



INSTALLATION GUIDE

RV ROCK GUARD LED LIGHT KIT

IMPORTANT! No two installation scenarios are the same. Accent lighting is highly subjective. Not everyone shares the same lighting or installation quality goals. Some folks are OK with twisting wires together, others want to solder and heat shrink them. Some folks are OK with running wires where they may be seen or unprotected to save money/time, others want a tidy, clean install so they wrap plastic split-loom around all exposed cables. Some folks are OK with mounting their LED strips to whatever surface they can find, others want to take the time necessary to build out appropriate mounting surfaces to provide the best lighting effect on their vehicle and maximize the longevity of their lighting system. The point is it's not possible to provide all the materials necessary for all installation scenarios on all types of vehicles to meet everyone's quality goals. Our light kits provide the essential components needed for a high-quality, functioning lighting system. Installation of our light kit to your specific vehicle will however likely require additional items to make it look, fit and work the way you want. This is particularly the case with electrical wiring, switching functionality and mounting surfaces for the LED strips. We have created a list of additional items you may need. Here's the link:

<https://www.boogeylights.com/other-items-you-might-need/> . While we offer them for sale you can also find these items locally. We urge you to review this information before starting your install.

BENCH TEST YOUR LIGHTING COMPONENTS FIRST!

We know this takes a few extra minutes, but we STRONGLY suggest you bench test your lights AND your controller / switches on a table before doing anything further. Test all of them. While we test every light strip and controller before shipping, bench testing your lights will eliminate the possibility of any problems with the lights or controller before mounting. It also lets you know everything is working properly. Also, the process of bench testing gives you an opportunity to understand the wiring system without interference from other wires, connectors and cables. You can use any good 12vdc battery to do this (e.g. car battery, motorcycle battery, lawn tractor battery or 12vdc power supply capable of supporting a 5 amp load). If you're not sure how to do this, we have prepared a document explaining the process here: <https://docs.boogeylights.net/?wpdmdl=1305> . Bench testing takes an extra 10 or 15 minutes. It's simple to do and can potentially save you hours of time and frustration down the road.

Did we mention the importance of bench testing every LED strip and controller before installing?

BEFORE YOU START

THIS IS A GUIDE. NOT A HOW-TO. It's simply not possible to provide detailed instructions for all installation scenarios. Far too many variables. The information in this manual is intended to be used as a guide. It is not a detailed step-by-step how-to installation manual. We do not spell out every single step along the way. We cover the essential steps related to installing this kit. Beyond that we assume the installer has the skills, knowledge and tools necessary to do the work using the information we provide as a guide. You may need to vary your installation and/or make adjustments based on your truck. This is particularly the case with electrical wire routing, electrical connections, electrical load sizing and switching. If you're unsure about how to do the installation – particularly the electrical components – we urge you to seek assistance from someone who has those skills.

YOU MUST HAVE AN UNDERSTANDING OF 12V POWER. An essential skill with installation of any Boogey Lights LED products is knowing how to correctly wire the product to a 12vdc circuit. This includes understanding the importance of having a properly sized fuse at the power source, polarity, how to properly seal an electrical connection, using properly sized wire gauge for the load, measuring voltage and measuring the additional amperage draw you're adding. If you are uncertain or unfamiliar with any of these concepts, we urge you to ask someone who has the knowledge to assist you. Electricity is unforgiving.

WORK AREA. Make sure you have ample area in which to work and that the area is protected from rain or cold temperatures. The 3M adhesive tape and 3M adhesion promoter works best if applied when the air temperature is above 40 degrees (and of course is DRY).

KNOW YOUR AMPERAGE DRAW. Pay attention to the number of LEDs you are lighting and the total amps you will be drawing. We manufacture a number of LED Controllers of varying capacities. If you over-load the LED controller, it will either not work at all or the lights will dim in a short period of time. Amperage data for all our LED products are on each product page. You can also download it directly here: <https://docs.boogeylights.net/?wpdmdl=1137>

INSTALLATION INFORMATION

Typical installation time for the Brake/Tail/Turn Light Bar is about 3 hours from start to finish. The Under-Glow interface will add about another hour if you're doing both. The Under-Glow interface needs to be wired into your existing Boogey Lights Under-Glow light system.

