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**GLOBE MODEL X-90
(Pocketphone)**



NOTICE

ONLY THOSE PERSONS PROPERLY LICENSED BY FCC ARE PERMITTED TO MAKE CRYSTAL SUBSTITUTION OR EFFECT REPAIRS ON THE TRANSMITTER PORTION OF THIS UNIT.

**GLOBE MODEL X-90
(Pocketphone)**

TRADE NAME	Globe Model X-90 (Pocketphone)		
MANUFACTURER	Globe Electronics, A Div. of Textron Electronics, Inc., Council Bluffs, Iowa		
TYPE SET	Battery Operated Transistorized Portable Citizens Band Transmitter-Receiver		
POWER SUPPLY	9 Volts DC	RATING	15MA @ 9 Volts DC (No Signal, Minimum Volume)
FREQ. RANGE	Any One of Citizens Band Channels		18MA @ 9 Volts DC (No Signal, Maximum Volume)
		1 thru 22	25MA @ 9 Volts DC (Transmit)

ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

Volume control should be at maximum position. Output of signal generator should be no higher than necessary to obtain an output reading.

Suggested Alignment Tools: A1 thru A5 GENERAL CEMENT #9440
 A6 GENERAL CEMENT #8282, 8606, 8606L, 9295, 9440
 WALSCO #2526, 2543, 2544, 2545

RECEIVER ALIGNMENT

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1.	High side thru .01mfd to base of Receiver Mixer. Low side to foil along board edge.	Frequency of desired operating channel.		Across Voice Coil	A1	Adjust for maximum output, then turn slug clockwise one half turn. Press the push-to-talk switch several times to make sure oscillator starts each time. If it fails to start, turn the adjust further and recheck.
2.	"	"		"	A2, A3, A4	Adjust for maximum output.

TRANSMITTER ALIGNMENT

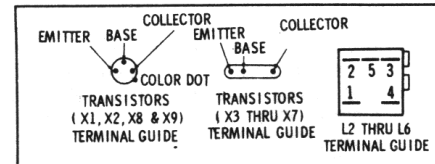
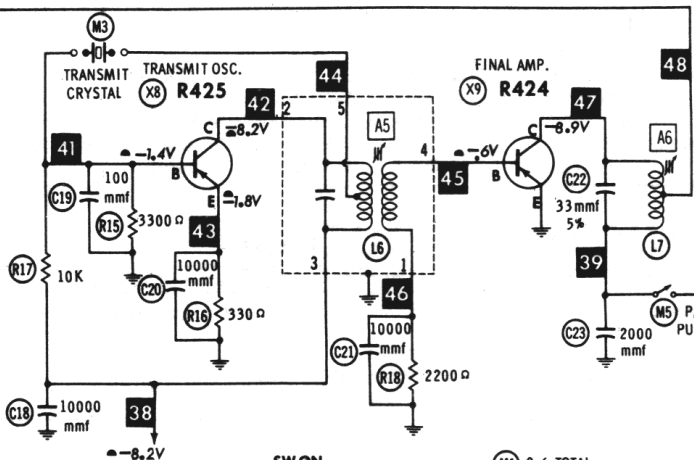
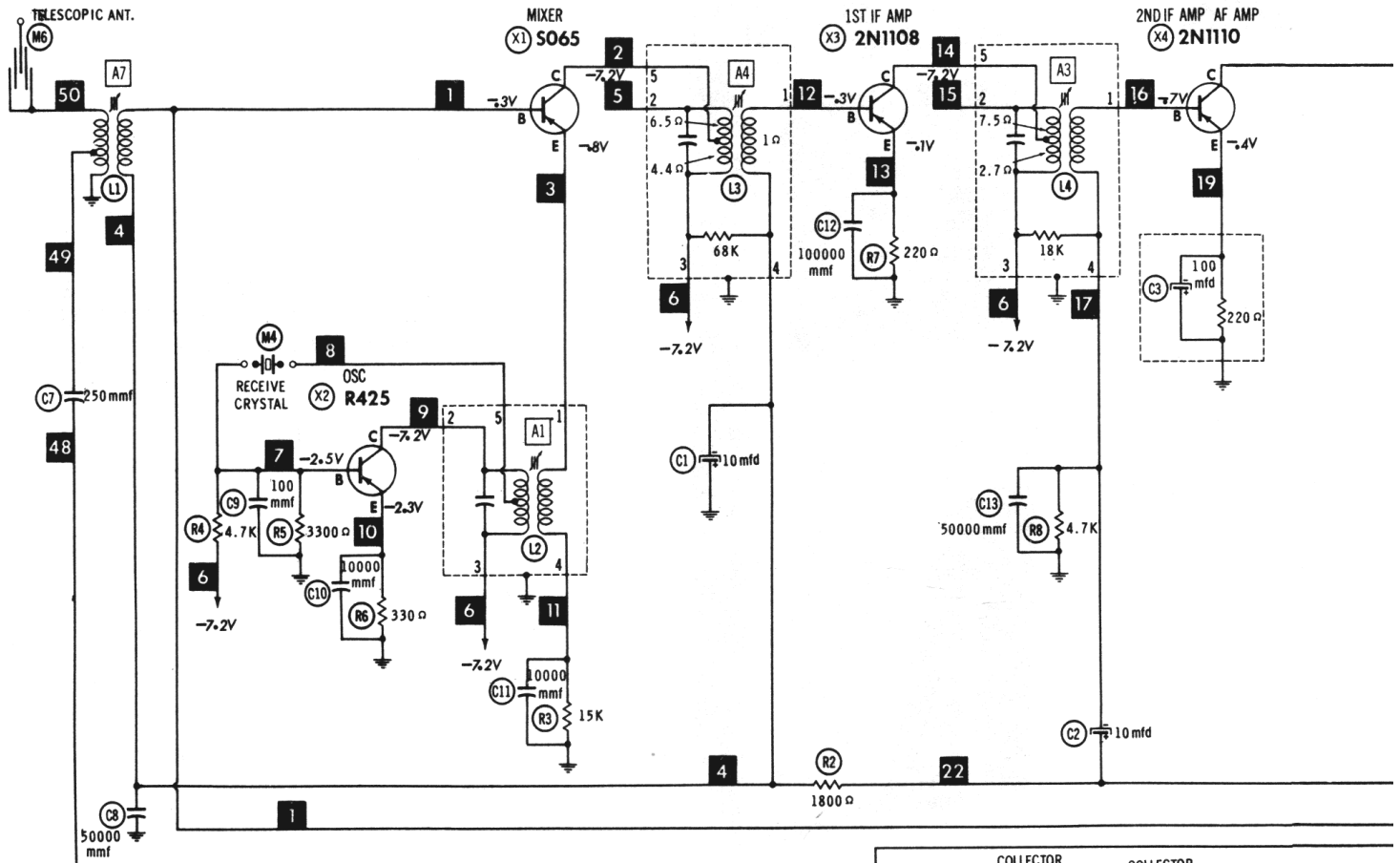
- Using an RF Output meter, press push-to-talk switch and adjust A5 for maximum RF output, then turn one half turn clockwise. Press the switch several times to make sure the Oscillator operates. If it fails to start, turn the slug further and recheck. Adjust A6 and A7 for maximum output as indicated on meter. A7 (slug in antenna coil) may not be used.

