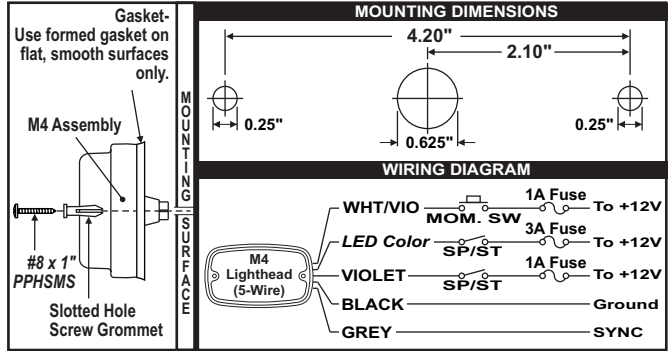


Safety First: This document provides all the necessary information to allow your Whelen product to be properly and safely installed. Before beginning the installation and/or operation of your new product, the installation technician and operator must read this manual completely. Important information 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.
- 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

- Using the dimensions below, mark the mounting and wire hole locations onto the proposed mounting surface. Drill two, .250" diameter mounting holes and a .625" (minimum) wire access hole into the mounting surface.
- Place the gasket into position on the rear of the M4 assembly. Insert the slotted hole screw grommet through the mounting holes on the M4/Gasket assembly.
- Feed the M4 wires through the wire access hole in the mounting surface. Press the M4/Gasket/Grommet assembly onto its mounting location so that it is flat against the mounting surface. With the assembly in position and using the hardware provided, tighten the mounting screws until the lighthouse assembly is drawn firmly against the mounting surface. **DO NOT OVERTIGHTEN!**
- Using appropriately sized wires (minimum 18 AWG), extend the M4 wires to their designated connections. Refer to the diagram below for wiring and fusing information.



IMPORTANT! If the lighthouse is mounted vertically, the vent membrane must be higher than the wire access hole.

LED Color - Flash Mode (The wire will be the color of the LED in the lighthouse) : Apply +VBAT to the LED Color wire to activate the lighthouse in "flash mode". In flash mode, you may change the flash pattern using Scan-Lock™.

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.

VIOLET - Low Power Mode: Applying +VBAT to the VIO wire while Flash Mode is active sets the lighthouse to Low Power Mode. Low Power Mode flash pattern can be set to a different flash pattern than Flash Mode using Scan Lock. By default, Low Power Mode flash pattern is #149, DVI Single Flash 75 Lo Inten. All On.

WHITE/VIO - Scan-Lock™ Pattern Selection: This feature allows the user to select from several available flash patterns. Lighthouse must be switched on for Scan-Lock to work. **TO CYCLE THROUGH ALL PATTERNS:** Apply +VBAT to the WHT/ VIO wire for less than 1 second and release. To cycle backward through patterns apply +VBAT to WHT/VIO wire for over 1 second and release.

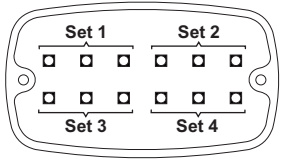
TO SET A PATTERN AS DEFAULT: Allow pattern to run over 5 seconds to make it the default pattern.

TO RESET TO THE FACTORY DEFAULT PATTERN: Turn off power. While applying +VBAT to the WHT/VIO wire, turn power on. The lighthouse will reset to it's default pattern.

Steady-Lock™ - When connected to a Core™ control system, a lighthouse doesn't require manually scanning 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.

M4 Sequencing & Phasing: The M4 lighthouse has 4 sets of 3 LEDs. These sets cycle through the 4 sequences.

Sequences	Operation of LED sets
Solid	All On Alternates with All Off
Left to Right	1 - 3 Alternates with 2 - 4
Top to Bottom	1 - 2 Alternates with 3 - 4
Diagonal	1 - 4 Alternates with 2 - 3



High Power	PH Low Power	PH	High Power	PH Low Power	PH
1 SignalAlert 75 All On *	1 SignalAlert 75 All On	1	76 DoubleFlash 150 Diag *	DoubleFlash 150 Diag	
2 SignalAlert 75 All On	2 SignalAlert 75 All On	2	77 ComAlert 150 All On	ComAlert 150 All On	
3 SignalAlert 75 Left/Right	1 SignalAlert 75 Left/Right	1	78 ComAlert 150 Left/Right	ComAlert 150 Left/Right	
4 SignalAlert 75 Right/Left	2 SignalAlert 75 Right/Left	2	79 ComAlert 150 Up/Down	ComAlert 150 Up/Down	
5 SignalAlert 75 Up/Down	1 SignalAlert 75 Up/Down	1	80 ComAlert 150 Diag	ComAlert 150 Diag	
6 SignalAlert 75 Down/Up	2 SignalAlert 75 Down/Up	2	81 ActionFlash 50 All On	ActionFlash 50 All On	
7 SignalAlert 75 Diag	1 SignalAlert 75 Diag	1	82 ActionFlash 50 Left/Right	ActionFlash 50 Left/Right	
8 SignalAlert 75 Diag	2 SignalAlert 75 Diag	2	83 ActionFlash 50 Up/Down	ActionFlash 50 Up/Down	
9 CometFlash 75 All On	1 CometFlash 75 All On	1	84 ActionFlash 50 Diag	ActionFlash 50 Diag	
10 CometFlash 75 All On	2 CometFlash 75 All On	2	85 ActionFlash 150 All On	ActionFlash 150 All On	
11 CometFlash 75 Left/Right	1 CometFlash 75 Left/Right	1	86 ActionFlash 150 Left/Right	ActionFlash 150 Left/Right	
12 CometFlash 75 Right/Left	2 CometFlash 75 Right/Left	2	87 ActionFlash 150 Up/Down	ActionFlash 150 Up/Down	
13 CometFlash 75 Up/Down	1 CometFlash 75 Up/Down	1	88 ActionFlash 150 Diag	ActionFlash 150 Diag	
14 CometFlash 75 Down/Up	2 CometFlash 75 Down/Up	2	89 ModuFlash 150 All On	ModuFlash 150 All On	
15 CometFlash 75 Diag	1 CometFlash 75 Diag	1	90 ModuFlash Left/Right	ModuFlash Left/Right	
16 CometFlash 75 Diag	2 CometFlash 75 Diag	2	91 ModuFlash Up/Down	ModuFlash Up/Down	
17 DoubleFlash 75 All On	1 DoubleFlash 75 All On	1	92 ModuFlash Diag	ModuFlash Diag	
18 DoubleFlash 75 All On	2 DoubleFlash 75 All On	2	93 DoubleFlash 120 All On	DoubleFlash 120 All On	
19 DoubleFlash 75 Left/Right	1 DoubleFlash 75 Left/Right	1	94 DoubleFlash 120 Left/Right	DoubleFlash 120 Left/Right	
20 DoubleFlash 75 Right/Left	2 DoubleFlash 75 Right/Left	2	95 DoubleFlash 120 Up/Down	DoubleFlash 120 Up/Down	
21 DoubleFlash 75 Up/Down	1 DoubleFlash 75 Up/Down	1	96 DoubleFlash 120 Diag	DoubleFlash 120 Diag	
22 DoubleFlash 75 Down/Up	2 DoubleFlash 75 Down/Up	2	97 PingPong 120 All On	PingPong 120 All On	
23 DoubleFlash 75 Diag	1 DoubleFlash 75 Diag	1	98 PingPong 120 Left/Right	PingPong 120 Left/Right	
24 DoubleFlash 75 Diag	2 DoubleFlash 75 Diag	2	99 PingPong 120 Up/Down	PingPong 120 Up/Down	
25 SingleFlash 75 All On	1 SingleFlash 75 All On	1	100 PingPong 120 Diag	PingPong 120 Diag	
26 SingleFlash 75 All On	2 SingleFlash 75 All On	2	101 TripleFlash 75 All On	TripleFlash 75 All On	1
27 SingleFlash 75 Left/Right	1 SingleFlash 75 Left/Right	1	102 TripleFlash 75 Left/Right	TripleFlash 75 Left/Right	1
28 SingleFlash 75 Right/Left	2 SingleFlash 75 Right/Left	2	103 TripleFlash 75 Up/Down	TripleFlash 75 Up/Down	1
29 SingleFlash 75 Up/Down	1 SingleFlash 75 Up/Down	1	104 TripleFlash 75 Diag	TripleFlash 75 Diag	1
30 SingleFlash 75 Down/Up	2 SingleFlash 75 Down/Up	2	105 TripleFlash 120 All On	TripleFlash 120 All On	
31 SingleFlash 75 Diag	1 SingleFlash 75 Diag	1	106 TripleFlash 120 Left/Right	TripleFlash 120 Left/Right	
32 SingleFlash 75 Diag	2 SingleFlash 75 Diag	2	107 TripleFlash 120 Up/Down	TripleFlash 120 Up/Down	
33 ComAlert 75 All On	1 ComAlert 75 All On	1	108 TripleFlash 120 Diag	TripleFlash 120 Diag	
34 ComAlert 75 All On	2 ComAlert 75 All On	2	109 ActionFlash 60 All On	ActionFlash 60 All On	
35 ComAlert 75 Left/Right	1 ComAlert 75 Left/Right	1	110 ActionFlash 60 Left/Right	ActionFlash 60 Left/Right	
36 ComAlert 75 Right/Left	2 ComAlert 75 Right/Left	2	111 ActionFlash 60 Up/Down	ActionFlash 60 Up/Down	
37 ComAlert 75 Up/Down	1 ComAlert 75 Up/Down	1	112 ActionFlash 60 Diag	ActionFlash 60 Diag	
38 ComAlert 75 Down/Up	2 ComAlert 75 Down/Up	2	113 ActionFlash 120 All On	ActionFlash 120 All On	
39 ComAlert 75 Diag	1 ComAlert 75 Diag	1	114 ActionFlash 120 Left/Right	ActionFlash 120 Left/Right	
40 ComAlert 75 Diag	2 ComAlert 75 Diag	2	115 ActionFlash 120 Up/Down	ActionFlash 120 Up/Down	
41 LongBurst 75 All On	1 LongBurst 75 All On	1	116 ActionFlash 120 Diag	ActionFlash 120 Diag	
42 LongBurst 75 All On	2 LongBurst 75 All On	2	117 Pinwheel Slow	Pinwheel Slow	
43 LongBurst 75 Left/Right	1 LongBurst 75 Left/Right	1	118 Pinwheel Medium	Pinwheel Medium	
44 LongBurst 75 Right/Left	2 LongBurst 75 Right/Left	2	119 Pinwheel Fast	Pinwheel Fast	
45 LongBurst 75 Up/Down	1 LongBurst 75 Up/Down	1	120 Pinwheel Variable	Pinwheel Variable	
46 LongBurst 75 Down/Up	2 LongBurst 75 Down/Up	2	121 Pinwheel Medium w/Flash	Pinwheel Medium w/Flash	
47 LongBurst 75 Diag	1 LongBurst 75 Diag	1	122 CalScan	CalScan	
48 LongBurst 75 Diag	2 LongBurst 75 Diag	2	123 ActionScan	ActionScan	
49 PingPong 75 All On	1 PingPong 75 All On	1	124 SignalAlert Steady	SignalAlert Steady	
50 PingPong 75 All On	2 PingPong 75 All On	2	125 DVI SingleFlash 60 Hi Inten. Diag	DVI SingleFlash 60 Hi Inten. Diag	
51 PingPong 75 Left/Right	1 PingPong 75 Left/Right	1	126 DVI SingleFlash 60 Hi Inten. Up/Down	DVI SingleFlash 60 Hi Inten. Up/Down	
52 PingPong 75 Right/Left	2 PingPong 75 Right/Left	2	127 DVI SingleFlash 60 Hi Inten. Left/Right	DVI SingleFlash 60 Hi Inten. Left/Right	
53 PingPong 75 Up/Down	1 PingPong 75 Up/Down	1	128 DVI SingleFlash 60 Hi Inten. All On	DVI SingleFlash 60 Hi Inten. All On	
54 PingPong 75 Down/Up	2 PingPong 75 Down/Up	2	129 DVI SingleFlash 75 Hi Inten. Diag	DVI SingleFlash 75 Hi Inten. Diag	2
55 PingPong 75 Diag	1 PingPong 75 Diag	1	130 DVI SingleFlash 75 Hi Inten. All On	DVI SingleFlash 75 Hi Inten. All On	2
56 PingPong 75 Diag	2 PingPong 75 Diag	2	131 DVI SingleFlash 75 Hi Inten. Down/Up	DVI SingleFlash 75 Hi Inten. Down/Up	2
57 SingleFlash 60 All On	1 SingleFlash 60 All On	1	132 DVI SingleFlash 75 Hi Inten. Up/Down	DVI SingleFlash 75 Hi Inten. Up/Down	2
58 SingleFlash 60 Left/Right	1 SingleFlash 60 Left/Right	1	133 DVI SingleFlash 75 Hi Inten. Right/Left	DVI SingleFlash 75 Hi Inten. Right/Left	2
59 SingleFlash 60 Up/Down	1 SingleFlash 60 Up/Down	1	134 DVI SingleFlash 75 Hi Inten. Left/Right	DVI SingleFlash 75 Hi Inten. Left/Right	2
60 SingleFlash 60 Diag	1 SingleFlash 60 Diag	1	135 DVI SingleFlash 75 Hi Inten. All On	DVI SingleFlash 75 Hi Inten. All On	2
61 SingleFlash 90 All On	1 SingleFlash 90 All On	1	136 DVI SingleFlash 75 Hi Inten. All On	DVI SingleFlash 75 Hi Inten. All On	2
62 SingleFlash 90 Left/Right	1 SingleFlash 90 Left/Right	1	137 Steady On	Steady On	-
63 SingleFlash 90 Up/Down	1 SingleFlash 90 Up/Down	1	138		
64 SingleFlash 90 Diag	1 SingleFlash 90 Diag	1	139		
65 SingleFlash 120 All On	1 SingleFlash 120 All On	1	140		
66 SingleFlash 120 Left/Right	1 SingleFlash 120 Left/Right	1	141		
67 SingleFlash 120 Up/Down	1 SingleFlash 120 Up/Down	1	142		
68 SingleFlash 120 Diag	1 SingleFlash 120 Diag	1	143		
69 SingleFlash 300 All On	1 SingleFlash 300 All On	1	144		
70 SingleFlash 300 Left/Right	1 SingleFlash 300 Left/Right	1	145		
71 SingleFlash 300 Up/Down	1 SingleFlash 300 Up/Down	1	146		
72 SingleFlash 300 Diag	1 SingleFlash 300 Diag	1	147		
73 DoubleFlash 150 All On	1 DoubleFlash 150 All On	1	148		
74 DoubleFlash 150 Left/Right	1 DoubleFlash 150 Left/Right	1	149		
75 DoubleFlash 150 Up/Down	1 DoubleFlash 150 Up/Down	1	150		

NOTE: High and Low power patterns are chosen separately. Scan-Lock™+ by Whelen can be used for easier pattern selection.

* = Default Pattern