CAPACITOR, DIODE, RESISTOR, POT. AND TUBE NUMBERING NOTE:

GAPS HAVE BEEN LEFT IN THE CAPACITOR, DIODE, RESISTOR, POTENTIOMETER, AND TUBE NUMBERING IN ORDER TO MAINTAIN CONSISTENCY BETWEEN THE P1, HIGH OCTANE, AND P1 EXTREME AMPS. A MISSING COMPONENT INDICATES THAT IT IS NOT USED ON THAT AMP, BUT IS USED ON ANOTHER.

Revision	Description
05.09.28	Changed Revision Number Format To Date Redrawn To Match P1 and P1eX Added Pilot Lamp PL1 Added Hammond 125DSE OT Added Detail Sheet Added 6N1P Output Detail Added Octal Output Detail Changed R9 To 220R/5W Removed 1uF Cap At V2B Added Mute Switch
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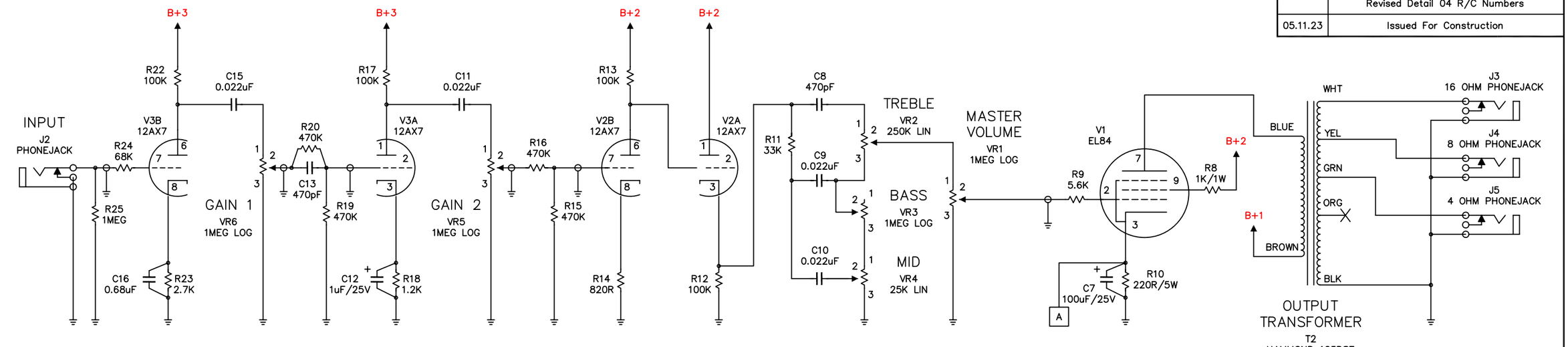
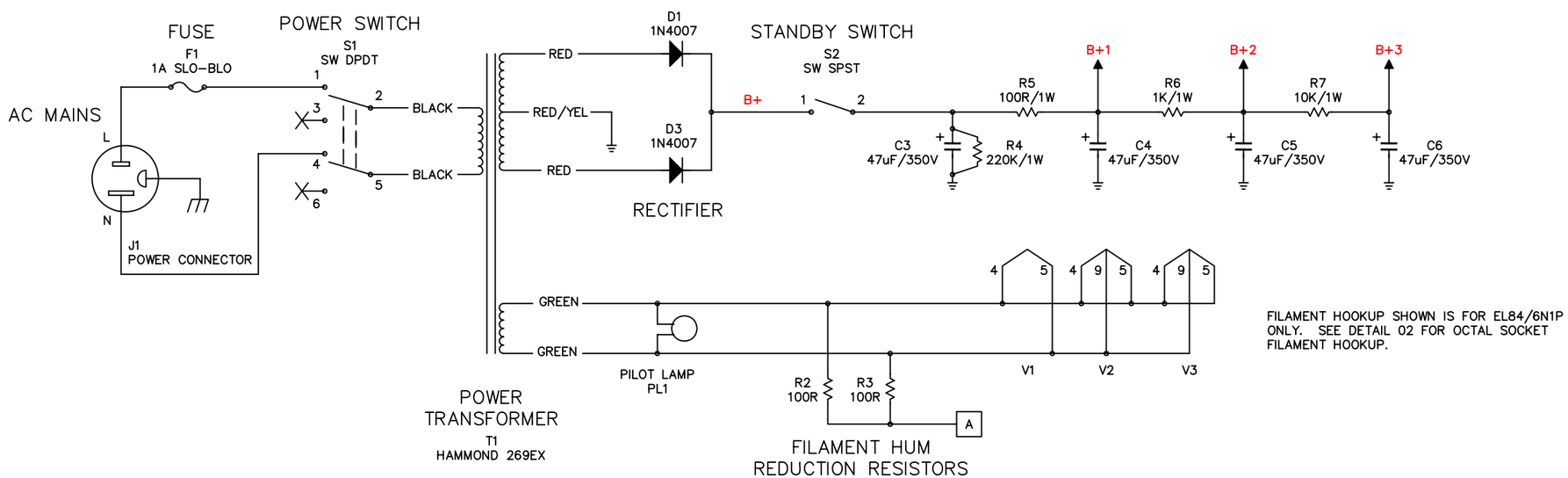
05.11.23	Issued For Construction





