

# LEGO® EIFFEL TOWER #10307 LIGHT KIT

**INSTALLATION GUIDE** 

Part 1 of 2



# **Light My Bricks**



Hi There!

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

Eiffel Tower 10307 Light Kit.

This PDF details the instructions for the LED light kit only. If you are wishing to purchase this product, please <u>click here</u> 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:**

\* Indicates components which include spares

## Individual Bags



- 28x White 30cm Micro Bit Light \*
- 8x White 15cm Micro Bit Light
- 2x RGB 15cm Bit Light 2.0
- 15x RGB Strip Light 2.0 \*
- 2x White 15cm Bit Light
- 1x 2Pin-3Pin 30cm Connecting Cable

## **Connecting Cables**



- 1x 5cm Connecting Cable
- 4x 15cm Connecting Cable
- 8x 30cm Connecting Cable \*
- 5x 50cm Connecting Cable \*
- 1x 120cm Connecting Cable

#### **RGB Connecting Cables**



10x RGB 15cm Connecting Cable6x RGB 30cm Connecting Cable \*

#### **Mixed Components 1**



- 4x 2-Port Expansion Board
- 3x 6-Port Expansion Board
- 36x Adhesive Square \*

## **Mixed Components 2**



5x 8-Port Micro Expansion Board \*

# Mixed Components 3



- 2x IR Switch Board
- 1x 3Pin Sparkle Effects Control Board

#### **USB Power Cable**



2x USB Power Cable

(Power Source not Included)





# **PACKAGE CONTENTS:**

## **Mixed Components 4**



- 8x Plate, Round 1x1 Open Stud Black
- 4x Plate, Round 1x1 with Bar Handle Black
- 4x Tile, Modified 1x1 with Open O Clip Black
- 4x Bracket 1x1 1x1 Inverted Dark Bluish Gray

## **Mixed Components 5**



8x Brick 1x2 - Black

## Mixed Components 6



8x Tile 1x6 - Black

## Mixed Components 7



4x Plate 1x6 - Black

## Light String Warm White 15 LED 3 Pin



6x Light String 15 LED 3Pin - Warm White

## Light String Warm White 15 LED 3 Pin



5x Light String 15 LED 3Pin - Warm White

# **RGB** Components



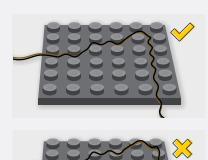
- 1x RGB Remote Control
- 3x RGB Control Board
- 1x RGB 6-Port Expansion Board



# **Contents**

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# 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.





# **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.



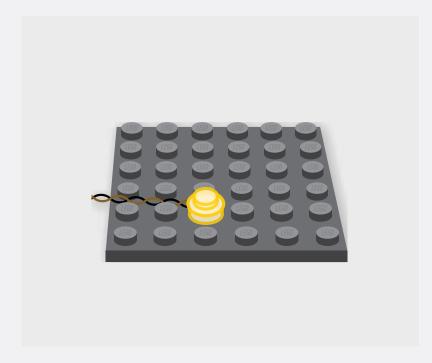
# Connecting Micro Cable Connectors To Micro Expansion Board Ports

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.



# **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.









# 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.



# **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.





# **Repeat Step**

Repeat the previous step eg.

Make a spotlight, then make a second spotlight.



## **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**

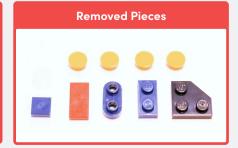
Connect to a 5V USB Power Bank, 5V USB Wall Adaptor, or USB to AA Battery Pack (sold separately)



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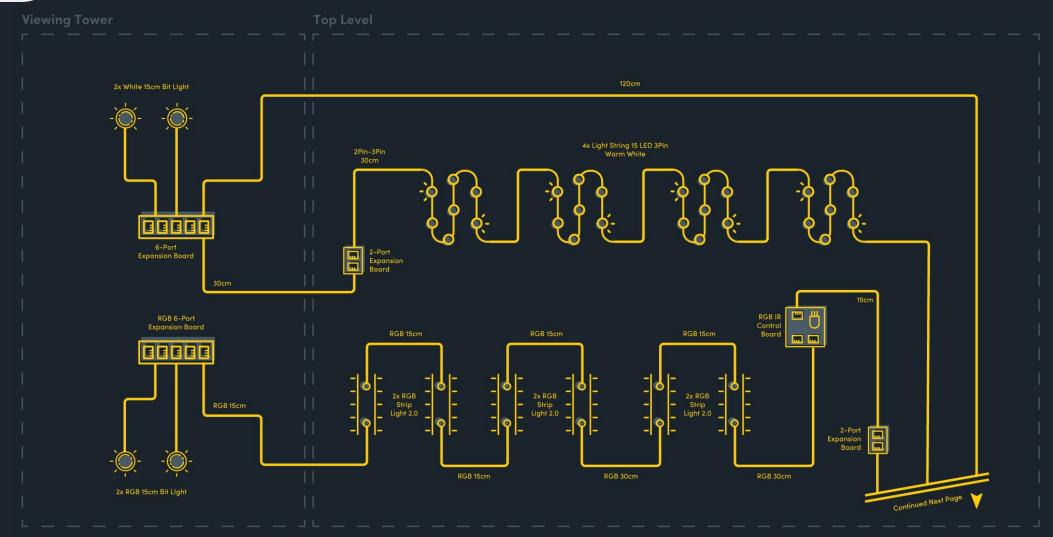
## NOTE

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





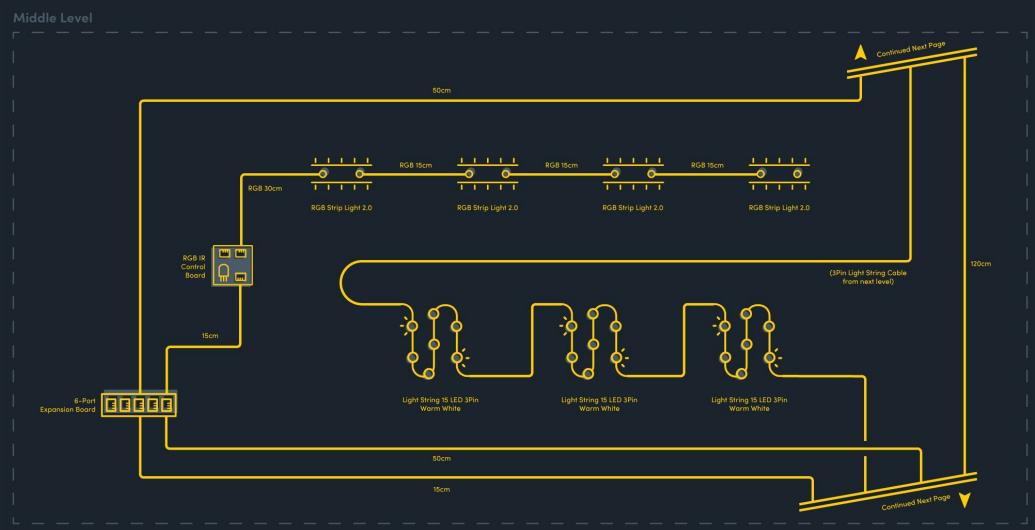
# **BLUEPRINT:** Top Level







# **BLUEPRINT:** Middle Level







# **BLUEPRINT:** Bottom Level

#### Continued Next Page 120cm 11111 11111 RGB 30cm **RGB IR Control** 0 Board (3Pin Light String Cable from next level) RGB 15cm 1111 BEBBB 2x RGB Strip Light 2.0 2x RGB Strip Light 2.0 ... Expansion Board RGB 15cm RGB 30cm 3Pin Sparkle Effects Control Board 2-Port Expansion 1 1 1 1 1 30cm 4x Light String 15 LED 3Pin Warm White 30cm IR Switch Board 8-Port Micro Expansion Board 8-Port Micro Expansion Board 8-Port Micro Expansion Board 8-Port Micro Expansion Board 30cm IR Switch Board BEREE ... 2x Micro Bit 2x Micro Bit Light 15cm 6x Micro Bit Light 30cm USB Power Cable **USB Power Cable**

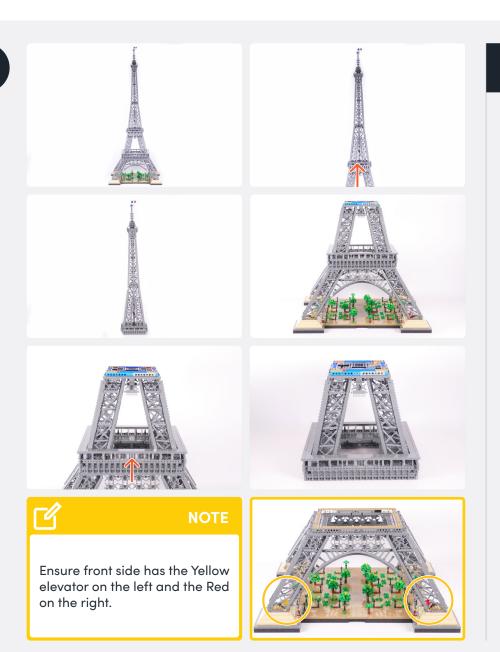


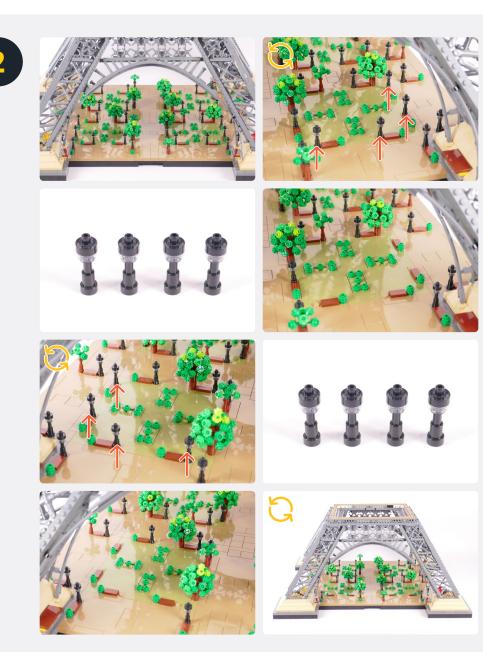


# **INSTRUCTIONS: Part 1**

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.





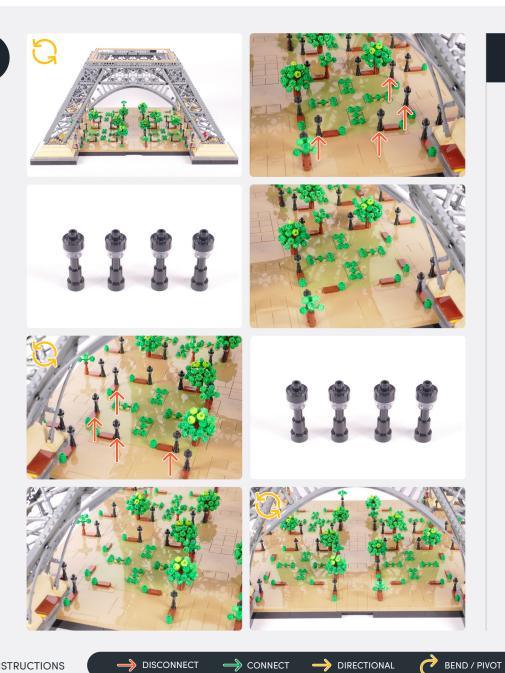
















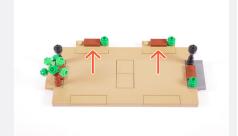


## NOTE

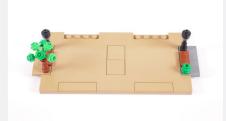
Use the LEGO Brick Separator Tool or similar to pry apart plates.











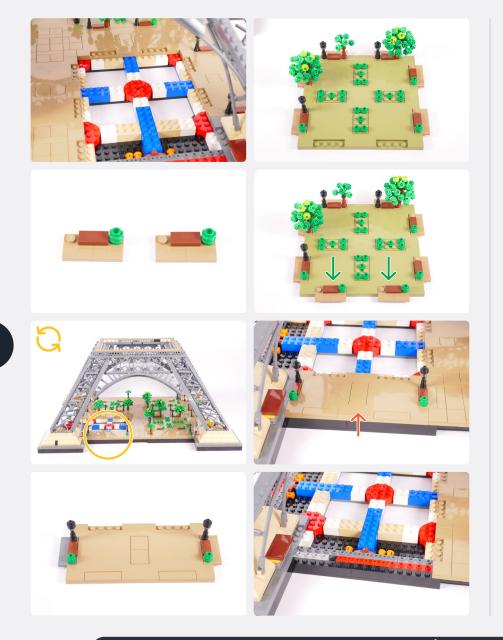


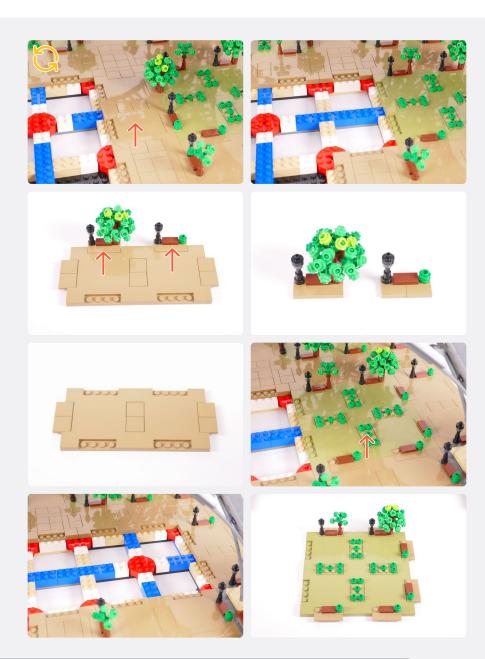




















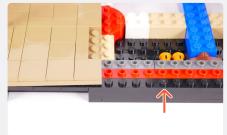










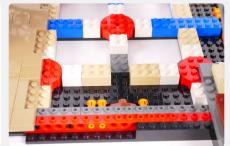






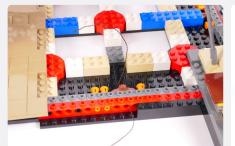














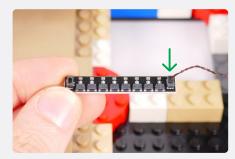




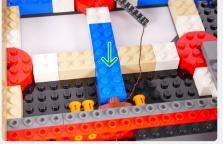


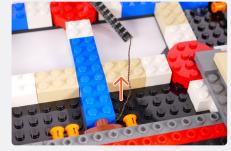




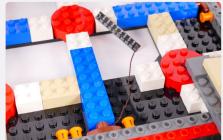


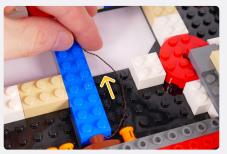




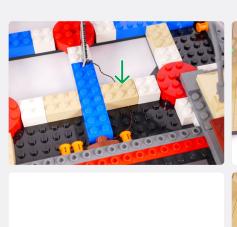


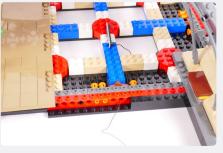




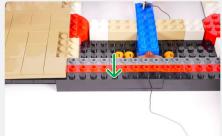


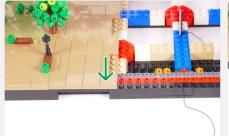


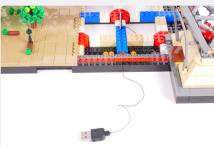




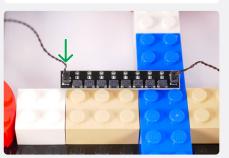












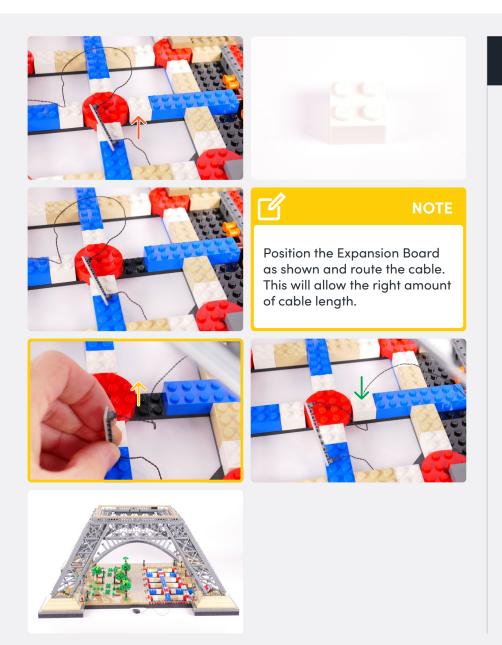


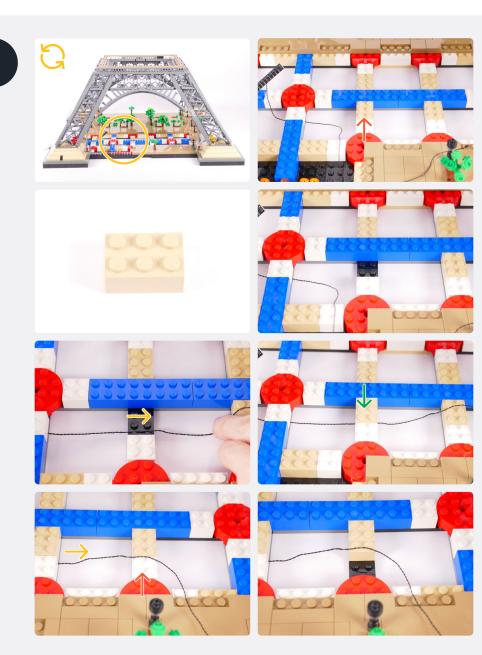




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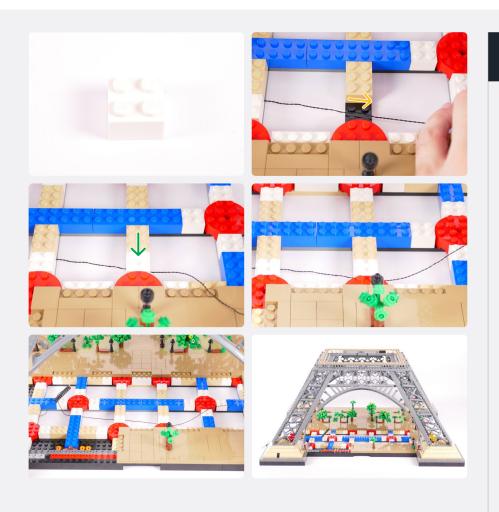


