MOONBOARD

LED SYSTEM - VERSION 3
INSTALLATION & TROUBLESHOOTING

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The system can only be used with official Moon LED lights, control box and power supply. Any attempt to use non-Moon components will invalidate the warranty and may result in system failure

This document outlines how to install the LED System and repair a damaged LED on a standard MoonBoard and Mini MoonBoard. If you have purchased a DIY Kit, you may skip page 2 as your MoonBoard panels are pre-drilled.

Installation

Troubleshooting

IN THE BOX

STANDARD MOONBOARD

LED SYSTEM COMPONENTS FROM 2024

1 x MoonBoard control box + connectors
1 x power supply (5V)
1 x mains power adaptor

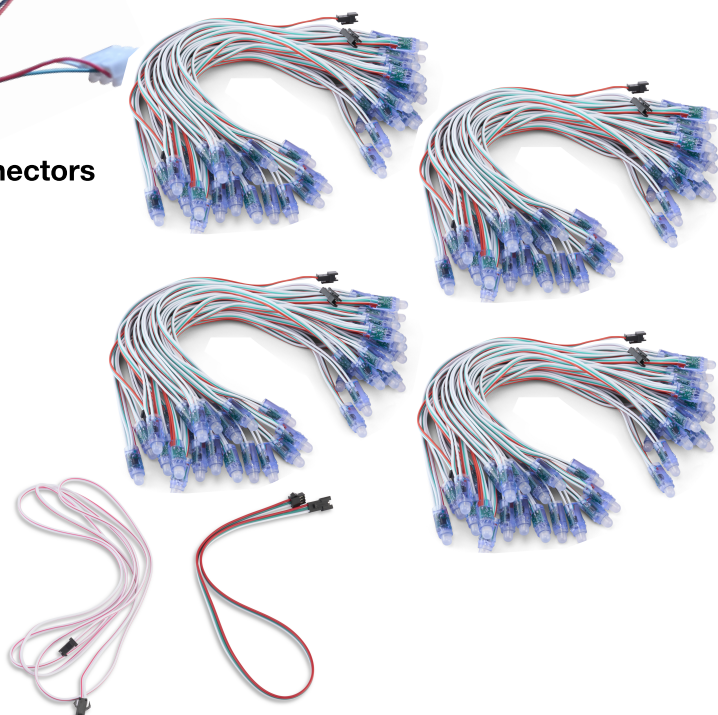4 x strings of 50 LEDs with a total of 200 pixel LED bulbs. The end 2 are spares

MINI MOONBOARD

LED SYSTEM COMPONENTS FROM 2024

1 x MoonBoard control box + connectors
1 x power supply (5V)
1 x mains power adaptor

3 x strings of 50 LEDs with a total of 134 pixel LED bulbs. The end 16 LEDs are spares

3 or 4 x strings of LEDs

Control Box + JST LED connectors

Power Supply & Mains Power Adaptor

INSTALLATION

DRILLING THE PANELS

TOOLS REQUIRED

Drill
1⁄2 inch (13 mm) drill bit
Wire Strippers

Measuring Tape
Chalk Line
Sandpaper

Starting from the top of the Moonboard place a mark every **8 inches** (20cm) down each side of the board (half way between your pre-existing bolt holes). Use the chalk line to snap a horizontal line between the marks from one side to the other.

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**Each LED light is designed to be installed <u>below</u> the hold it illuminates.
For example, the LED for hold B3 will be installed below the B3 t-nut.**

Drill **1⁄2 inch** (13mm) holes on the chalk line below each t-nut. If necessary, use sandpaper to remove any sharp edges.

TEST THE LEDs

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You must test the LEDs before installing them on your MoonBoard

Testing can be done by connecting the LED strings to the Control Box, connecting the Control Box to the power supply and switching the Control Box on.

The LEDs will illumate in a start-up sequence. The LEDs should cycle through three colours, (red, green and blue) and then remain in the intermittent flashing cycle indicating the control box is ready to connect. The sequence should start at the LED below the hold A1 and finish at the LED below the last hold before starting the next colour in the sequence.

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Once the start up sequence has finished, check that the MoonBoard app can connect with the control system by lighting up a selection of MoonBoard problems.

