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PHOTOFACT® Folder



GLOBE MODELS
CB-100, A



GLOBE MODELS
CB-100, A

TRADE NAME	Globe Models CB-100, CB-100A
MANUFACTURER	Globe Electronics, A Div. of Textron Electronics, Inc., 22-30S. 34th St., Council Bluffs, Iowa
TYPE SET	AC (or) Battery Operated 10 Tube Crystal Controlled Citizens Band Transmitter-Receiver
POWER SUPPLY	110 - 120 Volts AC, 60 Cycles (or) 12 Volt Storage Battery 110 - 120 Volts AC, 60 Cycles (or) 6 Volt Storage Battery
RATING	56 Watts, .5 Amp. @117 Volts AC (or) 5 Amp. @12.6 Volts DC (or) 10 Amp. @6.3 Volts DC
TUNING RANGE	Any 3 of Citizens Band Channels 1 thru 23

NOTICE

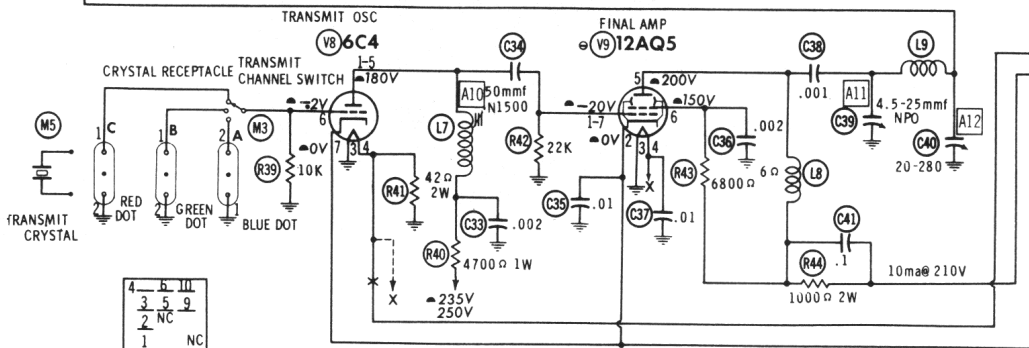
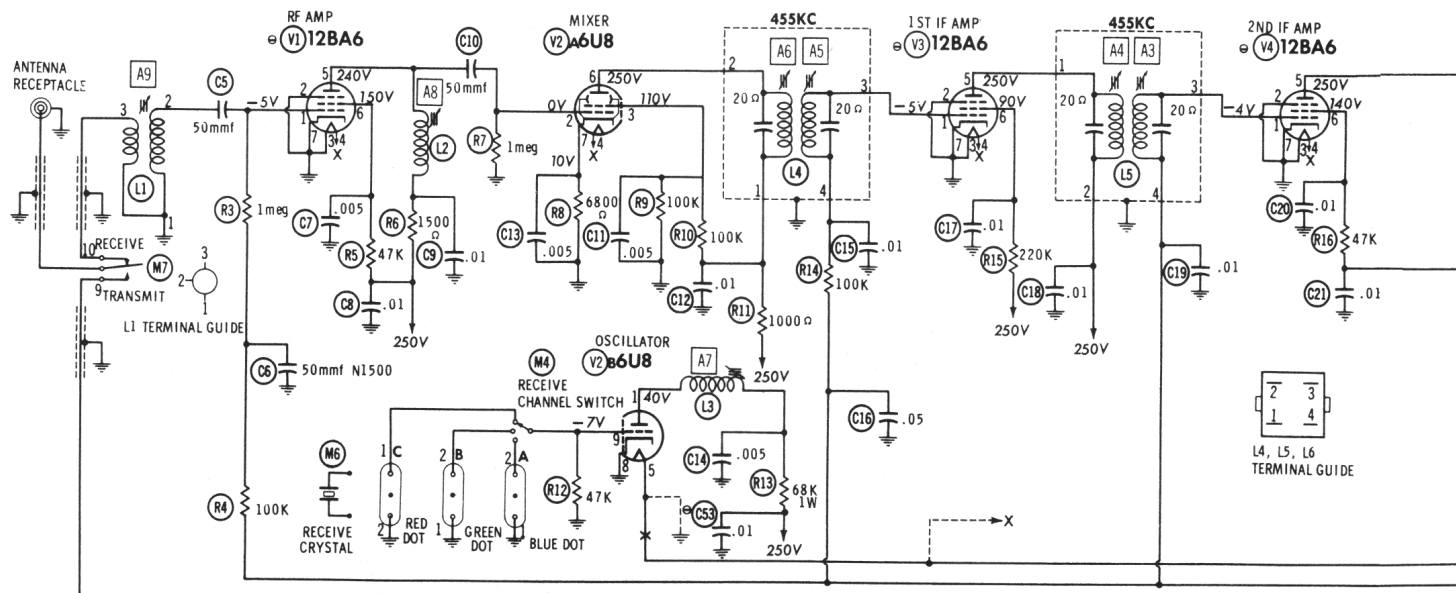
ONLY THOSE PERSONS PROPERLY LICENSED ARE PERMITTED TO MAKE ADJUSTMENTS OR REPAIRS WHICH MAY RESULT IN ILLEGAL OPERATION. (REFER TO FCC RULES & REGULATIONS PART 19, SUBPART D, SECTION 19.71).