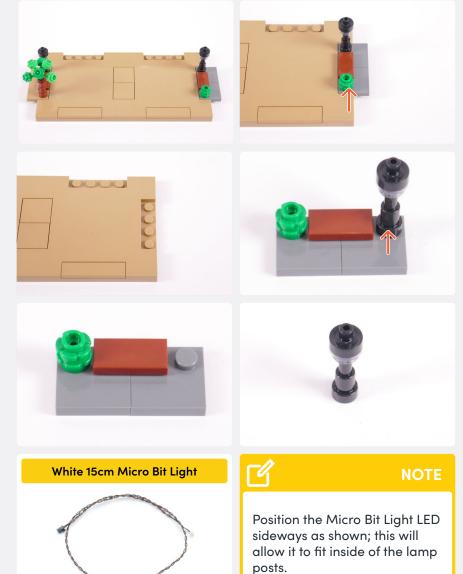
















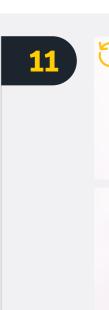


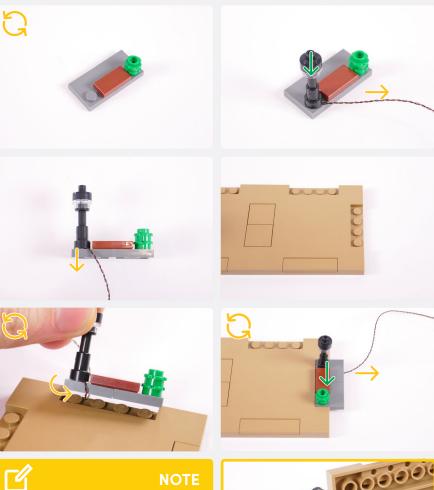


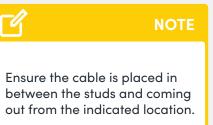


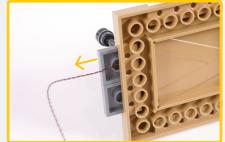








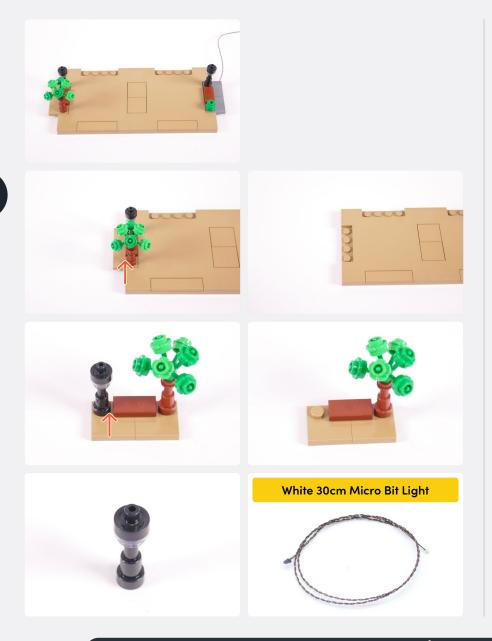


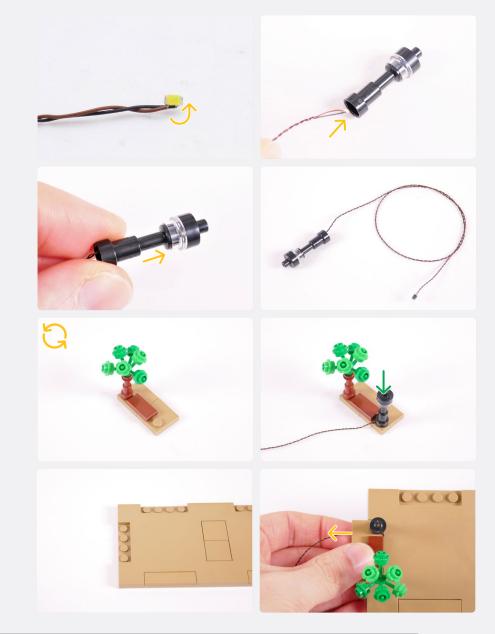






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INSTRUCTIONS











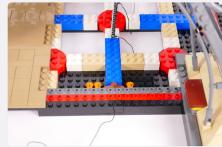






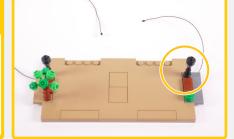








Run the cables to the side of the brown piece, ensure it is under the piece when placed down.





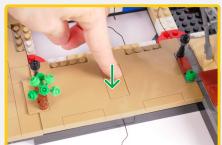


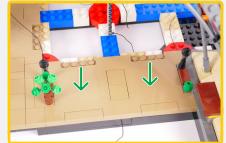


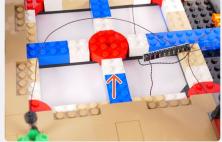


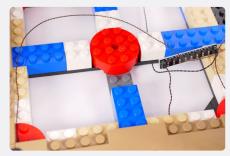
NOTE

Press down on the middle of the brown piece first, then press down where indicated.







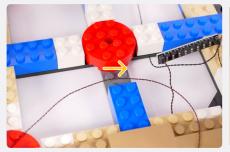


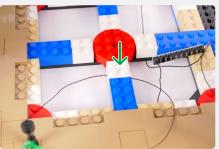


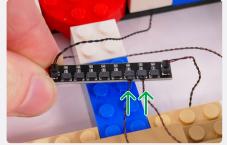


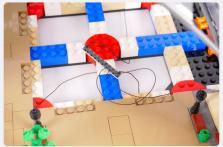
















# NOTE

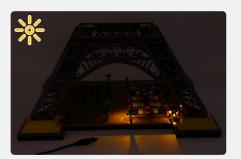
Connect to a 5V USB Wall Adaptor (sold separately). A power bank or battery pack is not recommended to power this set.





# NOTE

Testing the set regularly is encouraged to ensure all of the lights are working when completing each step.













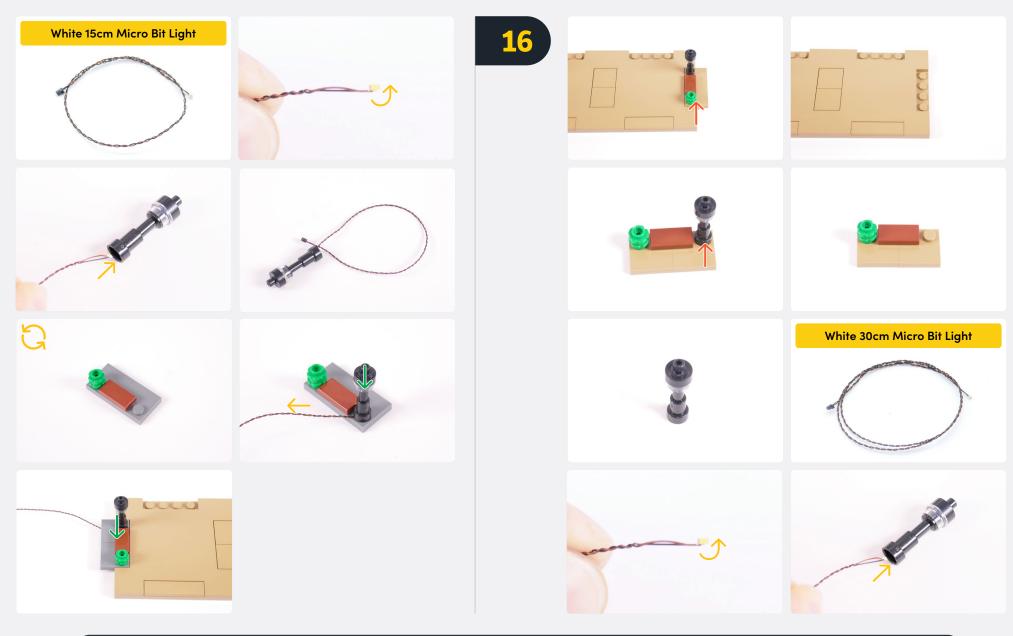


















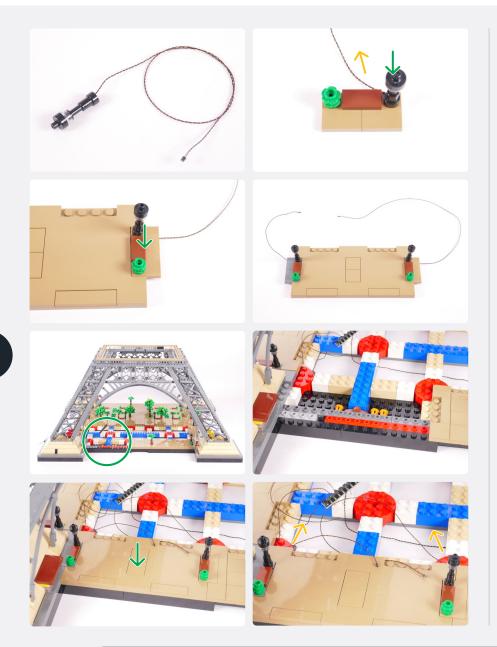


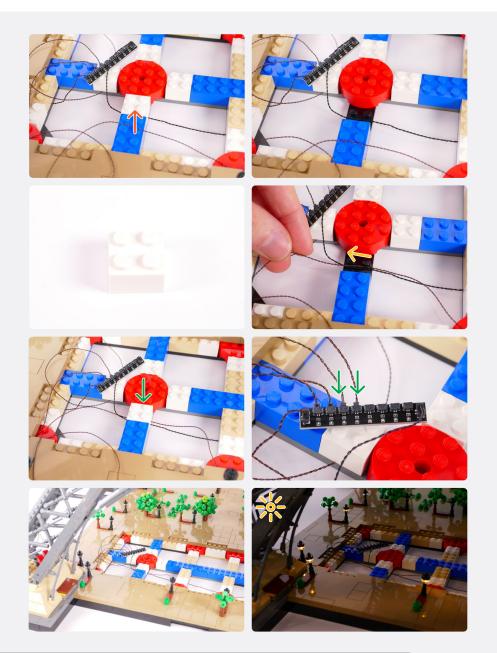




















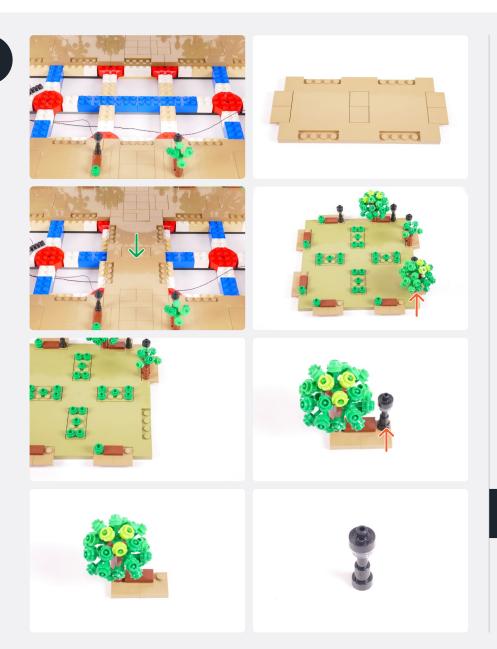


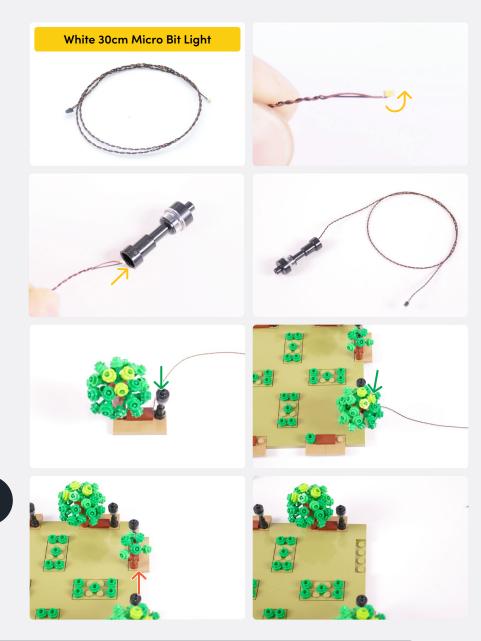


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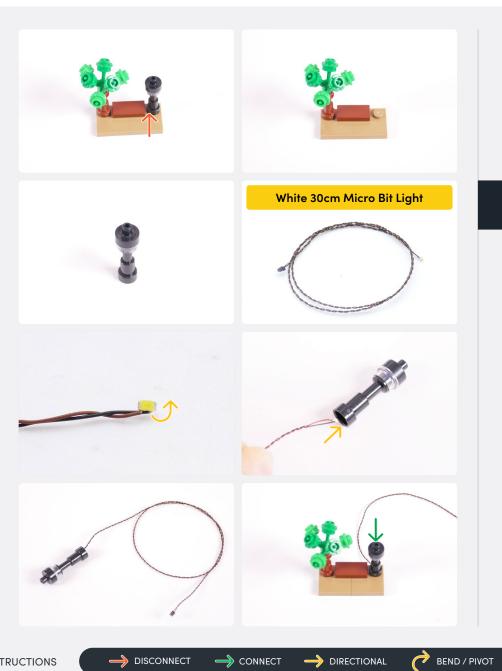




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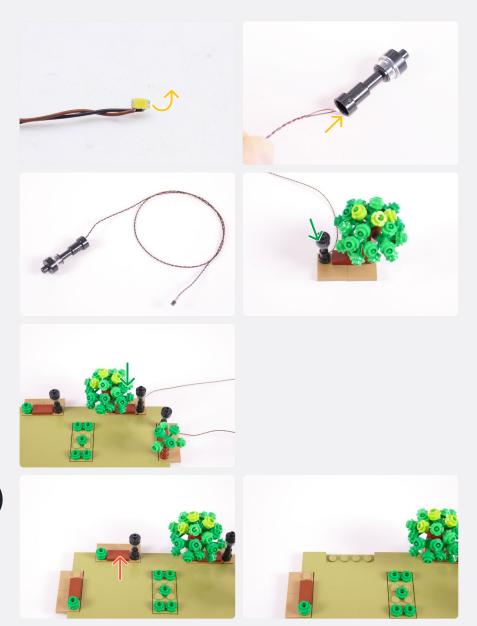


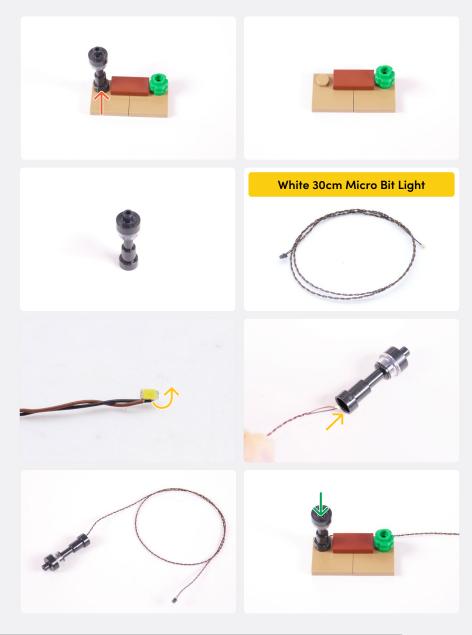








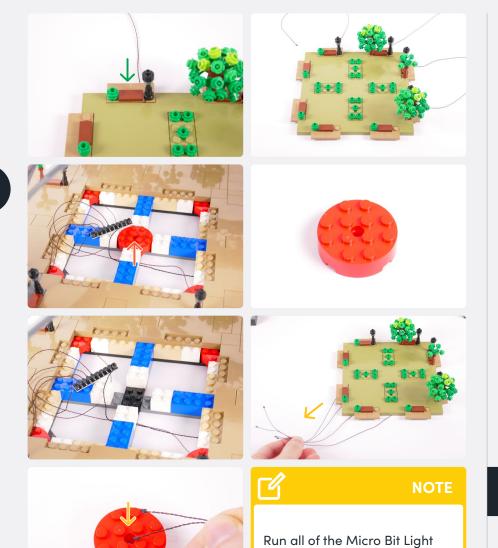




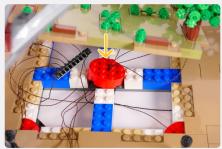
INSTRUCTIONS

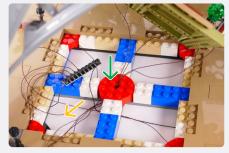














Place the green plate in an upright position, this will allow you to connect the cables underneath.









