

# 4200<sup>®</sup>

## INTELLIGENT DESIGN



### C-4200-DL

## INSTRUCTION MANUAL



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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 & 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 & 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 & 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 & workmanship for 2 years from the manufacturing date for all Public Works products.

If warranty service is needed, please contact customer support:

**Phone:** 1.800.615.8350

**Web Site:** [www.Feniex.com/support](http://www.Feniex.com/support)

**Email:** [techsupport@feniex.com](mailto:techsupport@feniex.com)

If the product needs to be returned for repair or replacement, contact our customer service team (using any method listed above) to receive a Return Merchandise Authorization (RMA) number. Operational times are from 9 a.m. to 6 p.m. central time, Monday through Friday.

## CONDITIONS

Feniex Industries, Inc. will not be held responsible for any costs associated with equipment removal and/or re-installation resulting from a warranty claim. It is the sole responsibility of the party initiating a warranty claim to pay shipping charges associated with returning a product to Feniex Industries for repair or replacement.

## 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.



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

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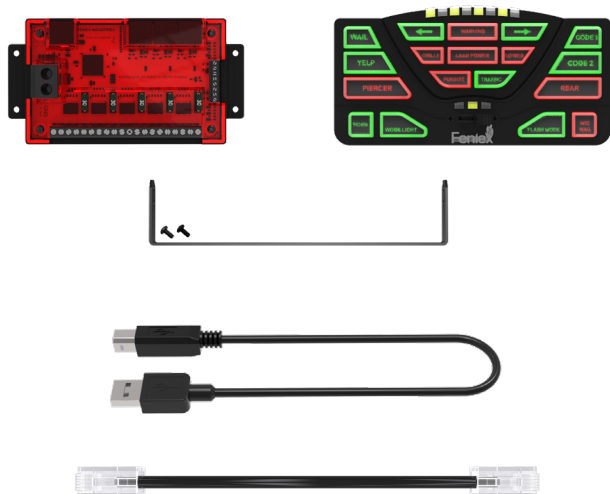


Please do not send in product without contacting support first for a Return Merchandise Authorization (RMA) number.

# SPECIFICATIONS & BOX CONTENTS



COMPONENT	QUANTITY
1. 4200 Data Link Relay	1
2. 4200 Data Link Keypad	1
3. Keypad Bail Bracket	1
4. Ethernet Cable	2
5. USB Cable	1
6. Button Legends	4 Sheets



SYSTEM SPECIFICATIONS	
Input Power	11 - 16 VDC
Max Input Current	60 Amps
Maximum Output	60 Amps
Standby Current	100mA +/-
External Fuse	125% of Circuit Load
Programmable Inputs	2 Ground, 3 Positive
System Inputs	Ignition, Day, Night
Relays	Solid State, Built-in
Switch Type	Latching, Momentary, Timed
Buttons	Rubberized, Backlit, 2 Colors
Button Legends	4 Sheets
Relay Dimensions	6.3" W x 3.3" H x 4.4" D
Keypad Dimensions	6.9" W x 4.6" H x 1.0" D
Bluetooth Dimensions	3.2" W x 1.5" H x 0.9" D
Bluetooth Range	35 - 40ft
Warranty	2 Years

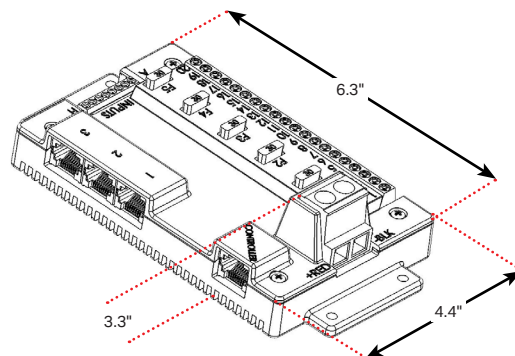
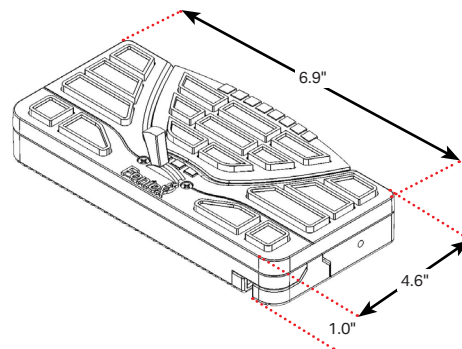
## WIG-WAG FLASH PATTERNS

