Feniex University
feniex.com/university/

Quantum® 49" Lightbar Instruction Manual
1.800.615.8350 / feniex.com

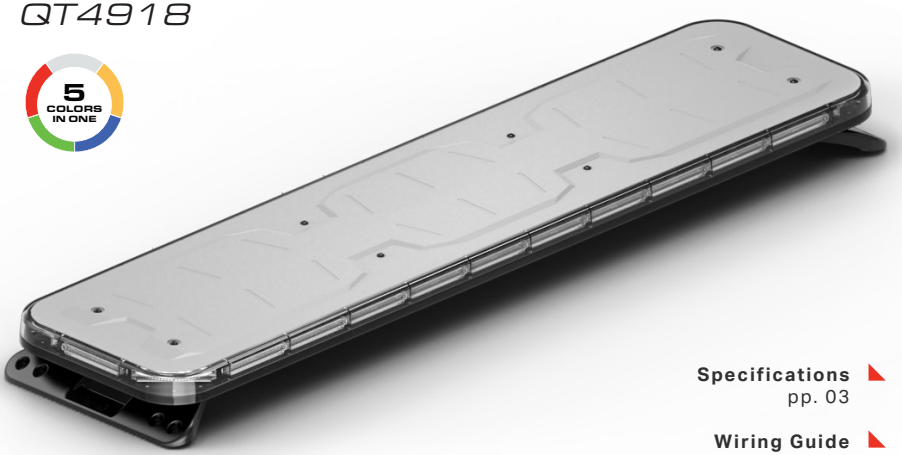
QUANTUM® 2.0

UNLOCK YOUR POTENTIAL

QUANTUM® 49" LIGHTBAR

QT4918

5 COLORS IN ONE



Specifications pp. 03

Wiring Guide pp.03

Patterns & Modes pp.04

Mounting pp. 05-07

Quick Setup Guide pp.08

MADE IN THE USA

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SAFETY REGULATIONS & WARRANTY

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 this 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's 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 all our products shall be free from defects in material and workmanship. Feniex Industries' speakers, sirens, rocker panels, AM600 Beacons, Torch Lights, AI lightbars, AI Cubes, AM900 Work Lights, 8.5" Dome Lights, Cargo Lights, flashlights, Remote Spot Lights, and controllers are warranted for 2 years from the manufacturing date. In addition, all other products are warranted for 5 years from the manufacturing date.

If a warranty problem occurs, please contact customer support at 1.800.615.8350 or visit the website at www.feniex.com/support.

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 9 a.m. to 6 p.m. central time, Monday through Friday. Please do not send in product without contacting support first for an RMA number.

Service After Expiration

Feniex Industries will still provide service for all products after the expiration of the warranty. 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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BOX CONTENTS

1x - Quantum 49" Lightbar
1x - 3-pin USB Connector*
1x - Standard Foot Mount*

*These items come attached to the product.

WIRING GUIDE

WIRE	INPUT
White	USB Port A
Green	USB Port B
Blue	12V+, Input 1
Orange	12V+, Input 2
Brown	12V+, Input 3
Gray	12V+, Input 4
Yellow	12V+, Input 5
Violet	12V+, Input 6
Blue/White	12V+, Input 7
Orange/White	12V+, Input 8
Brown/White	12V+, Input 9
Green/White	12V+, Input 10
Red/White	12V+, Input 11
Green/Black	12V+, Input 12
Red/Black	12V+, Input 13

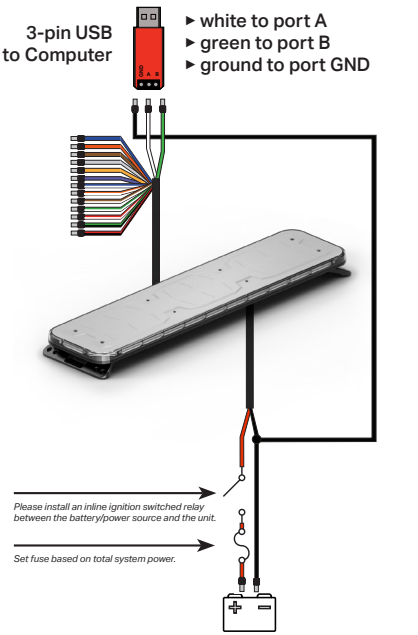
Important! *Install a customer supplied fuse rated for 125% of the product load to the end of the red wire. Do not use a circuit breaker or fusible link.*

