



**LIGHT^{MY}
BRICKS**



**LEGO[®] LAND ROVER CLASSIC DEFENDER
90 #10317 LIGHT KIT
INSTALLATION GUIDE**

Light My Bricks



LEGO® LAND ROVER CLASSIC DEFENDER 90 - 10317 INSTALLATION GUIDE

Hi There!

We're here to help you get started on the LEGO®

Land Rover Classic Defender 90 10317 Light Kit.

This PDF details the instructions for the LED light kit only. If you are wishing to purchase this product, please [click here](#) to view the product page.

If you run into any issues, please refer to the troubleshooting section towards the end of this guide.

Have fun and enjoy!





PACKAGE CONTENTS:

Individual Bags



- 8x White 15cm Bit Light
- 9x Cool White 15cm Bit Light *
- 7x White 30cm Bit Light *

Mixed Components 1



- 2x 2-Port Expansion Board
- 5x 6-Port Expansion Board
- 2x 8-Port Expansion Board
- 2x NC Push Board
- 10x Adhesive Square

Connecting Cables



- 4x 5cm Connecting Cable
- 5x 15cm Connecting Cable
- 2x 30cm Connecting Cable *

USB Power Cable



- 1x USB Power Cable
(Power Source not Included)

Mixed Components 2



- 5x Plate, Round 1x1 - Trans-Clear
- 4x Plate, Round 1x1 - Trans-Orange
- 3x Plate, Round 1x1 - Trans-Red
- 4x Plate, Round 1x1 with Open Stud - Black

Mixed Components 3



- 1x Tile 1x1 with Groove - Black
- 1x Tile 1x2 with Groove - Trans-Clear
- 1x Plate, Round 2x2 with Rounded Bottom (Boat Stud) - Trans-Clear
- 1x Plate 2x2 - Dark Bluish Gray
- 1x Plate 2x4 - Black

* Indicates components which include spares

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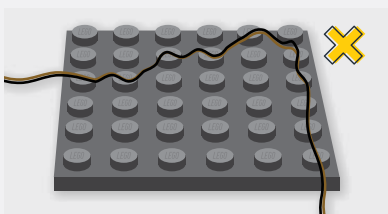
Before You Begin



Laying cables in between and underneath bricks

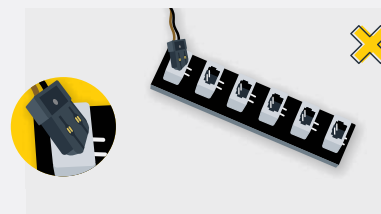
Cables can fit in between and underneath LEGO® bricks, plates, and tiles providing they are laid correctly between the LEGO® studs. Do NOT forcefully join LEGO® together around cables; instead ensure they are laying comfortably in between each stud.

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.



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

Before You Begin



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 Micro Cable Connectors To Micro Expansion Board Ports

Take extra care when inserting the micro connectors to micro ports of Micro Expansion Boards. Connecting Micro Bit Lights to Micro Expansion Boards is similar to connecting lights and cables to Strip Lights. With the expansion board 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, do not force it. Use your fingernail to push the plastic part of the connector to the micro port.

Before You Begin

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.



Before You Begin

The Symbols Used In This Guide

When going through the following guide you will come across symbols and formats that will assist with the installation of your light kit. Take notice of them as each has a specific purpose.

Light Kit Component

This is the most important image format as it indicates which part to use from the Light Kit. Make sure you pay close attention to which part is shown.

White 30cm Bit Light



Connect

Used when you need to connect a LEGO piece or LMB component.



Disconnect

Used when you need to remove a LEGO piece/ section or LMB component.



Directional

Used to show where to route cables, place components, or move them.



Bend/Pivot

Used when a component needs to be bent, or part folded or pivoted.



Turn/ Flip

Will be found in the top left corner when the set needs to be rotated or flipped.



Twist/ Braid

Seen when a set of cables need to be grouped and twisted together.



Power On Test

Found at the end of a major step to test the lights. Will be located in the top left corner.



Note

Notes will be found alongside the instruction photos and explain what to do.



Before You Begin

Repeat Step

Repeat the previous step eg. Make a spotlight, then make a second spotlight.

x2

Connect Focus

Used to highlight a hard to see area where a component is being connected.



Disconnect Focus

Used to highlight a hard to see area where a component is being disconnected.



General Focus

Used to highlight a hard to see area where a component needs to be acted on.



General Note

This is a sample note that is used anywhere in this guide. It will explain a difficult section where photos are hard to illustrate or easily confused.

Connect Note

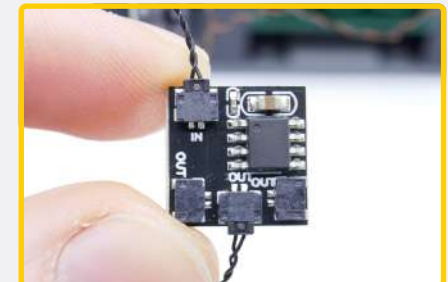
The green coloured note is used when the topic focuses on a component being connected, like the shown Power Bank.

Disconnect Note

The red coloured note is used when the topic focuses on a component being disconnected or like here, the removed pieces.

NOTE

Take the 5cm Connecting Cable from the 4-Port Micro Expansion Board and route it into the "IN" port of the Flicker Effects Board



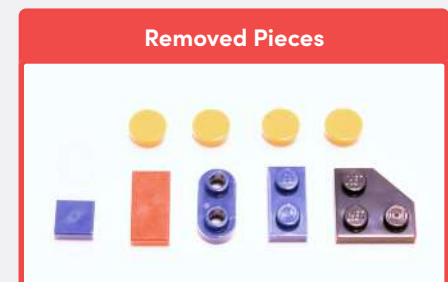
NOTE

Connect to a 5V USB Power Bank, 5V USB Wall Adaptor, or USB to AA Battery Pack (sold separately)