Single Flash [Slow]	Quad Flash [Slow]
Single Flash [Fast]	Quad Flash [Fast]
Single Flash [Combo]	Quad Flash [Combo]
Triple Flash [Slow]	Combination #1
Triple Flash [Fast]	Combination #2
Triple Flash [Combo]	Highbeam Override

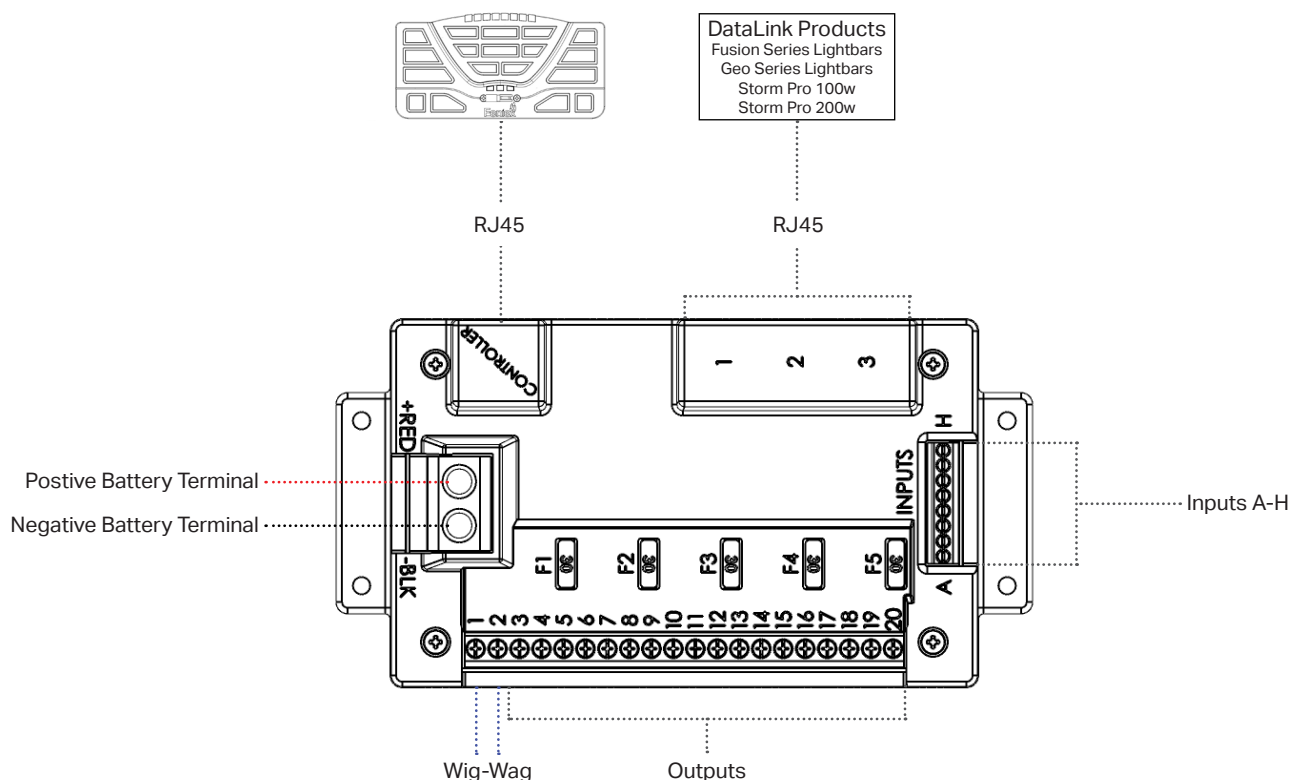


Important: Make sure to provide 12v+ into the "Ignition Input" (Input H).

