

WHELEN[®]

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Installation Guide: Guardian™ Lightbar with Beacons G5 Series

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.

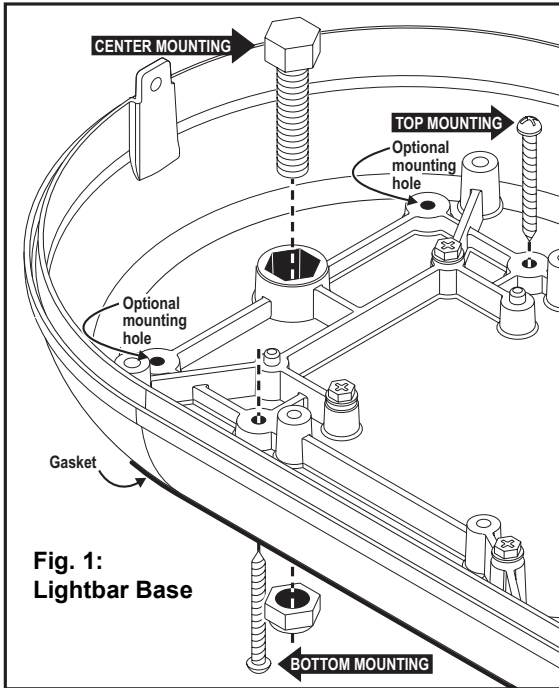
- Proper installation of this product requires the installer to have a good understanding of automotive electronics, systems and procedures.
- If mounting this product requires drilling holes, the installer **MUST** be sure that no vehicle components or other vital parts could be damaged by the drilling process. Check both sides of the mounting surface before drilling begins. Also de-burr any 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.
- If this product uses a remote device to activate or control this product, make sure that this control is located in an area that allows both the vehicle and the control 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

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

Installation:

- Since this installation will require drilling, it is absolutely necessary to make sure that no other vehicle components will be damaged in the process. Check both sides of the mounting surface before starting and if damage is possible, select a different mounting location.
- Always deburr all holes and remove any metal filings from the vehicle.



**Fig. 1:
Lightbar Base**

Top Mount:

1. Remove the 2 screws at each end of the lightbar that secure the dome to the base and remove the dome.
2. With a 3/16" drill bit, drill out the 4 mounting bosses in the base for clearance holes for #8 sheet metal screws (Figs. 1 & 2).
3. Be sure the mounting area is relatively flat. Using the lightbar base as a template, scribe the 4 mounting hole locations onto the mounting surface.
4. Mark the wire access hole located right behind the lightbar.
5. Drill the mounting holes you marked off in step 3 with a #29 drill bit and the wire access hole with a 3/8" drill bit.
6. Install a 3/8" rubber grommet in the wire access hole and route the wires through, then apply a silicone sealing compound around the wires and grommet.
7. Carefully position the lightbar over the mounting holes and secure the lightbar to the mounting surface using the #8 sheet metal screws supplied.
8. Replace the dome with the 2 screws removed in step 1.
9. Wire the Guardian™ as shown in Fig. 3.

Bottom Mount

1. Be sure the mounting area is relatively flat. Using the information in figure 2 scribe the 4 mounting hole locations onto the mounting surface.
2. Mark off the wire access hole, located right behind the lightbar.
3. Drill the mounting holes you marked off in step 1 with a 3/16" drill bit and the wire access hole with a 3/8" drill bit.
4. Install a 3/8" rubber grommet in the wire access hole and route the wires through, then apply a silicone sealing compound around the wires and grommet.
5. Carefully position the lightbar over the mounting holes and secure the lightbar to the mounting surface using the #8 sheet metal screws supplied.
6. Wire the Guardian™ as shown in Fig. 3.

Center Mount: Optional

1. Be sure the mounting area is relatively flat. Using the information in figure 2 scribe the 2 mounting hole locations onto the mounting surface.
2. Mark off the wire access hole, located right behind the lightbar.
3. Drill the 2 mounting holes using an 11/32 drill bit and the wire access hole using a 3/8" drill bit.
4. Tighten each locknut onto its bolt to draw the bolt head into the base then remove the locknuts.
5. Align the bolts with the 2 mounting holes you drilled and position the lighthouse onto the mounting surface.
6. Install a 3/8" rubber grommet in the wire access hole and route the wires through, then apply a silicone sealing compound around the wires and grommet.
7. Secure the lightbar with the locknuts.
8. Wire the Guardian™ as shown in Fig. 3.