SPECIFICATIONS

DIMENSIONS	49.8"x 12.15"x 1.6"
VOLTAGE	10-18VDC
CURRENT	20 Amps @ 13V
EXTERNAL FUSE	125% Product Load
WARRANTY	5 Years

WIRING DIAGRAM

Important! *To prevent constant draw on the battery/power source, please install an inline ignition switched relay between the battery/ power source and the unit.*



PATTERNS

1	Attack
2	Cluster
3	Cluster Mix
4	Combo Single
5	Combo Triple
6	Half-Half Single
7	Half-Half Triple
8	One-One Single
9	One-One Triple
10	Two-Two Single
11	Two-Two Triple
12	All-On Single
13	All-On Triple
14	Raging Beacon
15	Figure 8 Chase
16	Night Ride Crossover
17	Hale Storm
18	Pulse
19	I/O Flux
20	Spectrum
21	Progressive Pursuit
22	Steady On
23	Brake Flash

FUNCTIONS

1	Tail
2	Cruise
3	Front Flash
4	Rear Flash
5	Arrow Direction
6	Turn Signal
7	Brake Signal
8	Left Alley
9	Right Alley
10	Take Down
11	Work Light
12	Low Power
13	Cut Off
14	Pattern Change

INPUTS

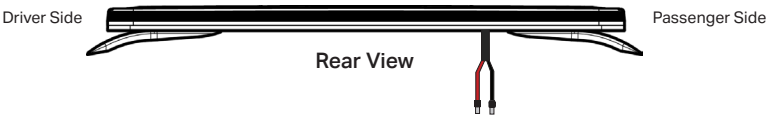
13 Hardwire Inputs
28 Inputs w/ Converter

BRIGHTNESS

10%	100%
50%	Park Pattern

WIRE EXIT DIAGRAM

For proper installation, refer to the wire exit diagram below to identify the driver and passenger sides of the product. The passenger side corresponds to where the wire exits.



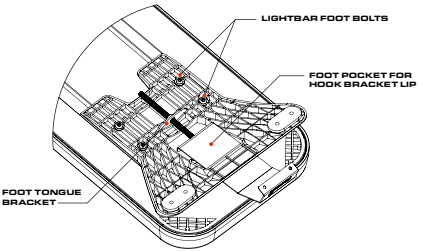
HOOK KIT MOUNTING

1. Initial Lightbar Positioning

Important! *Avoid drilling the vehicle at this stage. Please verify the mounting location before drilling.*

a. Place the full size lightbar on a flat surface with the bottom facing up. Using a 5/32" allen wrench, loosen the (4) bolts on each lightbar foot, but do not remove the feet from the bar. ***See figure A.***

Figure A - Lightbar Bottom View



b. Remove the 5" long hex bolt from its packaging and slide the bolt through the hook bracket hole. Using a ½" socket wrench and the hex bolt, thread the bolt in roughly ½" with the hook bracket into the foot tongue bracket. Repeat this process with the second bracket on the other foot of the lightbar, so both sides have a hook bracket. Route the hook bracket through the foot ensuring the lip of the hook bracket rests in the bottom pocket. Place the lightbar with the attached hook brackets on the top of the vehicle. Ensure the hook bracket is upright and seated correctly. ***See figure B.***