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 KZ616

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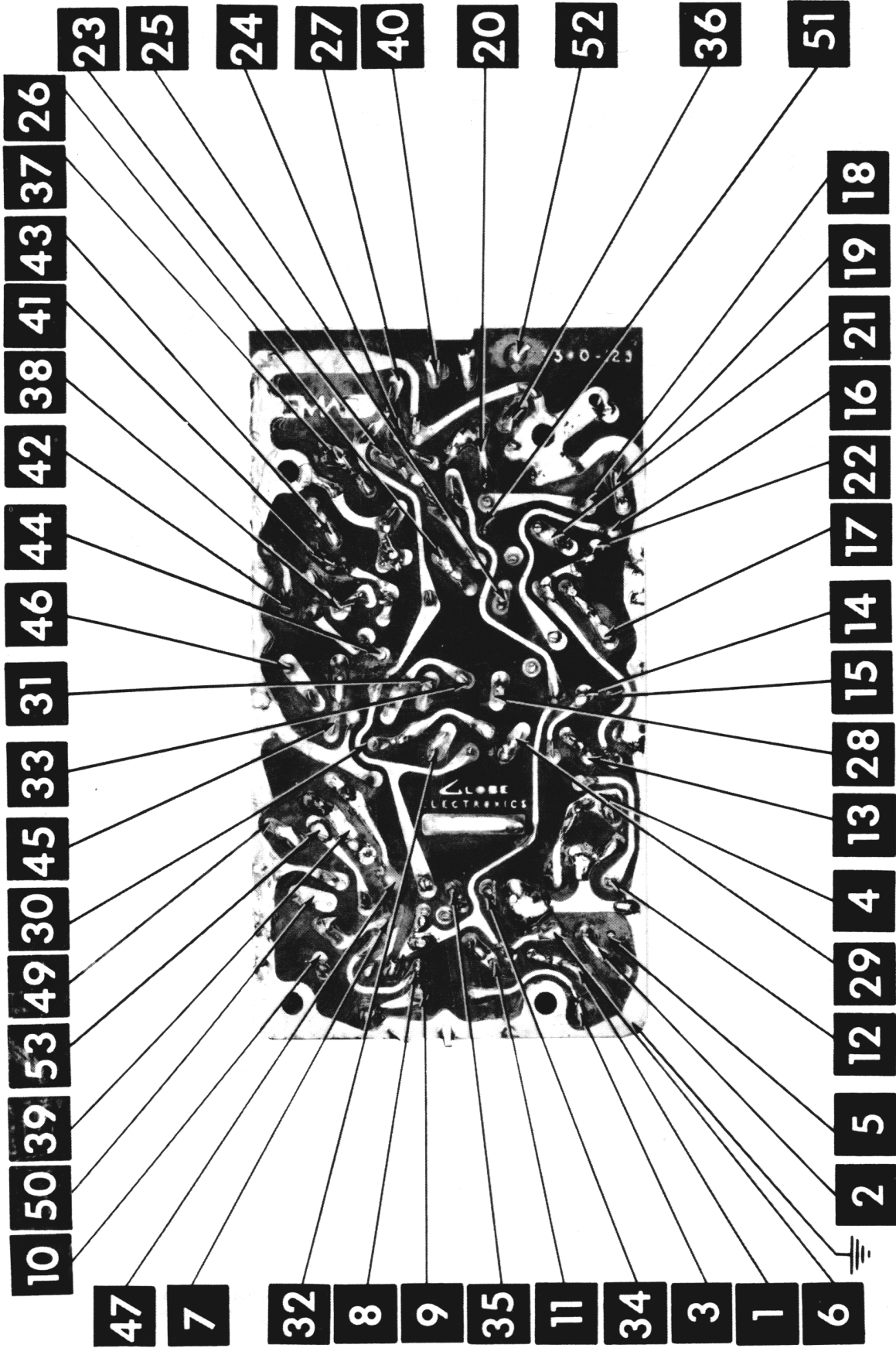


