



Supreme TRANSMITTER CORPORATION

SECTION VI

MAINTENANCE

6.1 Table of Typical Operating Voltages and Currents

CAUTION:

In no case should meter readings exceed the maximum values given below.

NOTE:

The values of the final amplifier plate current, grid current, and modulator plate current hold for all bands and for all types of emission.

	Minimum Value	Normal Value	Maximum Value
Final "Amplifier Plate"			
Current	85 ma	100 ma	110 ma
Final "Amplifier Grid"			
Current	9 ma	14 ma	20 ma
"Modulator Plate" Current (V403, V404), carrier on -- no modulation --	90 ma		
"Modulator Plate" Current -- 100% modulation -- sine wave input --	150 ma		
"Modulator Plate" Current -- 100% modulation -- speech input --	150 ma		
"Modulator Plate" Current -- 100% modulation -- square wave --	150 ma		

SOCKET VOLTAGES TO GROUND, R.F. SECTION

NOTE:

#1 All voltages measured with a voltohmyst or equivalent.

#2 All bias voltages measured at the Grids of all tubes are measured through a 2.5 mh R.F. choke.

	Tube	Key Up	Key Down
Reactance tube modulator 6AC7 (V101)	Pin #8	150 Volts	150 V
	Pin #6	50 V	50 V
	Pin #5	.5 V	.5 V
	Pin #4	0 V	0 V
	Pin #3	0 V	0 V
	Pin #2	0 V	0 V
	Pin #7	6.3 V	6.3 V
	Pin #1	0 V	0 V
Oscillator, 6J5 (V102)	Pin #3	150 V	150 V
	Pin #5	-45 V	0 V
	Pin #2	0 V	0 V
	Pin #1	0 V	0 V
	Pin #7	6.3 V	6.3 V
	Pin #8	0 V	5.7 V



Supreme TRANSMITTER CORPORATION

	Tube	Key Up	Key Down
Class "A" Amplifier and Crystal Oscillator, 6AC7 (V103)	Pin #8 Pin #6 Pin #7 Pin #5 Pin #3 Pin #4 Pin #2 Pin #1	300 V 150 V 6.3 V 0 V -45 V -45 V 0 V 0 V	250 V 150 V 6.3 V 22 V 0 V 0 V 0 V 0 V
80 meter buffer 40 meter doubler 30 meter tripler 6L6, (V201)	Pin #3 Pin #4 Pin #5 Pin #7 Pin #8 Pin #1 Pin #2	400 V 320 V -45 V 6.3 V 0 V 0 V 0 V	380 V 300 V -115 V 6.3 V 0 V 0 V 0 V
20 meter doubler, 6L6, (V202)	Pin #3 Pin #4 Pin #5 Pin #7 Pin #8 Pin #1 Pin #2	370 V 270 V -45 V 6.3 V 0 V 0 V 0 V	350 V 250 V -175 V 6.3 V 0 V 0 V 0 V
15 meter doubler 6L6, (V203)	Pin #3 Pin #4 Pin #5 Pin #7 Pin #8 Pin #1 Pin #2	370 V 270 V -45 V 6.3 V 0 V 0 V 0 V	350 V 250 V -90 V 6.3 V 0 V 0 V 0 V
10 meter doubler 6L6, (V204)	Pin #3 Pin #4 Pin #5 Pin #7 Pin #8 Pin #1 Pin #2	360 V 220 V -45 V 6.3 V 0 V 0 V 0 V	340 V 210 V -68 V 6.3 V 0 V 0 V 0 V
Final Amplifier 3D23, (V301)	Plate Cap Pin #1 Pin #2 Pin #3 Pin #4	1450 V 0 V 450 V -100 V 6.3 V	1400 V 0 V 350 V -300 V 6.3 V



Supreme TRANSMITTER CORPORATION

TUBE	KEY UP	KEY DOWN
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Speech Amplifier, Tone Generator and Modulator Section

Tone Generator 6SN7, (V405)

Pin #1	-45 V	0 V
Pin #2	300 V	125 V
Pin #4	0 V	0 V
Pin #5	6.6 V	39 V
Pin #6	0 V	4.5 V
Pin #3	0 V	4.5 V
Pin #7	6.3 V	6.3 V
Pin #8	0 V	0 V

0 Signal -60 DB Input

Speech Amplifier 6SJ7 (V401)

Pin #8	53 V	53 V
Pin #3	0 V	0 V
Pin #6	28 V	28 V
Pin #4	0 V	0 V
Pin #5	1.2 V	1.2 V
Pin #7	0 V	0 V
Pin #1	0 V	0 V
Pin #2	6.3 V	6.3 V

Speech Driver 6J5, (V402)

Pin #3	180 V	180 V
Pin #5	0 V	0 V
Pin #7	0 V	0 V
Pin #8	5.8 V	5.8 V
Pin #1	0 V	0 V
Pin #2	6.3 V	6.3 V

Modulators, 807 (V403 and V404)

Plate Cap	700 V	650 V
Pin #2	320 V	300 V
Pin #3	-32 V	-32 V
Pin #4	0 V	0 V
Pin #5	0 V	0 V
Pin #1	6.3 V	6.3 V

Line Voltage

117 V 117 V

Input Power

1. CW:
 - AM Phone -- 100% modulation: Key Down -- 250 watts
 - ICW -- 100% modulation: 350 watts
 - FM Phone: 350 watts
 - Standby: 250 watts
 - Standby: 80 watts



Supreme TRANSMITTER CORPORATION

6.2 Inspection

A visual inspection should be made of the equipment, both in the operating condition and also when all power is removed from the transmitter. When making a visual inspection of the transmitter when power is on, it is necessary to short out the interlock switch (S604), located directly under the rear right end corner of the transmitter cover.

CAUTION:

It must be remembered that dangerous high voltages are present and under no circumstances should any part of the transmitter be touched during this inspection.

When operating, the operator should especially inspect the color of the vacuum tube plates. The 807 modulator tubes should show no color at all while being operated at the recommended plate current. It will be found that some types of 807 tubes have a slightly bluish color, which is just inside the glass envelope. This is characteristic of these tubes and does not necessarily indicate a gassy tube. However, if this bluish color should become stronger than normal or a pinkish glow should show in these tubes, the tube should be replaced immediately. The final amplifier tube, type 3D23 exhibits a cherry red color at the recommended plate current of 100 milliamperes which is its normal operating color. It is characteristic of a tantalum plate tube such as the 3D23 to operate at colors varying from bright red to almost white. Under these conditions of operation, the tantalum plate acts as a getter. In the event that the plate current of this tube should start to rise very rapidly, it will indicate either one of two conditions:

1. The tube has become gassy, which can readily be seen by a bluish glow developing around the electrodes, or
2. The grid of the tube has begun to emit, possibly due to cathode material deposited on the grid.

In this transmitter, under recommended conditions of operation, these tubes will never suffer from grid emission troubles nor at any time become soft.

If there is any question regarding the emission of the tube, a quick test may be made by replacing the tube with a new one or an external set-up may be used for testing the emission of that particular tube. In addition to this, it is possible to determine very accurately the operating conditions from the meter readings of the stage involved. These readings should be compared with the "Table of Typical Operating Voltages and Currents" to determine whether operating conditions are normal.

Cleanliness is essential to the best operation of this transmitter. The unit may be kept free from dust or dirt by the use of compressed air on the apparatus inside the transmitter case or a soft clean cloth may be used with good results. Oily cloth or waste should never be used as this causes a collection of dust. The screens on the top cover of the transmitter cabinet should be kept clean and free of any objects which would prevent the proper circulation of air within the unit.

The final amplifier tank capacitor can easily be cleaned by means of a compressed air nozzle or a small soft brush may be used between the plates to remove dust.