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Once you have tested the LED bulbs, switch off the power and disconnect the LEDs from the Control Box.

If your LEDs do not display the sequence described above, verify the wiring.

If you have any further problems, please send a video to **moonboardsupport@moonclimbing.com** for further assistance.
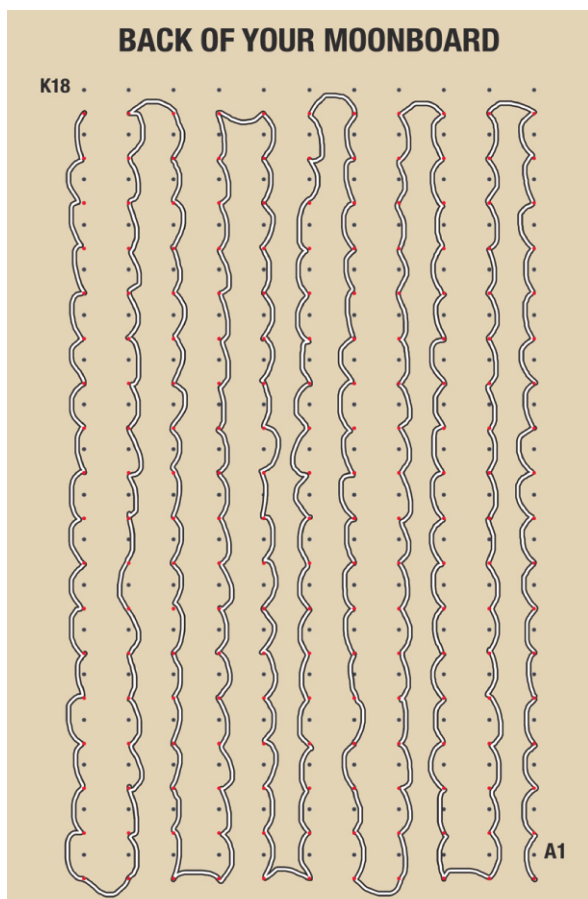
INSTALL THE LEDs

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Do not stand on the LEDs.
Do not twist the LEDs.
Make sure each LED is FLUSH with the front of the
MoonBoard panels and cannot be kicked or damaged
when you are climbing on the MoonBoard.

Carefully unravel the first pack of LEDs, locate the end with a single quick connector this is the input end for all the strings.

Start at A1 and gently push the first LED into the hole you have drilled until the bulb is flush with the climbing side of the panel. Repeat this process moving up and down the panel in a zig-zag pattern as indicated in the diagrams below. When you reach the end of a string, unravel the next pack of LED strings and connect together using the push fit connectors and continue as already explained until all the LED holes are full.

[There will be spare LEDs on the last string which can be used to replace damaged LEDs]

STANDARD MOONBOARD

BACK OF YOUR MOONBOARD

K18

A1

MINI MOONBOARD

BACK OF MINI MOONBOARD

K12

A1
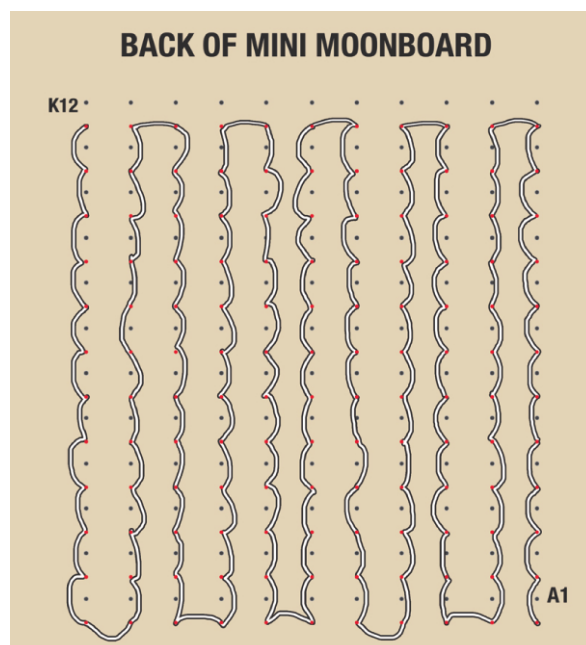
INSTALL THE CONTROL BOX

Mount the Moonboard control box on the back of the wall. Make sure that the attached LED power and communication cables on the front panel, and antenna, ports and on/off switch on the rear panel are easily accessible.

