MOONBOARD

LED SYSTEM V3 100 LED STRINGS
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. Opening the control box will invalidate the warranty

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

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

2 x strings of 50 LEDs with a total of 200
light bulbs. The final 2 LED bulbs are spares.
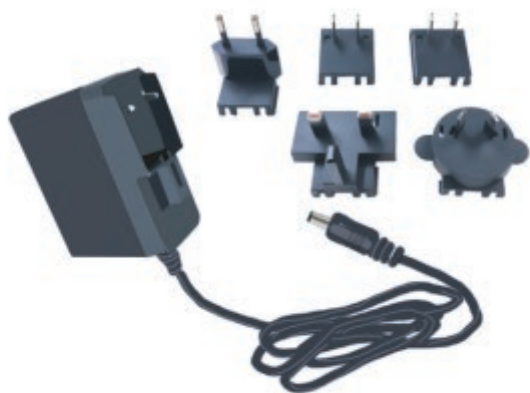
MINI MOONBOARD

LED SYSTEM COMPONENTS

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

2 x strings of LEDs with a total of 134
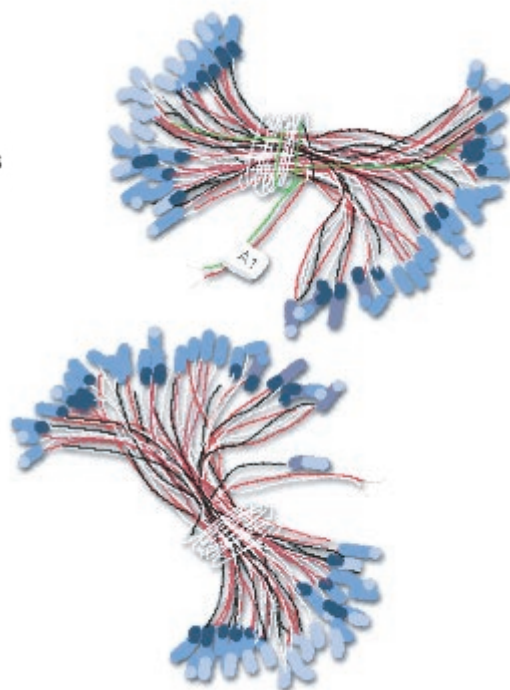light bulbs. The final 2 LED bulbs are spares.

2 x strings of LEDs

Control Box + JST LED connectors

Power Supply & Mains Power Adaptor

INSTALLATION

DRILLING THE PANELS

TOOLS REQUIRED

Drill	**Measuring Tape**
1/2 inch (13 mm) drill bit	**Chalk Line**
WireStrippers	**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

> **!**
>
> **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 illuminate and run through a start-up sequence. The LEDs should flash blue, then cycle through the three colours and then turn off. As the LEDs cycle through the three colours they should begin at the LED labelled A1 and finish at the last LED before starting the next colour 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.**

> **!**
>
> **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.

Box to the power supply and switching the Control Box on.

INSTALL THE LEDs

**!**

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 LED string A. The first LED will be labelled A1 (the first LED on the green wire)

From the back of your Moonboard, start at A1 and push the first LED into the hole you have drilled until the bulb is flush with the climbing side of the wall. The next LED on the string is A2

