en/Powerboard-QuadroXL

3

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QuadroXL-Powerboard

- deutsch
- français

Attention: The XL powerboards are designed for the **BL-Ctrl2.0**! Do **not** use BL-Ctrl1.2 on it.

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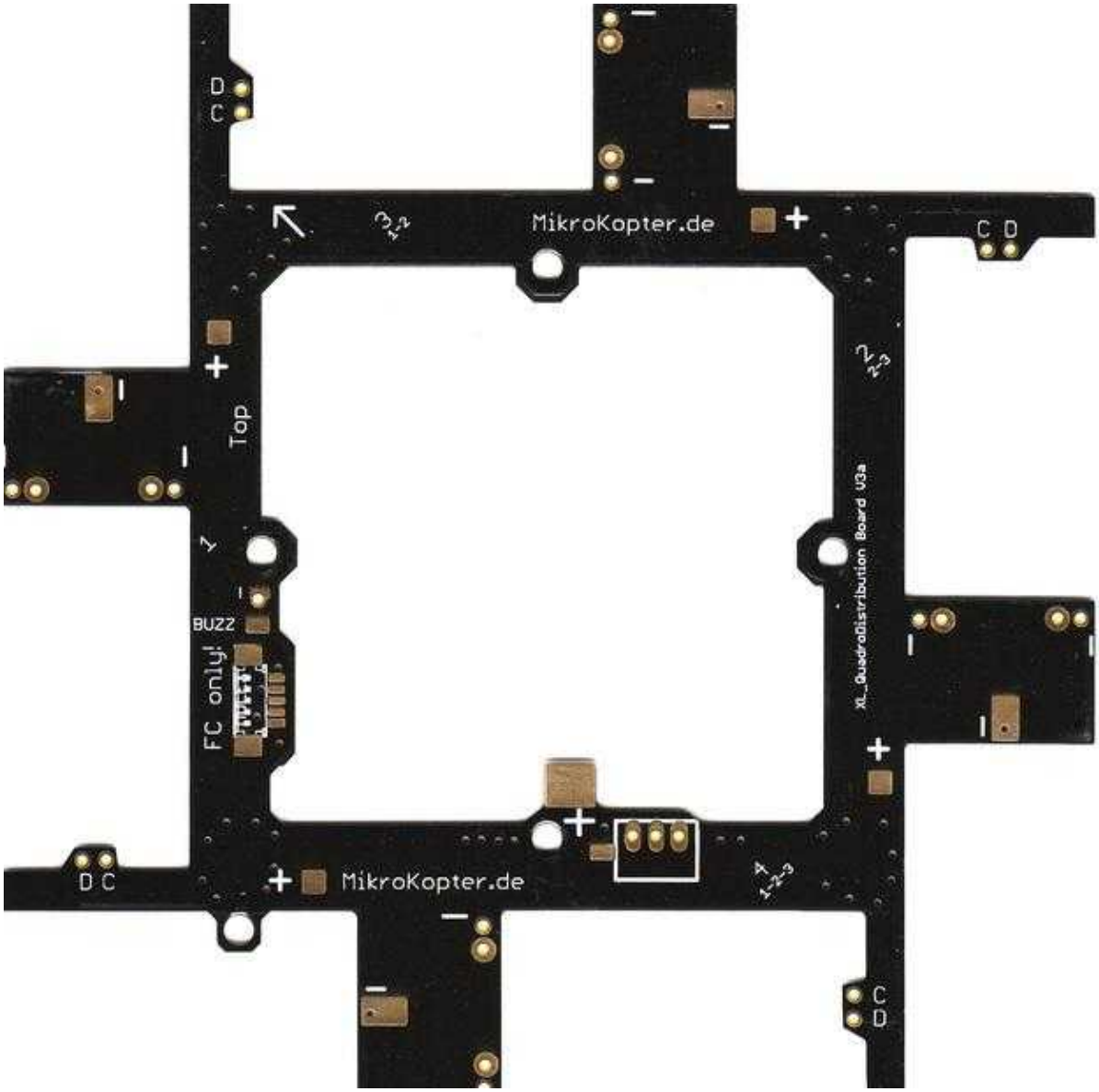
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Top
BUZZ
FC only!
XL_QuadroDistribution Board V3a

Info

At this current distribution of the BL-Ctrl2.0 overlapping be soldered to the power distribution board. This provides better heat dissipation is possible.
Since the PCB during soldering and the heat dissipates very quickly, you need a soldering iron with enough power (~ 80W). A completely clean soldering is a must.

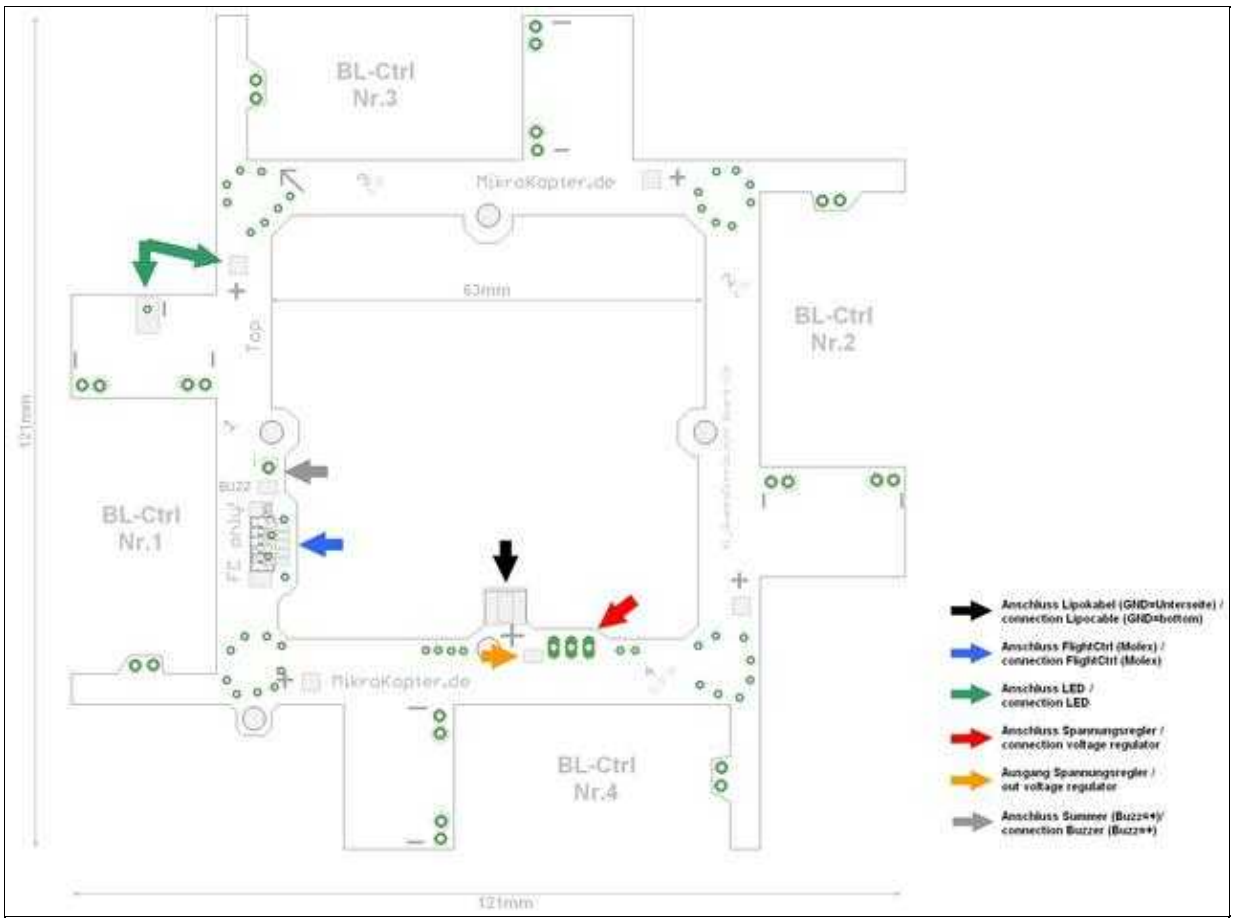
QuadroXL Power Distribution

The QuadroXL Power distributor provides the BL controller with power and connecting the I2C bus for communication.
The BL controllers are mounted in the recesses of the distribution board and connected by wire bonds.
⚠ The top of the distribution board is marked with "+".

If you have a allready mounted Power distributor, please read on "Versorgung und Summer" further.

Arrangement of the BL controller

The BL-controllers are arranged as shown here in the distribution board (clockwise BL-Ctrl Nr. 1-3-2-4).
⚠ **The processors and the solder connections for the motor have to show up at all controllers.**



