



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 6.4 Amp. @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

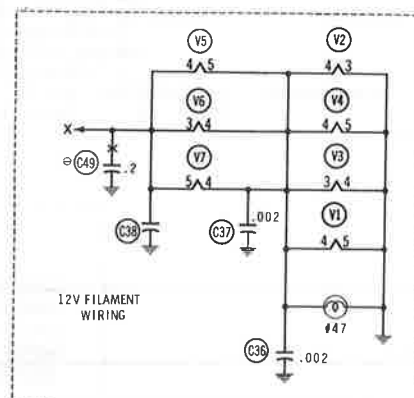
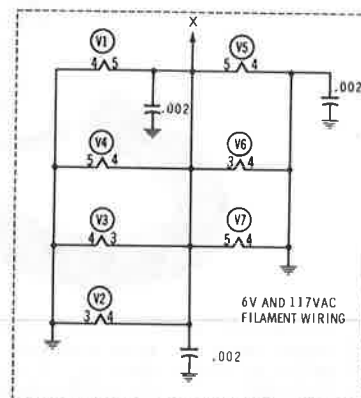
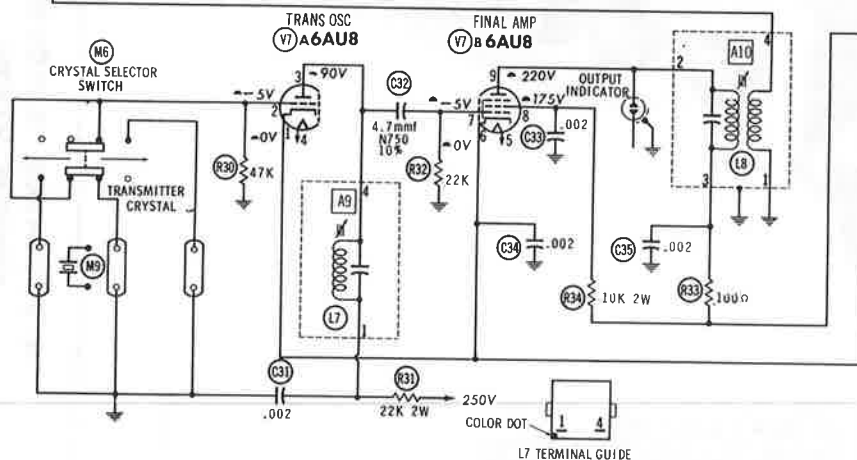
ONLY THOSE PERSONS PROPERLY LICENSED ARE PERMITTED TO MAKE ADJUSTMENTS OR REPAIRS WHICH MAY RESULT IN ILLEGAL OPERATION. (REFER TO FCC RULES & REGULATIONS PART 19, SUBPART D, SECTION 19.71).

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	1.0	0.0	47K
V2	6C4	NC	NC	FIL	FIL	†43K	22K	1.0		
V3	6BJ6	4meg	0.0	FIL	FIL	†10K	†66K	0.0		
V4	6BJ7	0.0	650K	0.0	FIL	FIL	630K	2.3meg	†540K	630K
V5	6AN8	~†480K	10meg	0.0	FIL	FIL	†330K	†1.5meg	270K	1500.0
V6	6AQ5A	270K	470.0	FIL	FIL	†810.0	†330.0	270K		
V7	6AU6	~0.0	~47K	†22K	FIL	FIL	~0.0	22K	†10K	†860.0

ALL MEASUREMENTS MADE IN "RECEIVE", VARIABLE POSITION UNLESS OTHERWISE DESIGNATED

MEASURED IN "TRANSMIT" POSITION.

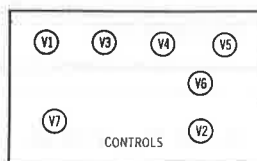
■ MEASURED IN "FIXED" POSITION.

