



CODE 3 Matrix Outliner Running Board Lights Installation Guide

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IMPORTANT! Read all instructions before installing and using. Installer: This manual must be delivered to the end user.



WARNING!

Failure to install or use this product according to manufacturer's recommendations may result in property damage, serious injury, and/ or death to those you are seeking to protect!



Do not install and/or operate this safety product unless you have read and understood the safety information contained in this manual.

1. Proper installation combined with operator training in the use, care, and maintenance of emergency warning devices are essential to ensure the safety of emergency personnel and the public.
2. Emergency warning devices often require high electrical voltages and/or currents. Exercise caution when working with live electrical connections.
3. This product must be properly grounded. Inadequate grounding and/or shorting of electrical connections can cause high current arcing, which can cause personal injury and/or severe vehicle damage, including fire.
4. Proper placement and installation is vital to the performance of this warning device. Install this product so that output performance of the system is maximized and the controls are placed within convenient reach of the operator so that they can operate the system without losing eye contact with the roadway.
5. Do not install this product or route any wires in the deployment area of an air bag. Equipment mounted or located in an air bag deployment area may reduce the effectiveness of the air bag or become a projectile that

- could cause serious personal injury or death. Refer to the vehicle owner's manual for the air bag deployment area. It is the responsibility of the user/operator to determine a suitable mounting location ensuring the safety of all passengers inside the vehicle particularly avoiding areas of potential head impact.
6. It is the responsibility of the vehicle operator to ensure daily that all features of this product work correctly. In use, the vehicle operator should ensure the projection of the warning signal is not blocked by vehicle components (i.e., open trunks or compartment doors), people, vehicles or other obstructions.
 7. The use of this or any other warning device does not ensure all drivers can or will observe or react to an emergency warning signal. Never take the right-of-way for granted. It is the vehicle operator's responsibility to be sure they can proceed safely before entering an intersection, drive against traffic, respond at a high rate of speed, or walk on or around traffic lanes.
 8. This equipment is intended for use by authorized personnel only. The user is responsible for understanding and obeying all laws regarding emergency warning devices. Therefore, the user should check all applicable city, state, and federal laws and regulations. The manufacturer assumes no liability for any loss resulting from the use of this warning device.

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Specifications:

- **Input Voltage:** 12VDC
- **Temperature:** -40C to 65C
- **Fusing Requirement:** 10 A
- **Weight:** OL60X-XXX-CM 3.02 lbs
OL72X-XXX-CM 3.54 lbs

Additional Matrix Resources:

Product Information: www.code3esg.com/us/en/products/matrix

Training Videos: www.youtube.com/c/Code3Inc

Matrix Software: <http://software.code3esg.global/updater/matrix/downloads/Matrix.exe>

2013-2019 FORD EXPLORER

The Running Board lights for the 2013-2019 Ford Explorer fit under the vehicle's running board and provide a lateral facing signal from the side of the vehicle.

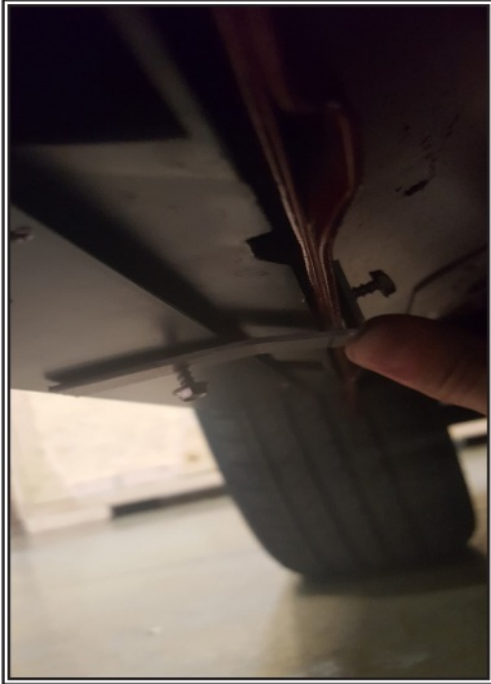
Installation and Mounting Instructions:

Step 1. From under the vehicle: Test fit the provided brackets to achieve the location needed for the mounting hole on the vehicle. Mark all four (4) hole positions needed.