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



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RECEIVE-TRANSMIT
RELAY TERMINAL
GUIDE (SHOWN IN
RECEIVE POSITION)

NUMBERS ASSIGNED TO COILS, SWITCHES, PLUGS, SOCKETS, AND TRANSFORMERS ARE TO FACILITATE CIRCUIT TRACING OR COMPONENT REPLACEMENT AND MAY NOT NECESSARILY BE FOUND ON THE UNIT.

● SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION

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 of component values makes possible a variation of ±15% in voltage and resistance readings.
6. All controls at minimum, proper output load connected.

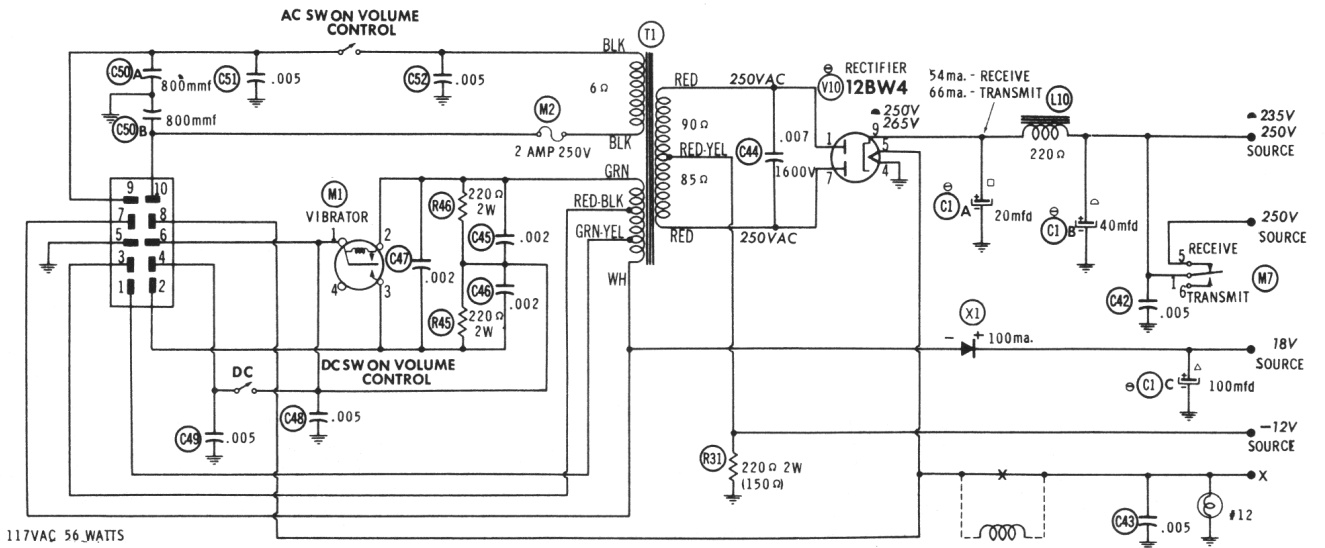
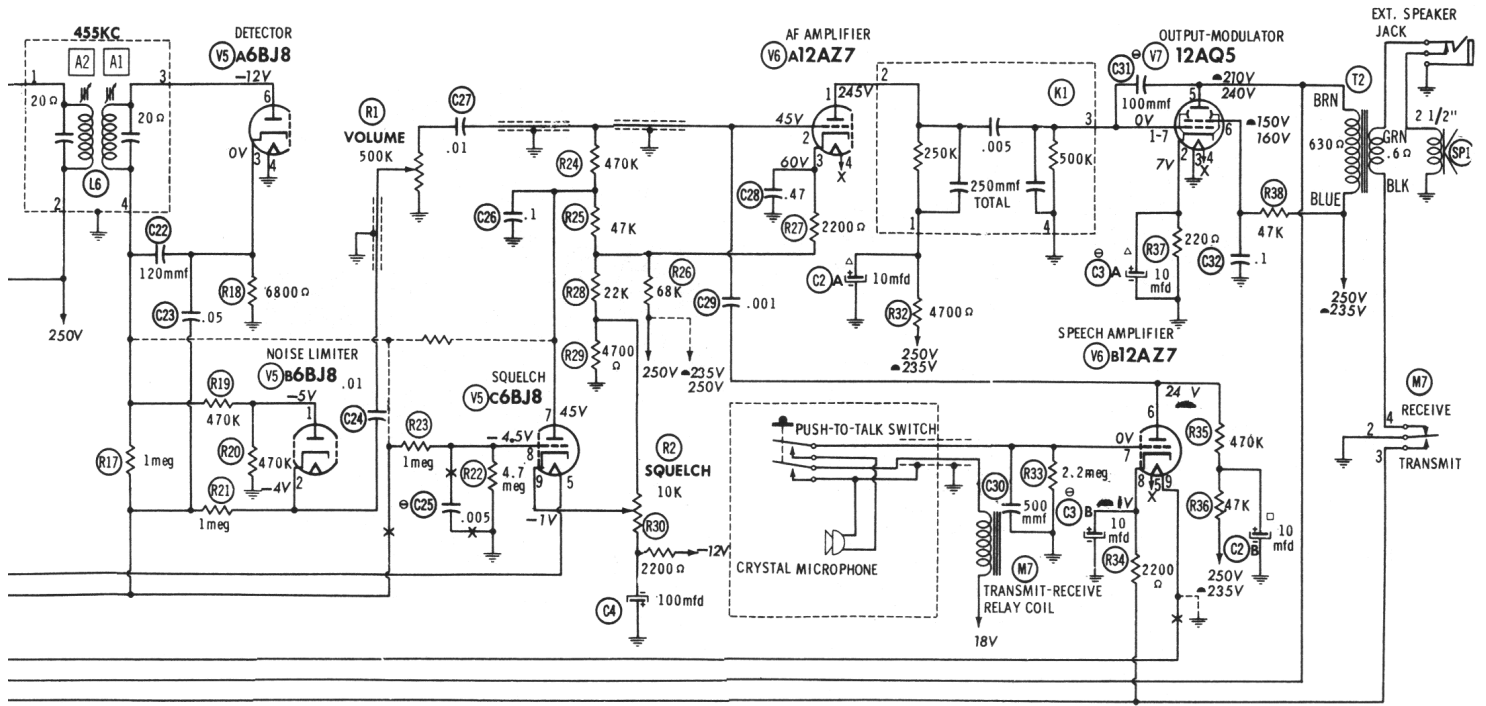
A PHOTOFACIT STANDARD NOTATION SCHEMATIC
© Howard W. Sams & Co., Inc. 1962