† MEASURED FROM OUTPUT OF X1.
NC NO CONNECTION

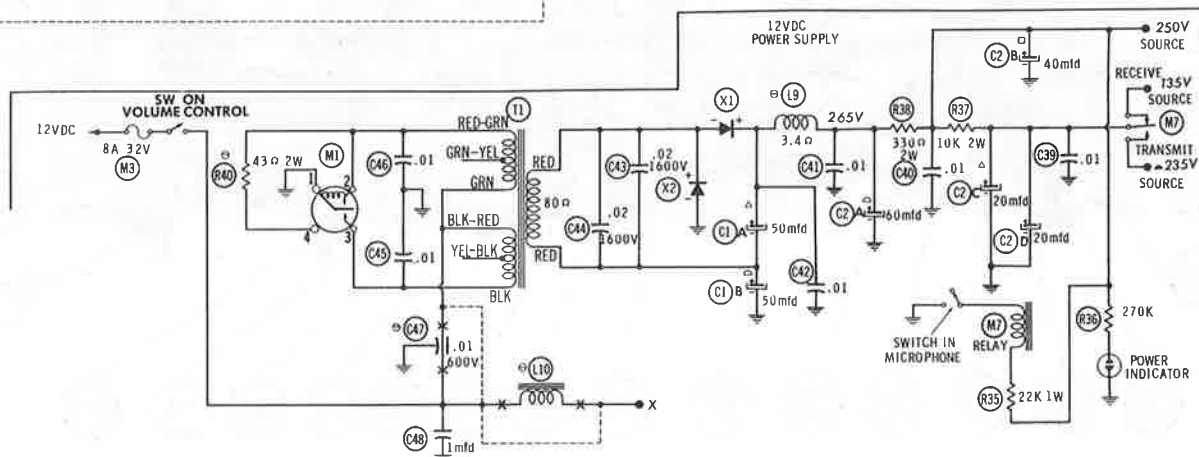
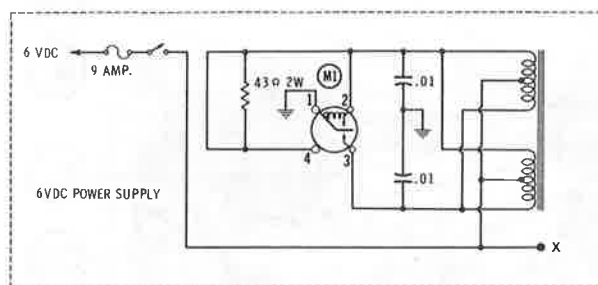
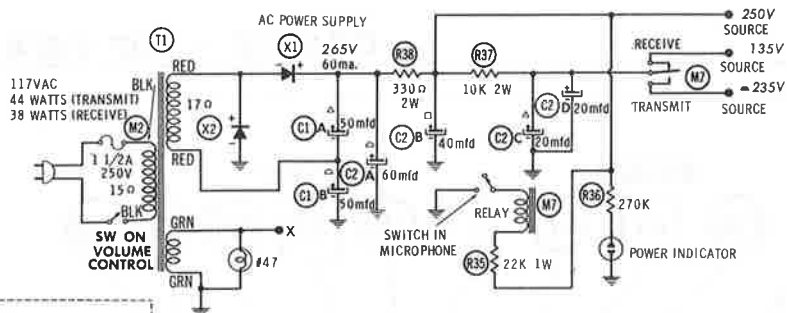
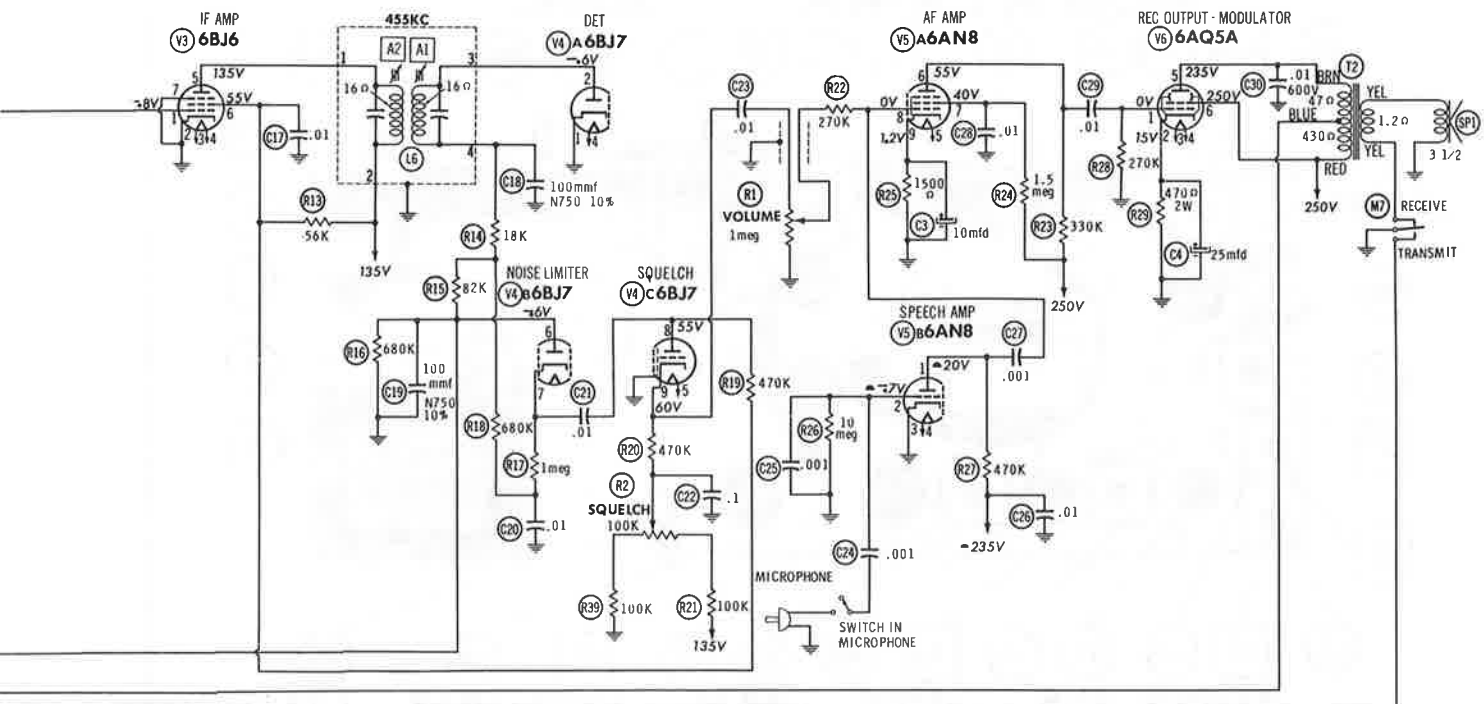
⑥ SEE PARTS LIST FOR ALTERNATE
VALUE OR APPLICATION

