

PWR BST

Introduction

Let me introduce this Power Supply. I have designed this Power Supply to provide power for many different solutions in nearly any kind of DIY Projects. PWR BST can supply up to 3 x 1A positive power rails and 2 x 1A negative power rails. Fits inside a one unit high rack cases. This power supply is designed to power up Rack units like SSL/NEVE/API Projects but also 500/51X Projects. For using as a 500/51X - 11 Slot Rack supply I suggest a different Heatsink solution, cause the Onboard Cooling will be not enough. This Guide will help with setting up this nice Preamp. Have Fun!

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DISCLAIMER: Proceed at your own risk. I am not liable for any damage, harm or loss of any kind resulting from the assembly and/or use of this PCB set. Safety provisions should always be exercised whenever working with any electronics. The following instructions are guidelines only. I can make no guarantee of the accuracy of contents contained within this document.

Functions

Different Output Connections

+/-V1 & +/-V2 tracking. (eg the +/-V1 & +/-V2 power rails will track each other while powering up or down within +/-0.3v stopping most thumps and pops)

+/-V1 & +/-V2 can configured between 3V to 30V depending on Transformer

12000uF (6000uF per +/--rail) Super smoothing cap bank.

PCB measurments 172mm x 82mm

+V3 can be set to extra normal positive rail or pump charged doubled or tripled for 48v rail with 2 simple jumpers.



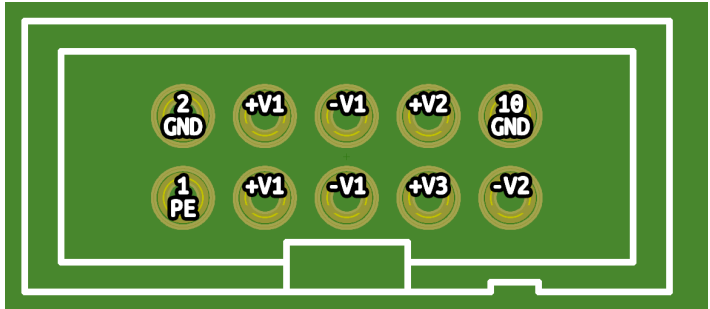
Fuseholder for each rail

5 power rails. (3 positive and 2 negative @ 1 Amp each)