[The cable colour reference is RED / CLEAR RED LINE = +5V, GREEN = LED data and WHITE / BLACK = ground.]

The new LED strings come with only JST SM connectors, remove the quick lock terminal adaptors from the control box. Then connect the first LED string to LED1 connector (an extension cable is provided in each LED string if required) then connect the supplementary power feed from the end of the second LED string with the two wire power exntension cable which comes in each LED string pack to PWR1 on the control box using the push and lock JST SM connectors.

Attach the appropriate adapter to the power supply and plug the power supply into the control box then plug into the mains. Do not use any other power supply than the one provided in your kit.

JST SM push and lock connectors

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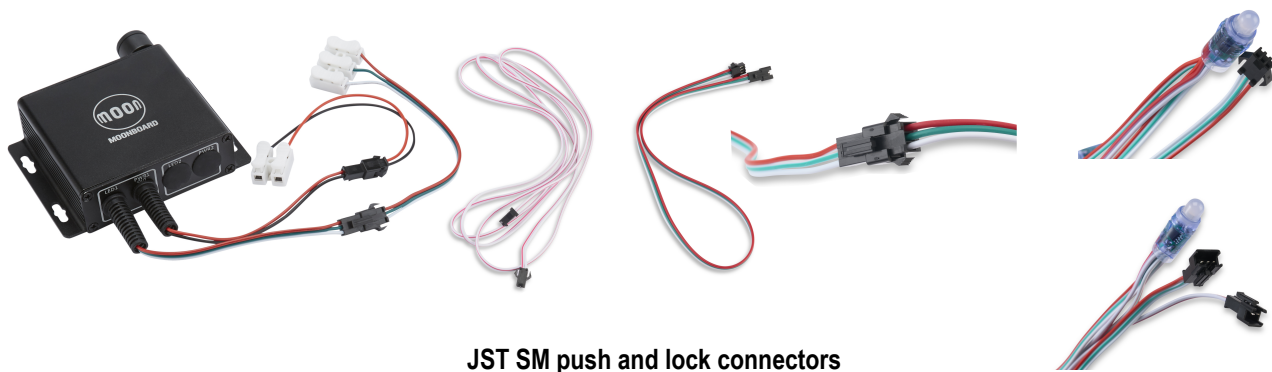
Please ensure all wires are connected well. A poor connection may cause your MoonBoard LED lights to fault.

Install the MoonBoard app onto your smartphone or tablet and CLIMB www.MOONBOARD.com

GET IT ON Google Play

Download on the App Store

TROUBLESHOOTING

TOOLS FOR REPLACING AN LED

TOOLS REQUIRED

Wire strippers
Wire cutters
Electrical tape

6 x butt splice wire connectors (fig. 1)
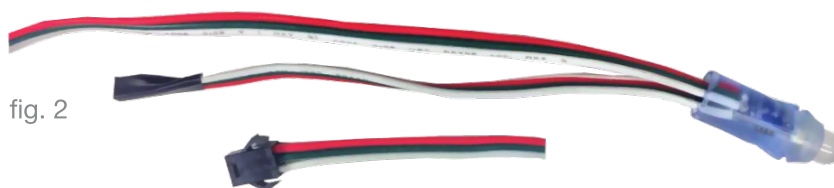Connector crimping tool

fig. 1

fig. 2

fig. 3

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Before you begin, you must disconnect the MoonBoard LED System from the mains power supply.

There are two extra LEDs at the very end of the LED string. Using wire cutters remove one of the extra LEDs at the end of the string by cutting the wires half way between the last LED and the one before it. Use electrical tape to protect the wires at the end of the LED string. (fig. 2)

If you have not previously removed any LEDs then the last LED will have a connector on it that will need to be cut off. (fig. 3)

HOW TO IDENTIFY A DAMAGED LED

A damaged LED can be identified in two ways:

1) If during the startup process the LEDs stop changing colours at a certain point and remain blue, then the first blue LED is the one you will need to replace. (fig.4)