SECTION VII - APPENDIX

7.1 OSCILLATOR SECTION -- ELECTRICAL PARTS LIST SUPREME MODEL AF-100 AMATEUR RADIO TRANSMITTER

SYMBOL	NAME OR FUNCTION	DESCRIPTION	MANUFACTURER	IDENTIFICATION
C101	V101 Grid Coupling Capacitor	Capacitor, .01 mfd. \pm 20%, 300 w.v., mica	1	J-06110
C102	V101 Grid R.F. By-pass Capacitor	Capacitor, 500 mmf \pm 20%, 500 w.v., mica	1	C-1350
C103	V101 Screen A.F. By-pass Capacitor	Capacitor, .5 mfd. \pm 20%, 200 w.v. paper	1	30205
C104	V101 Screen R.F. By-pass Capacitor	Same as C101		
C105	V101 Cathode A.F. By-pass Capacitor	Capacitor, 50 mfd. \pm 40%	2	FRS-EP25
C106	V101 Cathode R.F. By-pass Capacitor	Same as C101		
C107	V101 Quadrature Network Capacitor	Capacitor, 5 to 25 nmf, variable	3	AFC-25
C108	V101 Grid R.F. Coupling Capacitor	Capacitor, .005 mfd \pm 20%, 500 w.v., mica	1	C-1250
C109	V101 Plate Coupling Capacitor	Same as C108		
C110	V102 Grid Tank Capacitor	Capacitor, 100 nmf, split stator variable	4	AFC-100
C111	V102 Grid Tank Trimmer Capacitor	Capacitor, 100 nmf, variable	3	KR-1315
C112	V102 Grid Tank Network Capacitor	Capacitor, 150 nmf \pm 10%, 500 w.v., mica	1	KR-1420
C113	V102 Plate Feed-back By-pass Capacitor	Same as C101		
C114	V102 Plate Feed-back By-pass Capacitor	Capacitor, 300 nmf \pm 10%, 500 w.v., mica	1	KR-1330
C115	V102 Cathode By-pass Capacitor	Capacitor, .0047 mfd, \pm 20%, 500 w.v., mica	1	C-1247
C116	V103 Grid By-pass Capacitor	Capacitor, .001 nmf, \pm 20% 500 w.v., mica	1	C-1210
C117	V103 Grid Feed-back Capacitor	Capacitor, 20 nmf, \pm 10%, 500 w.v., mica	1	KR-1420
C118	V103 Plate Grid Feed-back Capacitor	Same as C116		
C119	V103 Cathode By-pass Capacitor	Same as C115		
C120	V103 Screen By-pass Capacitor	Capacitor, .002 mfd, \pm 20%, 500 w.v., mica	1	C-1220
C121	V103 Plate By-pass Capacitor	Same as C115		
C122	V102 Plate Coupling Capacitor	Capacitor, 50 nmf, variable	3	APC-50
L101	V101 Plate R.F. Choke	Inductor, 2.5 mh, 100 ma.	5	4537
L102	V102 Grid Tank Inductance	Inductor, 7.6 uh.	6	B157
L103	V103 Crystal Oscillator Plate Choke	Same as L101		
L104	V103 Plate Tank Inductance	Inductor, 44 uh.	6	B159
L105	V101 Quadrature Network Inductance	Same as L101		
R101	V101 Grid R.F. Filter Resistor	Resistor, 47K 1/2 W \pm 10%, carbon	7	BT-1/2
R102	V101 Grid Decoupling Resistor	Resistor, 220 K 1/2 W \pm 10%, carbon	7	BT-1/2
R103	V101 Screen Bleeder Resistor Network	Resistor, 5.6K 1W \pm 10%, carbon	7	BT-1/2
R104	V103 Same as R103	Resistor, 10K 2W, \pm 10%, carbon	7	BT-1/2
R105	V101 Cathode Bias Resistor	Resistor, 100 ohm 1/2W \pm 10% carbon	7	BT-1/2

SECTION VII - APPENDIX

7.1 OSCILLATOR SECTION -- ELECTRICAL PARTS LIST SUPREME MODEL AF-100 AMATEUR RADIO TRANSMITTER

SYMBOL	NAME OR FUNCTION	DESCRIPTION	MANUFACTURER	INDENTIFICATION
R106	V1C1 Quadrature Network Resistor	Resistor, 560K $1/2W \pm 10\%$, carbon	BT-1/2	7
R107	V1C2 Cathode Bias Resistor	Resistor, 1.2K $1/2W \pm 10\%$, carbon	BT-1/2	7
R108	V1C3 Grid Resistor	Same as R102	BT-1	
R109	V1C3 Cathode Bias Resistor	Resistor, 180 ohms $1W \pm 10\%$, carbon		7
R110	V1C3 Plate Tank Resistor	Same as R105		
R111	V1C2 Grid Resistor	Same as R102		
S101	Modulation Selector Switch	3 Pole, 3 Position single section, ceramic		2507
S102	Oscillator Selector Switch	Same as S101		
V101	Reactance Tube Modulator	Pentode vacuum tube	6AC7	9
V102	V.F.O. Tube	Triode vacuum tube	6J5	9
V103	Class "A" Amplifier Crystal Oscillator	Same as V101		
X101	Socket for V101	Socket, 8 prong, bakelite		9829
X102	Socket for V102	Same as X101		
X103	Socket for V103	Same as X101		
X104	Socket for 1/2" Mounting Center Crystals	Same as X101		
	Tube			
X101	Socket for V101			
X102	Socket for V102			
X103	Socket for V103			
X104	Socket for 1/2" Mounting Center Crystals			

7.2 BUFFER MULTIPLIER SECTION -- ELECTRICAL PARTS LIST

CAPACITOR	SUPREME MODEL AF-100 AMATEUR RADIO TRANSMITTER	C-1210
C201	V201 Grid Coupling Capacitor	C-1220
C202	V201 Grid By-pass Capacitor	
C203	V201 Plate By-pass Capacitor	1
C204	V202 Grid Coupling Capacitor	
C205	V202 Screen By-pass Capacitor	1
C206	V202 Plate By-pass Capacitor	
C207	V203 Grid Coupling Capacitor	
C208	V203 Screen By-pass Capacitor	
C209	V203 Plate By-pass Capacitor	
C210	V204 Grid Coupling Capacitor	

SECTION VII - APPENDIX

7.2 BUFFER MULTIPLIER SECTION -- ELECTRICAL PARTS LIST
SUPREME MODEL AF-100 AMATEUR RADIO TRANSMITTER

SYMBOL	NAME OR FUNCTION	DESCRIPTION	MANUFACTURER	IDENTIFICATION
C211	V204 Screen By-pass Capacitor	Same as C202		
C212	V204 Plate By-pass Capacitor	Same as C202		
C213	V204 Grid Compensating Capacitor	Capacitor, 3 mmf.	C	
L201	V201 Plate 80 Meter Tank Inductance	Inductor, 45.3 uh		6
L202	V201 Plate 40 Meter Tank Inductance	Inductor, 20.4 uh		6
L203	V202 Plate 20 Meter Tank Inductance	Inductor, 5.33 uh		6
L204	V203 Plate 15 Meter Tank Inductance	Inductor, 2.17 uh		6
L205	V204 Plate 10 Meter Tank Inductance	Inductor, 1.51 uh		6
L206	V201 Plate 30 Meter Tank Inductance	Inductor, 12 uh		6
L207	V203 Grid Choke	Inductor, 2.5 mh, 100 ma.		5
R201	V201 Grid Resistor	Resistor, 39K, 1W ± 10%, carbon		11
R202	V202 Grid Resistor	Same as R201		
R203	V203 Grid Resistor	Same as R201		
R204	V204 Grid Resistor	Resistor, 10K 2 W ± 10%, carbon		
R205	V201 Plate Series Resistor	Resistor, 250 ohms 8 W ± 10%, carbon consisting of 4 1K 2W ± 10%, carbon		11
S201	Buffer Multiplier Band Selector Switch	Switch, 6 Pole, 5 Position, 3 Section non shorting, ceramic		8
V201	80 Meter Buffer, 40 Meter Doubler, 30 Meter Tripler Tube	Beam power pentode vacuum tube	6L6	9
V202	20 Meter Doubler	Same as V201		
V203	15 Meter Doubler	Same as V201		
V204	10 Meter Doubler	Same as V201		
X201	Socket for V201	Socket, 8 prong, bakelite		10
X202	Socket for V202	Same as X201		
X203	Socket for V203	Same as X201		
X204	Socket for V204	Same as X201		

SECTION VII - APPENDIX

7.3 FINAL AMPLIFIER SECTION -- ELECTRICAL PARTS LIST

SUPREME MODEL AF-100 AMATEUR RADIO TRANSMITTER

SYMBOL	NAME OR FUNCTION	DESCRIPTION	MANUFACTURER	IDENTIFICATION
C301	V301 Grid Coupling Capacitor	Capacitor, 100 mmf \pm 20%, 500 w.v. mica	K-1310	1
C302	V301 Filament By-pass Capacitor	Capacitor, .01 mfd \pm 20%, 300 w.v. mica	J-06110	1
C303	V301 Screen By-pass Capacitor	Capacitor, .002 mfd \pm 20%, 500 w.v., mica	C-1220	1
C304	V301 Plate By-pass Capacitor	Capacitor, .002 mfd \pm 20%, 2500 w.v., mica	A-5220	1
C305	V301 Plate Tank Capacitor	Capacitor, 100 mmf, split stator	100-FD-30	12
C306	V301 Grid Plate Neutralizing Capacitor	See Section 2.1.5 "Power Amplifier Section" Section II "Detailed Description of Principal Components"		

