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 they can operate the system without taking their eyes off the roadway. Emergency warning devices 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 ground 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 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.

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 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 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 (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!
WARNING!!!
The strobe light power supply is a **HIGH VOLTAGE** device. You must wait at least 10 minutes after turning off the power to the system before starting any diagnostic or trouble shooting procedures that may bring you into contact with any internal components.

**Removal of Existing Power Supply...**

1. Remove endcap and lenses until you have access to your lightbar’s power supply. Power supply is located in the center section of your lightbar.
2. Remove the two (2), 10 x 24 ¾” screws that hold the power supply in position (See Diagram 1.1).
3. Disconnect Power Harness and Internal Harness from power supply.
4. Remove power supply from lightbar.
5. If your lightbar has two (2) power supplies, repeat steps 1 through 4 for the second power supply.
6. If you are replacing the power supplies in an older lightbar (eight or more years old) you will have to remove any Guide Pins that are present. These pins prevent the newer style power supplies from being installed. These can be broken off of the lightbar’s extrusion by hitting them with a hammer.

**Installation of New Power Supply...**

1. If your previous power supply was equipped with a drip cover attached, this must be removed and transferred onto the new power supply. The drip cover is held in place by one screw and is mounted onto the new power supply in the same fashion as it was on the previous power supply.
2. Position your new power supply in it’s general mounting location.
3. Connect the Power Harness and Internal Harness to the power supply. Refer to Table 1 for Correct Adaptor Cable(s).
4. With harness plugs connected, the power supply is ready to be mounted onto your lightbar.

**TABLE 1**

<table>
<thead>
<tr>
<th>IF YOU HAVE LIGHTBAR MODEL #...</th>
<th>WITH POWER SUPPLY #...</th>
<th>YOU NEED POWER SUPPLY #...</th>
<th>WITH ADAPTOR CABLE(S) #...</th>
</tr>
</thead>
<tbody>
<tr>
<td>9004SL, 9004WB, 9801, 9802, 9806 MINI EDGE®...</td>
<td>ZF, 1ZF</td>
<td>2ZFO</td>
<td>46-0741909-00 46-0741908-00</td>
</tr>
<tr>
<td>9004SL, 9004WB, 9801, 9802, 9804, 9806, 9004AK MINI EDGE...</td>
<td>ZS, 1ZS, 5ZS, ZSM</td>
<td>2ZSO</td>
<td>46-0745715-00 *LOW POWER SWITCHING MODIFICATION</td>
</tr>
<tr>
<td>9104, 9206, 9206WB, 9308, 9308WB, 9000FM...</td>
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<td>2ZFO</td>
<td>46-0745715-00 46-0745815-00</td>
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<tr>
<td>9104, 9206, 9206WB, 9308, 9308WB, 9000FM...</td>
<td>5ZF, ZFM</td>
<td>2ZFO</td>
<td>46-0745715-00 46-0745815-00</td>
</tr>
<tr>
<td>9004SL/AK, 9004WB, 9801, 9802, 9804, 9806, MINI EDGE...</td>
<td>ZSO</td>
<td>2ZSO</td>
<td>NONE *LOW POWER SWITCHING MODIFICATION</td>
</tr>
<tr>
<td>9104, 9206, 9308, 9000FM, 9206WB...</td>
<td>ZFO</td>
<td>2ZFO</td>
<td>NONE</td>
</tr>
</tbody>
</table>

* LOW POWER MODIFICATION - OLD POWER SUPPLY WAS GROUND ACTIVATION TO VIOLET FOR HI-POWER. NEW SUPPLY IS +12 VOLT MOMENTARY ACTIVATION TO VIOLET FOR LOW POWER