Figure B.1 - Bracket Top View

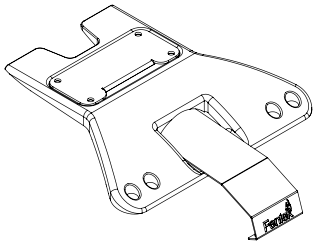


Figure B.2 - Bracket Bottom View

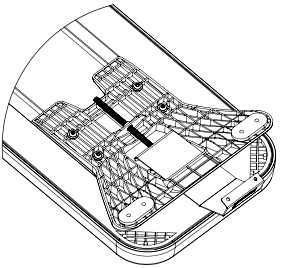
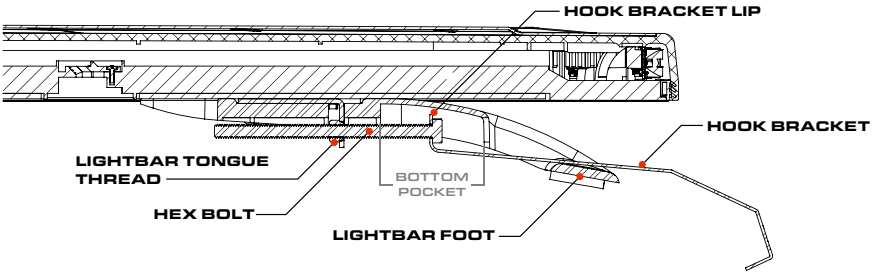
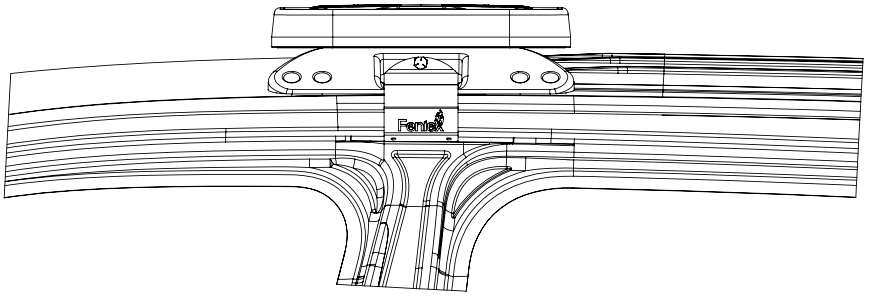


Figure B.3 - Bracket Side View



HOOK KIT MOUNTING

c. Align the center of the foot and hook bracket with the vehicle's B-pillar.



B-PILLAR

d. The rubber pads of the lightbar foot should be very close but never touching the vehicle's rain channel. Press the hook bracket up to the door jam and move the foot so the hook bracket doesn't interfere with the bottom side of the foot. Ensure the bracket does not touch the lightbar tongue bracket. The bottom of the lightbar will be close to the roof; however it should never touch the vehicle roof (Move the feet towards the center of the vehicle to remove any interference between the bottom of the lightbar and roof). ***See figure D.***

Figure D.1 - Vehicle View

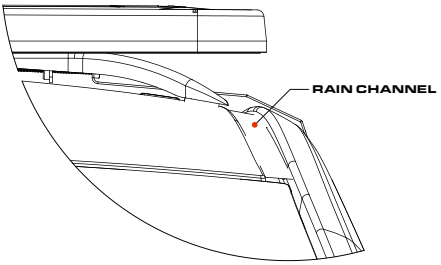
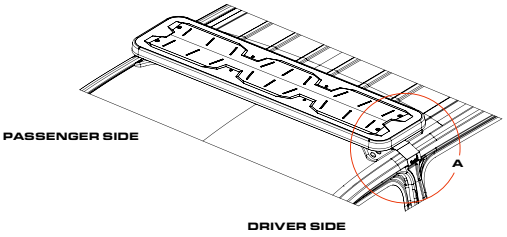
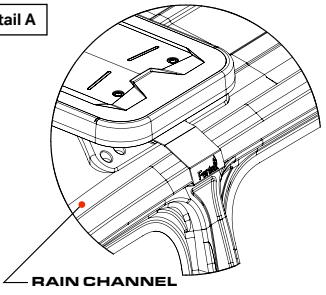


