

## Safety Message to Installers of Warning Lights Equipment

### **⚠ WARNING**

People's lives depend on your proper installation and operation of Federal Signal products. It is important to read and follow all instructions shipped with this product and the original product. In addition, listed below are some other important safety instructions and precautions you should follow:

- The Corner LED Light contains a high-intensity LED. To prevent permanent eye damage, DO NOT stare into the light beam at close range.
- Do not install equipment or route wiring in the deployment path of an airbag.
- Do not connect this device to a strobe power supply. This product is self contained and does not require an external power supply.
- Do not cut the wires between in-line flasher and light head.
- You should frequently inspect the light to ensure that it is operating properly and that it is securely attached to the vehicle.
- If a vehicle seat is temporarily removed, verify with the vehicle manufacturer if the seat needs to be recalibrated for proper airbag deployment.
- After installation, test the light to ensure that it is operating properly.
- File these instructions in a safe place and refer to them when maintaining and/or reinstalling the product.

Failure to follow all safety precautions and instructions may result in property damage, serious injury, or death.

## Product Overview

The Corner LED Light is designed to provide a higher visibility on the road. The light mounts on a flat vehicle surface with the included bezel or inside the headlight or tail light housing without the bezel. Up to four Corner LED Lights can be set to either flash in sync or alternately.

## Unpacking the Product

After unpacking the product, inspect it for damage that may have occurred in transit. If it has been damaged or is missing a part, do not attempt to install or operate it. File a claim immediately with the carrier, stating the extent of the damage. Carefully check all envelopes, shipping labels and tags before removing or destroying them. Ensure that all parts in Table 1 are included. If you are missing any parts, contact Customer Support at 1-800-264-3578, 7 A.M. to 5 P.M., Monday through Friday (CT).

**Table 1** Package contents

Qty.	Description
1	Assembled Lighthouse with In-Line Flasher
1	EPDM Mounting Gasket
2	Mounting Screws, 1-inch, Thread-Forming
1	Bezel
1	Foam Gasket

## Mounting the Corner LED Insert

### **⚠ WARNING**

**AIRBAG DEPLOYMENT**—Do not install equipment or route wiring in the deployment path of an airbag. Failure to observe this warning will reduce the effectiveness of the airbag or potentially dislodge the equipment, causing serious injury or death.

### **NOTICE**

**HEAT DAMAGE**—This product must be mounted with at least 1 inch of clearance from any plastic parts. Failure to do so may result in permanent damage to the housing.

To mount the light insert:

1. Remove the lens and reflector assembly according to the vehicle manufacturer's instructions.
2. Establish a location for each corner LED light head with the following parameters:
  - a. The lighthouse must have at least 1 inch of clearance from plastic and lens surfaces.
  - b. The Corner LED does not interfere with the normal operation of head light or tail light lamp.
  - c. The surface is as flat as possible.
  - d. For the greatest reflector fill, the light must be as close to the focal point of the reflector as possible.
3. When removing the optic lenses, use a small flat-head screw-driver to carefully pry the lens off the assembly.
4. Using a 1-inch thread-forming screw, drill a hole into the reflector housing in the location selected in step 2.
5. See Figure 1. Place the LED Corner Light insert into the hole drilled in step 4. Using the light as a template, mark the two mounting-hole locations.
6. Drill the holes marked in step 5 with a #40 (0.098 in) drill bit.
7. Install the Corner Led assembly using the gasket and #6 screw.
8. Replace the reflector assembly and lens. Do not touch the LED or circuit board.
9. See "Wiring the Corner LED Light" on page 2 for the electrical connections.

## Mounting the Corner LED with Bezel

### **⚠ WARNING**

**AIRBAG DEPLOYMENT**—Do not install equipment or route wiring in the deployment path of an airbag. Failure to observe this warning will reduce the effectiveness of the airbag or potentially dislodge the equipment, causing serious injury or death.

To mount the light with the bezel:

1. Locate a flat area on the vehicle surface.
2. Using a bezel as template, mark and drill two pilot holes for #6 screws.
3. Drill a 1" hole for the wires and flasher centered between the two pilot holes from step #2.
4. Install the LED insert in the bezel and threads as shown in Figure 2.
5. Complete the wire connections. See "Wiring the Light" for the electrical connections.
6. Finish the installation by screwing the bezel to surface. **Do not overtighten the screws.**

Figure 1 Light insert mounted in housing on vehicle

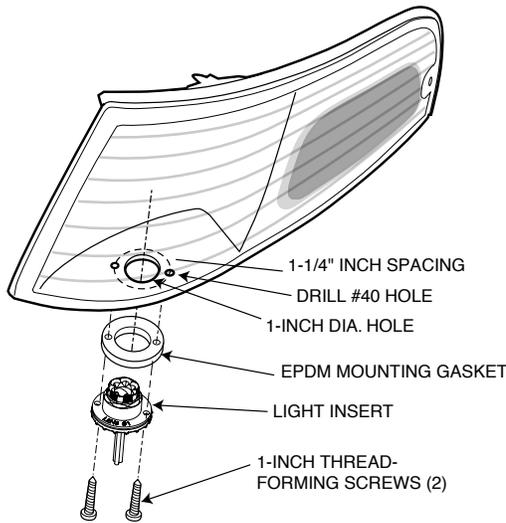
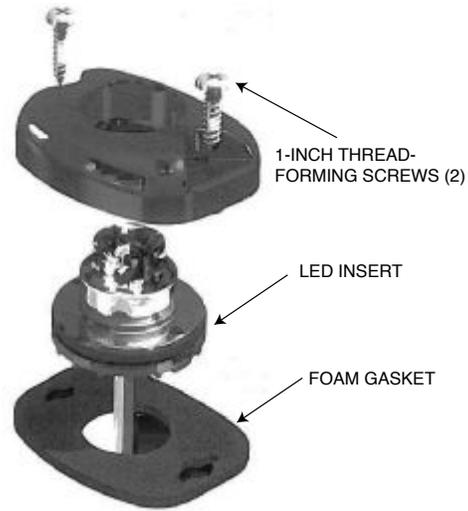


Figure 2 Light insert mounted with bezel



### Wiring the Corner LED Light

Table 2 shows the electrical connections for the Corner LED Light.