Temporary Mount (Magnetic, Suction Cup, etc.)

WARNING! The presence of any temporarily mounted warning light on the outside of a vehicle in motion is not recommended and is at the sole discretion and liability of the user!

Thoroughly clean the proposed mounting surface prior to mounting. For suction cup mounting, wipe the suction cup clean, place the Guardian onto its mounting surface and apply gentle pressure to ensure a good seal has been achieved. The Magnetic/Suction Cups mount the same way as standard suction cups but are best suited to a flat, steel surface.

IMPORTANT! Guardian models equipped with cigar cords are intended for short duration, intermittent operation only! Prolonged operation requires the Guardian to be wired to the vehicle as shown in Fig. 3.

If converting a cigar cord model to permanent wiring, the smooth side of the cigar cord is positive (+). See Fig. 3 for wiring information.

Fig. 2:
Mounting Holes

WIRE EXIT ● HOLE HERE

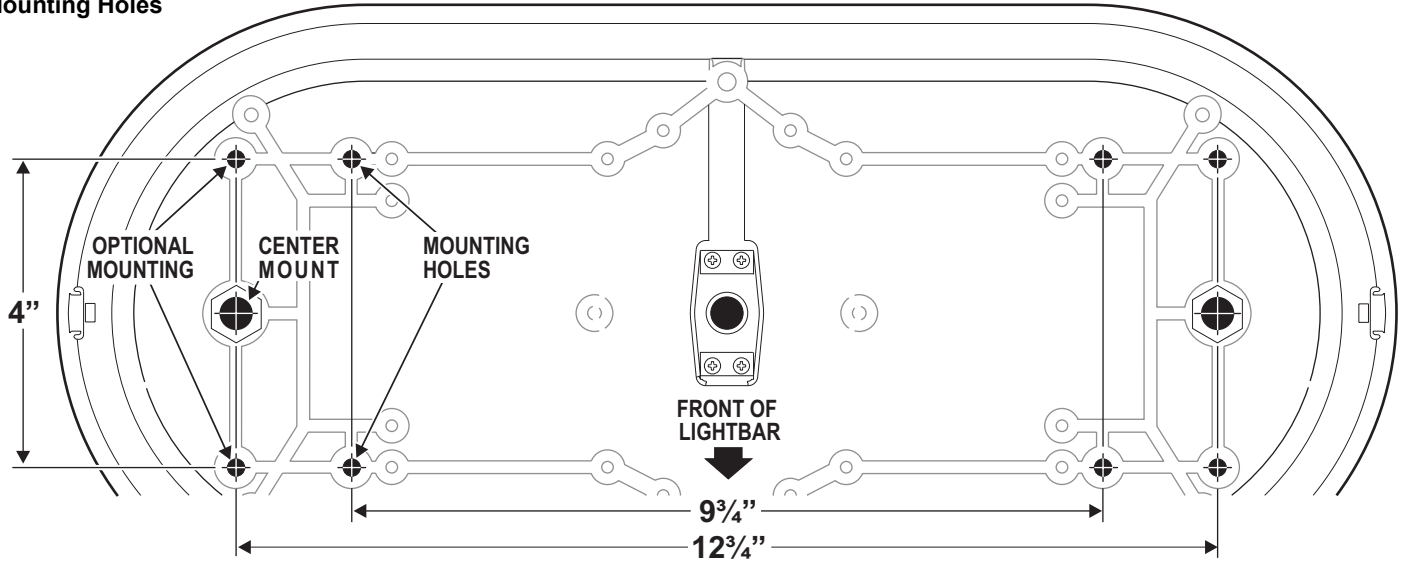
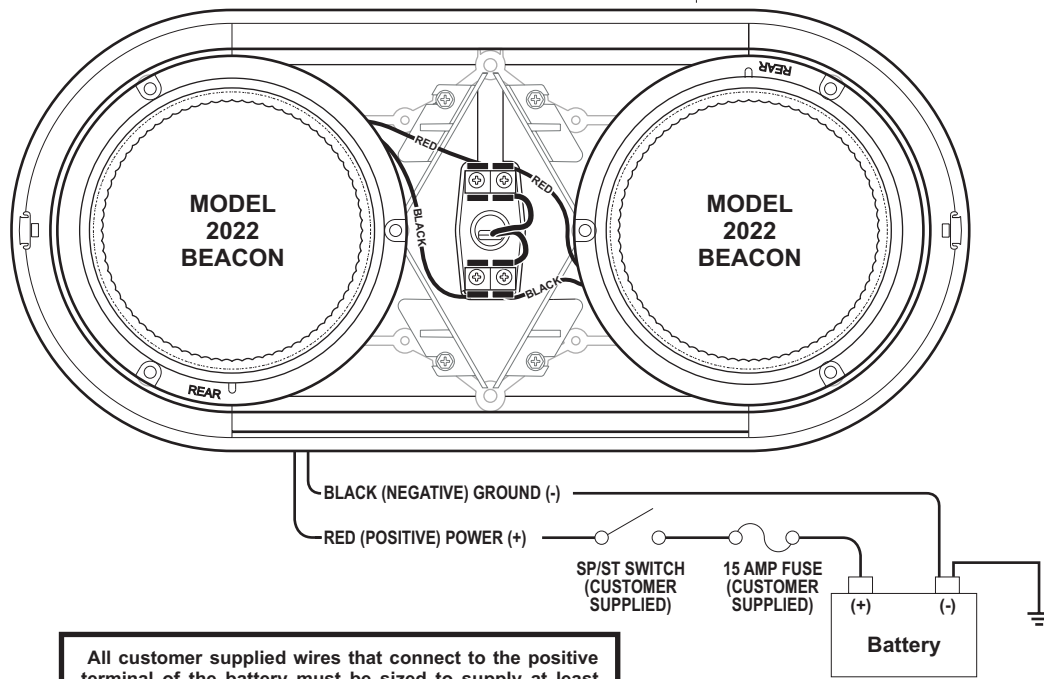