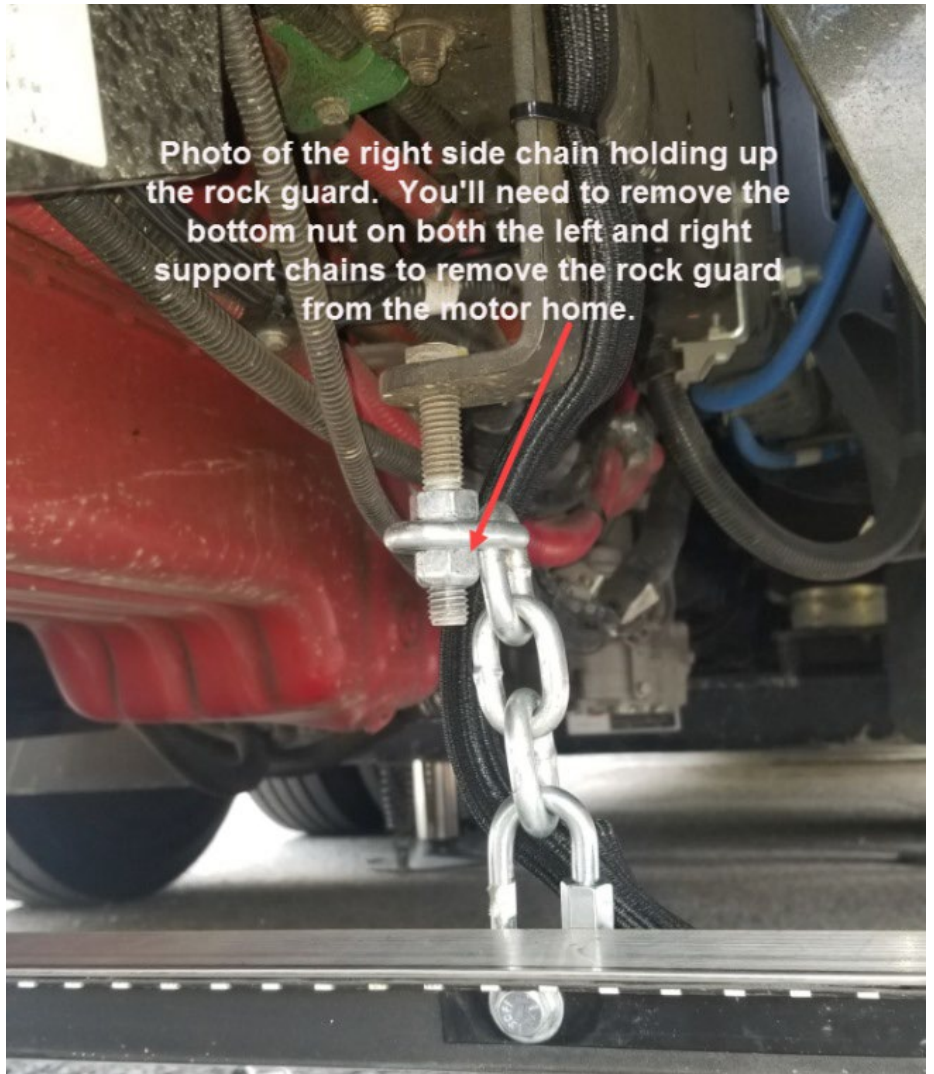
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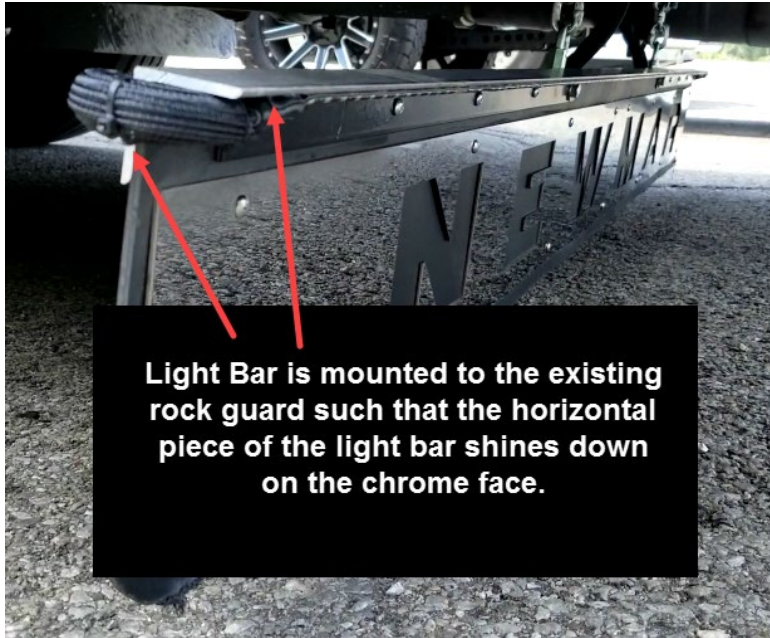
This installation manual shows the LED LIGHT BAR attached to the top of the rock guard on a NEWMAR DUTCH STAR motor home. On some motor homes, this might not be possible because the rock guard isn't straight across the top. Some rock guards have a 'U' shape cut out across the top to allow for the tow bar or other under-carriage structures. In those situations the LED LIGHT BAR can be attached on top of the chrome lettering, sandwiched in-between the chrome lettering and the rock guard itself. In this situation the LED LIGHT BAR is shining directly on top of the chrome lettering which makes for a nice look many folks prefer. However you decide to mount the LED LIGHT BAR is up to you and the structure of your motor home's rock guard.

