

WHELEN[®]

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Installation Manual: HELS™ Lighthouse

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

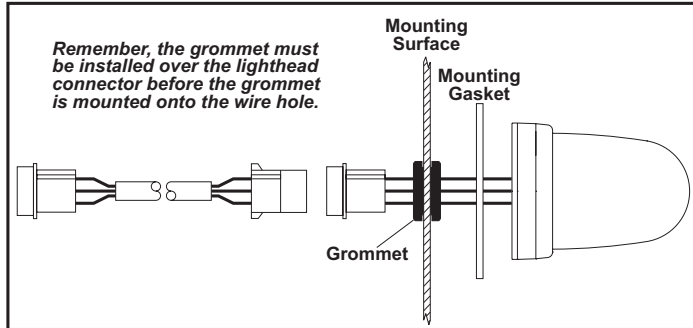
Mounting:

WARNING! Strobe light power supplies are high voltage devices. Do not touch or remove the strobe tube assembly while in operation. Wait 10 minutes after disconnecting the power source before starting any work on the power supply or system.

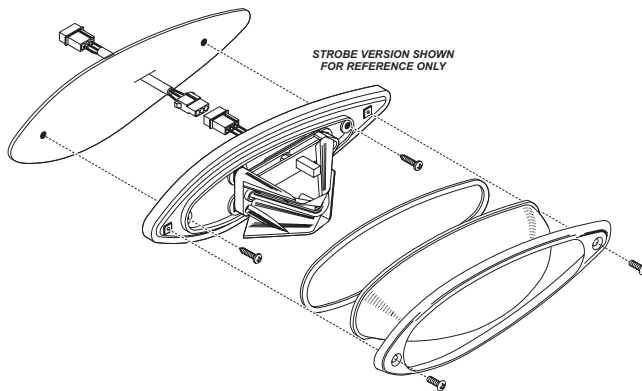
WARNING! All customer supplied wires that connect to the positive terminal of the battery must be sized to supply at least 125% of the maximum operating current and FUSED at the battery to carry that load. DO NOT USE CIRCUIT BREAKERS WITH THIS PRODUCT!

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.

1. Refer to the mounting dimensions shown on the exploded product view. Mark off and drill two 1/4" mounting holes for two #10 x 1-1/4 sheet metal screws into the mounting surface.



2. Drill a 1" wire hole and deburr the hole.
3. Feed the 15' lighthouse cable (included) through the wire hole and route it towards your control head. Pass the lighthouse connector through the mounting gasket and the wire hole grommet (included) before connecting the lighthouse to the lighthouse cable.



4. Connect the lighthouse to the cable and install the grommet into the wire hole. Secure the lighthouse to the mounting surface using the two mounting screws supplied.
5. Finish the installation by securing the gasket, lens and lens retainer with the two lens screws.
6. Use the wiring diagram for the model being installed to complete the electrical connections.

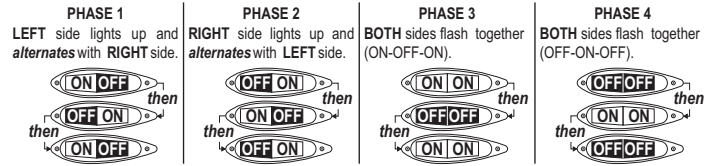
Scan-Lock™: To advance pattern: With the lighthouse active, apply +VBAT to the WHT/VIO wire for less than 1 second. **To cycle to previous patterns:** Apply +VBAT for more than 1 second. **To restore factory default pattern:** Turn off power to the lighthouse. Apply +VBAT to the WHT/VIO wire while turning the lighthouse on. Continue to apply voltage to the WHT/VIO wire for 5 seconds.

IMPORTANT WARNING!

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

SYNC Operation (LED models only): Some of the patterns available for the standard SYNC lighthouse are described as being either Phase 1 (PH.1) or Phase 2 (PH.2), Phase 3 (PH.3) or Phase 4 (PH.4). These terms define how patterns on lighthouses with their SYNC wires connected relate to each other. Lighthouses configured to display the same Phase of a given pattern will flash simultaneously. Lighthouses configured to Phase 1 of a given pattern will alternate with Phase 2 lighthouses. This concept is more easily understood using the following illustration:

Split Lighthouse Operation



Note: Phases 3 & 4 are visually indistinguishable.

