

# **Light My Bricks : Millennium Falcon LED Lighting Kit**







Here is the instruction document for the Lego Millennium Falcon LED lighting kit. Please read and follow the steps carefully to ensure this lighting kit is installed properly.

If you are viewing this user guide as a PDF file, you can also view this online by clicking **here.** 

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#### **Package Contents:**

- 2 x White 30cm Bit Lights
- 2 x Blue 30cm Bit Lights
- 4 x Flashing 30cm White Bit Lights
- 5 x White Strip Lights
- 1 x 12 Port Expansion Board
- 1 x AA Battery Pack (Requires 3 x AA Batteries)
- 4 x Lego Light Grey 1 x 1 Plate
- 3 x Lego 1 x 6 Plate (any colour)
- 2 x Lego Trans Red 1 x 1 Round Plate

- 2 x Lego Trans Clear 1 x 1 Round Plate
- 4 x Lego Light Grey 1 x 1 Round Brick
- 2 x **Lego 1 x 2 Technic Brick** (minimum one light grey)
- 4 x Lego Trans Red Lightsaber Bar
- 1 x Lego 6 x 8 Plate or 8 x 8 Plate (light or dark grey)

#### Connecting Cables

- 3 x 5cm Connecting Cable
- 1 x 15cm Connecting Cable
- 1 x 30cm Connecting Cable

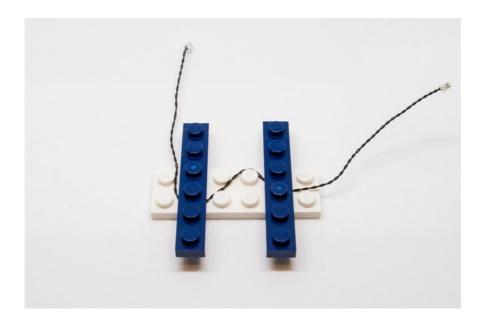
## Important things to note:

#### 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 Strip Lights**

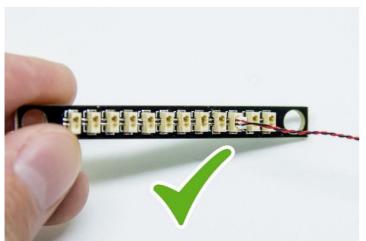
Take extra care when inserting connectors to ports on the Strip Lights. Connectors can be inserted only one way. With the Strip Light facing up, ensure the side of the connector with the wires exposed is facing down. If a plug won't fit easily into a port connector, don't force it. Doing so will damage the plug and the connector.

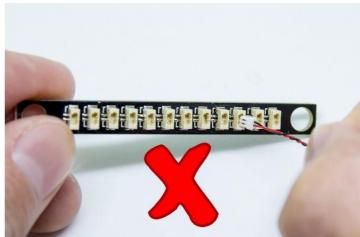




### Connecting cable connectors to Expansion Boards

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.

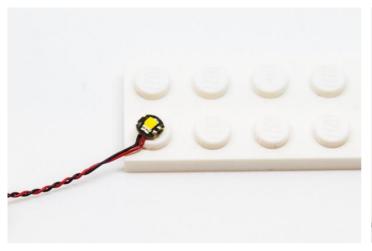


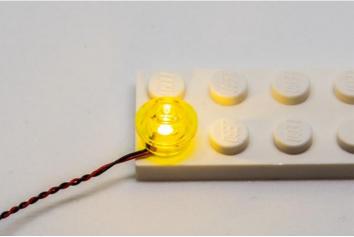


WARNING: Incorrectly inserting the connector can result in bent pins inside the port or possible overheating of the expansion board when connected.

## 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.









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OK, Let's Begin!

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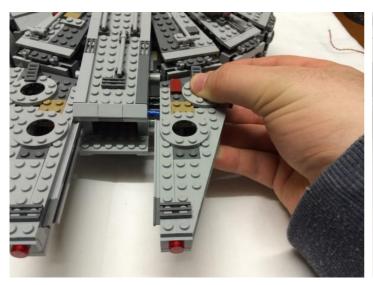
# Instructions for installing this kit

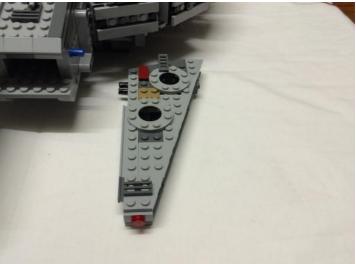






Start with the front of the Millennium Falcon facing you and remove the cone pieces around the cockpit.





Remove the front right section by holding it and pulling it to the right, away from the centre of the Millennium Falcon. This section is attached with technic pins so give it a wiggle if it isn't coming off easily.

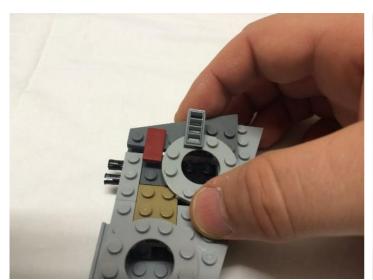


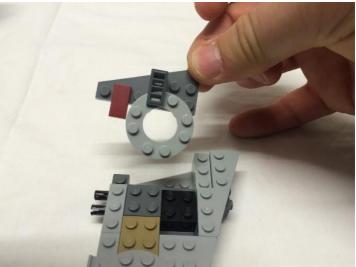


Remove the front left section by holding it and pulling it to the left, away from the centre of the Millennium Falcon. This section is attached with technic pins so give it a wiggle if it isn't coming off easily.

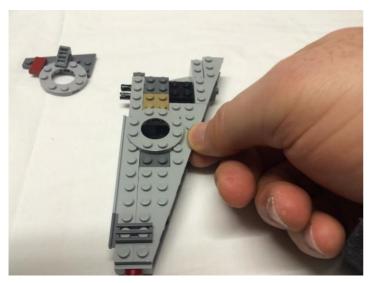


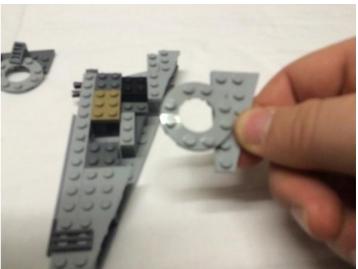
We are going to install a **White Bit Light** in the front of each of the sections we just removed. Below are the steps for the right hand side section. Repeat these steps for the left hand side.



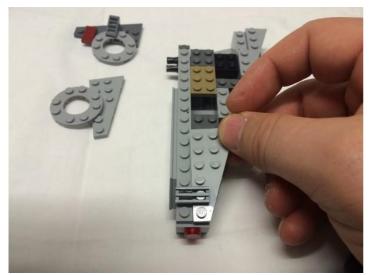


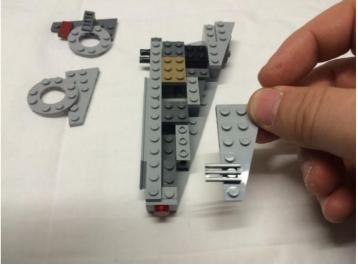
From the back, gently pry the dark grey wedge plate up and off the section. Let the round plate with the hole in it and the red  $1 \times 2$  tile come away with it. Put these pieces to the side.