J301	Jack Bar for V301 Plate Tank Inductor	Jack bar, 5 prong, ceramic	3228	13
I301	V301 Grid Choke	Inductor, 2.5 mh, 100 ma	4537	5
I302	V301 Plate Choke	Inductor, 1.5 mh, 200 ma	4532	5
I303	V301 80 Meter Plate Tank Inductance	Inductor, 44.1 uh, air wound with 600 ohm link	2175	13
I304	V301 40 Meter Plate Tank Inductance	Inductor, 13.3 uh, air wound with 600 ohm link	2176	13
I305	V301 20 Meter Plate Tank Inductance	Inductor, 3.6 uh, air wound with 600 ohm link	2177	13
I306	V301 15 Meter Plate Tank Inductance	Inductor, 2.72 uh, air wound with 600 ohm link	2178	13
I307	V301 11-10 Meter Plate Tank Inductance	Inductor, .9 uh, air wound with 600 ohm link	2179	13
R301	V301 Grid Resistor	Resistor, 9K 10 W \pm 10% WW	14	A-10-A
V301	Final Amplifier Tube	Tetrode vacuum tube	3D25	15
X301	Socket for V301	Socket, 4 prong, ceramic	XC-14	16

7.4 SPEECH AMPLIFIER, TONE GENERATOR AND MODULATOR SECTION -- ELECTRICAL PARTS LIST

SUPREME MODEL AF-100 AMATEUR RADIO TRANSMITTER				
C401	V401 Plate Coupling Capacitor	Capacitor, .01 mfd \pm 20%, 300 w.v., mica	J-06110	1
C402	V401 Cathode R.F. By-Pass Capacitor	Capacitor, .002 mfd \pm 20%, 500 w.v., mica	C-1220	1
C403	V401 Cathode By-pass Capacitor	Capacitor, 25 mfd + 40% 25 w.v. electrolytic	TD-50-25	2
C404	V401 Screen By-pass Capacitor	Capacitor, .1 mfd \pm 20%, 200 w.v., paper	30201	1
C405	V401 Plate Decoupling Capacitor	Same as C402		

SECTION VII - APPENDIX

7.4 SPEECH AMPLIFIER, TONE GENERATOR AND MODULATOR SECTION -- ELECTRICAL PARTS LIST

SUPREME MODEL AF-100 AMATEUR RADIO TRANSMITTER

SYMBOL	NAME OR FUNCTION	DESCRIPTION	MANUFACTURER	IDENTIFICATION
C406A and B	V401 Plate Supply Filter Capacitor	Capacitor, 8-8 mfd + 40% 450 w.v., electrolytic - 10%	2	TM-DIO-450
C407	V402 Cathode By-pass Capacitor	Same as C403		
C410	V405 Grid Plate Feed-back Capacitor	Capacitor, .001 mfd \pm 20% 500 w.v., mica	1	C-1210
C411	V405 Plate By-pass Capacitor	Capacitor, .01 mfd \pm 20%, 300 w.v., mica	1	J-06110
C412	V405 Plate Coupling Capacitor	Capacitor, .0047 mfd \pm 20%, 500 w.v., mica	1	C-1247
J401	V401 Microphone Input Connector	Connector, closed circuit	17	75-CL-BCIM
P401	V401 Grid Compensating Resistor	Resistor, 100K 1/2 W \pm 10%, carbon	7	BT-1/2
R402	V401 Grid Resistor	Resistor, 2.2 meg 1/2W \pm 10%, carbon	7	BT-1/2
R403	V401 Cathode Bias Resistor	Resistor, 2.2K 1W \pm 10%, carbon	7	BT-1
R404	V401 Screen Dropping Resistor	Resistor, 1 meg 1W \pm 10%, carbon	7	BT-1
R405	V401 Plate Load Resistor	Resistor, 220K 1W \pm 10%, carbon	7	BT-1
R406	V401 Plate Filter Resistor	Resistor, 47K 1W \pm 10%, carbon	7	BT-1
R407	V402 Cathode Bias Resistor	Resistor, 1K 1W \pm 10%, carbon	7	BT-1
R408	Speech Amplifier Plate Dropping Resistor	Resistor, 22K 2W \pm 10%, carbon	7	BT-2
R409	V402 Volume Control	Potentiometer, 500K 1W \pm 20%, audio taper, carbon	7	37-S
R410	V405 Grid Resistor	Same as R401	14	
R411	V405 Frequency Control Potentiometer	Potentiometer, 500K 1W \pm 20%, linear taper, carbon	14	37-S
R412	V405 Cathode Bias Resistor	Resistor, 500 ohm, 1/2W \pm 10%, carbon	7	BT-1/2
R413	V405 Plate Load Resistor	Resistor, 560K 1/2W \pm 10%, carbon	7	BT-1/2
R414	V405 Plate Supply Dropping Resistor	Same as R408		
R415	V405 Plate Isolating Resistor	Same as R413		
T401	V402 Speech Driver Transformer	Transformer, single plate, push-pull Class AB ₂ grids	6	A-101
T402	V403, V404 Modulator Transformer	Transformer, Class AB ₂ plates to Class C final	6	B-105
V401	Speech Amplifier Tube	Fetode vacuum tube	9	6SJ7
V402	Speech Driver Tube	Triode vacuum tube	9	6J5
V403	Modulator Tube	Beam power pentode tube	9	807
V404	Same as V403	Same as V403	9	
V405	Tone Generator Tube	Dual triode vacuum tube	9	6SN7GT

SECTION VII - APPENDIX

7.4 SPEECH AMPLIFIER, TONE GENERATOR AND MODULATOR SECTION -- ELECTRICAL PARTS LIST

SUPREME MODEL AF-100 AMATEUR RADIO TRANSMITTER

SYMBOL	NAM'D OR FUNCTION	DESCRIPTION	MANUFAC-TURER	IDENTI-FICATION
X401	Socket for V401	Socket, 8 prong, bakelite	17	MIF-8
X402	Socket for V402	Same as X401		
X403	Socket for V403	Socket, 5 prong, bakelite	17	MIF-5
X404	Socket for V404	Same as X403		
X405	Socket for V405	Same as X401		

7.5 POWER SUPPLY SECTION -- ELECTRICAL PARTS LIST

SUPREME MODEL AF-100 AMATEUR RADIO TRANSMITTER

C501	High Voltage Rectifier Filter Capacitor	Capacitor, 4mfd + 40%, - 10% 1500 w.v., oil	1	7115-A-4
C502	Modulator Rectifier Filter Capacitor	Capacitor, 4mfd + 40%, - 10% 600 w.v., oil	1	4006-4
C503A & B	Speech Amplifier Rectifier Filter Capacitor	Capacitor, 8-8 mfd, + 40%, - 10% 450 w.v., + 40% - 10%	2	TM-DIO-450
C504	Exciter Rectifier Filter Capacitor	Same as C502		
C505	Same as C504	Same as C502		
C506	Bias Rectifier Filter Capacitor	Same as C502		
C507	Same as C506	Same as C502		
L501	Exciter Rectifier Filter Choke	Inductor, 12 henries, 250 ma	6	B-106
L502	High Voltage Rectifier Filter Choke	Inductor, 30 henries, 150 ma	6	B-107
L503	Speech Amplifier Filter Inductor	Inductor, 5 henries, 40 ma	6	A-102
R501	Modulator Rectifier Bleeder Resistor	Resistor, 20K 20W ± 10%, WW	14	A-20-K
R502	Exciter Rectifier Bleeder Resistor	Resistor, 30K 50W, ± 10%, Adj. WW	14	K-50-NA
R503	Speech Amplifier Rectifier Bleeder Resistor	Resistor, 82K 2W ± 10%, carbon	7	BT-2
R504	High Voltage Rectifier Bleeder Resistor	Resistor, 30K 160W ± 10%, Adj. WW	14	K-160-W A
R505	Bias Rectifier Series Dropping Resistor	Resistor, 7K 20W ± 10%, carbon	14	A-20-K
R506	Bias Rectifier Bleeder Resistor	Resistor, 2.5K 25W ± 10%, Adj. WW	14	A-25-KA
R507	V507 Dropping Resistor	Same as R505		
R508	Bias Rectifier Isolator Resistor	Resistor, 560K 1W ± 10%, carbon	7	BT-1