NOTE

You should have these parts left over that were removed from the LEGO set

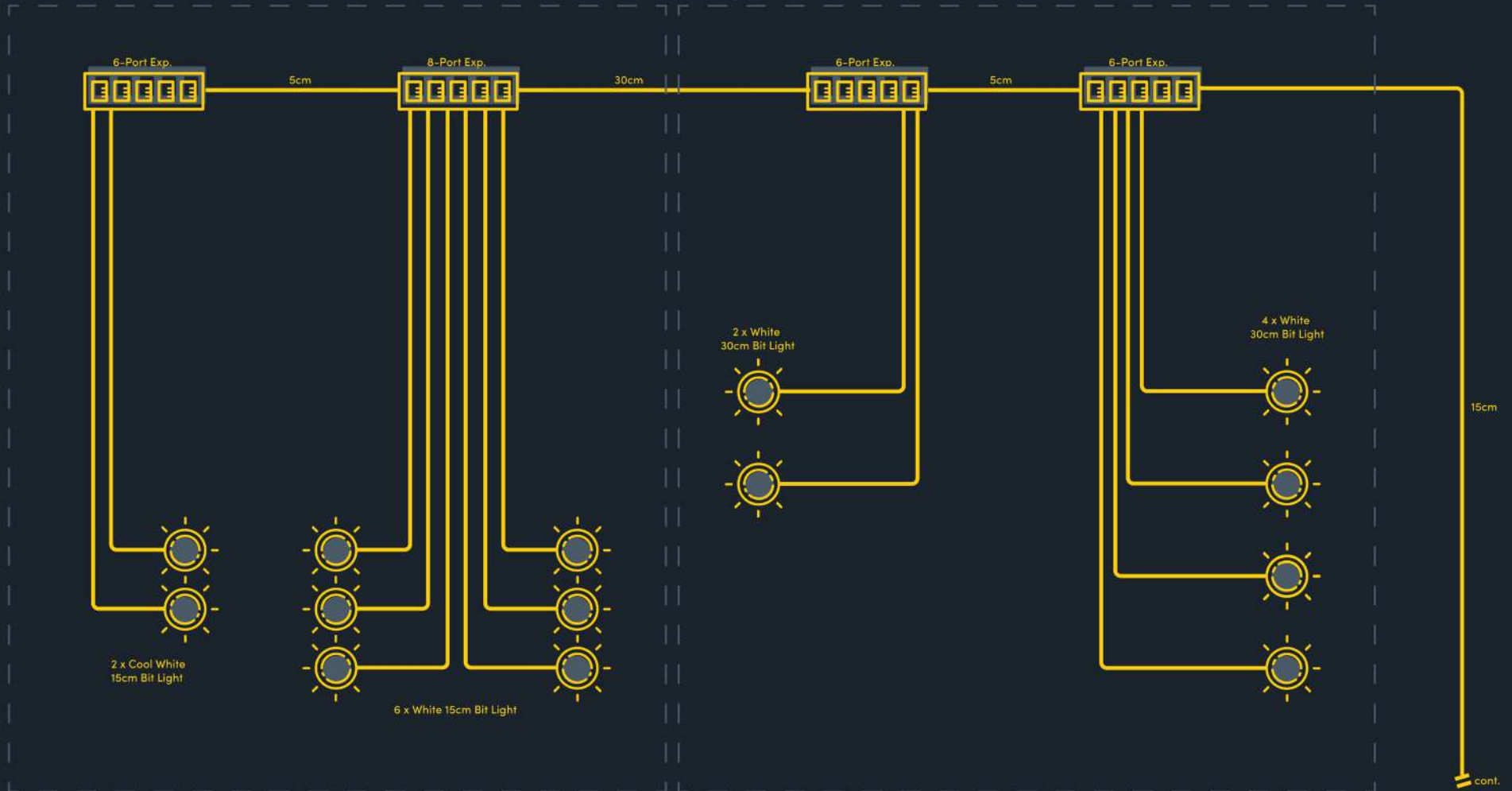




BLUEPRINT

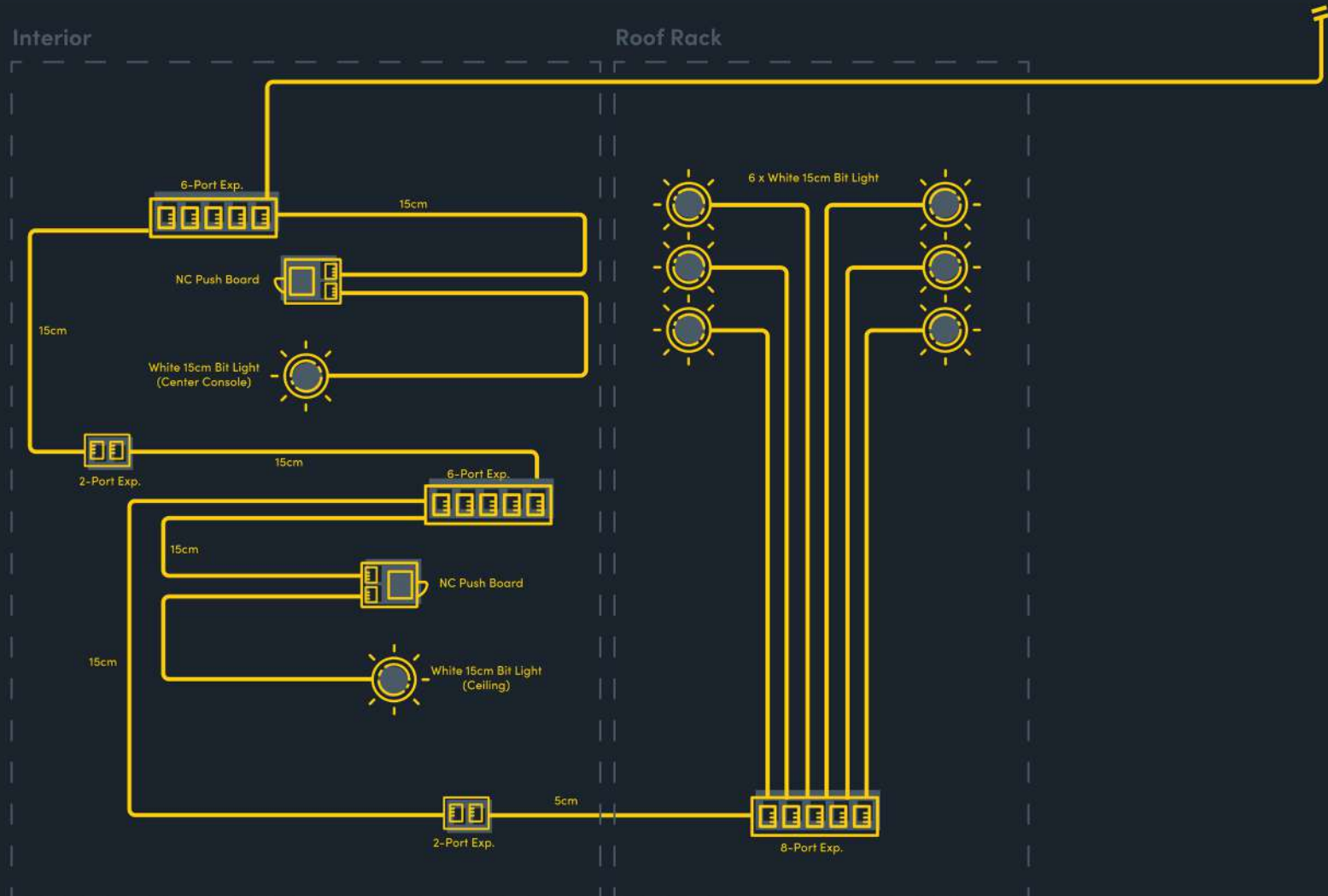
Headlights & Bullbar

Taillights





BLUEPRINT





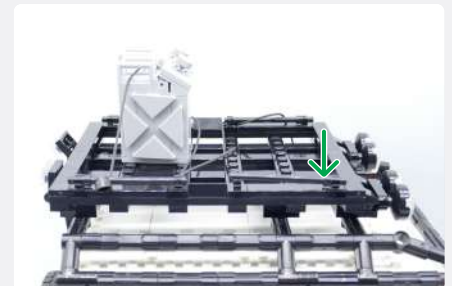
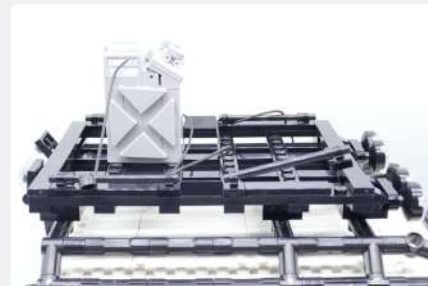
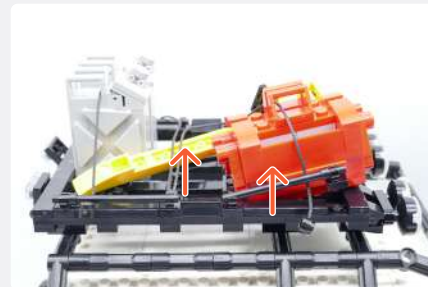
INSTRUCTIONS

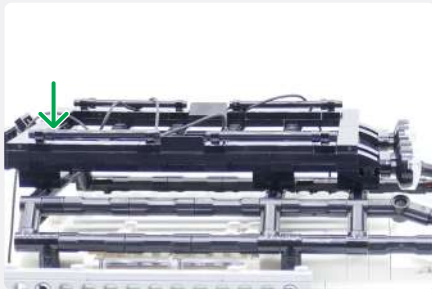
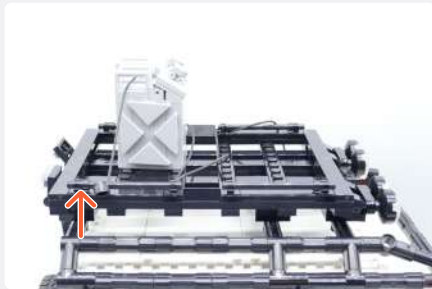
To ensure a smooth installation of your light kit, please read and follow each step carefully. If you run into any issues, please refer to the online troubleshooting guide.

1

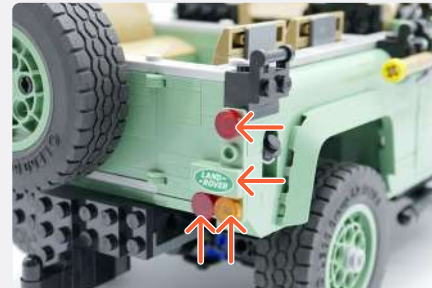


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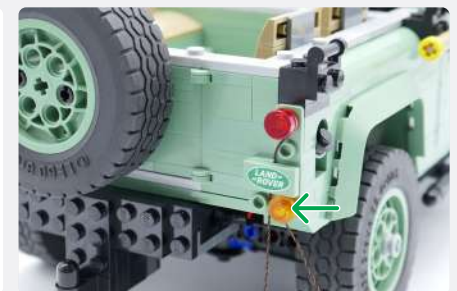
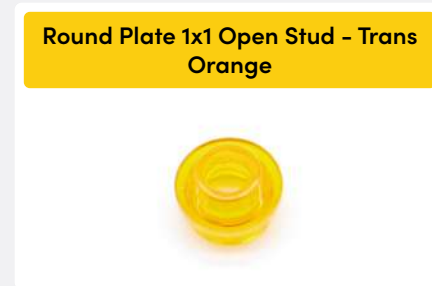
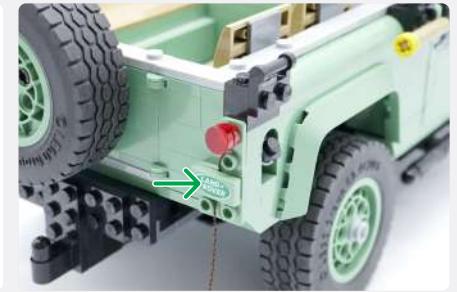
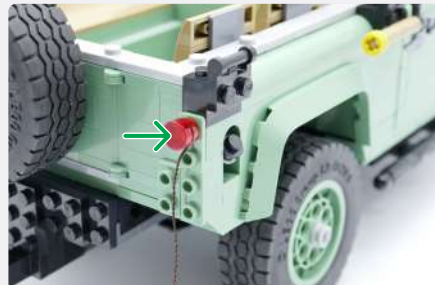
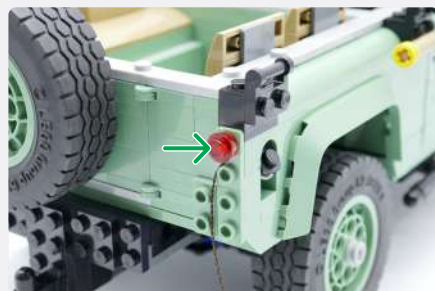
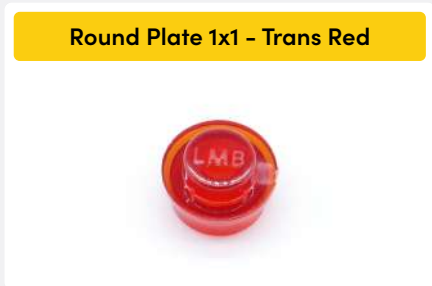




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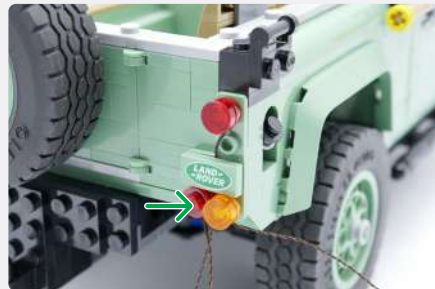
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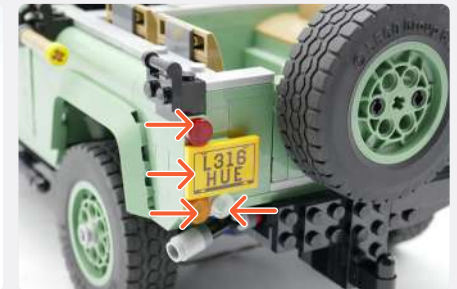
White 30cm Bit Light



Round Plate 1x1 - Trans Red



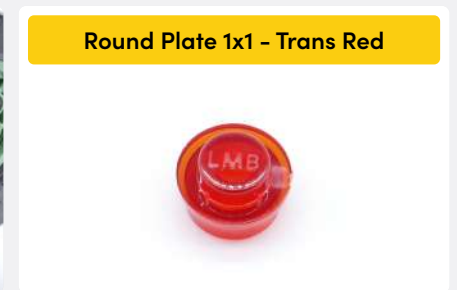
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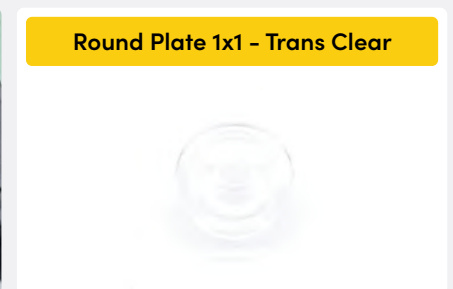
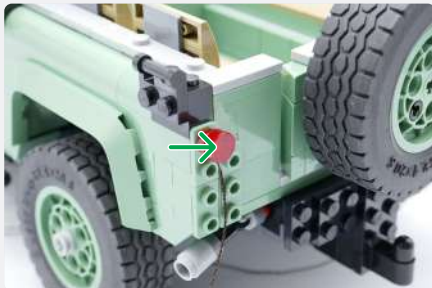
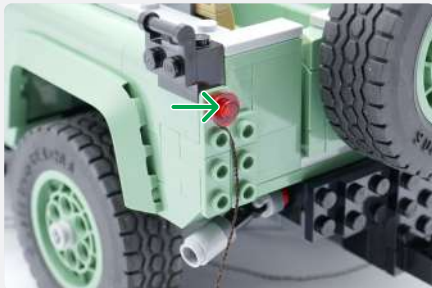
White 30cm Bit Light

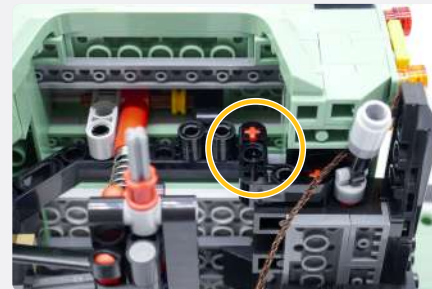
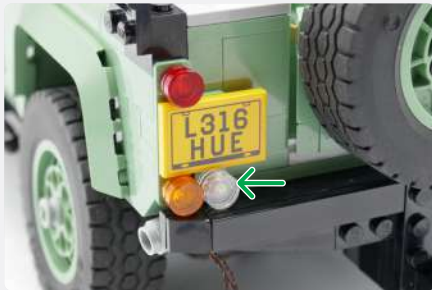


Round Plate 1x1 - Trans Red

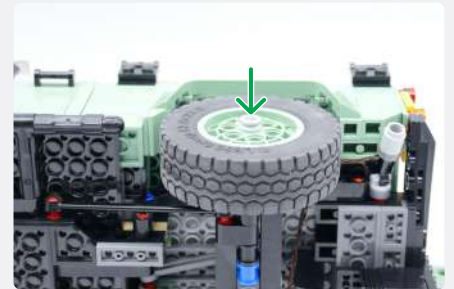


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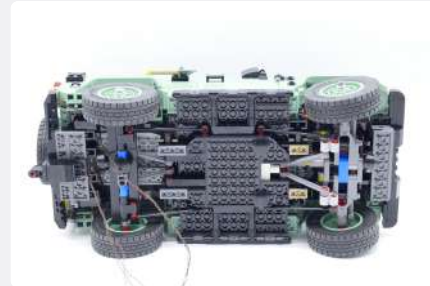
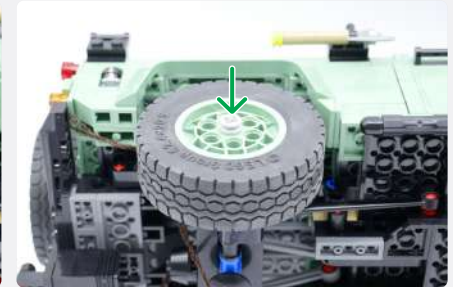
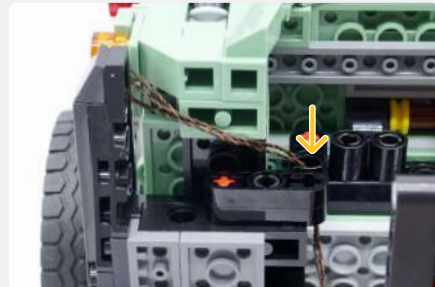
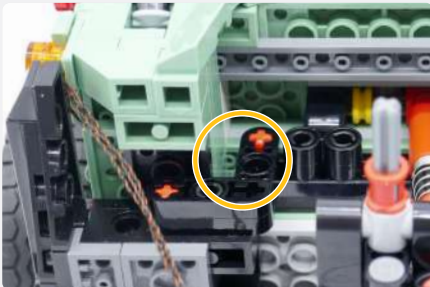
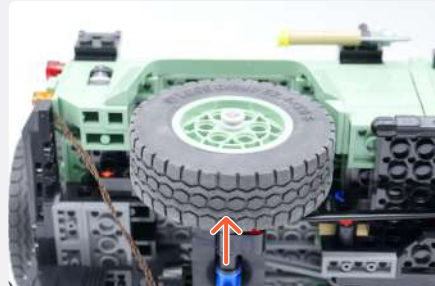
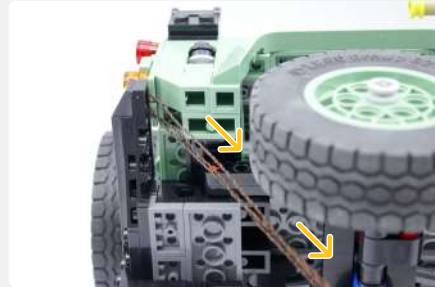




