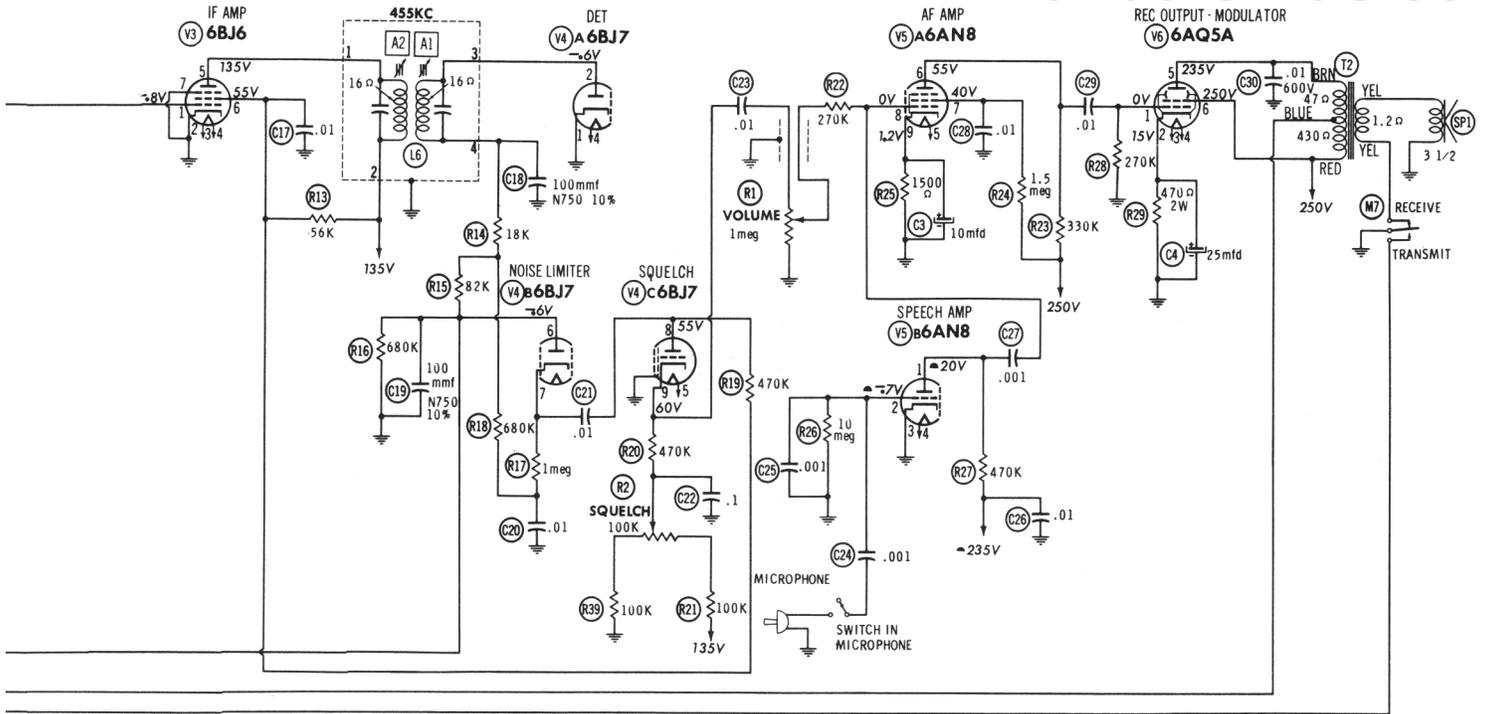
DC COIL RESISTANCE VALUES UNDER ONE OHM NOT SHOWN ON SCHEMATIC DIAGRAM

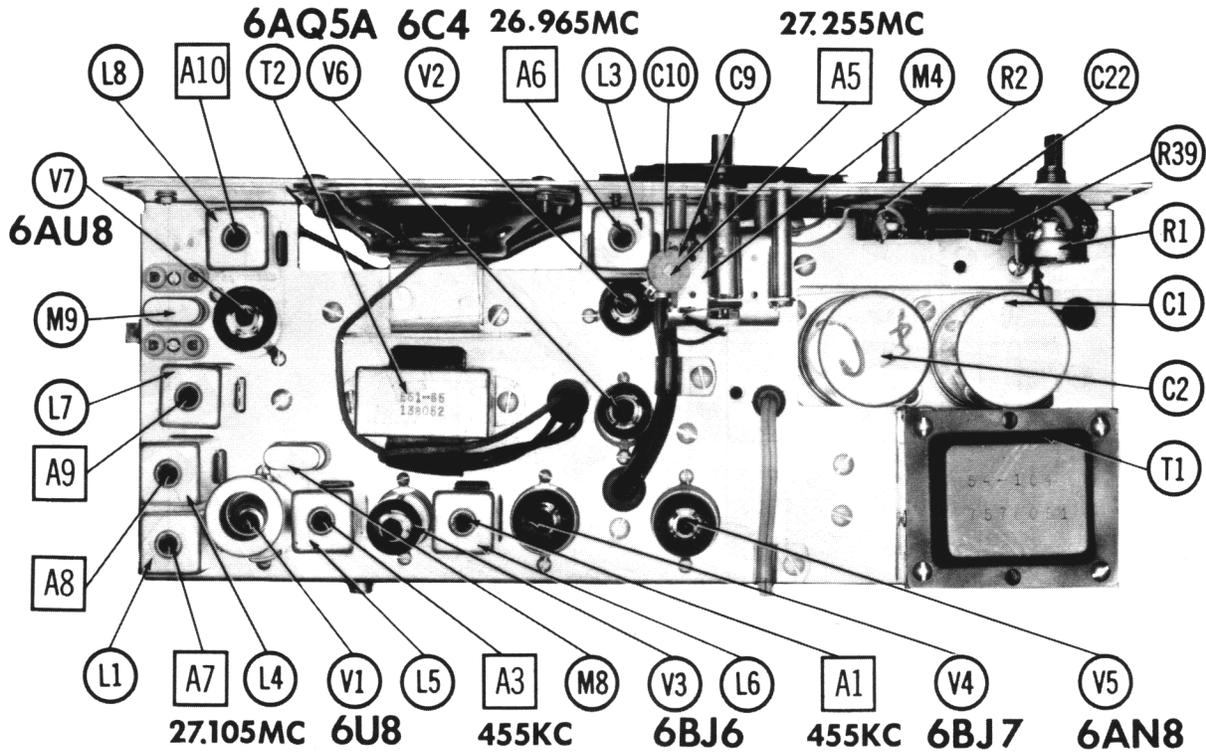
- DC voltage measurements taken with vacuum tube voltmeter; AC voltages measured with 1000 ohm per volt voltmeter.
- Socket connections are shown as bottom views.
- Measured values are from socket pin to common ground.
- Line voltage maintained at 117 volts for voltage readings.
- Nominal tolerance of component values makes possible a variation of ±15% in voltage and resistance readings.
- All controls at minimum, proper output load connected.



