

DLQSMC Quick Stick Series

MULTICOLORED TRAFFIC DIRECTORS and WARNING STICKS



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.



This light utilizes high-intensity LED Lamps. DO NOT stare directly into the light while it is on, as momentary blindness and/or permanent eye damage may occur.

Please Note: These instructions are provided as a general guideline only. Specific mounting and/or wiring, may be necessary and are 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.



Star Headlight & Lantern Co., Inc.

455 Rochester Street Avon, NY 14414 Phone: 585-226-9787 FAX: 888-478-2797

STAR
WARNING
SYSTEMS

STAR SIGNAL
VEHICLE PRODUCTS

BRADFORD
Vehicle Solutions

www.starheadlight.com

PLIT594 REV. B 2/27/20

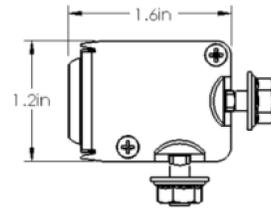
Before beginning the installation:

- Determine where the Traffic Director is to be mounted (on your roof, in your rear window, on the back of the vehicle, etc).
- Check to see that there are no obstructions hindering the visibility of your traffic director.
- Determine how you will be controlling the traffic director (using independent switches, a siren controller, etc.).
- You will also need to determine the path your cable will take. The cable should exit the left side of the Traffic Director when you are facing the lights on the stick.

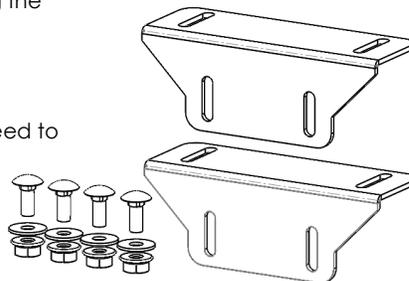


Mounting Instructions

1. There are two slots along the length of the lightstick that can be used to facilitate mounting. Depending upon your application, slide the two enclosed #10 carriage bolts into the appropriate slot (rear or bottom).
2. Slide them along the channel to the desired location and mark the locations for your mounting holes on the mounting surface.
3. Drill your holes and mount the light using the enclosed washers and nuts.



We also include two L-Brackets to facilitate mounting. These are optional and do not need to be used.



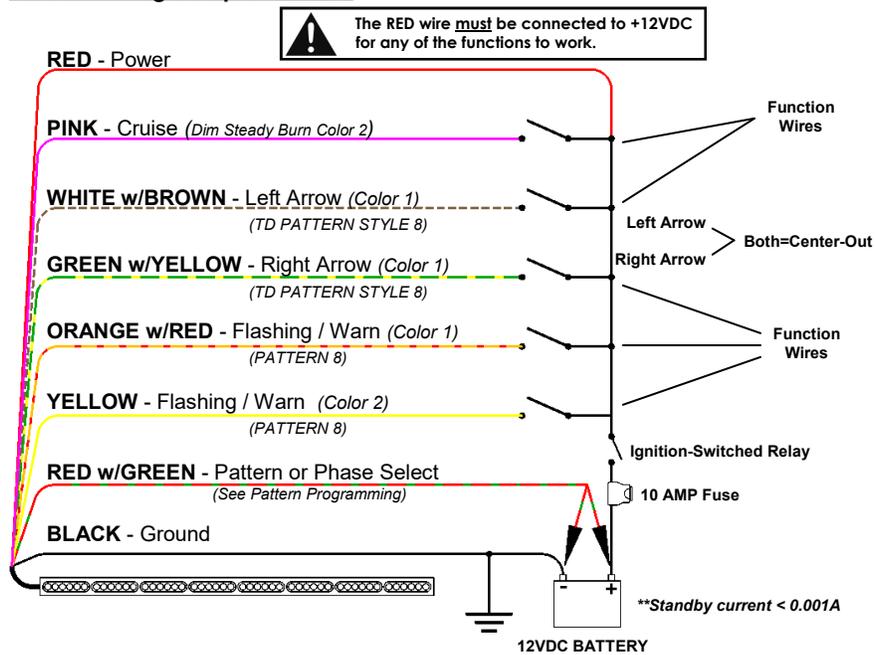
Because of the wide variety of mounting applications, Star Headlight & Lantern Co., Inc. assumes no responsibility for the secure mounting of this light. It is the responsibility of the installer and/or owner to ensure the lightbar is mounted securely. Check your light every time you use the vehicle to ensure that it is mounted securely.

