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B A S T L
INSTRUMENTS

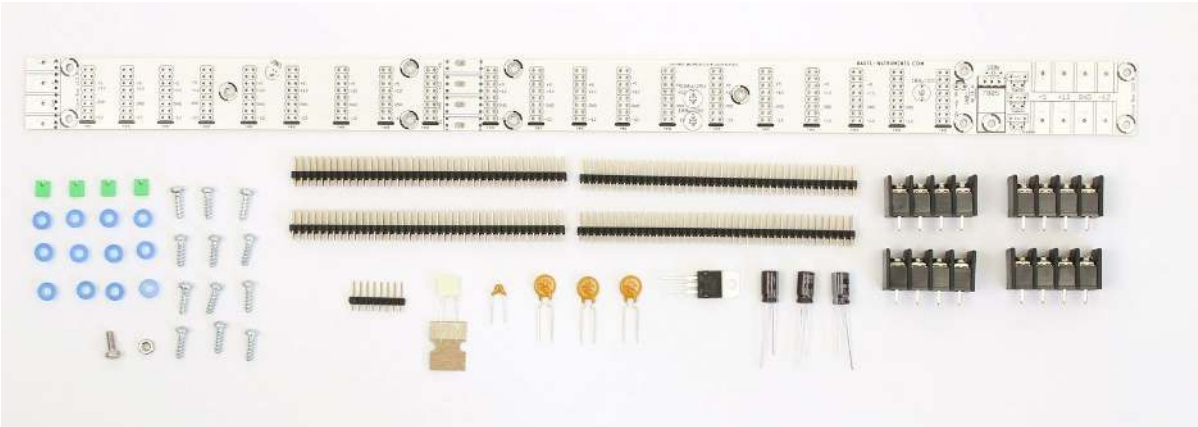
JUICEBUS BOARD v1.2 - Assembly Guide

bastl-instruments.com

INTRODUCTION

This guide is for building JuiceBus Board from Bastl Instruments. It is good to have basic soldering skills and to be able to identify electronic components before starting this kit. However if you have never soldered before, check out this tutorial first[1]. We even included some of the best quality solder to help you solder everything faster and better.

JuiceBus lets you connect up to 20 modules with dedicated pin connectors. Optionally it can convert your standard +-12V to +5V and therefore feed your digital modules with power. This feature can be easily bypassed with a dedicated jumper in case your power supply provides +5V already. You can use it either as a long busboard with 20 connectors, or you can simply split it at its breakpoints and have one main powered busboard of 11 connectors and secondary busboard of 9 connectors for smaller eurorack cases. In this scenario you just connect the two pieces with faston connectors or simply use one ribbon powercable to connect the powerpins.



[1] http://www.instructables.com/id/How-to-solder/

The Juice Bus consists of just one board, which can be split into two. All the parts comes in Soldering and Assembly bags. See Bill of Materials (BOM) for detailed list.

Before starting this kit, prepare the following tools:

- Soldering iron (15-20W)
- Flush cutters
- Phillips screwdriver (cross)
- Protective eyewear

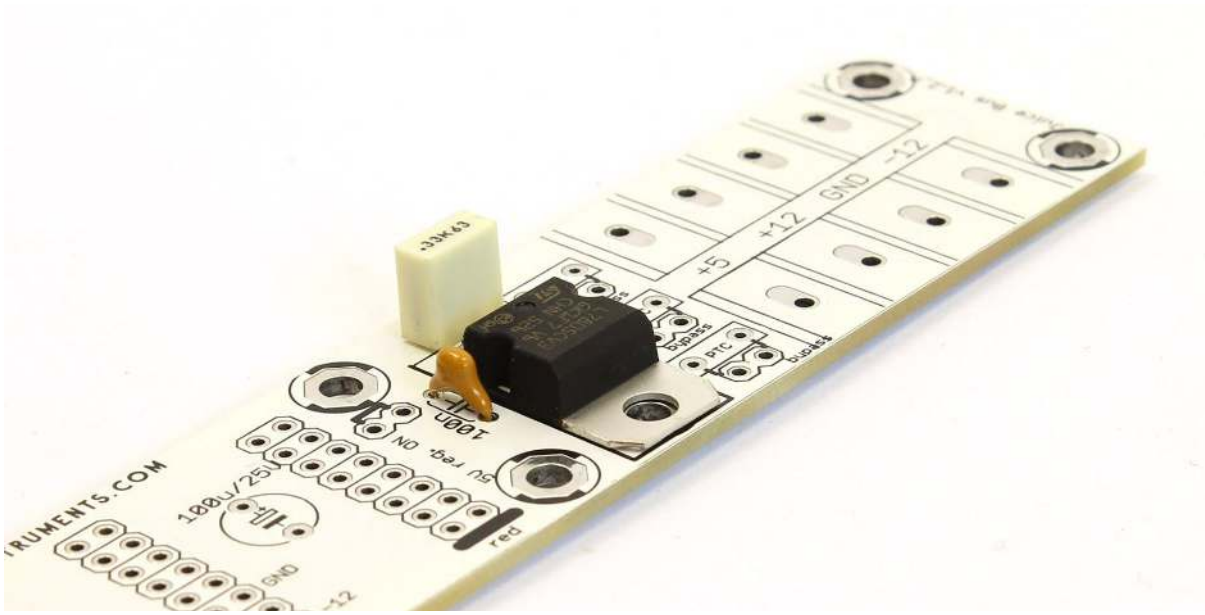
We suggest that you work in a clean and a well lit and ventilated environment to avoid accidents or losing any of the small components.