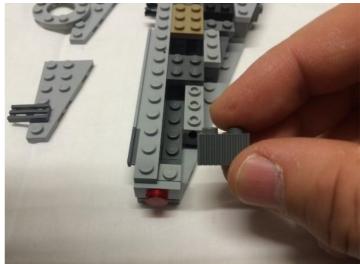
Working down the right side, remove the light grey wedge plate. Allow the round plate with the hole in it to come away with it. Put these pieces to the side as well.



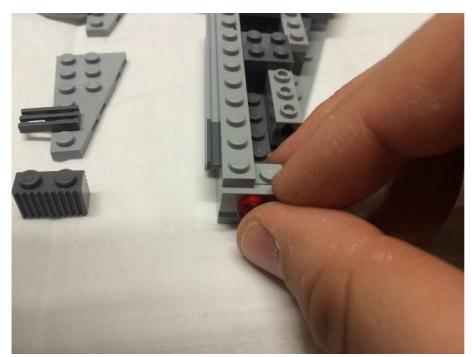


Still working down the right hand side, remove the remaining light grey wedge plate. Let the  $1 \times 2$  grille plate come away with it. Pop these pieces to the side with the others.





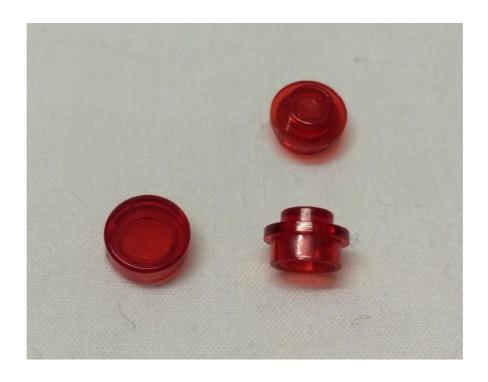
There is a  $1 \times 2$  dark grey grille brick that is now accessible. Remove it.



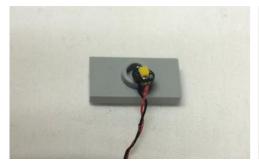


Remove the front 1 x 2 modified plate with the transparent red piece attached to it.

Remove the transparent red piece.



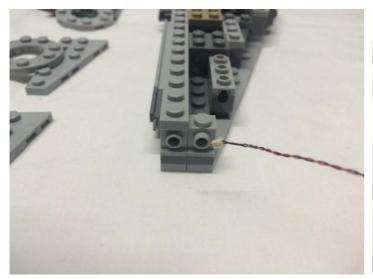
It's time to put this transparent red piece aside and replace it with a  $\bf Lego\ Trans\ Red\ 1\ x\ 1\ Round\ Plate.$ 

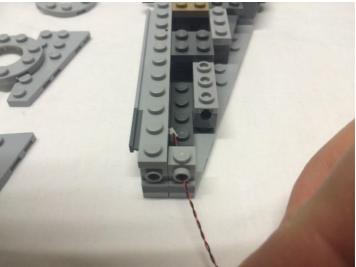




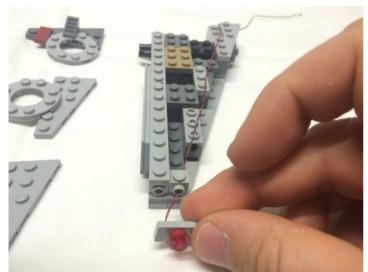


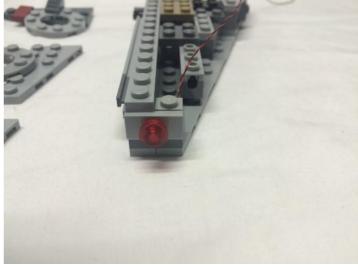
Grab one of the **White Bit Lights** and rest it over the stud on the  $1 \times 2$  modified plate. Position it so that the wire comes down from the middle similar to that in the picture above. Gently place the **Lego Trans Red 1**  $\times$  **1 Round Plate** over the **White Bit Light**.





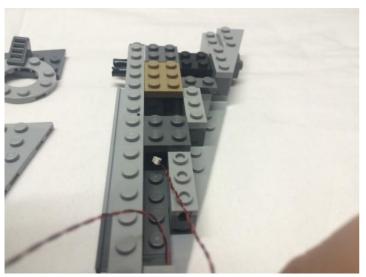
Pick up the plug end of the **White Bit Light** and feed it through the hole in the  $1 \times 1$  modified brick with headlight (that had the  $1 \times 2$  brick with grille behind it).

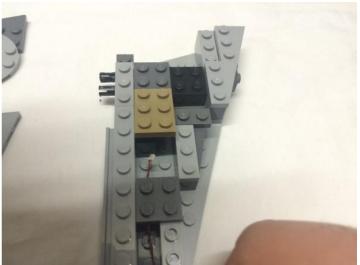




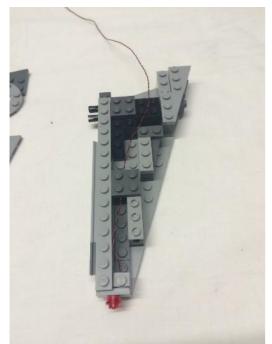
As you pull the wire through and the modified  $1 \times 2$  plate with the **White Bit Light** gets closer to the  $1 \times 1$  headlight bricks, keep the wire on the underside of the  $1 \times 2$  modified plate with the **White Bit Light** on it.

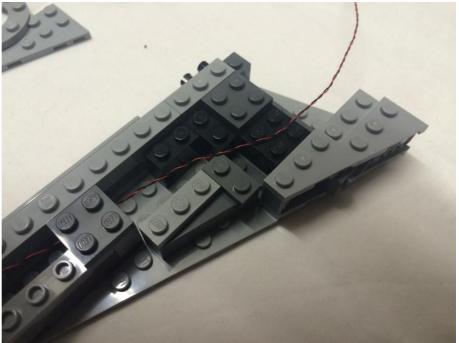
Gently put the 1 x 2 modified plate back in position.



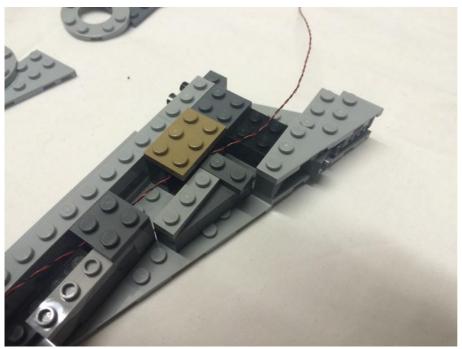


Feed the plug end of the **White Bit Light** underneath the  $1 \times 2$  dark grey plate. There is a technic brick under there with a hole in it that the plug fits through.



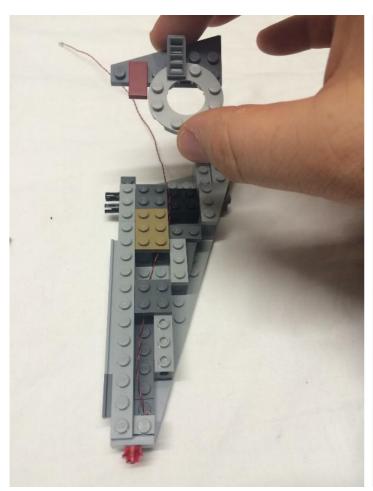


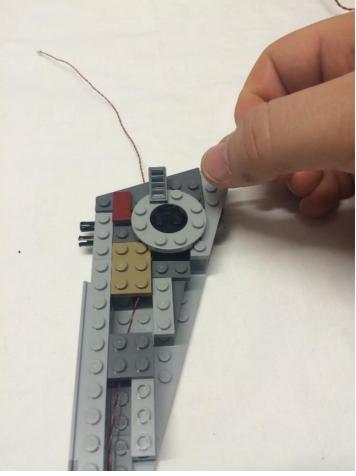
Remove the  $2 \times 3$  tan plate and run the wire across the point where the  $1 \times 2$  black brick and the  $1 \times 2$  dark grey brick corners touch.