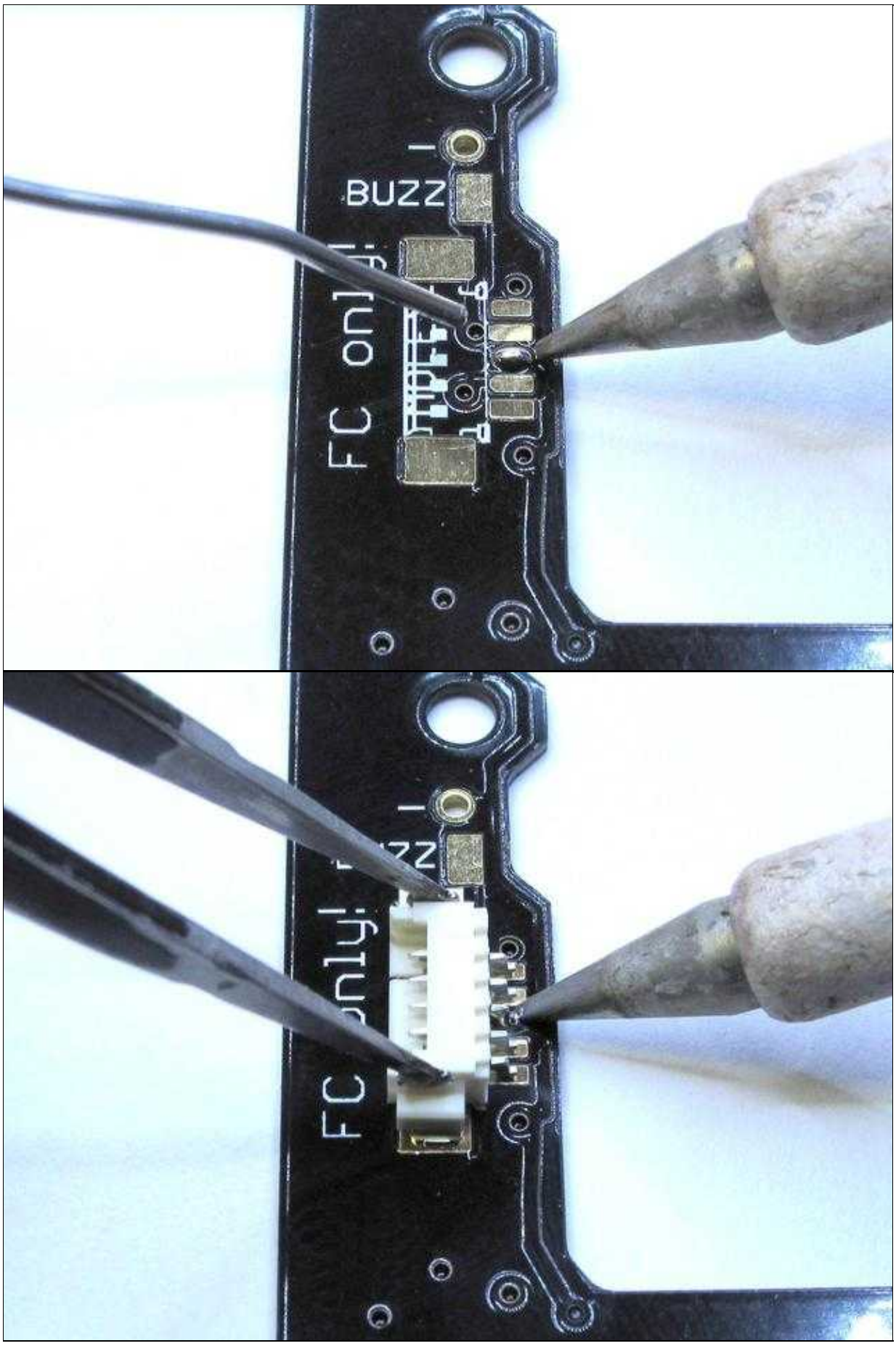
Assembly of the Molex connector

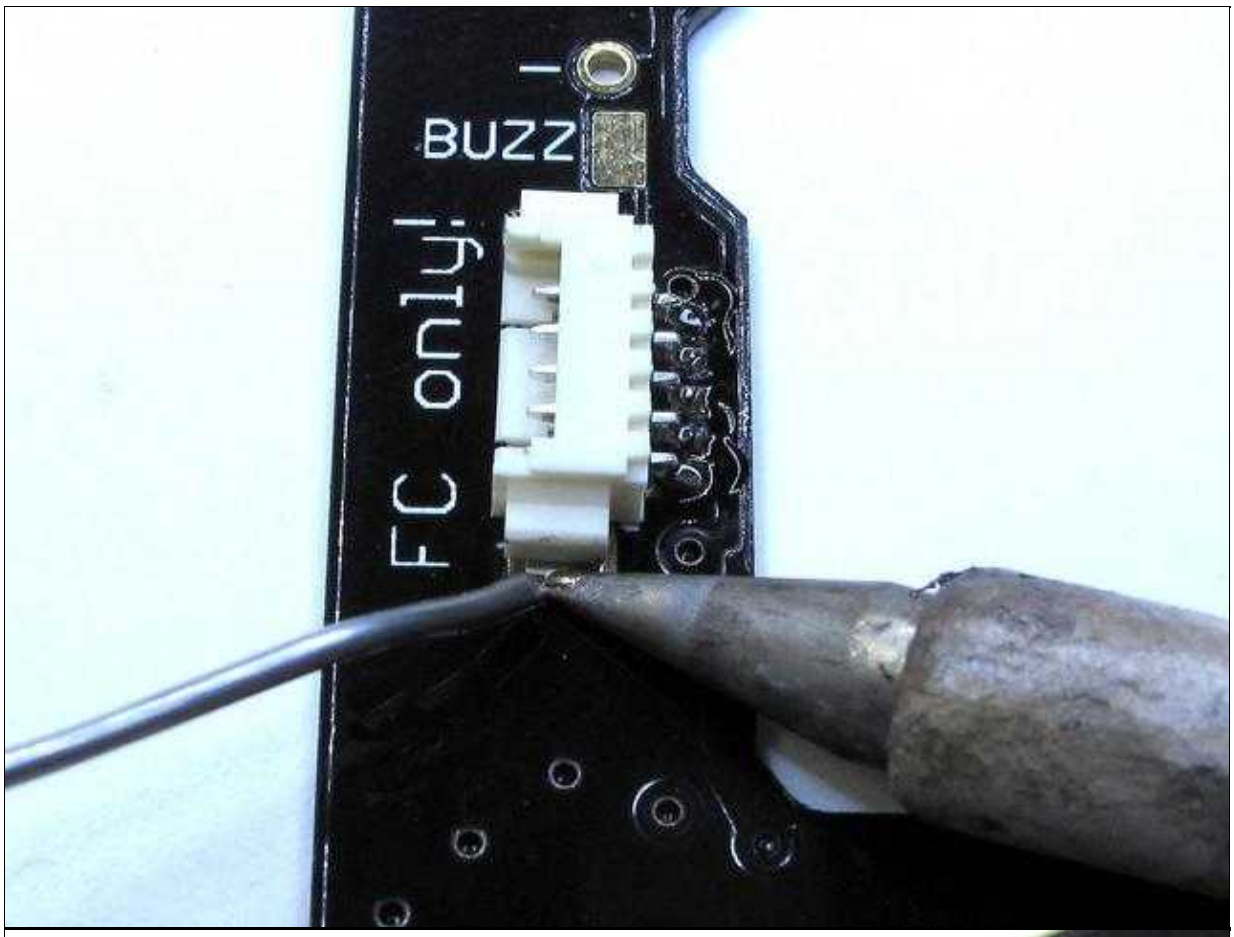
For this purpose you should use a fine tip. The first one is a solder pad on the distribution board and solder then Molexbuchse fixed thereto. This is to cater to the remaining contacts are soldered.

⚠ The contacts may have no connection with each other!

- **The FlightCtrl is connected over the Molex socket with power, I2C-bus and the Buzzer.**

ℹ Tip: Excess solder can be removed perfectly with solder wick. If the mounting of the Molex socket fails, the PCB can be gently heated from the bottom with a heat gun and the socket be released.