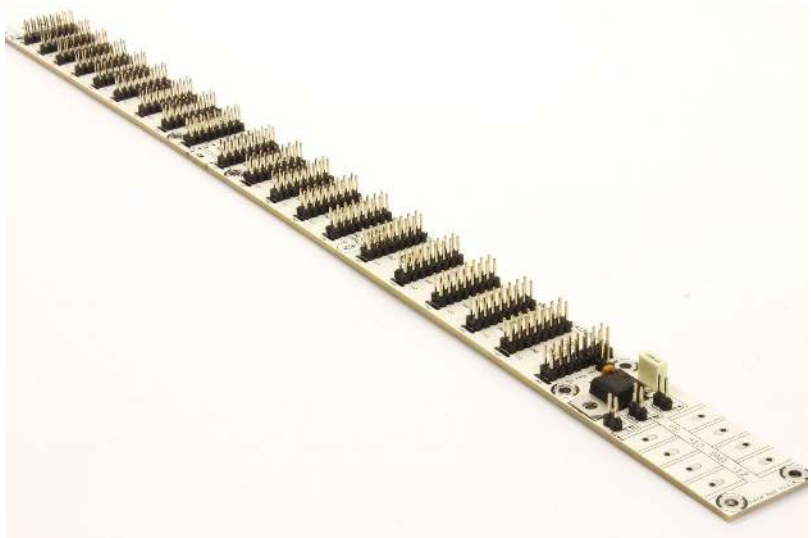
Also briefly go through this guide and make sure that you understand all the steps.

SOLDERING

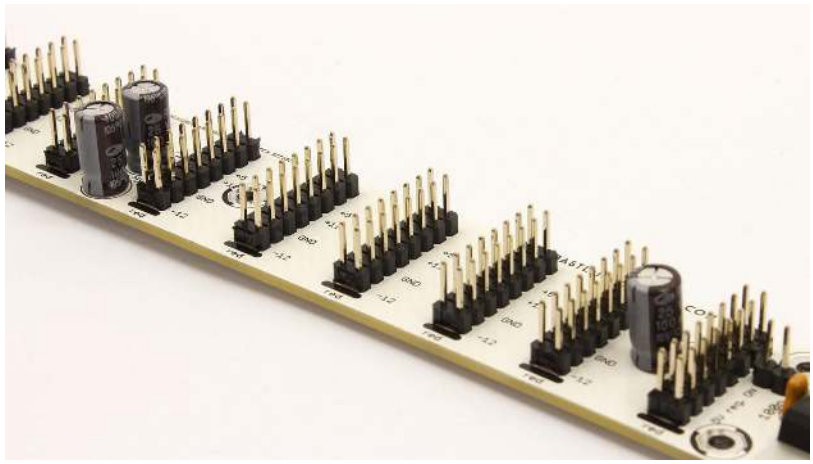
There are just few easy components to solder on the Juice Bus board so it is not really a tough job to get it done. Just be sure to solder all the joints properly. Start soldering in the following order:

- **7805 voltage regulator** (1x; bend its legs at a right angle to make sure that it lies flat on the circuit board)
- **100nF ceramic capacitor** (1x; marked “104”)
- **330nF polyester capacitor** (1x)

