

WHELEN[®]

ENGINEERING COMPANY INC.

Route 145, Winthrop Road,

Chester, Connecticut 06412

Phone: (860) 526-9504

Fax: (860) 526-4078

Internet: www.whelen.com

Sales e-mail: autosale@whelen.com

Canadian Sales e-mail: autocan@whelen.com

Customer Service e-mail: custserv@whelen.com

Installation Guide: 500-series Linear Super-LED™ Vertical Lighthouse

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 owners 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

IMPORTANT NOTICE! This product has been designed for improved visibility. Prior to installing this product on any vehicle, check your state motor vehicle codes to confirm that this product complies with any and all state statutes.

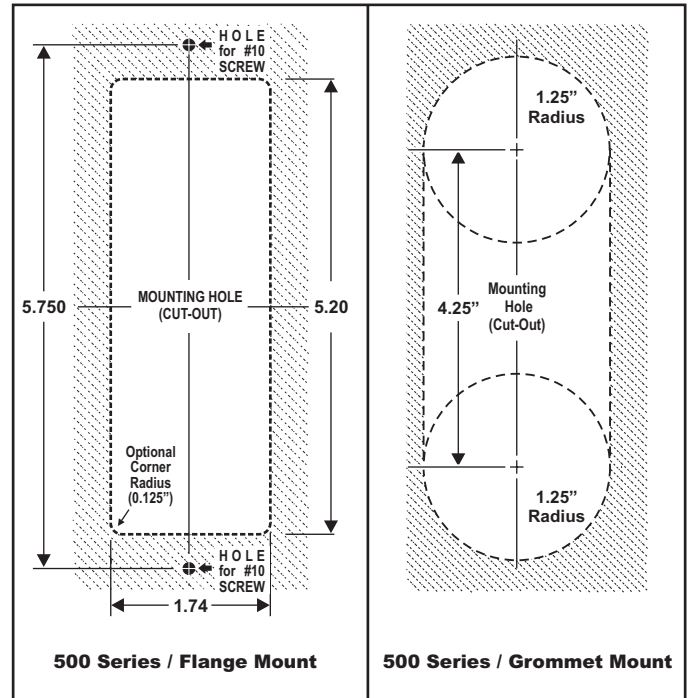
This Lighthouse can be mounted in several mounting styles using a mounting kit that must be purchased separately. Choose the mounting style that best suits your needs.

Installation: Flanged

1. Mark the measurements shown in the flange mount diagram onto the mounting surface. Drill the two holes for the #10 mounting screws and then cut out and remove the area shown for the mounting hole.
2. Thread the wires through the rubber gasket, mounting hole and to your power source.
3. Attach light housing to vehicle using the supplied mounting hardware and accessories.
4. Extend the wires to your power source (See "Wiring" below).

Installation: Grommet

1. After marking onto the mounting surface the measurements shown in the D.O.T. grommet, drill the two 1.25" radius holes following the measurements, then cut out the center area as shown.
2. Install the rubber grommet into the vehicle. Assemble the flange, lighthouse and adapter as shown on the next page, then snap these 3 assembled parts into the rubber grommet.
3. Extend the wires to your power source (See "Wiring" below).



Wiring:

The lighthouse should be wired using the information shown at right. The power wire should be connected to a single pole/single throw switch (customer supplied). The Scan-Lock™ wire should be connected to a normally open momentary switch (customer supplied).

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 be fused at the battery to carry the load.

WIRING DESIGNATIONS:

LED COLOR	+12VDC (fuse @ 3A)
BLK	GROUND
GRY	SYNC (see text)
WHT/VIO	Scan-Lock™ (see text)

SPECIFICATIONS:

INPUT VOLTAGE:	12.8VDC ±20%
CURRENT DRAW:	1 Amp

Scan-Lock™ & Sync:

Scan-Lock™ - This lighthouse has a special set of flash patterns, with each pattern available in two modes; Phase 1 and Phase 2. The patterns are changed with the WHT/VIO wire.

To advance to the next pattern, apply +12VDC to the WHT/VIO wire for less than 1 second. To cycle backwards to previous patterns, apply +12VDC for more than 1 second. To reset to the factory default pattern, turn off power to the lighthouse. While applying +12VDC to the WHT/VIO wire, turn the lighthouse back on. Continue to apply voltage to the WHT/VIO wire for 5 seconds.

All lighthouses configured to display the Phase 1 mode of a given pattern will flash simultaneously. Any lighthouses configured to display the Phase 2 mode of a pattern, will alternate with any Phase 1 lighthouses with the same pattern.