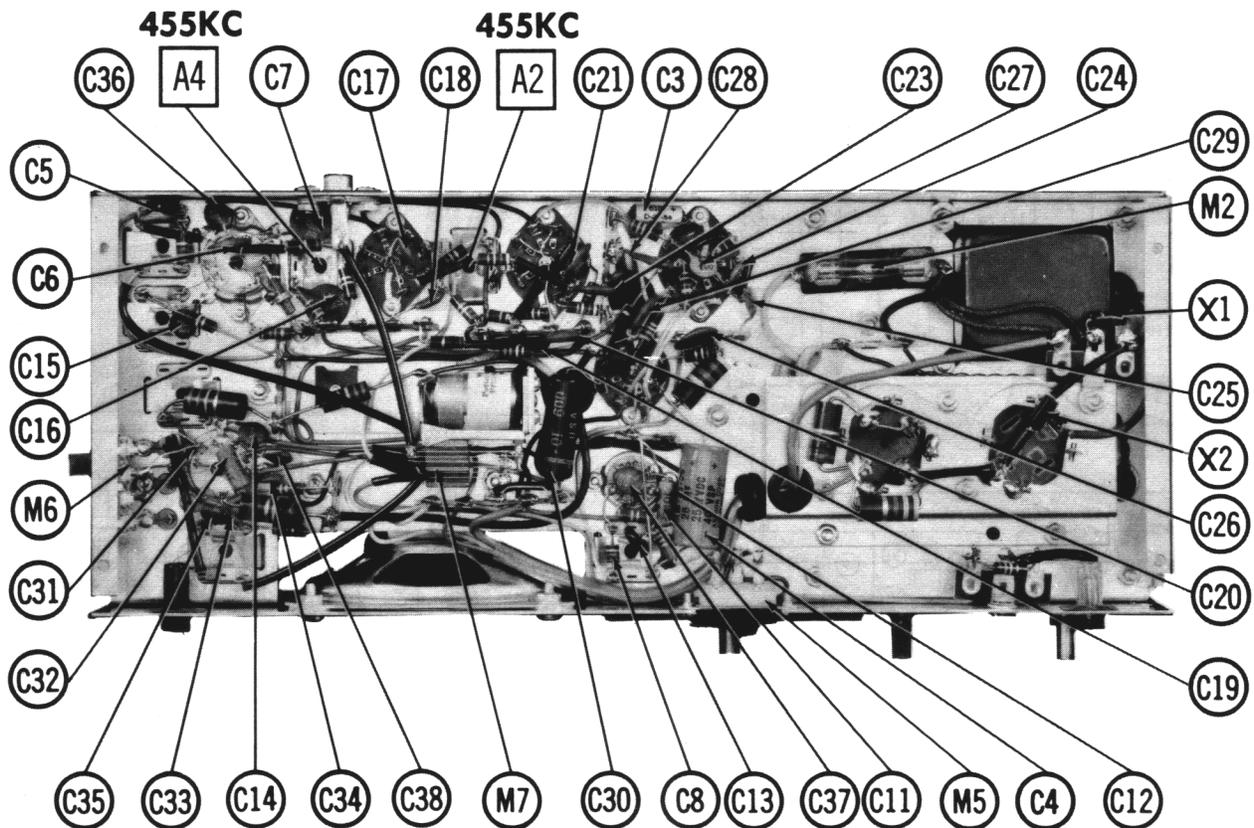
TUBE LAYOUT (BOTTOM VIEW)







CHASSIS - TOP VIEW



CHASSIS BOTTOM VIEW - ALIGNMENT, CAPACITOR & MISC. IDENT.

ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

Use only enough generator output to provide a usable indication.

Suggested Alignment Tools:

A1 thru A4, A6 thru A10. . GENERAL CEMENT #8282, 8606, 8606-L, 9295, 9440
 WALSCO #2526, 2543, 2544, 2545
 A5. GENERAL CEMENT #5004, 5008, 5009
 WALSCO #2520

