

CAROUSEL # 10257 Advanced Version

Package contents:

- 48x White 15cm Dot Lights
- 6x White Strip Lights
- 6x LEGO Plates 1x6
- 2x Multi-Colour Changing Light Strings
- 5x 12 Port Expansion Boards
- 8x 5cm Connecting Cables
- 2x 15cm Connecting Cables
- 10x Adhesive Squares

Power Option:

- 1x AA Battery Pack

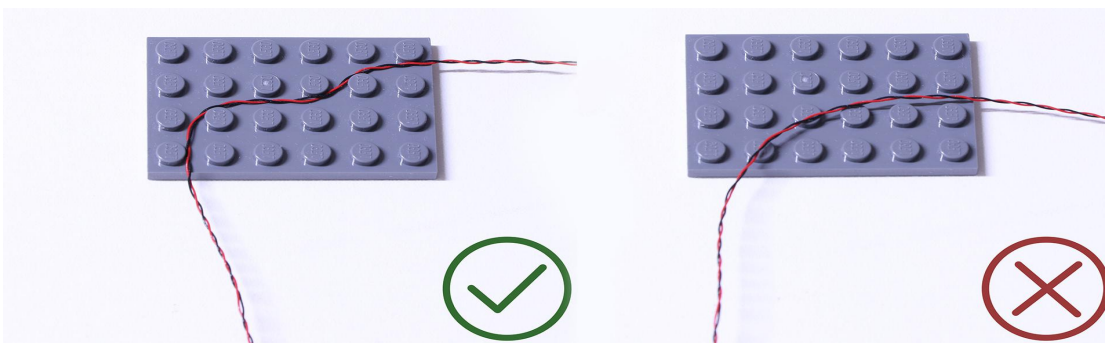
or

1x USB Cable 30cm

Note:

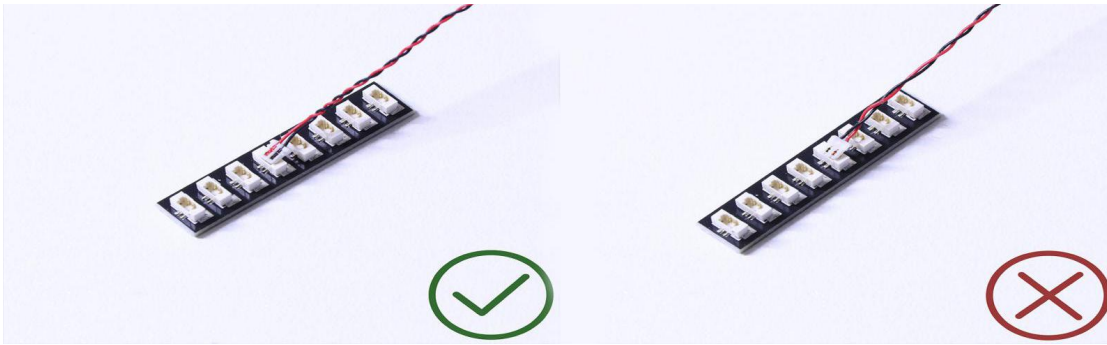
Place wires on the surface or under the LEGO building blocks.

The wire can be place between the building blocks or under the block, but they should be placed between the studs correctly.

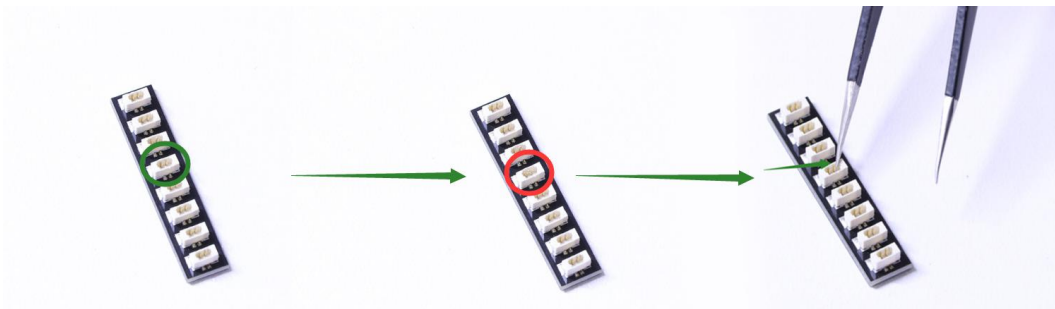


Insert the connectors to the ports.

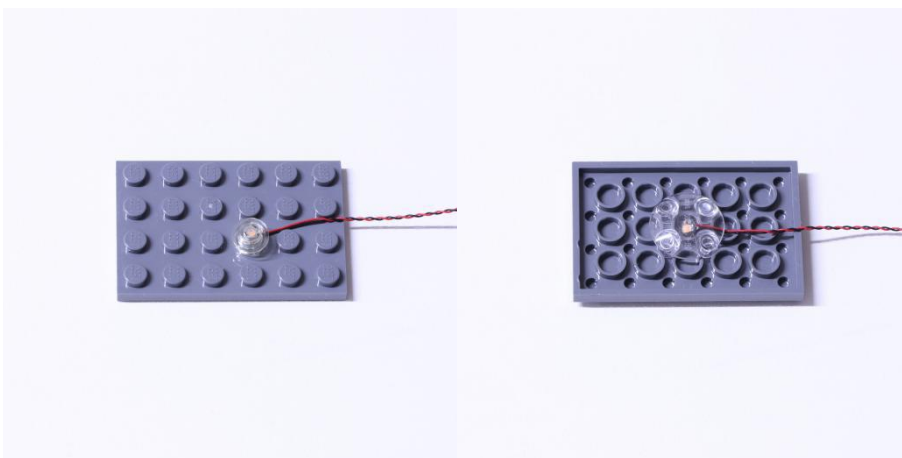
Be careful when you are operating, there's only one correct way to insert, make sure the expansion board is upward, find the soldered "=" sign on the left of the port. When you are inserting, the side which the wires can be seen should be faced to the "=" sign and if you feel hard to insert, please stop, and don't force it, for that may result in bent pins inside the port or overheating of the expansion board.



At this point, use the tweezers to straighten the bent pins.

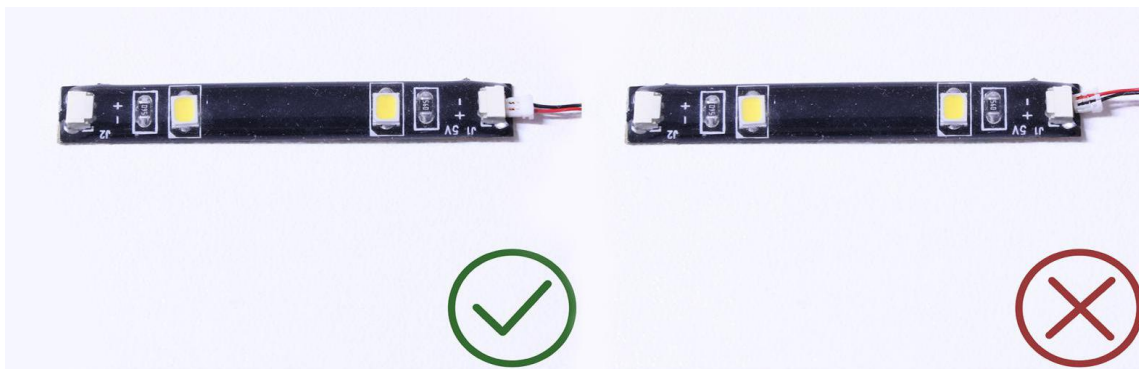


When installing dot lights, make sure they are correctly placed (Yellow LED package is exposed). You can put them either on the top of the studs or between studs.

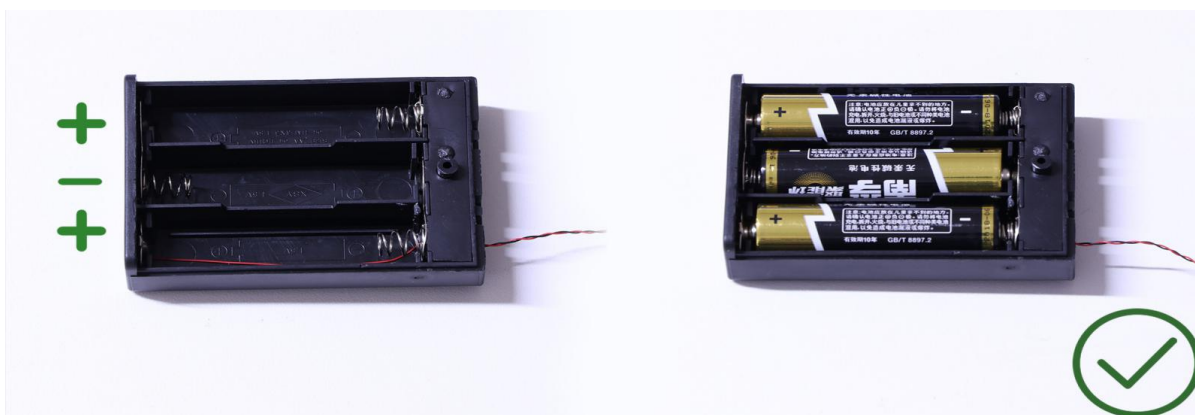


Connecting cable connectors to Strip Lights

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.



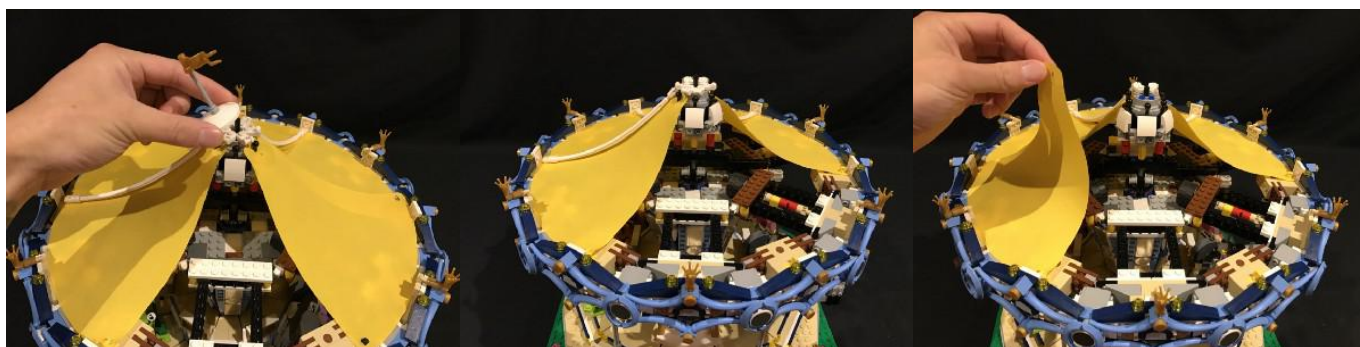
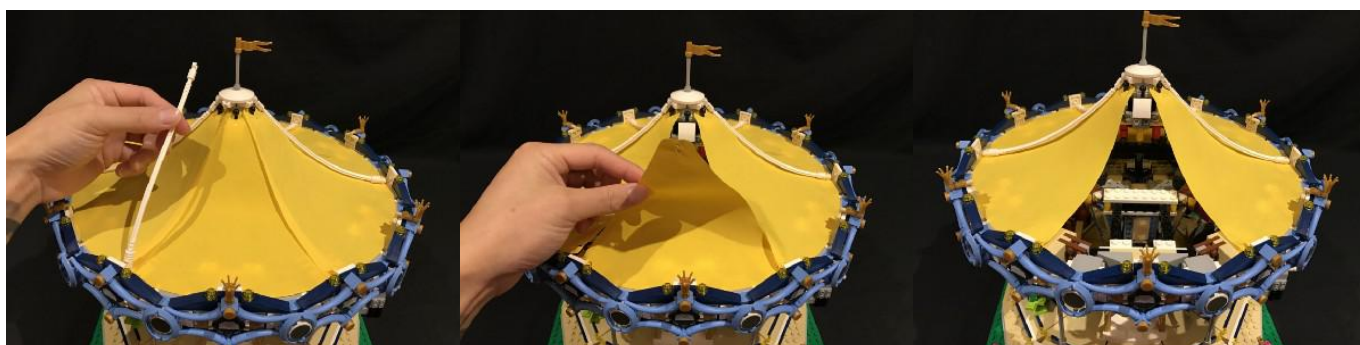
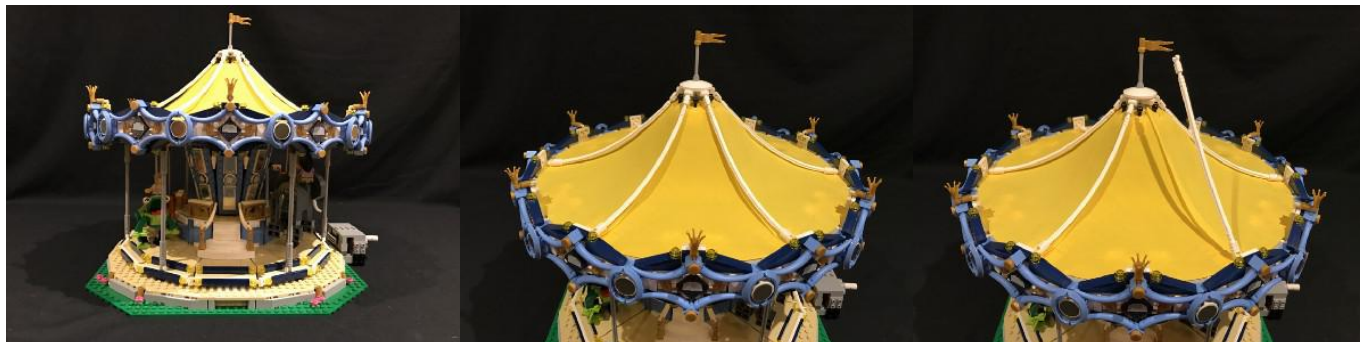
Finally, please pay attention to the positive and negative terminals of the battery when installing the battery case.