INSTRUCTIONS

cables about halfway through

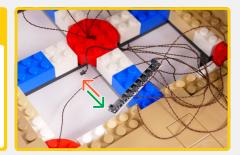
the red circle brick.





# NOTE

If you have trouble attaching the Micro Bit Light cables to the Micro Expansion Board, remove the connecting cable, then reattach after.



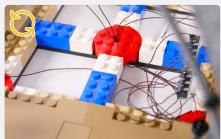


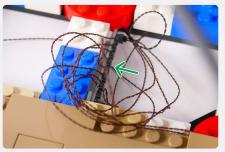




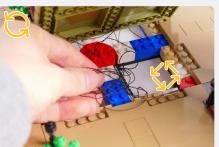










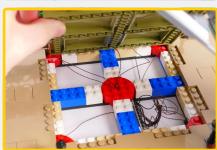






Position the green plate as

shown, and ensure all of the cables are clear of the studs and placed in the empty spaces.





# NOTE

NOTE

Rest the green plate down in the original position, but do not press down yet.













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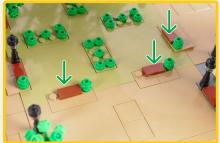


## NOTE

Press down the centre of the green plate first, then press down each of the brown tile sections indicated.











Then press down the remaining sections by pressing on the edge of the brown plate of each. Ensure you do not press too hard.







## NOTE

The green plate will be slightly raised but this is normal. There are several cables underneath and making it flat will break them.



















