

# 1023 LiPo board using the DC inputs charge inputs.



The 1S 600mAh LiPo board (product number 1023) is an add-on board for several products that will sit on-top of the LiPo board.

The LiPo board will power the mated board with 3.7V Max 1A.

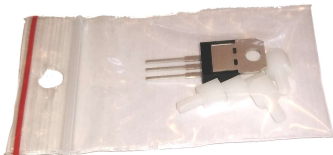
This document describes how to prepare and use the LiPo board for charging from external DC inputs. The user will need to solder in a voltage regulator before the DC inputs can be used.

## Step 1

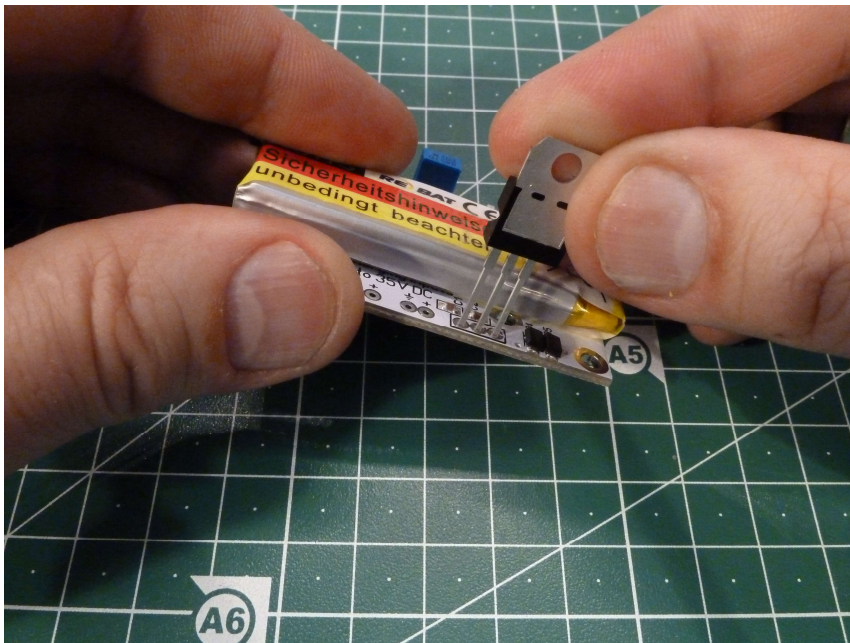
### Mounting the 7805 voltage regulator.

The 7805 needs to be mounted before the DC inputs can be used.

Locate the 7805 that was included in a plastic bag.



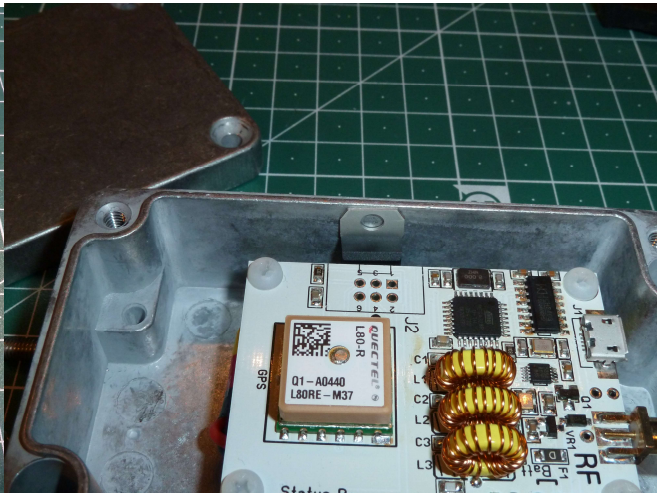
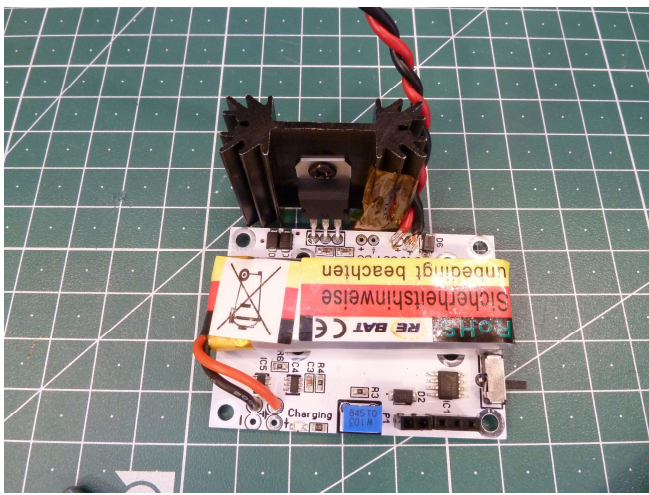
Mount it with the metal tab facing out from the PCB (see picture)



Insert the legs as long as is suitable in your situation and solder the three pins on the bottom side of the board.