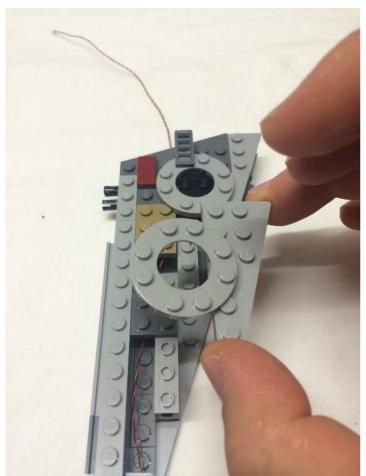


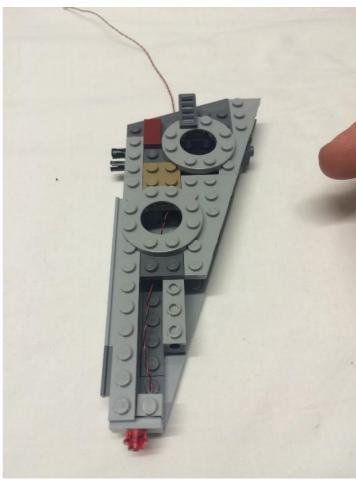
Replace the 2 x 3 tan plate and run the wire straight out along the side of the 2 x 2 dark grey plate that sits on the black brick.



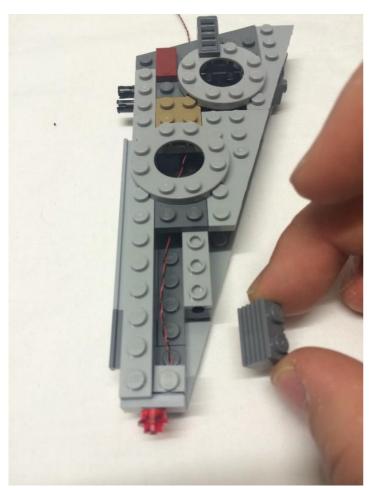


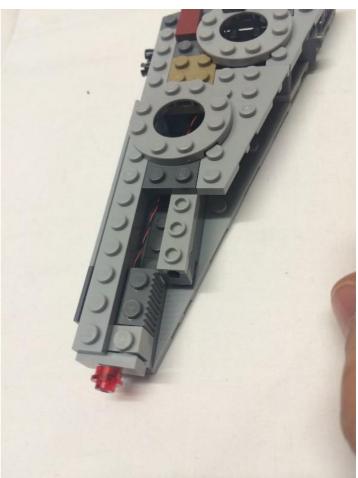
Replace the dark grey wedge plate with the round plate with the hole in it and the red 1 x 2 tile.



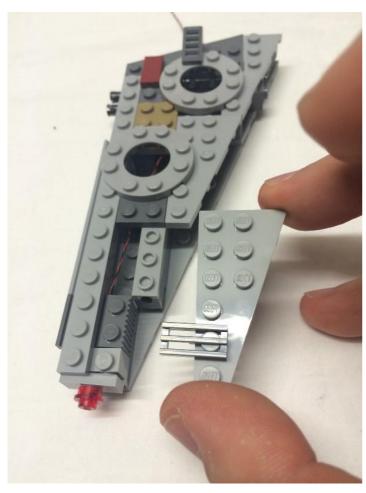


Replace the light grey wedge plate with the round piece with the hole in it.





Replace the 1 x 2 dark grey grille brick with the horizontal grille lines facing towards the wire.





Replace the last light grey wedge with  $1 \times 2$  grille plate on it.

Repeat the above for the left section.

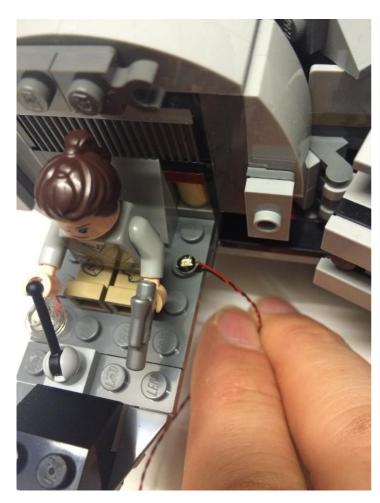




Find the **Lego Trans Clear 1 x 1 Round Plates** and have them ready. Grab a **Blue Bit Light** and position it on top of the stud as seen in the photo above. Keep the wires facing roughly towards the back.



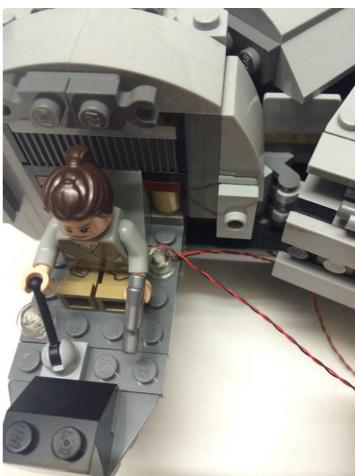
Gently place the Lego Trans Clear 1  $\times$  1 Round Plate over the Blue Bit Light.





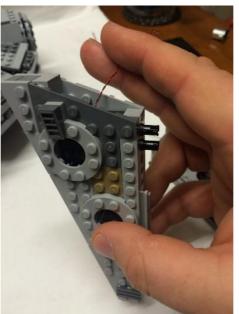
Grab the other **Blue Bit Light** and position is over the stud as seen in the picture. Keep the wires pointing out to the right and gently place the **Lego Trans Clear 1 x 1 Round Plate** over the **Blue Bit Light**.





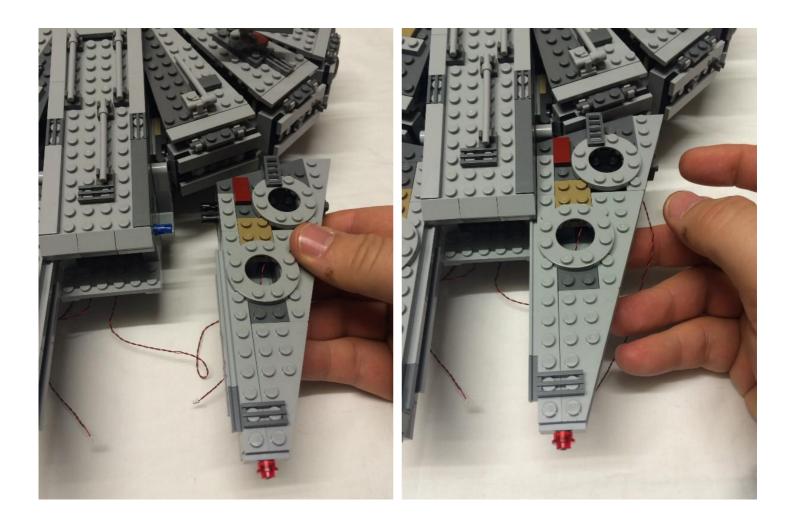
Run the wire from the **Blue Bit Light** on the left around the back of Rey (or whoever you have in the pilot seat!) so both wires are running out to the right of the cockpit.