BUZZ
FC only!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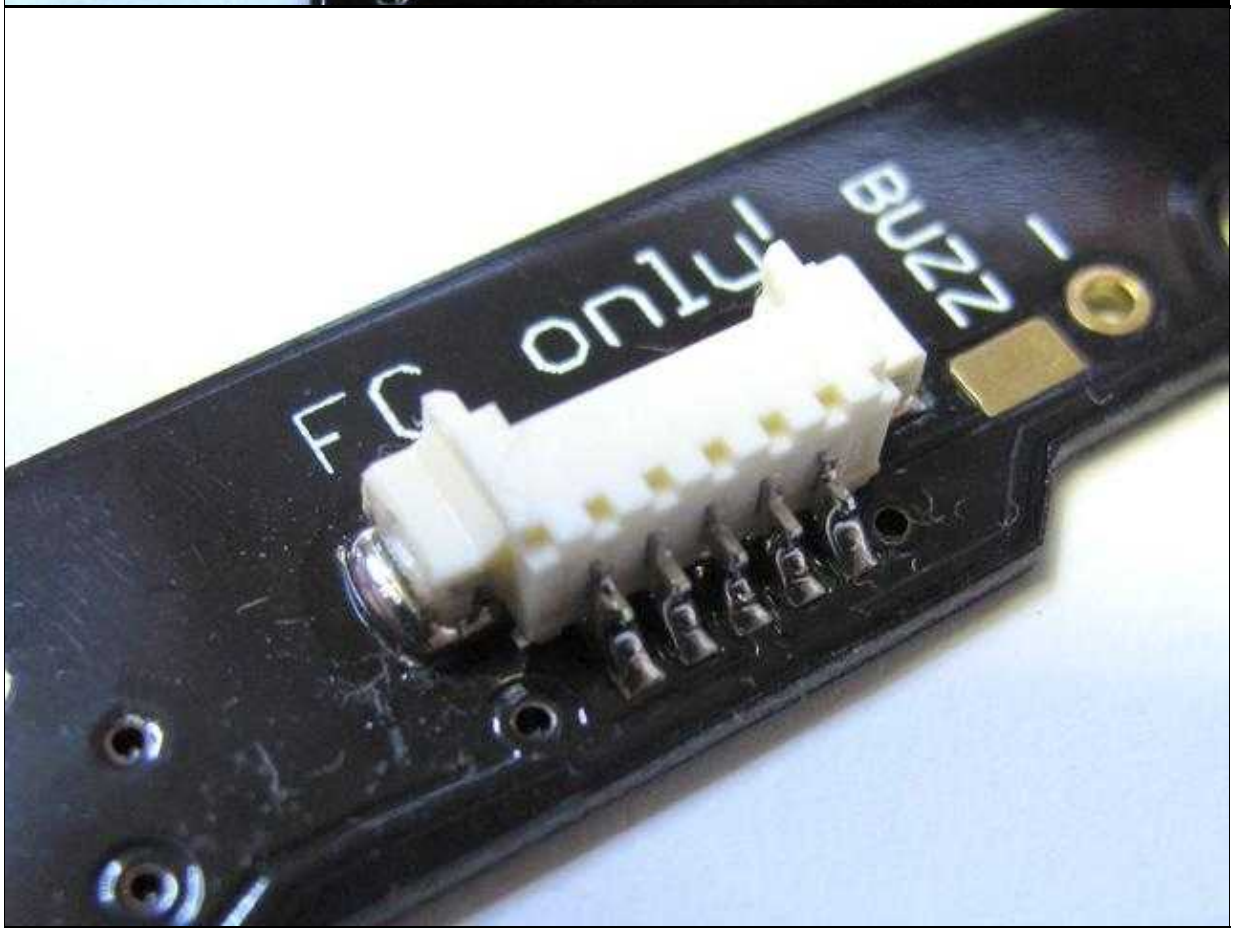
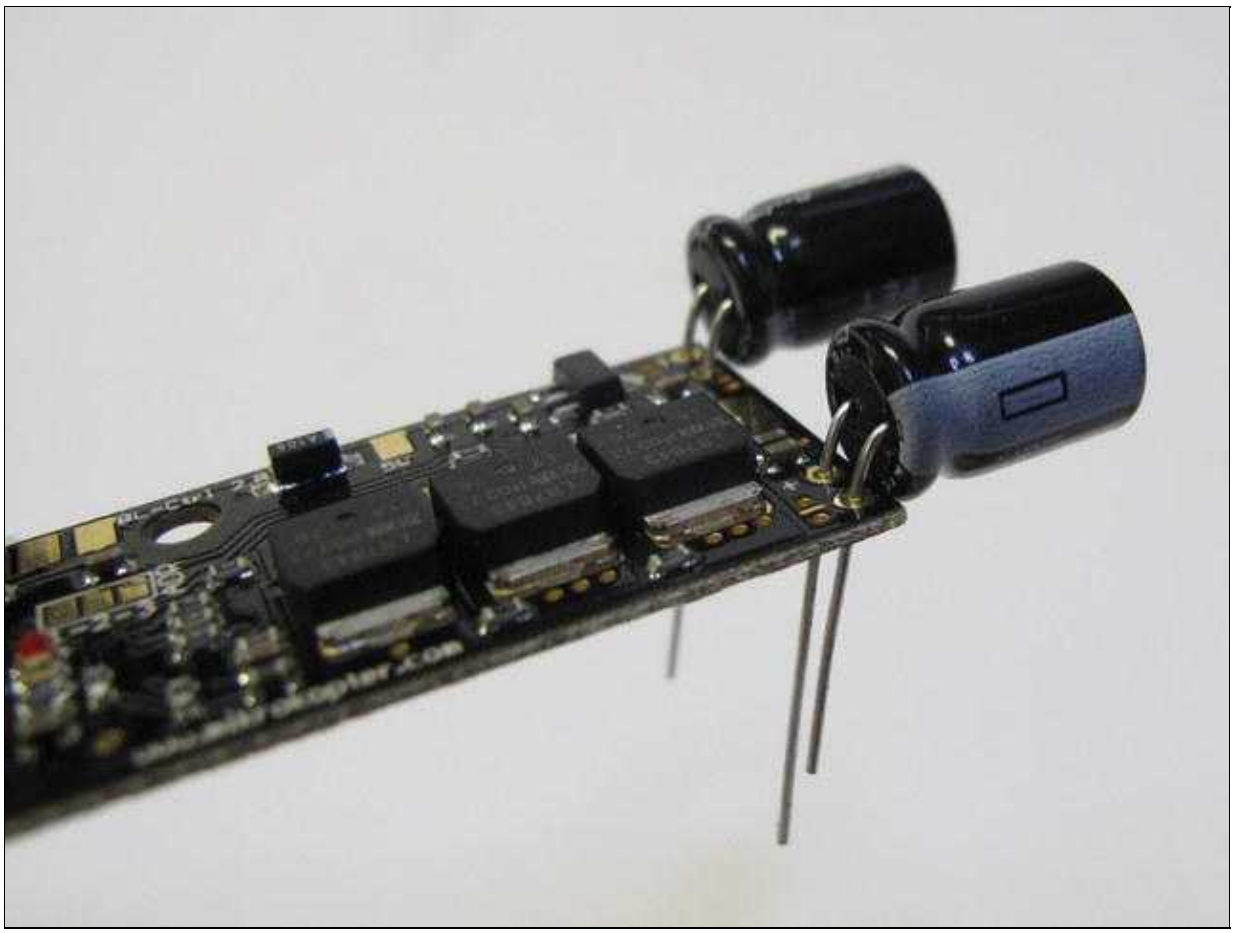

FC only!
BUZZ

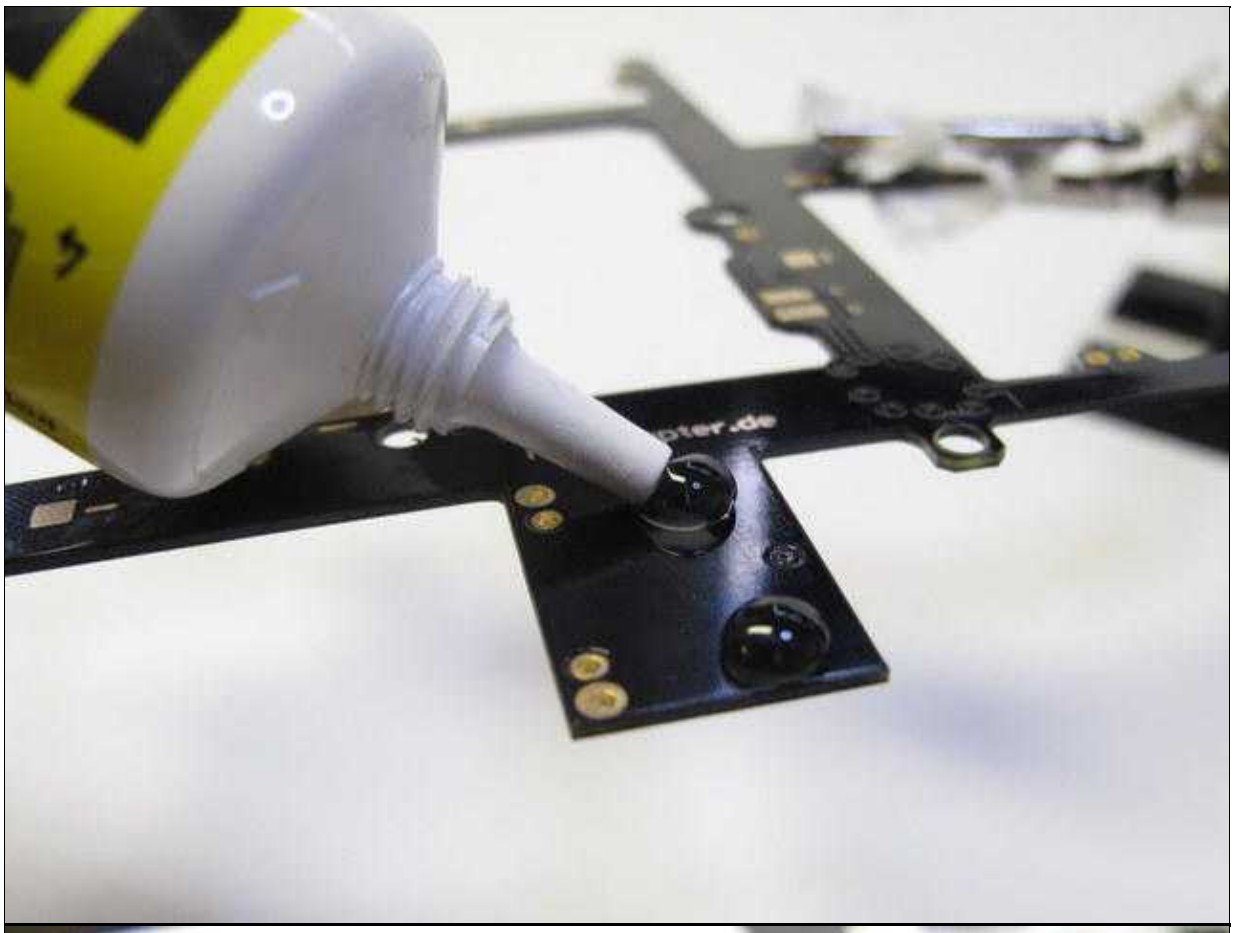
solder the Elkos on the BL-Ctrl2.0

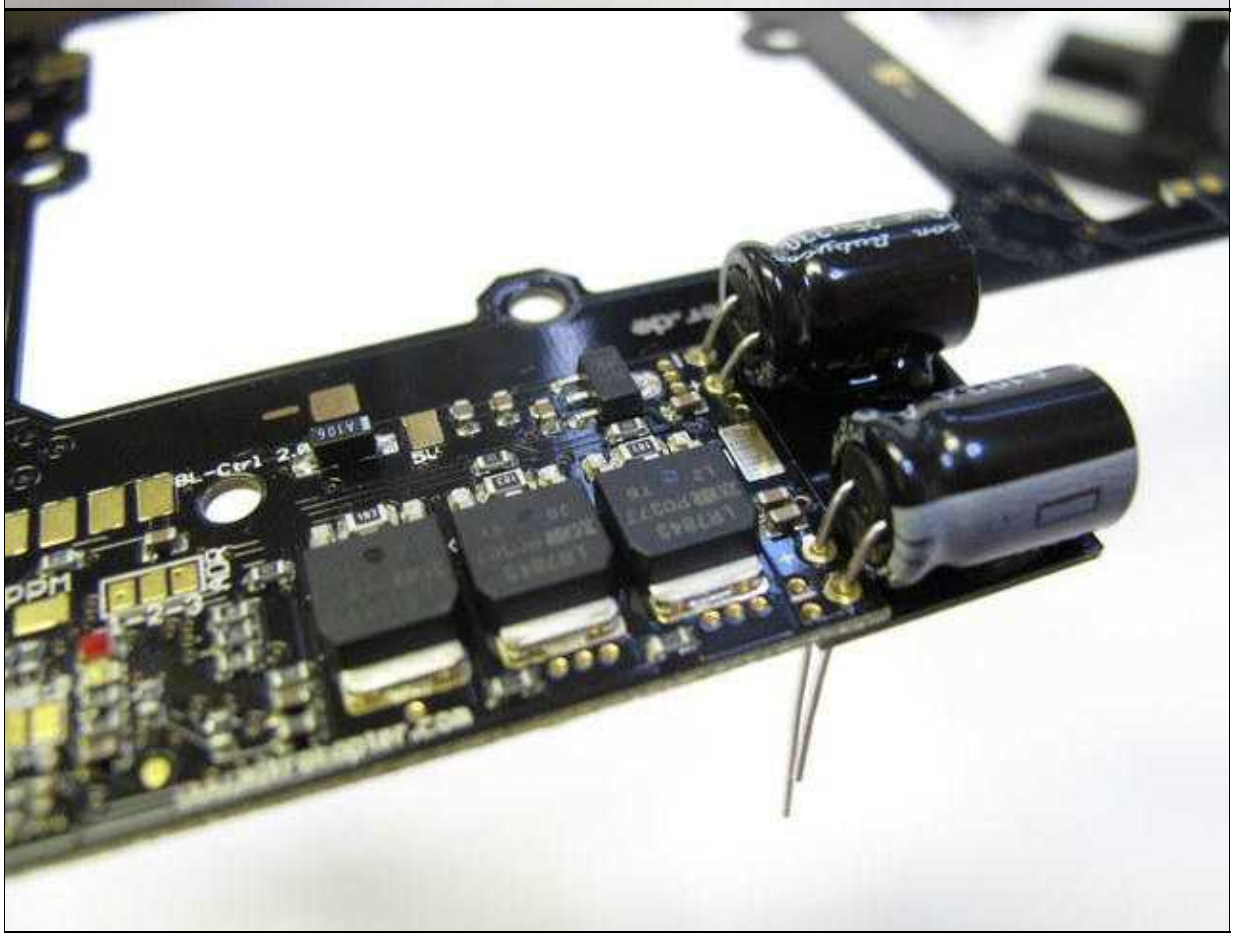
All Elkos you can mount on the bottom side of the power distributor.
First solder the two Elkos on the bottom side of the BL-Ctrl2.0.