Table 2 Wire colors and functions

Wire Color	Connection
Red	+ 12 Vdc
Black	Ground (-)
White	Pattern Select Sync
Green	Cruise Mode (+Vdc)

### Selecting a Pattern for a Single Lighthouse

**⚠ WARNING**

**LIGHT HAZARD** – *To be an effective warning device, an emergency warning system produces bright light that can be hazardous to your eyesight at close range. Do not stare directly into the light at close range or permanent damage to your eyesight may occur.*

To select a pattern for a single lighthouse:

1. Disconnect the WHITE wire from any connections, if applicable.
2. Turn on the Corner LED by applying power to the RED wire and grounding the BLACK wire.
3. Momentarily touch and remove the WHITE wire to ground to advance the light to the next flash pattern. Touching and removing the white wire for more than a few seconds will allow you to change the corner led to the previous pattern. See the flash patterns in Table 3 on page 4.

**NOTE:** Continuing to touch and remove the WHITE wire to ground allows you to scroll through the pattern list. After pattern #30 is reached, the list starts again at Pattern #1.

## Alternating or Synchronizing Single or Split Colors

To alternate or synchronize flash patterns for single-color or split color configurations:

Follow the ID selection steps in the next section and set the lighthoods to the following ID:

ID #1: Split Color                      ID #3: Split Color  
 ID #2: Single Color                    ID #4: Single Color

### Single Color: Simultaneous Flash Patterns

Set the lighthoods to same ID (#2 or #4).

### Single Color: Alternating Flash Patterns

Set one light head to ID #2 and another to ID #4.

### Split Color: Simultaneous Flash Patterns

Set the lighthoods to the same ID (#1 or #3)

### Split Color: Alternating Flash Patterns

Set one lighthouse to ID #1 and another to ID #3

## Selecting a Patterns for Multiple Lighthoods

To select a pattern for multiple lighthoods:

1. Set the ID:
  - a. Make these connections:
    - RED: +12 Vdc
    - WHITE: +12 Vdc
    - BLACK: Ground
    - GREEN: No connection needed for ID selection.
  - b. Apply power to the lighthouse.
  - c. Without disconnecting power from the lighthouse, disconnect the WHITE wire.
  - d. Momentarily connect WHITE to Ground to change ID#
    - Identify ID # (1–4) by number of sequential flashes
  - e. Disconnect power to exit ID mode.
2. Set the pattern. (Must be done individually to each light prior to syncing.)
  - a. RED +12Vdc
  - b. BLACK: Ground
  - c. While light is powered, tap the WHITE wire to ground to advance to the next pattern (Table 3).
  - d. Disconnect power.
3. Sync the lighthoods. See first section above,
4. Connect WHITE wires together and insulate them.
5. Connect the master switch for the application.

Pattern Name	1 Light	Alternating 2 Lights	Simultaneous 2 Lights	FPM Flashes/Minute
1. Quint	X	X	X	70
2. Warp	X	X	X	350
3. Inter-Cycle Flash	X	X	X	
4. Double Flash	X	X	X	70
5. Quad Flash	X	X	X	80
6. PowerPulse	X	X	X	180
7. RoadRunner	X	X	X	113
8. Q-Switch	X			
9. RoadRunner Steady Burn	X			113
10. Quad Steady Burn	X			80
11. E-Ideal Single Flash	X	X	X	200
12. E-Ideal Double Flash	X	X	X	146
13. Quad2 Flash	X	X	X	67
14. Double2 Flash	X	X	X	95
15. PowerRunner	X	X	X	
16. LCR Quint	X	X	X	
17. Warp <sup>3</sup>	X	X	X	
18. Ultra Wrap	X	X	X	545
19. Thunder & Lightning	X	X		
20. Line Speed	X	X	X	85
21. SuperSonic	X		X	170
22. LCR Lite Speed	X	X	X	
23. SuperSonic Ultra	X	X	X	
24. Tempo Shift	X	X	X	
25. Tempo Shift Warp	X	X	X	
26. SBE2	X	X	X	
27. C <sup>2</sup>	X	X	X	200
28. U <sup>2</sup>	X	X	X	176
29. Cyclone	X	X	X	
30. Cameleon2	X	X	X	

## Resetting the Pattern

To reset the pattern to Pattern 1 (Quint):

1. Remove power
2. Touch the WHITE (sync) wire to ground
3. With the WHITE wire grounded, apply +12 Vdc to the RED wire.
4. Keep the lights dimmed for one second.
5. Remove power and ground. Pattern #1 is set.

## Putting the Lighthouse in Slave Mode

The Corner LED light is capable of being activated through the use of a user-supplied flasher by putting it in slave mode.

1. Permanently connect the WHITE and BLACK wires to ground.
2. Connect the RED wire through a 3 A fuse to the output of a +12 Vdc switch flasher.