RECEIVER ALIGNMENT

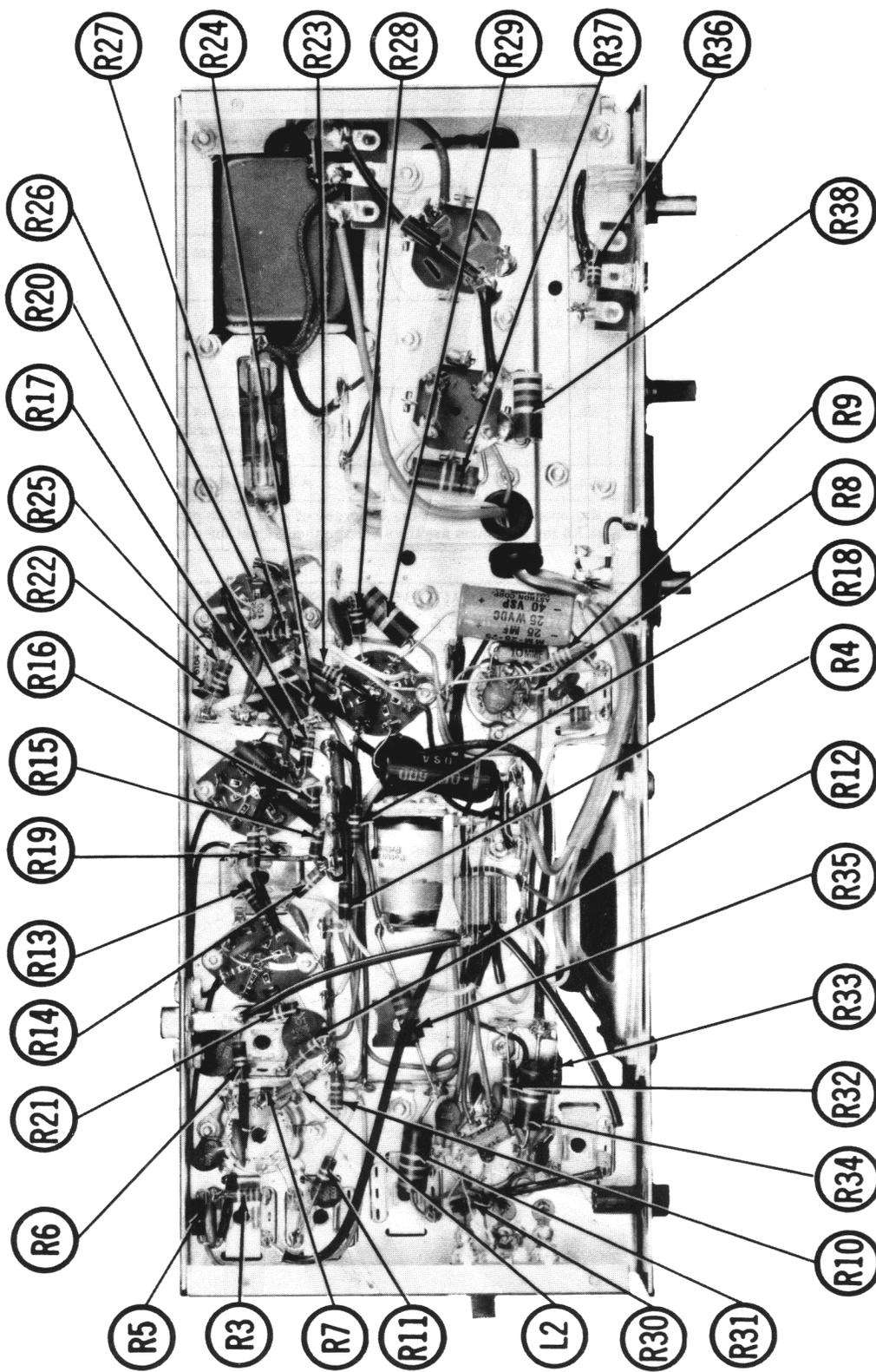
Set Squelch control fully counterclockwise.
 Set switch to Variable.

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1.	High side thru .01mfd to pin 2 (grid) of Mixer, Low side to chassis.	455KC (400% Mod.)		Across voice coll.	A1, A2, A3, A4	Adjust for maximum output.
2.	Fashion loop of several turns of wire and radiate signal into antenna of receiver.	27.255MC	Ch. 23	"	A5	"
3.	"	26.965MC	Ch. 1	"	A6	Adjust for maximum output. Check calibration and if necessary repeat steps 2 and 3.
4.	"	27.105MC	Ch. 12	"	A7	Adjust for maximum output.
5.	Turn signal generator off. Switch to Crystal operation. Connect the DC probe of a VTVM to pin 9 (grid) of Receiver Crystal Oscillator tube, common to chassis. Adjust A8 for maximum negative voltage then adjust for a reduction of 10% on the long slope.					

TRANSMITTER ALIGNMENT

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	INDICATOR	ADJUST	REMARKS
6.	#47 pilot lamp across antenna receptacle.	A9, A10	Depress mike button and adjust A9 until lamp light. Adjust A10 for maximum brilliance of dummy load lamp. Slowly turn A9 clockwise until lamp goes out. Now turn A9 counterclockwise until lamp again is lit. Turn A9 1/4 turn counterclockwise and then check to be sure oscillator starts each time mike button is depressed.
7.	"	A10	Switch to lowest channel and adjust A10 for maximum brilliance. Mark position of slug. Switch to highest channel used and readjust A10 for maximum brilliance. Make compromise adjustment of A10 by setting slug halfway between these two positions.



