LED Troubleshooting

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Check the Controller Box

When troubleshooting LED issues, it's crucial to verify the connections in the controller box. Is your controller box plugged in and on? If not, switch it on and see if that fixes your problem. If already on, switch it off and follow these steps to ensure everything else is correctly connected.

1. Check the First 3 Connection Points:
   - Ensure both connector wires (red/white/blue) are securely attached to the first three box connection points.
   - Match the colors correctly:
     - Red with Red
     - White with White
     - Blue with Blue
   - There should be **two** strands per color in these connection points.
2. Verify Connections for Additional Points:
   - Depending on your wall size, the subsequent connection points will have one or two strands per color.
   - Double-check that each strand is placed in the correct matching color point:
     - Red to Red
     - Blue to Blue
   - Ensure all strands are tightened securely to avoid loose connections.

Tip for Better Connections

- To help refresh the connections, remove each set of strands from their connection point, clip off the ends, restrip them, and **then put them back in the same connection point.**
- This ensures clean, fresh contact points and can help resolve issues caused by oxidation or fraying at the wire ends.

Tip: Loose or mismatched connections can cause LED malfunctions. Carefully inspect each point during troubleshooting to prevent further issues.

01 No Lights Working

Power Source

- Ensure the box is plugged in and turned on so the switch is lit red. If it is not lit, use a voltage meter to check the outlet.
- Check for anything that might be interrupting the power supply to the box or outlet. This includes other things plugged into the outlet. Consider adding a surge protector.

Connections

- Verify that the wall plug, outlet, extension cords/power strips, and their connections to the box are secure.
- Ensure all wires from the LED strands are properly connected to the box and that these connections are secure.

Wiring Instructions

- There are three colors of wires: white, blue, and red.
- When setting up, connect the white, blue, and red wires from the two lead wires (red/white/blue with a clip on the end) into the box. These are the starts for Strand A and Strand B of LED. The LED strands run parallel, so light 56 on Strand A goes in the same hold as light 56 on Strand B. When you run out of LEDs, plug additional strands in and continue.
- The extra blue/red wires at the end of each strand are power booster wires and must be connected back to the box to maintain strong power throughout the system. The last set does not need these booster wires.
- Refer to the LED Wiring Instructions to ensure your box is set up correctly.

02

Some Lights Are Not Working

Individual LED Not Working

- Check if there's a screw in the LED.
- Inspect if the LED has been smashed.
- Look for any damage, such as torn wires, which could occur if the LED has been stepped on.
- Sometimes, the LED directly before the non-working one is actually the broken one. This can happen even if it still passes the signal, making it tricky to identify the faulty LED.

For guidance on replacing faulty LEDs, refer to the "LED Replacement" document.

03

Uncertain Which Lights Are Not Working

- Open the app and select the “+” icon to report a “new problem.”
- Start by lighting up the LEDs from the far right side of the kickboard, moving left across the board.
- Once you reach the far left side, light up the LEDs in a vertical S pattern. Follow each column up, then move over to the next column and light it up from top to bottom, continuing in this manner as per the LED diagram at the bottom of this link. This sequence matches how the LEDs are arranged on the board.
- If a LED is completely out, all subsequent LEDs in the same strand will also be out.
- You may need to discard the “new problem” and start over occasionally, or you can turn off the lights as you go if you prefer. This allows you to use the app to test each LED without saving any changes.
- When you identify an LED that is out or behaving strangely, check behind the board to see if the LED has fallen out. If not, check for screws in the LED or the one before it. If there are no issues there, you may need to investigate potential power source problems or other issues.

04 Some Lights Are Weird Colors or Won’t Go Off

LED with a Screw in It

- A screw in the LED can either break the light or cause it to behave erratically. Even if the LED still works with a screw in it, it may display unpredictable colors or change colors when the screw is tightened or loosened. Climbing on the hold can also cause the screw to wiggle and affect the LED’s behavior.
- If it's a single LED screw hole (and the next LED in the sequence still works), you can simply remove the broken LED, leave it hanging in the back, and insert the adjacent free LED into the hole.
- If the LEDs following the broken one are also not working, you’ll need to replace the broken LED to restore functionality.
- If you need to loosen the screw to remove the LED, make sure to put the screw back in before installing the new LED to avoid damaging it.
- You can also adjust the hold slightly to prevent the screw from entering the LED hole in the future.
- For bolt-on holds, you should replace the broken LED. After replacing it, either create a new set-screw hole away from the LED hole or reinsert the set screw before installing the LED. If the set screw fits with the LED, this can be an effective solution.