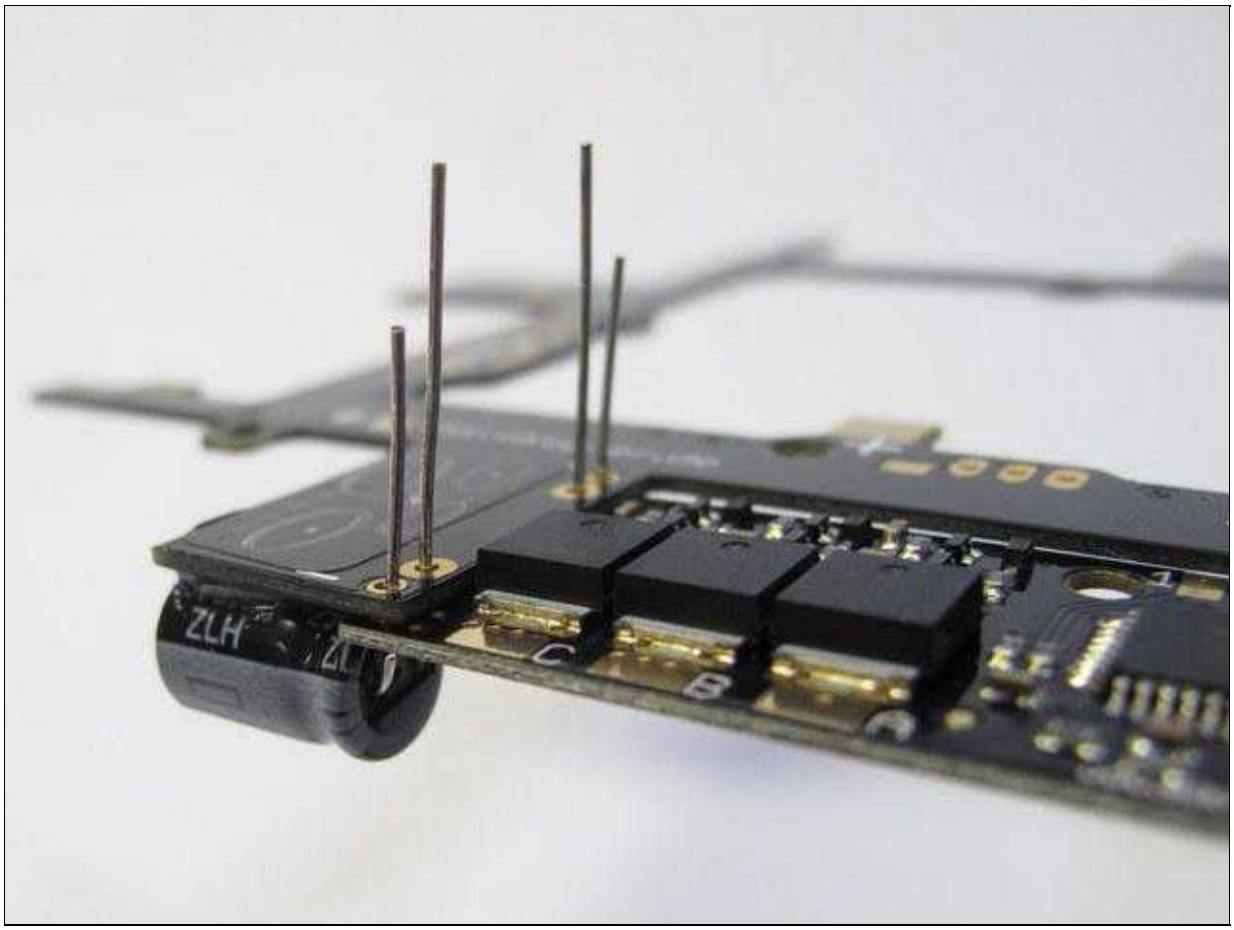
solder the BL-Ctrl2.0 on the Power Distribution

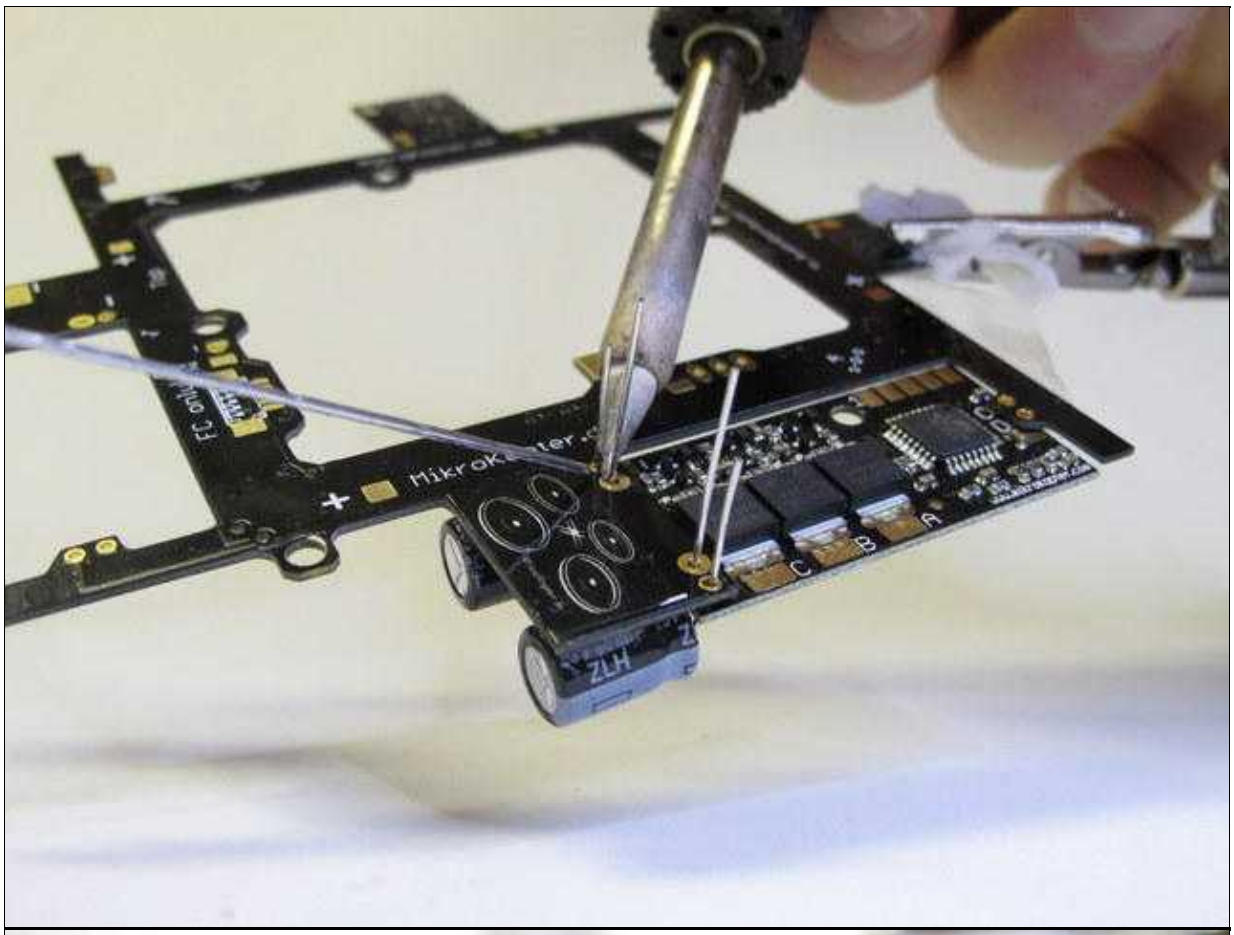
First make for eatch elko a little bit glue on the bottom side of the power distribution. Then put the BL-Ctrl2.0 with the soldered Elkos on the power board.