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

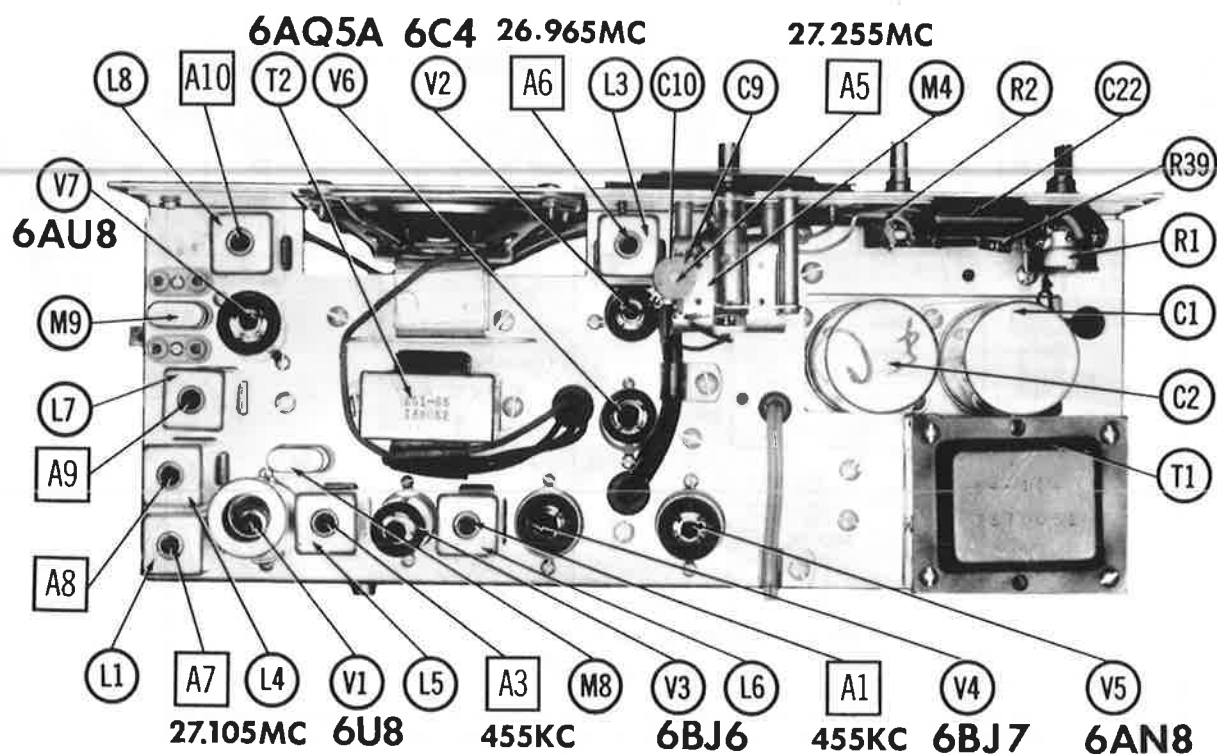
1. DC voltage measurements taken with vacuum tube voltmeter; AC voltage measured with 1000 ohm per volt voltmeter.
2. Socket connections are shown as bottom views.
3. Measured values are from socket pin to common ground.
4. Line voltage maintained at 117 volts for voltage readings.
5. Nominal tolerance of component values makes possible a variation of $\pm 1\%$ in voltage and resistance readings.
6. All controls at minimum, proper output load connected.



