

### SECTION 7 LINE DRAWINGS

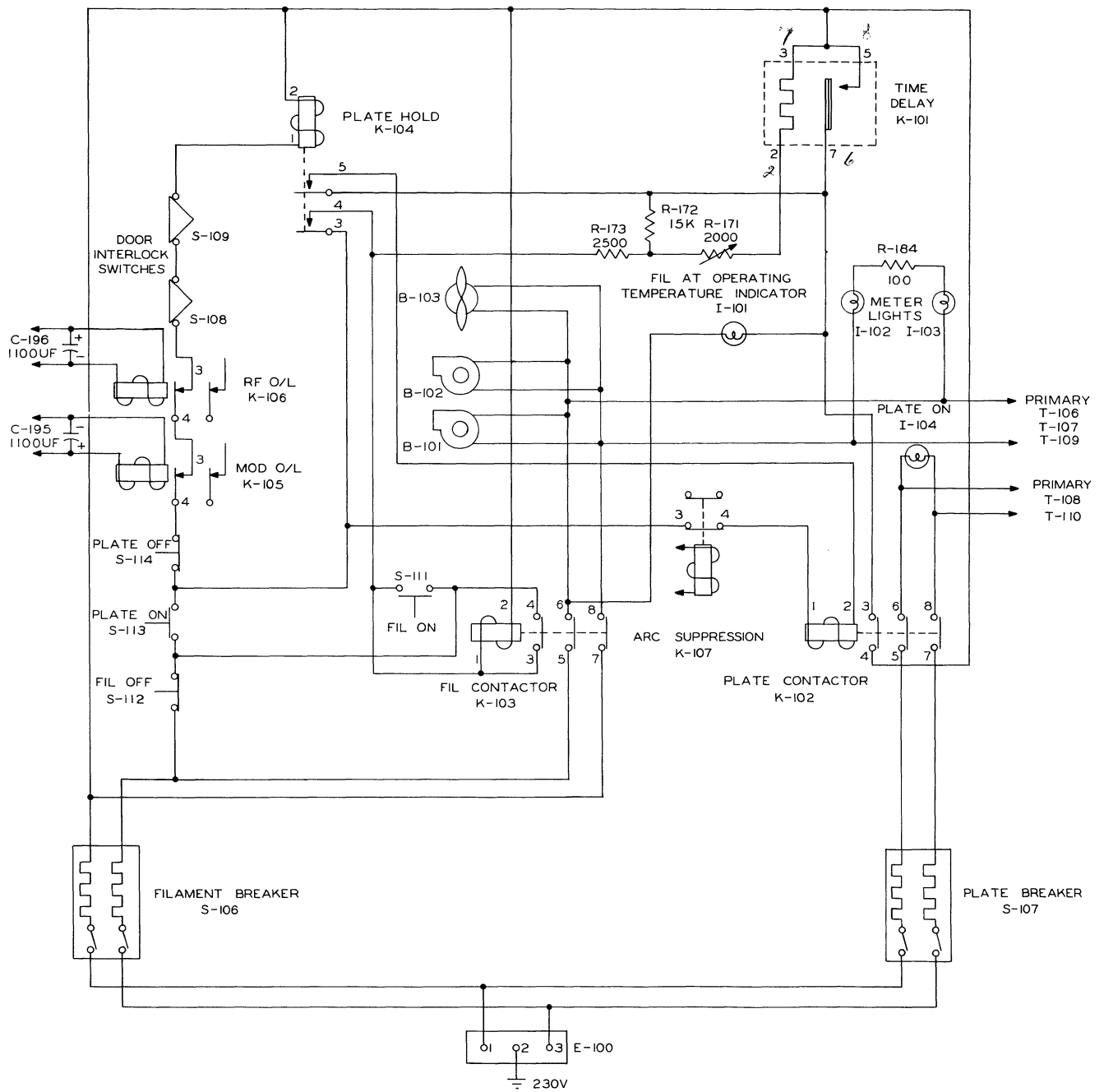


Figure 7-1. Primary Control Circuit