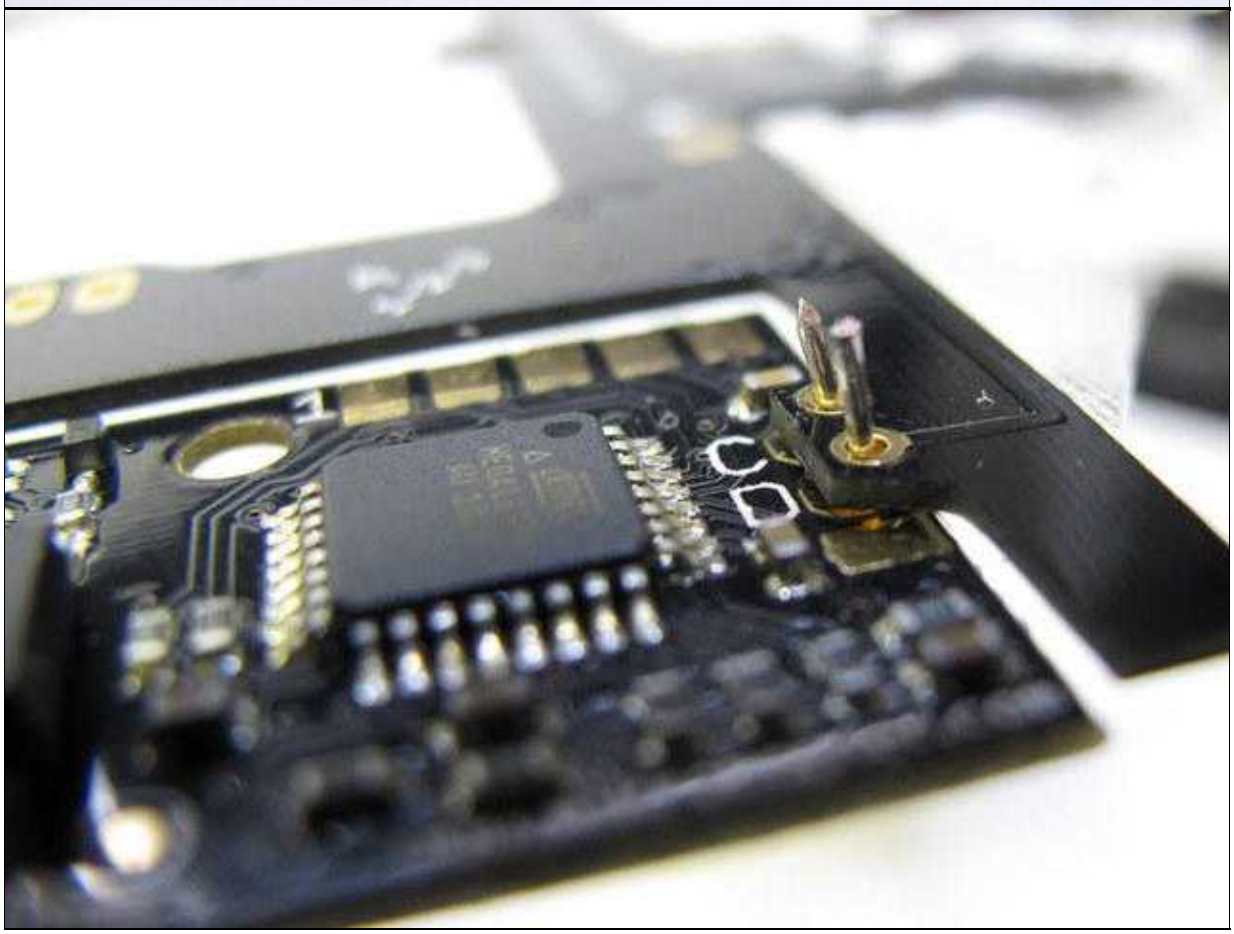


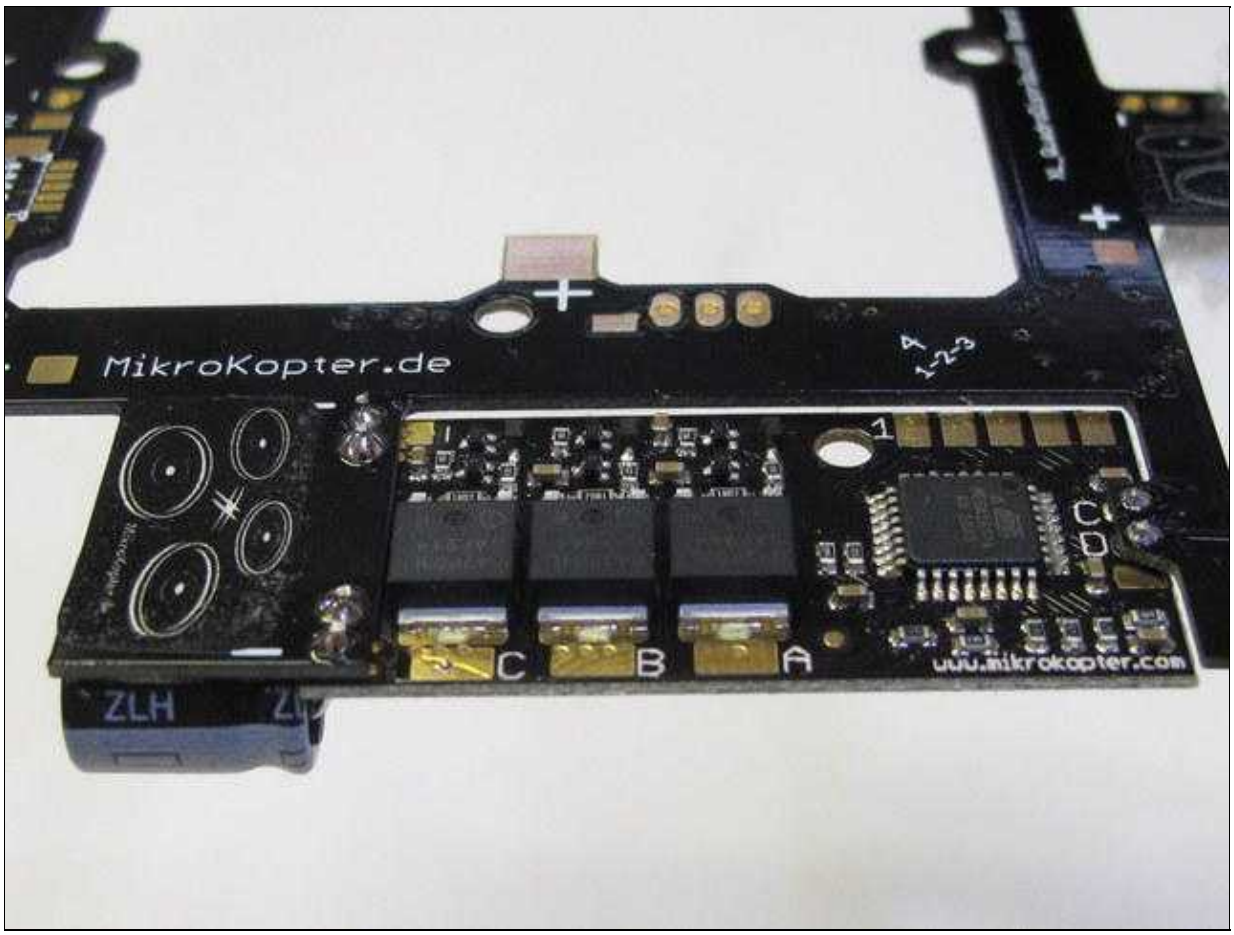

BL-Ctrl 2.0
PPM

Take care, that the BL-Ctrl2.0 have a goot contact to the power distribution.
This achieves the greatest possible heat dissipation.







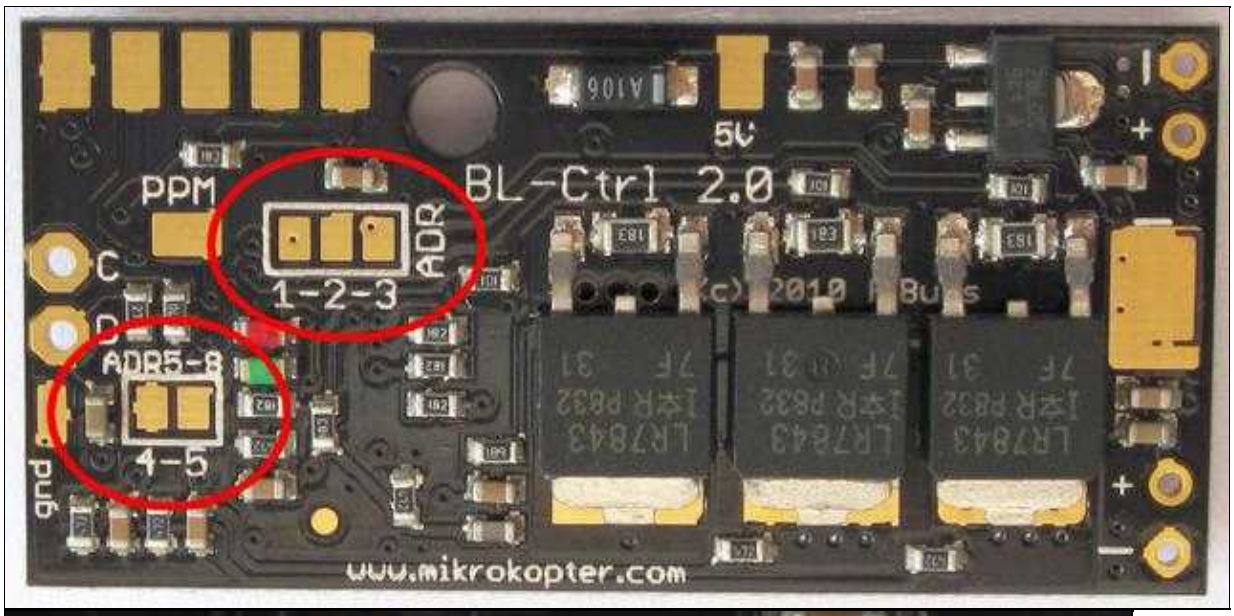


The board can be very hot during soldering (see Info)

Address selection

Each BL-Ctrl requires now a unique address. Therefore, the BL controllers assign addresses.
A Quadrokopter get the addresses 1-4, a HexaKopter the addresses 1-6 and a Oktokopter the addresses 1-8.
On the power distributor each address is already printed.

On BL-Ctrl V2.0 the motor address is set on the board using jumpers (use solder).