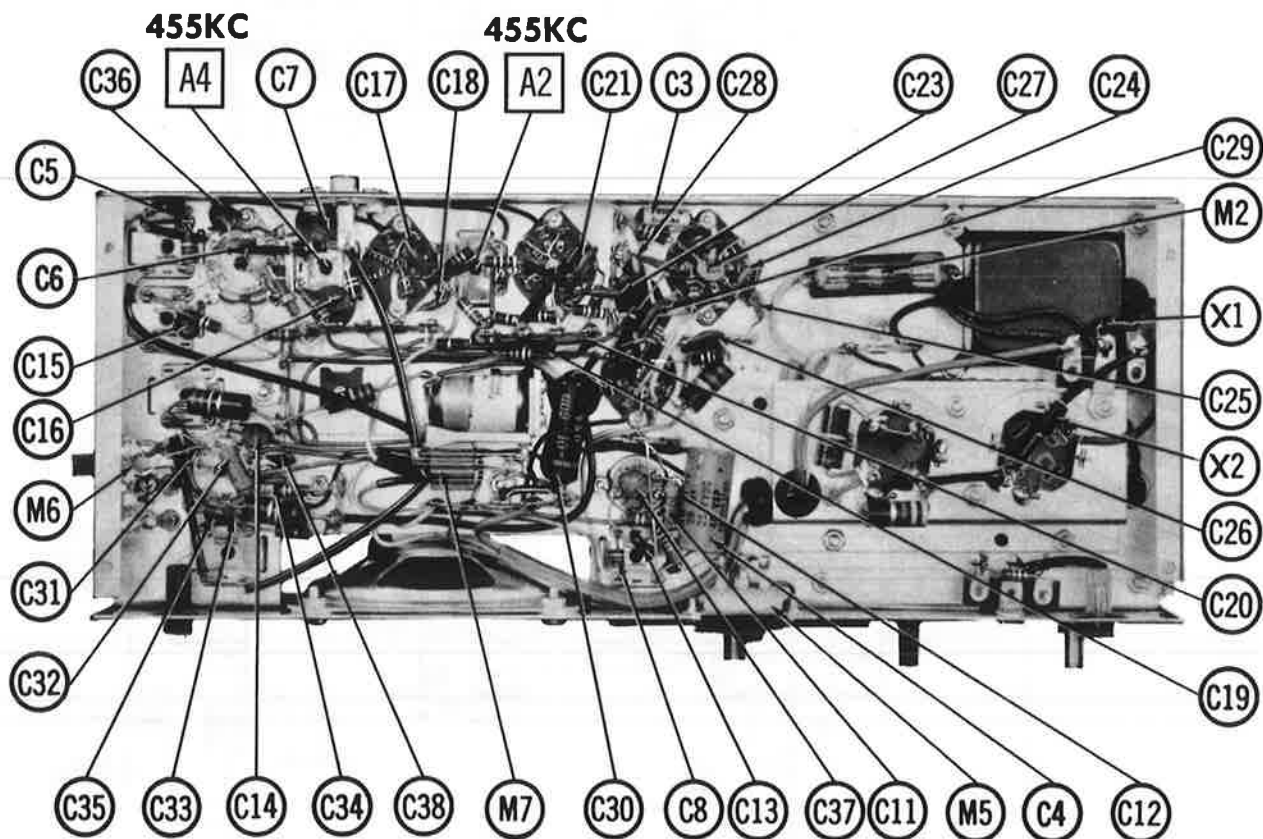
TUBE LAYOUT
(BOTTOM VIEW)



