

RESISTORS (Continued)

<u>SYMBOL</u>	<u>DESCRIPTION</u>	<u>PART NO.</u>
R-55	1000 Ohms, 1/4 Watt	2025-102
R-56	120 Ohms, 1/4 Watt	2025-121
R-57	100 Ohms, 1/4 Watt	2025-101
R-58	47 Ohms, 1/4 Watt	2025-470
R-59	2.7 Ohms, 1/2 Watt	2000-017
R-60	47 Ohms, 1/4 Watt	2025-470
R-61	47K Ohms, 1/4 Watt	2025-473
R-70	500K (Tone Control)	2008-065
R-71	2.5K (S-Meter Trimmer)	2008-035
R-72	3.3 Megohms, 1/4 Watt	2025-335
R-73	270 Ohms, 1/4 Watt	2025-271
R-74	15K Ohms, 1/4 Watt	2025-153
R-75	100K Ohms (AGC Trimmer)	2008-021
R-76	500 Ohms (Sq. Trimmer)	2008-068
R-77	10K Ohms, 1/4 Watt	2025-103
R-78	22K Ohms, 1/4 Watt	2025-223
R-79	47K Ohms, 1/4 Watt	2025-473
R-80	150 Ohms, 1/4 Watt	2025-151
R-81	47 Ohms, 1/4 Watt	2025-470
R-82	220 Ohms, 1/4 Watt	2025-221

RESISTORS (Continued)

<u>SYMBOL</u>	<u>DESCRIPTION</u>	<u>PART NO.</u>
R-101	8200 Ohms, 1/4 Watt	2025-822
R-102	15K Ohms, 1/4 Watt	2025-153
R-103	680 Ohms, 1/4 Watt	2025-681
R-104	15K Ohms, 1/4 Watt	2025-153
R-105	8200 Ohms, 1/4 Watt	2025-822
R-106	680 Ohms, 1/4 Watt	2025-681

SEMICONDUCTORS

<u>SYMBOL</u>	<u>DESCRIPTION</u>	<u>PART NO.</u>
Q-1	MPS6517 RF Amplifier	2904-038
Q-2	MPS6517 1st Receiver Mixer	2904-038
Q-3	MPS6517 2nd Receiver Mixer	2904-038
Q-4	2N2672 1st IF Amplifier	2904-016
Q-5	MPS6517 2nd IF Amplifier	2904-038
Q-6	MPS2716 1st Receiver Audio Amp.	2904-034
Q-7	MPS2716 2nd Receiver Audio Amp.	2904-034
Q-8	2N1540 Audio Power Amplifier	2904-008
Q-9	MPS2716 1st Transmit Audio Amp.	2904-034
Q-10	MPS2716 2nd Transmit Audio Amp.	2904-034
Q-11	MPS706 33 MC Oscillator	2904-033
Q-12	MPS706 Transmit Mixer	2904-033

SEMICONDUCTORS (Continued)

<u>SYMBOL</u>		<u>DESCRIPTION</u>	<u>PART NO.</u>
Q-13	MPS706	Transmit Buffer	2904-033
Q-14	S19386	Transmit Driver	2940-032
Q-15	PT2677C	Transmit Final	2904-037
Q-16	MPS2716	AGC Amplifier	2904-034
Q-101	MPS706	Receiver 6 mc Oscillator	2904-033
Q-102	MPS706	Transmit 6 mc Oscillator	2904-033
CR-1	1N34A	Detector	2102-010
CR-2	1N2069	ANL	2102-014
CR-3	11V Zener	Voltage Regulator	2102-023
CR-4	1N2069	Reverse Polarity Protector	2102-014
CR-5	1N2069	Negative Peak Clipper	2102-014
CR-6	1N2069	Squelch Gate	2102-014
CR-7	1N54	AGC Detector	2102-025
CR-8	1N2069	Reverse Polarity Protector	2102-014
CR-9	1N2069	Transient Suppressor	2102-014
CR-10	1N2069	S-Meter Multiplier Diode	2102-014
CR-11	1N54	S-Meter Detector	2102-025
CR-12	1N462	IF Limiter	2102-019

INDUCTANCES

<u>SYMBOL</u>		<u>DESCRIPTION</u>	<u>PART NO.</u>
L-1		RFC 5.6 uh	1201-144

INDUCTANCES (Continued)