RESISTANCE MEASUREMENTS NOT GIVEN BECAUSE OF THE WIDE VARIATION IN INTERNAL TRANSISTOR RESISTANCE.
 ▲ MEASURED IN " TRANSMIT " POSITION

1. DC voltage measurements taken with vacuum tube voltmeter.
2. Socket connections or transistor terminals are shown as bottom views.
3. Measured values are from socket pin or terminal to common ground.
4. Nominal tolerance on component values makes possible a variation of +15% in voltage and resistance readings.
5. Volume control at maximum, no signal applied for voltage measurements.

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.

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



PARTS LIST AND DESCRIPTIONS

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA			NOTES
			RCA PART No.	RAYTHEON PART No.	SYLVANIA PART No.	
X1	8065	Mixer				
X2	R425	Oscillator				PNP
X3	2N1108	1st IF Amplifier				PNP
X4	2N1110	2nd IF Amp. - AF Amp.	2N486	2N412		PNP
X5	2N238 *	Driver - Modulator	2N483	2N409		PNP
X6	2N165 *	Output - Modulator	2N362	2N407		PNP
X7	2N165 *	Output - Modulator	2N633	2N270		PNP
X8	R425	Trans. Oscillator	2N407	2N270		PNP
X9	R424	Final Amplifier	2N407	2N270		PNP

* Supplied as matched kit.

ELECTROLYTIC CAPACITORS

ITEM No.	RATING CAP. VOLT.	GLOBE PART No.	REPLACEMENT DATA				SPRAGUE PART No.	NOTES
			AEROVOX PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	PYRAMID PART No.		
C1	10	1106-028A	BCD1000	ECPB408	PET1340	MLV10-10	VL-1127	
C2	10	1106-028A	BCD1000	ECPB408	PET1340	MLV10-10	VL-1127	
C3	100	1109-006	BCD1000	ECPB117	PET1340	MLV100-4	VL-1100	
C4	10	1106-028A	BCD1000	ECPB408	PET1340	MLV10-10	VL-1127	
C5	100	1109-007	BCD1000	ECPB117	PET1400	MLV100-4	VL-1100	
C6	100	1106-027	BCD1000	ECPB417	PET1400	MLV100-10	VL-1140	

† Connect 220Ω Resistor across Electrolytic.

‡ Connect 470Ω Resistor across Electrolytic.

FIXED CAPACITORS

Capacity values given in the rating column are in mfd. for Paper Capacitors, and in mmfd. for Mica and Ceramic Capacitors.

