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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.
- Whelen Engineering requires the use of waterproof butt splices and/or connectors if that connector could be exposed to moisture.
- Failure to use specified installation parts and/or hardware will void the product warranty!
- 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.
- 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.
- Waterproof butt splices and/or connectors are required if that connection could be exposed to moisture. Any unused wires must be sealed (waterproofed) to prevent moisture infiltration.
- **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 Instructions:

1. Using the mounting dimensions shown, mark the mounting and wire hole locations onto the proposed mounting surface.
2. Drill two mounting holes (sized for #6 sheet metal screws and the mounting surface thickness) and a .875" wire passage hole into the mounting surface. De-burr wire passage hole before proceeding.
3. Route the lighthouse wires through the wire passage hole. Position the T-Series™ onto its mounting location.
4. Insert the two supplied #6 sheet metal screws through the T-Series™ mounting holes and into the mounting surface. Tighten the mounting screws until the lighthouse assembly is drawn firmly against the mounting surface. Snap in flange over the lens.
5. Using appropriately sized wires (minimum 22 AWG), extend the wires to their designated connections. Refer to the Wiring Diagram for wiring and fusing information.

**IMPORTANT! TO ENSURE CORRECT INSTALLATION, PLACE THE VENT MEMBRANE ABOVE THE LIGHT'S HORIZONTAL CENTERLINE WHEN INSTALLED.**

### Wiring:

**NOTE:** All wires are 22 AWG. All switches and fuses are customer supplied.

**Ground (BLK)** - Extend the BLK wire to Chassis Ground.

**Color 1 (LED color)** - Extend to +10-30VDC via an SP/ST switch (Fuse at 3 amps).

**Color 2 (LED color)** - Extend to +10-30VDC via an SP/ST switch (Fuse at 3 amps).

**Color 3 (LED color)** - Extend to +10-30VDC via an SP/ST switch (Fuse at 3 amps).

**(GREY) SYNC** - To SYNC 2 lighthoods, configure both lighthoods to display the same Phase 1 (Simultaneous) pattern. Turn power off and connect the GREY wire from each lighthouse together. Activate the lighthoods and their patterns will be synchronized. To configure 2 lighthoods to alternate their patterns, advance either lighthouse to Phase 2 (Alternating) of the current pattern.

**(WHT/VIO) Scan-Lock™** - Extend the WHT/VIO wire to +10-30VDC via a momentary switch (1 amp fuse). Refer to the Scan-Lock™ section for operational information.

### Scan-Lock™ Operation:

**NOTE:** Each individual color can be configured to display any of the patterns shown. Additionally, patterns for 2-color and 3-color combinations can also be configured using the Scan-Lock™ procedure, outlined below, while the desired colors are active.

**To advance to the next pattern:** Apply +10-30V to the WHT/VIO wire for less than 1 second and release.

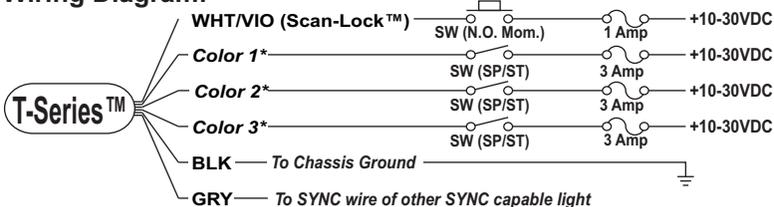
**To cycle back to the previous pattern:** Apply +10-30V to the WHT/VIO wire for more than 1 second and release.

**To change the Default Pattern:** When the desired pattern is displayed, allow it to run for more than 5 seconds. The lighthouse will now display this pattern when initially activated.

**To restore the factory default pattern:** With the light turned off, apply power to the WHT/VIO wire. With power applied to the WHT/VIO wire, turn light on. Allow the unit to run for 3 seconds before removing power from the WHT/VIO wire. This will reset all patterns back to their default settings.