SECTION VII - APPENDIX
7.5 POWER SUPPLY SECTION -- ELECTRICAL PARTS LIST
SUPREME MODEL AF-100 AMATEUR RADIO TRANSMITTER

SYMBOL	NAME OR FUNCTION	DESCRIPTION	MANUFACTURER	IDENTIFICATION
R509 R510	Bias Rectifier Network Resistor Same as R509	Resistor, 4.7K $2W \pm 5\%$, carbon Resistor, 2.2K 1W $\pm 10\%$, carbon	7 7	BT-2 BT-1
T501	High Voltage Rectifier Plate Transformer	Transformer Primary - 115 V, 50/60 cycle, single phase. Secondary - 1400 V D.C. @ 150 ma.	6	B104C
T502	Speech Amplifier Modulator Rectifier Plate and Filament Transformer	Transformer Primary 115V, 50/60 cycle, single phase Secondary #1 - 6.3V @ 4.2 amps. #2 - 5V @ 3 amps. #3 - 5V @ 3 amps. #4 - 60CV D.C. @ 225 ma 300V D.C. @ 42 ma	6	B103
T503	Exciter Plate and Filament Transformer	Transformer Primary - 115V, 50/60 cycle, Secondary #1 - 6.3V @ 8.7 amps #2 - 2.5V @ 10 amps #3 - 5V @ 3 amps #4 - 360V D.C. @ 250 ma	6	B108
V501 V502 V503	High Voltage Plate Rectifier Tube Same as V501 Speech Amplifier Plate Rectifier Tube	Mercury vapor rectifier tube Same as V501	9	866/A
V504 V505 V506 V507	Modulator Plate Rectifier Tube Exciter Plate Tube Bias Rectifier Tube Oscillator Voltage Stabilizer Tube	Dual diode rectifier tube Dual diode rectifier tube Same as V504 Dual diode rectifier tube Voltage regulator tube	9 9 9 9	80 5R4GY EX5GT OD/VR150
X501 X502 X503 X504 X505 X506 X507	Socket for V501 Socket for V502 Socket for V503 Socket for V504 Socket for V505 Socket for V506 Socket for V507	Socket, 4 prong, ceramic Same as X501 Socket, 4 prong, bakelite Socket, 8 prong, bakelite Same as X504 Same as X504 Same as X504	16 16 17 17	XC-4 MIP-4 MIP-8

SECTION VII - APPENDIX

7.6 CHASSIS, CABINET AND PANEL SECTION -- ELECTRICAL PARTS LIST

SUPREME MODEL AF-100 AMATEUR RADIO TRANSMITTER

SYMBOL	NAME OR FUNCTION	DESCRIPTION	MANUFACTURER	IDENTIFICATION
E601	Receiving Antenna Feed-thru Insulator	Insulator, feed-thru, porcelain	18	458
E602	Same as E601	Same as E601		
E603	Transmitting Antenna Feed-thru Insulator	Insulator, feed-thru, porcelain	18	478
E604	Same as E603	Same as E603		
F601	Filament Fuse	Fuse, 10 amp, 250V, Type 3AG	19	1081
F602	Plate Fuse	Fuse, 3 amp, 250V, Type 3AG	19	1043
I601	Oscillator Dial Pilot Light	Lamp, 6-8 V, bayonet base	4	MAZDA 44
I602	Final Amplifier Dial Light	Same as I601		
I603	Filament On Indicator Light	Lamp, miniature neon, bayonet base, 1/25 W	4	NE51
I604	Plate On Indicator Light	Same as I603		
J601	Key Jack	Jack, closed circuit	22	2A
K601	Antenna Changeover Relay	Relay, DFDT, with SFST contact, normally closed	20	1000-2B
M601	Final Amplifier Plate Meter	Milliammeter, 0-300 milliamperes, 2" square black bakelite case, flush mtg.	21	212
M602	Final Amplifier Grid Meter	Milliammeter, 0-50 milliamperes, 2" square black bakelite case, flush mtg.	21	212
M603	Modulator Plate Meter	Same as M601		
S601	Filament Switch	Switch, SFST, 10 amp, 250V, toggle	23	81012
S602	Plate Switch	Same as S601		
S603	Standby-Transmit Switch	Switch, DFST, 10 amp, 250V, toggle	23	81013
S604	Interlock Switch	Switch, micro, SFST, 3 amp, 250V	24	F5N2
S605	Speech Amplifier Modulator Filament and Plate Transformer Switch	Switch, SFST, 3 amp, 250V, mounted on R409	25	1311
S606	Phone CW Switch	Switch, toggle, SFST, 5 amp, 250V		
TB601	Terminal Board	2 Terminal, Screw Type	10	1510-A
XF601	Holder for F601	Fuse holder, mounting for type 3AG fuses	19	HKM-3AG
XF602	Holder for F602	Same as XF601		

SECTION VII - APPENDIX

7.6 CHASSIS, CABINET AND PANEL SECTION -- ELECTRICAL PARTS LIST

SUPREME MODEL AF-100 AMATEUR RADIO TRANSMITTER

SYMBOL	NAME OR FUNCTION	DESCRIPTION	MANUFACTURER	IDENTIFICATION
XI601	Socket for 1601	Socket, miniature bayonet type	26	203AH
XI602	Socket for 1602	Same as XI601		
XI603	Socket for 1603	Socket, bayonet type, 5/8" dia. clear plastic dome for NE51 neon lamp	26	51N
XI604	Socket for 1604	Socket, bayonet type, 5/8" dia. amber plastic dome for NE51 neon lamp	26	51N

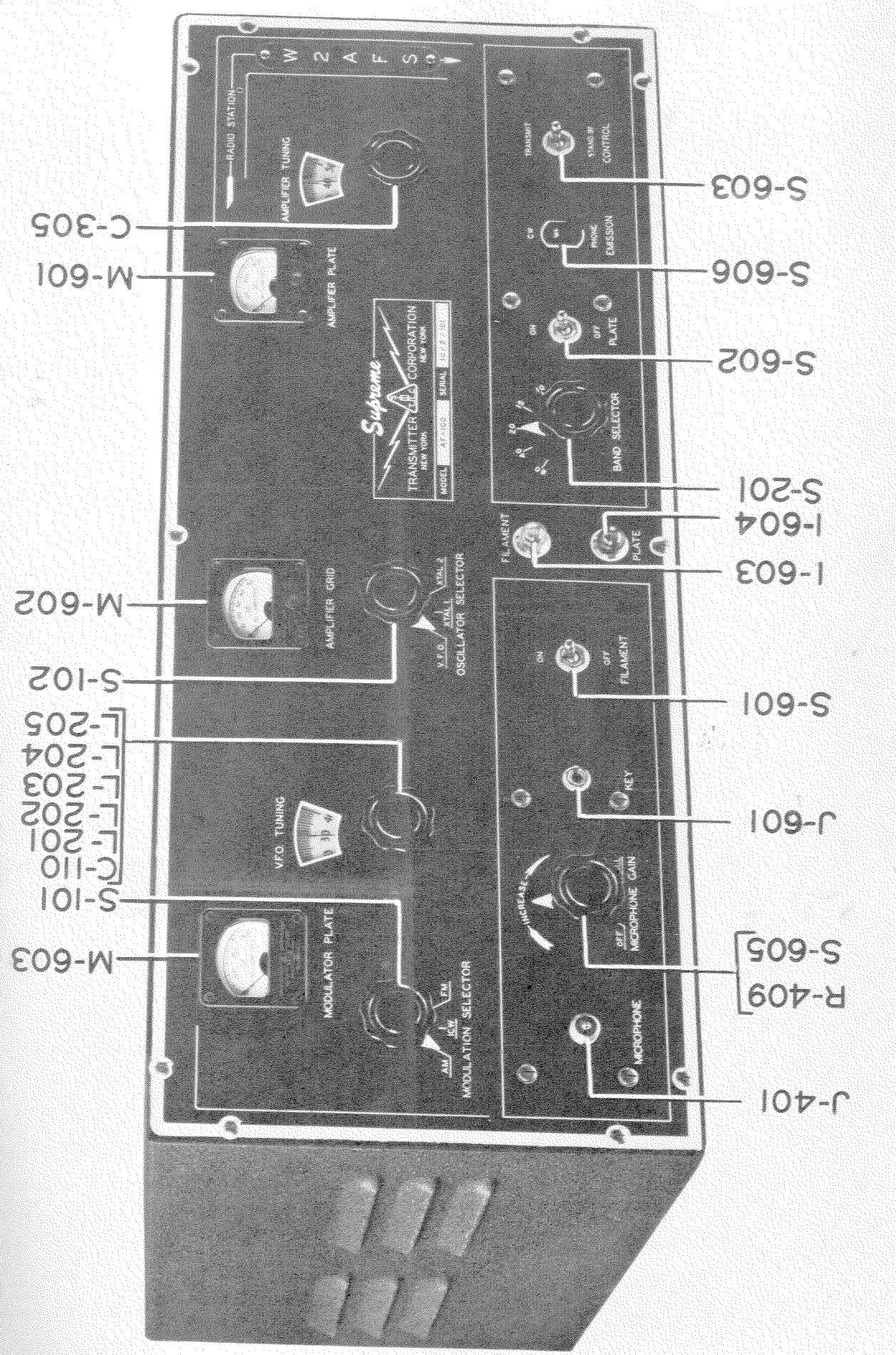


Supreme TRANSMITTER CORPORATION

7.7 LIST OF MANUFACTURERS AND ADDRESSES

DESIGNATION	NAME	ADDRESS
1	Sangamo Electric Co.	Springfield, Illinois
2	Pyramid Electric Co.	Paterson, N. J.
3	Hammarlund Mfg. Co.	New York, New York
4	General Electric Co.	Schenectady, New York
5	James Millen Company	Malden, Massachusetts
6	Supreme Transmitter Corp.	New York, New York
7	International Resistance Co.	Philadelphia, Pa.
8	Centralab	Milwaukee, Wisconsin
9	Radio Corporation of America	Harrison, New Jersey
10	Cinch Mfg. Corp.	Chicago, Illinois
11	Allen-Bradley	Milwaukee, Wisconsin
12	E. F. Johnson Co.	Waseca, Minnesota
13	Barker and Williamson	Upper Darby, Pa.
14	Clarostat Mfg. Co.	Brooklyn, New York
15	Taylor Tubes, Inc.	Chicago, Illinois
16	The National Company, Inc.	Malden, Massachusetts
17	American Phenolic Corp.	Chicago, Illinois
18	Birnbach Radio Co.	New York, New York
19	Bussmann Mfg. Co.	St. Louis, Missouri
20	Advance Electric	Los Angeles, California
21	DeJur Amsco Corp.	Long Island City, New York
22	Utah Radio Products	Chicago, Illinois
23	Arrow-Hart & Hegeman Electric Co.	Hartford, Connecticut
24	Micro Switch	Freeport, Illinois
25	Pass & Seymour	Syracuse, New York
26	Drake Mfg. Co.	Chicago, Illinois