RESISTANCE READINGS

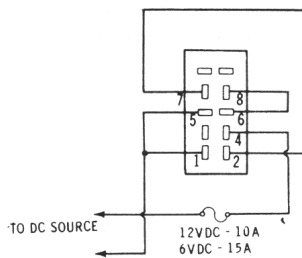
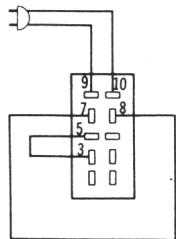
ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	12BA6	3meg	0Ω	FIL	FIL	†1700Ω	†47K	0Ω		
V2	6U8	†68K	1meg	†80K	FIL	FIL	†1200Ω	6800Ω	0Ω	47K
V3	12BA6	2meg	0Ω	FIL	FIL	†240Ω	†220K	0Ω		
V4	12BA6	1.9meg	0Ω	FIL	FIL	†240Ω	†47K	0Ω		
V5	6BJ8	450K	2.5meg	6800Ω	FIL	FIL	900K	74K	2meg	9K
V6	12AZ7	†255K	540K	30K	FIL	FIL	†520K	2.2meg	≈2200Ω	FIL
V7	12AQ5	500K	220Ω	FIL	FIL	†850Ω	†47K	500K		
V8	6C4	4900Ω	NC	FIL	FIL	NC	10K			
V9	12AQ5	22K	≈0Ω	FIL	FIL	†1.8K	†8600Ω	22K		
V10	12BW4	310Ω	NC	NC	FIL	FIL	NC	305Ω		†

ALL MEASUREMENTS MADE IN "RECEIVE" POSITION WITH SQUELCH CONTROL SET AT NORMAL OPERATING POSITION UNLESS OTHERWISE DESIGNATED.