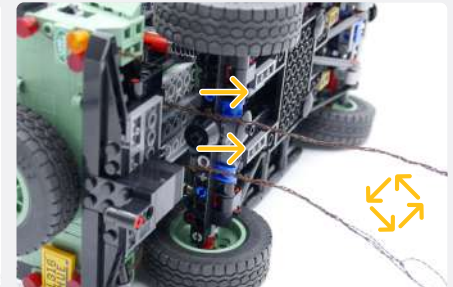
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7



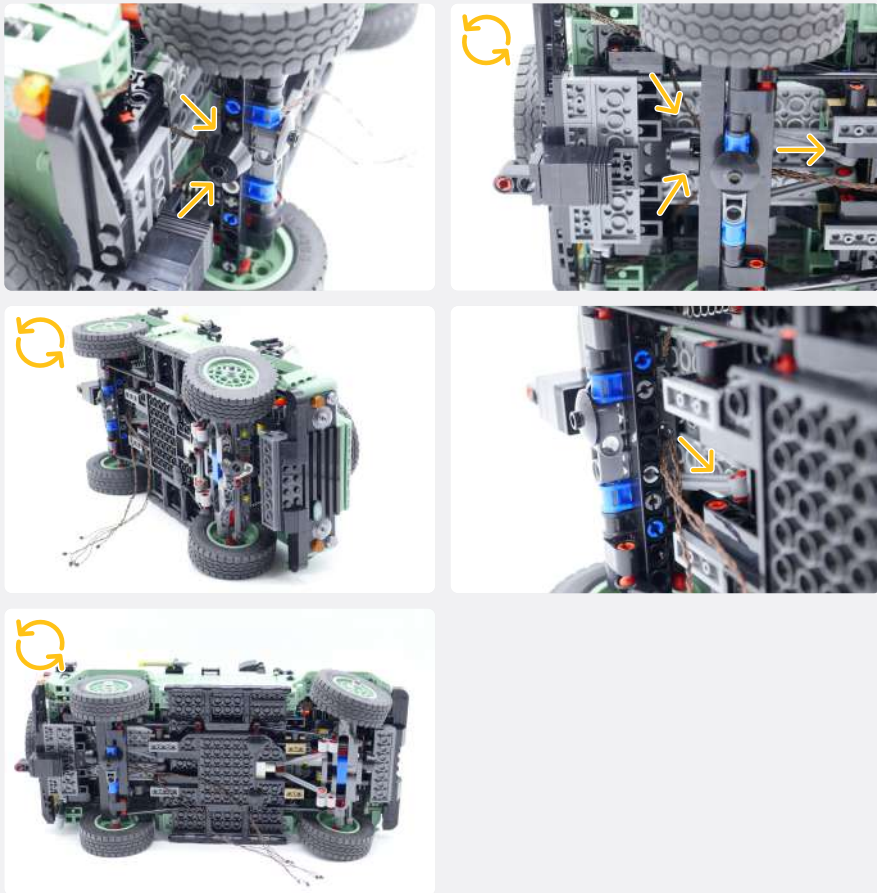
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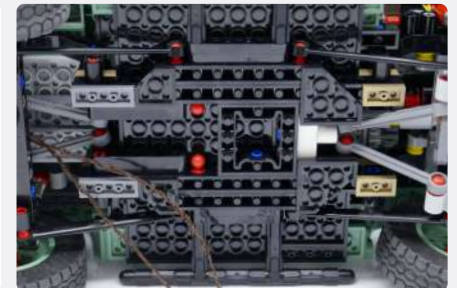
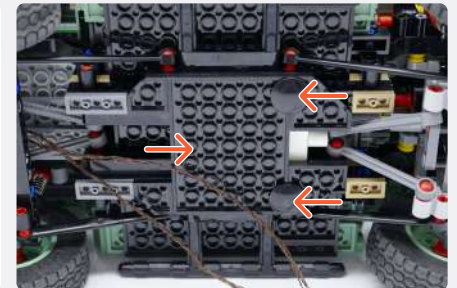
NOTE

Thread the bundled cables through the following gap



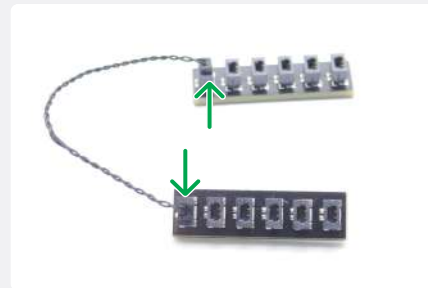


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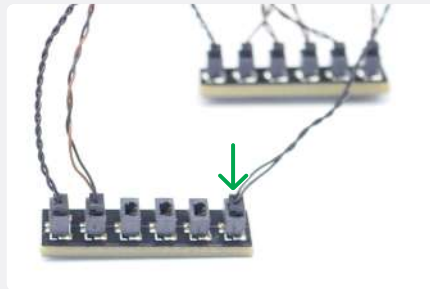
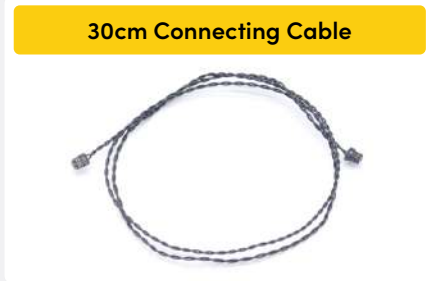
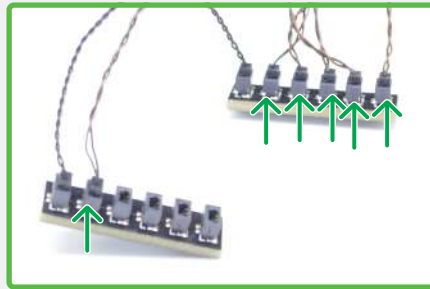
2 x 6-Port Expansion Board

5cm Connecting Cable



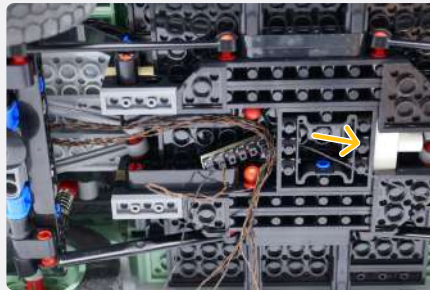
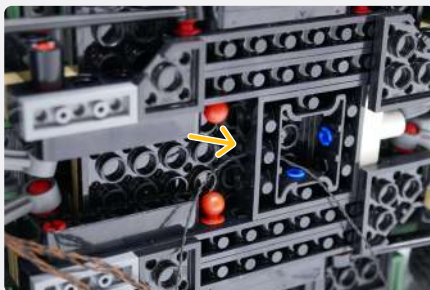
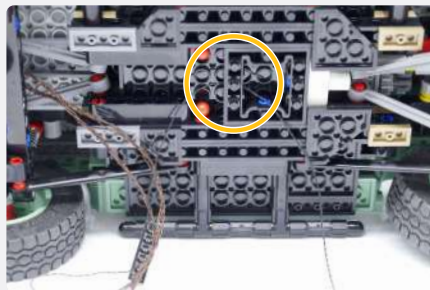
NOTE

Connect the White 30cm Bit Lights to either Expansion Board

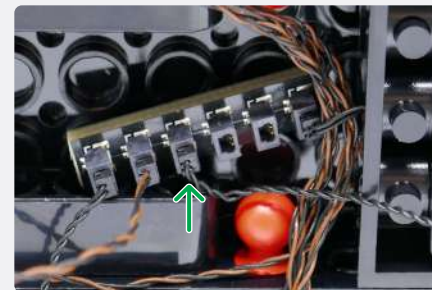


NOTE

Take the other end of the 30cm Connecting Cable and thread it through the following gap

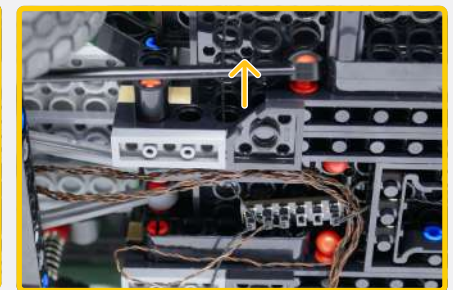
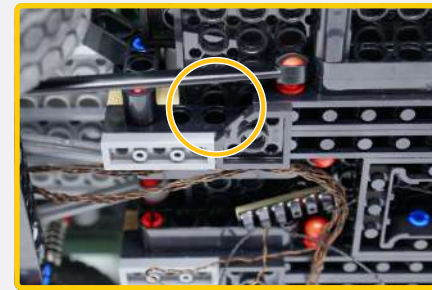


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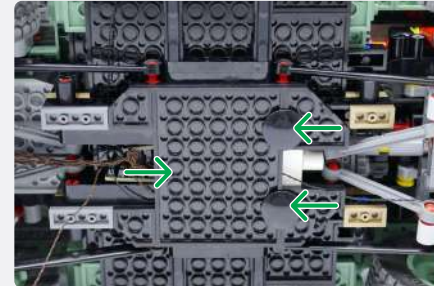
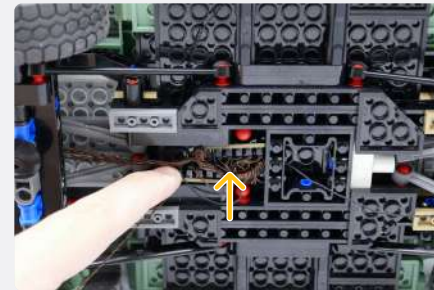
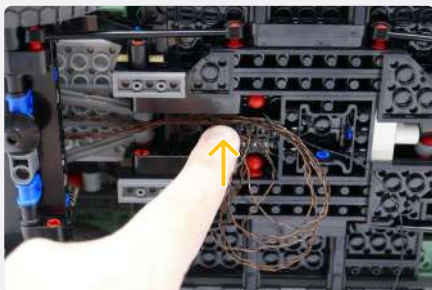
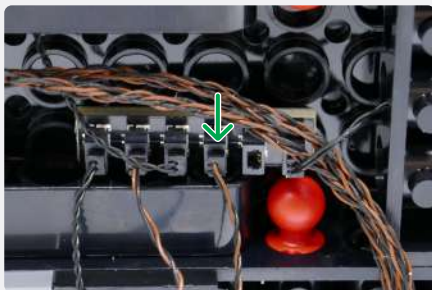
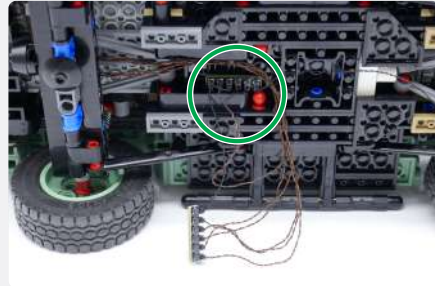


NOTE

Take the other end of the 15cm Connecting Cable and thread it through the following gap



10



11



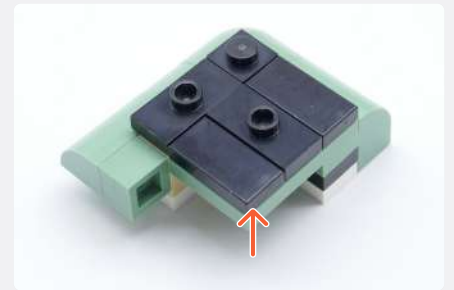
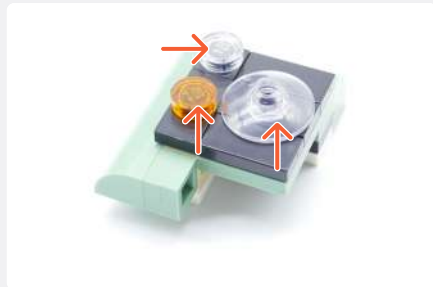
NOTE

Connect to a 5V USB Power Bank, 5V USB Wall Adaptor, or USB to AA Battery Pack (sold separately)



! If you experience any issues with the lights not working and suspect an issue with a component, please try a different port on the expansion board to verify where the fault lies (with the light or expansion board). To correct any issues with expansion board ports, please view the section addressing expansion board issues in our troubleshooting section. i