If you want more information on these two installation differences, visit our ROCK GUARD LED LIGHT KIT product page here: <https://www.boogeylights.com/rock-guard-led-light-kit/> . We offer two videos showing both types of installations:

- 1) NEWMAR DUTCH STAR – The light bar is attached to the top of the rock guard as shown in this manual.
- 2) TIFFIN ZEPHYR – The light bar is attached to the top of the 'ZEPHYR' chrome lettering, sandwiched in-between the chrome lettering and the rock guard.

The first step is to remove the existing rock-guard from the motor home and place it on a table or other suitable work-surface. Most rock guards will be secured to the motor home by two chains. It's important to remove the chains too along with the rock guard itself. Remove the chains at the point at which they connect to the chassis; typically a bolt and nut configuration.

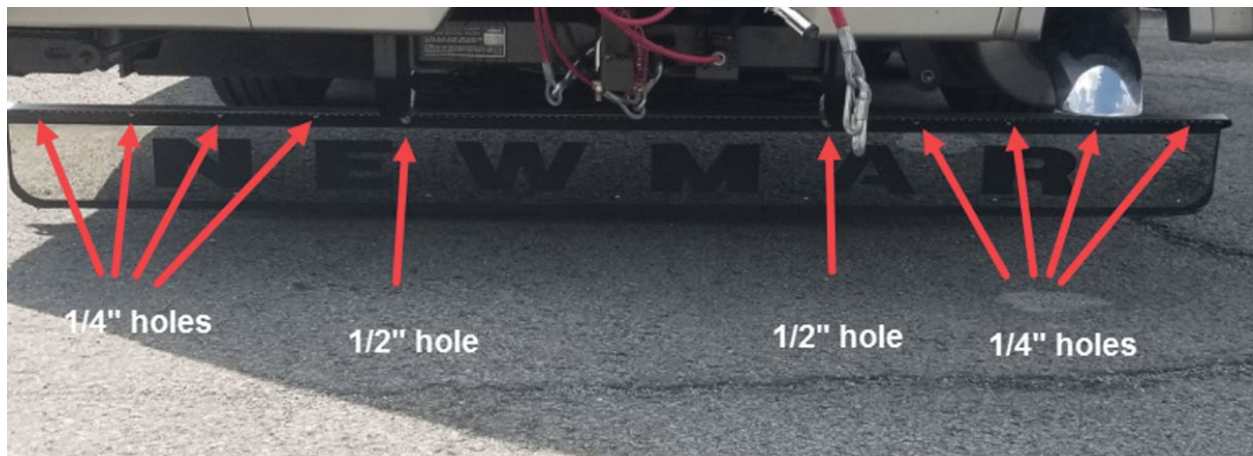




The Boogey Lights light bar angle mounts to the back of the rock guard with the LED strips facing down toward the front of the rock guard.