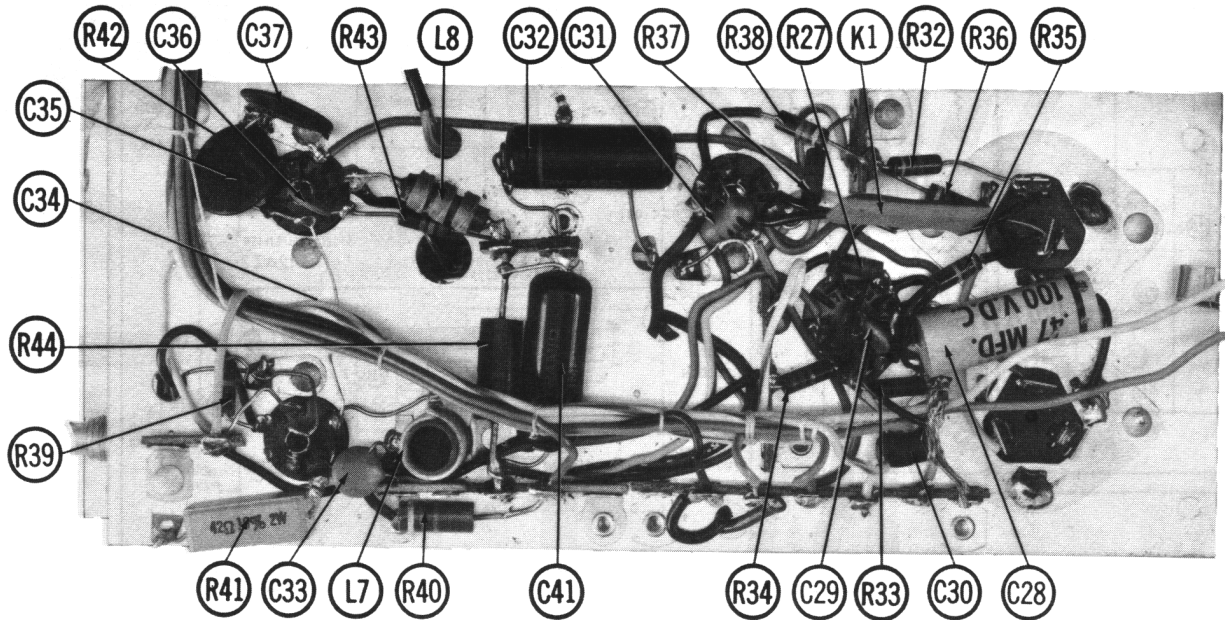
- † MEASURED FROM PIN 9 OF V10.
- NC NO CONNECTION
- † THIS READING WILL VARY DEPENDING UPON THE CONDITION OF THE ELECTROLYTIC IN THE CIRCUIT.
- ≈ MEASURED IN "TRANSMIT" POSITION.