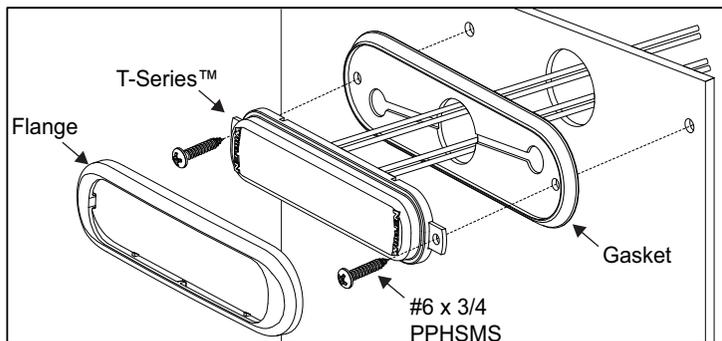
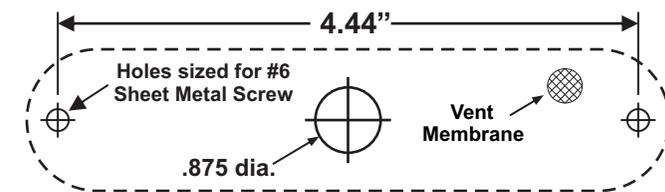
**Steady-Lock™** - When connected to a Core™ control system, a lighthouse doesn't require manually scanlocking to the steady pattern. All populated outputs can be sent a Steady-Lock™ signal from Whelen Command®, automatically setting their pattern to Steady. A minimum Whelen Command® version of 2.2.9 is required for this Steady-Lock™ feature.

### Wiring Diagram:



**NOTE:** Color wires vary by model (ie. Solo, Duo, Trio)

### Mounting:



### Flash Patterns:

Pattern#	Name	Cert.	Pattern#	Name	Cert.
1/2.	SignalAlert™ 75	1,2,3,4	23.	ComAlert™ 150	1, 3,4
3/4.	Comet 75	1,2,3,4	24.	PingPong™ 120	1,2,3,4
5/6.	Com-Alert 75	1,2,3,4	25.	ActionFlash™ 60	1,2, 4
7/8.	Long Burst 75	1,2,3,4	26.	ActionFlash™ 120	1,2,3,4
9/10.	Ping-Pong 75	1,2,3,4	27.	Action SF 60/120	1,2, 4
11/12.	Single 75	1,2,3,4	28.	Action SF 120/TF75	1,2,3,4
13/14.	Double 75	1,2,3,4	29.	ModuFlash	
15/16.	Triple 75	1,2,3,4	30.	CalScan	1,2,3,4
17.	SingleFlash 60	1,2, 4	31.	ActionScan	1, 3,4
18.	SingleFlash 90	1,2,3,4	32.	SignalAlert Steady*	
19.	SingleFlash 120	1,2,3,4	33.	DVI SF 60 Day Ph1	1,2,3,4
20.	SingleFlash 240	1, 3,4	34.	DVI SF 75 Day Ph2	1,2,3,4
21.	DoubleFlash 120	1,2,3,4	35.	DVI SF 75 Day Ph1	1,2,3,4
22.	Tripleflash™ 120	1,2,3,4	36.	Steady*	

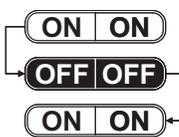
**Bold = SYNC Pattern. \* Patterns 32, 36 not available in 2 color modes**  
**Note: SYNC Patterns can be Phase 1 or Phase 2**

Each pattern is certified compliant in up to 4 classifications, shown in the "Cert" column: 1. SAE | 2. CA Title XIII | 3. NFPA | 4. KKK

### Lighthouse Operation:

**Note: Phases 1 & 2 are visually indistinguishable.**

PHASE 1 - BOTH sides flash together (ON-OFF-ON).



PHASE 2 - BOTH sides flash together (OFF-ON-OFF).



**IMPORTANT:** Waterproof butt splices and/or connectors are required if that connection could be exposed to moisture. Any unused wires must be sealed (waterproofed) to prevent moisture infiltration.