

# WHELEN<sup>®</sup>

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## Installation Guide: Vertex™ LED Lighthouse Flange Mount

### Safety First

This document provides all the necessary information to allow your Whelen product to be properly and safely installed. Before beginning the installation and/or operation of your new product, the installation technician and operator must read this manual completely. Important information is contained herein that could prevent serious injury or damage.

- **Proper installation of this product requires the installer to have a good understanding of automotive electronics, systems and procedures.**
- **If mounting this product requires drilling holes, the installer MUST be sure that no vehicle components or other vital parts could be damaged by the drilling process. Check both sides of the mounting surface before drilling begins. Also de-burr any holes and remove any metal shards or remnants. Install grommets into all wire passage holes.**
- **If this manual states that this product may be mounted with suction cups, magnets, tape or Velcro®, clean the mounting surface with a 50/50 mix of isopropyl alcohol and water and dry thoroughly.**
- **Do not install this product or route any wires in the deployment area of your air bag. Equipment mounted or located in the air bag deployment area will damage or reduce the effectiveness of the air bag, or become a projectile that could cause serious personal injury or death. Refer to your vehicle owner's manual for the air bag deployment area. The User/Installer assumes full responsibility to determine proper mounting location, based on providing ultimate safety to all passengers inside the vehicle.**
- **For this product to operate at optimum efficiency, a good electrical connection to chassis ground must be made. The recommended procedure requires the product ground wire to be connected directly to the NEGATIVE (-) battery post.**
- **If this product uses a remote device to activate or control this product, make sure that this control is located in an area that allows both the vehicle and the control to be operated safely in any driving condition.**
- **Do not attempt to activate or control this device in a hazardous driving situation.**
- **This product contains either strobe light(s), halogen light(s), high-intensity LEDs or a combination of these lights. Do not stare directly into these lights. Momentary blindness and/or eye damage could result.**
- **Use only soap and water to clean the outer lens. Use of other chemicals could result in premature lens cracking (crazing) and discoloration. Lenses in this condition have significantly reduced effectiveness and should be replaced immediately. Inspect and operate this product regularly to confirm its proper operation and mounting condition. Do not use a pressure washer to clean this product.**
- **It is recommended that these instructions be stored in a safe place and referred to when performing maintenance and/or reinstallation of this product.**
- **FAILURE TO FOLLOW THESE SAFETY PRECAUTIONS AND INSTRUCTIONS COULD RESULT IN DAMAGE TO THE PRODUCT OR VEHICLE AND/OR SERIOUS INJURY TO YOU AND YOUR PASSENGERS!**

**For warranty information regarding this product, visit [www.whelen.com/warranty](http://www.whelen.com/warranty)**

**WARNING:** All customer supplied wires that connect to the positive terminal of the battery must be sized to supply at least 125% of the maximum operating current and FUSED at the battery to carry that load. DO NOT USE CIRCUIT BREAKERS WITH THIS PRODUCT!

Permanent mounting of this product will require drilling. It is absolutely necessary to make sure that no other vehicle components could be damaged by this process. Check both sides of the mounting surface before starting. If damage is likely, select a different mounting location.

**IMPORTANT!** It is the responsibility of the installation technician to make sure that the installation and operation of this product will not interfere with or compromise the operation or efficiency of any vehicle equipment!

**IMPORTANT!** Before returning the vehicle to active service, visually confirm the proper operation of this product, as well as all vehicle components/equipment.

