

REPAIR PARTS LIST

LEGEND	DESCRIPTION	DUKANE PART NUMBER
	Cap, plug	181-37
	Jewel, red	420-30
	Knob, w/insert	440-165
	Lamp, #47	456-1
	Meter	485-2012
	Pilot lamp socket	566-6
	" " collar	566-8
	" " nut	566-7
	Plug, male; 12 terminals	570-178
	Resistor, 910 ohms, 1/2 watt	600-0073-911
	Switch, 11-position, 2 sections	680-180

190 1668

NO. REQ'D.	USED ON
	1A831

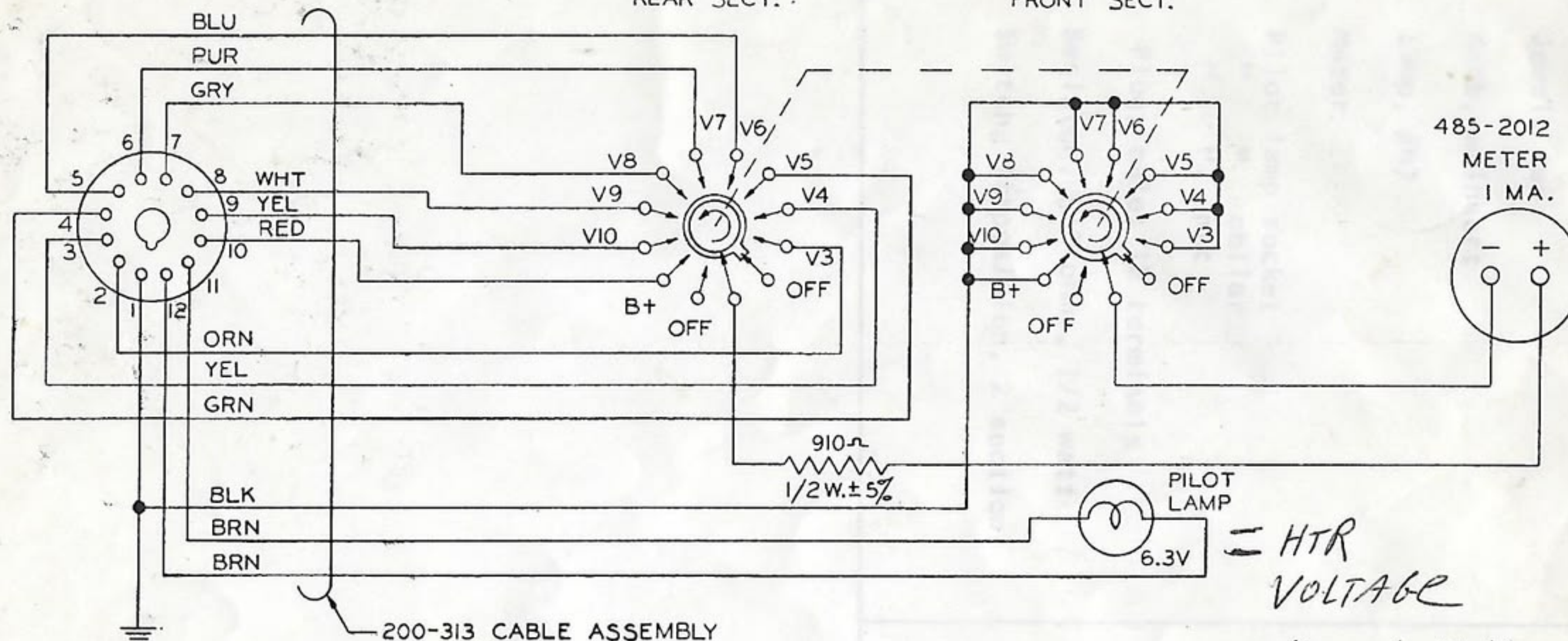
NOTE: SWITCH SHOWN IN "OFF"
POSITION, EXTREME CLOCKWISE
POSITION AS VIEWED FROM
REAR.

680-180
SWITCH

REAR SECT.

FRONT SECT.