Simplified Schematic

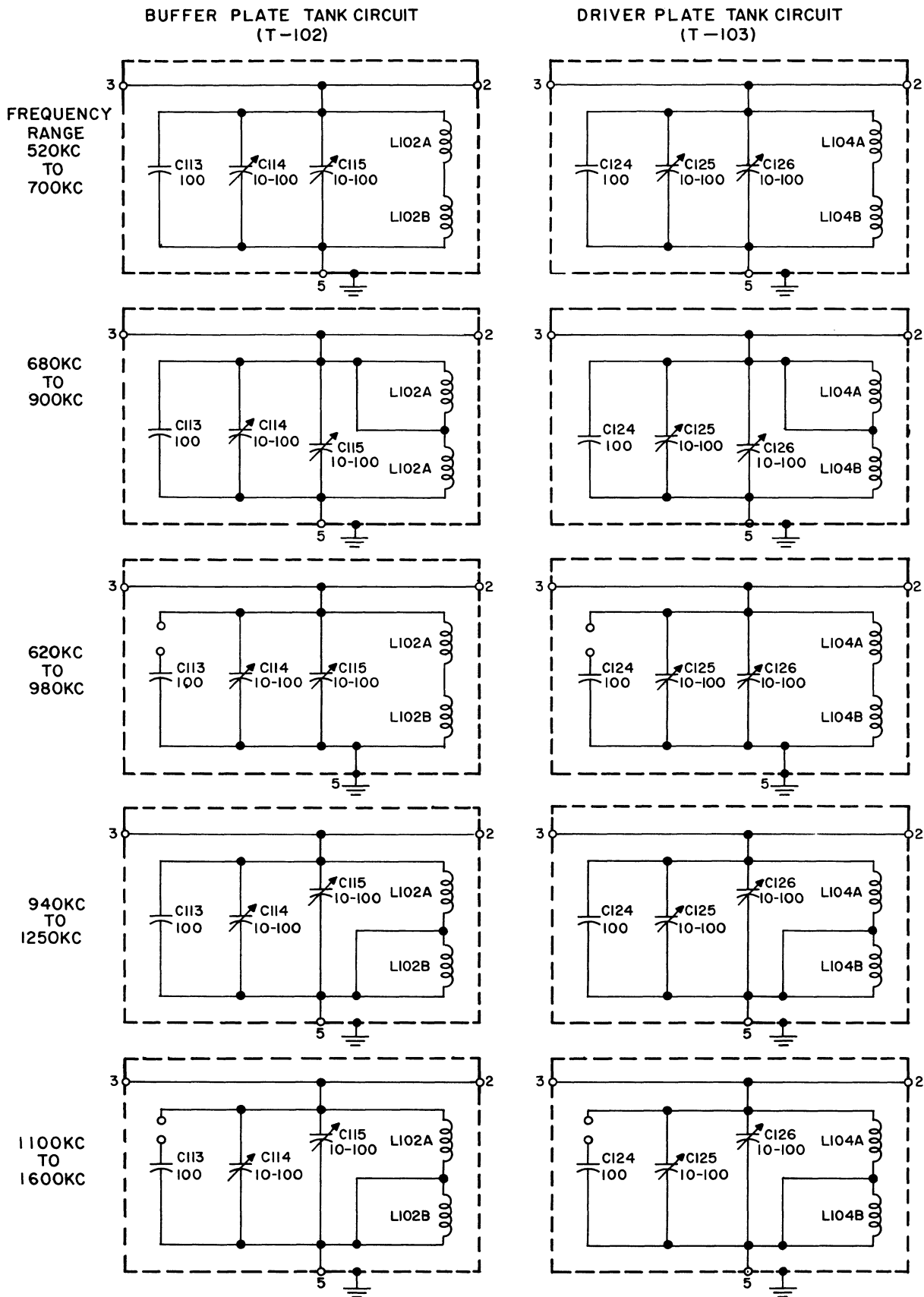
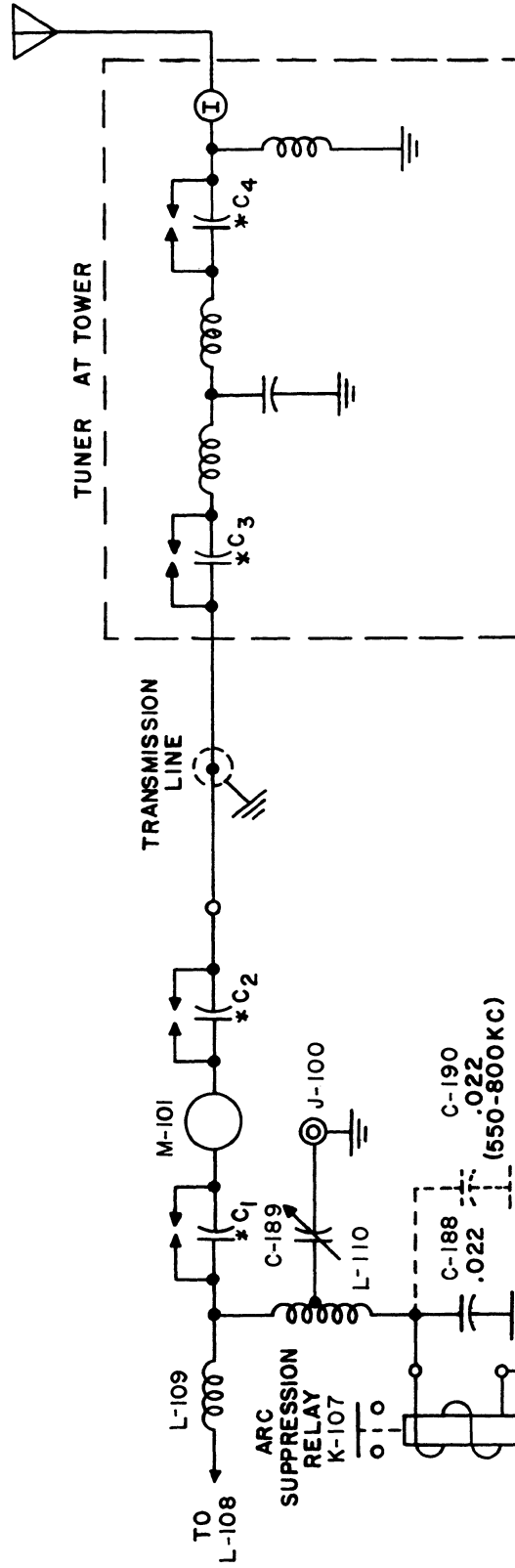