12



13

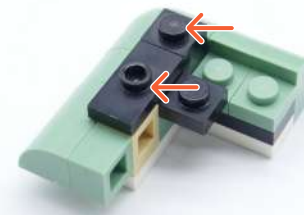
White 15cm Bit Light



Round Plate 1x1 - Trans Clear



14



White 15cm Bit Light

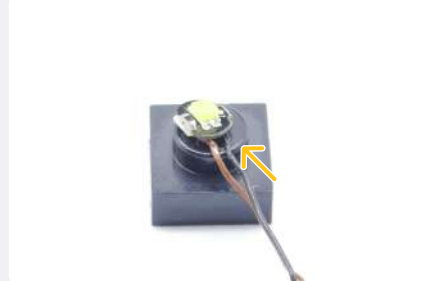


Round Plate 1x1 Open Stud - Trans Orange

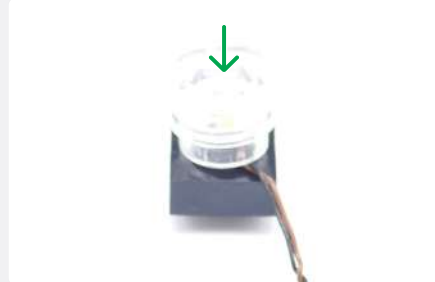




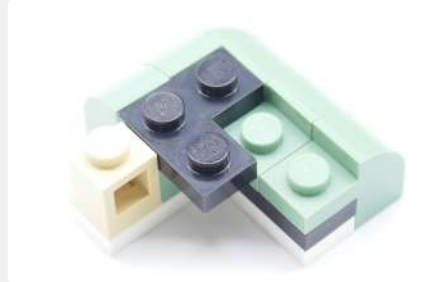
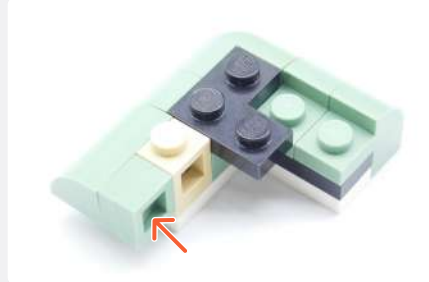
White 15cm Bit Light

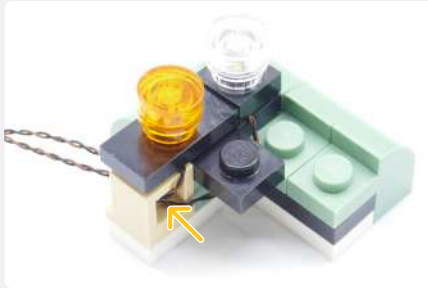
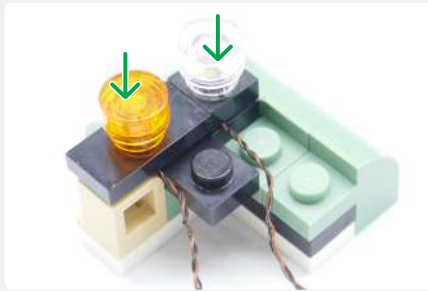


Round Plate 1x1 - Trans Clear



15





NOTE

Repeat this process for the opposite headlight

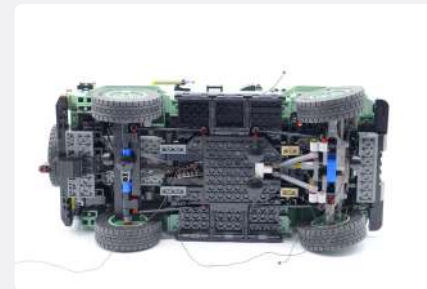


16





17

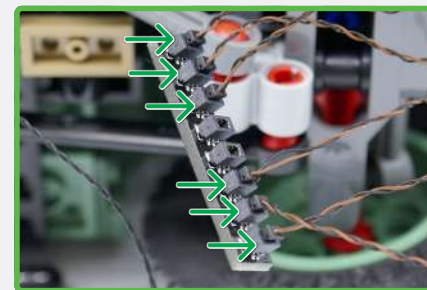
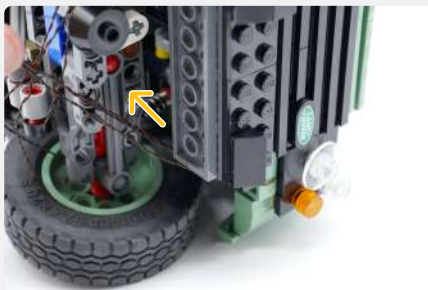


8-Port Expansion Board



NOTE

Connect the Headlight cables to the 8-Port Expansion Board

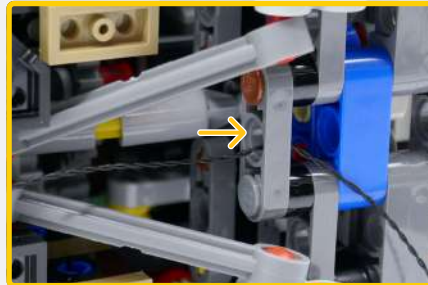
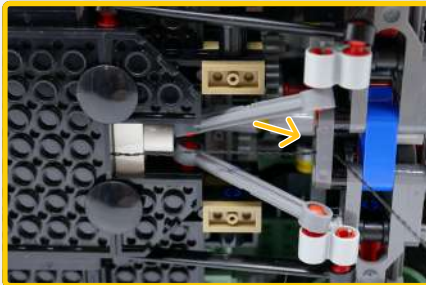
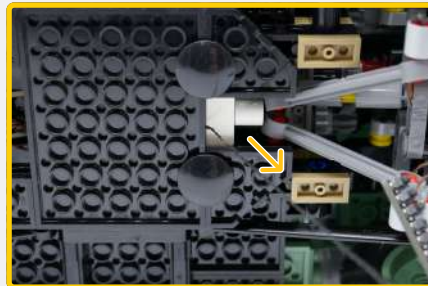


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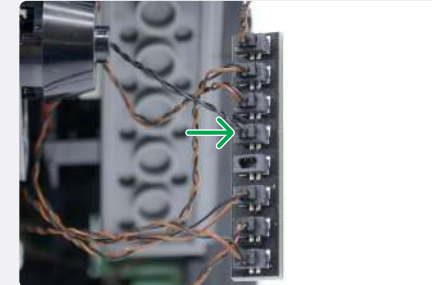
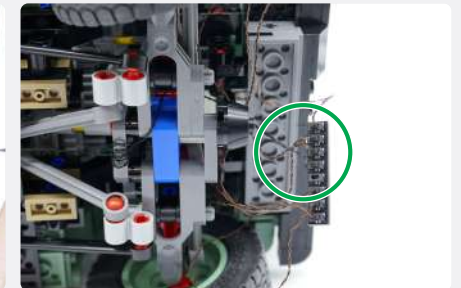
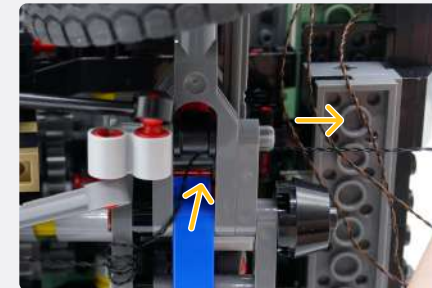
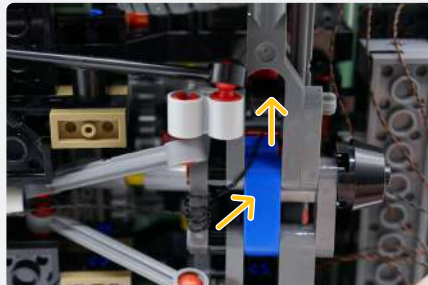
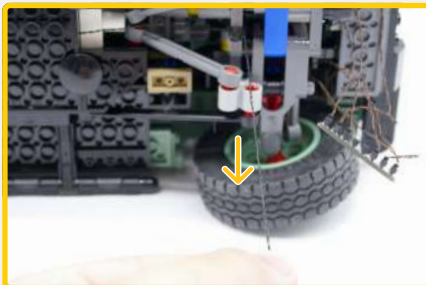
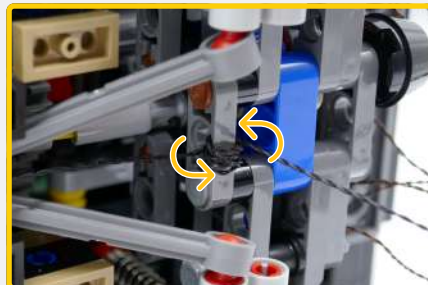
NOTE

Thread the 30cm Connecting Cable from the 6-Port Expansion Board at the center of the vehicle through the following hole



NOTE

Wrap the cable around the hole until there is about 10cm excess cable remaining

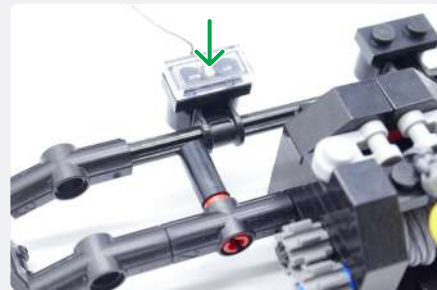


19



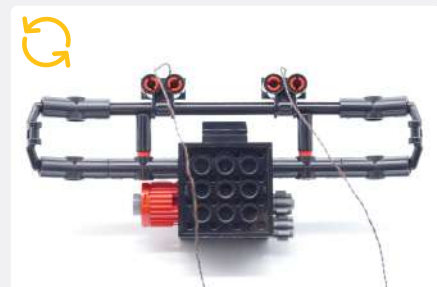
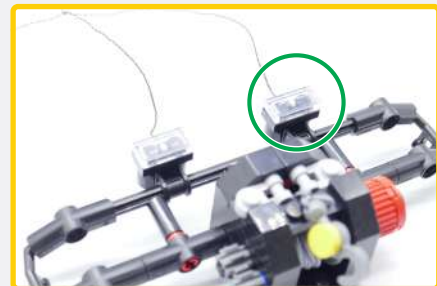
Cool White 15cm Bit Light





NOTE

Repeat this process for the opposite light



20

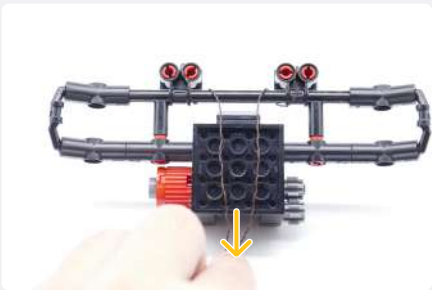
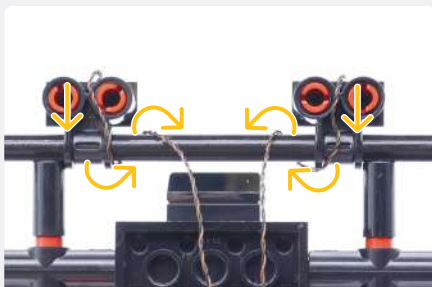
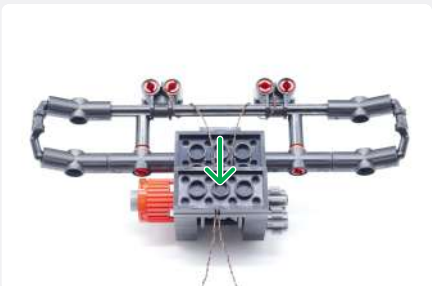
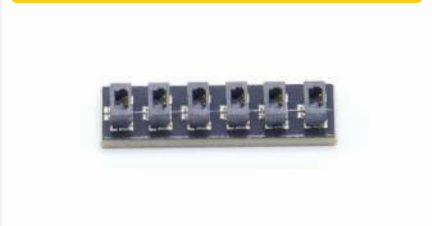