OK, Let's Begin!

Instructions for installing this kit

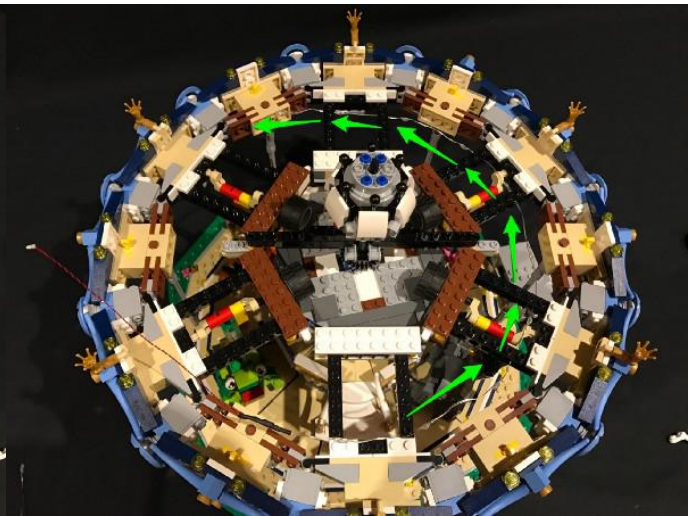
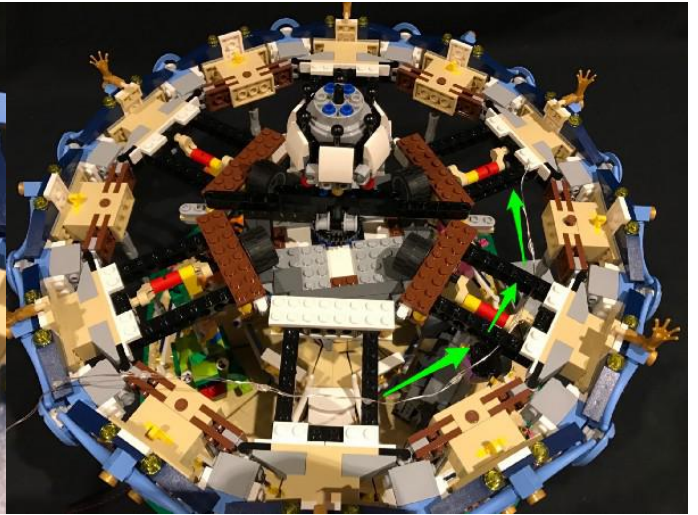
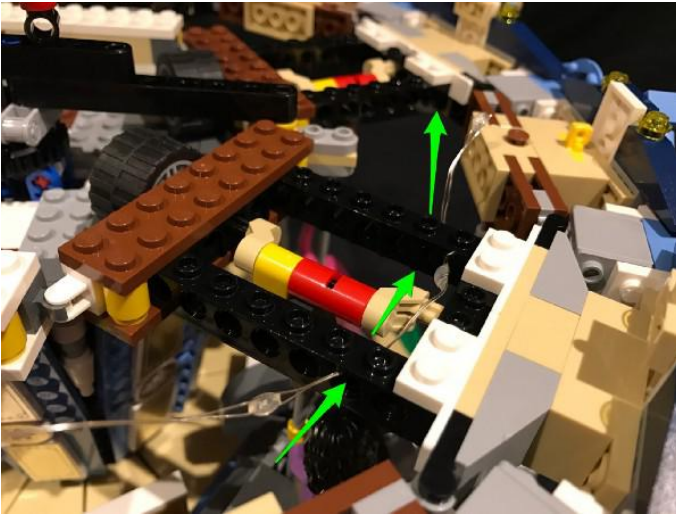
1.) All of the lights will be installed to the top of the Carousel. In order to get inside, follow the below images to remove the sections of roof off the carousel:



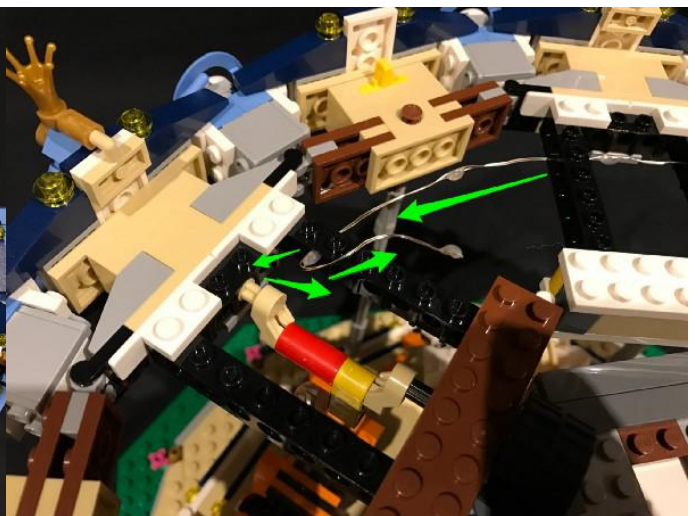
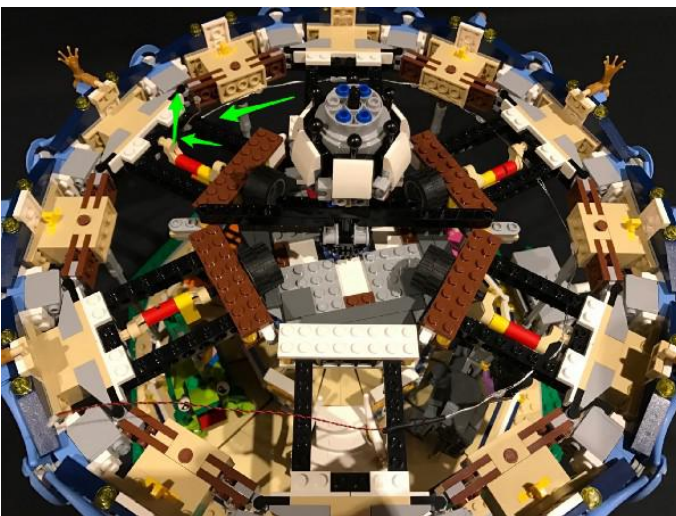
2.) The first lights we will install will be the 2x **Multi-Colour Changing Light Strings**. Take one of the light strings and then thread the top of it through the side of one of the the black technic bricks (through the second hole closest to the front).



Continue threading the light string all around the carousel through the holes (second hole closest to the front) of the black technic bricks until you get about half way around.



After threading the first Light String about half way, secure it in place by bending the tip up and then threading back around through the next hole of the black technic brick.





You may have a fair dot of excess light string on the opposite side (connector side). To secure this section in place, pull the end of the light string the opposite way and then thread the light string around and through the 3rd and 4th holes along the black technic brick as per below.



3.) Take a **12-Port Expansion board** and connect the light string to the first available port.





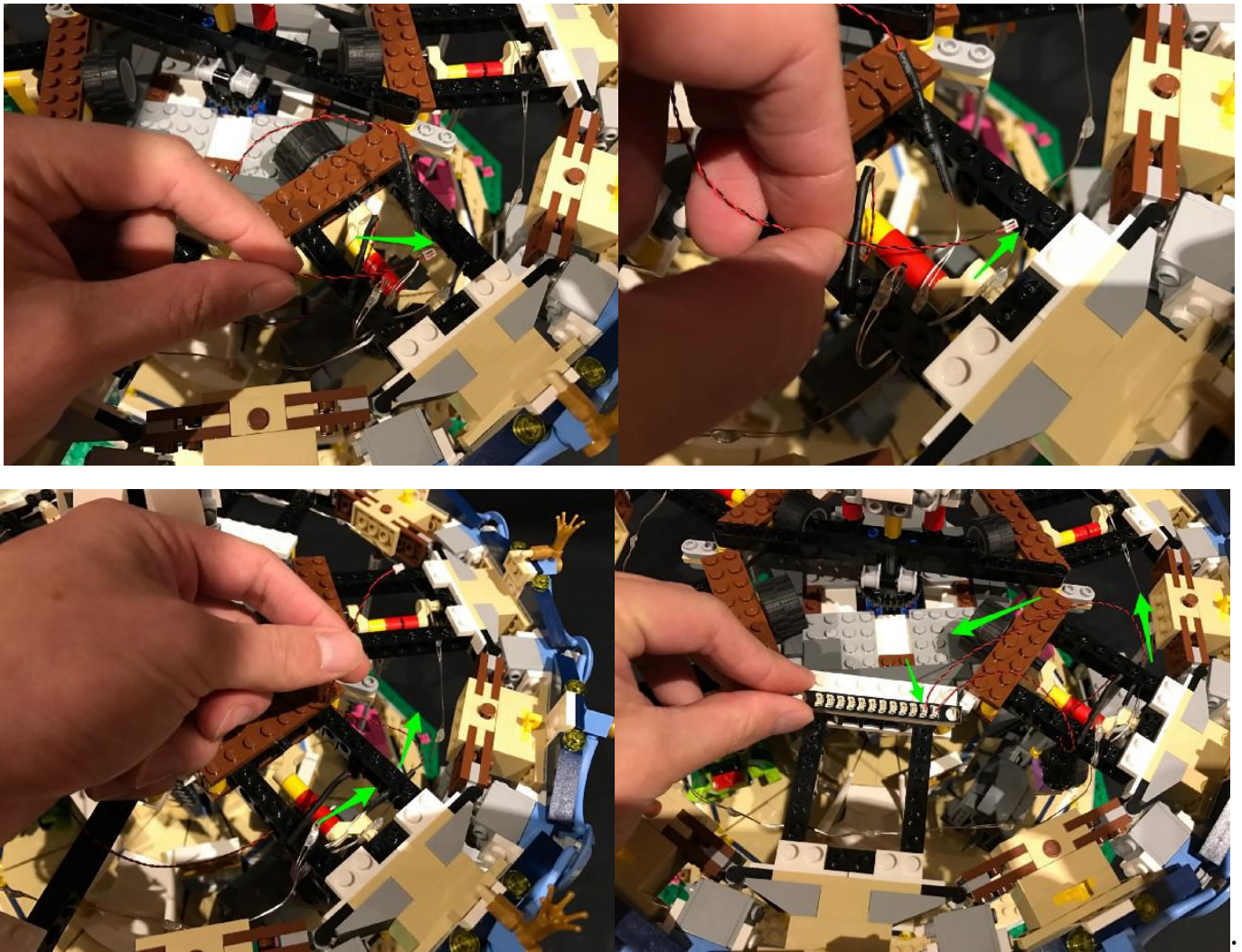
4.) Take the second **Multi Colour Changing Light String** and then thread the top through the same hole we started the first Light String except in the opposite direction.



Continue threading this light string right around the carousel (using the same method we used for the first light string) until you reach the end of the first light string.



Thread the other end of the second light string through the following hole and then pull all the way through and connect to the next available port on the 12-port Expansion Board.



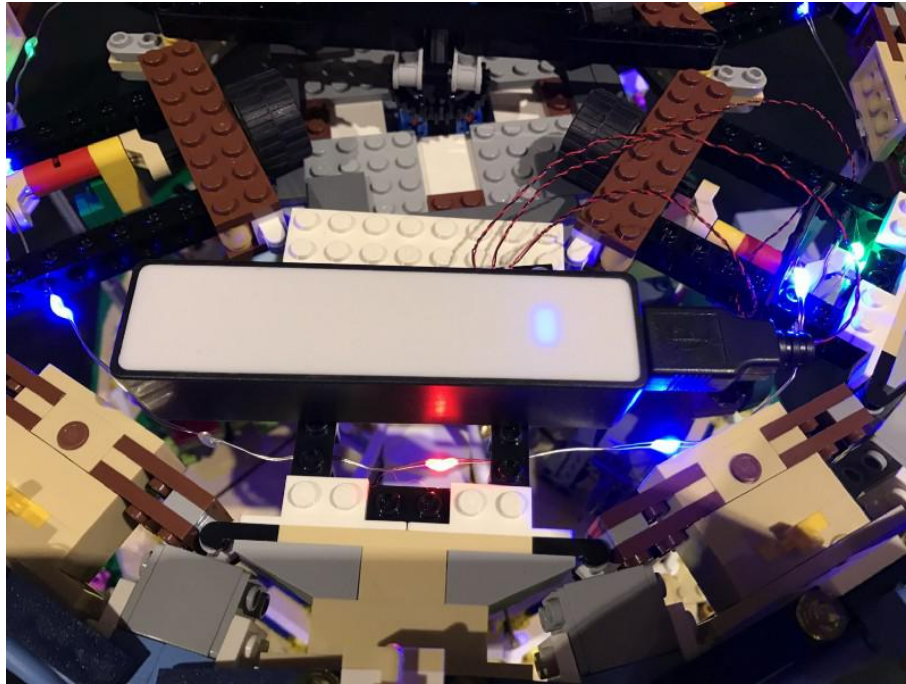
5.) We will now secure the 12-port Expansion Board. Take 2x **Adhesive squares** and stick them to the back of the expansion board and then mount it to the following position on top of the Carousel.