ITEM No.	RATING	REMARKS	REPLACEMENT DATA				MALLORY PART No.	SPRAGUE PART No.
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.		
C7	250		ST 250	D6-251	L10725	CCD-251	GP325	
C8	50000	10V	C80V103AM	UK10-503	H-0551	CCD-101	TA150	
C9	100		DL-100	DM-103	L1071		GP310	
C10	10000		C80V103AM	DM-103	H-0551		TA-110	
C11	100000	10V	C80V103AM	UK10-104	H-0551		TA-110	
C12	50000	10V	C80V103AM	UK10-503	H-0551		TA-150	
C13	10000		C80V103AM	DM-103	H-0551		TA-110	
C14	10000		C80V103AM	UK10-503	H-0551		TA-150	
C15	50000	10V	C80V103AM	UK10-503	H-0551		TA-150	

FIXED CAPACITORS (cont)

ITEM No.	RATING	REMARKS	REPLACEMENT DATA					MALLORY PART No.	SPRAGUE PART No.
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.		
C16	10000		C80V103AM	DM-103	H-0551		TA-110	TG-810	
C17	100000	10V	C80V104AM	UK10-104	H-0551		TA-110	TG-810	
C18	10000		C80V103AM	DM-103	H-0551	CCD-101	GP310	107S-T10	
C19	100		DL-100	DM-103	L1071		TA-110	TG-810	
C20	10000		C80V103AM	DM-103	H-0551		TA-110	TG-810	
C21	10000		C80V103AM	DM-103	H-0551		TA-110	TG-810	
C22	33	5%	1469-000033	TCZ-33	2R25Q33	CM-19B-330J	CNO-433	ME-433	
C23	2000		DL-2000	DD-202	BYAL0D2	CCD-202	GP220	5HK-D20	
C24	50000		C80V103AM	UK10-503	H-0551		TA-150	TG-850	
C25	10000		C80V103AM	DM-103	H-0551		TA-110	TG-810	

CONTROLS

ITEM No.	RATING RESISTANCE	WATTS	REPLACEMENT DATA			INSTALLATION NOTES
			GLOBE PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	
R1	2500Ω	1/10	2300-018	B16-212		Volume and Switch

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 TV PART No.			IRC PART No.	WORKMAN TV PART No.
R2	1800Ω			R11	22K		
R3	15K			R12	22K		
R4	4700Ω			R13	5000 @ 25°C		
R5	3300Ω			R14	4 TO		
R6	3300			R15	3300Ω		
R7	2200			R16	3300		
R8	2200Ω			R17	10K		
R9	1500Ω			R18	2200Ω		
R10	4700Ω			R19	2200		

PARTS LIST AND DESCRIPTIONS (Continued)

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA				NOTES
		GLOBE PART No.	Miller PART No.	Stancor PART No.	Workman TV PART No.	
L1	Antenna Oscillator	1400-113				
L2	1st IF	1205-008				
L3	2nd IF	1205-002				
L4	3rd IF	1205-003				
L5	Trans. Oscillator	1205-004				
L6	Final Amp. Plate	1205-005				
L7		1400-114				

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO	REPLACEMENT DATA			NOTES
		GLOBE PART No.	Stancor PART No.	Thordarson PART No.	
T1	1.7 1	1203-012	TA-28		

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE	REPLACEMENT DATA			NOTES
		GLOBE PART No.	Stancor PART No.	Thordarson PART No.	
T2	7000 CT	1203-013			
	SEC. 1	6-80			
	SEC. 2	5500			

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		GLOBE PART No.	QUAM PART No.	
SP1	2 1/4" PM 6-80	4002-004	22A06Z8	

BATTERIES

ITEM No.	VOLTAGE	GLOBE PART No.	REPLACEMENT DATA			NOTES	
			BURGESS	EVEREADY	MALLORY		
M1	9.6V	1902-025 *	"A"	"B"	"A"	"B"	* 8 Required (Nickel Cadmium)
			CD-4L *				

SIGNAL DIODES

ITEM No.	ORG. TYPE	REPLACEMENT DATA			NOTES
		GLOBE PART No.	GENERAL ELECTRIC PART No.	RAYTHEON PART No.	
M2	1N48	3700-058	1N295	1N295	Detector (Pigtail)

MISCELLANEOUS

ITEM No.	PART NAME	GLOBE PART No.	REPLACEMENT DATA		NOTES
			GENERAL ELECTRIC PART No.	SYLVANIA PART No.	
M3	Crystal				Transmit (Specify Channel & Frequency Desired) Receive (Specify Channel & Frequency Desired) Push to talk (Spring Return, Pushbutton Type) Whip (164)
M4	Crystal	2102-004			
M5	Switch	4003-001			
M6	Antenna Earphone	4000-009			

WIRING DATA

WIRING DATA	
General-use Unshielded Hook-up Wire	Use BELEDEN No. 8590 (Solid) Available in Ten Colors 8524 (Stranded) Available in Ten Colors

CHASSIS—TOP VIEW

