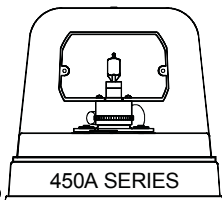# INSTALLATION AND INSTRUCTION MANUAL

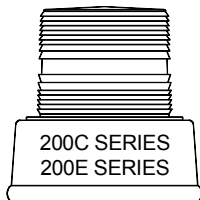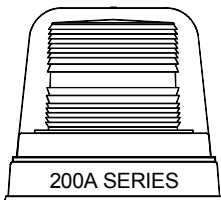|			
200A SERIES	200C SERIES 200E SERIES	400A	450A SERIES
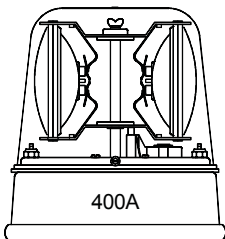
CAUTION: All of our DC powered warning lights are polarity sensitive. These lights are polarity protected *only if the appropriate fuse* is used. All wires connected to the positive terminal of the battery should be fused <u>at the battery</u> for their rated load. **Testing the light before this fuse is properly installed will void the warranty on the light.**
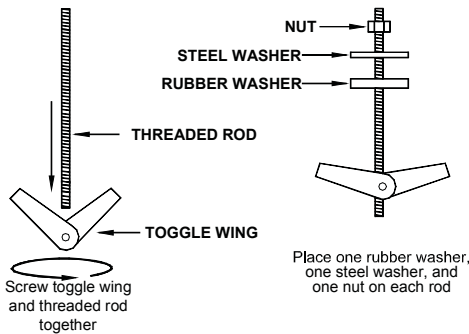
These lights are standard **negative ground**. Isolated or floating units for positive ground vehicles are clearly labeled and are available upon request. In this case connect the power to the proper polarity as marked on the wires.

Mounting Toggle Wing Models

1. Your new warning light comes complete with a rubber mounting gasket, 2 toggle wings, 2 threaded rods, 2 neoprene washers, 2 steel washers, 2 nuts, and 2 self-locking nuts.

2. Mark two mounting holes on 7" centers for the 400A, and 450A Series or 3½" centers for the 200C or 200E series and mark a spot for the wire hole centered directly between them.

WIRE HOLE

$\frac{5}{8}$" DIA. $\frac{3}{8}$" DIA. $\frac{5}{8}$" DIA.

◄— 3½" CENTERS —►
◄——————— 7" CENTERS ———————►
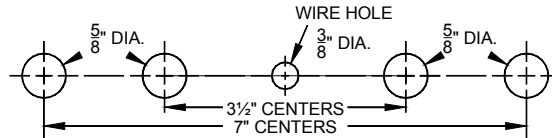
3. Drill a 5/8" hole in the outer two marked locations. Then drill a 3/8" hole in the center marked location for your wires to run through. **CAUTION:** Take care not to drill through the headliner of the vehicle.

NUT

STEEL WASHER

RUBBER WASHER

THREADED ROD

TOGGLE WING

Screw toggle wing and threaded rod together

Place one rubber washer, one steel washer, and one nut on each rod

4. Attach the rubber mounting gasket around the base of the light.

5. Carefully remove the lens by removing the three screws at the base of the lens. Lift off the lens and remove it taking care to ensure you do not lose or destroy the lens gasket.

6. Attach a toggle wing to one end of one of each of the threaded rods.

7. Place the rubber and steel washers around each of the threaded rods according to the diagram to the left.

8. Then push the toggle wing through the top of one of the outer holes in the mounting surface until it opens under the mounting surface.

Insert the threaded rod and toggle wing through the mounting surface

Tighten the nut, securing the rod in place
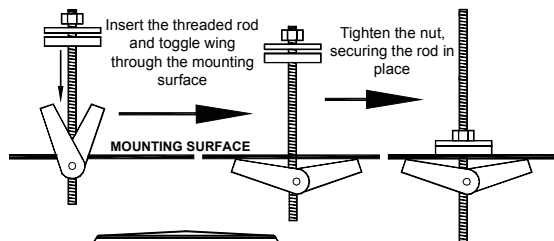
MOUNTING SURFACE

9. Tighten the nut down such that it seats the steel washer firmly against the rubber washer, and the mounting surface, holding the rod in place. Repeat this for each threaded rod.
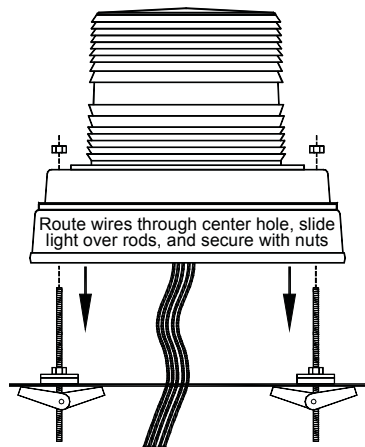
10. Route the wires through the center hole, align the outer holes in the base with the threaded rods and slide the base onto the rods.