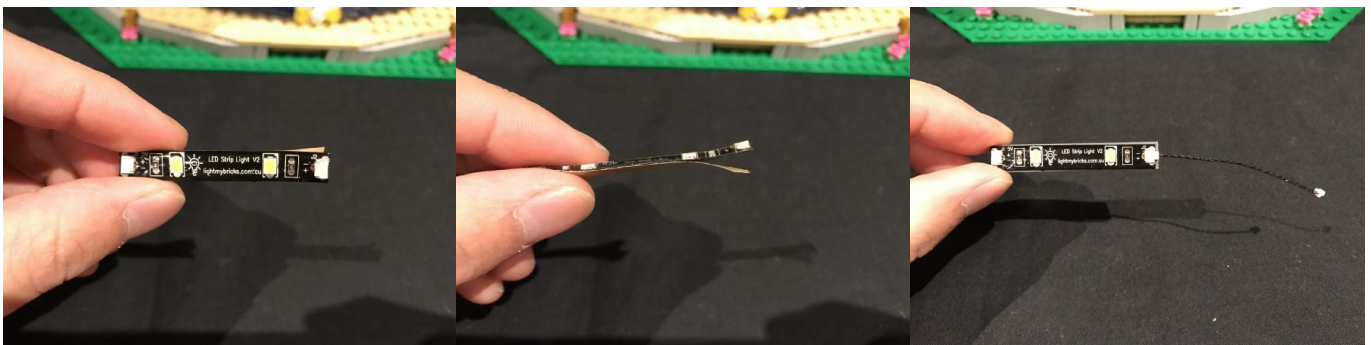


6.) Take this time to test to ensure the two light strings we have installed so far are working ok when winding the carousel around. Take the **AA Battery Pack** or **USB Cable 30cm** and connect it to any of the ports on the expansion board. Turn on the Battery Pack (or Connect the USB Cable to your USB Power Bank). Wind the carousel around and around and ensure the Light Strings are not getting caught with the different animal's poles.





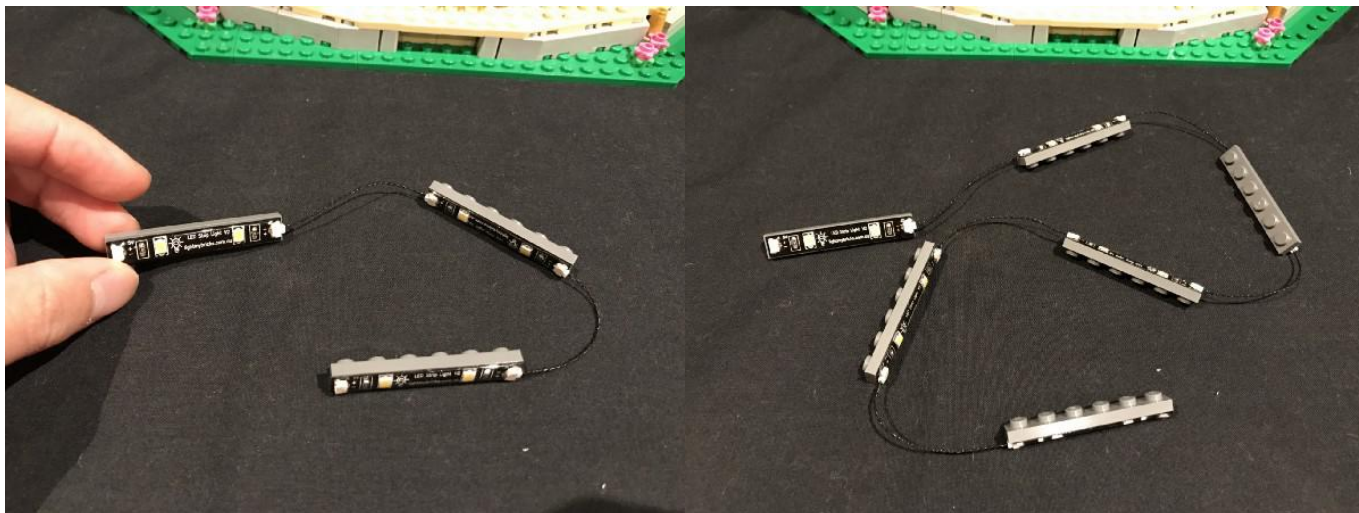
7.) Take a **White Strip Light** and then carefully peel off the adhesive backing to allow you to stick onto the base of a provided **LEGO 1x6 Plate**. Connect a **5cm Connecting Cable** to the right port.



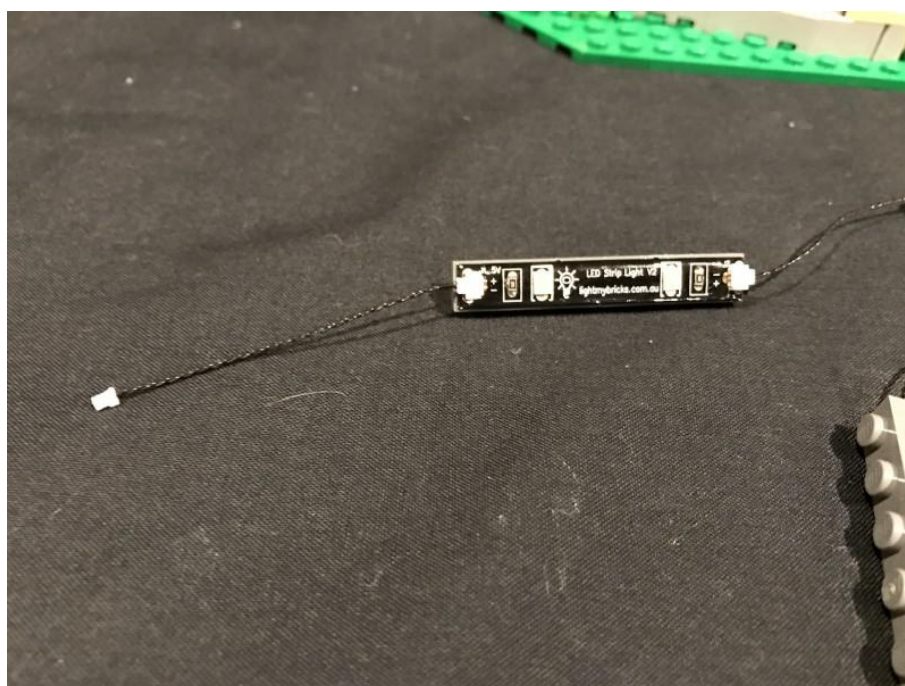
Connect the other end of the connecting cable to another **White Strip Light** (first stick onto LEGO 1x6 Plate).



Continue this process to connect **6x White Strip Lights** (using total of five **5cm connecting cables**)



Take one more **5cm connecting cable** and connect it to the end of one of the White Strip Lights.



8.) Take all 6 Strip Lights over the top of the Carousel and then connect the other end of the 5cm connecting cable to the port on the expansion board second from the left.



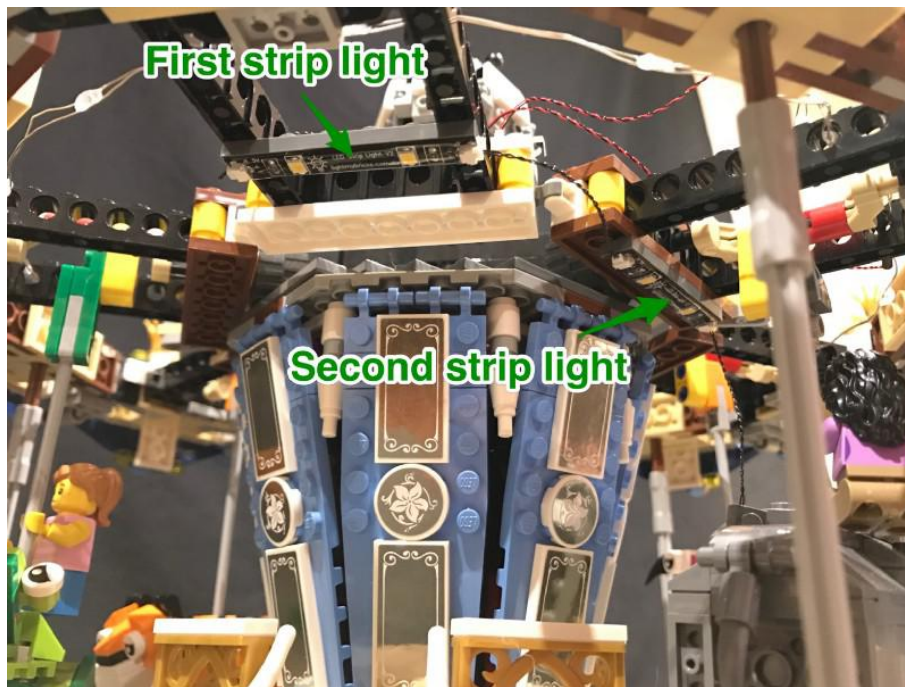
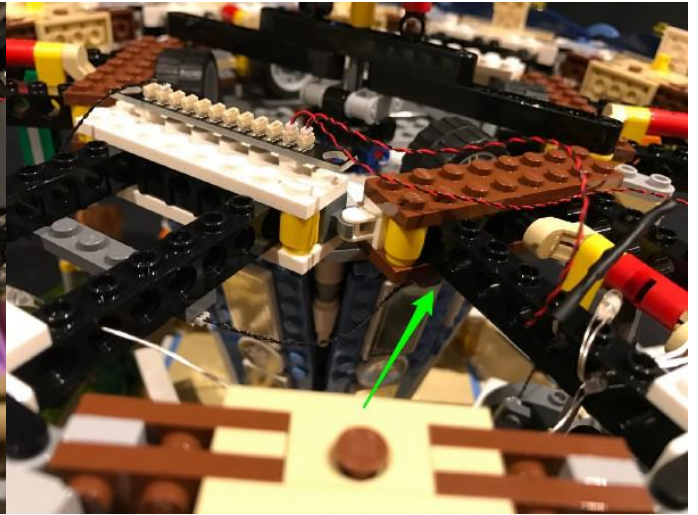
Thread all of the strip lights down the spacing which leads below.



9.) Mount the first Strip Light to the top of the Carousel in the following position.

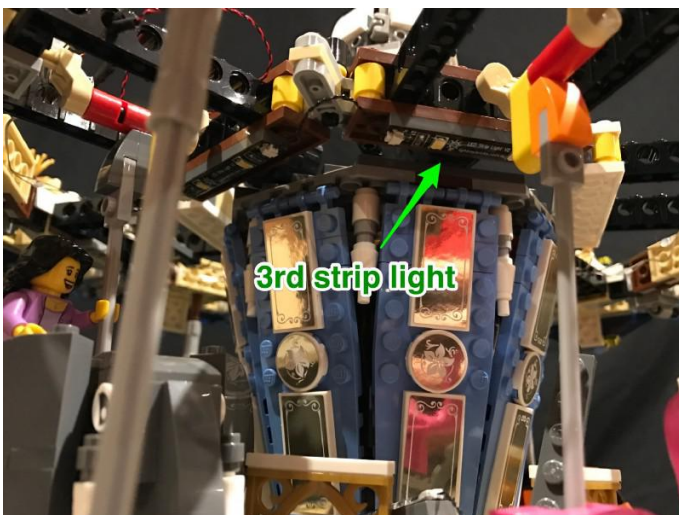


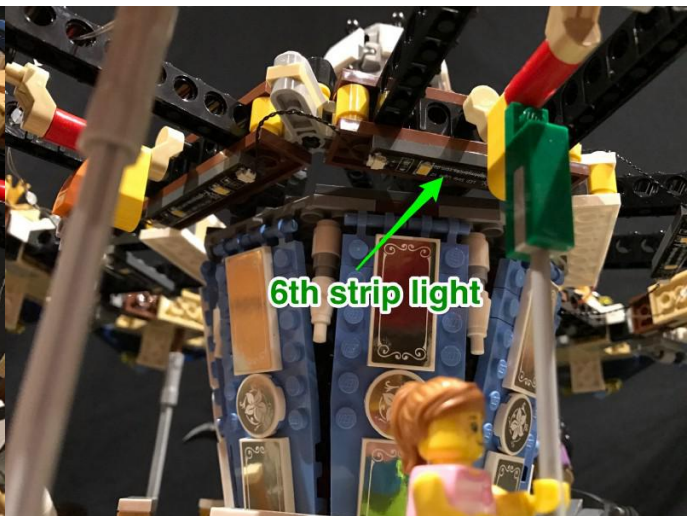
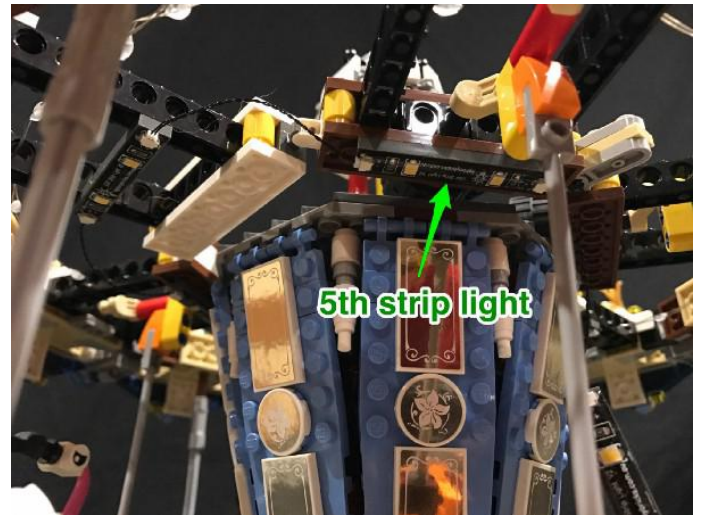
Mount the second strip light to the next section on the right to the following position.



