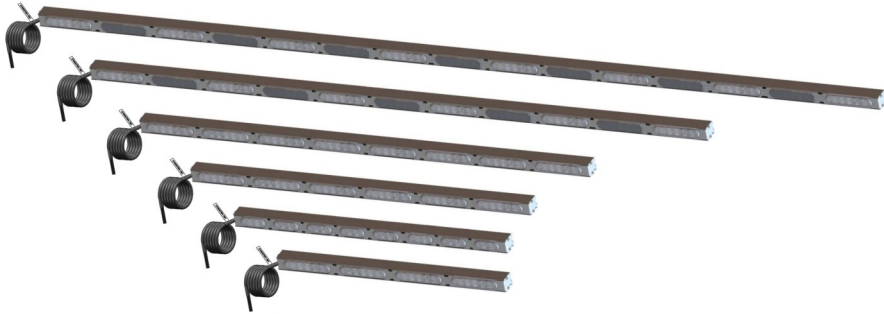


# DLQS Quick Stick Series

## TRAFFIC DIRECTORS and WARNING STICKS



**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 Safety Technologies assumes no responsibility for the integrity of the installation for this or any of its products.

**WARNING!** These lights utilize high-intensity LEDs. Do not stare directly into the light while it is on, as momentary blindness and/or permanent eye damage may occur.



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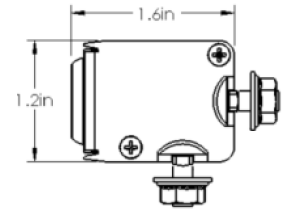
Before beginning the installation:

- 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.
- 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.

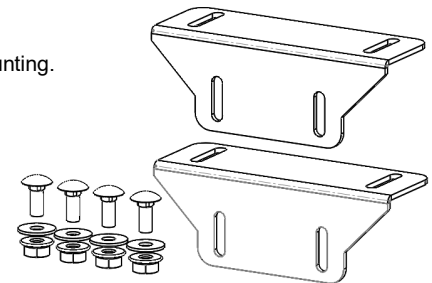


### Mounting Instructions

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 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.

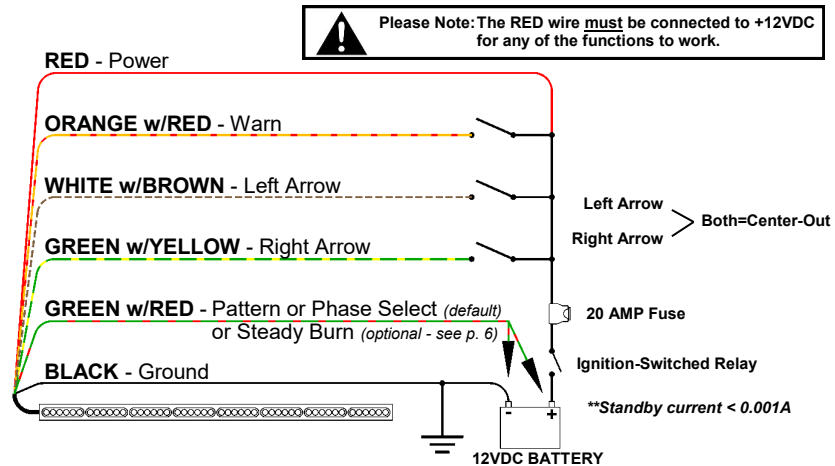


**WARNING!** Because of the wide variety of mounting applications, Star Safety Technologies assumes no responsibility for the secure mounting of this light. It is the responsibility of the installer and/or owner to ensure the lightbar is mounted securely. Check your light every time you use the vehicle to ensure that it is mounted securely.