FIG. #2 FRONT PANEL VIEW



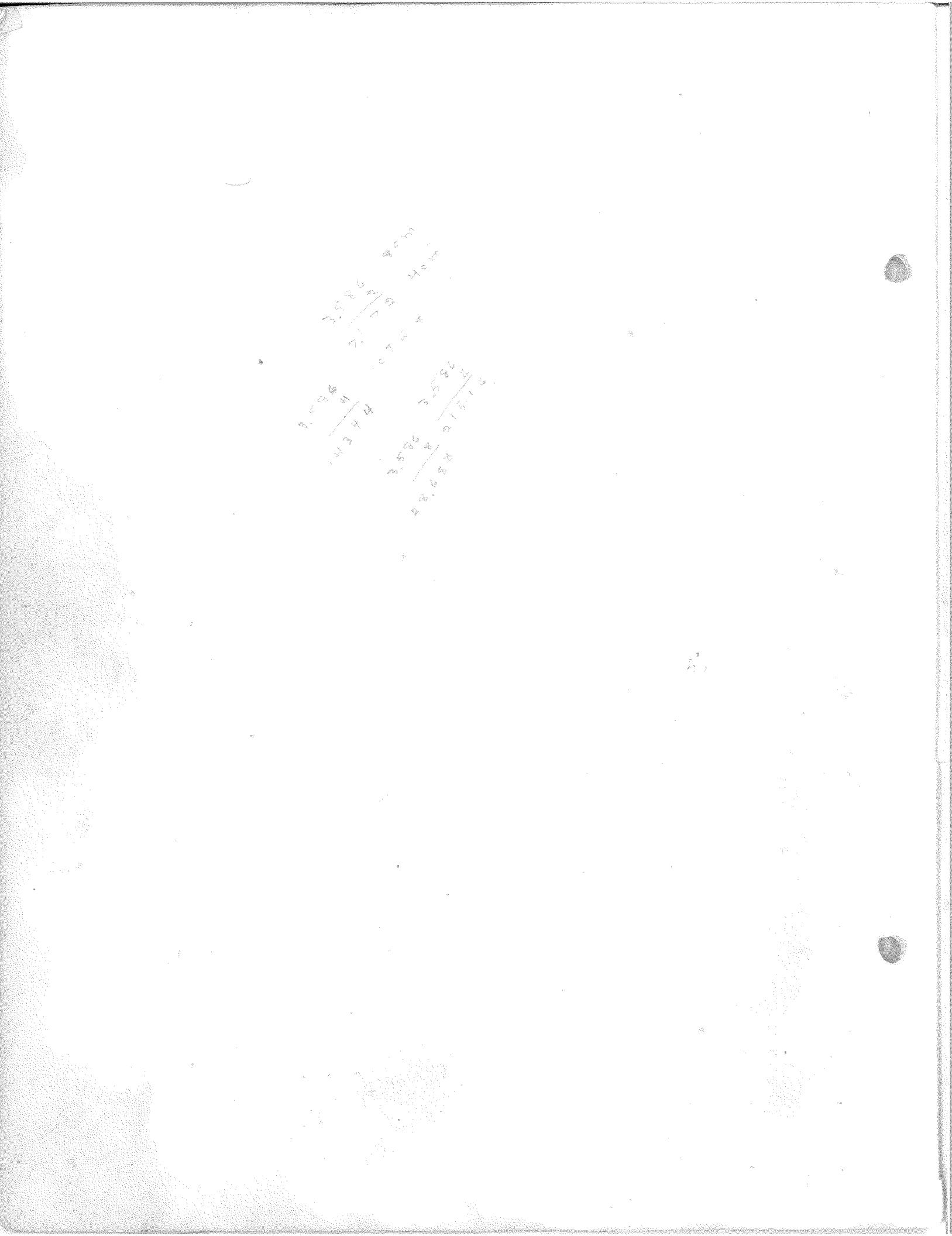
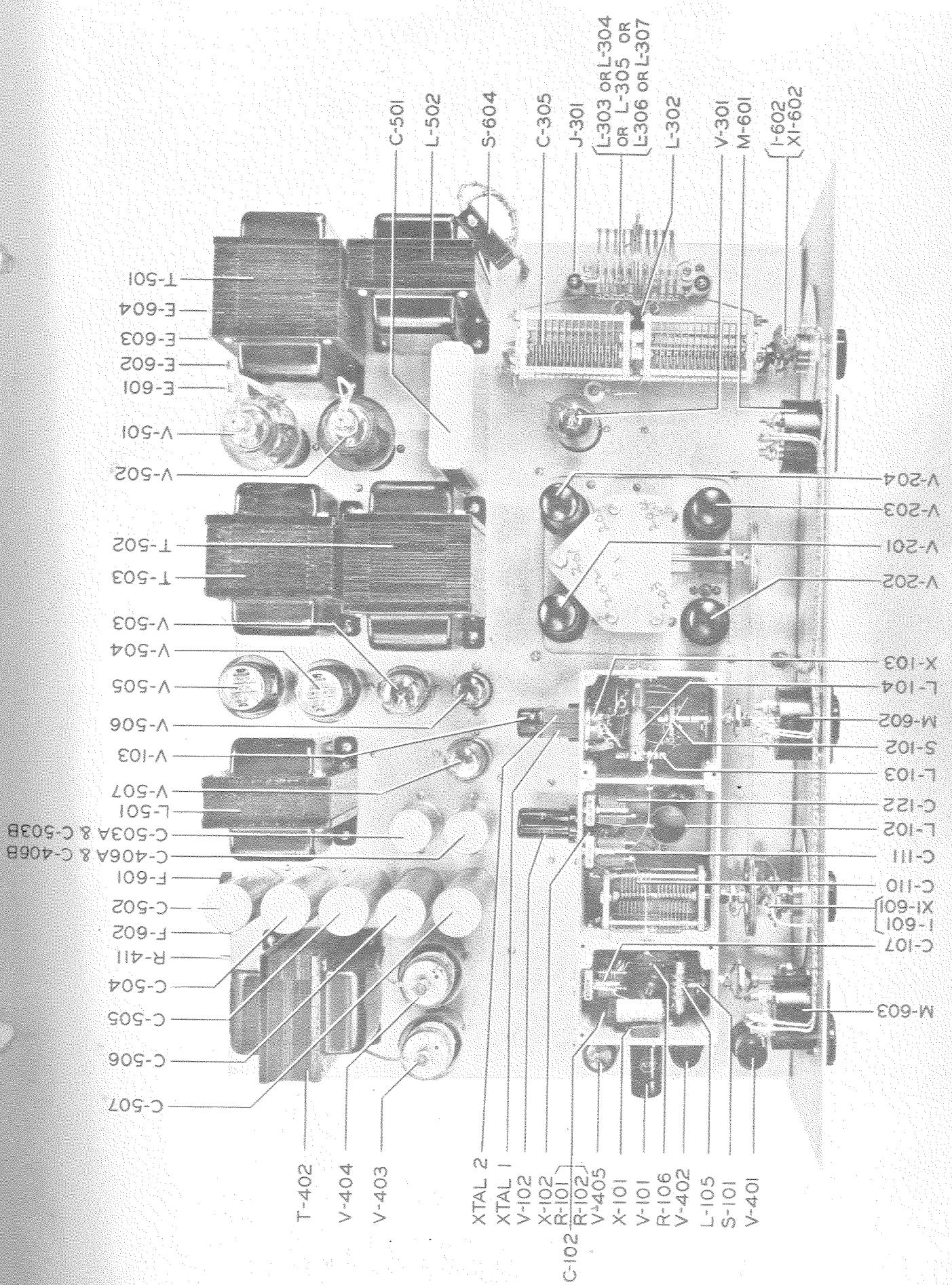