Pick up the left hand side front section. Make sure the wire runs out the back and then down. Reattach the front section.



Reattach the right hand side section, also keeping the wire running out the back and then down.



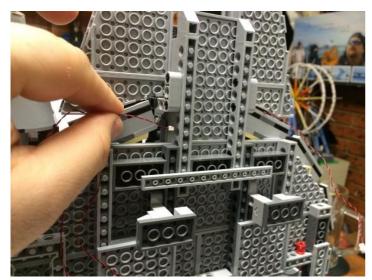


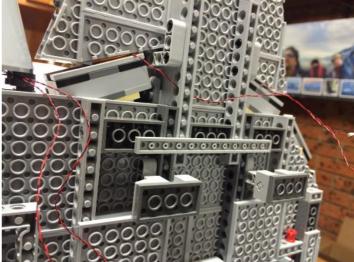
Replace the cone pieces around the cockpit.



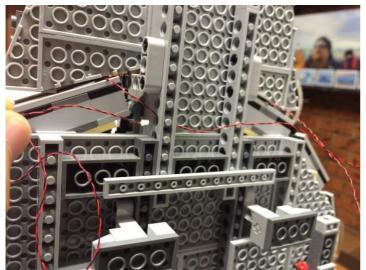


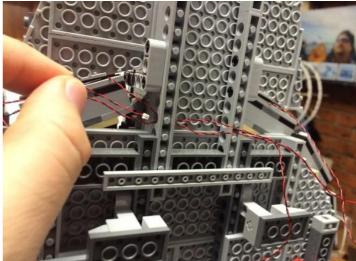
Flip the Millennium Falcon up and let it rest on it's end so you can access the bottom of the ship.



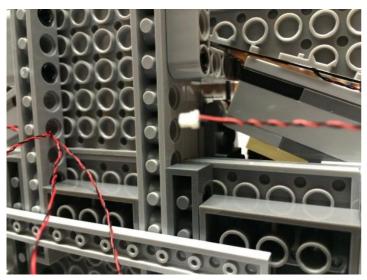


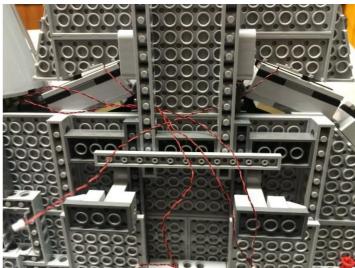
There are three wires on the left hand side of the ship. Grab the plug end of one of them and feed it through the hole in side of the long light grey technic brick.



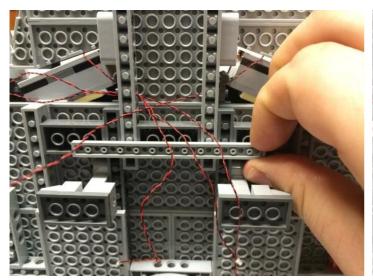


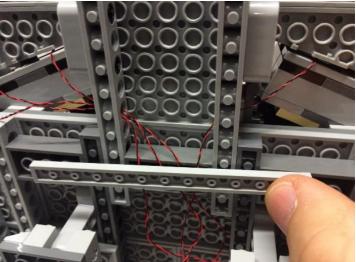
Repeat the process for the other two wires and pull them through so that there is still a little slack in the wire before it goes through the technic hole (it doesn't need to be pulled tight).





There is one wire on the right hand side of the ship. Grab the plug end and feed it through the hole in side of the long light grey technic brick.





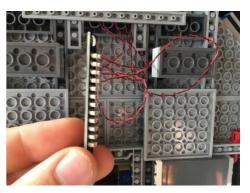
Remove the  $1 \times 12$  light grey plate that runs horizontally across the ship, just under where your wires are fed through the holes in the technic brick.

Spread the wires out and run them downwards. Hold the  $1 \times 12$  grey plate so that there is a gap between it and the brick in the middle that the wires will run in between. Make sure the wires run in between the studs of the  $1 \times 12$  grey plate.

Lock the 1 x 12 light grey plate back into position.







Grab the **12 Port Expansion Board** and connect the plug ends of the four **Bit Lights.** 

The **12 Port Expansion Board** can rest in the cavity under the ship near where it is or it can hang freely. Just remember that it is there so we don't damage as we work on other parts of the ship.





Place the Millennium Falcon back on its feet in front of you where you can easily access the gun turret on top of the ship.





Remove the gun turret from the turntable piece on top of the Millennium Falcon.

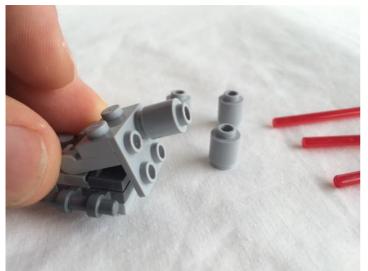


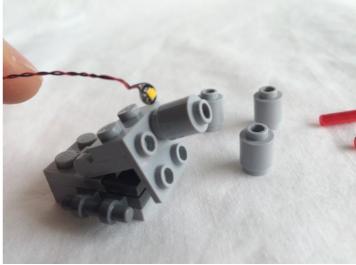


Remove the cone pieces with the technic pin pieces in them from the bracket piece.

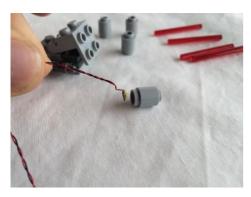


Grab the four Lego Light Grey 1 x 1 Round Bricks.

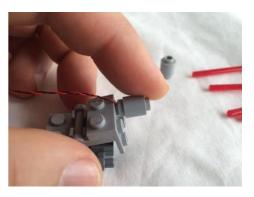




The **Lego Light Grey 1 x 1 Round Bricks** are going have a **Flashing White Bit Light** inside each of them and then be placed on the bracket piece where the cone pieces were.



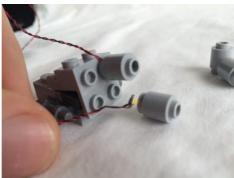




When fitting the **Flashing White Bit Lights**, make sure the yellow LED element is facing inside the round brick so when it is turned on, the light will shine out the smaller end of the round brick.

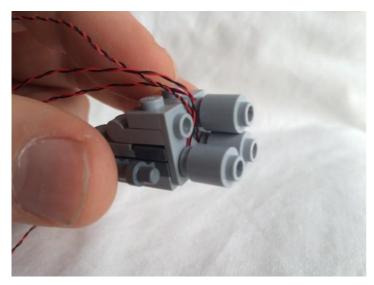
Place a **Flashing White Bit Light** just inside the larger end of the **Lego Light Grey 1 x 1 Round Brick**. Bend the wires similar to that shown in the picture above to make fitting easier. Fix the **Lego Light Grey 1 x 1 Round Brick** to the bracket piece where a cone piece was.