Ensure you mount the strip lights to the exact same position as above

Continue to mount the next 4 strip lights around the top of the carousel ensuring you position them exactly as shown in the below images.





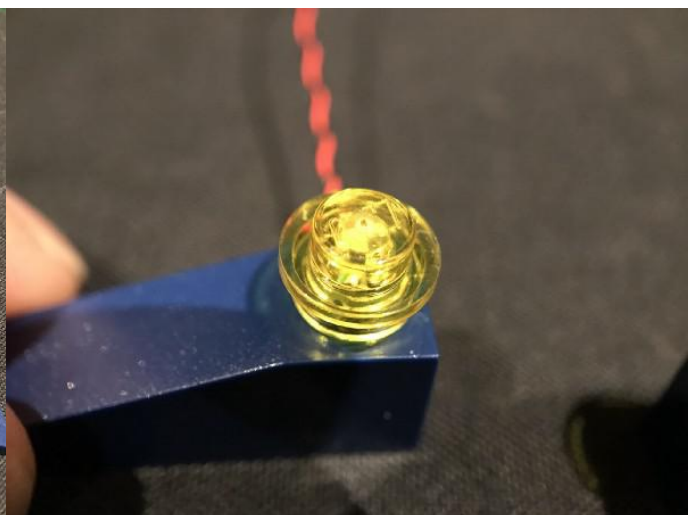
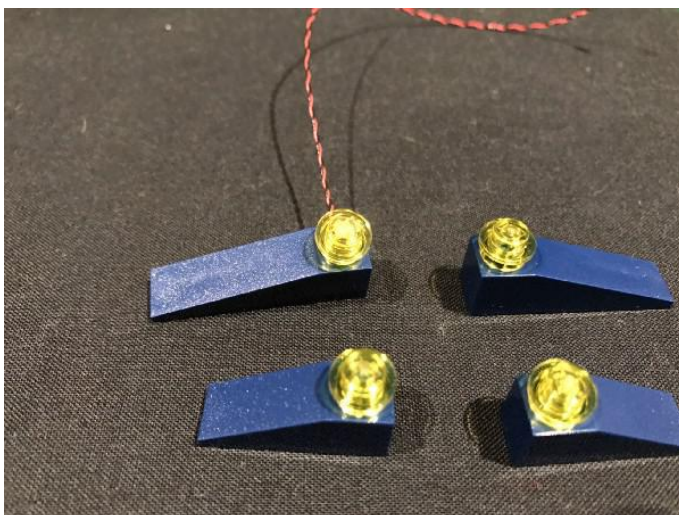
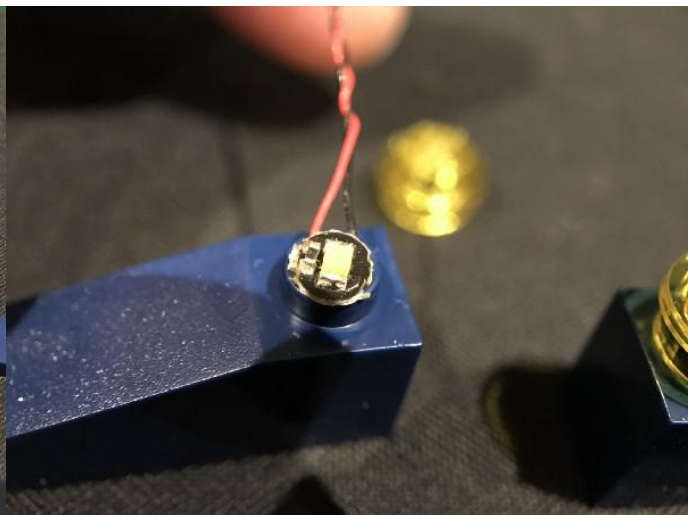
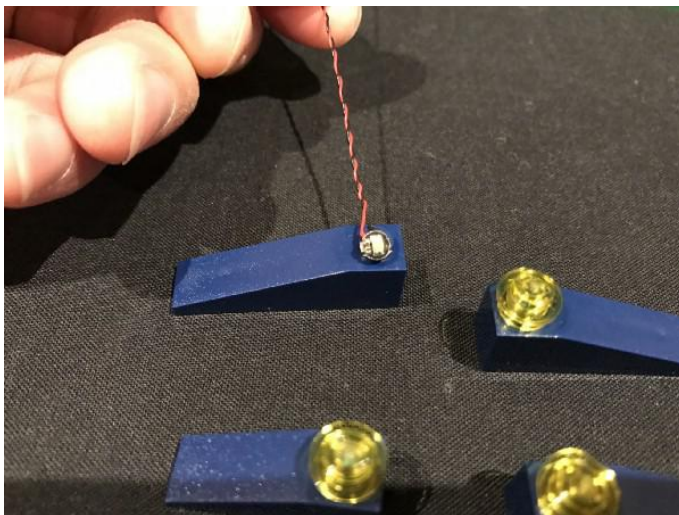
Once all 6 Strip Lights are installed, test that all lights are working OK by connecting back your Battery Pack (or USB cable) to a spare port on the expansion board and turn 'ON'.

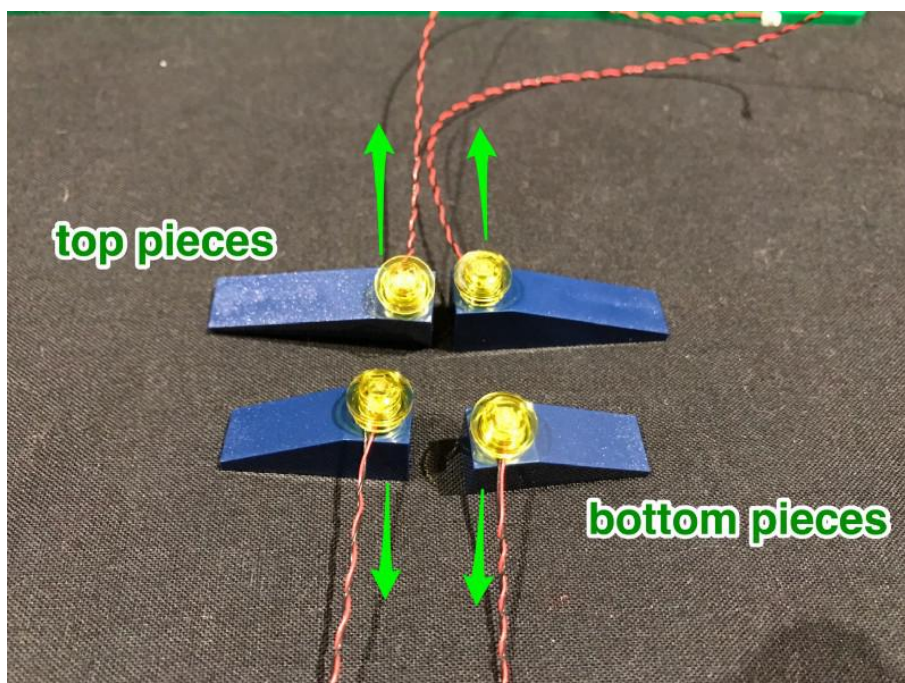
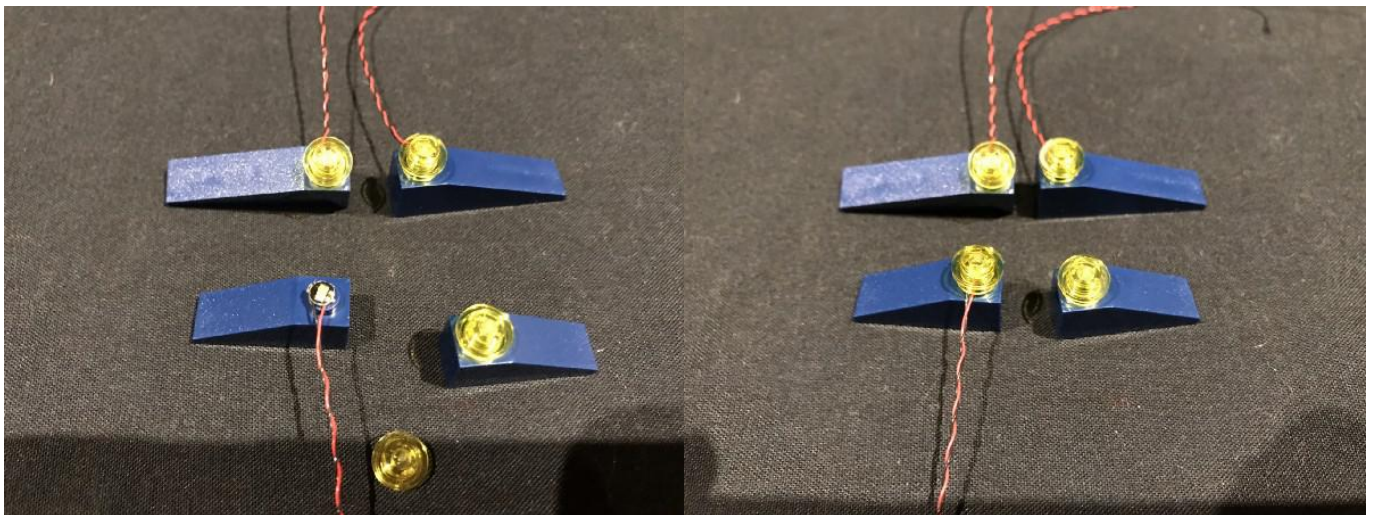
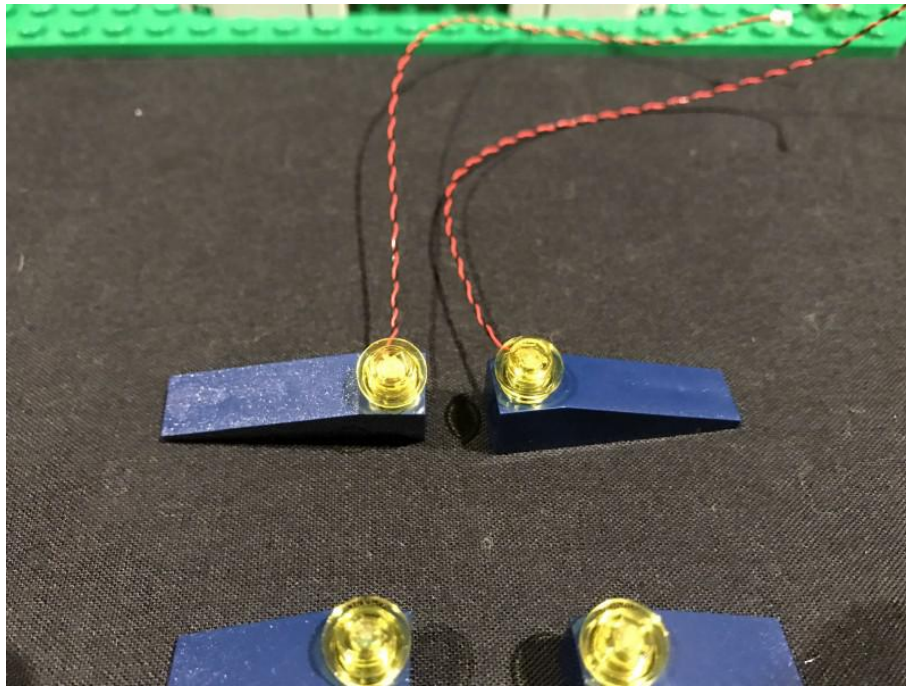


10.) We will now connect lights all around the top of the carousel starting with the first section closest to the 12-port expansion board. First remove the following sections from the top and bottom as per below:



11.) Disconnect the trans yellow LEGO pieces and then take **4x White 15cm Dot Lights** and install them by placing them directly over the LEGO studs and then reconnecting the trans yellow LEGO pieces over the top of them to secure them in place. Ensure the cable for each dot light is facing toward the back of the LEGO piece the way you would be reconnecting them.





12.) Reconnect the pieces (with dot lights installed) back to the top of the Carousel ensuring the cable is facing behind.



For the bottom dot lights, thread each cable up the space behind and then pull up from the top.

