

WHELEN[®]

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Installation Guide:
Guardian™ Lightbar
Model(s): G9PA, G9PB, G9PR

Automotive: Lightbars

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

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 another mounting location.

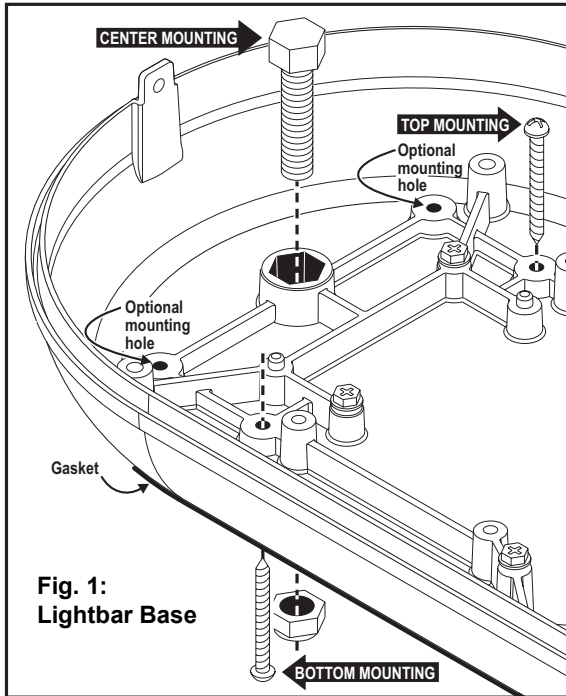


Fig. 1:
Lightbar Base

Mounting:

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

NOTE: Some mounting styles will require the removal of internal assemblies. Be sure to return all components to their original mounted condition prior to putting this product into service.

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 (Fig. 1).
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 off 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. Remount the dome using the 2 screws removed in step 1.

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.

Center Mount

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 lighthead 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.

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. If converting a cigar cord model to permanent, the smooth side of the cigar cord is positive.

Operation:

Scan-Lock™ (white-violet)

TO CHANGE PATTERNS: To cycle forward to the next available pattern, apply +12 volts to the WHT-VIO wire for less than 1 second and release. **To cycle back to the previous pattern** apply +12 volts to the WHT-VIO wire for more than 1 second and release.

TO CHANGE THE DEFAULT PATTERN: When the desired pattern is displayed, allow it to run for more than 5 seconds. The lightbar will now display this pattern when initially activated.

TO RESTORE THE FACTORY DEFAULT PATTERN: With the power to the lightbar off, apply +12 volts to the WHT-VIO wire. Now turn power to the lightbar on. The factory default pattern should now be displayed.

A Normally Open momentary switch can be used to control Scan-Lock™.

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!

Sync:

To SYNC two lightbars, configure both lightbars to display the same flash pattern. With the power off, connect the GREY wire from each lightbar together. When the lightbars are activated, their patterns will be synchronized. Only the flash patterns designated for SYNC in the flash pattern list may be used.

NOTE: SEE NEXT PAGE FOR FLASH PATTERNS AND WIRING DIAGRAM.

Hi/Low Power:

Allows user to step the unit down to low power for nighttime use.

Latching Mode: By applying +VBAT to the VIOLET wire for less than 1 second, the lightbar is "latched" into low power. The unit must be turned off and then back on to restore normal operation (Momentary switch).

Level Mode: Applying +VBAT to the VIOLET wire for more than 1 second holds the lightbar in low power mode until voltage is removed (Toggle switch).

Pattern Override: Applying +VBAT to the ORANGE wire while lightheads are activated, will change the flash pattern to whatever pattern override is programmed for. To program the flash pattern activate the lightbar then activate pattern override by applying +VBAT to the ORANGE wire and select a flash pattern using Scan-Lock™.

IMPORTANT WARNING!

CAUTION! DO NOT LOOK DIRECTLY AT THESE LEDS WHILE THEY ARE ON. MOMENTARY BLINDNESS AND/OR EYE DAMAGE COULD RESULT!