Electrical Connections

This wiring diagram below applies to the default programming of this light. There are several additional advanced features that, if used, will affect the wire functions shown below. Most applications will not require this reprogramming, but you can find these options described in detail under the **Advanced Programming** section.

Use standard On/Off switches rated for 5 amps and make your connections according to the wiring diagram below.

Default Wiring Setup (Wire Setup 1)



Note: The wires are shown above in order of Priority. Higher priority wires will override the patterns on any lower priority wires for the heads that are enabled.

HIGHEST PRIORITY LOWEST PRIORITY
Pink > White w/Brown > Green w/Yellow > Orange w/Red > Yellow

Standard Programming

This light has been designed for maximum versatility and has many different options that can be programmed. This manual has divided the Programming into two sections. Most users will not need to change any of the **Advanced Programming** options.

Standard Programming Options

- Pattern Selection (both Flashing and Traffic Directing Patterns)
- Resetting the Factory defaults

Advanced Programming Options

- Alternate Wire Setups
- Custom Wire Programming
- Priority Modification
- Head Enable (which heads activate)
- Single Steady Head Programming
- Phase Selection (which heads alternate from one another)

Warning Flash Pattern Programming

(Applies to Orange w/Red, and Yellow wires by default. Can also apply to Pink, White w/Brown, and Green w/Yellow, if reprogrammed for flashing mode.)

If you would like to change the flash pattern of any of your Function wires set for Warning/Flashing Mode, proceed below:

1. Connect the Red wire to power and the Black wire to Ground.
2. Connect one of the Function wires to +12VDC.
3. Touch and release the Pattern Select wire to +12VDC to scroll through the patterns shown below.

Note: At any time you can shortcut to the pattern with the asterisk by holding the pattern select wire to +12VDC for 3 seconds (1 flash).

4. If desired, repeat steps 2 and 3 to reprogram the pattern for any of the other Function wires set for Flashing mode.

Patterns for Function Wires Set For Flashing Mode

1 Flicker * † (factory default)	20 Dual-Color Flicker
2 Slow Singleflash †	21 Delta-Omega
3 Fast Singleflash	22 Random 1
4 Slow Doubleflash †	23 Random 2
5 Medium Doubleflash †	24 Random 3
6 Slow Tripleflash †	25 Flashing Bounce
7 Fast Tripleflash †	26 Full Bounce
8 Quadflash †	27 Split Bounce
9 Quintflash †	28 Half Bounce
10 Tripleflash w/Post Pop †	29 Bounce w/End Pop
11 Quadflash w/Post Pop †	30 Search Lights
12 Quintflash w/Pre Pop †	31 Eyeballz
13 Fast Doubleflash	32 Fade Invert
14 Fast Quadflash	33 Moving Out
15 Singleflash Flicker	34 Triple In/Triple Out
16 Doubleflash Flicker	35 Two Speed (Pursuit default)
17 Single, Quad w/Post Pop, Flicker	36 Random 4
18 Dual-Color Single, Quad, Flicker	* Shortcut Pattern #1 (3 sec/1 flash)
19 Dual-Color Quad w/Post Pop, Quint	† SAE Approved Pattern

(Standard Programming CONT'D)

Traffic Directing Pattern Selection

If you would like to choose an alternate Pattern Style for your Traffic Directing patterns (Left, Right, and Center-Out), proceed below:

1. Connect the Red wire to power and the Black wire to Ground.
2. Connect either the Right Arrow wire or Left Arrow wire to +12VDC.
3. Touch and release the Pattern Select wire to +12VDC to scroll through the patterns shown to the right.

