

Assembling the DKblock2 using two battery modules

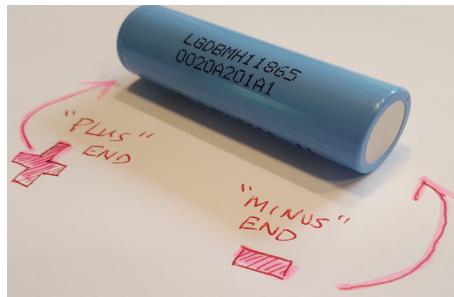
Version Jan 2024

First acquire parts and tools:

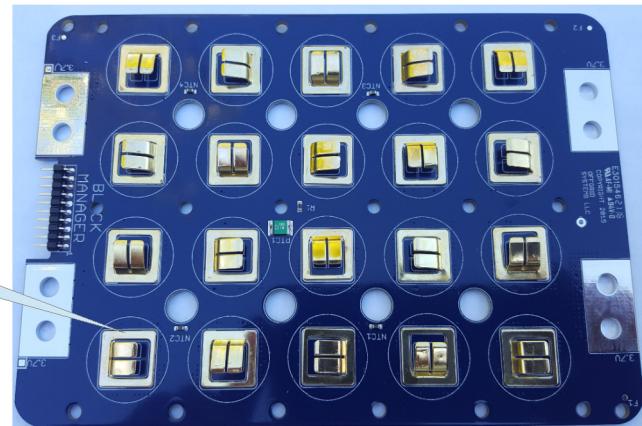
1. Lithium ion or Lithium Iron Phosphate cells – 18650 size, 20 cells per 10S2P DKblock, you will assemble two battery modules
2. Clamp boards (one each 2S-3.7V and one each 2S-7.4-V board)
3. Plastic cell holders – 2 each
4. Clean cotton gloves – one pair
5. Workbench with nonconducting surface
6. Standoff and screws with hand operated screwdriver
7. Dewalt DW920 or Makita DT01 driver with #1 phillips bit or equivalent battery driver calibrated to about 3.5 inch-pounds of torque
8. Plastic cell organizers – 3d printed from github or purchased from Offgrid

Now IDENTIFY your parts

Battery cell has PLUS and MINUS ends



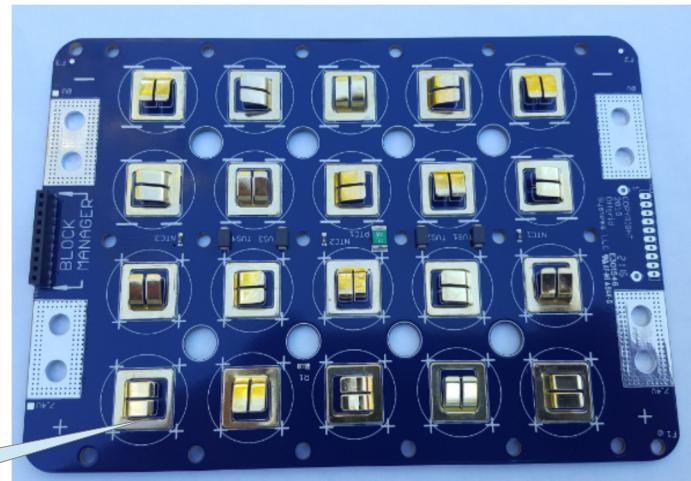
3.7V board



Screwdrivers



7.4V board



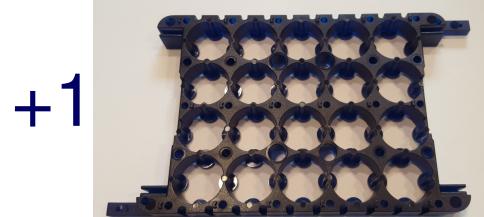
1

Begin block assembly:

1. You will be assembling the basic block using two clamp boards, the 7.4V board and the 3.7V board. We'll start with the 7.4V board.
Using 18 screws (4-40 x 0.75in), attach the 1.75 in long standoffs with each screw, using the plastic cell spacer, as in this image, and tighten to hand-tight:



1



+1



+18



+18

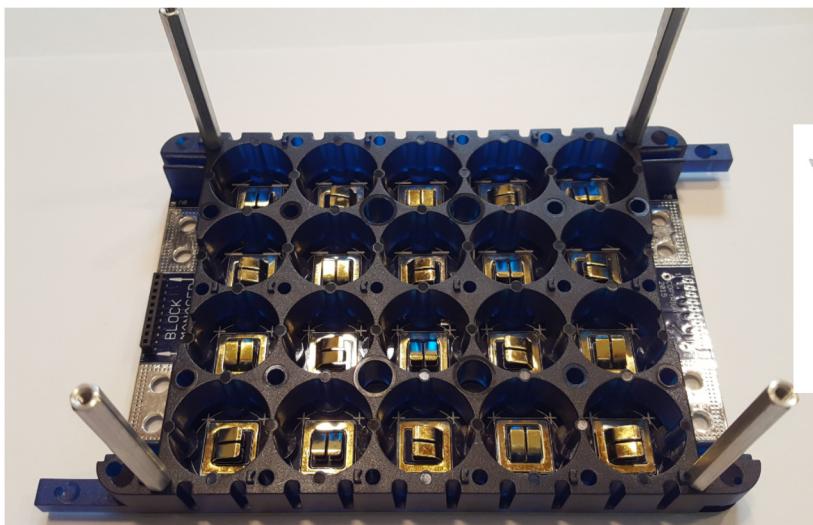
7.4V board

Cell spacer

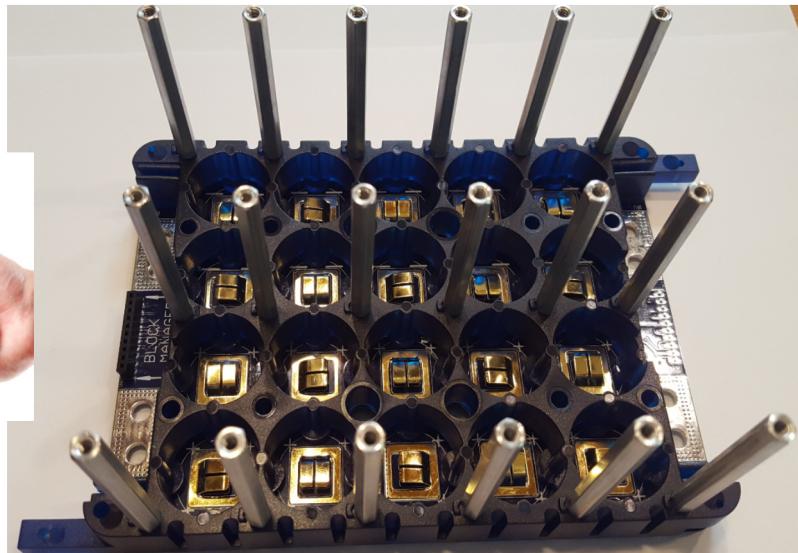
1.75 in Standoff

4-40 screw

Assembly should look like this:



Hand tight only!



Then add all the rest

2

20

Add up to 20 lithium cells paying attention to polarity. Positive cell end is placed into PLUS marked on printed circuit board.