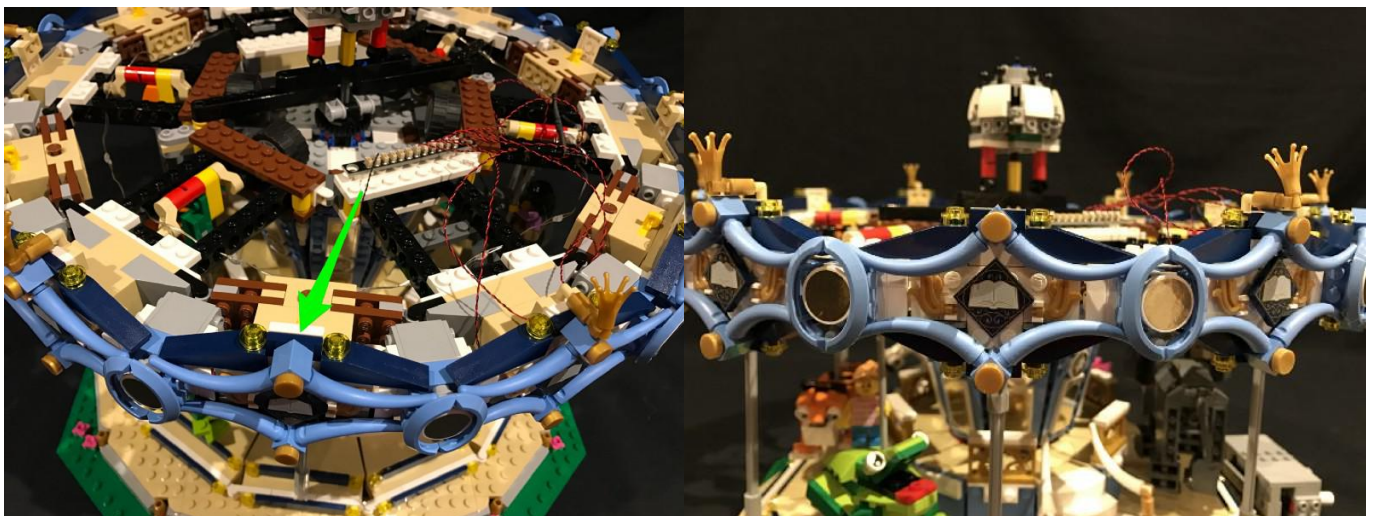


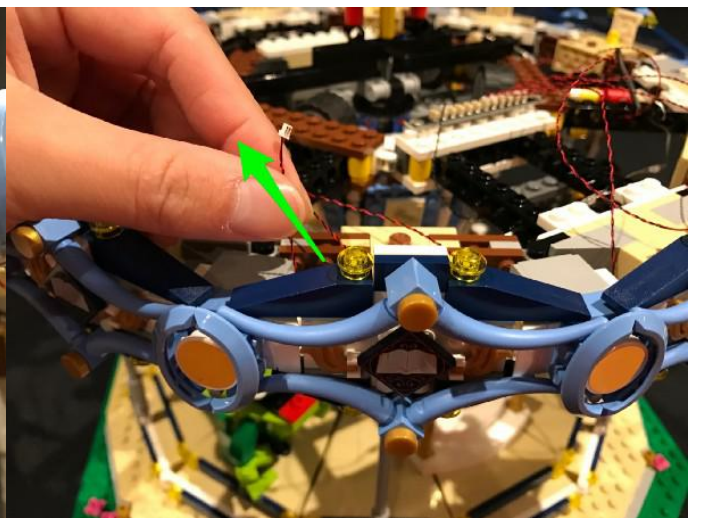
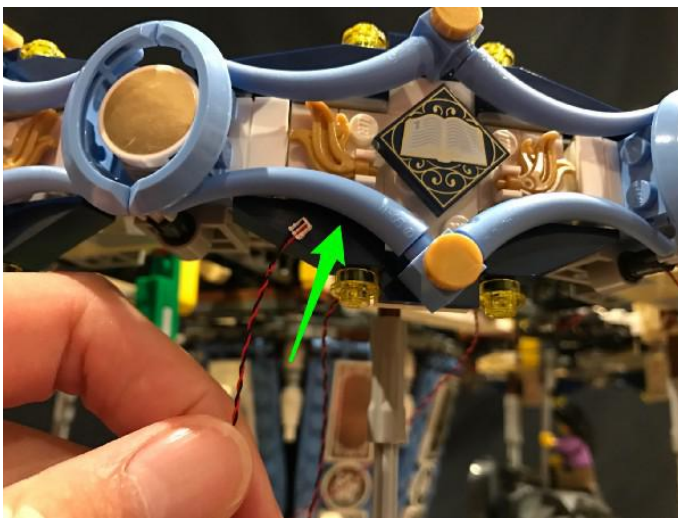
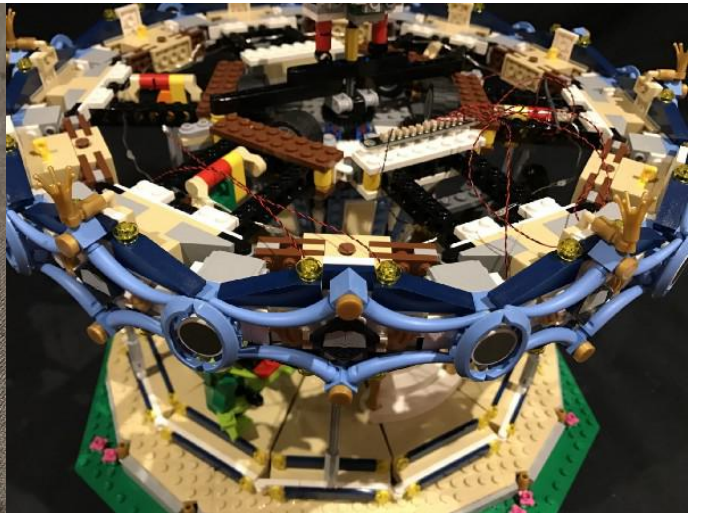
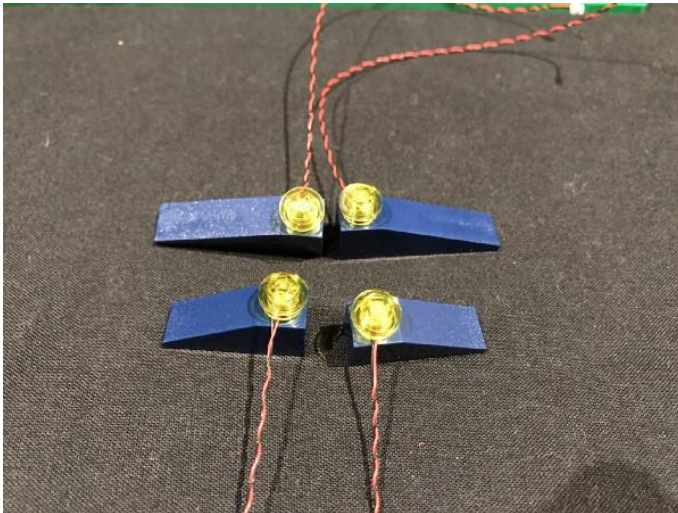


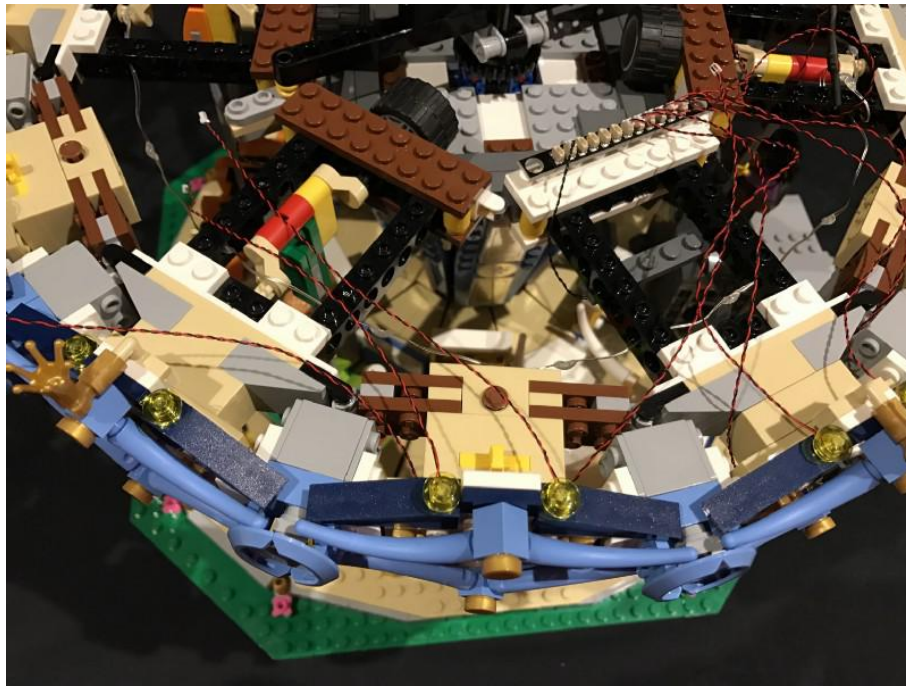
Connect all 4 cables to the next available ports on the 12-port Expansion board.



13.) We will now move onto connecting lights to the next section to the left. Disconnect top and bottom pieces and then repeat steps 11 and 12 to install another 4x **White 15cm Dot Lights**.







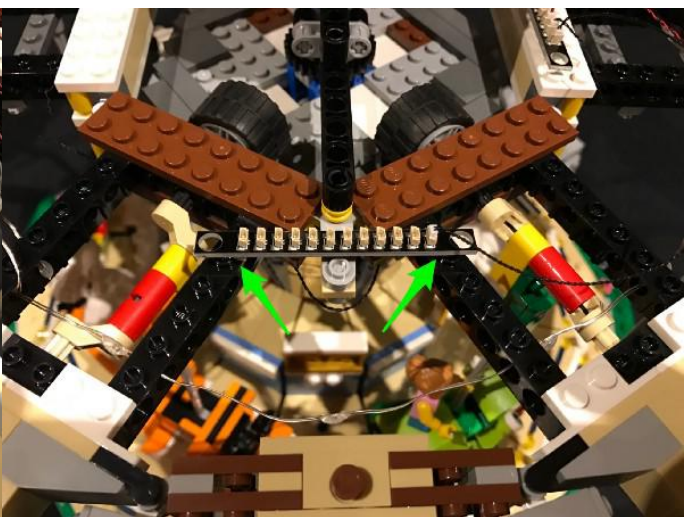
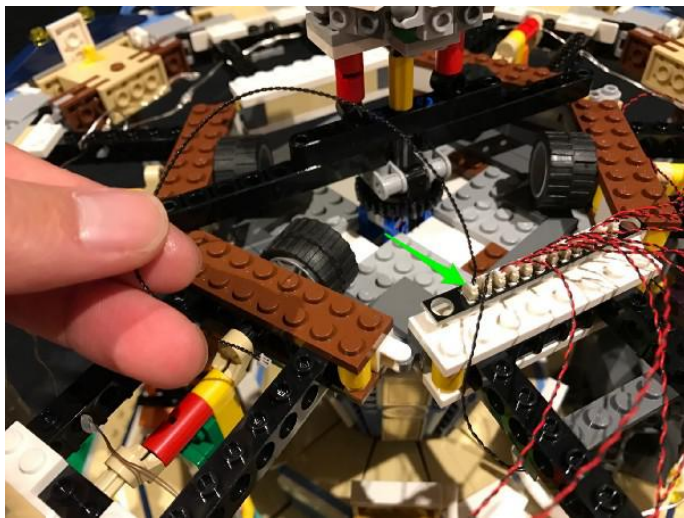
Ensure you thread the bottom cables up to the top and then connect all 4 cables into the next available ports on the 12-port expansion board keeping the far left port free.



Test that all lights are working OK by connecting back your Battery Pack (or USB cable) to a spare port on the expansion board.



14.) Take a **15cm Connecting Cable** and then connect it to the far left port on the 12 port expansion board. Connect the other end of the cable to another **12 Port Expansion board** then mount the expansion board to the following position using 2x **adhesive squares**.



15.) We will now install lights to the next 2 sections to the left. Using the same method we used for the previous lights, install lights to the next 2 sections (**8x White 15cm Dot Lights**).





Remember to thread the bottom light cables up through to the top

Connect all 8 Dot Light cables to the first available ports on the 12-Port Expansion board (from right to left).

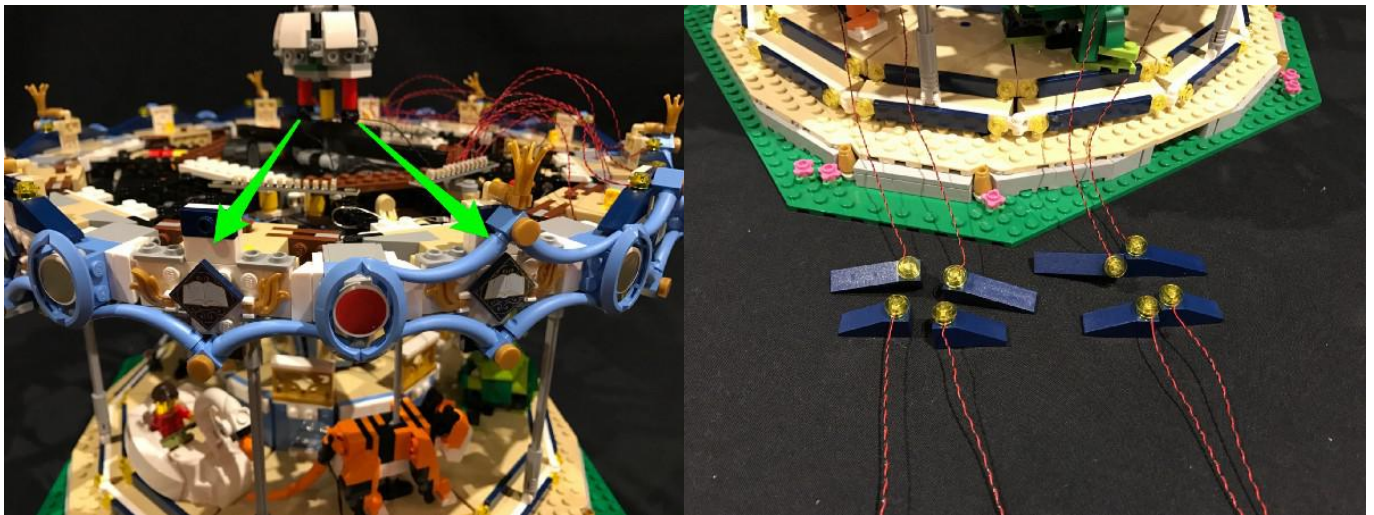


16.) Take a **5cm Connecting Cable** and connect it to the far left port on the expansion board and then connect the other end to a new **12-port Expansion Board** and then mount to the following position using another 2x **adhesive squares**.