Note: Position brackets to avoid cutouts in pinch weld for jack clearance.

Step 2. Drill the mounting holes into the vehicle using a #34 drill bit.

Step 3. Using the provided screws, securely mount the bracket to the vehicle and the unit as shown in **Figure 1**.



Step 4. Repeat the process for the opposite side running board.

Step 5. Route the lights wiring as desired.

Note: Instructions are made using Driver's Side as example. To Reproduce results, revisit each step for Passenger Side.

2015-2020 CHEVY TAHOE / 2014-2019 CHEVY SILVERADO

The Running Board lights for the 2015-2020 Chevy Tahoe / 2014-2019 Chevy Silverado fit under the vehicle's running board and provide a lateral facing signal from the side of the vehicle.

Installation and Mounting Instructions:

Step 1. Remove three (3) 13mm bolts and one (1) 10mm bolt from under the rocker panel. **(See Figure 1 & 2)**





Step 2. Loosen, without removing, three (3) 13mm bolts (See Figure 3).



Allowing the rocker panel assembly to lower ~1/4" (See Figure 4).

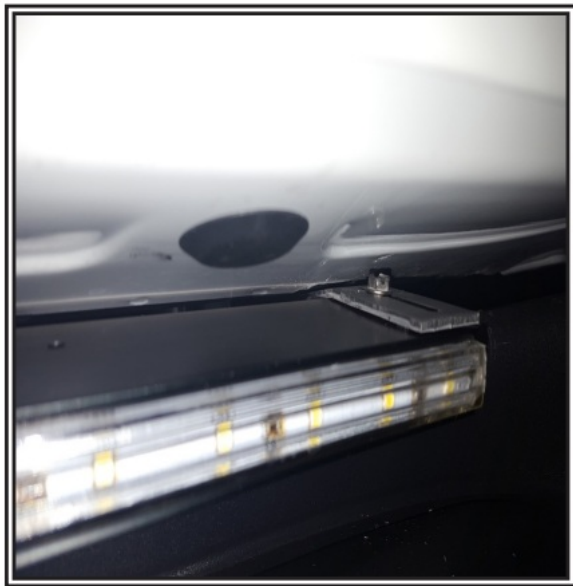


Step 3. Using the provided screws, mount the provided brackets to the unit where shown in Figure 5.



Note: Bracket is slotted in order to use existing holes on the unit.

Step 4. Slide the unit into position while guiding brackets to approximate locations (**See Figure 6**).



Step 5. Align brackets to existing mounting holes and fasten using three (3) 13mm bolts removed in Step 1.

Step 6. Fasten remaining bolts removed in Step 1 and tightened bolts loosened in Step 2.

Step 7. Repeat the process for the opposite side running board.

Step 8. Route the lights wiring as desired.

Note: Instructions are made using Driver's Side as example. To Reproduce results, revisit each step for Passenger Side.



2020 CHEVY SILVERADO

The Running Board lights for the 2020 Chevy Silverado fit under the vehicle's rocker panels and provide a lateral facing signal from the side of the vehicle.

Installation and Mounting Instructions:

Step 1. Mount the brackets to the light unit using the provided screws **(See Figure 1)**.



Step 2. From under the vehicle: Test fit the provided brackets to achieve the location needed for the mounting hole on the vehicle. Mark all four (4) hole positions needed.

Note: Position brackets to avoid cutouts in pinch weld for jack clearance.

Step 3. Drill the mounting holes into the vehicle using a #34 drill bit.

Step 4. Using the provided screws, mount the bracket to the vehicle using mount shown in **Figure 2**.

Step 5. Repeat the process for the opposite side running board.

Step 6. Route the lights wiring as desired.

Note: Instructions are made using Driver's Side as example. To Reproduce results, revisit each step for Passenger Side.

2015-2020 FORD F-SERIES

The Running Board lights for the 2015-2020 Ford F-150 fit under the vehicle's doors and above the running board (if equipped) and provide a lateral facing signal from the side of the vehicle.

