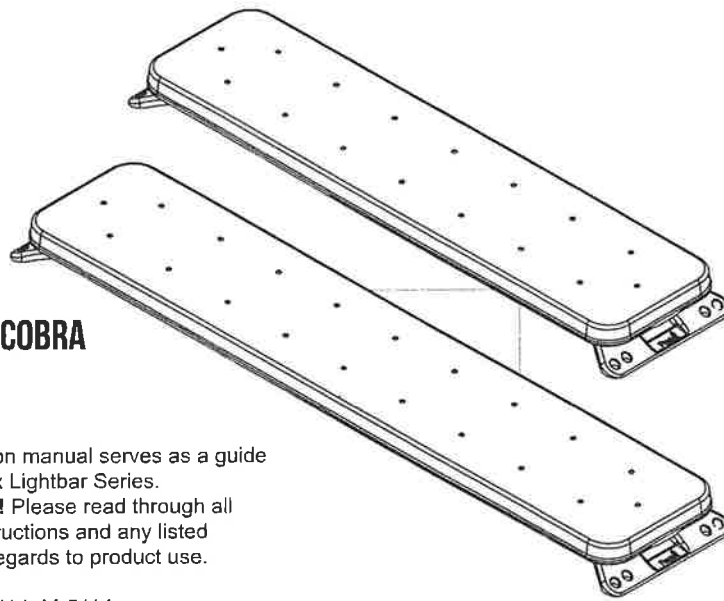**Cobra & Apollo Lightbar - Instruction Manual**

APOLLO & COBRA LIGHTBAR
V2.0

This instruction manual serves as a guide for the Feniex Lightbar Series.
IMPORTANT! Please read through all provided instructions and any listed warnings in regards to product use.

Model # M-4114, M-5114

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SAFETY REGULATIONS & WARRANTY

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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.

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

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EQUIPMENT DIMENSIONS

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49in.

Apollo/Cobra 49" Lightbar

3.75in.

12.5in.

59in.

Apollo/Cobra 60" Lightbar

Hook Brackets

3.75in.

12.5in.

Please Note! Hook kit purchased separately
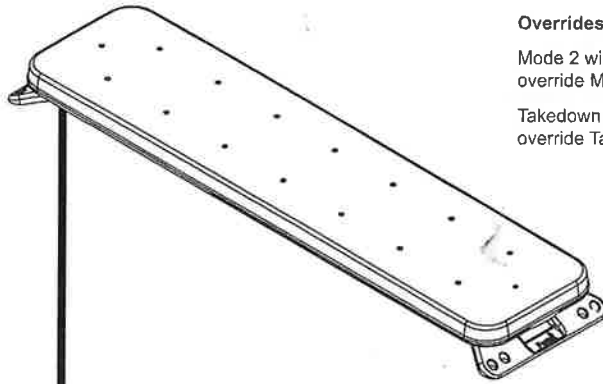
FEATURES & SPECIFICATIONS

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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
Cobra Module Count:	22 modules (6 LEDs per module) = 132 total LEDs
Apollo Module Count:	34 modules (6 LEDs per module) = 204 total LEDs
LED Type:	4 watt high power
Sizes:	49" & 60"
Functions:	
Center Out:	To engage, connect the left wire and the right arrow wire together.
Cruise Mode:	Engages corners at 10% full brightness potential.
Dim Mode:	Dims full bar at 10% full brightness potential.
Arrow Flashing Mode:	Pattern displayed from Mode selected.
Alley Flashing Mode:	Pattern displayed from Mode 1 selection.
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

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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.

Cobra System Specifications:

Wire Color:	Function:	Function Description:
Black	Mode 1	
Red	Mode 2	Overrides Mode 1
Orange	Mode 3	Overrides Mode 1 and Mode 2
Green	Cruise Mode	Activates side modules at 10% brightness
Blue	Takedown	Overrides Flashing
White	Left Alley	Overrides Alley Flashing
Red/Black	Right Alley	Overrides Alley Flashing
Orange/Black	Takedown/Alley Flashing	Displays flash patterns from Mode 3
Green/Black	Flood	Cycles through 5 flood flash patterns
Blue/Black	Dim	Dims bar to 10% brightness
White/Black	Arrow Left	Overrides Arrow Flashing
Black/White	Arrow Right	Overrides Arrow Flashing
Red/White	Pattern Changer	Cycles through 48 flash patterns
Green/White	Rear Cut Off	Turns off all rear facing modules
Blue/White	Front Cut Off	Turns off all front facing modules