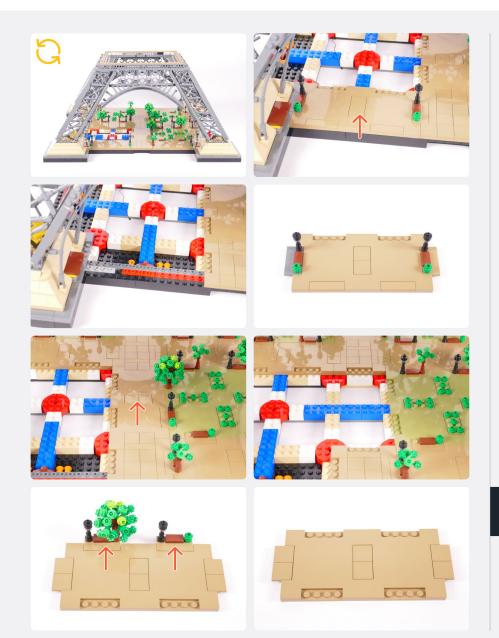


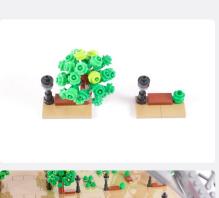






















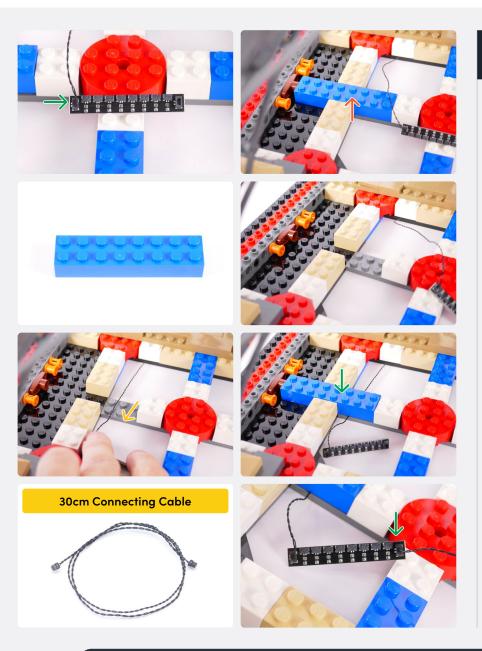
8-Port Micro Expansion Board

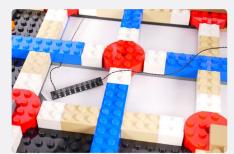


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TURN / FLIP





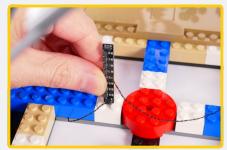


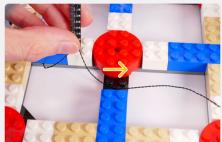


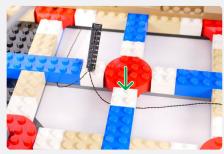
NOTE





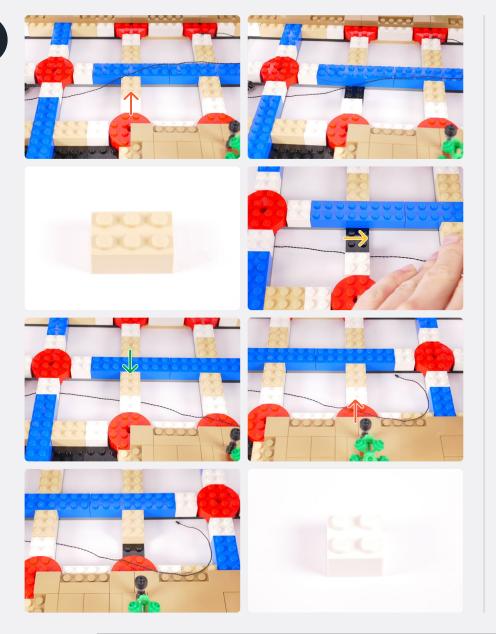


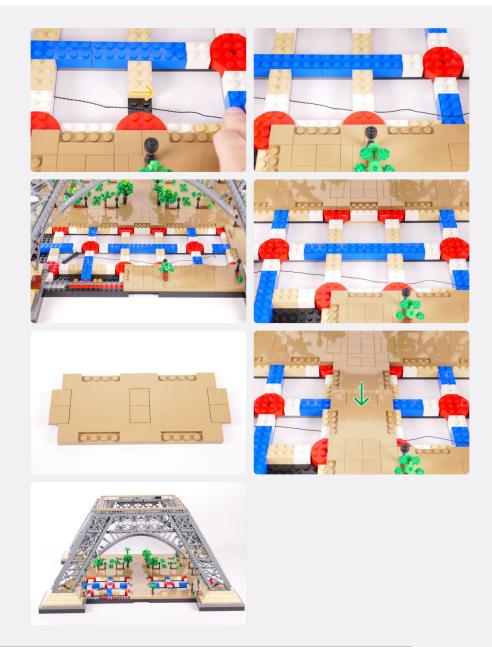






**28** 



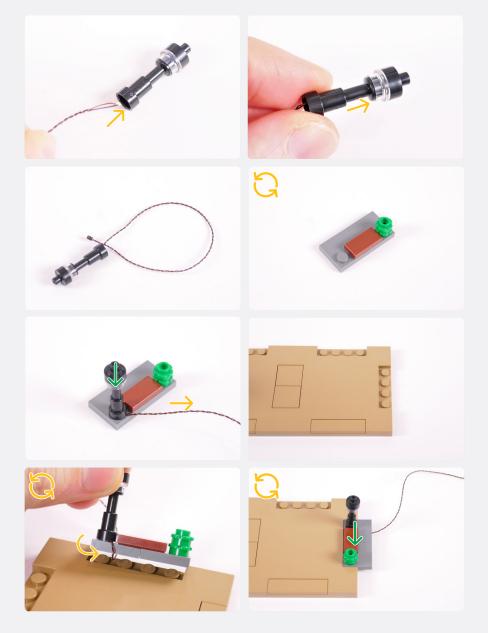


















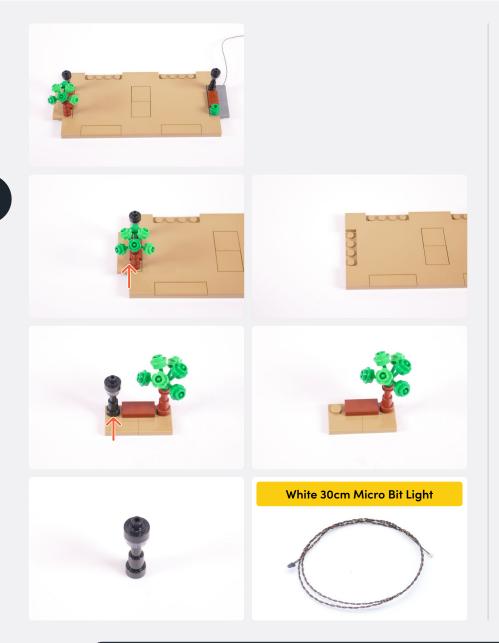


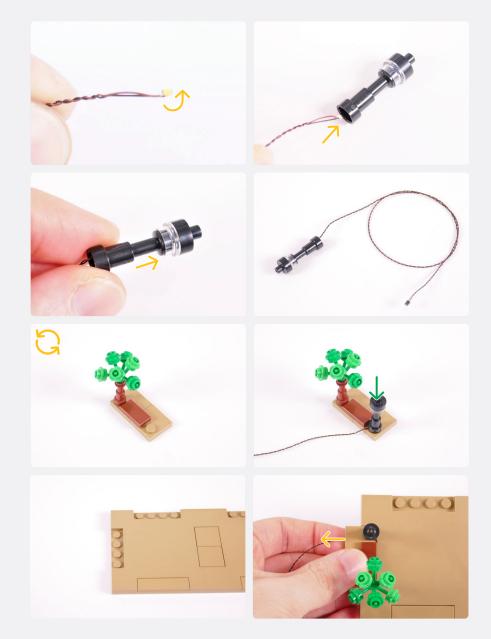














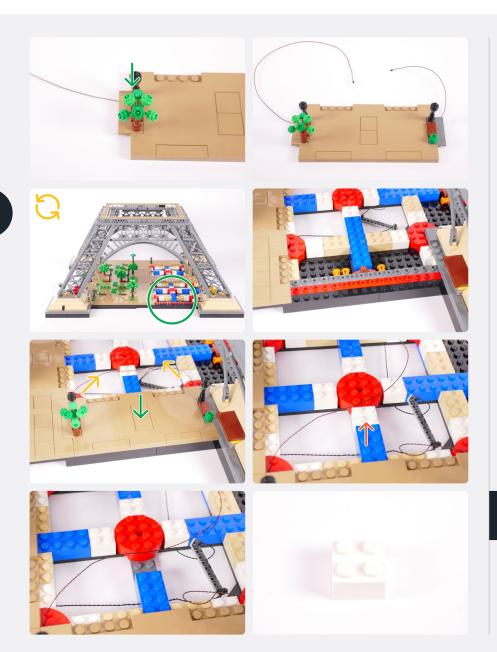


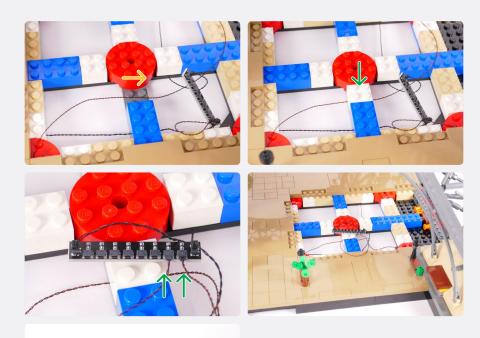












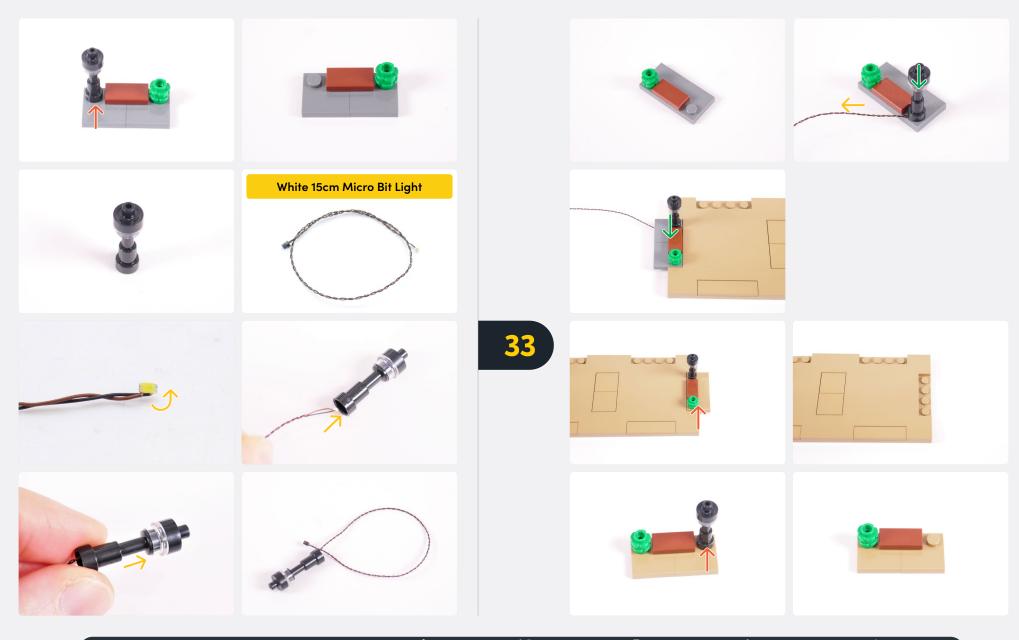












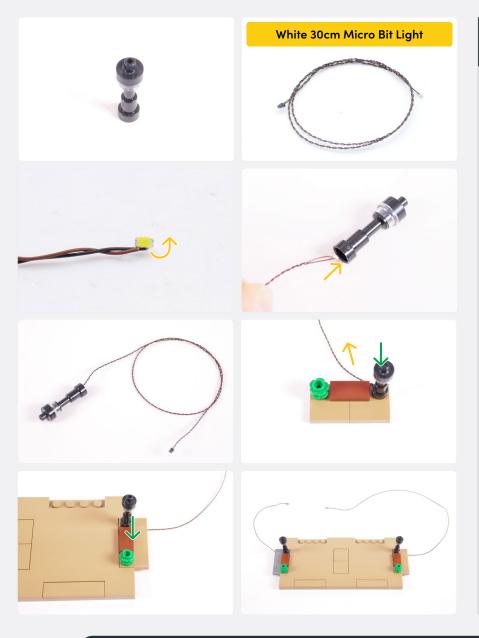


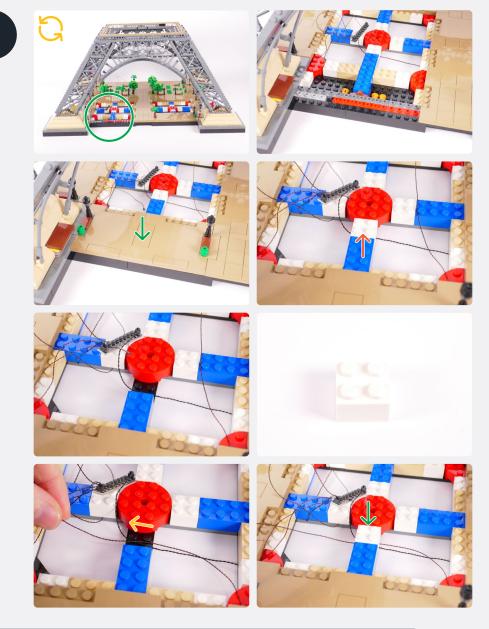














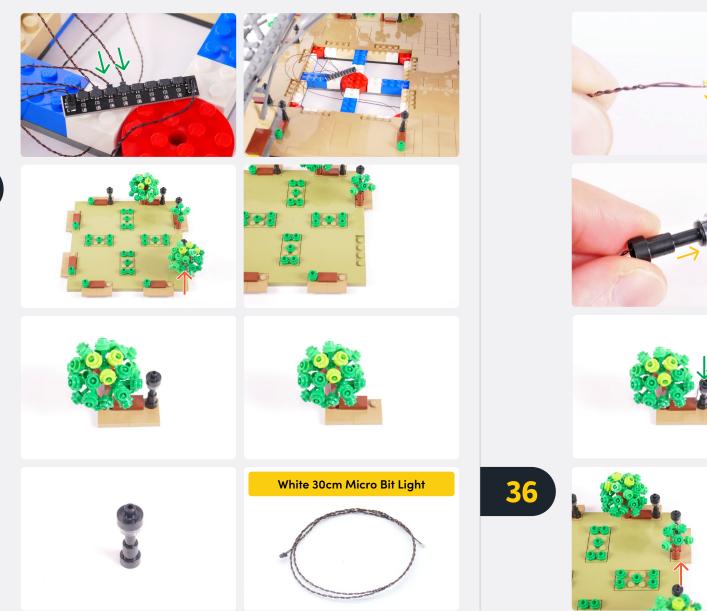


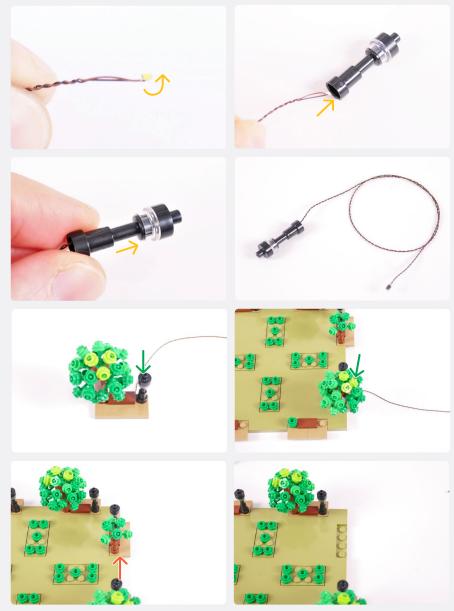




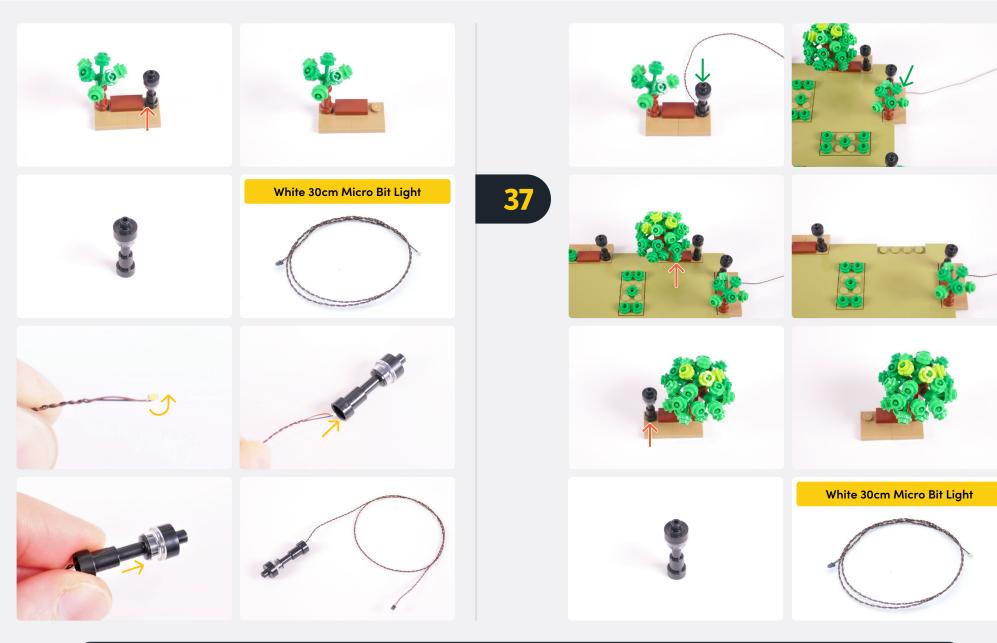










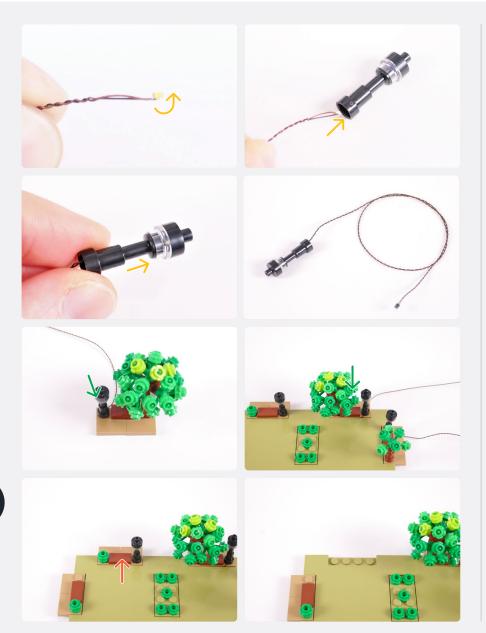


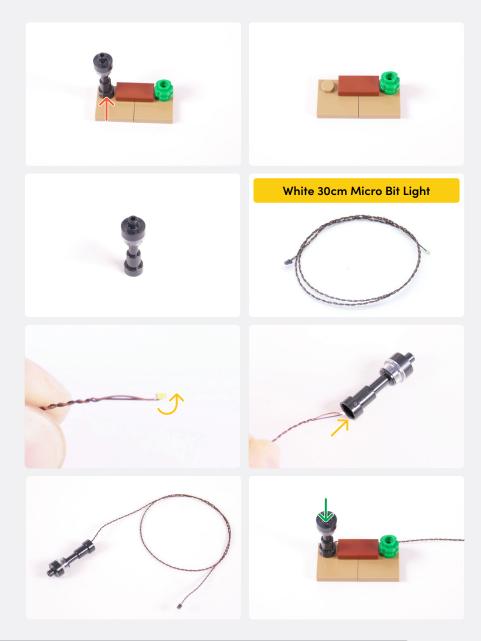






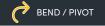










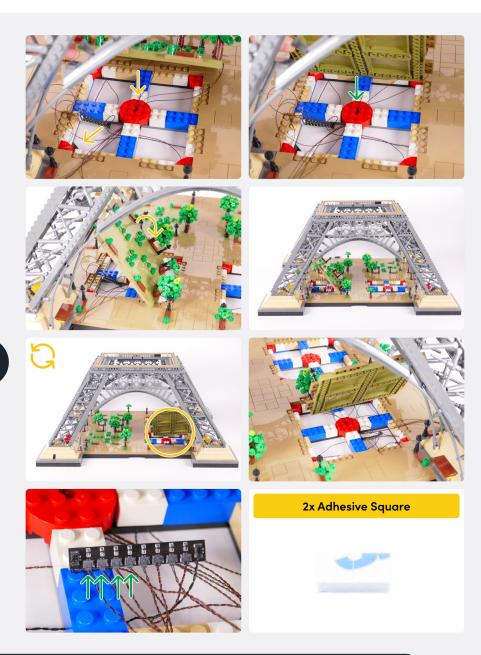










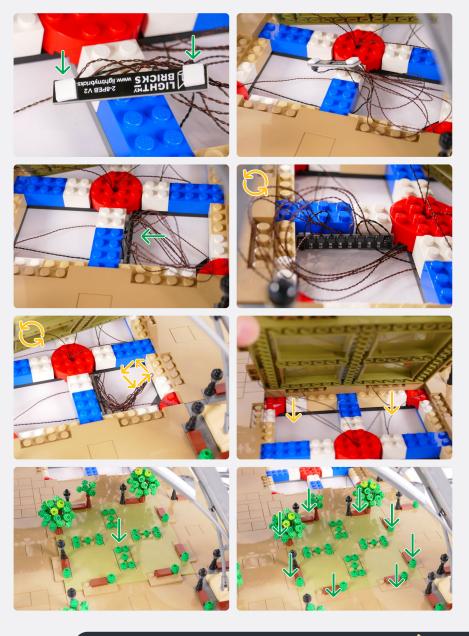
















Connect to a 5V USB Wall Adaptor (sold separately). A power bank or battery pack is not recommended to power this set.

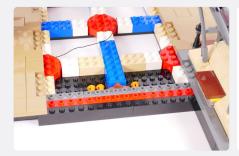


If you experience any issues with the lights not working and suspect an issue with a component, please try a different port on the expansion board to verify where the fault lies (with the light or expansion board). To correct any issues with expansion board ports, please view the section addressing expansion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















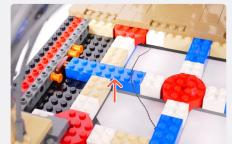




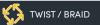






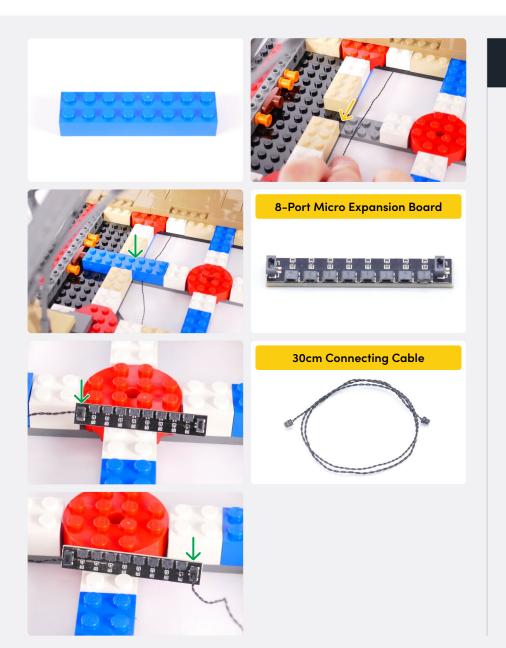


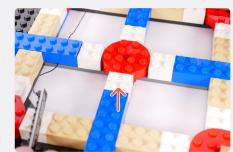


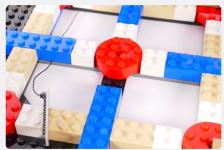


→ DISCONNECT





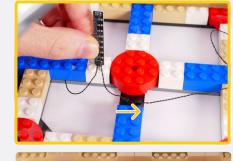


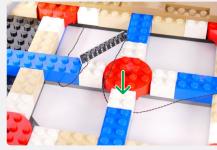


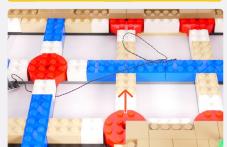


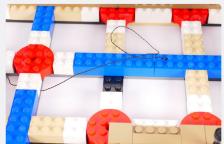


Hold the Micro Expansion Board in this position, then fix the cable down and let go.