Available Flash Patterns:

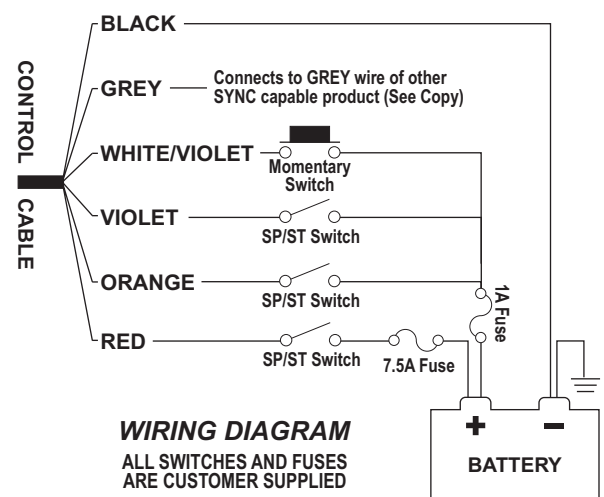
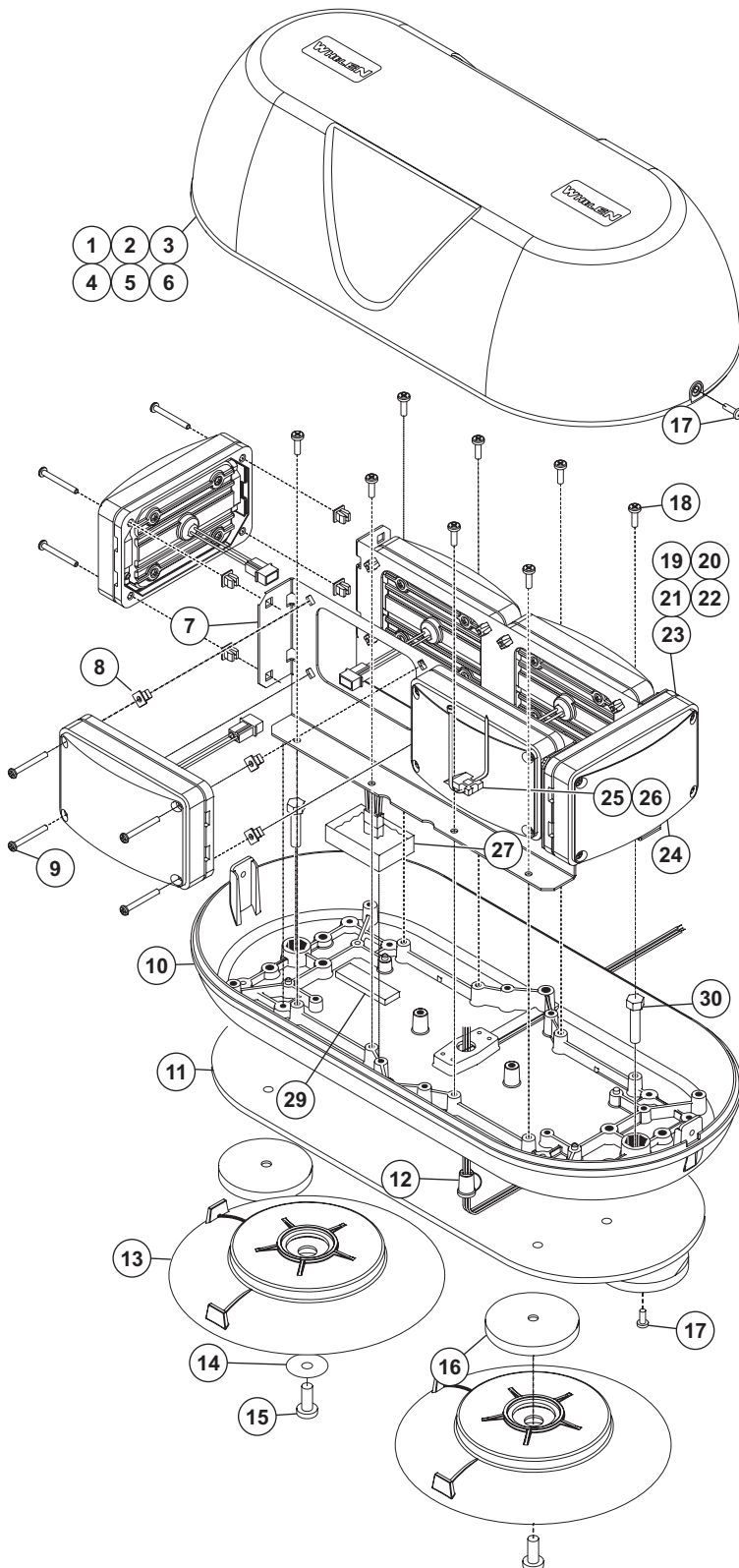
1. ActionScan™
2. SignalAlert™ ALT
3. SignalAlert (Sim)
4. SignalAlert (Alt/Sim)
5. CometFlash® (Alt)
6. CometFlash (Sim)
7. CometFlash (Alt-Sim)
8. DoubleFlash 75 (Alt)
9. DoubleFlash 75 (Sim)
10. DoubleFlash 75 (Alt-Sim)
11. SingleFlash 75 (Alt)