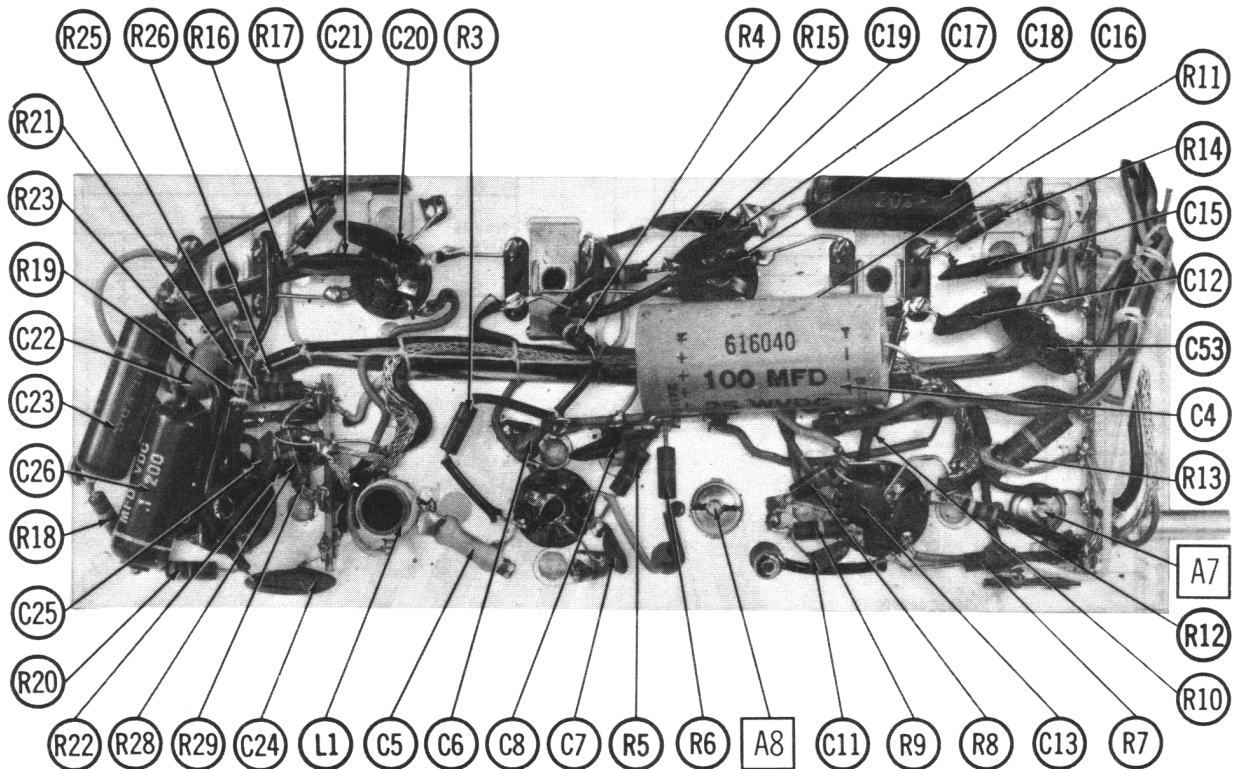
117VAC 56-WATTS



**GLOBE MODELS
 CB-100, A**



TRANSMITTER CHASSIS — BOTTOM VIEW



RECEIVER CHASSIS — BOTTOM VIEW

ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

Use only enough generator output to provide a usable indication.

Suggested Alignment Tools:

- A1 Thru A6.....GENERAL CEMENT #8282, 8606, 8606-L, 9295, 9440
WALSCO #2526, 2543, 2544, 2545
- A7, A8, A9, A10....GENERAL CEMENT #5003, 8271, 8275, 8276, 8609, 8721, 8722, 9150, 9298
WALSCO #2516, 2518, 2519
- All, A12.....GENERAL CEMENT #5004, 5009, 8195, 8274, 8275, 8607, 8728, 8987, 8988, 8989, 9291
WALSCO #2515, 2520, 2522, 2523, 2531, 2532, 2534, 2537, 2538

RECEIVER ALIGNMENT

Connect DC probe of VTVM to Point Δ , common to chassis.

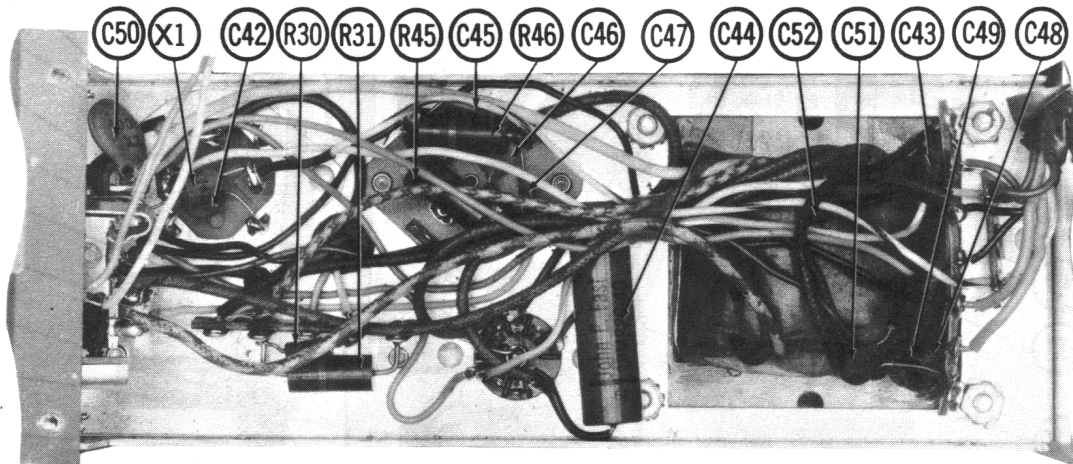
	SIGNAL GENERATOR	CHANNEL	ADJUST	REMARKS
1.	Tune to 455KC (Unmod.) High side thru .001mfd to Pin 2 (grid) of Mixer, common to ground.		A1, A2, A3, A4, A5, A6	Remove Receiver Crystal. Adjust for maximum deflection. Reinsert Crystal.
2.	Tune to Crystal Freq. High side to antenna receptacle, low side to ground.	Highest Channel Used	A7	Adjust for maximum deflection by rocking A7. Note rate of dropoff and set just below peak on side of gradual dropoff.
3.	"	"	A8, A9	Adjust for maximum deflection. Repeat Steps 2 & 3.