570-178
PLUG



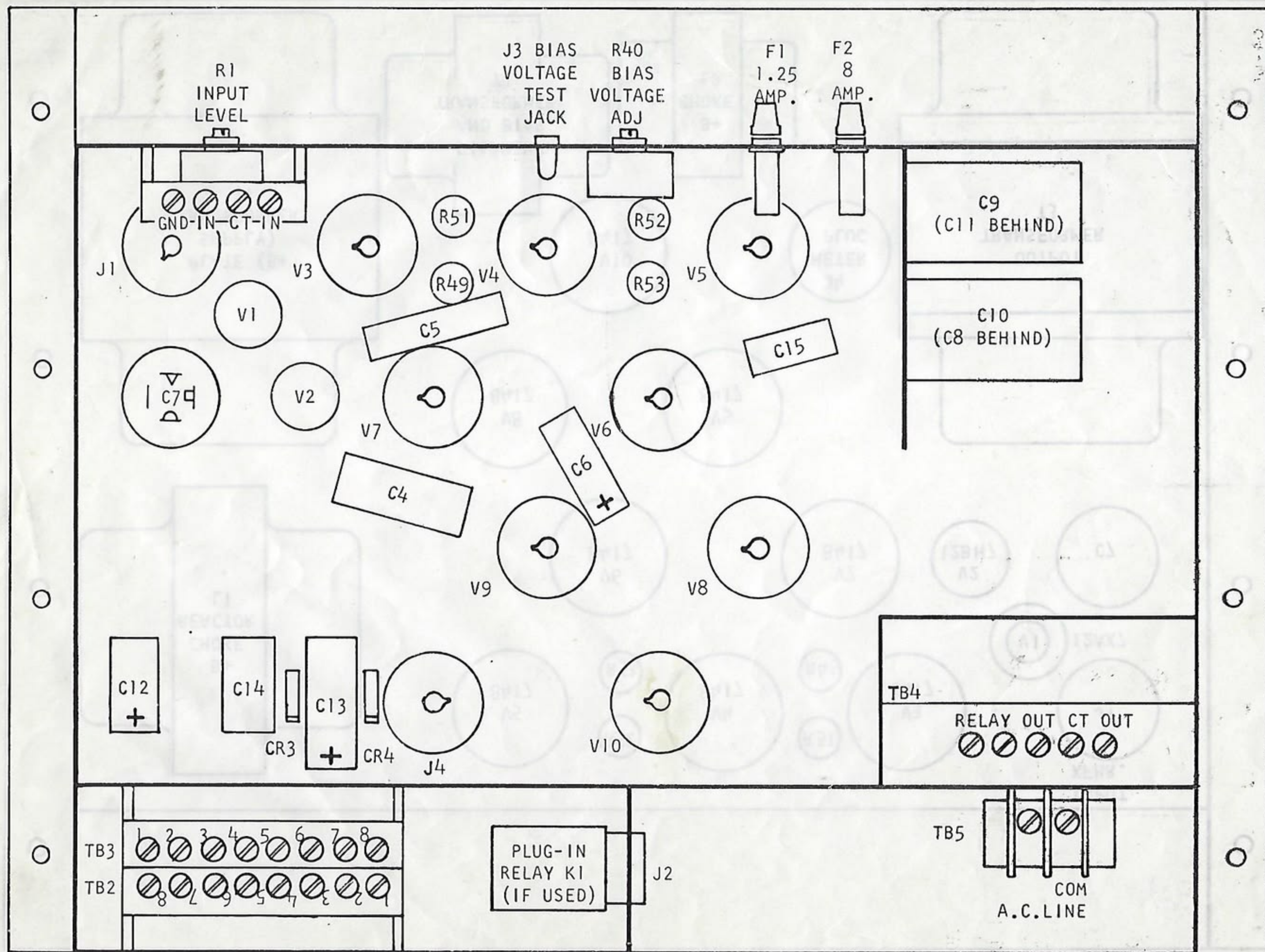
*HTR
VOLTAGE*

M10 + M11

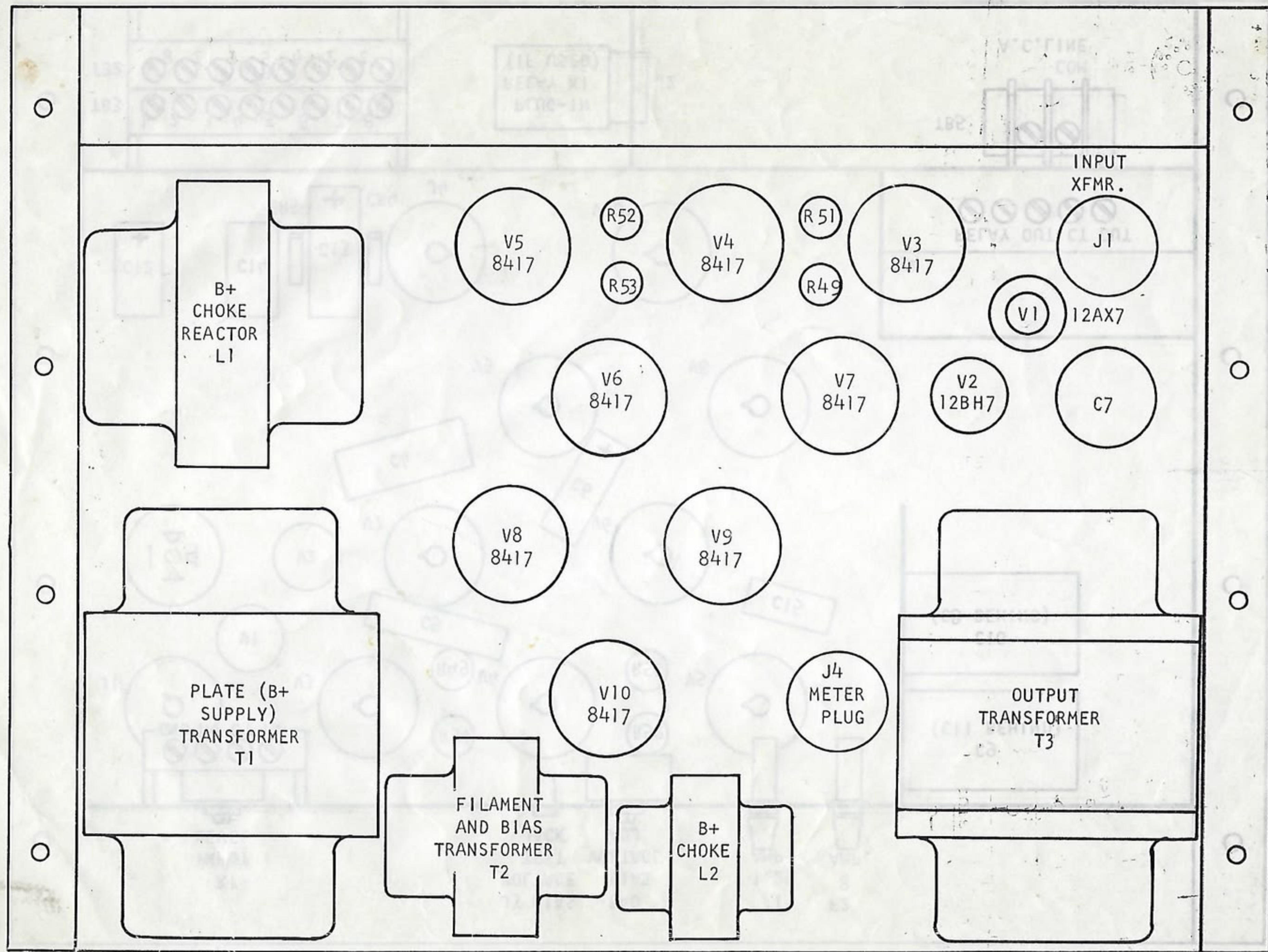
V3	MEASURES	CATHODE	CURRENT	OF	V3
V4	"	"	"	"	V4
V5	"	"	"	"	V5
V6	"	"	"	"	V6
V7	"	"	"	"	V7
V8	"	"	"	"	V8
V9	"	"	"	"	V9
V10	"	"	"	"	V10

