Test Point tip Jacks (in red):
TP1A – red/blk – 300B filament voltage 1
TP1B – red/blk – 300B filament voltage 2
TP2A – blu/yel – 300B pass current 1
TP2B – blu/yel – 300B pass current 2
TP3 – blu/yel – driver tube pass current
TP4 – blu/yel – bias voltage
TP5 – red/yel – 300B anode voltage
TP6 – red/yel – B+ voltage
TP7 – red/yel – driver B+ voltage
TP8 – red/yel – driver anode voltage
TP9 – grn chassis (mains) ground
TP10 – yel circuit ground
TP11 – driver cathode voltage

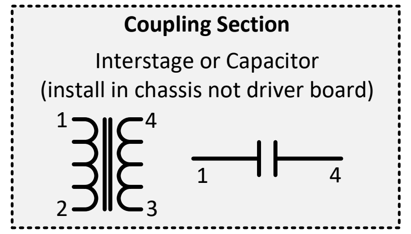
IT secondary or capacitor out side

IT primary or capacitor in side

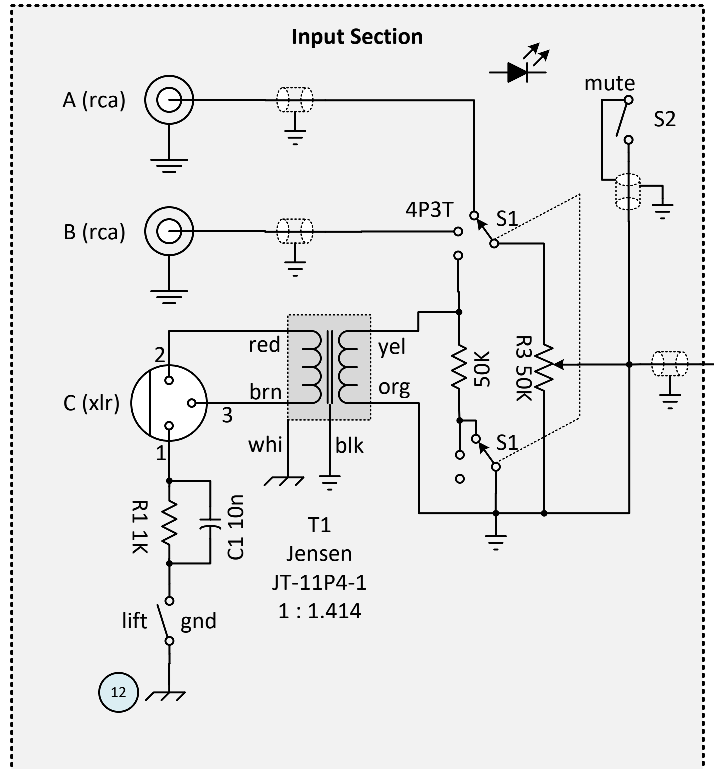
Switches:
S1 Input select
S2 Mute
S3 Spkr / Hdph
All switches are implemented with relays (except headphone switch). LED indicators powered from umbilical pins 4,6 12V.

PCB's shown in yellow all other wiring is point to point.

