

Light My Bricks : LEGO Dr Who LED Lighting Kit



Here is the instructions document for the LEGO Dr Who LED lighting kit. Please read and follow the steps carefully to ensure this lighting kit is installed properly.

Package contents:

- 8x White 15cm Bit Lights
- 2x Flashing White 15cm Bit Lights
- 1x 6-Port Expansion Board
- 1x 8-Port Expansion Board
- 2x Multi-Effect Boards (3 effects)
- 2x 5cm Connecting Cables
- 4x Adhesive Squares
- 1x AA Battery Pack (requires 3x AA Batteries)
- 1x Flat Battery Pack (requires 2x CR2032 Batteries)

Extra LEGO pieces

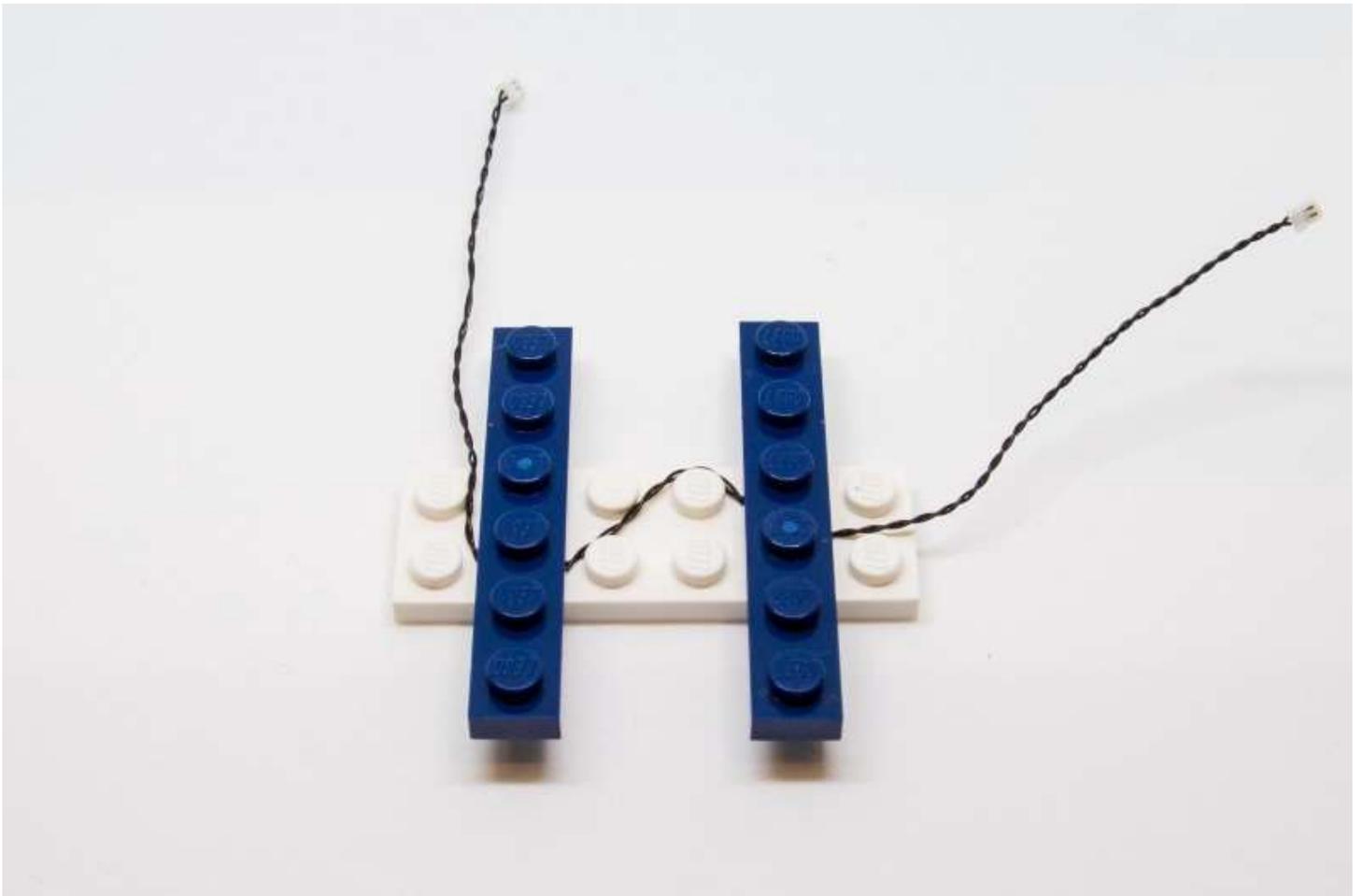
- 1x Trans Red Round Plate 1x1
 - 1x Trans Green Round Plate 1x1
-

Important things to note:

Laying cables in between and underneath bricks

Cables can fit in between and underneath LEGO® bricks, plates, and tiles providing they are laid correctly between the LEGO® studs. Do NOT forcefully join LEGO® together around cables; instead ensure they are laying comfortably in between each stud.



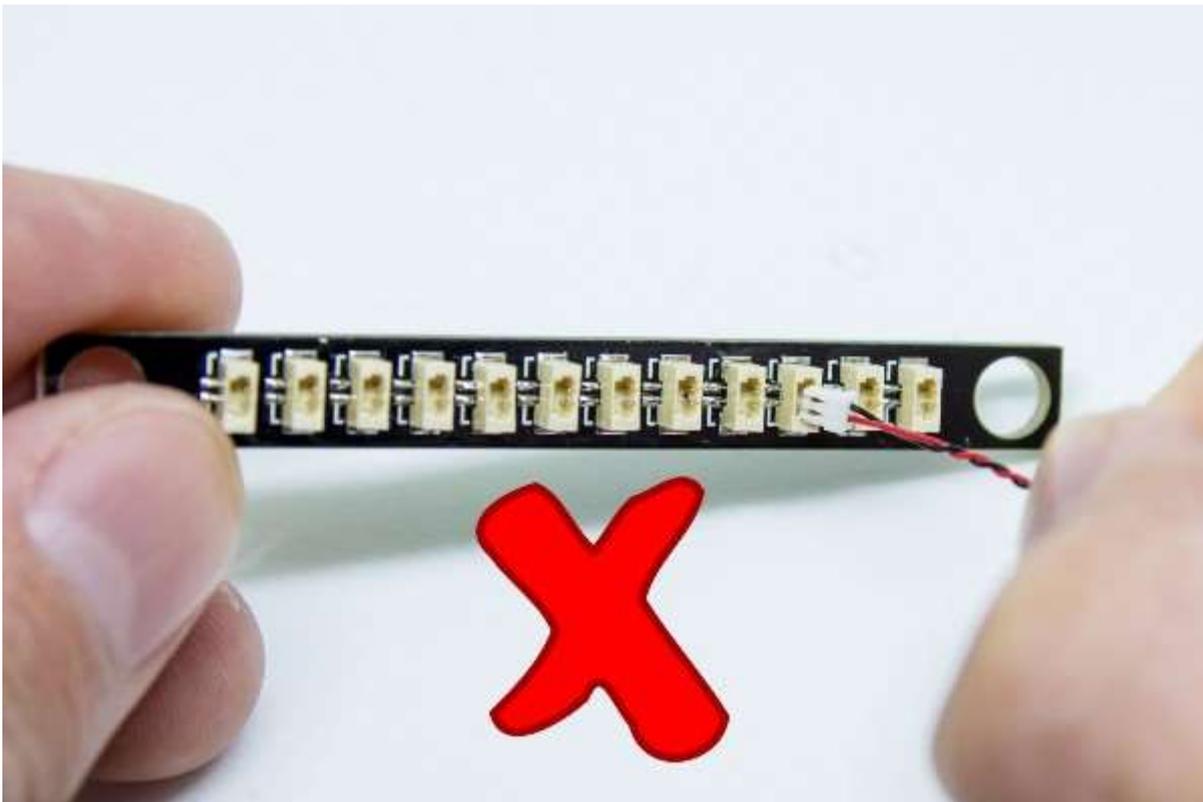


CAUTION: Forcing LEGO® to connect over a cable can result in damaging the cable and light.

Connecting cable connectors to Expansion Boards

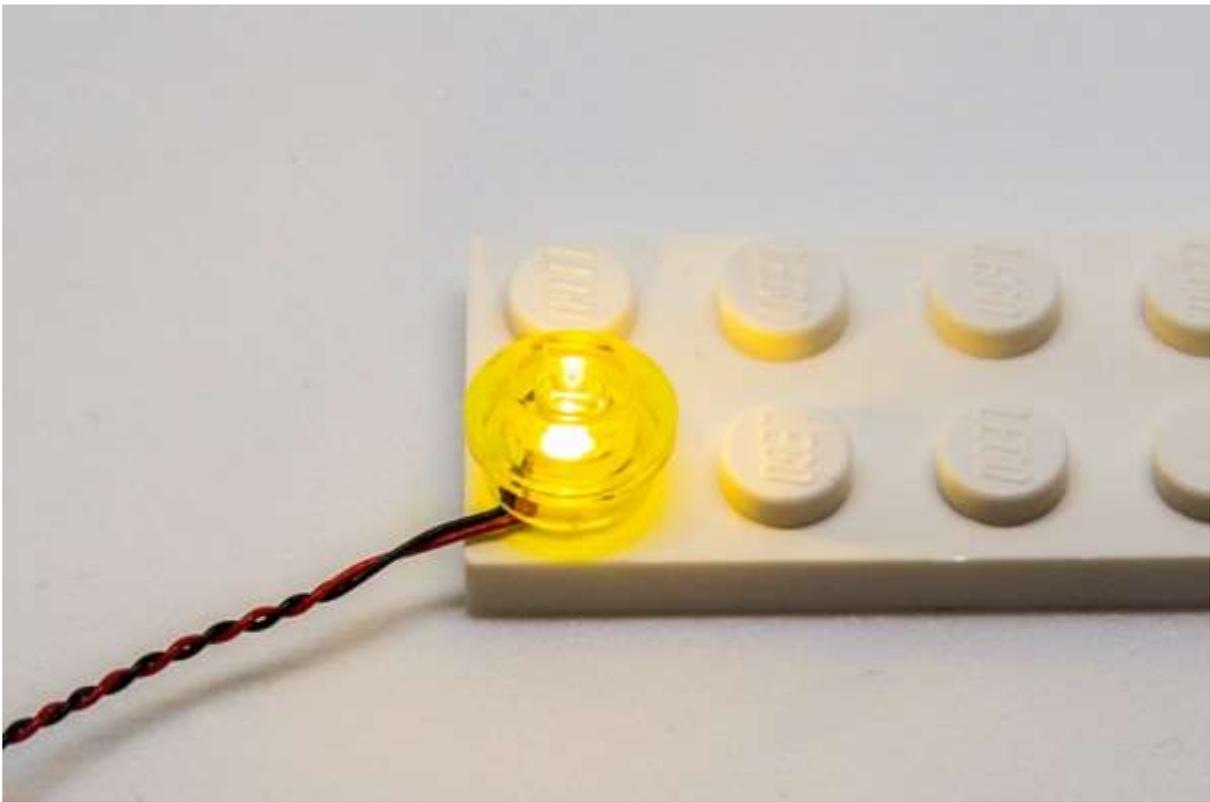
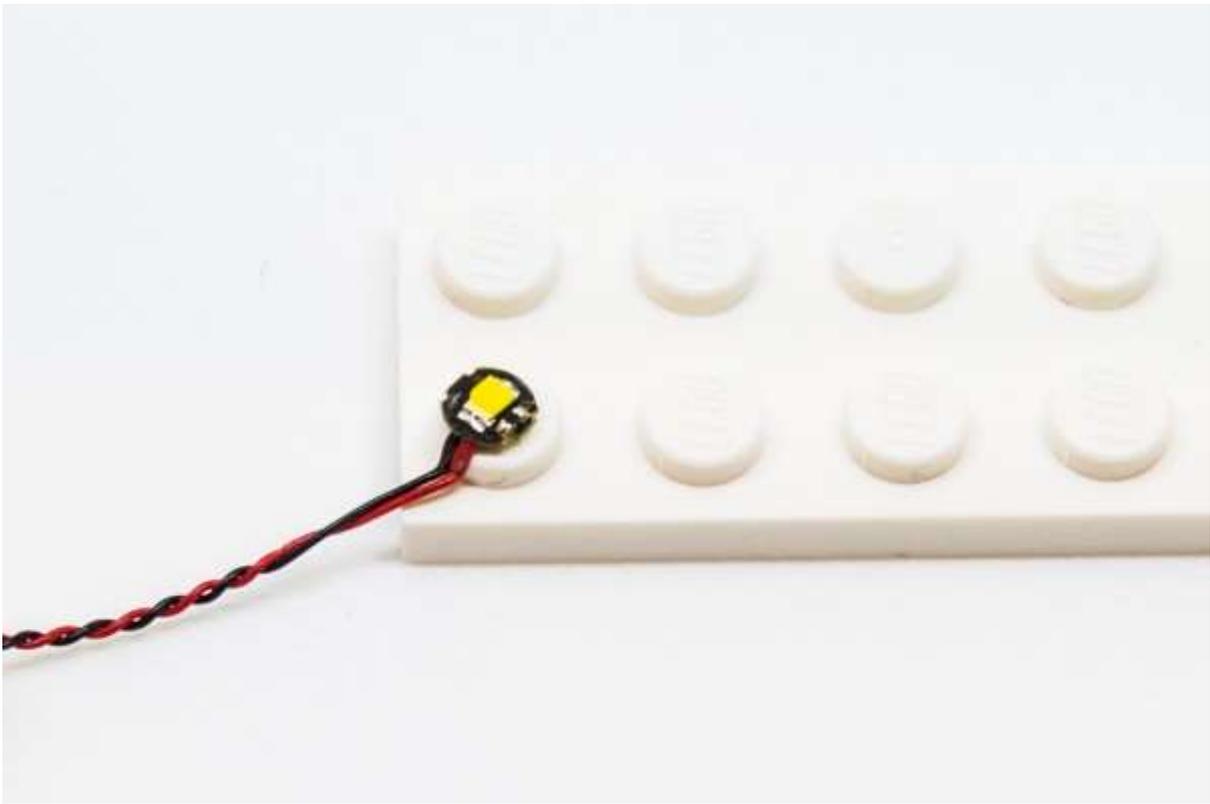
Take extra care when inserting connectors to ports of Expansion Boards. Connectors can be inserted only one way. With the expansion board facing up, look for the soldered “=” symbol on the left side of the port. The connector side with the wires exposed should be facing toward the soldered “=” symbol as you insert into the port. If a plug won't fit easily into a port connector, do not force it.

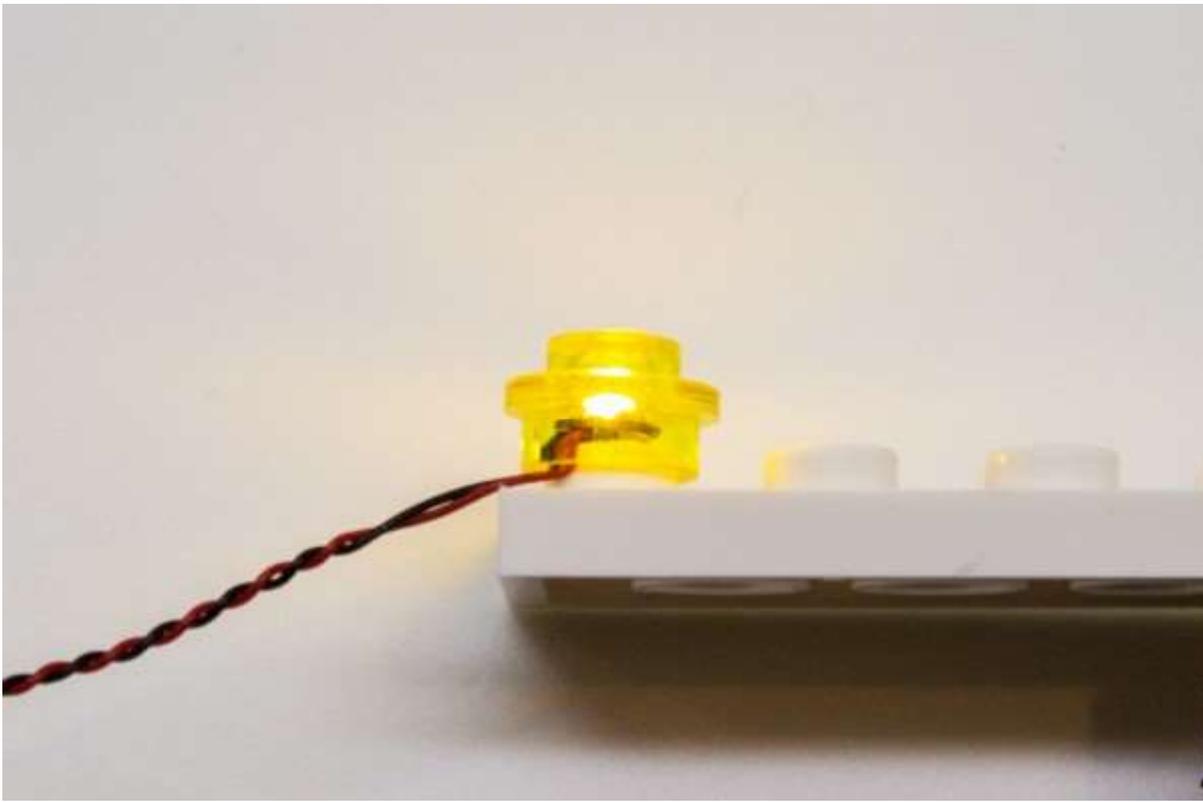
WARNING: Incorrectly inserting the connector can result in bent pins inside the port or possible overheating of the expansion board when connected.



Installing Bit Lights under LEGO® bricks and plates.

When installing Bit Lights under LEGO® pieces, ensure they are placed the correct way up (Yellow LED component exposed). You can either place them directly on top of LEGO® studs or in between.





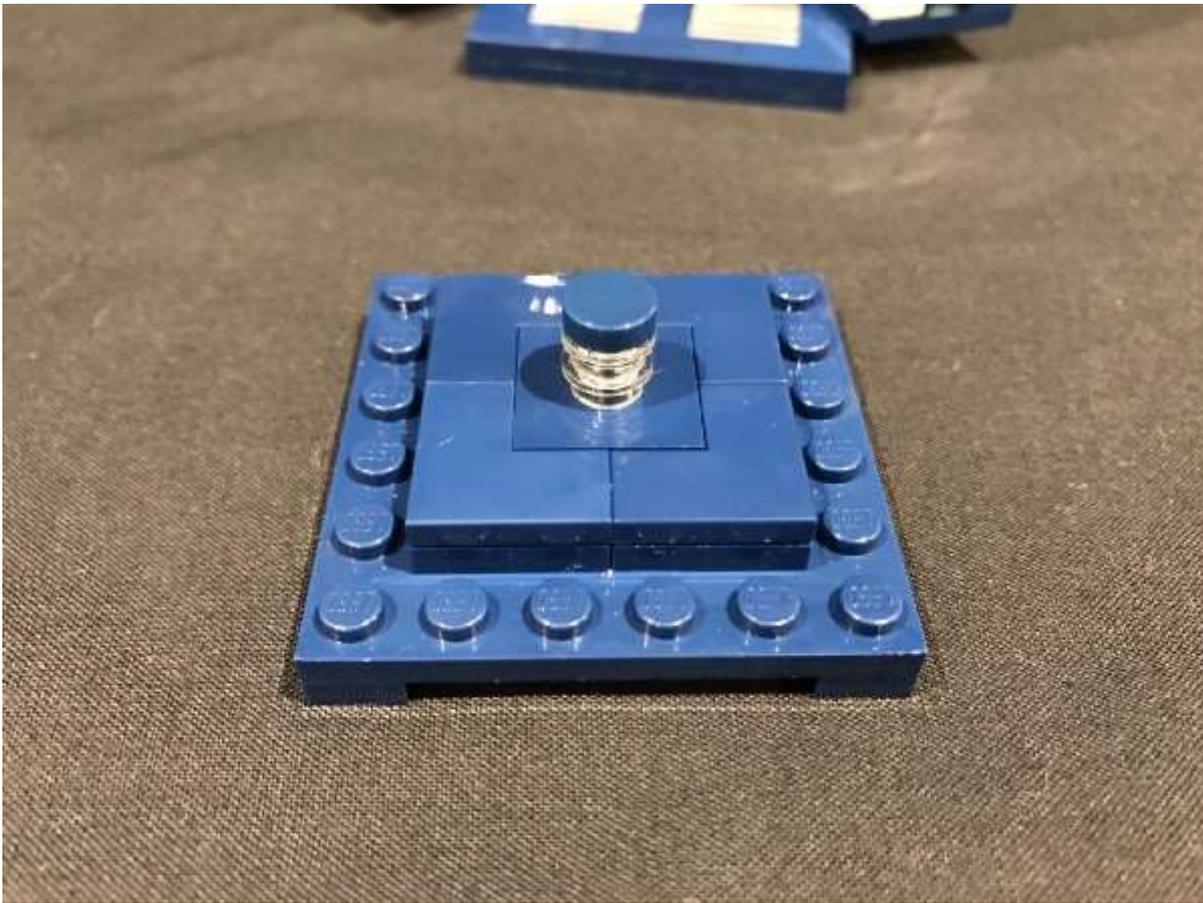
OK, Let's Begin!

Instructions for installing this kit

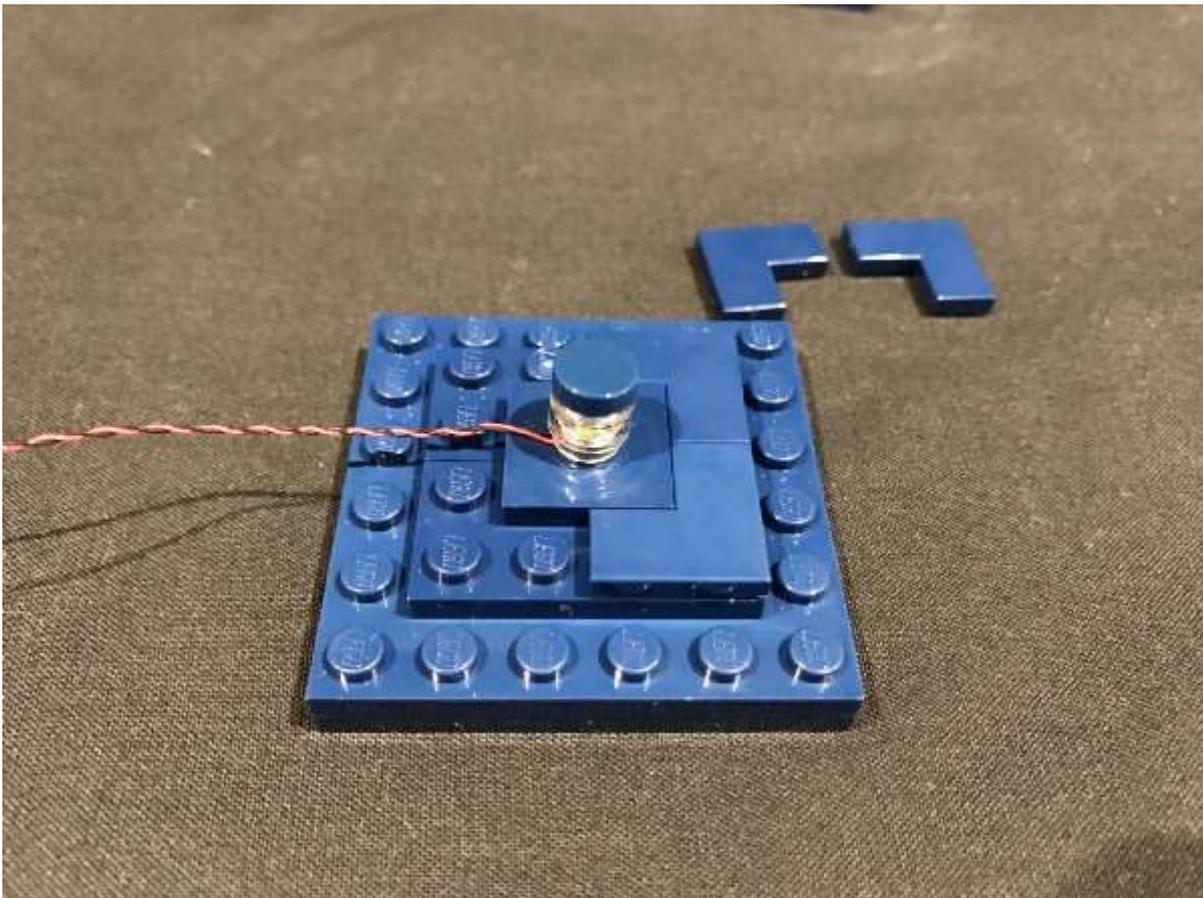
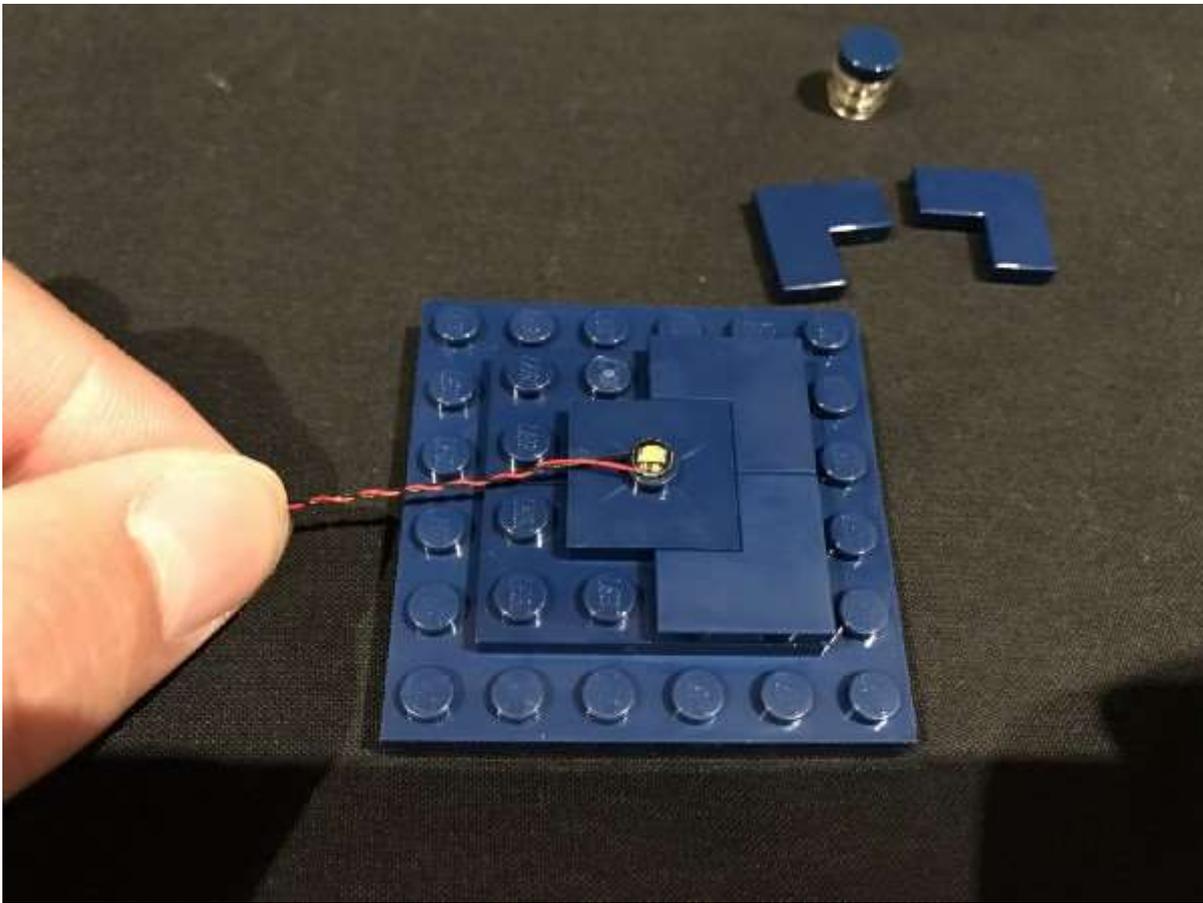
Lighting the Tardis

1.) We will start installing a light to the Tardis first. Remove the roof and then disconnect the following pieces from the top.

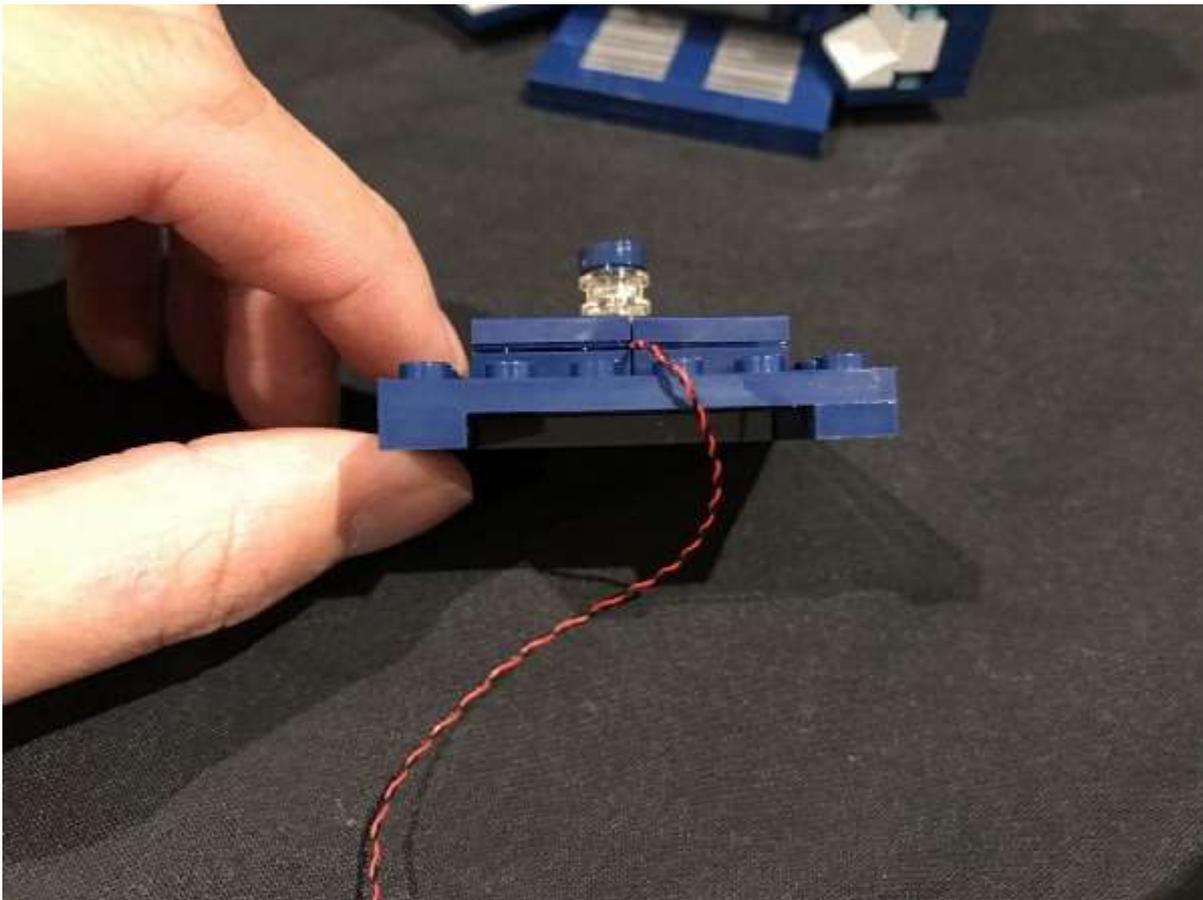
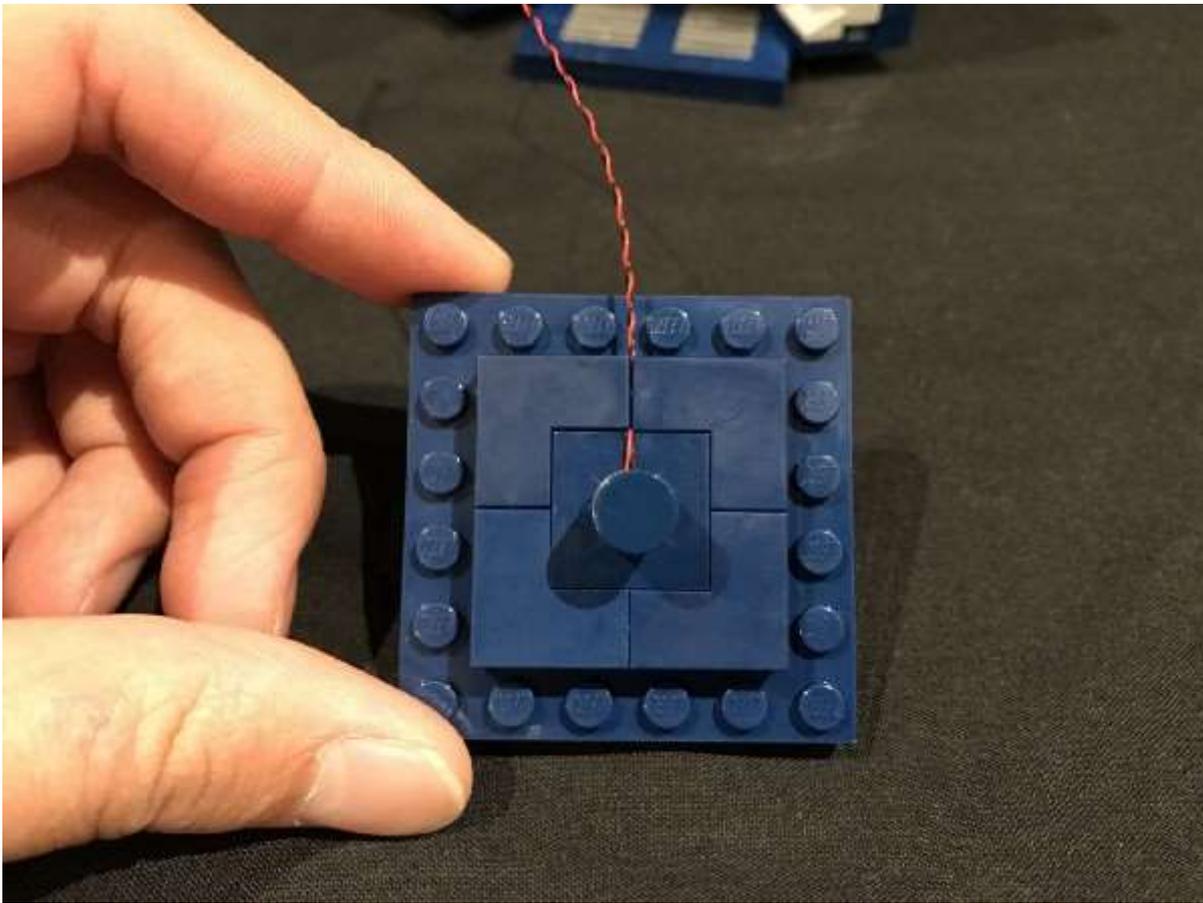




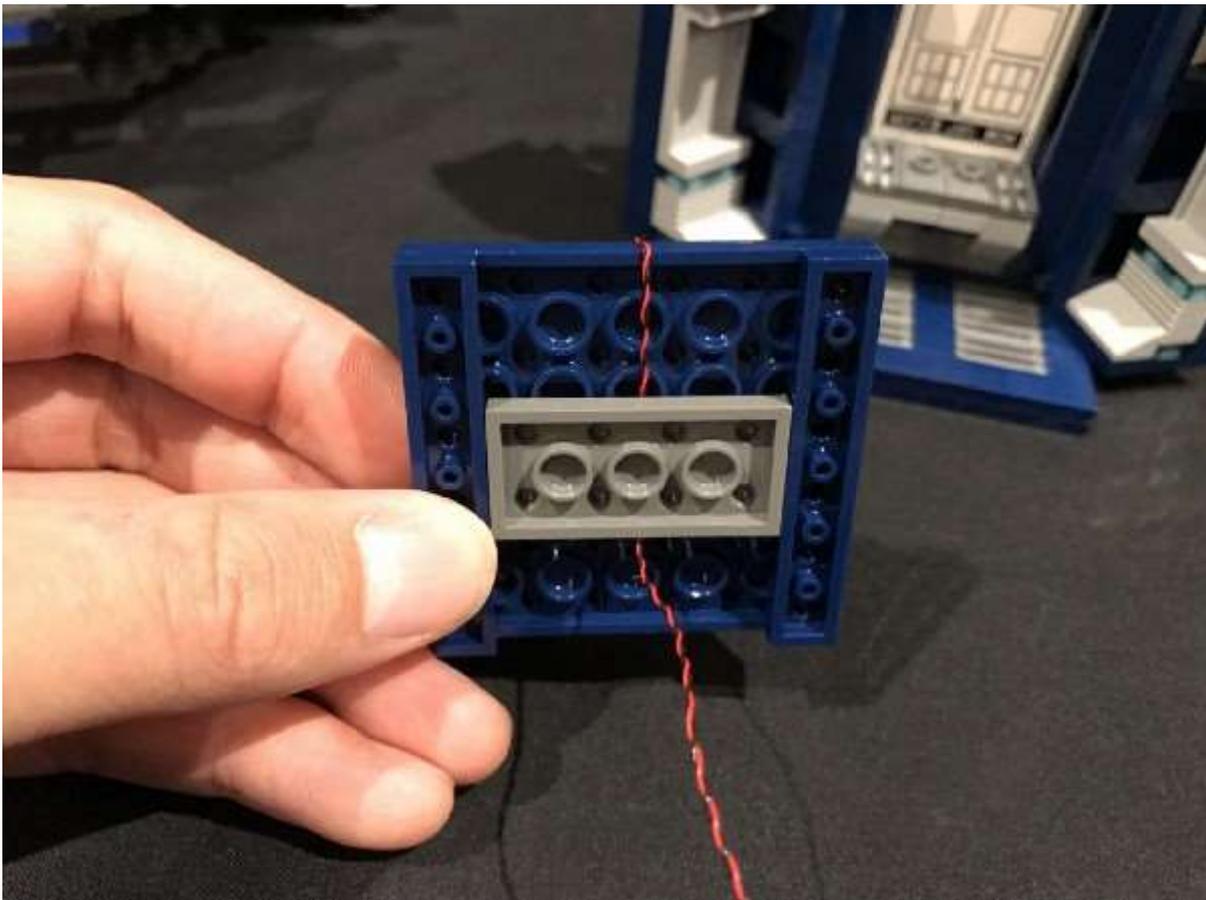
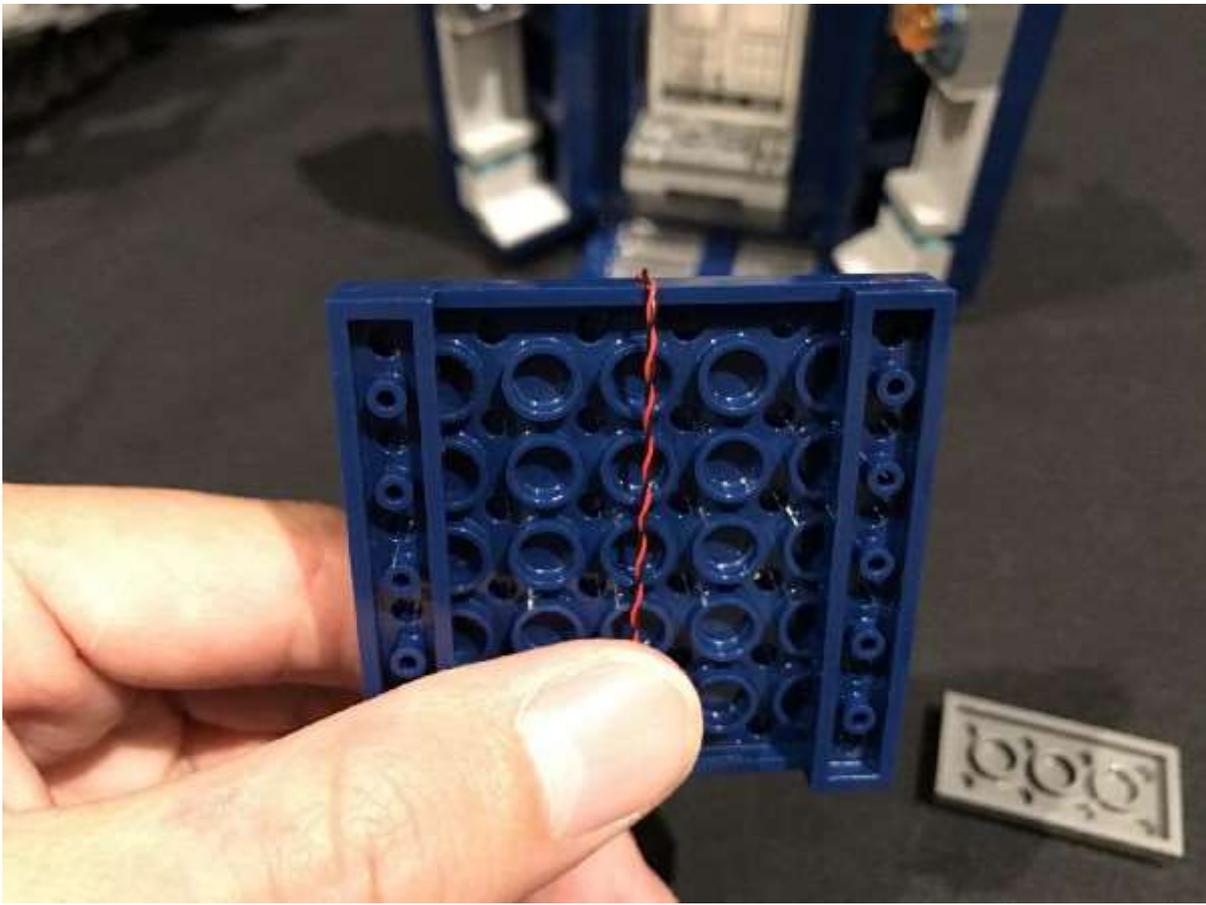
2.) Take a **White 15cm Bit Light** and then place it directly over the top of the centre stud as per below. Secure the bit light in place by reconnecting the LEGO light pieces.



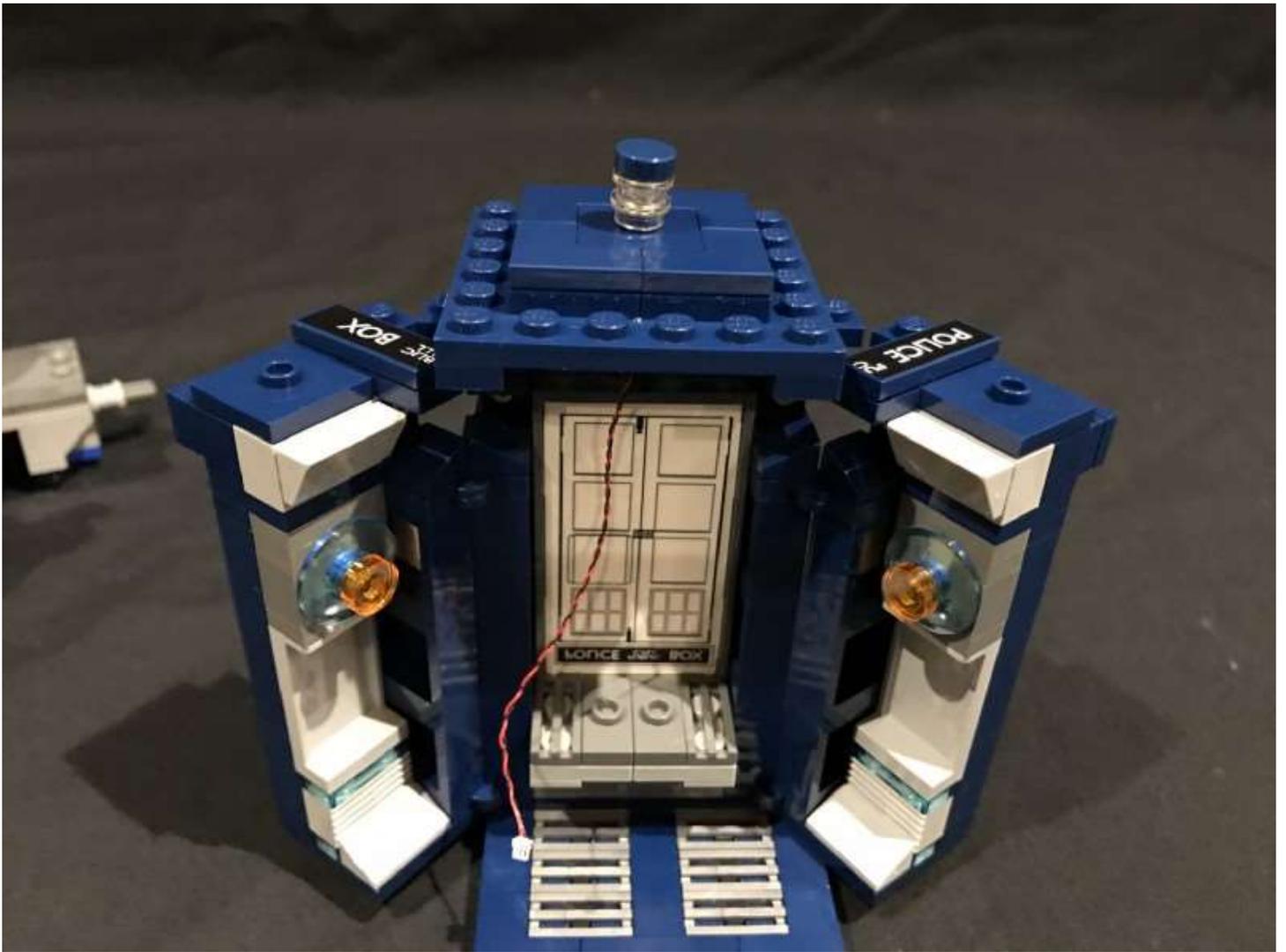
3.) Reconnect the 'L' shaped tiles ensuring the Bit Light cable is neatly laid in between studs.



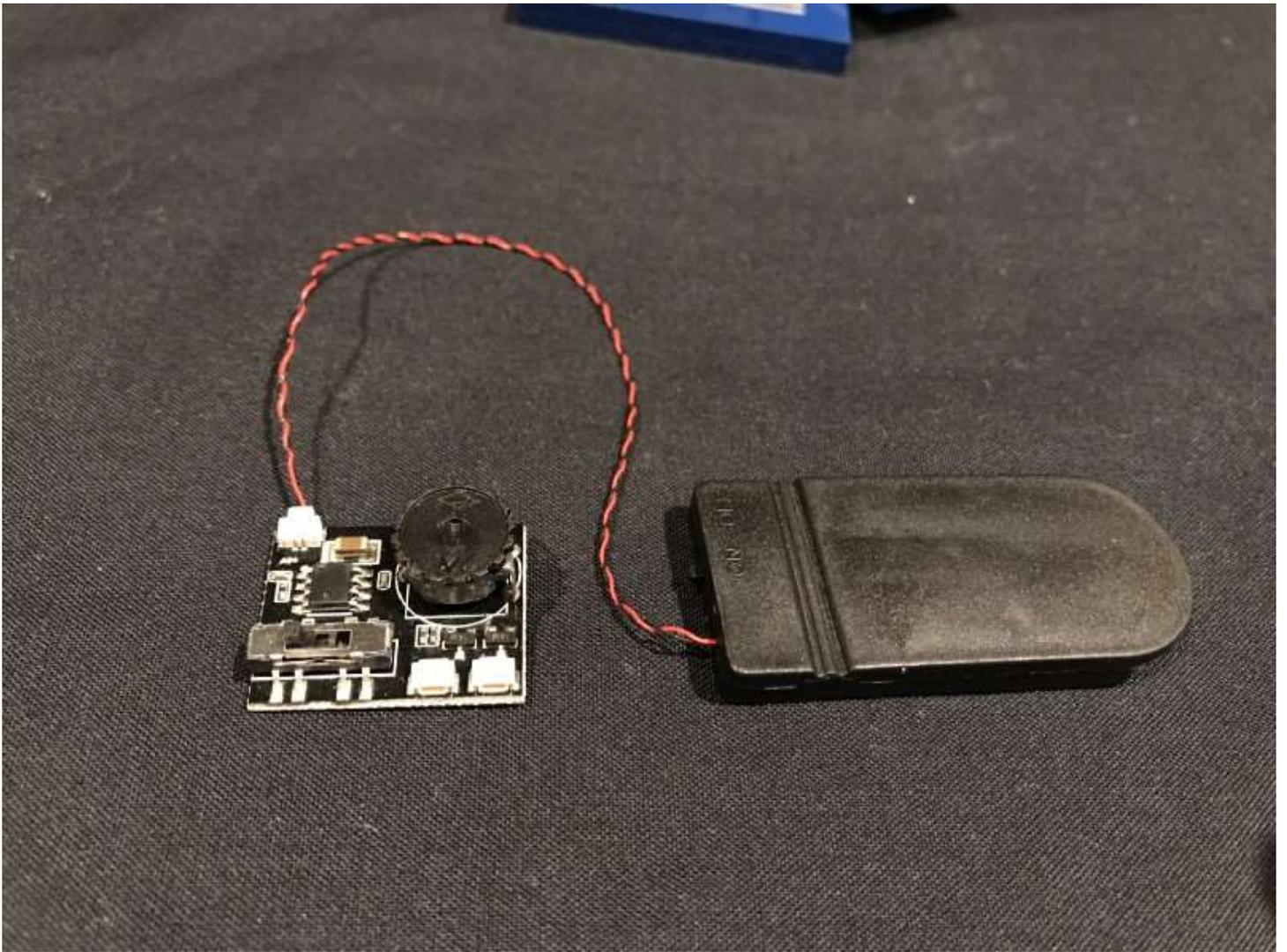
Turn the roof over and then pull the cable down and then disconnect the grey 2×4 plate from underneath. Reconnect the plate over the top of the cable to secure it.



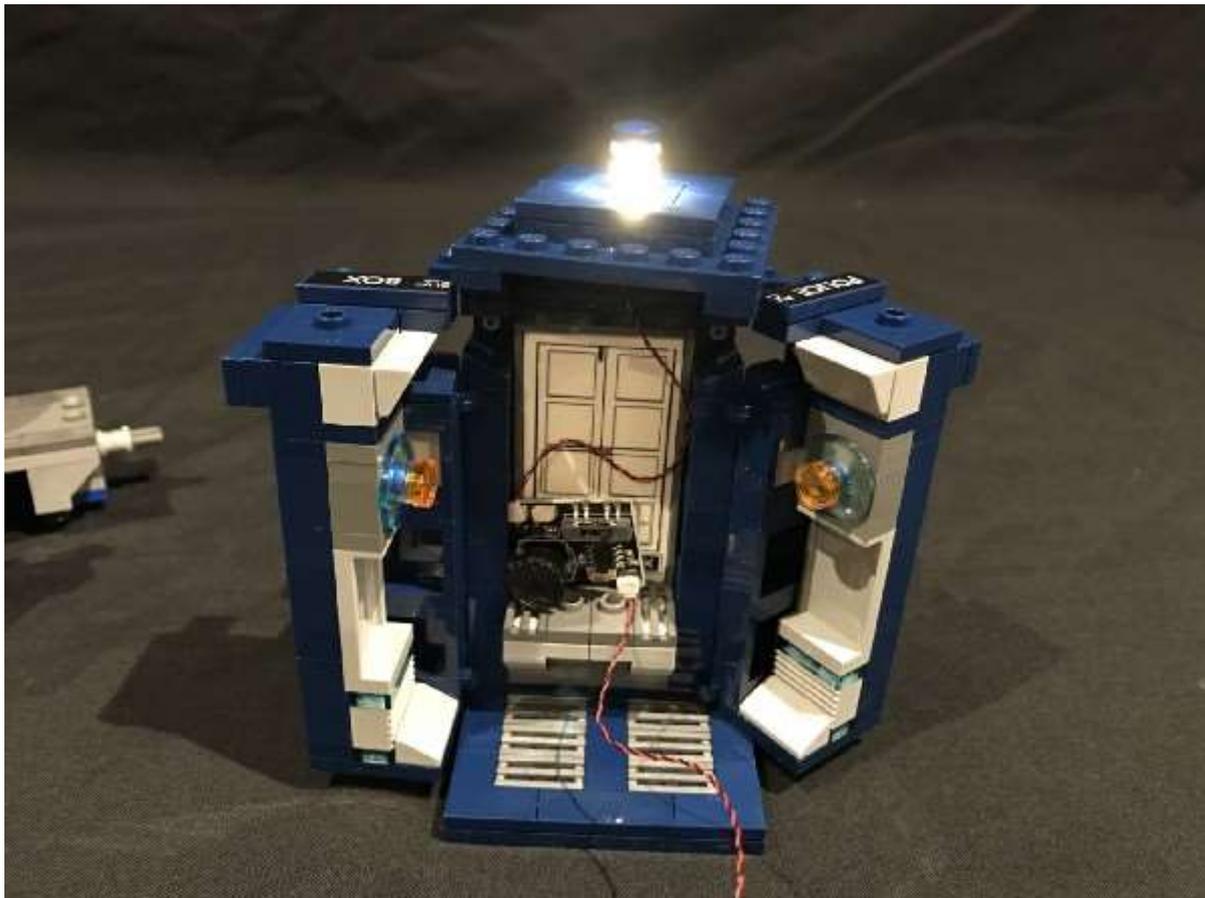
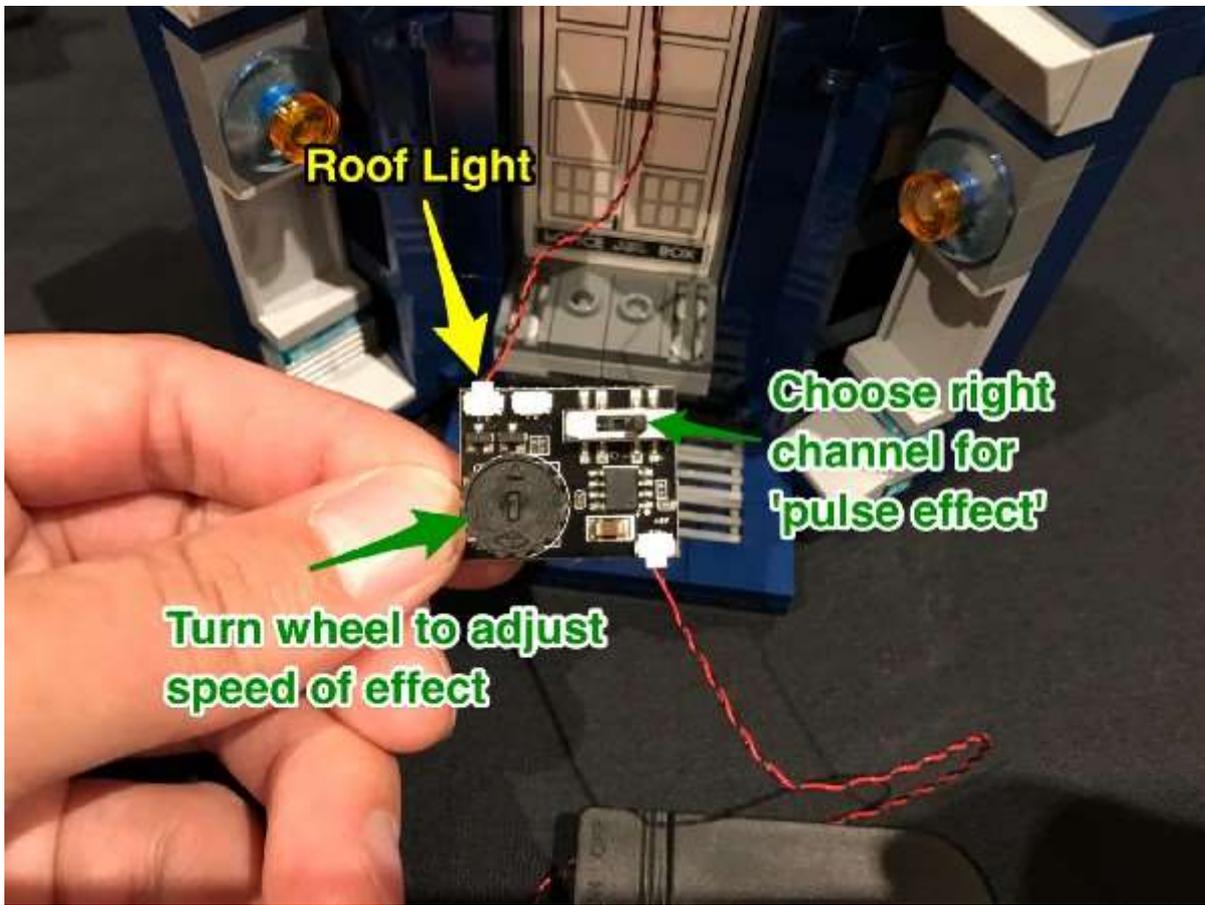
Place the roof back on top of the Tardis.



4.) Take the **Flat Battery Pack** and insert 2x CR2032 batteries to it. Insert the connecting cable to the input port of the **Multi-Effects Board** (side with 1 port)



Connect the Bit Light cable from the roof to one of the output ports of the Multi-Effects Board. Turn the channel far left for the “pulse” effect and then turn on the battery pack. Adjust the speed of the effect by turning the wheel either clockwise or anticlockwise.



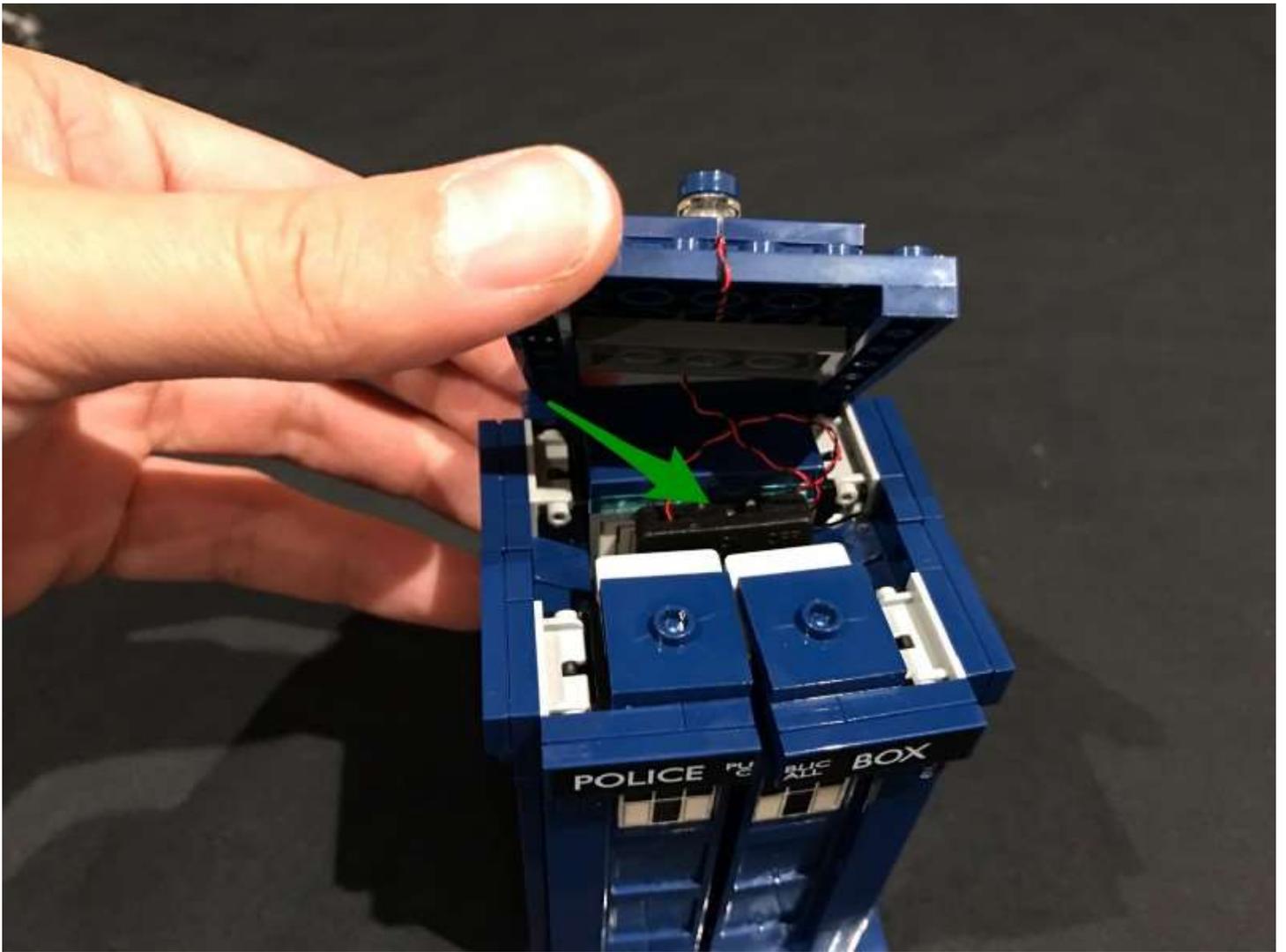
5.) Place expansion board and battery pack into the middle of the TARDIS before closing the doors.



6.) Lift up the top side panels and then turn the roof around before connecting down so that the cable is exposed (as we want to prevent the cable from being seen from the front of the Tardis)



You should be able to turn the light on/off by simply removing the roof and accessing the battery pack switch inside.



Lighting the Console Room

1.) Start by removing sections from the middle of the console room.

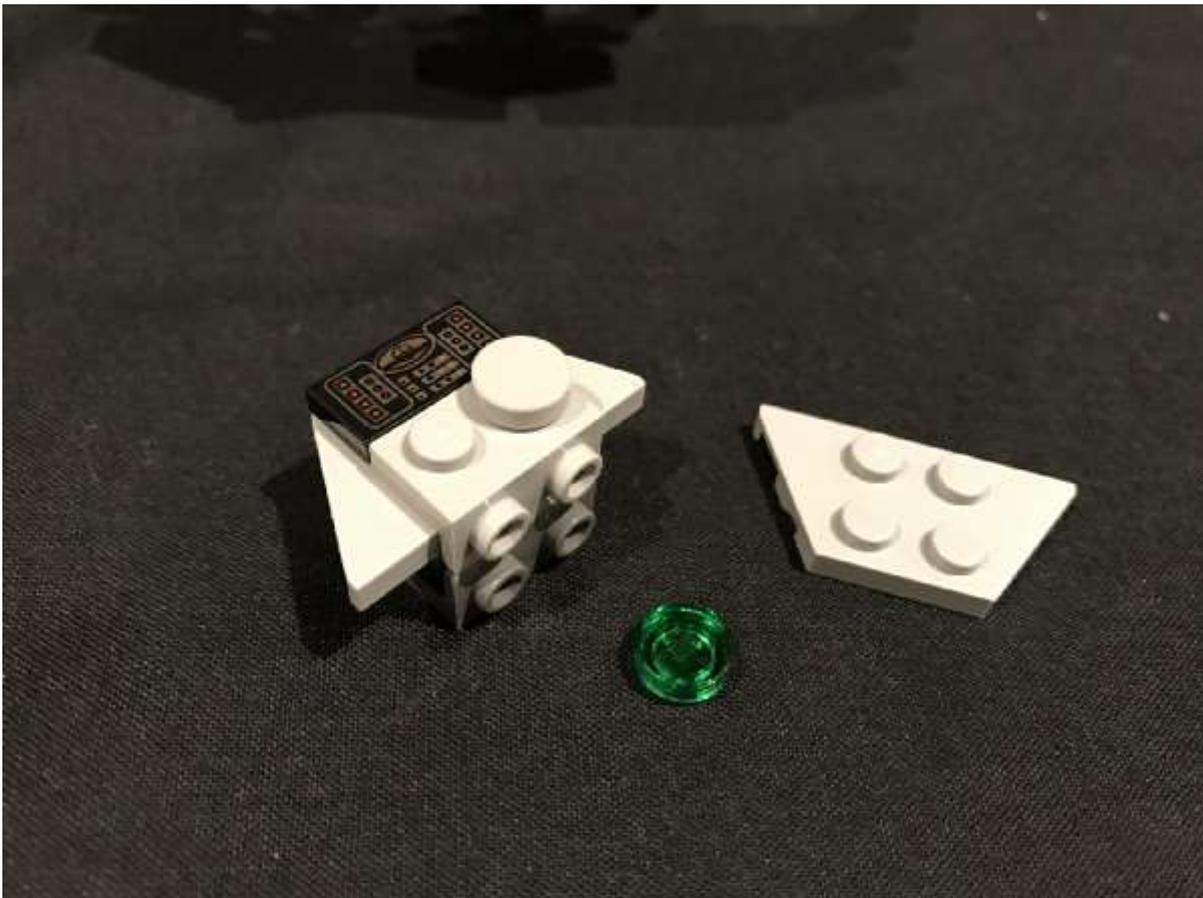




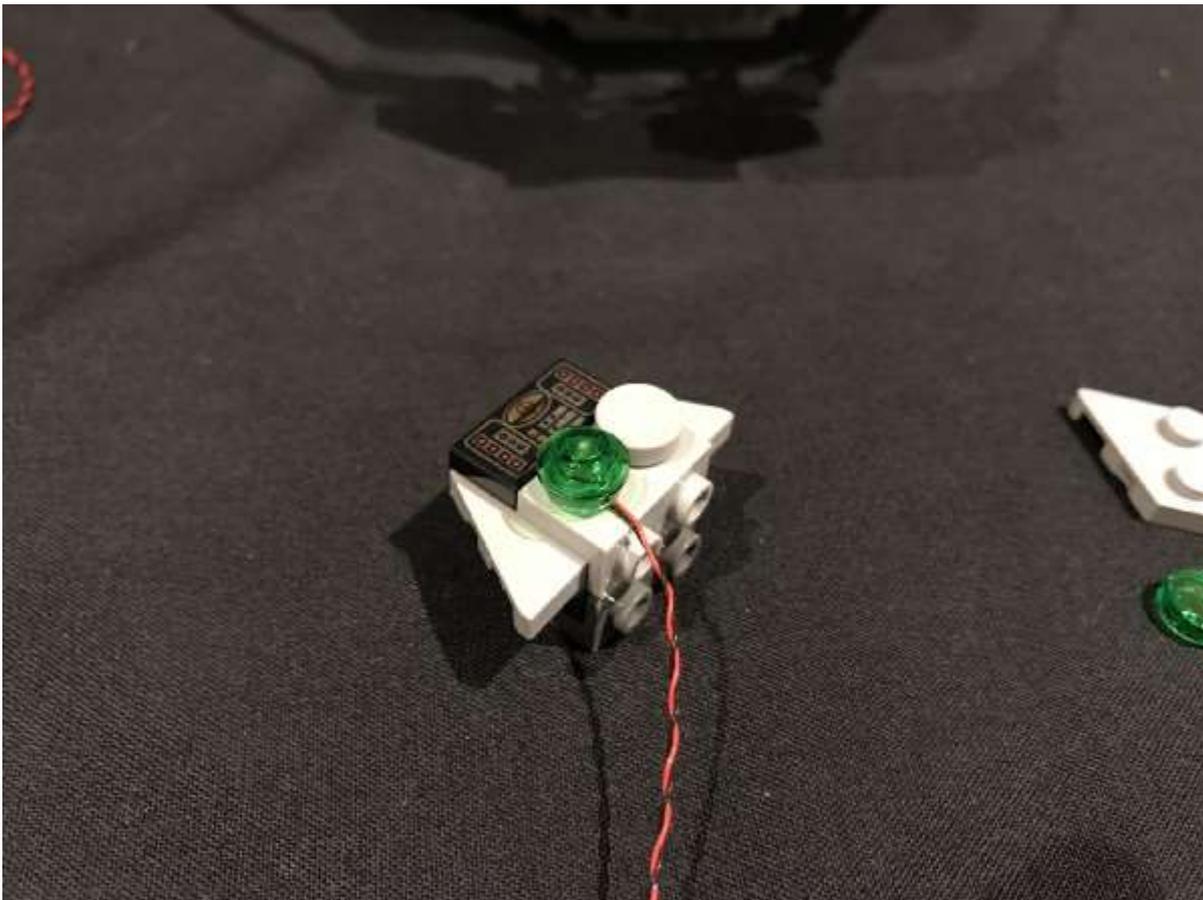
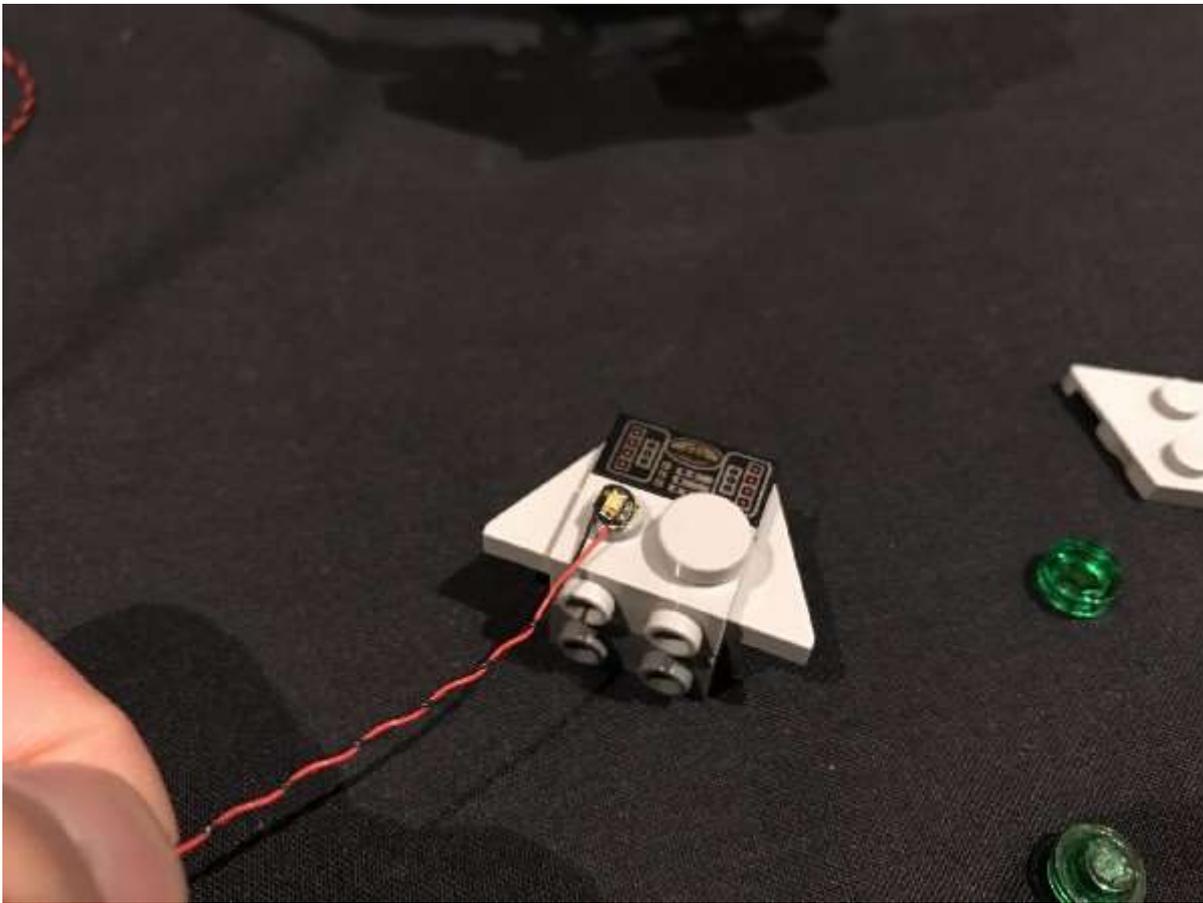


2.) We will install a flashing light to the green light below. First remove the panel section and then disassemble as per below.

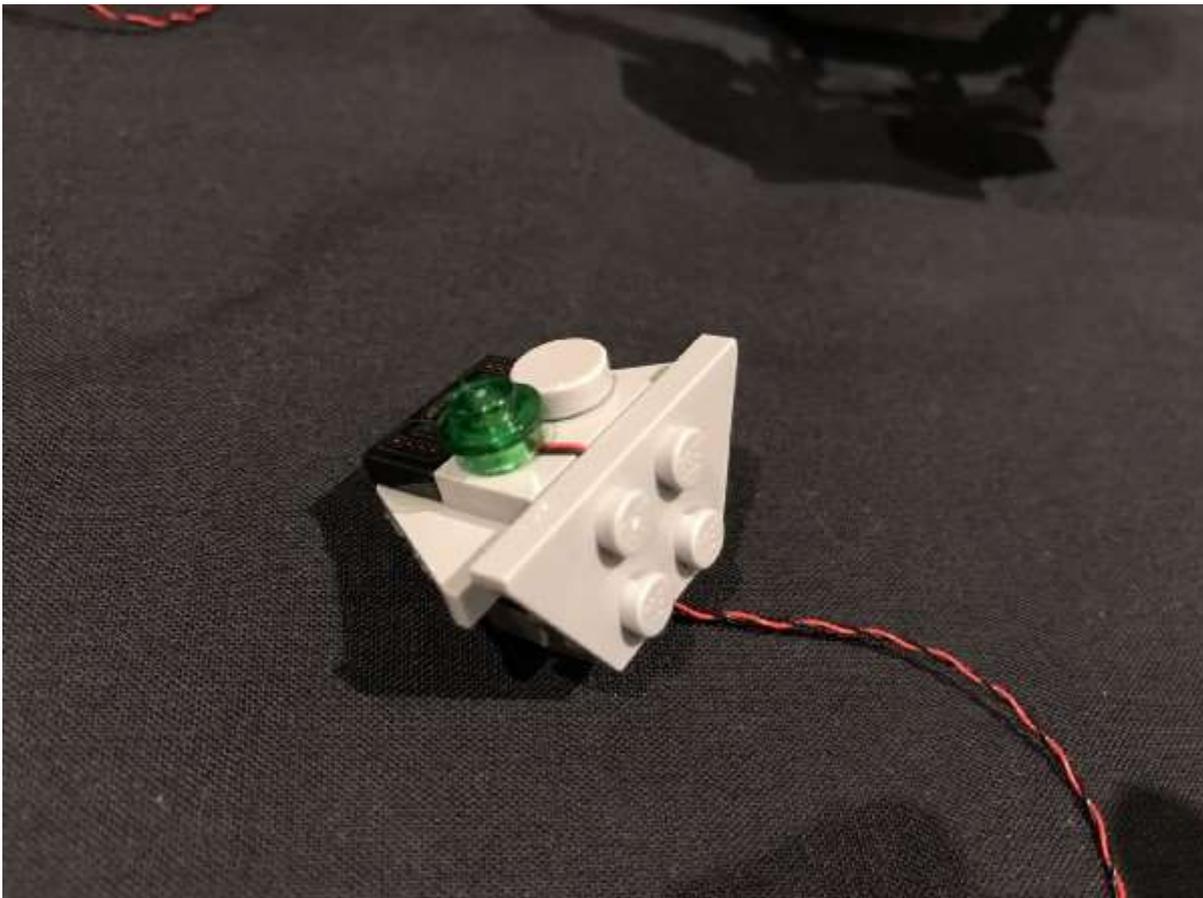
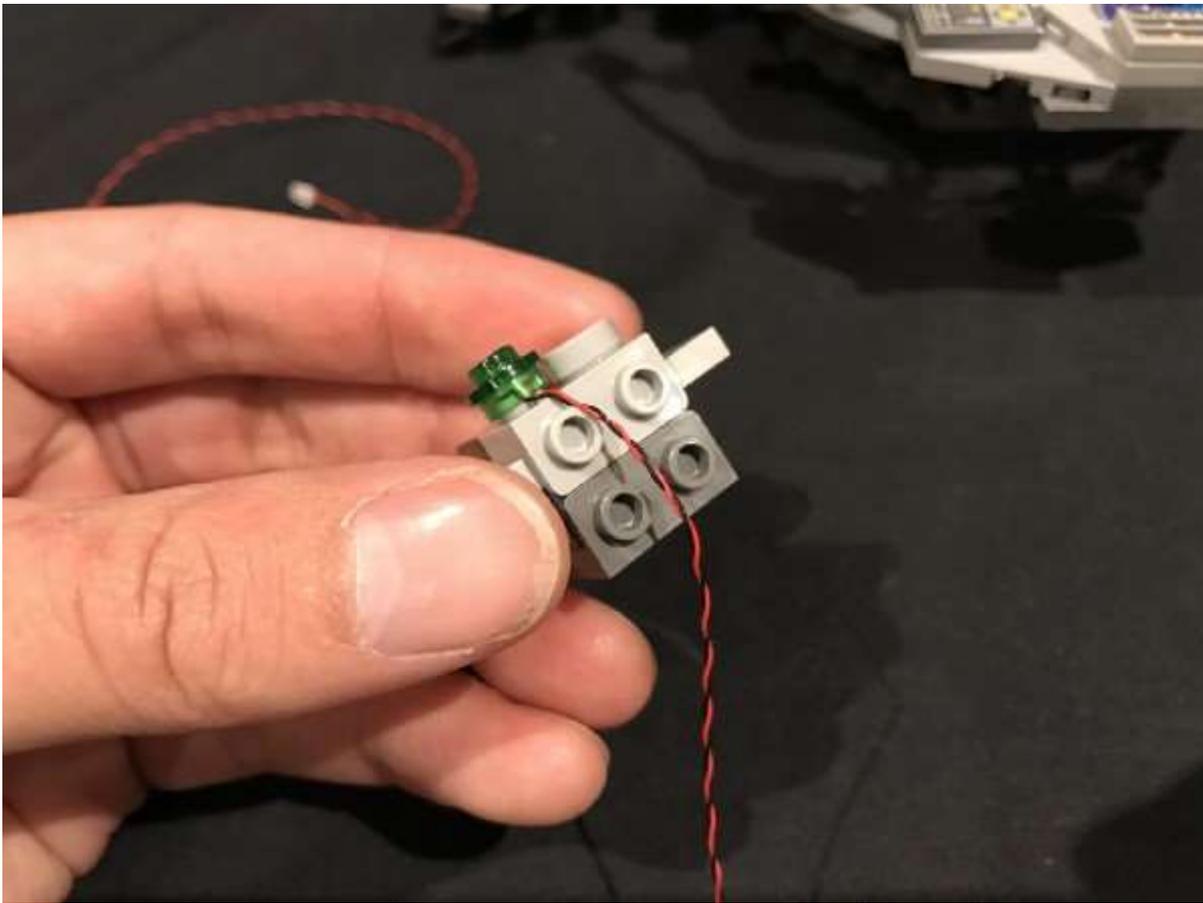




3.) Take a **Flashing White 15cm Bit Light** and then place it directly over the grey stud. Secure it in place by connecting the provided **Trans Green Round Plate** over the top ensuring the cable is facing downward.



Pull the cable down and lay in between studs before reconnecting the grey plate over the top



Before reconnecting this panel section to the middle, thread the bit light cable underneath so that it leads to the back.



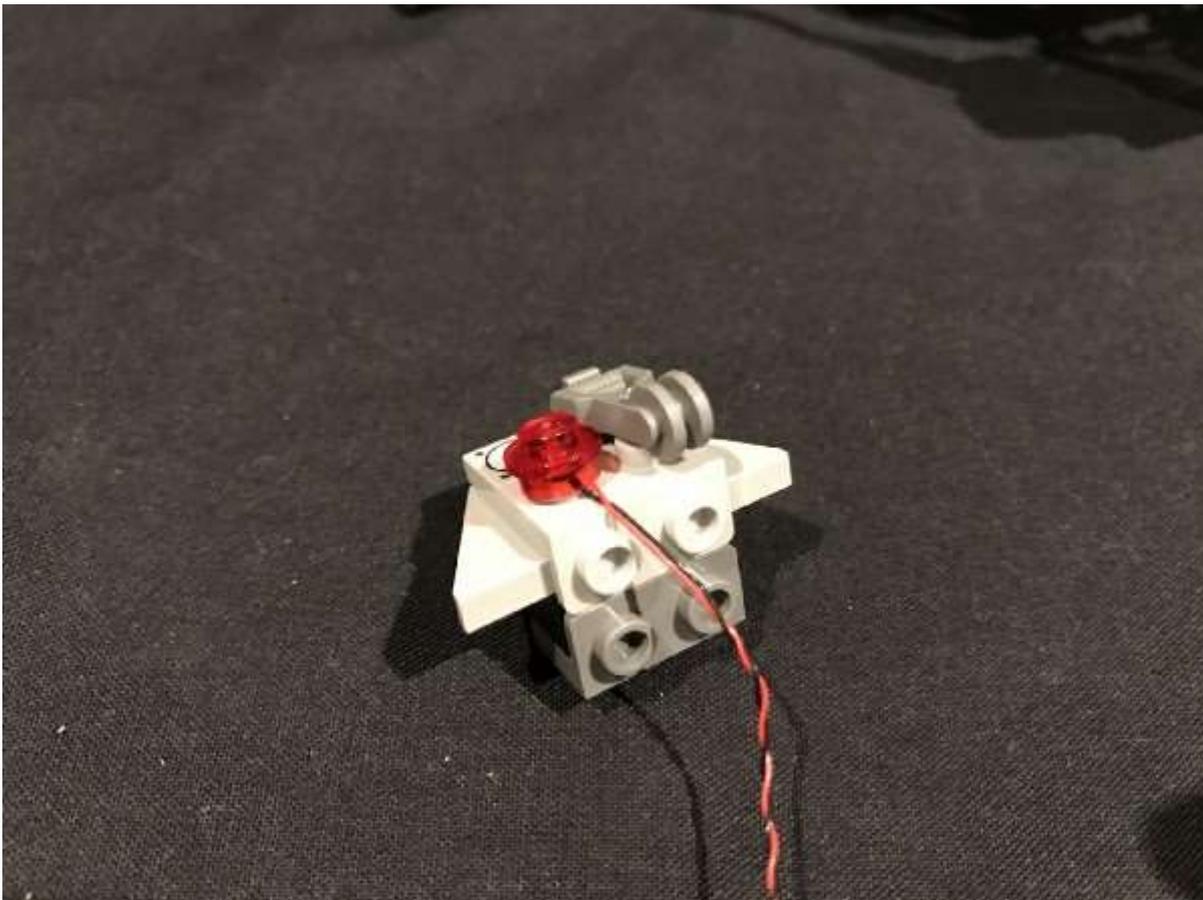
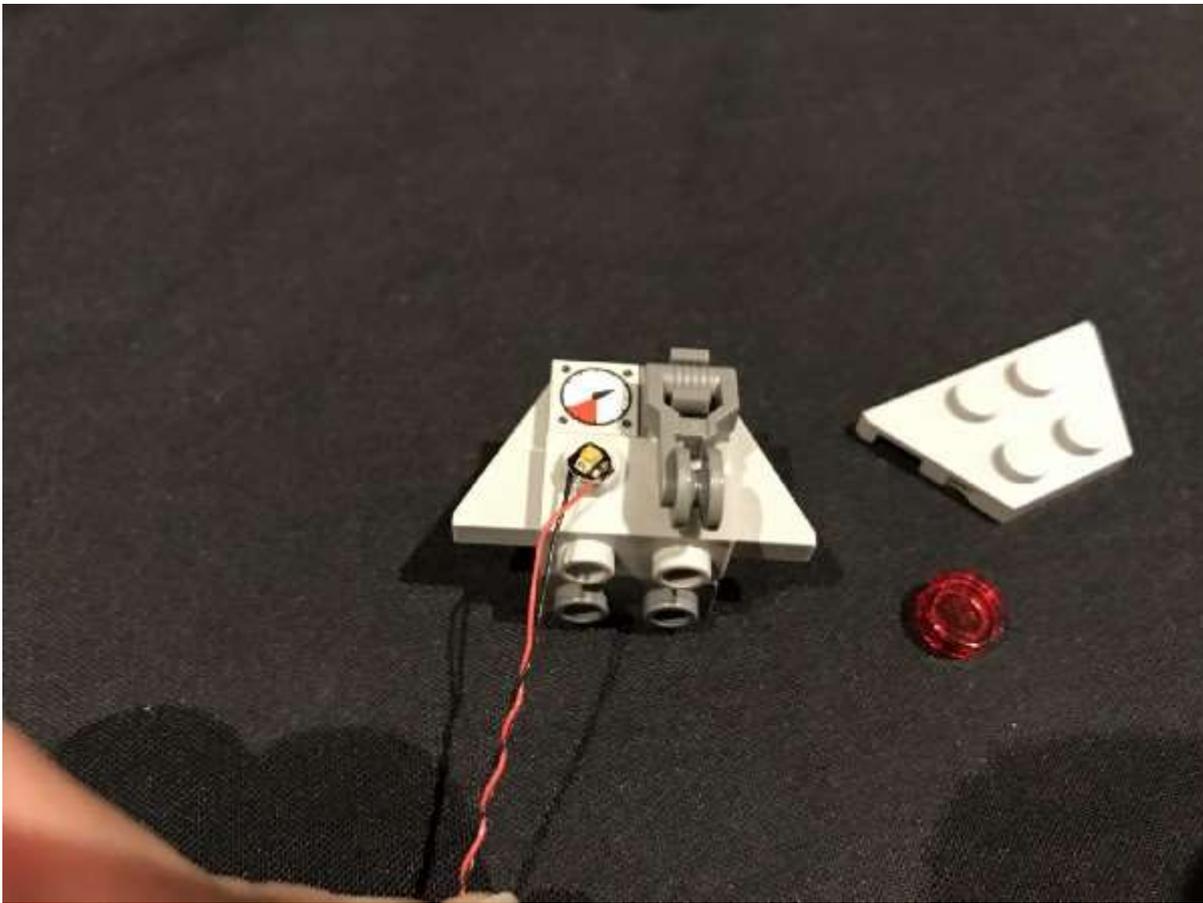
Thread the cable underneath the railings.



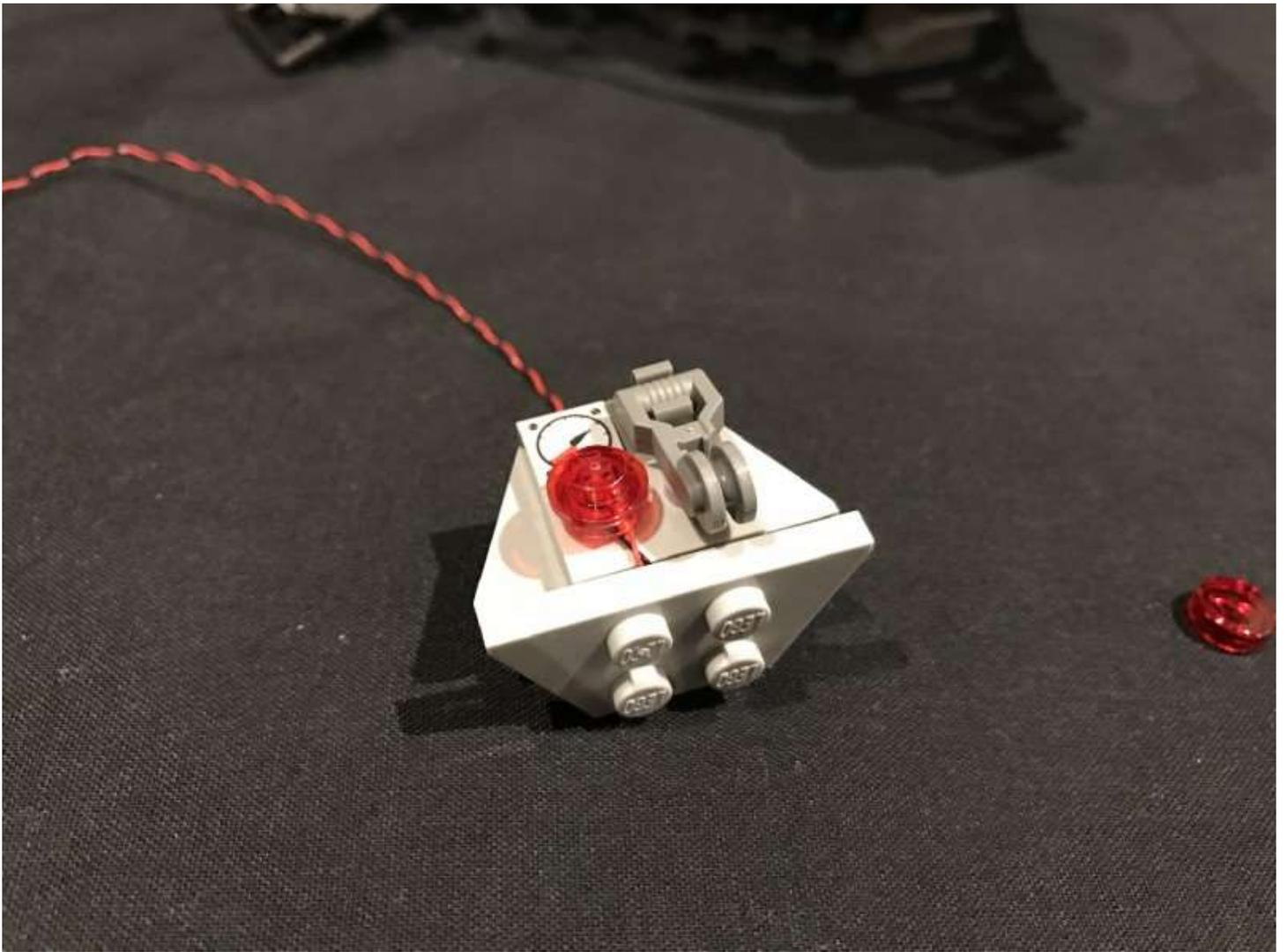
4.) We will now install another flashing light to the red light on the other side. First remove this section and disassemble pieces as per below.



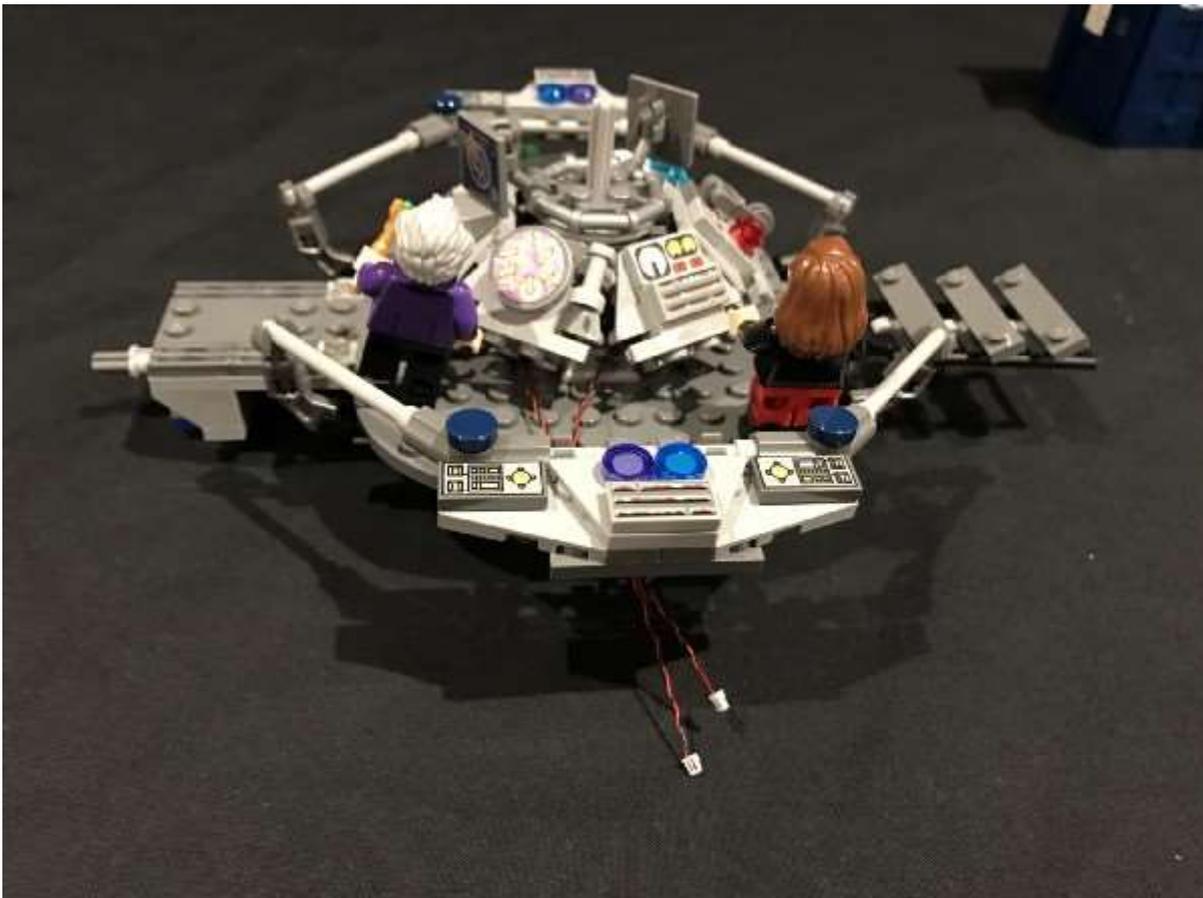
5.) Take a **Flashing White 15cm Bit Light** and then place it directly over the grey stud. Secure it in place by connecting the provided **Trans Red Round Plate** over the top ensuring the cable is facing downward.



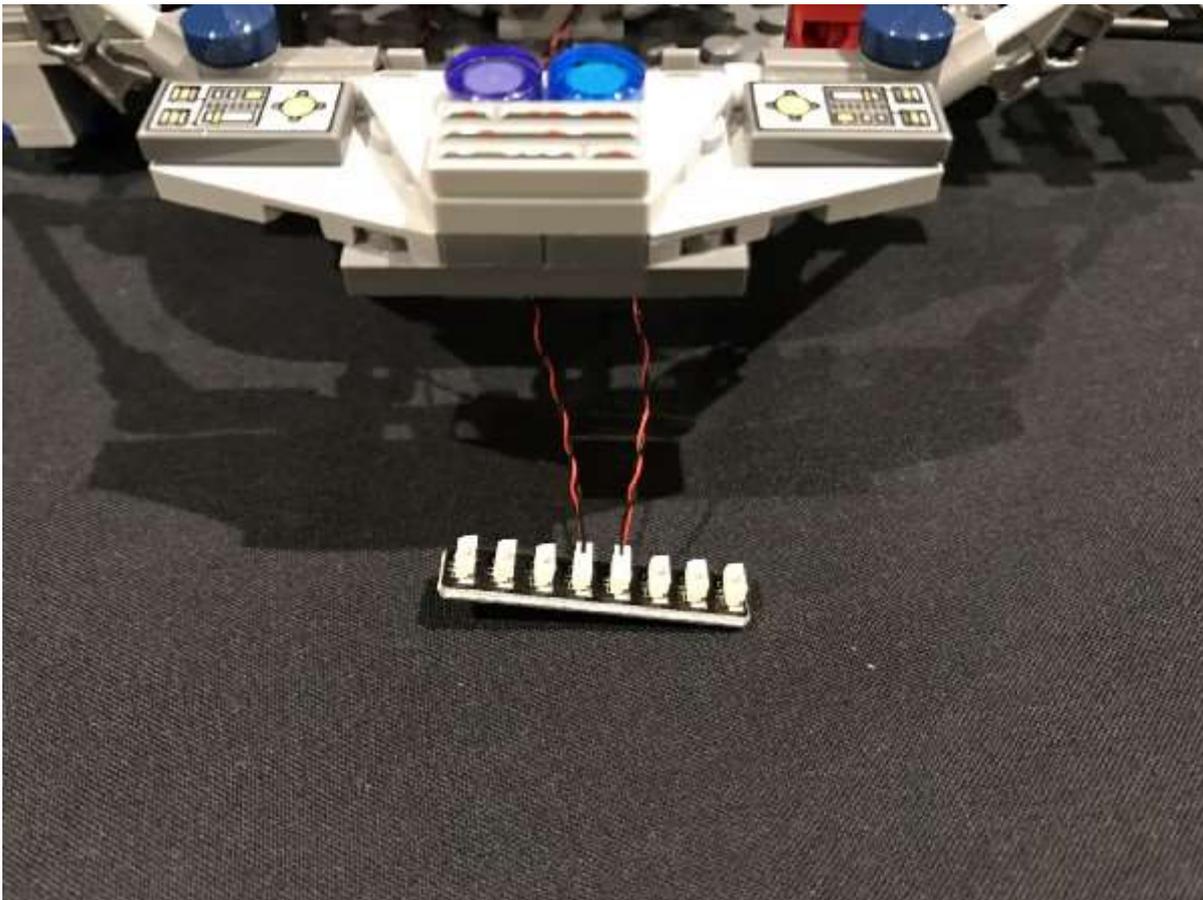
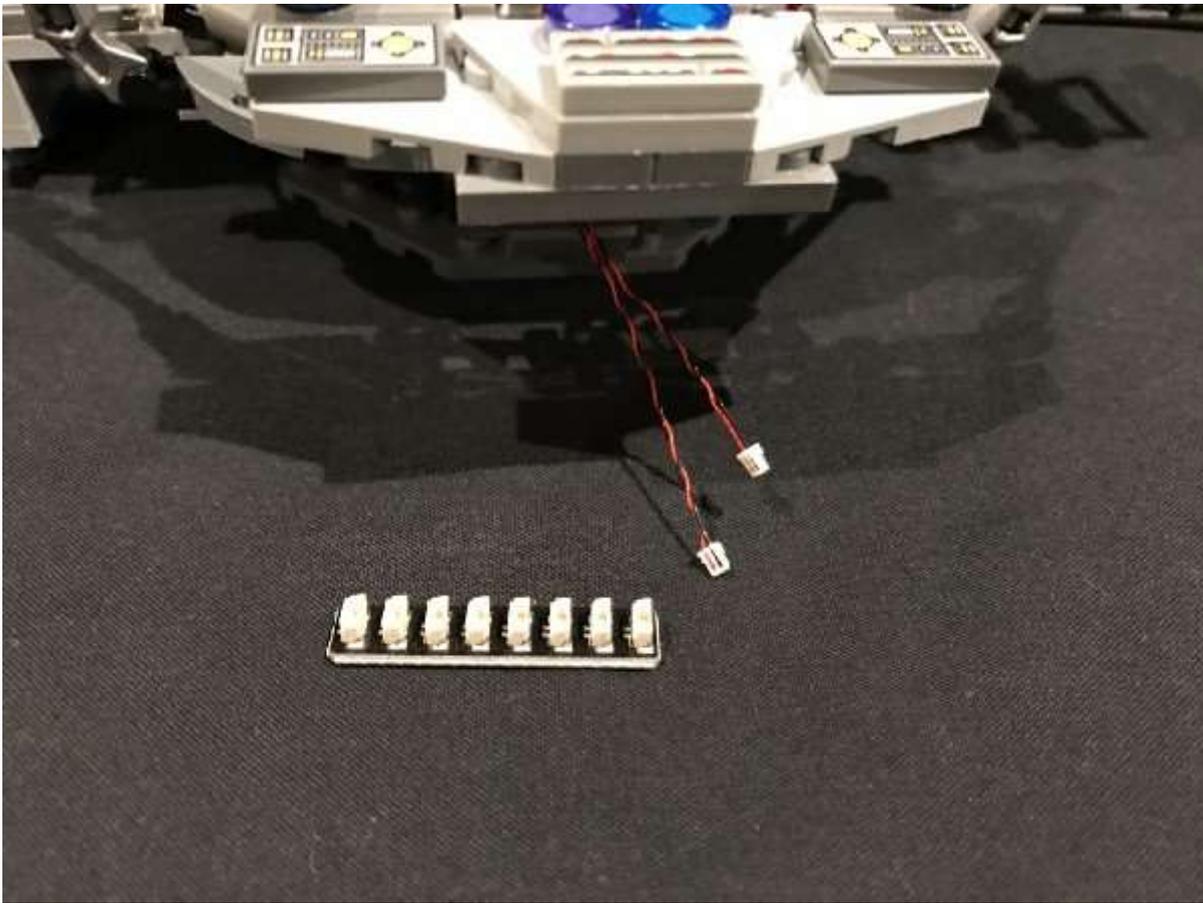
Pull the cable down and lay in between studs before reconnecting the grey plate over the top



Reconnect this panel section back to the middle ensuring you first thread the cable underneath so that it threads through to the back section.

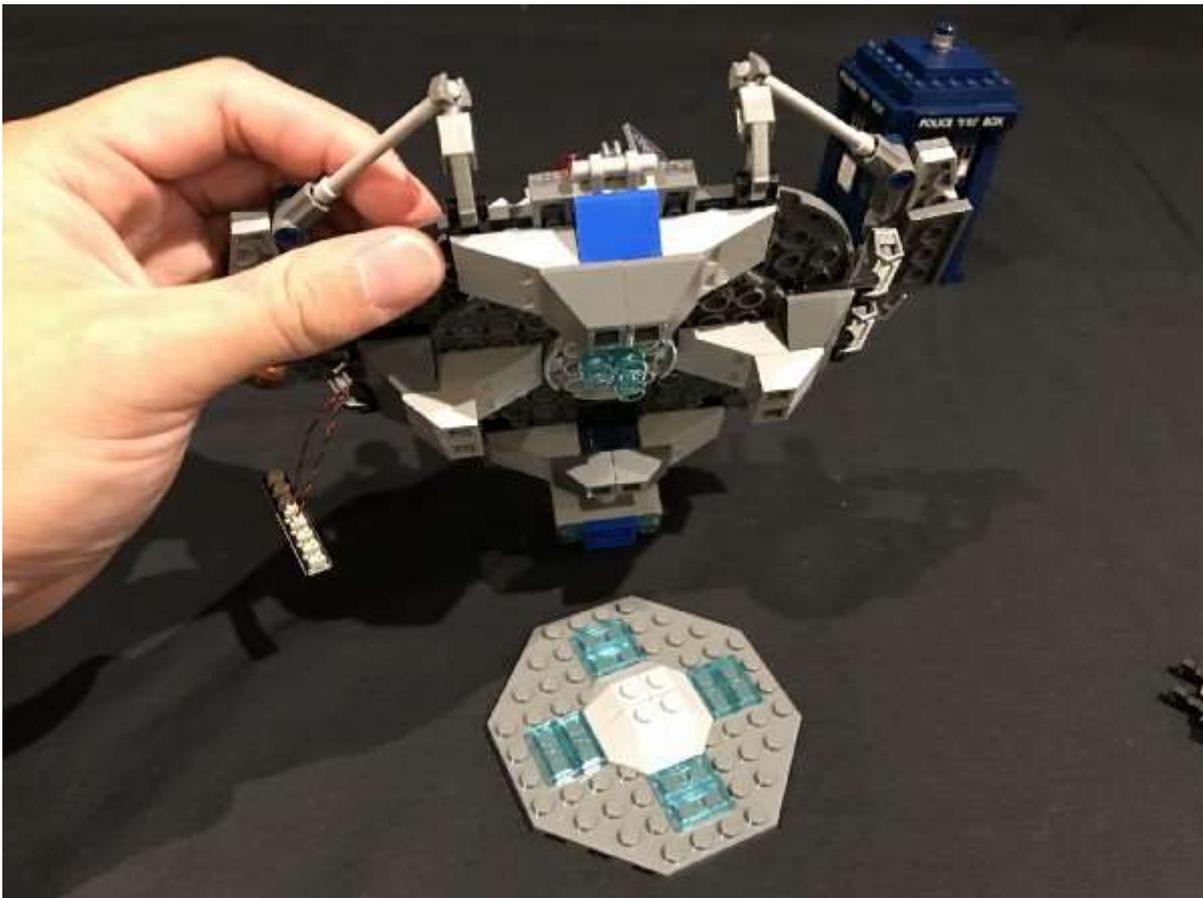
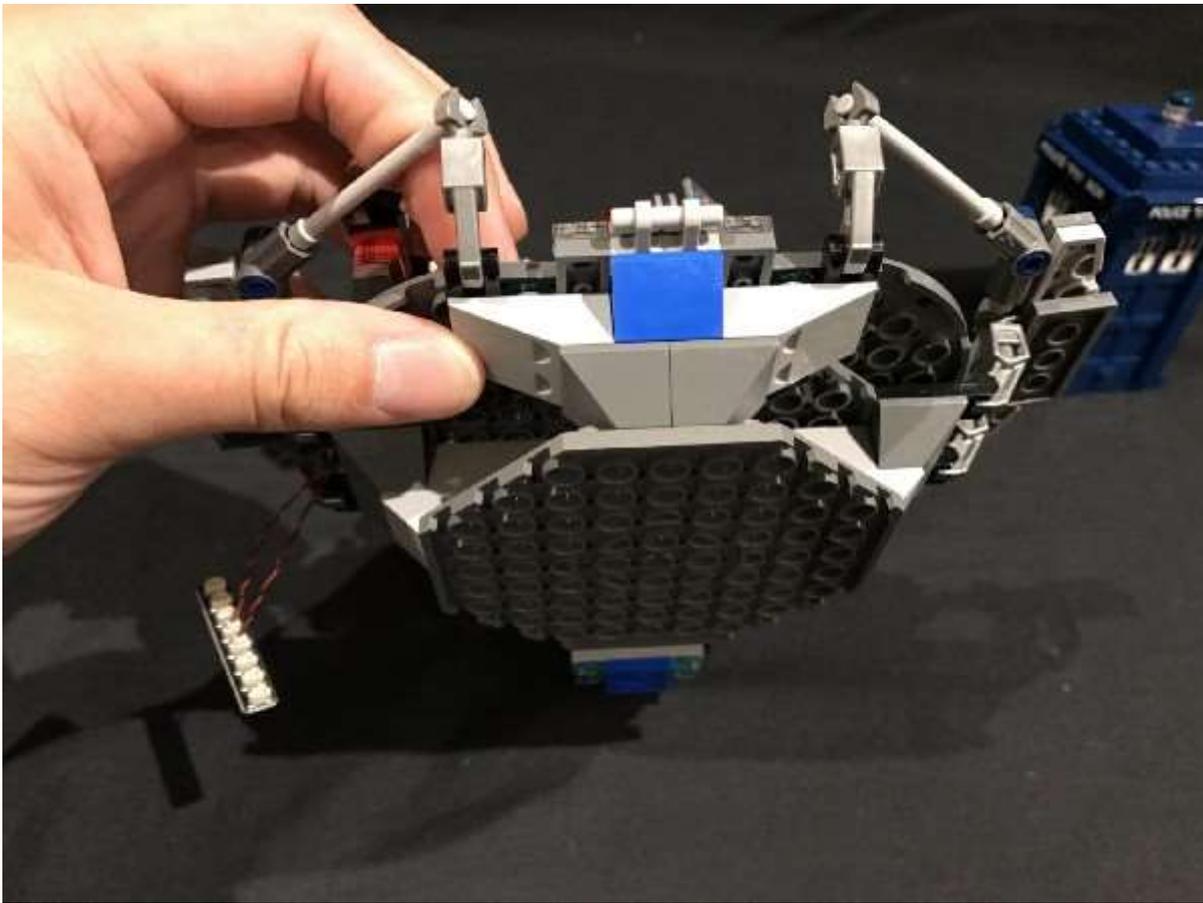


6.) Turn the console room around to the back and then take the **8-Port Expansion Board** and then connect the 2 light cables to the middle ports.

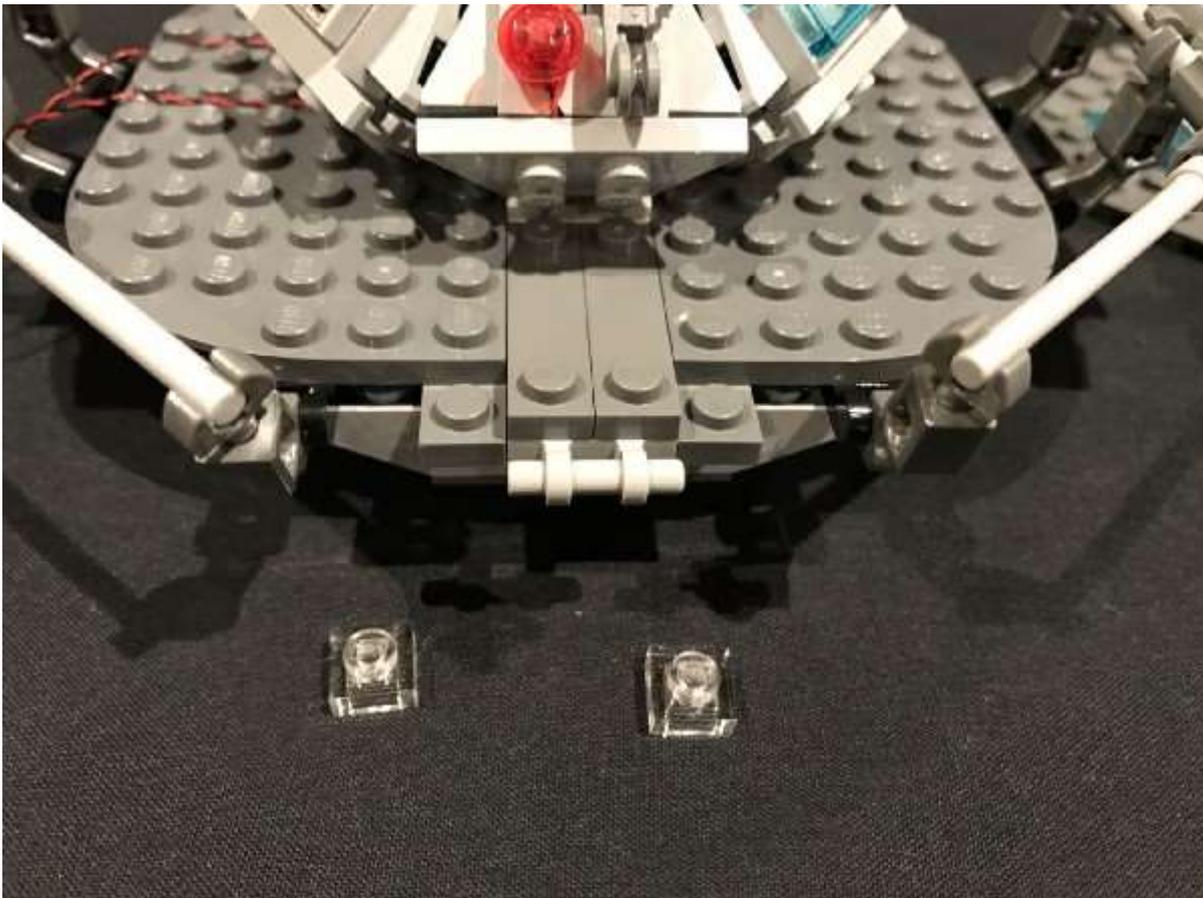
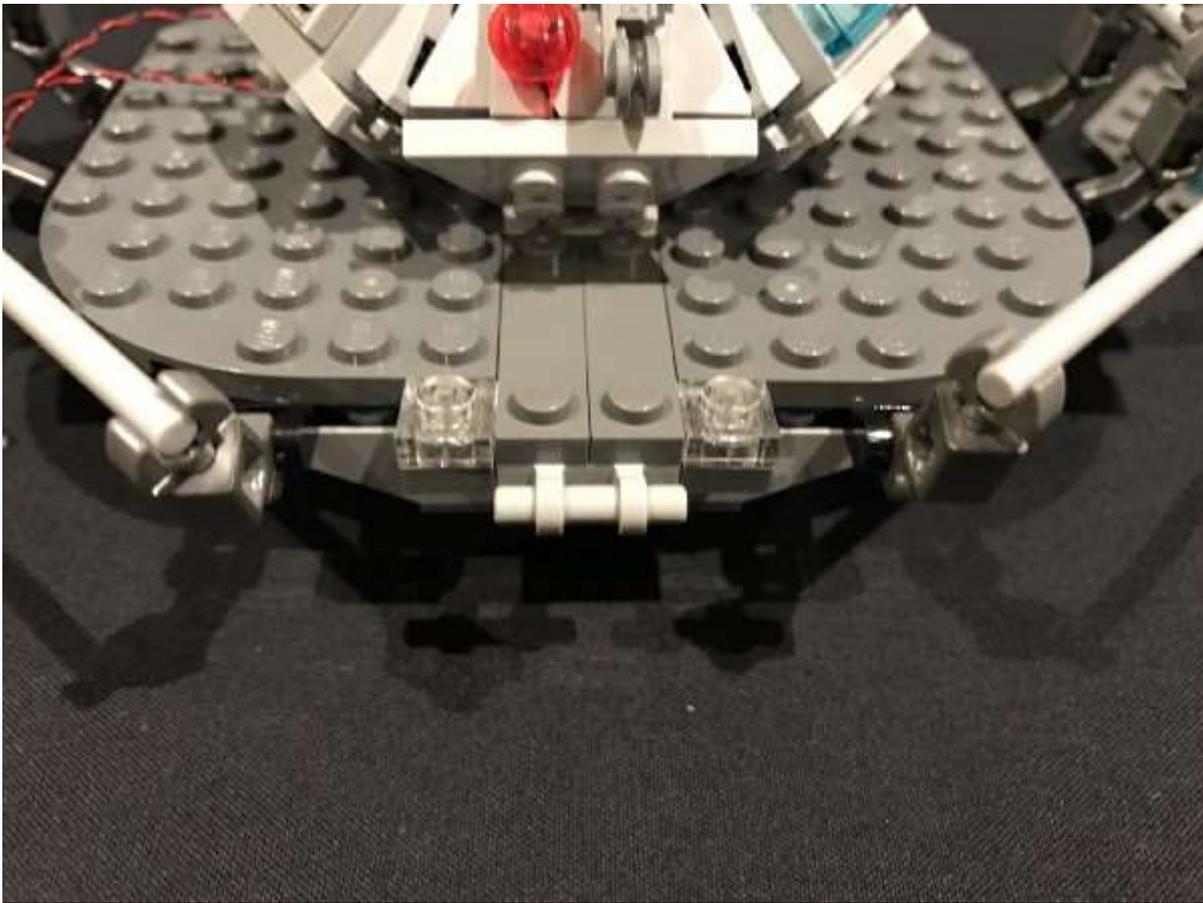


7.) We will now light up the floor lights starting from the ones located near the steps. First remove the steps section and then remove the octagon plate from underneath.

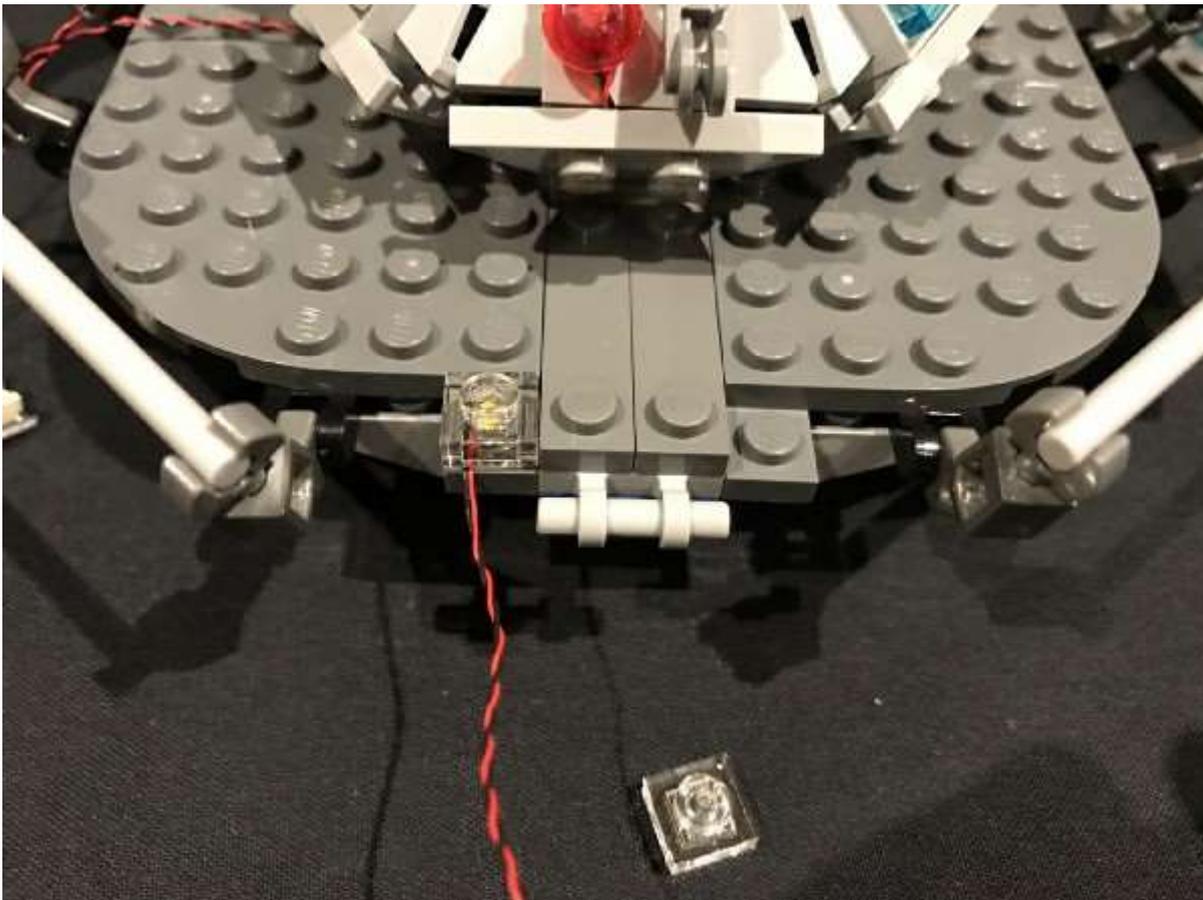
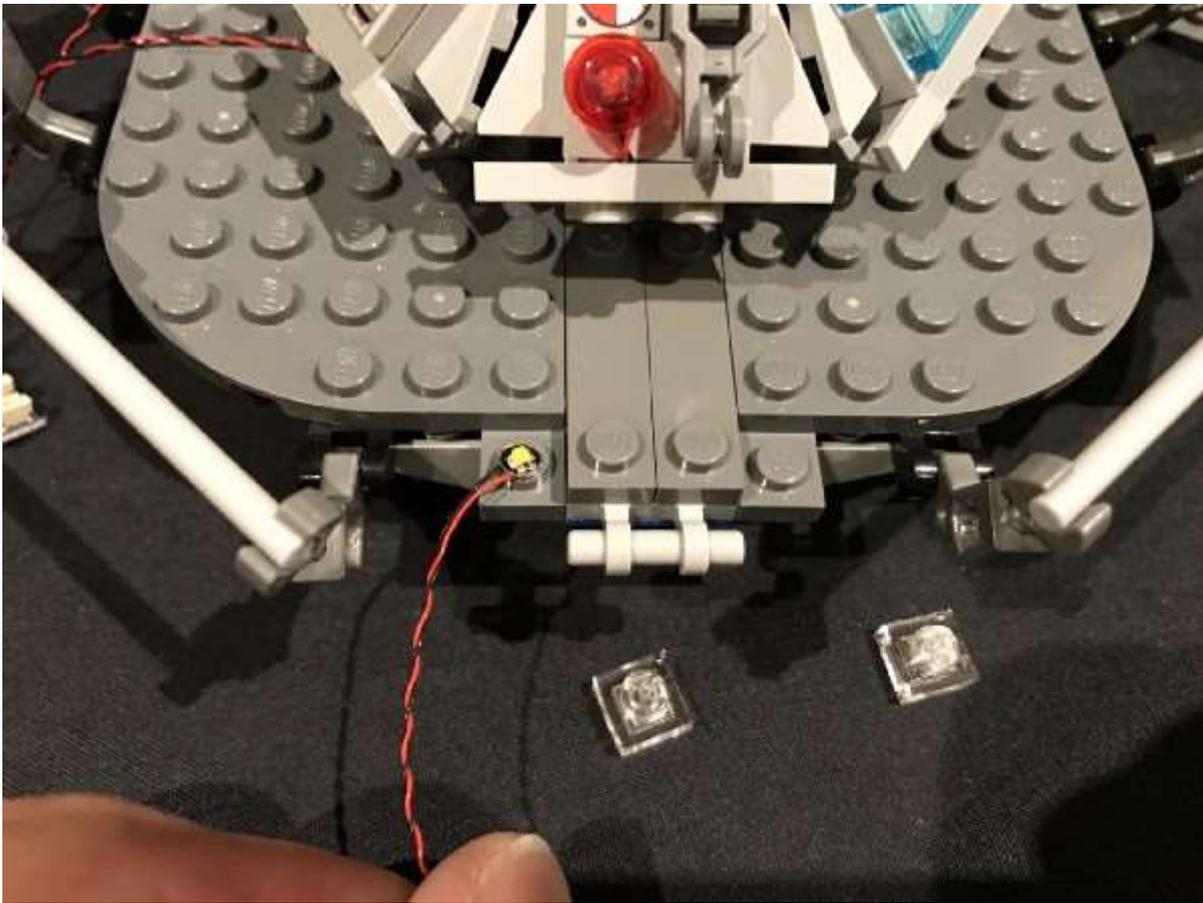




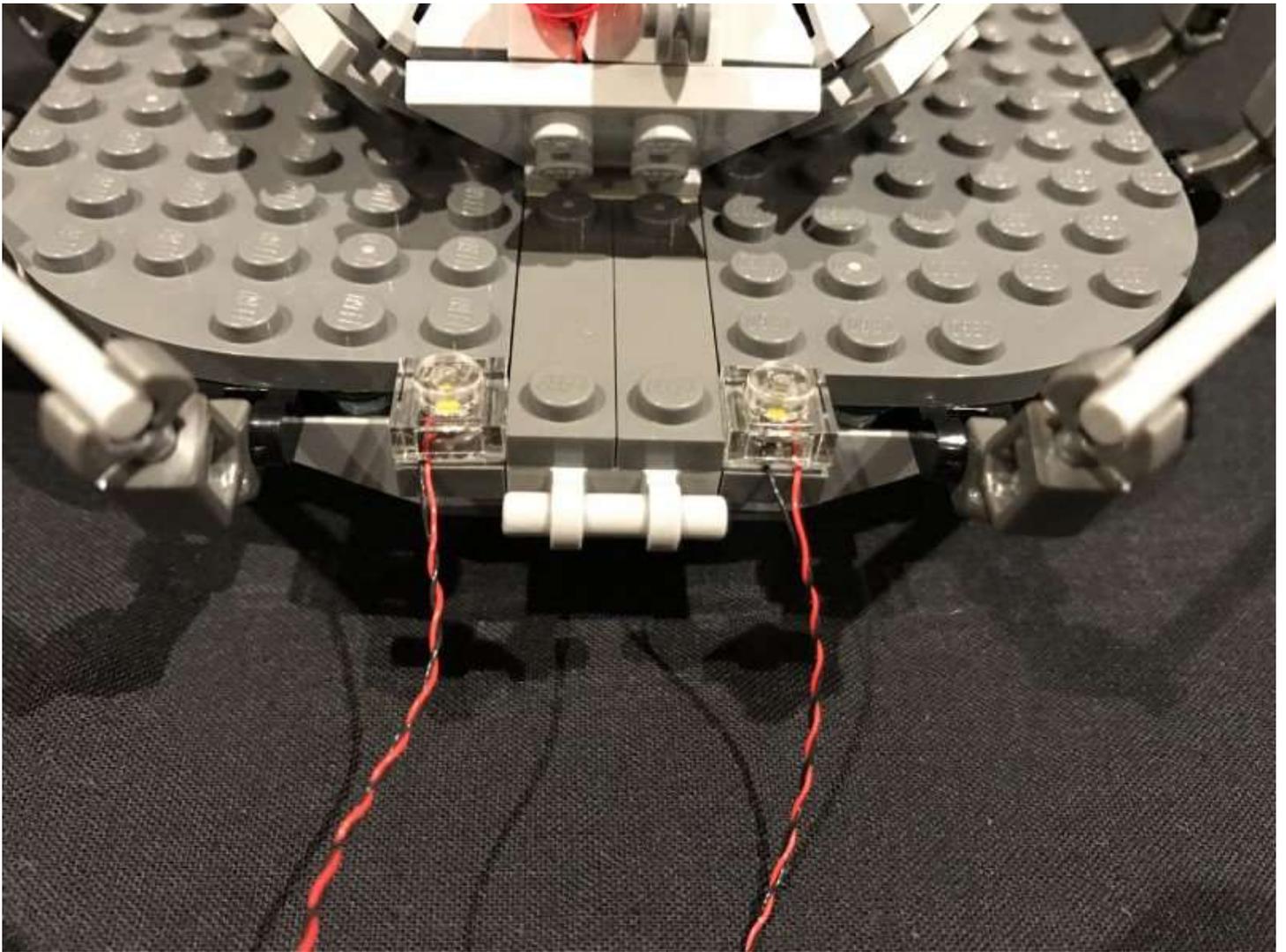
Remove the trans white square plates



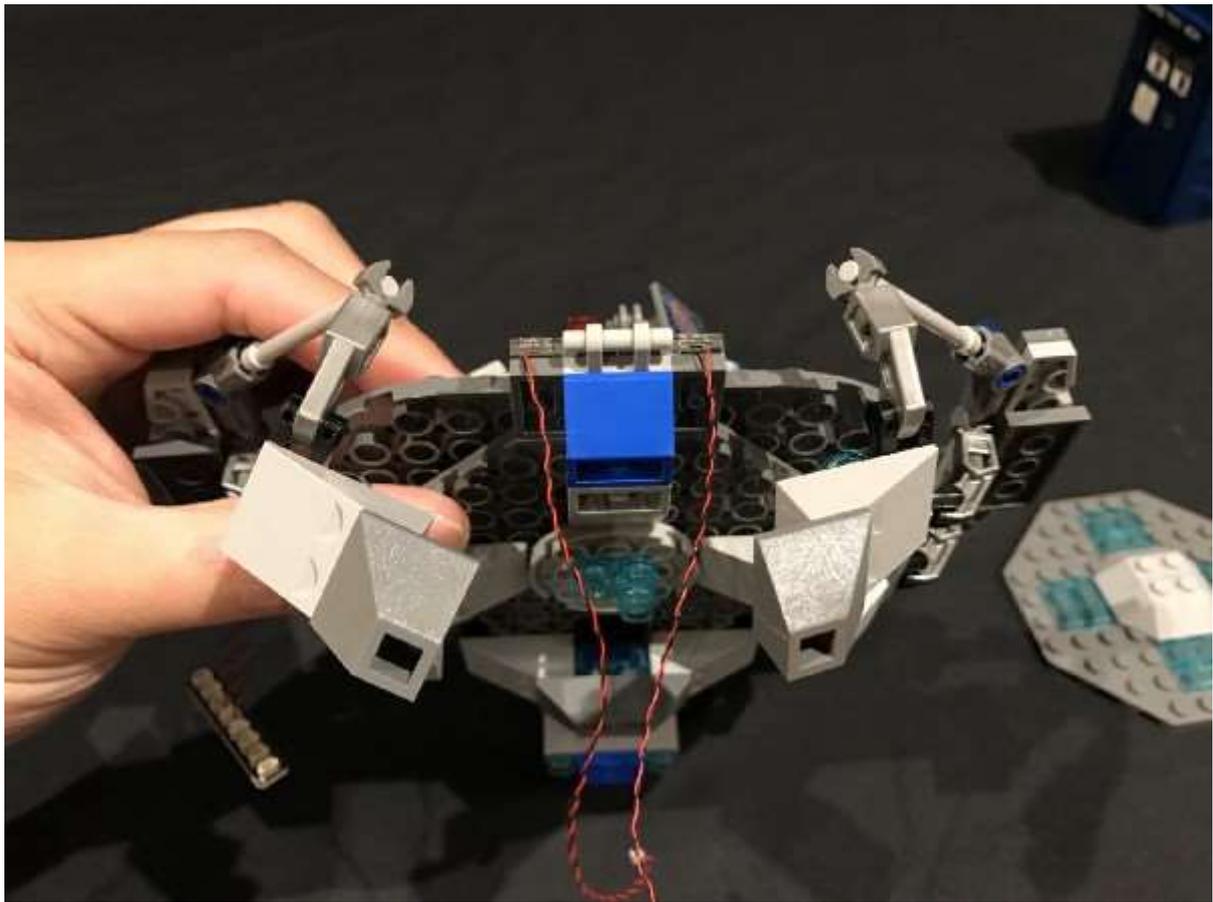
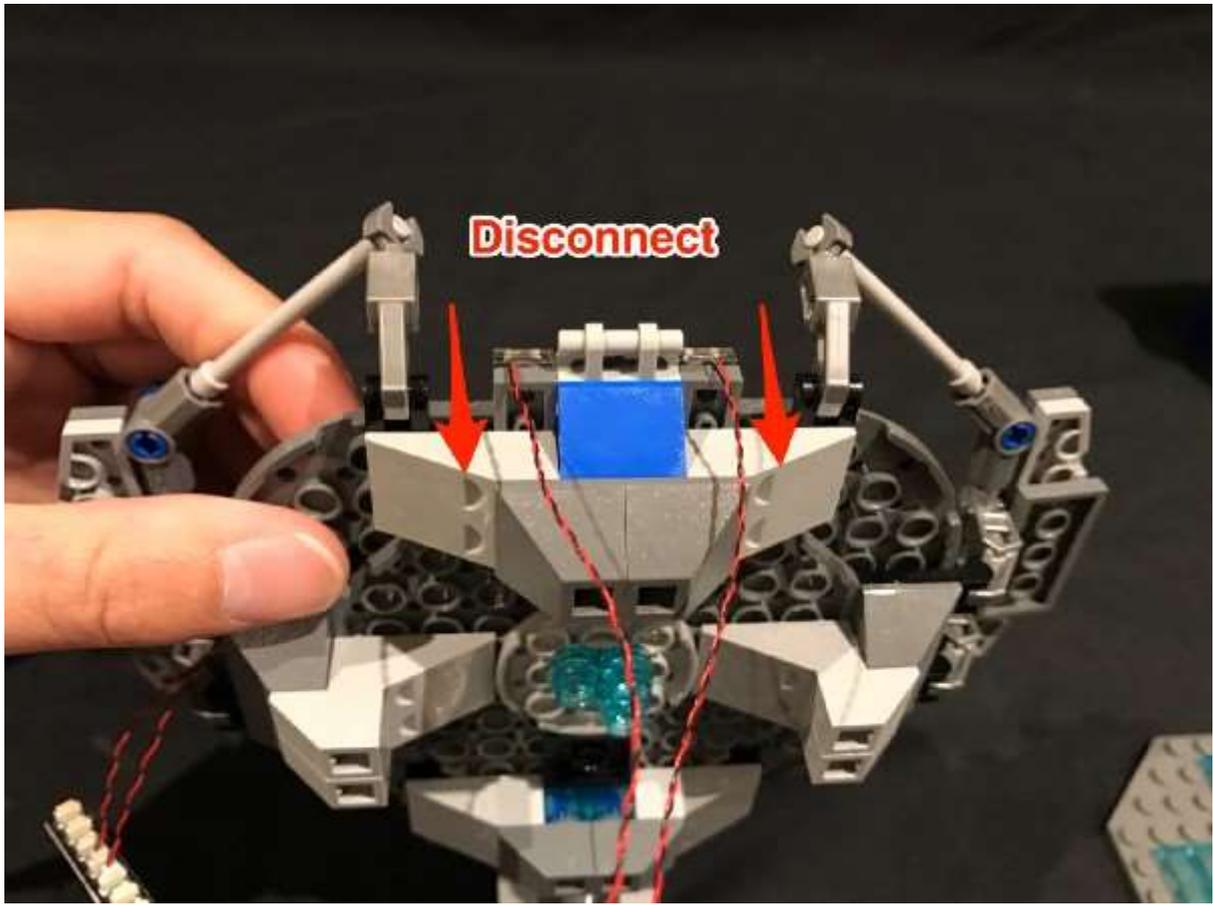
8.) Take a **White 15cm Bit Light** and then place it directly over the grey stud on the left. Secure the light in place by reconnecting the trans white plate over the top as per below.

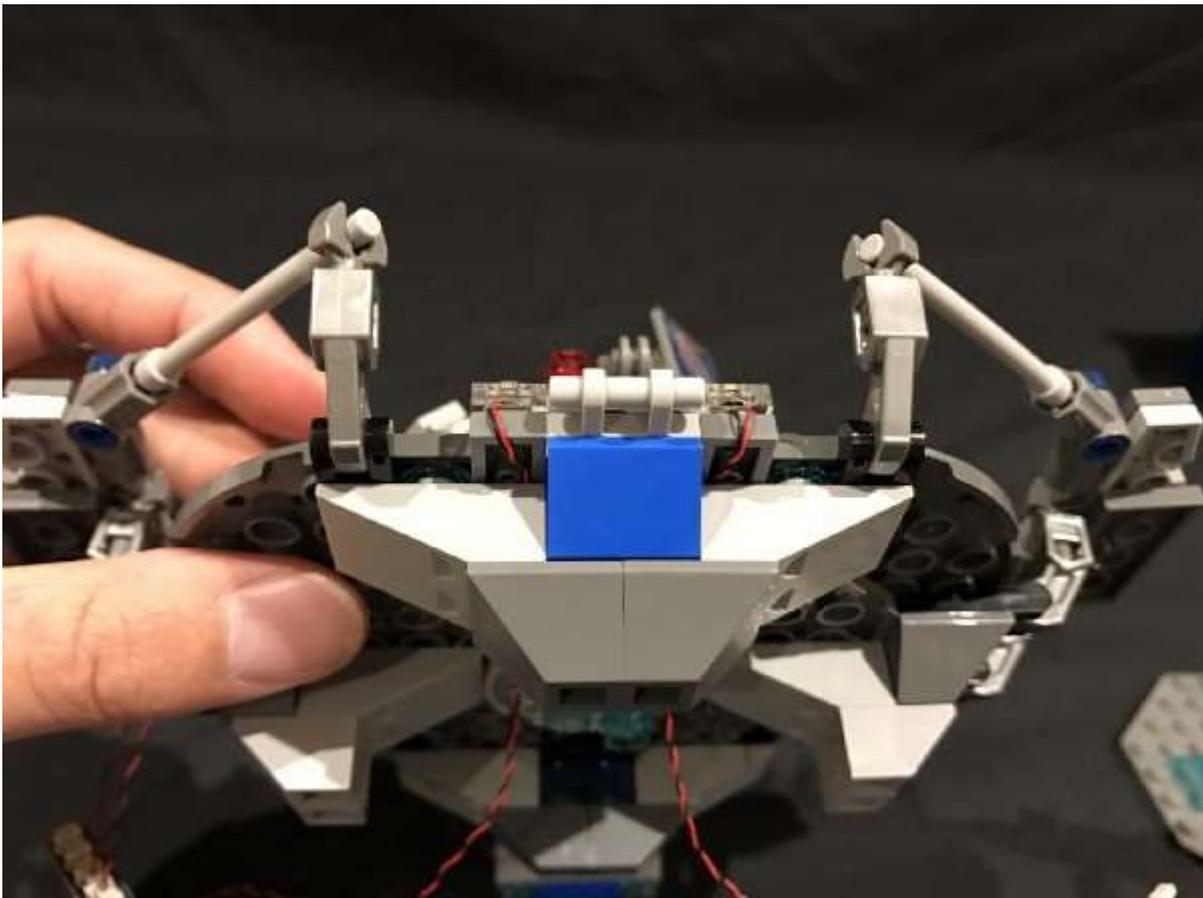
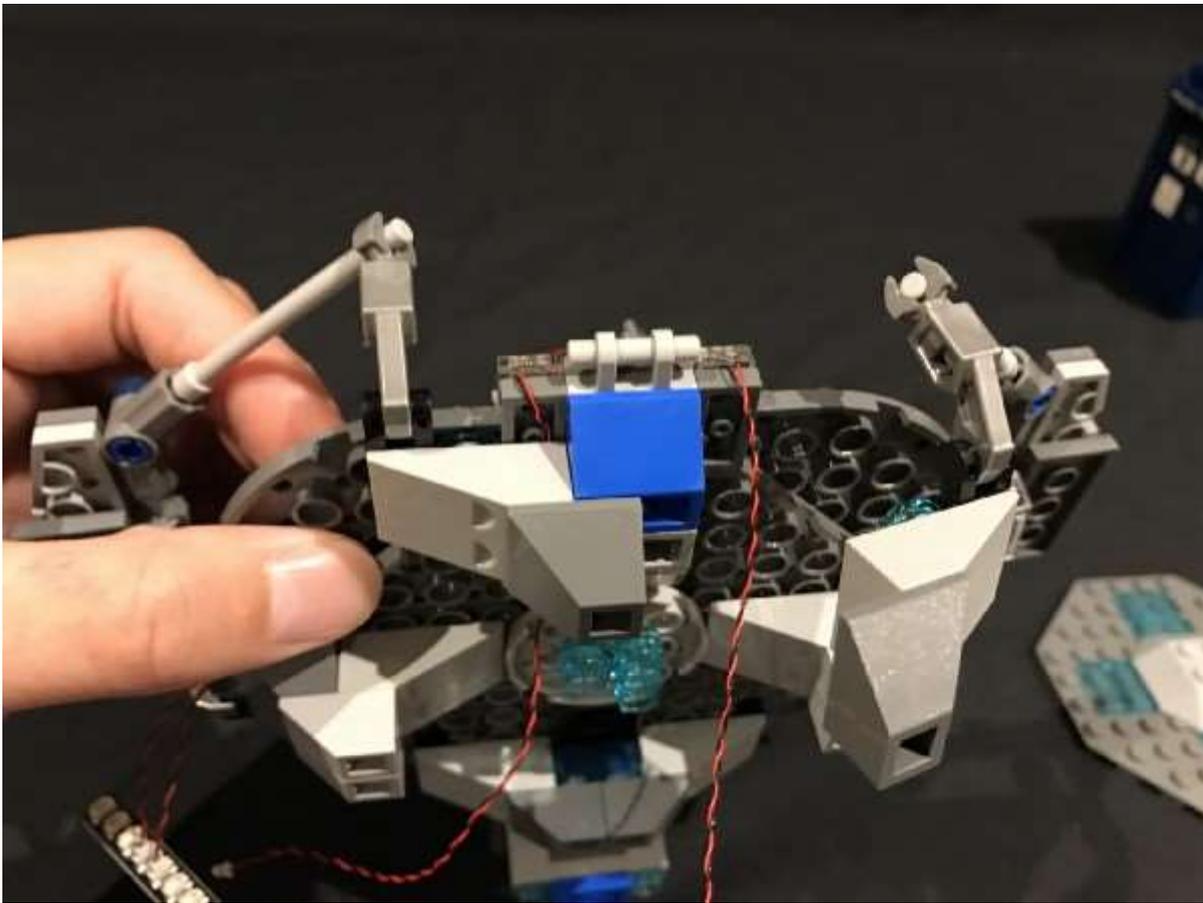


Install another **White 15cm Bit Light** to the right side using the same method as above.

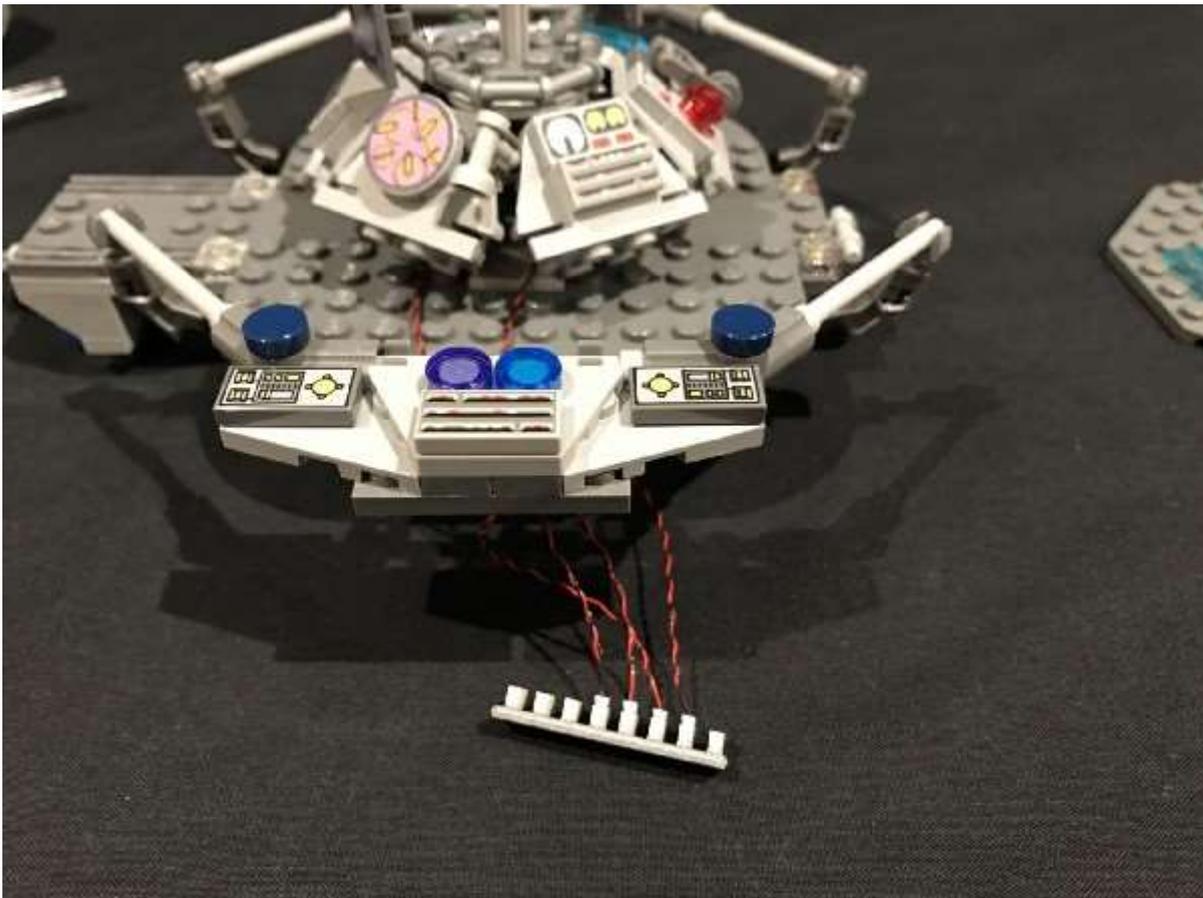
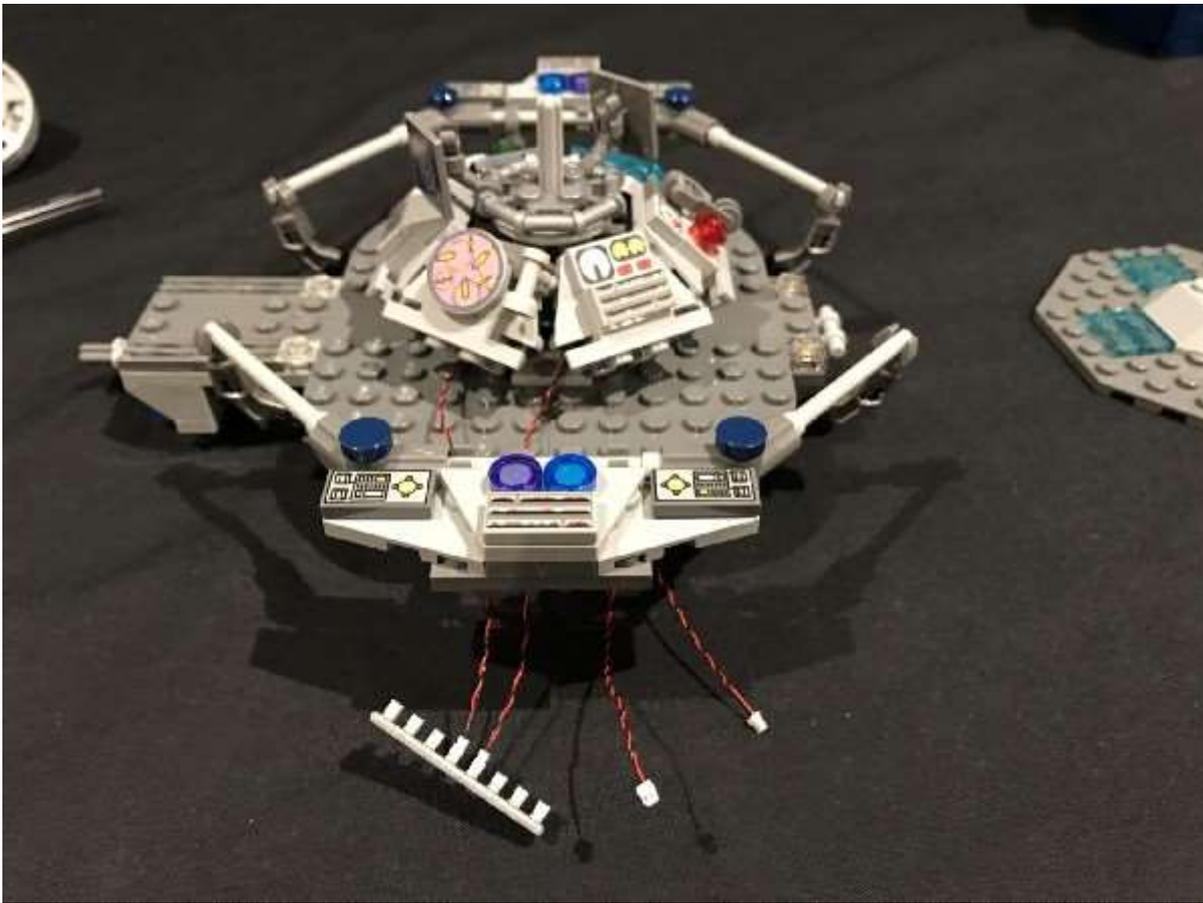


9.) Pull both cables down underneath and then disconnect sections below to allow us to lay a cable from each side underneath them. Reconnect these sections to secure cable in place.

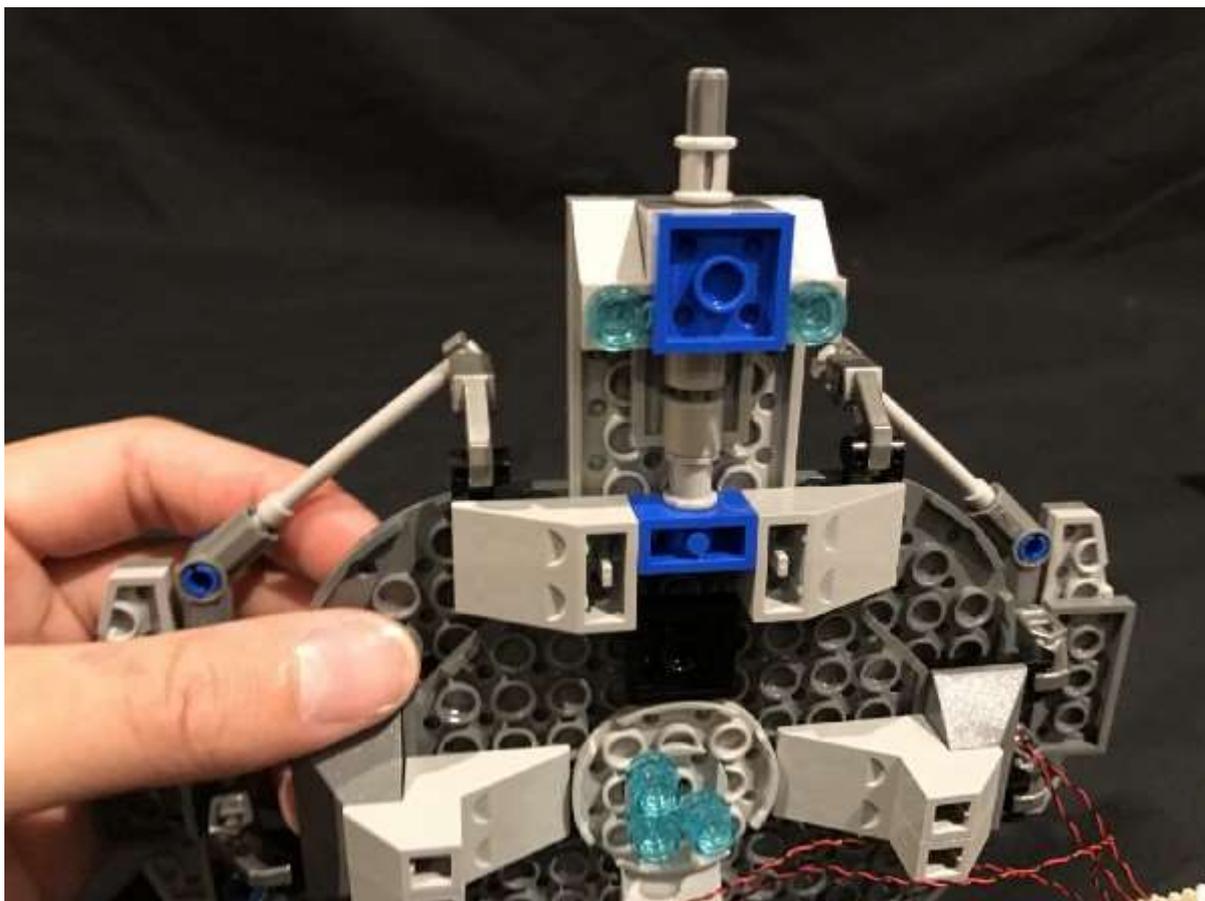
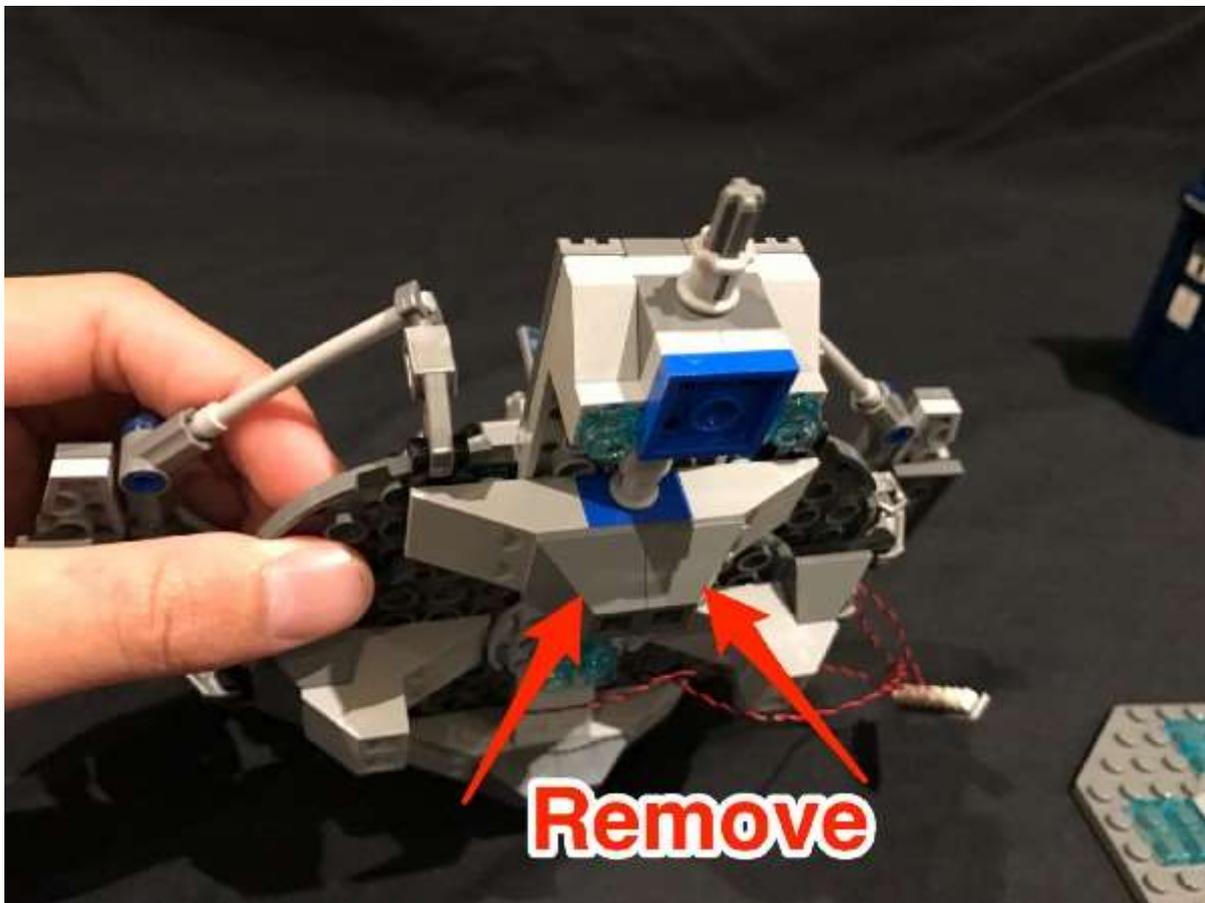




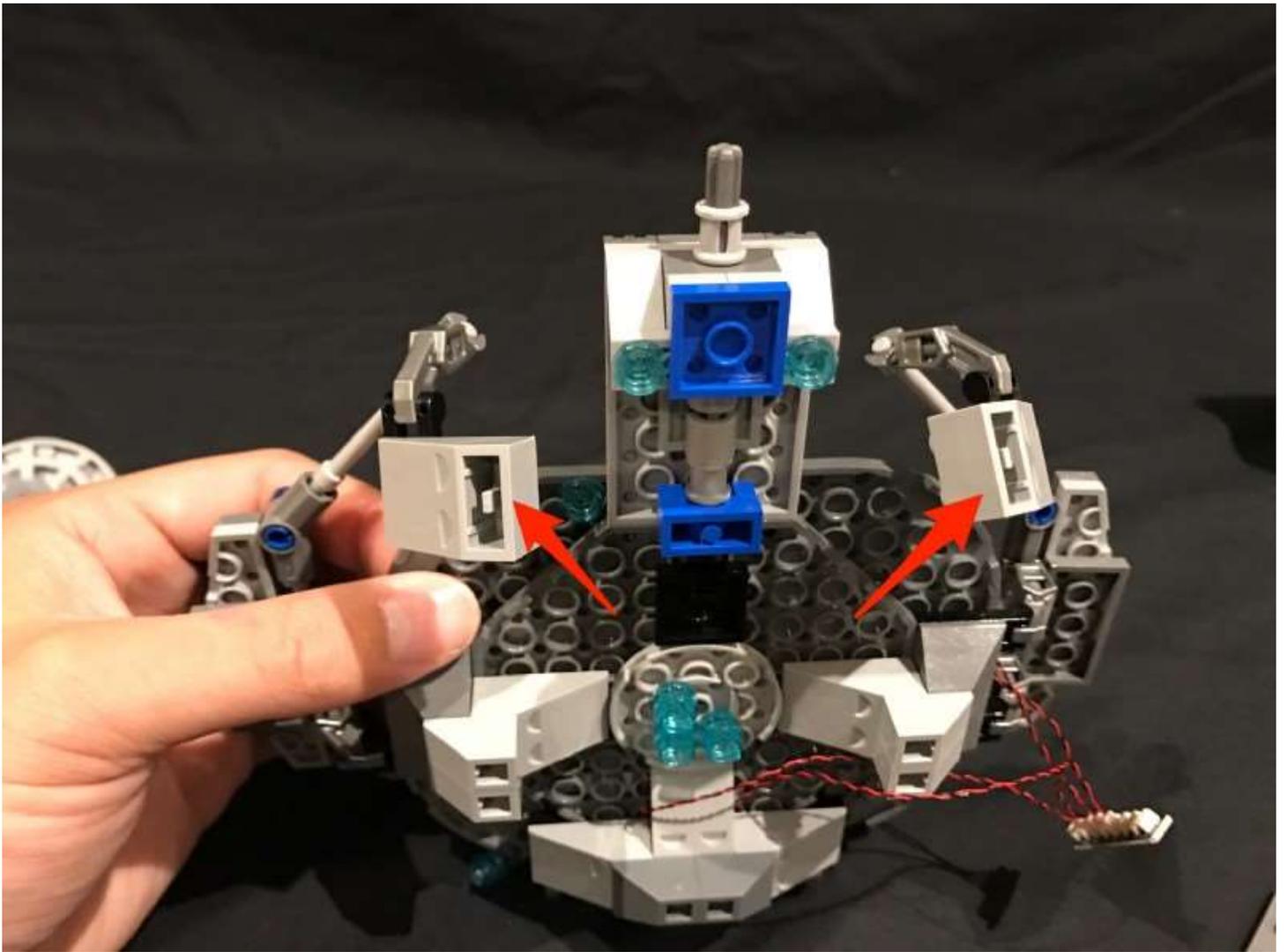
10.) Turn the Console Room around to the back and then pull the cables we have just installed to connect them to the 8-port Expansion Board.



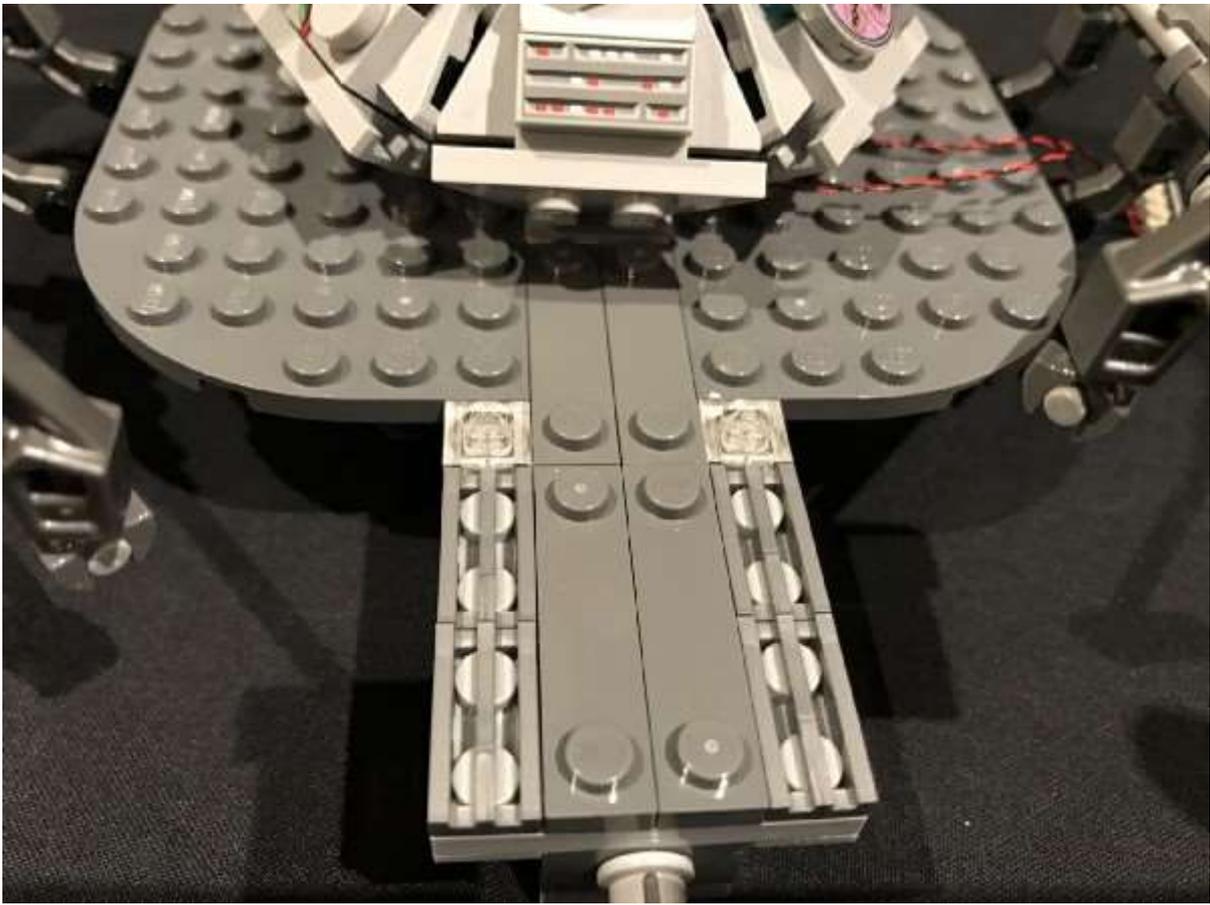
11.) We will now install lights to the floor lights on the opposite side. First remove the following pieces from underneath.



Disconnect sections from each side as per below.

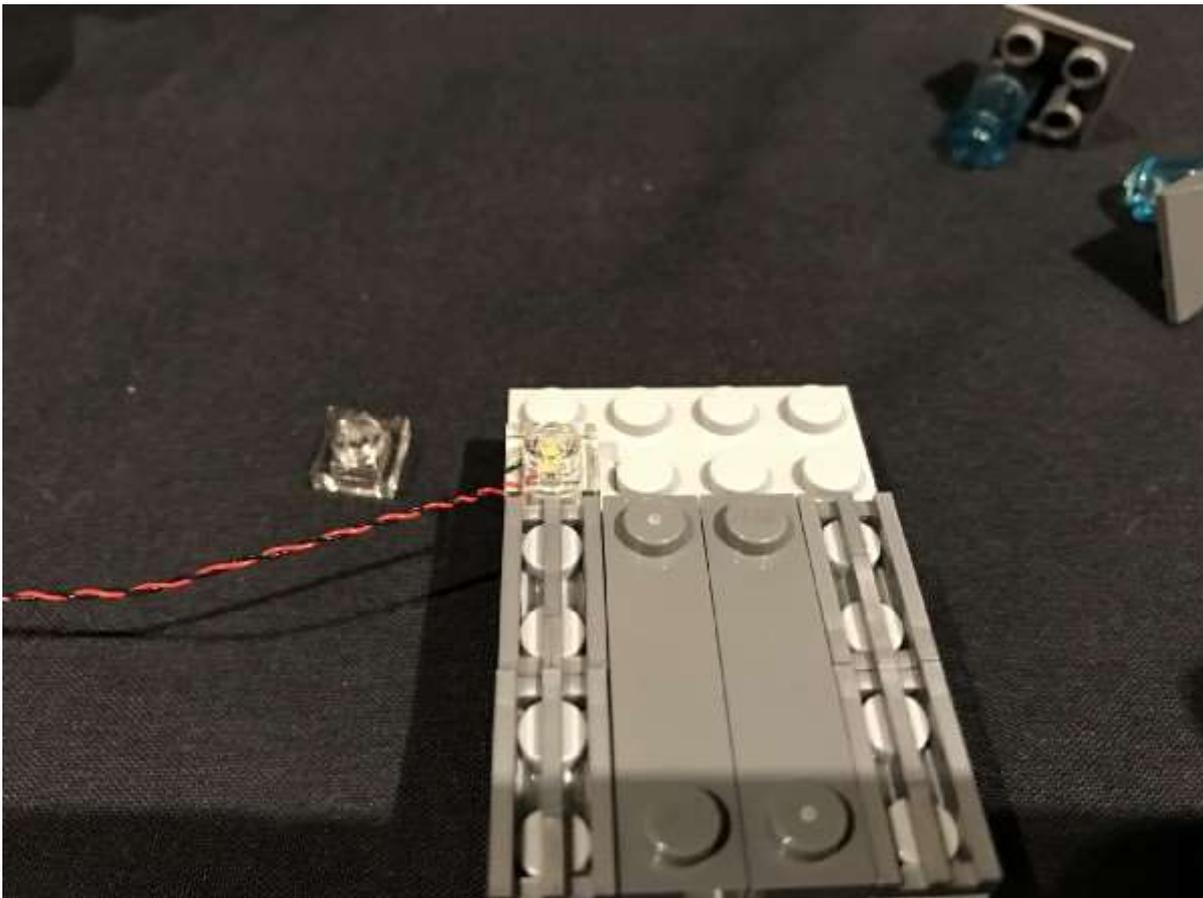
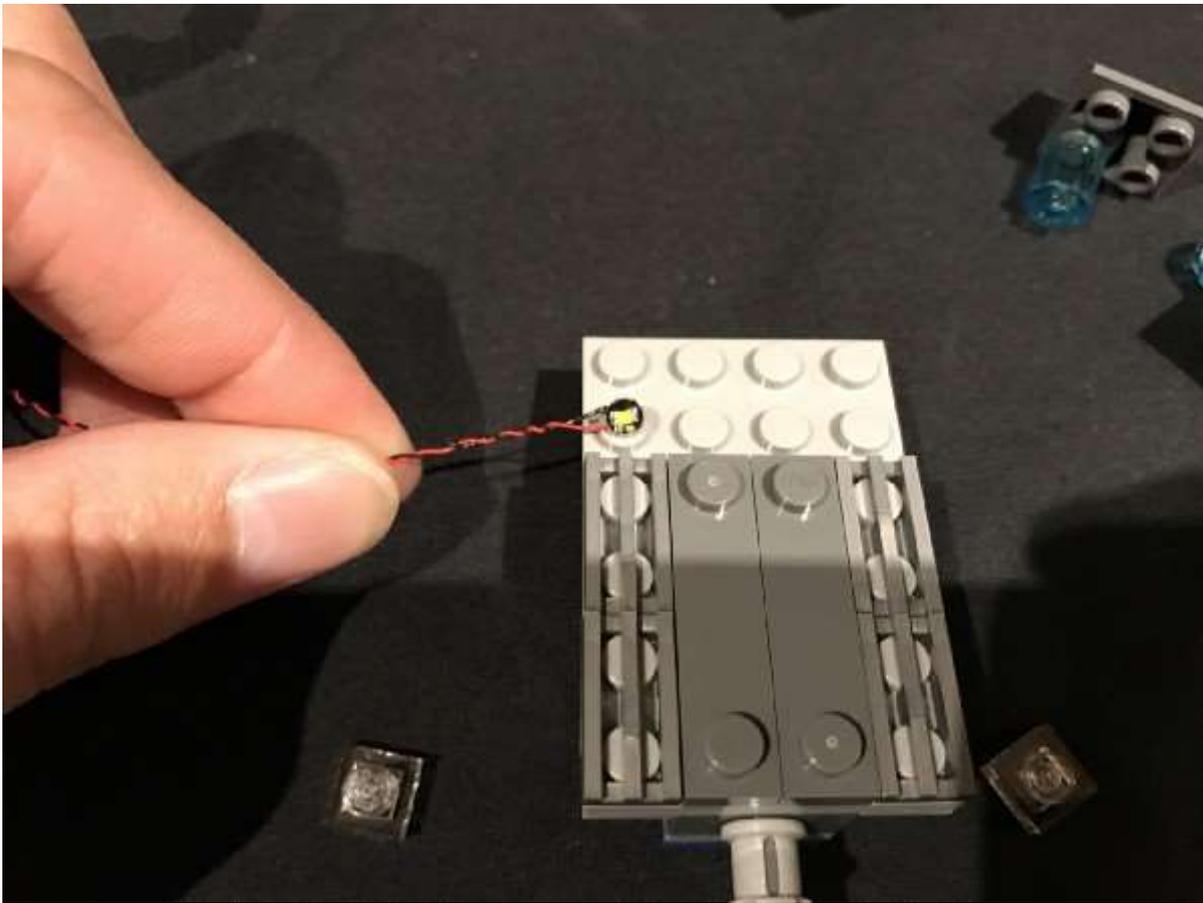


Turn back over and then disconnect the floor light section, followed by the trans white square plates from each side.

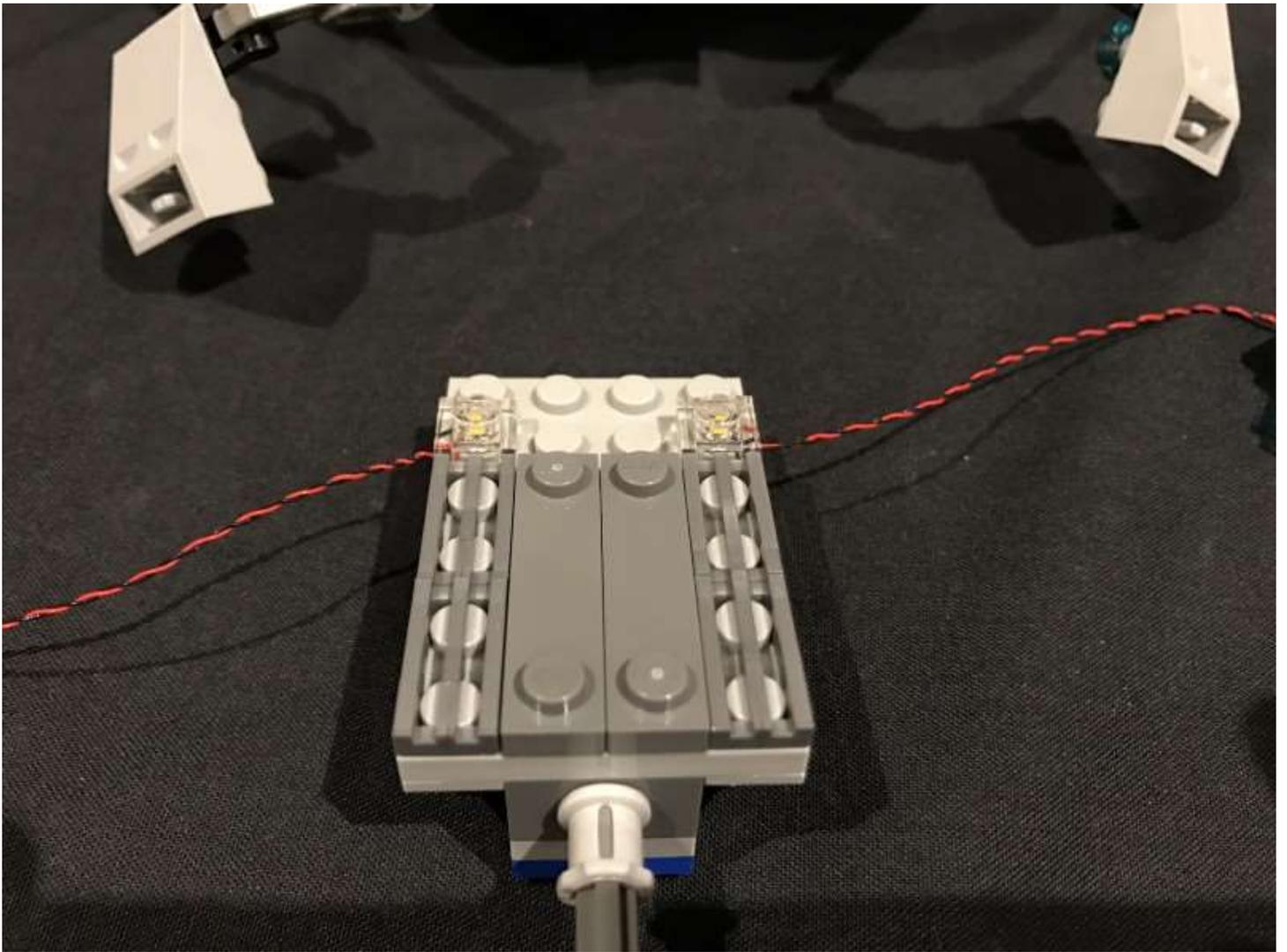




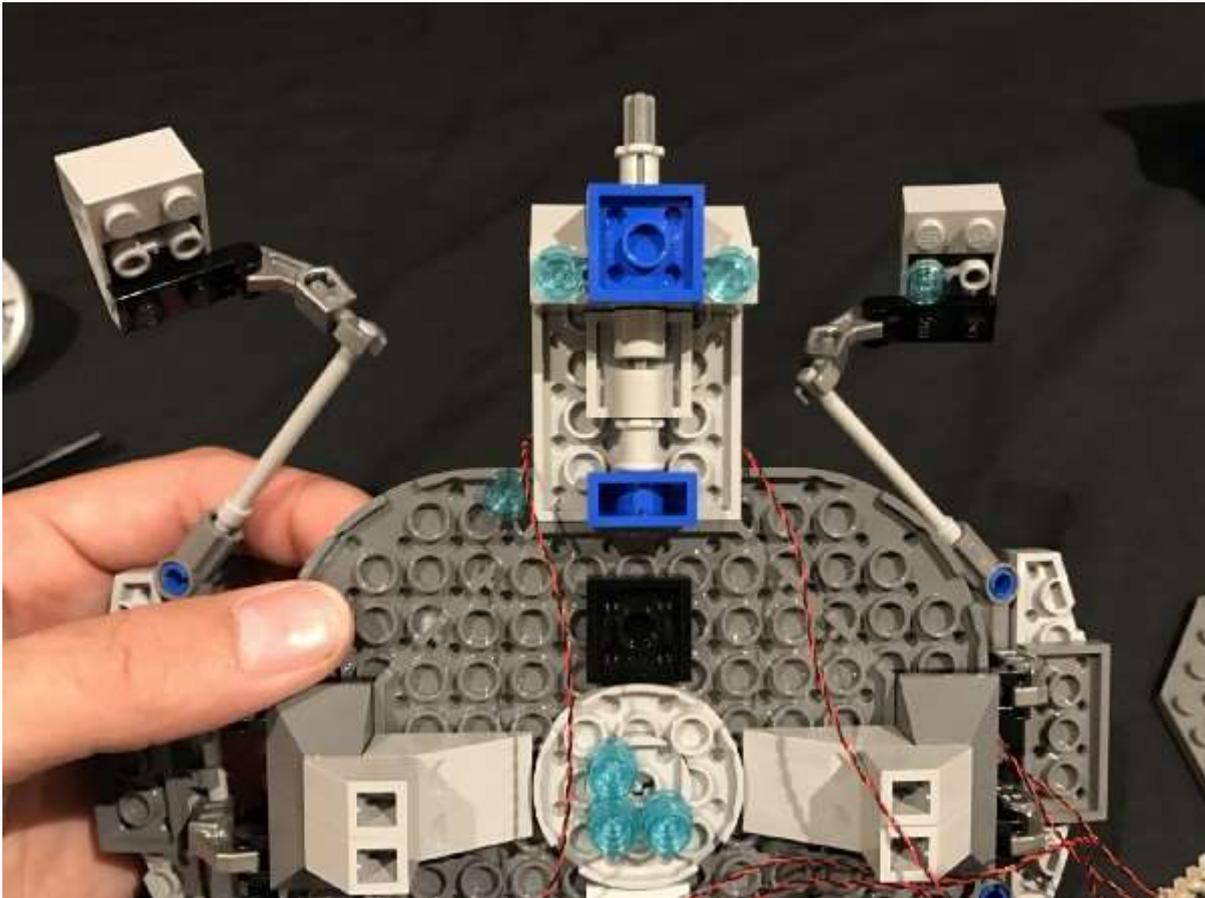
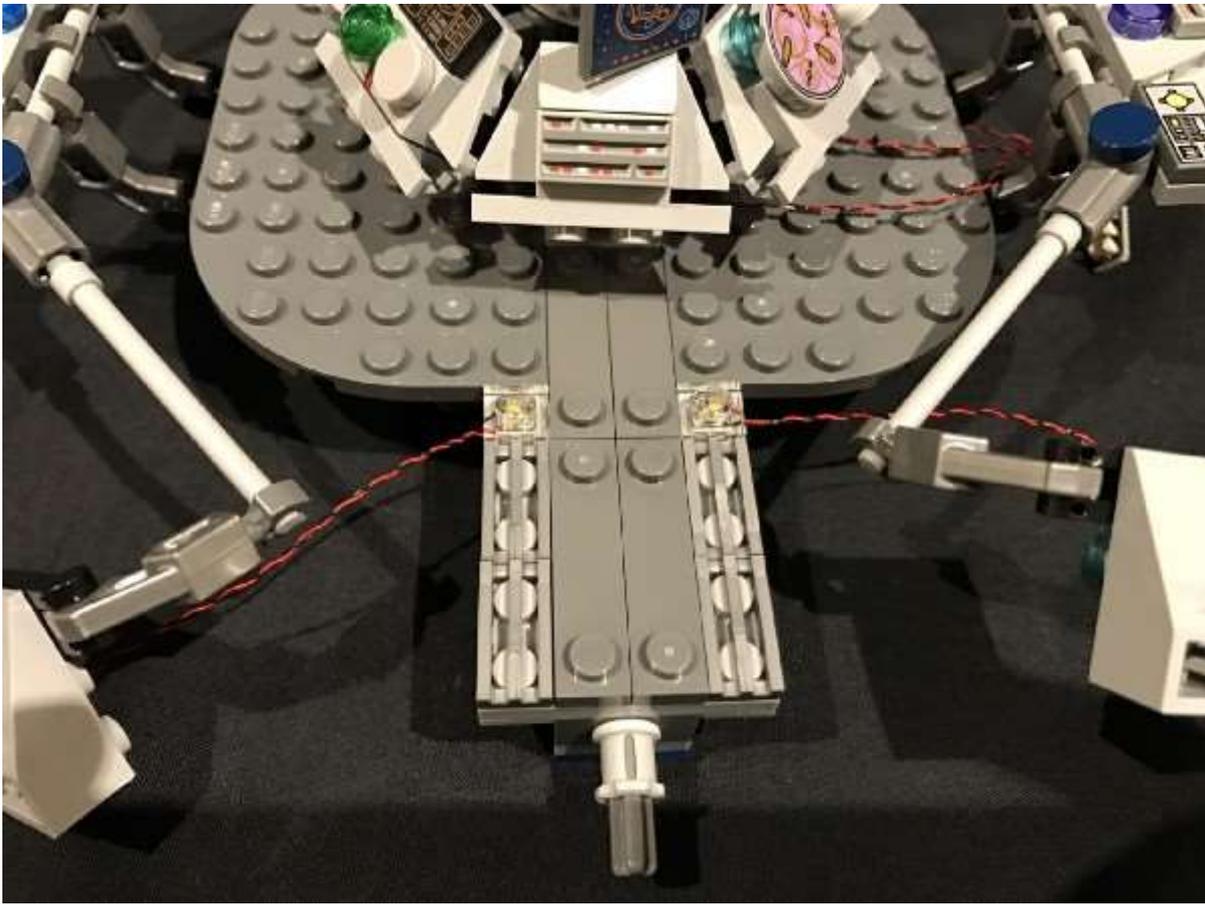
12.) Take a **White 15cm Bit Light** and then place it directly over the grey stud on the left. Ensure cable is facing toward the left and then secure the light in place by reconnecting the trans white plate over the top as per below.



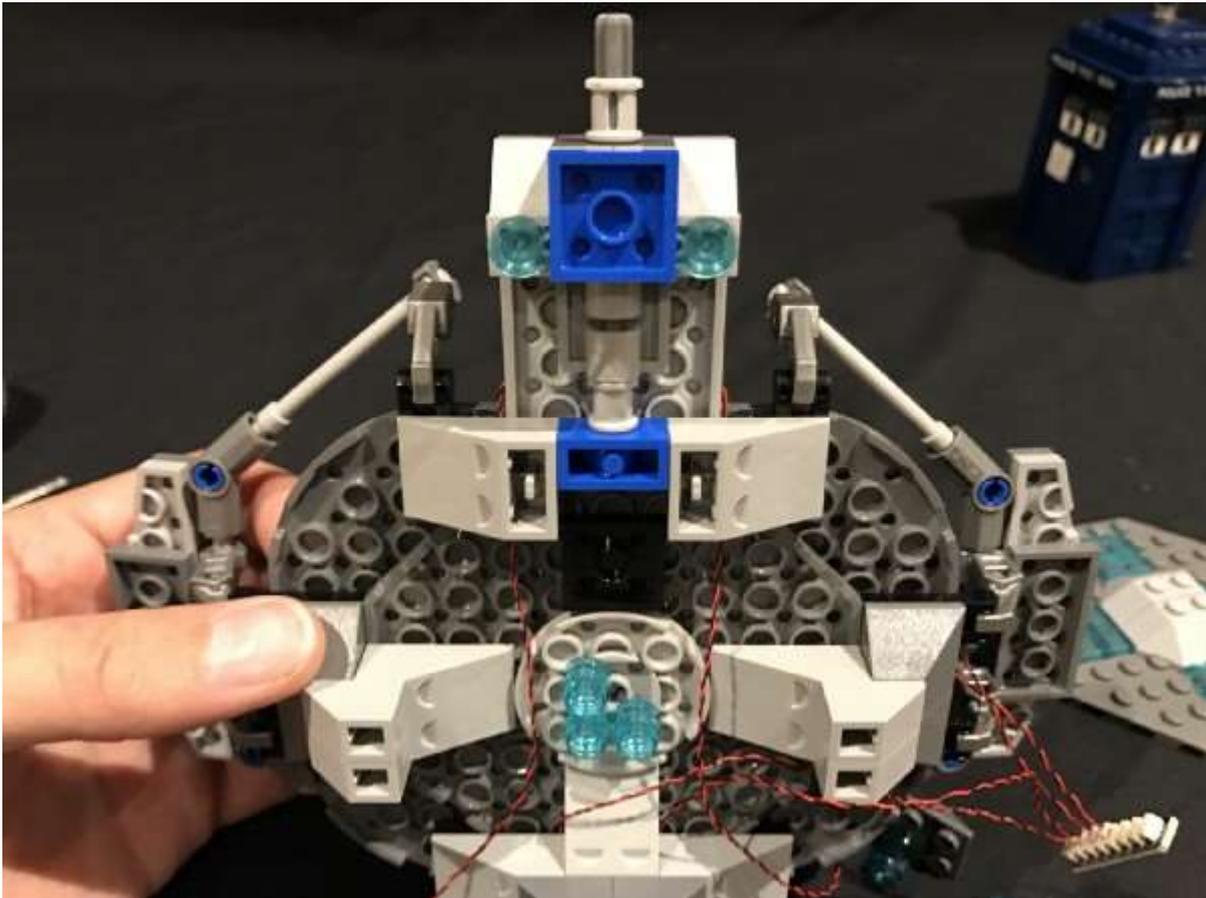
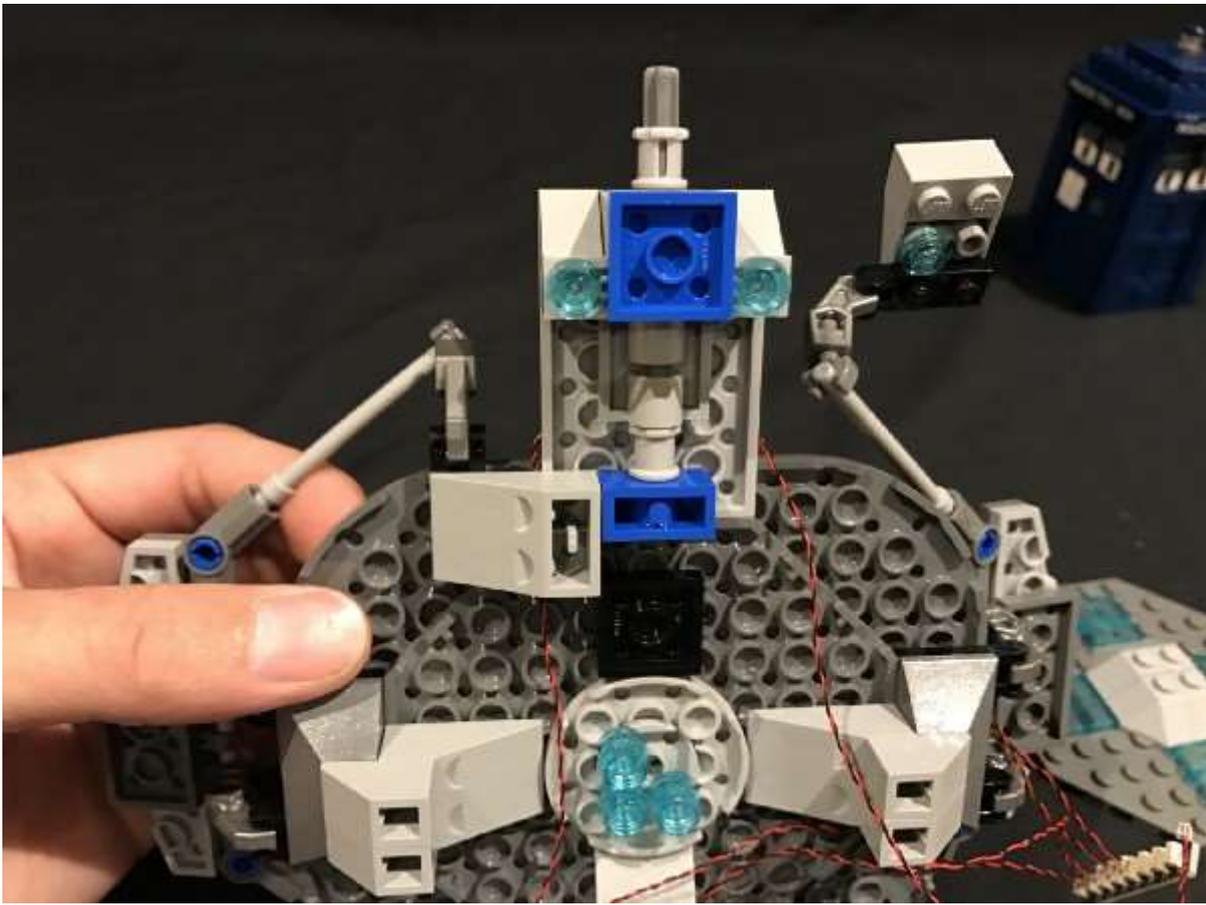
Install another **White 15cm Bit Light** to the right side using the same method as above.



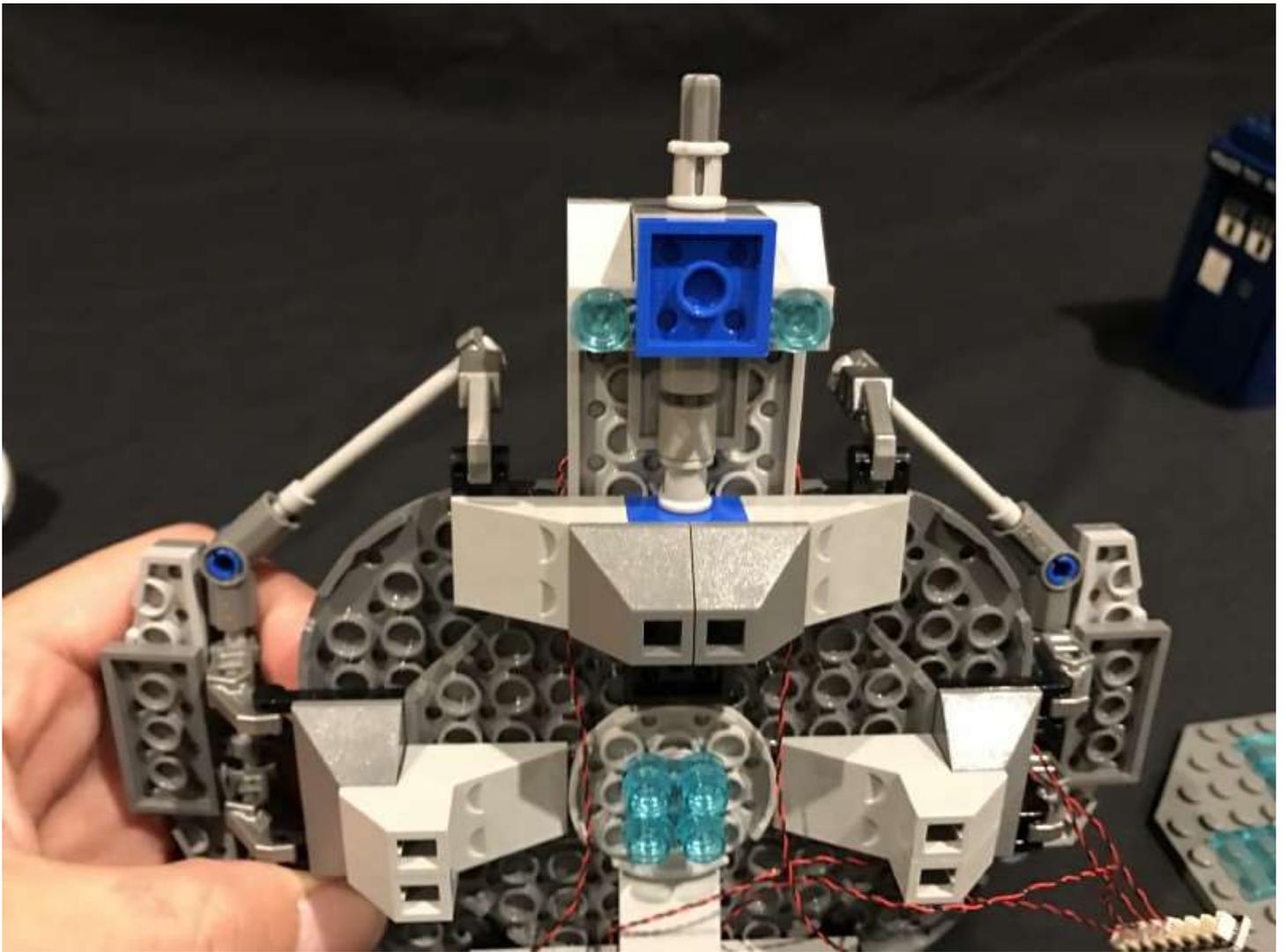
13.) Reconnect this floor section back and then pull the cables down underneath.



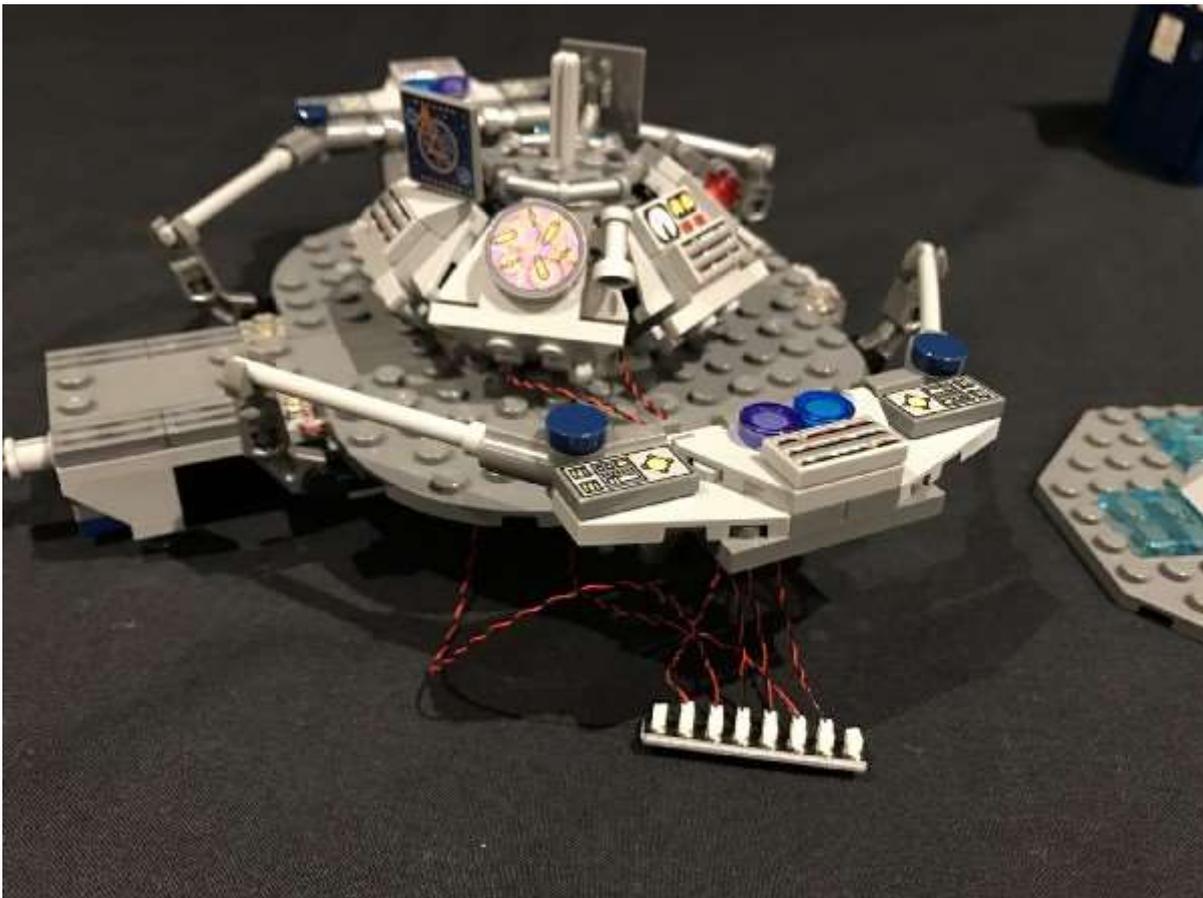
Reconnect the left and right sections back to the base ensuring the cable for each side is laid underneath.



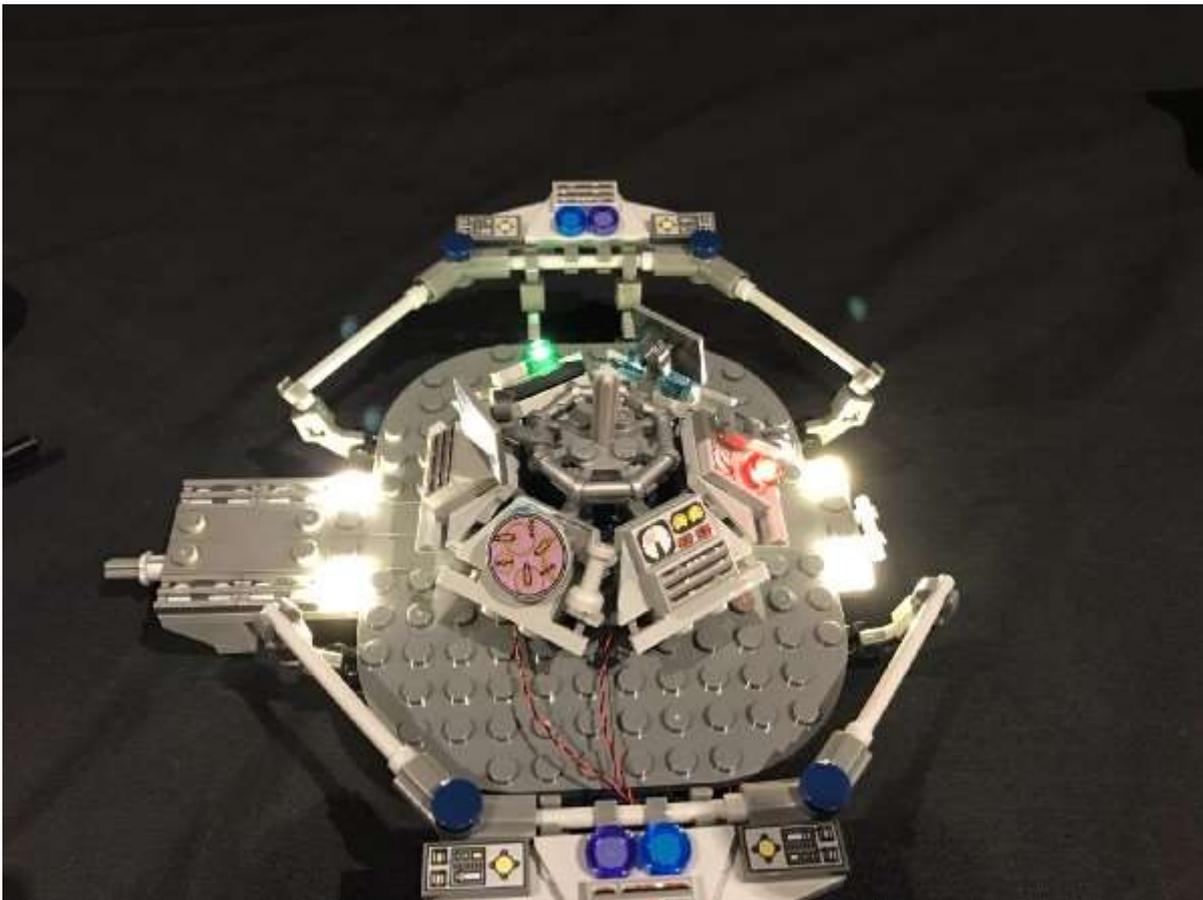
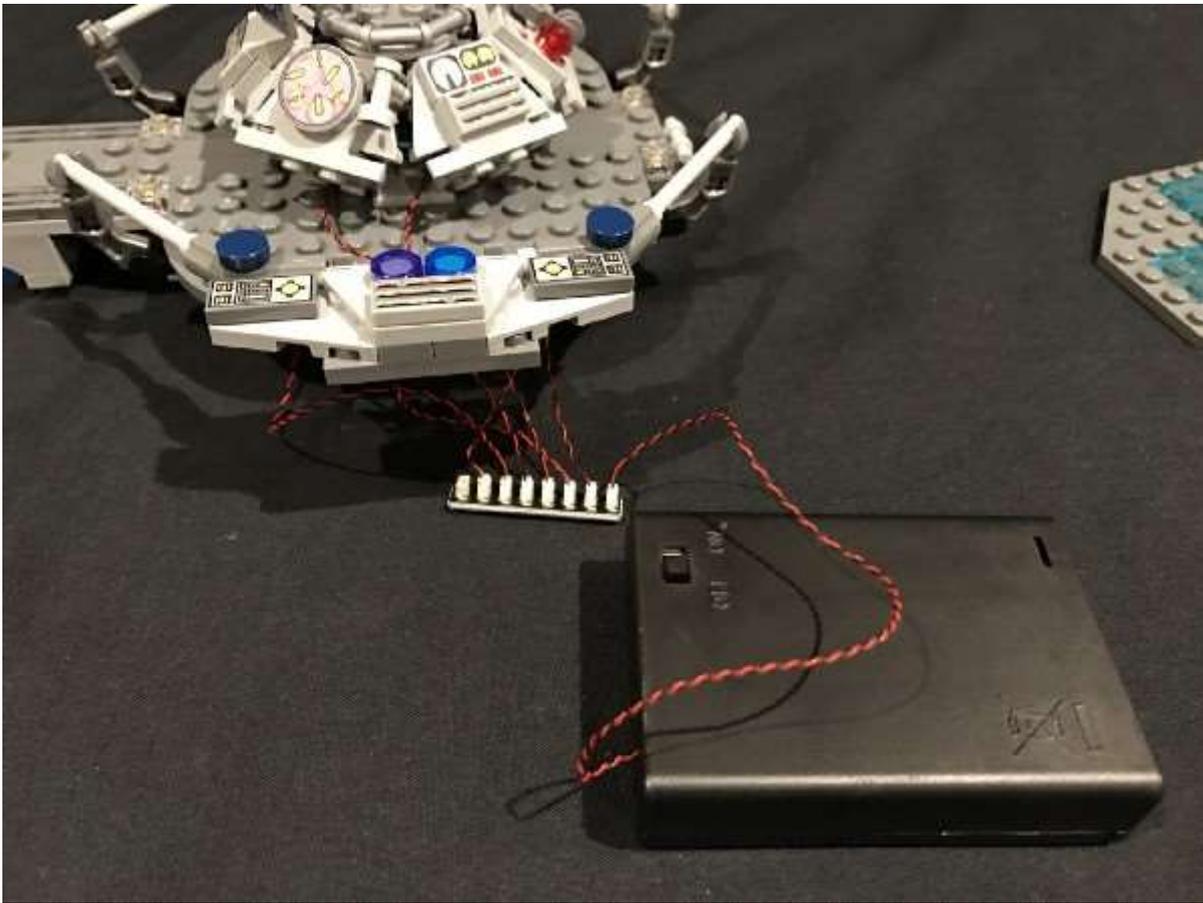
Reconnect dark grey pieces we removed earlier.



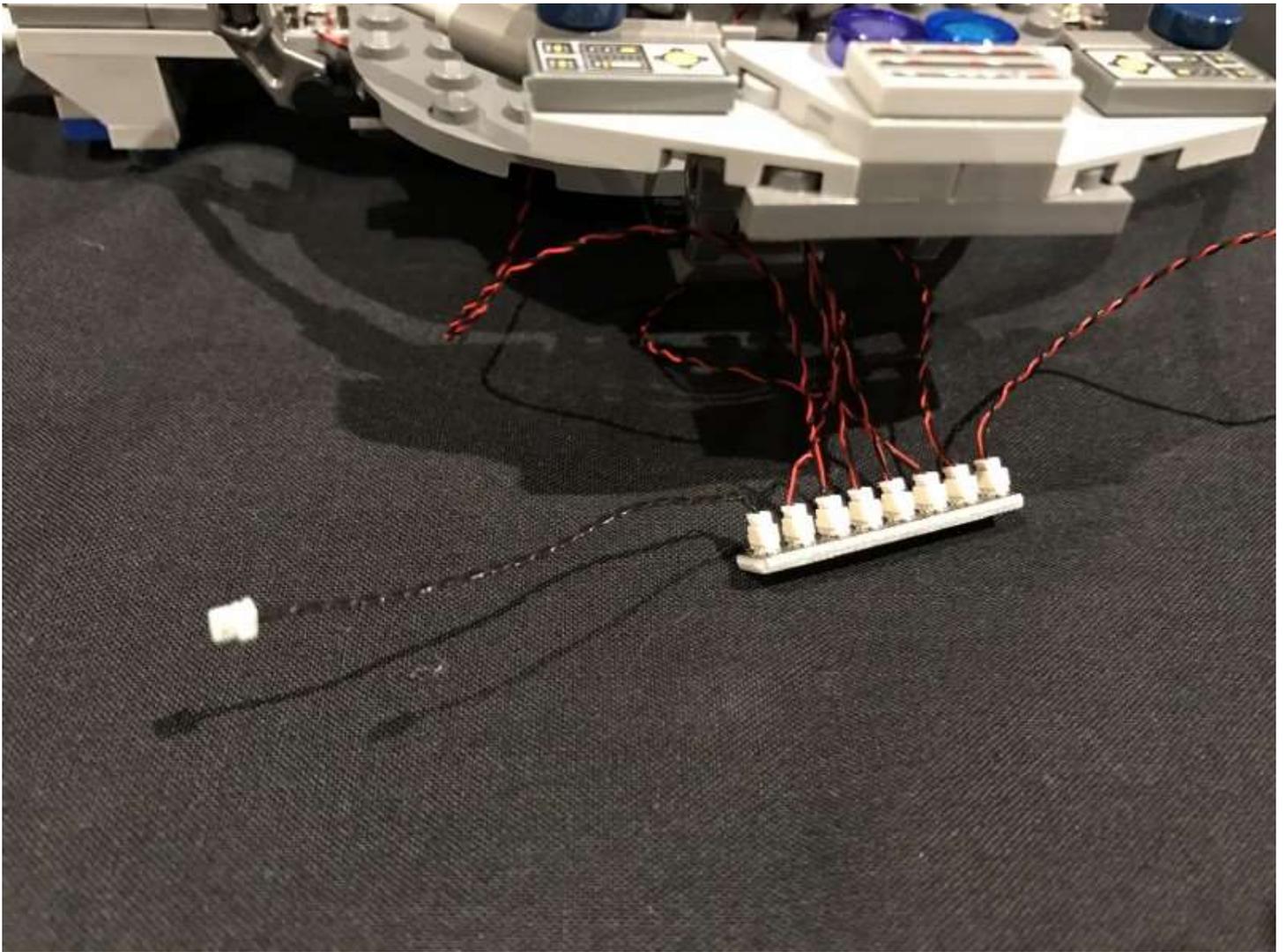
14.) Pull cables from the 2 lights we just installed underneath and out toward the back before connecting them into the next available ports on the 8-Port Expansion Board.



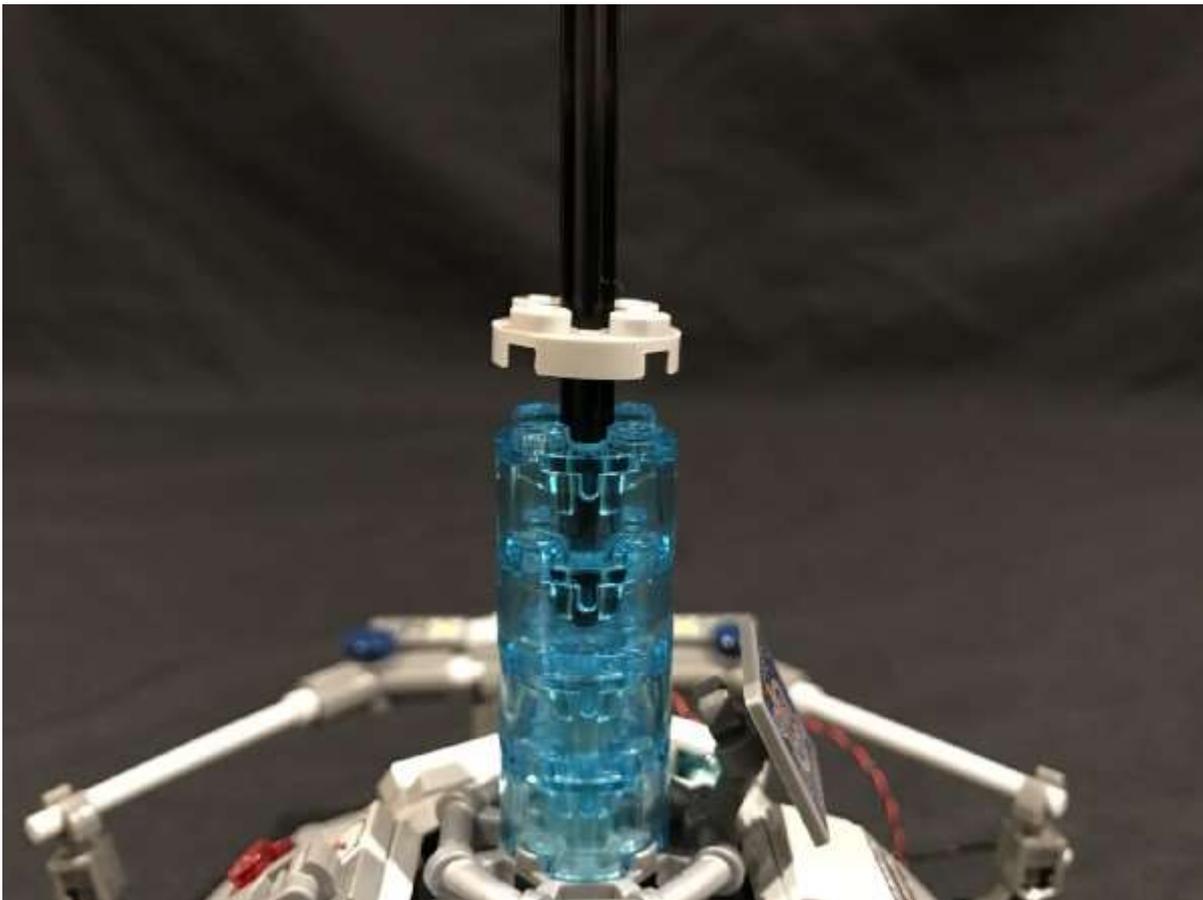
15.) Take the **AA Battery Pack** and insert 3x AA batteries. Insert the battery pack cable to the port on the far right of the expansion board. Turn on the battery pack and ensure all the lights we have installed so far are working.



16.) Take a 5cm Connecting Cable and connect it to the remaining available port on the expansion board.

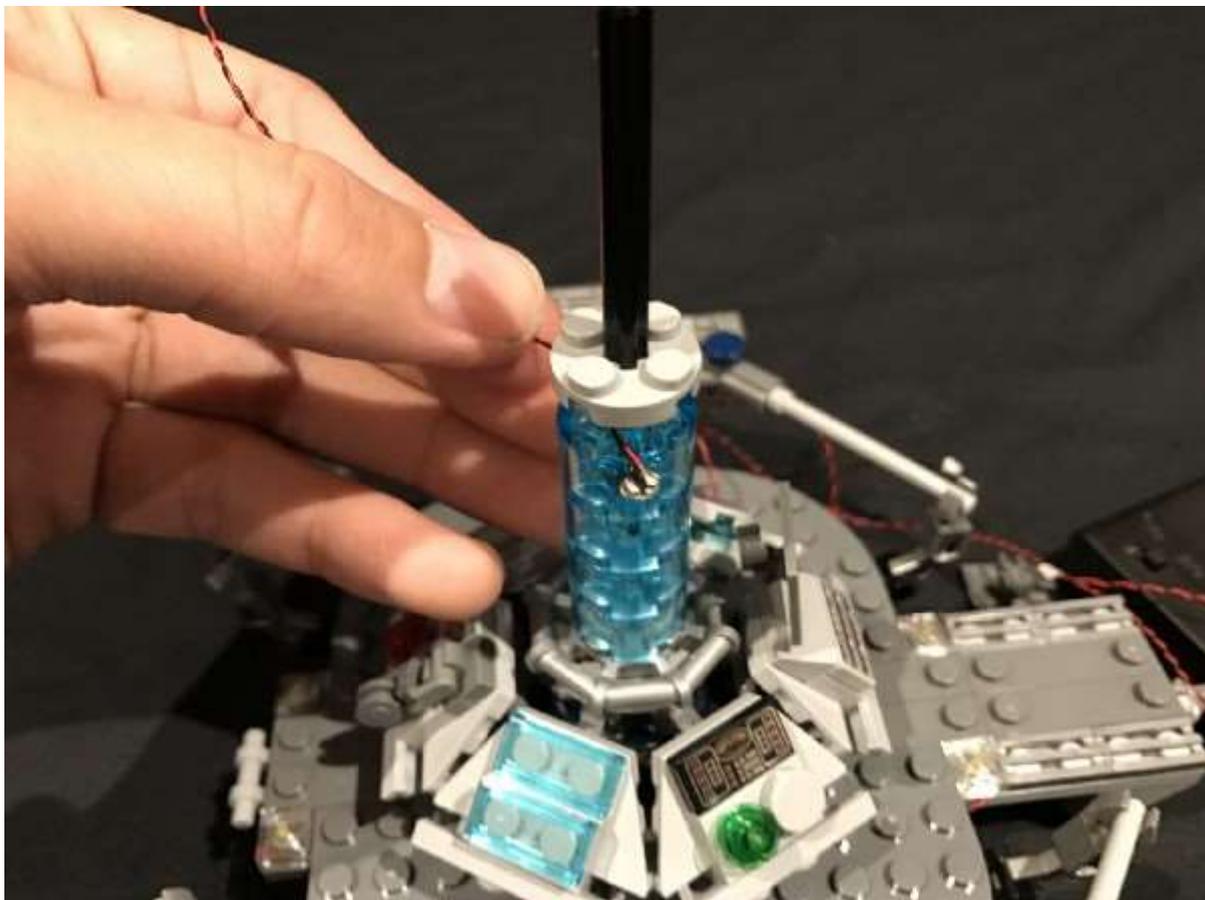
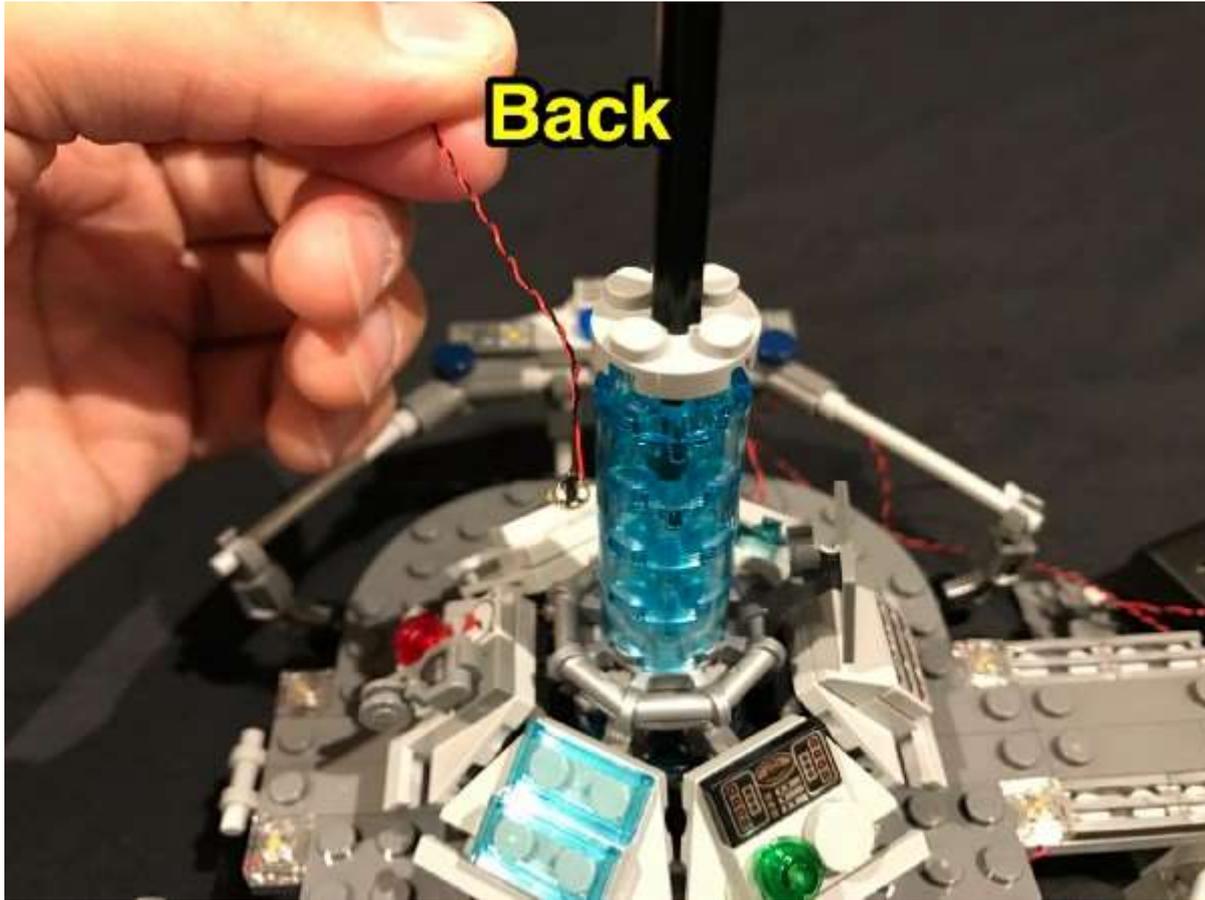


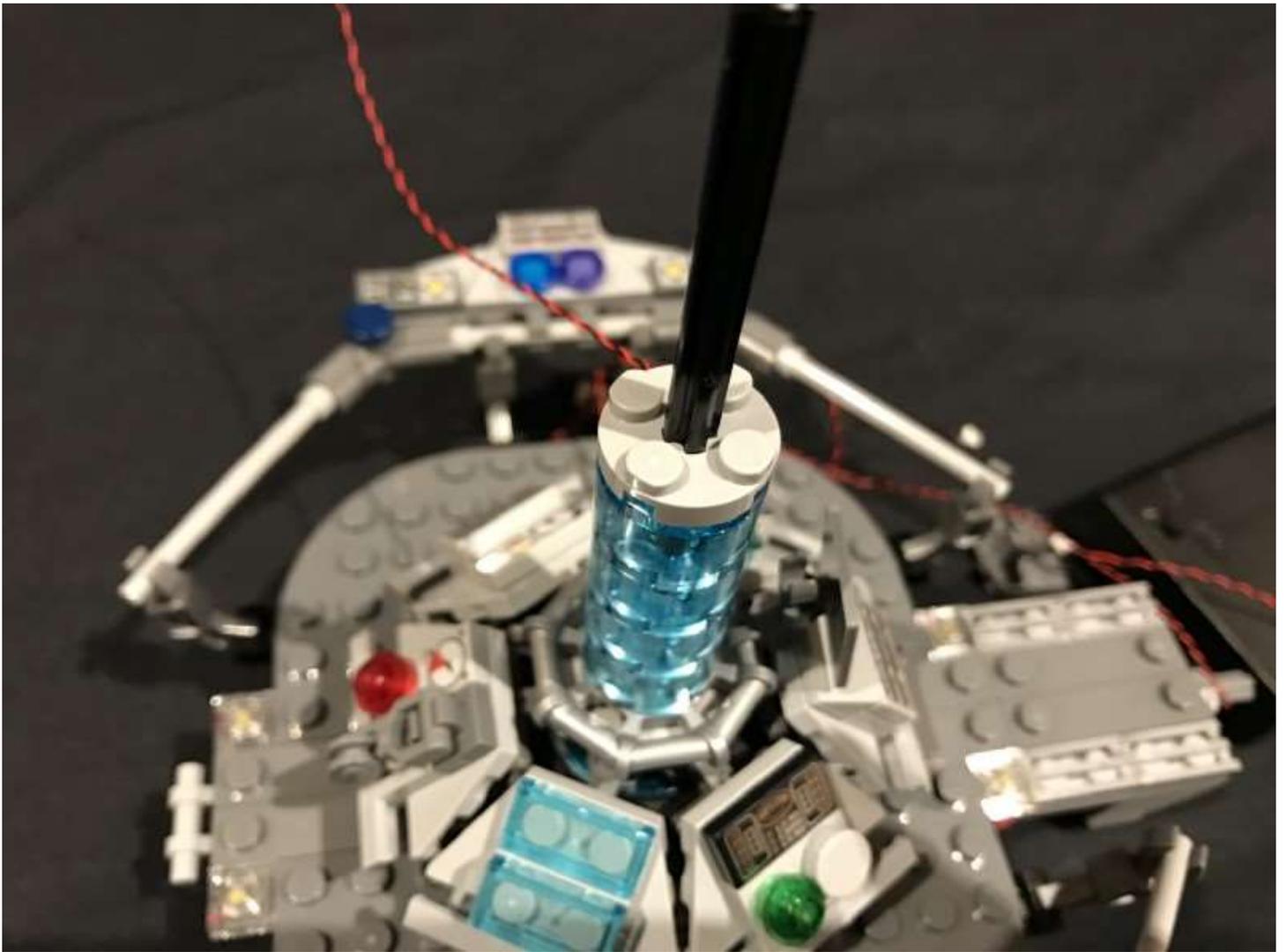
17.) We will now install lights to the middle of the time machine. First reconnect the following trans blue pieces followed by the round grey piece. Do not completely connect the grey piece but leave about a 5mm gap.



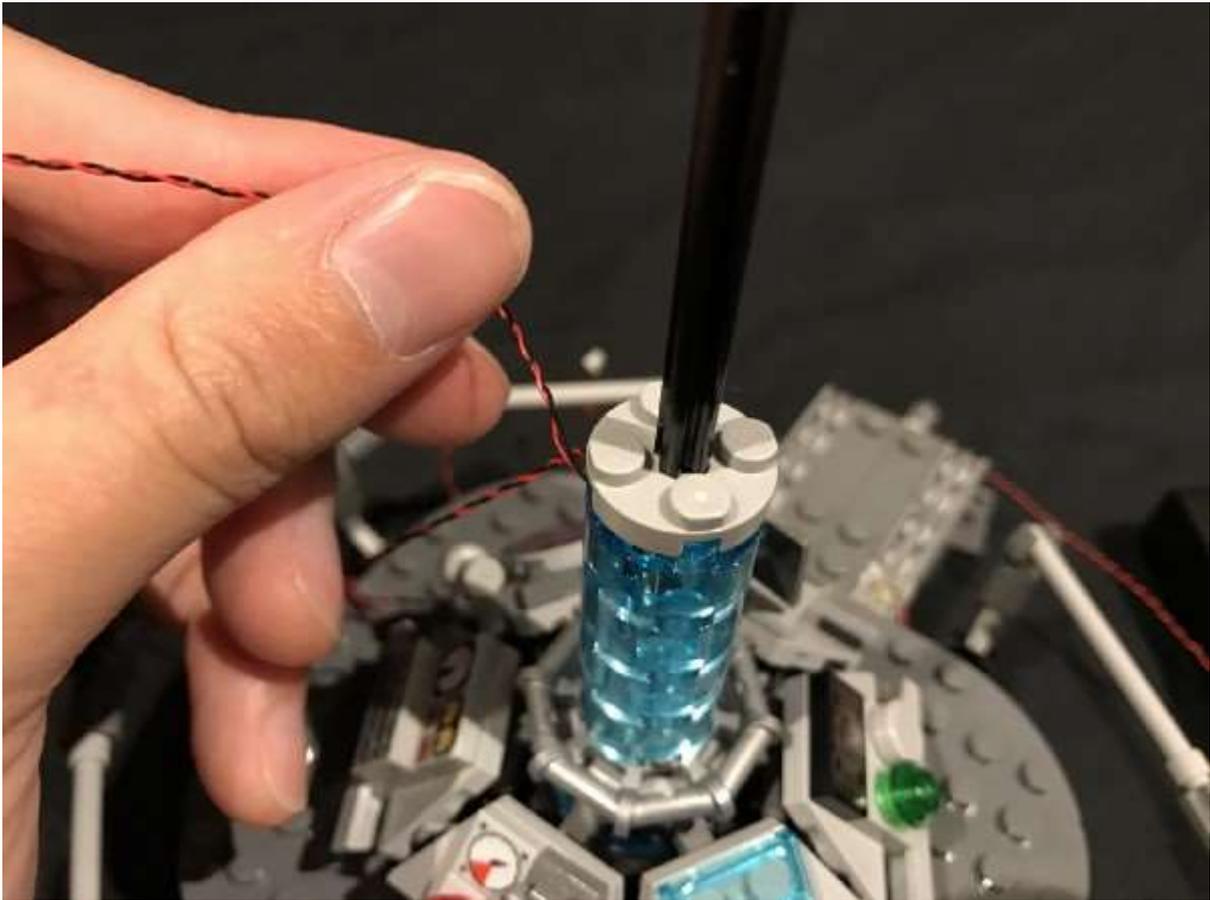
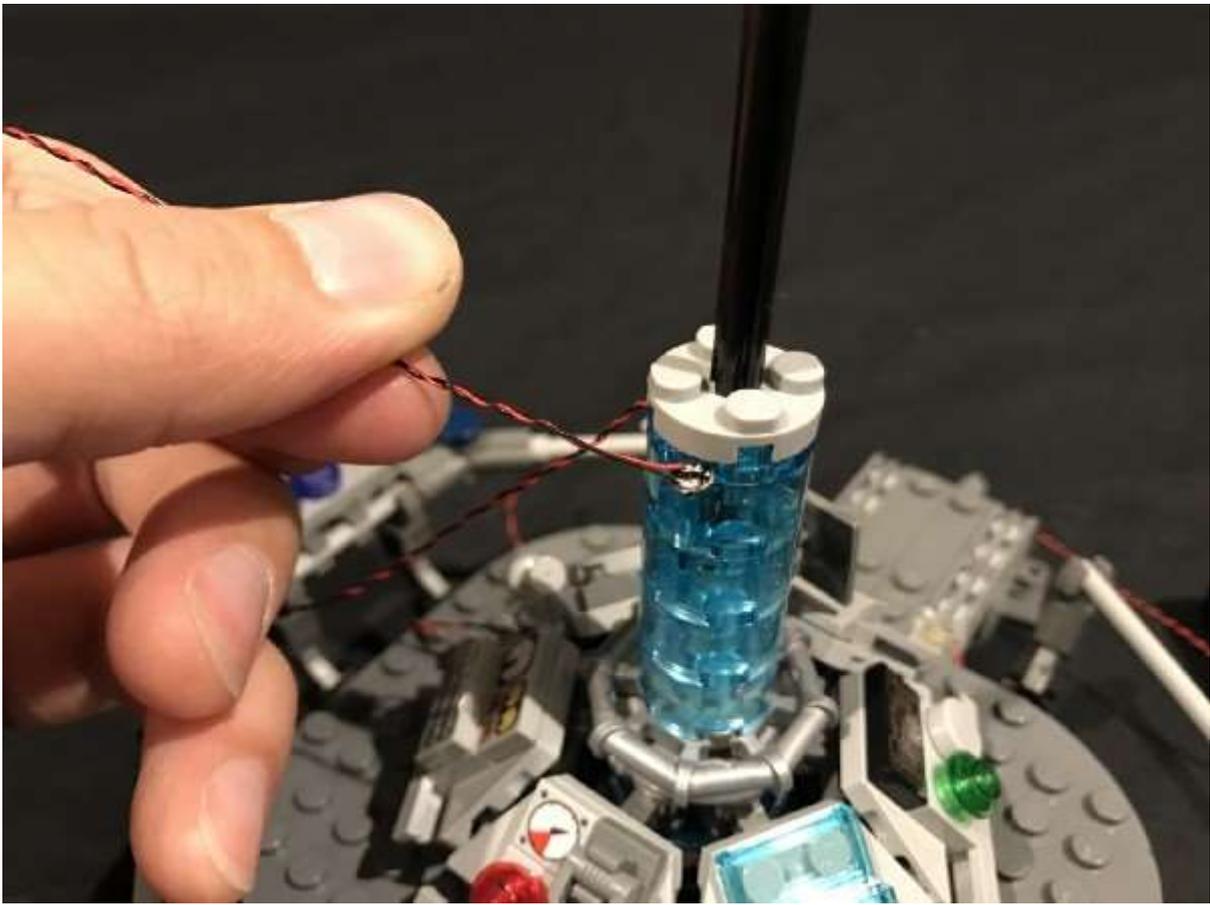
18.) We will be installing 3 Bit Lights facing down in between the gap we have created. One light on the left and right sides, and another in the middle toward the front. Take a **White 15cm Bit Light** and with the bit light facing down and cable facing toward the back, thread the bit light through the left side side. We want the bit light to be placed in

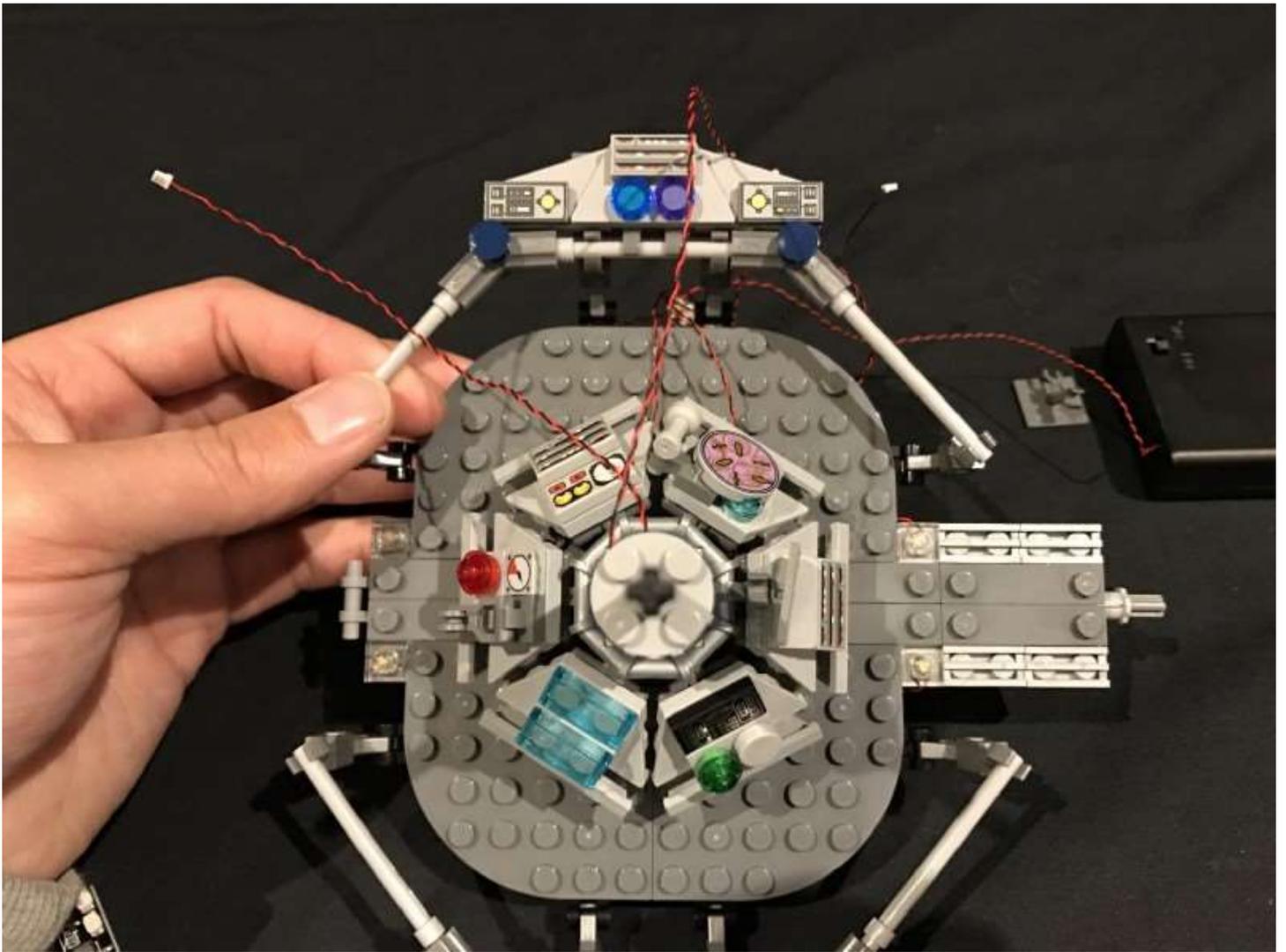
between the trans blue studs at the front. Secure the light in place by pushing the grey piece above to close up the gap.



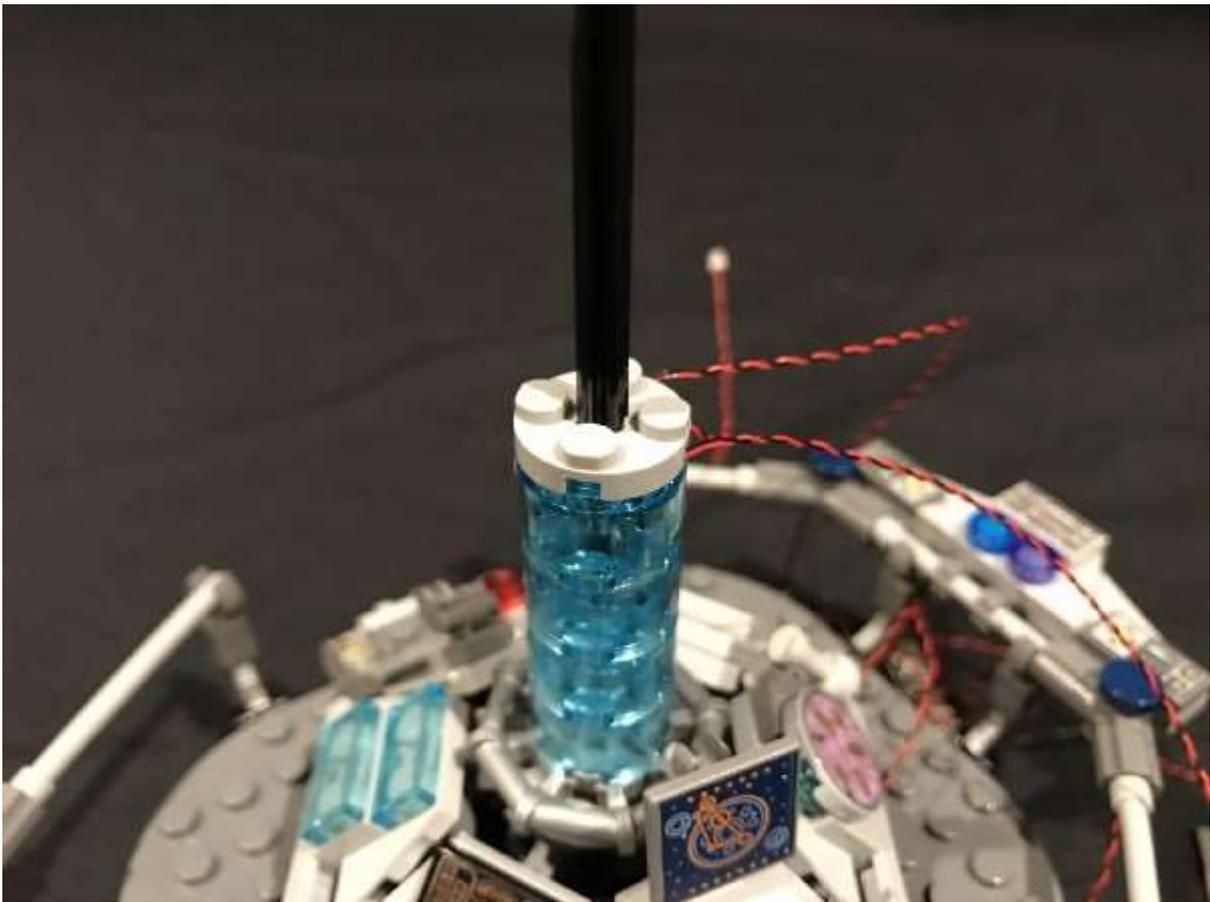
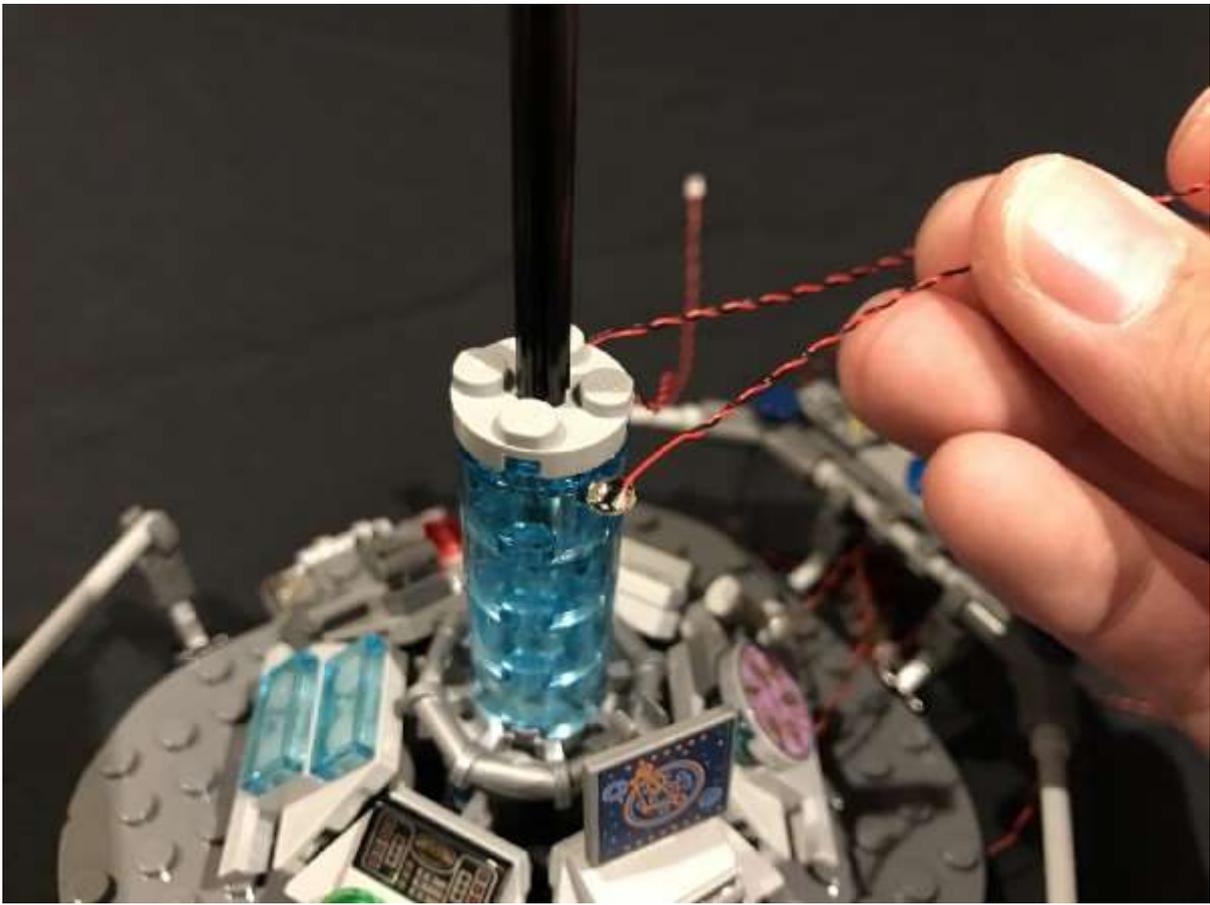


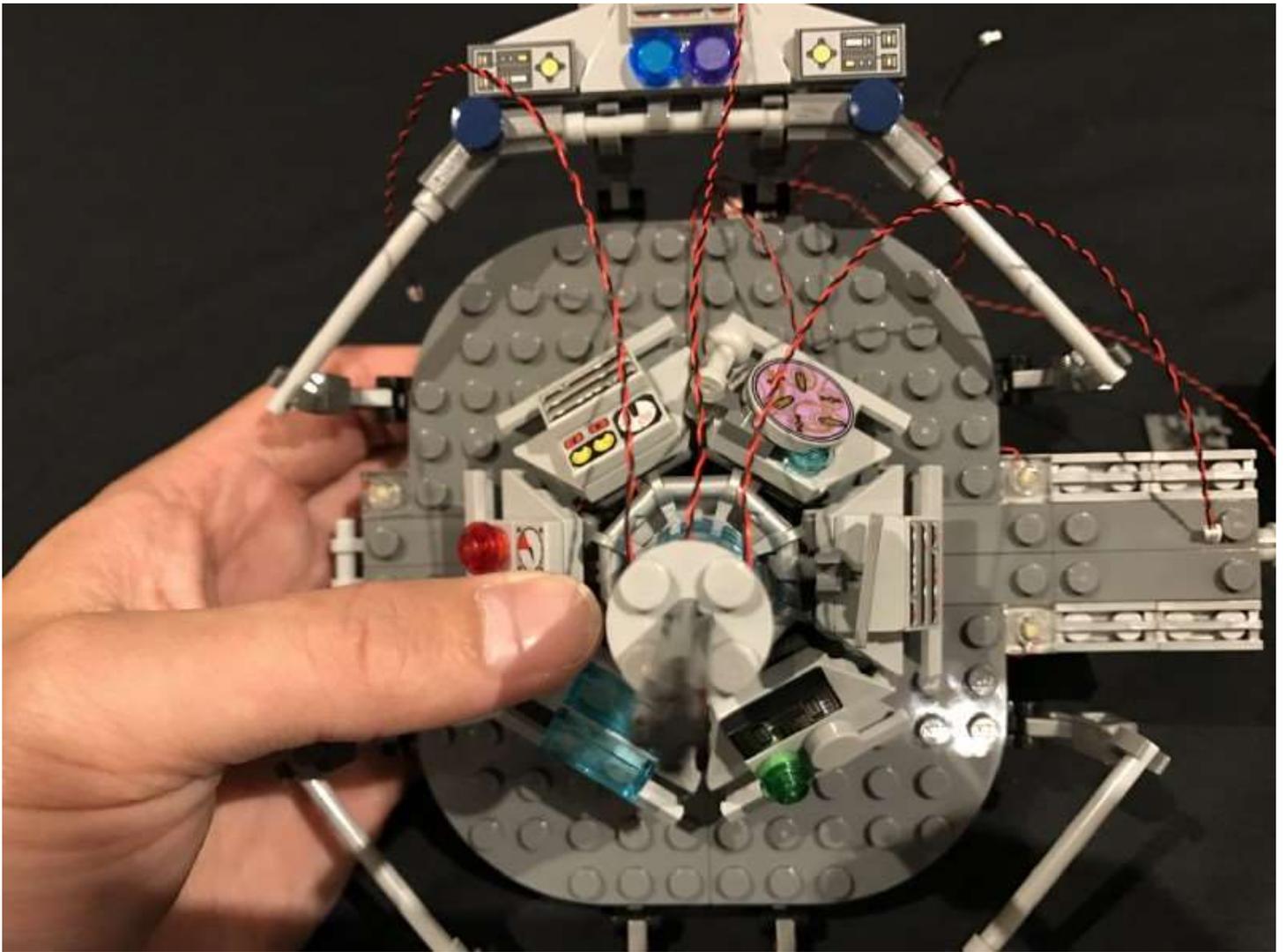
Take another **White 15cm Bit Light** and with the bit light facing down and cable facing the back , thread it through the left side. You may need to lift up the grey lego piece above to do this. Be careful and ensure the middle light we installed earlier does not fall out. We want the bit light to be placed in between the trans blue studs on the left side.



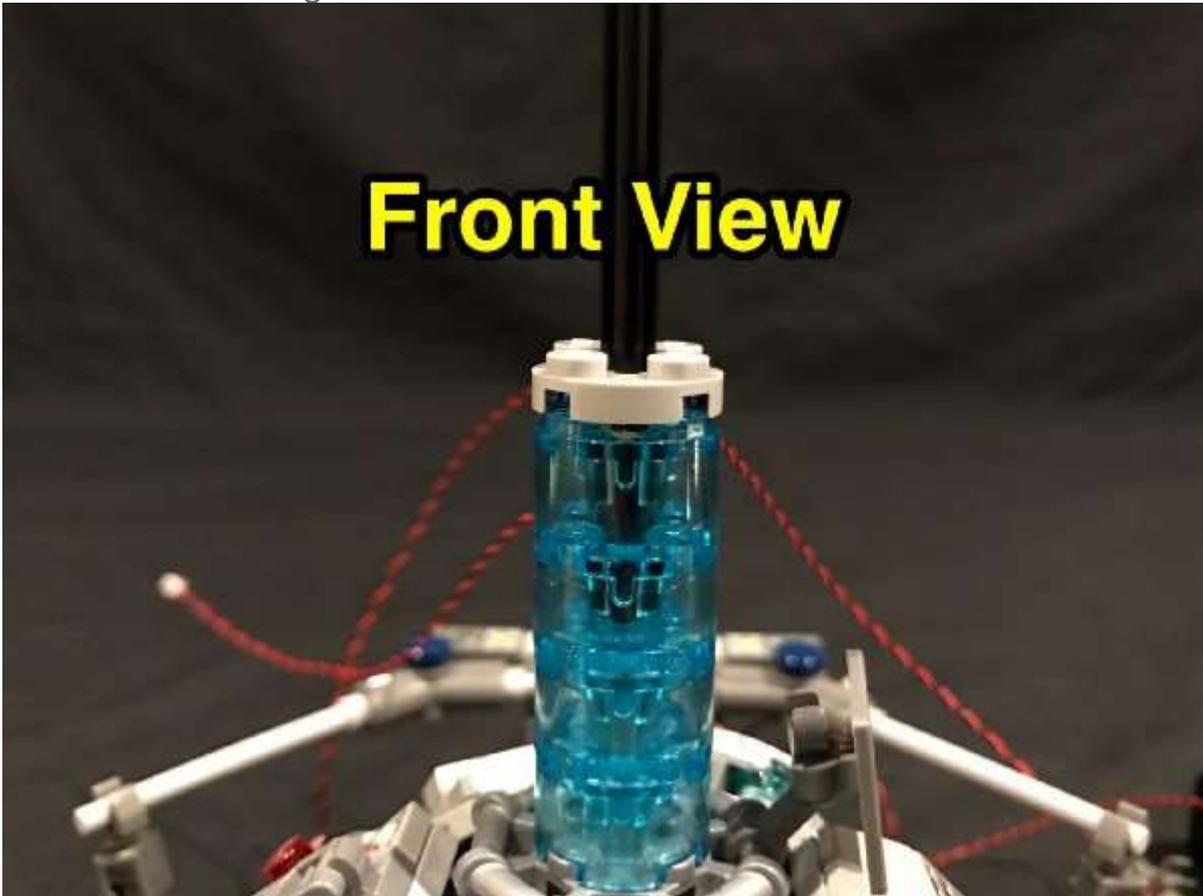


Cables for the bit lights should look like this from above.
Take the third **White 15cm Bit Light** and with the bit light facing down and cable facing the back , thread it through the right side. You may need to lift up the grey lego piece above to do this. Be careful and ensure the middle light we installed earlier does not fall out. We want the bit light to be placed in between the trans blue studs on the right side.

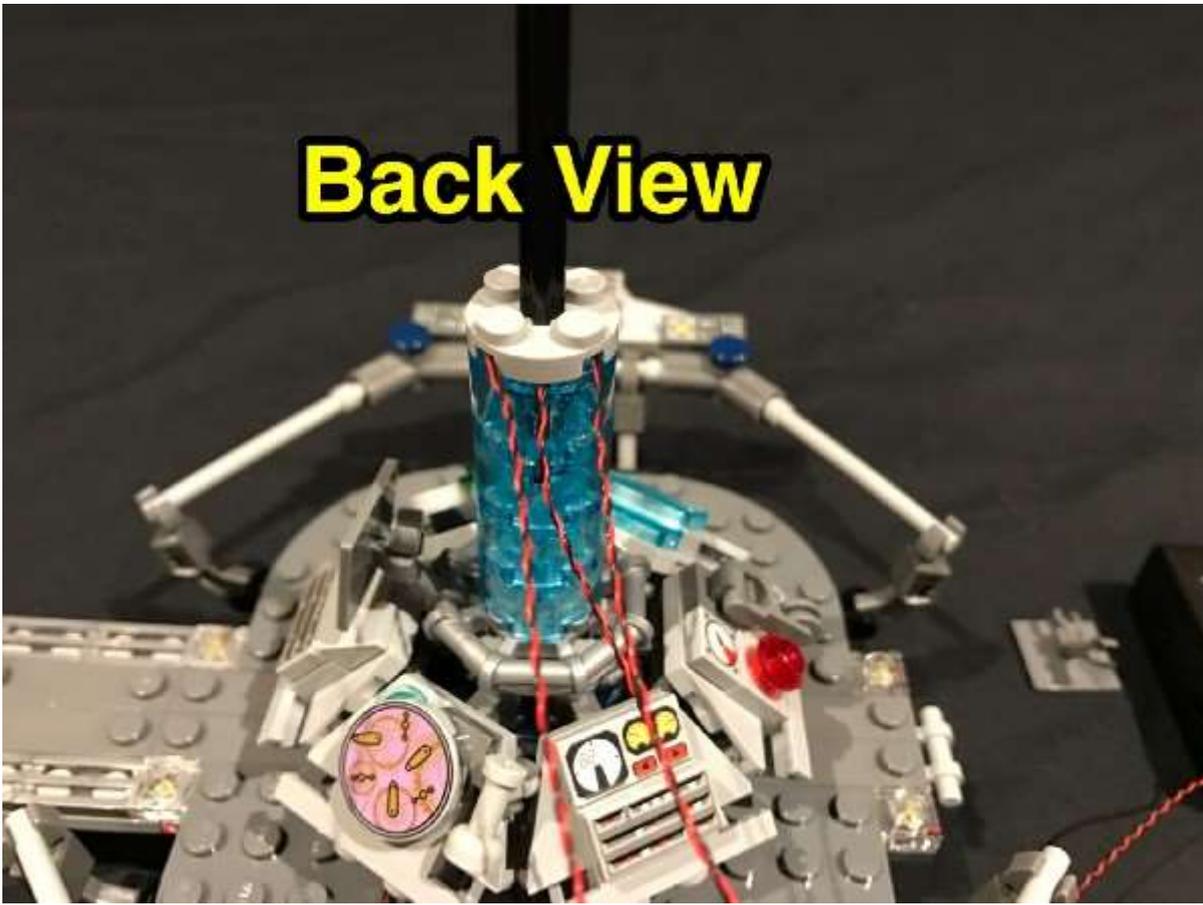




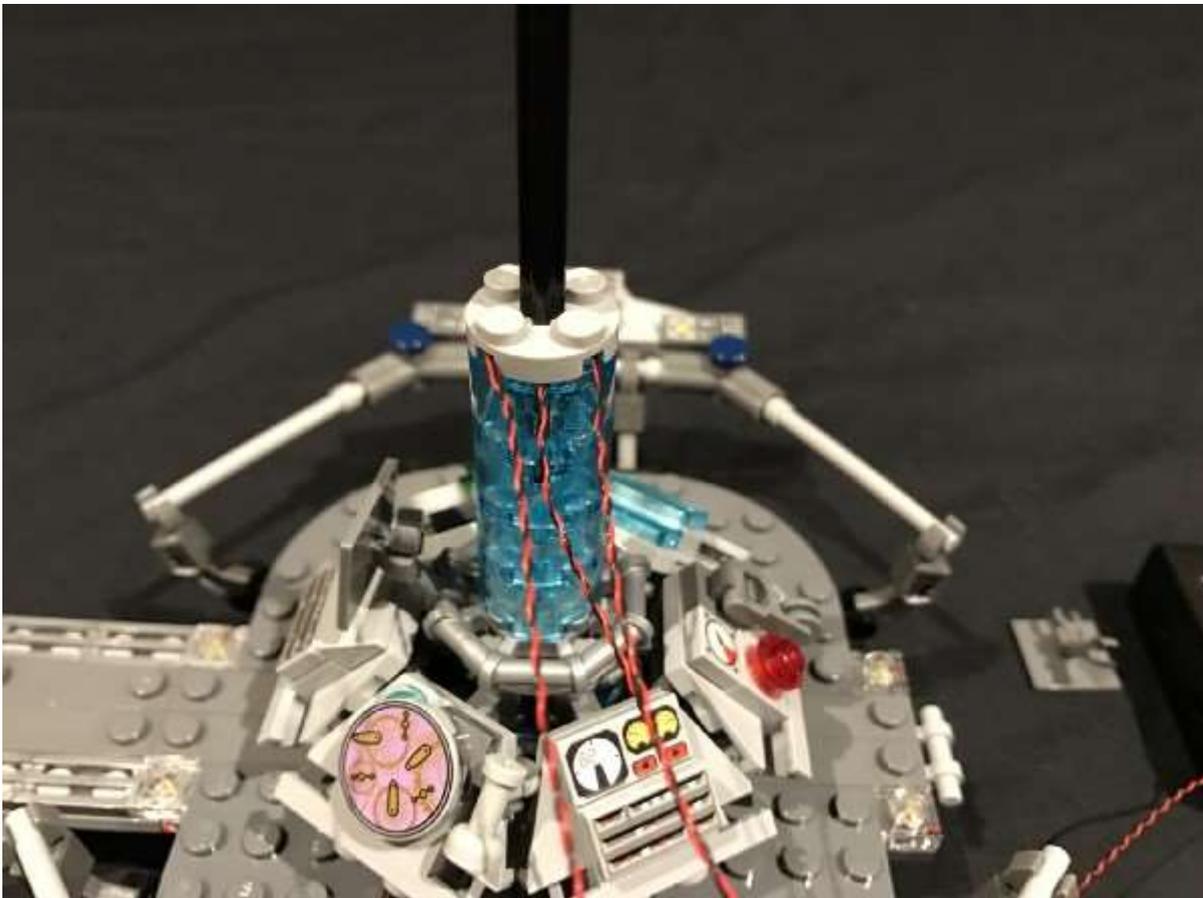
Cables for the bit lights should look like this from above.

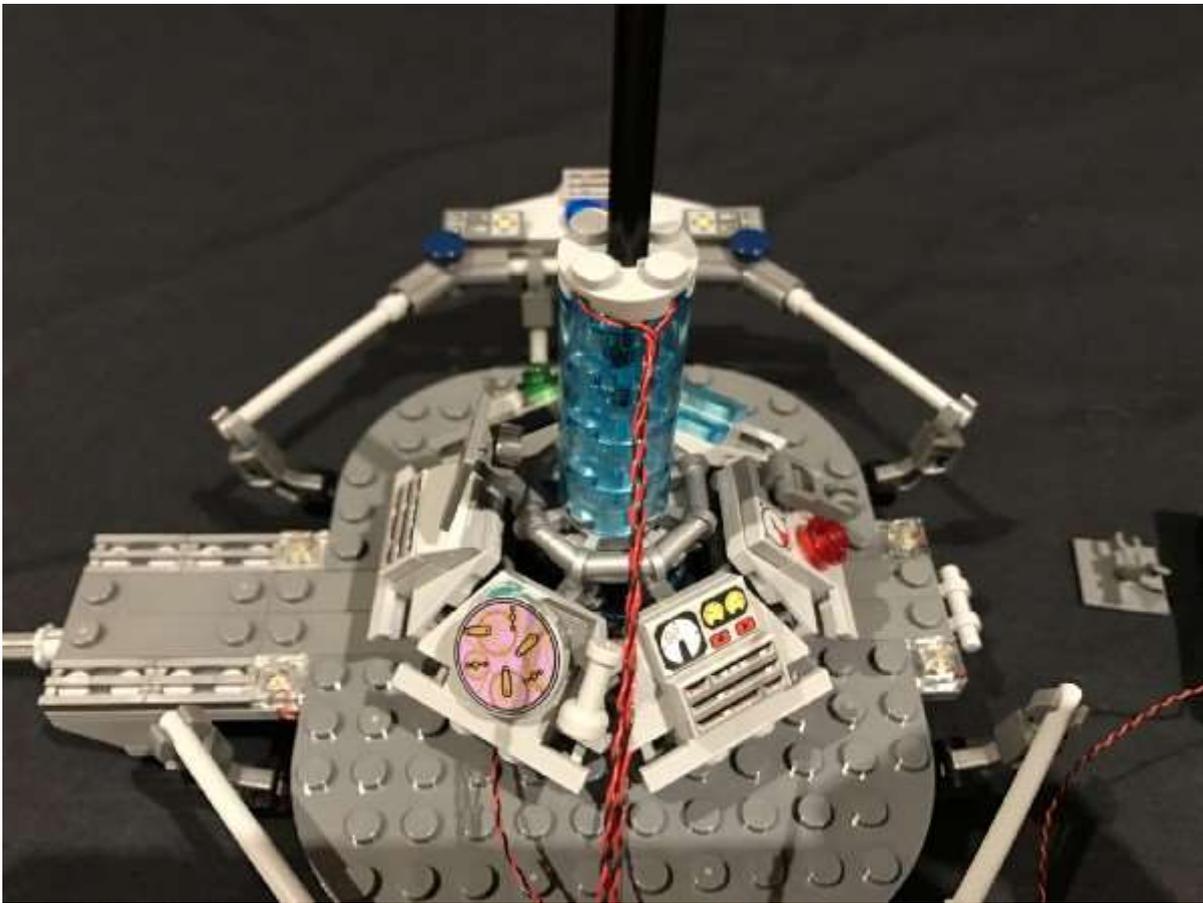


Back View



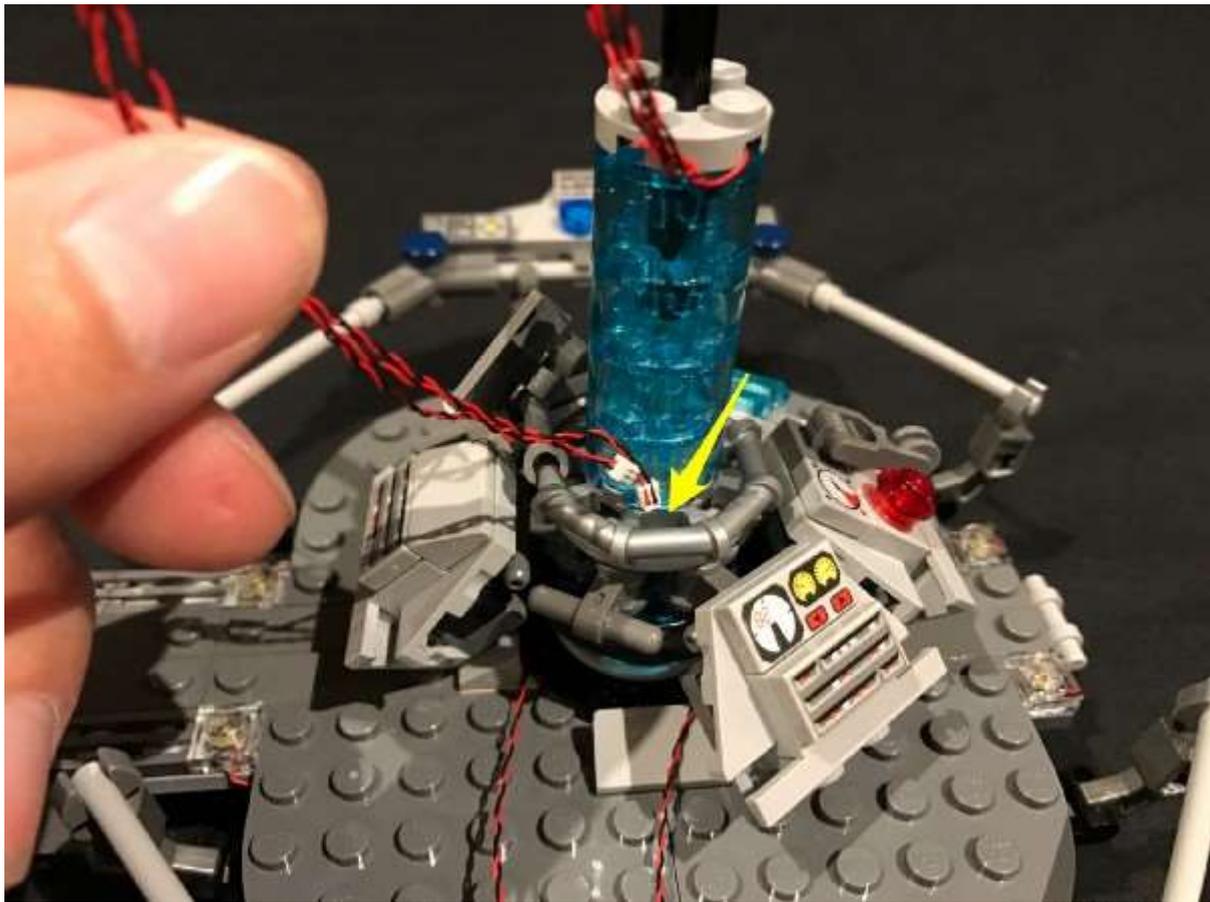
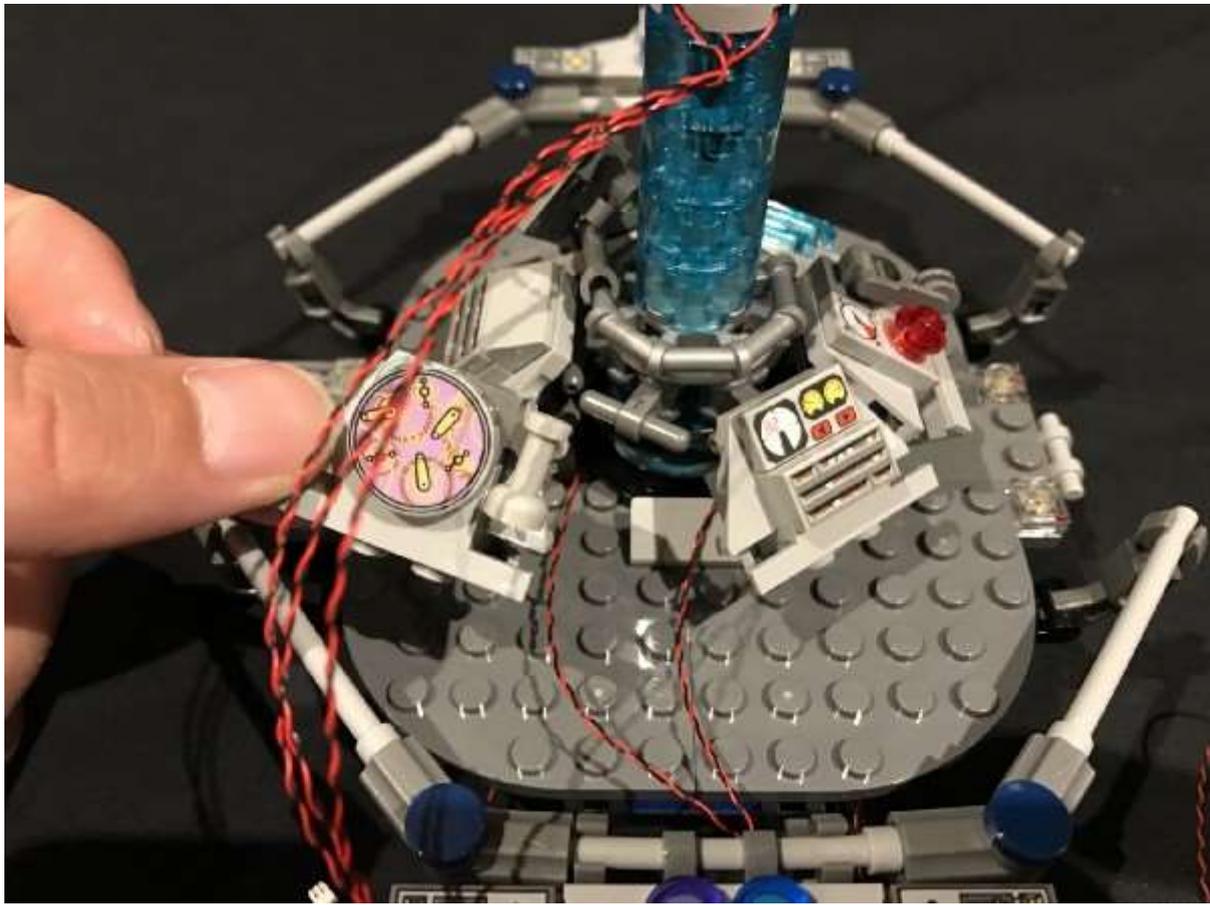
19.) From the back of the console room, take the 3 cables and then twist them together at the top.

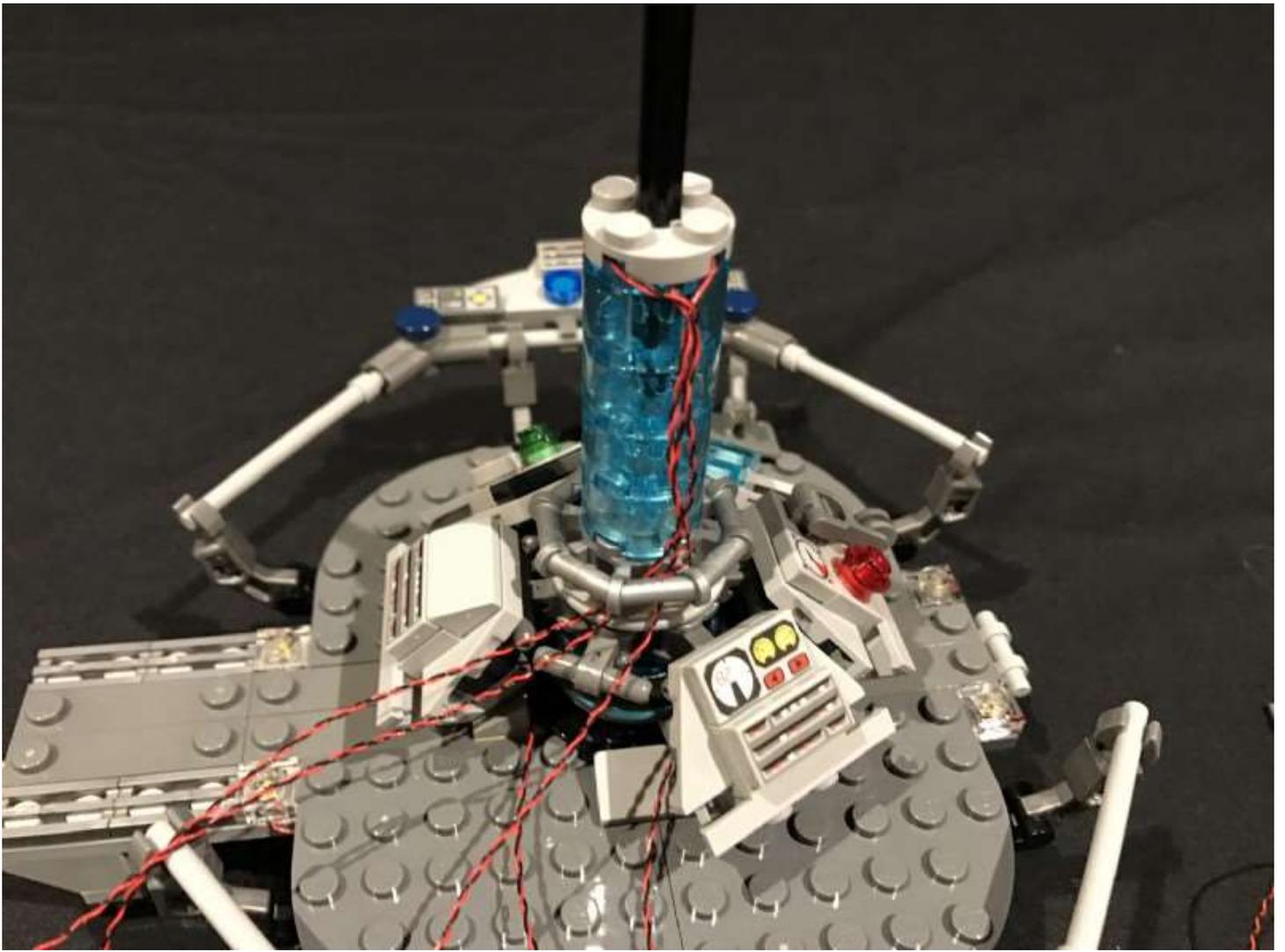




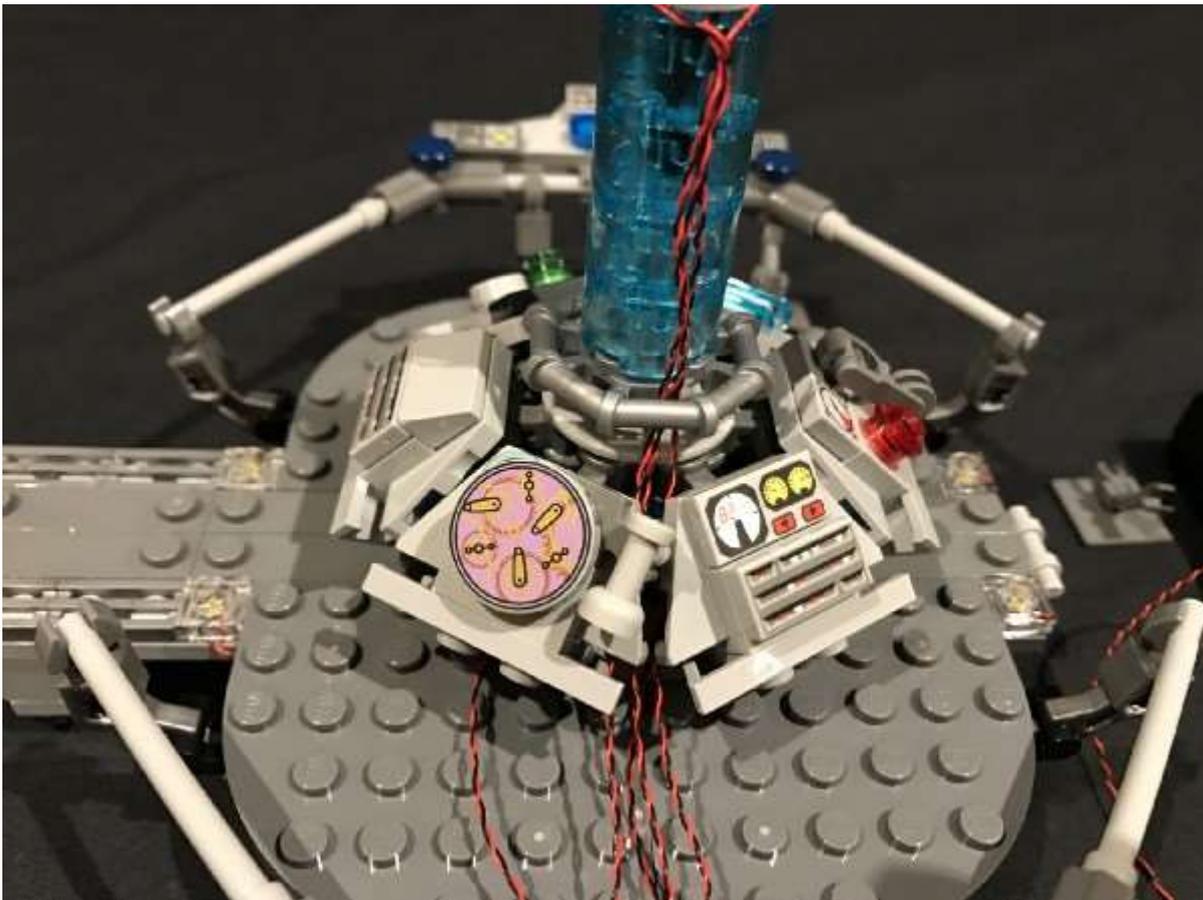
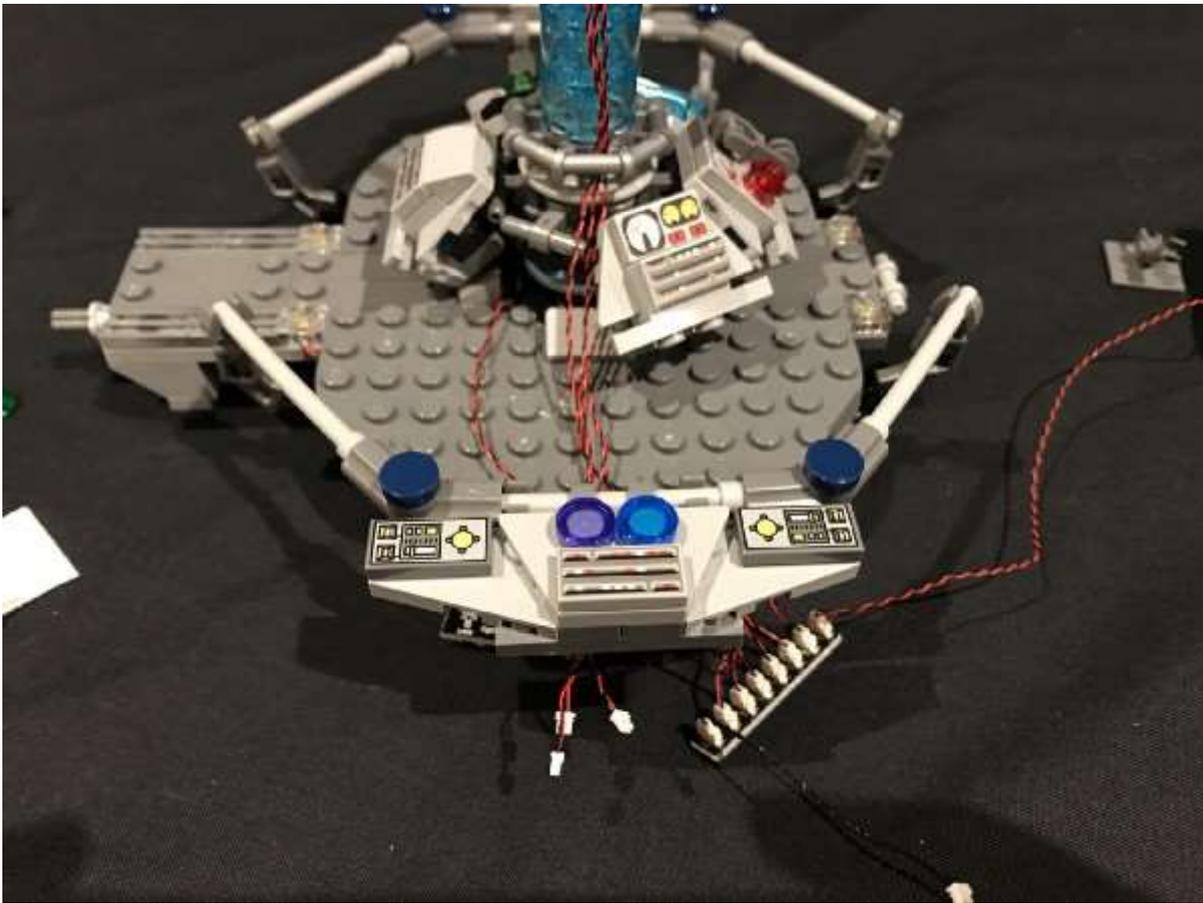
Remove one of the control panel sections below so that we can thread each cable in the spacing on the middle wheel.

Note: In order to get all three cables threaded through, you may have to lift this section up a little.

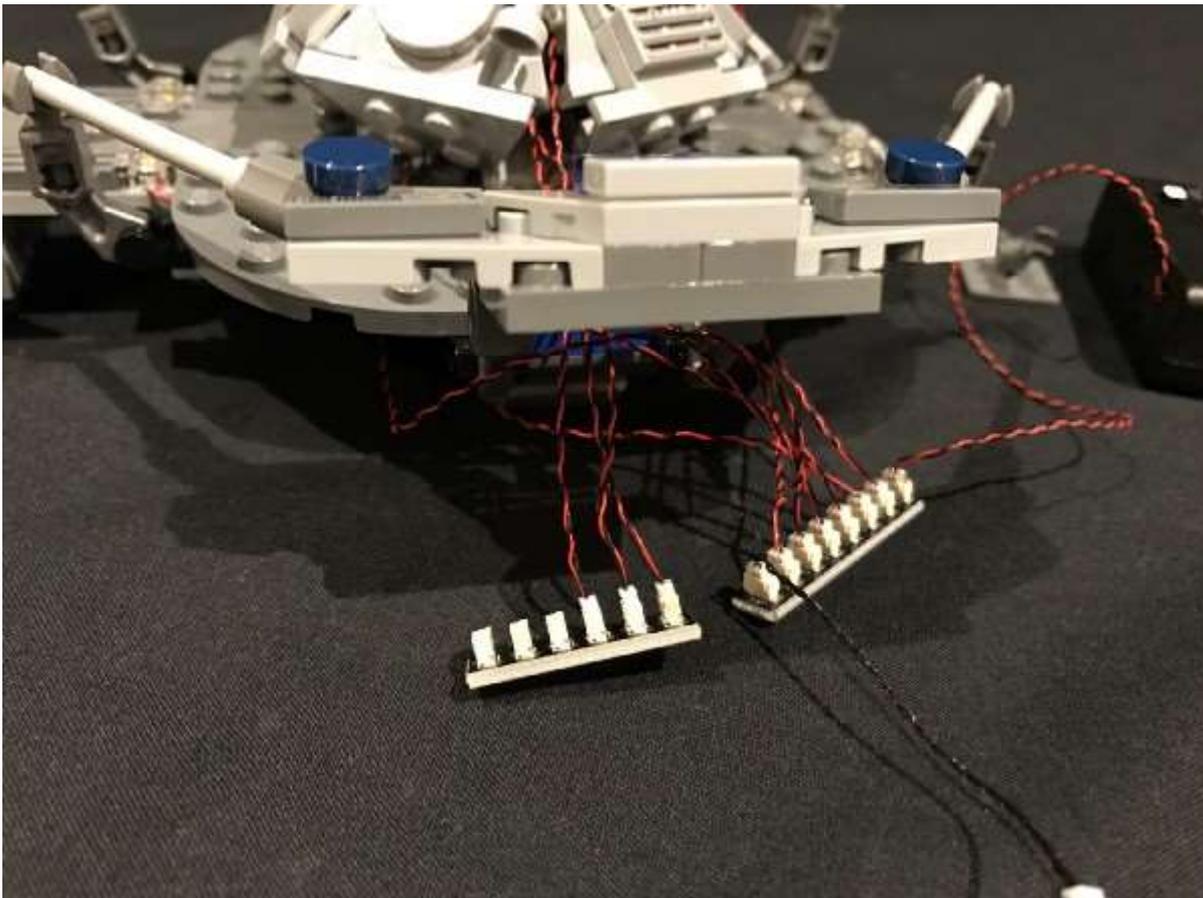
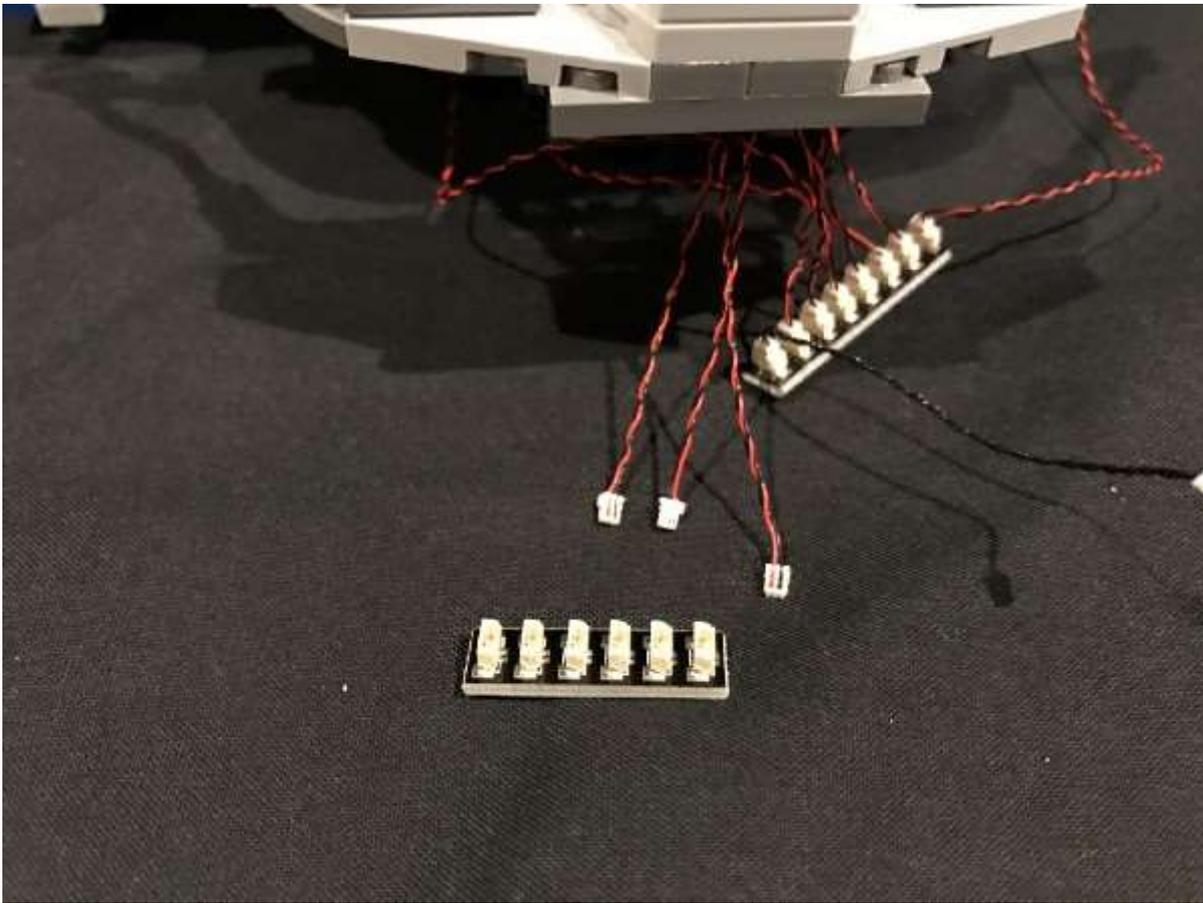




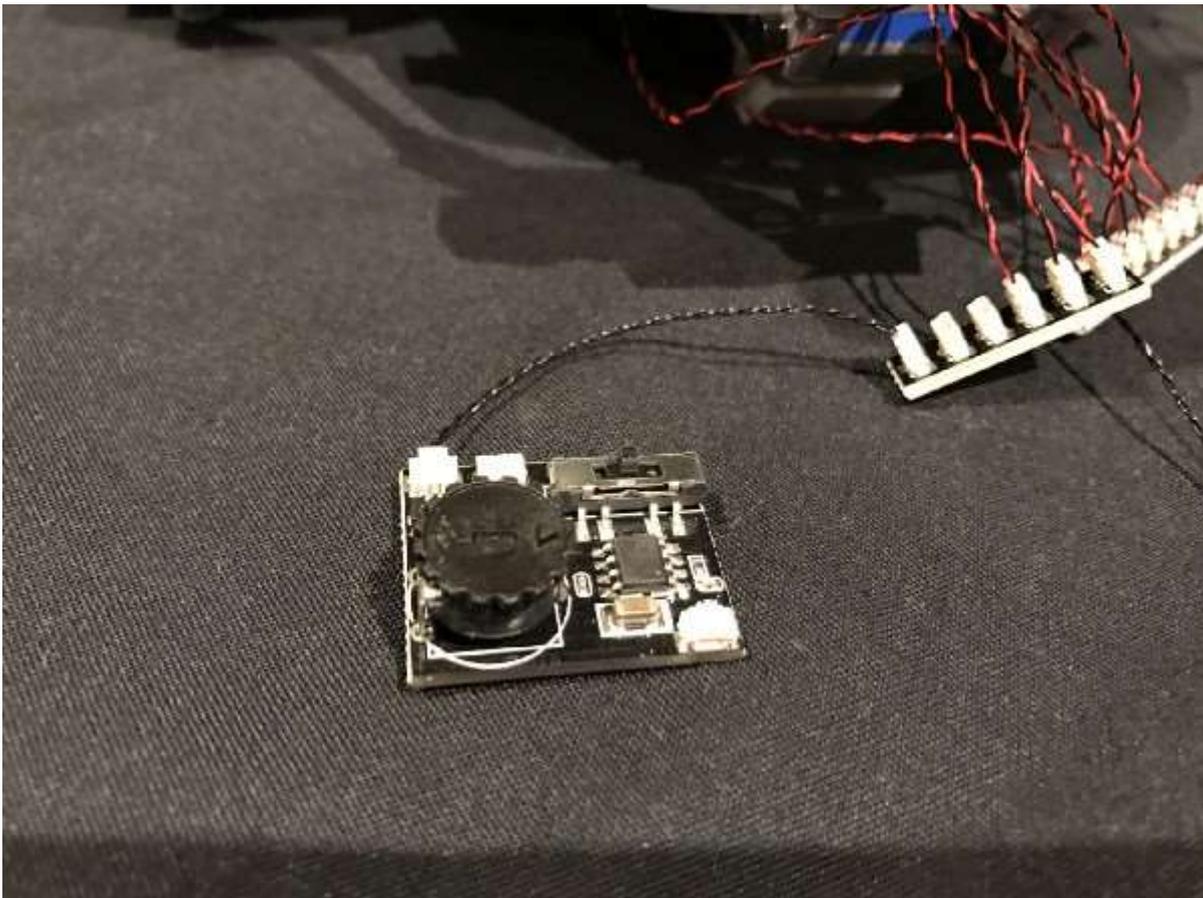
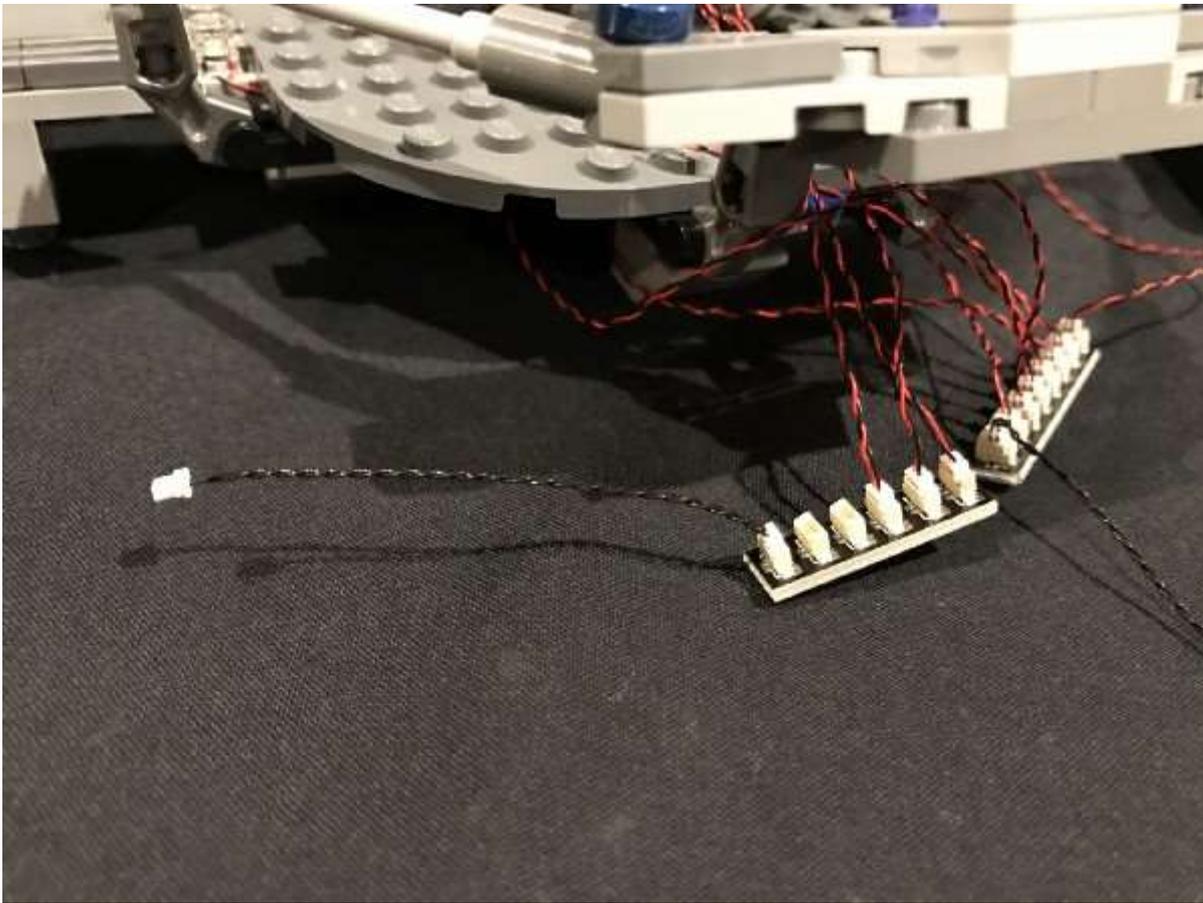
Thread the cables through the railing before reconnecting the control panel section.



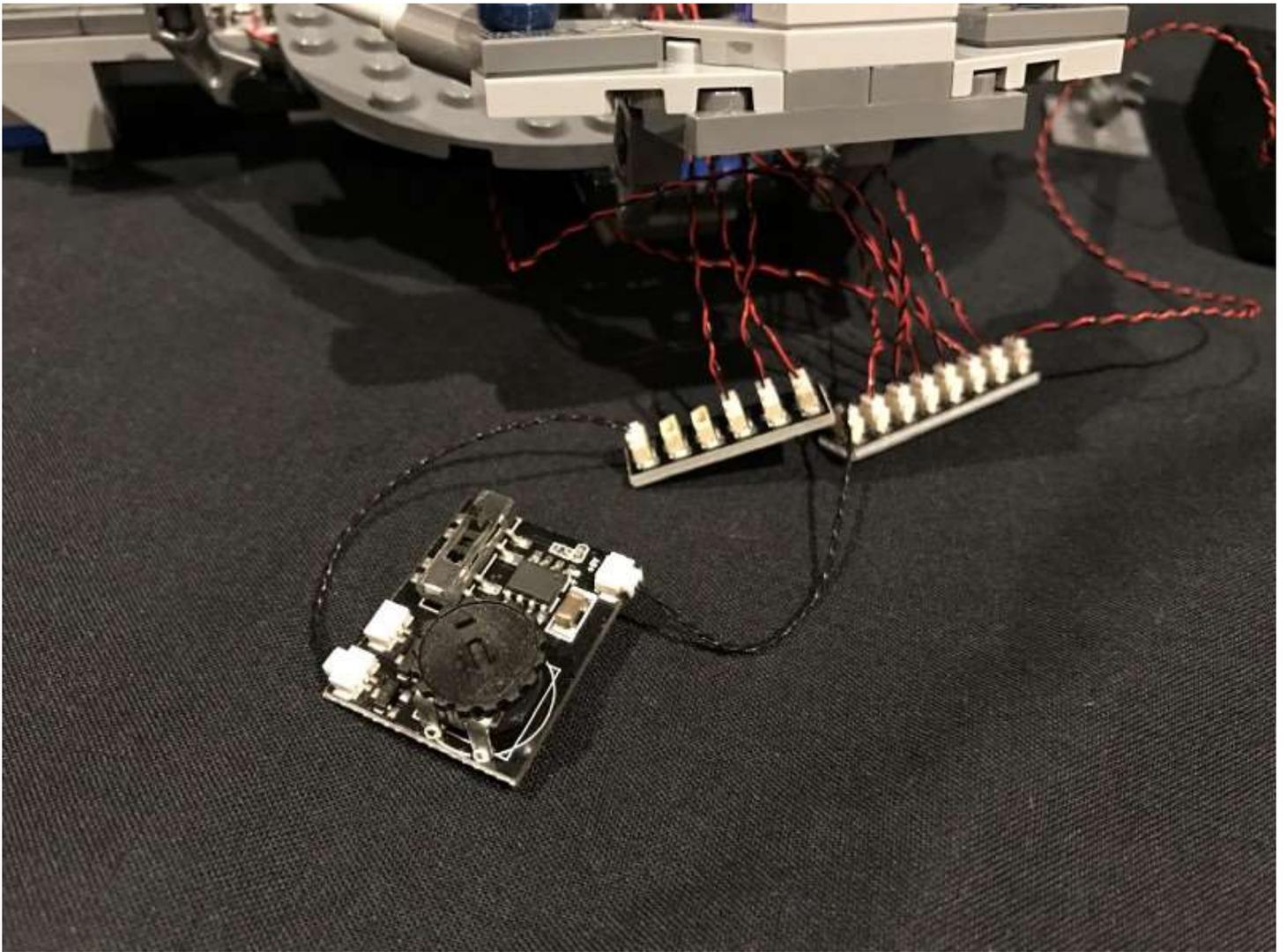
20.) Take the **6-Port Expansion Board** and then connect the 3 bit light cables into the ports.



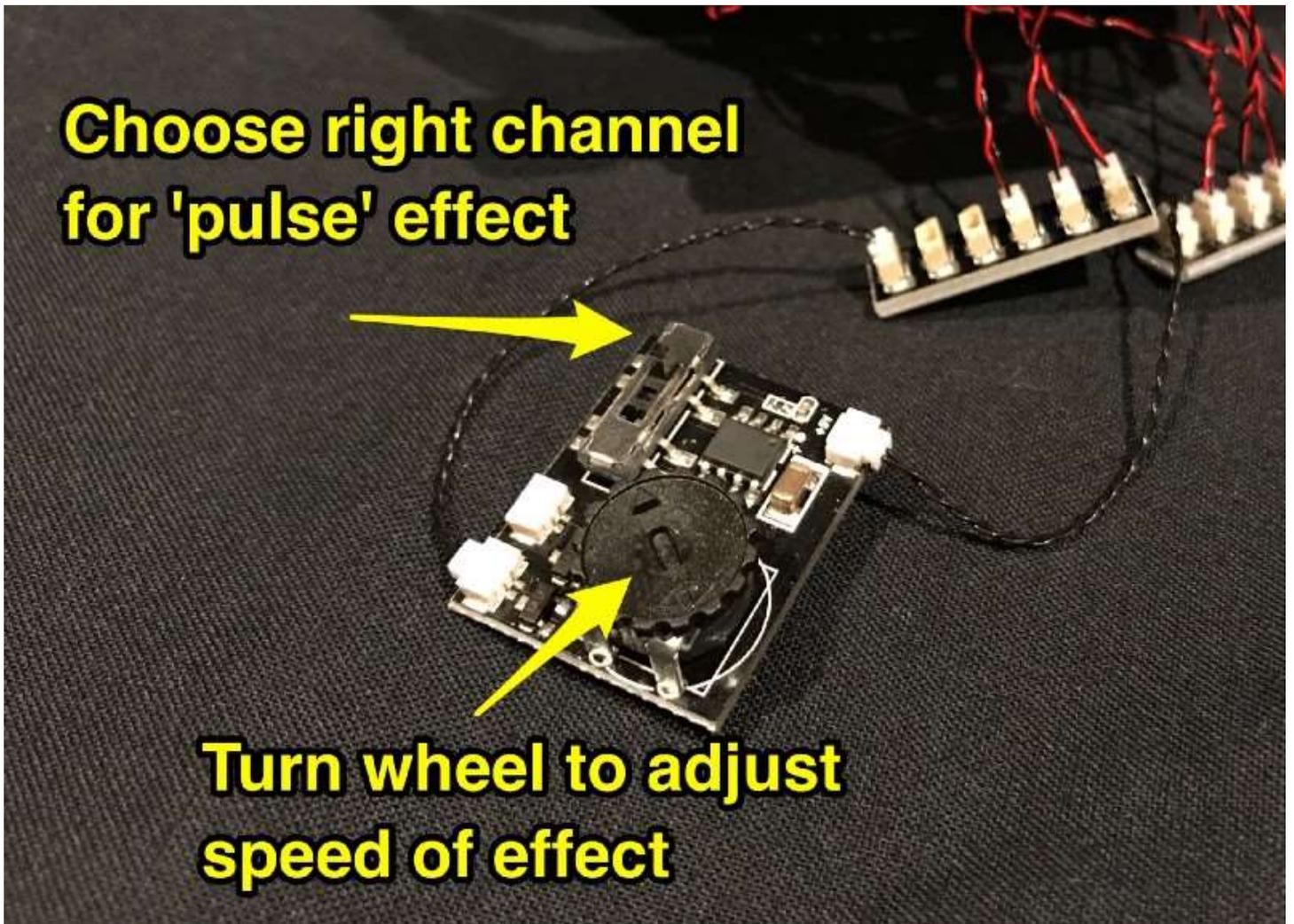
21.) Take the last **5cm Connecting Cable** and connect it to one of the ports on the 6-port Expansion Board. Take the **Multi-Effects Board** and then connect the 5cm connecting cable we just connected to one of the output ports (side with 2ports)



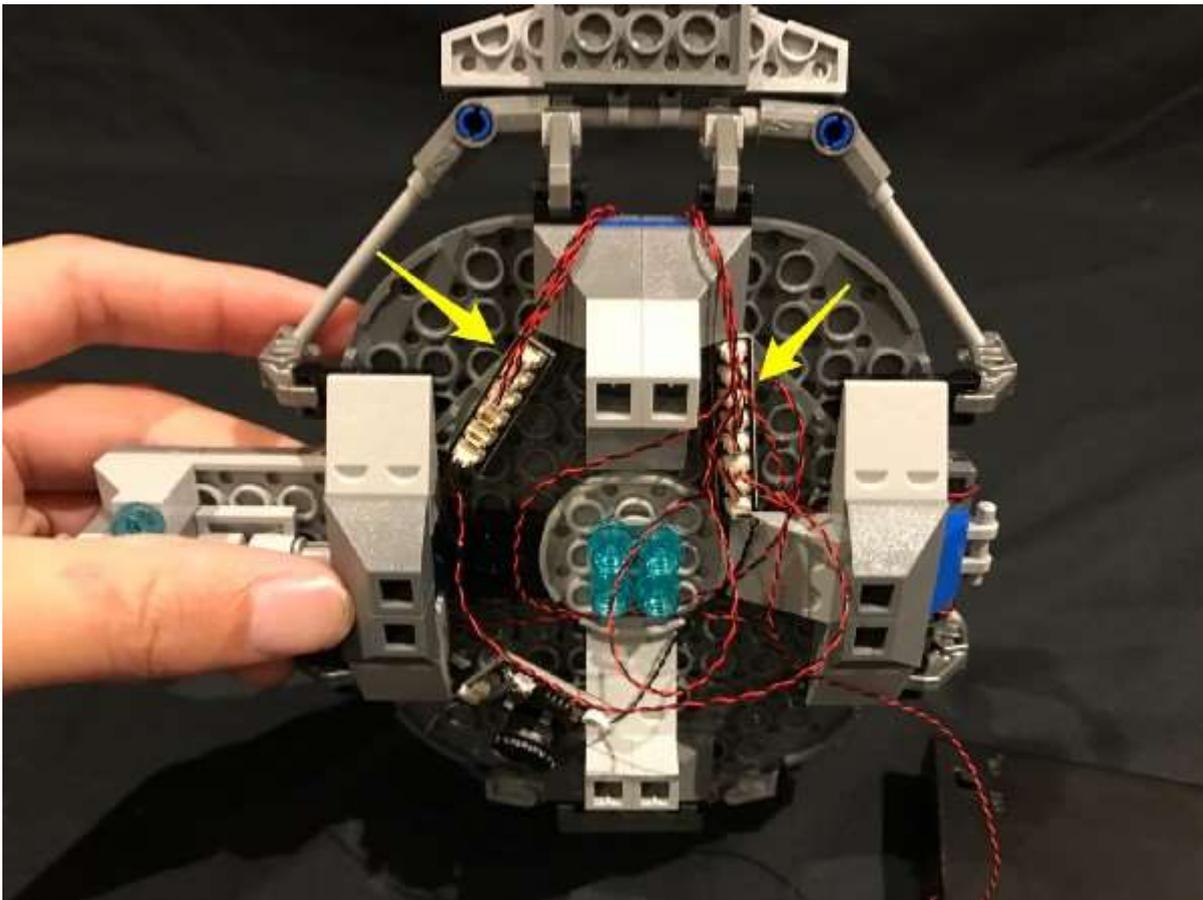
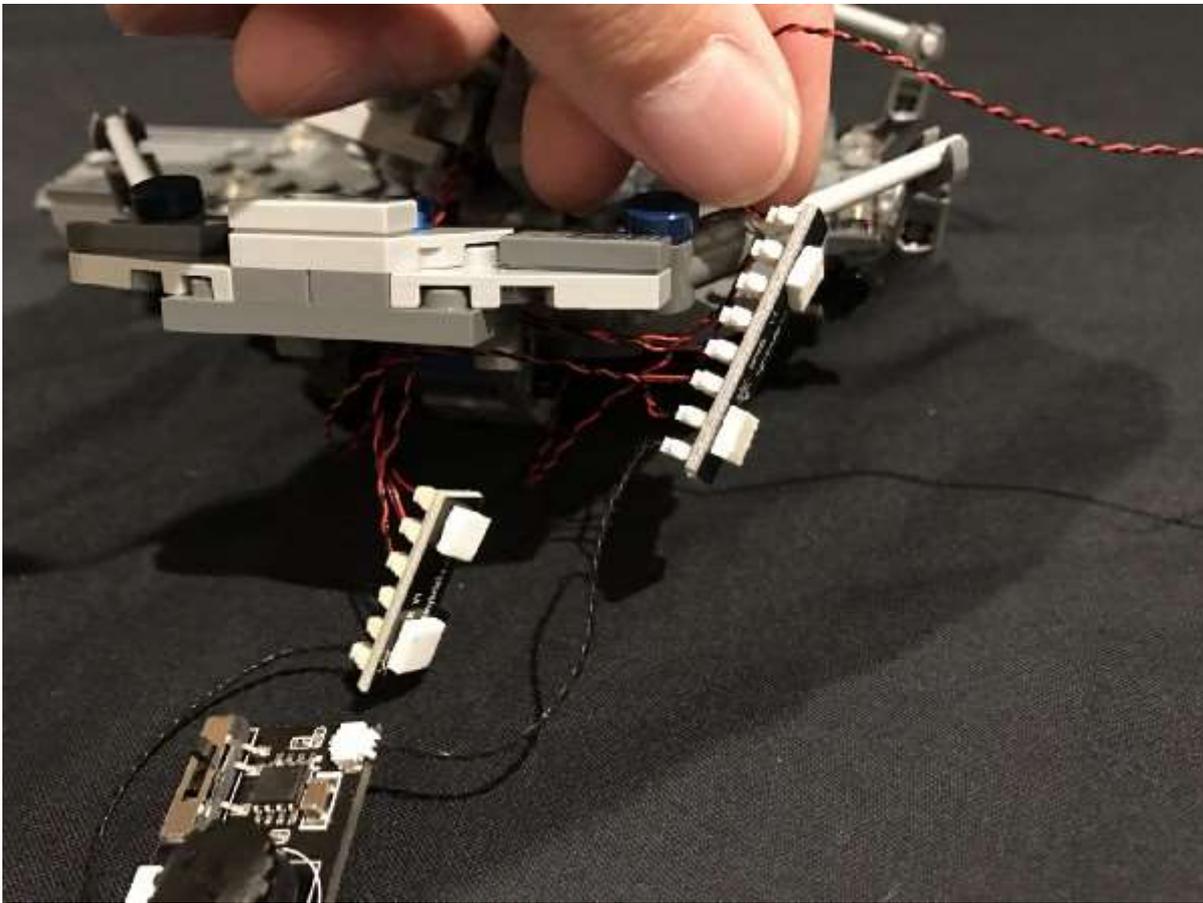
22.) Connect the other end of the 5cm connecting cable from the 8-port Expansion Board to the output channel of the Multi-Effects Board (side with 1 port)



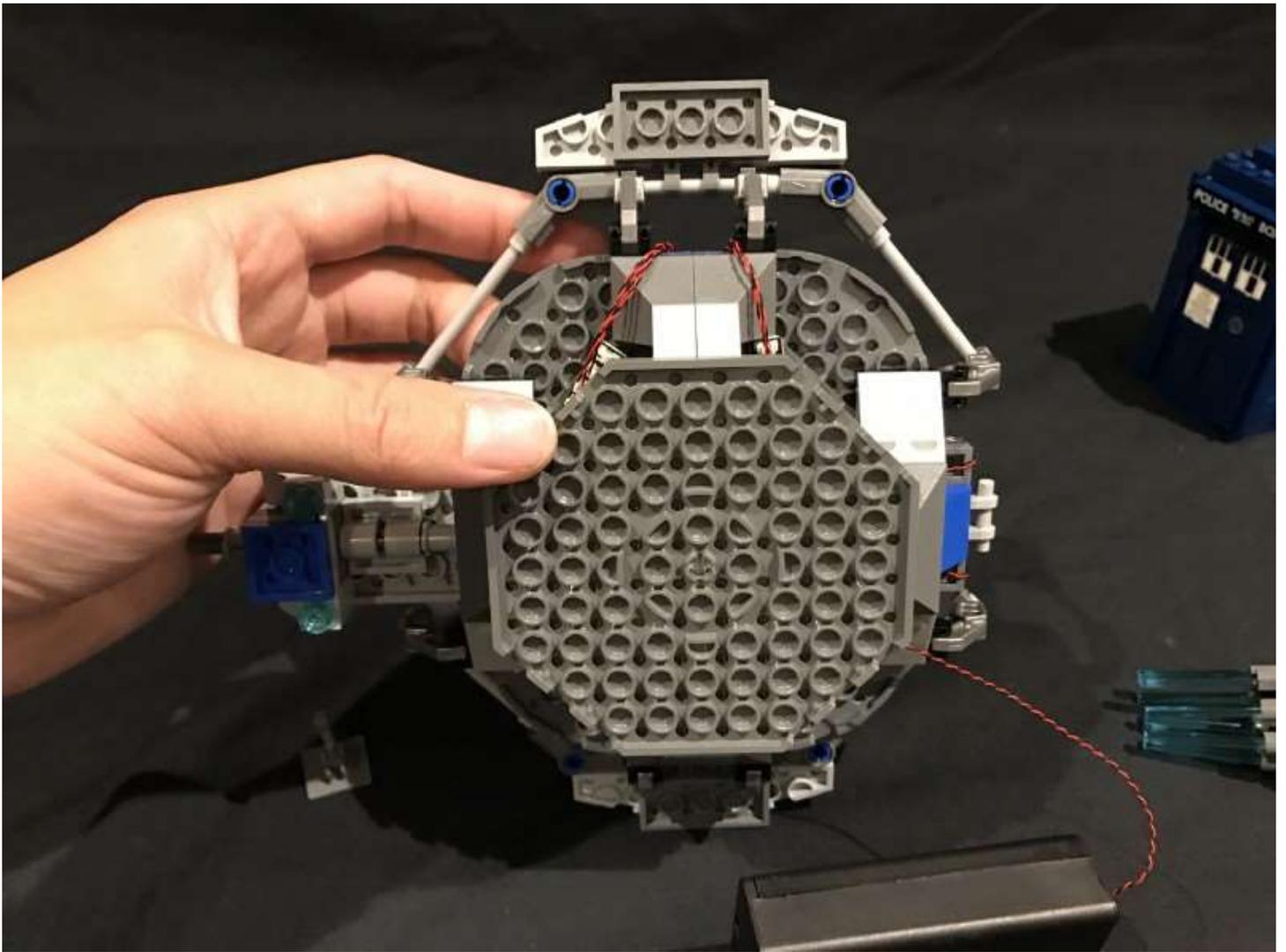
Flick the channel switch to the far right for 'Pulse' effect and turn the wheel to adjust the speed of the effect.



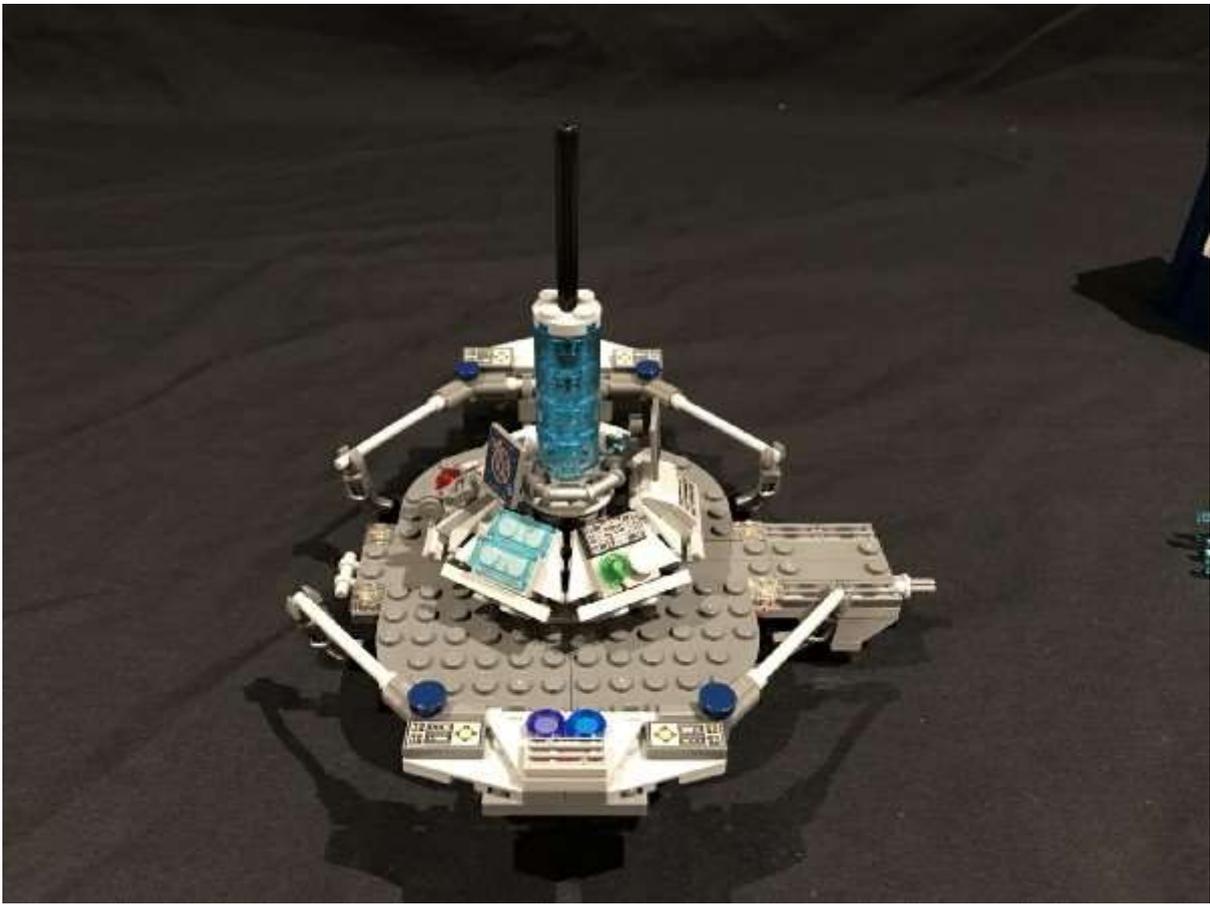
23.) Use the provided double sided adhesive squares to stick onto the expansion boards. Mount both expansion boards underneath in the below positions.



Tuck the multi-effects board underneath before reconnecting the Octagon plate we removed earlier.



24.) Finally, reconnect all the sections we removed from the centre of the control panel.





Installation of your lighting kit is complete. Neatly place the battery pack behind, turn on and ENJOY!