CHASSIS BOTTOM VIEW - RESISTOR & INDUCTOR IDENT.

PARTS LIST AND DESCRIPTIONS

TUBES

ITEM No.	AMPEREX		GENERAL ELECTRIC		RCA		RAYTHEON		SPRAGUE	
	USE	TYPE	USE	TYPE	USE	TYPE	USE	TYPE	USE	TYPE
V1	Rec. Mixer-Crystal Oscillator	6U8			Det.-Noise Limiter	6BJ7				
V2	Rec. Variable Oscillator	6C4			Squelch					
V3	IF Amplifier	6BJ6			AF Amp. -Speech Amp. Rec. Output-Modulator Trans. Osc. -Final Amp.	6AN8 6AQ5A 6AU8				

POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	CURRENT RATING (Measured)	RECTIFIERS		DIODES		NOTES
		ORIGINAL Part or Type No.	SARKES TARZIAN Part No.	GENERAL ELECTRIC Part No.	RAYTHEON Part No.	
X1	.060A	57-27	IN1763	F6		
X2	.060A	57-27	IN1763	F6		

ELECTROLYTIC CAPACITORS

ITEM No.	RATING CAP.	VOLT.	HEATH Part No.	REPLACEMENT DATA				SPRAGUE Part No.
				AEROVOX Part No.	CORNELL-DUBILIER Part No.	GENERAL ELECTRIC Part No.	MALLORY Part No.	
C1A	.50	200	25-58	PRS1585		XC4-55		
C6	.01	200	25-58	PRS1585				
C7A	.60	450	25-93					
C8	2.2	NPO						
C9	3-12	NPO						
C10	15	750						
C11	10	N750						
C12	22	5%						
C13	47	5%						
C14	.002							
C15	.002							
C16	.01							
C17	.01	N750 10%						
C18	100	N750 10%						
C19	100	N750 10%						
C20	.01							
C21	.01							
C22	.1	200V						
C23	.01							
C24	.001							
C25	.001							
C26	.01							
C27	.001							
C28	.01							

FIXED CAPACITORS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA						
			AEROVOX Part No.	CORNELL-DUBILIER Part No.	EMERSON Part No.	MALLORY Part No.	PYRAMID Part No.	SPRAGUE Part No.	
C5	.01		BPD-01	DD-103	CCD-103	CCD-103	B-110		5HK-S10
C6	.01		BPD-01	DD-103	CCD-103	CCD-103	B-110		5HK-S10
C7	.01		BPD-01	DD-103	CCD-103	CCD-103	B-110		5HK-S10
C8	2.2		NFO-SI 2.2	TCZ-2R2	TCZ-2R2	CNO-2R2	CNO-522		10TCC-V22
C9	3-12	NPO		822-FZ		420			
C10	15	5%	1469-000015	TCZ-15	22R5Q15	CM-19B-150J	CNO-415		MS-415
C11	10	N750		TCN-10	C10QU	CM-19B-220J	CNO-410		10TCU-Q10
C12	22	5%	1469-000022	TCZ-22	22R5Q22	CM-19B-220J	CNO-422		MS-422
C13	47	5%	1469-000047	TCZ-47	22R5Q47	CM-19B-470J	CNO-447		MS-447
C14	.002		BPD-002	DD-202	BYA10D2	CCD-202	B-220		5HK-D20
C15	.002		BPD-01	DD-103	BYA10S1	CCD-103	B-110		5HK-S10
C16	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110		5HK-S10
C17	.01	N750 10%	N750-D1.100	DTN-100	C10TIU	CCTN-100	CNT-310		10TCU-T10
C18	100	N750 10%	N750-D1.100	DTN-100	C10TIU	CCTN-100	CNT-310		10TCU-T10
C19	100	N750 10%	BPD-01	DD-103	BYA10S1	CCD-103	B-110		5HK-S10
C20	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110		5HK-S10
C21	.01		P288N-1	DF-104	CUB6S1	ZDP-3-104	GEM-201		2TM-P10
C22	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110		5HK-S10
C23	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110		5HK-S10
C24	.001		BPD-001	DD-102	BYA10D1	CCD-102	B-210		5HK-D10
C25	.001		BPD-001	DD-102	BYA10D1	CCD-102	B-210		5HK-D10
C26	.01		BPD-001	DD-103	BYA10S1	CCD-103	B-110		5HK-S10
C27	.001		BPD-001	DD-102	BYA10D1	CCD-102	B-210		5HK-D10
C28	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110		5HK-S10