Figure D.2 - Vehicle Top View



Detail A

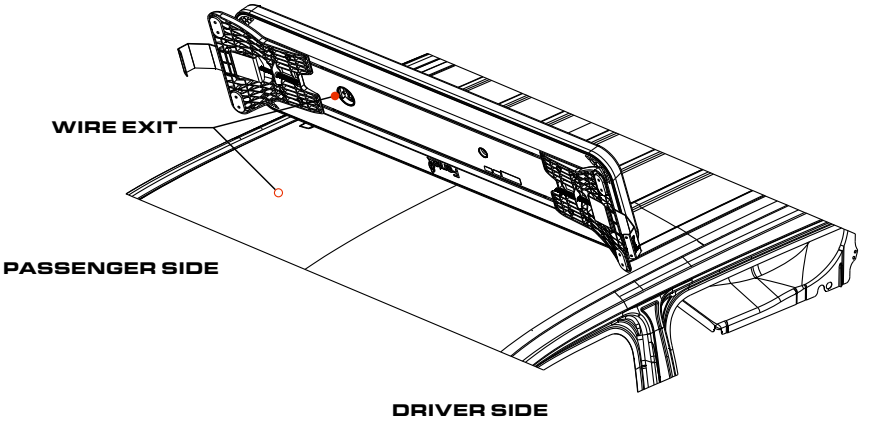


HOOK KIT MOUNTING

e. When the lightbar mounting locations are set, use an automotive masking tape or a marker to reference lightbar foot locations later. Also mark the wire exit location under the Passenger Side of the lightbar. This will serve as the drill point on the vehicle to allow for wire access. Flip the lightbar over to retighten the lightbar foot bolts using a 5/32" allen wrench on both feet (shown in step 1.a).

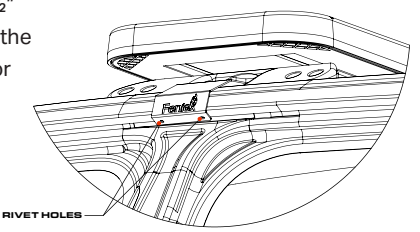
2. Routing Lightbar Wires

Ensure the headliner is removed or out of the way. To route the wire harness, drill a 1in. diameter hole (preferably under the Lightbar wire exit, ¾" diameter minimum), and route the wire harness through the vehicle. Ensure that wires are protected from rough edges using a rubber wire grommet seal the hole with silicone after securing the hook brackets.



3. Mounting Lightbar to Vehicle

Secure and tighten the hook brackets using a ½" socket wrench on each side of the vehicle until the bar is snugly mounted. Ensure the vehicle's door closes fully without any interference. Drill and secure the hook bracket to the vehicle with 3/16" diameter rivets, using the two pilot holes on the bottom of the hook bracket as a guide. Once the rivets are installed, torque the hex bolts to 175 in*lb max to complete the installation.



QUICK SETUP GUIDE

1. Unbox Quantum® Product

Remove the Quantum® product from its packaging. Locate the Quantum® product and the 3-pin USB drive:



2. Download Quantum® Unlock Software

Visit website *http://unlock.feniex.com/site/change_log* or use the QR code to download the Quantum® unlock software.

3. Install Quantum® Unlock Software

The Quantum® Unlock Software is available for both PC and Mac. The software will allow the user to completely configure their Quantum Products (i.e color, modes, functions).



4. Connect Quantum® to your Computer

Open Quantum® Software. Connect the Quantum® product to your computer using the 3-pin USB connector.



5. Power the Quantum® Product

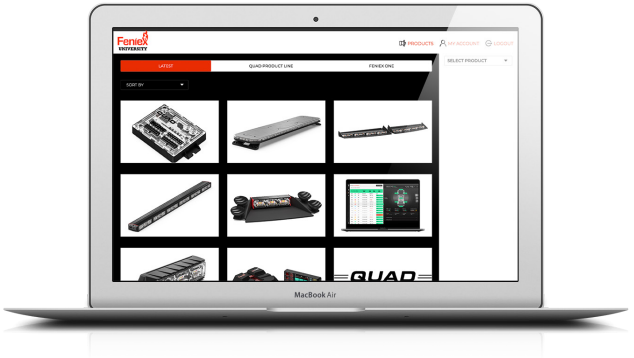
Connect the red wire to a 12V+ terminal and the black wire to Ground to power on your Quantum® product.

- white to port A
- green to port B
- ground to port GND

6. Open Feniex University

Open Feniex University to follow step-by-step instructions on how to configure your Quantum product.

FENIEX UNIVERSITY



Feniex University

Before installing the Quantum product, watch our instructional video series; Feniex University. Get an in-depth look at how to program and install your products using the Quantum Unlock Software





















Visit Feniex University

feniex.com/university/

Download Quantum Unlock Software

http://unlock.feniex.com/site/change_log

QUANTUM SOFTWARE

Unlocking Quantum

Every Quantum product is programmed to be a “Single” color platform from the factory. Single color implies one color LED per module as a “Single” color use. All 5 colors can be used on this platform as a single color or single function operation (i.e., if my single color lightbar has takedowns it is defaulted with a white colored module. I cannot change my takedowns as red, blue, or amber in color). Each function like STT, Alley, and Takedowns are defaulted to a specific-colored module. Users can unlock different levels through their unlock portal.