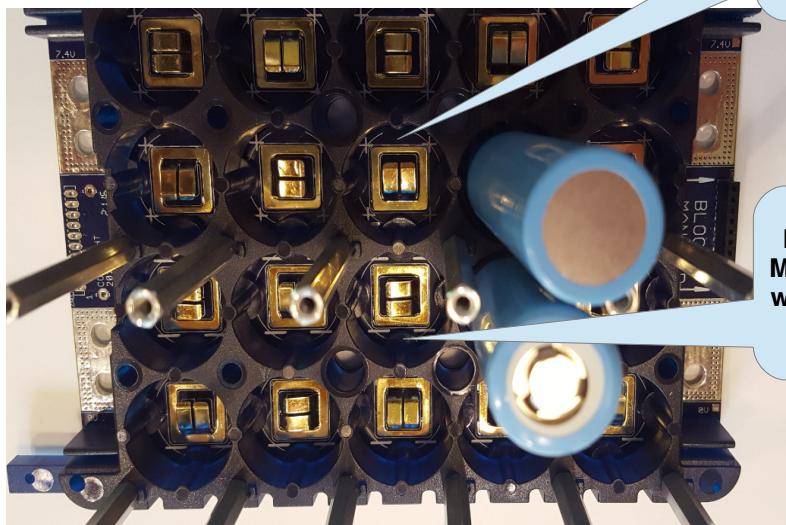


+2

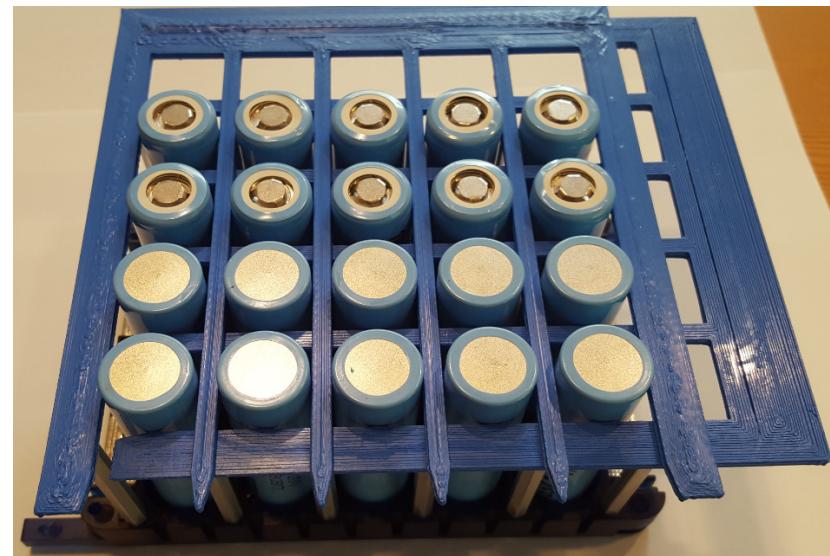


**CELL
POLARITY
MUST agree
With 'PLUS'
marking
on PCB**

**CELL
POLARITY
MUST agree
with 'MINUS'
marking
on PCB**



Place battery cells into place being very careful with polarity. PLUS cell goes to plus on the printed circuit board