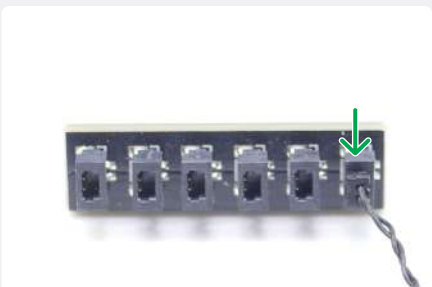
Plate 2x4 - Black



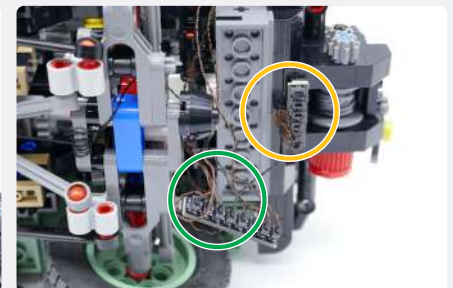
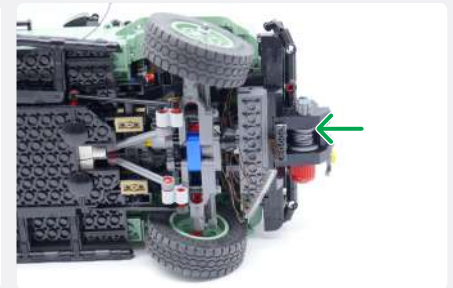
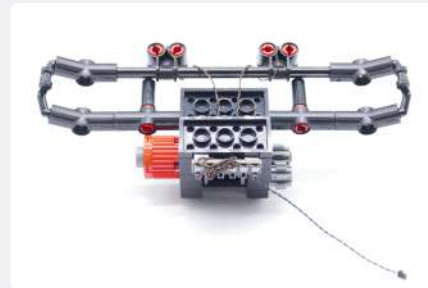
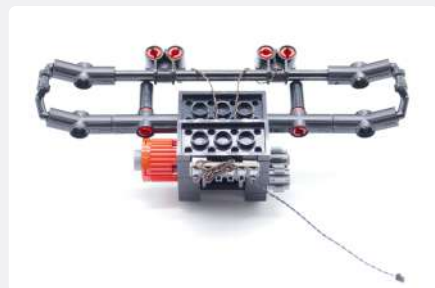
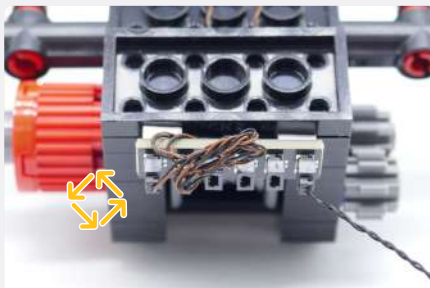
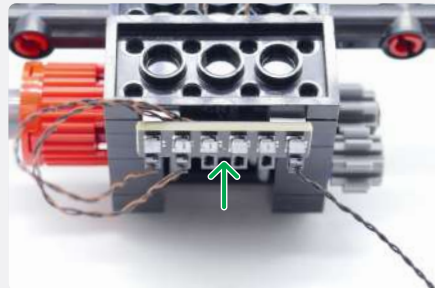
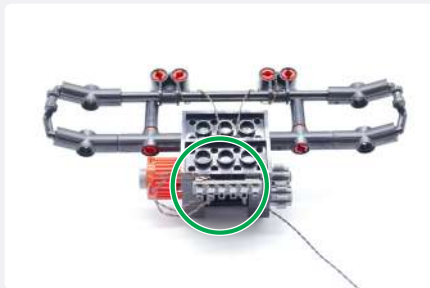
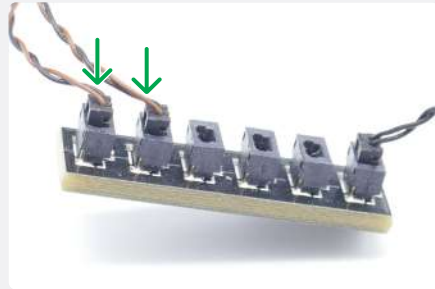
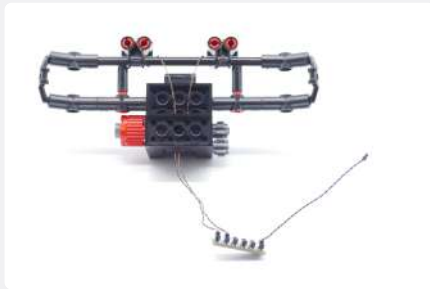
6-Port Expansion Board

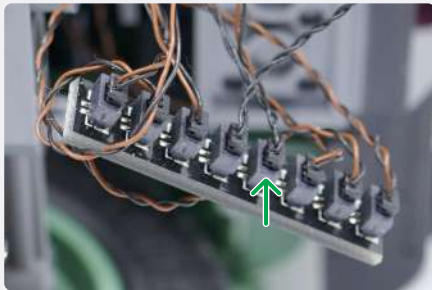


5cm Connecting Cable

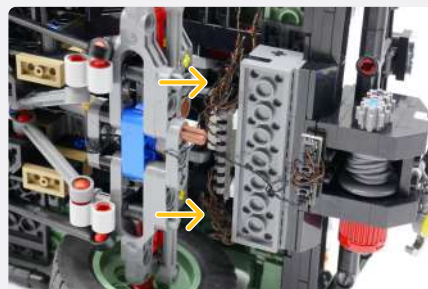
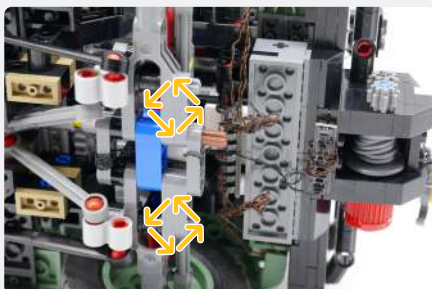
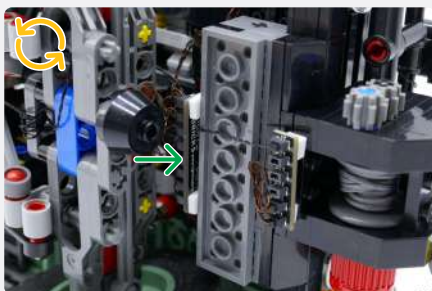
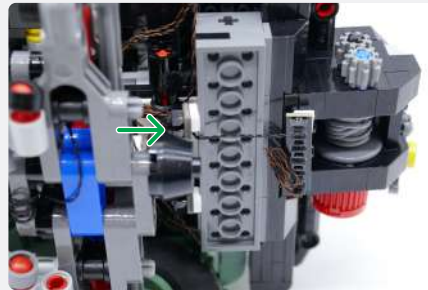
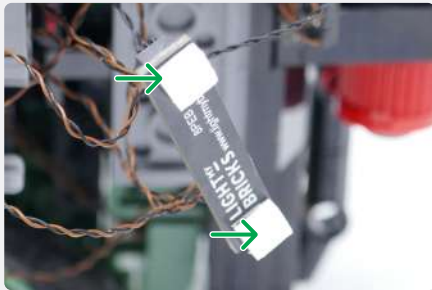


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2x Adhesive Square



22

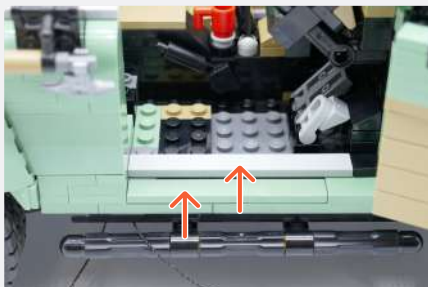
NOTE

Connect to a 5V USB Power Bank, 5V USB Wall Adaptor, or USB to AA Battery Pack (sold separately)



! If you experience any issues with the lights not working and suspect an issue with a component, please try a different port on the expansion board to verify where the fault lies (with the light or expansion board). To correct any issues with expansion board ports, please view the section addressing expansion board issues in our troubleshooting section. **i**

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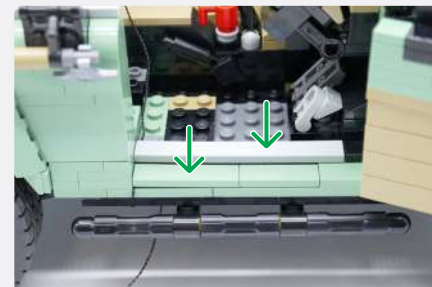
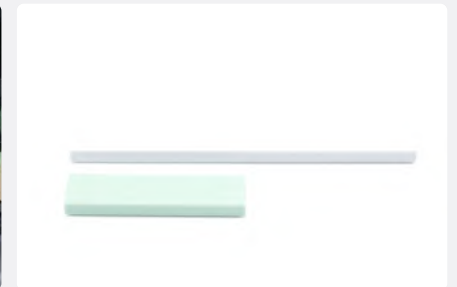
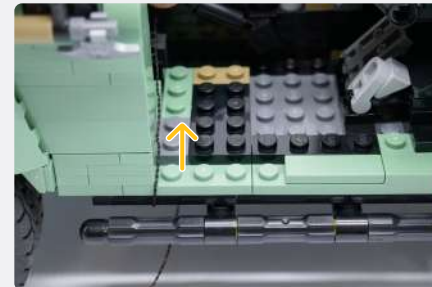
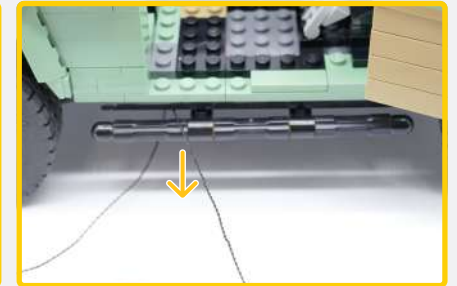


24



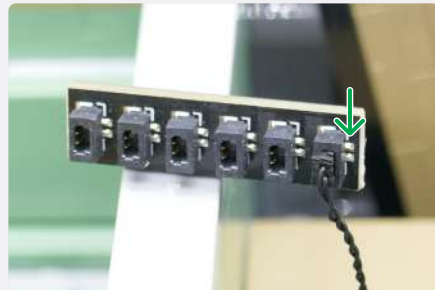
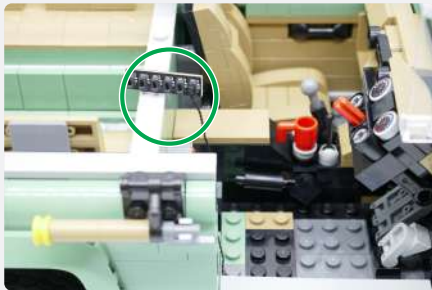
NOTE

Take the 15cm Connecting Cable coming from beneath the car



6-Port Expansion Board

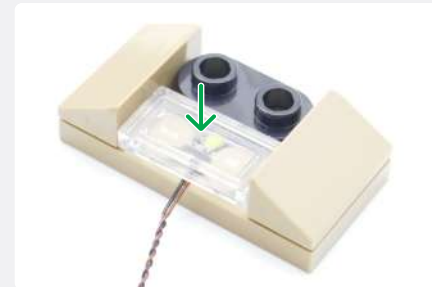
25



White 15cm Bit Light



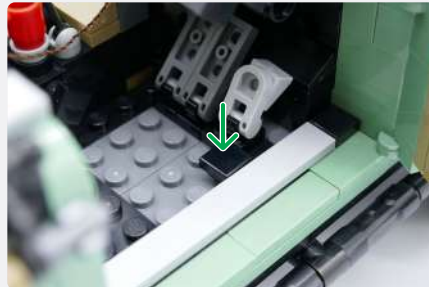
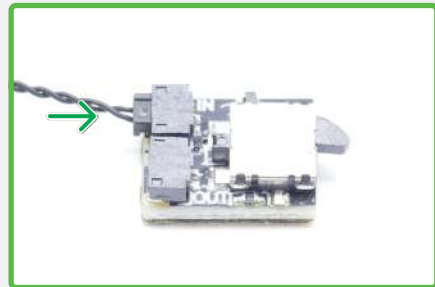
Tile 1x2 - Trans Clear





NOTE

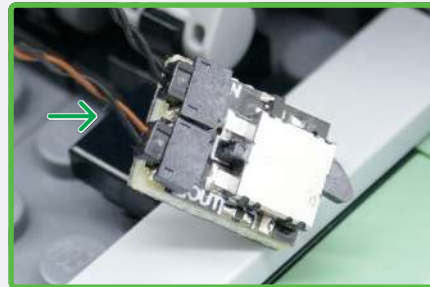
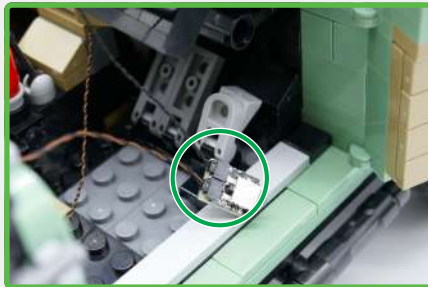
Connect to a 5V USB Power Bank, 5V USB Wall Adaptor, or USB to AA Battery Pack (sold separately)



NOTE

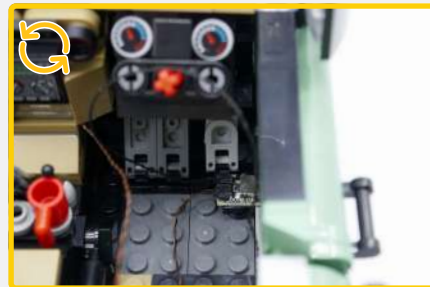
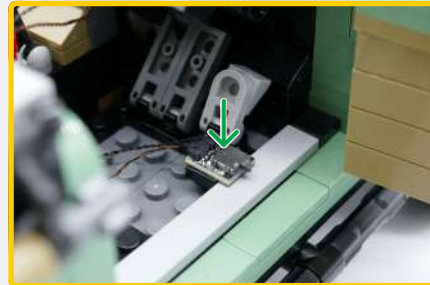
Connect the White 15cm Bit Light from the center console to the 'OUT' port of the NC Push Board

26



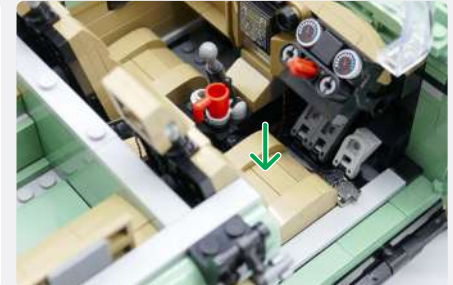
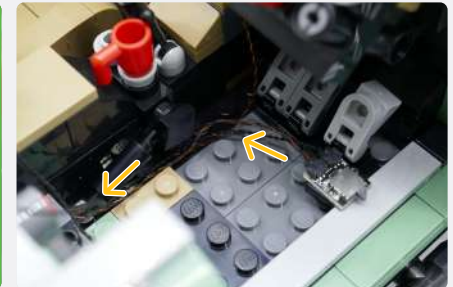
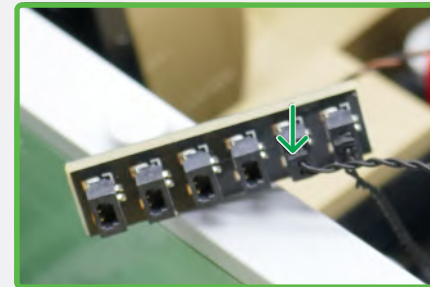
NOTE

