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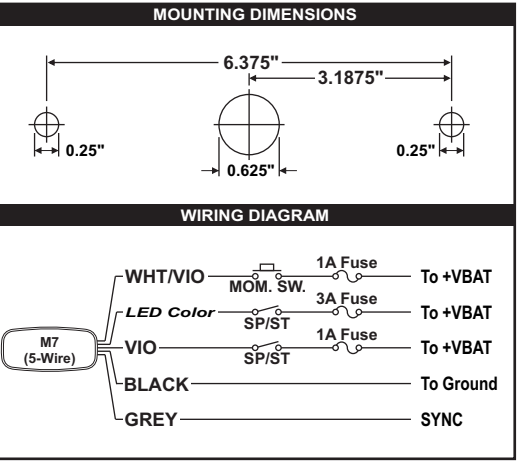
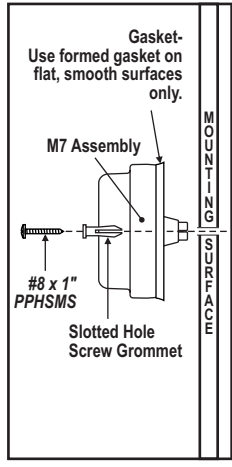
Safety First: This document provides all the necessary information to allow your Whelen product to be properly and safely installed. Before beginning the installation and/or operation of your new product, the installation technician and operator must read this manual completely. Important information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

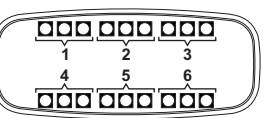
Mounting

- 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 M7 assembly. Insert the slotted hole screw grommet through the mounting holes on the M7/Gasket assembly.
- Feed the M7 wires through the wire access hole in the mounting surface. Press the M7/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 lighthead assembly is drawn firmly against the mounting surface. **DO NOT OVERTIGHTEN!**
- Using appropriately sized wires (minimum 18 AWG), extend the M7 wires to their designated connections. Refer to the diagram below for wiring information.

pattern than Flash Mode using Scan Lock. By default, Low Power Mode flash pattern is #188 DVI SingleFlash 75 Lo Intensity All On.



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



Sequences	Operation of LED sets		
Solid	All On	Alternates with	All Off
Left to Right	1 - 2 - 4	Alternates with	3 - 5 - 6
Top to Bottom	1 - 2 - 3	Alternates with	4 - 5 - 6
In and Out	2 - 5	Alternates with	1 - 3 - 4 - 6
Diagonal	1 - 2 - 6	Alternates with	4 - 5 - 3

Sequencing & Phasing: The M7 has 6 sets of 3 LEDs which cycle through the 5 sequences shown.

WHITE/VIO - Scan-Lock™ Pattern Selection: This feature allows the user to select from several available flash patterns. Lighthead must be switched on for Scan-Lock to work.
NOTE: High and Low power patterns are chosen separately. Scan-Lock™+ by Whelen can be used for easier pattern selection.

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 lighthead will reset to it's default pattern.

GREY - SYNC: To SYNC 2 lighthead, configure both lighthead to display the same Phase 1 (Simultaneous) pattern. Turn power off and connect the GREY wire from each lighthead together. Activate the lighthead and their patterns will be synchronized. To configure 2 lighthead to alternate their patterns, advance either lighthead 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 lighthead to Low Power Mode. Low Power Mode flash pattern can be set to a different flash

High Power	SYNC PH	Low Power	SYNC PH	High Power	SYNC PH	Low Power	SYNC PH
1 SignalAlert 75 All On (Default)	Yes	1 SignalAlert 75 All On	Yes	1 108 ActionFlash 50 Diag	Yes	1 ActionFlash 50 All On	Yes
2 SignalAlert 75 All On	Yes	2 SignalAlert 75 All On	Yes	2 107 ActionFlash 150 Left/Right	Yes	2 ActionFlash 150 Left/Right	Yes
3 SignalAlert 75 Left/Right	Yes	3 SignalAlert 75 Left/Right	Yes	2 108 ActionFlash 150 Up/Down	Yes	2 ActionFlash 150 Up/Down	Yes
4 SignalAlert 75 Right/Left	Yes	2 SignalAlert 75 Right/Left	Yes	1 109 ActionFlash 150 In/Out	Yes	1 ActionFlash 150 In/Out	Yes
5 SignalAlert 75 Up/Down	Yes	2 SignalAlert 75 Up/Down	Yes	2 110 ActionFlash 150 Diag	Yes	2 ActionFlash 150 Diag	Yes
6 SignalAlert 75 Down/Up	Yes	2 SignalAlert 75 Down/Up	Yes	1 111 ModuFlash All On	Yes	1 ModuFlash All On	Yes
7 SignalAlert In/Out	Yes	1 SignalAlert 75 In/Out	Yes	2 112 ModuFlash Left/Right	Yes	2 ModuFlash Left/Right	Yes
8 SignalAlert 75 Out/In	Yes	1 SignalAlert 75 Out/In	Yes	1 113 ModuFlash Up/Down	Yes	1 ModuFlash Up/Down	Yes
9 SignalAlert 75 Diag	Yes	1 SignalAlert 75 Diag	Yes	1 115 ModuFlash Diag	Yes	1 ModuFlash Diag	Yes
10 SignalAlert 75 In/Out	Yes	1 SignalAlert 75 In/Out	Yes	2 116 DoubleFlash 120 All On	Yes	2 DoubleFlash 120 All On	Yes
11 CometFlash 75 All On	Yes	1 CometFlash 75 All On	Yes	1 117 DoubleFlash 120 Left/Right	Yes	1 DoubleFlash 120 Left/Right	Yes
12 CometFlash 75 All On	Yes	1 CometFlash 75 All On	Yes	2 118 DoubleFlash 120 Up/Down	Yes	2 DoubleFlash 120 Up/Down	Yes
13 CometFlash 75 Left/Right	Yes	1 CometFlash 75 Left/Right	Yes	1 119 DoubleFlash 120 In/Out	Yes	1 DoubleFlash 120 In/Out	Yes
14 CometFlash 75 Right/Left	Yes	1 CometFlash 75 Right/Left	Yes	2 120 DoubleFlash 120 Diag	Yes	2 DoubleFlash 120 Diag	Yes
15 CometFlash 75 Up/Down	Yes	1 CometFlash 75 Up/Down	Yes	1 121 PingPong 120 All On	Yes	1 PingPong 120 All On	Yes
16 CometFlash 75 Down/Up	Yes	1 CometFlash 75 Down/Up	Yes	2 122 PingPong 120 Left/Right	Yes	2 PingPong 120 Left/Right	Yes
17 CometFlash 75 In/Out	Yes	1 CometFlash 75 In/Out	Yes	1 123 PingPong 120 Up/Down	Yes	1 PingPong 120 Up/Down	Yes
18 CometFlash 75 Out/In	Yes	1 CometFlash 75 Out/In	Yes	2 124 PingPong 120 In/Out	Yes	2 PingPong 120 In/Out	Yes
19 CometFlash 75 Diag	Yes	2 CometFlash 75 Diag	Yes	1 125 PingPong 120 Diag	Yes	1 PingPong 120 Diag	Yes
20 CometFlash 75 All On	Yes	1 DoubleFlash 75 All On	Yes	2 126 TripleFlash 75 All On	Yes	2 TripleFlash 75 All On	Yes
21 DoubleFlash 75 All On	Yes	2 DoubleFlash 75 All On	Yes	1 127 TripleFlash 75 Left/Right	Yes	1 TripleFlash 75 Left/Right	Yes
22 DoubleFlash 75 Left/Right	Yes	2 DoubleFlash 75 Left/Right	Yes	2 128 TripleFlash 75 Up/Down	Yes	2 TripleFlash 75 Up/Down	Yes
23 DoubleFlash 75 Right/Left	Yes	2 DoubleFlash 75 Right/Left	Yes	1 129 TripleFlash 75 In/Out	Yes	1 TripleFlash 75 In/Out	Yes
24 DoubleFlash 75 Up/Down	Yes	2 DoubleFlash 75 Up/Down	Yes	2 130 TripleFlash 75 Diag	Yes	2 TripleFlash 75 Diag	Yes
25 DoubleFlash 75 Down/Up	Yes	2 DoubleFlash 75 Down/Up	Yes	1 131 TripleFlash 120 All On	Yes	1 TripleFlash 120 All On	Yes
26 DoubleFlash 75 In/Out	Yes	2 DoubleFlash 75 In/Out	Yes	2 132 TripleFlash 120 Left/Right	Yes	2 TripleFlash 120 Left/Right	Yes
27 DoubleFlash 75 Out/In	Yes	2 DoubleFlash 75 Out/In	Yes	1 133 TripleFlash 120 Up/Down	Yes	1 TripleFlash 120 Up/Down	Yes
28 DoubleFlash 75 Diag	Yes	2 DoubleFlash 75 Diag	Yes	2 134 TripleFlash 120 In/Out	Yes	2 TripleFlash 120 In/Out	Yes
30 DoubleFlash 75 All On	Yes	2 DoubleFlash 75 All On	Yes	1 135 TripleFlash 120 Diag	Yes	1 TripleFlash 120 Diag	Yes
31 SingleFlash 75 All On	Yes	1 SingleFlash 75 All On	Yes	2 136 Action 60 All On	Yes	2 Action 60 All On	Yes
32 SingleFlash 75 All On	Yes	1 SingleFlash 75 All On	Yes	1 137 Action 60 Left/Right	Yes	1 Action 60 Left/Right	Yes
33 SingleFlash 75 Left/Right	Yes	1 SingleFlash 75 Left/Right	Yes	2 138 Action 60 Up/Down	Yes	2 Action 60 Up/Down	Yes
34 SingleFlash 75 Right/Left	Yes	2 SingleFlash 75 Right/Left	Yes	1 139 Action 60 In/Out	Yes	1 Action 60 In/Out	Yes
35 SingleFlash 75 Up/Down	Yes	1 SingleFlash 75 Up/Down	Yes	2 140 Action 60 Diag	Yes	2 Action 60 Diag	Yes
36 SingleFlash 75 Down/Up	Yes	2 SingleFlash 75 Down/Up	Yes	1 141 Action 120 All On	Yes	1 Action 120 All On	Yes
37 SingleFlash 75 In/Out	Yes	1 SingleFlash 75 In/Out	Yes	2 142 Action 120 Left/Right	Yes	2 Action 120 Left/Right	Yes
38 SingleFlash 75 Out/In	Yes	2 SingleFlash 75 Out/In	Yes	1 143 Action 120 Up/Down	Yes	1 Action 120 Up/Down	Yes
39 SingleFlash 75 Diag	Yes	1 SingleFlash 75 Diag	Yes	2 144 Action 120 In/Out	Yes	2 Action 120 In/Out	Yes
40 SingleFlash 75 All On	Yes	2 SingleFlash 75 All On	Yes	1 145 Action 120 Diag	Yes	1 Action 120 Diag	Yes
41 ComAlert 75 All On	Yes	1 ComAlert 75 All On	Yes	2 146 Cylon Slow	Yes	2 Cylon Slow	Yes
42 ComAlert 75 All On	Yes	2 ComAlert 75 All On	Yes	1 147 Cylon Medium	Yes	1 Cylon Medium	Yes
43 ComAlert 75 Left/Right	Yes	2 ComAlert 75 Left/Right	Yes	2 148 Cylon Fast	Yes	2 Cylon Fast	Yes
44 ComAlert 75 Right/Left	Yes	2 ComAlert 75 Right/Left	Yes	1 149 Cylon Variable	Yes	1 Cylon Variable	Yes
45 ComAlert 75 Up/Down	Yes	1 ComAlert 75 Up/Down	Yes	2 150 Cylon Medium w/Flash	Yes	2 Cylon Medium w/Flash	Yes
46 ComAlert 75 Down/Up	Yes	2 ComAlert 75 Down/Up	Yes				
47 ComAlert 75 In/Out	Yes	1 ComAlert 75 In/Out	Yes				
48 ComAlert 75 Out/In	Yes	2 ComAlert 75 Out/In	Yes				
49 ComAlert 75 Diag	Yes	2 ComAlert 75 Diag	Yes				
50 ComAlert 75 All On	Yes	1 ComAlert 75 All On	Yes				
51 LongBurst 75 All On	Yes	1 LongBurst 75 All On	Yes				

High Power	SYNC PH	Low Power	SYNC PH	High Power	SYNC PH	Low Power	SYNC PH
52 LongBurst 75 All On	Yes	2 LongBurst 75 All On	Yes	2 156 SigAlert Steady	Yes	2 CalScan	Yes
53 LongBurst 75 Left/Right	Yes	1 LongBurst 75 Left/Right	Yes	1 157 ActionScan	Yes	1 ActionScan	Yes
54 LongBurst 75 Right/Left	Yes	2 LongBurst 75 Right/Left	Yes	2 158 DVI SingleFlash 60 Hi Intensity Day	Yes	2 DVI SingleFlash 60 Hi Intensity Day	Yes
55 LongBurst 75 Up/Down	Yes	1 LongBurst 75 Up/Down	Yes	1 159 DVI SingleFlash 60 Hi Intensity In/Out	Yes	1 DVI SingleFlash 60 Hi Intensity In/Out	Yes
56 LongBurst 75 Down/Up	Yes	2 LongBurst 75 Down/Up	Yes	2 160 DVI SingleFlash 60 Hi Intensity Left/Right	Yes	2 DVI SingleFlash 60 Hi Intensity Left/Right	Yes
57 LongBurst 75 In/Out	Yes	1 LongBurst 75 In/Out	Yes	2 161 DVI SingleFlash 60 Hi Intensity Up/Down	Yes	2 DVI SingleFlash 60 Hi Intensity Up/Down	Yes
58 LongBurst 75 Out/In	Yes	2 LongBurst 75 Out/In	Yes	2 162 DVI SingleFlash 60 Hi Intensity Diag	Yes	2 DVI SingleFlash 60 Hi Intensity Diag	Yes
59 LongBurst 75 Diag	Yes	1 LongBurst 75 Diag	Yes	1 163 DVI SingleFlash 60 Lo Intensity All On	Yes	1 DVI SingleFlash 60 Lo Intensity All On	Yes
60 LongBurst 75 All On	Yes	2 LongBurst 75 All On	Yes	2 164 DVI SingleFlash 60 Lo Intensity Left/Right	Yes	2 DVI SingleFlash 60 Lo Intensity Left/Right	Yes
61 PingPong 75 All On	Yes	1 PingPong 75 All On	Yes	1 165 DVI SingleFlash 60 Lo Intensity Up/Down	Yes	1 DVI SingleFlash 60 Lo Intensity Up/Down	Yes
62 PingPong 75 Left/Right	Yes	2 PingPong 75 Left/Right	Yes	2 166 DVI SingleFlash 60 Lo Intensity In/Out	Yes	2 DVI SingleFlash 60 Lo Intensity In/Out	Yes
63 PingPong 75 Right/Left	Yes	1 PingPong 75 Right/Left	Yes	1 167 DVI SingleFlash 60 Lo Intensity Left/Right	Yes	1 DVI SingleFlash 60 Lo Intensity Left/Right	Yes
64 PingPong 75 Up/Down	Yes	2 PingPong 75 Up/Down	Yes	2 168 DVI SingleFlash 60 Hi Intensity All On	Yes	2 DVI SingleFlash 60 Hi Intensity All On	Yes
65 PingPong 75 Down/Up	Yes	1 PingPong 75 Down/Up	Yes	1 169 DVI SingleFlash 60 Hi Intensity Left/Right	Yes	1 DVI SingleFlash 60 Hi Intensity Left/Right	Yes
66 ComAlert 75 Right/Left	Yes	1 ComAlert 75 Right/Left	Yes	2 170 DVI SingleFlash 60 Hi Intensity Up/Down	Yes	2 DVI SingleFlash 60 Hi Intensity Up/Down	Yes
67 PingPong 75 In/Out	Yes	1 PingPong 75 In/Out	Yes	1 171 DVI SingleFlash 60 Hi Intensity Left/Right	Yes	1 DVI SingleFlash 60 Hi Intensity Left/Right	Yes
68 PingPong 75 Out/In	Yes	2 PingPong 75 Out/In	Yes	2 172 DVI SingleFlash 60 Hi Intensity In/Out	Yes	2 DVI SingleFlash 60 Hi Intensity In/Out	Yes
69 PingPong 75 Diag	Yes	1 PingPong 75 Diag	Yes	1 173 DVI SingleFlash 60 Hi Intensity All On	Yes	1 DVI SingleFlash 60 Hi Intensity All On	Yes
70 PingPong 75 All On	Yes	2 PingPong 75 All On	Yes	2 174 Steady On	Yes	2 Steady On	Yes
71 SingleFlash 60 All On	Yes	1 SingleFlash 60 All On	Yes				
72 SingleFlash 60 Left/Right	Yes	1 SingleFlash 60 Left/Right	Yes				
73 SingleFlash 60 Up/Down	Yes	1 SingleFlash 60 Up/Down	Yes				
74 SingleFlash 60 In/Out	Yes	1 SingleFlash 60 In/Out	Yes				
75 SingleFlash 60 Diag	Yes	1 SingleFlash 60 Diag	Yes				
76 SingleFlash 90 All On	Yes	1 SingleFlash 90 All On	Yes				
77 SingleFlash 90 Left/Right	Yes	1 SingleFlash 90 Left/Right	Yes				
78 SingleFlash 90 Up/Down	Yes	1 SingleFlash 90 Up/Down	Yes				
79 SingleFlash 90 In/Out	Yes	1 SingleFlash 90 In/Out	Yes				
80 SingleFlash 90 Diag	Yes	1 SingleFlash 90 Diag	Yes				
81 SingleFlash 120 All On	Yes	1 SingleFlash 120 All On	Yes				
82 SingleFlash 120 Left/Right	Yes	1 SingleFlash 120 Left/Right	Yes				
83 SingleFlash 120 Up/Down	Yes	1 SingleFlash 120 Up/Down	Yes				
84 SingleFlash 120 In/Out	Yes	1 SingleFlash 120 In/Out	Yes				
85 SingleFlash 120 Diag	Yes	1 SingleFlash 120 Diag	Yes				
86 SingleFlash 300 All On	Yes	1 SingleFlash 300 All On	Yes				
87 SingleFlash 300 Left/Right	Yes	1 SingleFlash 300 Left/Right	Yes				
88 SingleFlash 300 Up/Down	Yes	1 SingleFlash 300 Up/Down	Yes				
89 SingleFlash 300 In/Out	Yes	1 SingleFlash 300 In/Out	Yes				
90 SingleFlash 300 Diag	Yes	1 SingleFlash 300 Diag	Yes				
91 DoubleFlash 150 All On	Yes	2 DoubleFlash 150 All On	Yes				
92 DoubleFlash 150 Left/Right	Yes	2 DoubleFlash 150 Left/Right	Yes				
93 DoubleFlash 150 Up/Down	Yes	2 DoubleFlash 150 Up/Down	Yes				
94 DoubleFlash 150 In/Out	Yes	2 DoubleFlash 150 In/Out	Yes				
95 DoubleFlash 150 Diag	Yes	2 DoubleFlash 150 Diag	Yes				
96 ComAlert 150 All On	Yes	1 ComAlert 150 All On	Yes				
97 ComAlert 150 Left/Right	Yes	1 ComAlert 150 Left/Right	Yes				
98 ComAlert 150 Up/Down	Yes	1 ComAlert 150 Up/Down	Yes				
99 ComAlert 150 In/Out	Yes	1 ComAlert 150 In/Out	Yes				
100 ComAlert 150 Diag	Yes	1 ComAlert 150 Diag	Yes				
101 ActionFlash 50 All On	Yes	1 ActionFlash 50 All On	Yes				
102 ActionFlash 50 Left/Right	Yes	1 ActionFlash 50 Left/Right	Yes				
103 ActionFlash 50 Up/Down	Yes	1 ActionFlash 50 Up/Down	Yes				
104 ActionFlash 50 In/Out	Yes	1 ActionFlash 50 In/Out	Yes				