FILAMENT HOOKUP SHOWN IS FOR EL84/6N1P ONLY. SEE DETAIL 02 FOR OCTAL SOCKET FILAMENT HOOKUP.

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The Cooperative Tube Guitar Amp Project

Title: **High Octane Schematic**

Sheet 1 Of 3 | Revision: 05.11.23

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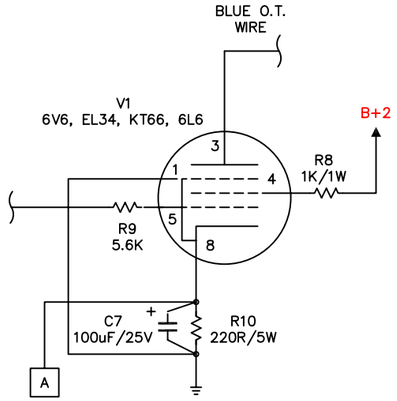
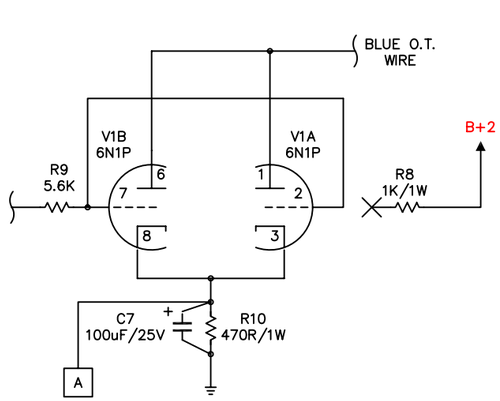


01 **OCTAL OUTPUT STAGE**



04 **6N1P OUTPUT STAGE**

GENERAL NOTES:

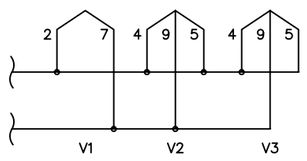
1. ALL RESISTORS 1/2W MINIMUM UNLESS OTHERWISE NOTED.
2. ALL COUPLING CAPACITORS 250V OR GREATER.
3. 47uF/350V ELECTROLYTIC POWER SUPPLY CAPACITOR VALUES/VOLTAGES ARE NOT CRITICAL. SUGGESTED VALUES: 20-50uF AT 350-500V.
4. THE HAMMOND 269EX POWER TRANSFORMER IS USED IN THIS AMP. IT MAY BE REPLACED BY UNITS WITH THE FOLLOWING SPECIFICATIONS:

   180-0-180V @ 65mA OR MORE SECONDARY B+ TAPS
   6.3V @ 2.5A OR MORE FILAMENT TAPS

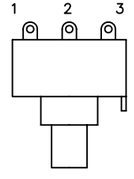
5. THE HAMMOND 125DSE OUTPUT TRANSFORMER IS USED IN THIS AMP. IT MAY BE REPLACED BY UNITS WITH THE FOLLOWING SPECIFICATIONS:

   SINGLE-ENDED OUTPUT
   4000-5000 OHM PRIMARY IMPEDENCE
   70mA OR MORE MAXIMUM D.C. BIAS
   4, 8, AND 16 OHM SECONDARY TAPS