Route wires through center hole, slide light over rods, and secure with nuts

11. Fasten one of the self-locking nuts to each of the threaded rods and tighten until snug.

SELF-LOCKING NUT

BASE

MOUNTING GASKET

MOUNTING SURFACE
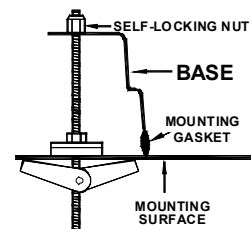
12. Once all of the nuts are tight and the base is secure, reattach the outer lens(es).

-1-

Mounting Plastic Base Models
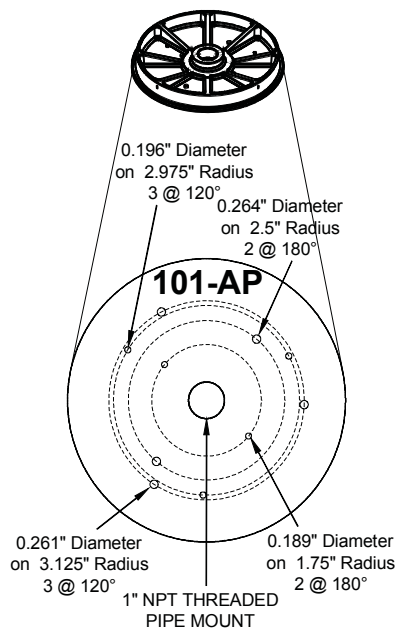
Remove the 4 screws in the
side of the Aluminum housing
and slide the plastic base out

Gasket

Plastic Mounting Base
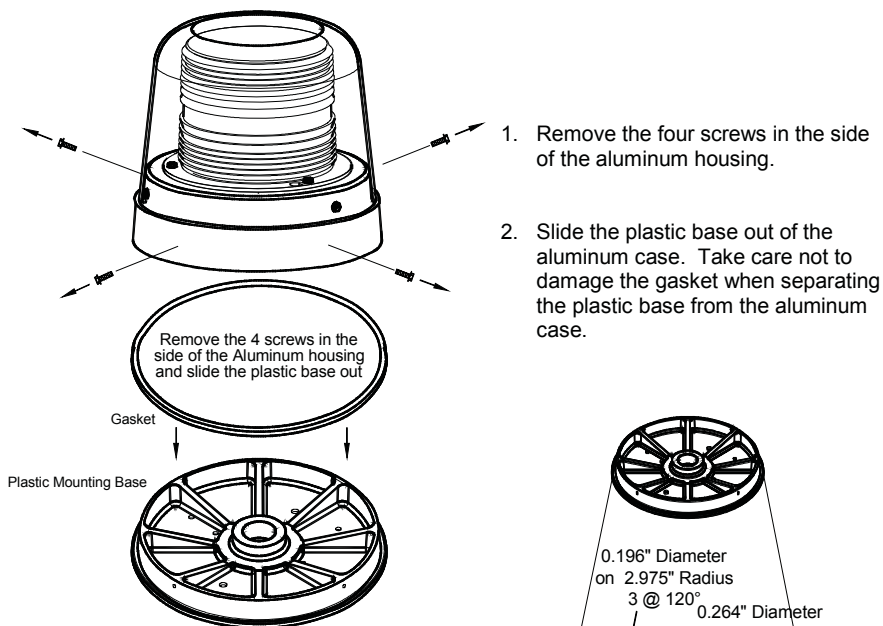
1. Remove the four screws in the side of the aluminum housing.

2. Slide the plastic base out of the aluminum case. Take care not to damage the gasket when separating the plastic base from the aluminum case.