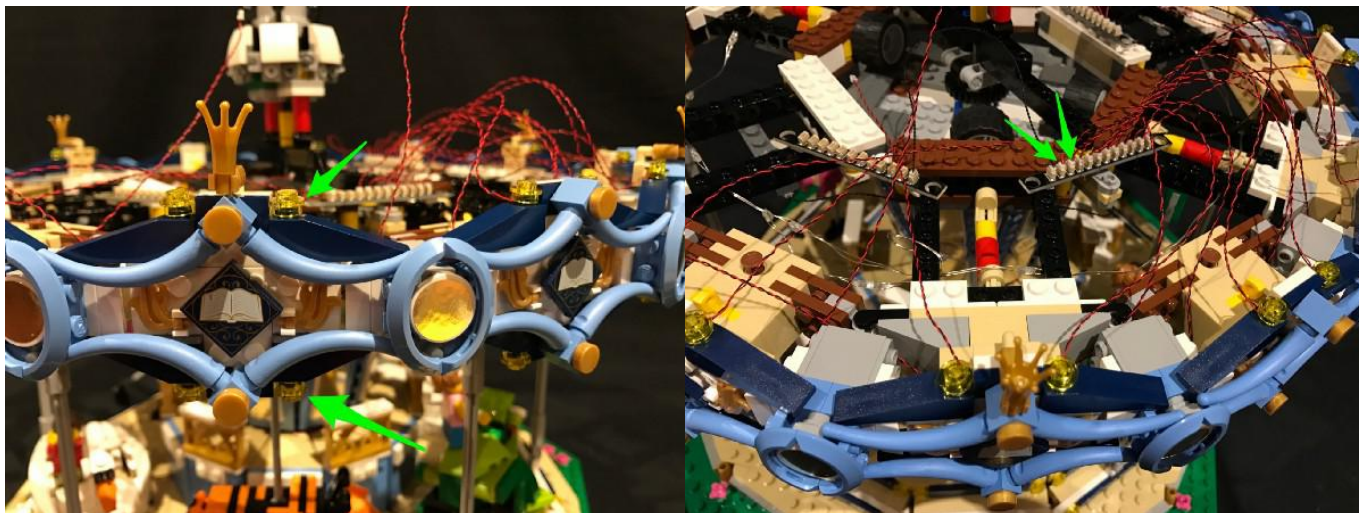




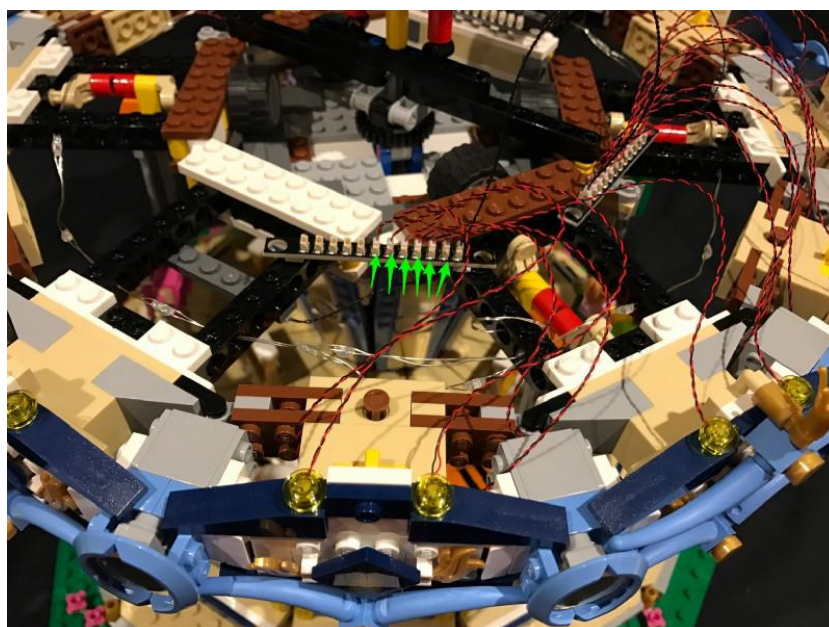
17.) Move onto the next 2 sections and install another **8x White 15cm Dot Lights** to these sections before reconnecting them to the top.



18.) Take the 2 lights from the right of the right section of lights and connect them to the remaining 2 ports on the 12-port expansion board to the right.



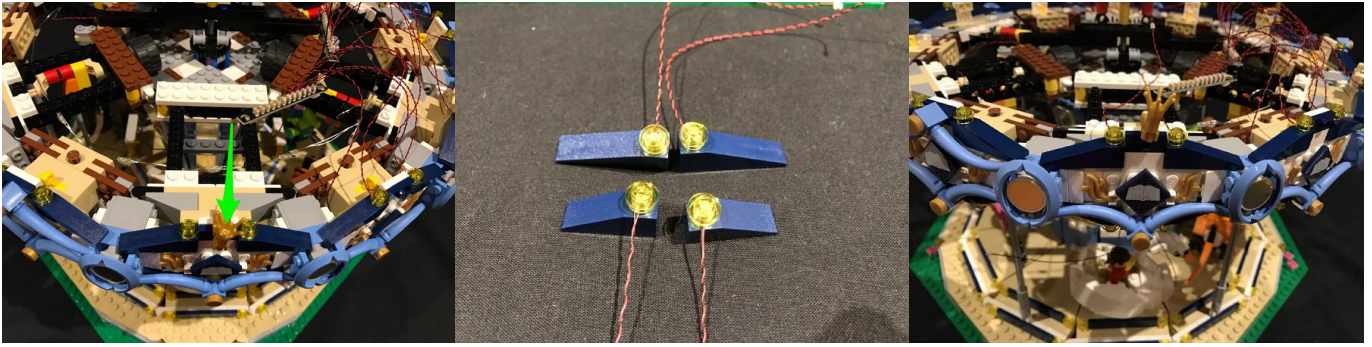
Connect the remaining 6 lights to the first few ports on the new 12-port expansion board we mounted in step 16.



Test that all lights are working OK by connecting back your Battery Pack (or USB cable) to a spare port on the expansion board.



19.) Move onto the next section of lights on the left and install another 4x **White 15cm Dot Lights**.



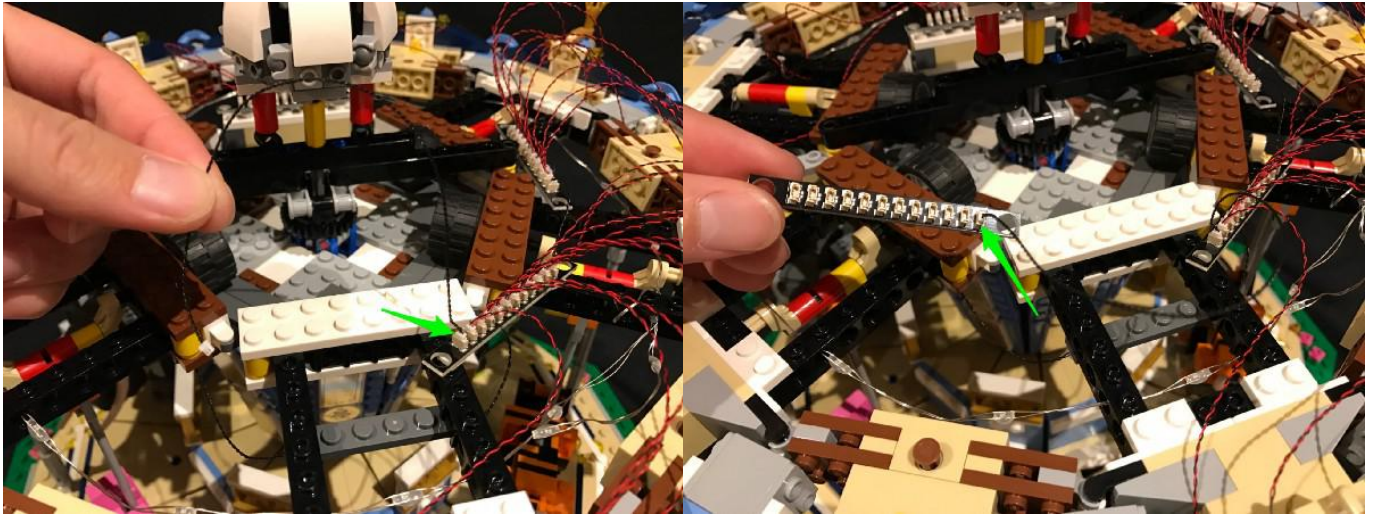
Remember to thread the bottom cables up through to the top.



Connect the 4 cables to the next ports along the 12-port expansion board.

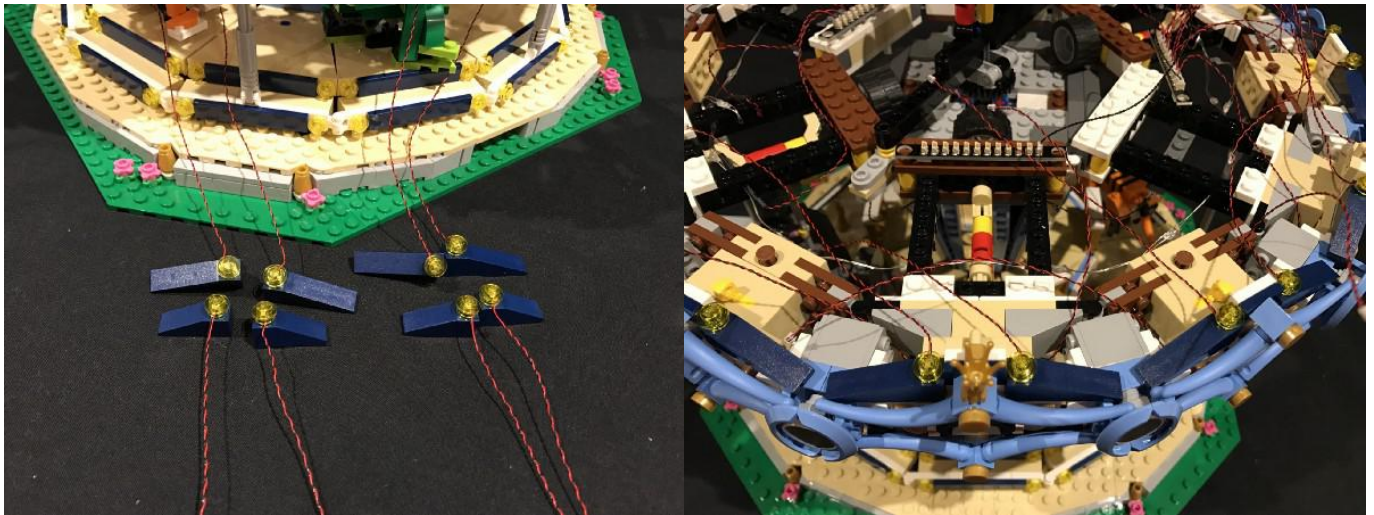


20.) Take a **15cm Connecting Cable** and then connect it to the remaining port on the 12 port expansion board. Connect the other end of the cable to a new **12 Port Expansion board** then mount the expansion board to the following position using 2x **adhesive squares**.