NOTE: The SYNC wire can be connected to other SYNC-capable power supplies to synchronize their output.

Be sure to cap the SYNC wire if it is not used.

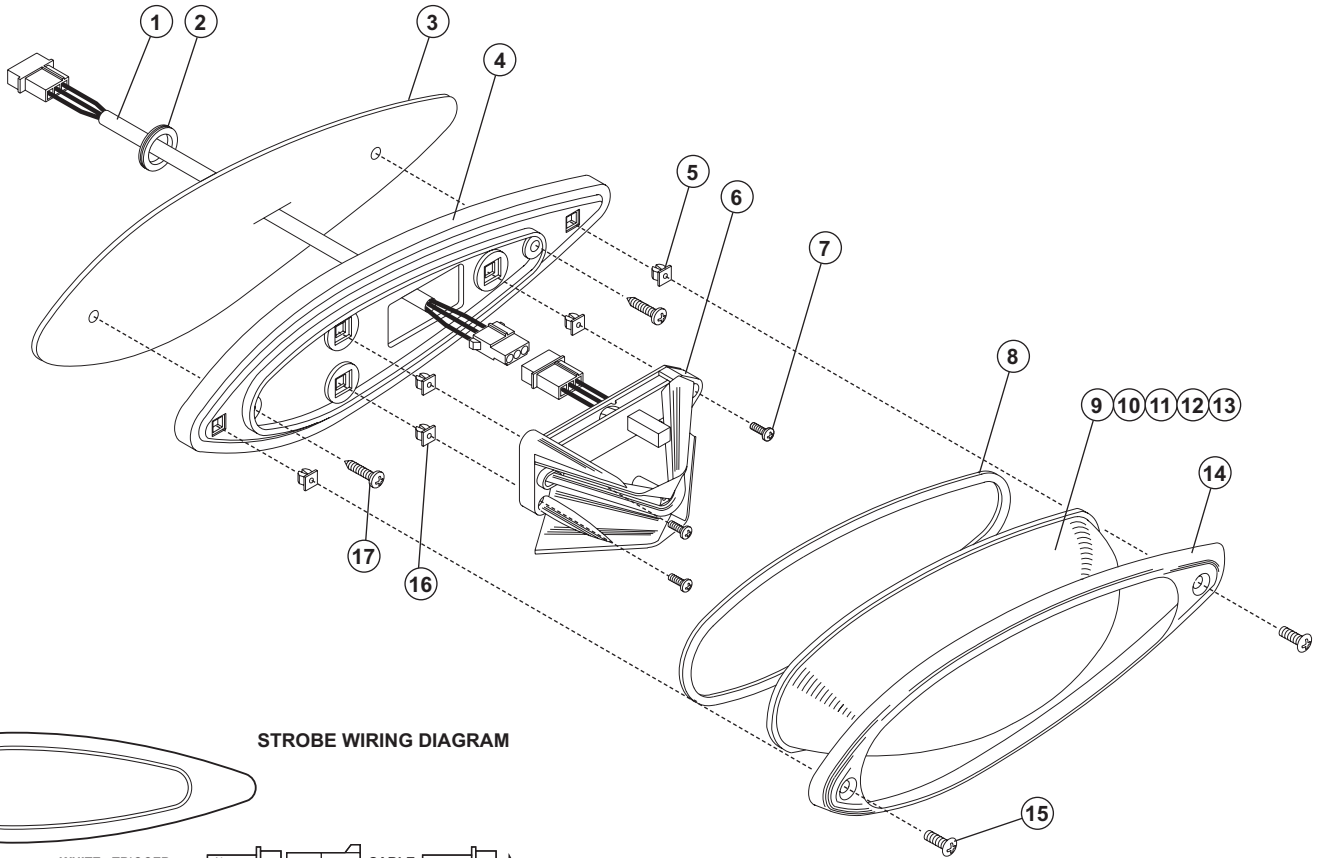
IMPORTANT! Before returning the vehicle to active service, visually confirm the proper operation of this product, as well as all vehicle components/equipment.

Flash Patterns

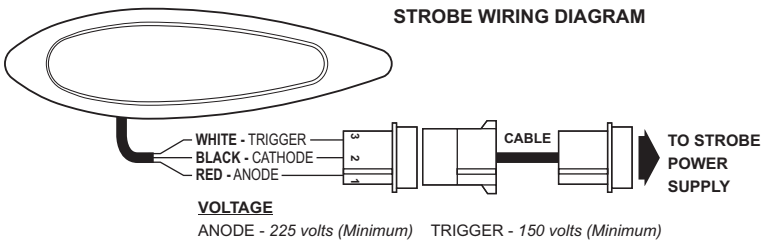
1. SignalAlert™ 75.....	PH.1	36. SingleFlash 120.....	SIM
2. SignalAlert 75.....	PH.2	37. SingleFlash 300.....	ALT
3. SignalAlert 75.....	PH.3	38. SingleFlash 300.....	SIM
4. SignalAlert 75.....	PH.4	39. DoubleFlash 150.....	ALT
5. CometFlash® 75.....	PH.1	40. DoubleFlash 150.....	SIM
6. CometFlash 75.....	PH.2	41. ComAlert150.....	ALT
7. CometFlash 75.....	PH.3	42. ComAlert150.....	SIM
8. CometFlash 75.....	PH.4	43. ActionFlash™50.....	ALT
9. DoubleFlash 75.....	PH.1	44. ActionFlash50.....	SIM
10. DoubleFlash 75.....	PH.2	45. ActionFlash150.....	ALT
11. DoubleFlash 75.....	PH.3	46. ActionFlash150.....	SIM
12. DoubleFlash 75.....	PH.4	47. ModuFlash™.....	ALT
13. SingleFlash 75.....	PH.1	48. ModuFlash.....	SIM
14. SingleFlash 75.....	PH.2	49. DoubleFlash 120.....	ALT
15. SingleFlash 75.....	PH.3	50. DoubleFlash 120.....	SIM
16. SingleFlash 75.....	PH.4	51. PingPong™ 120.....	ALT
17. ComAlert™ 75.....	PH.1	52. PingPong 120.....	SIM
18. ComAlert 75.....	PH.2	53. TripleFlash™ 75.....	ALT
19. ComAlert 75.....	PH.3	54. TripleFlash 75.....	SIM
20. ComAlert 75.....	PH.4	55. TripleFlash 120.....	ALT
21. LongBurst™ 75.....	PH.1	56. TripleFlash 120.....	SIM
22. LongBurst 75.....	PH.2	57. SigAlert Cal.™.....	ALT
23. LongBurst 75.....	PH.3	58. SigAlert Cal.	SIM
24. LongBurst 75.....	PH.4	59. Action 1.....	ALT
25. PingPong™ 75.....	PH.1	60. Action 1.....	SIM
26. PingPong 75.....	PH.2	61. Action 2.....	ALT
27. PingPong 75.....	PH.3	62. Action 2.....	SIM
28. PingPong 75.....	PH.4	63. CalScan™.....	ALT/SIM
29. SSNF 75.....	PH.1	64. ActionScan™.....	ALT/SIM
30. SSNF 75.....	PH.2	65. SteadyFlash 60	
31. SingleFlash 60.....	ALT	66. SteadyFlash 75	
32. SingleFlash 60.....	SIM	67. SteadyFlash 90	
33. SingleFlash 90.....	ALT	68. SteadyFlash 120	
34. SingleFlash 90.....	SIM	69. Steady & Steady	
35. SingleFlash 120.....	ALT		

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

**NOTE: PHASE 1 ALWAYS ALTERNATES WITH PHASE 2
PHASE 3 ALWAYS ALTERNATES WITH PHASE 4**



STROBE WIRING DIAGRAM

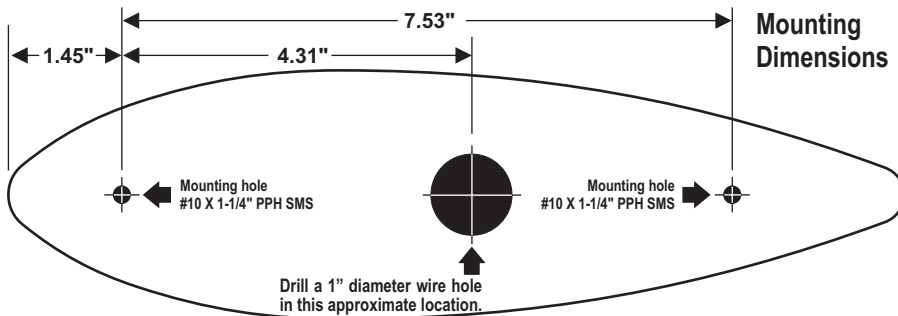


PART NUMBER KEY:
 01-0682082-

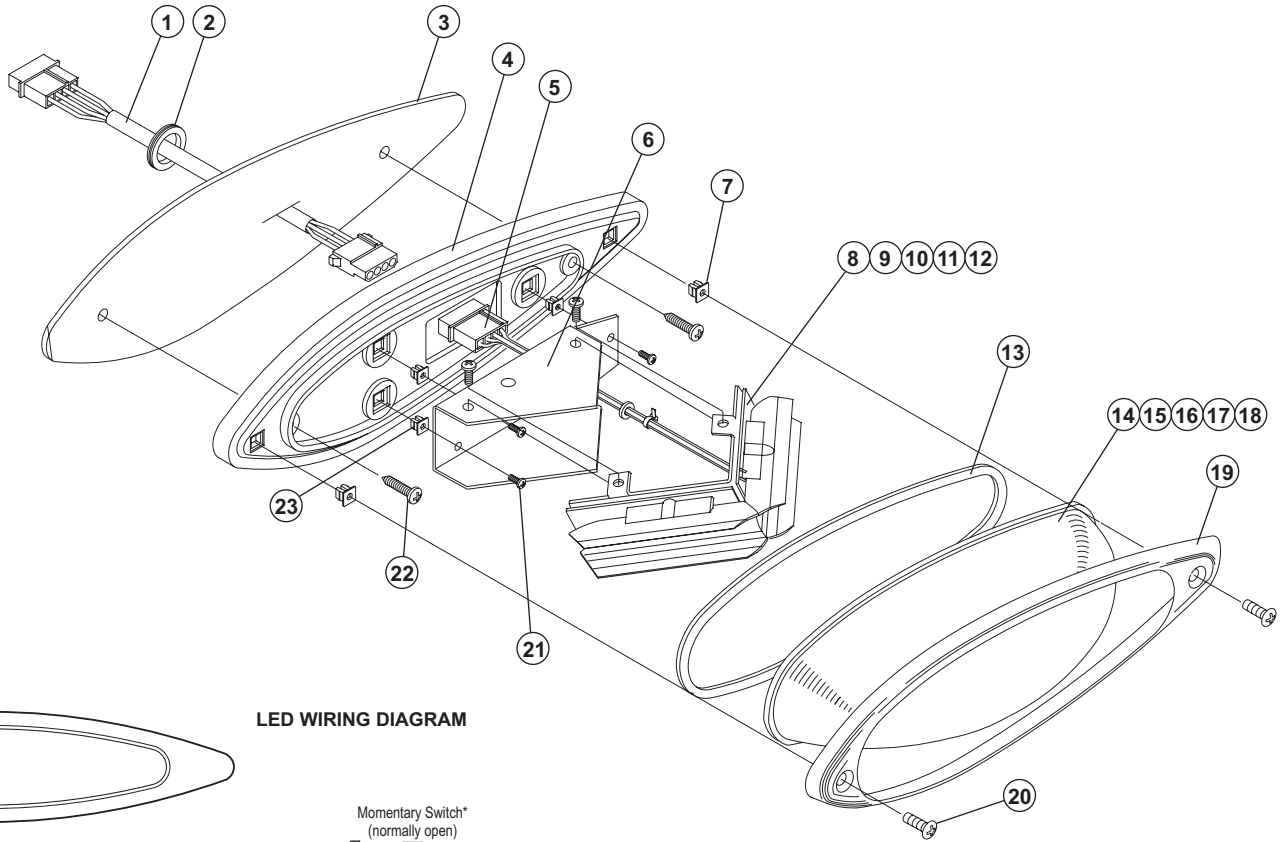
COLOR CABLE REQ.

COLOR: R - RED
 B - BLUE
 G - GREEN
 A - AMBER
 C - CLEAR

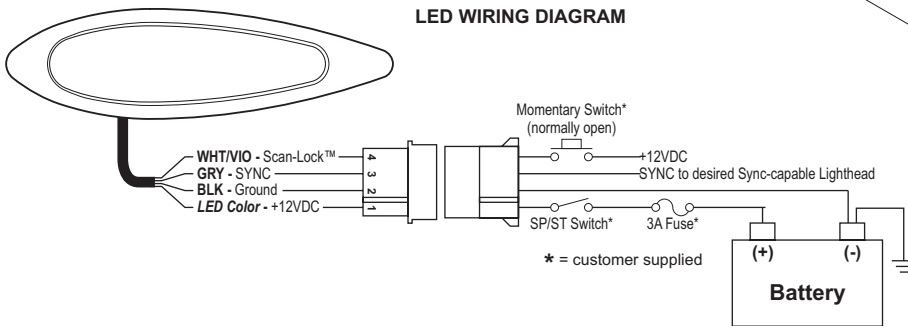
CABLE: 0 - NO CABLE
 1 - with CABLE



QTY	ITEM	PART NUMBER	DESCRIPTION
*		01-0682082- ()	HELST™ LIGHTHEAD ASSEMBLY
A/R	1	02-0240624-15	CABLE ASS'Y.
1	2	21-11263204-0	1" GROMMET
1	3	38-0261715-00	BASEPLATE GASKET
1	4	06-182081-001	BASEPLATE
2	5	21-17060704-3	SCREW GROMMET / #242-180602-91-0101
1	6	02-0282121-00	REFLECTOR ASS'Y.
3	7		#6 x 5/8 PAN HD. THD. FORM SCREW
1	8	38-0270590-01	LENS GASKET
A/R	9	68-4170581-10	LENS / AMBER
A/R	10	68-4170581-20	LENS / BLUE
A/R	11	68-4170581-30	LENS / CLEAR
A/R	12	68-4170581-40	LENS / GREEN
A/R	13	68-4170581-50	LENS / RED
1	14	19-190154-003	LENS RETAINER
2	15		#10 x 5/8 PFH SMS
3	16	13-062C40-16J	SCREW GROMMET
2	17		#10 x 1-1/4 PPH SMS



LED WIRING DIAGRAM



PART NUMBER KEY: **LENS/COLOR:** A - AMBER 1 - AMBER/CLEAR **CABLE:** 0 - NO CABLE
 01-0684474- B - BLUE 2 - BLUE/CLEAR 1 - with CABLE
 G - GREEN 3 - WHITE/CLEAR
 R - RED 4 - GREEN/CLEAR
 5 - RED/CLEAR

QTY	ITEM	PART NUMBER	DESCRIPTION
*		01-0684474- ()	HELST™ LED LIGHTHEAD ASSEMBLY
1	1	46-0746533115	CONN./CABLE ASSEMBLY (18 AWG)
1	2	21-11263204-0	1" GROMMET
1	3	38-0261715-00	BASEPLATE GASKET
1	4	06-182081-001	BASEPLATE
1	5	39-0404313-04	AMP 4-POS. PIN HOUSING
1	6	07-264595-023	MOUNTING BRACKET
2	7	21-17060704-3	SCREW GROMMET
A/R	8	01-0264605-10	REFLECTOR ASSEMBLY - AMBER
A/R	9	01-0264605-20	REFLECTOR ASSEMBLY - BLUE
A/R	10	01-0264605-30	REFLECTOR ASSEMBLY - CLEAR
A/R	11	01-0264605-40	REFLECTOR ASSEMBLY - GREEN
A/R	12	01-0264605-50	REFLECTOR ASSEMBLY - GREEN
1	13	38-0270590-01	LENS GASKET
A/R	14	68-4170581-10	LENS / AMBER
A/R	15	68-4170581-20	LENS / BLUE
A/R	16	68-4170581-30	LENS / CLEAR
A/R	17	68-4170581-40	LENS / GREEN
A/R	18	68-4170581-50	LENS / RED
1	19	19-190154-003	LENS RETAINER
2	20		#10-5/8 PFHMS SCREW
3	21	15-06521B-060	#6-3/8 PPH PLASTI-LOK SCREW (BLK)
2	22		#10 x 1-1/4 PPH SMS
3	23	13-062C40-16J	#6 / #8 FASTEX GROMMET

