
INSTALLATION AND INSTRUCTION MANUAL

TD93-NYDOT



Important: This product is used to **direct** traffic. Improper use may result in vehicular collision, personal injury and/or death. Star Headlight & Lantern Co., Inc., and its subsidiaries shall not be held responsible for damages directly or indirectly caused by improper use of this product. Always carefully consider the effect on traffic that the selected light pattern will have before engaging the lights.



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An ISO 9001:2008 Certified Company

NOTICE

Due to continuous product improvements, we must reserve the right to change any specifications and information, contained in this manual at any time without notice. Star Headlight & Lantern Co., Inc. makes no warranty of any kind with regard to this manual, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose. Star Headlight & Lantern Co., Inc. shall not be liable for errors contained herein or for incidental or consequential damages in connection with the furnishing, performance, or use of this manual.



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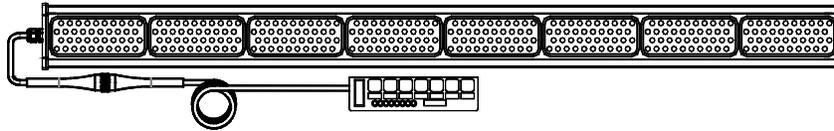


This light utilizes one or more of the following light sources: Strobe Lights, Halogen Lights, and/or High-Intensity LED Lights.

DO NOT stare directly into the light while it is on, as momentary blindness and/or permanent eye damage may occur.

Before beginning the installation:

- Determine where the Traffic Director is to be mounted (on your lightbar, on your roof, in your rear window, etc).
- Check to see that there are no obstructions hindering the visibility of your traffic director.
- Then select a location to mount your controller. The controller must be located in a dry location out of direct sunlight, free of dirt and dust. Under the vehicle's instrument panel is usually the best choice.
- Once you have selected these locations, determine the path your cable, which connects the controller to the Traffic Director, will take. The cable should exit the left side of the Traffic Director when you are facing both the stick and the controller.



These traffic directors come with a short pigtail out of the side of the light that attaches to the main harness. The available lengths for the harnesses are 15', 30', 45', and 60'. Be sure the harness you ordered is long enough for proper installation. **Star does not recommend "splicing in" additional cable when the supplied cable is too short.** If it is too short, you will need to order a harness of the correct length.



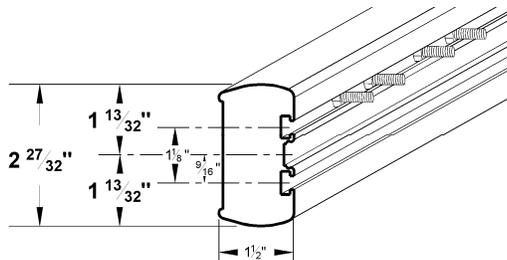
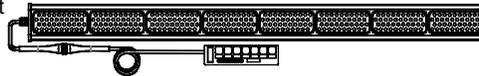
It is the sole responsibility of the owner to ensure the lightbar is mounted securely. Check your light every time you enter the vehicle to ensure that it is mounted securely. The manufacturer assumes no responsibility for the secure mounting of this light.

Mounting Instructions

Please Note: These instructions are provided as a general guideline only. *Some vehicles may require special mounting, wiring, and/or weather-sealing. This is the sole responsibility of the installer.* Star Headlight & Lantern Co., Inc. assumes no responsibility for the integrity of the installation for this or any of its products.

1. **Caution:** There are two vapor vent holes drilled in the bottom of each endcap.

These **are not** visible, so be sure that the cable exits the left side of the Traffic Director when you are facing both the stick and the controller.



2. Each Traffic Director assembly comes equipped with two slots that run along the entire length of the rear of the extrusion.

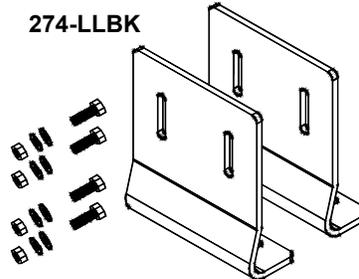
The top slot will contain four $\frac{1}{4}$ " x 20 x $\frac{3}{4}$ " hex head bolts pre-installed.

3. Two "L"-Brackets (274-LLBK) are included with each traffic director to assist in mounting.

4. Also included are four flat washers, four split washers, and four nuts to attach the L-Brackets to your traffic director.