Place cell array organizer over cells to prepare for the top cell spacer

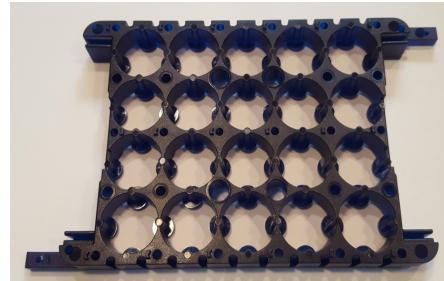
3

1

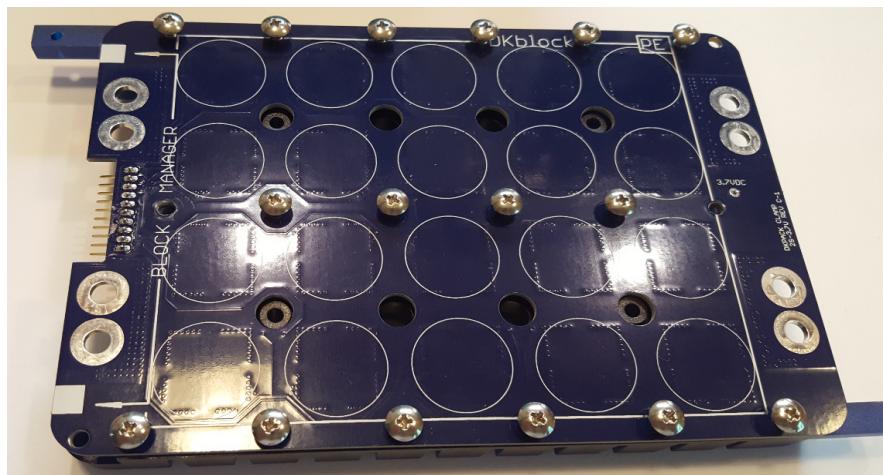
3.7V board



+1



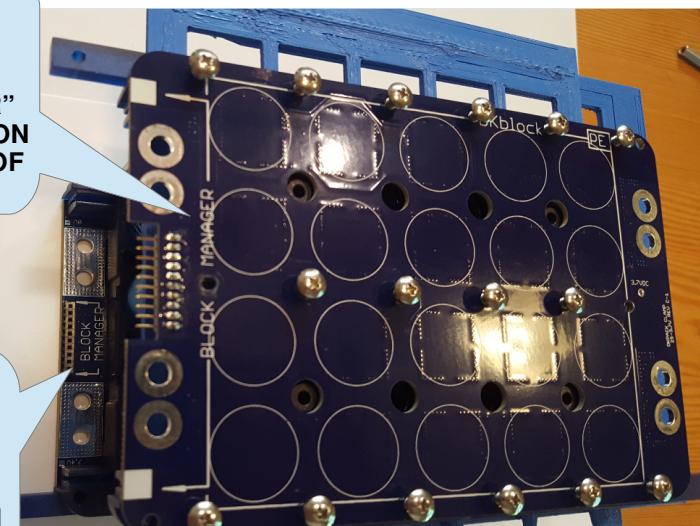
+18



Insert 18 screws into 3.7V board and cell spacer

**ALIGN 3.7V
BOARD
WITH
“BLOCK
MANAGER”
PRINTED ON
THIS END OF
BOARD**

**ALIGN 7.4V
BOARD
WITH
“BLOCK
MANAGER”
PRINTED ON
THIS END OF
BOARD**

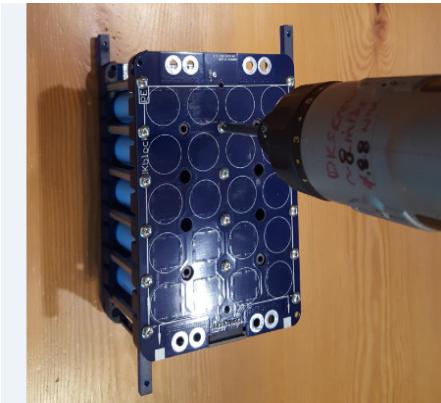


Place 3.7V board and cell spacer on cells and pull out plastic organizer

4

Keep DKblock on non-conductive surface for this operation

Tighten all screws on 3.7more V board to 3.5in-lbs



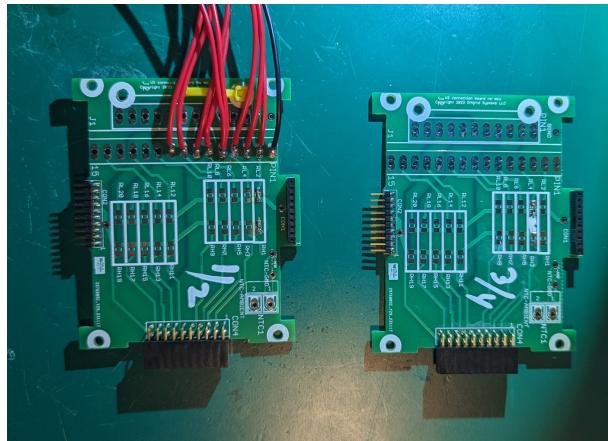
Tighten all screws on 7.4V board to 3.5in-lbs



Verify connectors on both boards are pointing up, and measure from plus (+) to minus (-) on 7.4V board, and verify voltage is at least 7.0VDC with the proper polarity.

Congratulations you finished the block assembly!!!!

Now begin your Dkblock2 pack assembly



Now place connection boards on battery modules by plugging in male plugs first

PRINT first 5 pages of 8x11 only on landscape.

END OF DOC
END OF DOC

maybe have some





Also add contact grease to rear bearing



Hand tight only!
apriete a mano únicamente!
main seulement