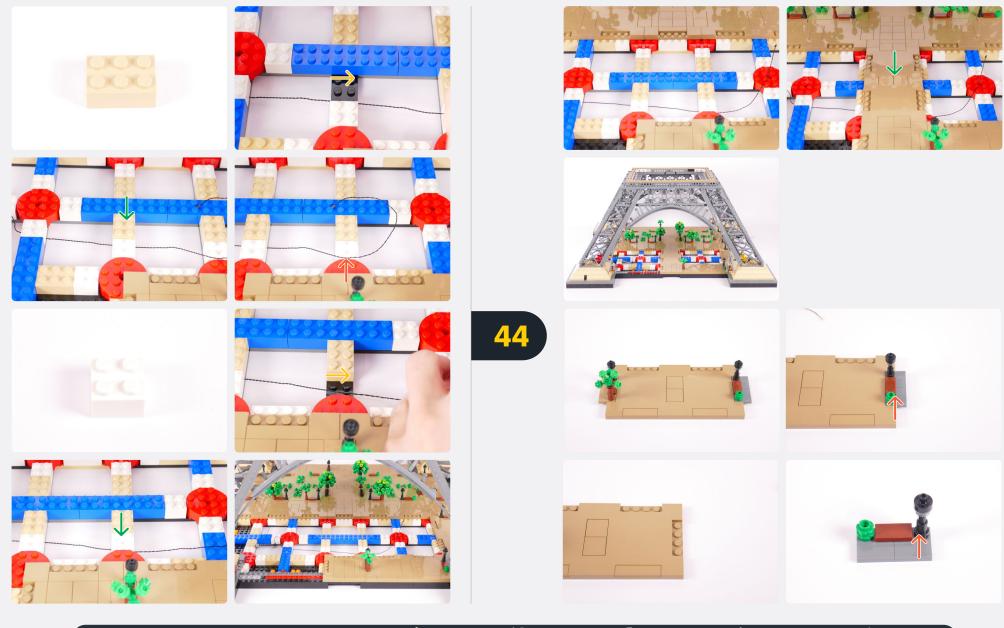










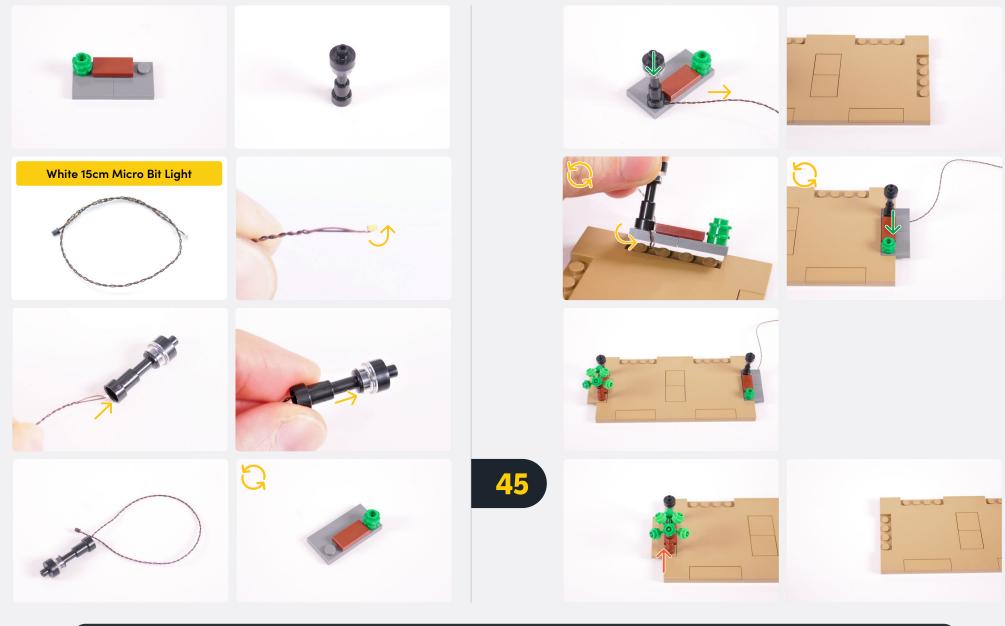












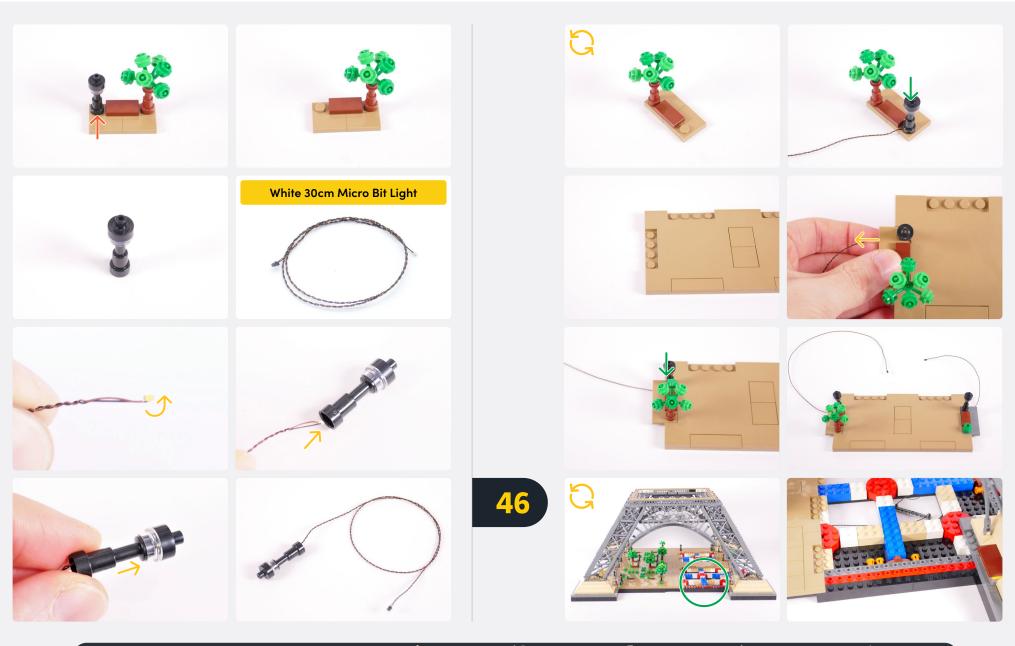










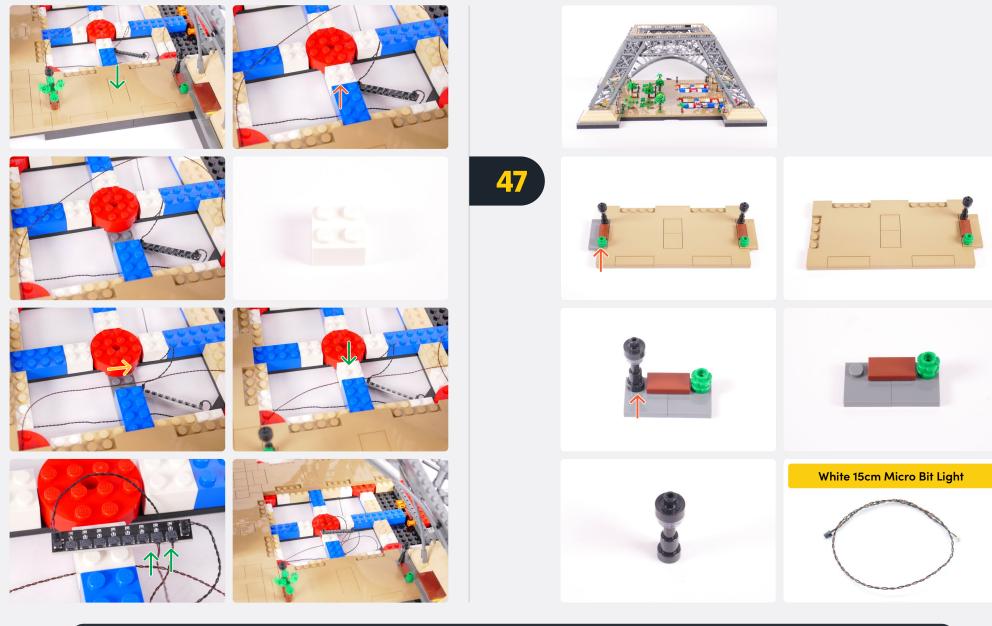










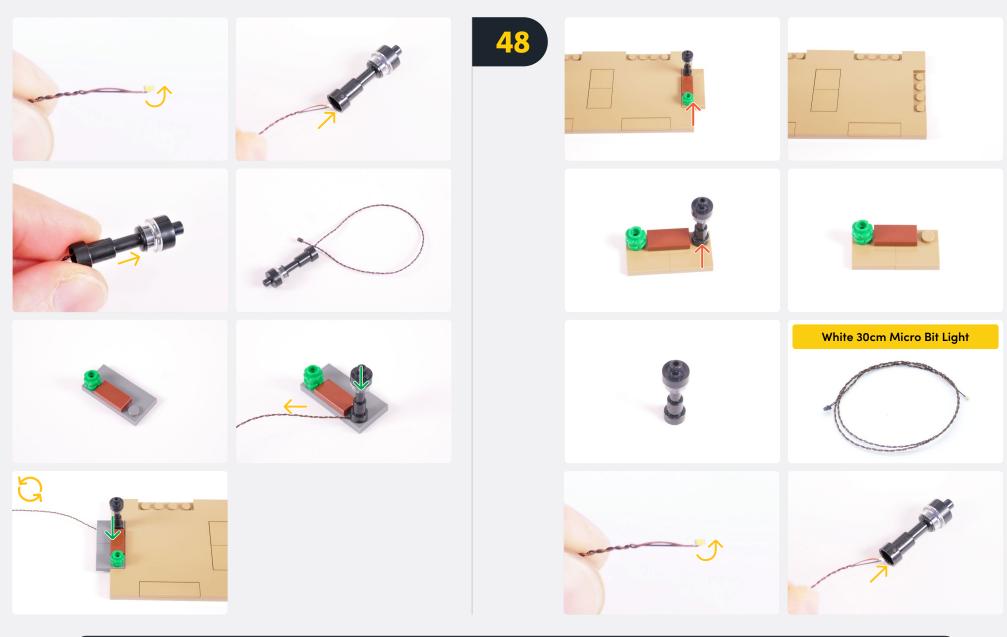
















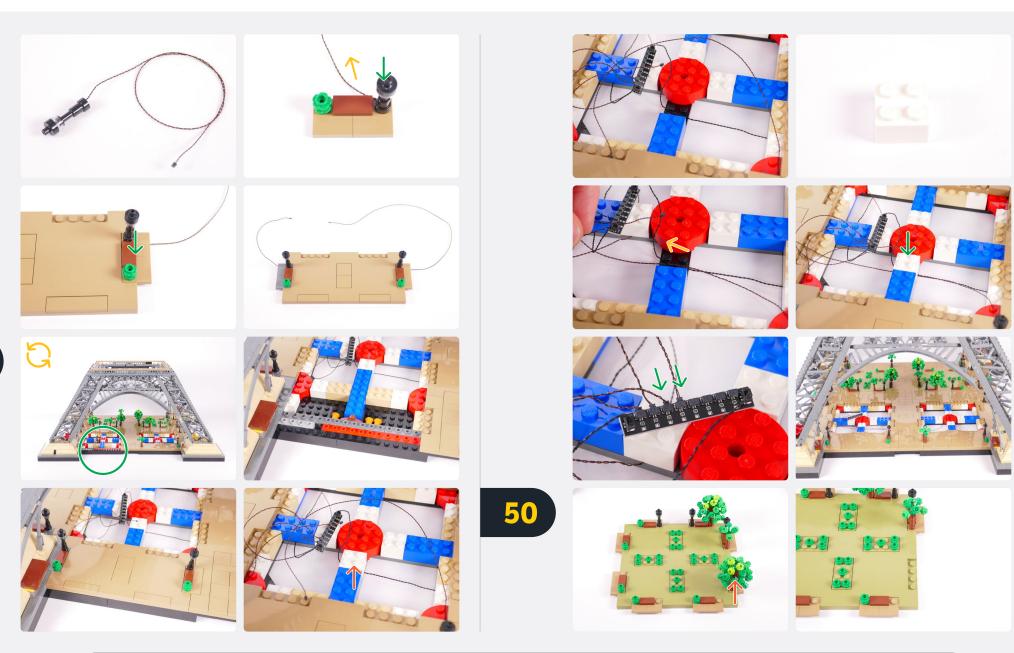












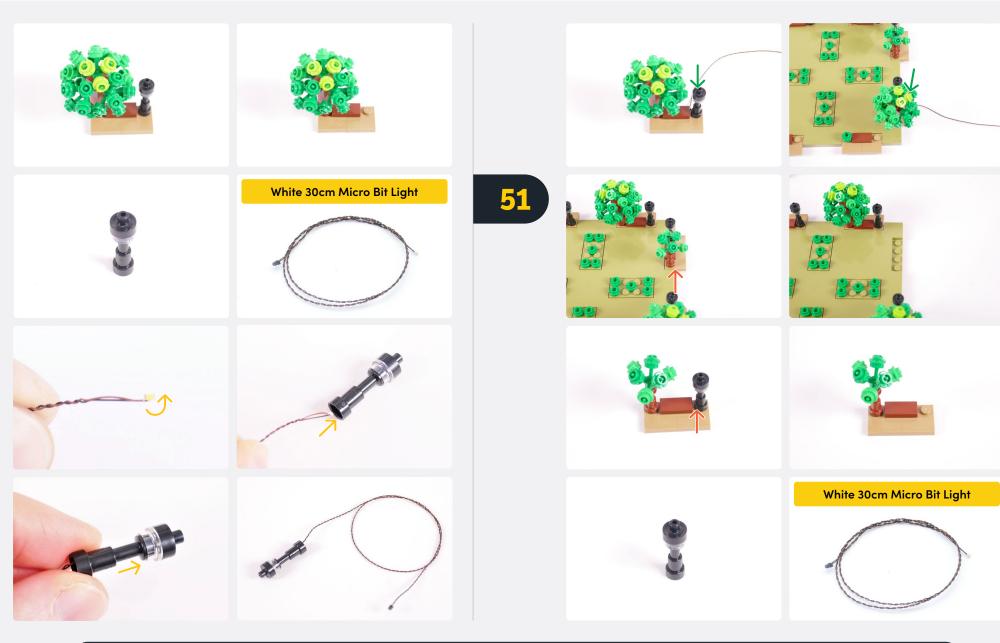












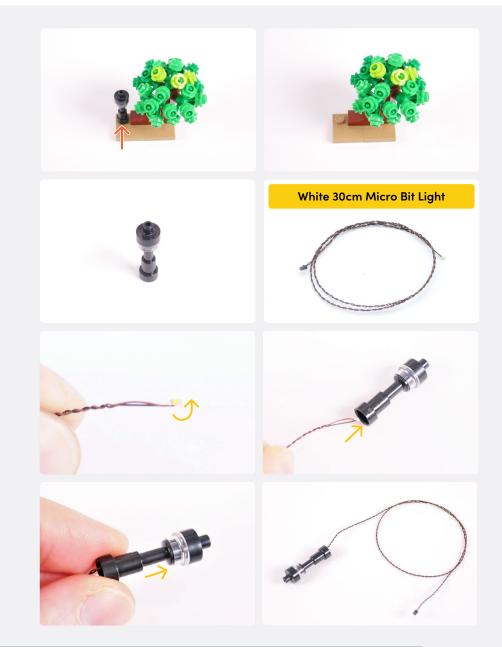










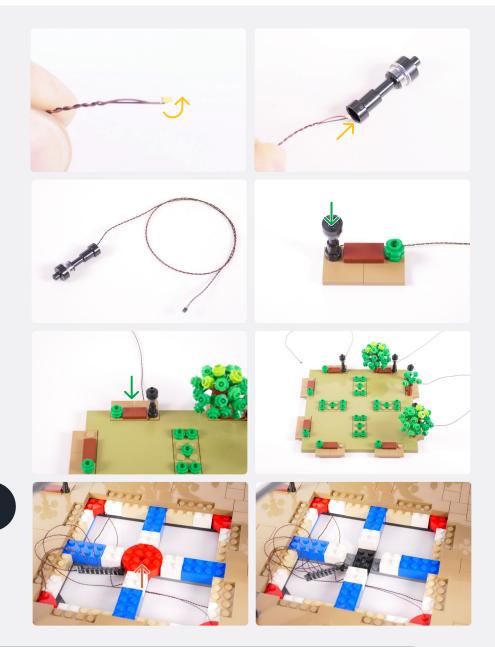




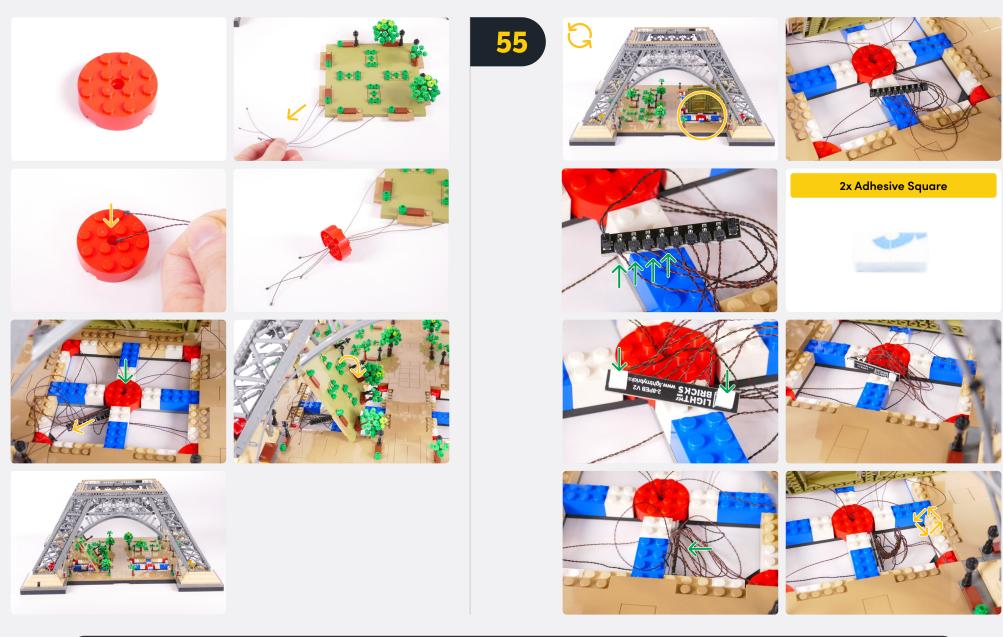




White 30cm Micro Bit Light



















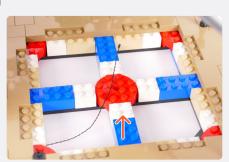


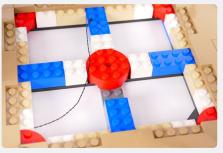
Connect to a 5V USB Wall Adaptor (sold separately). A power bank or battery pack is not recommended to power this set.



