



**Installation Guide:  
LED Lightbar  
Model(s) 76983, 76993**

## ***Safety First***

This document provides all the necessary information to allow your Grote® 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 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 magnets or any other temporary mounting style, 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 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 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!**

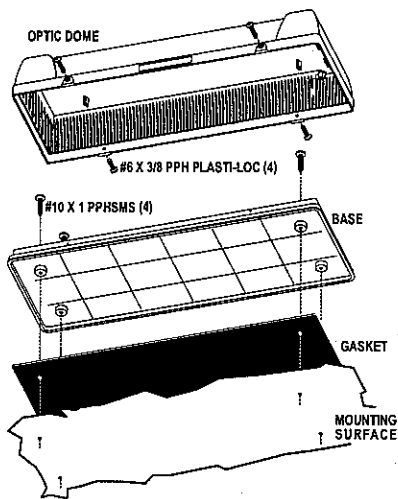
## Permanent Mounting:

Check to see that no vehicle components will interfere with the selected mounting location. If you are installing the lightbar on the roof you will need to remove the headliner from the vehicle. There may be a roof support member that runs from the drivers to the passengers side of the vehicle. *Do not drill through this member.*

**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.

**IMPORTANT!** It is the responsibility of the installation technician to make sure that the installation and operation of this product will not interfere with or compromise the operation or efficiency of any vehicle equipment!

1. Check to make sure that no vehicle components will interfere with the selected mounting location of this unit.
2. Remove the outer lens by unscrewing the four Phillips Pan Head screws. Position the lightbar on the mounting location. Using an awl or other suitable tool, scribe the mounting surface where the mounting holes are to be drilled.
3. Drill the mounting holes in the areas scribed in step two using a #16 drill bit.
4. Secure the lightbar to the mounting location with the supplied #10 x 1" sheet metal screws and remount the lens in its original location.



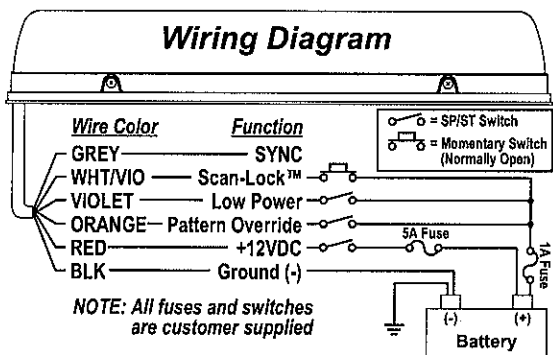
## Temporary Magnetic Mount:

**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.

Clean the mounting surface with a 50/50 mix of isopropyl alcohol and water and dry thoroughly. Place the lightbar onto the mounting surface. Note that all four magnets should be in full contact with this surface. Plug the cigar adaptor power cord into the vehicle cigar lighter.

## Wiring (permanent mount only):

**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 the load. **DO NOT USE CIRCUIT BREAKERS WITH THIS PRODUCT!**



### IMPORTANT WARNING!

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

## Scan-Lock™ / Flash Pattern Selection:

- BLACK - Ground**..... Extend wire to Chassis Ground.
- RED - Main Power**..... Extend wire to an SP/ST switch and then to the POSITIVE battery terminal. *Fuse at 5 Amps.*
- VIOLET - Low Power**..... Extend wire to a switch and then to +12VDC (for switch type see "High-Low Power"). *Fuse at 1 Amp.*
- WHT/VIO - Scan-Lock™**..... Extend this wire to a momentary switch and then to +12VDC. *Fuse at 1 Amp.*
- GREY - SYNC**..... Extend this wire to the SYNC wire of another SYNC-capable lightbar.
- ORANGE - Pattern Override**..... Extend wire to an SP/ST switch and then to +12VDC. *Fuse at 1 Amp.*

**TO CHANGE PATTERNS:** To cycle forward to the next pattern apply +12 volts to the WHITE/VIOLET wire for less than 1 second and release. To cycle back to the previous pattern apply +12 volts to the WHITE/VIOLET 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 lighthead will now display this pattern when initially activated.

**TO RESTORE THE FACTORY DEFAULT PATTERN:** With the power to the lighthead off, apply +12 volts to the WHITE/VIOLET wire. Now turn power to the lighthead on. The factory default pattern will be displayed.

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

## Flash Patterns:

- |                               |                               |                      |
|-------------------------------|-------------------------------|----------------------|
| 1. ActionScan™                | 19. SingleFlash 60 Alt.-Sim.* | 37. ModuFlash™ Alt.  |
| 2. SignalAlert™ Alt.          | 20. SingleFlash 90 Alt.*      | 38. ModuFlash™ Sim.  |
| 3. SignalAlert™ Sim.          | 21. SingleFlash 90 Sim.*      | 39. Steady (0.5%)    |
| 4. SignalAlert™ Alt.-Sim      | 22. SingleFlash 90 Alt.-Sim.* | 40. Steady (0.75%)   |
| 5. CometFlash® Alt.           | 23. SingleFlash 120 Alt.*     | 41. Steady (1%)      |
| 6. CometFlash® Sim.           | 24. SingleFlash 120 Sim.*     | 42. Steady (2%)      |
| 7. CometFlash® Alt.-Sim.      | 25. SingleFlash120 Alt.-Sim.* | 43. Steady (7%)      |
| 8. DoubleFlash 75 Alt.        | 26. SingleFlash 300 Alt.      | 44. Steady (40%)     |
| 9. DoubleFlash 75 Sim.        | 27. SingleFlash 300 Sim.      | 45. In-Out           |
| 10. DoubleFlash 75 Alt.-Sim.  | 28. SingleFlash 300 Alt.-Sim. | 46. Sweep            |
| 11. SingleFlash 75 Alt.*      | 29. MicroBurst™ Alt.          | 47. Longburst™ Sweep |
| 12. SingleFlash 75 Sim.*      | 30. MicroBurst™ Sim.          | 48. In-Out Blast     |
| 13. SingleFlash 75 Alt.-Sim.* | 31. MicroBurst™ Alt.-Sim.     | 49. Seq On-Off       |
| 14. LongBurst™ Alt.           | 32. ActionFlash™ Alt.         | 50. Zig-Zag          |
| 15. LongBurst™ Sim.           | 33. ActionFlash™ Sim.         | 51. Rotator 90       |
| 16. LongBurst™ Alt.-Sim.      | 34. ActionFlash™ Alt.-Sim.    | 52. Rotator 120      |
| 17. SingleFlash 60 Alt.*      | 35. PingPong                  | 53. Rotator 150      |
| 18. SingleFlash 60 Sim.*      | 36. FilmFlam                  | 54. Rotator 250      |

\* = California Title XIII Compliant Alt = Alternating Sim = Simultaneous

## 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.

SYNC-compatible patterns are shown in **BOLD** typeface

## Hi/Low Power:

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

**Latching Mode:** By applying positive voltage 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 high power operation (*Momentary switch*).

**Level Mode:** Applying positive voltage 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 +12 volts 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 +12 volts to the ORANGE wire and select a flash pattern using Scan-Lock™.

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