To do this, you'll need to remove the existing hardware that attaches the chain and support bars. For the NEWMAR Dutch Star, there are a total of 10 bolts. Two of them are where the chains attach to the rock guard. The remaining 8 are where the rigid support bars (2 of them) attach to the rock guard. There are two support bars on the front and two support bars on the rear of the rock guard. We will be reusing the two front support bars. The two rear support bars won't be needed since we'll have the Boogey Lights Light Bar running down the entire rear of the rock guard.

Here's a photo of the entire rock guard and the 10 bolt locations. You will need to remove all 10 of these bolts. The number of bolts on other models may vary but they'll be similar in concept.



At this point it's a good idea to thoroughly clean the rock guard. Rock guards tend to get dirty from road grime. Also, the chrome can be polished too. The LEDs will shine brighter if it is.

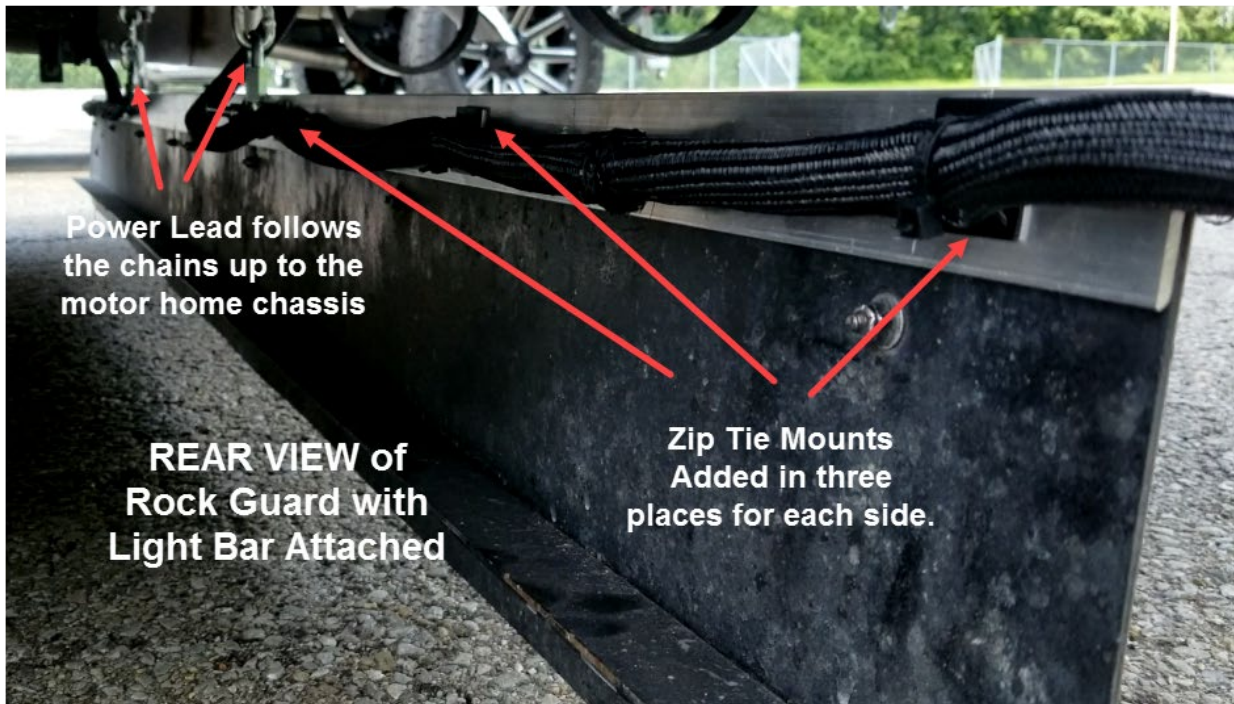
Carefully lay the rock guard on top of the Boogey Lights Light Bar. Be careful to protect the LED strips and power leads from tension. Be sure to align the end of the Light Bar to the end of the rock guard. Also, make sure the rock guard is firmly pressed up against the top of the light bar. You're going to use the holes that are already in the rock guard as a template for the drill points in the Boogey Lights Light Bar angle. For the Newmar Dutch Star you'll need a ½" and a ¼" drill bit. The two points at which the chains attach to the rock guard require a ½" hole. The other 8 holes which connect the support bar to the rock guard are ¼".