PPM
ADR
1-2-3
BL-Ctrl 2.0
C
D
ADR5-8
4-5
5V
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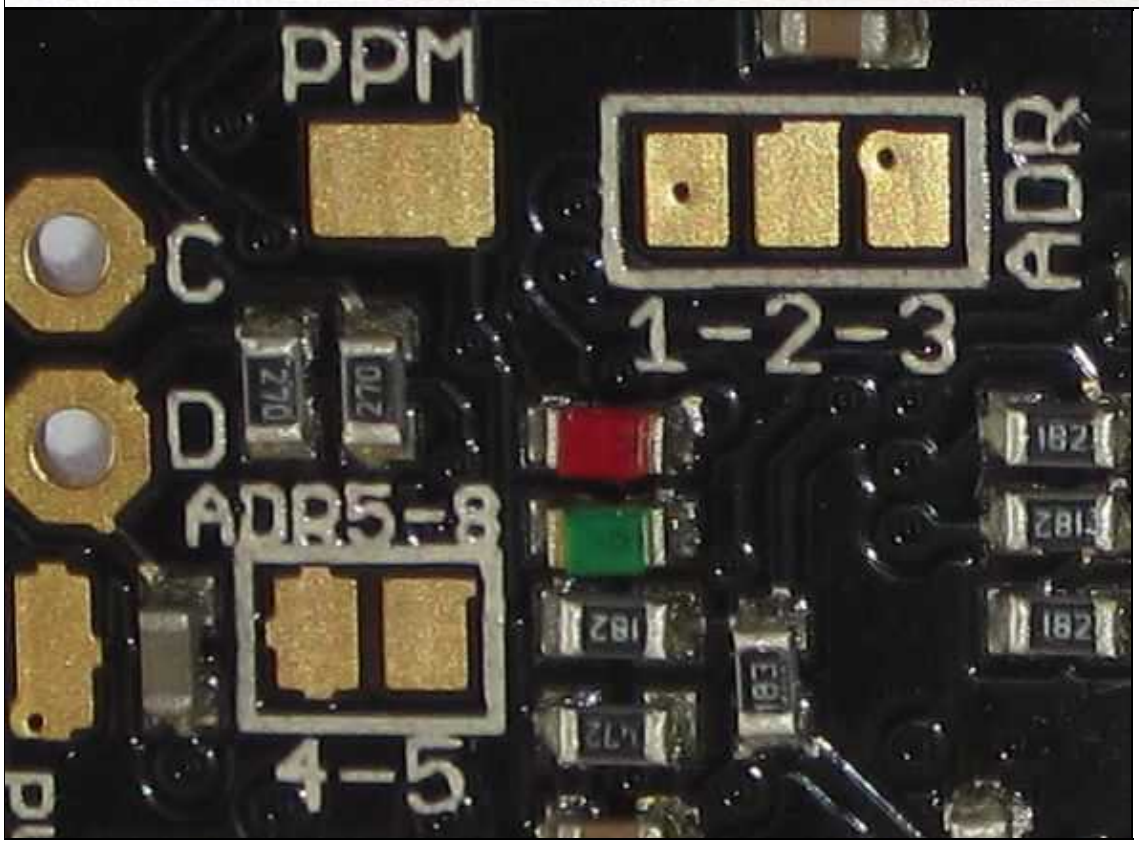

PPM
C
D
ADR5-8
4-5
1-2-3
ADR

Where:

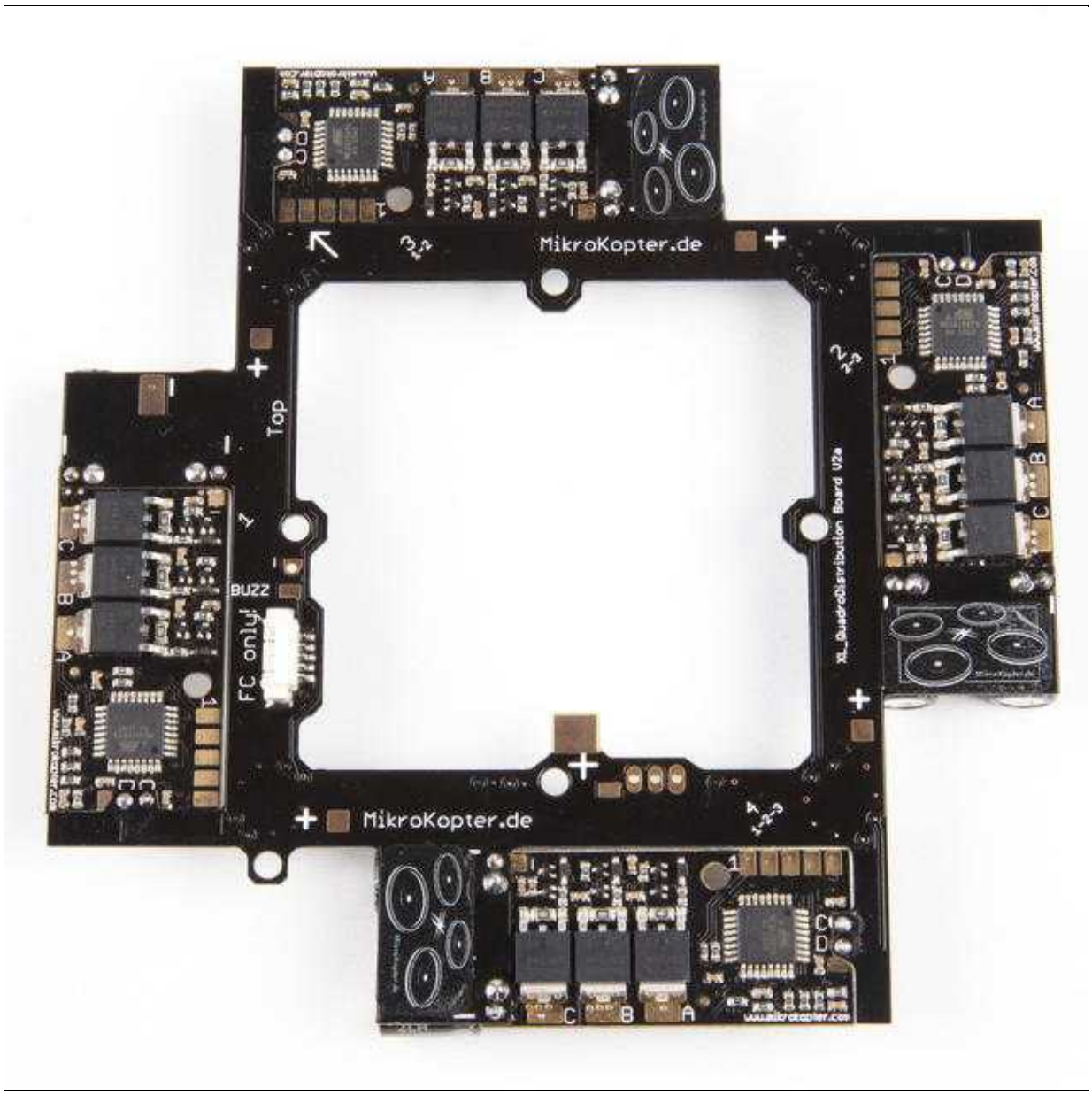
Adress (Motor)	1-2	2-3	4-5
1	open	open	open
2	open	closed	open
3	closed	open	open
4	closed	closed	open
5	open	open	closed
6	open	closed	closed
7	closed	open	closed
8	closed	closed	closed

More information about the BL-Ctrl2.0 can be found here: BL-Ctrl2.0

Powerboard

Power Distributor - Top

The completely equipped distribution board from the top.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Top
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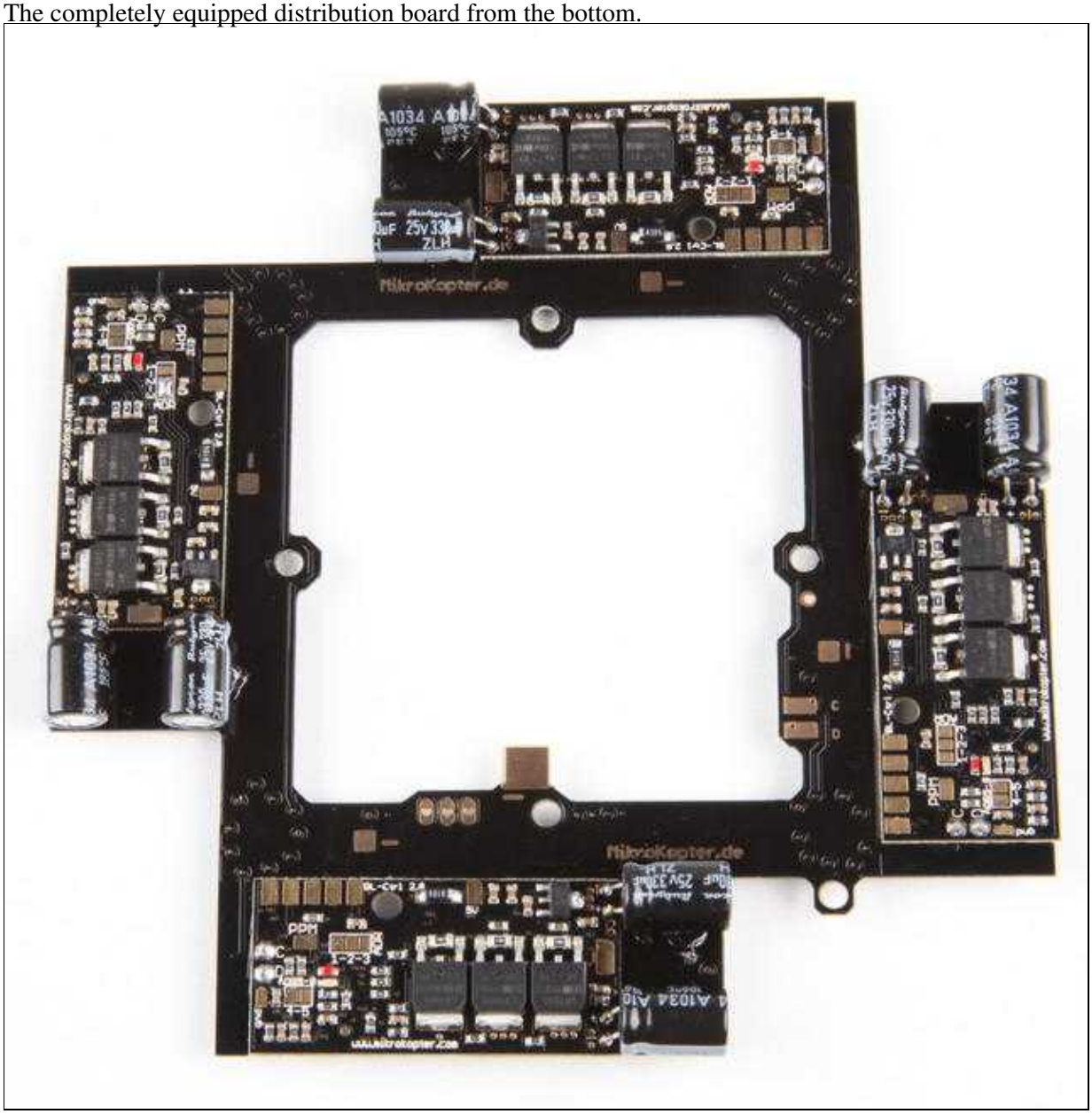
XL_QuadroDistribution Board V2a

Power Distributor - Bottom

The completely equipped distribution board from the bottom.