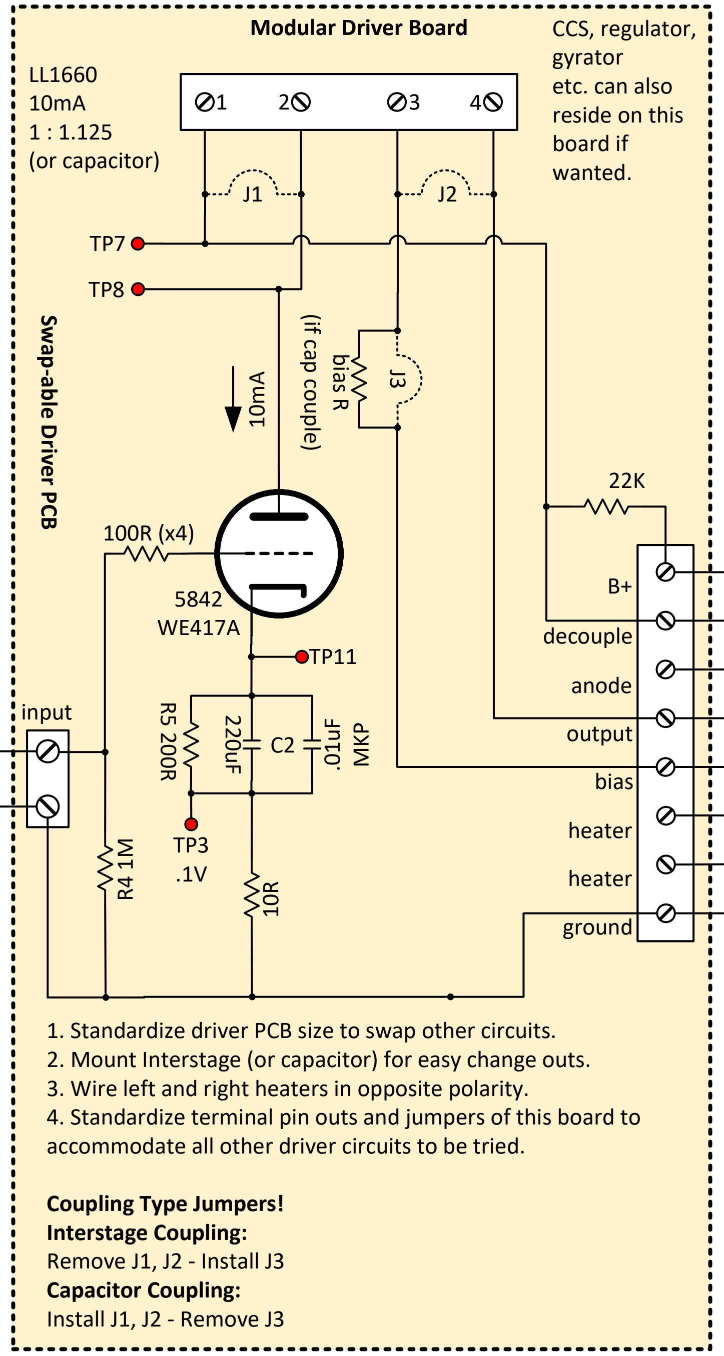
Use interstage or capacitor coupling with direct bias. **See driver board jumpers!!!**



Calibration Procedure (verify this after buid):
TP6 – set PSU to 0V
TP4 – set coarse bias fully counter clockwise (max negative bias)
TP1A – set Coleman to 5V
TP1B – set Coleman to 5V
TP6 – set PSU to 380V
Set grid balance control to approximately middle
TP2A and TP2B – set coarse bias so these are nearly matched at .7V
TP2A and TP2B – set fine bias so these are nearly matched at .7V
Adjust grid balance control for nearest .7V match
TP6 – Verify that B+ is still 380, re-adjust variac to 380V if needed
Repeat above four steps to get .7V match at 380V B+
TP3 – verify driver current it should be about .1V
TP4 – verify bias voltage it should be about -85V (verify after)?
Verify all other test points for reasonableness