STANDARD MOONBOARD

BACK OF YOUR MOONBOARD

K18

A1

MINI MOONBOARD

BACK OF MINI MOONBOARD

K12

A1
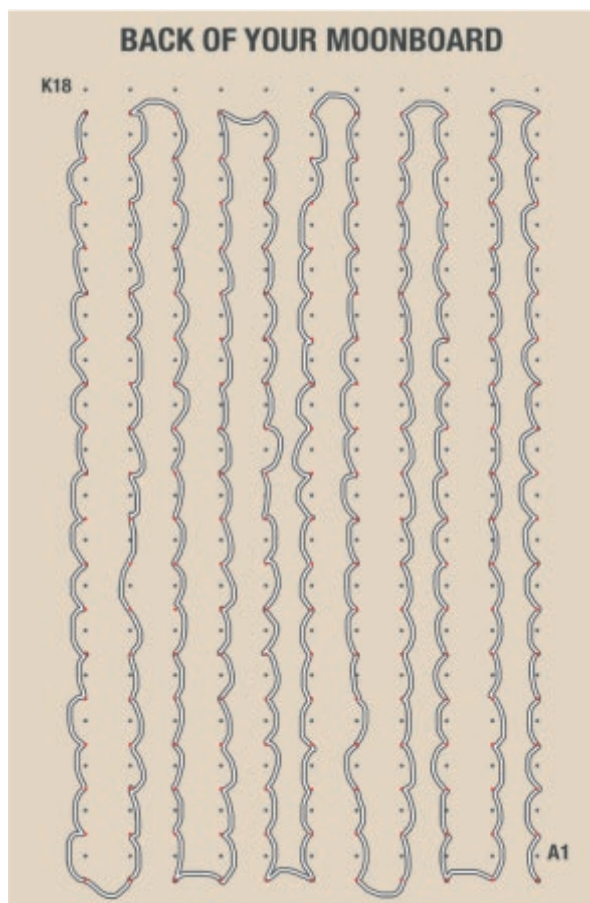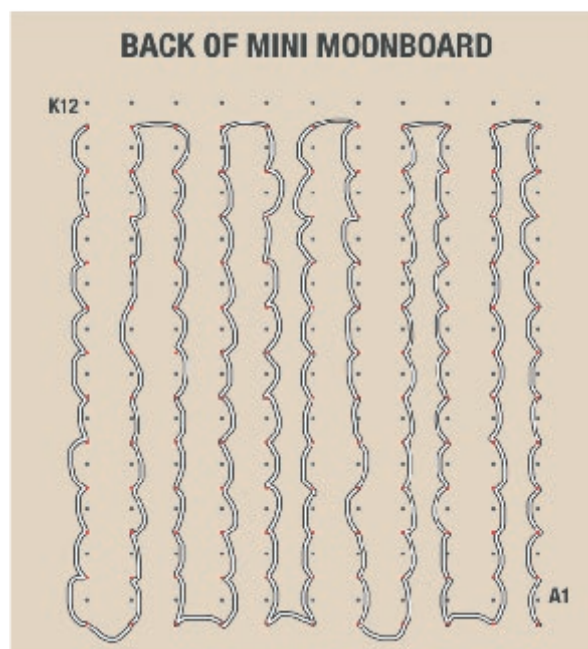
Once you haveused all of the LED's in string A, connect the LEDs from string B to set A using the push fit connector, and continue installing in the zig-zag pattern.

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.]

If the LED string come as packs A and B strip the wire insulation ¼ inch (0.5mm) from the end and insert directly into the quick lock terminal adaptors to JST connector provided with the control box. Push down on the top tab exposing the terminal contact plate and insert the cable so that each wire is held firmly and has good contact. The A string connects to LED1 on the control box (RED to RED, GREEN to GREEN and WHITE to WHITE). The supplementary power feed cable connects to string B and PWR1 on the control box (RED to RED, and WHITE/BLACK to WHITE).

If the LED string comes with only JST SM connectors, remove the quick lock terminal adaptors from the control box. Then connect the first LED string to LED1 and the supplementary power feed from the end of the first LED string to PWR1 using the push and lock JST SM connectors on the control box.

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.

Quick lock terminal adaptors

JST SM push and lock connectors

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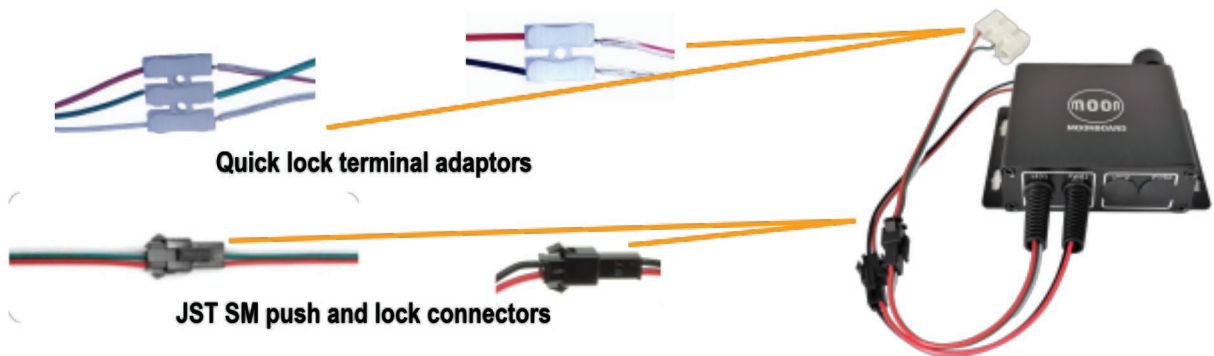
Please ensure all wires are connected well. A poor connection may cause your MoonBoard LED lights to fault.