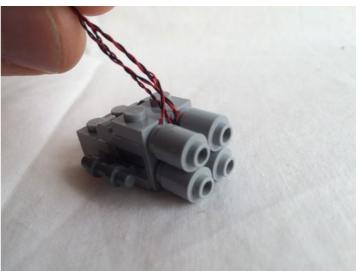






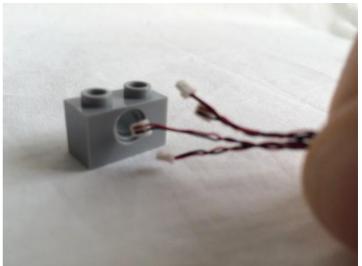
Try to run the wires towards the middle of the bracket piece. We want to run them together along the top of the gun turret.



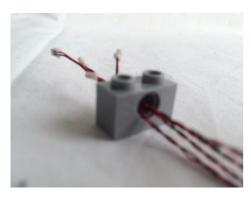


Attach the remaining Lego Light Grey 1  $\times$  1 Round Bricks with Flashing White Bit Lights inside them.





Find the **Lego Light Grey 1 x 2 Technic Brick** and feed the plug end of the cables through the hole in the centre of the brick.



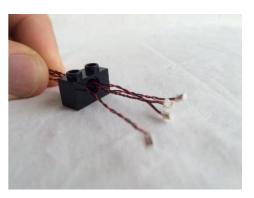




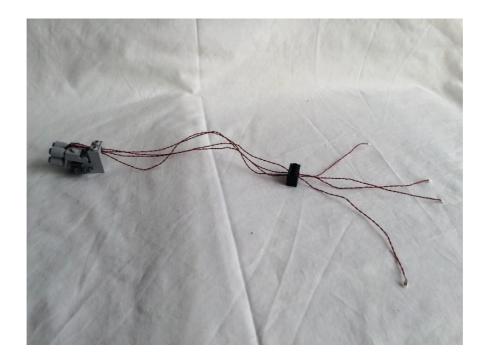
Pull the wires through and then attach the Lego Light Grey 1 x 2 Technic Brick to the piece immediately behind the hinge piece that has bracket piece attached to it.



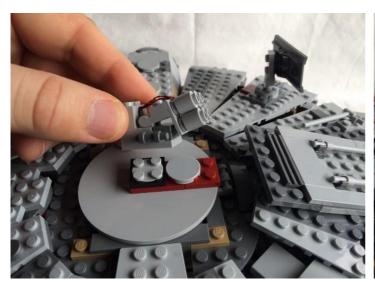




Find the second (any colour) Lego 1  $\times$  2 Technic Brick and feed the plug ends of the wires through the hole in the centre of it.



What you have now may look something like the picture above.





Reattach the gun turret to the turntable piece on top of the Millennium Falcon.







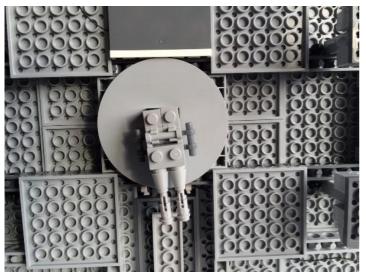
Lift the large round Lego piece (hatch) under the gun turret to reveal the gunner's compartment.

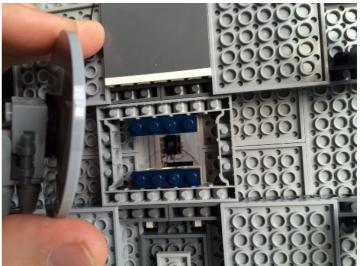
Attach the second (any colour) **Lego 1**  $\times$  **2 Technic Brick** to the 2  $\times$  6 light grey plate on the underside of the hatch.





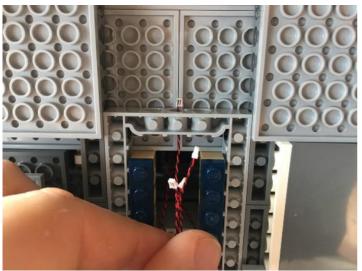
Lower the wires in to the gunner's compartment and close the top hatch.

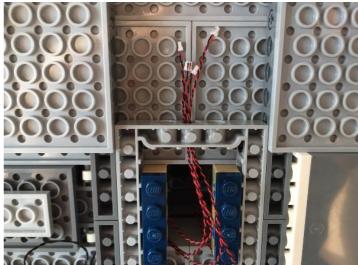




Flip the Millennium Falcon on to it's side so that you can access the bottom of the ship.

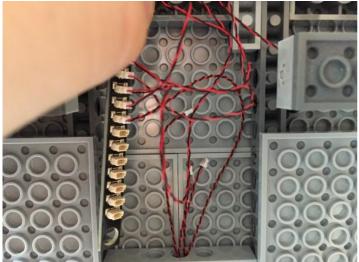
Remove the large round Lego piece (hatch) that the bottom gun turret is mounted to.

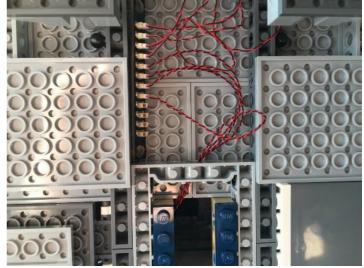




Pull the **Flashing White Bit Light** wires through the bottom of the gunner's compartment.

There is a square 6 x 8 technic piece surrounding the bottom of the gunner's compartment. Feed the **Flashing White Bit Light** wires through the available centre hole in the side of this piece that faces towards the front of the ship. This will feed them into the cavity where the **12 Port Expansion Board** is.

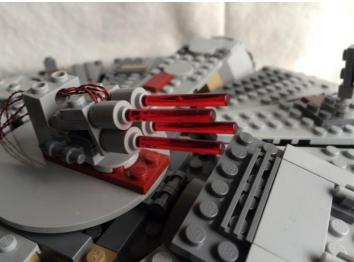




Plug the Flashing White Bit Light wires into the 12 Port Expansion Board.

Leave the gun turret hatch removed for now as we will be working in this area again soon.





Stand the Millennium Falcon upright again. Grab the **Lego Trans Red Lightsaber Bars** and fit them to the **Lego Light Grey 1 x 1 Round Bricks**. You don't need to push them all the way in. Remember, there is a **Flashing White Bit Light** in each one, so push them in gently.

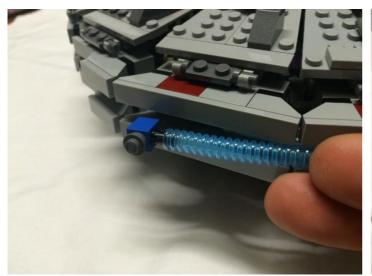
GREAT! Your plain grey guns are now light up laser cannons!

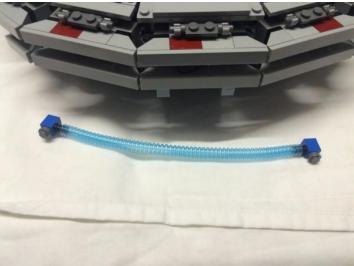
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You are ready to move on to the rest of the kit......

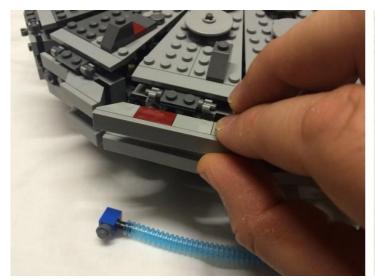


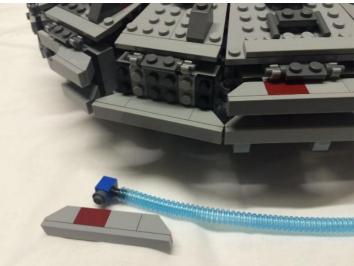
Turn the Millennium Falcon around so that the back section is facing you.