MATERIAL		FINISH		SCALE <i>#</i>		DATE 12-9-68	
UNLESS OTHERWISE SPECIFIED DECIMAL DIMENSIONS TO BE ±.		FRACTIONAL DIMENSIONS TO BE ±		ANGLES TO BE ±		W A S	
DUKANE Corporation ESTABLISHED 1922 ST. CHARLES, ILLINOIS U.S.A.		METER CONTROL PANEL MODEL 9A1036 FOR 300W. AMPLIFIER		DRAWN <i>Ray</i> CHECKED		APP'D. <i>Doc</i> ENGR. <i>F.E.V.</i>	
NO. 190-1668						00	

9A1036



3 2M2



SERVICE INFORMATION

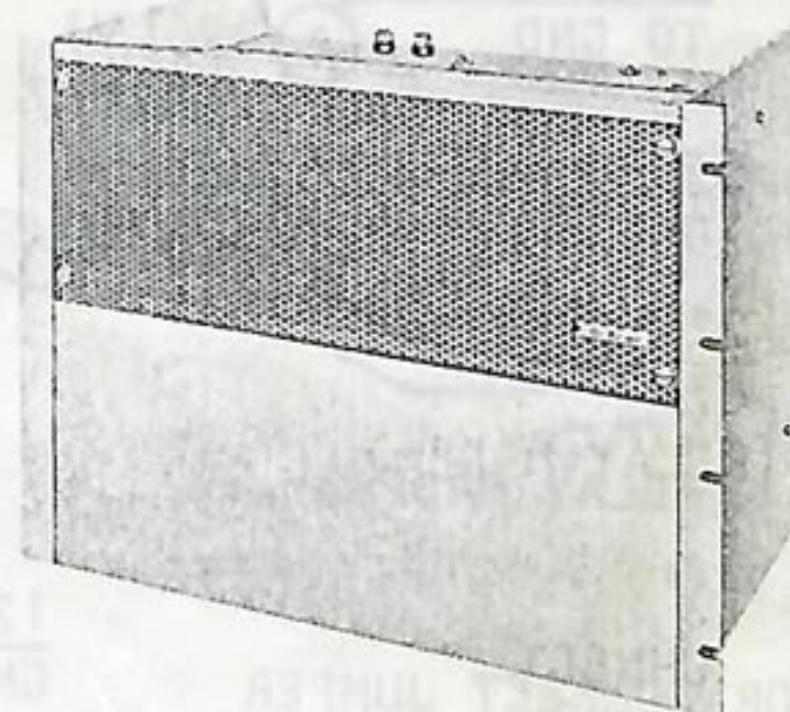
GENERAL DESCRIPTION -

The DuKane Model 1A831 300-Watt Power Amplifier is protected with two fuses. A $1\frac{1}{4}$ -ampere, slow-blow fuse (Bussman Type MDL 1-1/4 or equiv.) protects the DC power supply circuits and an 8-ampere slow-blow fuse (Bussman Type MDL 8 or equiv.) protects the AC power circuits.

- DO NOT over-fuse these circuits.

CAUTION - ALWAYS DISCONNECT MAIN POWER TO THIS AMPLIFIER BEFORE DOING ANY WORK BEHIND FRONT OR BACK COVERS.