Installations and Mounting Instructions:

Step 1. Mount the brackets to the light unit using the provided screws (**See Figure 1**).



Step 2. From under the vehicle: Test fit the provided brackets to achieve the location needed for the mounting hole on the vehicle. Mark all four (4) hole positions needed.

Step 3. Drill the mounting holes into the vehicle using a 1/4" drill bit.

Step 4. Using the provided screws and binding barrels, securely mount the bracket to the vehicle using mount shown in **Figure 2**.



Step 5. Repeat the process for the opposite side running board.

Step 6. Route the lights wiring as desired.

Note: Instructions are made using Driver's Side as example. To Reproduce results, revisit each step for Passenger Side

2019+ FORD RANGER

The Running Board lights for the 2019+ Ford Ranger fit under the vehicle's running board and provide a lateral facing signal from the side of the vehicle.

Installation and Mounting Instructions:

Step 1. From under the vehicle: Test fit the provided brackets to achieve the location needed for the mounting

hole on the vehicle. Mark all four (4) hole positions needed.

Note: Position brackets to avoid cutouts in pinch weld for jack clearance.

Step 2. Drill the mounting holes into the vehicle using a #32 drill bit.

Step 3. Using the provided screws, securely mount the bracket to the vehicle and the unit as shown in **Figure 1**.



Step 4. Repeat the process for the opposite side running board.

Step 5. Route the lights wiring as desired.

Note: Instructions are made using Driver's Side as example. To Reproduce results, revisit each step for Passenger Side.

2017 FORD FUSION

The Running Board lights for the 2017 Ford Fusion fit under the vehicle's rocker panels and provide a lateral facing signal from the side of the vehicle.

Installation and Mounting Instructions:

Step 1. Mount the brackets to the light unit using the provided screws (See Figure 1).



Step 2. From under the vehicle: Test fit the provided brackets to achieve the location needed for the mounting hole on the vehicle. Mark all four (4) hole positions needed.

Step 3. Drill the mounting holes into the vehicle using a #34 drill bit.

Step 4. Using the provided screws, securely mount the bracket to the vehicle using mount shown in **Figure 2**



(Bracket will be oriented so that the slot is on the light side and the single hole on the vehicle side as shown in **Figure 1**).

Step 5. Repeat the process for the opposite side running board.

Step 6. Route the lights wiring as desired.

Note: Instructions are made using Driver's Side as example. To Reproduce results, revisit each step for Passenger Side.

2016 FORD TAURUS

The Running Board lights for the 2016 Ford Taurus fit under the vehicle's rocker panels and provide a lateral facing signal from the side of the vehicle.

Installation and Mounting Instructions:

Step 1. Mount the brackets to the light unit using the provided screws (See **Figure 1**).



Step 2. From under the vehicle: Test fit the provided brackets to achieve the location needed for the mounting hole on the vehicle. Mark all four (4) hole positions needed (~1" of the light will be tucked behind plastic molding; See **Figure 3**).

Step 3. Drill the mounting holes into the vehicle using a #34 drill bit.

Step 4. Using the provided screws, securely mount the bracket to the vehicle using mount shown in **Figure 2**



(Bracket will be oriented so that the slot is on the light side and the single hole on the vehicle side as shown in **Figure 1**).

Step 5. Repeat the process for the opposite side running board.

Step 6. Route the lights wiring as desired.

OPTIONAL: Plastic Molding concealing lights, shown in **Figure 3**,



can be cut to reveal remaining LEDs.

Note: Instructions are made using Driver's Side as example. To Reproduce results, revisit each step for Passenger Side.

2018 DODGE DURANGO

The Running Board lights for the 2018 Dodge Durango fit under the vehicle's rocker panels and provide a lateral facing signal from the side of the vehicle.

Installation and Mounting Instructions:

Step 1. Mount the brackets to the light unit using the provided screws **(See Figure 1)**.



Step 2. From under the vehicle: Test fit the provided brackets to achieve the location needed for the mounting hole on the vehicle. Mark all four (4) hole positions needed.