## DIMENSIONS



# CONNECTION DIAGRAM



PIN	FUNCTION	POLARITY	PIN	FUNCTION	POLARITY
1	Headlight Flasher, Channel 1	12v (+)	11	Programmable Output #11	12v (+)
2	Headlight Flasher, Channel 2	12v (+)	12	Programmable Output #12	12v (+)
3	Programmable Output #3	12v (+)	13	Programmable Output #13	12v (+)
4	Programmable Output #4	12v (+)	14	Programmable Output #14	12v (+)
5	Programmable Output #5	12v (+)	15	Programmable Output #15	12v (+)
6	Programmable Output #6	12v (+)	16	Programmable Output #16	12v (+)
7	Programmable Output #7	12v (+)	17	Programmable Output #17	12v (+)
8	Programmable Output #8	12v (+)	18	Programmable Output #18	12v (+)
9	Programmable Output #9	12v (+)	19	Programmable Output #19	12v (+)
10	Programmable Output #10	12v (+)	20	Programmable Output #20	12v (+)

PIN	FUNCTION	POLARITY	PIN	FUNCTION	POLARITY
A	Programmable Input	12v (-)	E	Programmable Input	12v (+)
B	Programmable Input	12v (-)	F	Programmable Input [Night Mode]	12v (+)
C	Programmable Input	12v (+)	G	Programmable Input [Day Mode]	12v (+)
D	Programmable Input	12v (+)	H	Programmable Input [Ignition]	12v (+)

# MOUNTING INSTRUCTIONS



## SWIVEL MOUNT INSTALLATION

- 1)** Secure the Swivel Ball to the base of the controller using the #10 screw.
- 2)** Attach the swivel ball to the swivel bracket base using the #10 screw.
- 3)** Using the #10 screw, secure the two clamps loosely together.
- 4)** Place the clamps and screw around the 2 swivel balls. Tighten the clamp screw, thereby attaching the swivel bracket base to the mini controller.
- 5)** Secure the Swivel Bracket to the rear of the controller (as shown in the diagram).
- 6)** Place the unit against the intended mounting surface.
- 7)** Mark the areas where the mounting holes will be drilled. If the mounting surface is part of the vehicle, make sure no vital components could be damaged by the drilling process.
- 8)** Drill two mounting holes on the mounting surface, making sure no vital components of the surface are damaged.
- 9)** Using customer supplied screws, secure the 4200 Mini to the mounting surface.

## L-BRACKET INSTALLATION

**Note:** The provided L-brackets can be mounted either way, L-inward or L-outward. The instructions reflect the default mounting method: L-outward.

- 1)** Utilizing the provided screws, secure the L-Bracket to the side of the controller using a Phillips head screwdriver.
- 2)** Repeat Step 1 on the opposite side of the controller so both sides have the L-Bracket securely connected.
- 3)** Place the unit against the intended mounting surface.
- 4)** Mark the areas where the mounting holes will be drilled. If the mounting surface is part of the vehicle, make sure no vital components could be damaged by the drilling process.
- 5)** Drill two mounting holes on the mounting surface, making sure no vital components of the surface are damaged.
- 6)** Using customer supplied screws, secure the 4200 Mini to the mounting surface.

## OPTION B: SURFACE MOUNT

- 1)** Mount the U-Shaped Bracket in the desired location using 2 self-tapping screws. If you wish to use machine screws, simply drill out the required hole size based on the size of screw choice.

Important! Make sure not to damage any vital parts of the vehicle or mounting surface. Do not mount anywhere that interferes with the vehicle air bag.

- 2)** Re-attach the control panel head to the U-Shaped bracket utilizing the factory provided screws.
- 3)** Connect the RJ45 cable to the RJ45 port located on the rear of the controller.

# CONFIGURATION RECORD



Use this page to record the products connected to each outlet to assist when programming the control head with the provided software package.

