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 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 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.

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 Methylene Chloride which is known to the State of California to cause cancer, and Bisphenol A, which is known to the State of California to cause 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 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!
Mounting...

This installation requires the temporary removal of certain vehicle components. Be sure to refer to the factory service manual for proper removal procedures and any applicable safety advisories.

This manual will outline the installation procedure of Inner Edge FST in a 2019-2020 Ford Transit Cargo Van. Other Transit models may contain additional components/equipment that may affect the installation procedure.

The procedure outlined herein is for installation of the Right side (passenger-side) Inner Edge. The procedure for Left side (Driver-side) installation is identical.

1. Using the hardware provided, mount the Right side inner Edge onto the Right side mounting bracket.
2. Remove both sun visors and the overhead console/shelf (if so equipped) to gain unobstructed access to the headliner panel.
3. Locate the 4 round openings in the headliner near the windshield, two on either side of the vehicle centerline. These openings reveal 4 of the overhead console mounting hole bulkheads. The Right side mounting bracket will be mounted between the two bulkheads located to the right of the centerline.
4. Position the Inner Edge/Bracket Assembly in its mounting location. The assembly is properly positioned when the side of the Inner Edge base is 10.5 inches from the vehicle centerline. With the assembly in position, use a felt tip marker to trace the outline of the mounting bracket 'ears' onto headliner. Place the assembly aside.
5. Using the outline traces created in the previous step, create two, 3-sided flaps in the headliner using a razor knife or other suitable tool. Bend these flaps down to expose the roof structure.
6. Lower the leading edge of the headliner and slide the bracket ears between the headliner and the roof structure so that the ears are positioned in the flap area. Note that it will be necessary to remove a small section of the headliner to allow the headliner to fit around the mounting ears.
7. When the assembly is properly positioned, all of the following conditions will be met:
   a) The side of the inner edge base will be 10.5 inches from the vehicle centerline.
   b) The bracket mounting ears are flat against the roof structure.
   c) The entire leading edge of the light assembly is in contact with the windshield.
8. When all of these conditions are met, secure the bracket to the roof member using the four, self-tapping screws provided.

Wiring and Operation...

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!

1. Follow the factory wiring harness through the firewall. It may be necessary to drill a hole in the firewall. If so, be absolutely sure that there are no components that could be damaged by drilling. After the hole has been drilled, insert a grommet to protect the cable.
2. Route the cable along the factory wiring harness towards the battery. Install a 25 amp fuse block (customer supplied) on the end of the RED wire in the power cable. NOTE: Remove the fuse from the fuse block before connecting any wires to the battery.
3. Connect the BLACK wire to Chassis Ground.

Connecting the Shield and Communication Wires:

Connect the GREEN and GREY wires from the Inner Edge to the GREEN and GREY wires from the WeCan Control Point Module Pig Tail connector. Connect the bare Shield wire to the BLK/WHT wire.

Control Point Module

The Control Point Module serves as the brain of the Whelen WeCan™ Series lightbar. The module is programmed with the WeCan Programming Software via the USB port and in turn, provides the necessary signals that allow the lightbar to function as desired.

In the WeCan Programming software, each of the 18 inputs may be programmed to activate any number or combination of the installed lightbar components by applying +12VDC to an input. Refer to the installation guide included with your switches for wiring information.

Programming Procedure

IMPORTANT - It is not necessary to program this device unless changes to the default configuration (for example pattern or switch control changes) are desired.

1. Connect a USB cable from the host PC to the module’s USB port.
2. Start the WeCan™ software on the host PC and open the configuration to be programmed.
3. Click on the WeCan button on the menu bar. Select Control Point then Program from the fly-out.
4. A window will open to confirm that you are about to program a Control Point Module. Confirm that the USB cable is connected to both the module and the PC and then press “OK” to continue. The software will display a window when the programming procedure has been successfully completed.
5. Be sure to confirm proper operation of the module before returning the vehicle to active service.

Seal shown in full contact with windshield
**Default Configuration (12V Inputs)**

<table>
<thead>
<tr>
<th>POS</th>
<th>Color</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>GREEN</td>
<td>Mode 1 (SignalAlert™)</td>
</tr>
<tr>
<td>2</td>
<td>GRN/WHT</td>
<td>Mode 2 (SignalAlert)</td>
</tr>
<tr>
<td>3</td>
<td>GRN/BLK</td>
<td>No Connection</td>
</tr>
<tr>
<td>4</td>
<td>WHT/RED</td>
<td>No Connection</td>
</tr>
<tr>
<td>5</td>
<td>WHITE</td>
<td>Mode 2 (SingleFlash 60)</td>
</tr>
<tr>
<td>6</td>
<td>YELLOW</td>
<td>Cruise (Mode 2 Inputs only)</td>
</tr>
<tr>
<td>7</td>
<td>WHT/VIO</td>
<td>No Connection</td>
</tr>
<tr>
<td>8</td>
<td>WHT/GRN</td>
<td>Mode 1 (DoubleFlash 150)</td>
</tr>
<tr>
<td>9</td>
<td>WHT/ORG</td>
<td>No Connection</td>
</tr>
<tr>
<td>10</td>
<td>BLUE</td>
<td>No Connection</td>
</tr>
<tr>
<td>11</td>
<td>BLU/WHT</td>
<td>No Connection</td>
</tr>
<tr>
<td>12</td>
<td>BLU/BLK</td>
<td>Mode 2 (ModuFlash™)*</td>
</tr>
<tr>
<td>13</td>
<td>WHT/BRN</td>
<td>No Connection</td>
</tr>
<tr>
<td>14</td>
<td>WHT/BLK</td>
<td>No Connection</td>
</tr>
<tr>
<td>15</td>
<td>WHT/BLU</td>
<td>Mode 1 (SignalAlert - Random)*</td>
</tr>
<tr>
<td>16</td>
<td>RED/HT</td>
<td>No Connection</td>
</tr>
<tr>
<td>17</td>
<td>WHITE</td>
<td>No Connection</td>
</tr>
<tr>
<td>18</td>
<td>VIOLET</td>
<td>SingleFlash 75 (Mode 2 Inputs only)**</td>
</tr>
</tbody>
</table>

* Non-compliant KKK-A-1822A Pattern
** Low Power (20%)

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**Control Point Module (part of 15)**

Connect to an ignition controlled circuit that can accommodate an additional 250mA load.

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**Battery**

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**Control Point Module (part of 15)**

Connect to an ignition controlled circuit that can accommodate an additional 250mA load.