Step 3. Drill the mounting holes into the vehicle using a #34 drill bit.

Step 4. Using the provided screws, securely mount the bracket to the vehicle using mount shown in **Figure 2**



(Bracket will be oriented so that the slot is on the light side and the single hole on the vehicle side as shown in Figure 1).

Step 5. Repeat the process for the opposite side running board.

Step 6. Route the lights wiring as desired.

Note: Instructions are made using Driver's Side as example. To Reproduce results, revisit each step for Passenger Side.

2020 FORD EXPLORER PIU/Explorer

The Running Board lights for the 2020 Ford Explorer fit under the vehicle's rocker panels and provide a lateral facing signal from the side of the vehicle.

Installation and Mounting Instructions:

Step 1. Mount the brackets to the light unit using the provided screws. **(See Figure 1)**



Step 2. From under the vehicle: Test fit the provided brackets to achieve the location needed for the mounting hole on the vehicle. Mark all four (4) hole positions needed.

Step 3. Drill the mounting holes into the vehicle using a #34 drill bit.

Step 4. Using the provided screws, mount the bracket to the vehicle using mount shown in **Figure 2.**



Step 5. Repeat the process for the opposite side running board.

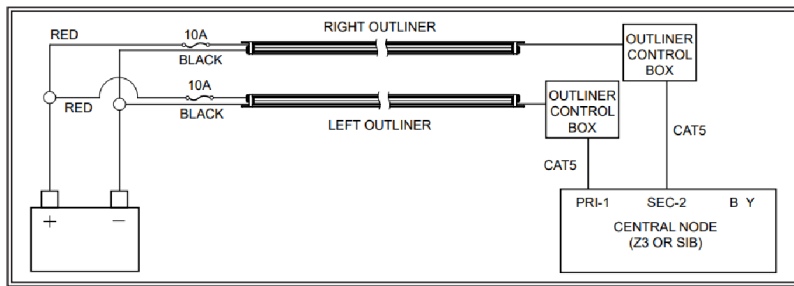
Step 6. Route the lights wiring as desired.

Note: Instructions are made using Driver's Side as example. To Reproduce results, revisit each step for Passenger Side

Wiring Instructions:

Red – Positive (12V)

Black – Negative



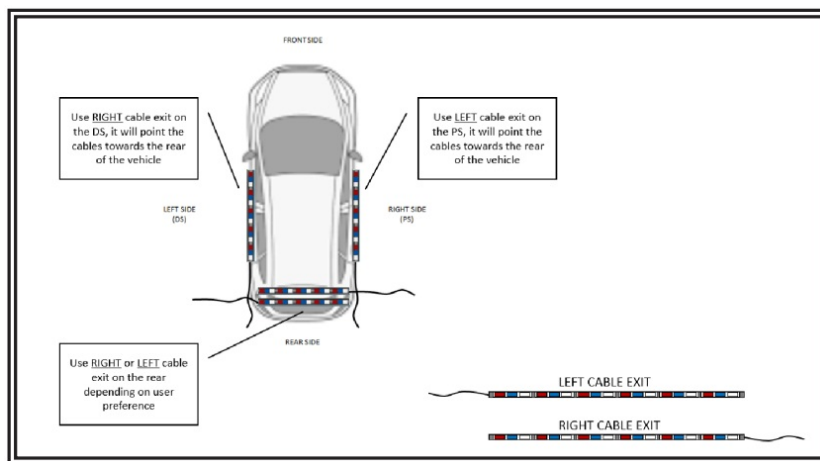
Each Outliner comes with an Outliner control box. Connect the Outliner “Left” connector to the “Left” port on the Outliner control box. Connect the Outliner “Right” connector to the “Right” port on the Outliner control box. Connect the CAT5 cable from the Z3 to the Outliner control box.