Outputs:	Buttons: (1 - 18, P1 - P3)
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14
15	15
16	16
17	17
18	18
19	P1
20	P2
	P3

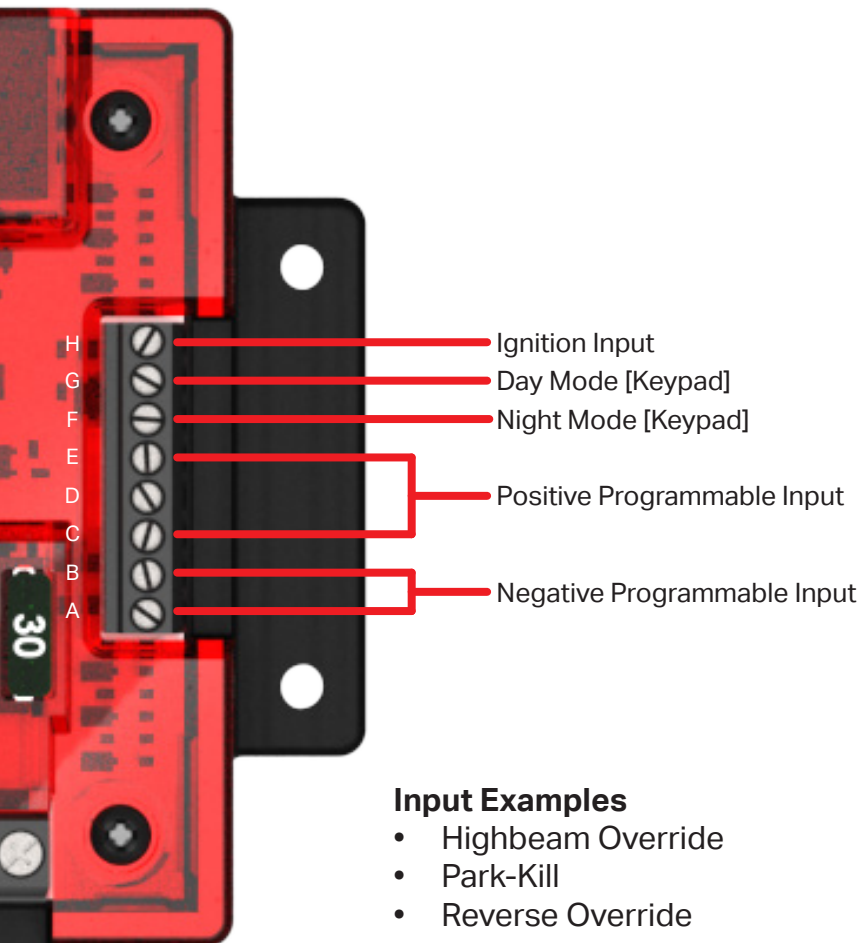
Input/Polarity:	
A (-)	F- Night (+)
B (-)	G- Day (+)
C (+)	H- Ignition (+)
D (+)	
E (+)	



## BUTTON LEGENDS

**!** The ignition input must be activated before the system can be used to control attached equipment.

**!** Tip: Once the appropriate ignition input is connected, install a small jumper wire between inputs H & G to activate keypad backlight in "Day Mode".