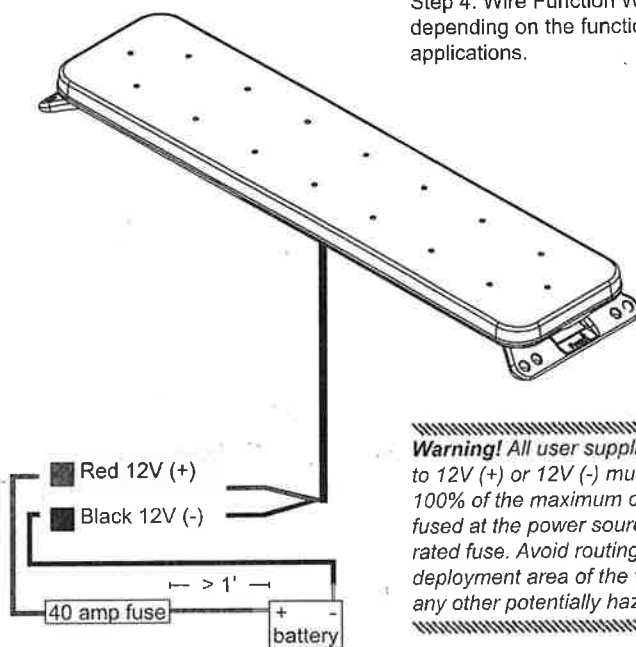*Please Note!* To change flash patterns, momentarily tap the Red/White wire to the Red 12V (+) wire

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 the functions needed for applications.

■ Red 12V (+)
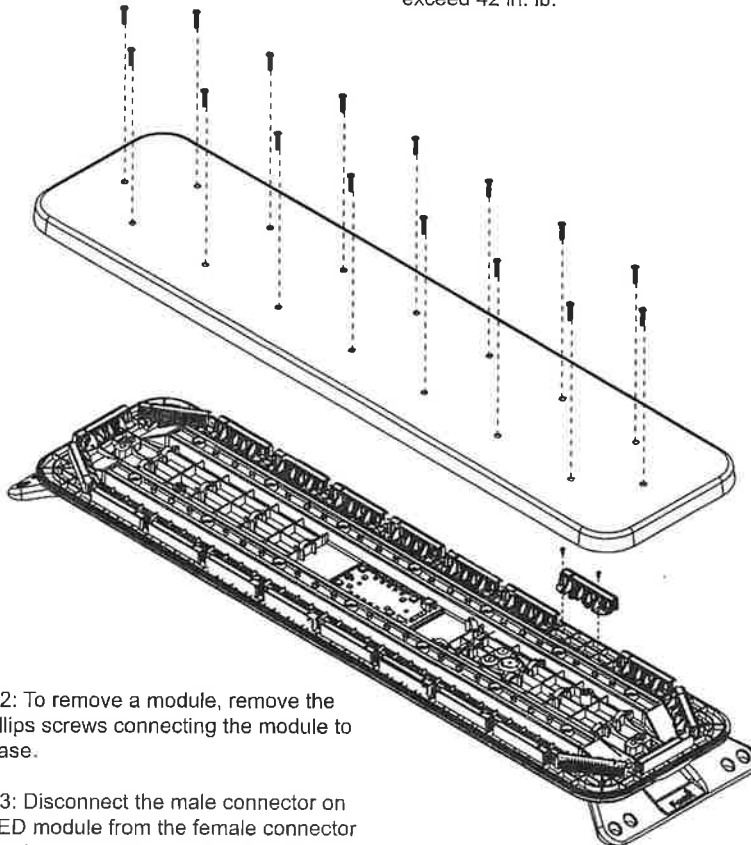
■ Black 12V (-)

⊢ > 1' ⊣

40 amp fuse + -
battery

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.

REPLACING A COBRA LED MODULE:

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Step 1: Remove the top cover by removing the Phillips screws on the cover. Do not exceed 42 in. lb.