Flash Patterns:

Default Flash Patterns		
Outliner Side	Left	Right
Default	Description	Description
Level 3	Pursuit (Primary and Secondary with Tertiary Pops)	Pursuit (Primary and Secondary with Tertiary Pops)
Level 2	Triple Flash 115 (Primary, Secondary and Tertiary)	Triple Flash 115 (Primary, Secondary and Tertiary)
Level 1	Primary Sweep	Primary Sweep
Cruise	Primary Cruise	Primary Cruise
Dim	30%	30%
Left Scene	Tertiary Steady	-
Right Scene	-	Tertiary Steady
Driver Front Door	Timed Left Cut	-
Passenger Front Door	-	Right Cut
Driver Rear Door	Timed Left Cut	-
Passenger Rear Door	-	Right Cut

Installation on a vehicle:

For vehicles with an equipment tray in the rear of the vehicle, we recommend placing the products as follows:



Flash Pattern Compliance Chart

No.	Description	FPM	SAE J595			
Red	Blue	Amber	White			
1	Single	75	CLASS 2	CLASS 3	CLASS 2	CLASS 2
2	Single 90-300	—	—	—	—	—
3	Single (ECE R65)	120	CLASS 2	CLASS 3	CLASS 2	CLASS 2
4	Single	150	CLASS 2	CLASS 3	CLASS 2	CLASS 2
5	Single	250	—	—	—	—
6	Single	375	—	—	—	—
7	Double	75	CLASS 2	CLASS 3	CLASS 2	CLASS 2
8	Double	85	CLASS 2	CLASS 3	CLASS 2	CLASS 2
9	Double (CA T13)	75	CLASS 2	CLASS 3	CLASS 2	CLASS 2
10	Double 90-300	—	—	—	—	—
11	Double	115	CLASS 2	CLASS 3	CLASS 2	CLASS 2
12	Double (CA T13)	115	CLASS 2	CLASS 3	CLASS 2	CLASS 2
13	Double (ECE R65)	120	CLASS 2	CLASS 3	CLASS 2	CLASS 2
14	Double	150	CLASS 2	CLASS 3	CLASS 2	CLASS 2
15	Triple 90-300	—	—	—	—	—
16	Triple	60	CLASS 2	CLASS 3	CLASS 2	CLASS 2
17	Triple	75	CLASS 2	CLASS 3	CLASS 2	CLASS 2
18	Triple Pop	75	CLASS 2	CLASS 3	CLASS 2	CLASS 2
19	Triple	55	—	—	—	—
20	Triple	115	CLASS 2	CLASS 3	CLASS 2	CLASS 2
21	Triple (ECE R65)	120	CLASS 2	CLASS 3	CLASS 2	CLASS 2
22	Triple	150	CLASS 2	CLASS 3	CLASS 2	CLASS 2

23	Triple Pop	150	CLASS 2	CLASS 3	CLASS 2	CLASS 2
24	Quad	75	CLASS 2	CLASS 3	CLASS 2	CLASS 2
25	Quad Pop	75	CLASS 2	CLASS 3	CLASS 2	CLASS 2
26	Quad	40	–	–	–	–
27	NFPA Quad	77	CLASS 2	CLASS 3	CLASS 2	CLASS 2
28	Quad	115	CLASS 2	CLASS 3	CLASS 2	CLASS 2
29	Quad	150	CLASS 2	CLASS 3	CLASS 2	CLASS 2
30	Quad Pop	150	CLASS 2	CLASS 3	CLASS 2	CLASS 2
31	Quint	75	CLASS 2	CLASS 3	CLASS 2	CLASS 2
32	Quint	150	CLASS 2	CLASS 3	CLASS 2	CLASS 2
33	Six	60	CLASS 2	CLASS 3	CLASS 2	CLASS 2
34	Six	80	CLASS 2	CLASS 3	CLASS 2	CLASS 2