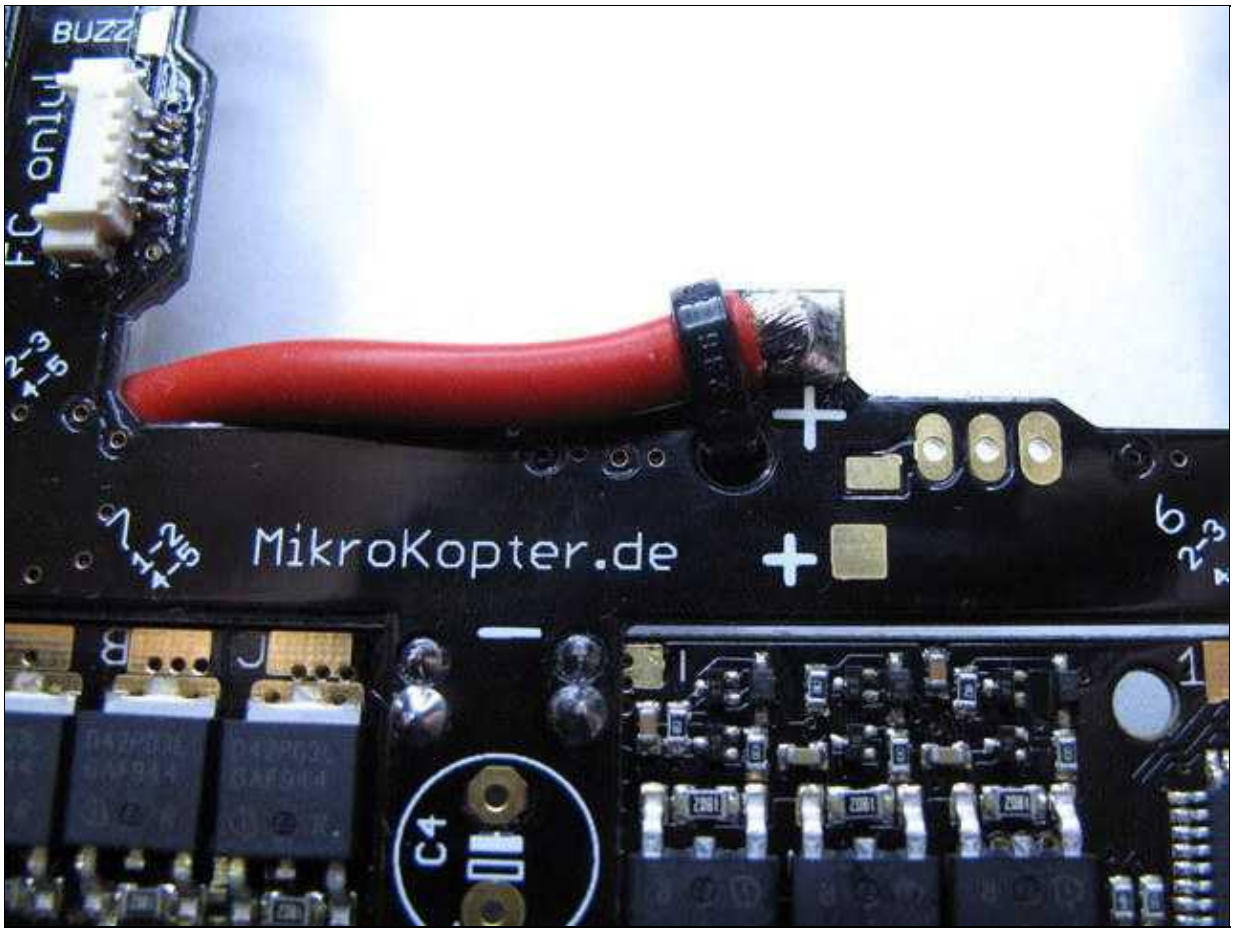
Supply

Connect the batterie cable

On the large "+" and "-" solder pads connect the cable for the Lipo. With a cable tie the cable can be fixed to the power distributor.

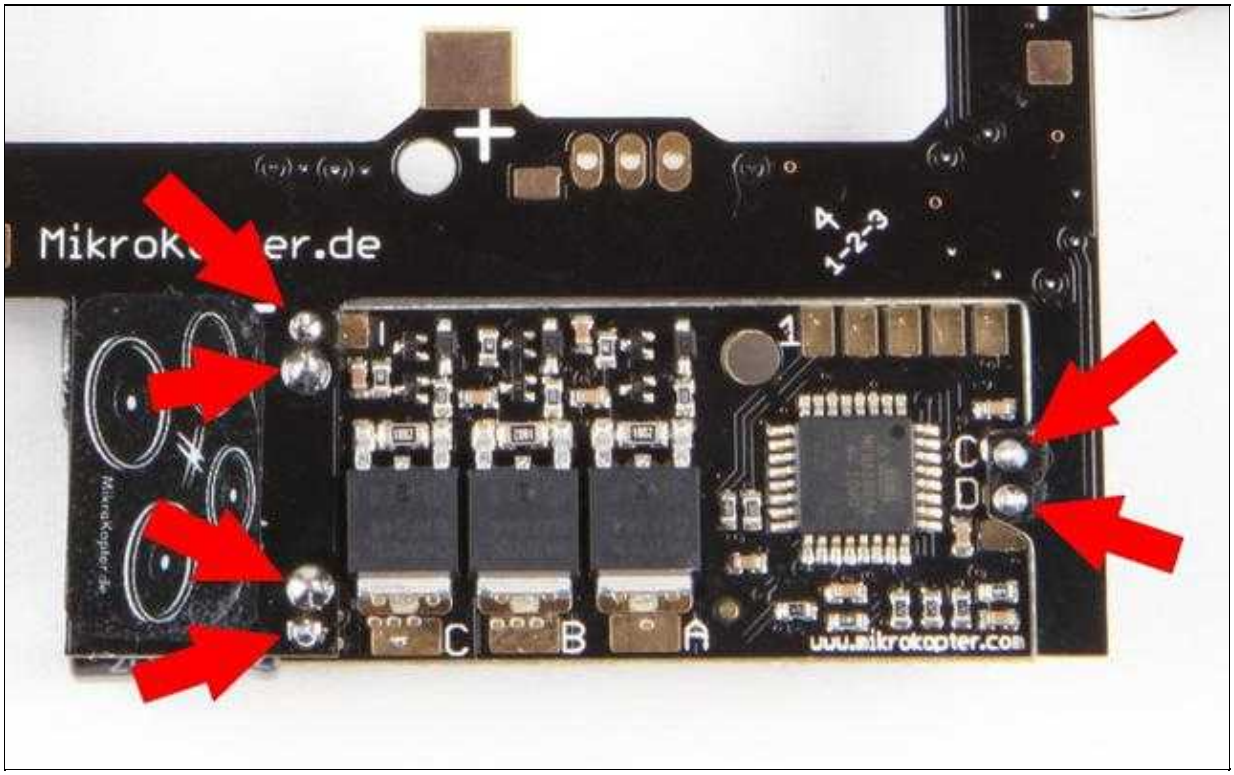
- Plus = red
- Minus = black

⚠ do not mix plus and minus here!



Check for short circuit

The contacts (red arrows) are measured with a multimeter. You may not contact or short circuit with each other or have to plus or minus.

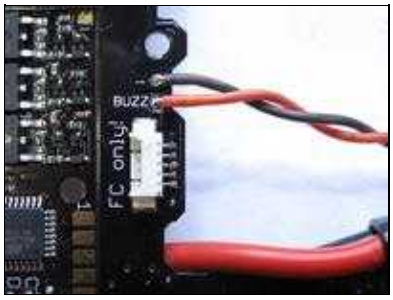


Connect the Buzzer

⚠ You can mount the buzzer on a rigger or with a Buzzer Adapter board.
If the buzzer would be to close to the compass, the compass readings could be disturbed!!