Sync - To sync two lighthouses, configure both lighthouses to display the same Phase 1 pattern. With the power off, connect the GRY wires from each lighthouse together. When the lighthouses are activated, their patterns will be synchronized. To configure the two lighthouses to alternate their patterns, advance the pattern of either lighthouse to the Phase 2 mode of the current pattern.

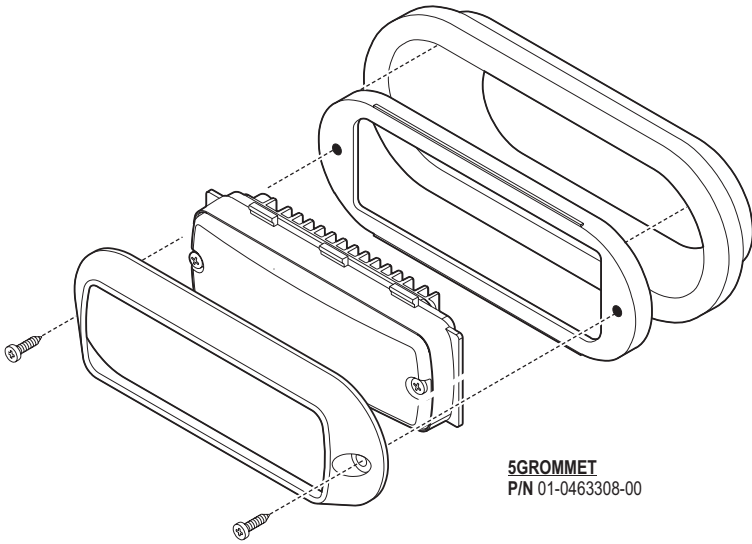
To understand how to use the SYNC feature with more than 2 lighthouses, the principles will be applied to a sample system consisting of 4 lighthouses. 2 are mounted on the rear, driver side of the vehicle and 2 mounted on the rear, passenger side of the vehicle.

With all the wiring complete, turn on the 4 lighthouses. As shipped from the factory, all the lighthouses will simultaneously display the same pattern (Signal Alert / Phase 1). To configure, for example, the passenger side lighthouses to alternate with the driver side lighthouses, change the flash patterns for either the passenger or driver side lighthouses to Phase 2 mode of the same pattern.

Scan-Lock™ Patterns:

- | | |
|---|--|
| 1 - SignalAlert™ Phase 1 | 7 - SingleFlash Phase 1 |
| 2 - SignalAlert™ Phase 2 | 8 - SingleFlash Phase 2 |
| 3 - CometFlash® Phase 1 | 9 - ComAlert™ Phase 1 |
| 4 - CometFlash® Phase 2 | 10 - ComAlert™ Phase 2 |
| 5 - DoubleFlash Phase 1 | 11 - Steady |
| 6 - DoubleFlash Phase 2 | |

Kit: 5GROMMET



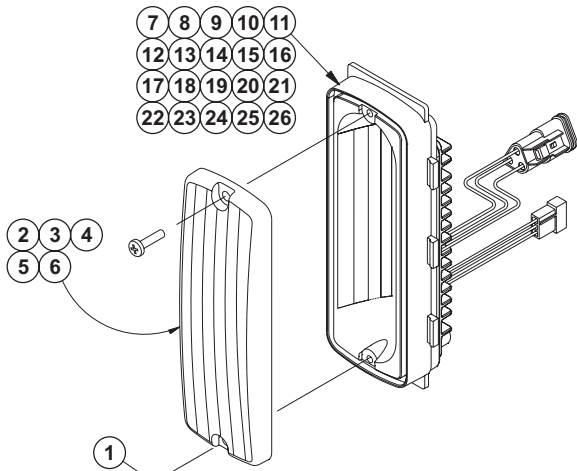
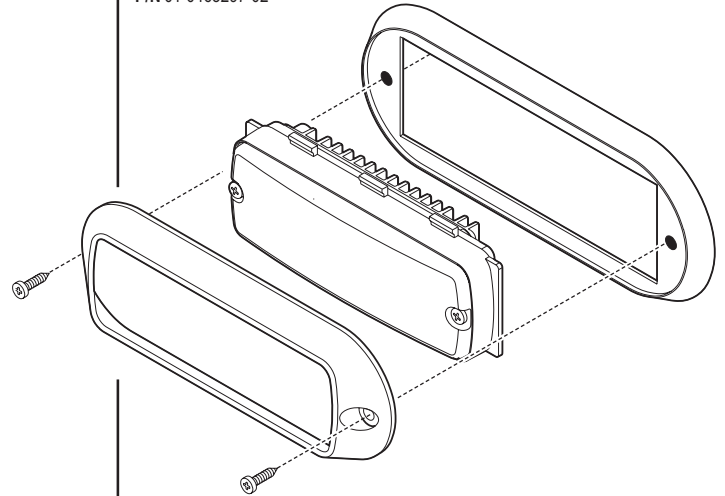
5GROMMET
P/N 01-0463308-00