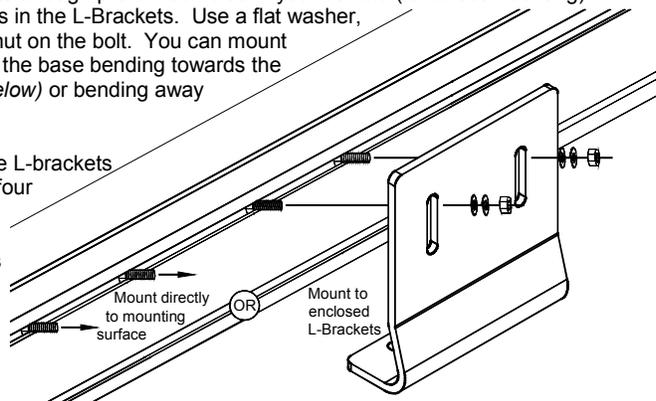
In addition, there are four $\frac{1}{4}$ " x 20 x $\frac{3}{4}$ " hex head bolts enclosed that can be optionally used to mount the L-Brackets to your mounting surface.

274-LLBK



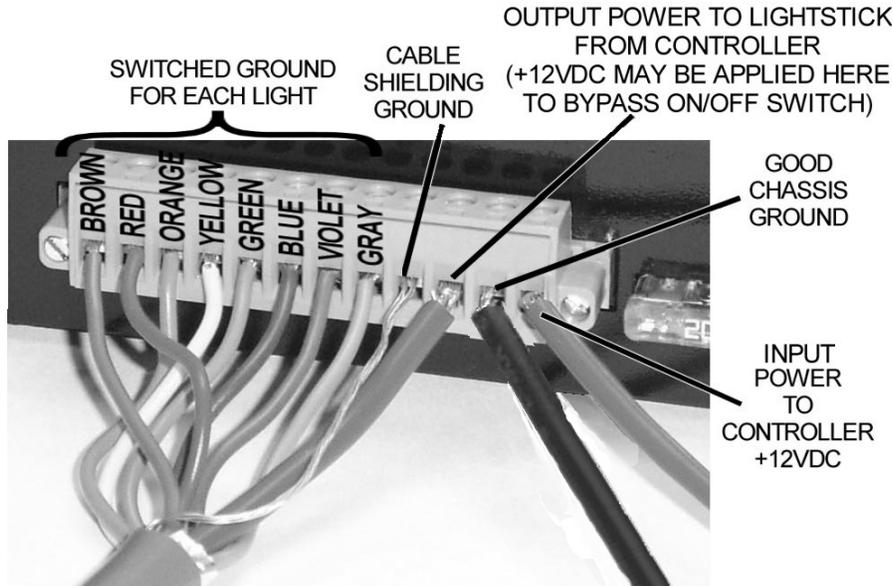
5. Slide the mounting bolts to their desired location (usually two bolts towards each end) and mount the bolts through pre-drilled holes in your vehicle (for direct mounting) or through the slots in the L-Brackets. Use a flat washer, split washer, and nut on the bolt. You can mount the L-Bracket with the base bending towards the bar (as pictured below) or bending away from the bar.

6. If you are using the L-brackets provided, use the four enclosed bolts or other locally obtained fasteners to attach the L-Brackets to your mounting surface.



CAUTION: Be sure to carefully inspect and test the integrity of your mount.

Electrical Connections



Please note: If you are connecting a TD93DLXT24 (which operates only on 24VDC) the Input Power (and bypass power) would be 24VDC in the diagram above.

1. The cable attached to your Traffic Director should have a green connector (part #CPSS-153) attached to it. Eight colored 18 AWG wires, one bare drain wire, and a large red 12AWG wire should already be connected from the cable to the connector.
2. Connect a ground wire to the interior empty terminal on the green connector. (See diagram above) The corresponding terminal plugs into the outlet on the back of the controller and is marked **BAT-**.



