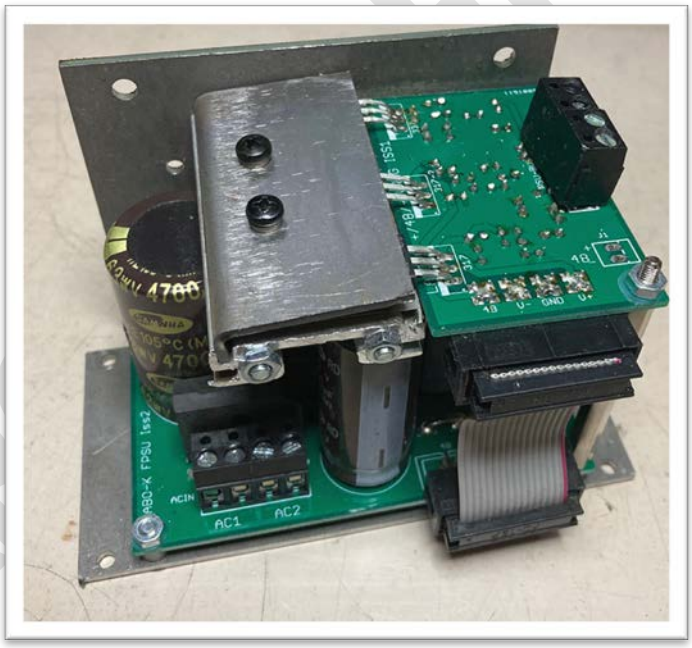
LABO ⋆ K EFFECTS

POWER SUPPLY KIT FOR STUDER 169 MODULES



CONTENTS

INTRODUCTION 3

KIT OVERVIEW 4

COMPOSITION OF THE ASSEMBLY KIT 5

FPSU BOARD PARTS LIST 6

FPSU BOARD CONNECTOR PINOUT 6

VREG BOARD PARTS LIST 7

CARD TO CARD FLAT CABLE 7

FPSU BOARD ASSEMBLY INTRUCTIONS 8

FIXING FPSU AND VREG BOARDS 9

POWER TRANSFORMER WIRING 10

PSU BUS PINOUT 10

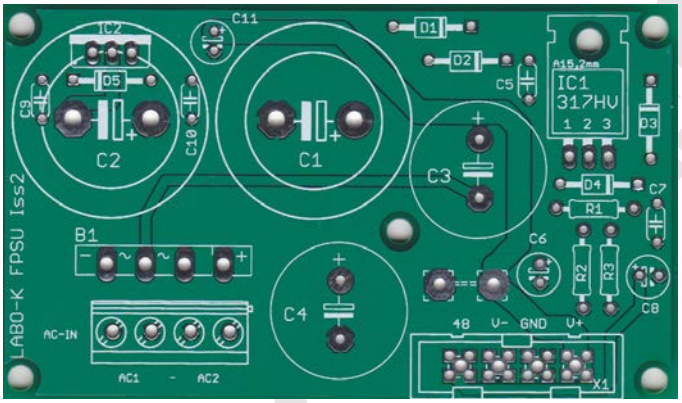
INTRODUCTION

This kit is used to power Studer 169 preamplifier and equalizer modules in order to rack them up.
This power supply can feed up to 8 modules.
The assembly kit is used to fix the pcbs and the radiator of the power supply.
The compact unit can thus be easily placed in the rack.

KIT OVERVIEW

- **1 PCB (FPSU board) for connecting:**
    - 1 power transformer 2x15v 50VA (not supplied)
    - The +15V / -15V regulation board (VREG)

This board performs the rectification and filtering of ac power.