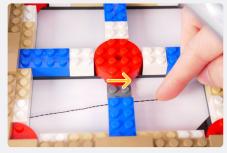
If you experience any issues with the lights not working and suspect an issue with a component, please try a different port on the expansion board to verify where the fault lies (with the light or expansion board). To correct any issues with expansion board ports, please view the section addressing expansion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

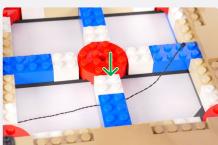








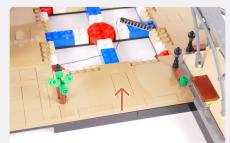












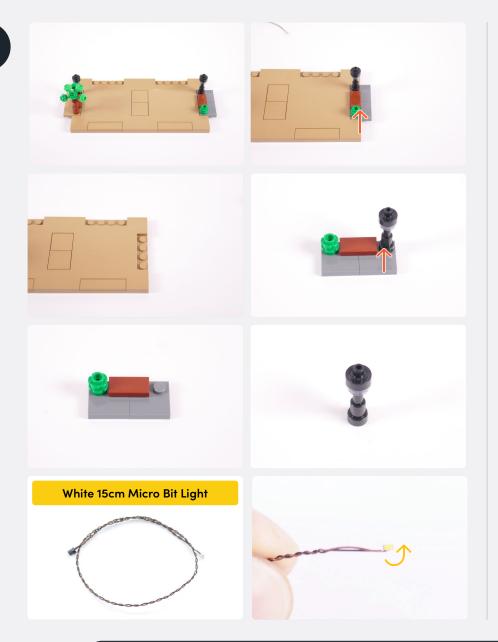


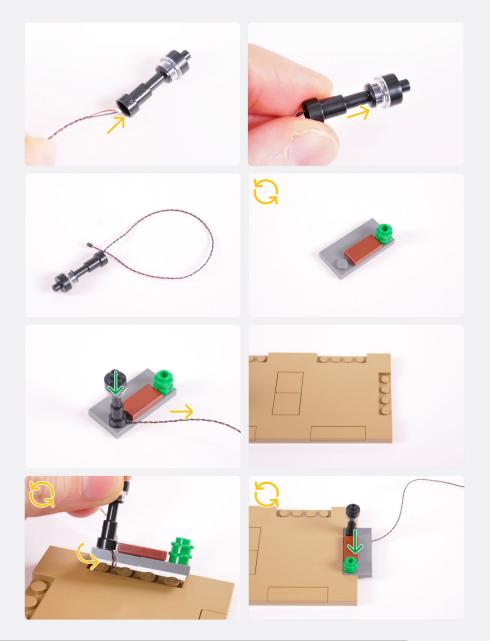




















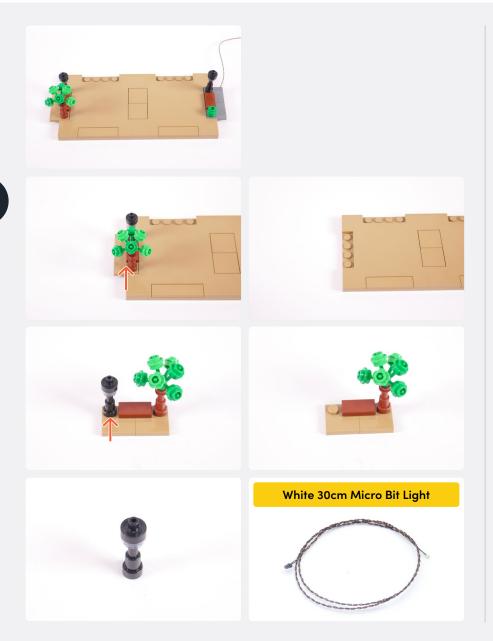


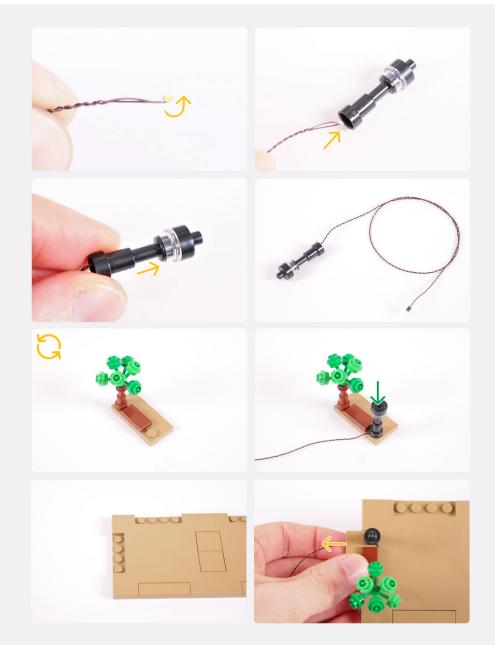
















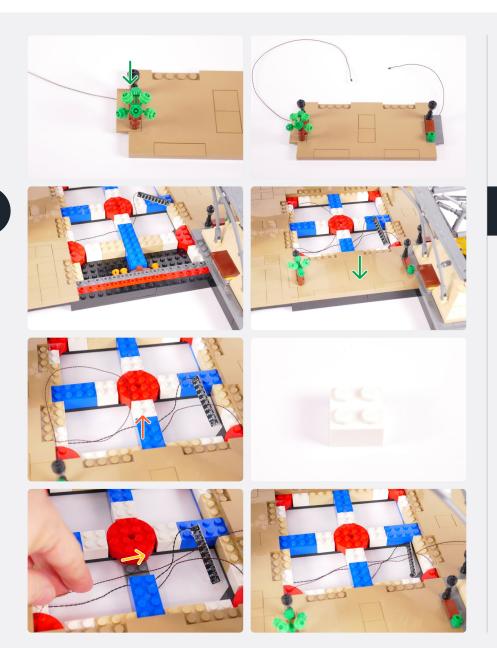


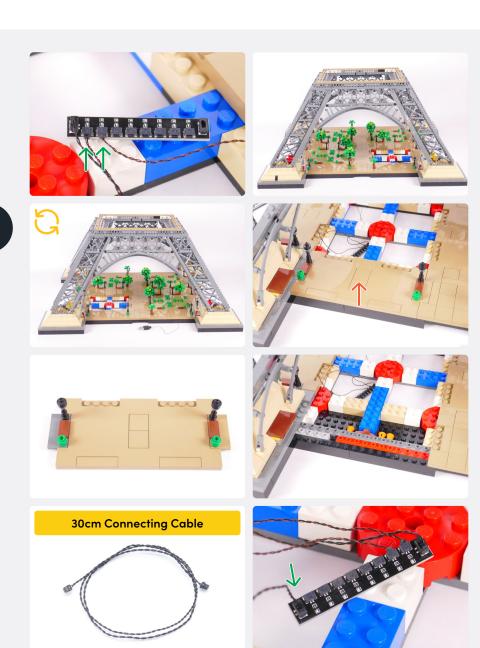




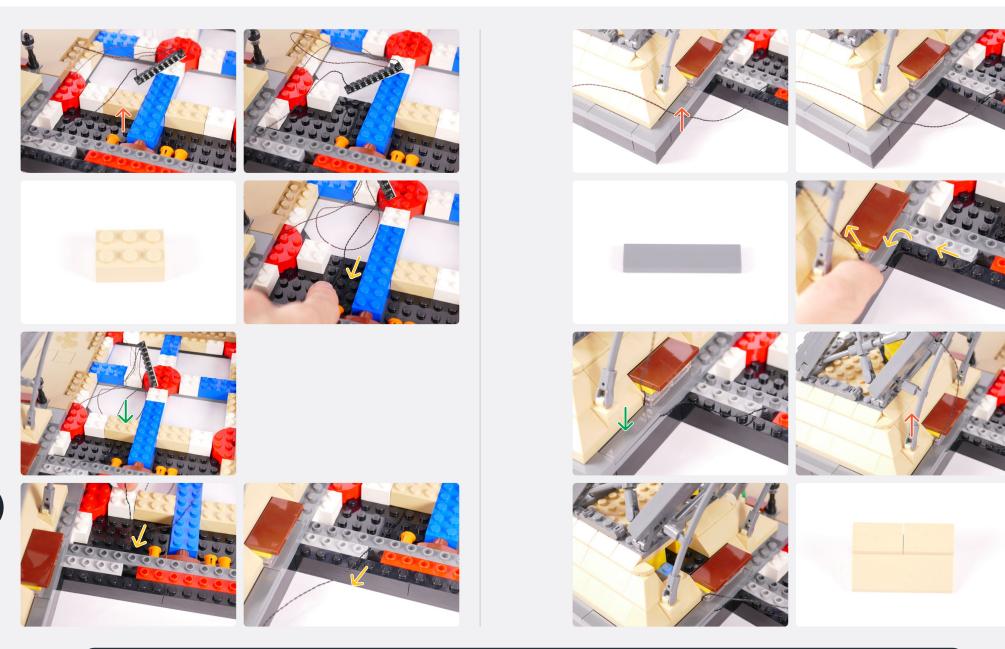








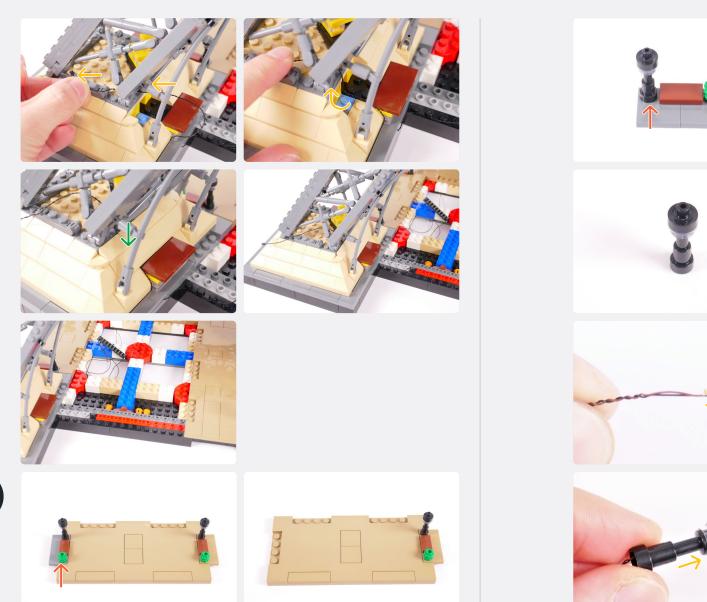


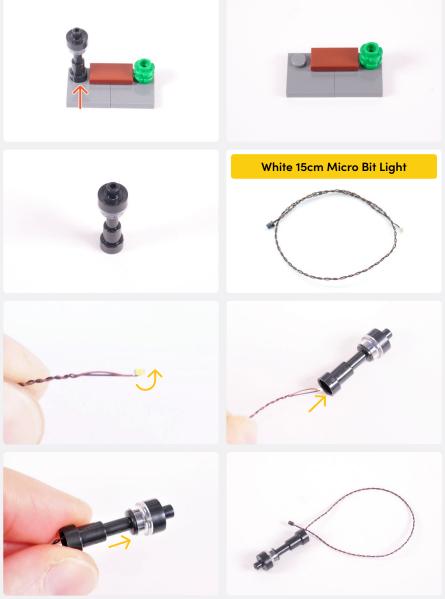










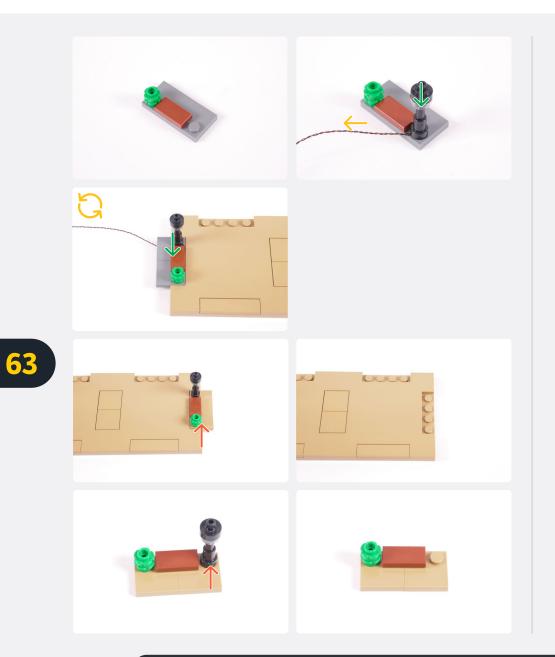


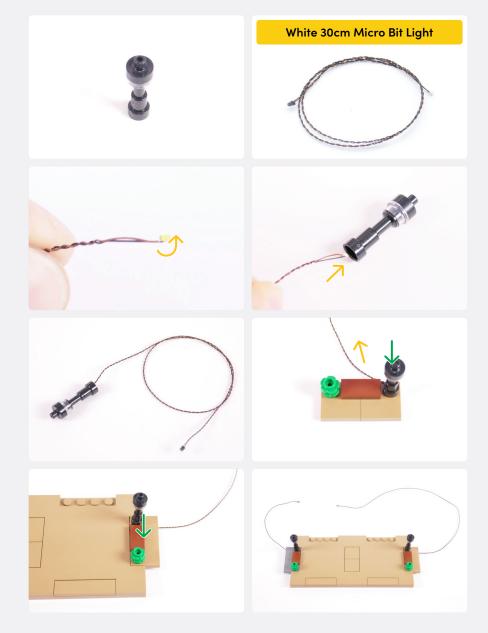








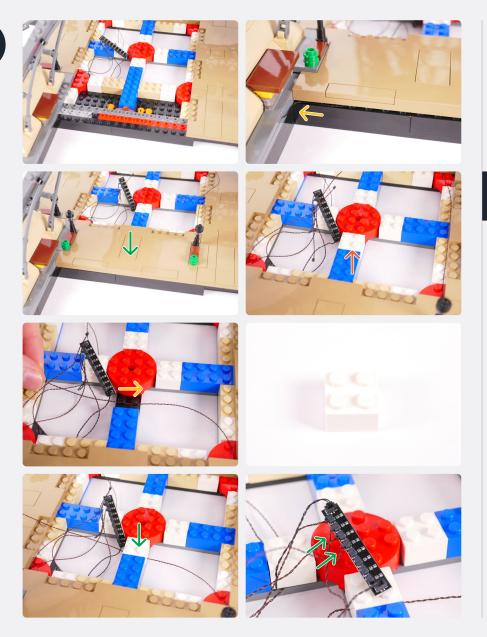


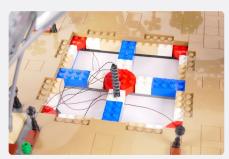


















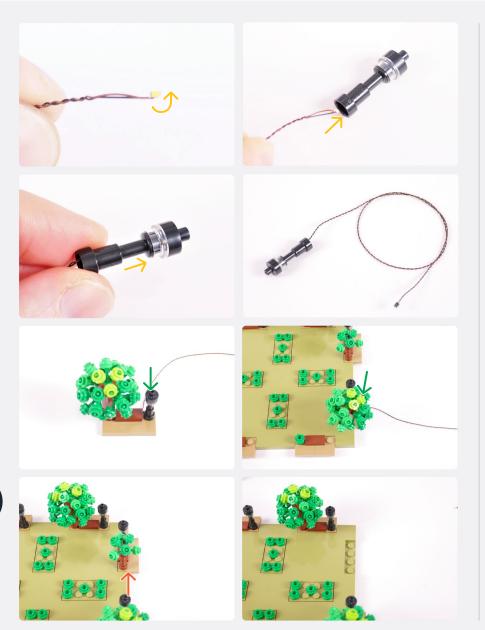


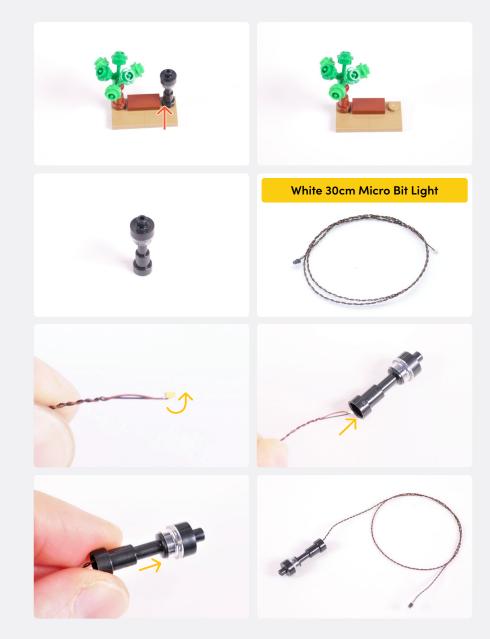






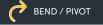












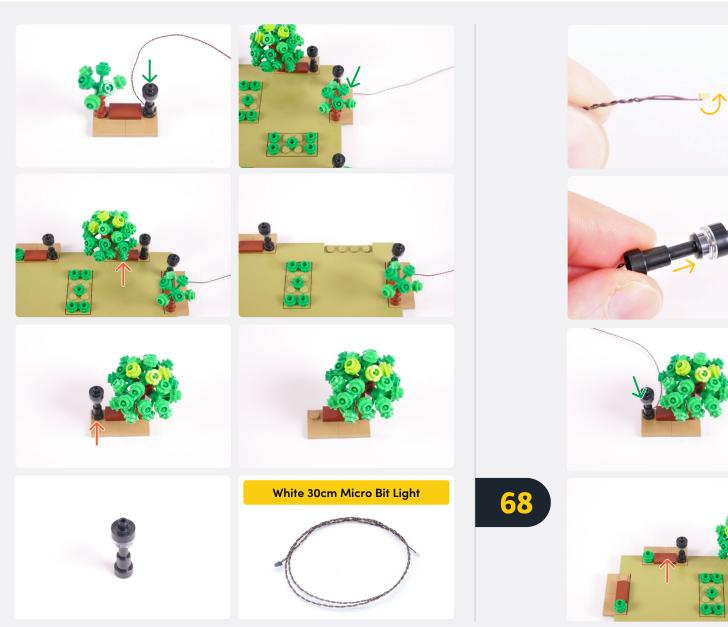


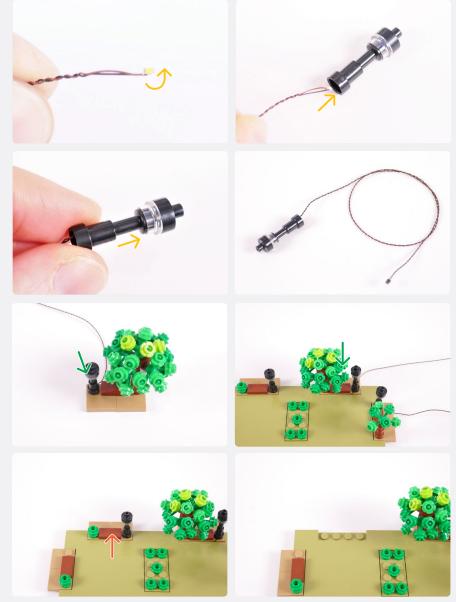














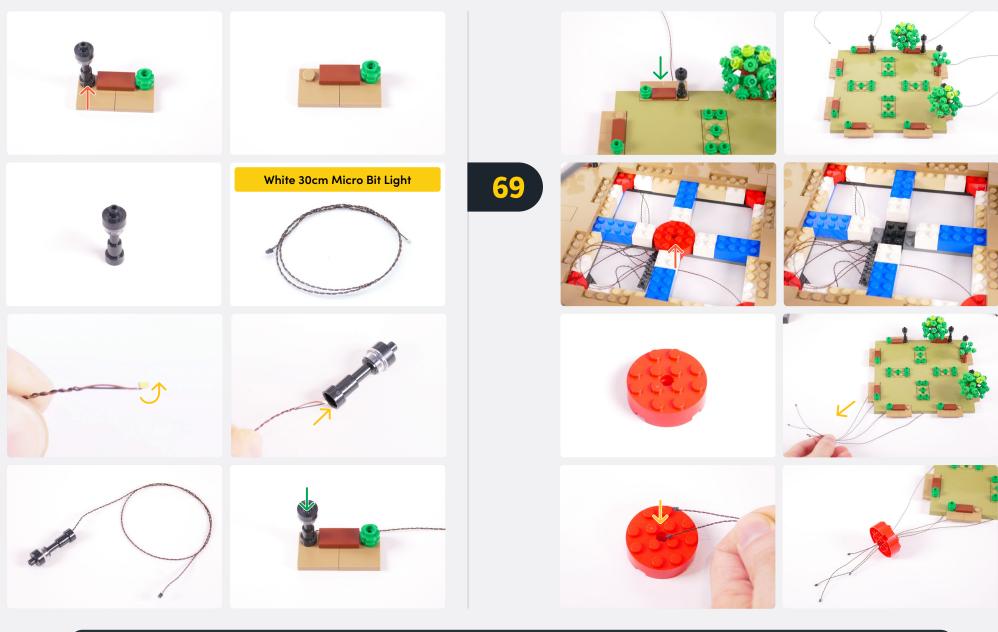












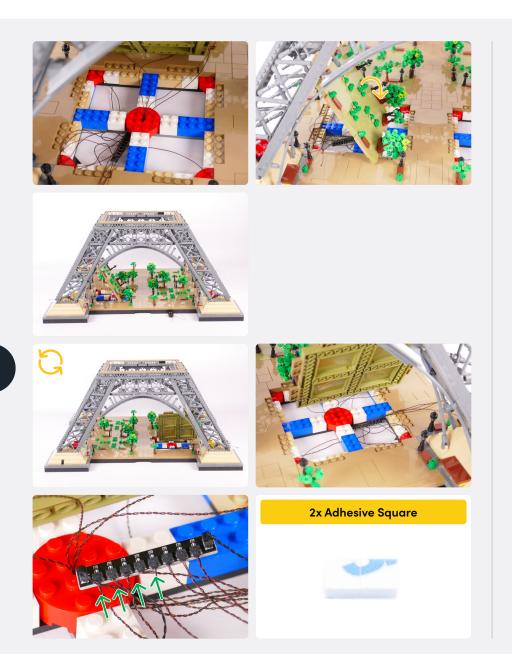


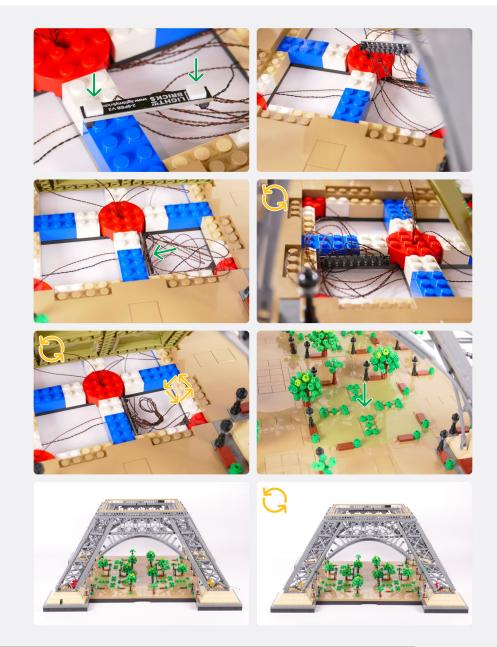
















Connect to a 5V USB Wall Adaptor (sold separately). A power bank or battery pack is not recommended to power this set.