Note 1. DC operated models only.

FIXED CAPACITORS (cont)

ITEM No.	RATING	REMARKS	REPLACEMENT DATA					
			AEROVOX Part No.	CORNELL-DUBILIER Part No.	EMERSON Part No.	MALLORY Part No.	SPRAGUE Part No.	
C29	.01		BPD-01	BYA10S1	CCD-103	B-110		5HK-S10
C30	.01	600V	P688N-01	CUB6S1	6DP-2-103	GEM-811		6TM-S10
C31	.002		BPD-002	BYA10D2	CCD-202	B-220		5HK-D20
C32	4.7	N750 10%	N750-SI 5.0	C10V5U	CCTN-050	CNT-547		10TCU-V50
C33	.002		BPD-002	BYA10D2	CCD-202	B-220		5HK-D20
C34	.002		BPD-002	BYA10D2	CCD-202	B-220		5HK-D20
C35	.002		BPD-002	BYA10D2	CCD-202	B-220		5HK-D20
C36	.002		BPD-002	BYA10D2	CCD-202	B-220		5HK-D20
C37	.002		BPD-002	BYA10D2	CCD-202	B-220		5HK-D20
C38	.002		BPD-002	BYA10D2	CCD-202	B-220		5HK-D20
C39	.01		BPD-01	BYA10S1	CCD-103	B-110		5HK-S10
C40	.01		BPD-01	BYA10S1	CCD-103	B-110		5HK-S10
C41	.01		BPD-01	BYA10S1	CCD-103	B-110		5HK-S10
C42	.01	1600V	BPD-01	BYA10S1	CCD-103	B-110		5HK-S10
C43	.02	1600V	BPD-01	CUB6S2	16DP-4-203	GEM-1612		MB-52
C44	.02	1600V	BPD-01	CUB6S2	16DP-4-203	GEM-1612		MB-52
C45	.01		BPD-01	BYA10S1	CCD-103	B-110		5HK-S10
C46	.01	600V	BPD-01	BYA10S1	CCD-103	B-110		5HK-S10
C47	.01	600V	BPD-01	BYA10S1	CCD-103	B-110		5HK-S10
C48	1mf	200V	P288N-1.0	CUB2W1		GEM-21		2TM-M1
C49	.2	50V	P288N-2	CUB2P22	IDP-3-204	GEM-402		4TM-P20

Heath Part Number.

Note 1. Not used in some DC operated versions.

CONTROLS

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

ITEM No.	USE	RESISTANCE	HEATH Part No.	REPLACEMENT DATA		
				CENTRALAB Part No.	CLAROSTAT Part No.	CTS-IRC Part No.
R1	Volume	1meg	19-53	B-70-S, or (AB-70, AK-11, KR-1)	A47-1meg-Z/ FS-3	Q13-137, 76-1, or (BU2, CF26, SSI, GC)*
R2	Power Off-On Squelch	100K	10-108	B-40, or (AB-40, AK-11)	A47-100K-Z/ FS-3	Q11-128, or (BU2, CF13, SSI, DC)*

* "SNAPTROL"

RESISTORS

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

ITEM No.	RATING	REMARKS	REPLACEMENT DATA		
			ITEM No.	RATING	REMARKS
R3	3300Ω		R22	270K	
R4	1meg		R23	330K	
R5	1meg		R24	1.5meg	
R6	100K		R25	1500Ω	
R7	3300Ω		R26	10meg	
R8	22K		R27	470K	
R9	33K		R28	270K	
R10	47K		R29	470Ω 2W	
R11	100K		R30	47K	
R12	3.3meg		R31	22K 2W	
R13	50K		R32	22K	
R14	18K		R33	100Ω	
R15	82K		R34	10K 2W	
R16	680K		R35	22K 1W	
R17	1meg		R36	270K	
R18	680K		R37	10K 2W	
R19	470K		R38	330Ω 2W	
R20	470K		R39	100K	
R21	100K		R40	43Ω 2W	

Note 1. DC operated models only.