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



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.

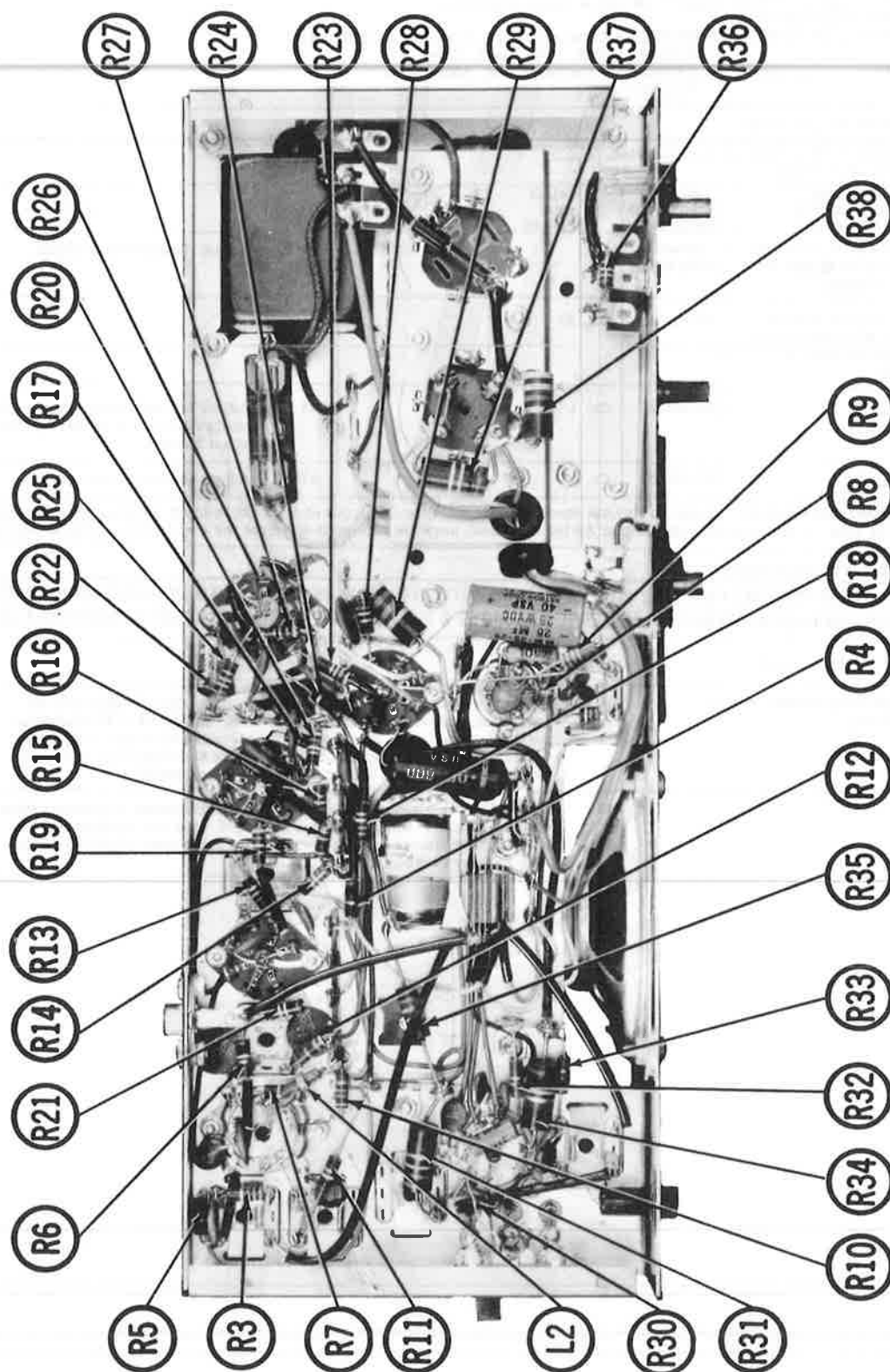
Set switch to Variable.