User Unlock with Hardware & User Interface

Users will have access to a Quantum user interface. This will allow the user to make any level changes to their product(s) and configure their product to their specific needs. A USB dongle will be provided for every Quantum product.

User Configuration with Hardware & User Interface

Every end user can make any configuration change based on their current unlock level. This means unlimited flexibility to adjust color and pattern configurations without a time limit. Color and configuration changes are no longer restricted to a 60-day window.

Configuring Products

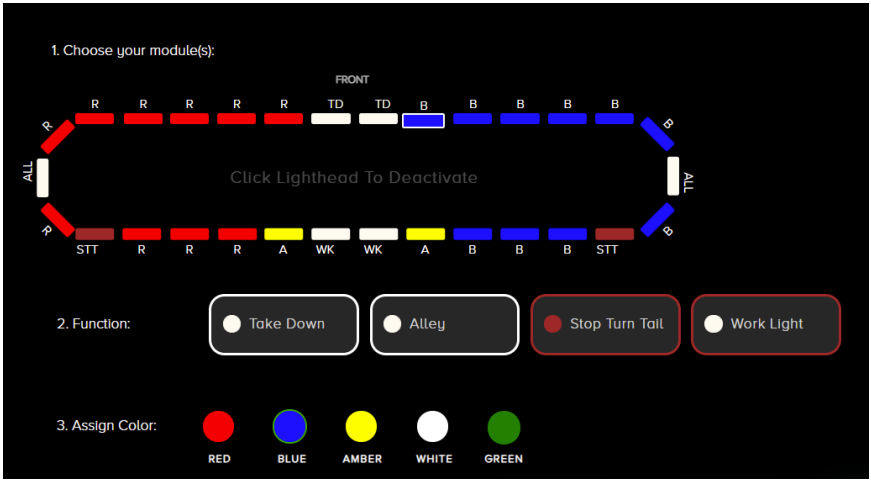
Levels:

- Single
- Dual
- Trio
- Quad
- Quint



SINGLE COLOR OPTIONS

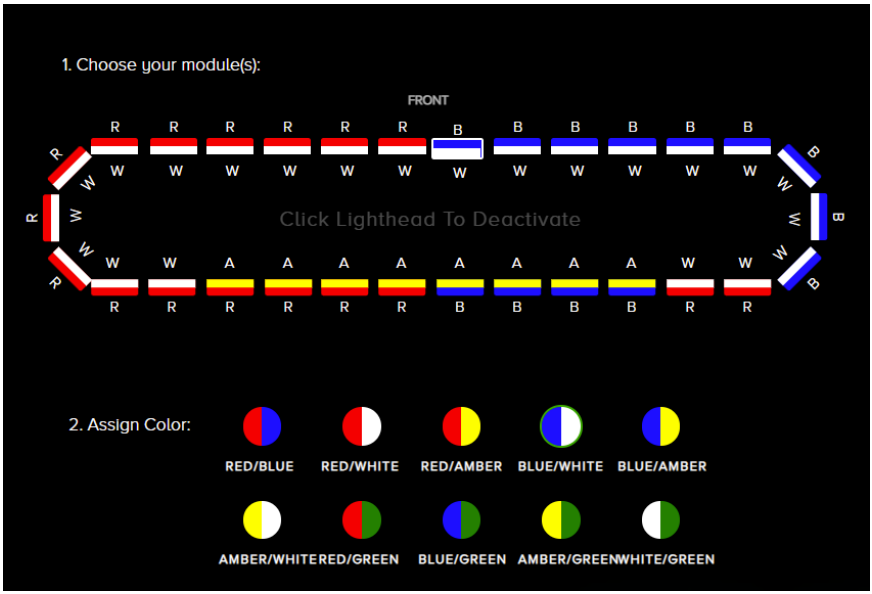
The product can be in any color scheme utilizing all 5 colors on a single module and the use of all 5 options (i.e., takedown, alleys, and stop, turn, and tail). This configuration is the most widely used as a single-color platform by most agencies nationally and internationally. It covers the basics of police and fire color schemes widely known in our industry. In this illustration, this lightbar is fully populated with every possible Quantum function available and has more capabilities for a budget department than they need.