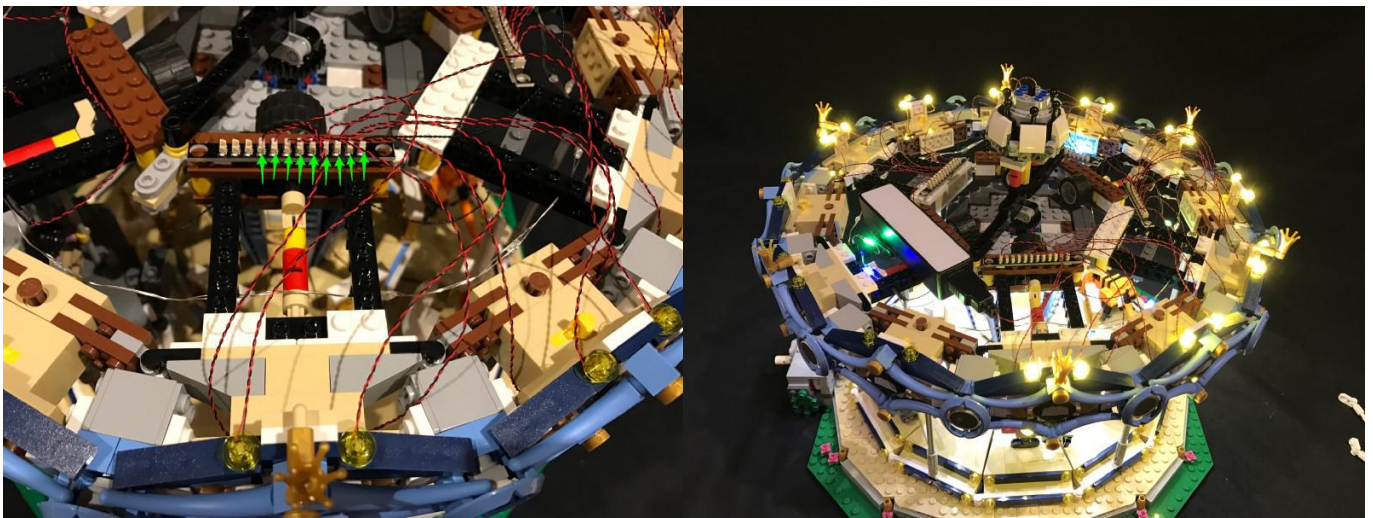


21.) Take another 8x **White 15cm Dot Lights** to install lights to the next 2 sections to the left using the same method we used for previous lights.

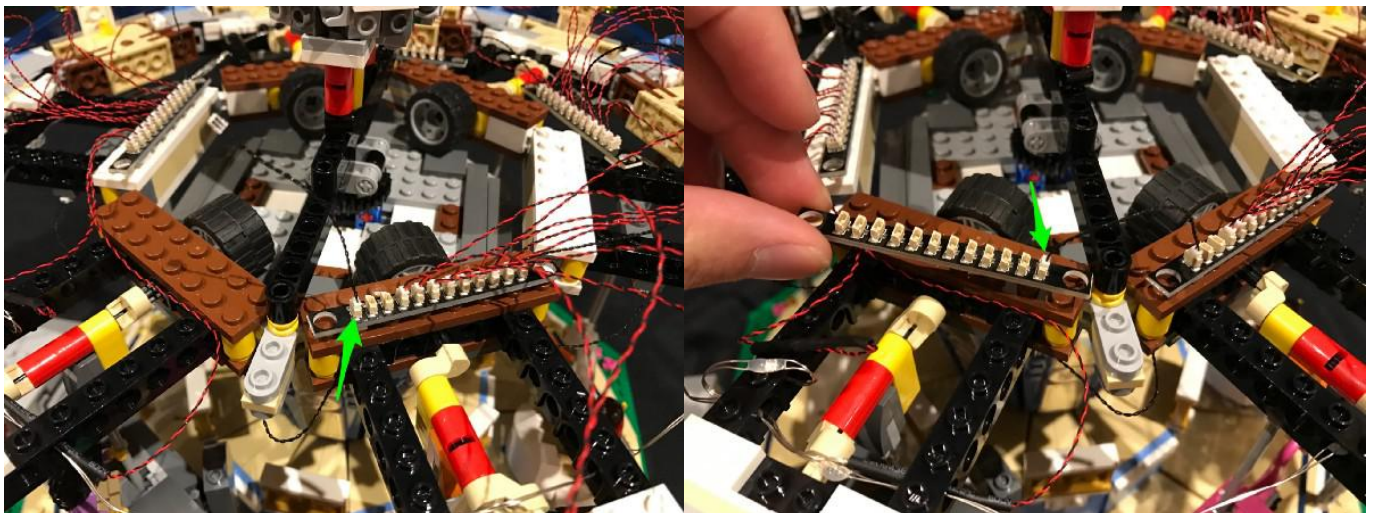




Connect all 8 Dot Light cables to the first remaining ports on the new 12-port Expansion Board and then test that all lights are working OK by connecting back your Battery Pack (or USB cable) to a spare port on the expansion board.

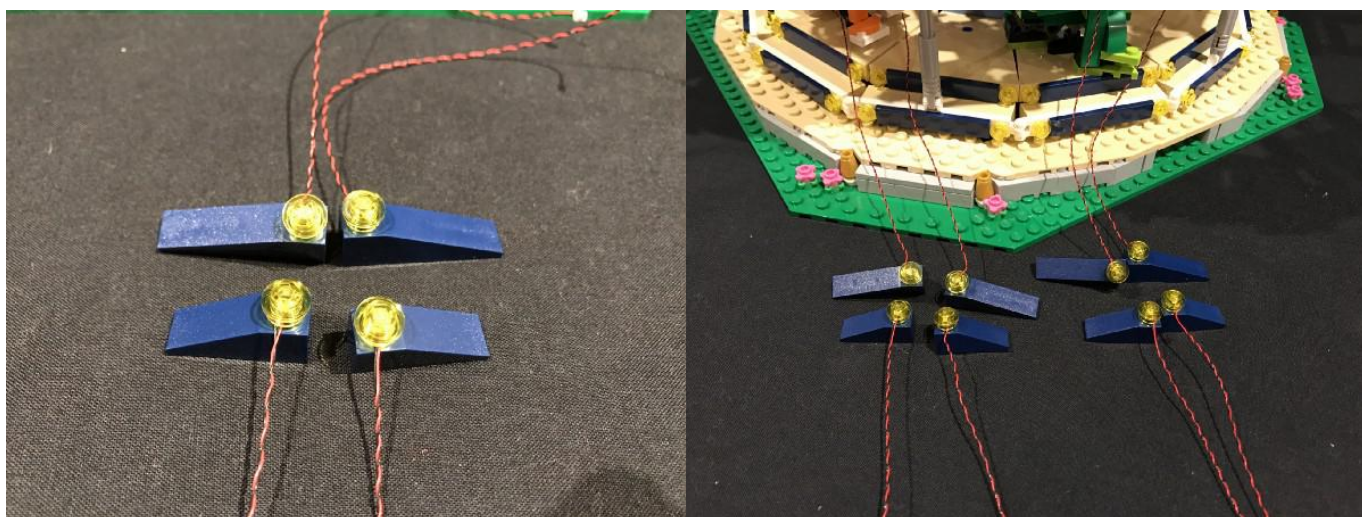
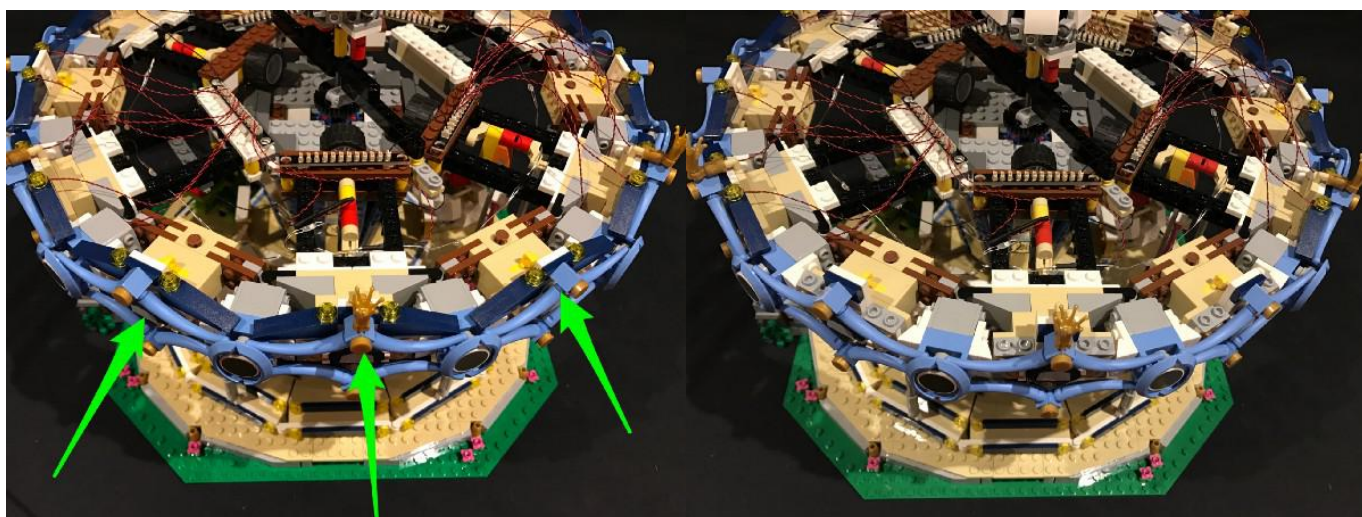


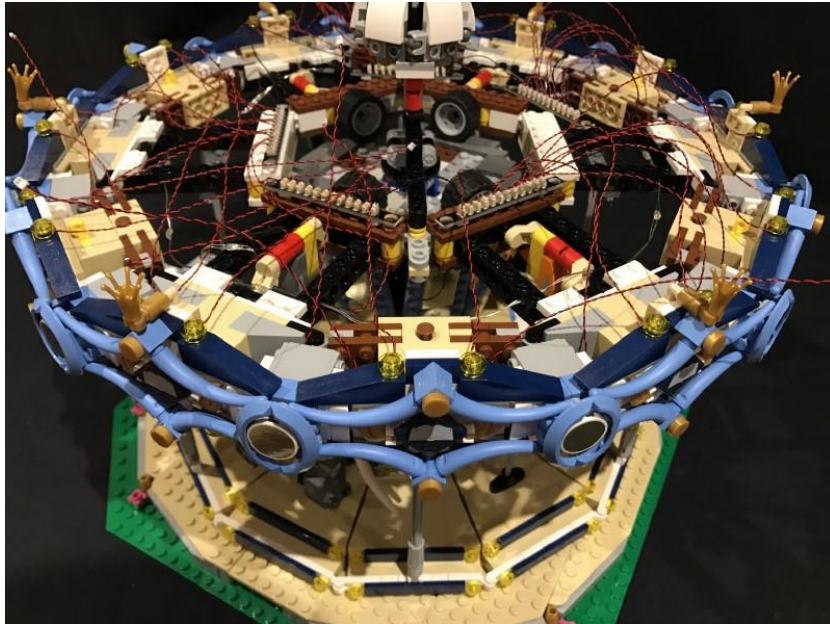
22.) Take a **5cm Connecting Cable** and then connect it to the far left port on the 12 port expansion board. Connect the other end of the cable to the last remaining **12 Port Expansion board** then mount the expansion board to the following position using 2x **adhesive squares**.



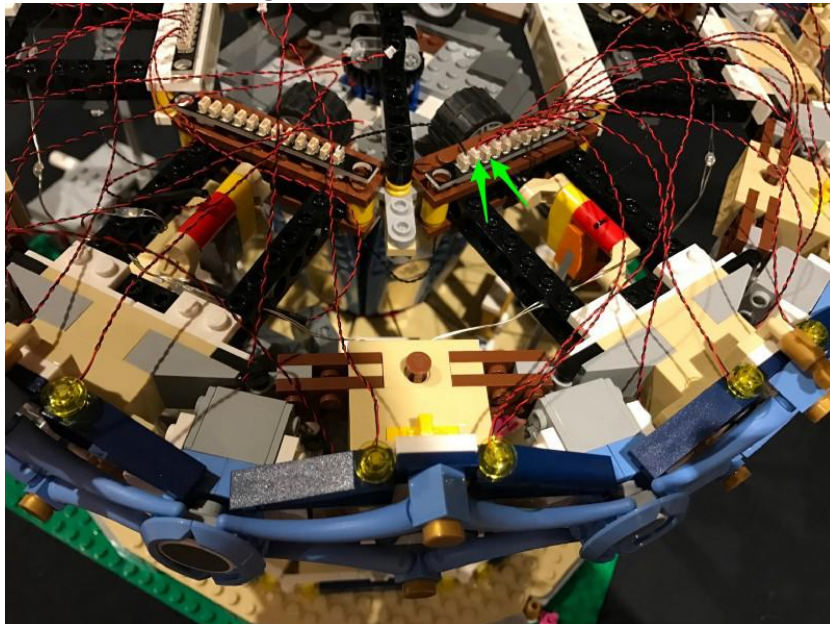


23.) We will now install lights to the 3 remaining sections of the carousel roof. Take the remaining **12x White 15cm Dot Lights** and install them to these sections using the same method as we did for previous lights.

