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**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.**
- **Whelen Engineering requires the use of waterproof butt splices and/or connectors if that connector could be exposed to moisture.**
- **Any holes, either created or utilized by this product, should be made both air- and watertight using a sealant recommended by your vehicle manufacturer.**
- **Failure to use specified installation parts and/or hardware will void the product warranty!**
- **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.**
- **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.**
- **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!**
- **FAILURE TO FOLLOW THESE PRECAUTIONS AND INSTRUCTIONS COULD RESULT IN DAMAGE TO THE PRODUCT OR VEHICLE AND/OR SERIOUS INJURY TO YOU AND YOUR PASSENGERS!**

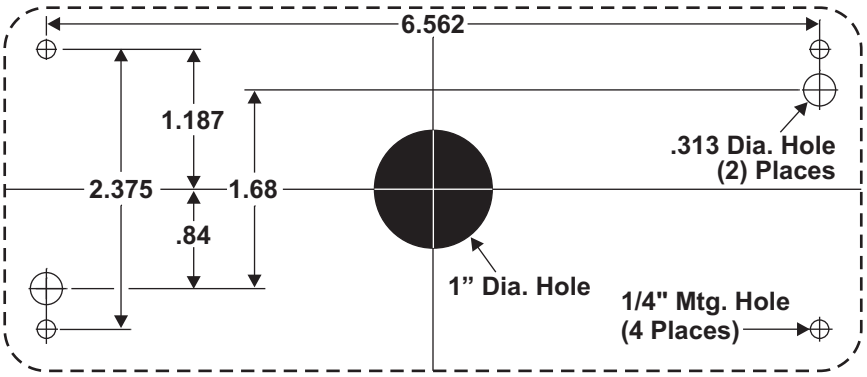
**Installation:**
**IMPORTANT NOTICE! This product has been designed for improved visibility. Prior to installing this product on any vehicle, check you state motor vehicle codes to confirm that this product complies with any and all state statutes**
**WARNING! This product draws less current than a normal automotive bulb. If your flasher does not operate properly, replace your flasher with a Whelen 3TERM flasher.**

1. Using the dimensions shown, drill two, 5/16" diameter vent tube holes and a 1" wire hole into the mounting surface. **Make sure lighthead will not interfere with equipment or any items on the opposite side of the mounting surface.**
2. Place the lighthead into position and mark off the 4 mounting holes. Using a 1/4" drill bit, drill the 4 mounting holes. Install a grommet (customer supplied) into the 1" wire hole.
3. Using appropriately sized wires (Min. 18 AWG), extend the wires to their connections. Fuse the +12VDC connections at 3 Amps and test the lighthead for proper operation. Secure the lighthead to the vehicle using the flange grommet and the four #6 x 1-1/2" sheet metal screws.

**Sync:** SYNC lightheads are available in two modes; SignalAlert™ Simultaneous and SignalAlert Alternating. The patterns are changed with the WHT/VIO wire. Connect the SYNC wire (GRY) from each lighthead together. Lightheads displaying the same pattern will flash simultaneously.

**Scan-Lock™**:
**To Cycle Through Patterns:** Apply +VBAT to the WHT/VIO wire for less than 1 sec. and release. Apply +VBAT to the WHT/VIO wire for more than 1 sec. and release to cycle backward. Allow the pattern to run for more than 5 secs. The lighthead will now display this pattern when active.

**Flash Patterns**: SignalAlert 75 > SignalAlert 150 > SingleFlash 375 > SingleFlash 150 > SingleFlash 75 > SingleFlash 150 > DoubleFlash 150 > DoubleFlash 75 > CometFlash® 75 > ActionFlash™ > ModuFlash™ > ComAlert™ > ActionScan™ > SignalAlert™ Steady > Steady (Brake) **Brake Patterns:** SignalAlert™ Steady > Steady Brake **SYNC Patterns:** SignalAlert 75 simultaneous > SignalAlert 75 alternating **Arrow Patterns:** Sequence to Solid 150 FPM > Sequence to Solid 80 FPM > Sequence to Solid-Steady On: Fast > Sequence to Solid-Steady On: Slow > SignalAlert To Steady On > Steady On
**Dual Color Patterns:** SingleFlash 680 alt. > Singleflash 240 alt. > Singleflash 120 alt. > SingleFlash 150 sim. > DoubleFlash 240 alt. > DoubleFlash 120 alt. > DoubleFlash 150 sim. > CometFlash® 120 alt. > CometFlash® 120 sim. > ActionFlash™ alt. > ActionFlash alt.-sim. > ModuFlash™ alt. > ModuFlash sim. > SignalAlert 120 alt. > SignalAlert 100 sim. > ActionScan alt.-sim. > Action Single > CH1 Steady-CH2 SF120 > CH1 Steady-CH2 Action-Single > CH1 Steady-CH2 CometFlash® 120 > Ch1 Steady / CH2 FastAction




**IMPORTANT NOTE / SPLIT LED:** This lighthead will not have a Scan-Lock™ wire. There are programming pins on the LED side of the circuit board. Where Scan-Lock instructions state "apply +12 volts to the Scan-Lock wire," short out these pins.