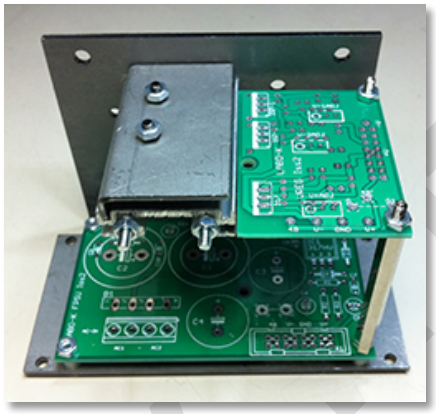
- **1 PCB (VREG board) for connecting:**
    - FPSU board
    - PSU Bus

This board provides +15V / -15V and +48V regulated voltages

- **- Connectors and components**
    - *The power transformer is not supplied*
    - *Use a 2x15V 50VA for 1 or 4 channels*
    - *Use a 2x15V 80VA for 5 to 8 channels*

COMPOSITION OF THE ASSEMBLY KIT

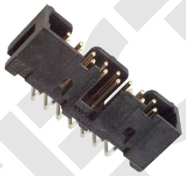
- **1 steel base for fixing:**
    - The FPSU card
    - The +15V / -15V /48V regulation card (VREG)
    - The heat sink



- **The following elements :**
    - 4 M3x15 screws (A)
    - 4 plastic spacers (B)
    - 2 50mm spacers €
    - 2 M3x60 screws (D)
    - 1 heat sink €
    - 1 clip (F)
    - 2 M3x15 screws (G)
    - 8 washers (H)
    - 6 M3 nuts (I)
    - 3 insulator pads for TO220 (J)

A	B	C	D	E	F	G	H	I	J
									

FPSU BOARD PARTS LIST

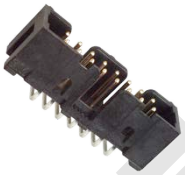
AC-IN 4 ways terminal	
Connextor X2 IDC16	
B1	Bridge RS602
D1, D2	1N4002
D3	LINK 0R
D4	NA
R1	NA
R2	NA
R3	NA
C1, C2	4700µF/63v
C3, C4	1000µF/100v
C5, C7	100n100v
C6, C8	NA
IC 1	NA

All resistors are 1/4w metal film 1%

FPSU BOARD CONNECTOR PINOUT

AC-In			X1	
1	15V AC1		1 Orange	+48V
2	15V AC1		2 Blue	-22V
3	15V AC2		3 Black	0V
4	15V AC2		4 Red	+22V

VREG BOARD PARTS LIST

PSU BUS 4 ways terminal	
Connector X1 IDC16	
D1, D2, D3, D4, D5, D6	1N4002
R1	180R
R2	12K
R5	15K
R3, R7	243R
R4, R8	2K7
C1, C2	100n/100V
C5, C6, C9, C10	100n/50v
C3, C4	47u/60V
C7, C8, C11, C12	10µF/63v
IC1 (317)	LM317T
IC2 (317-2)	LM317HV
IC3 (337)	LM337

All resistors are 1/4w metal film 1%

CARD TO CARD FLAT CABLE

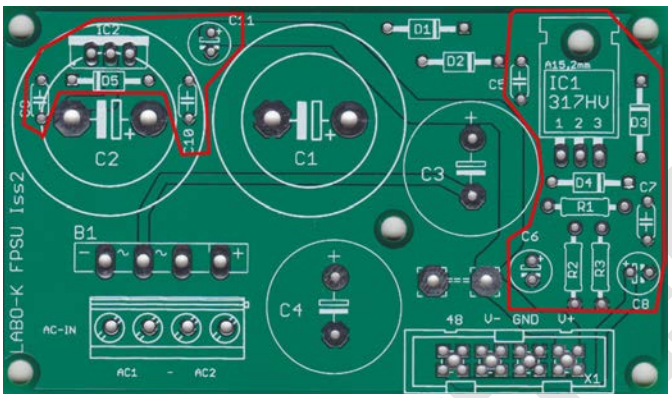
This 16wires flat cable allows to connect FPSU and Vreg boards

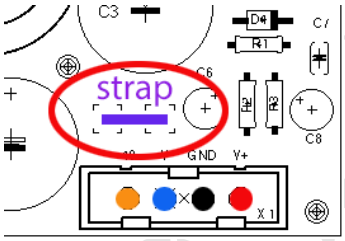
FPSU BOARD ASSEMBLY INTRUCTIONS

1) Solder a strap on the PCB as shown in figure 1.
2) Solder components on the pcb

Note.

