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 devices 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 they can operate the system without taking their 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 ensure 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 communications 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 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.

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.

!! WARNING: This product can expose you to chemicals including Lead which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

- 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 the 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 vehicle manufacturer 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 (this does not include products that use cigar power cords).
- If this product uses a remote device for activation or control, make sure that this device is located in an area that allows both the vehicle and the device 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!
Strobe Lighthouse: Installation

1. Disconnect the unit from power and remove the endcaps. Remove the 4 endcap screws, endcap and gasket from both sides of the lightbar base. If you have alley lights, they must be unplugged also (Fig. 1).

2. Slide the 4 corner strobes out of the lightbar (without unplugging them) and set them aside.

3. Slide the lenses and spacers out of the lightbar and place them on your workbench in the order you removed them (for easy reassembly).

4. Remove the top of the base extrusion by removing the 4 screws as shown in figure 2.

5. With the base extrusion exposed (see wiring diagram) remove the dummy power supply housing located in the power supply “B” spot. Its function is to secure the top extrusion to the base if there is no power supply present. You will replace it with the power supply.

6. Install the new power supply as shown (Fig. 3). Slide the power supply into the base of the lightbar. Two of the screws that hold the top extrusion on will secure the power supply to the base when you remount the top of the lightbar (Fig. 6). Make sure that the power supplies connectors are facing out toward the end of the lightbar.

7. Plug the power (PSB) and strobe (SB) connectors of the internal harness into the power supply as shown in the wiring diagram.

8. Install the lightheads into the lighthead housings (Fig. 5). Make sure that the lighthead connectors are routed through the wire exit holes located in the housing. Plug these connectors into the internal harness. Installation is complete and you may reassemble the lightbar.

9. First identify which I.O. card your lightbar has. If the power connector plug is red and black, use the new personality module included with the kit. Follow the instructions included with the module. If the power connector is grey, you do not need to install a personality module for this installation.

10. Remount the top extrusion. Line screws up with power supply (Fig. 6).

11. Next replace the lenses and spacers you removed (Fig. 7).

12. Now make sure the endcap gasket is in place (Fig. 8) on the endcap, plug in the alley lights and remount the endcap. Repeat for other side.

13. Reassembly is now complete. Reconnect to power and test the lightbar.

Control Wire Functions:

Control cables were changed in the new LFL lightbars. Be sure of which cable you have. The old cable will have a GREY wire present.

<table>
<thead>
<tr>
<th>OLD CONTROL CABLE</th>
<th>FUNCTION</th>
<th>NEW CONTROL CABLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>GRAY</td>
<td>Front Inboard Strobes</td>
<td>GREEN-WHITE</td>
</tr>
<tr>
<td>GREEN</td>
<td>Front Corner Strobes</td>
<td>GREEN</td>
</tr>
<tr>
<td>BLUE</td>
<td>Rear Corner Strobes</td>
<td>BLUE</td>
</tr>
<tr>
<td>YELLOW</td>
<td>Passenger Alley</td>
<td>YELLOW</td>
</tr>
<tr>
<td>WHITE</td>
<td>Driver Alley</td>
<td>WHITE</td>
</tr>
<tr>
<td>WHITE-BLACK</td>
<td>Takedowns</td>
<td>WHITE-BLACK</td>
</tr>
<tr>
<td>WHITE-BROWN</td>
<td>Rear L.E.D.</td>
<td>WHITE-BROWN</td>
</tr>
<tr>
<td>WHITE-RED</td>
<td>Front L.E.D.</td>
<td>WHITE-RED</td>
</tr>
<tr>
<td>WHITE-ORANGE</td>
<td>Rear Inboard Strobes</td>
<td>BLUE-WHITE</td>
</tr>
<tr>
<td>WHITE-YELLOW</td>
<td>Alley / Flashing</td>
<td>WHITE-YELLOW</td>
</tr>
<tr>
<td>WHITE-GREEN</td>
<td>Takedown / Flashing</td>
<td>WHITE-GREEN</td>
</tr>
<tr>
<td>WHITE-BLUE</td>
<td>Strobe Scan-Lock</td>
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<tr>
<td>WHITE-VIOLET</td>
<td>L.E.D. Scan-Lock</td>
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<tr>
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<td>Low Power</td>
<td>VIOLET</td>
</tr>
<tr>
<td></td>
<td>Right Traffic Advisor</td>
<td>GREEN-BLACK</td>
</tr>
<tr>
<td></td>
<td>Left Traffic Advisor</td>
<td>BLUE-BLACK</td>
</tr>
<tr>
<td></td>
<td>Auxiliary</td>
<td>WHITE-ORANGE</td>
</tr>
</tbody>
</table>
NOTE: This wiring diagram shows only the 4 locations you may add strobes.

F1 FUSE
F2 FUSE

INBOARD STROBE INBOARD STROBE
POWER SUPPLY "A" POWER SUPPLY "B"

INTERNAL WIRING HARNESS

SB4 PSB
SB3 SB2 SB1

OPTIONAL WIRE ENTRY

Fig. 5 Installing Lighthead into Housing
Fig. 6 Remounting the Top of the Lightbar Base
Fig. 7 Side View / Installing Lens and Lighthead Housing into lightbar base

Fig. 8 Endcap: Lighthead and Gasket

Insert the tabs on the lighthead housing, into the channels in the lightbar base.

Place the endcap gasket onto the endcap matching up all the tabs and holes.

Personality module not required.