Replacement Parts	
Part No.	Description
CZ0322	REPLACE CONTROL BOX FOR OL60L-RBW-CM
CZ0323	REPLACE CONTROL BOX FOR OL60L-RBA-CM
CZ0324	REPLACE CONTROL BOX FOR OL60L-BAW-CM
CZ0325	REPLACE CONTROL BOX FOR OL60L-RAW-CM
CZ0326	REPLACE CONTROL BOX FOR OL72L-RBW-CM
CZ0327	REPLACE CONTROL BOX FOR OL72L-BAW-CM
CZ0328	REPLACE CONTROL BOX FOR OL60R-RBW-CM
CZ0329	REPLACE CONTROL BOX FOR OL60R-RBA-CM
CZ0330	REPLACE CONTROL BOX FOR OL60R-BAW-CM
CZ0331	REPLACE CONTROL BOX FOR OL60R-RAW-CM
CZ0332	REPLACE CONTROL BOX FOR OL72R-RBW-CM
CZ0333	REPLACE CONTROL BOX FOR OL72R-BAW-CM
CZ0334	REPLACE RUNNING BOARD FOR OL60L-RBW-CM
CZ0335	REPLACE RUNNING BOARD FOR OL60L-RBA-CM
CZ0336	REPLACE RUNNING BOARD FOR OL60L-BAW-CM
CZ0337	REPLACE RUNNING BOARD FOR OL60L-RAW-CM
CZ0338	REPLACE RUNNING BOARD FOR OL72L-RBW-CM
CZ0339	REPLACE RUNNING BOARD FOR OL72L-BAW-CM
CZ0340	REPLACE RUNNING BOARD FOR OL60R-RBW-CM
CZ0341	REPLACE RUNNING BOARD FOR OL60R-RBA-CM
CZ0342	REPLACE RUNNING BOARD FOR OL60R-BAW-CM
CZ0343	REPLACE RUNNING BOARD FOR OL60R-RAW-CM
CZ0344	REPLACE RUNNING BOARD FOR OL72R-RBW-CM
CZ0345	REPLACE RUNNING BOARD FOR OL72R-BAW-CM

Troubleshooting:

PROBLEM	POSSIBLE CAUSE(S)	COMMENTS / RESPONSE
No power	Faulty wiring	Ensure power and ground connections to the product are secured. Remove and reconnect the red power wire to the vehicle battery.
	Input Voltage	The product is equipped with an over voltage lock- out circuit . During a sustained overvoltage event, the controller inside will maintain communication with the rest of the Matrix® network, but disable power out to the light modules. Look for the solid red V_FAULT LED. Ensure that input voltage does not exceed the specified range for your particular model. When overvoltage occurs, the input must temporarily drop ~1V below the maximum limit in order to resume normal operation.
	Blown Fuse	The product may have blown an upstream fuse. Check and replace fuse if necessary.
No Communication	Ignition input	An ignition wire input is first required to bring the central node out of a sleep state. From that point, the central node controls the status of all other Matrix® compatible devices, including Matrix Outliner. If the device is active, you should see a flashing green STATUS LED on the controller inside. See the installation manual of the customer selected central node for further troubleshooting of the ignition input.
	Connectivity	Ensure that the CAT5 cable is securely connected back to a central node. Ensure that any other cables connecting Matrix® compatible accessory devices in a CAT5 daisy chain are fully seated with positive lock. Remember that the PRI-1 jack at the central node must first be used, before the SEC-2 jack can be used.
Bad Light Module	No Response	Verify that the harness connection is secure at the back of each module.
	Short Circuit	If any one light module is shorted out, and the user attempts to activate a flash pattern, the pattern will not operate. Instead, the controller inside the Matrix Outliner will display a solid red I_FAULT LED.

Warranty

Manufacturer Limited Warranty Policy:

Manufacturer warrants that on the date of purchase this product will conform to Manufacturer's specifications for this product (which are available from the Manufacturer upon request). This Limited Warranty extends for Sixty (60) months from the date of purchase.

DAMAGE TO PARTS OR PRODUCTS RESULTING FROM TAMPERING, ACCIDENT, ABUSE, MISUSE, NEGLIGENCE, UNAPPROVED MODIFICATIONS, FIRE OR OTHER HAZARD; IMPROPER INSTALLATION OR OPERATION; OR NOT BEING MAINTAINED IN ACCORDANCE WITH THE MAINTENANCE PROCEDURES SET FORTH IN MANUFACTURER'S INSTALLATION AND OPERATING INSTRUCTIONS VOIDS THIS LIMITED WARRANTY.