Figure 7-2. T-102 and T-103 Internal Connections



\* C<sub>1</sub>, C<sub>2</sub>, C<sub>3</sub>, C<sub>4</sub> - POSITIONS AT WHICH C-192/C-193 AND SPARK GAP CAN BE INSERTED. USE ONE POSITION AND JUMPER ACROSS OTHERS. C-192/C-193 ARE .0111 F EACH. TRANSMITTER USUALLY SHIPPED WITH C-192/C-193 AT C<sub>2</sub>.

Figure 7-3. Arc-Suppression Circuit Simplified Schematic

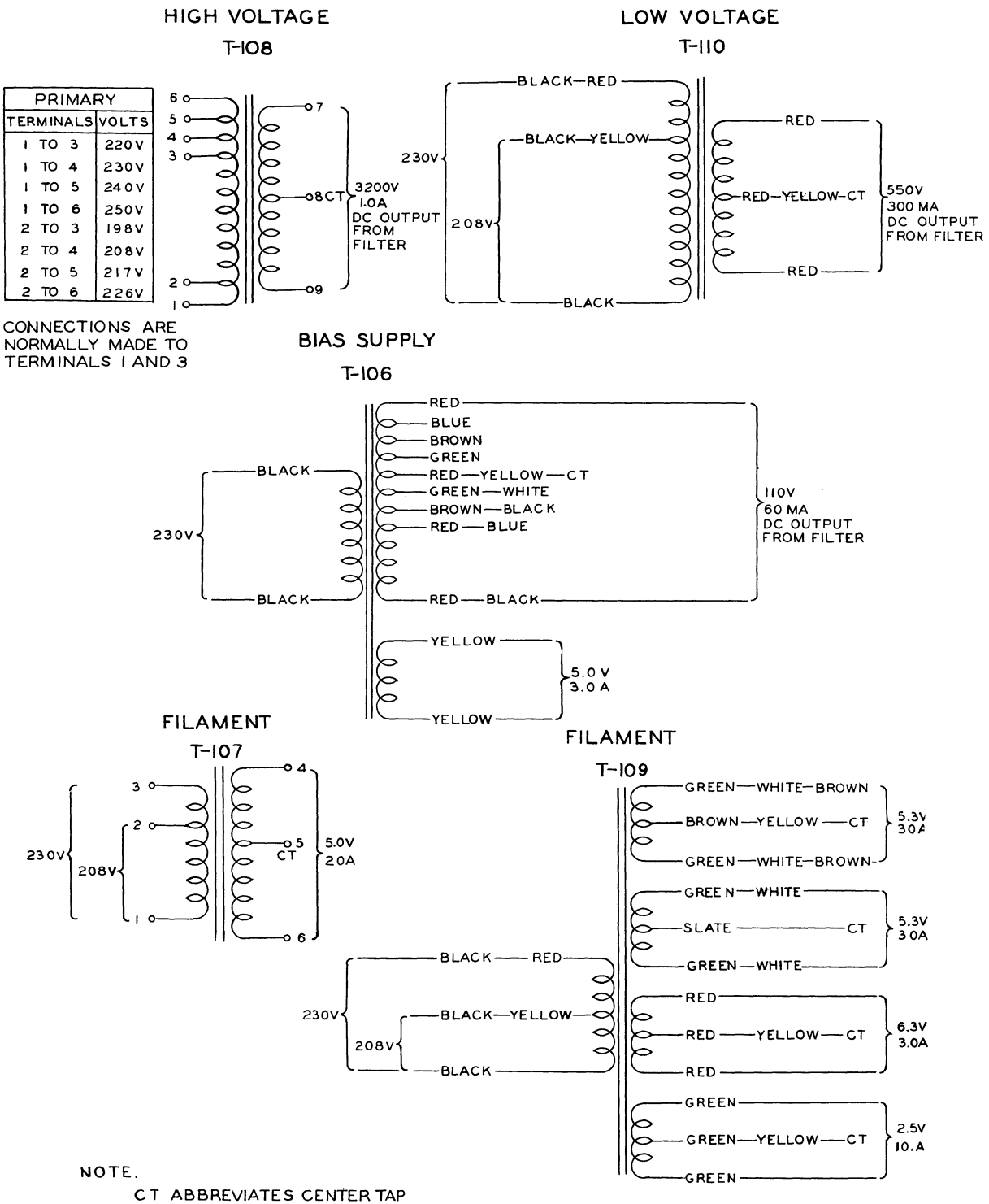
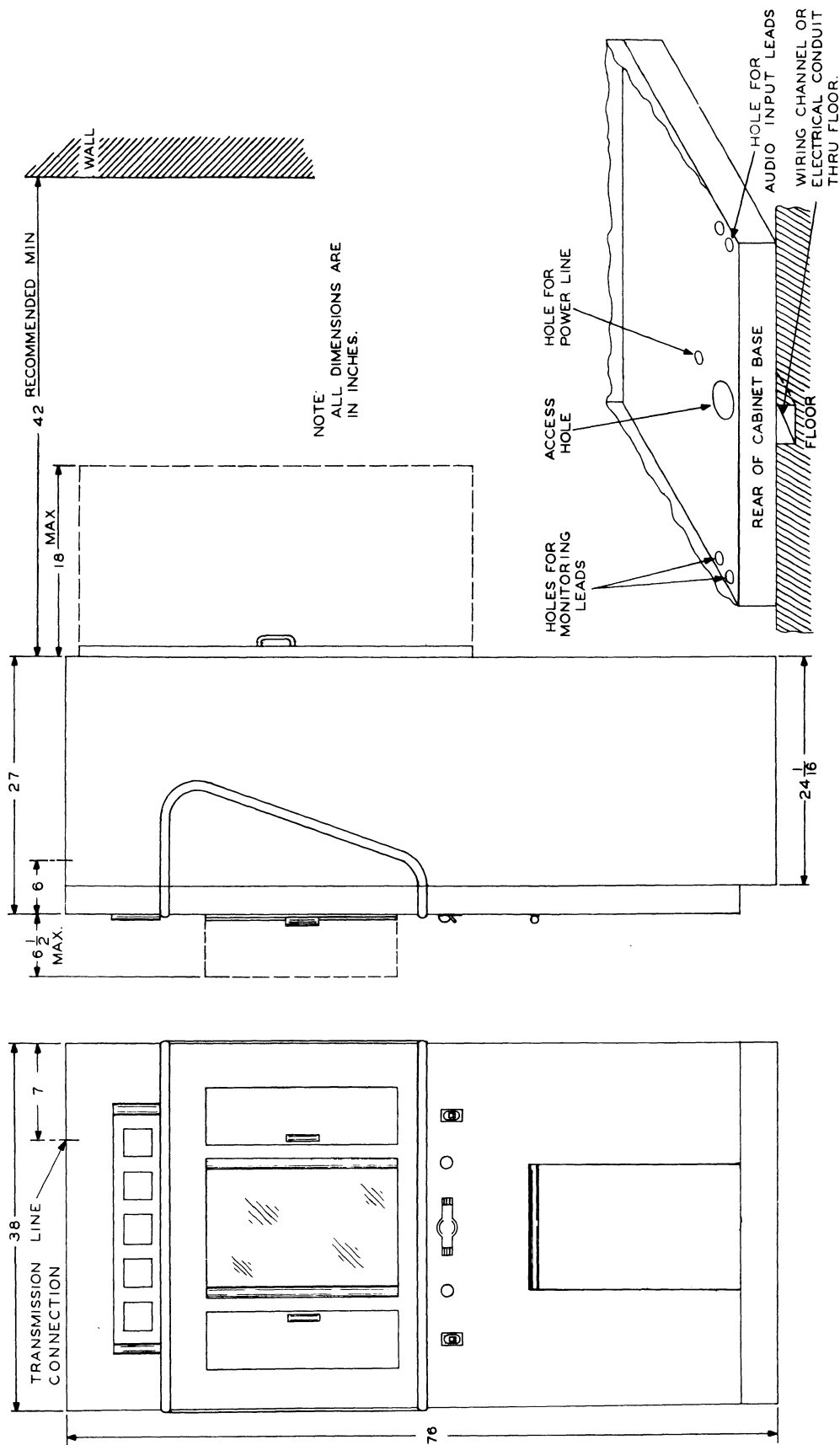