DUKANE MODEL 1A831 300-WATT AMPLIFIER



AMPLIFIER ADJUSTMENT CONTROLS -

MODEL 1A831 AMPLIFIER

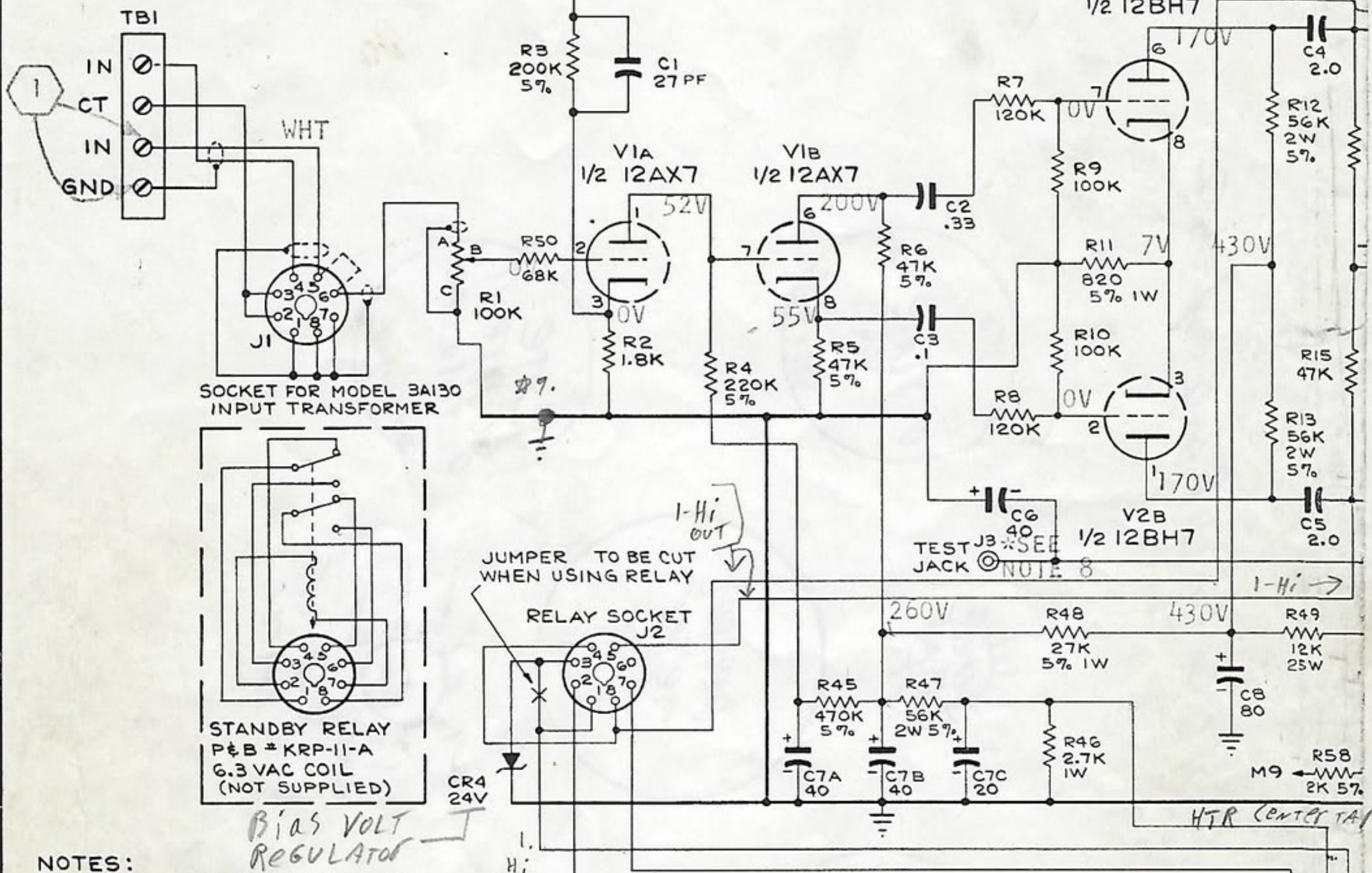
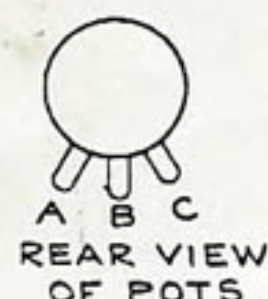
- INPUT LEVEL potentiometer R1 - Not more than 0.4 volt rms (sine wave) input is required to obtain full-rated output power of 300 watts with this amplifier. However, it is recommended that, in order to accommodate the complex waveform of program material, the input should be lowered 8 dB for actual amplifier installation and operation. For example: Set INPUT LEVEL potentiometer to obtain 10 volts rms (with 1 kHz sine wave input) across 25-volt output terminals, or 28 volts across 70-volt output.
- BIAS VOLTAGE ADJ potentiometer R40 is adjusted to obtain -17 volts DC measured between center terminal of potentiometer and chassis ground. This control may be readjusted in event primary tap on power transformers must be changed due to higher or lower AC line voltage - for transformer data, see schematic diagram.
- METER PANEL DuKane Model 9A1036 may be added to this amplifier. Table below gives typical indications obtained with 1 kHz signal @ 0.4 volt applied to amplifier input with proper output load connected.