### Input Examples

- Highbeam Override
- Park-Kill
- Reverse Override

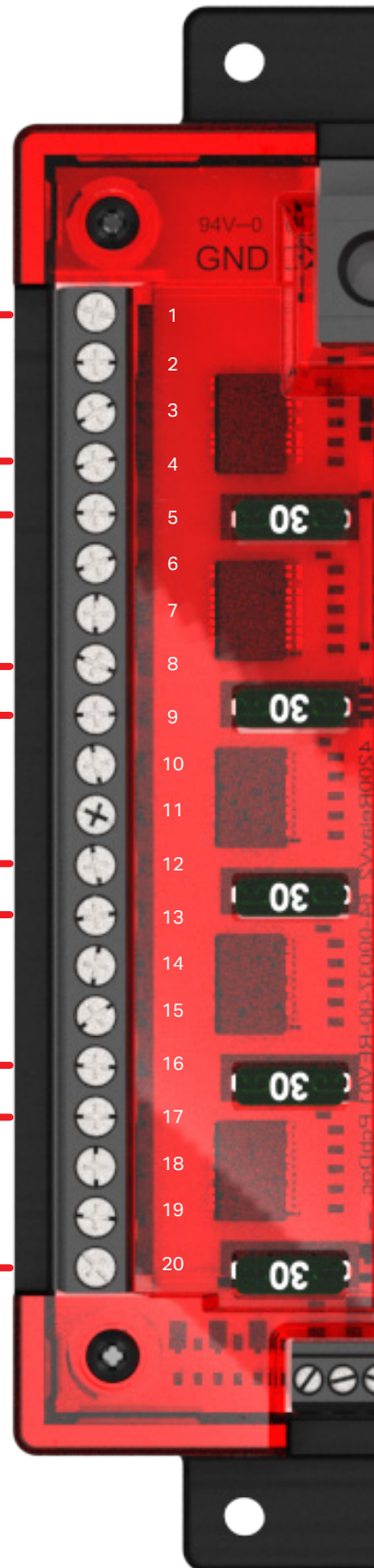
Fuse 1  
Outputs 1 - 4

Fuse 2  
Outputs 5 - 8

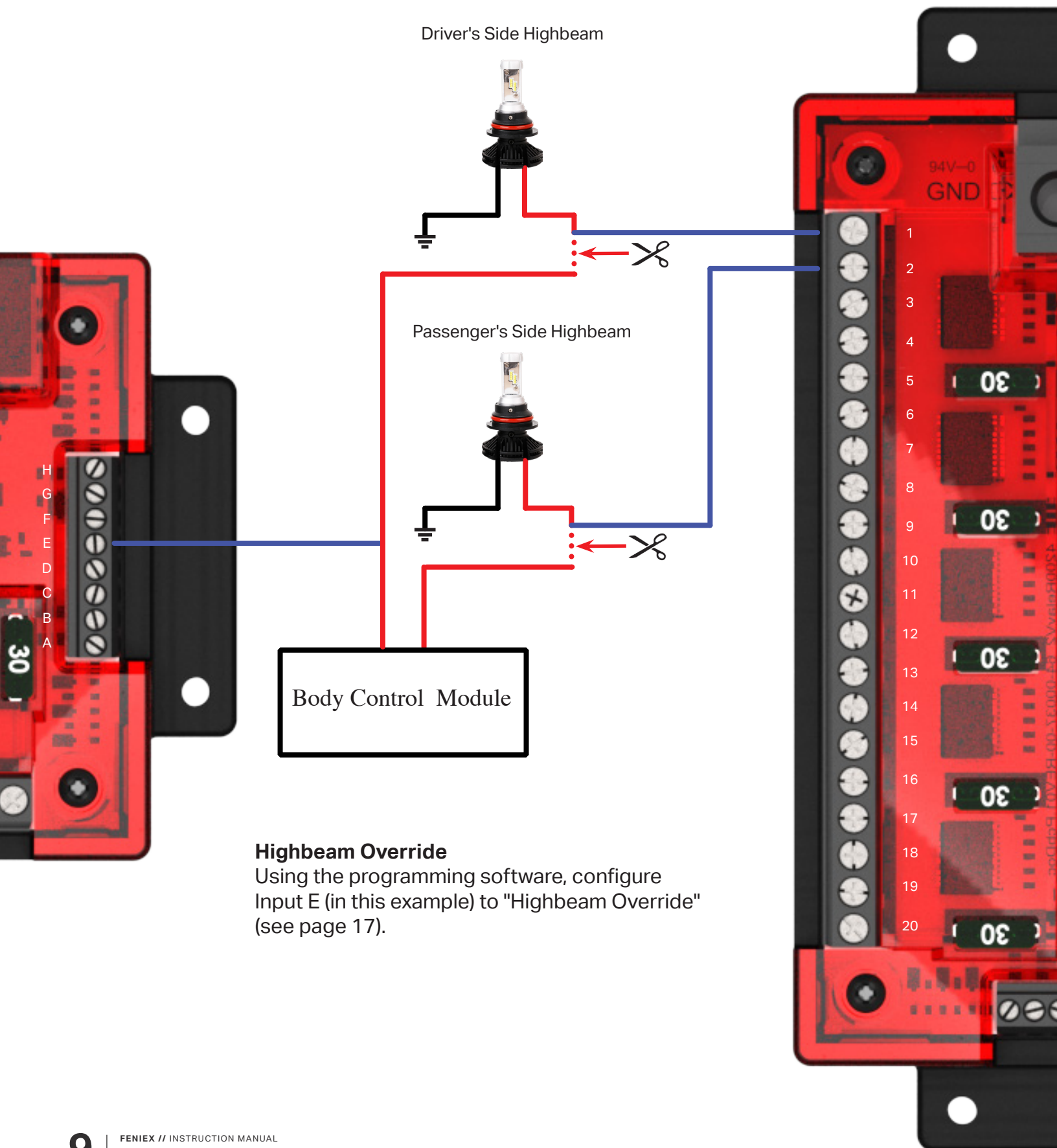
Fuse 3  
Outputs 9 - 12

Fuse 4  
Outputs 13 - 16

Fuse 5  
Outputs 17 - 20







## Highbeam Override

Using the programming software, configure Input E (in this example) to "Highbeam Override" (see page 17).