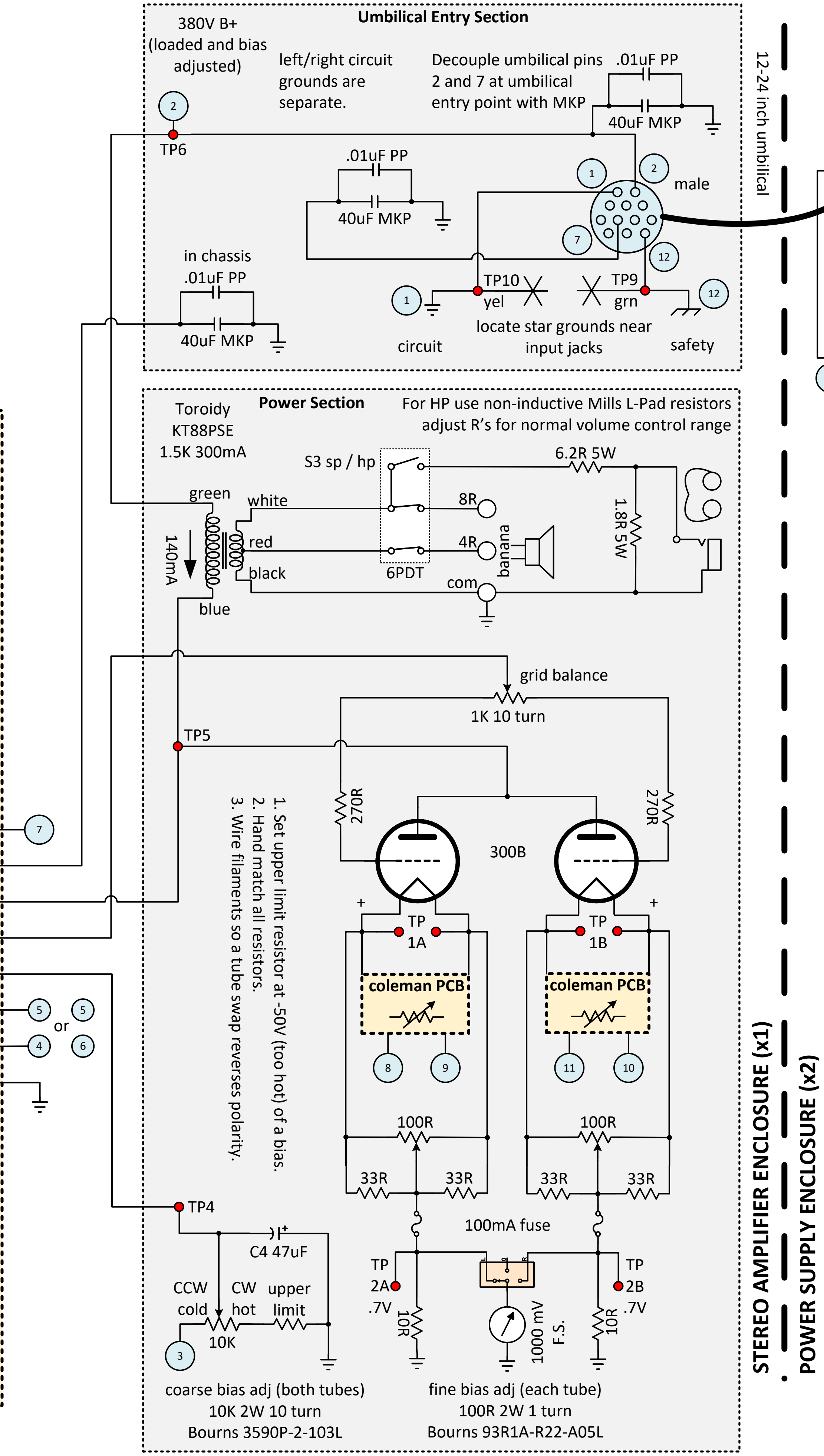


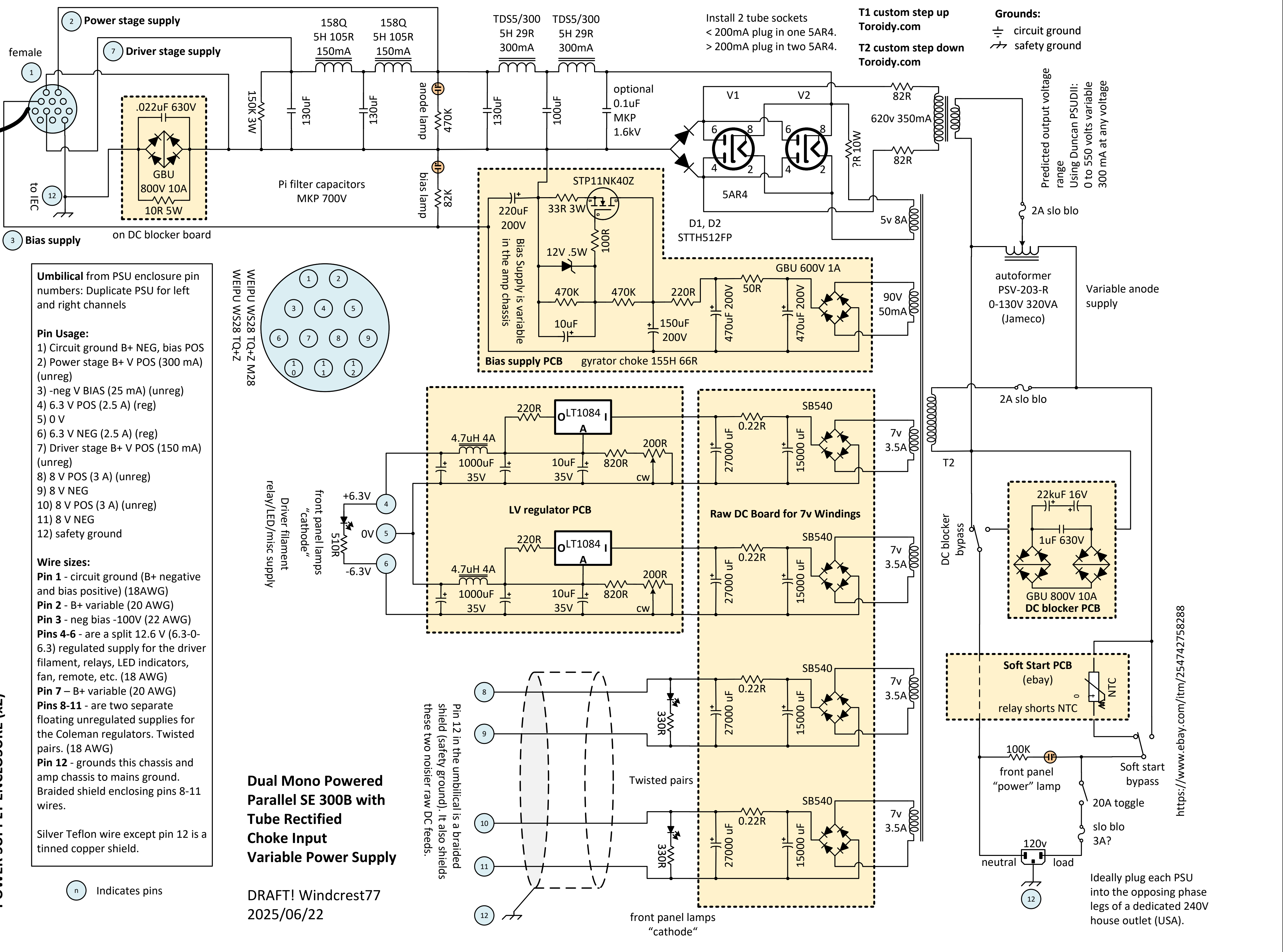
1. Ground XLR pin 1 to safety ground! NOT the B+ circuit ground.
2. S1 must keep T1 loaded at 50K in any position.
3. Float RCA grounds away from the chassis!