12. SingleFlash 75 (Sim)
13. SingleFlash 75 (Alt-Sim)
14. LongBurst™ (Alt)
15. LongBurst (Sim)
16. LongBurst (Alt-Sim)
17. SingleFlash 60 (Alt) CA
18. SingleFlash. 60 (Sim) CA
19. SingleFl. 60 (Alt-Sim) CA
20. SingleFlash 90 (Alt) CA
21. SingleFlash 90 (Sim) CA
22. SingleFl. 90 (Alt-Sim) CA
- *23. SingleFlash 120 (Alt) CA

- *24. SingleFlash 120 (Sim) CA
25. SingleFl. 120(Alt-Sim) CA
- *26. SingleFlash 300 (Alt)
- *27. SingleFlash 300 (Sim)
28. SingleFlash 300 (Alt-Sim)
- *29. MicroBurst™ (Alt)
- *30. MicroBurst (Sim)
31. MicroBurst (Alt-Sim)
- *32. ActionFlash™ (Alt)
- *33. ActionFlash (Sim)
34. ActionFlash (Alt-Sim)
- *35. PingPong™ (Alt)

- *36. PingPong (Sim)
37. FlimFlam (Alt.)
38. ModuFlash™ (Alt)
39. ModuFlash (Sim)
40. Steady 5%
41. Steady 1%
42. Steady 4%
43. Steady 8%
44. Steady 12%
45. Steady 40%
46. InOut
47. Sweep

48. LongBurst Sweep
 49. InOut Blast
 50. Sequence On/Off
 51. ZigZag
 52. Rotator 90
 53. Rotator 120
 54. Rotator 150
 55. Rotator 250
- CA = Calif. Title XIII Compliant
 Alt = Alternating
 Sim = Simultaneous
 Alt-Sim = Alternating-Simultaneous
 * = SYNC