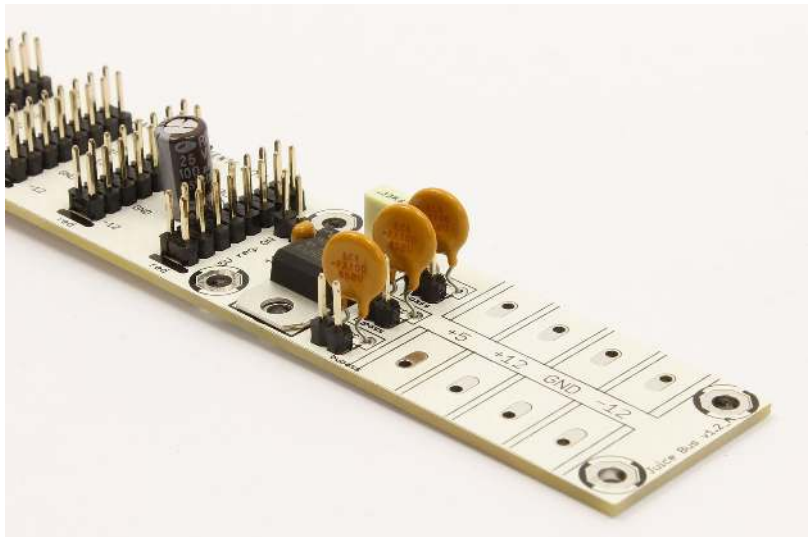




- **Male pinheaders** - use your flush cutters to get 20 pieces of 2x8 pin male headers and four pieces of 2 pin male headers. Be aware to solder the pinheaders straight and flat with the PCB. You can start by soldering just one pin and after checking the position move on to the next ones.

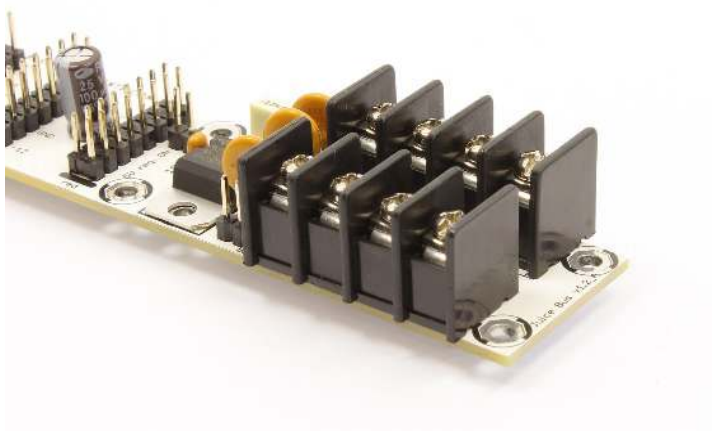


- **100µF electrolytic capacitors** (3x; watch out for **orientation!** - there is a plus (+) sign on the PCB that has to match the longer lead of the capacitor)

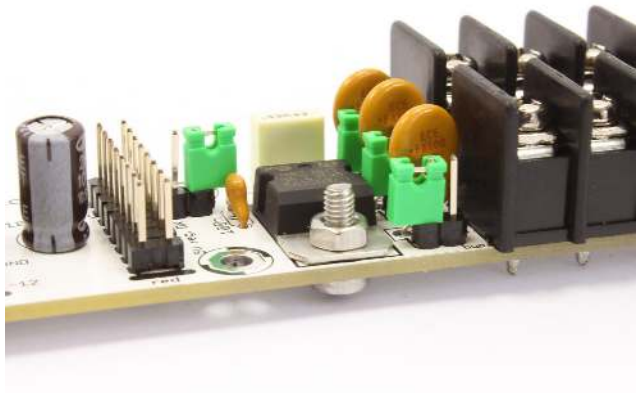


- **Fuse** (3x)

- **Terminal blocks** (before soldering these last parts you have to choose whether you want to use the JuiceBus as a long board consisting of 20 connectors (=> solder just 2 terminal blocks next to the fuses) or if you want to split it at its breakpoints and have one main powered busboard of 11 connectors and secondary busboard of 9 connectors (=> solder all 4 terminal blocks). After soldering cut the overhanging wires).



After the soldering don't forget to install the **nut with screw** on the voltage regulator and the **jumpers** (4x) into the default position.



Congratulations! Your JuiceBus board is done. Now you are ready to install it into your system. You can use the enclosed screws and plastic washers. Enjoy!

TROUBLESHOOTING

First check out the DIY F.A.Q.

If you are having some more trouble, the best thing is to take a nap! Especially late at night!

If you are still in trouble you can send the detailed description of the problem with enclosed high-resolution photos on diy@bastl-instruments.com.

If you think that you are unable to make the unit work on your own, consider our "Come to Daddy" service.