Figure 7-4. Transformer Details



CONNECTION	RECOMMENDED WIRE	WIRE SIZES
STATION POWER LINE SWITCH TO TRANSMITTER INPUT (208/230V SINGLE PHASE 50/60 CPS SOURCE FUSED AT WALL CUT OUT BOX FOR 30 AMPERES)	TWO NO. 6 WIRES	ONE RG-8/U COAXIAL CABLE
GROUND FEED (FURTHER BONDING OF CABINET TO BUILDING GROUND WOULD BE DESIRABLE)	ONE NO. 4 BARE WIRE	ONE 2 WIRE SHIELDED LEAD
FREQUENCY MONITOR FEED	ONE RG-8/U COAXIAL CABLE	ONE 2 WIRE SHIELDED LEAD
MODULATION MONITOR FEED	ONE RG-8/U COAXIAL CABLE	ONE 2 WIRE SHIELDED LEAD
AUDIO MONITOR FEED	ONE 2 WIRE SHIELDED LEAD	7/8" RIGID 50 OR 72 OHM COAXIAL CABLE

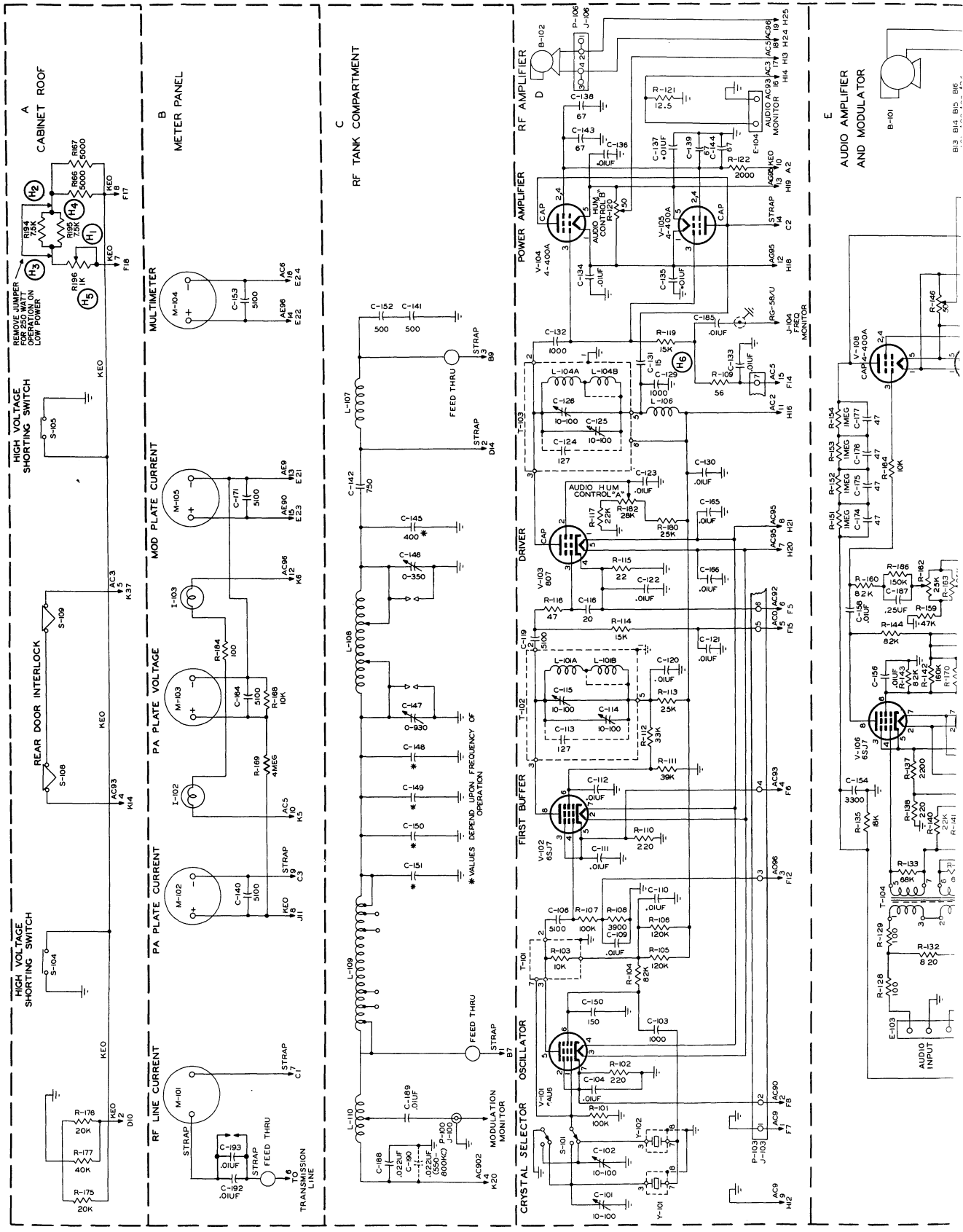
Figure 7-5. Typical Installation Diagram