FIG. #3 TOP VIEW



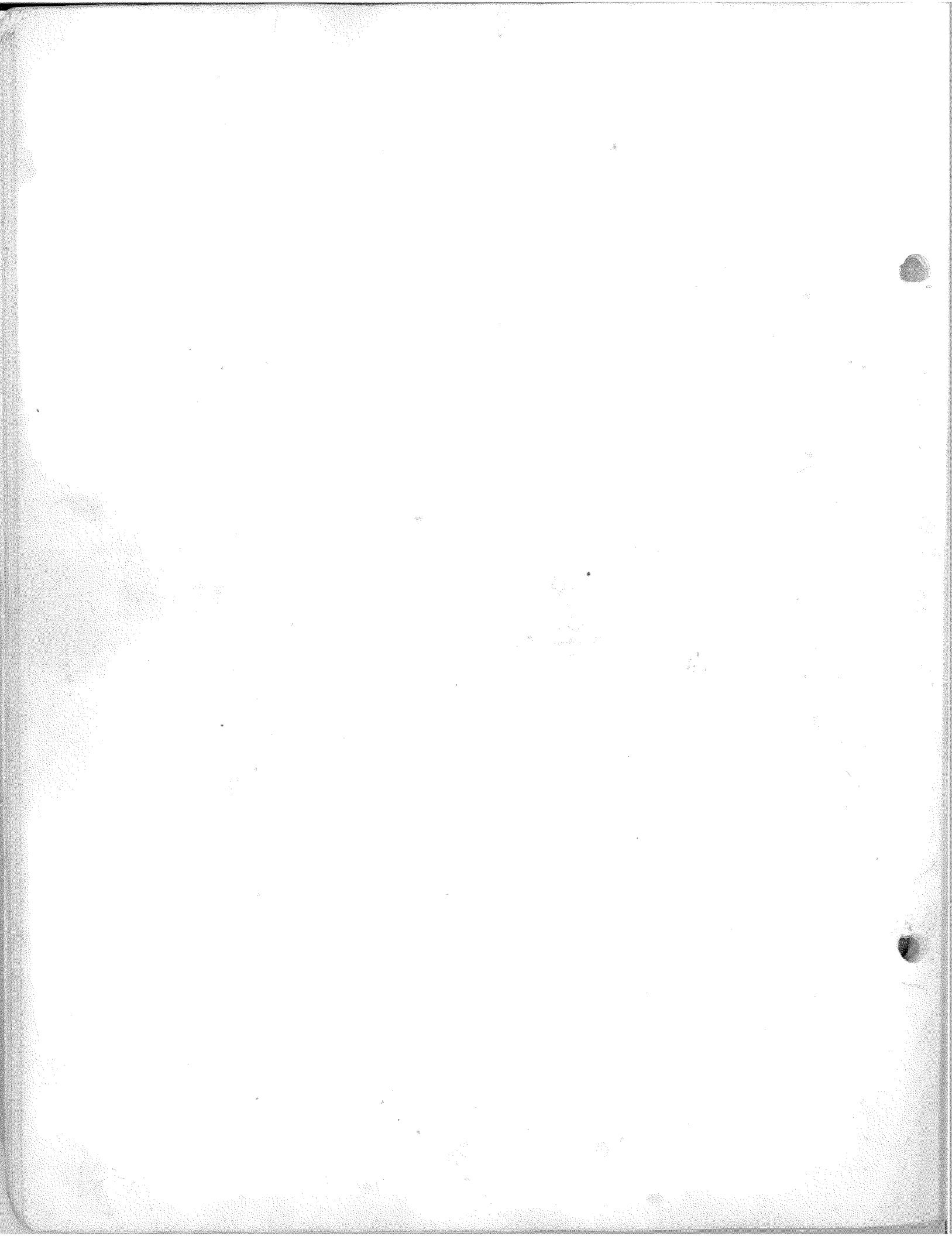
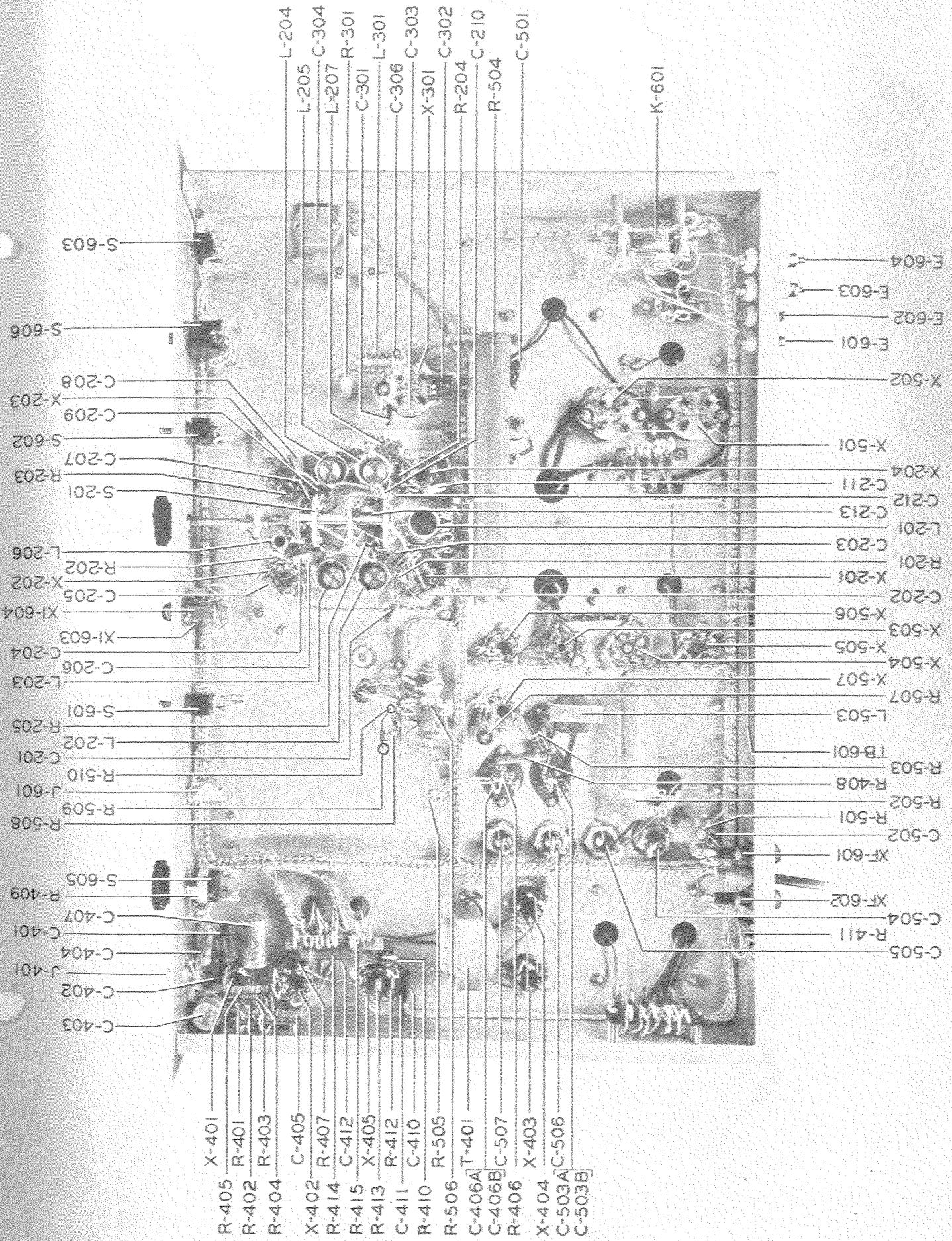
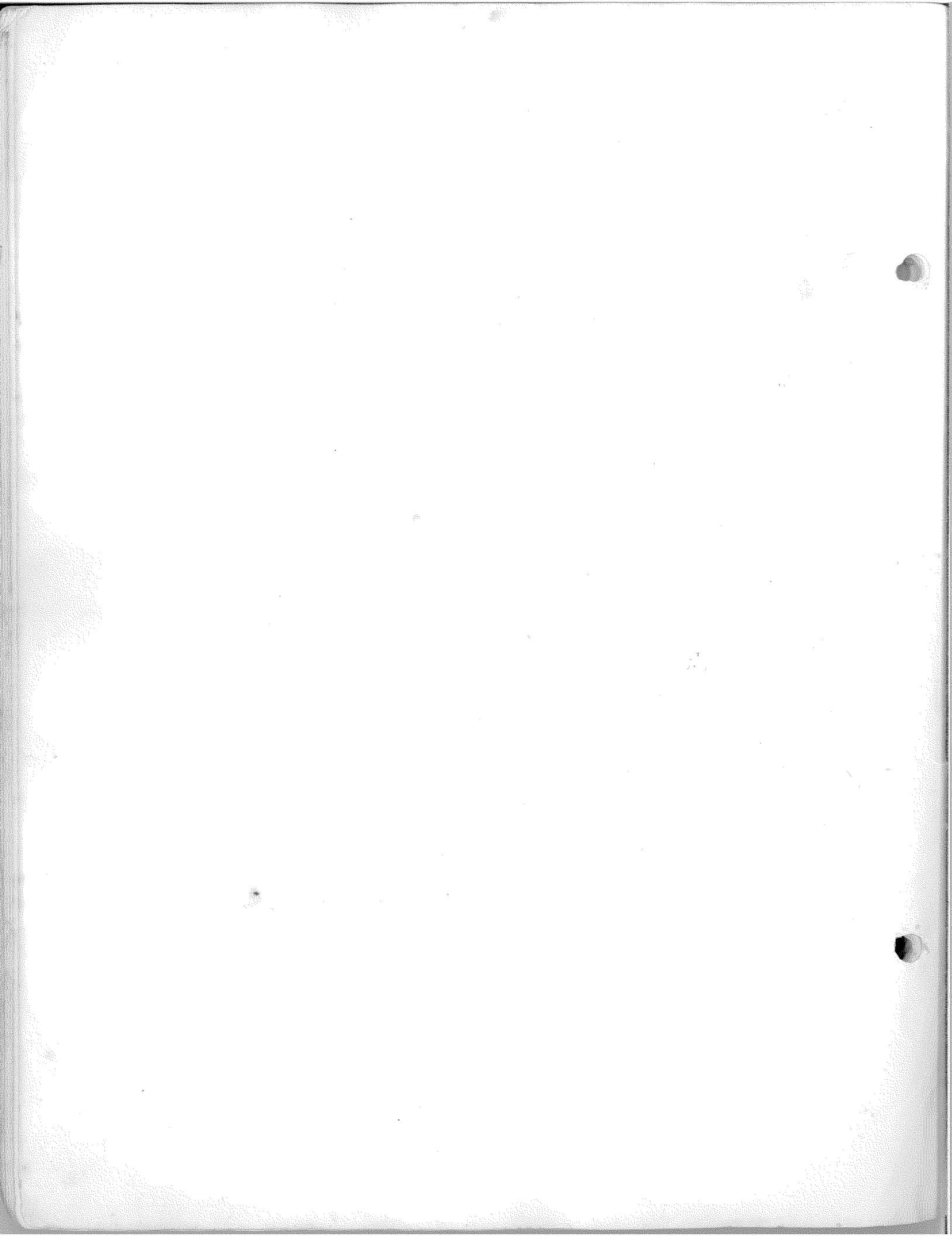