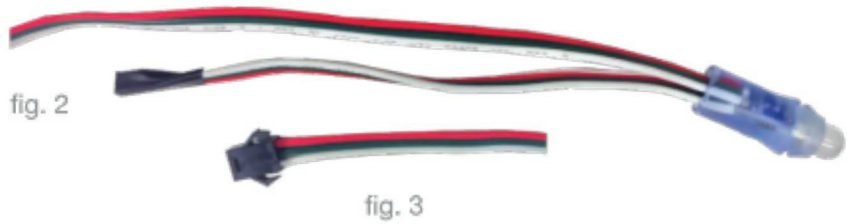**Install the MoonBoard app onto your smartphone or tablet and CLIMB www.MOONBOARD.com**

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
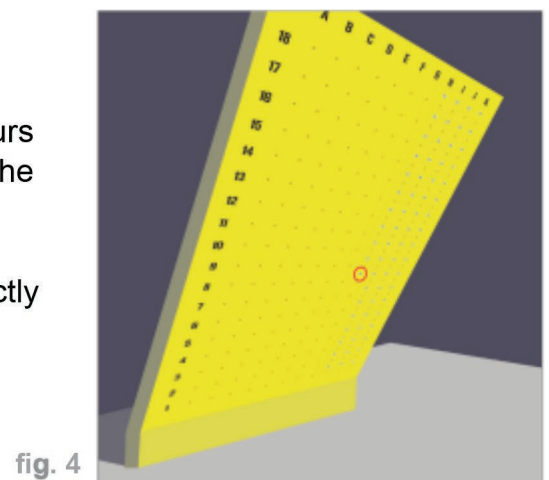
REMOVING & REPLACING A DAMAGED LED

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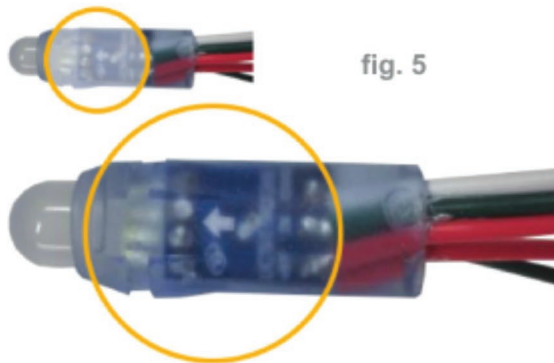
**Need more help?
Watch the video guide at
www.moonboard.com**

Strip the 6 wires on the replacement LED and 6 wires on the LED string a 1⁄4 inch and connect them using the Butt Splice Connectors and Crimping Tool. (fig. 6).

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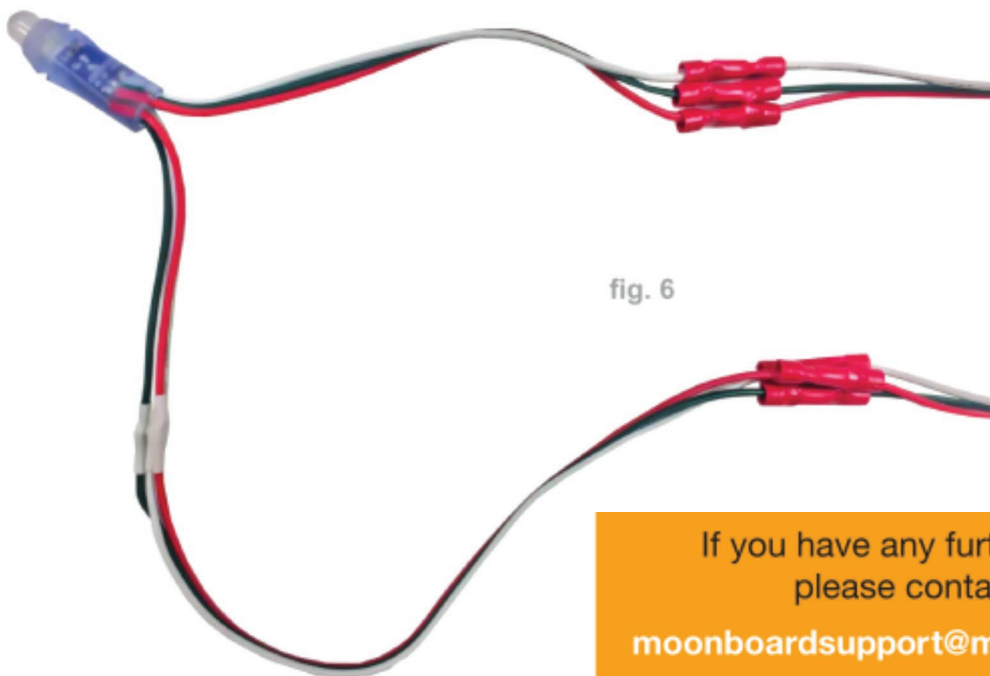
If you have any further questions
please contact us at:

moonboardsupport@moonclimbing.com