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Safety First

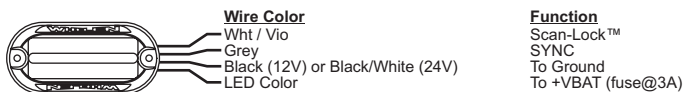
This document provides all the necessary information to allow your Whelen product to be properly and safely installed. Before beginning the installation and/or operation of your new product, the installation technician and operator must read this manual completely. Important information is contained 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.
- 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.
- 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.
- 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 high-intensity LEDs. 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.
- **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!**
- Failure to follow these precautions and instructions could result in damage to the product or vehicle and/or serious injury to you and your passengers!

Mounting

1. Place the unit against the mounting surface and mark the two mounting hole locations. Confirm that no vehicle parts could be damaged by the drilling process.
2. Using a #30 drill bit, drill two mounting holes. A 1/2" dia. wire passage hole must also be drilled. Thoroughly de-burr all holes.
3. Route the wires through the hole in the gasket and through the wire passage hole. Secure the lighthead to the mounting surface using the hardware provided.

Wiring



Operation

Scan-Lock™ (WHT/VIO) - To advance to the next pattern, apply +VDC to the WHT/VIO wire for less than 1 second. To cycle backwards, apply +VDC for more than 1 second. To reset to the factory default pattern, turn off power to the lighthead. While applying +VDC to the WHT/VIO, turn the lighthead back on. Continue to apply voltage for 5 seconds.

Lightheads configured to display the Phase 1 mode of a pattern will flash simultaneously. Any lightheads configured to display the Phase 2 mode will alternate with any Phase 1 lightheads with the same pattern.

Sync (GREY) - To sync two lightheads, configure both lightheads to display the same Phase 1 pattern. With the power off, connect the GREY wires from each lighthead together. When the lightheads are activated, their patterns will be synchronized. To configure the two lightheads to alternate their patterns, advance the pattern of either lighthead to the Phase 2 mode of the current pattern. The same concept applies to Phases 3 & 4.

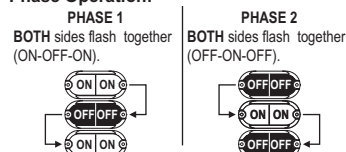
To understand how to use the sync feature with more than two lightheads, the principles will be applied to a sample system consisting of 4 lightheads with 2 mounted on the rear, driver-side and 2 mounted on the rear, passenger-side. With all the wiring complete, turn on all 4 lightheads. As shipped from factory, the lightheads will all display SignalAlert™ 75 - Phase 1. To configure one side to alternate with the other side, change the pattern for either the passenger or driver side to Phase 2 mode for that pattern.

IMPORTANT! SYNC-capable LED lightheads can be SYNCed to a SYNC-capable strobe power supply (such as the CS240S or UPS64LXA) by wiring their GREY wires together. When connected, LED lightheads in Phase 1 of a pattern will flash **simultaneously** with strobe lightheads connected to the GREEN wire outputs. LED lightheads set to Phase 2 of a pattern will **alternate** with strobe lightheads connected to the WHITE wire outputs. GREEN wire outputs always alternate with WHITE wire outputs.

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

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

Phase Operation:



Note:
Phases 1 & 2 are visually indistinguishable.

Flash Patterns:

NOTE: **BOLD** = California Title XIII Compliant Pattern *Italic* = SYNC Pattern

PH 1 = Phase 1 PH 2 = Phase 2

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|--------------------------|-------------|
| 1. SignalAlert™ 75 | PH 1 |
| 2. SignalAlert 75 | PH 2 |
| 3. CometFlash® 75 | PH 1 |
| 4. CometFlash 75 | PH 2 |
| 5. DoubleFlash 75 | PH 1 |
| 6. DoubleFlash 75 | PH 2 |
| 7. SingleFlash 75 | PH 1 |
| 8. SingleFlash 75 | PH 2 |
| 9. ComAlert™ 75 | PH 1 |
| 10. ComAlert 75 | PH 2 |
| 11. LongBurst™ 75 | PH 1 |
| 12. LongBurst 75 | PH 2 |
| 13. PingPong™ 75 | PH 1 |
| 14. PingPong 75 | PH 2 |
| 15. SingleFlash 60 | |
| 16. SingleFlash 90 | |
| 17. SingleFlash 120 | |
| 18. SingleFlash 300 | |
| 19. DoubleFlash 150 | |
| 20. ComAlert™ 150 | |
| 21. ActionFlash™ 50 | |
| 22. ActionFlash™ 150 | |
| 23. ModuFlash™ | |
| 24. ActionScan™ | |
| 25. Steady | |