FIG. #4 BOTTOM VIEW







Supreme TRANSMITTER CORPORATION

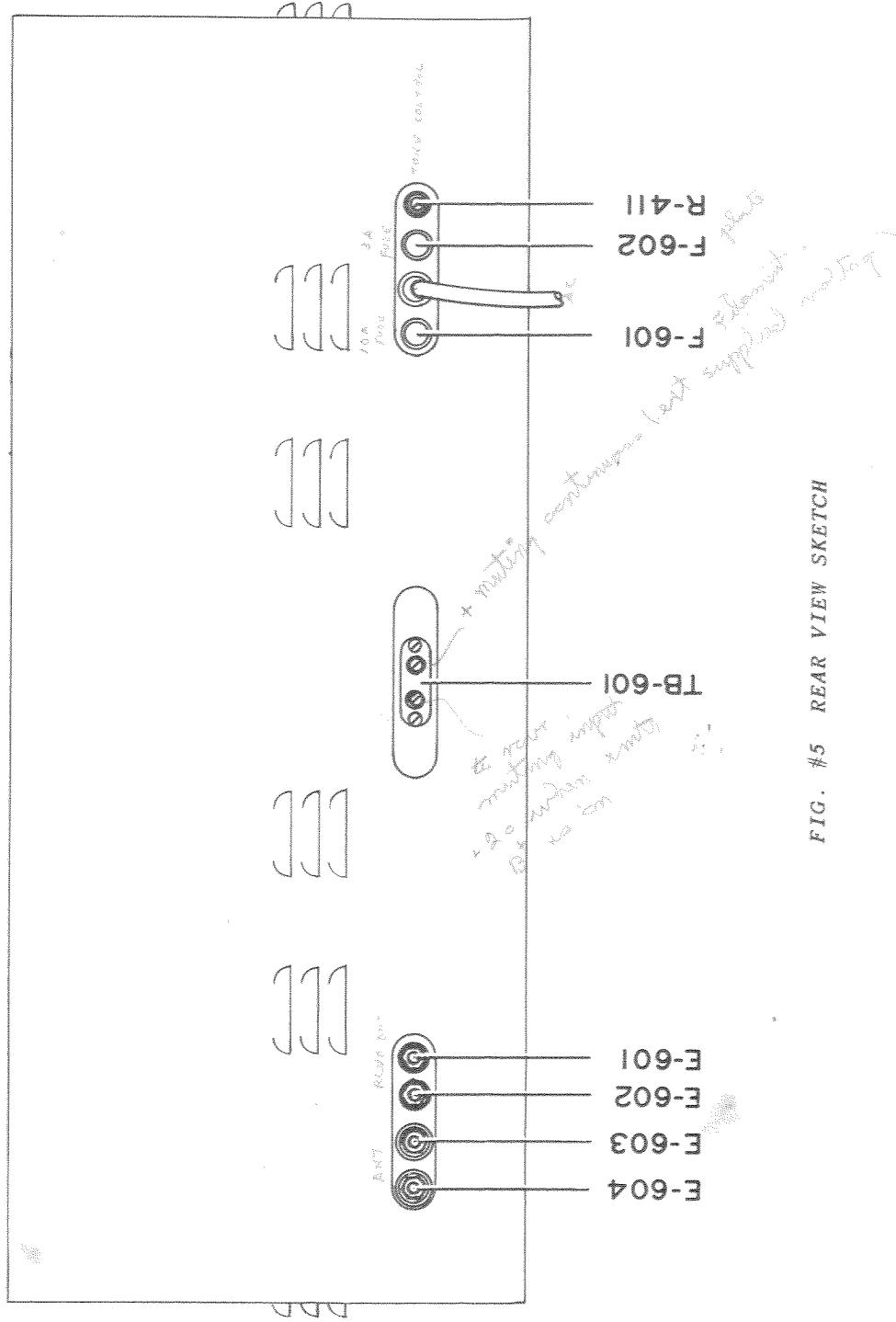
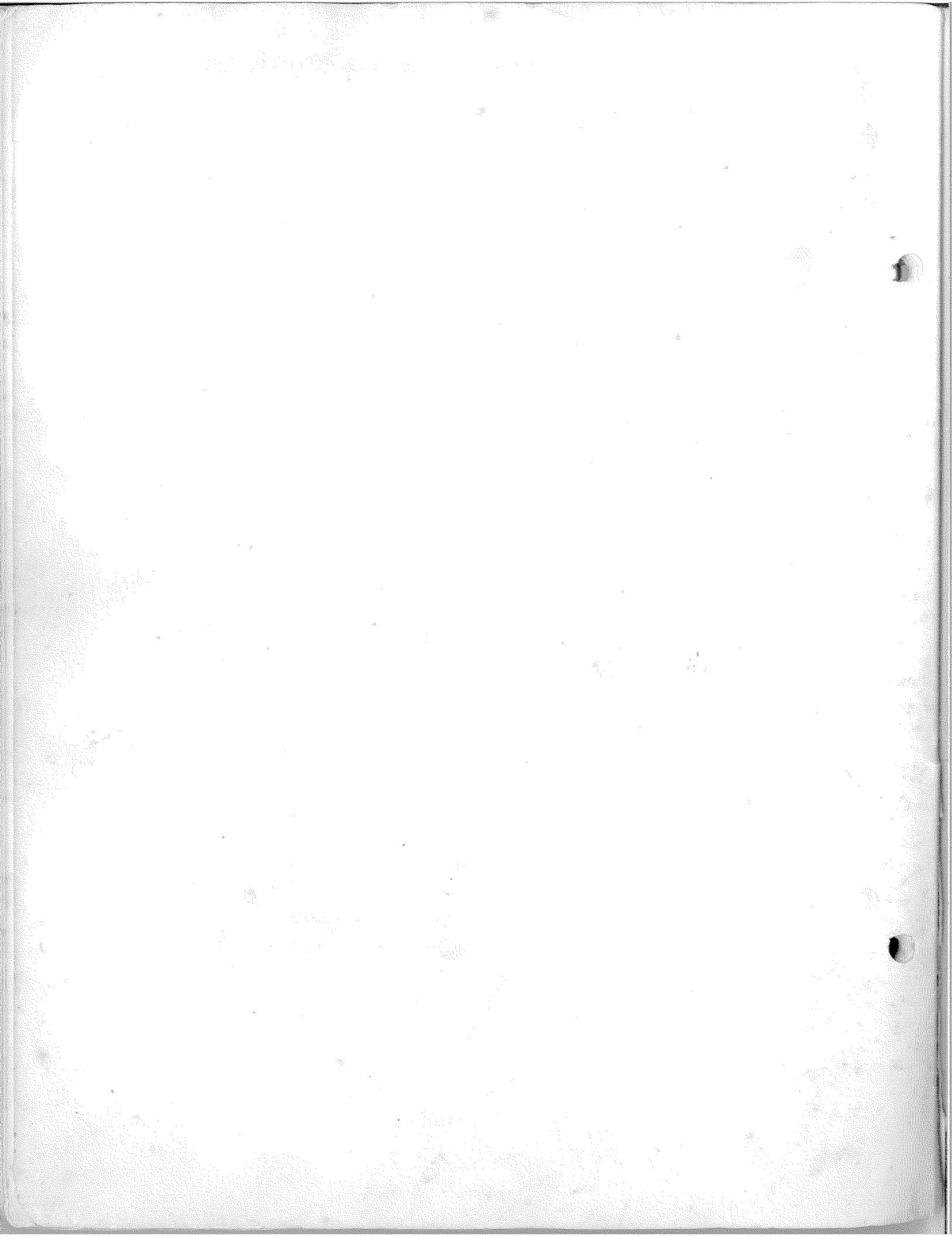