	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 coil.	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

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)

	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.



PARTS LIST AND DESCRIPTIONS

TUBES

ITEM No.	AMPEREX		GENERAL ELECTRIC		RCA		RAYTHEON		SYLVANIA	
	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	6BQ6			Rec. Output-Modulator	6AN8				
					Trans. Osc. -Final Amp.	6AU6				

POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	CURRENT RATING (Measured)	RECTIFIERS		DIODES		NOTES
		ORIGINAL Part or Type No.	SARKES PART No.	GENERAL ELECTRIC PART No.	RAYTHEON PART No.	
X1	.080A	57-27	LN763	F6		
X2	.080A	57-27	LN763	F6		

ELECTROLYTIC CAPACITORS

ITEM No.	RATING CAP.	VOLT.	HEATH PART No.	REPLACEMENT DATA		SPRAGUE PART No.
				AEROVOX PART No.	CORNELL-DUBILIER PART No.	
C1A	.50	200	25-58	PRS1585	XC4-55	
C2A	.50	200	25-83	PRS1585		
C3A	.40	450				
C4	.20	350				
C5	.20	250	25-54	PTT39	MLV10-15	TR-114
C6	.10	10	25-44	PRS1260	BER25-25	TYA-1205

FIXED CAPACITORS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA		SPRAGUE PART No.
			AEROVOX PART No.	CORNELL-DUBILIER PART No.	
C5	.01	#31-13	BPD-01	DD-103	5HK-S10
C6	.01		BPD-01	DD-103	5HK-S10
C7	.01		BPD-01	DD-103	5HK-S10
C8	2.2		NFO-SI 2.2	TCZ-2R2	10TCC-V22
C9	3-12 NPO		1469-000015	622-FZ	MS-415
C10	15 5%		N750-SI 10	TCN-15	MS-422
C11	10 N750		1469-000027	TCZ-22	MS-447
C12	22 5%		1469-000047	TCZ-47	5HK-D20
C13	47 5%		BPD-002	DD-202	5HK-S10
C14	.002		BPD-002	DD-202	5HK-S10
C15	.002		BPD-01	DD-103	5HK-S10
C16	.01		BPD-01	DD-103	5HK-S10
C17	.01		N750-DI 100	DTN-100	10TCC-V10
C18	100 N750 10%		N750-DI 100	DTN-100	5HK-S10
C19	100 N750 10%		BPD-01	DD-103	5HK-S10
C20	.01		BPD-01	DD-103	5HK-S10
C21	.01		BPD-01	DD-103	5HK-S10
C22	.1 200V		PR88N-1	DF-104	2TM-P10
C23	.01		BPD-01	DD-103	5HK-S10
C24	.001		BPD-001	DD-102	5HK-D10
C25	.001		BPD-001	DD-102	5HK-D10
C26	.01		BPD-001	DD-102	5HK-S10
C27	.001		BPD-001	DD-102	5HK-S10
C28	.01		BPD-01	DD-103	5HK-S10

FIXED CAPACITORS (cont)