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

## *Wiring Options*

**MAX BIAS**
**LED Color**.....Positive (+)
**Black (12V) or**
**Black-White (24V)**...Ground

**SPLIT**
**LED Color 1**.....Positive (+)
**LED Color 2**.....Positive (+)
**Black**.....Ground

**WIDE ANGLE**
**LED Color**.....Positive (+)
**Black (+12V) or**
**Black-White (24V)**....Ground
**White-Violet**.....Scan-lock™

**FLOOD or BACK-UP**
**White**.....Positive (+)
**Black (12V) or**
**Black-White (24V)**...Ground

**TURN & ARROW**
**LED Color**.....Positive (+)
**Black (12V) or**
**Black-White (24V)**...Ground
**White-Violet**.....Scan-lock™

**SYNC**
**LED Color**.....Positive (+)
**Grey**.....SYNC
**Black (12V)**.....Ground

**BRAKE-TAIL-TURN**
**Yellow**....Brake / Positive (+)
**Brown**.....Tail / Positive (+)
**White (12V) or**
**White-Black (24V)**...Ground
**White-Violet**.....Scan-Lock™

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


Form No. 13570P (122017)

**For warranty information regarding this product, visit www.whelen.com/warranty**

# Warnings to Installers

Whelen's emergency vehicle warning devices must be properly mounted and wired in order to be effective and safe. Read and follow all of Whelen's written instructions when installing or using this device. Emergency vehicles are often operated under high speed stressful conditions which must be accounted for when installing all emergency warning devices. Controls should be placed within convenient reach of the operator so that he can operate the system without taking his eyes off the roadway. Emergency warning devices can require high electrical voltages and/or currents. Properly protect and use caution around live electrical connections.Grounding or shorting of electrical connections can cause high current arcing, which can cause personal injury and/or vehicle damage, including fire. Many electronic devices used in emergency vehicles can create or be affected by electromagnetic interference. Therefore, after installation of any electronic device it is necessary to test all electronic equipment simultaneously to insure that they operate free of interference from other components within the vehicle. Never power emergency warning equipment from the same circuit or share the same grounding circuit with radio communication equipment. All devices should be mounted in accordance with the manufacturer's instructions and securely fastened to vehicle elements of sufficient strength to withstand the forces applied to the device. Driver and/or passenger air bags (SRS) will affect the way equipment should be mounted. This device should be mounted by permanent installation and within the zones specified by the vehicle manufacturer, if any. Any device mounted in the deployment area of an air bag will damage or reduce the effectiveness of the air bag and may damage or dislodge the device. Installer must be sure that this device, its mounting hardware and electrical supply wiring does not interfere with the air bag or the SRS wiring or sensors. Mounting the unit inside the vehicle by a method other than permanent installation is not recommended as unit may become dislodged during swerving; sudden braking or collision. Failure to follow instructions can result in personal injury. Whelen assumes no liability for any loss resulting from the use of this warning device. PROPER INSTALLATION COMBINED WITH OPERATOR TRAINING IN THE PROPER USE OF EMERGENCY WARNING DEVICES IS ESSENTIAL TO INSURE THE SAFETY OF EMERGENCY PERSONNEL AND THE PUBLIC.

# Warnings to Users

Whelen's emergency vehicle warning devices are intended to alert other operators and pedestrians to the presence and operation of emergency vehicles and personnel. However, the use of this or any other Whelen emergency warning device does not guarantee that you will have the right-of-way or that other drivers and pedestrians will properly heed an emergency warning signal. Never assume you have the right-of-way. It is your responsibility to proceed safely before entering an intersection, driving against traffic, responding at a high rate of speed, or walking on or around traffic lanes. Emergency vehicle warning devices should be tested on a daily basis to ensure that they operate properly. When in actual use, the operator must ensure that both visual and audible warnings are not blocked by vehicle components (i.e.: open trunks or compartment doors), people, vehicles, or other obstructions. It is the user's responsibility to understand and obey all laws regarding emergency warning devices. The user should be familiar with all applicable laws and regulations prior to the use of any emergency vehicle warning device. Whelen's audible warning devices are designed to project sound in a forward direction away from the vehicle occupants. However, because sustained periodic exposure to loud sounds can cause hearing loss, all audible warning devices should be installed and operated in accordance with the standards established by the National Fire Protection Association.