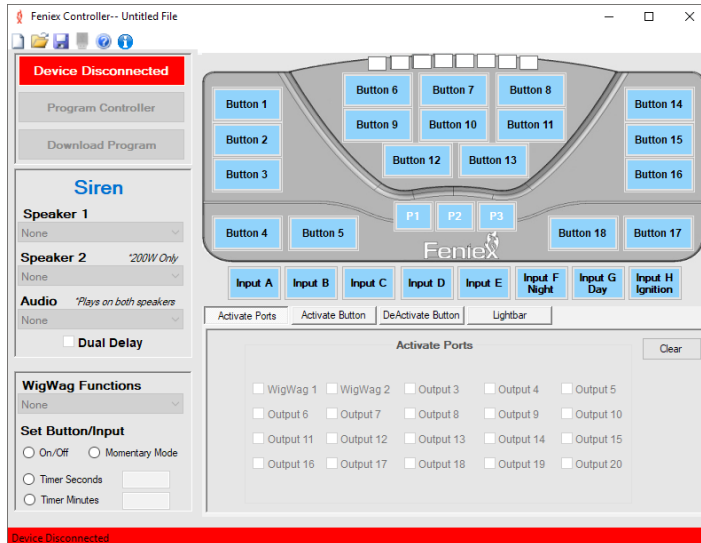
# PROGRAMMING SOFTWARE



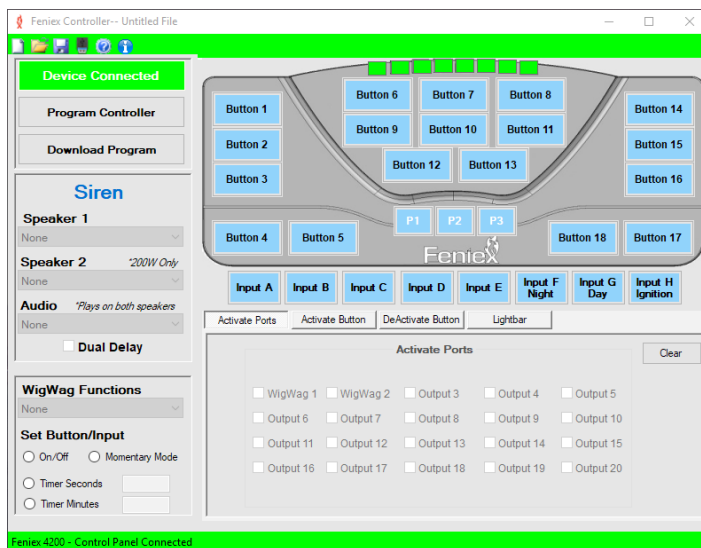
To program the Fenix 4200 Controller, first visit [fenix.com](http://fenix.com) to download the software.

## Help

For assistance on how to use the software, please click the help button located on the top bar in the software interface. You will find informative videos on how to program every function of the 4200 software system.