Position the NC Board exactly as shown - ensuring when the door is shut, the trigger is pushed in



NOTE

Connect the 15cm Connecting Cable from the NC Push Board to the 6-Port Expansion Board

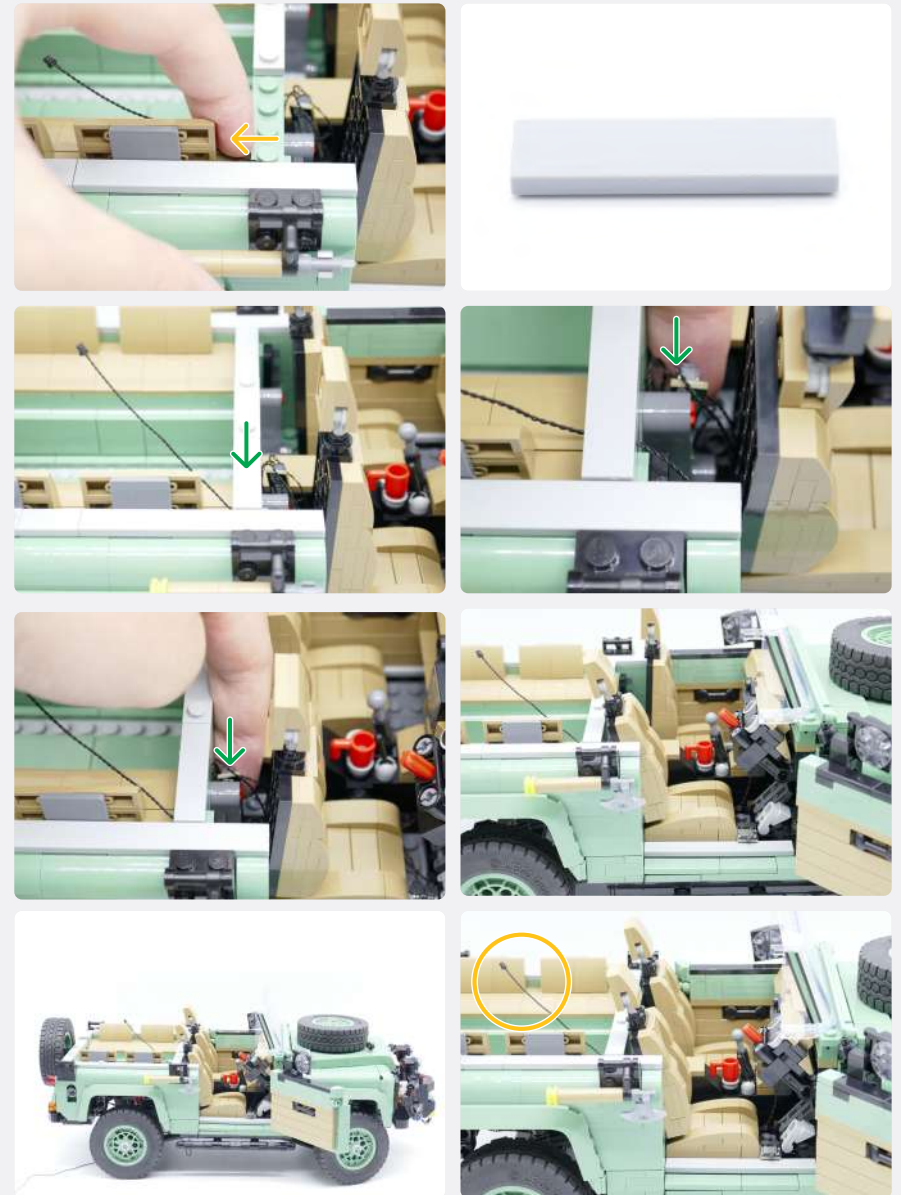
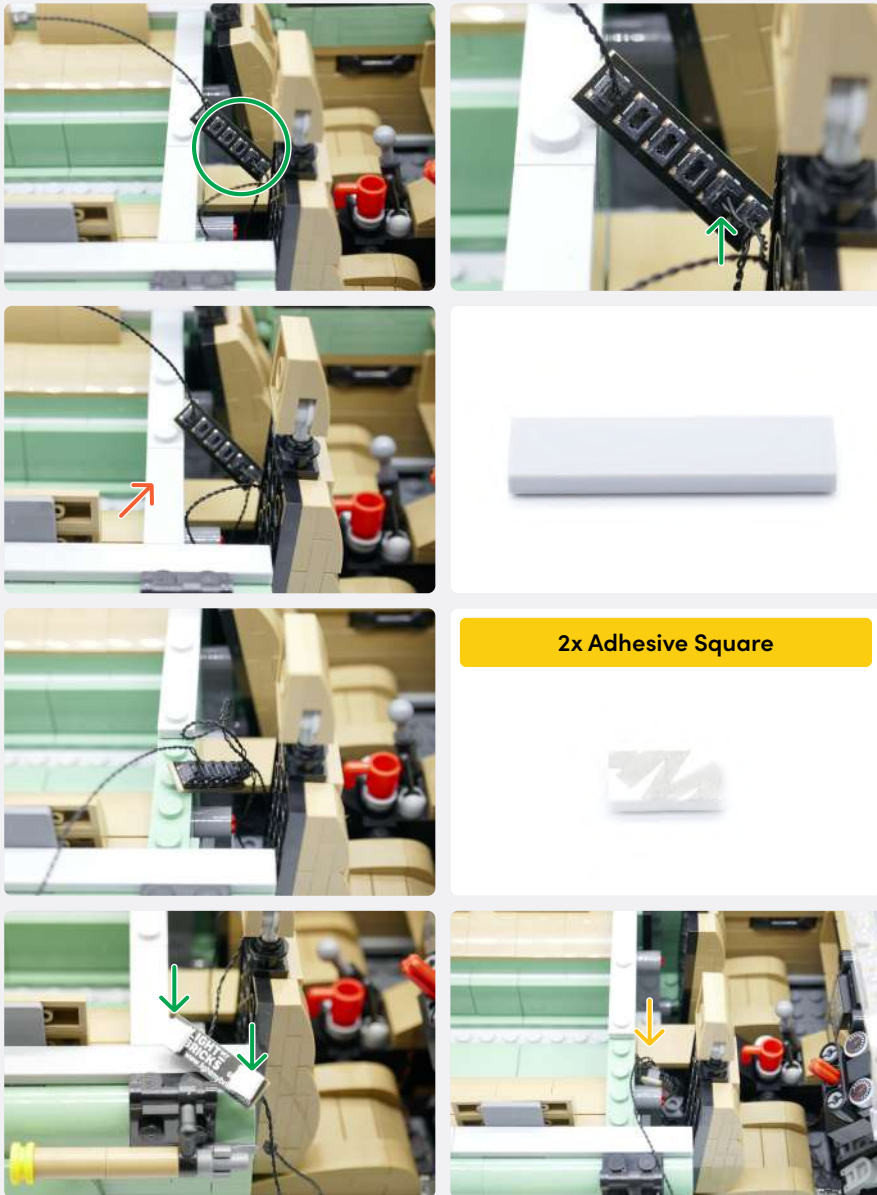


27



15cm Connecting Cable





2-Port Expansion Board



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NOTE

Connect to a 5V USB Power Bank, 5V USB Wall Adaptor, or USB to AA Battery Pack (sold separately)



NOTE

Ensure the light at the center console turns off when the is closed



! If you experience any issues with the lights not working and suspect an issue with a component, please try a different port on the expansion board to verify where the fault lies (with the light or expansion board). To correct any issues with expansion board ports, please view the section addressing expansion board issues in our troubleshooting section. i



DISCONNECT



CONNECT



DIRECTIONAL



BEND / PIVOT



TURN / FLIP



TWIST / BRAID



POWER ON TEST



NOTE ICON

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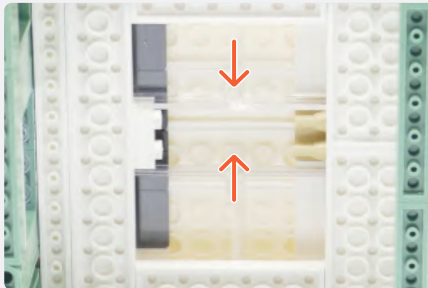


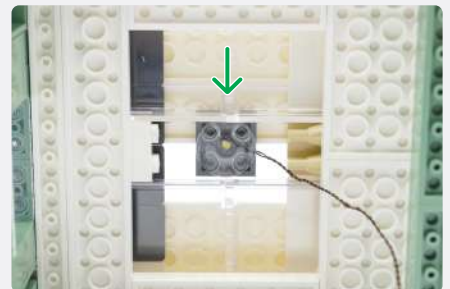
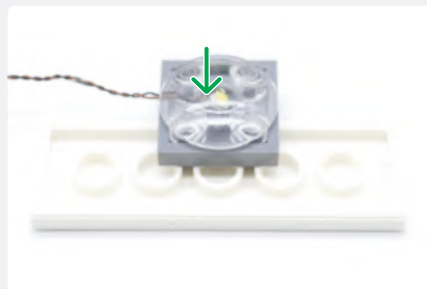
Plate 2x2 - Dark Grey



White 15cm Bit Light



Plate 2x2 W/ Rounded Bottom - Trans Clear



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N/C Push Board

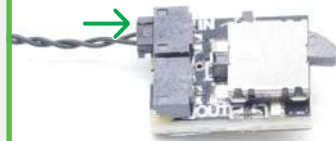


15cm Connecting Cable



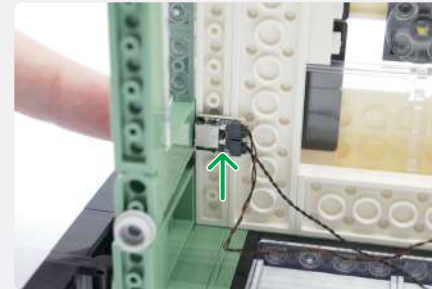
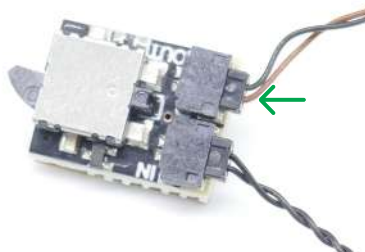
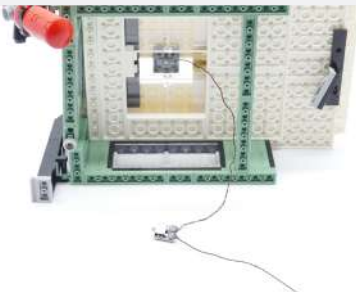
NOTE

Connect the 15cm Connecting Cable to the 'IN' port of the NC Push Board



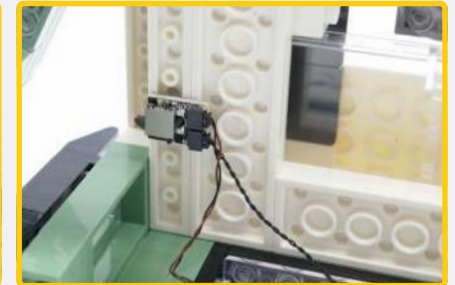
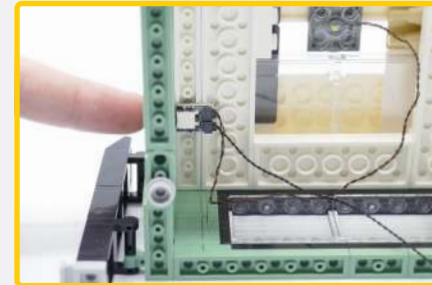
NOTE

Connect the White 15cm Bit Light to the 'OUT' port of the NC Push Board



NOTE

Ensure when the back door is closed that the trigger on the NC Push Board is pushed



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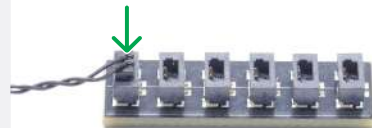
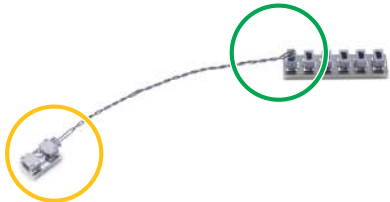
2-Port Expansion Board