Note: At any time you can shortcut to the pattern with the asterisk by holding the pattern select wire to +12VDC for 3 seconds (1 flash).

Patterns for Traffic Director

(8- and 6-Head Only)

*Left, Right, and Center Out functions
all use the same pattern*

- 1 Standard * (factory default)
- 2 6-Head TD with End Flash
- 3 Standard w/End Blink
- 4 Two-Head Traveling
- 5 Fast †
- 6 Ultra-Fast †
- 7 Four Head Traveling †
- 8 Snake †
- 9 Pop
- 10 Arrowhead on Ends †

* Shortcut Pattern #1 (3 sec/1 flash)

† SAE Approved Pattern

Resetting To Factory Defaults

If you ever need to reset the entire light to the Factory Default Settings, follow the steps below:

1. Connect only the Red wire to power and the Black wire to Ground.
2. Hold the Pattern Select wire (RED w/GREEN) to **+12VDC** until the unit flashes once (~3 seconds).



PROUDLY MADE IN THE USA
An ISO 9001:2008 Certified Company

Operation

Using your user supplied switches, supply +12VDC to the wires indicated in the wiring diagram on page 2 to activate the desired function.

Please note the following:

- The Red wire MUST have +12VDC applied to it for any of the patterns to work.
- Higher priority wires will override the patterns on any lower priority wires for the heads that are enabled.

HIGHEST PRIORITY

LOWEST PRIORITY

Pink > White w/Brown > Green w/Yellow > Orange w/Red > Yellow

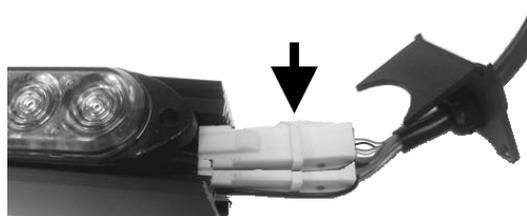
- Activating the Right and Left patterns together will produce the Center-Out Pattern
- If you disable any heads for the Traffic Director Patterns (typically heads 1 & 8), and they are enabled for one of the Flashing functions, activating both functions will operate the Traffic Director pattern and the Flashing Pattern will show on those heads.

Service

Removing the Quick Stick From the Harness

Please be aware that the Quick Stick is designed with two internal connectors on the harness that can be accessed by removing the two screws securing the endcap and harness. This allows a Quick Stick that needs service to be removed from the vehicle without needing to remove the entire harness.

If you do use this feature, **it is imperative** that the zip tie securing the connection be replaced upon reinstallation to ensure that a good connection is maintained. Because the connectors are inside the light stick, extra care must be taken so that they are reinstalled properly. The installer is fully responsible for any issues that may occur as a result of using the disconnect feature. This includes loose connections and pinched wires.



Advanced Programming



This section is OPTIONAL. Most applications will not require any Advanced Programming. You should only need to reference this section if you require specialized programming.

Advanced Programming Options

- Alternate Default Wire Setups
- Custom Wire Programming / Priority Modification
Includes Work Lights (bright steady burn), Cruise Mode (dim steady burn), and Single Head Steady Burn (California Title 13)
- Head Enable (which heads activate)
- Phase Selection (which heads alternate from one another)

Alternate Default Wire Setups

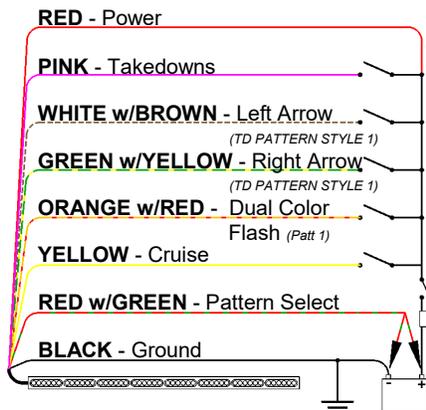
The default wire setup is shown on page 2 (Wiring Setup 1). For ease of programming, this light has been designed with three additional default setups. Follow the instructions below to reprogram the wires for Setup 2, 3, or 4.