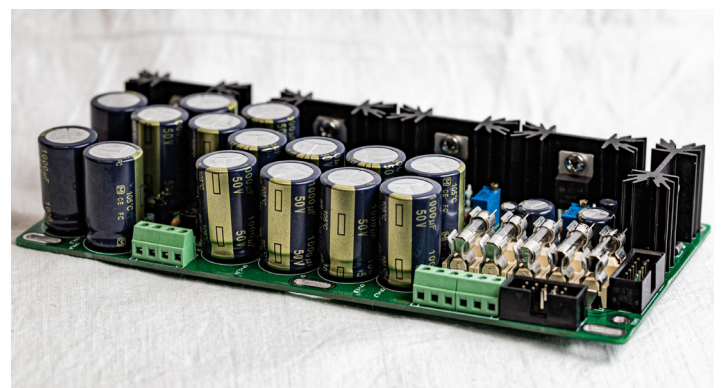
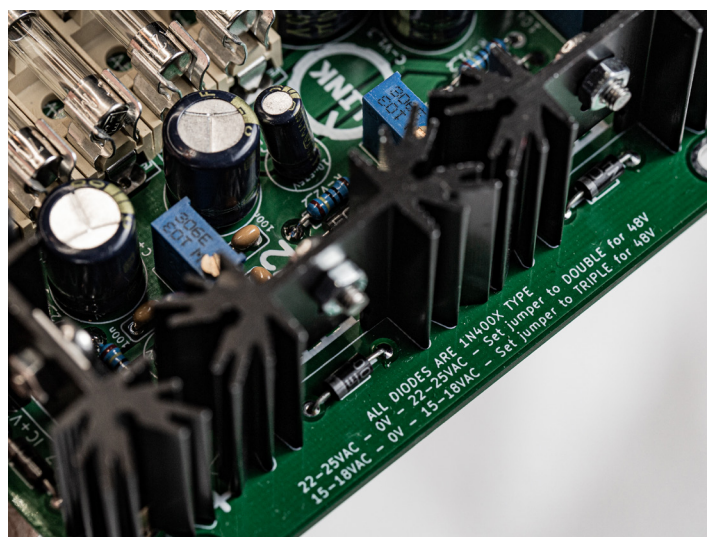
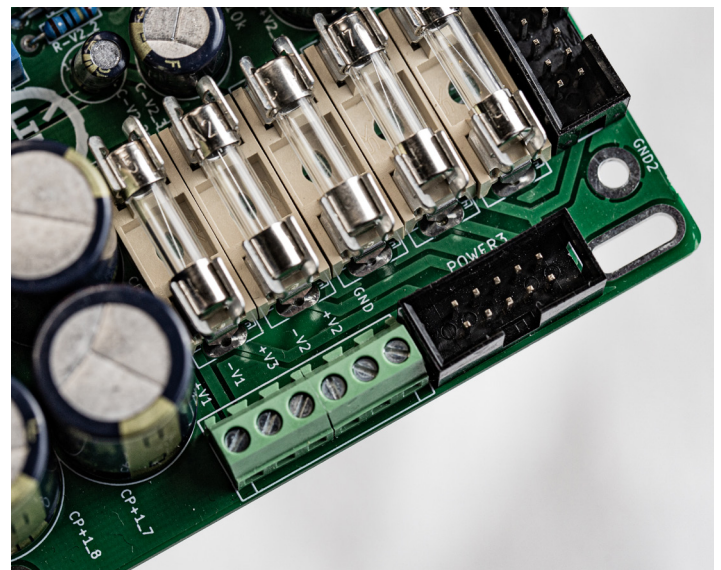
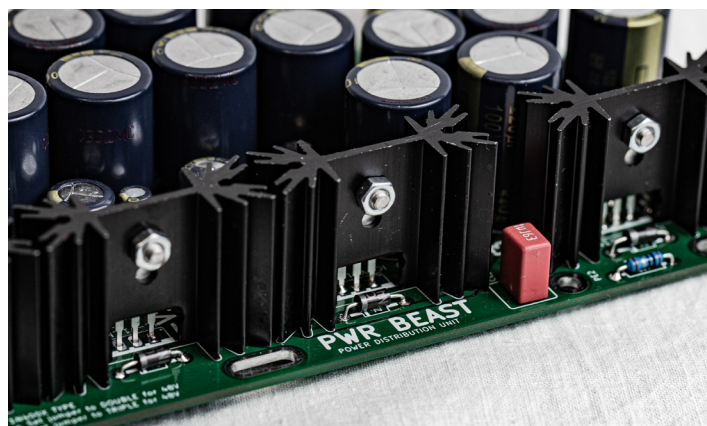
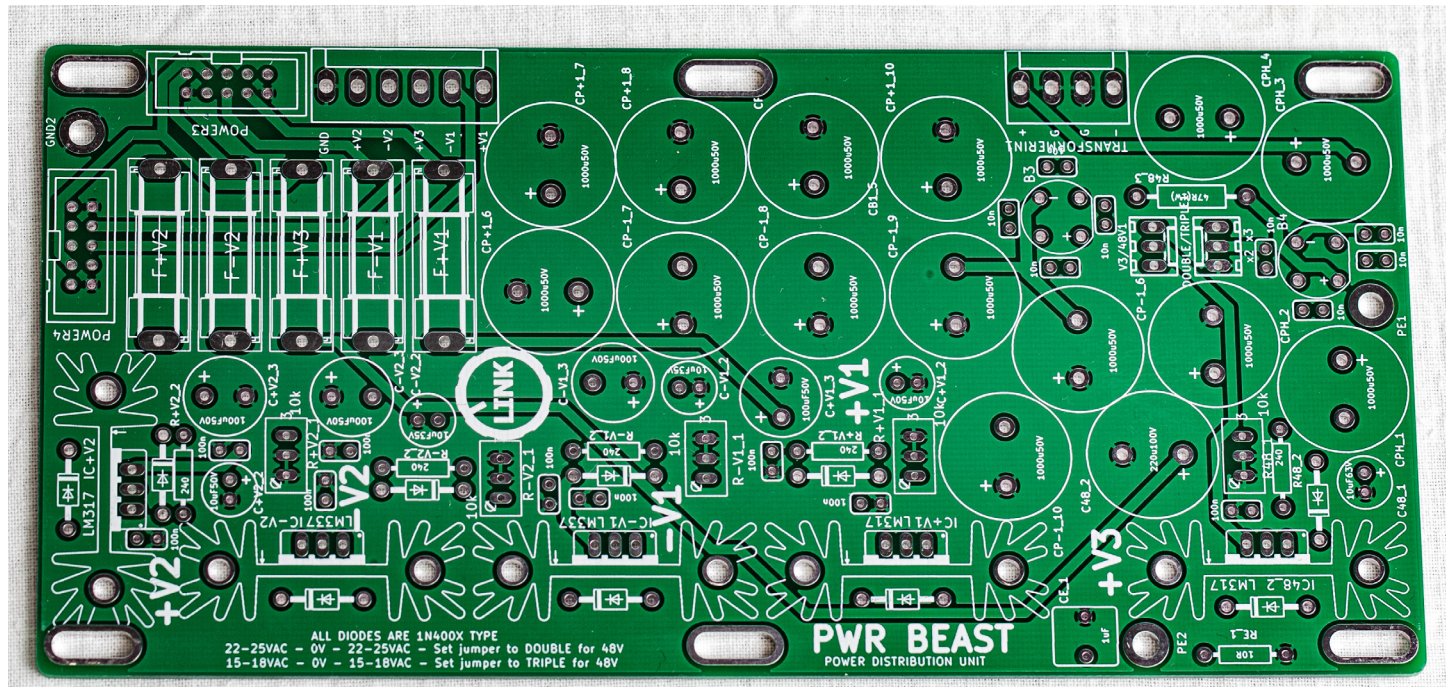
PE and GND connections