9A1036 SWITCH POSITION	VOM TEST POINT*	200-WATT OPERATION			300-WATT OPERATION		
		9A1036 METER			9A1036 METER		
V3	M1	0.33	to 0.38	0.3V to 0.4V	0.43	to 0.48	0.35V to 0.45V
V4	M2	"	"	"	"	"	"
V5	M3	"	"	"	"	"	"
V6	M4	"	"	"	"	"	"
V7	M5	"	"	"	"	"	"
V8	M6	"	"	"	"	"	"
V9	M7	"	"	"	"	"	"
V10	M8	"	"	"	"	"	"
B+	M9	0.58	to 0.62	0.58V to 0.62V	0.58	to 0.62	0.58V to 0.62V

*See schematic diagram for location of test points M1 through M9.

For proper jumper arrangement for either balanced or single-ended 25-volt output, or for balanced 70-volt output or single-ended 70-volt output, see schematic diagram or EXTERNAL CONNECTION instruction sheet No. 402-190.

1 kHz @ 0.15V
APPLIED; R1
SET TO MAX.



NOTES:

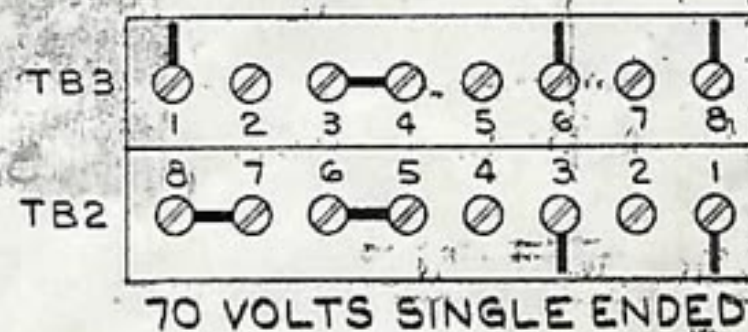
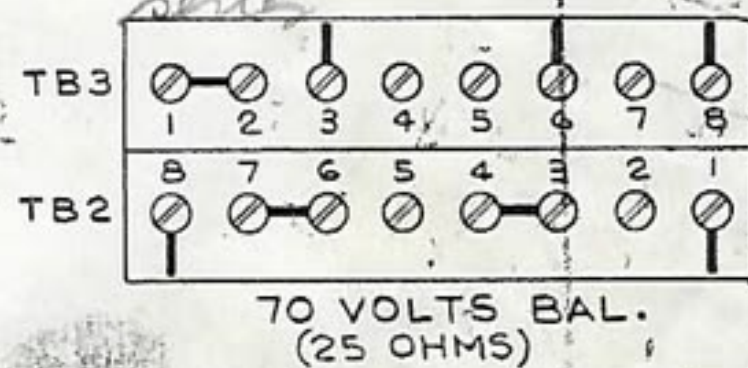
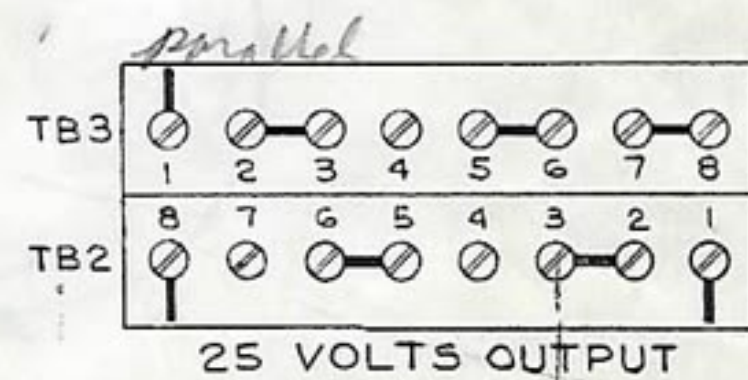
UNLESS OTHERWISE SPECIFIED

1. ALL FIXED RESISTORS ARE 1/2 WATT.
2. TOLERANCES ON RESISTORS $\pm 10\%$.
3. RESISTANCE VALUES IN OHMS
K=1000 OHMS MEG=1,000,000 OHMS.
4. CAPACITANCE VALUES IN MICROFARADS.
5. VOLTAGES MEASURED WITH 20,000 Ω /V VOM.
6. DC VOLTAGES MEASURED WITH NO SIGNAL IN,
R1 SET TO MINIMUM (GROUND).
7. AC OUTPUT VOLTAGES SHOWN ARE LESS THAN
FULL RATED (200W OR 300W) LEVEL AND ARE
FOR TEST PURPOSES ONLY.

*8. -17V, OR -34 VOLTS DC WITH RELAY (IF
USED) DE-ENERGIZED.