**A**  
CABINET ROOF

**B**  
METER PANEL

**C**  
RF TANK COMPARTMENT

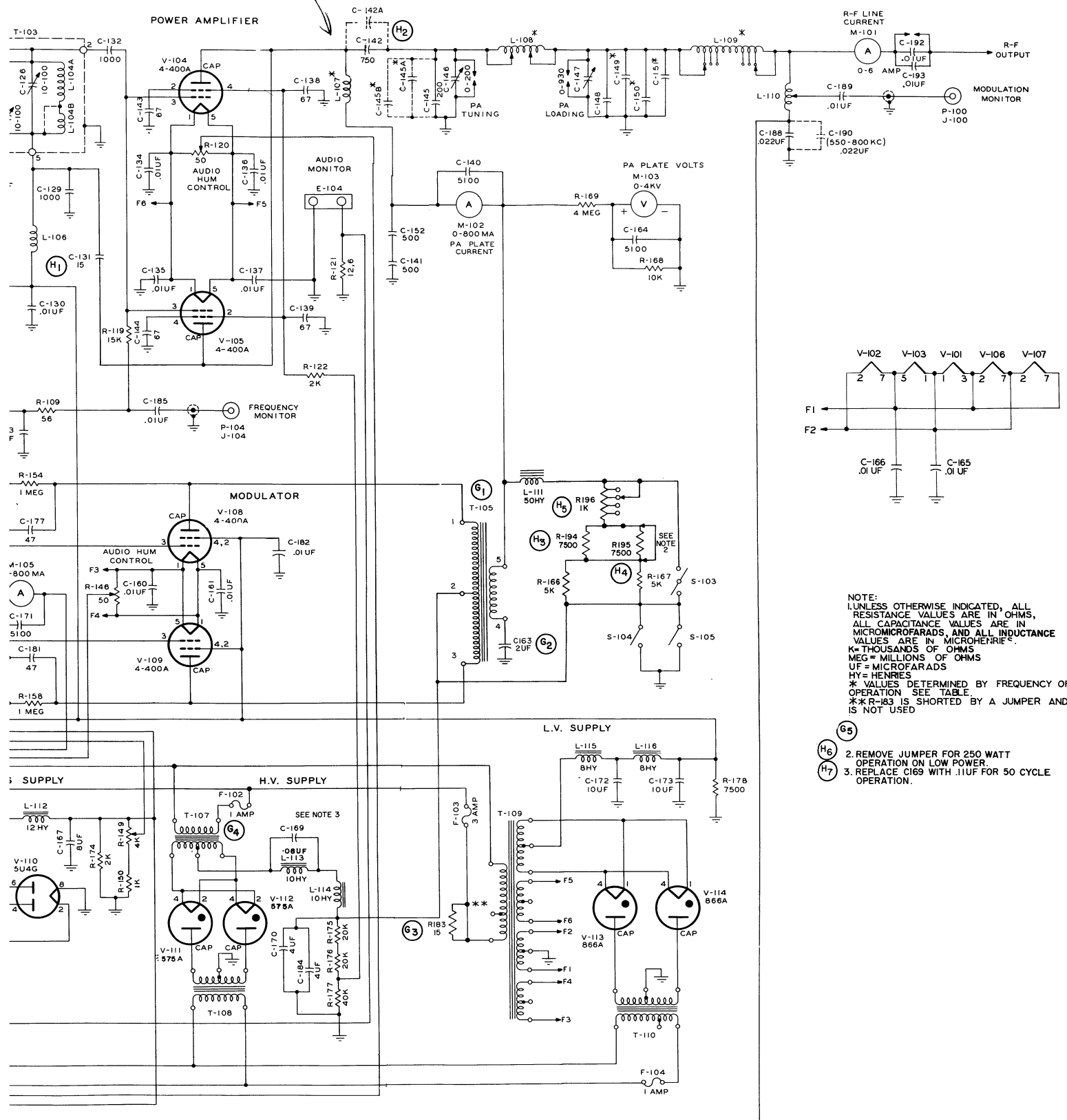
**D**  
POWER AMPLIFIER

**E**  
AUDIO AMPLIFIER AND MODULATOR

REMOVE JUMPER FOR 250 WATT IN LOW POWER

\* VALUES DEPEND UPON FREQUENCY OF OPERATION

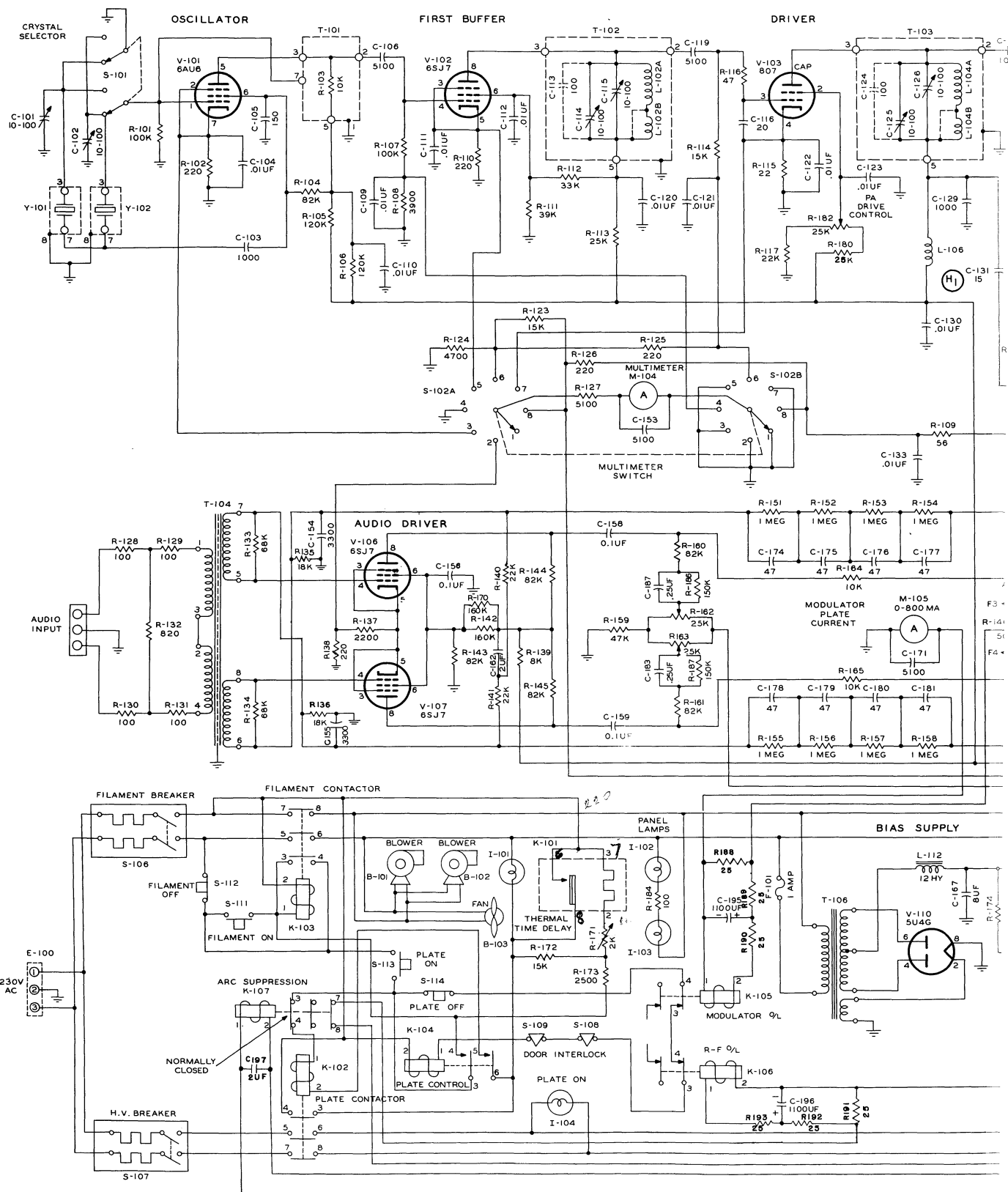
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NOTE:  
 1. UNLESS OTHERWISE INDICATED, ALL RESISTANCE VALUES ARE IN OHMS, ALL CAPACITANCE VALUES ARE IN MICROMICROFARADS, AND ALL INDUCTANCE VALUES ARE IN MICROHENRIES.  
 K = THOUSANDS OF OHMS  
 M = MILLIONS OF OHMS  
 UF = MICROFARADS  
 HY = HENRIES  
 \* VALUES DETERMINED BY FREQUENCY OF OPERATION SEE TABLE.  
 \*\* R-183 IS SHORTED BY A JUMPER AND IS NOT USED