It is imperative that you supply a ground wire to the terminal marked "BAT -" on the controller. You must not let the controller's case supply ground. Use 12 AWG wire for all power and ground connections

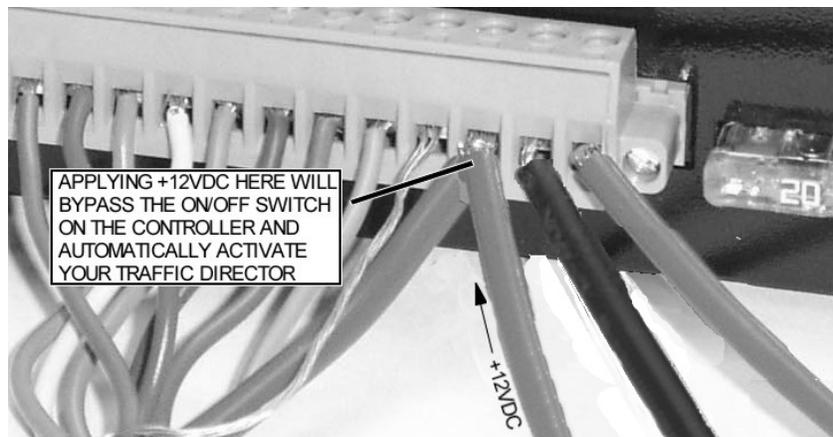
3. Supply power for the unit from a **fused**, +12 VDC source capable of delivering at least 15 amps of current (use a 20 amp fuse). Star recommends the use of an ignition switched supply to avoid the possibility of draining the vehicle's battery should the unit be accidentally left on.
4. Connect your power supply to the terminal on the green connector that corresponds to the outlet on the back of the controller marked **BAT+**.
5. The lamp brightness will be somewhat diminished if a large voltage drop exists between the vehicle's battery and the controller. If voltage drop is a problem, use a relay to control a direct battery feed. A generic relay designed for automotive lamp service should be available from most automotive stores for this purpose. If using a relay, don't forget to **fuse the feed and signal wires** at their source, with appropriate values. It is imperative that you supply a ground wire to the terminal marked "**BAT -**" on the controller; you must **not** let the controller's case supply ground. Use 12 AWG wire for all power and ground connections.
6. Your Traffic Director should now be ready to operate.

(Wiring CONT'D)

Wiring for Optional Automatic Activation

1. The Traffic Director may also be wired to automatically bypass the On/Off switch on the TD77-NYDOT-2 controller and turn on through the use of an alternate power source (i.e. lightbar switch, siren switch, reverse switch, etc.).
2. When you apply +12VDC to the 12AWG wire supplying the stick with power, you will bypass the On/Off switch and activate the Traffic Director. When activated, the Traffic Director will automatically enter the "Warn" pattern. **CAUTION: If any other lights are also connected to this "bypass" circuit they will activate any time the traffic director is powered up unless they are isolated in some way (e.g. diode or relay).**

Note: If the "Alt" button was active when the unit was turned off, it will be active when the unit is turned back on.



Operation

1. Your new traffic director is a powerful tool that can aid you in traffic control; or if used *improperly*, it could direct traffic into a *dangerous situation*.
USE CAUTION!!!

TD77-NYDOT-2 Controller

2. Operation of your Traffic Director is straightforward. The controls include an On/Off switch, four *Pattern Select* buttons, and three additional "option" buttons.



3. Turn the vehicle's ignition switch to the on or accessories position to supply power to the controller (if necessary) and press the On/Off switch on the control box. The LED display should begin to show the "Warn" pattern and the "Warn" label should glow red.
Note: If the "Alt" button was active when the unit was turned off, it will be active when the unit is turned back on.

(Operation CONT'D)

4. Select the desired pattern (if different from the current pattern) by using any of the *Pattern Select* buttons. The *Pattern Select* buttons include **Left**, **Center**, **Right**, **Warn** and **Alt** (patterns shown to the right). The selected pattern label should change to red and the light output should mimic exactly the display on the controller.



5. The TD77-NYDOT2 controllers also have two "option" buttons: Fast and Dim.

Fast Button

(Left / Center Out / Right Patterns Only)

The "Fast" button provides the user with the option to display the Left, Center Out, or Right patterns in a "faster" mode. Pressing the "Fast" button once should change the "Fast" label to red and speed up the pattern. Pressing the button again will change the "Fast" label back to green and revert the pattern to the standard speed.

Dim Button

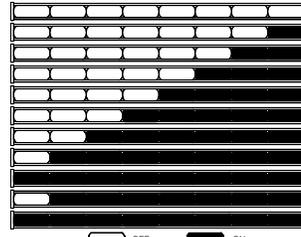
This button allows the user the option to dim the light for nighttime operation. When the "Dim" button is pressed once the "Dim" label will change from green to red and the Traffic Director will dim slightly (50%). Pressing it a second time will change the button back to Green and return the Traffic Director to full brightness.