CAUTION: When drilling the mounting holes in the Boogey Lights Light Bar, make sure the chuck of the drill DOES NOT touch the LED strips mounted to the perpendicular portion of the light bar. We strongly suggest using a long enough drill bit to avoid the potential of this occurring. The drill's chuck spinning drilling the holes will easily destroy the LED strips attached to that perpendicular portion of the light bar angle. Ask us how we know.

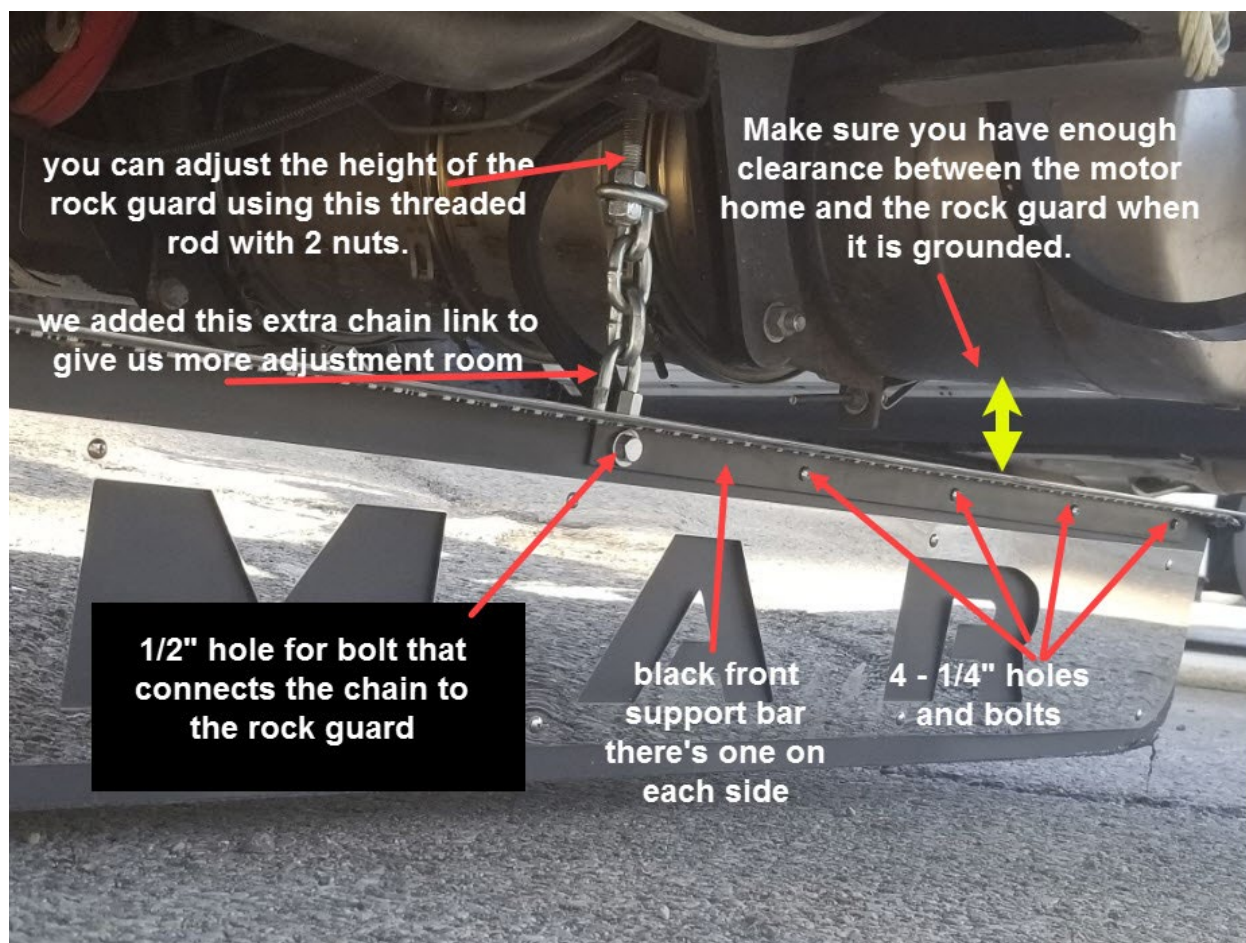
Once you have the mounting holes drilled in the Boogey Lights Light Bar you can reassemble the rock guard and tighten the bolts. For the Newmar Dutch Star we reused the front support bar to hold the rock guard to the Light Bar but we eliminated the rear support bar since the Boogey Lights Light Bar runs the entire length of the rock guard. If your rock guard has rear support bars, you can remove them too and just use the Boogey Lights Light Bar. It's up to you.