Step 2: To remove a module, remove the 2 Phillips screws connecting the module to the base.

Step 3: Disconnect the male connector on the LED module from the female connector of the wire assembly extruding from the controller.

Step 4: Unfasten both M3x8 screws from the back of the module.

Step 5: Connect the male connector of the new module back to the same remote connector of the wire from the controller.

Step 6: Slide the module back into the frame and fasten both M3x8 screws on the back of the module to the frame.

Step 7: Secure the 2 Phillips screws removed from step 2.

Step 8: Re-fasten the top cover with the hardwire removed in step 1.

Please Note! *Do not damage the flange by providing too much torque when installing the screws. Failure to do so may result in damage to the unit.*

REPLACING AN APOLLO LED MODULE

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Step 1: Remove the top cover by removing the Phillips screws on the cover. Do not exceed 42 in. lb.

Step 2: To remove a module, remove the 2 Phillips screws connecting the module to the base.

Step 3: Disconnect the male connector on the LED module from the female connector of the wire assembly extruding from the controller.

Step 4: Unfasten both M3x8 screws from the back of the module.

Step 5: Connect the male connector of the new module back to the same remote connector of the wire from the controller.

Step 6: Slide the module back into the frame and fasten both M3x8 screws on the back of the module to the frame.

Step 7: Secure the 2 Phillips screws removed from step 2.

Step 8: Re-fasten the top cover with the hardwire removed in step 1.

Please Note! Do not damage the flange by providing too much torque when installing the screws. Failure to do so may result in damage to the unit.
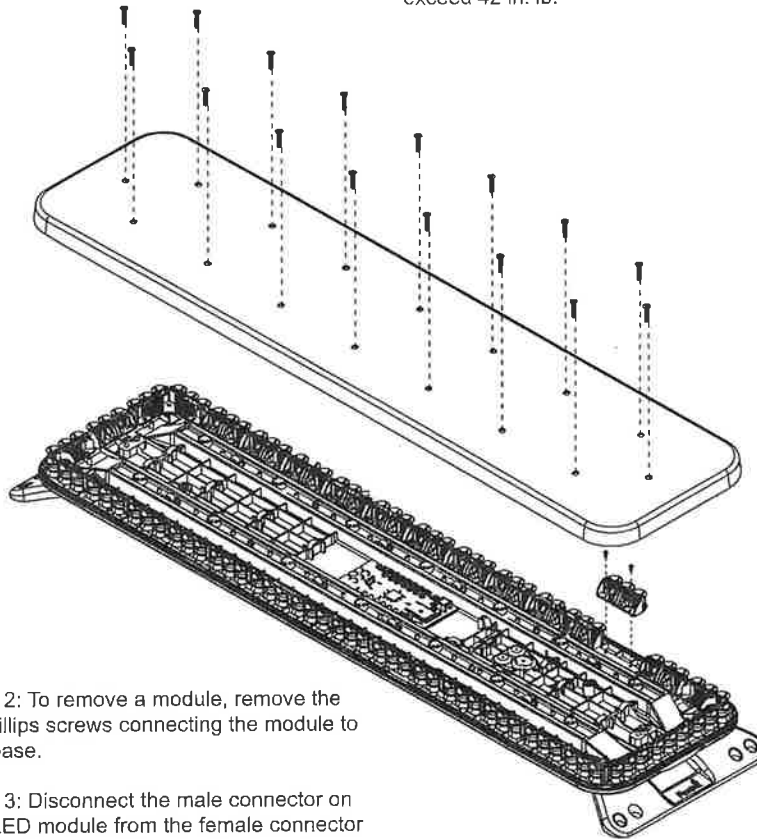
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Installing a Hook Bracket

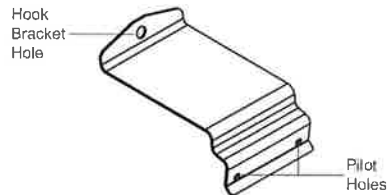Step 1: Remove the 3" hex bolt from its packaging and slide the bolt through the hook bracket hole.

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

Step 3: Place the lightbar 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.