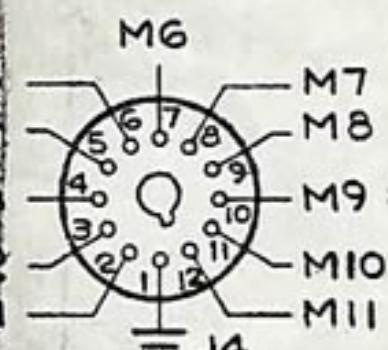
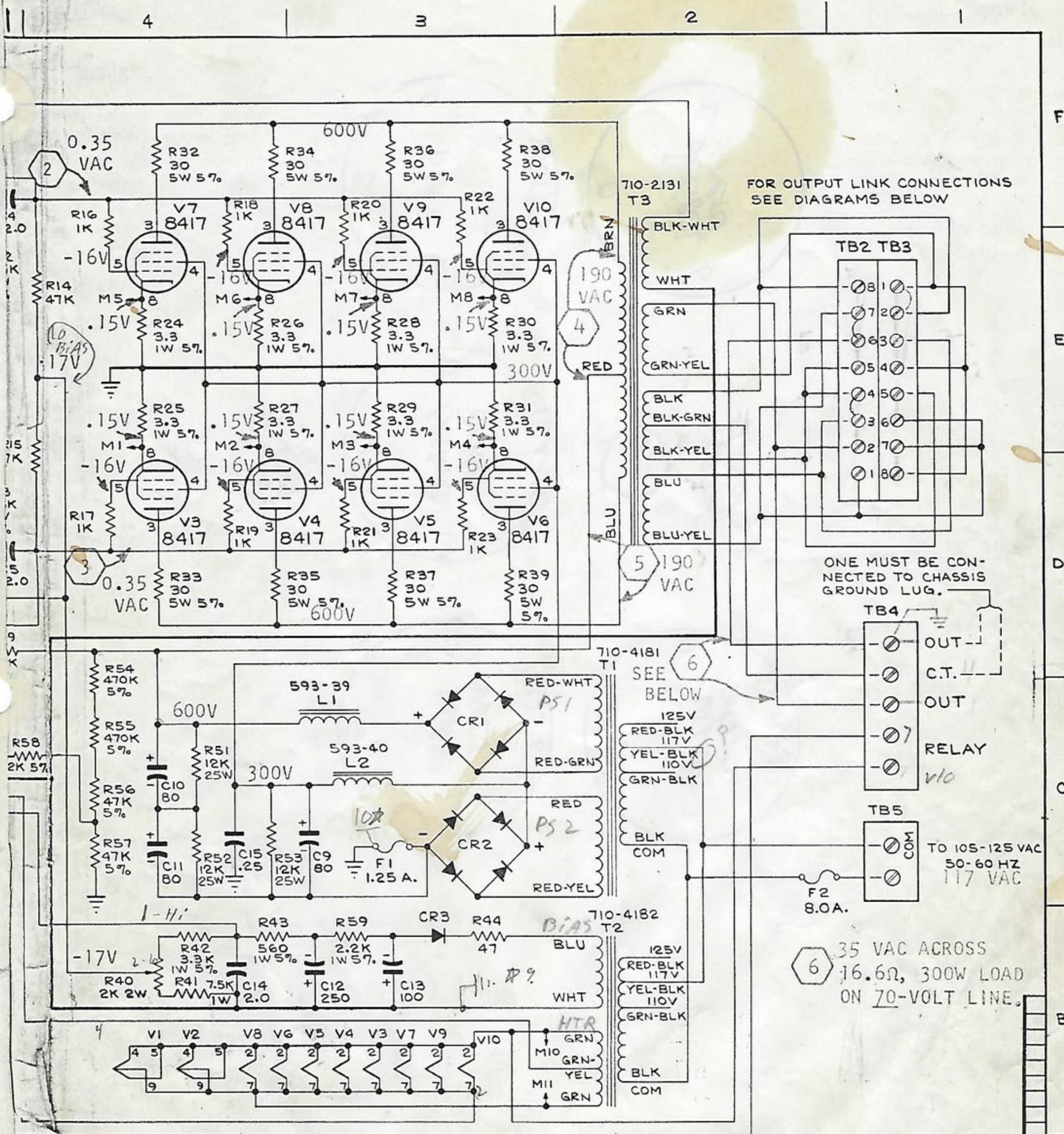
9. N.Y.W. Grounded 5-12-15