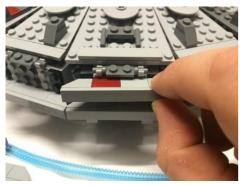




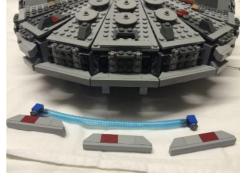
Remove the blue bricks with the dark grey round plates on top of them at either end of the long transparent light blue hose.



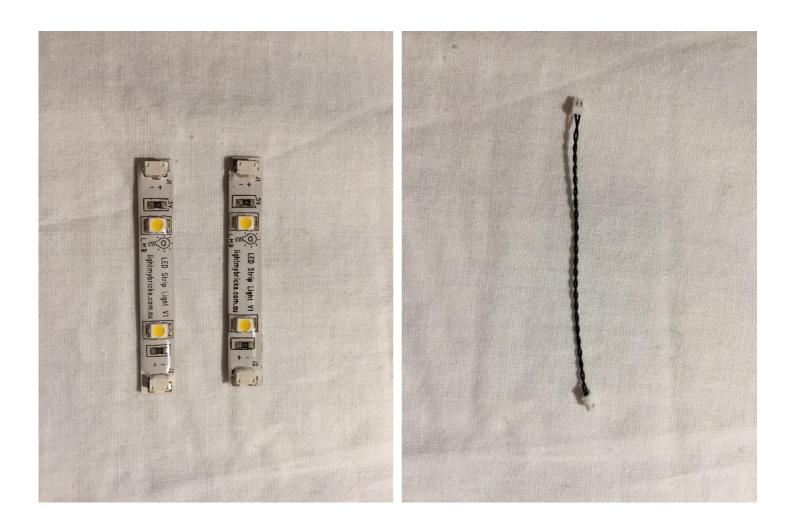








Remove the 1 x 6 light grey tile and the bricks attached to the tile (they should all come off together) from the three sections above where the hose was.



Grab two  ${\bf Strip\ Lights}$  and a  ${\bf 5cm\ Connecting\ Cable}.$ 





Connect the two **Strip Lights** using the **5cm Connecting Cable**.



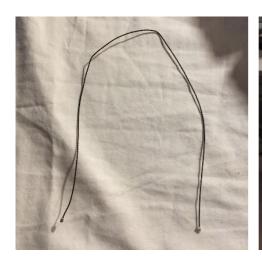


Peel the backing off the **Strip Lights** and in the middle of the joins of each section that had the  $1 \times 6$  tiles (and joined bricks) prepare to stick the **Strip Lights** on.

With the middle of the **Strip Light** in the centre of the join of each section, there will be enough of the sticky part on the back of the **Strip Light** to stick to two studs on both sections. Push them against the studs so they stick. They just need to be held here for now as the hose will also keep them in place permanently.



Both light strips stuck on should resemble the picture above.

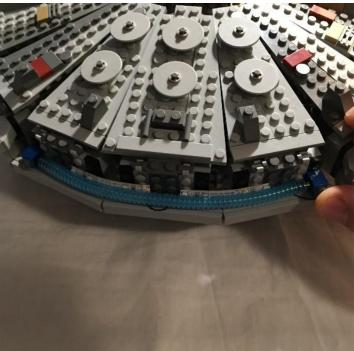




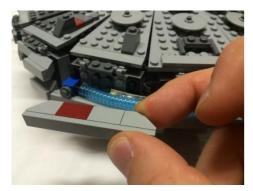


Grab the **30cm Extension Cable** and plug it in to the plug on the right hand side of the **Strip Light** on the right. Run the cable to the right and then down in between the next section.





Replace the two blue bricks attached to either end of the transparent light blue hose. The hose will need to sit a little further down the technic pin because it now needs to go over the **Strip Lights**.



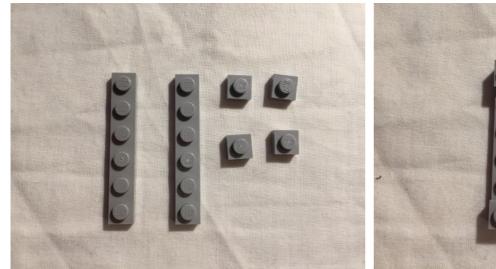




Replace the  $1 \times 6$  light grey tile with the bricks attached to the three sections above where the hose is.



Get all the items together from the photo above; three Lego Light Grey  $1 \times 6$  Plates, four Lego Light Grey  $1 \times 1$  Plates, three Strip Lights and two 5cm Connecting Cables.





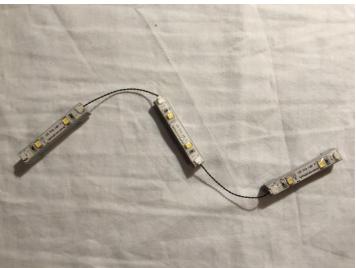
Put one of the Lego Light Grey 1  $\times$  1 Plates on each end of two of the Lego Light Grey 1  $\times$  6 Plates.





Peel the adhesive backing off the **Strip Lights** and stick them to the back of each of the **Lego Light Grey 1**  $\times$  **6 Plates**.





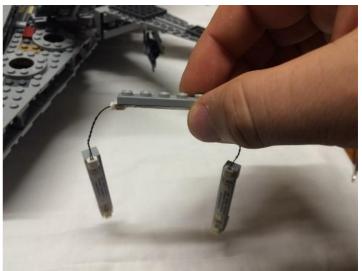
Put the **Lego Light Grey 1 x 6 Plates** that does not have **Lego Light Grey 1 x 1 Plates** attached to it in the middle of the other two. Connect the three **Strip Lights** together with the two **5cm Connecting Cables**.





Open up the Millennium Falcon and give yourself clear access to where Han Solo sits (when he's not in the cockpit!).





Get the **Strip Lights** ready. We are going to mount the centre one first.





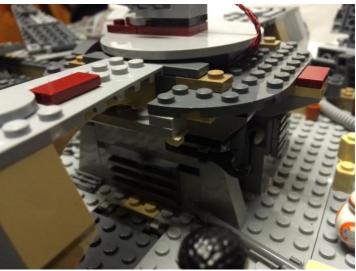
Directly above the console where Han Solo sits, there is a ledge that the  ${f Lego}$  Light Grey 1 x 6 Plate can attach to.





Follow the round edge of the dark grey round corner plate around to the right. Attach the **Lego Light Grey 1**  $\times$  **1 Plate** (that is attached to the **Lego Light Grey 1**  $\times$  **6 Plate**) to the corner of the dark grey round corner plate.







The Lego Light Grey 1  $\times$  1 Plate on other end of the Lego Light Grey 1  $\times$  6 Plate will attach to the corner of another dark grey round corner plate.





From where Han is sitting, follow the round edge of the dark grey round corner plate around to the left. Attach the Lego Light Grey  $1 \times 1$  Plate (that is attached to the Lego Light Grey  $1 \times 6$  Plate) to the corner of the dark grey round corner plate.





The Lego Light Grey 1  $\times$  1 Plate on other end of the Lego Light Grey 1  $\times$  6 Plate will attach to the corner of another dark grey round corner plate.