1. Connect the Red wire to power and the Black wire to Ground.
2. Hold the Pattern Select wire (RED w/GREEN) to +12VDC then release it after the time indicated in the chart to the right.

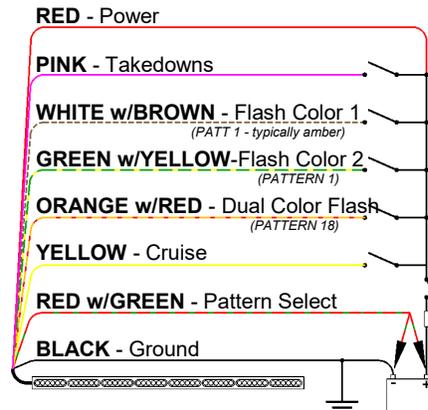
Wiring Function Setup

<i>Hold</i>	<i>#</i>	<i>Wiring</i>
<u>Patt. Sel.</u>	<u>Flashes</u>	<u>Setup #</u>
3 sec	1	Setup 1
6 sec	2	Setup 2
9 sec	3	Setup 3
12 sec	4	Setup 4

Wiring Setup 2

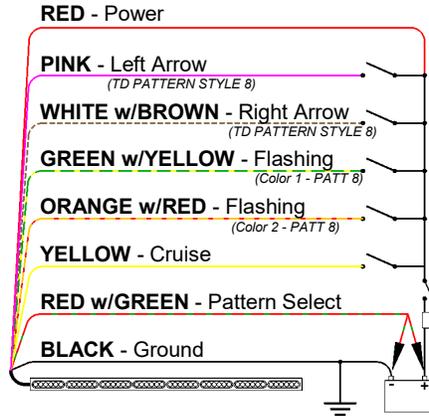


Wiring Setup 3 (No Arrow)



(Advanced Programming CONT'D)

Wiring Setup 4



Programming Summary Chart

The chart below gives a quick overview of many of the programming options. Pattern Incrementing and the Pattern 1 shortcut are discussed earlier in this manual. The additional modes are described in further detail on the following pages.

1. Connect the **Red** wire to power and the **Black** wire to Ground.
2. Connect the function wire that you want to reprogram to +12VDC.
3. Select the option you wish to program and review the corresponding pages.

Hold Red wGreen to +12VDC	# Flashes	Programming Description
1 sec	0	Increments Pattern (see pages 3-4)
3 sec	1	Shortcut to Pattern 1 (see pages 3-4)
6 sec	2	Custom Wire Programming Mode ↳ Touch and release Red w/Green to Ground to advance to desired options (see page 8)
9 sec	3	Color 1 Head Enable Programming Mode ↳ Touch and release Red w/Green to Ground to scroll through Head Enable options (see page 9)
12 sec	4	Color 2 Head Enable Programming Mode ↳ Touch and release Red w/Green to Ground to scroll through Head Enable options (see page 9)
15 sec	5	Phase Programming Mode (see page 9) ↳ Touch and release Red w/Green to Ground to scroll through Phase options (see page 10)
18 sec	6	Toggles between Flashing Mode and Work Lights

4. Save your programming by holding the Pattern Select wire to **+12VDC** until the unit flashes once (~3 seconds), then releasing it.

(Advanced Programming CONT'D)

Custom Wire Programming and Priority Modification

Higher priority wires will override the patterns on any lower priority wires for the heads that are enabled.