## Electrical Connections

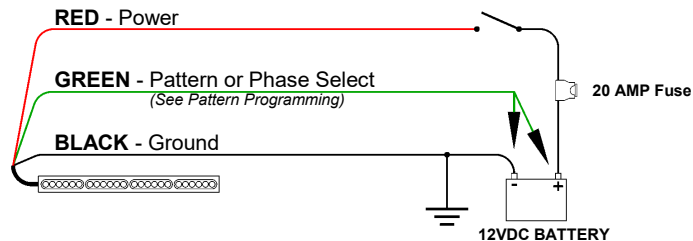
Use standard On/Off switches rated for 5 amps and make your connections according to the appropriate wiring diagram below. See page 6 for information on the optional control box.

### Wiring for 8- or 6-Head Units



**Note:** Left, Right, and Center-Out patterns will override the Warn Pattern on the heads for which they are enabled.

### Wiring for 4-Head Units



## Programming

**Programming is optional.** If the default settings are acceptable, skip to the Operation section on page 5.

Programmable features include the following:

- Pattern Selection (both WARN and Traffic Directing Patterns)
- Phase Selection (which heads alternate from one another)
- Head Enable (which heads activate)
- Steady Burn Mode and Steady Burn Function
- Resetting the Factory defaults

(Programming CONT'D)

## Pattern Programming

Not only does this light have several Patterns to select from, but it also incorporates advanced programming that allows you to select which heads flash On and Off with one another (*Phase*), and which heads are active in any of the functions (*Head Enable*). Review the various section below and on the following two pages for details on these options.

### Basic Pattern Selection

The first step in programming is to select a basic pattern for each of the 2 modes:

- Warn Function (*ORANGE w/RED*)
- Traffic Directing Patterns (L, R, and C-O) (*GREEN w/YELLOW, WHITE w/BROWN, or Both*)

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. Touch and release the Pattern Select wire to +12VDC to scroll through the patterns shown to the right. (*Traffic Director L, C-O, R shown below.*)

**Note:** At any time you can shortcut to the patterns with the asterisks by holding the pattern select wire to +12VDC for the indicated time.

4. Repeat for each function you wish to program.

### 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 Snake Pop
- 10 Pop
- 11 Arrowhead on Ends †
- 12 Marquee

- \* Shortcut Pattern #1 (3 sec/1 flash)
- \*\* Shortcut Pattern #2 (6 sec/2 flashes)
- † SAE Approved Pattern

### Warn Patterns

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

- \* Shortcut Pattern #1 (3 sec/1 flash)
- \*\* Shortcut Pattern #2 (6 sec/2 flashes)
- \*\*\* Shortcut Pattern #3 (9 sec/3 flashes)
- † SAE Approved Pattern

**Phase Selection** (Programmable for Patterns 1-18 only)

Each head has two Phases, an "On" phase and an "Off" phase. All of the heads set for Phase 1 will illuminate at the same time and flash opposite from all of the ones 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 Warn Pattern. It is not programmable for the directional functions (Left, Right, or Center Out).
- There are 5 different Phase options, allowing you to customize which heads flash On together and which are Off together.
- The Phase option is only compatible with Warning Patterns 1-18. You cannot alter the Phases for patterns 19-34 (the pre-set phase is crucial to the pattern).

1. Connect the RED wire to power and the BLACK wire to Ground.
2. For the 8- or 6-Head units, also connect the ORANGE w/RED wire to +12VDC, which will activate the Warn function.
3. Place the light in **Phase Programming Mode** by holding the Pattern Select wire to +12VDC until the unit flashes once, then twice, then three times, then four times (~15 seconds).
4. Scroll through the 5 optional Phase variations by touching and releasing the Pattern Select wire to GROUND (or Battery Neg).
5. Disconnect power when you are on the Phase you wish to select.