FIG. #5 REAR VIEW SKETCH



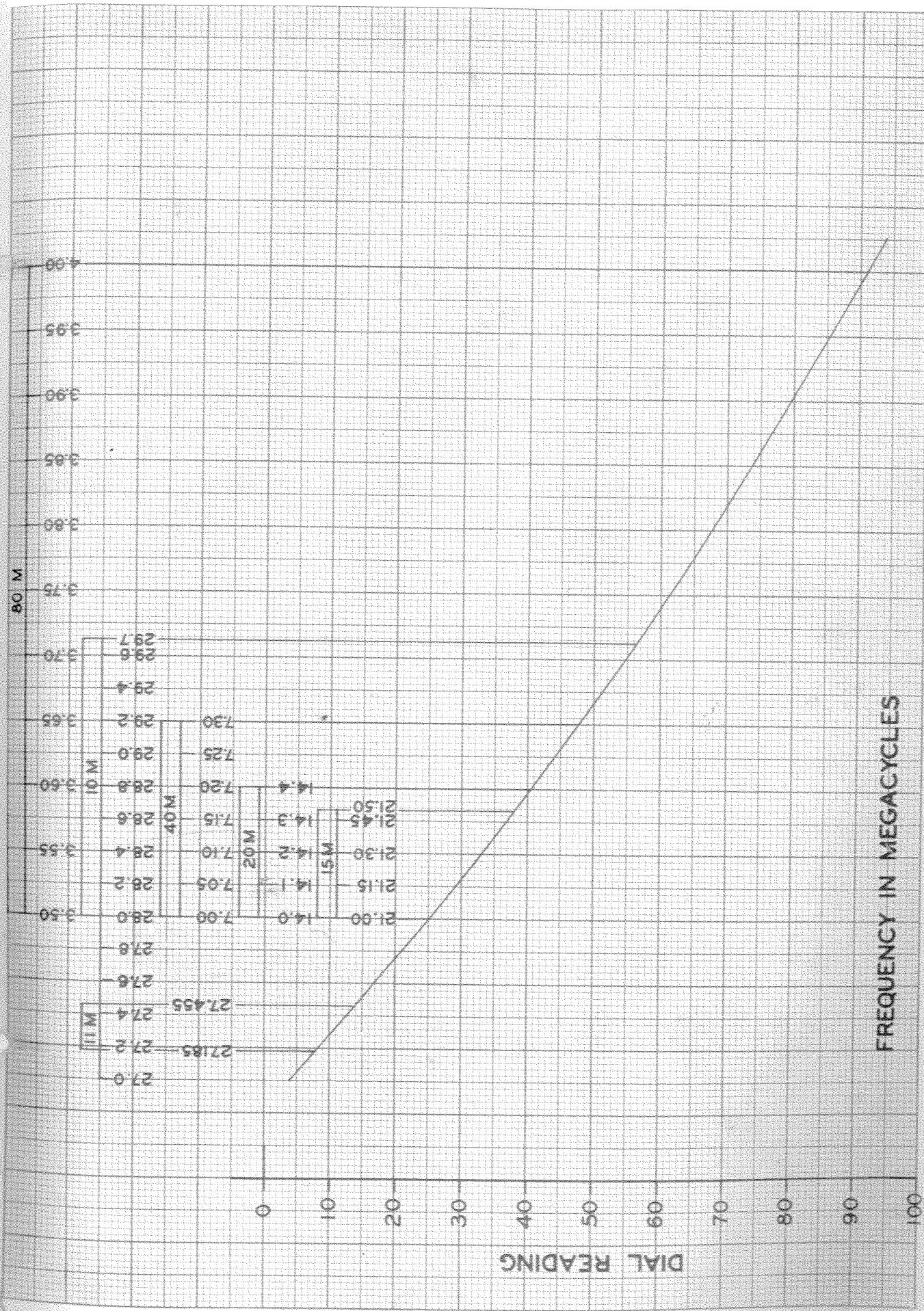


FIG. #6 OSCILLATOR DIAL READING VERSUS FREQUENCY CHART

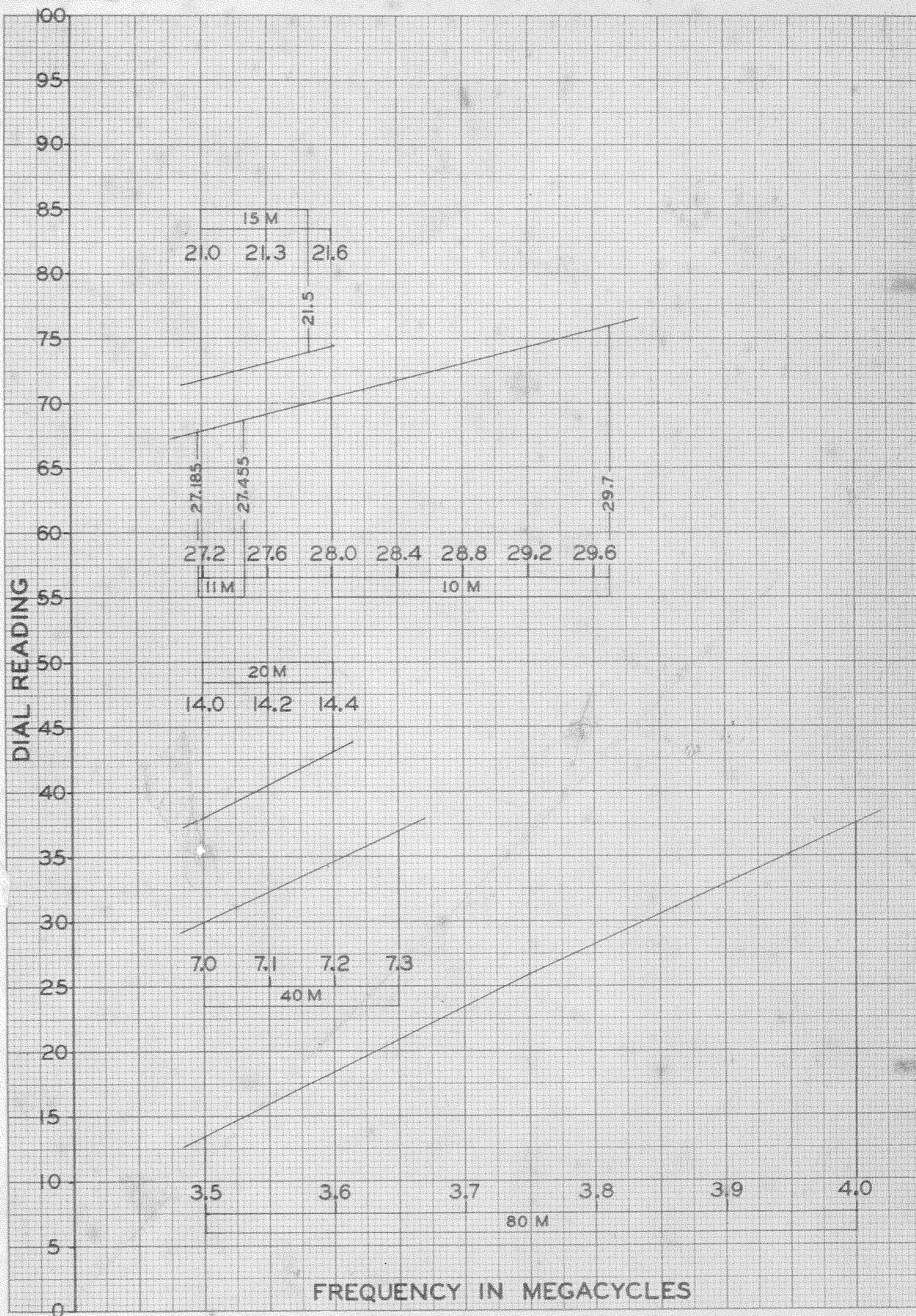


FIG. #7 FINAL AMPLIFIER DIAL READING VERSUS FREQUENCY CHART