

THANKS FOR CHOOSING ONE OF OUR KITS!

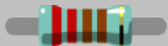
This assembly guide has been designed taking into account the common issues that we often find people experience in our workshops. The order in which the components are placed on the board is meant to make assembly as easy as possible.


Some steps are not obvious, so even if you're an experienced DIYer, please take the time to read the steps thoroughly before starting.


If this is your first project, please read this article before you start assembling the kit:
www.befaco.org/howto/

GOOD LUCK!

OPEN BAG A

RESISTORS 			
Qty	Value	Code	Name on PCB
6	51k	Green, Brown, Brown, Red, Brown	R5, R6, R7, R14, R15, R16
5	1k	Brown, Black, Black, Brown, Brown	R12, R17, R18, R20, R22
4	120k	Brown, Red, Black, Orange, Brown	R8, R9, R10, R11
3	10k	Brown, Black, Black, Red, Brown	R1, R2, R13
2	100k	Brown, Black, Black, Orange, Brown	R4, R23
2	1M	Brown, Black, Black, Yellow, Brown	R3, R21
1	100 Ω	Brown, Black, Black, Black, Brown	R19

DIODES 		
Solder the diodes observing their polarity . The black or white line on the diode must be in the same place as the white line on the diode symbol on PCB silkscreen.		
Qty	Value	Name on PCB
2	1N5817	D1, D2

ICs 		
First place the socket (taking care to orientate IT properly - the “notch” on one end should match the image of the silkscreen) and solder them into their correct positions.		
Next place the IC in the socket (again taking note of their polarity - the mark or “notch” on the front of the IC must match that of the socket and silkscreen).		
Qty	Value	Name on PCB
1	TL072P	IC2
1	ATMEGA328	IC1 (Silkscreen is incomplete. Notch is facing up, out of the board)



CAPACITORS & RESONATOR

Mind the polarity of the 10uF capacitors (The long leg of the capacitor is the positive (+)).

Qty	Value	Code	Name on PCB
3	100n	104	C1, C2, C5
2	10uF	10uf (watch the polarity!!)	C3, C4
1	16Mhz	160.n (three legs)	Y1

TRANSISTOR & REGULATORS

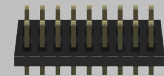


Mind the polarity! Shape must match silkscreen footprint.

Qty	Value	Code	Name on PCB
3	2N3904	2N3904	Q1, Q2, Q3
1	7805	78L05	IC3

OPEN BAG B

POWER CONNECTOR



Solder the power connector at "PWR". **THIS CONNECTOR IS PLACED ON THE BACK OF THE PCB!!**

FRONT PANEL COMPONENTS MOUNTING TIPS:

Now we will proceed to mount the jacks, Switches, LEDs and potentiometers. This part of the assembly is CRITICAL. Please take your time and read the instructions carefully.

These components must **NOT** be soldered until they are placed on the PCB and fully attached to the front panel.

There are two reasons for this:

- The height of the panel components are not all the same. Because of this, if not attached properly before soldering, they will not stay properly seated against the panel. This might cause mechanical stress reducing their life expectancy and in the worst case cause them to break.
- The second reason is that it is very difficult to align the components to the holes if the panel is not positioned prior to soldering. In the case of the LEDs, they are almost impossible to set to the correct height without reference to the front panel.

MINI-JACKS

Place all the mini-jacks onto the PCB ensuring they are on the silkscreen side, but **don't solder yet.**
CLKIN, DIVOUT, FILL, RSTIN, STEP.

SWITCH

Remove washers and nuts from the switches. Place it at **S1. But do not solder them yet!**

OPEN POTS BAG

POTENTIOMETERS

Place potentiometers, ensuring they are flat against the board. Then place a nut on each (IMPORTANT!). **Do not solder them yet!**

Qty	Type	Name on PCB
5	Single 10k	FILLCV, FILLMAN, ROTMAN, STEPCV, STEPMAN

LEDs



Place the LEDs onto the PCB minding their polarity, but **don't solder them** until the front panel is in place. This is the only way to solder them in the right position.

The long leg is the positive and the short the negative. On the PCB the square pad indicates the negative side.

Qty	Name on PCB
2	LED1, LED2

FRONT PANEL

Attach the **front panel** adjusting the parts one by one if necessary until they fit. At this point a pair of fine tweezers can be helpful.

To finish:

- Secure the parts to the panel in this order: **A) Mini-jacks B) Switch C) Pots.**
- Ensuring all of the above parts are flush with the panel then you can finally **solder** them!
- Next, adjust the **LED** so that they are flush with the panel and solder them.
- Put the **knobs** on the potentiometers.
- Connect the **power ribbon cable**: The red wire (-12V) on the power ribbon cable corresponds to pin number one on the male power connector. The number one pin is indicated with a small triangle on the male power connector and a white line on the main PCB. A white or black line (or “-12v”) marked on your power bus normally indicates the corresponding pin.

ENJOY YOUR NEW REBEL TECHNOLOGY MODULE!