	Head 1	Head 2	Head 3	Head 4	Head 5	Head 6	Head 7	Head 8	
1	Phase 2	Phase 1	Phase 2	Phase 1	Phase 2	Phase 1	Phase 2	Phase 1	(Def 1) 3 sec/1 Flash
2	Phase 2	Phase 2	Phase 2	Phase 2	Phase 2	Phase 2	Phase 2	Phase 2	
3	Phase 2	Phase 2	Phase 2	Phase 2	Phase 1	Phase 1	Phase 1	Phase 1	
4	Phase 2	Phase 1	Phase 1	Phase 2	Phase 2	Phase 1	Phase 1	Phase 2	
5	Phase 2	Phase 2	Phase 2	Phase 1	Phase 1	Phase 2	Phase 2	Phase 2	

4-Head Units  
6-Head Units

**Head Enable**

This light also has the ability for the installer to select which heads are active for any given function. You may wish to de-activate several heads in your Warn Pattern to indicate less urgency. Or you may wish to have only a 6 head Traffic Director pattern, allowing the Warn pattern to still flash on the end heads.

This option is programmed separately for the Warn pattern and for the directional patterns.

1. Connect the RED wire to power and the BLACK wire to Ground.
2. For 8- and 6-Head units also activate the function you wish to program (Warn or directional) by connecting the corresponding wire to +12VDC.
3. Place the light in **Head Enable Programming Mode** by holding the Pattern Select wire to +12VDC until the unit flashes once, then twice, then three times, then four times (~12 seconds).
4. Scroll through the 10 optional variations below by touching and releasing the Pattern Select wire to GROUND (or Battery Neg).  
*Note: Only options 1 and 2 are available for the 8-Head Traffic Director Functions. For 6-Head sticks, do not re-program the Directional Pattern Head Enables, always use Option 2.*
5. Repeat for each function you wish to program.

	Head 1	Head 2	Head 3	Head 4	Head 5	Head 6	Head 7	Head 8	
1	ON	ON	ON	ON	ON	ON	ON	ON	(Def 1 - 3 sec / 1 flash)
2		ON	ON	ON	ON	ON	ON		
3			ON	ON	ON	ON			
4				ON	ON				
5	ON							ON	
6	ON	ON					ON	ON	
7	ON	ON	ON				ON	ON	ON
8			ON			ON			
9	ON	ON		ON	ON		ON	ON	
10		ON						ON	

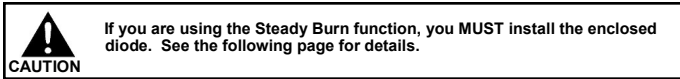
4-Head Units  
6-Head Units

**DIRECTIONAL PATTERN HEAD ENABLE CHART**

	Head 1	Head 2	Head 3	Head 4	Head 5	Head 6	Head 7	Head 8	
1	ON	ON	ON	ON	ON	ON	ON	ON	(Def 1) 3 sec/1 Flash
2		ON	ON	ON	ON	ON	ON		

**Steady Burn Function and Steady Mode** (disabled by default)

(Cruise Feature, Work Lights, Scene Lighting, etc.)



When enabled, the Steady Burn function will illuminate all of the lights in a steady burn pattern. Please note the following:

- In order to use the Steady Burn function you must place the light into Steady Burn Mode.
- When the light is in Steady Burn Mode, the GREEN w/RED wire can NOT be used for Pattern Select or programming any of the options described on the previous pages. Steady Burn Mode must be activated AFTER all other programming has been completed.

After you have programmed any other options mentioned earlier in this manual, activate Steady Burn Mode by performing the following:

1. Connect the RED wire to power and the BLACK wire to Ground.
2. Decide whether you want the Steady Burn function to be Low Priority (all other functions override Steady) or High Priority (Steady overrides all other functions).
3. With no other functions activated, hold the GREEN w/RED wire to **Power** for the corresponding time indicated below:
  - Low Priority - Hold until the light flashes twice (~6 seconds)
  - High Priority - Hold until the light flashes three times (~9 seconds)

The light will now be in Steady Burn Mode and whenever power is applied to the GREEN w/RED wire, the Steady Burn function will be activated.