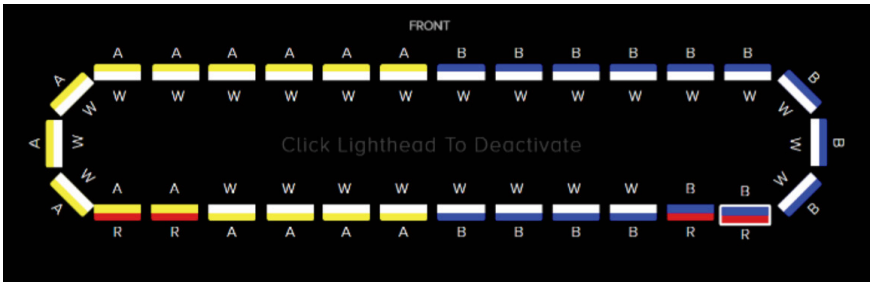
Most common single-color configuration for Police, Fire & EMS:
Driver red, passenger blue, takedowns, alleys, and STT [Stop, Turn, Tail]

DUAL COLOR OPTIONS

The standard driver red, passenger blue, with the addition of white to their emergency flash pattern, with flood takedowns and flood alleys (modular capability), full traditional amber directional, rear worklights and Stop, Turn, and Tail.



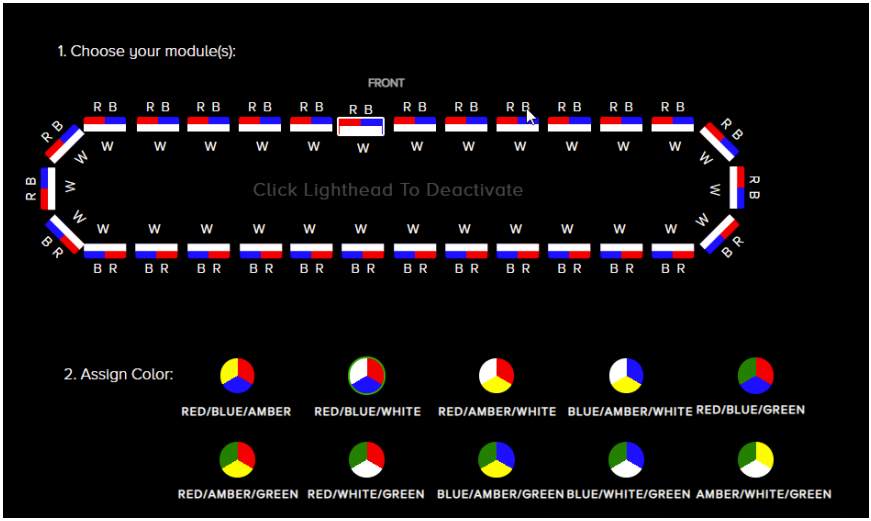
Most common dual-color configurations for Police, Fire & EMS:
Driver red, passenger blue, flood takedowns, flood alleys, amber arrows, STT, Worklights.



A popular public safety build w/ every necessary function. While maintaining the traditional amber and blue, a flood 360 is a must for night work while adding the DOT approved lighting functions needed with stop, turn and tail.

TRI COLOR OPTIONS

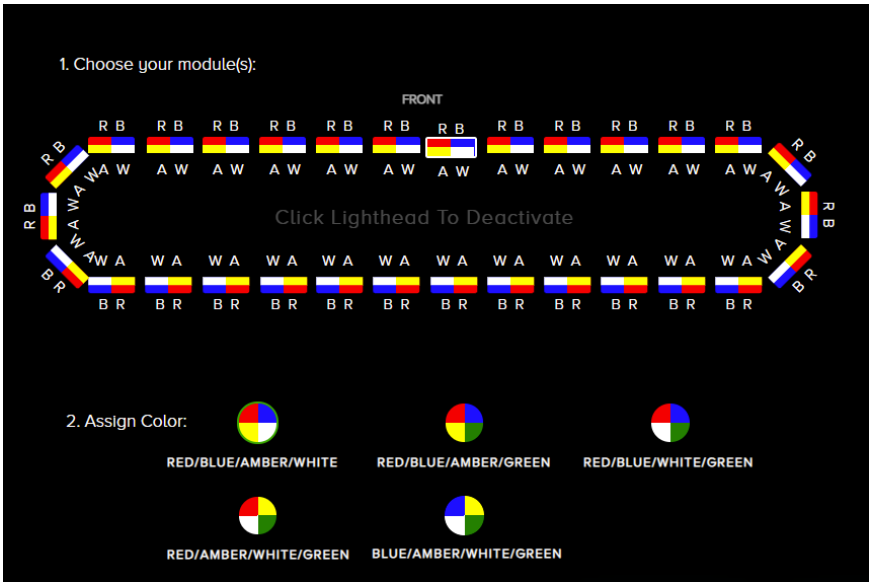
This color combo sets the bar for an enhanced traditional red and blue lightbar. It features an abundance of red and blue lights throughout the entire lightbar, complemented by all-white lights spanning 360 degrees. While the inclusion of all-white lights may seem excessive, they are necessary for optimal visibility. With our diverse flash patterns and a combination of reds, blues, and whites, the lightbar will undoubtedly stand out. Stop, turn, and tail functions are always optional. Compared to the predecessor standard build of driver red, passenger blue, and two takedowns, this setup provides coverage across a larger area in terms of color, surpassing what is typically needed.