<u>SYMBOL</u>	<u>DESCRIPTION</u>	<u>PART NO.</u>
L-2	RFC 15 uh	1201-145
L-3	RFC 5.6 uh	1201-144
L-4		
L-5	RFC 5.6 uh	1201-144
L-6	Pi-net Coil 1	1201-147
L-7	Pi-net Coil 2	1201-148
L-8		
L-9	RFC 5.6 uh	1201-144
L-101	RFC 10 uh	1201-146
L-102	RFC 10 uh	1201-146

TRANSFORMERS

<u>SYMBOL</u>	<u>DESCRIPTION</u>	<u>PART NO.</u>
T-1	27.1 MC Antenna Input	1201-153
T-2	27.1 MC Receiver Interstage	1201-152
T-3	6.015 MC IF	1201-151
T-4	455 KC IF	1201-150
T-5	455 KC IF	1201-150
T-6	455 KC IF	1201-150
T-7	455 KC IF	1201-150
T-8	Audio Driver	1202-096

TRANSFORMERS (Continued)

<u>SYMBOL</u>	<u>DESCRIPTION</u>	<u>PART NO.</u>
T-9	Modulation	1202-136
T-10	27.1 MC Transmitter Interstage	1201-157
T-11	27.1 MC Transmitter Interstage	1201-154
T-12	27.1 MC Transmitter Interstage	1201-149

CRYSTALS

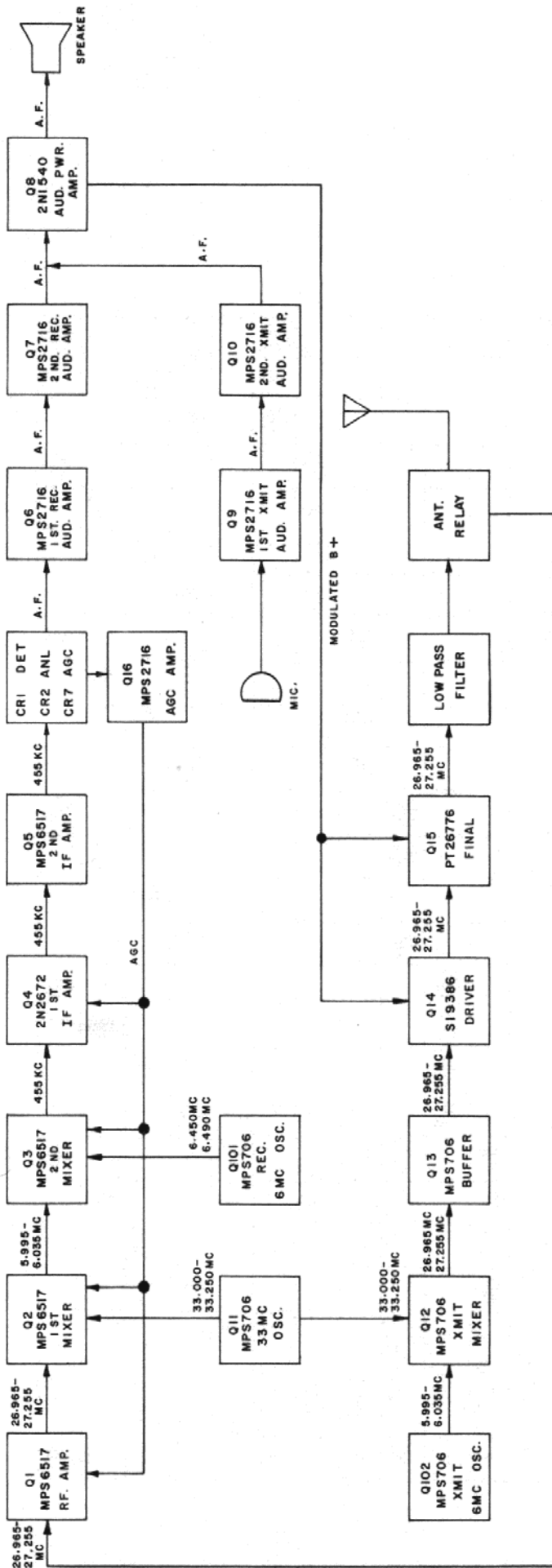
<u>SYMBOL</u>	<u>DESCRIPTION</u>	<u>PART NO.</u>
Y-101	33.000mc \pm .002%	0506-001
Y-102	33.050mc \pm .002%	0506-002
Y-103	33.100mc \pm .002%	0506-003
Y-104	33.150mc \pm .002%	0506-004
Y-105	33.200mc \pm .002%	0506-005
Y-106	33.250mc \pm .002%	0506-006
Y-107	5.995mc \pm .0025%	0506-007
Y-108	6.015mc \pm .0025%	0506-008
Y-109	6.025mc \pm .0025%	0506-009
Y-110	6.035mc \pm .0025%	0506-010
Y-111	6.450mc \pm .0025%	0506-011
Y-112	6.470mc \pm .0025%	0506-012
Y-113	6.480mc \pm .0025%	0506-013
Y-114	6.490mc \pm .0025%	0506-014

