51 Winthrop Road<br>Chester, Connecticut 06412-0684<br>Phone: (860) 526-9504<br>Internet: www.whelen.com<br>Sales e-mail: autosale@whelen.com<br>Customer Service e-mail: custserv@whelen.com

Installation Guide:<br>Inner Edge ${ }^{\circledR}$ Split \& Full Size Interior Lightbar (Lo-Pro ${ }^{\text {TM }}$ ) 2006 Impala, Charger, Crown Vic, Expedition<br>2007 Crown Vic, Tahoe, Suburban, F-150 2007-present F-250, F-350, 2010 Ford Fusion 2011 Expedition, Tahoe, Taurus, Charger, Explorer

## 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/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.

## 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!

IMPORTANT AIR BAG WARNING! 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.

## Installation / Split Bar:

IMPORTANT! The lightbar should be located a minimum of 16" from any radio antennas!
Note: When routing the wires, it is important to choose a path that will keep the wires away from excessive heat or any vehicle equipment that could compromise the integrity of the wires (ex. trunk lids, door jams, etc.)

1. Locate and install the rubber window seal (included) onto the lower, leading edge and side of the housing.
2. Using an appropriately sized Torx head screwdriver, loosen (do not remove) the three screws securing the passenger-side visor swivel bracket to the vehicle.
3. Remove the screws securing the visor clip to the vehicle. Remove and retain the clip and all hardware.

4. Position the keyed opening of the mounting bracket directly under the mounting location for the visor clip removed in step 2. With the bracket in this position, remount the visor clip in its original location using the original hardware.
5. Firmly tighten any hardware loosened in this procedure.
6. Repeat this procedure for the driver-side assembly and mounting bracket (indicated with a "D").
7. Position the lightbar as shown. Using the hardware provided, secure the lightbar to the mounting bracket.
8. When properly mounted, the rubber seal will be in full contact with the vehicle windshield and roof. This is to prevent light output from entering the passenger compartment. When this has been achieved, tighten mounting hardware firmly to maintain contact.
9. Route the lightbar cable down the vehicle A-pillar to your control head.
10. Make all wiring connections using the information in the wiring diagram.

## Wiring:

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!

## Operation:

This lightbar is powered and controlled by an 8-conductor cable exiting the lightbar. All functions listed here are not present in all lightbars.

## White/Green - Scan-Lock ${ }^{\text {TM }}$

The WHITE/GREEN wire allows you to choose from the available flash patterns listed below. First you must activate the lighthead(s) you wish to change:


TO CYCLE THROUGH ALL PATTERNS: Apply + 12 VDC to the WHITE/GREEN wire for less than 1 second and release to cycle forward. Apply +12 VDC to the WHITE/GREEN wire for more than 1 second and release to cycle backward.
TO SET A PATTERN AS DEFAULT: When the pattern is displayed, allow it to run for more than 5 seconds. The lighthead will now display this pattern when active. TO RESET TO THE FACTORY DEFAULT PATTERN: Turn off power and apply +12 VDC to the WHITE/GREEN wire while turning power on. Use a normally open momentary switch to control Scan-Lock.

Available Flash Patterns:

1. SignalAlert ${ }^{\text {TM }} 75$ Alternating
2. SignalAlert ${ }^{\text {TM }} 75 \mathrm{In}$-Out
3. SignalAlert ${ }^{\text {TM }} 75$ Left-Right
4. SingleFlash 90 Alternating
5. SingleFlash 90 In -Out
6. SingleFlash 90 Left-Right
7. CometFlash® 75 Alternating
8. CometFlash® 75 In -Out
9. CometFlash® 75 Left-Right
10.SingleFlash 75 Alternating
10. SingleFlash 75 In -Out
11. SingleFlash 75 Left-Right

> 13. SingleFlash 150 Alternating 14. SingleFlash 150 In-Out 15. SingleFlash 150 Left-Right 16. DoubleFlash 75 Alternating 17. DoubleFlash 75 In-Out 18. DoubleFlash 75 Left-Right 19. ActionFlash ${ }^{T M}$ Alternating 20. ActionFlash ${ }^{T M}$ In-Out 21. ActionFlash ${ }^{T M}$ Left-Right $_{\text {22. ActionScan }{ }^{T M} \text { Alternating }}^{\text {23. ActionScan }{ }^{T M} \text { In-Out }}$ 24. ActionScan ${ }^{T M}$ Alternating.

## Brown: Hi/Low Power

The low power feature allows you to step the lightbar down to run in low power for night time use. Fuse this wire @ 1AMP. A single pole / single throw switch can be used to control Hi/Low power.
To activate Low power operation: Apply +12 VDC to the BROWN wire.
To restore regular power: Remove the BROWN wire from +12 VDC.

## White/Black: Take-Downs

Apply +12 VDC to the WHITE/BLACK wire to activate the take-downs. Fuse this wire @ 1AMP.

## Blue: Take-Down Flasher

Apply +12 VDC to the BLUE wire to cause the take-downs to flash. Fuse this wire @ 1AMP.

## White/Orange: Steady-burn option

Apply +12 VDC to the WHITE/ORANGE wire to activate the center steady-burn lighthead(s). Fuse this wire @ 1AMP.

## Orange: Flasher

Apply +12 VDC to the ORANGE wire and all of the lightheads that are activated will flash. Fuse this wire @ 1AMP.

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

IMPORTANT! Do not install product or route any wires in the deployment area of your air bag. (See air bag warning Pg. 1).

## IMPORTANT! The lightbar should be located a minimum of 16 " from any radio antennas!

Important note for Chevrolet Impalas:
When mounting to a Chevrolet Impala, the optical gasket must be installed. Failure to do so could result in reflected light within the passenger compartment.

## Installation / Full Bar:

When routing the wires, it is important to choose a path that will keep the wires away from excessive heat or any vehicle equipment that could compromise the integrity of the wires.

1. Locate and install the rubber window seal onto the lower, leading edge of the housing.
2. Using an appropriately sized Torx® head screwdriver, loosen the three screws securing the driver-side visor swivel bracket to the vehicle. Do not remove these screws.
3. Remove the screws securing the visor clip to the vehicle. Remove and retain the clip and all hardware.
4. Locate the driver-side mounting bracket (indicated with a "D" label). Orient bracket as shown.
5. Slide the mounting bracket fingers between the loosened swivel bracket and the headliner. The bracket fingers should straddle the inner section of the swivel bracket when properly oriented.
6. Position the keyed opening of the mounting bracket directly under the mounting location for the visor clip removed in step 2. With the bracket in this position, remount the visor clip in its original location using the original hardware. Firmly tighten any hardware loosened in this procedure.
7. Repeat this procedure for passenger-side