Exclusion of Other Warranties:

MANUFACTURER MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED. THE IMPLIED WARRANTIES FOR MERCHANTABILITY, QUALITY OR FITNESS FOR A PARTICULAR PURPOSE, OR ARISING FROM A COURSE OF DEALING, USAGE OR TRADE PRACTICE ARE HEREBY EXCLUDED AND SHALL NOT APPLY TO THE PRODUCT AND ARE HEREBY DISCLAIMED, EXCEPT TO THE EXTENT PROHIBITED BY APPLICABLE LAW. ORAL STATEMENTS OR REPRESENTATIONS ABOUT THE PRODUCT DO NOT CONSTITUTE WARRANTIES.

Remedies and Limitation of Liability:

MANUFACTURER'S SOLE LIABILITY AND BUYER'S EXCLUSIVE REMEDY IN CONTRACT, TORT (INCLUDING NEGLIGENCE), OR UNDER ANY OTHER THEORY AGAINST MANUFACTURER REGARDING THE PRODUCT AND ITS USE SHALL BE, AT MANUFACTURER'S DISCRETION, THE REPLACEMENT OR REPAIR OF THE PRODUCT, OR THE REFUND OF THE PURCHASE PRICE PAID BY BUYER FOR NON-CONFORMING PRODUCT. IN NO EVENT SHALL MANUFACTURER'S LIABILITY ARISING OUT OF THIS LIMITED WARRANTY OR ANY OTHER CLAIM RELATED TO THE MANUFACTURER'S PRODUCTS EXCEED THE AMOUNT PAID FOR THE PRODUCT BY BUYER AT THE TIME OF THE ORIGINAL PURCHASE. IN NO EVENT SHALL MANUFACTURER BE LIABLE FOR LOST PROFITS, THE COST OF SUBSTITUTE EQUIPMENT OR LABOR, PROPERTY DAMAGE, OR OTHER SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES BASED UPON ANY CLAIM FOR BREACH OF CONTRACT, IMPROPER INSTALLATION, NEGLIGENCE, OR OTHER CLAIM, EVEN IF MANUFACTURER OR A MANUFACTURER'S REPRESENTATIVE HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. MANUFACTURER SHALL HAVE NO FURTHER OBLIGATION OR LIABILITY WITH RESPECT TO THE PRODUCT OR ITS SALE, OPERATION AND USE, AND MANUFACTURER NEITHER ASSUMES NOR AUTHORIZES THE ASSUMPTION OF ANY OTHER OBLIGATION OR LIABILITY IN CONNECTION WITH SUCH PRODUCT.

This Limited Warranty defines specific legal rights. You may have other legal rights which vary from jurisdiction to jurisdiction. Some jurisdictions do not allow the exclusion or limitation of incidental or consequential damages.

Product Returns:

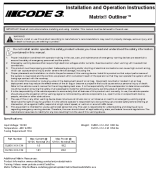
If a product must be returned for repair or replacement*, please contact our factory to obtain a Return Goods Authorization Number (RGA number) before you ship the product to Code 3®, Inc. Write the RGA number clearly on the package near the mailing label. Be sure you use sufficient packing materials to avoid damage to the product being returned while in transit.

*Code 3®, Inc. reserves the right to repair or replace at its discretion. Code 3®, Inc. assumes no responsibility or liability for expenses incurred for the removal and /or reinstallation of products requiring service and/or repair.; nor for the packaging, handling, and shipping: nor for the handling of products returned to sender after the service has been rendered.

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CODE3ESG.com



Documents / Resources



[CODE 3 Matrix Outliner Running Board Lights](#) [pdf] Installation Guide
Matrix Outliner Running Board Lights, Outliner Running Board Lights, Running Board Lights, Board Lights, Lights

References

- [🌐 software.code3esg.global/updater/matrix/downloads/Matrix.exe](https://software.code3esg.global/updater/matrix/downloads/Matrix.exe)
- [User Manual](#)

[Manuals+](#), [Privacy Policy](#)

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