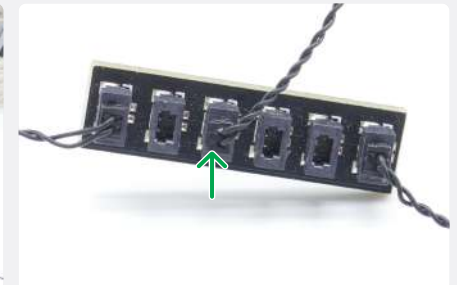
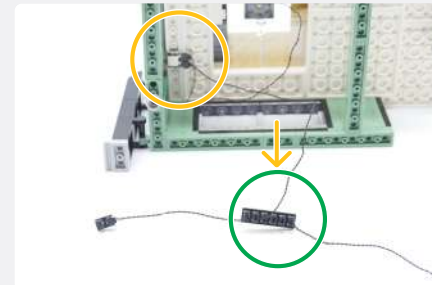
5cm Connecting Cable



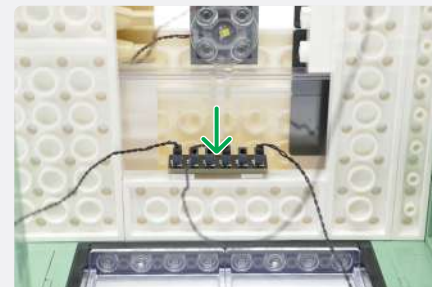
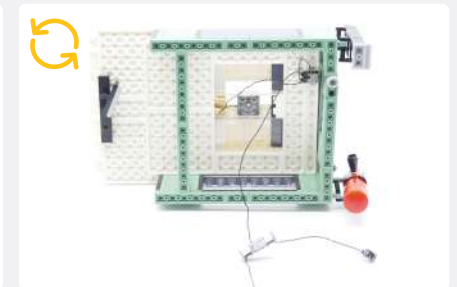
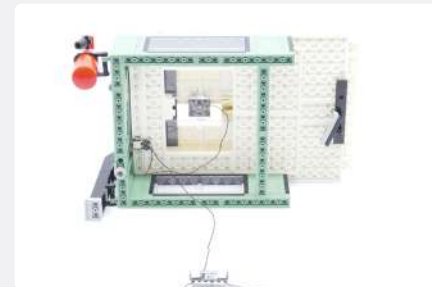
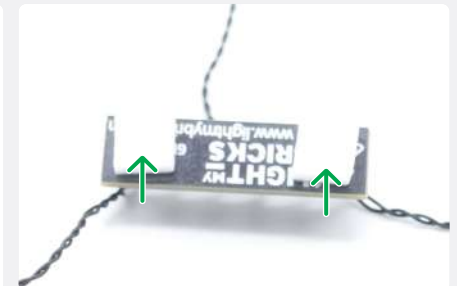
6-Port Expansion Board



15cm Connecting Cable

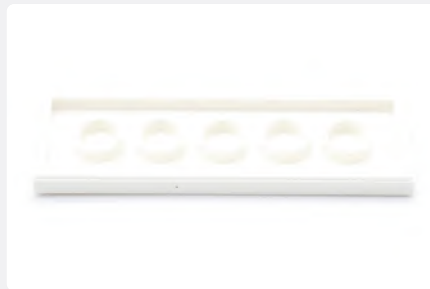
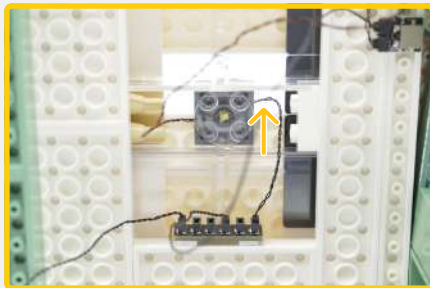


2x Adhesive Square



NOTE

Thread the 5cm Connecting Cable through the following gap

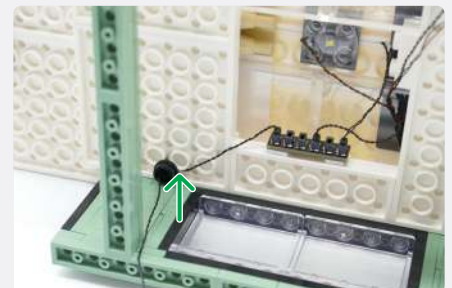
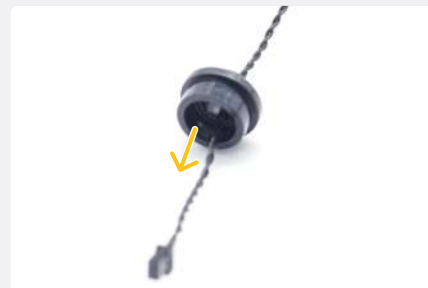
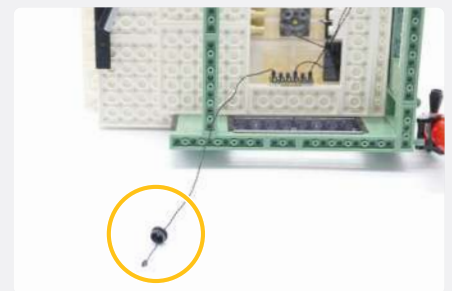
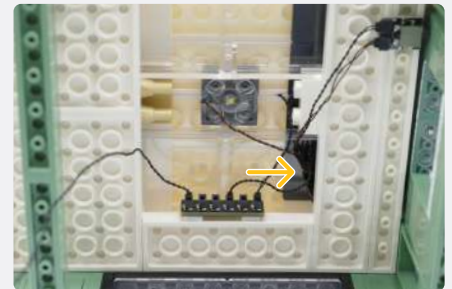
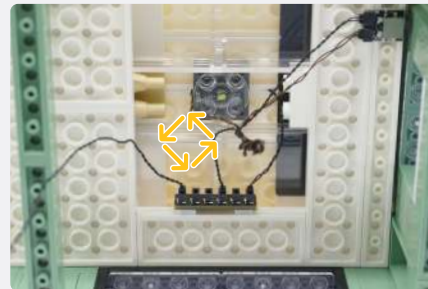
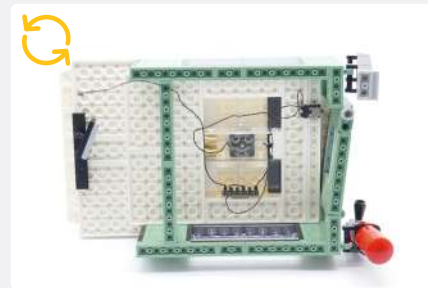


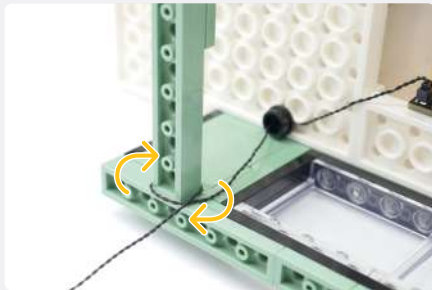
NOTE

Alternatively, if you are not attaching the roof rack, you can conceal the cable and 2-Port inside



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NOTE

Ensure there are no visible cables dangling from the ceiling



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NOTE

Connect to a 5V USB Power Bank, 5V USB Wall Adaptor, or USB to AA Battery Pack (sold separately)



NOTE

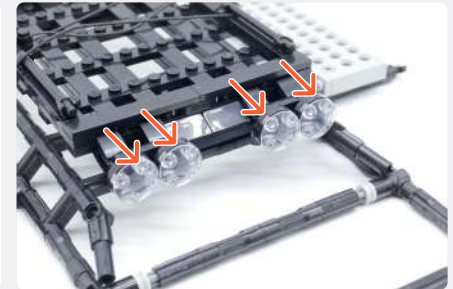
Ensure the ceiling light turns off when the back door is closed



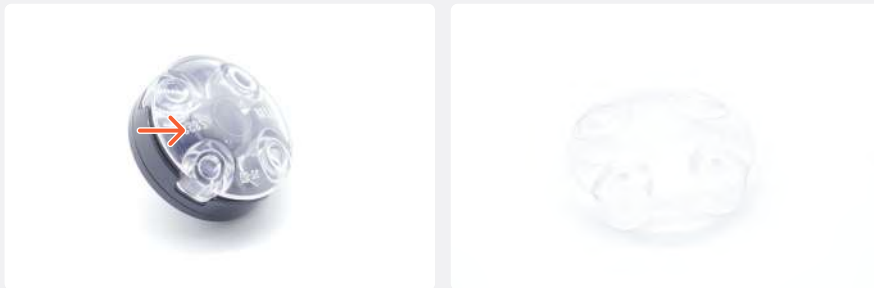
! If you experience any issues with the lights not working and suspect an issue with a component, please try a different port on the expansion board to verify where the fault lies (with the light or expansion board). To correct any issues with expansion board ports, please view the section addressing expansion board issues in our troubleshooting section.



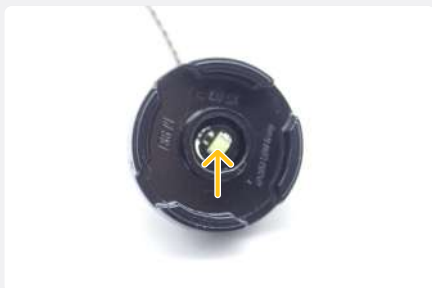
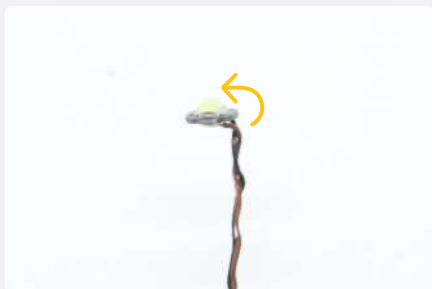
35



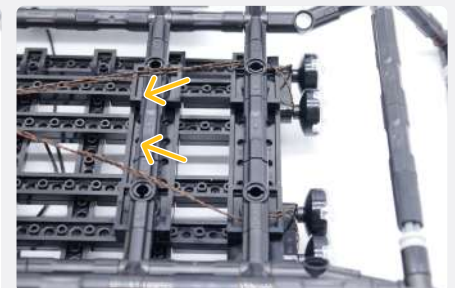
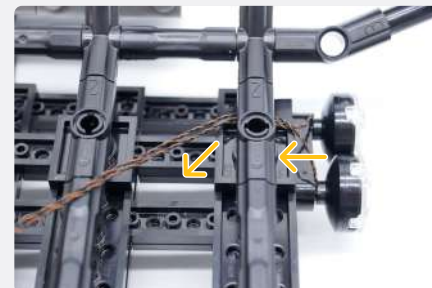
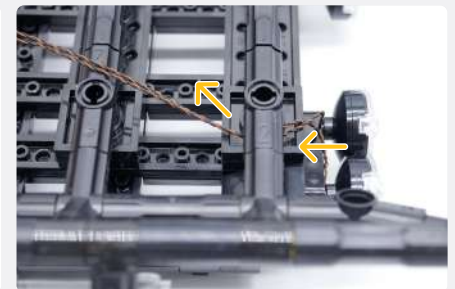
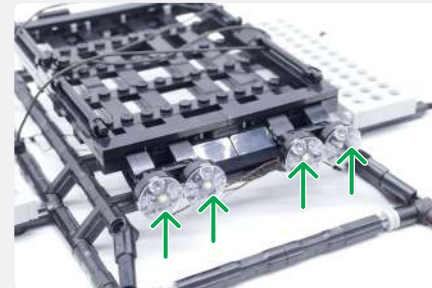
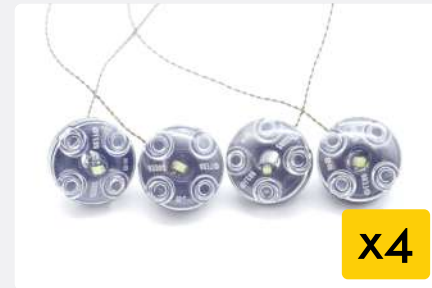
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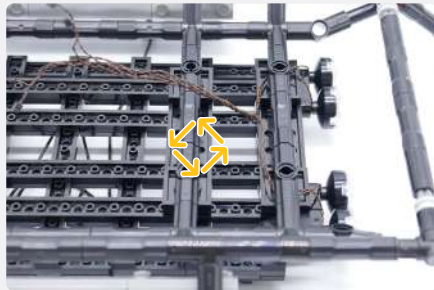


Cool White 15cm Bit Light

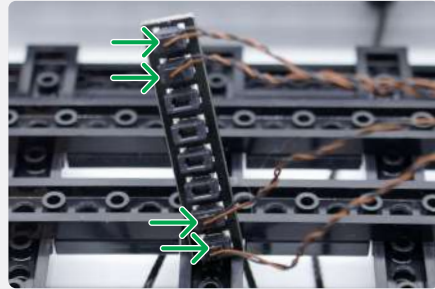
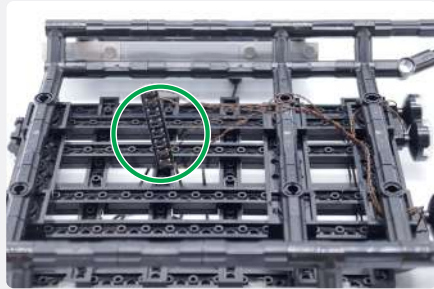