10. Total Plate current meter DC.



OUTPUT LINK CONNECTIONS

ME
FOR ACCE
W

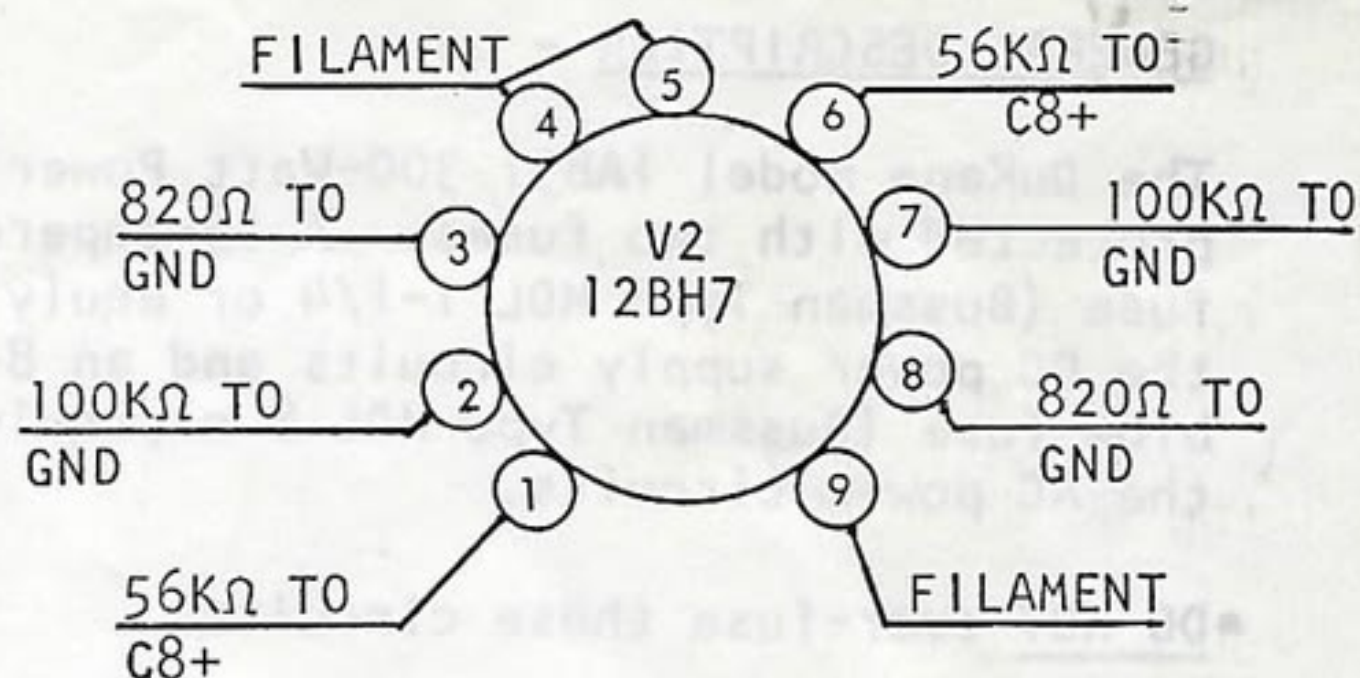
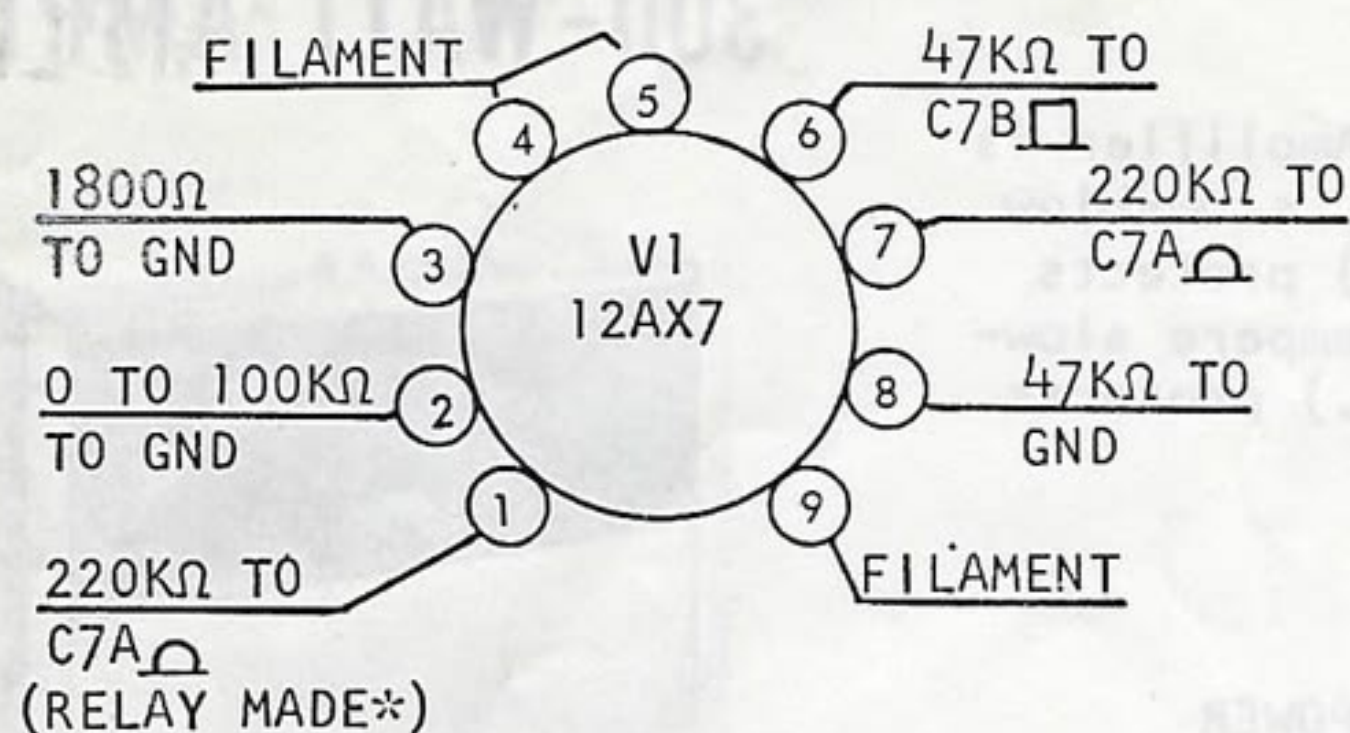