Mount a heat sink of suitable size. The higher voltage you will use to charge the hotter the regulator will be.

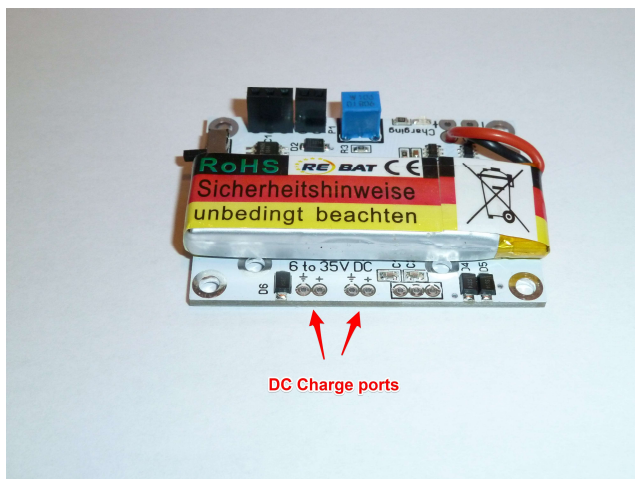
If you only intend to charge from 6V and with charge current set to 100mA you don't need a heatsink.



The 7805 sits near the edge of the PCB so a heatsink can sit outside the board. If the board is to be mounted in a metal box then the case of the box can be used as a heatsink.

A small heatsink as shown in the left picture above is suitable up to 14V and 300mA charge current, more than that and you need a bigger heatsink or to use the case of a metal box.

You can now solder in wires to the two charge ports, they can be used simultaneously, they have diodes that separate them from each other so if you for example want to use two solar cells solder them one to each port.



Max voltage on the input is 35Volt but as stated before, higher voltages will heat up the regulator

The USB port on the mated board can still charge the battery even if the DC Charge inputs are used. Due to the construction, the USB port will have priority on charging

## Step 2

### Optionally adjust the charge current.

Adjust the charge current with the potentiometer.

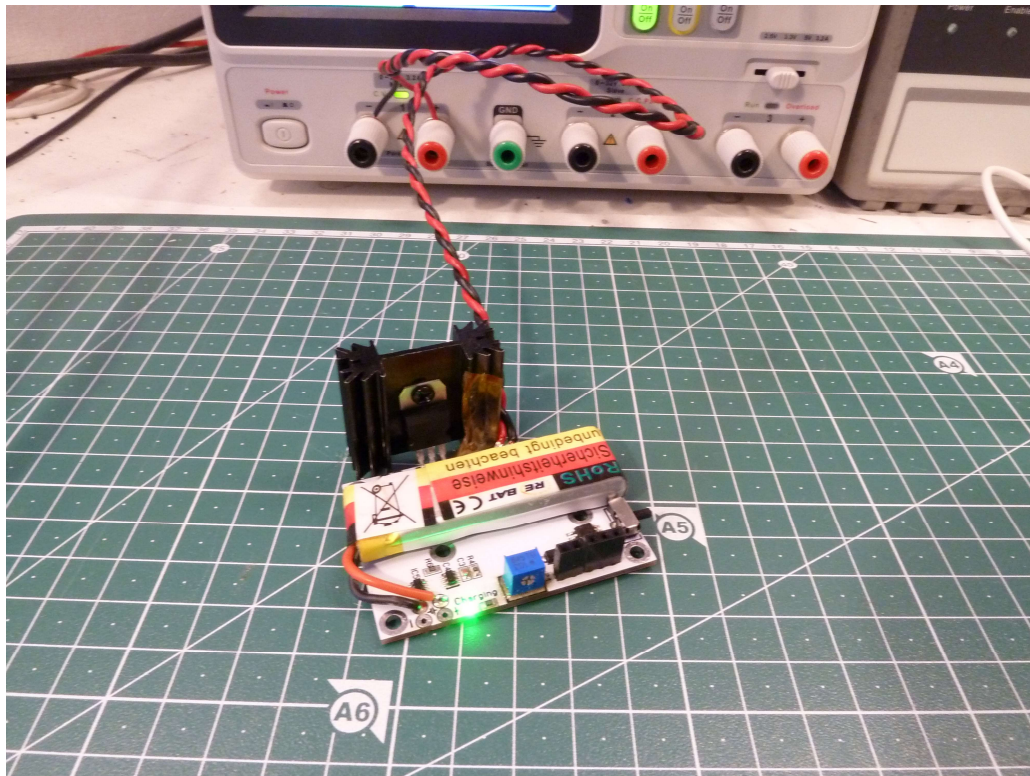
Turning the potentiometer clockwise will increase the charge current.

To get max current use at least 8V on the DC input and charge to an empty battery.

The charging circuits will lower the charge current when the battery is nearly fully charged.

When fully charged the green LED will go out.

The charge circuit will automatically start and stop charging when it find it appropriate to do so based on battery voltage.



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