



Retro-fit Light Kit Installation Instructions

The retro-fit light kit includes everything that is to a Monitor-mounted, Coast Guard approved LED. Mounting the LED stern light on the Monitor frame upgrades a boat's existing stern light and solves the problem of light scattering and glare associated with pulpit and coaming mounted lights. The light has been tested to be visible at 2.4 nautical miles and draws 1.5w.

The kit comes with the following:

- 1 Aqua Signal Series 34 (12-24 volt) stern light.
- 1 Aqua Signal Series 34 stainless steel cover.
- Stainless steel (316L) light bracket.
- Mounting hardware.
- UV-resistant chafe protection grommet.
- Instructions.

Instructions:

The light installation for every boat will be different and planning is required before proceeding. Be careful when working over the water and secure tools, hardware, and parts. If the light installation can be done in a slip, it is recommended that you orient the boat stern first.

1. Unpack the kit and inventory all parts. Read the installation instructions before proceeding.
2. Determine if the LED light's wiring will be run externally or internally through the frame.
3. **For running the light's wiring externally.** Locate where the light bracket will attach to the frame (It is recommended that the bracket be located 6 ½" – 165mm below the air vane base). This location allows the lead counter weight to rotate freely and clear the installed light. The bracket is fitted by spreading the wings and carefully slipping it over the tubing. Once located, squeeze the wings closed and, using the longest bolts and hardware, hand tighten.

Note: The Monitor frame's tubing is angled at 15 degrees. The light bracket is designed to orient the light vertically. Make sure the bracket is mounted right side up.

4. With the bracket loosely mounted, uncoil the light's wiring and gently pull it into the supplied chafe guard by opening up the seam using a thin blade or other suitable tool. Determine how to best run the wire and chafe guard on the frame and mounting tubes to the ship's wiring (the chafe guard can be secured using UV-resistant cable ties or other suitable fasteners. Using the remaining hardware, finish mounting the light to the bracket with the wiring and chafe guard facing down and hand tighten. Do a final position and alignment check and finish tightening.

Note: The light's wire is 56"-1422mm long and the chafe guard's is 72" – 1829mm long. The chafe guard can be shortened or used as-is to protect an added spliced wire that connects with the ship's wiring. Use a best-practice splicing method suitable for the marine environment.

Choosing to run the light's wiring through the Monitor frame and upper mounting tube requires additional steps and careful consideration. It is recommended that two people work together to finish the project.



5. **For running the light's wiring internally.** Locate the bracket on the frame 6 ½" – 165mm below the air vane base. Spread the light bracket wings and slip it over the tubing (see instruction # 3). Locate the bracket and mark the location to drill a ½" hole. The mark should be dead-astern, centered on the tubing, and near the bottom of the bracket. Slide the bracket gently up the tubing and out of the way. Using a hammer and center punch, punch the tubing on the mark. Drill a starter hole in the tubing. Using increasing size drill bits finish drilling a ½" – 12.7mm hole and deburr using a rat tail file. Insert the supplied Delrin grommet and press fit.

Note: The hole is used to run the light's wiring and chafe guard through the frame. The Delrin grommet will help prevent chafing of the light's wiring.

6. Uncoil the light's wiring and gently pull it into the supplied chafe guard by opening up the seam using a thin blade or other suitable tool. Make a gentle bend in the chafe guard approximately 2" long and feed it through the grommet so it runs down the tube. With some encouragement and gentle twisting of the chafe guard it will round the corner and enter the larger "D" ring tubing. Next, unbolt the Monitor from its mounting tubes. Pull on the frame gently while rocking it side-to-side will help free it from the upper mounting tubes.

Note: It is important to pull back the Monitor from the upper mounting tubes by 2-3" while maintaining the attachment with the lower tubes.

7. Continue pushing the chafe guard through the "D" ring tubing. If possible, sight down the tubing using a flash light and determine which side the chafe guard is exiting. If it is exiting on the opposite side from where you plan to connect it to the ship's wiring, gently pull it out of the frame and start the process over. It may be possible to grab the chafe guard inside the "D" ring tubing and pull it out using a stiff wire or straightened coat hanger with a small hook on the end.

Note: With some finessing, you will be able to run the light wiring and chafe guard successfully through the Monitor frame and mounting tubes.

8. Remount the Monitor to the upper and lower mounting tubes and secure it with the hardware that was removed. Check the light's wiring to ensure it wasn't pinched during the Monitor installation process. Connecting the Monitor stern light to the ship's lighting will require special attention and differ between boats.
9. Check the light's alignment and tighten the mounting bolts. Remove the stainless steel cover from its packaging and push it onto the light until both sides snap into place.

Note: Make sure the cover snaps securely into place. The cover is designed to fit tightly and failure to snap both sides into place may result in loss of the cover.