Once you are in Steady Burn Mode, decide whether or not you want to change either of the following options.

- Steady Burn Function Brightness
- Active Heads

**STEADY BURN FUNCTION BRIGHTNESS**

By default, the Steady Burn function is set for 15% brightness (typical setting for the Cruise feature). If you would instead like to set it for a brighter level (e.g. work lights or scene lighting), proceed as follows:

1. Connect the RED wire to power and the BLACK wire to Ground.
2. With no other functions activated, hold the GREEN w/RED wire to Ground until the light flashes once (~3 seconds) then release it. Repeat this to scroll through the levels:  
Low (15%) ► Medium-Low ► Medium ► Medium High ► High
3. At any time you can skip directly to the default mode (Low/15%) by holding the GREEN w/RED wire to Ground for 6 seconds (until the light flashes twice) and then releasing it.
4. Disconnect all wires when set.

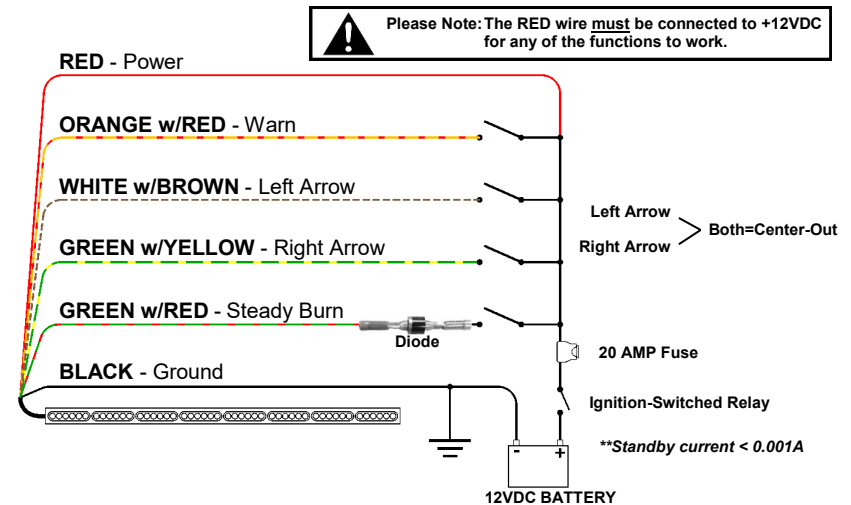
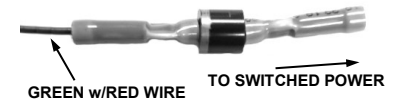
**ACTIVE HEADS FOR STEADY BURN FUNCTION**

By default, when the Steady Burn Function is activated all of the heads will illuminate. If you would like fewer heads illuminated, proceed as follows:

1. Connect the RED wire to power and the BLACK wire to Ground.
2. With no other functions activated, briefly touch and release the GREEN w/RED wire to Ground to scroll through the various options shown in the WARN PATTERN HEAD ENABLE CHART on the previous page.  
*Please note: The active heads for each level will not actually display as you scroll through the list. To see which heads are enabled, touch the GREEN w/RED wire to +12VDC.*
3. Disconnect all wires when the desired layout is set.

**STEADY BURN FUNCTION DIODE INSTALLATION**

If you wish to use the Steady Burn function you will need to install a diode (user supplied 0.1A, 35v or higher) on the GREEN w/RED wire AFTER programming has been completed.



**Note: Left, Right, and Center-Out patterns will override the Warn Pattern on the heads for which they are enabled.**

**EXITING STEADY BURN MODE**

If you would like to exit Steady Burn Mode because you would like to change the patterns or program any of the other "non-steady" options described on the previous pages, proceed as follows:

1. Connect the RED wire to power and the BLACK wire to Ground.
2. With no other functions activated, hold the GREEN w/RED wire to Ground until the light flashes once, then twice, then three times (~9 seconds), then release it.