Most common dual-color configurations for Police, Fire & EMS:
Driver red, passenger blue, flood takedowns, flood alleys, amber arrows, STT, Worklights.

QUAD COLOR OPTIONS

Featuring a versatile combination of blue, red, white, and amber lights, this configuration offers a comprehensive array of colors suitable for various emergency and utility applications. The inclusion of blue and red lights ensures high visibility and compliance with emergency vehicle regulations, while white lights provide additional illumination for optimal visibility in all conditions. The amber lights may serve as directional indicators or provide warning signals, adding to the functionality and effectiveness of the lightbar in different scenarios.



QUINT COLOR OPTIONS

Enjoy all five colors any time!



FENIEX CONVERTER

Quantum programming unlocks more modes and functionality for your Quantum product. Quantum full-sized lightbars come with 13 programmable inputs and all other Quantum products (excluding mini lightbars), come with 10 programmable inputs. The Feniex Converter increases your modes to 28 inputs.

Follow the steps below to connect your product to the Feniex Converter.

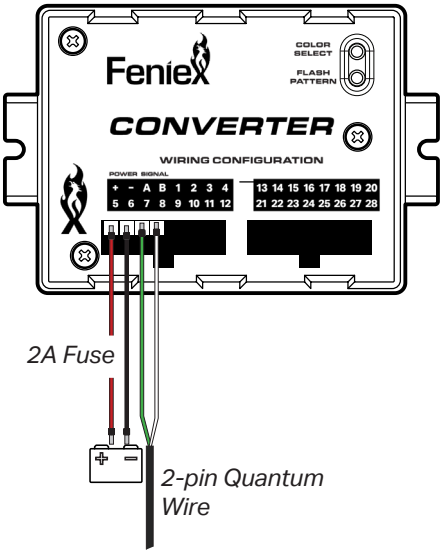
Connecting Quantum® to the Feniex Converter

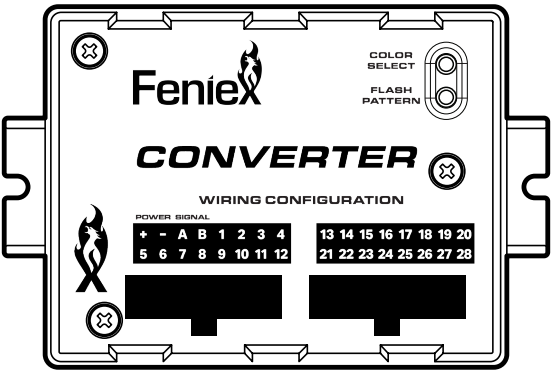
1. Connect your Quantum product to the Feniex Converter by using your data wires to the A and B inputs (Green wire to A, White wire to B).

2. Power your Quantum product by connecting the red wire to a 12V+ terminal and the black wire to Ground.

3. Power your Feniex Converter to a 12V battery by connecting the red wire to a 12V+ terminal and the black wire to Ground.

4. Use the provided Feniex Converter wiring harnesses to connect the wires to inputs 1-28.





CONVERTER INPUT GUIDE

1	Input 1
2	Input 2
3	Input 3
4	Input 4
5	Input 5
6	Input 6
7	Input 7
8	Input 8
9	Input 9
10	Input 10
11	Input 11
12	Input 12
13	Input 13
14	Input 14
15	Input 15
16	Input 16
17	Input 17
18	Input 18
19	Input 19
20	Input 20
21	Input 21
22	Input 22
23	Input 23
24	Input 24
25	Input 25
26	Input 26
27	Input 27
28	Input 28

PROGRAMMING FENIEX CONVERTER (CONT.)