- (G5)
- (H6) 2. REMOVE JUMPER FOR 250 WATT OPERATION ON LOW POWER.
- (H7) 3. REPLACE C169 WITH .11UF FOR 50 CYCLE OPERATION.

Figure 7-7. Main Schematic



# ELECTRICAL WIRE CODE

## EXAMPLES

UNSHIELDED WIRE, MIL TYPE B #22 AWG, WHITE WITH RED AND GREEN TRACERS:

  D    
Type of Wire
  A    
Size of Wire
  9    
Color of Body
  25    
Color of Tracers
—
  4-1/4    
Length of Wire in Inches  
(Includes Stripping & Tinning)

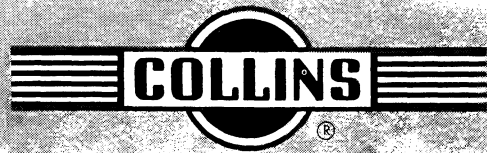
SHIELDED WIRE (SINGLE), MIL TYPE C, #15 AWG, WHITE WITH RED AND GREEN TRACERS:

  R    
Type of Wire
  D    
Size of Wire
  S    
Shielded
  9    
Color of Body
  25    
Color of Tracers
—
  4-1/4    
Length of Wire in Inches  
(Includes Stripping & Tinning)

SHIELDED WIRE (MULTIPLE), MIL TYPE B, #22 AWG, WHITE, AND WHITE WITH RED TRACER:

  D    
Type of Wire
  A    
Size of Wire
  S    
Shielded
  (9)    
First Conductor
  (92)    
Second Conductor
—
  4-1/4    
Length of Wire in Inches  
(Includes Stripping & Tinning)

TYPE OF WIRE CODE			SIZE OF WIRE CODE		COLOR CODE	
LETTER	TYPE OF WIRE	FAMILY USUALLY FOUND IN	LETTER	SIZE	NUMBER OR LETTER	COLOR
A	Cotton Braid Over Plastic (Formerly AN-J-C-48)	440 Plain 443 Shielded	A	#22 AWG	0	Black
B	Busbar, Round Tinned	421	B	#20	1	Brown
C	MIL-W-16878 Type B (#20 and Larger) (600 Volts)	439	C	#18	2	Red
D	Miniature Wire, MIL-W-16878 Type B (#22 & Smaller)	439-7000 Series	D	#16	3	Orange
E	Extra Flexible Varnished Cambric	423	E	#14	4	Yellow
F	Extra Flexible Varnished Cambric	423	F	#12	5	Green
G			G	#10	6	Blue
H	Kel-F (Monochloro-trifluoroethylene)	422	H	#8	7	Violet
J			J	#6	8	Gray (Slate)
K	Neon Sign Cable (15,000 Volts)	423 0004 00	K	#4	9	White
L	Silicone	425 0942 00	L	#2	a	Clear
M			M	#1	b	Tan
N	Single Conductor Stranded (Not Rubber Covered)	422	N	#0	c	Pink
P	Single Conductor Stranded (Rubber Covered)	423	P	#00	d	Maroon
Q			Q	#000	e	Light Green
R	MIL-W-16878 Type C (1000 Volts)	439 1000 Series	R	#0000	f	Light Blue
T	Teflon, MIL-W-16878 Type E (600 Volts)	439 4000 Series	T	#28		
V	MIL-W-16878 Type D (3000 Volts)	439 3000 Series	V	#26		
W	Teflon, MIL-W-16878 Type EE (1000 Volts)	439 0000 Series	W	#24		
X			X	#19		
Y			Y	#30		
Z	Acetate Yarn Telephone Type	428	Z			



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**COLLINS RADIO COMPANY**