| QTY | QTY | QTY | ITEM | PART NUMBER | DESCRIPTION |
|-----|-----|-----|------|---------------|---|
| | | * | | 01-0684656__ | GUARDIAN™ / 400 LIN LED 12VDC PERM |
| | | * | | 01-0684656__ | GUARDIAN™ / 400 LIN LED 12VDC MAG |
| | | * | | 01-0684656__ | GUARDIAN™ / 400 LIN LED 12VDC MAG/SUCT. |
| A/R | A/R | A/R | 1 | 68-4983857-10 | DOME, AMB NON OPTIC GUARDIAN |
| A/R | A/R | A/R | 2 | 68-4983857-20 | DOME, BLU NON OPTIC GUARDIAN |
| A/R | A/R | A/R | 3 | 68-4983857-30 | DOME, CLR NON OPTIC GUARDIAN |
| A/R | A/R | A/R | 4 | 68-4983857-40 | DOME, GRN NON OPTIC GUARDIAN |
| A/R | A/R | A/R | 5 | 68-4983857-50 | DOME, RED NON OPTIC GUARDIAN |
| A/R | A/R | A/R | 6 | 68-4983857-V0 | DOME, VIO NON OPTIC GUARDIAN |
| 2 | 2 | 2 | 7 | 07-284655-000 | BRACKET, 400 HYBRID MOUNTING |
| 24 | 24 | 24 | 8 | 13-062C40-16J | SCREW GROMMET #6 #8 FASTEX |
| 24 | 24 | 24 | 9 | 15-06541A-200 | SCREW, #6 X 1 1/4 PPH PLASTI-LOK |
| 1 | 1 | 1 | 10 | 11-383856-000 | BASE, GUARDIAN FAMILY |
| 1 | 1 | 1 | 11 | 38-0163610-00 | GASKET, BASE |
| 1 | 1 | 1 | 12 | 21-47001603-0 | STRAIN RELIEF, 1/2", SPT-2 HPN 16/2, BLK NYLON, 94V-2 |
| 2 | - | - | 13 | 08-1583927-05 | SUCTION CUP, MAG./SUCTION CUP MT |
| 2 | - | - | 14 | 16-1302820-06 | WASHER, FLAT 1/4" 7/8" O.D. |
| 2 | - | - | 15 | 15-211416-128 | SCREW, 14 X 3/4" PPHSMS TYPE A, O-RING |
| - | 4 | - | 16 | 65-0010191-00 | MAGNET, X-50 |
| 2 | 6 | 2 | 17 | 15-081416-080 | SCREW #8 X 1/2" PPHSMS |
| 8 | 8 | 8 | 18 | 15-081916-066 | SCREW #8 X 3/8" PHEXWASHHD |
| A/R | A/R | A/R | 19 | 01-026B569212 | SUB ASSY, 400 LINEAR TIR AMB 2 WIRE |
| A/R | A/R | A/R | 20 | 01-026B569222 | SUB ASSY, 400 LINEAR TIR BLU 2 WIRE |
| A/R | A/R | A/R | 21 | 01-026B569232 | SUB ASSY, 400 LINEAR TIR WHT 2 WIRE |
| A/R | A/R | A/R | 22 | 01-026B569242 | SUB ASSY, 400 LINEAR TIR GRN 2 WIRE |
| A/R | A/R | A/R | 23 | 01-026B569252 | SUB ASSY, 400 LINEAR TIR RED 2 WIRE |
| 6 | 6 | 6 | 24 | 68-1183304-30 | LENS, CLEAR/OPTIC 43 HALOGEN |
| 1 | 1 | 1 | 25 | 26-2015976-00 | CABLE TIE, MT BASE W/ADHESIVE not shown |
| 1 | 1 | 1 | 26 | 26-0215001-06 | TY WRAP 6" BLACK not shown |
| 1 | 1 | 1 | 27 | 01-026A213-00 | ELECT 6 CHANNEL FLASHER |
| 1 | 1 | 1 | 28 | 10-0543418__ | LABEL, P/N M/N S/N |
| 1 | 1 | 1 | 29 | 66-0421074-00 | TAPE, DOUBLE-SIDED VHB |
| - | - | 1 | 30 | 01-0442961-00 | KIT, PERM MOUNT, GUARDIAN |
| 1 | 1 | 1 | 31 | 46-076A239-00 | HARNESS OUTPUT 6 CHANNEL not shown |
| 1 | 1 | - | 32 | 39-0402023-04 | HOUSING, 2 POS SCKT HOUSING |
| 1 | 1 | - | 34 | 02-0246315-01 | CIG. PLUG, 18 GA 10" ON/OFF SWTCH 8A FUSE |
| A/R | A/R | A/R | 35 | 26-0215001-03 | TY WRAP 3" BLACK |
| - | - | 1 | 36 | 46-076A219-00 | ASSY, HARNESS INPUT |

P/N KEY: 01-0684656

| | | | |
|-----------|------------------|-----------|-----------|
| MOUNT | OUTER DOME COLOR | LED COLOR | MOUNT |
| A - AMBER | G - GREEN | 1 - AMBER | P - PERM |
| B - BLUE | R - RED | 2 - BLUE | M - MAG. |
| C - CLEAR | V - VIOLET | 3 - WHITE | V - MAG./ |
| | | 4 - GREEN | SUCTION |
| | | 5 - RED | |