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.















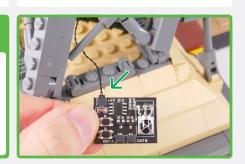
**IR Switch Board** 





## NOTE

Connect the loose 30cm Connecting Cable into the "+5V" port of the IR Switch Board.









# NOTE

71

Connect a 50cm Connecting Cable into the "OUT A" port of the IR Switch Board.















Wrap the 50cm Connecting Cable up the tower leg. Follow the guide photos as closely as possible.













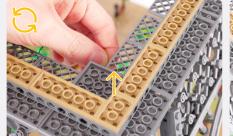


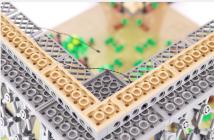




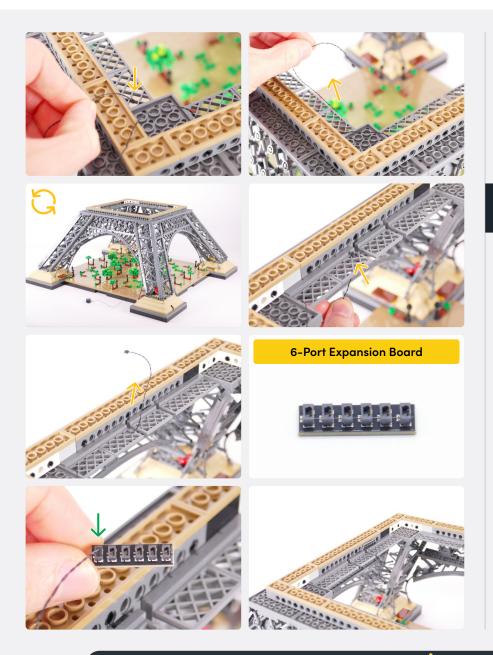








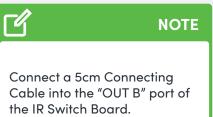


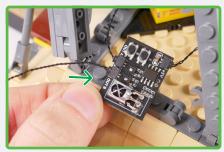
















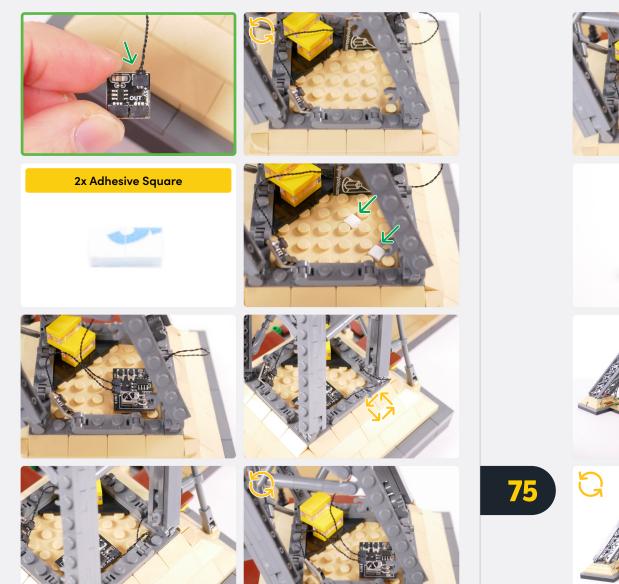
Connect the other end of the 5cm Connecting Cable into the "+5V" port of the 3Pin Sparkle Effects Control Board.

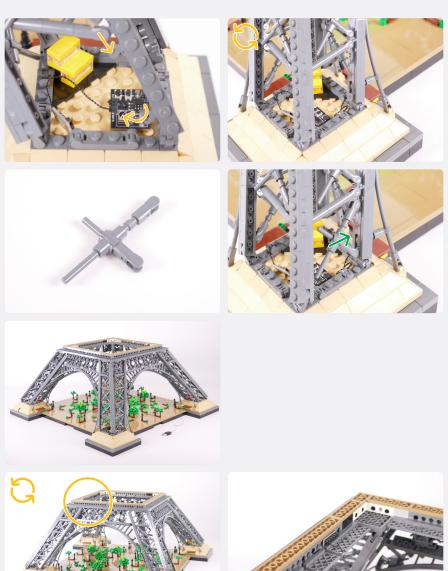




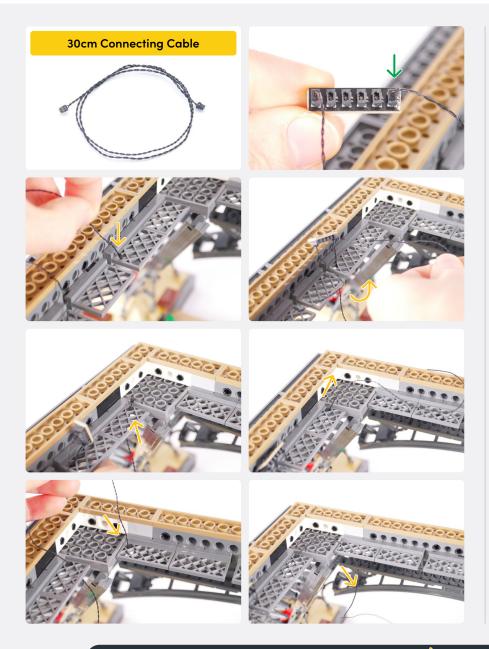


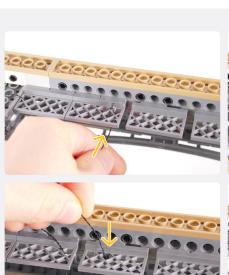












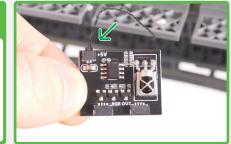








Cable from the 6-Port Expansion Board into the "+5V" port of the RGB IR Control Board.









**76** 

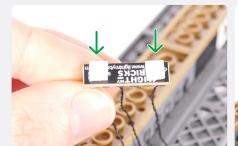


















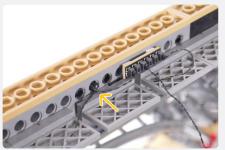


NOTE

Twist the 50cm Connecting Cable from Step 71 only.









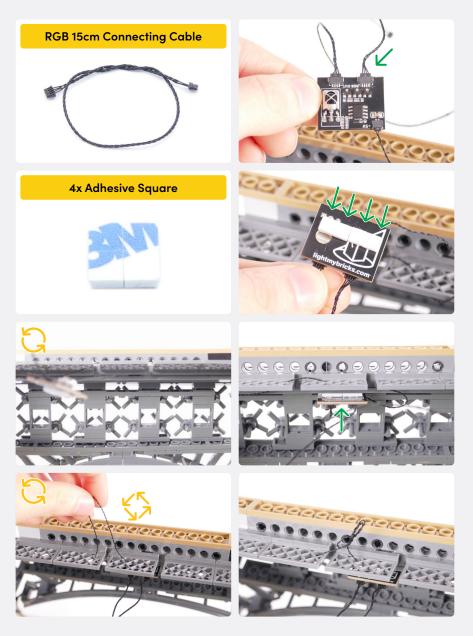


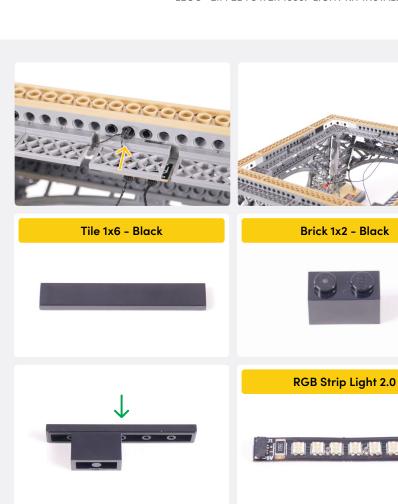


















→ DIRECTIONAL

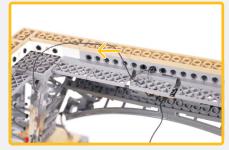
TURN / FLIP

**78** 

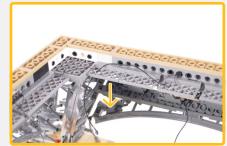


Take one of the two loose 15cm RGB Connecting Cables form Step 77 and thread as shown.

