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 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 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.

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. This product can expose you to chemicals including Methylene Chloride which is known to the State of California to cause cancer, and Bispheon 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.

A WARNING: This product requires the installer to have a good understanding of automotive electronics, systems and procedures.

- 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 the 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!

For warranty information regarding this product, visit www.whelen.com/warranty
Installation:
**IMPORTANT!** The lightbar should be located a minimum of 16” from any radio antennas!

**Stud Mounting:**
1. Insert the two supplied .312 X .75 Carriage Bolts into the Stud Mount Bracket. Loosely install them into the bracket using the supplied .312 Elastic Stop Nut and .312 Flat Washer.
2. Flip the lightbar over and slide the heads of the carriage bolts into the two tracks in the bottom of the lightbar extrusion. When they are in the position you want them, tighten the mounting hardware to secure the brackets to the extrusion. Repeat steps 1 and 2 for the other stud mounts you are installing.
3. Position the lightbar onto the vehicle and mark the mounting bolt locations onto the mounting surface.
4. Remove the lightbar and drill holes in the locations you marked off using a 5/16 drill bit.
5. Insert the carriage bolts into the mounting holes you drilled and secure the lightbar to the mounting surface with the supplied mounting hardware.

**Temporary Magnetic/Suction Cup Mounting**
**WARNING!** The use of any magnetically mounted warning device on the outside of a vehicle in motion is not recommended and is the sole risk and responsibility of the user.
Mount the magnetic/suction cup on a flat part of the roof.
**Magnetic/suction:** Thoroughly clean the proposed mounting surface prior to mounting. Wipe the suction cup clean, place the beacon onto its mounting surface and apply gentle pressure to ensure a good seal has been achieved.

**Permanent Mounting:**
**IMPORTANT!** The lightbar must be a minimum of 16” from any radio antennas.
**Caution:** Permanent mounting of this product will require drilling. It is absolutely necessary to make sure that no other vehicle components could be damaged by this process. Check both sides of the mounting surface before starting. If damage is likely, select a different mounting location.

1. Secure the mounting bracket to the mounting foot using the supplied mounting hardware. Leave the mounting hardware loose enough so you can slide the two heads of the carriage bolts into the tracks in the bottom of the lightbar base extrusion.
2. Install the mounting foot onto the lightbar extrusion by sliding the heads of the two carriage bolts you installed into the two tracks in the bottom of the extruded base (Fig. 1).
3. Slide the bracket to the outer end of the base extrusion and secure the bracket to the extrusion by tightening the elastic stop nuts. Repeat steps 1 - 3 for other side of lightbar.
4. Drill two holes in each mounting foot (Fig. 2) to accommodate the permanent mount hardware.
5. Position the lightbar onto the vehicle in its exact mounting location and mark the location of the mounting holes onto the surface of the roof using the mounting feet as templates.
6. Remove the lightbar and drill the 4 mounting holes.
7. Install the lightbar using the supplied 1/4 - 20 X 1-1/2” Socket Head Screw, 1/4” Internal Tooth Lock Washer and 1/4 - 20 X 7/16 Hex Nut.
Wiring and Operation:
Extend the control cable to your switch panel and make connections. Connect control cable to control head or switch box and fuse there. Applying +12VDC to a control wire will activate its function. BLK and WHT/BLK are ground wires. (Optional Alley/Take-down cable shown).

Cigar Plug: In models that feature a cigar plug, you can control Scan-Lock pattern selection and Power with the two switches located on the top of the plug.

Control Cable:
BLACK / Ground:
Connect the BLACK wire to ground.
WHT/BLK / Ground:
Connect the BLACK wire to ground.
RED / Front Outboards:
Apply +12VDC to the RED wire to activate the Front Outboards.
BLUE / Rear Outboards
Apply +12VDC to the BLUE wire to activate the Rear Outboards.
ORANGE / Front Inboards:
Apply +12VDC to ORG wire to activate the Front Inboards.
WHT/ORG / Rear Inboards:
Apply +12VDC to WHT/ORG wire to activate the Rear Inboards.
BROWN / Low Power:
The switch type used depends on how you wish Low Power to function:
Latching Mode: Apply +12 VDC to the BROWN wire for less than 1 sec. to “latch” the lightbar into Low Power. The unit must be turned off and then back on to restore normal operation. (Momentary Switch)
Level Mode: Apply +12 VDC to the BROWN wire for over 1 sec. to hold the lightbar in Low Power until voltage is removed. (Toggle Switch)

WHITE-GREEN / Scan-Lock™:
The WHT/GRN wire allows you to choose from available flash patterns. You must activate the function to select a pattern:
TO CYCLE THROUGH ALL PATTERNS:
To cycle forward apply +12 VDC to the WHT/GRN wire for less than 1 second and release.
To cycle backward apply +12 VDC to the WHT/GRN wire for more than 1 second and release.
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 activated.
TO RESET TO THE FACTORY DEFAULT PATTERN:
With power off, apply +12 VDC to WHT/GRN wire while turning power on.
Use a normally open momentary switch for Scan-Lock operation.
Available Flash Patterns: ECE DoubleFlash (default pattern)
ECE SingleFlash
MOUNTING OPTIONS

PERMANENT

MAG MOUNT

VACUUM MOUNT

STUD MOUNT

LIGHTHEAD KEY

6 LED DIRECTIONAL

12 LED DIRECTIONAL

6 LED CORNER - AMB

6 LED CORNER - AMB

6 LED DIRECTIONAL

TD/ALLEY FILLER

Page 4