0.196" Diameter
on 2.975" Radius
3 @ 120°

0.264" Diameter
on 2.5" Radius
2 @ 180°

101-AP

3. Locate the various knockouts on the bottom of the base and determine which mounting holes will work best for your application. Clear the knockouts using a punch or other appropriate tool.

4. Using the plastic mounting base as a template, mark the appropriate holes on the mounting surface. Take care to ensure that the base does not move while you are marking each of the holes.

0.261" Diameter
on 3.125" Radius
3 @ 120°

0.189" Diameter
on 1.75" Radius
2 @ 180°

1" NPT THREADED
PIPE MOUNT

5. Remove the plastic mounting base and drill a 3/8" hole in the marked locations. Then, if applicable, drill a 3/8" hole for the wires in the center of the outer holes.
   CAUTION: Take care not to drill through the headliner of the vehicle below.

6. Push the enclosed rubber well nuts through the outer holes until the bottom side of the wider lip rests on the surface of the vehicle.

7. Route the wires through the center hole, if applicable and align the holes with the well nuts. Install the screws through the base, into the well nuts, and tighten until snug.

8. Once the plastic mounting base is installed on the vehicle, you may replace the light on the base and reinstall the four screws that affix the light to the plastic mounting base.
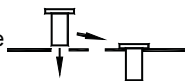
Wiring

1. For 110/120VAC models, the black and white wires may be connected either way (polarity is not important).

2. For all other models, the black or white wire on your light is the ground lead and should be connected to a good chassis ground.

3. The red wire on your light should be connected to the positive side of the power through a fused switch, checking your warning light for proper voltage and amperage.

4. If you are installing a single-flash, 12-48 VDC, or rotating model, you are now finished and may skip the remaining steps.

5. *For strobe models with a purple wire:*
   If your light comes with a purple wire, it has the ability to switch between Low and High power (if desired).

   To run on High Power Only:
   Connect the Purple wire with the Black wire to Ground.
   *To run on Low Power Only:*
   Disconnect the Purple wire (or cut it short and tape it off).

   If *you intend to make use of the High/Low option* through a switch, refer to the wiring diagram to the right for proper connections using a two-switch switch panel available from Star. When the purple wire is grounded through your switch, the light will operate under High Power.

SP3860-2H SWITCH PANEL (REAR VIEW)
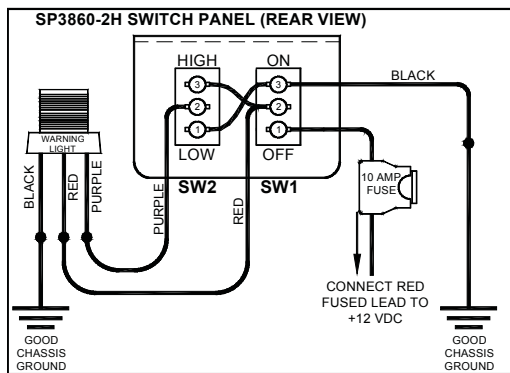
LED Indicator

These lights also have an **LED Diagnostic Indicator**. The LED indicator is designed to flash when the strobe tube should be flashing. If a strobe light is not working, troubleshooting becomes easy with this new LED. Simply examine the circuit when power is applied to it. If the strobe tube is not

flashing, but the LED is flashing, you have a bad strobe tube. If the LED is not flashing, the circuit is either not receiving the proper voltage, or the circuit has failed.

S8070-159-14
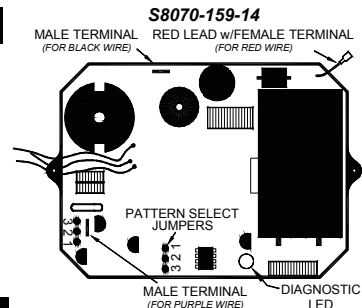
Pattern Select Jumper

The circuits now found in these lights have a jumper on them allowing the end user to select the desired flash pattern (singleflash, doubleflash, or quadflash). If you wish to change the pattern, activate the light and follow the instructions below.

1. The Pattern Select Jumper is stored on pins 1 & 2.

2. To change the pattern, remove the jumper from pins 1 & 2, momentarily place it over pins 2 & 3, then remove it. The pattern should advance to the next.

3. Continue to touch and release the jumper to pins 2 & 3 to cycle through the patterns:
   Singleflash ➡ Doubleflash ➡ Quadflash

4. Once you have selected a pattern, replace the jumper on pins 1 & 2.

S8070-159-14