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

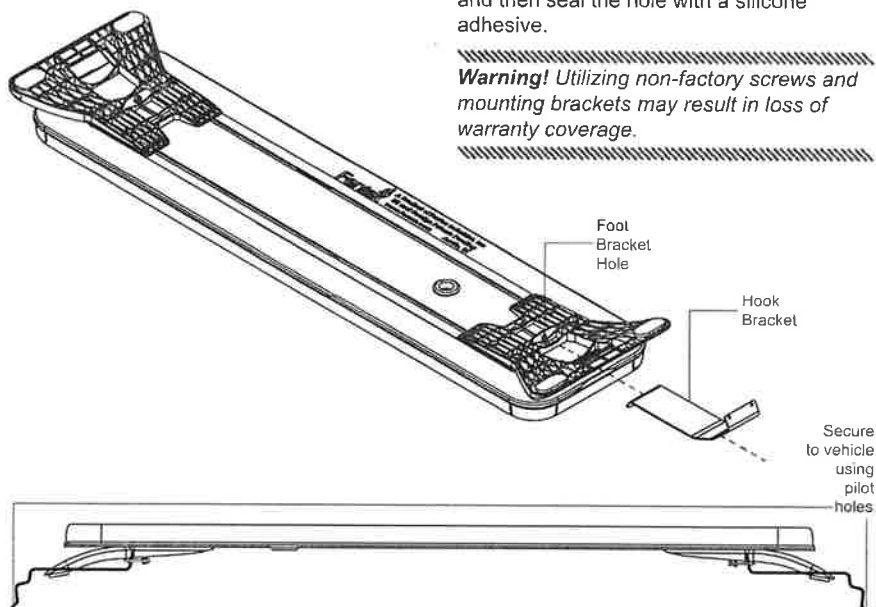Ensure the vehicle's door will close without any interference.

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.

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.

Hook
Bracket
Hole

Pilot
Holes

Foot
Bracket
Hole

Hook
Bracket

Secure
to vehicle
using
pilot
holes

FLASH PATTERN LIST

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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.

Single Color Patterns: Cobra & Apollo

1. Cluster
2. Attack
3. Night Ride
4. Half-Half Slow
5. Half-Half Fast
6. One One Slow
7. One One Fast
8. Two Two Slow
9. Two Two Fast
10. All On Slow
11. All On Fast
12. In Out Slow
13. In Out Fast
14. Combo (4-6-8-10-12)
15. Combo (5-7-9-11-13)
16. Combo (4-5-6-7-8-9-10-11-12-13)

FLASH PATTERN LIST

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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.

Dual Color Patterns: Apollo only

Color 1:		Color 2:		Color 1 & 2:	
1.	Cluster	18.	Cluster	34.	Cluster
2.	Attack	19.	Attack	35.	Attack
3.	Night Ride	20.	Night Ride	36.	Night Ride
4.	Half-Half Slow	21.	Half-Half Slow	37.	Half-Half Slow
5.	Half-Half Fast	22.	Half-Half Fast	38.	Half-Half Fast
6.	One One Slow	23.	One One Slow	39.	One One Slow
7.	One One Fast	24.	One One Fast	40.	One One Fast
8.	Two Two Slow	25.	Two Two Slow	41.	Two Two Slow
9.	Two Two Fast	26.	Two Two Fast	42.	Two Two Fast
10.	All On Slow	27.	All On Slow	43.	All On Slow
11.	All On Fast	28.	All On Fast	44.	All On Fast
12.	In Out Slow	29.	In Out Slow	45.	In Out Slow
13.	In Out Fast	30.	In Out Fast	46.	In Out Fast
14.	Combo (4-6-8-10-12)	31.	Combo (4-6-8-10-12)	47.	Combo (4-6-8-10-12)
15.	Combo (5-7-9-11-13)	32.	Combo (5-7-9-11-13)	48.	Combo (5-7-9-11-13)
16.	Combo (4-5-6-7-8-9-10-11-12-13)	33.	Combo (4-5-6-7-8-9-10-11-12-13)	49.	Combo (4-5-6-7-8-9-10-11-12-13)

Mode 1 starts on color 1 and 2   **Mode 2** starts on color 1   **Mode 3** starts on color 2