### Resetting to Factory Default Settings (8- and 6-Head Versions Only)

1. After ensuring that the light is NOT in Steady Burn Mode, connect the RED wire to power and the BLACK wire to Ground.
2. Hold the Pattern Select wire to (GREEN w/RED) +12VDC until the heads flash once (~3 seconds).
3. Release the Pattern Select wire and the light will be restored to the factory default settings.

## Operation

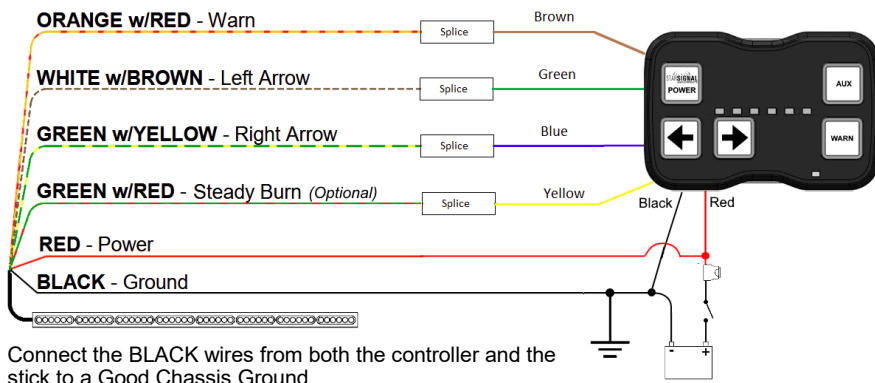
Using your user supplied switches, supply +12VDC to the wires indicated in the wiring diagram on page 2 to activate the desired function.

Please note the following:

- The Red wire MUST have +12VDC applied to it for any of the patterns to work.
- The 4-Head units DO NOT have a Traffic Director option, nor the Steady Burn feature.
- Activating the Right and Left patterns together will produce the Center-Out Pattern
- Activating the Right or Left pattern (or Center-Out) will override the Warn Pattern
- If you disable any heads for the Traffic Director Patterns (typically heads 1 & 8), and they are enabled for the Warn pattern, activating both functions will operate the Traffic Director pattern and the Warn Pattern will show on those heads.

## Optional Control Box

Typical On/Off switches can be used for standard installation. If you would like a preconfigured control box with feedback LEDs, please order the optional **SB44-5**.



Connect the BLACK wires from both the controller and the stick to a Good Chassis Ground.

Tie the RED wires from the controller and the stick together and connect them to your power source through a 20A fuse.

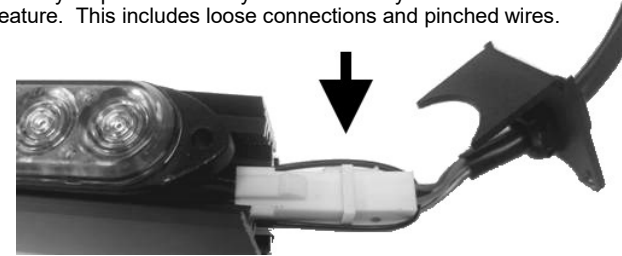
Optionally, if you are NOT using the **Steady Burn** function of your Quick Stick, you can connect the YELLOW wire to another auxiliary device (light).

## Service

### Removing the Quick Stick From the Harness

Please be aware that the Quick Stick is designed with an internal connector 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 connector is inside the light stick, extra care must be taken so that it is 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.



### LED FIVE YEAR LIMITED WARRANTY

Star Safety Technologies warrants this LED light against factory defects in material and workmanship for five years after the date of manufacture. 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, domes, 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.** Star 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 a product must be returned for any reason, please contact our Repair Department at (585) 226-9500 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.

If you have any questions concerning this or any other product, please contact our **Customer Service Department** at (585) 226-9500.



### 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 Safety Technologies, 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 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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