PWR Beast can be configured for below and many other combinations
500 series: +16Vdc/-16Vdc and +48Vdc using a 2x15/18Vac 30VA to 100VA
500/51X series: +16Vdc/-16Vdc and +24Vdc/-24Vdc and +48Vdc using a 2x24/30Vac 50VA to 100VA
GSSL: +15Vdc/-15Vdc and +12Vdc/-12Vdc and +12Vdc for Relays using a 2 x 15/18Vac 30VA to 50VA.

POWER CONNECTIONS 10 POL RIBBON CABLE CONNECTOR



Highlights



Bill of Materials (BOM)

PART ON PCB	TYPE	COUNT	VALUE
RE_1	Resistor	1	10R
R48_3	Resistor	1	47R(1W)
R+V2_2,R-V2_2,R-V1_4,R+V1_4,R48_2,R+V1_2,R-V1_2	Resistor	5	240R
IC+V3,IC48_2,IC+V1,IC+V2	Regulator	3	LM317
IC-V3,IC-V1,IC-V2	Regulator	2	LM337
DOUBLE/TRIPLE1,V3/48V	PIN Header	2	DOUBLE/TRIPLE1
C+V1_1,C48_3,C-V1_4,C+V1_4,C-V1_1,C-V2_1,C+V2_1,C+V2_4,C-V2_4	Ceramic 2,5MM	9	100nF
CB2_5,CB1_7,CB2_6,CB1_6,CB1_8,CB2_8,CB2_7,CB1_5	Ceramic 2,5MM	8	10n
CE_1	Wima 5MM	1	1uF
C+V2_2,C+V1_7,C+V1_2	Electrolytic	4	10uF50V
C48_1	Electrolytic	1	10uF63V
C-V2_3,C+V2_3,C-V1_6,C+V1_6,C-V1_3,C+V1_3	Electrolytic	4	100uF50V
C48_2	Electrolytic	1	220u100V
CPH_2,CPH_1,CPH_3,CPH_4,CP-1_6,CP+1_7,CP+1_6,CP+1_8,CP+1_9,CP-1_7,CP-1_8,CP+1_10,CP-1_10,CP-1_9	Electrolytic	14	1000u50V
D+V2_2,D-V2_2,D-V2_1,D+V2_1,D+V1_3,D-V1_4,D-V1_3,D+V1_4,D48_2,D+V1_2,D-V1_2,D-V1_1,D+V1_1,D48_1	Diode	10	1N4004
TRANSFORMERIN	Connector	1	3,81mm-4Pol /3,5mm
POWEROUT2	Connector	1	3,81mm-6Pol /3,5mm
POWEROUT	Connector	2	Connector 10 Pol
B3,B4	Rectifier	2	B80C250V
F+V2,F+V1,F-V1,F-V2,F+V3	Fuseholder SH22,5	5	SH22,5
K5,K1,K3,K4,K2	Heatsink	5	V PR32/25,4
Jumper	Jumper 2.54 mm	2	Jumper 2.54 mm
R-V2_1,R+V2_1,R+V1_3,R-V1_3,R48_1,R-V1_1,R+V1_1	Trimmer	5	10k S64W
PWR BST PCB	PCB	1	PCB
LED BOARD			
POWER5,POWER2,POWER1,IN/OUTSIGNAL1,CH1,CH2,POWER4,POWER3	Cable	1	Cable 10 pol
LED+V2,LED-V1,LED+V1,LED+48V1,LED-V2	LED2MM Green	4	FLAT LED
LED+V2,LED-V1,LED+V1,LED+48V1,LED-V2	LED2MM Red	1	FLAT LED
POWER5,POWER2,POWER1,IN/OUTSIGNAL1,CH1,CH2,POWER4,POWER3	Connector	2	Connector 10 Pol
RL+V1,RL-V2,RL-V1,RL+V2	Resistor	4	6k8
RL+48V1	Resistor	1	10k
LED Indicator PCB	PCB	1	PCB