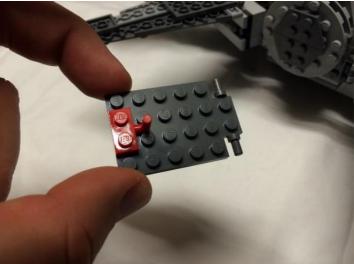




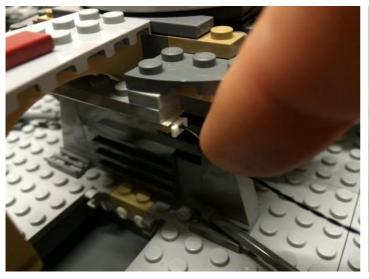
Grab the **15cm connecting cable.** We are going to use it to connect the **Strip Lights** to the **12 Port Expansion Board.** 

With the ship facing away from you, locate the **Strip Light** on the left hand side. The available port on the **Strip Light** will be sitting above a wrench mounted on the wall.





In the floor beneath the **Strip Light** is the hidden storage compartment. Lift the compartment hatch and pull it out of the clips that it is attached to.





Connect the **15cm** Connecting Cable to the Strip Light. Run the **15cm** Connecting Cable around the back of the wrench clipped to the wall. Run the cable down and inside the hidden compartment. Run the cable down the right hand side of the clip on the right.

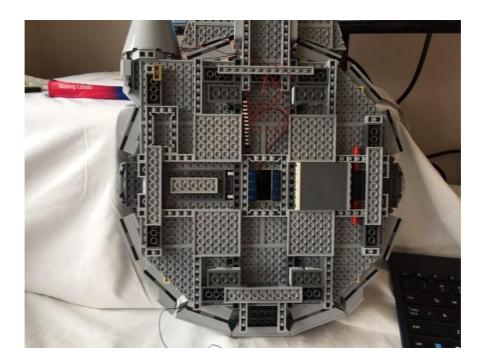




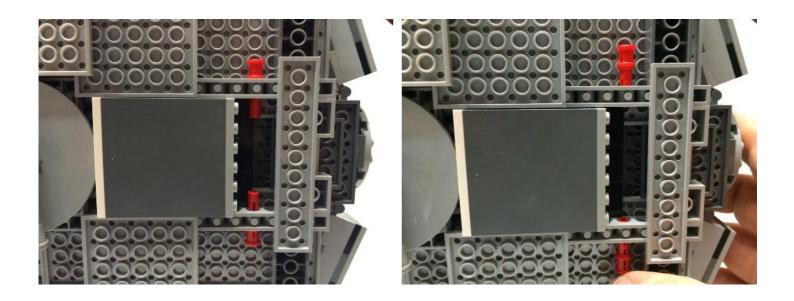
Reattach the compartment hatch. Place the available plug of the **15cm Connecting Cable** inside the compartment with any excess cable that now runs below the hatch hinge. Close the hatch.





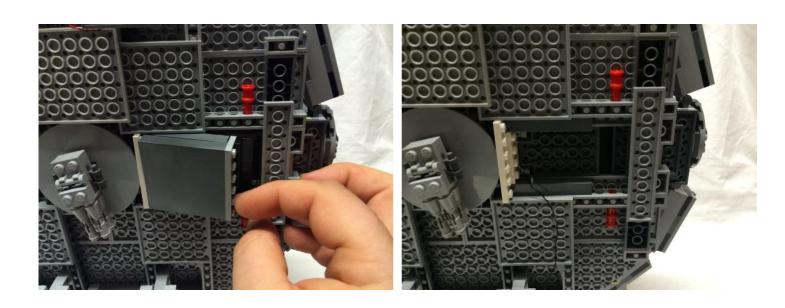


Close up the Millennium Falcon and stand it on its end so that you can access the bottom of the ship.

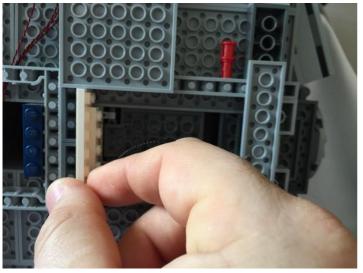


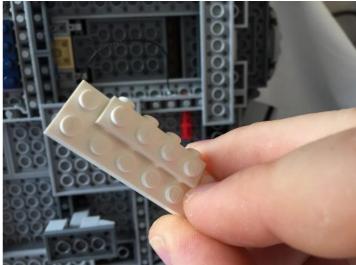
On the right hand side of the ship is the bottom panel of the hidden storage compartment.

Push the red technic pins with stop bushes out.

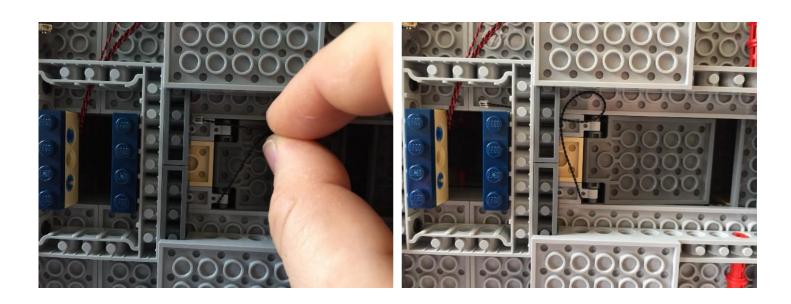


Pull the hidden compartment down an off the plates it is attached to. The **15cm Connecting Cable** should now be hanging freely down.

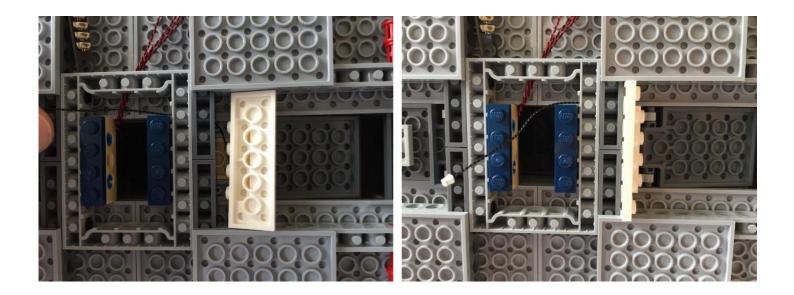




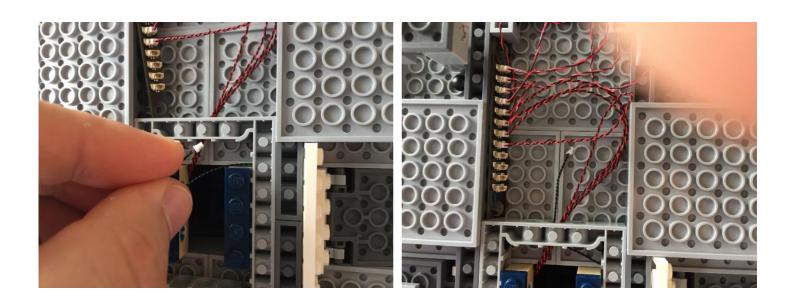
Remove the  $2 \times 6$  white modified plate.



