b3ꓝꓵ⊏o

THANKS FOR CHOOSING ONE OF OUR KITS!

This manual has been written taking into account the common issues that we often find people experience in our workshops.

Some steps are not obvious, so even if you're an experienced DIY ninja please read the steps thoroughly before starting.

IF is your firt time and need some advice in to the soldering art, It might be good moment to take a look to this document:

www.befaco.org/howto/

Be warned that this little power supply is designed for powering a maximum of three modules but it all depends on the power of the USB-C Host where you connect it. Please connect this module only to "Phone-Like" USB Chargers or high-power USB ports.
The maximum current this device can deliver continuously is 400mA per power rail, but this is only possible with a decent 20W or more power charger or USB-C 1.2. Connecting it to older USB port versions like USB-1 or USB-2 IS NOT RECOMMENDED Connecting it to a USB 3 or 3.1 port is possible but the power will be very limited, so is also NOT RECOMMENDED.

SOME USEFUL INFO:

This kit contains a PCB and some mechanical and electronic components. When soldering the parts to the PCB ensure they are on the silkscreen side (the white images on the PCB) with the actual soldering done on the other side.

- The long leg is the positive (LEDs, capacitors etc…).
- Snip the excess length of the legs of components after soldering.
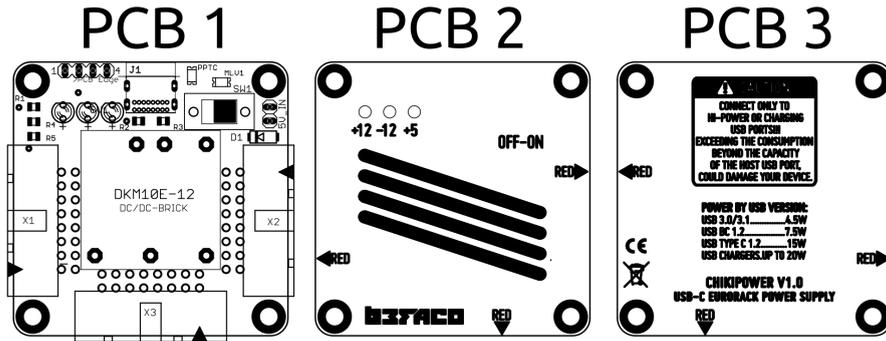- Be gentle and triple check all steps!

ENJOY!

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SEPARATE THE PCBS

There are three PCBs on the panel:

PCB-1: I where all the components will be soldered
PCB-2: Is the front panel
PCB-3: Is the bottom panel

Before you solder anything. Separate the three PCBs
Don't be afraid to break them. You can make it by hand, or using some cutting pliers.
After you separate them, clean the rest of union tabs with the help of a file or a piece of sandpaper.

OPEN BAG A

| IDC CONNECTORS |
|---|
| Take PCB-1. Place the three angled IDC connectors (the black boxes) on it, in their respective places X1, X2 and X3. To do so follow the PCB graphics. Hold the three connectors against the PCB with a flat object (like one of the remaining PCBs), so you can flip it upside down with all the connectors in place. Solder one leg of each connector. Flip the PCB and double check if all of them are perfectly aligned. If they are, solder all the remaining pins. |

OPEN BAG B

+12/- 12V DC REGULATOR
The large Black DC/DC regulator Brick(marked "DKM10E-12") should be placed at the center of the PCB and soldered into the place where the large white square silkscreen indicates. Solder it from the bottom side of the PCB and cut the excess legs so they get flush to the PCB

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OPEN BAG C

SPACERS
Fix the four 12mm aluminum spacers to the top of the PCB 1 using the four long screws from the bottom side up Reserve PCBs 2 & 3 for later. From the side, It should look like this: SPACER SCREW
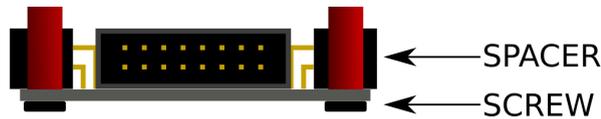
SLIDE SWITCH
Place the Switch SW1 in the place indicated on the PCB but DO NOT SOLDER IT YET. It should be soldered only after the front panel is in place so you can easily calculate at which height it should be.

| LEDs |
| --- |
| Place the three LEDs onto the PCB taking care of their polarity. The long leg is the positive and the short the negative. Make sure you follow the indications on the PCB's silkscreen.