TRANSMITTER ALIGNMENT

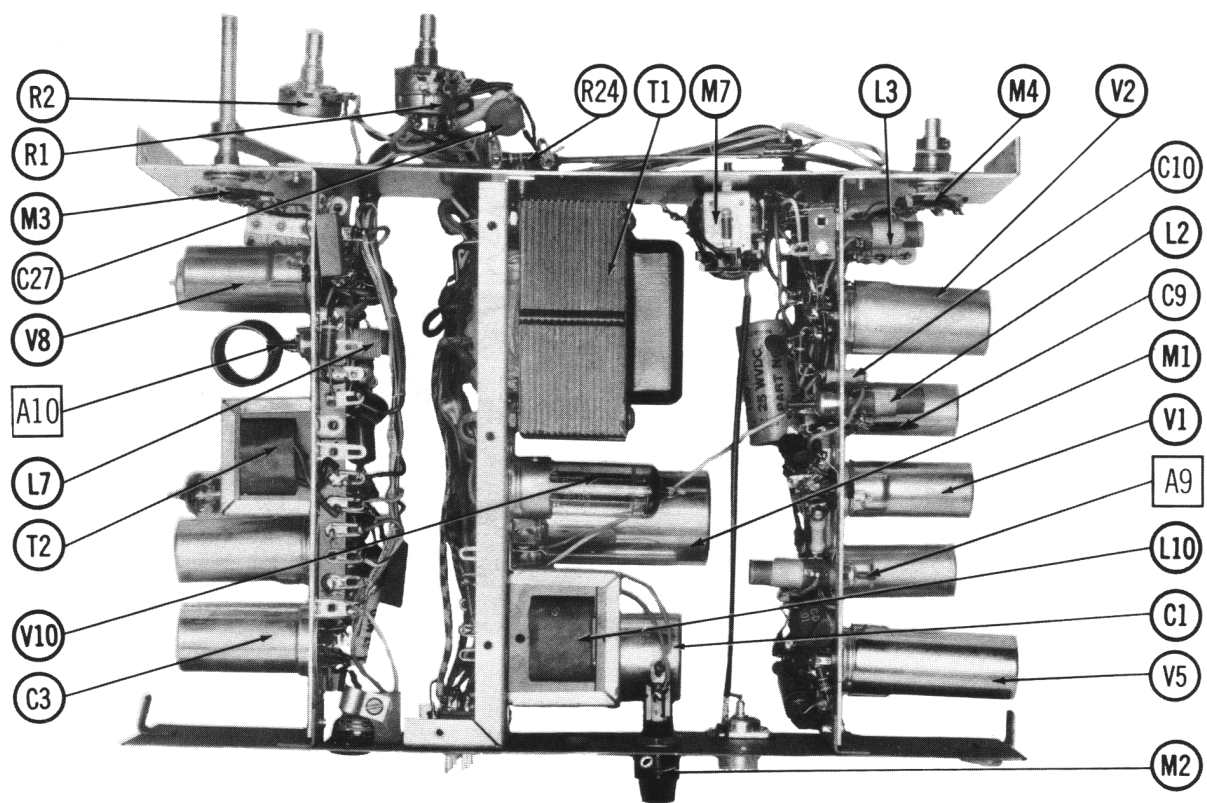
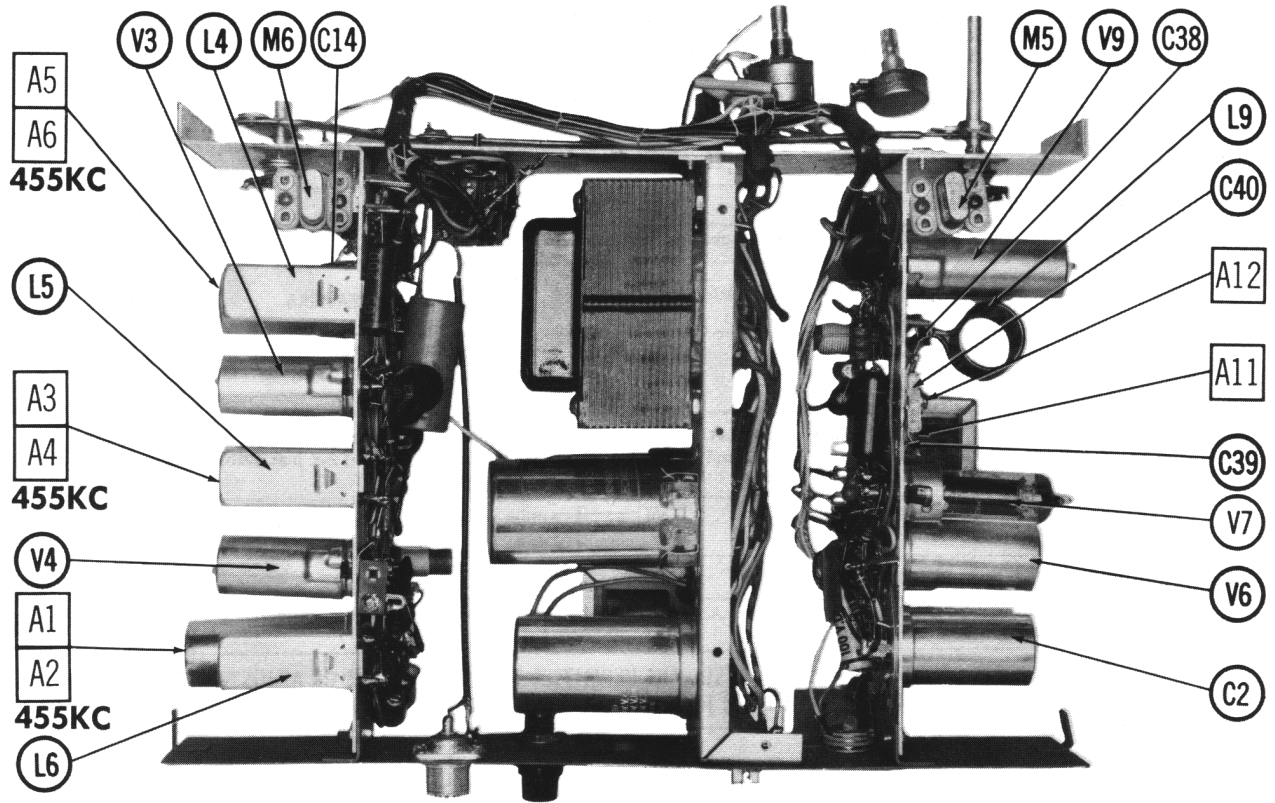
Best results will be obtained when adjusting A11 and A12 if the antenna normally used is connected and the unit is as nearly in the cabinet as possible.