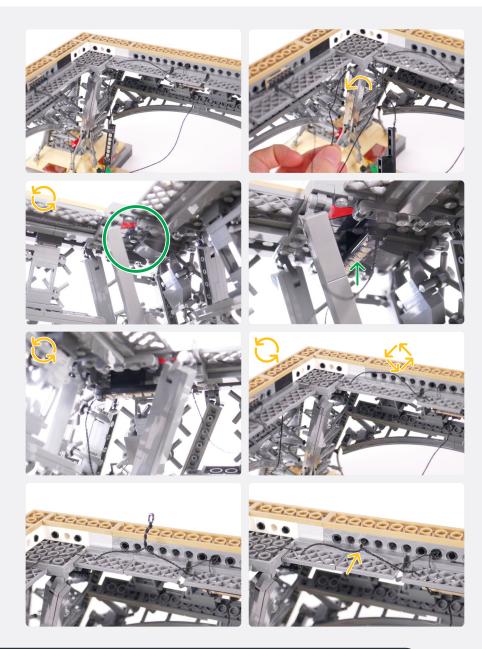








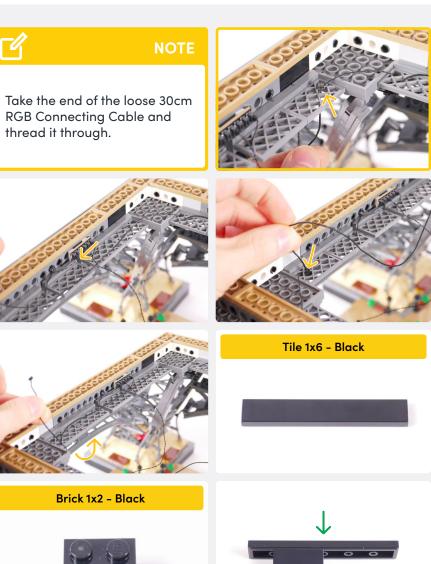




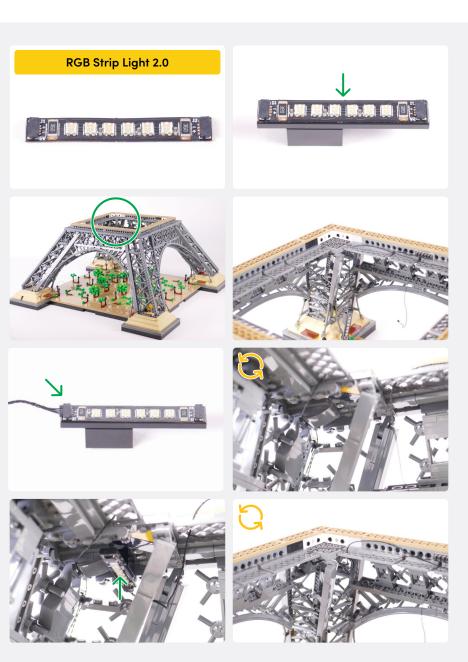
TURN / FLIP

78













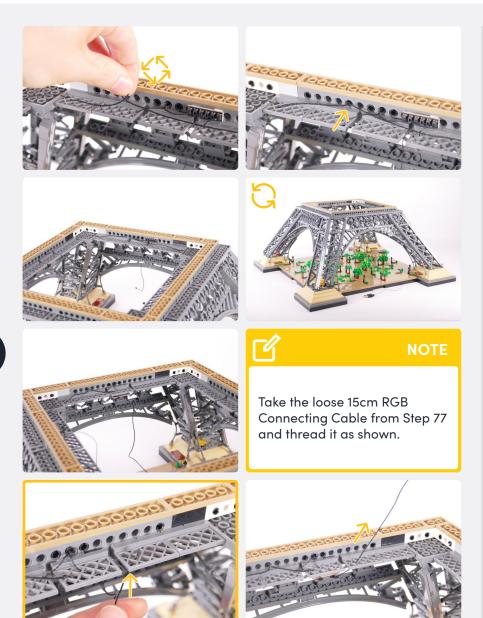


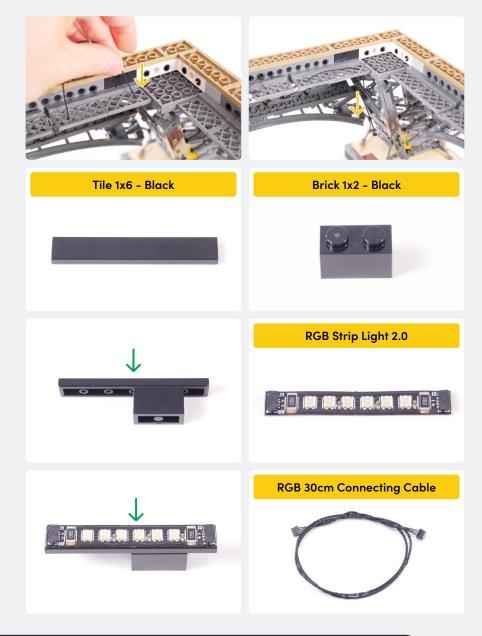














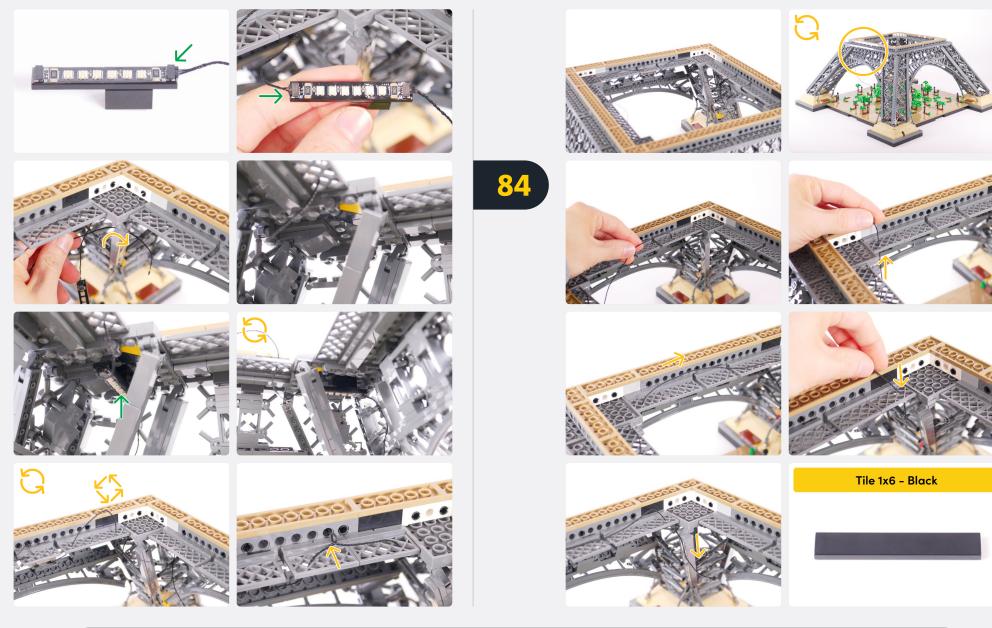
















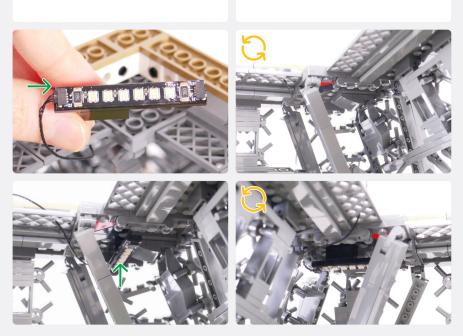


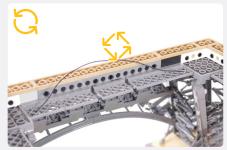


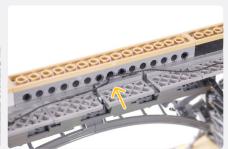














86



Connect to a 5V USB Wall Adaptor (sold separately). A power bank or battery pack is not recommended to power this set.









NOTE

Use the included RGB IR Remote to Control the RGB Strip Lights via the RGB Board. Point the remote at the board indicated below.









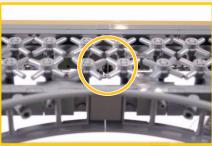


















Press the R, G, and B buttons on the Remote to change the Strip Lights to Red, Green, and Blue to test if they are working.















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

Connect the Light String 15 LED 3Pin to the "OUT" port of the 3Pin Sparkle Effects Control Board.



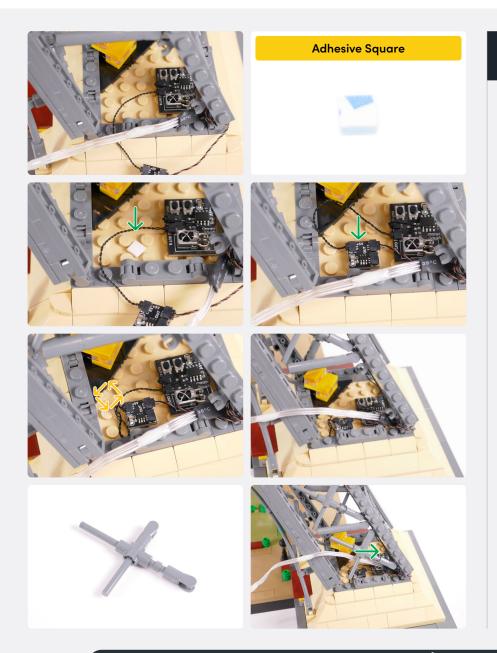
















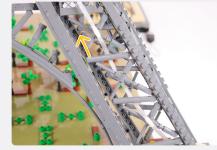


Wrap the Light String up the tower leg. Follow the guide photos as closely as possible.



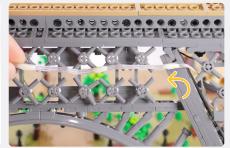








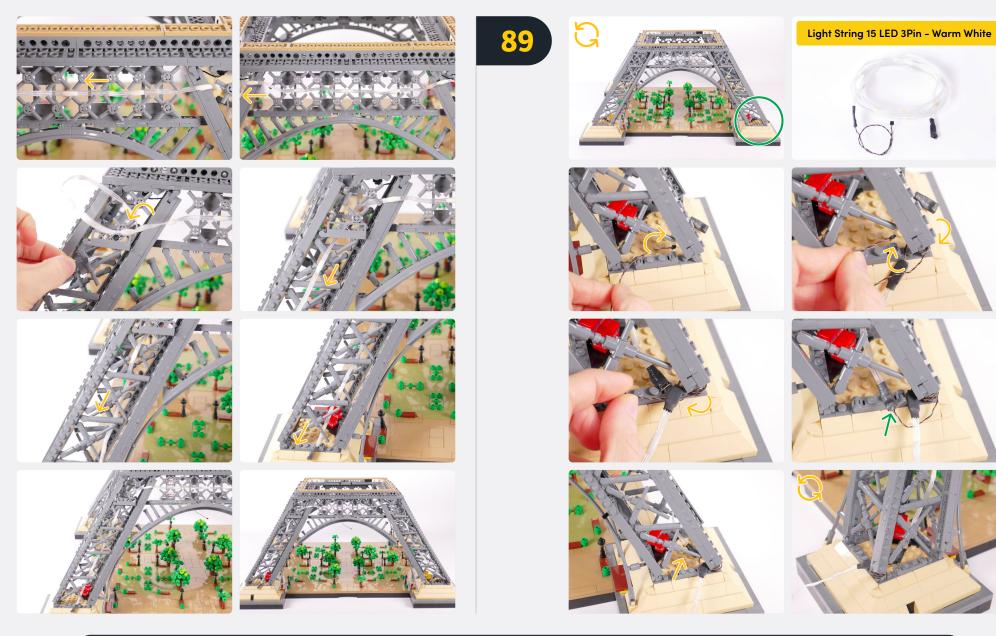










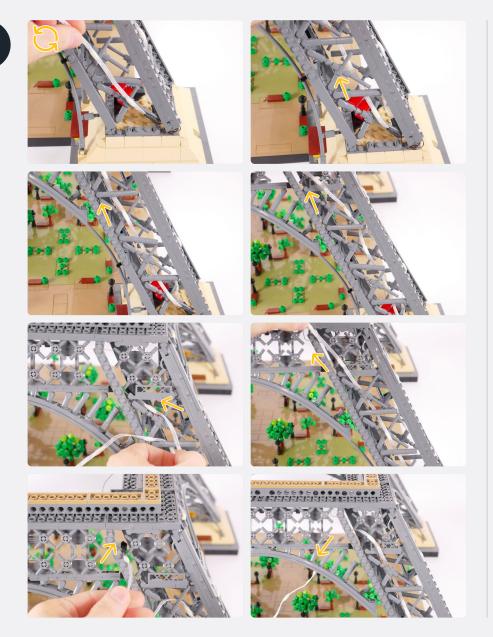


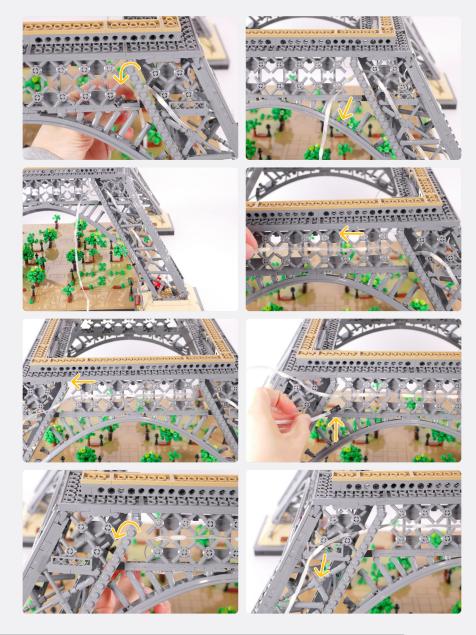


















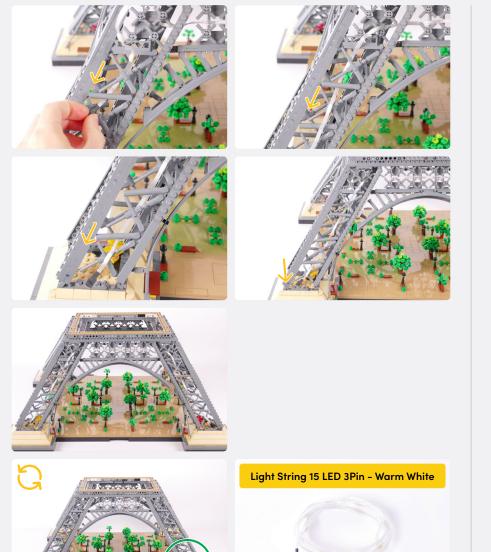


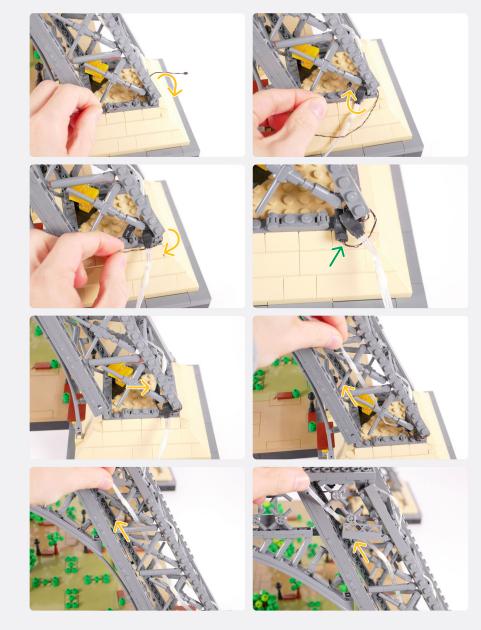














→ DISCONNECT





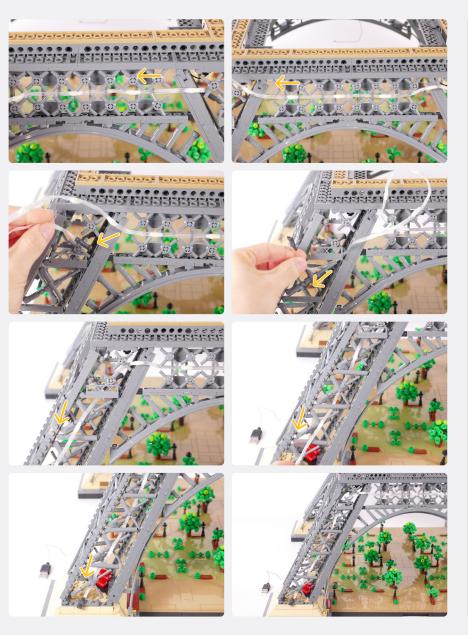










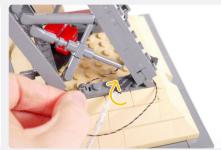






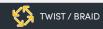




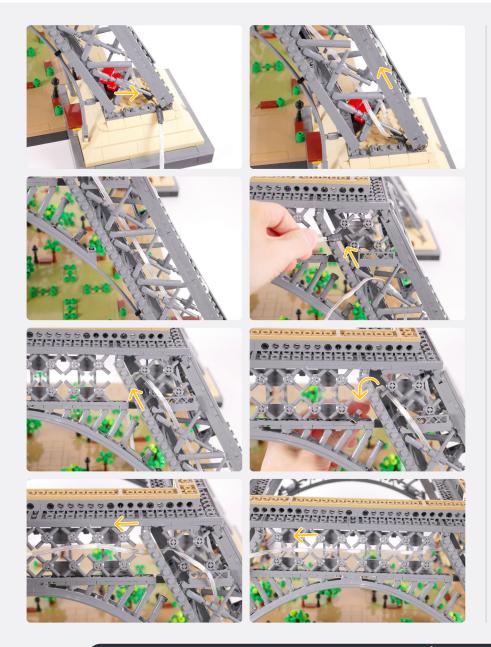


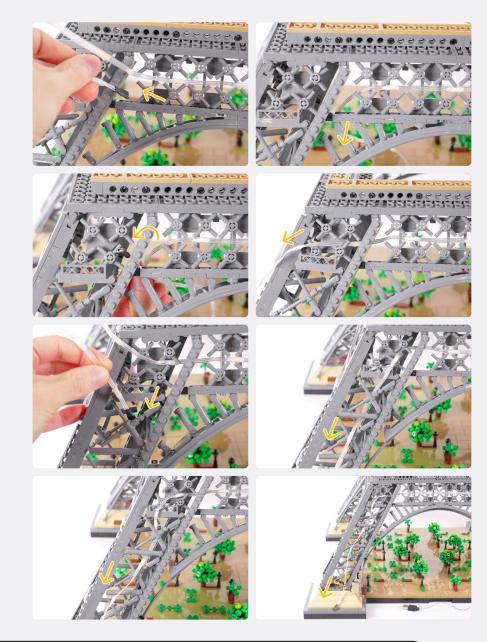






















Leave the end of the String Light loose for now. It will be connected to the second level of the Eiffel Tower when it is completed later.









### NOTE

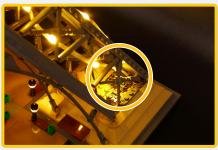
Connect to a 5V USB Wall Adaptor (sold separately). A power bank or battery pack is not recommended to power this set.





### NOTE

Use the RGB Remote to switch between the RGB Mode and Sparkle Mode with the ON and OFF buttons. Point it at the IR Switch Board when pressing.







### NOTE

After 30 seconds the String Lights flash rapidly for 30 seconds then back to static. Avoid staring at the effect as it may cause discomfort to some.



### NOTE

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



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

This concludes Part 1 of the Eiffel Tower Guide.

To continue, please click the box to download Part 2.

Part 2 Links to instructions portal page















# **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!

**TROUBLESHOOTING** 



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