Fig. 3:
Wiring

INTERNAL WIRING / TWO 360° 2022 SERIES STROBE BEACONS / 2 DIAMOND MIRRORS



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!

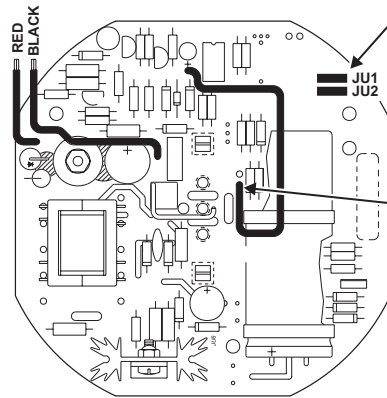
The 2022 Beacon:

The 2022 beacon used in the Guardian™ has a choice of 4 flash patterns and a Hi/Low power feature. Enabling either or both of these features requires disassembly of the beacon(s) (Fig. 4).

Refer to the wiring diagram on Page 3 for fusing and connectivity information.

FLASH PATTERN	JU1	JU2
QuintFlash™	IN	IN
DoubleFlash	IN	CUT
RapidRandom	CUT	IN
ActionFlash™	CUT	CUT

Fig. 5:
Power Supply Assembly
(Component Side)

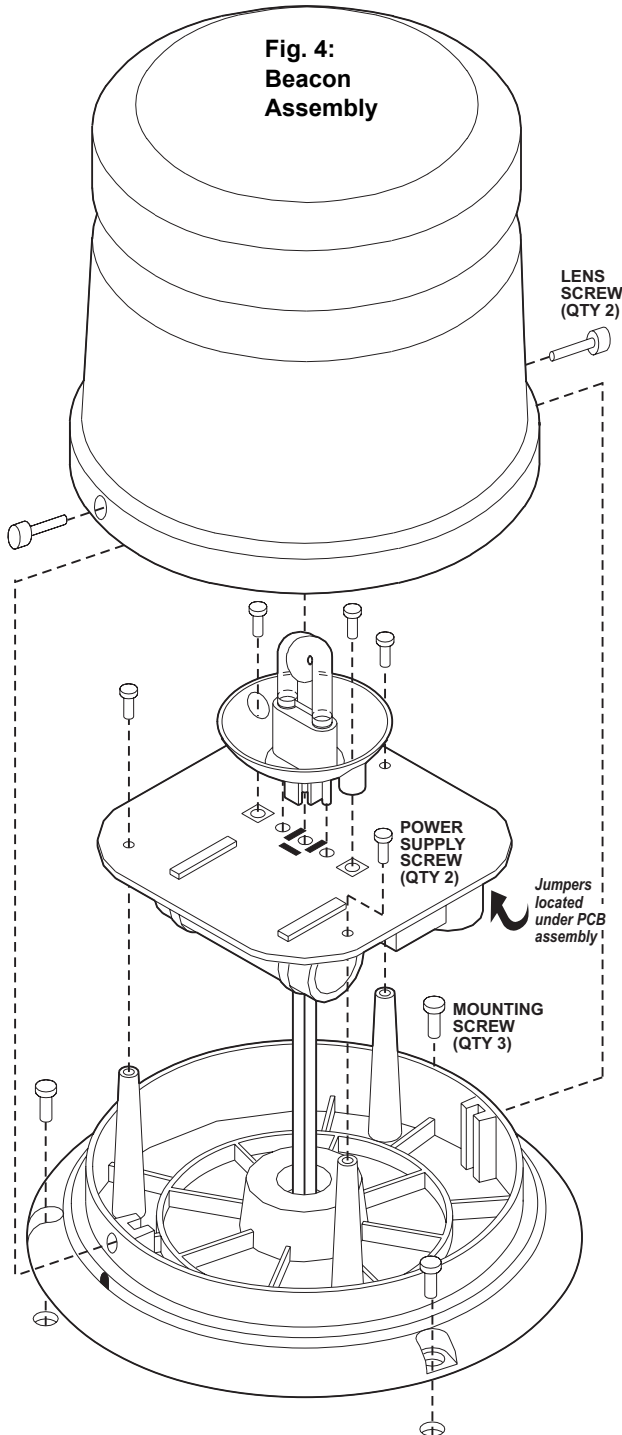


JUMPER OPTIONS

To achieve any one of the 4 flash patterns listed in the above chart, you must either cut-out or leave-in one, two, both or neither of the two jumpers. If you do not touch the jumpers the unit will run in QuintFlash.

HI/LOW PATTERN

If you wish to control High or Low Power externally, cut the Violet wire off at this point and exit it with black and red wires. If you ground this wire you will go to high power. You will most likely want to install a switch so you can switch back and forth from high to low.



Flash Patterns and Hi/Low Feature:

WARNING! The strobe power supply is a high voltage device. Do not remove flash tubes or dismantle strobe light head assembly while in operation. Wait 10 minutes after turning power off before starting work or trouble shooting.

1. Remove the 2 screws at each end of the lightbar that secure the dome to the base and remove the dome.
2. Remove the beacons lens screws and remove the lens. If your beacon is equipped with diamond mirrors, to gain access to the beacon lens screws you may have to first remove the mirrors.

Note: If the edge of the base interferes with the screwdrivers access to the lens screw, you may have to remove the 3 mounting screws holding the beacon to the base and lift the beacon.

3. Remove the 3 screws that hold down the beacon power supply and carefully lift the power supply out of the beacon just enough to gain access to the bottom or component side.
4. Follow the instructions in Figure 5 then reinstall the power supply and replace the lens and mirrors if you removed them.
5. Replace the lightbar dome and the operation is finished.

Flash Tube Replacement:

1. First follow steps 1 & 2 above then remove the 2 screws that hold down the flash tube and pull the flash tube out of the beacon.
2. Install the new flash tube making sure to align the 3 prongs on the flash tube with the 3 slots in the power supply (Fig. 4).
3. Secure the new flash tube with its screws and reassemble the beacon and lightbar.