1. Standardize driver PCB size to swap other circuits.
2. Mount Interstage (or capacitor) for easy change outs.
3. Wire left and right heaters in opposite polarity.
4. Standardize terminal pin outs and jumpers of this board to accommodate all other driver circuits to be tried.

Coupling Type Jumpers!
Interstage Coupling:
Remove J1, J2 - Install J3
Capacitor Coupling:
Install J1, J2 - Remove J3





Umbilical from PSU enclosure pin numbers: Duplicate PSU for left and right channels

Pin Usage:
1) Circuit ground B+ NEG, bias POS
2) Power stage B+ V POS (300 mA) (unreg)
3) -neg V BIAS (25 mA) (unreg)
4) 6.3 V POS (2.5 A) (reg)
5) 0 V
6) 6.3 V NEG (2.5 A) (reg)
7) Driver stage B+ V POS (150 mA) (unreg)
8) 8 V POS (3 A) (unreg)
9) 8 V NEG
10) 8 V POS (3 A) (unreg)
11) 8 V NEG
12) safety ground

Wire sizes:
Pin 1 - circuit ground (B+ negative and bias positive) (18AWG)
Pin 2 - B+ variable (20 AWG)
Pin 3 - neg bias -100V (22 AWG)
Pins 4-6 - are a split 12.6 V (6.3-0-6.3) regulated supply for the driver filament, relays, LED indicators, fan, remote, etc. (18 AWG)
Pin 7 – B+ variable (20 AWG)
Pins 8-11 - are two separate floating unregulated supplies for the Coleman regulators. Twisted pairs. (18 AWG)
Pin 12 - grounds this chassis and amp chassis to mains ground. Braided shield enclosing pins 8-11 wires.

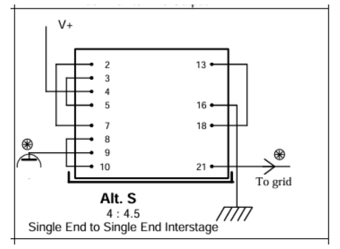
Silver Teflon wire except pin 12 is a tinned copper shield.

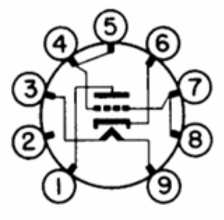
ⓝ Indicates pins

Dual Mono Powered Parallel SE 300B with Tube Rectified Choke Input Variable Power Supply

DRAFT! Windcrest77
2025/06/22

Ideally plug each PSU into the opposing phase legs of a dedicated 240V house outlet (USA).





BOTTOM VIEW