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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.
- 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. 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 maximum 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 NEG (-) 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 high-intensity LEDs. Do not stare directly into these lights. Momentary blindness and/or eye damage could result.
- **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!

This product is designed for use with 12 volt LED lighthead. Do not exceed 5 amps total current draw for each channel.

**Mounting:** Position flasher onto proposed mounting surface and secure using the hardware provided. Do not mount near water or extreme heat.

**Wiring:** See wiring diagram. All fuses and switches are customer supplied.

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!**

**Low Power (Item 2):** Allows user to step the unit down to low power for nighttime use.

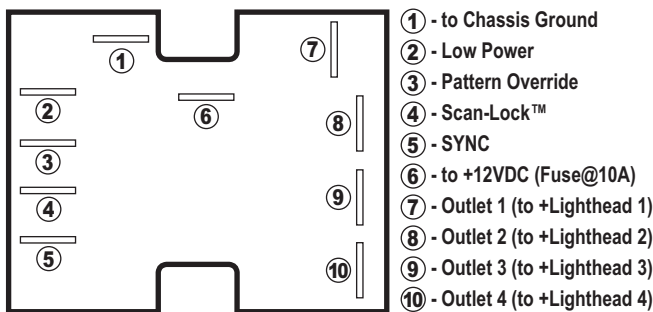
**Latching Mode** - By applying positive voltage to the Low Power wire for less than 1 second, the lighthead is "latched" into low power. The unit must be turned off and then back on to restore normal high power operation (a momentary switch is preferred).

**Level Mode** - Applying positive voltage to the Low Power wire for more than 1 second holds the lighthead in low power mode until voltage is removed (a toggle switch is preferred).

**Pattern Override (Item 3):** Applying +12 volts to the pattern override wire while lighthead are activated will change the flash pattern to whatever pattern override is programmed for. To program the flash pattern activate pattern override and select a flash pattern using Scan-Lock™.

**Scan-Lock™ Pattern Selection (Item 4):**

**TO CHANGE PATTERNS:** With the light activated: To cycle forward to the next pattern apply +12VDC to the Scan-Lock wire for less than 1 second and release. To cycle back to the previous pattern apply +12 volts to the Scan-Lock 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 power to the lighthead off, apply +12 volts to the Scan-Lock wire then turn power to the lighthead on. The factory default pattern should now be displayed (a normally open momentary switch is recommended).

**Scan-Lock will cycle through the pattern phases for each flash pattern (Alternating, Alt. Progressive, Simultaneous and Alt. Simultaneous).**

**Sync (Item 5):** Multiple flashers may be SYNC'd by connecting their respective SYNC terminals. This will allow lighthead from each flasher to display SYNC-patterns (1 thru 20; Phases A & C *only*) identically to those from the other flasher(s).

Additional SYNC-capable lighthead(s) may also be connected to the SYNC terminal. The lighthead(s) should be configured to display Phase 1 of the pattern the flasher is configured for. For example; if the flasher is configured to pattern 1-A (SignalAlert™-Alternating), the additional lighthead(s) pattern should be set to SignalAlert-Phase 1. When active, Outlets 1&2 will alternate with outlets 3&4 + the additional lighthead(s).

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

**WARNING!** Do not look directly at LED lights while active. Momentary blindness and/or eye damage could result!

PATTERN PHASES	FLASH PATTERNS	
A - Alternating Outlets 1 & 2 alt. with 3 & 4	1-4 SignalAlert™ / SYNC	44-46 PingPong™ (2) 47-48 FlimFlam (3) 49 ZigZag (4) 50-51 ModuFlash™ (3) 52 Rotator 90 53 Rotator 120 54 Rotator 150 55 Rotator 250 56-61 Steady (5) 62 ActionScan™ (4)
	5-8 CometFlash® / SYNC	
	9-12 DoubleFlash 75 / SYNC	
B - Alt (Progressive) Outlet 1 alt. with 4; 2 alt. with 3	13-16 SingleFlash 75 / SYNC(1)	Only phases A and C are Synchronous
	17-20 LongBurst™ / SYNC	
	21-24 SingleFlash 60 (1)	
C - Simultaneous All outlets flash Simultaneously	25-28 SingleFlash 90 (1)	
	29-32 SingleFlash 120 (1)	
	33-36 SingleFlash 240	
D - Alt.-Sim. 3 cycles of A then 3 cycles of C	37-40 MicroBurst™	
	41-43 ActionFlash™ (2)	
	1 = Calif. Title XIII compliant 2 = Phases A,B & C only 3 = Phases A & B only 4 = Varying phase sequence 5 = Six intensity levels	