If you're installing our Light Bar with the Brake/Tail/Turn LED lights, you'll notice there are two power leads. One comes off the left side of the Light Bar (attaches to the left brake/tail/turn light cluster). The other comes off the right side of the Light Bar (attaches to the right brake/tail/turn light cluster). If you have the Under-Glow, there is only one power lead and it comes off the left side (attaches to the LED controller usually mounted at the front of the rv). In all cases, these power leads are in a protective wire loom which are wire tied to the back of the Light Bar itself. Because we cannot predict where the mounting holes will be on every model, four of the six zip tie mounts cannot be pre-attached to the light bar. You'll need to do this yourself. Be sure to prime the surface of the light bar using the included Alcohol wipes AND 3M Primer and then affix the zip tie mounts in appropriate locations on the back side of the light bar. Wipe the aluminum surface first with alcohol (needs to be free of oil, dirt, grease) and then prime it using the 3M Adhesion Primer (1 tube included). This is an important step. Do NOT skip it. You want to make sure these LED power lead cables remain firmly attached to the Boogey Lights Light Bar.

Once you have the zip tie mounts affixed to the light bar, you can use the included zip ties to secure each power lead to the back of the light bar. Note that these power leads will follow the two mounting chains up from the back of the rock guard to the motor home chassis. See photo.



At this point you can reinstall the rock guard (now with the Boogey Lights Light Bar attached) to the motor home. This is where you may (or may not) require the use of those 2 extra chain links we include with the light kit. When you reconnect your rock guard to the motor home, take a close look at how the rock guard swings when grounded. **Be sure to observe how the rock guard behaves when swinging both ways (forward and reverse).** On the Newmar Dutch Star without the extra chain link the horizontal portion of the Boogey Lights Light Bar would hit the muffler (right side under the coach) when grounded (forward motion due to unlevel pavement). Doing so would either damage the Light Bar or the muffler or both. We had to lower the rock guard about one inch to get the additional clearance. Not all motor homes will be like this though. And, in many cases you might be able to adjust the height of the rock guard using the existing nut/bolt that attach the rock guard to the bottom of the motor home. Regardless of how you do it, it will be important to look at this carefully to make sure the rock guard with the Boogey Lights Light Bar attached can swing back and forth without damaging the light bar or any components on the bottom of the motor home. If you don't look at this closely, it won't take but one grounding of that rock guard for you to find out you didn't allow enough clearance between the rock guard and the bottom of the motor home. Just sayin'.



Ok. Now that you have the rock guard and Boogey Lights Light Bar attached to the motor home, it's time to do the wiring. This is the fun part.

First, if you're wiring the Brake/Turn/Tail lights to the Light Bar, you'll need to run the power lead wires coming from the Boogey Lights Light Bar up to the light cluster on both the left and right sides of the motor home. Be sure to keep these wires away from extreme heat or other moving parts. We have provided additional zip ties for you to do this. If you're wiring the RGB Under-Glow lights, run that wire up to your Boogey Lights LED controller.

Tying into the motor-home brake, tail and turning indicators is straight forward. The Boogey Lights® Rock-Guard LED Light Bar has two RED LED strip power leads. Each LED power lead contains four wires: Black, Red, Green, Blue. The left side LED strip power lead connects to the motor home's left light cluster. The right side LED strip power lead connects to the motor home's right light cluster. Use the crimp-on connectors to make these connections. These light clusters are relatively easy to reach from the rear engine compartment. We recommend cutting the existing wires – be sure to give yourself enough room to work – and then reconnect them **ALONG WITH** the Boogey Lights Light Bar wires using the included crimp-on connectors. If necessary, seal the connections with electrical tape.