**Installation:**

1. Place the flange onto the mounting surface in its exact mounting position and mark off the location of the 2 mounting holes and the center wire hole.
2. Drill two mounting holes for the two supplied #4 sheet metal screws (Use a #47 drill bit). Also drill a 1" wire hole in the center of the two mounting holes.
3. Insert the lighthouse cable and driver module into the wire hole, add the gasket and secure the light with the sheet metal screws supplied.
4. Extend the red and black wires to your power source and wire as shown in the wiring diagram

**Wiring & Operation:**

**This LED lighthouse is powered & controlled by a 4-wire cable. All switches, fuses and fuse blocks are customer supplied.**

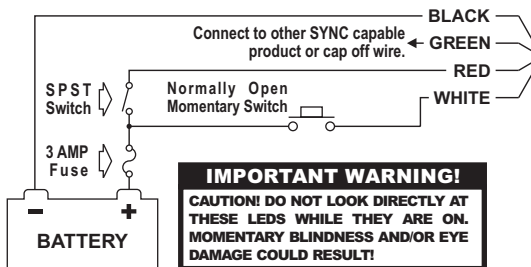
**RED: Positive** - Extend RED wire to +12V DC. (Fuse @ 3 amps).

**BLACK: Ground** - Extend BLACK wire to negative terminal of battery.

**GREEN: SYNC** - Connect GREEN wire to other SYNC capable lights to synchronize output. Cap this wire off if it is not used.

**WHITE: Scan-Lock™** - Extend WHITE wire to customer supplied momentary switch (Fuse @ 1 amp).

**WARNING: DO NOT ATTEMPT TO USE THIS LIGHTHEAD WITHOUT THE LED DRIVER MODULE CONNECTED.**



**IMPORTANT WARNING!**  
CAUTION! DO NOT LOOK DIRECTLY AT THESE LEDS WHILE THEY ARE ON. MOMENTARY BLINDNESS AND/OR EYE DAMAGE COULD RESULT!

- |                              |                       |                          |                    |
|------------------------------|-----------------------|--------------------------|--------------------|
| <b>Flash Patterns / SYNC</b> | 7. SingleFlash 75 PH1 | 14. PingPong™ PH2        | 20. ActionFlash™ 1 |
| 1. SignalAlert™ 75 PH1       | 8. SingleFlash 75 PH2 | <b>Non-SYNC Patterns</b> | 21. ActionFlash™ 2 |
| 2. SignalAlert™ 75 PH2       | 9. ComAlert™ PH1      | 15. SingleFlash 90       | 22. ModuFlash™     |
| 3. CometFlash@ 75 PH1        | 10. ComAlert™ PH2     | 16. SingleFlash 120      | 23. ActionScan™    |
| 4. CometFlash@ 75 PH2        | 11. LongBurst™ PH1    | 17. SingleFlash 300      | 24. Steady         |
| 5. DoubleFlash 75 PH1        | 12. LongBurst™ PH2    | 18. DoubleFlash 150      |                    |
| 6. DoubleFlash 75 PH2        | 13. PingPong™ PH1     | 19. ComAlert™ 150        |                    |

**Scan-Lock™**

**In order to program flash patterns, the lighthouse must be on. With the lighthouse activated:**

**TO CHANGE PATTERNS:** To advance to the next pattern apply +12VDC to the WHITE wire for less than 1 second and release. To cycle back to the previous pattern apply +12VDC to the WHITE wire for more than 1 second and release.

**TO CHANGE THE DEFAULT PATTERN:** When the desired pattern is displayed, allow it to run for more than 5 seconds. The lighthouse will now display this pattern when initially activated.

**TO RESTORE THE FACTORY DEFAULT PATTERN:** With the light turned off, apply power to the WHITE wire. With power applied to the WHITE wire, turn the light on. Allow the unit to run for 3 seconds before removing power from the WHITE wire.

A normally open momentary switch should be used to control Scan-Lock operation.

**SYNC:**

To SYNC two or more lighthouses, configure all lighthouses to display the same Phase 1 pattern. Turn the lighthouses off and connect the GREY wires coming from the lighthouses together. When the lighthouses are activated, the patterns displayed will be synchronized. To configure specific lighthouses to alternate their patterns with other lighthouses, advance the pattern of either lighthouse to Phase 2 of the current pattern.

**Phase Operation**

Phase 1 (PH1) flashes simultaneously with PH1

Phase 2 (PH2) flashes simultaneously with PH2

PH1 alternates with PH2