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)

	SPECIAL INSTRUCTIONS	INDICATOR	ADJUST	REMARKS
4.	Connect suitable load to antenna receptacle.	VTVM with crystal probe. Connect to pin 1 (grid) of final amp.	A10	Key transmitter. Adjust A10 for MINIMUM of 15V. Key transmitter several times to assure stable Oscillation. Repeat if necessary.
	"	RF Wattmeter or field strength meter.	A11, A12	Key transmitter. Adjust for maximum output.



POWER CHASSIS—BOTTOM VIEW



COMPLETE CHASSIS — SIDE VIEWS

PARTS LIST AND DESCRIPTIONS

WIRING DATA

General-use Hook-up Wire	Use BELDEN No. 8530 (801d) Available in 12 Colors
Shielded Antenna Lead	8524 (Stranded) Available in 12 Colors 8237 Low Loss (RG-8/U Type)
Coiled Microphone Cable	8250 (Stranded) Miniature (RG-58A/U) 8496 3 Conductor - 1 Shielded for Press-to-Talk (Neoprene)
Ignition Noise Suppression	Use BELDEN No. 7900-Series Spark-Plug Sets
Bonding Strap	Use BELDEN No. 8661 (3/8 In.)

TUBES

ITEM No.	USE	GENERAL ELECTRIC	RCA	RAYTHEON	SYLVANIA
V1	RF Amplifier	12BA6 (6BA6)*			
V2	Mixer-Oscillator	6U8			
V3	1st IF Amplifier	12BA6 (6BA6)*			
V4	2nd IF Amplifier	12BA6 (6BA6)*			
V5	Det. -ANL-Squelch	6BJ8			

* 6VDC Versions.

POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	CURRENT RATING (Measured)	RECTIFIERS		DIODES		NOTES
		ORIGINAL Part or Type No.	RCA PART No.	SARKES TARZIAN PART No.	RAYTHEON PART No.	
X1	.1A	3700-014	1N1763	2F4		Relay DC

ELECTROLYTIC CAPACITORS

ITEM No.	RATING CAP. VOLT.	REPLACEMENT DATA			
		AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	SPRAGUE PART No.
C1A	20		C1090		TVLS-3744, 4*
B	40				
C	100				
C2A	10	1106-022	CO370	XC2-3	TMD2230
B	10				
C3A	10	1106-021	B0210	XC3-7	TMT3292
B	10				
C	10				
C4	100	1106-019	BR100-25	QTI-23	TD-100-25

① In some versions CIC may be a separate unit (Part #1106-019). CIA & B Part #1106-020.

② CSC not used.