04 Some Lights Are Weird Colors or Won’t Go Off

LED Before the Problematic One Has a Screw

- Sometimes, if an LED goes out or acts strangely, the issue may be with the LED directly before it in the sequence. If the problematic LED shows no signs of screw interference, check the previous LED in the strand for a screw. If it has one, replacing this LED may resolve the issue with the "bad" LED.

Power Booster Wires Are Not Attached or Are Loose

- Before adjusting the red and blue power booster wires, turn off the power to the box. Touching these wires together while the power is on can short the entire strand.
- Locate the RED and BLUE wires at the end of each strand. These need to be securely connected back into the corresponding RED and BLUE slots in the box.
- Ensure these connections are tight and that no RED or BLUE wires are missing from the box.
- After securing the connections, turn the power back on and check if the issue is resolved.

Power Source Fluctuations

- If other devices, like a vacuum, are plugged into the same outlet, they can cause power fluctuations to the box, which may affect the colors of the LEDs.

05 All the Problems Look Weird - Erratic Holds Are Lit Up

Incorrect App Configuration

- If the app is set to the wrong wall size, it may seem like random holds are lighting up when you select a problem. This happens because differences in wall size significantly alter the position of each light in the sequence.

- The app needs to be correctly configured to match your light setup:

    - For an 8x12 wall, set the app to 8x12 lights.
    - For a 12x12 wall, the app may be configured for either 12x12 lights.

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LED Replacement

If an LED is shorted, smashed, stepped on with torn wires, has a screw in it, or fails for any other reason, it needs to be replaced.

Prepare Yourself

- Gather your PPE: Gloves, Safety Glasses, and any other gear needed to work safely on the back of your wall.

Tools & Equipment Checklist

- PPE (Gloves/Glasses)
- Wire Strippers
- New LEDs
- Electrician’s Twist Caps or Heat Shrink Butt Caps (depending on the method)
- Heat Gun (for Method 2)
- Extension Cord (for Method 2)
- Phone or iPad to control the wall while behind it
- A bag or tool belt to carry your tools behind the wall

Safety Precaution

Double-check that the controller box is unplugged. This is crucial to avoid shorting the system or risking injury.

06 LED Replacement

Method 1 - Quickest but Least Secure (Twist-Caps)

- Supplies Needed:
  - PPE (Gloves/Glasses)
  - Wire Strippers
  - New LED
  - Electrician’s Twist Caps

- Cut the damaged LED off, leaving plenty of wire to work with.

- Strip about 1.5” of the wire ends where you cut the LED off.

- Strip about 1.5” of the wire ends on your new LED.

- Match the WHITE, RED, and BLUE wires from both the old and new LEDs, and twist them together with twist caps.

- Ensure the white arrow on the circuit board inside the LED points towards the end of the strand, indicating the correct direction of power flow.

- Once everything is connected and no wire is exposed, plug the box back in, sync with your app, and test the new LED.

- If the new LED doesn’t work:
  - Unplug the box, check your connections, and try again.
  - Check the LED immediately before the one you replaced; it might be compromised and not passing the signal correctly.
  - Power cycle the system by turning the controller box off and on.

If issues persist, consult the LED Troubleshooting document or consider the possibility of a power supply problem.

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LED Replacement

Method 2 - More Supplies, More Secure (Heat Shrink Butt Caps)

- Supplies Needed:
  - PPE (Gloves/Glasses)
  - Wire Strippers
  - New LED
  - Heat Gun
  - Extension Cord
  - Heat Shrink Butt Caps

- Strip the wire ends as described in Method 1.

- Ensure the new LED is oriented correctly, with the white arrow pointing towards the end of the strand.

- Insert the WHITE wires into a heat shrink butt cap and use a heat gun to secure them. Be cautious not to overheat nearby wires.

- Repeat this process for the RED and BLUE wires, ensuring each color is properly connected.

- Once connected, plug the box back in, sync with your app, and test the new LED.

- If the new LED doesn’t work:
  - Follow the steps in Method 1 for checking connections, power cycling, and inspecting the previous LED.

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LED Replacement

Testing and Verification

- After replacing the LED, test multiple sequences on the app to ensure the new LED functions correctly in different scenarios.

Post-Repair Maintenance Tip

- After successfully replacing the LED, take a moment to inspect surrounding LEDs and connections as a preventive measure to catch any other potential issues early.

IF ALL ELSE FAILS

PLEASE EMAIL HELP@KILTERGRIPS.COM AND WE WILL GET BACK TO YOU AS SOON AS POSSIBLE