## 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.

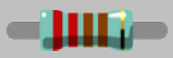
If this is your first project, please read this article before you start assembling the kit:
www.befaco.org/howto/

## GOOD LUCK!

# MAIN PCB

## OPEN MAIN BOARD BAG A

### RESISTORS



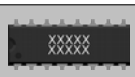
| Qty | Value | Code | Name on PCB |
|---|---|---|---|
| 5 | 56k | Green, Blue, Black, Red, Brown | R3, R4, R11, R12, R15 |
| 4 | 100k | Brown, Black, Black, Orange, Brown | R9, R10, R17, R19 |
| 2 | 1k | Brown, Black, Black, Brown, Brown | R1, R2 |
| 2 | 10k | Brown, Black, Black, Red, Brown | R7, R8 |
| 2 | 2k7 | Red, Purple, Black, Brown, Brown | R13, R20 |
| 2 | 47k | Yellow, Violet, Black, Red, Brown | R5, R6, |
| 1 | 3k3 | Orange, Orange, Black, Brown, Brown | R14 |
| 1 | 1M | Brown, Black, Black, Yellow, Brown | R16 |
| 1 | 120 Ω | Brown, Red, Black, Black, Brown | R21 |
| 1 | 470k | Yellow, Purple, Black, Orange, Brown | R18 |

### 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 |

### ICs




First **place the sockets** (taking care to orientate them properly – the notch or dot on one end of the IC should match the image on the silkscreen) and solder them into their correct positions.
Next place the ICs in their respective sockets (again taking note of their orientation – the notch or dot on the top of the IC must match that of the socket and silkscreen).

| Qty | Value | Name on PCB |
|---|---|---|
| 1 | TL074 | IC100 |

### 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 |
|---|---|---|---|
| 4 | 100n | 104 | C1, C2, C7, C8 |
| 1 | 100p | 101 | C3 |

### 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 | C5, C6 |
| 1 | 1µF **N.P.** | 1µF | C4 **(This cap has no polarity)** |

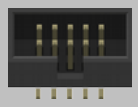
### TRANSISTORS

Be sure they are orientated correctly. The curved and flat sides of the silkscreen outline of the transistor on the PCB must match that of the transistor's body.

| Qty | Value | Name on PCB |
|---|---|---|
| 2 | 2N3906 | T2, T3 |
| 2 | 2N3904 | T1, T4 |

## OPEN MAIN BOARD BAG B

### POWER CONNECTOR



Solder the power connector at "POWER". The small arrow on the connectors must be on the side with the thick white line.

[CONTINUED ON NEXT PAGE]

## FRONT PANEL COMPONENTS MOUNTING TIPS:

Now we will proceed to mount the jacks, sliders & potentiometer. 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.

## OPEN MINI-JACKS BAG

| **MINI-JACKS** |
|---|
| Place all the mini-jacks onto the PCB ensuring they are on the silkscreen side, but **don't solder yet**.<br><br>**Caution:** the switch nut and the jack nuts look the same, but they are not equally sized and will not fit in each others' thread, so make sure to keep them separate! |

| **FADERS** | |
|---|---|
| **Solder** the faders onto the PCB in the position indicated by the silkscreen | |
| Qty | Name on PCB |
| 2 | RISE_POT, FALL_POT |

**POTENTIOMETER**

Cut the locating lug with cutting pliers as pictured. Now place potentiometer on the PCB but... **don't solder them**.

| Qty | Type | Name on PCB |
|---|---|---|
| 1 | Single (3pin) 100K | SHAPE |

## 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!

- Put the **knob** on the potentiometer and the red end-**caps** on the switches/faders.

- 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 BEFACO MODULE!