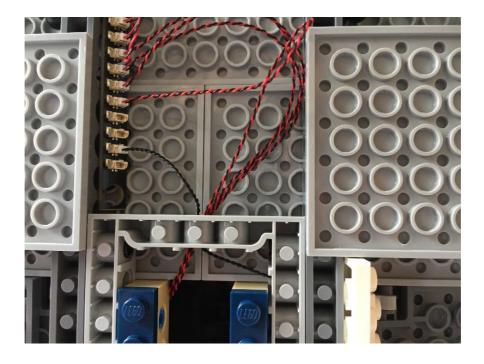
Run the plug end of the **15cm Connecting Cable** through the side of the technic brick so that it comes out above the blue 1 x 4 plate.



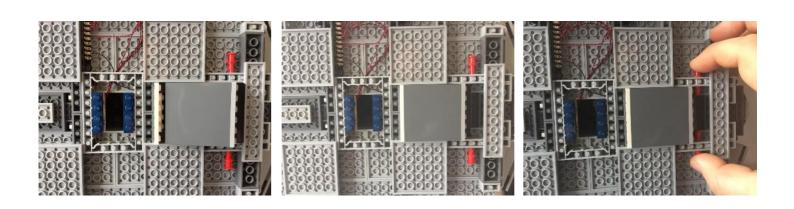
Pull the cable through and grab the white  $2 \times 6$  modified plate. Reattach the white  $2 \times 6$  modified plate making sure that the **15cm Connecting Cable** runs in between the studs of the white  $2 \times 6$  modified plate that are going to be locked in to place.



Run the plug end of the **15cm Connecting Cable** up through the same hole in the technic brick that the **Flashing Bit Lights** are running through.



Connect the **15cm Connecting Cable** to the **12 Port Expansion Board.** 



Replace the hidden compartment and push the red technic pins with stop bushes back in.

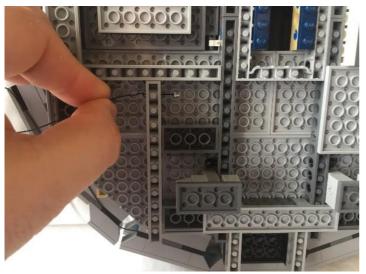


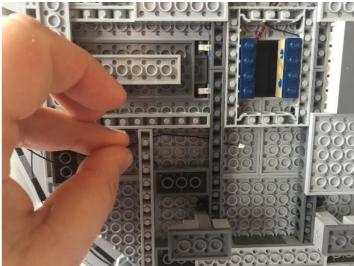




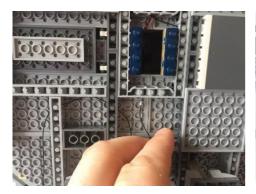
Look to the bottom left of the ship. The **30cm Connecting Cable** should be visible down there.

There is a  $6 \times 6$  plate above the bottom left landing gear. Remove the  $6 \times 6$  plate.

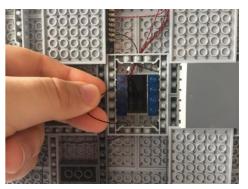




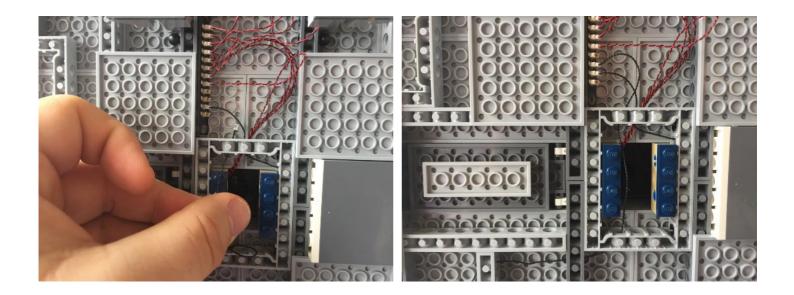
Feed the 30cm Connecting Cable through the side of the technic brick. The cable runs underneath where the  $6 \times 6$  plate was.





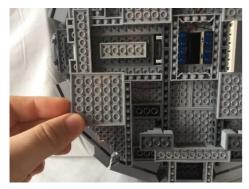


Run **30cm Connecting Cable** up through the left most available hole in the side of the square 6 x 8 technic piece that surrounds the bottom of the gunner's compartment.



Continue to feed the **30cm Connecting Cable** up through the left most available hole in the top side of the square  $6 \times 8$  technic piece that surrounds the bottom of the gunner's compartment.

Plug the 30cm Connecting Cable into the 12 Port Expansion Board.

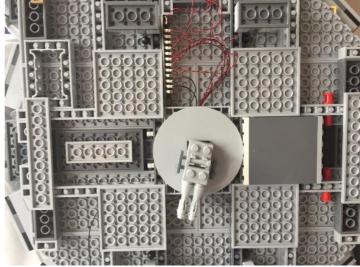






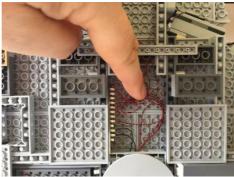
Replace the 6 x 6 plate above the bottom left landing gear.

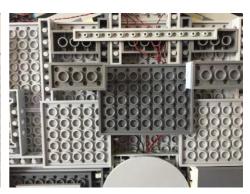




Replace the hatch and bottom guns.







Grab the **Lego 6 x 8 Plate or 8 x 8 Plate**. We are going to put it over the top of the **12 Port Expansion Board** and excess wire to ensure they stay up and out of the way.

Slide the **12 Port Expansion Board** inside the cavity where it should roughly be already. If vertical, the **12 Port Expansion Board** will fit perfectly inside the cavity. Gather the excess wires together and then pin them under your finger.

Fix the 6 x 8 Plate or 8 x 8 Plate over the top.

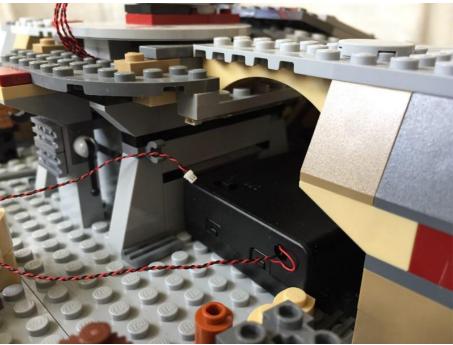




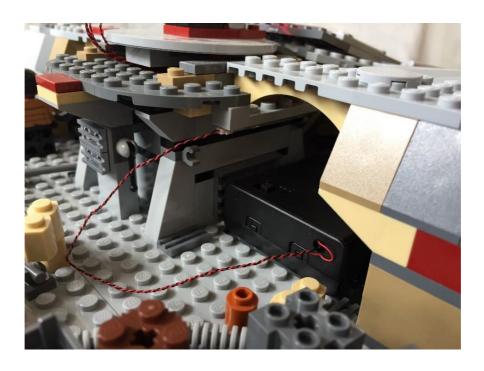
Stand the ship upright again with the front facing away from you. Open up the roof sections so you can access the interior of the back of the ship.

Locate the available **Strip Light** port that runs along the right hand side of the ship.





Grab the **Standard Battery Pack** and put three AA batteries in it. Slide the **Standard Battery Pack** in underneath the **Strip Light** you located. Make sure the On / Off switch is facing up and the wires are pointing towards the back of the ship.



The last thing to do is plug the **Standard Battery Pack** plug into the **Strip Light.** 

 ${\bf CONGRATULATIONS!\ You\ have\ finished.\ Turn\ the\ \bf Standard\ Battery} \\ {\bf Pack\ on\ and\ enjoy\ the\ lights!}$ 