MEERING SOCKET
ACCESSORY PANEL 9A1036
W/ PILOT LAMP

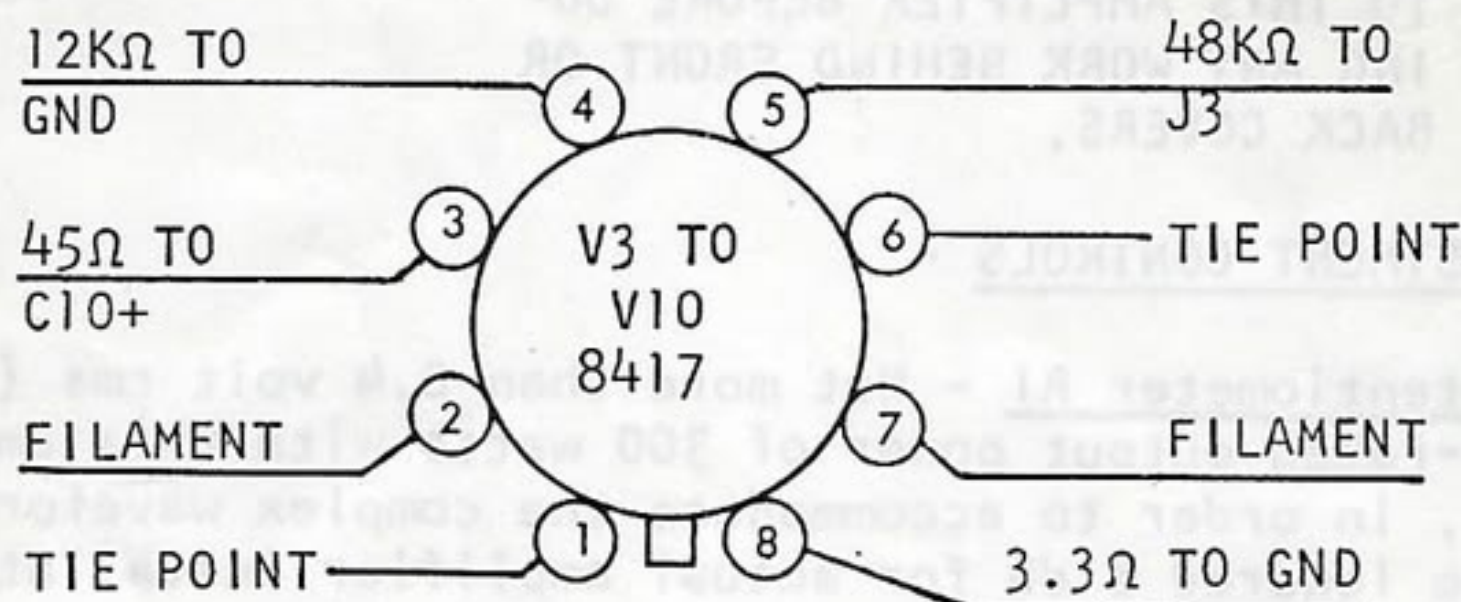
MATERIAL		FINISH		ANGLES TO BE ±		ISSUE		DATE		APPR.	
UNLESS OTHERWISE SPECIFIED DECIMAL DIMENSIONS TO BE ±		FRACTIONAL DIMENSIONS TO BE ±									
NO. USED ON		DUKANE Corporation		SCHEMATIC DIAGRAM		SCALE		DATE 11-14-68		01	
		ESTABLISHED 1932 ST. CHARLES, ILLINOIS U.S.A.		MODEL 1A831		DRAWN		NO. 190-1651		01	
				300W. POWER AMPL		CHECKED					

REWIRED J2 & CR4
DELETED R50-470K
GROUNDED "C" LUG
ON R1. ADD'D R50-68K
4-3-69
DATE 11-14-68
NO. 190-1651

TYPICAL RESISTANCE MEASUREMENTS - MADE WITH 20,000Ω/V VOM -



*OR CONNECT JUMPER TEMPORARILY FROM TERM. 6 TO TERM. 8 ON RELAY SOCKET IF RELAY IS USED.



TYPICAL DC RESISTANCE MEASUREMENTS OF TRANSFORMER WINDINGS - MADE WITH 20,000Ω/V VOM -

NOTE - To make these measurements, transformer wiring must be disconnected.

POWER TRANSFORMER T1 -

PRIMARY WINDING:

RED/BLACK to BLACK - - - 0.25ΩDC
YELLOW/BLACK to BLACK - - 0.20ΩDC
GREEN/BLACK to BLACK - - 0.20ΩDC

SECONDARY WINDINGS:

RED/YELLOW to RED - - - 4.0ΩDC
RED/WHITE to RED/GREEN - 4.2ΩDC

BIAS AND FILAMENT TRANSFORMER T2 -

PRIMARY WINDING:

RED/BLACK to BLACK - - - 4.0ΩDC
YELLOW/BLACK to BLACK - - 3.8ΩDC
GREEN/BLACK to BLACK - - 3.5ΩDC

SECONDARY WINDING:

WHITE to BLUE - - - - - 17.0ΩDC
GREEN to GREEN - less than 0.1ΩDC

OUTPUT TRANSFORMER T3 -

PRIMARY WINDING:

BROWN to BLUE - - - - - 31Ω DC
BROWN to RED (CT) - - - - - 14.5ΩDC
BLUE to RED (CT) - - - - - 16.5ΩDC

SECONDARY WINDINGS:

BLACK/WHITE to WHITE - - - - 2.5ΩDC
BLACK/GREEN to BLACK - - - - .05ΩDC
BLACK/YELLOW to BLACK - - - 0.1ΩDC
GREEN/YELLOW to GREEN - - - 0.1ΩDC
BLUE/YELLOW to BLUE - - - - 0.1ΩDC

POWER SUPPLY CHOKE L1 - - - - - 17.0ΩDC

POWER SUPPLY CHOKE L2 - - - - - 9.0ΩDC