ITEM No.	RATING	REMARKS	REPLACEMENT DATA		SPRAGUE PART No.
			AEROVOX PART No.	CORNELL-DUBILIER PART No.	
C29	.01	10%	BPD-01	DD-103	5HK-S10
C30	.01		PR88N-01	DD-103	5HK-S10
C31	.002		BPD-002	DD-202	5HK-S10
C32	4.7 N750 10%		N750-SI 5.0	TCN-5	10TCC-V50
C33	.002		BPD-002	DD-202	5HK-D20
C34	.002		BPD-002	DD-202	5HK-D20
C35	.002		BPD-002	DD-202	5HK-D20
C36	.002		BPD-002	DD-202	5HK-D20
C37	.002		BPD-002	DD-202	5HK-D20
C38	.002		BPD-002	DD-202	5HK-D20
C39	.01		BPD-01	DD-103	5HK-S10
C40	.01	1600V	BPD-01	DD-103	5HK-S10
C41	.01		BPD-01	DD-103	5HK-S10
C42	.01		BPD-01	DD-103	5HK-S10
C43	.02		BPD-01	DD-103	5HK-S10
C44	.02		BPD-01	DD-103	5HK-S10
C45	.01		BPD-01	DD-103	5HK-S10
C46	.01		BPD-01	DD-103	5HK-S10
C47	.01		BPD-01	DD-103	5HK-S10
C48	1mfd 200V		P288N-1.0	DD-103	5HK-S10
C49	.2 50V		P288N-2	DD-103	5HK-S10

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	REPLACEMENT DATA		MALLORY PART No.
			HEATH PART No.	CORNELL-DUBILIER PART No.	
R1	Volume	1meg	19-53	DD-103	U53
R2	Power Off-On Squelch	100K	10-108	DD-103	US-26

* "SNAPTROL"

RESISTORS

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

ITEM No.	RATING	REMARKS	REPLACEMENT DATA		REMARKS
			ITEM No.	RATING	
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	56K		R32	22K	
R14	18K		R33	10K 2W	
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

Note 1. DC operated models only.

PARTS LIST AND DESCRIPTIONS (Continued)

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	Att.	40-310					① Not used in some versions.
L2	RF Choke (30uh)	45-27					
L3	Osc. Plate	40-313					
L4	Osc. Plate	40-312					
L5	1st IF	52-38					
L6	2nd IF	52-39					
L7	Osc. Plate	40-312					
L8	Final	40-311					
L9	RF Choke (90uh)	45-7					
L10	Radio Choke						

TRANSFORMER (POWER)

ITEM No.	RATING	REPLACEMENT DATA					NOTES
		HEATH PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
T1	PRI 117V @ 100V @ 8.3V @ .44A .250A 3A SEC 1 12.6VCT 100V @ @ 2.3A .250A (or) 8.3VCT @ 4.6A	54-104					AC Operation
	PRI 12.6VCT 100V @ @ 2.3A .250A (or) 8.3VCT @ 4.6A	55-5					DC Operation

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE	REPLACEMENT DATA					NOTES
		HEATH PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
T2	PRI 5800Ω Tap @ 4800Ω SEC 3-4Ω	51-45					

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA			NOTES
		HEATH PART No.	QUAM PART No.		
SP1	SIZE 3 1/2" PM FIELD 3-4Ω V. C. IMP. 3A07	401-21			

VIBRATOR

ITEM No.	TYPE	INPUT VOLTS	FREQUENCY	REPLACEMENT DATA			NOTES
				HEATH PART No.	CORNELL DUBIER PART No.	MALLORY PART No.	
M1	Interrupter	6-12	115%	68-5	6301	GI601	6301

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA			BUSS PART No.
			FUSE	HEATH PART No.	LITTELFUSE PART No.	
M2	3AG	1 1/4A 250V 8A 32V	421-1 ①	422-1	31201.5 (3AG 1 1/4A 250V)	AGC 1 1/4
M3	SFE	32V	421-4 ②	423-6	307008 (SFE 6A 32V)	SFE 8 HDH

① AC Operation. ② DC Operation.

MISCELLANEOUS

ITEM No.	PART NAME	HEATH PART No.	NOTES
M4	Tuning Cap	28-66	1 Gang Crystal-Variable (DPDT Slide Type) Crystal Selector (3-Position Slide Type)
M5	Switch	80-4	
M6	Relay	60-10	
M7	Crystal	69-14	
M8	Crystal		Receive
M9	Microphone	480-14	Transmit

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 1726 (Rubber) - 6 Ft. 1709 (Plastic) or 1729 (Rubber) - 9 Ft.
Power Cord (Interlock Type)	Use BELDEN No. 8874 (Rubber) or 8895 (Plastic)