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

FIXED CAPACITORS (cont)

ITEM No.	RATING	REMARKS	REPLACEMENT DATA			
			AEROVOX PART No.	CORNELL-DUBILIER PART No.	ELMENC0 PART No.	SPRAGUE PART No.
C9	.01		BPD-01	BYA10S1	CCD-103	5HK-S10
C10	.50		SI 50	LI0035	CCD-500	10TS-Q50
C11	.005		BPD-005	BYA10D5	CCD-502	5HK-D50
C12	.01		BPD-01	BYA10S1	CCD-103	5HK-S10
C13	.005		BPD-005	BYA10D5	CCD-502	5HK-D50
C14	.005		BPD-01	BYA10S1	CCD-103	5HK-S10
C15	.01		BPD-01	BYA10S1	CCD-103	5HK-S10
C16	.05 200V		P288N-05	CUB2S5	4DP-3-503	2TM-S50
C17	.01		BPD-01	BYA10S1	CCD-103	5HK-S10
C18	.01		BPD-01	BYA10S1	CCD-103	5HK-S10
C19	.01		BPD-01	BYA10S1	CCD-103	5HK-S10
C20	.01		BPD-01	BYA10S1	CCD-103	5HK-S10
C21	.01		BPD-01	BYA10S1	CCD-103	5HK-S10
C22	.120		SI 120	LI0712	CCD-121	10TS-T12
C23	.05 200V		BPD-01	BYA10S1	CCD-103	5HK-S10
C24	.01		BPD-01	BYA10S1	CCD-103	5HK-S10
C25	.005		P288N-05	CUB2S5	4DP-3-503	2TM-S50
C26	.1 200V	Note 1	BPD-005	BYA10D5	CCD-502	5HK-D50
C27	.01		P288N-1	CUB2P1	ZDP-3-104	2TM-P10
C28	.47		P288N-47	CUB2P47	CCD-103	5HK-S10
C29	.001		BPD-001	BYA10D1	IDF-4-474	2TM-P47
C30	.500		SI 500	LI075	CCD-102	5HK-D10
C31	.100		SI 100	LI075	CCD-501	10TS-T50
C32	.1 200V		P288N-1	CUB2P1	ZDP-3-104	2TM-P10
C33	.002		BPD-002	BYA10D2	CCD-202	5HK-D20
C34	50 N1500	#1101-033	BPD-01	BYA10S1	CCD-103	5HK-S10
C35	.002		BPD-002	BYA10D2	CCD-202	5HK-D20
C36	.002		BPD-01	BYA10S1	CCD-103	5HK-S10
C37	.01		BPD-01	BYA10S1	CCD-103	5HK-S10
C38	.001		BPD-001	BYA10D1	CCD-102	5HK-D10
C39	4.5-25 NPO					
C40	20-280					
C41	.1 200V		P288N-1	CUB2P1	ZDP-3-104	2TM-P10
C42	.005		BPD-005	BYA10D5	CCD-502	5HK-D50
C43	.005		BPD-005	BYA10D5	CCD-502	5HK-D50
C44	.007 1600V		P1684C-M-007	DD16-702	10DP-3-702	MB-D7
C45	.002		BPD-002	CUB3DD2	CCD-202	5HK-D20
C46	.002		BPD-002	BYA10D2	CCD-202	5HK-D20
C47	.002		BPD-002	BYA10D2	CCD-202	5HK-D20
C48	.005		BPD-005	BYA10D5	CCD-502	5HK-D50
C49	.005		BPD-005	BYA10D5	CCD-502	5HK-D50
C50A	800		BPD-2X001	DD3-102	CCD-801	5HK-2D10
B	800					
C51	.005		BPD-005	BYA10D5	CCD-502	5HK-D50
C52	.005		BPD-005	BYA10D5	CCD-502	5HK-D50
C53	.01		BPD-01	BYA10S1	CCD-103	5HK-S10

Note 1. Not used in some versions.

Globe Part Number.

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

CONTROLS

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

ITEM No.	USE	RESISTANCE	REPLACEMENT DATA			
			GLOBE PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.
R1	Volume & Switch	500K	2300-015	B-60-S, or (A-B-60, KR-2, AK-9)	A47-500K-Z, SWE-20, RS-2	Q13-133, or (UA55A, US42, SL-3500)
R2	Squelch	10K	2300-022	B-14, or (A-B-14, AK-9)	A47-10K-S, RB-2	U20, or (UA8L, SL-3500)

* 'SNAPTROL'

FIXED CAPACITORS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA			
			AEROVOX PART No.	CORNELL-DUBILIER PART No.	ELMENC0 PART No.	SPRAGUE PART No.
C5	50		SI 50	LI0035	CCD-500	10TS-Q50
C6	50 N1500		BPD-005	BYA10D5	CCD-502	5HK-D50
C7	.005	#1101-042	BPD-01	BYA10S1	CCD-103	5HK-S10
C8	.01					