Most vehicle manufacturers adhere to these common wire color designations. They're listed below. If you're in doubt, you can easily confirm them using a 12vdc volt meter. These are 12vdc lights.

MOTORHOME

WHITE = Ground
BROWN = Running
RED = Brake
YELLOW = LEFT TURN
GREEN = RIGHT TURN

BOOGIE LIGHTS ROCK-GUARD LIGHT BAR

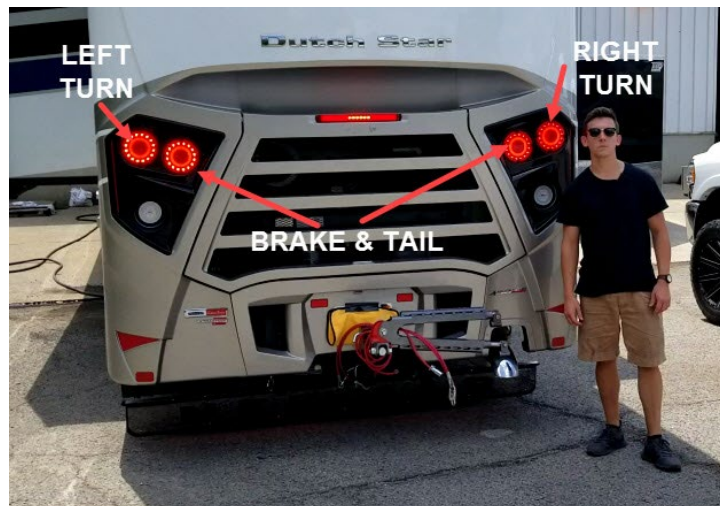
Black = Ground
Green = Running
Red = Brake
Blue = Turn

MOTORHOME to ROCK-GUARD LIGHT BAR

WHITE = Black
BROWN = Green
RED = Red
YELLOW = Blue (left side LED strip)
GREEN = Blue (right side LED strip)

Note: On some motor homes (e.g. 2015 Tiffin Zephyr), the wire colors are a little different as follows:

BLACK = Ground
RED = Brake
BLUE = Right Turn
YELLOW = Left Turn
BROWN = Running



In the event your motor home doesn't have a separate brake light, connect the YELLOW and GREEN wires on the motor home turning indicators to the RED wire coming from the Rock-Guard Light Bar.

Additional Resources

- Product Page: <https://www.boogeylights.com/rock-guard-led-light-kit/>
- How to Videos: <https://www.boogeylights.com/how-to-videos/>
- Building a mounting surface: <https://www.boogeylights.com/video-creating-a-smooth-mounting-surface/>
- Using Aluminum Channels - <https://docs.boogeylights.net/?wpdmdl=1351>
- General installation: <https://www.boogeylights.com/video-how-to-install-a-boogey-lights-multi-color-under-glow-led-light-kit/>
- Troubleshooting: <https://www.boogeylights.com/trouble-shooting-guide/>
- Installation Resources: <https://www.boogeylights.com/installation-resources/>
- GEN2 LED Controller Wiring Diagrams + Operating Info: <https://docs.boogeylights.net/?wpdmdl=1163>
- GEN2 RF Wireless Remote Operating Info: <https://docs.boogeylights.net/?wpdmdl=1164>
- GEN2 Bluetooth APP Operating Info: <https://docs.boogeylights.net/?wpdmdl=1169>
- GEN2 Bluetooth APP Quick-Start: <https://docs.boogeylights.net/?wpdmdl=1167>
- Amperage Data: <https://docs.boogeylights.net/?wpdmdl=1137>

Support

- Phone: 800.847.1359 (M-F, 9-6 Eastern)
- Text: 859.955.8155
- Open a Support Ticket: <https://www.boogeylights.com/email-us/>
- Online: 24/7 resources at <https://www.boogeylights.com/installation-resources/>
- How to Make a Warranty Claim: <https://www.boogeylights.com/make-a-warranty-claim/>

Warranty

The Boogey Lights® warranty requires an original sales receipt from Boogey Lights or an authorized dealer. It covers product replacement only, not labor or other costs. Register your purchase at: <https://www.boogeylights.com/warranty-registration/>. Full details: <https://www.boogeylights.com/warranty/>.