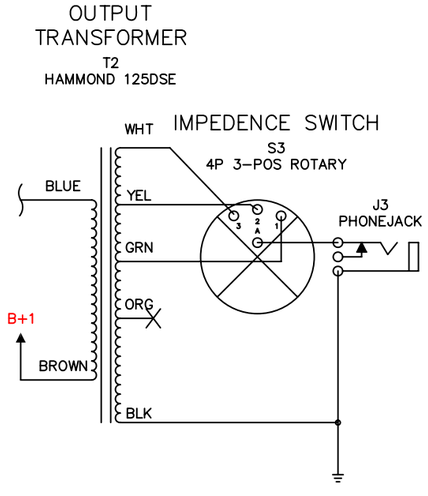
5. BIASING: EL84 MAX BIAS CURRENT IS 48mA AS MEASURED IN PLATE LEAD, OR APPROXIMATELY 53mA AS MEASURED ACROSS R10 IN CATHODE LEAD. DO NOT EXCEED 12W DISSAPATION AS CALCULATED BY: (VPLATE - VCATHODE) * IPLATE. SCREEN CURRENT CAN BE SUBTRACTED FROM CATHODE CURRENT TO FIND EXACT PLATE CURRENT BY MEASURING THE VOLTAGE DROP ACROSS R7 AND DIVIDING BY IT'S VALUE (1000 OHMS). BIAS CURRENT CAN BE ADJUSTED BY CHANGING THE VALUE OF R15. LOWER VALUES OF RESISTANCE YEILD MORE BIAS CURRENT, AND HIGHER VALUES YEILD LESS BIAS CURRENT. CATHODE CURRENT IS EQUAL TO CATHODE VOLTAGE DIVIDED BY CATHODE RESISTANCE R15.



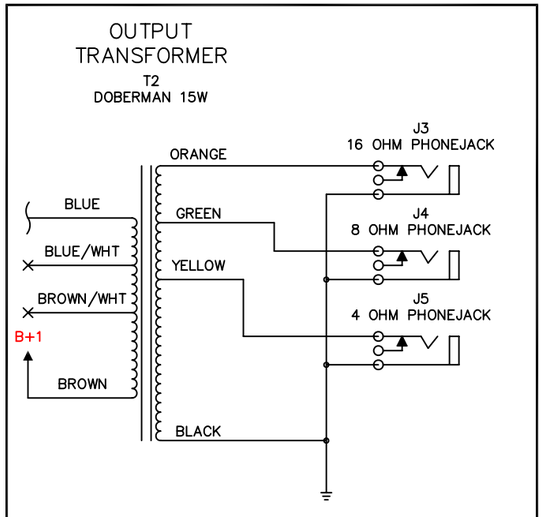
02 **OCTAL FILAMENT HOOKUP**



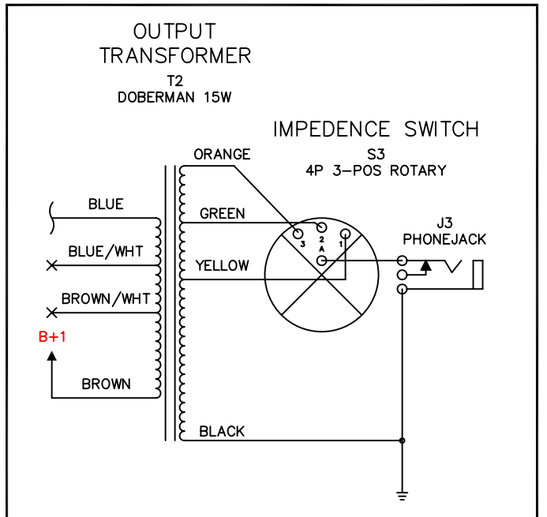
03 **POTENTIOMETER PINOUTS - TOP VIEW**



05 **ROTARY IMPEDENCE SWITCH WIRING**



06 **DOBERMAN OT HOOKUP (MULTI-JACK)**



07 **DOBERMAN OT HOOKUP (ROTARY)**

PROTOTYPE VOLTAGE READINGS

Ref	Desc.	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	6V6GTA	N/A	Filament	261.1V	255.8V	N/A	N/A	Filament	11.63V	N/A
V2	12AX7	259.5V	144.4V	145.7	Filament	Filament	144.7V	N/A	0.928V	Filament
V3	12AX7	146.2V	N/A	1.136V	Filament	Filament	177.8V	N/A	1.735V	Filament