2) If during the startup process all of the LEDs perform correctly except one, then this one LED is the one that will need to be replaced
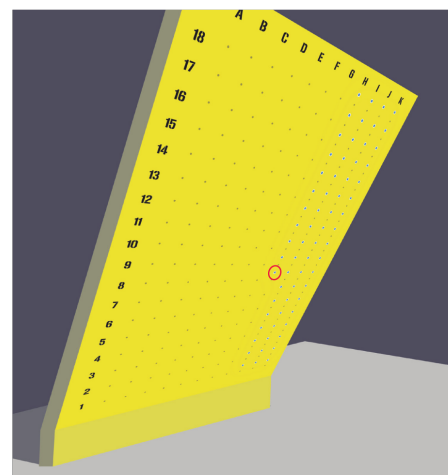
fig. 4

REMOVING & REPLACING A DAMAGED LED

Remove the damaged LED by cutting the wires as close as you can to the damaged LED.

When connecting the new LED back into the string it is very important that you follow the arrow pattern in the LEDs (fig. 5) so that the previous LED wires are crimped to the new LED following the flow from the beginning of the LED string into the replacement LED.

fig. 5
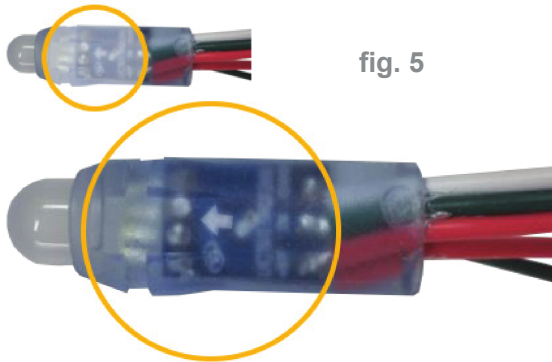
**Need more help?
Watch the video guide at
www.moonboard.com**

Strip the 6 wires on the replacement LED and 6 wires on the LED string a ¼ inch and connect them using the Butt Splice Connectors and Crimping Tool. (fig. 6).

fig. 6
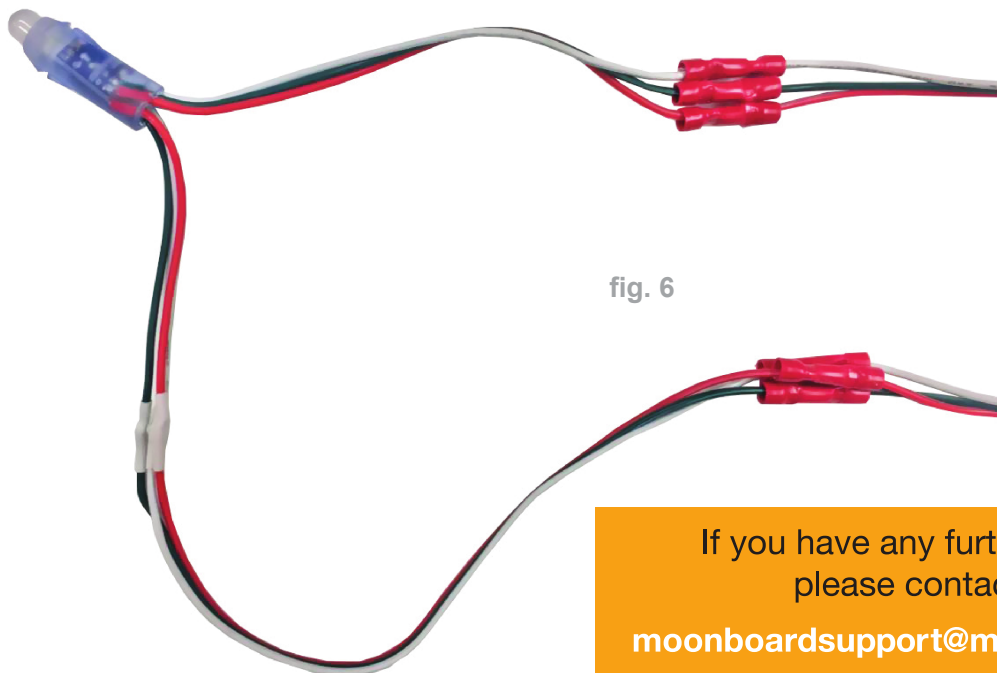
If you have any further questions
please contact us at:

moonboardsupport@moonclimbing.com