HIGHEST PRIORITY LOWEST PRIORITY
Pink > White w/Brown > Green w/Yellow > Orange w/Red > Yellow

If none of the 4 Wiring setups fits your needs (functions or priority of functions), you can custom program each of the five input wires (Pink, White w/Brown, Green w/ Yellow, Orange w/Red, or Yellow) for any function (* Note: The Pink wire cannot be reprogrammed for Flashing). Refer to the chart below and proceed as follows:

1. Connect the Red wire to power and the Black wire to Ground.
2. Connect the function wire that you want to reprogram to +12VDC.
3. Hold the Pattern Select wire to **+12VDC** until the unit flashes two times (it will flash once, then twice - ~6 seconds), then release it, placing the light into Custom Wire Programming Mode.
4. Reviewing the chart below, touch and release the Pattern Select wire to **GROUND (or Battery Neg)** to scroll through the various function options for each head. Use the display of the **center four heads** of the lightstick to identify which function that function wire is programmed for.

Wiring Function Programming

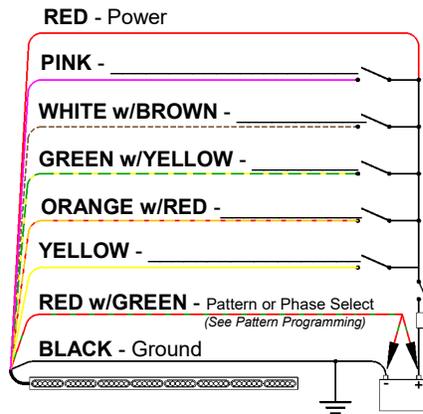
<u>Desired Function</u>	<u>Head 1</u>	<u>Head 2</u>	<u>Head 3</u>	<u>Head 4</u>	<u>Head 5</u>	<u>Head 6</u>	<u>Head 7</u>	<u>Head 8</u>
Flashing 1	ON							
Arrow Left 2	ON							
Arrow Right 3	ON							
Work Lights 4	ON							
Cruise 5	ON							
Single Steady (Cal T13) 6	ON							

5. Repeat steps 2-4 for any other function wires desired.
6. Save your programming by holding the Pattern Select wire to **+12VDC** until the unit flashes once (~3 seconds), then releasing it.

Custom Wiring Setup

Use the diagram below to record the custom functions that you have programmed.

 Please Note: The RED wire must be connected to +12VDC for any of the functions to work.



(Advanced Programming CONT'D)

Head Enable

This warning stick also has the ability to allow the installer to select which heads are active for any given function. Some examples of this might include options such as these:

- Turning one of the colors On or Off for a particular function
- De-activating several heads for one of the functions to indicate less urgency
- Changing the number of active heads in Worklight or Cruise modes
- Utilizing only a 6 head Traffic Director pattern allowing a Warn pattern to still flash on the end heads
- Changing the single steady head for the Title 13 mode

This option is programmed independently for each function and each color.

1. Connect the Red wire to power and the Black wire to Ground.
2. Activate the function you wish to program by connecting the corresponding wire to +12VDC.
3. Place the light in **Head Enable Programming Mode** by holding the Pattern Select wire to +12VDC for the corresponding amount of time depending upon which color you would like to program: **Color 1** - Three flashes (~9 seconds)
Color 2 - Four flashes (~12 seconds).
4. Scroll through the 13 optional variations below by touching and releasing the Pattern Select wire to GROUND (or Battery Neg).
5. Repeat steps 2-4 for each function you wish to program.
6. Save your programming by holding the Pattern Select wire to +12VDC until the unit flashes once (~3 seconds), then releasing it.

Flashing or Steady Head Enable Chart

	<u>Head 1</u>	<u>Head 2</u>	<u>Head 3</u>	<u>Head 4</u>	<u>Head 5</u>	<u>Head 6</u>	<u>Head 7</u>	<u>Head 8</u>
1	ON							
2	ON							
3	ON							
4	ON							
5	ON							
6	ON							
7	ON							
8	ON							
9	ON							
10	ON							
11	ON							
12	ON							
13	ON							

6-Head Units

Traffic Director Head Enable Chart

	<u>Head 1</u>	<u>Head 2</u>	<u>Head 3</u>	<u>Head 4</u>	<u>Head 5</u>	<u>Head 6</u>	<u>Head 7</u>	<u>Head 8</u>
1	ON							
2	ON							
3	ON							

(Def 1 - 3 sec / 1 flash)

To change the display of your Traffic Director (Arrow) functions, follow the instructions above for the corresponding enable wire and refer to the chart above. Color 2 will override Color 1 (if enabled).