The components in red limits are not fitted.



Strap on the pcb	Bend the legs of capacitors C1 and C2 before soldering
	

Note :
Replace D3 by a Stap (0R) as shown in figure 1.

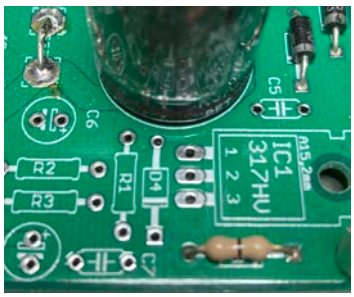
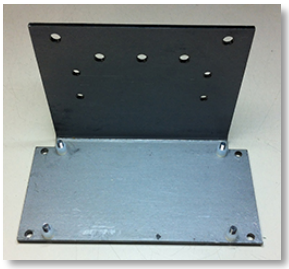


Figure 1

FIXING FPSU AND VREG BOARDS

1: Place the base with the 4 screws (A) and 4 plastic spacers (B)
2: Place the FPSU card on the base
Fix the FPSU board on the base with 2 washers (H), 2 nuts (I) and 2 spacer (C)
3: Attach the heat sink (E) on the base with the screws (D), 2 washers (H) and 2 nuts (I). The holes are on the left of the heat sink
4: Fix the card VREG with components facing down with 2 washers (H) and 2 nuts (I). Place the insulators pads (J) and the regulators in the good order.
5: Attach the clip (F) on the heat sink (E) using 2 washers (H) and 2 screws (G).
6: Solder regulators and interconnection wires.
7: Plug the flat cable

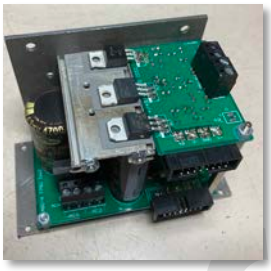
Important: Check with a tester that the legs of the regulators are well insulated from the chassis.



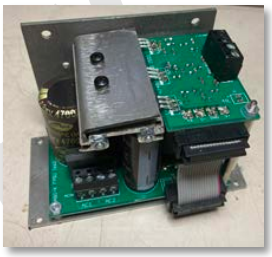
1 Place the base

2 Place the board on the base

3 Fix the heat sink

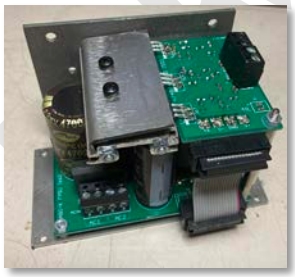


4 Fix the VREG board



5 Fix the clip

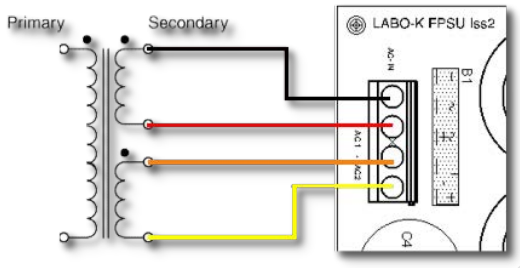
6 Solder the regulators



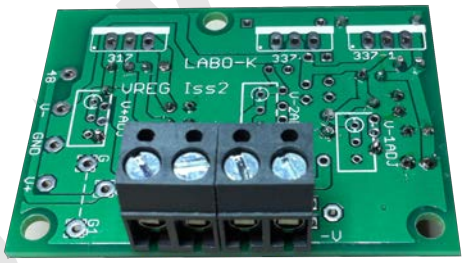
7 Plug the interconnect flat cable

POWER TRANSFORMER WIRING

2X 15V power transformer wiring



PSU BUS PINOUT



Mentions légales :

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.*