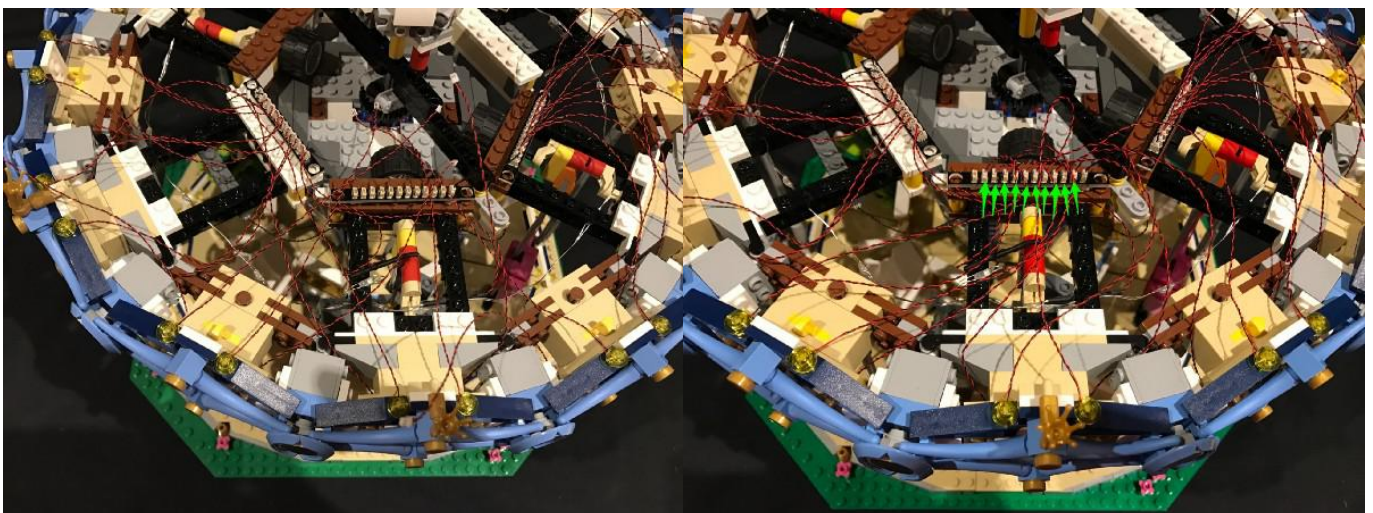




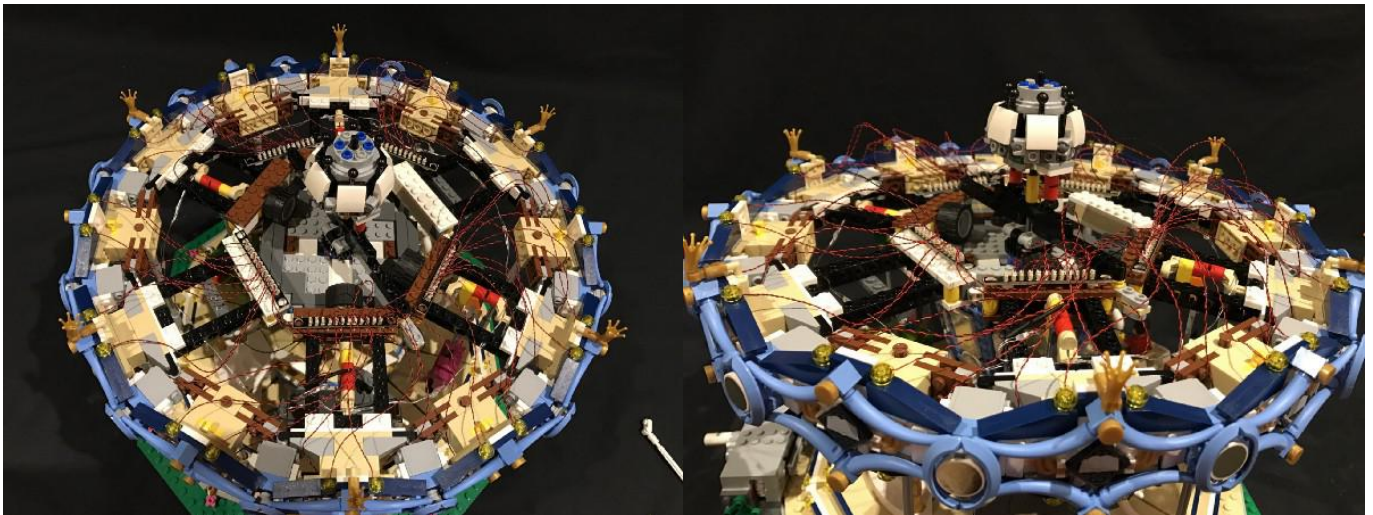
First connect the 2 lights from the right section (top and bottom) to the remaining 2 ports on the 12-port expansion board towards the right.



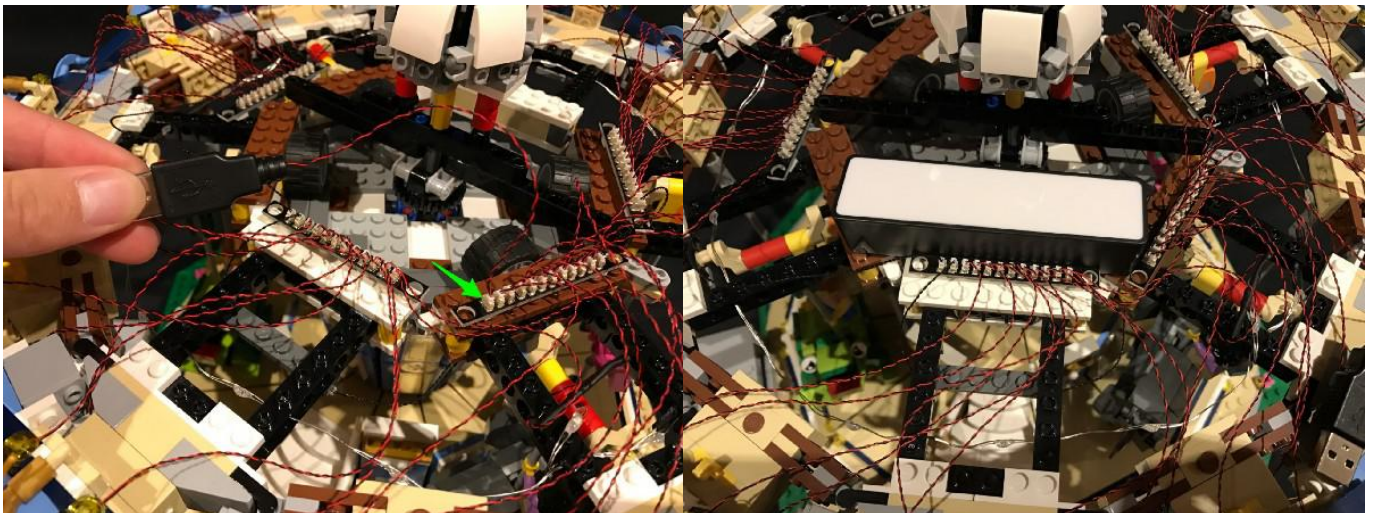
Then connect the remaining 10x Dot Light cables to the last 12-port expansion board.



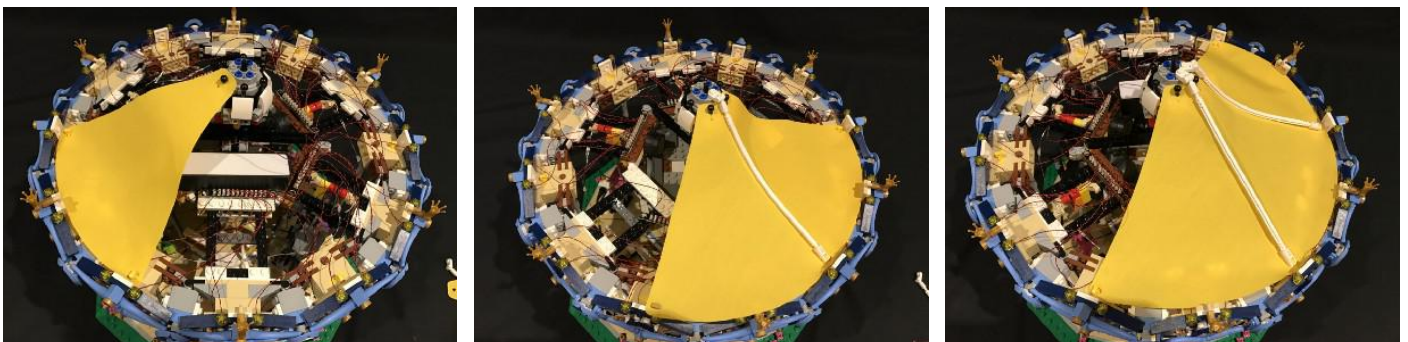
This completes the installation of lights to the top of the carousel. Yours should look like the below. Don't be too concerned with the messy cabling as this will all be covered by the carousel roof top.

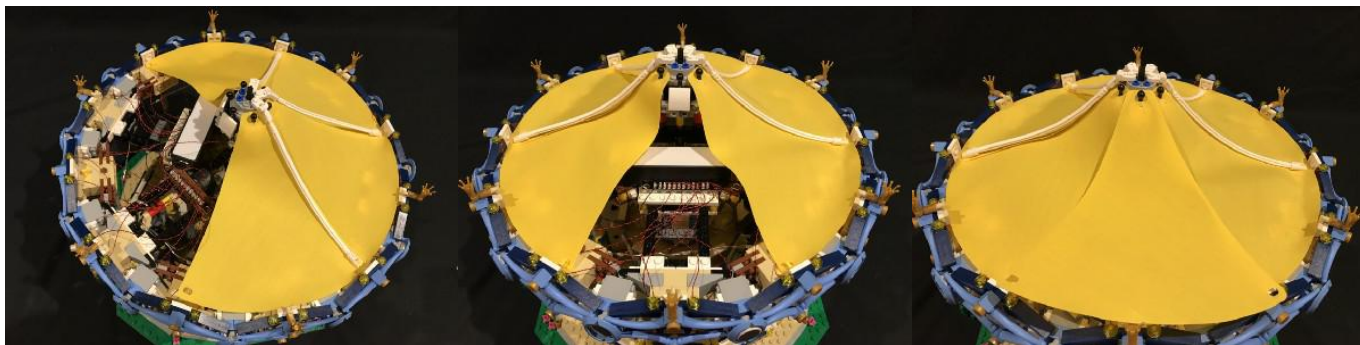


24.) Take the USB cable or AA Battery Pack and then connect it to the remaining port on the expansion board below. Position your Battery Pack/USB power Bank on top.

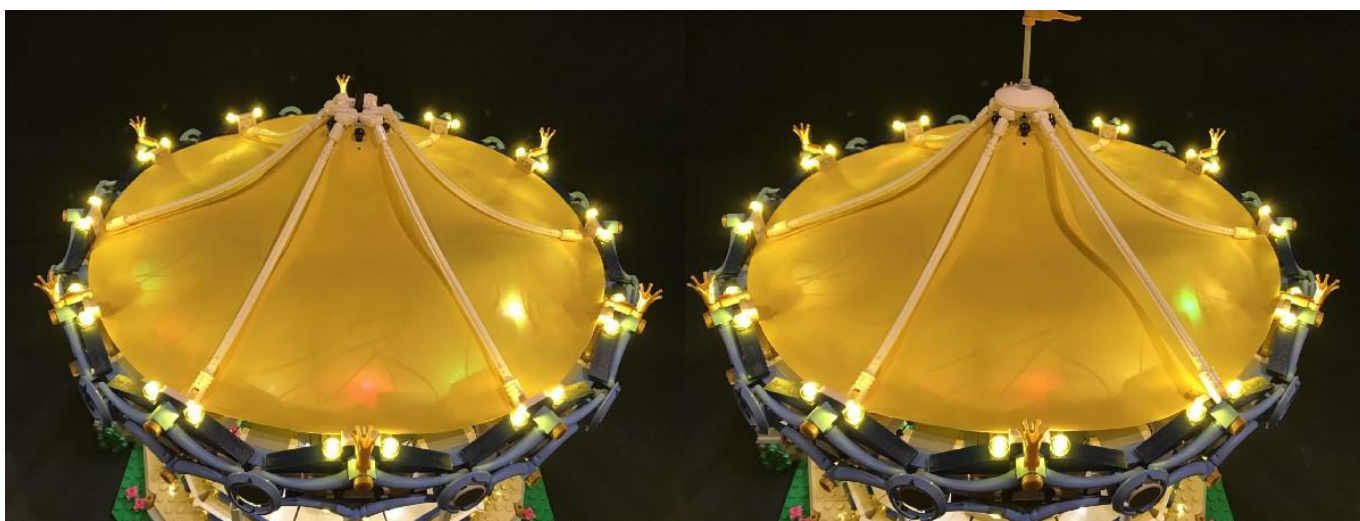


25.) Replace the yellow roof top pieces and white pole sections as per below.

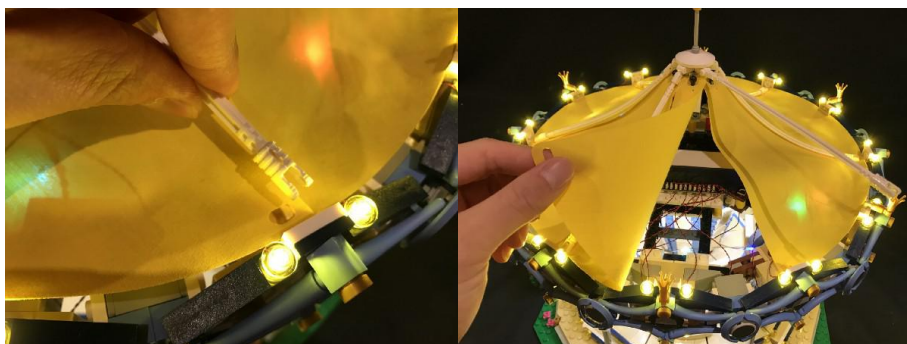




Locate where the Battery Pack/USB power cable are and then lift up the flap. Connect up the power bank/AA Battery Pack and place inside before reconnecting the top centre flag piece and remaining white pole sections.



You can leave one of the white pole sections closest to the Battery Pack/USB power bank disconnected to allow for easy powering on/off.



This finally completes installation of the Vonado LEGO Carousel Lighting Kit. ENJOY!