(Advanced Programming - Head Enable CONT'D)

Single Steady Head Programming

If you have programmed one of your function wires for the Single Steady Head option (often used for California Title 13 compliance) as described on the page 8, you can change which head is steady by following the Head Enable instructions on the previous page for either color and the corresponding function wire. Each time you scroll the head will advance one position to the right, then cycle back around.

Phase Selection (Programmable for Patterns 1-21 only)

Each head has two Phases, an "On" phase and an "Off" phase (or a "Color 1" Phase and a "Color 2" phase). All of the heads/colors set for Phase 1 will illuminate at the same time and flash opposite from all of the heads/colors set for Phase 2.

Prior to changing the Phase for any functions, please note the following limitations:

- The Phase option is only programmable for the Flash Pattern functions. It is not programmable for the directional functions (Left, Right, or Center Out).
- There are 10 different Phase options (shown in the chart below), allowing you to customize which heads flash On together and which are Off together.
- The Phase option is only compatible with Patterns 1-21. You cannot alter the Phases for patterns 22-36 (the pre-set phase is crucial to the pattern).

1. Connect the Red wire to power and the Black wire to Ground.
2. Connect one of the Function wires to +12VDC, to activate that function.
3. Place the light in **Phase Programming Mode** by holding the Pattern Select wire to **+12VDC** and releasing it after the unit flashes five times (~15 seconds - it will flash once, twice, three times, four times, then five times).
4. Scroll through the 10 optional Phase variations (see chart below) by touching and releasing the Pattern Select wire to **GROUND**. The stick will display each corresponding Phase pattern as you scroll to it. Holding the Pattern Select wire to Ground for 3 seconds (until it flashes once) will reset the Phase to the default setting.

Note: You are programming Phase 1 of Color 2. Color 1 (if enabled) will always flash in Phase 2.

5. If applicable, repeat Steps 2-4 to program the Phase setting for the other Function wires.
6. Save your programming by holding the Pattern Select wire to **+12VDC** until the unit flashes once (~3 seconds), then releasing it.

	<u>Head 1</u>	<u>Head 2</u>	<u>Head 3</u>	<u>Head 4</u>	<u>Head 5</u>	<u>Head 6</u>	<u>Head 7</u>	<u>Head 8</u>	
Standard 1	Phase 2	Phase 1	Phase 2	Phase 1	Phase 2	Phase 1	Phase 2	Phase 1	(Def 1 - 3 sec / 1 flash)
Simultaneous 2	Phase 1								
Left/Right 3	Phase 2	Phase 2	Phase 2	Phase 2	Phase 1	Phase 1	Phase 1	Phase 1	(Factory Default)
Alt Pairs 4	Phase 2	Phase 1	Phase 1	Phase 2	Phase 2	Phase 1	Phase 1	Phase 2	
Center Two 5	Phase 2	Phase 2	Phase 2	Phase 1	Phase 1	Phase 2	Phase 2	Phase 2	
Inversed Standard 6	Phase 1	Phase 2	(Def 2 - 6 sec / 2 flash)						
Inversed Simultaneous 7	Phase 2								
Right/Left 8	Phase 1	Phase 1	Phase 1	Phase 1	Phase 2	Phase 2	Phase 2	Phase 2	
Inversed Alt Pairs 9	Phase 1	Phase 2	Phase 2	Phase 1	Phase 1	Phase 2	Phase 2	Phase 1	
Inversed Center Two 10	Phase 1	Phase 1	Phase 1	Phase 2	Phase 2	Phase 1	Phase 1	Phase 1	

6-Head Units

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.

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.



PROUDLY MADE IN THE USA
An ISO 9001:2008 Certified Company