

LABO ★ K EFFECTS

POWER SUPPLY KIT FOR VINTAGE MODULES

24V & 48V

ISS 3.1



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INTRODUCTION

This kit allows you to build a power supply for preamp, equaliser and compressor modules powered by 24V in order to put them in a rack.
This kit is designed to supply approximately 8 modules.

Transformer power 2X25V:

1 to 4 modules 50VA
5 to 8 modules 80VA

This power supply will be perfect for Telefunken, Siemens, Tab, Ela , Neumann ,Lawo modules etc.

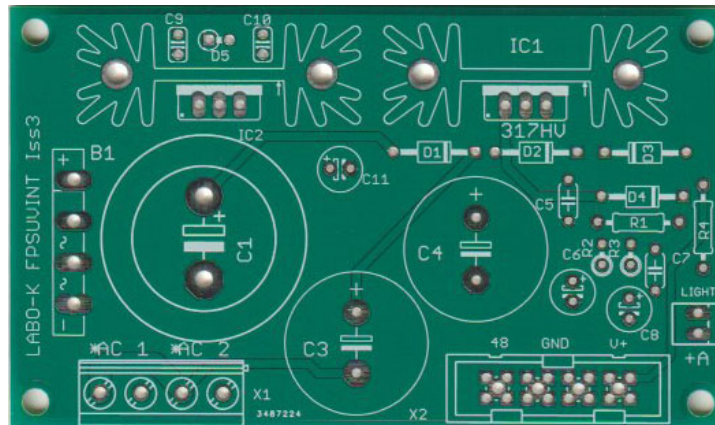
It also provides 48V Phantom.

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KIT OVRVIEW

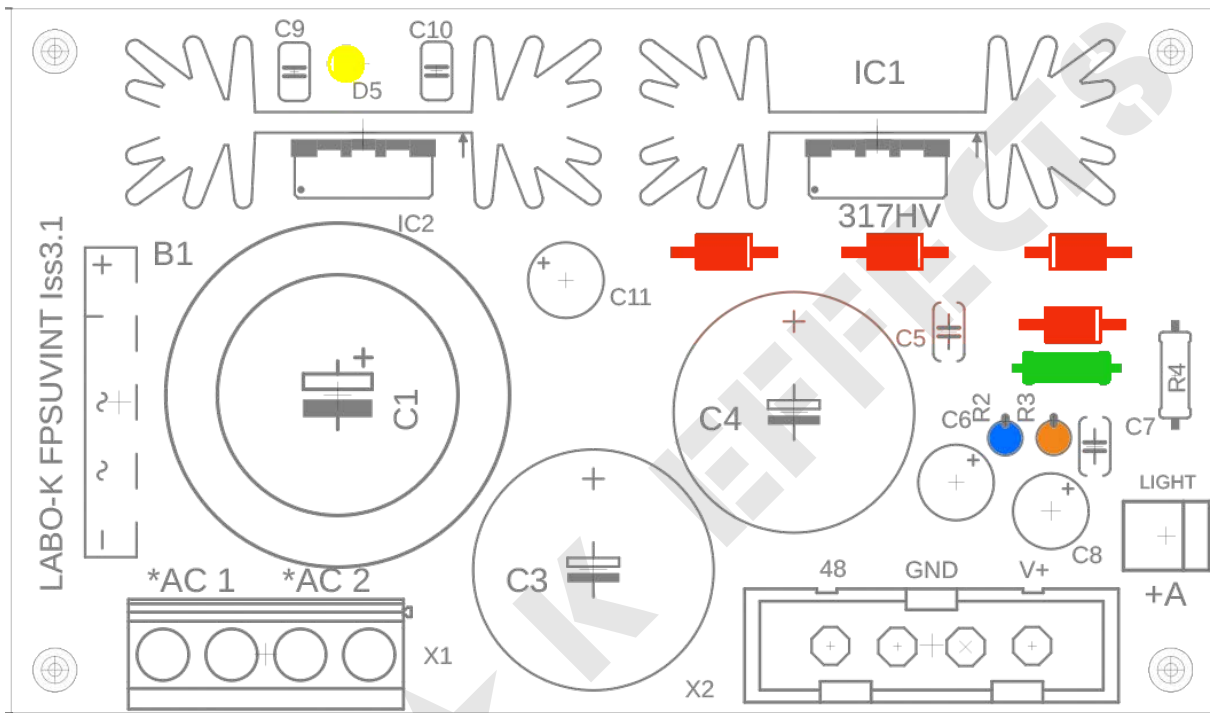
One board (FPSU) for connecting :

- 1 power transformer 2x25v (**not supplied**)
- PSU bus.