PARTS LIST AND DESCRIPTIONS (Continued)

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA				NOTES
		HEATH PART No.	Miller PART No.	Stancor PART No.	Workman PART No.	
L1	Ant. RF Choke (30uh)	40-310				① Not used in some versions,
L2	RF Choke (30uh)	45-277				
L3	OSC. Plate	40-313				
L4	OSC. Plate	40-312				
L5	1st IF	52-38	12-C1	RTC-8632	T807	
L6	2nd IF	52-39	12-C2	RTC-8633	T808	
L7	OSC. Plate	40-312				
L8	Final RF Choke (90uh)	40-311				
L9	RF Choke (90uh)	45-7				
L10	Hash Choke					

TRANSFORMER (POWER)

ITEM No.	RATING	REPLACEMENT DATA				NOTES
		HEATH PART No.	Meritt PART No.	Stancor PART No.	Thorndson PART No.	
T1	PRI. SEC. 1 117V @ .44A SEC. 2 6.3V @ 3A PRI. SEC. 1 12.8VCT @ 2.3A (or) 6.3VCT @ 4.6A SEC. 1 100V @ .250A SEC. 2 2.3A @ .250A	54-104				AC Operation
		55-5				DC Operation

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE	REPLACEMENT DATA				NOTES
		HEATH PART No.	Meritt PART No.	Stancor PART No.	Thorndson PART No.	
T2	5000Ω T800 @ 4800Ω	51-65				

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		HEATH PART No.	QUAM PART No.	
SP1	3 $\frac{1}{2}$ " PM 3-4Ω	401-21	3A07	

VIBRATOR

ITEM No.	TYPE	INPUT VOLTS	FREQUENCY	REPLACEMENT DATA			NOTES
				HEATH PART No.	CORNELL-DUBIER PART No.	MALLOY PART No.	
M1	Interrupter	6-12	115%	68-5	6301	61601	6301

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			HEATH PART No.	HEATH PART No.	LITTELFUSE PART No.	BUSS PART No.		
M2	3AG	1 $\frac{1}{2}$ A 250V	421-1 ①	422-1	31201.5 (3AG 1 $\frac{1}{2}$ A 250V)	357001	AGC 1 $\frac{1}{2}$	4405
M3	SFE	8A 32V	421-4 ②	423-6	307008 (SFE 8A 32V)	156008	SFE 8	HDX

① AC Operation. ② DC Operation.

MISCELLANEOUS

ITEM No.	PART NAME	HEATH PART No.	NOTES
M4	Tuning Cap	26-66	1 Gang Crystal-Variable (DDPT Slide Type) Crystal Selector (8-Position Slide Type) Receive Transmit
M5	Switch	60-4	
M6	Switch	60-10	
M7	Relay	69-14	
M8	Crystal		
M9	Crystal		
	Microphone	480-14	

CABINETS & CABINET PARTS

(When Ordering Cabinets & Cabinet Parts, Specify Model, Chassis & Color)

NAME	PART NO.	DESCRIPTION
Dial Scale	205-M221F362	
Dial Pointer	100-M270	
Knob	462-78	
Front Panel	100-M271	
Cabinet	90-M131F	

WIRING DATA

General-use Unshielded Hook-up Wire Use BELDEN No. 8530 (Solid) Available in 12 Colors
 8524 (Stranded) Available in 12 Colors
 Power Cord Use BELDEN No. 1706 (Plastic) or 17128 (Rubber) - 6 Ft.
 1709 (Plastic) or 17128 (Rubber) - 9 Ft.
 Power Cord (Interlock Type) Use BELDEN No. 8874 (Rubber) or 8895 (Plastic)