THANKS FOR CHOOSING ONE OF OUR KITS!

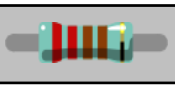
This manual has been written taking into account the common issues that we often find people experience in our workshops. The order in which the components are placed on the board is meant to make assembly as easy as possible.

Some steps are not obvious, so even if you're an experienced DIYer please read the steps thoroughly before starting. You will be soldering both boards at the same time.

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

GOOD LUCK!

RESISTORS



It's strongly recommended to measure the resistors with a multimeter. Color code might be hard to read with blue/green background.

Qty	Value	Code	Name on PCB
8	100k	Brown, black, black, orange, brown	R1, R2, R3, R4, R7, R8, R11, R12
4	1k	Brown, black, black, brown, brown	R5, R6 , R16, R17
2	51k	Green, brown, black, red, brown.	R9, R10
2	39k	Orange, white, black, red, brown	R15, R18
2	20k	Red, black, black, red, brown	R13, R14

FERRITE

To solder the two ferrite beads use a recycled resistor leg passed through each ferrite and proceed as if it were a resistor. Ferrite beads don't have polarity.

Qty	Name on PCB
2	F+1, F-1

DIODES

Solder the diodes observing their polarity. The black or white line on the diode must match with the white line on the diode symbol on the PCB silkscreen.

Qty	Value	Name on PCB
2	1N5817	D1, D2

CAPACITORS

Identifying capacitors can be quite tricky. Codes stated are indicative, please take a look at this guide for help identifying capacitors: http://www.wikihow.com/Read-a-Capacitor

Qty	Value	Code	Name on PCB
12	100n	104	C2, C3, C4, C5, C6, C8, C10, C11, C14, C15, C20, C21
4	10p	10	C12, C13, C16, C17
3	4n7	4.7n	C1, C7, C9

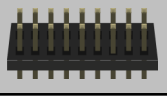
ELECTROLYTIC CAPACITORS

Values are written on the side of the capacitor. Mind their polarity (The long leg of the capacitor is the positive (+)).

Qty	Value	Code	Name on PCB
2	10µF	10µF	C18, C19

This is a good moment to split the boards apart.

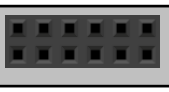
PIN HEADERS



Place and solder the Pin Headers on the silkscreen side of the main board (It is the shorter pins that you are soldering). Double check they all are perfectly straight.

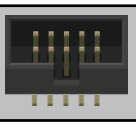
Qty	PINs	Name on PCB
2	1x6	JP1, JP2
1	1x5	JP3

SOCKET CONNECTORS



Place the socket connectors on the control board over the silkscreen markings at positions and solder. Double check they all are perfectly straight.

Qty	PINs	Name on PCB
2	1x6	JP100, JP101
1	1x5	JP102

POWER CONNECTOR 
Solder the power connector on the bottom face of the main PCB, ensuring it is facing out from the edge of the PCB. The small arrow on the connectors must be on the side with the thick white line.

SPACERs
Spacers should be placed on the control board, there are 2 holes for this purpose. Secure the 11mm female/female spacer on the hole between the top minijacks using the m2x6mm screw, the spacer should face the component side. On the hole of the bottom should be placed the 11mm female/male (facing component side) secured using the 10mm female/female on the mechanical part side.

FRONT PANEL COMPONENTS MOUNTING TIPS:

Now we will proceed to mount the jacks, switches, button and potentiometers. This part of the assembly is CRITICAL. Please take your time and read the following 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.

POTENTIOMETER		
Place the potentiometer on the PCB. Do not place IT all the way down, as it should be the same height as minijacks and ... **don't solder it yet!**		
Qty	Type	Name on PCB
1	Dual (6pin) B100K	POT

MINI-JACKS
Place all the mini-jacks onto the PCB ensuring they are on the silkscreen side, but **don't solder yet.** Some of the minijacks' ground legs will share the same solder holes.

SWITCHES		
Place the switches in their right places. **don't solder them yet!**		
Qty	Type	Name on PCB
2	Slide Switch ON-ON SPDT	SWPP, GATE_LATCH

BUTTON		
Place the button in its right place, **check orientation**, the flat side of the button is marked on the silkscreen. **don't solder it yet!**		
Qty	Type	Name on PCB
1	Led Button	Launch Button

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) **Pot** - Ensuring all of the above parts are **flush with the panel** Then you can finally **solder** them all! - Connect the **main PCB** to the **control PCB** by threading the M2 screw through the main PCB and securing them to the spacer. The main PCB should be orientated so that the component side is facing towards the front panel. - Put the **knob** on the potentiometer. - 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 MOLTEN MODULE!

IN_L
IN_R
SEND_L
SEND_R
RETURN_L
RETURN_R
OUT_L
OUT_R
SWPP
POT
LAUNCH
GATE_LATCH
C1
R1
IC1
C2
R2
R3
C3
C4
R4
R6
R5
IC2
C5
C6
R7
IC3
R8
C7
C8
C9
C11
IC4
C10
R9
R10
R11
R12
C12
C13
IC5
R14
C15
R13
C14
R16
R17
R15
C16
R18
C17
C18
C19
C20
C21
F-
F+
D1
D2
JP1
JP2
JP3