MISCELLANEOUS

<u>DESCRIPTION</u>	<u>PART NO.</u>
Fuse, 3 Amp.	0801-002
Fuse Holder	0802-001
Knob, Screw Cradle	1103-077
Retainer, Transistor Socket	1103-107
Knob, Front Small	1301-054
Knob, Front Large	1301-056
Mounting Cradle Assembly	2601-055
Side Rail	1509-051
Cover	1510-035
Channel Disc	1511-064
Panel Plastic Assembly	2601-055
Microphone	1601-017
Pilot Lamp No. 1705	1801-027
Relay	1902-020
Crystal Socket	2301-057
Transistor Socket	2301-067
Antenna Connector	2303-004
Power Connector Male	2303-039
Power Connector Female	2303-040

MISCELLANEOUS (Continued)

<u>DESCRIPTION</u>	<u>PART NO.</u>
Speaker, 2-1/4 x 6-1/2	2501-021
Channel Selector	2701-075
Teflon Terminal	2805-001
Teflon Feedthru	2805-002
Driver Heat Sink	2905-001
S-Meter	3701-010

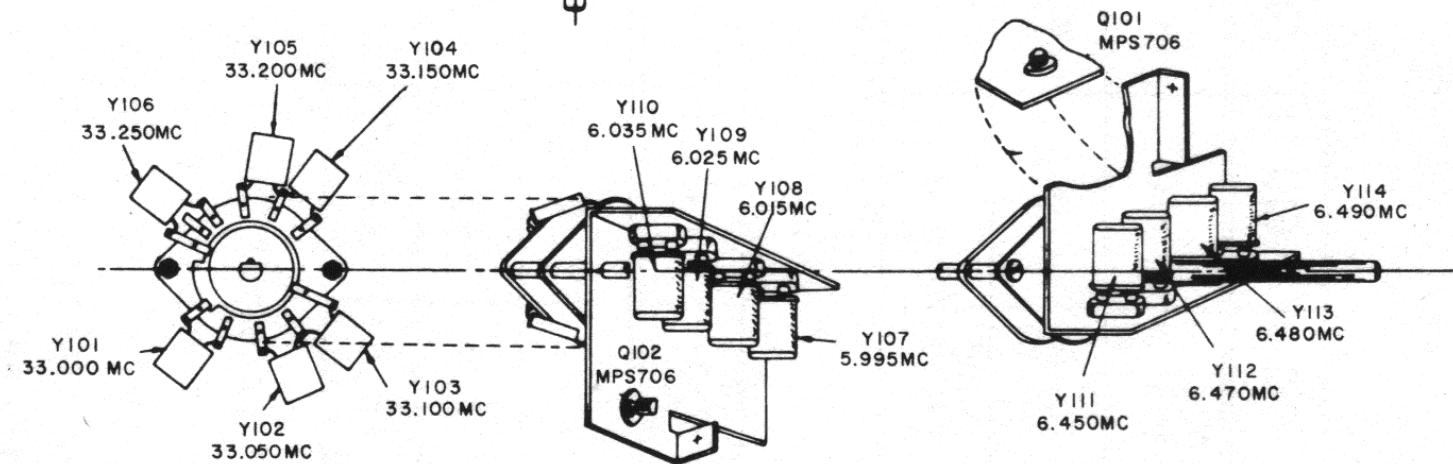
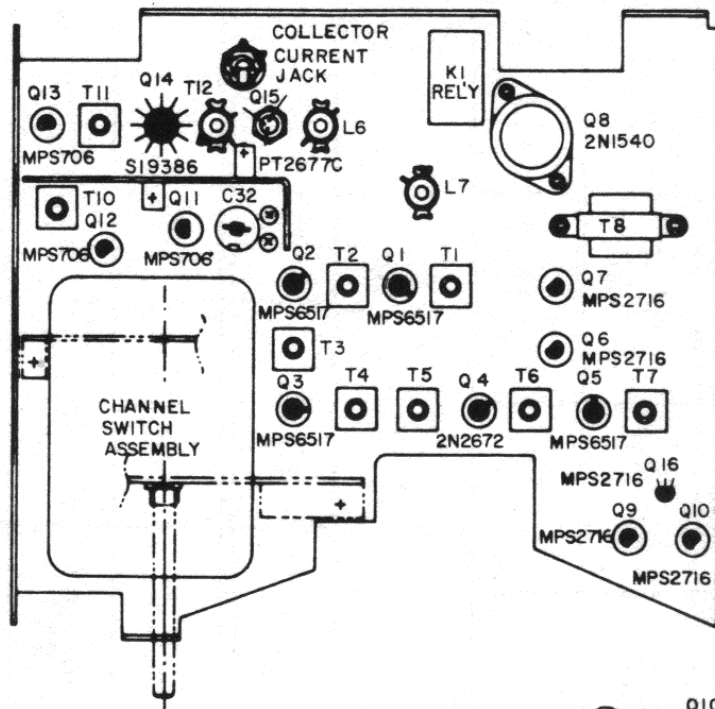
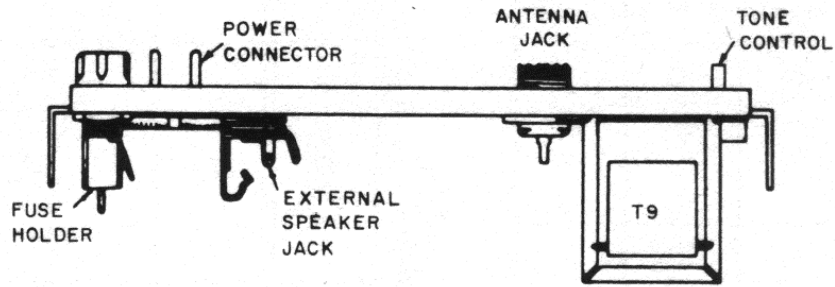


DIRECTOR 23
BLOCK DIAGRAM
FIG. 4.1

XTAL	CHANNEL																						
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
XMTR																							
6.035 MC	●				●				●				●							●			
6.025		●				●				●				●						●			
6.015			●				●				●				●					●			
5.995				●				●				●				●					●		
MASTER																							
33.000	●	●	●	●																			
33.050					●	●	●	●															
33.100								●		●													
33.150									●		●												
33.200																	●		●		●		
33.250																					●	●	●
RCVR																							
6.490	●				●				●								●				●		
6.480		●				●				●							●				●		
6.470			●				●				●						●				●		
6.450				●				●				●					●				●		

CRYSTAL FREQUENCY CHART

FIGURE 4.2



COMPONENT LAYOUT
DIRECTOR 23

FIG. 4.3

FIGURE 4.3

FIGURE 4.4
DC VOLTAGE CHARTS

RECEIVER

SYMBOL	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q11	Q101	Q16
Emitter	+9.7	+10	+10	+9.5	+9.5	+1.0	+1.2	+11.2	+5.5	+6	0
Base	+9.5	+9.8	+9.8	+9.2	+9	+1.5	+1.8	+11.0	+4.6	+3.2	+5
Collector	0	0	0	0	0	+10.8	+10.5	+5	+10.8	+10.8	+6

TRANSMITTER

SYMBOL	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q102
Emitter	+11.2	+1.2	+2.4	+5.4	+1.0	+2.5	0	0	+5
Base	+11.0	+1.8	+3.0	+4.4	+5	+3.0	-2	-2	+2
Collector	+1.5	+5.8	+10.0	+10.8	+10.8	+10.8	+12.2	+12.2	+10.8

- NOTE: 1. Measurements made with VTVM
 2. Receiver measurements made with no signal and squelch control set full CCW
 3. Supply voltage set to 13.8 VDC
 4. Transmitter was unmodulated and loaded to 5 watts input

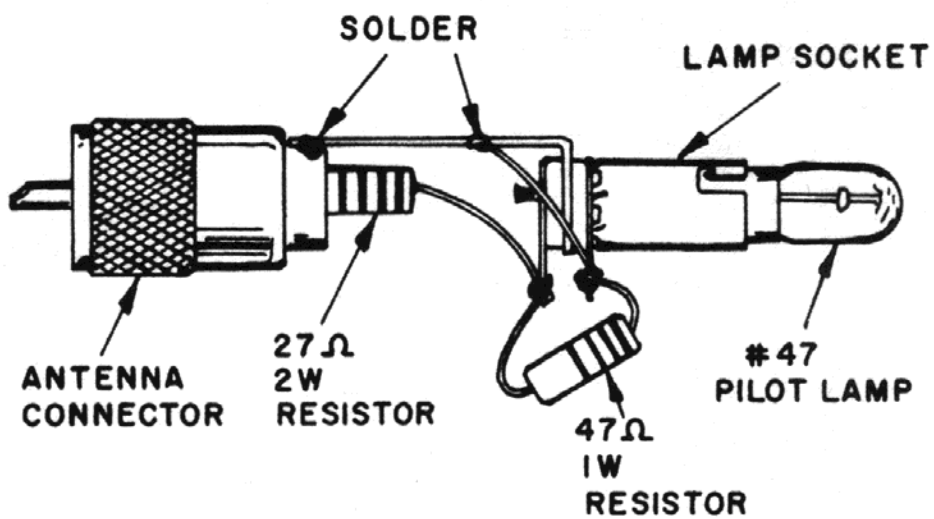


FIG. 4.5
 PEARCE SIMPSON
 RECOMMENDED DUMMY ANTENNA FOR CITIZENS
 BAND TRANSMITTER ADJUSTMENTS.

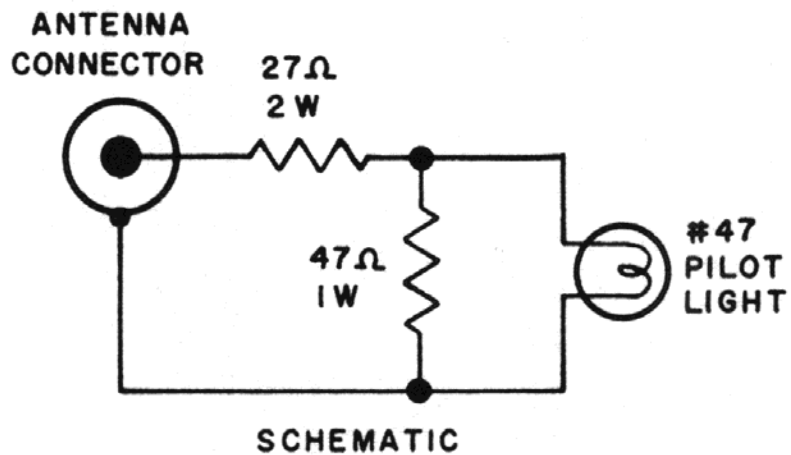
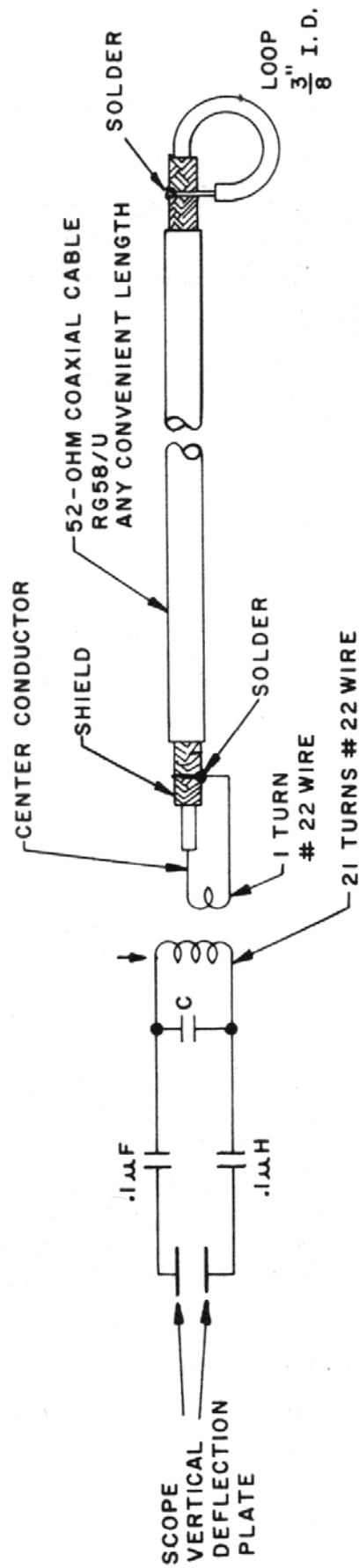


FIGURE 4.5



NOTES:

1. THE VALUE OF C IN THE TUNED CIRCUIT MAY RANGE FROM 5 TO 10PF DEPENDING ON THE OSCILLOSCOPE IT IS USED ON.
2. TRANSFORMER WOUND ON 3/8" COIL FORM WITH TUNABLE IRON CORE. SUGGESTED COIL FORM IS CAMBION # 1465-3-1
3. TUNE SLUG FOR MAXIMUM SCOPE VERTICAL DEFLECTION.

R.F. PICK-UP LOOP FOR OSCILLOSCOPE

FIG. 4.6

FIGURE 4.6
R. F. PICKUP LOOP



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