

## Assembling the Dkblock battery block

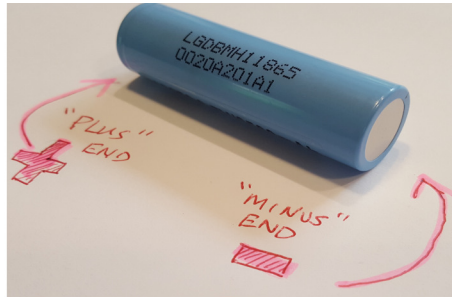
Ver: Jul2016 Updated 1AUG2017, 28OCT2019

First acquire parts and tools:

1. Lithium ion cells – 18650 size, 20 cells per 10S2P Dkblock
2. Dkblock clamp boards (one each 2S-3.7V and one each 2S-7.4-0V board)
3. Plastic cell holders – 2 each
4. Clean cotton gloves – one pair
5. Workbench with nonconducting surface
6. Standoff and screws
7. Dewalt DW920 with #1 philips bit or equivalent automatic screwdriver calibrated to 3.5 inch-pounds of torque

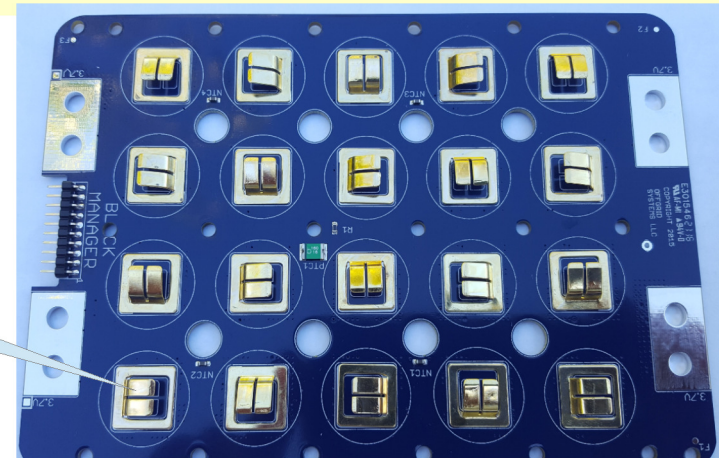
Now IDENTIFY your parts

Battery cell has PLUS and MINUS ends



3.7V board

DO NOT TOUCH gold plated spring contacts

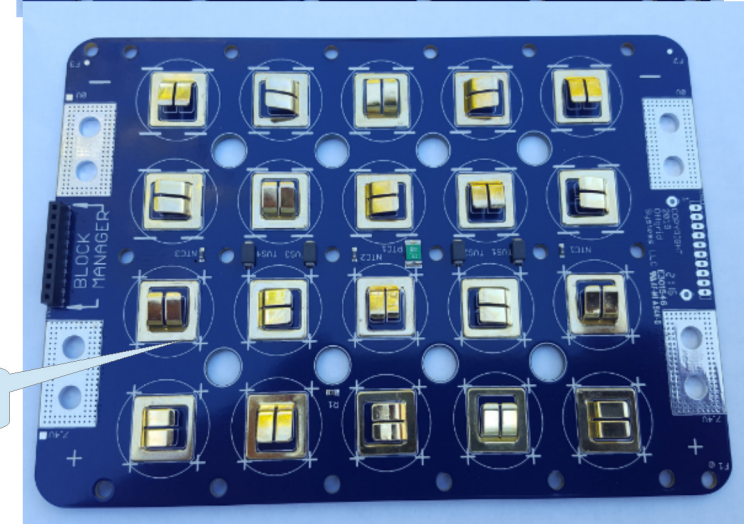


Screwdriver



7.4V board

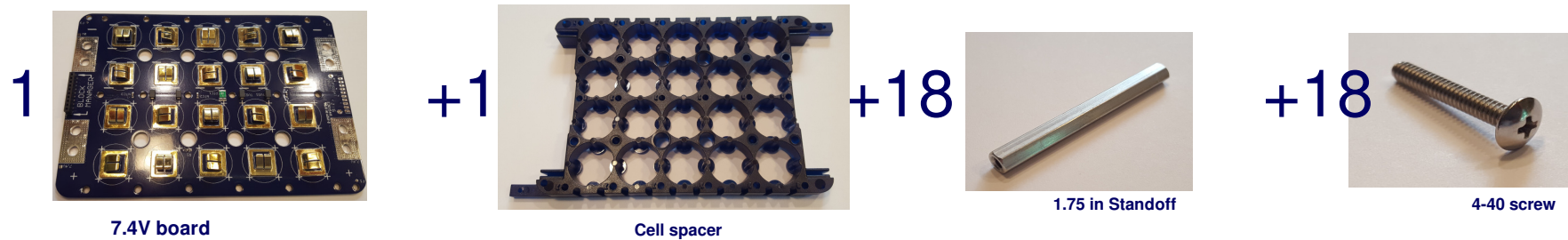
DO NOT TOUCH gold plated spring contacts



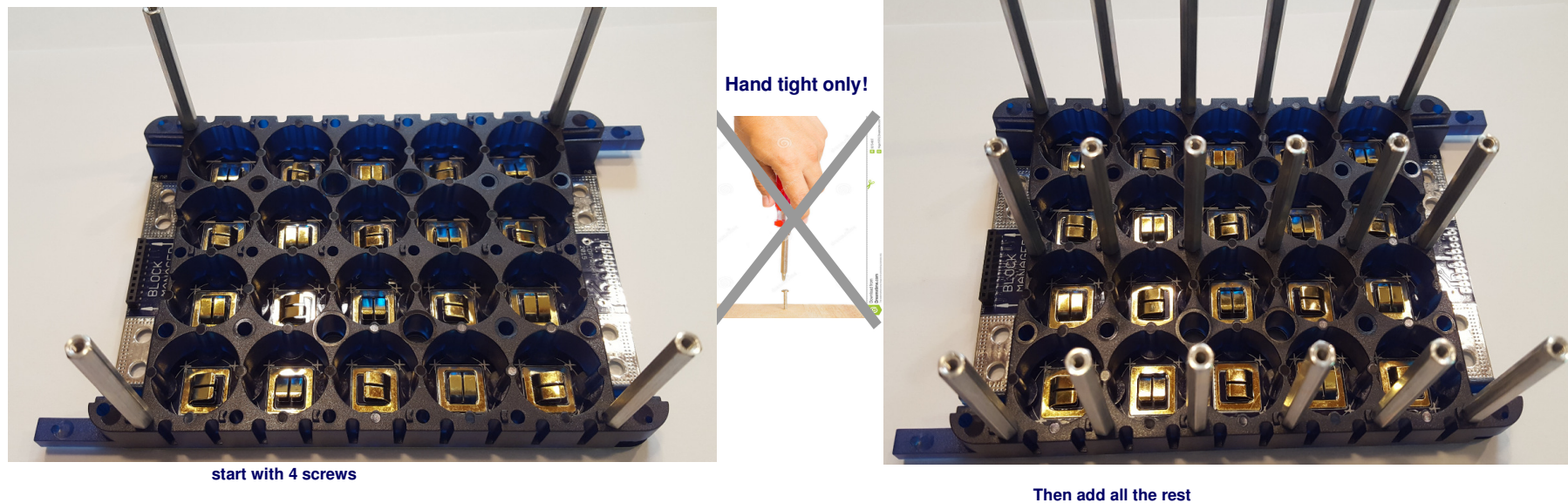
# 1

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:



Assembly should look like this:

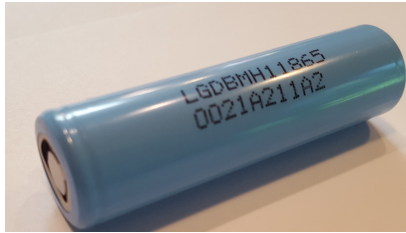




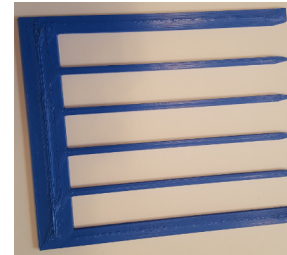
2

20

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

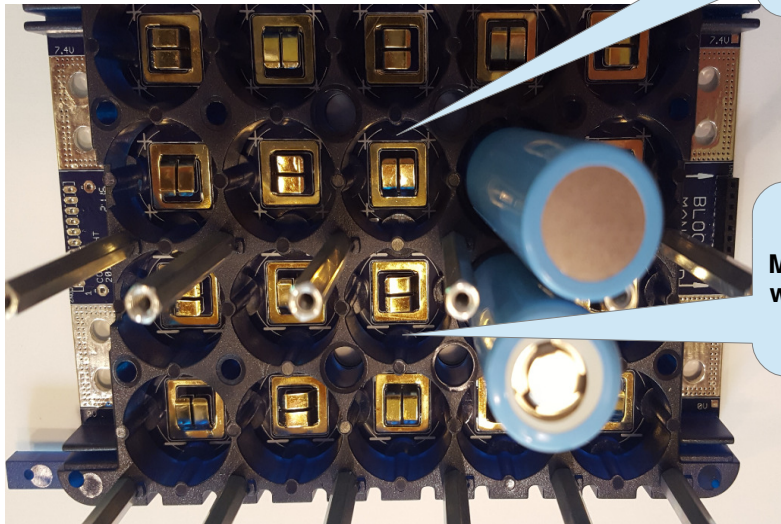


+2



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

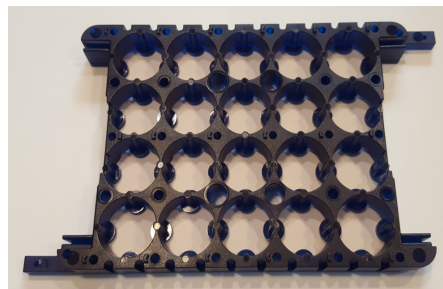
3

1

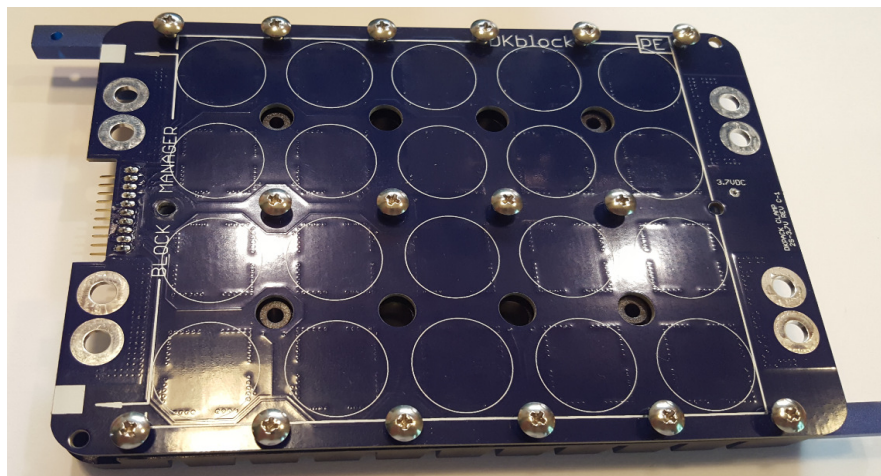
3.7V board



+1



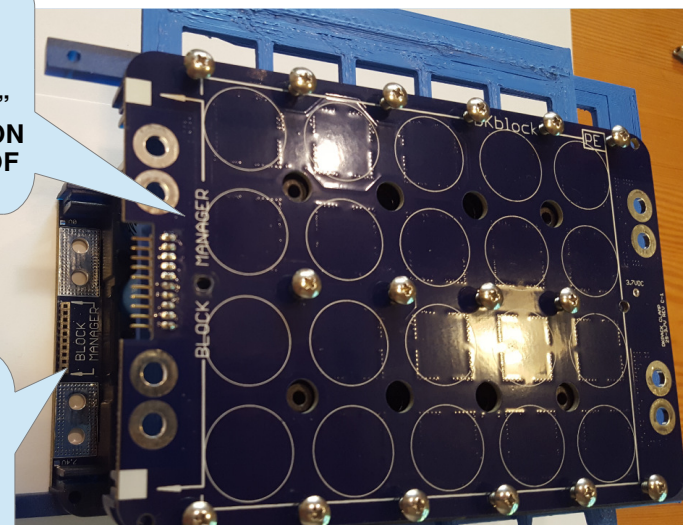
+18



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



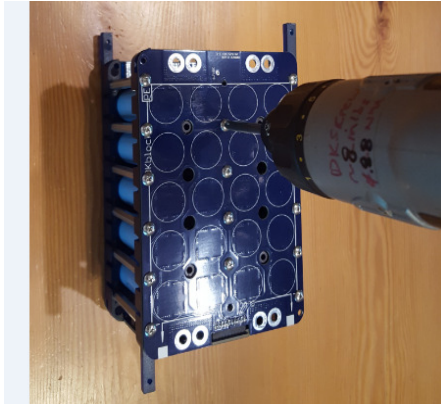
Place 3.7V board and cell spacer on



4

Keep Dkblock on non-conductive surface for this operation

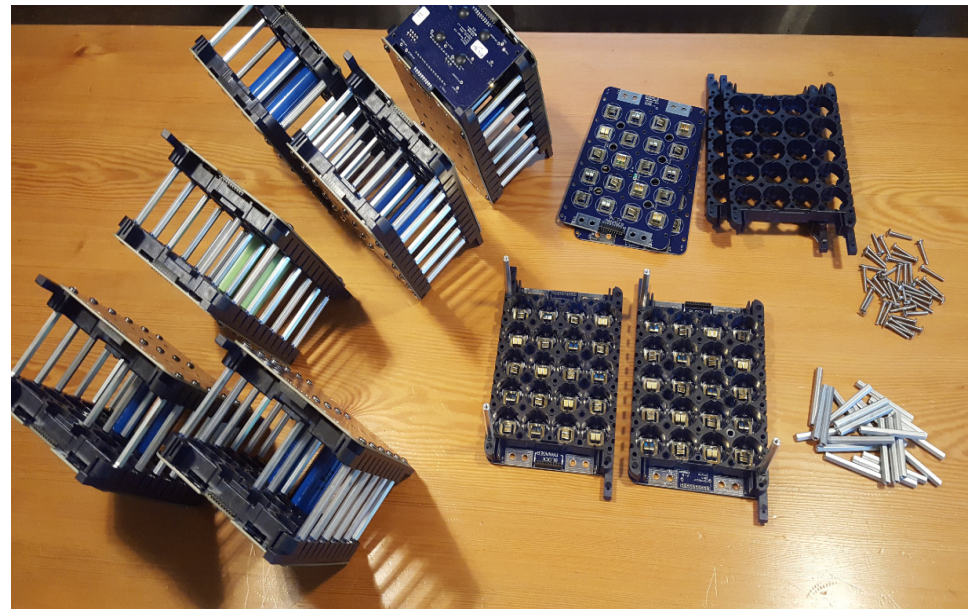
Tighten all screws on 3.7more V board to 3.5in-lbs



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.



Carefully place Dkblock in it's own box, or into a non-conductive anti-static bag