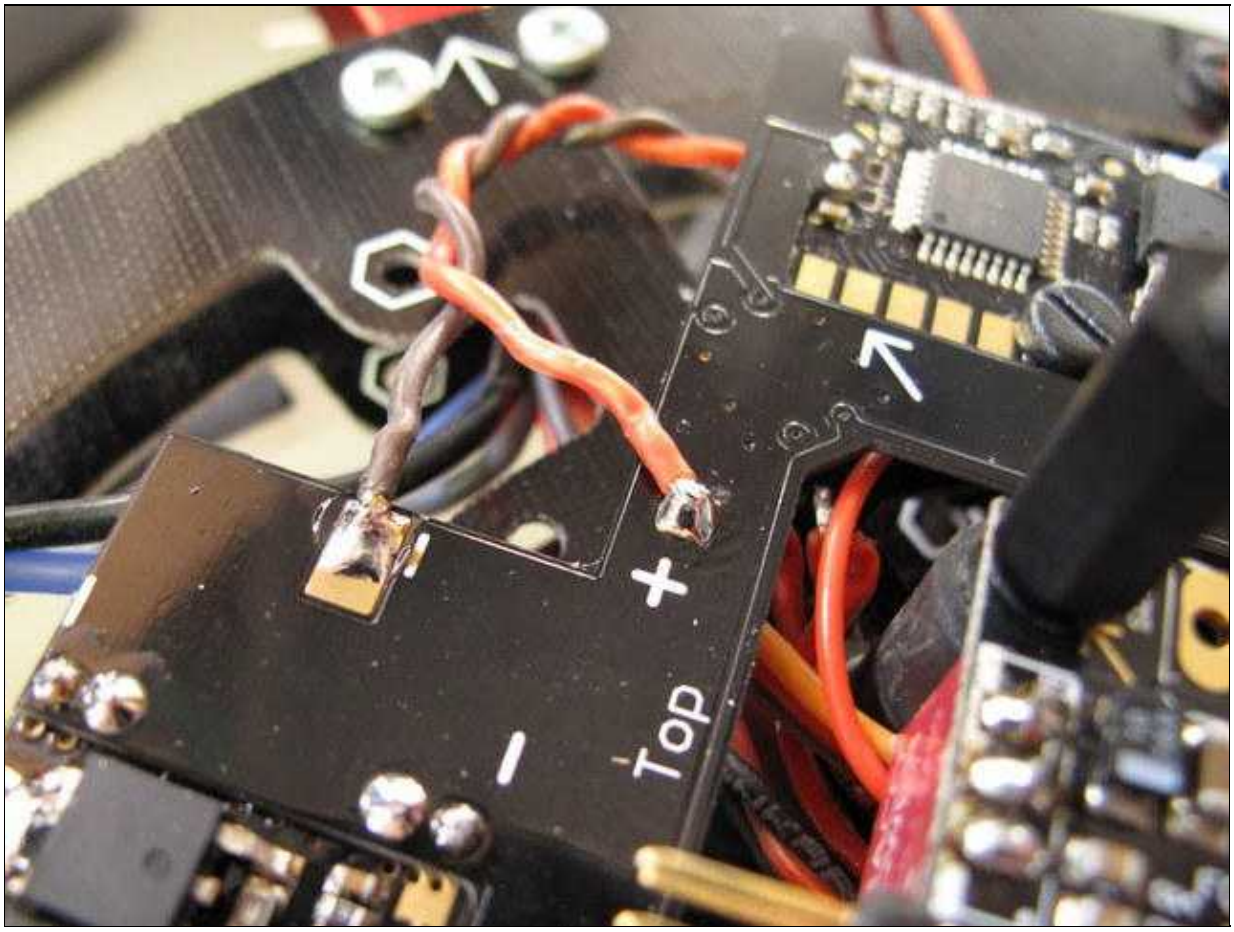
Solder the Buzzer on the "Buzz"-Pad (+) and "-"-Pad.

- buzzer plus = red cable = "Buzz"
- buzzer GND = black cable = "-" = "minus"



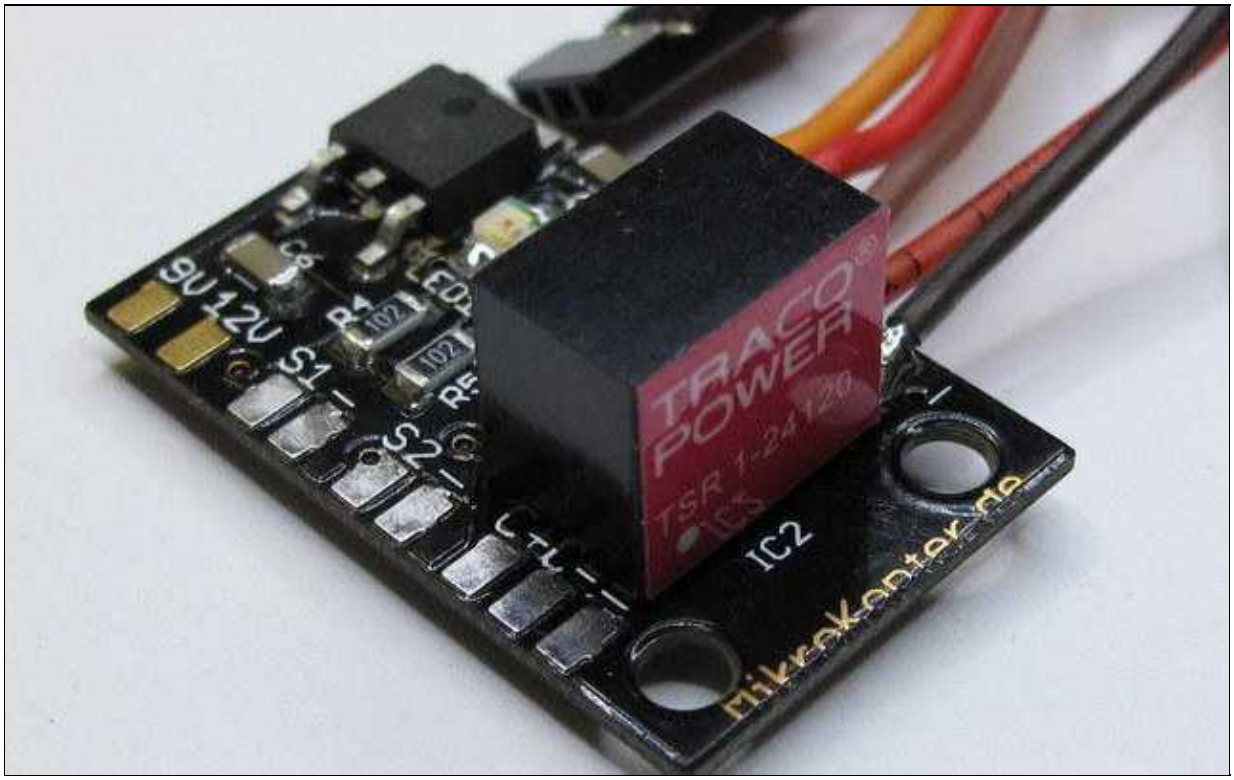
Lighting

You can connecting the lighting (LED) directly to any "+" and "-" pad.



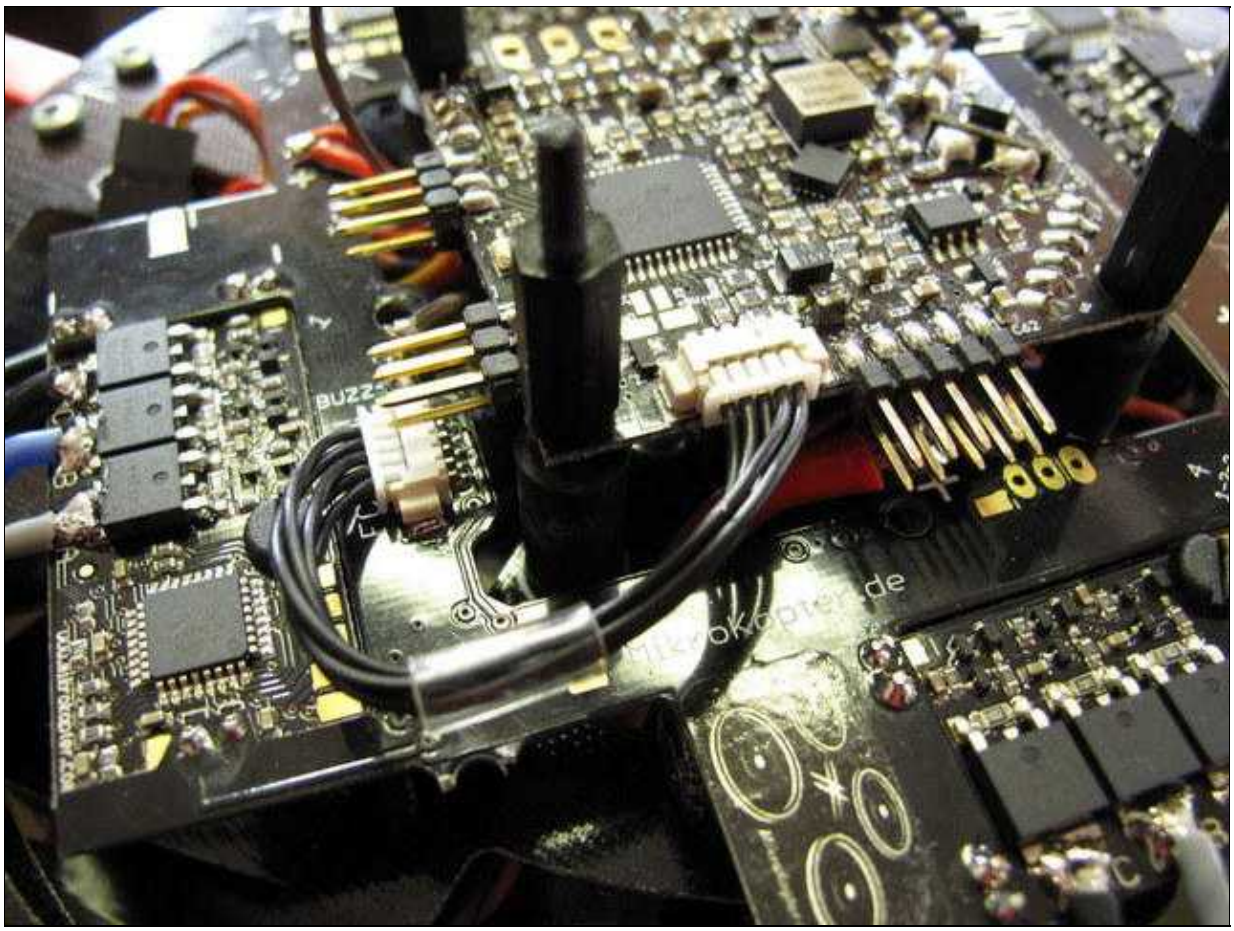
Lighting shiftable

If you want to switch the lights, the optional ExtensionPCB can be used for this purpose. The connection is described here:: ExtensionPCB



connect the FC

The FlightCtrl2.1 can connected later with the Molex-cable.



⚠ The printed arrow on the FlightCtrl must show to the on the rigger No.1 (red rigger) !