Mains = 124V	B+ = 273V	B+1 = 267V	B+2 = 259V	B+3 = 243V

AS-BUILT VOLTAGE READINGS

Ref	Desc.	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1										
V2					Filament	Filament				Filament
V3					Filament	Filament				Filament

Mains =	B+ =	B+1 =	B+2 =	B+3 =

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The Cooperative Tube Guitar Amp Project

Title: **High Octane Schematic**

Sheet 2 Of 3 | Revision: 05.11.23

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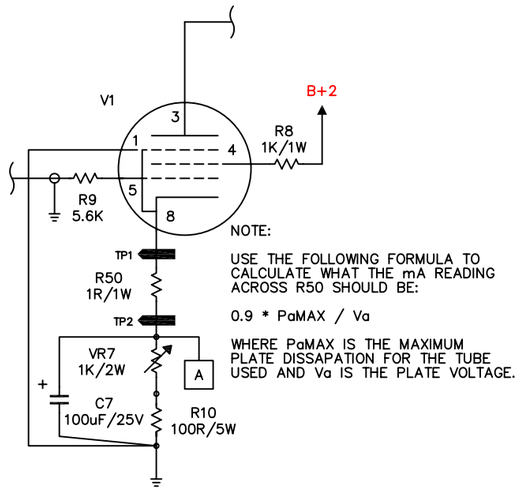
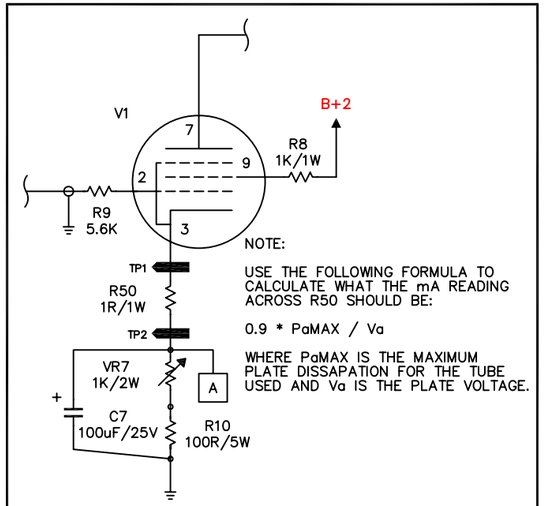
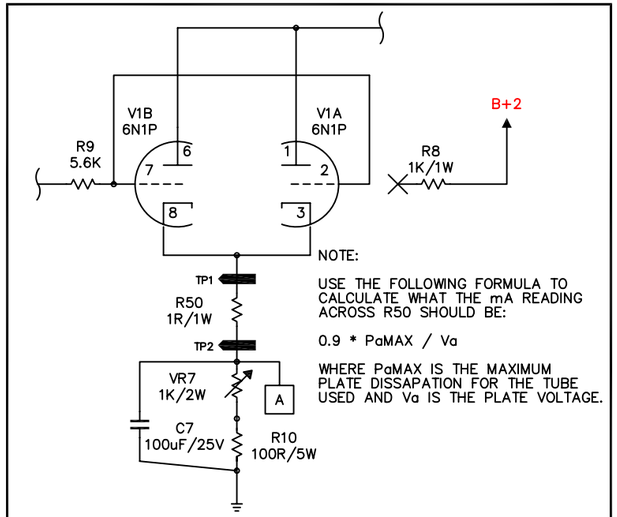


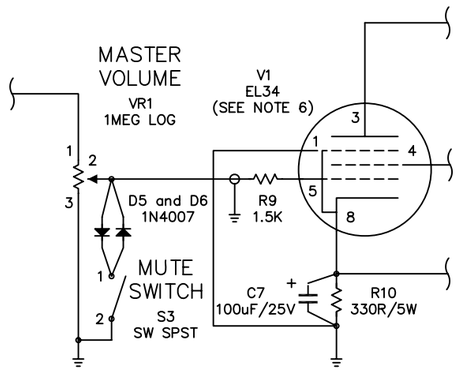
08 **Variable Cathode Bias Option (Octal)**



09 **Variable Cathode Bias Option (Noval)**



10 **Variable Cathode Bias Option (6N1P)**



11 **Mute Switch Option**

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The Cooperative Tube Guitar Amp Project

Title: **High Octane Schematic**

Sheet 3 Of 3 | Revision: 05.11.23