37

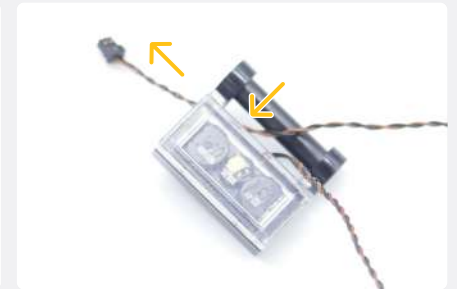




8-Port Expansion Board

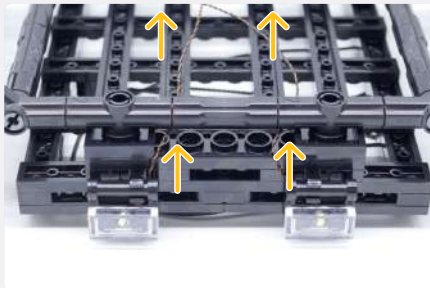
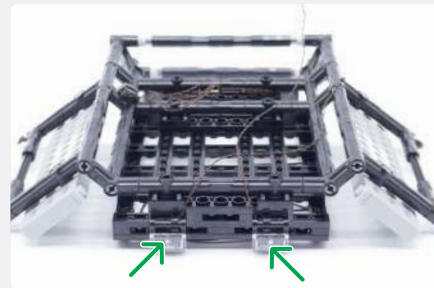


Cool White 15cm Bit Light

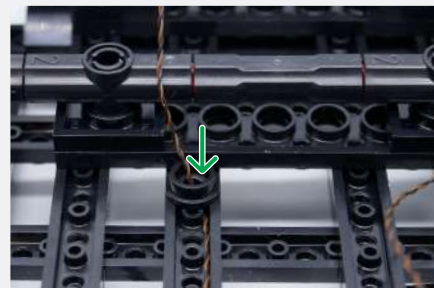
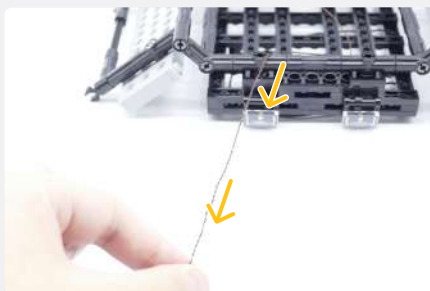


38

39



Round Plate 1x1 Open Stud - Black

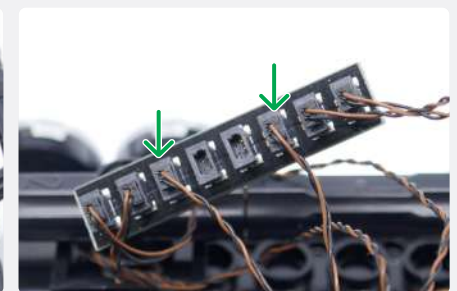
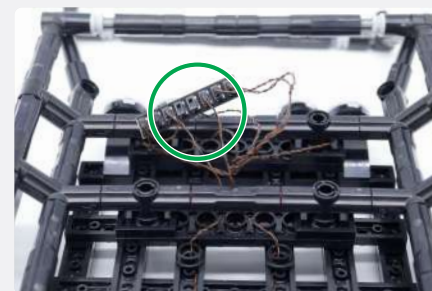
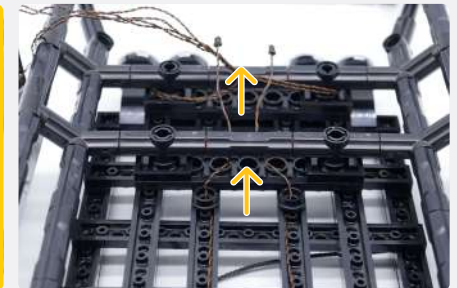
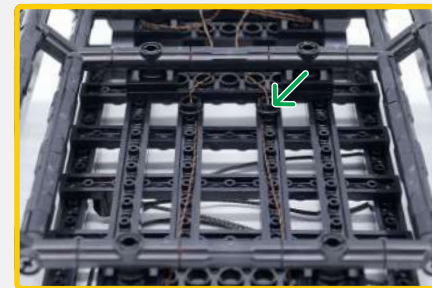


Round Plate 1x1 Open Stud - Black

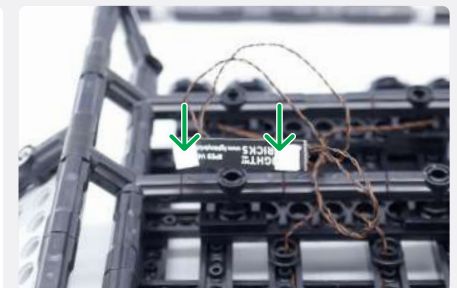


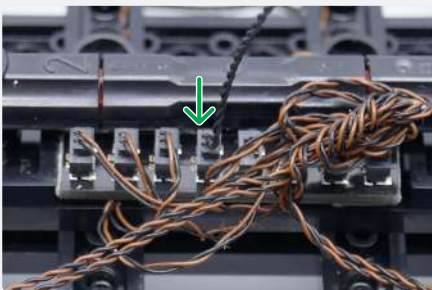
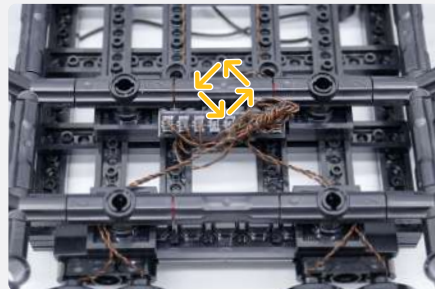
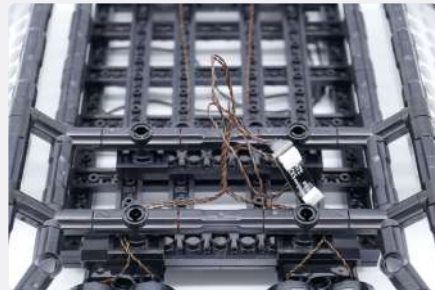
NOTE

Repeat the process for the opposite light



2x Adhesive Square






40



NOTE


Secure the roof rack from the opposite side as well


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 **NOTE**

Connect to a 5V USB Power Bank, 5V USB Wall Adaptor, or USB to AA Battery Pack (sold separately)




! If you experience any issues with the lights not working and suspect an issue with a component, please try a different port on the expansion board to verify where the fault lies (with the light or expansion board). To correct any issues with expansion board ports, please view the section addressing expansion board issues in our troubleshooting section. 

 **NOTE**

Reconnect the remaining pieces to the set



 **NOTE**

You should have these parts left over that were removed from the LEGO set



FINAL PRODUCT

This finally completes installation of the Light My Bricks

LEGO® Land Rover Classic Defender 90 Light Kit.





TROUBLESHOOTING

Light My Bricks lighting kits contain individual components that are very small and can be easily damaged if not handled correctly.

To prevent unnecessary damage to components, we highly recommend that the User Guide section, **“Important things to note”** is read carefully. Follow the handling procedures in the User Guide to help prevent faults and damages to your Light My Bricks components.

If you are experiencing issues with your Light My Bricks set, watch our troubleshooting video [here](#) or read on for a list of common causes to help you troubleshoot.

Troubleshooting

Firstly, ensure that the batteries have power using a battery charge gauge.

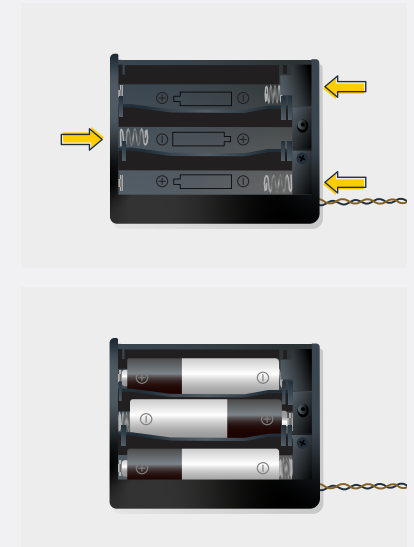
If the batteries have no power, replace the batteries.

If the batteries still have power, check to see if the batteries have been inserted correctly into the battery pack.

Check for AA batteries using the AA battery pack

Inside the battery pack are symbols indicating which direction the AA battery should be inserted. The flat side of the battery should be paired with the spring side of the battery pack.

If the batteries have been installed correctly and your kit still isn't operating correctly, the next step is to check the wiring.



Troubleshooting

Check Your Wires

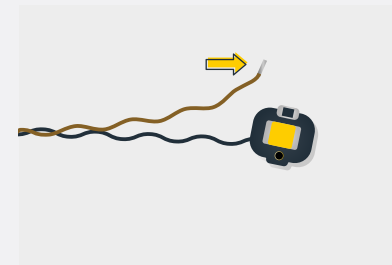
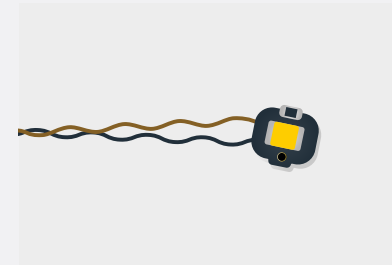
In order for Light My Bricks components to fit in between and underneath LEGO® bricks, the components need to be very small. Due to this nature, Light My Bricks components can be easily damaged when not handled correctly.

Be careful when removing unpacked components out of the packaging and ensure not to forcibly pull at the wires as this can damage the soldering that attach the wires to the LEDs.

If the wiring is detached from the LED itself, the light will not operate.

When connecting lights to your LEGO® set, check that there are no pinched wires underneath or in between bricks and plates.

When the wires are pinched and the exposed wires are touching each other, this can cause a crosswire and the lights to not function correctly.



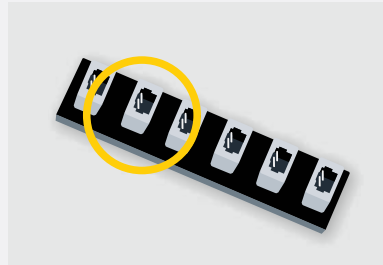
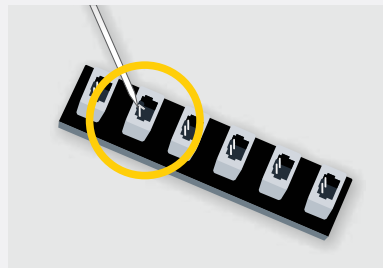
Troubleshooting

Check Your Expansion Board Ports/ Strip Light Ports / Effects Board Ports

It is important to note that connectors can only be inserted to the expansion board, strip light, or effects board ports in one direction.

Forcibly inserting connectors in the incorrect direction will result in damaging the pins inside each of the ports on your component board.

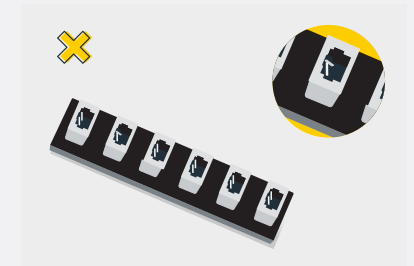
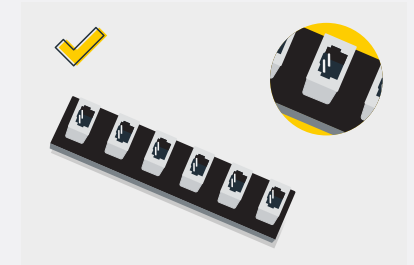
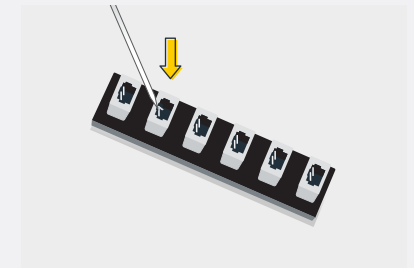
Not only will a light connected to the damaged port not work, but if the pins inside the port are bent to a point they are touching each other, this can result in all other lights in the system to stop working. This is a short circuit.



A short circuit can also result in overheating of the board, cable or batteries. If you suspect a short circuit, **DISCONNECT POWER IMMEDIATELY**. Batteries can fail, catch fire, or even explode if left connected to a short circuit for too long.

If you suspect you have a faulty component due to a bent pin, try the following steps:

If you look carefully inside each of the ports, each port contains 2 small pins that should be straight. You will be able to identify a faulty port if it has any bent pins.





CONTACT US

If you have an enquiry regarding the online shop, our products or a general enquiry please refer to our Frequently Asked Questions webpage here.

Alternatively, you can contact our Customer Services team by visiting our online support portal here.

support.lightmybricks.com

We thank you for purchasing this product and hope you enjoy!



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