Kit: 5FLANGEB / 5FLANGEC and 5FLANGEP

5FLANGEB Flange Kit / BLACK
P/N 01-0463297-00

5FLANGEC Flange Kit / CHROME
P/N 01-0463297-01

5FLANGEP Flange Kit / POLISHED ALUM.
P/N 01-0463297-02



PART NUMBER KEY:
01-0664096

FEATURE
LED / LENS COLOR
CONNECTOR

FEATURE	LED / LENS COLOR	CONNECTOR
- = LOW POWER	A = AMBER-AMBER	0 = AMP
1 = SYNC	B = BLUE-BLUE	1 = DEUTSCH
	G = GREEN-GREEN	
	R = RED-RED	
	1 = AMBER-CLEAR	
	2 = BLUE-CLEAR	
	3 = WHITE-CLEAR	
	4 = GREEN-CLEAR	
	5 = RED-CLEAR	

QTY	QTY	QTY	QTY	ITEM	PART NUMBER	DESCRIPTION
			*		01-0664096-()1	LED Lighthouse / Linear / Vertical / Deutsch
			*		01-06640961()0	LED Lighthouse / Linear / Vertical / SYNC / AMP
	*				01-06640961()1	LED Lighthouse / Linear / Vertical / SYNC / Deutsch
*					01-0664096-()0	LED Lighthouse / Linear / Vertical / Low Power / AMP
2	2	2	2	1	15-065419-080	SCREW, #6 x 1/2" PPH PLASTI-LOK
A/R	A/R	A/R	A/R	2	68-1963588-10	LENS, VERTICAL OPTIC - AMBER
A/R	A/R	A/R	A/R	3	68-1963588-20	LENS, VERTICAL OPTIC - BLUE
A/R	A/R	A/R	A/R	4	68-1963588-30	LENS, VERTICAL OPTIC - CLEAR
A/R	A/R	A/R	A/R	5	68-1963588-40	LENS, VERTICAL OPTIC - GREEN
A/R	A/R	A/R	A/R	6	68-1963588-50	LENS, VERTICAL OPTIC - RED
-	-	-	A/R	7	01-0264095411	LINEAR LED - AMBER / LOW POWER / DEUTSCH
-	-	-	A/R	8	01-0264095421	LINEAR LED - BLUE / LOW POWER / DEUTSCH
-	-	-	A/R	9	01-0264095431	LINEAR LED - WHITE / LOW POWER / DEUTSCH
-	-	-	A/R	10	01-0264095441	LINEAR LED - GREEN / LOW POWER / DEUTSCH
-	-	-	A/R	11	01-0264095451	LINEAR LED - RED / LOW POWER / DEUTSCH
-	-	A/R	-	12	01-0264077410	LINEAR LED - AMBER / SYNC / AMP
-	-	A/R	-	13	01-0264077420	LINEAR LED - BLUE / SYNC / AMP
-	-	A/R	-	14	01-0264077430	LINEAR LED - WHITE / SYNC / AMP
-	-	A/R	-	15	01-0264077440	LINEAR LED - GREEN / SYNC / AMP
-	-	A/R	-	16	01-0264077450	LINEAR LED - RED / SYNC / AMP
-	A/R	-	-	17	01-0264077411	LINEAR LED - AMBER / SYNC / DEUTSCH
-	A/R	-	-	18	01-0264077421	LINEAR LED - BLUE / SYNC / DEUTSCH
-	A/R	-	-	19	01-0264077431	LINEAR LED - WHITE / SYNC / DEUTSCH
-	A/R	-	-	20	01-0264077441	LINEAR LED - GREEN / SYNC / DEUTSCH
-	A/R	-	-	21	01-0264077451	LINEAR LED - RED / SYNC / DEUTSCH
A/R	-	-	-	22	01-0264095410	LINEAR LED - AMBER / LOW POWER / AMP
A/R	-	-	-	23	01-0264095420	LINEAR LED - BLUE / LOW POWER / AMP
A/R	-	-	-	24	01-0264095430	LINEAR LED - WHITE / LOW POWER / AMP
A/R	-	-	-	25	01-0264095440	LINEAR LED - GREEN / LOW POWER / AMP
A/R	-	-	-	26	01-0264095450	LINEAR LED - RED / LOW POWER / AMP