6. To avoid possible damage, the controller should be turned off prior to engine starting. It is possible, though not likely, to confuse the controller if the vehicle's battery is low and the engine is started with the controller running. If you notice that the controller's display shows something out of the ordinary, simply push the power switch to the off position and back on again. This should clear any fault caused by improper voltage being supplied to the unit.

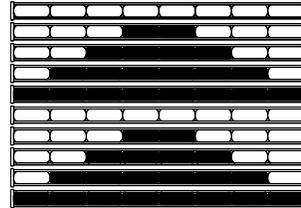
7. Once your Traffic Director is installed, please test all the patterns, options, and alternate versions to familiarize yourself with the various patterns and the operation of the controller.

When using the Traffic Director, always be sure that the pattern selected is appropriate for the present hazard condition. **The potential danger in displaying an inappropriate pattern cannot be overstated.**

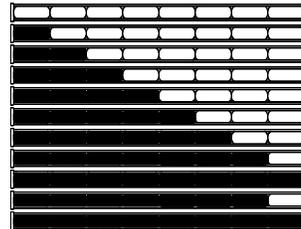
LEFT



CENTER OUT



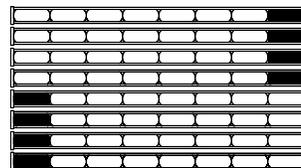
RIGHT



WARN



ALT

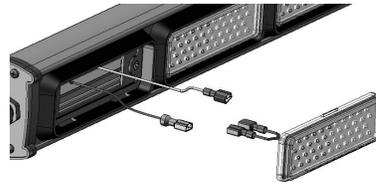


Service

The **TD93-NYDOT** uses state-of-the-art light Emitting Diode (LED) technology. These lightsticks are comprised of eight segments of Ultra-Bright LEDs that are operated in a multiplexed mode to efficiently produce light output with lifetimes up to 100,000 hours. Under normal circumstances, you will not need to replace any lights in these lightsticks.

Head Replacement

If there is a failure in one of the arrays, the array can easily be replaced without removing the lightstick from the vehicle. The replacement head is a part #TD93DLXTRH-* (*=color).



TD77-NYDOT-2 Controller

The TD77-NYDOT-2 controller contains two ATO "blade-type" fuses located in the back of the controller. The fuses are accessible from the rear of the controller. The 20 amp fuse controls power to the bar light assembly, while the 5 amp fuse powers the controller. If the 20-amp fuse blows the controller will continue to function normally, however, the roof lamps will not. It is important to note that under normal circumstances the only reason a fuse will blow is because there is a fault in the system. **If a fuse blows repeatedly it is a signal that something is wrong.** Do not replace a blown fuse with anything other than the same amperage rating as marked on the rear panel of the controller; doing so may damage the unit, or worse yet start a fire. Likely causes of blown fuses are improper wiring, harness damage, and/or improper bulb type.

LED FIVE YEAR LIMITED WARRANTY

The manufacturer warrants this LED light against factory defects in material and workmanship for five years after the date of purchase. The owner will be responsible for returning to the Service Center any defective item(s) with the transportation costs prepaid. The manufacturer will, without charge, repair or replace *at its option*, products, or part(s), which its inspection determines to be defective. Repaired or replacement item(s) will be returned to the purchaser with transportation costs prepaid from the service point. A copy of the purchaser's receipt must be returned with the defective item(s) in order to qualify for the warranty coverage. Exclusions from this warranty include, but are not limited to, dimes, and/or the finish. This warranty shall not apply to any light, which has been altered, such that in the manufacturer's judgment, the performance or reliability has been affected, or if any damage has resulted from abnormal use or service.

There are no warranties expressed or implied (including any warranty of merchantability or fitness), which extend this warranty period. **The loss of use of the product, loss of time, inconvenience, commercial loss or consequential damages, including costs of any labor, are not covered.** The manufacturer reserves the right to change the design of the product without assuming any obligation to modify any product previously manufactured.

This warranty gives you specific legal rights. You might also have additional rights that may vary from state to state. Some states do not allow limitations on how long an implied warranty lasts. Some states do not allow the exclusion or limitation of incidental or consequential damages. Therefore, the above limitation(s) or exclusion(s) may not apply to you.

If you have any questions concerning this or any other product, please contact our **Customer Service Department** at (585) 226-9787.

If a product must be returned for any reason, please contact our Customer Service Department to obtain a Returned Materials Authorization number (RMA #) before you ship the product back. Please write the RMA # clearly on the package near the mailing label.



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