DO NOT SOLDER THEM YET! Wait until the front panel is in place. |

Qty	Name on PCB
3	D2, D3, D4

| FRONT PANEL |
| --- |
| Place PCB-2 to the top of the PCB-1 and screw it to the spacers using the four short screws from the top side down (Reserve PCB-3 for later)

Now place the LED's thru the holes of PCB2 so they get flush to it, and solder them.
Cut the excess legs

Do the same with the slide switch using PCB2 to position it at the correct height, so that it sticks out above PCB2.
Now, it should look like this:

LEDs flush to PCB 2

switch poking all the way through PCB 2 |

BYACO
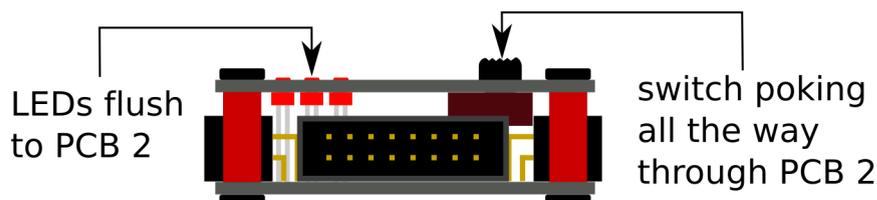
BOTTOM PANEL

We will now screw PCB-3 to the bottom.
To do this, with the Chiki Power upside down:

-Remove the four lower screws
-Place the four small red washers over the four holes
-Put the PCB-3 on it and screw it using the four long screws

Your Chiki Power should look as follows:
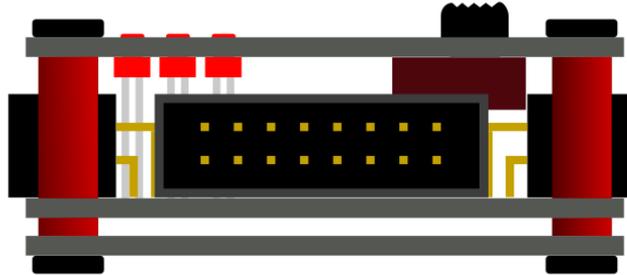

TESTING THE MODULE

DO NOT CONNECT ANY MODULE BEFORE TESTING IT!!!

Connect the Chiki Power using a >15W USB power adapter and the supplied USB A to C cable.

Switch the device ON

On power up, the three LEDs should light indicating all three voltages are working.

With the help of a multi-meter, check that you have relevant voltages in each connector.
Use the next drawing as a reference:
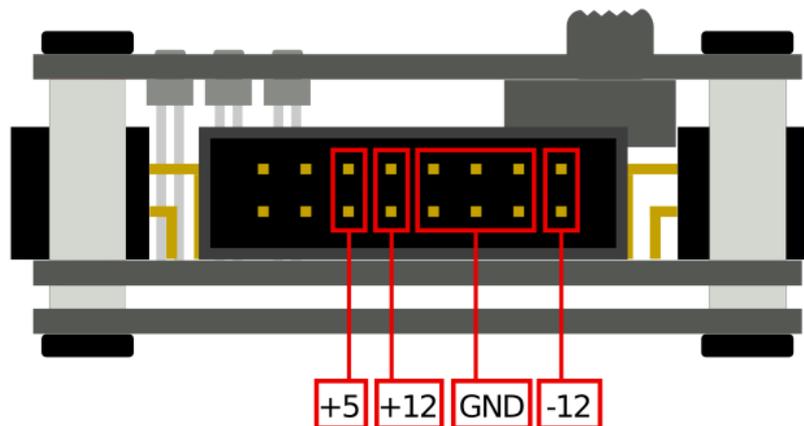
If all your voltages are correct, you are ready to use your Chiki Power

ENJOY YOUR NEW BEFACO MODULE!

TROUBLESHOOTING TIPS:

-If the LEDs do not light and get the correct voltages, the LEDs are most likely the wrong way around.

-If the LEDs do not light and you are not getting the correct voltages (or any voltages) at the pins:

   Ensure your USB power source and cable are ok.

   Carefully go back through the manual checking your connections and that you have made good solder joints.

BONUS TRACK:

Chiki Power is designed to be an auxiliary standalone power supply, but it's possible to adapt it to use it inside a small modular case.
To facilitate this operation, connection pins are provided to solder any connector for power IN and OUTs.
If you want to do so, please check the following graph the pin-outs: