This instruction manual serves as a guide for the Feniex Avatar lightbar series.

IMPORTANT! Please read through all provided instructions and any listed warnings in regards to product use.

Avatar Model #: L-23709, L24809, L-25709

Record Product Serial Number:
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Safety Regulations
The following provides all the information necessary to safely operate the previously listed products of Feniex Industries, Inc. Please read this manual thoroughly before installing or operating your new product in order to prevent any damage or injury. Failure to follow the listed instructions in the manual may result in damage to your products or personal injury.

- Proper installation of this product requires good knowledge of automotive systems, electronics and procedures.
- Please guarantee all vital components of the vehicle are not in danger of being damaged by drilling holes necessary for installation. Check all sides of the mounting surface before drilling any holes into the vehicle.
- Do not install this product in any way that interferes with the deployment of the air bag. Doing so may damage the effectiveness of the air bag and can lead to serious personal and vehicle injury. The installer will assume full responsibility of proper installation of the new unit.
- Please clean the mounting surface before installation of the unit when using tape, brackets, magnet, Velcro or suction cups.
- The product ground wire must be connected directly to the Negative (-) battery post for effective use of the unit. Please follow all wiring guidelines provided to guarantee long lifespan and productivity. Failing to follow these instructions may result in damage to the product.

Warranty
Feniex Industries, Inc. warrants to the original purchaser that the product shall be free from defects in material and workmanship for sixty (60) months from the date of purchase for all LED products. Feniex Industries warranties speakers, sirens and controllers for 24 months; switches and flashers for 12 months. If a warranty problem occurs, please contact customer support at 1.800.615.8350 or visit the web site at www.Feniex.com. If the product needs to be returned for repair or replacement, call our customer support line to receive a return merchandise authorization number. Operational times are from 10 a.m. to 5 p.m. central time, Monday through Friday. Please do not send in product without contacting support first for a RMA number.

Service After Expiration
Feniex Industries will still provide service for all products after expiration of the warranty. For any issues, call the customer support line. In some instances it may be necessary for the product to be shipped, freight prepaid and insured for loss or damage to Feniex headquarters.

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Feniex Avatar Content Diagram

Avatar Lightbars:

Avatar 37: front view
37” L

Avatar 47: front view
47” L

Avatar 57: front view
57” L

Avatar 37, 47, 57: side view
13” W
.95” H

Avatar Foot Brackets:

Hook Mount:
12.5” W
2” H

Please note! Hook kit purchased separately.

Avatar Mounting Brackets:

Permanent Mount:

Headache Mount:
### Features & Specifications:

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
</table>
| Operating Voltage                   | 10-15V Reverse Polarity Protection  
* A 24V to 12V step down converter is required for 24V applications. |
| Flashing Current Draw                | 15 Amp                                                                      |
| Available Colors                     | Red, Amber, White, Blue or Green  
* Order sheet available online.  
* For flash patterns, please refer to the flash pattern list available online.  
* Controller features pattern memory recall. |

### Functions:

<table>
<thead>
<tr>
<th>Function</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Center Out</td>
<td>To engage, connect the left wire and the right arrow wire together.</td>
</tr>
<tr>
<td>Cruise Mode</td>
<td>Engages corners at 20% full brightness potential</td>
</tr>
<tr>
<td>Dim Mode</td>
<td>Dims full bar at 20% full brightness potential</td>
</tr>
<tr>
<td>Arrow Flashing Mode</td>
<td>Pattern displayed from Mode selected</td>
</tr>
<tr>
<td>Alley Flashing mode</td>
<td>Pattern displayed from Mode 1 selection</td>
</tr>
</tbody>
</table>

### Requirements:

External 40 amp fuse is required on the Red +12 AWG wire.

### Internal Controller Board:

Controller board is programmed to customer build requirements. If the end user requires serviceability, please contact Feniex for assistance.

### Reverse Polarity Protection:

The light bar controller has built in reverse polarity circuit. This will protect the controller in the event the user reverse connects the 12V (+) and 12V (-) inputs.
## Wiring Diagram

### Overrides:

- Mode 2 will override Mode 1. Mode 3 will override Modes 1 and 2.
- Takedown steady and Alley steady functions override Takedown flashing and Alley flashing.

### System Specification

<table>
<thead>
<tr>
<th>Wire Color</th>
<th>Function</th>
<th>Function Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black</td>
<td>Mode 1</td>
<td></td>
</tr>
<tr>
<td>Red</td>
<td>Mode 2</td>
<td>Overrides Mode 1</td>
</tr>
<tr>
<td>Orange</td>
<td>Mode 3</td>
<td>Overrides Mode 1 and Mode 2</td>
</tr>
<tr>
<td>Green</td>
<td>Cruise Mode</td>
<td>Activates All 4 Corners at 20% Brightness</td>
</tr>
<tr>
<td>Blue</td>
<td>Takedown Steady</td>
<td>Overrides Takedown Flashing</td>
</tr>
<tr>
<td>White</td>
<td>Left Alley Steady</td>
<td>Overrides Alley Flashing</td>
</tr>
<tr>
<td>Red / Black</td>
<td>Right Alley Steady</td>
<td>Overrides Alley Flashing</td>
</tr>
<tr>
<td>Orange / Black</td>
<td>Takedown / Alley Flashing</td>
<td>Displays Flash Patterns from Mode 3</td>
</tr>
<tr>
<td>Green / Black</td>
<td>Arrow Flashing</td>
<td>Displays Flash Patterns from Mode 3</td>
</tr>
<tr>
<td>Blue / Black</td>
<td>Dim</td>
<td>Dims bar to 20% Brightness</td>
</tr>
<tr>
<td>White / Black</td>
<td>Arrow Left</td>
<td>Overrides Arrow Flashing</td>
</tr>
<tr>
<td>Black / White</td>
<td>Arrow Right</td>
<td>Overrides Arrow Flashing</td>
</tr>
<tr>
<td>Red / White</td>
<td>Pattern Changer</td>
<td>Cycles through 20 Flash Patterns</td>
</tr>
<tr>
<td>Green / White</td>
<td>Rear Cut Off</td>
<td>Turns Off all Rear Facing Modules</td>
</tr>
<tr>
<td>Blue / White</td>
<td>Front Cut Off</td>
<td>Turns Off all Front Facing Modules</td>
</tr>
</tbody>
</table>

**Important!** If work lights are requested in the build, then the black wire for mode 1 will be deactivated and set to activate dual work light function. Please request at time of purchase if single activation is needed per work light.
Electrical Installation

**Power Cable Wiring:**

Step 1: Install a 40 Amp Fuse (customer supplied) to the end of the Red, 12 AWG wire of the light bar power wire harness assembly. Do not use a circuit breaker or fusible link. Do not insert the fuse until the opposite end of the fuse holder is connected to the vehicle battery.

Step 2: Connect the opposite end of the fuse to the 12V + terminal of the battery. Do not use more than 1 foot of wire between the fuse and the battery terminal to ensure wire protection.

Step 3: Connect the Black, 12 AWG wire to the vehicle chassis ground.

Step 4: Wire function wires to switches, depending on functions needed for applications.

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**Warning!** All user supplied wires connecting to 12V (+) or 12V (-) must be sized to supply 100% of the maximum current and properly fused at the power source with the correctly rated fuse. Avoid routing wires in the deployment area of the vehicle air bag or any other potentially hazardous locations.
To replace a LED module:

Step 1: Remove the top cover by removing the Phillips screws on the center cover. Do not exceed 42 in. lb. (see Figure 3.0).

- Access to end cap is needed only to remove or replace alley lights (see Figure 3.1).

**Important!** Do not overtighten Phillips screws. Do not exceed 42 in. lb.

Step 2: To remove a module, slide out the clips on each side of the module (see Figure 3.2).
Step 3: Disconnect the male connector on the LED module from the female connector of the wire assembly extruding from the controller (see Figure 3.4).

Step 4: Unfasten both M3x8 screws from the back of the module (see Figure 3.3).

Step 5: Connect the male connector of the new module back to the same remote connector of the wire from the controller (see Figure 3.4).

Step 6: Slide the module back into the frame and fasten both M3x8 screws on the back of the module to the frame (see Figure 3.3).

Step 7: Slide the plastic clips back on each side of the module (see Figure 3.2).

Step 8: Re-fasten the top cover with the hardware removed in step 1 (see Figures 3.0 & 3.1).

**Important!** Do not overtighten Phillips screws. Do not exceed 42 in. lb.
Installing Brackets

Installing a Hook Bracket

Step 1: Remove the 3” hex bolt from its packaging and slide the bolt through the hook bracket hole (see figure 4.0).

Step 2: Using an open wrench, secure the hook bracket to the Avatar foot bracket hole using the hex bolt. Repeat on other side of Avatar so both sides have hook bracket secured (see figure 4.1).

Step 3: Place the Avatar with the attached hook brackets on the vehicle.

Step 4: Secure and tighten the bracket using an open wrench on each side of the vehicle until the bar is snugly mounted (see figure 4.2).

**Warning!** Do not overtighten the hex bolts. Do not exceed 165 in. lb.

Ensure the vehicle’s door will close without any interference (see figure 4.2).

**Important!** Use the “Hook Kit Compatibility Chart” for more information online.

Step 5: Drill and secure the bracket to the vehicle using the two pilot holes on the bottom of the hook bracket (see figure 4.0).

Step 6: Once secure, drill a one inch hole to route the wire harness through the vehicle and then seal the hole with a silicone adhesive.

**Warning!** Utilizing non-factory screws and mounting brackets may result in loss of warranty coverage.

www.feniex.com
Installing the Permanent Bracket

Step 1: If not previously installed, mount the two permanent brackets to the Avatar using the bolts provided.

Step 2: Place the Avatar with the connected permanent brackets on the platform to mark the locations for drilling.

Step 3: Drill out the marked holes from Step 2 into the platform.

Step 4: Screw Avatar onto platform using user-supplied hardware.

Step 5: Drill 1" hole to route the harness assembly through the platform and then seal the hole with silicone adhesive.

Installing the Headache Bracket

Step 1: If not previously installed, mount the 2 headache mount brackets to the Avatar, using the bolts provided.

Step 2: Place the Avatar with the 2 brackets attached on the headache bar to mark locations for drilling.

Step 3: Drill marked locations from Step 2.

Step 4: Mount the Avatar to headache bar using user-provided hardware.

Important! Use a thread-locking adhesive on bolts and screws to prevent loosening from vibration.
FAQ

What type of bolts are used for the foot brackets and hook mounts?

<table>
<thead>
<tr>
<th>Bolt Diameter:</th>
<th>Hex Bolt Head:</th>
<th>Bolt Length:</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 / 16 in.</td>
<td>1 / 2 in.</td>
<td>2 in. or 5 in.</td>
</tr>
</tbody>
</table>

What screws should I use for the hook bracket?

Self tapping screws.

Is it possible to overtighten the bolt for the foot brackets and hook mounts?

Yes, do not overtighten the bolt. Do not exceed 165 in. lb.

For hook kit installation, where should I place the foot bracket?

Place the foot bracket towards the edge of the roof to best install the hook kit.

Can I use only 6 lightheads for a traffic advisor on a 57” Avatar?

Feniex can program the lights at the main facility in Austin, TX. Custom requests must be submitted at the time of purchase.

Can I turn off the corner lights when using front function?

No.

Can I turn off the corner lights when using rear function?

Yes, engage arrow flashing (green/black wire).

Can I disable alley flashing when engaging takedown/alley flashing (orange/black wire)?

No.
Flash Pattern List

The flash patterns are listed in consecutive order of appearance. To select a certain flash pattern, start with a recognizable pattern and use the pattern changer wire to cycle through patterns.

Patterns:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1)</td>
<td>Cluster™</td>
</tr>
<tr>
<td>2)</td>
<td>All Patterns</td>
</tr>
<tr>
<td>3)</td>
<td>Half-Half Single</td>
</tr>
<tr>
<td>4)</td>
<td>Half-Half Double</td>
</tr>
<tr>
<td>5)</td>
<td>Half-Half Quad</td>
</tr>
<tr>
<td>6)</td>
<td>Half-Half Combo</td>
</tr>
<tr>
<td>7)</td>
<td>One-One Single</td>
</tr>
<tr>
<td>8)</td>
<td>One-One-Double</td>
</tr>
<tr>
<td>9)</td>
<td>One-One Quad</td>
</tr>
<tr>
<td>10)</td>
<td>One-One Combo</td>
</tr>
<tr>
<td>11)</td>
<td>Two-Two Single</td>
</tr>
<tr>
<td>12)</td>
<td>Two-Two Double</td>
</tr>
<tr>
<td>13)</td>
<td>Two-Two Quad</td>
</tr>
<tr>
<td>14)</td>
<td>Two-Two Combo</td>
</tr>
<tr>
<td>15)</td>
<td>In-Out Single</td>
</tr>
<tr>
<td>16)</td>
<td>In-Out Double</td>
</tr>
<tr>
<td>17)</td>
<td>In-Out Quad</td>
</tr>
<tr>
<td>18)</td>
<td>In-Out Combo</td>
</tr>
<tr>
<td>19)</td>
<td>All On Single</td>
</tr>
<tr>
<td>20)</td>
<td>All On Double</td>
</tr>
<tr>
<td>21)</td>
<td>All On Quad</td>
</tr>
<tr>
<td>22)</td>
<td>All On Combo</td>
</tr>
</tbody>
</table>