ASSEMBLY INSTRUCTIONS PART 1

	1N4002	D1, 2, 3, 4	4
	180R	R1	1
	12K	R2	1
	15K	R3	1
	1N4002	D5	1

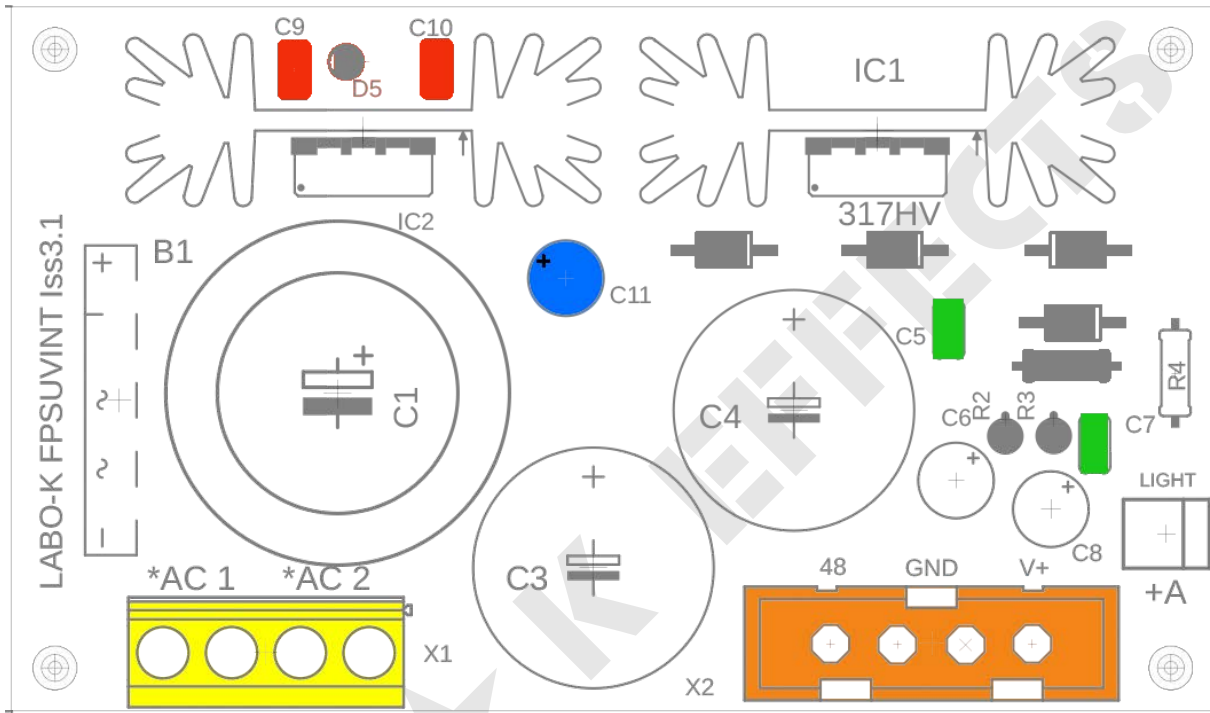


Take care of:

Diode orientation

ASSEMBLY INSTRUCTIONS PART 2

	100n50V	C9, 10	2
	100n100V	C5, C7	2
	1u Tantale	C11	1
	Conn IDC	X2	1
	Bornier 4	X1	



Take care of:

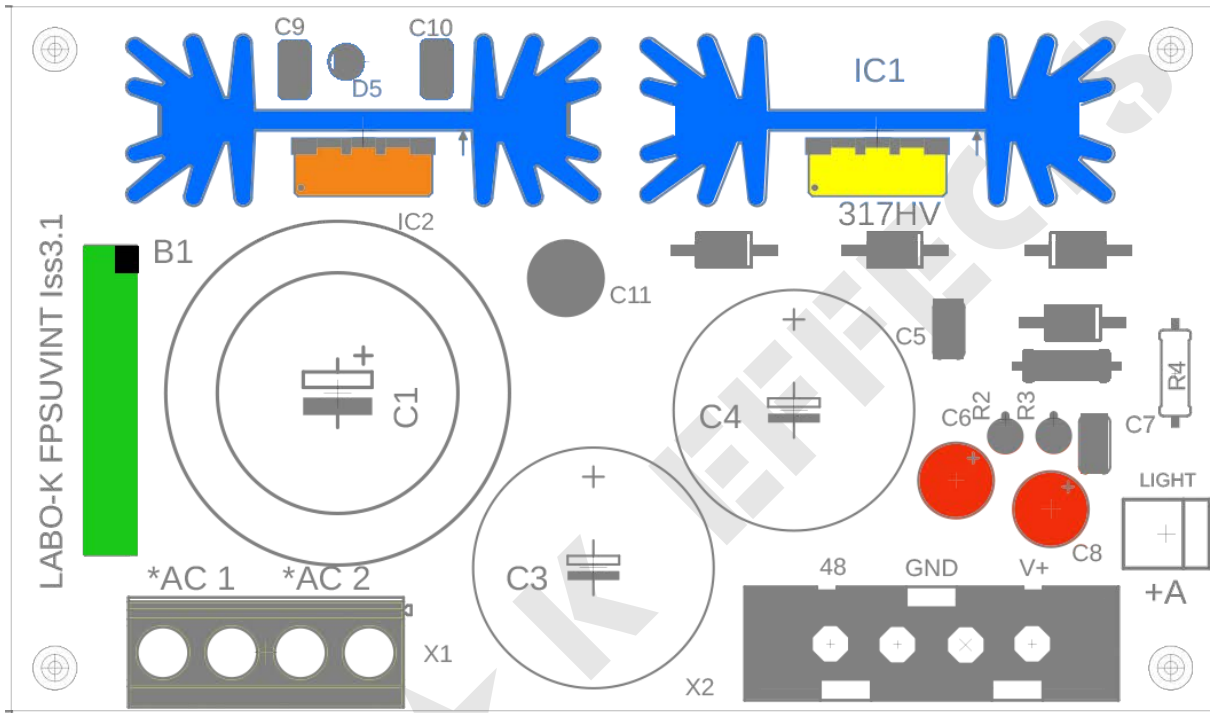
Capacitor C11 orientation

100n 50V ceramic capacitors are smaller than 100n 100V capacitors

You can choose to install a 4-screw terminal block in place of the IDC X2 connector.

ASSEMBLY INSTRUCTIONS PART 3

	47u63V	C6, 8	2
	RS601	B1 (Rectifier Bridge)	1
	Radiateurs		2
	LM78S24	IC2	1
	LM317HVT	IC1	1



Take care of:

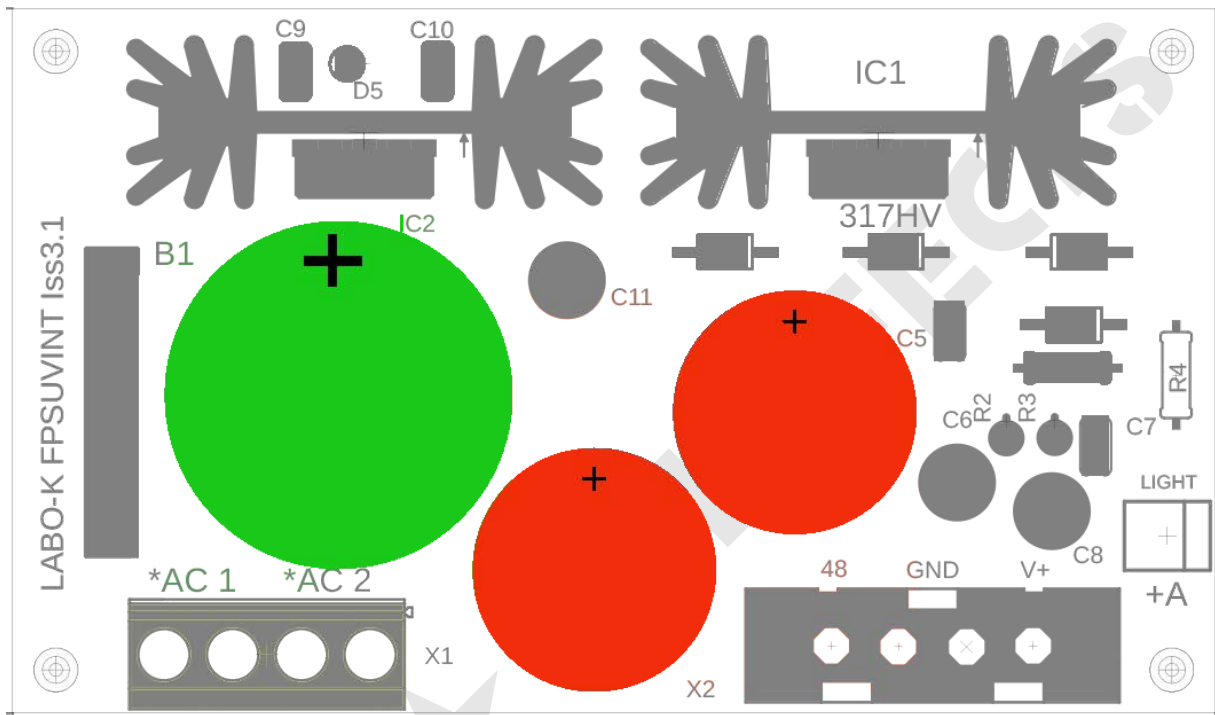
Capacitor orientation

Rectifier orientation

Once the radiators have been welded, place and screw on the regulators then weld them.

ASSEMBLY INSTRUCTIONS PART 4

	1000u100V	C3, 4	2
	4700u63V	C1	1

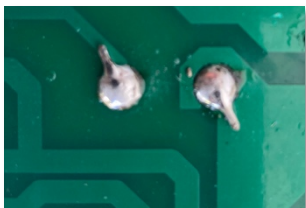


Take care of:

Capacitor orientation

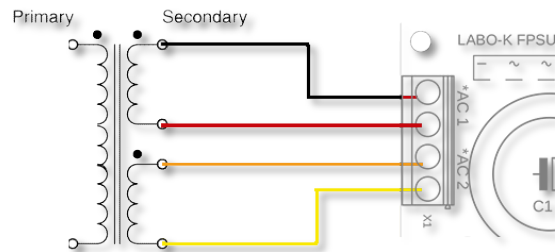
Bend the legs of the C1 capacitor before soldering (see Figure 1)

Figure 1

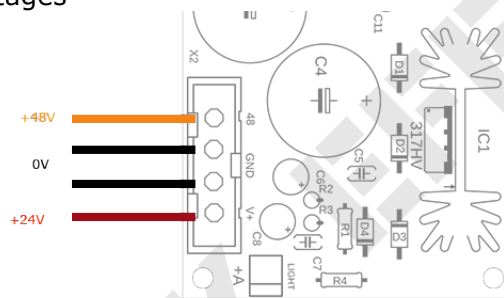


WIRING OF POWER SUPPLY

Connecting the transformer



Connecting the output voltages



A pilot LED can be connected to the Light slot.
The anode of the LED is marked with the letter A.

VERIFICATION





First check that there is no short circuit between pins 24V and 0V and between pin 48V and 0V.

Supply power to the transformer and measure the output voltages.

We need to measure 48V and 24V.

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COMPONENTS LIST

NAME	VALUE	VISUAZL	REFERENCE
R1	180R		
R2	12K		
R3	15K		
R4	2K7 (Option)		
D1	1N4002		
D2	1N4002		
D3	1N4002		
D4	1N4002		
D5	1N4002		
C1	4700u 63V		
C3	1000u 100V		
C4	1000u 100V		
C5	100n 100V Ceramic		
C6	47u 63V		
C7	100n 100V Ceramic		
C8	47u 63V		
C9	100n 50V Ceramic		
C10	100n 50V Ceramic		
C11	1u Tantale		
IC1	LM317HVT		
IC2	78S24CV		
B1	RS601		
X1	Terminal bolck		
X2	IDC 16 or Term block		
Heat	Heat sinks		

PINOUTS

Connector X1	
1	AC 1
2	AC 1
3	AC 2
4	AC 2

Connector X2	
1	+ 48 V
2	+ 48 V
3	+ 48 V
4	+ 48 V
5	GND
6	GND
7	GND
8	GND
9	GND
10	GND
11	GND
12	GND
13	+ 24 V
14	+ 24 V
15	+ 24 V
16	+ 24 V
Connector X2	
1	+ 48 V
2	GND
3	GND
4	+ 24 V

Legal notice :

Labo K Effects shall not be responsible and disclaims all liability for any damage (whether direct or consequential) that may result from a wrong use of the kit by the user.