Improved Quantum Functions

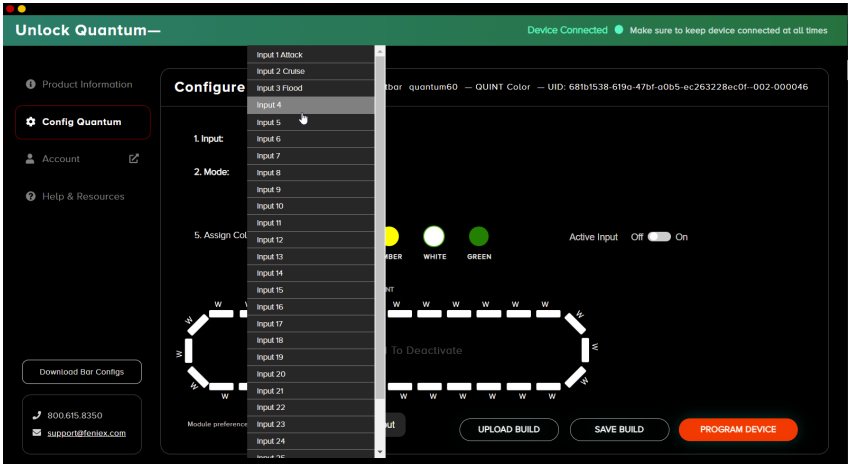
Feniex Converter for all Quantum products is now programmable. There are up to 28 programmable inputs of your choice. They can have an infinite number of flash patterns, 28 different alley light configurations, 28 variable arrow functions, etc.

▸ *All programming will be done through the end-user app when configuring.*

Understand the Feniex Converter

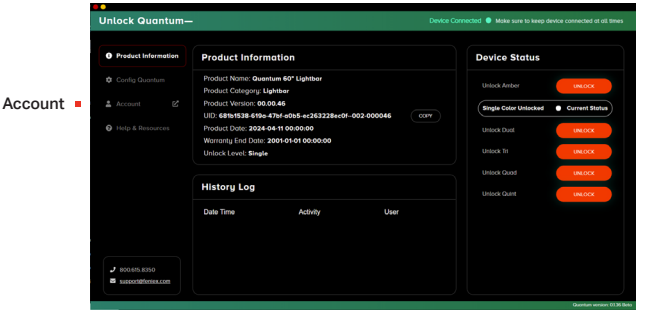
Each input shows in the illustration below is a direct correlation with the inputs on the Feniex Converter. The end-user is required to map out their specific configurations to a 12V+ trigger from a controller like the 4200 Data Link, Mini 4200, Typhoon, Feniex One (analog 12V+ triggers).

Example of User Interface:



PAYMENT

Purchasing and upgrading your Quantum products is easy. Start by connecting your Quantum product to your computer and opening your Quantum Unlock Software and clicking "Account."



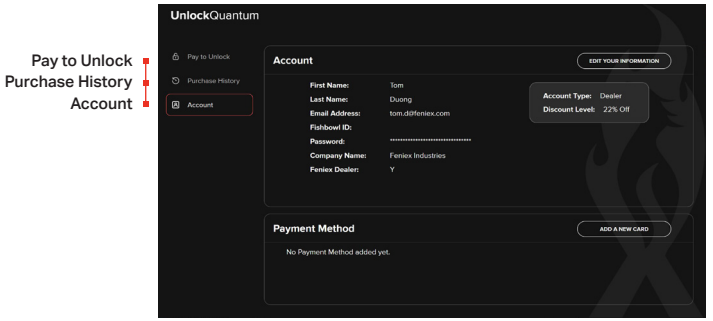
You will be redirected to another screen for payment information. Add a Payment Method by selecting "Add a New Card."

Pay to Unlock

Unlock Once added, select "Pay to Unlock" to upgrade your Quantum products.

Payment History

To view past purchases with Quantum, select "Purchase History" in the right side menu.



PAYMENT (DEALER ACCESSIBILITY)

The dealer can setup their own account on a provided web link that is accessible through their inside sales representative.