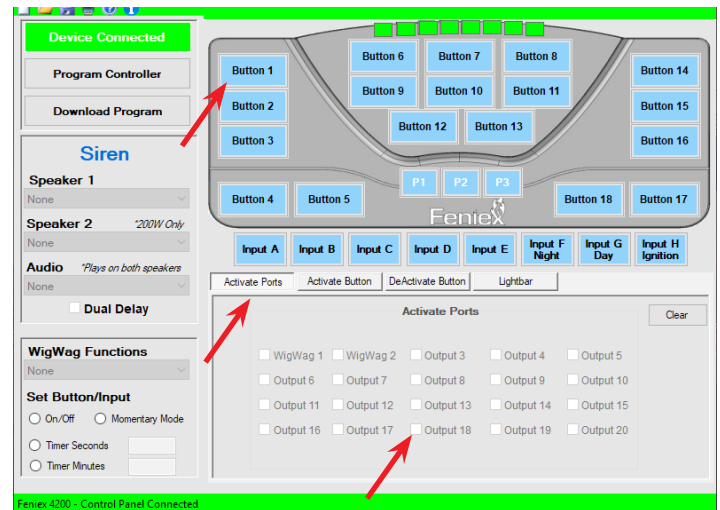
1) Connect the provided USB wire to the controller, and connect the other end of the USB port to the computer.



2) When the controller is plugged in, the red box reading "Device Disconnected" will change from Red to Green will read: "Device connected."

Ports 1-20 can be activated by:

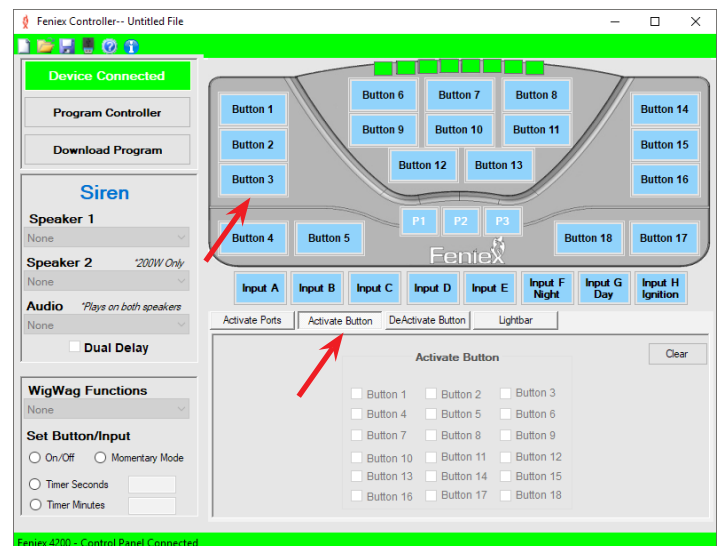
- Button
- Input
- Slide Switch (p1, p2, p3)



## 3) Activate Ports

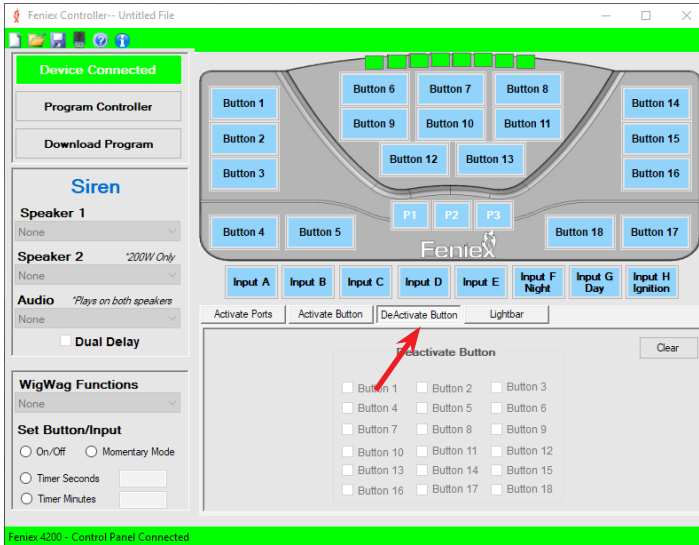
Select button, input or slide switch and then check the box of the desired port. You can select as many ports as needed with each button programmed. Each output is capable of 10 amps. For any product requiring more than 10 amps, use multiple ports to split the load.

For example: For a spotlight that requires 15 amps, select the desired button on the controller then use 2 ports to split the load. Don't exceed 30 amps per fuse quadrant.



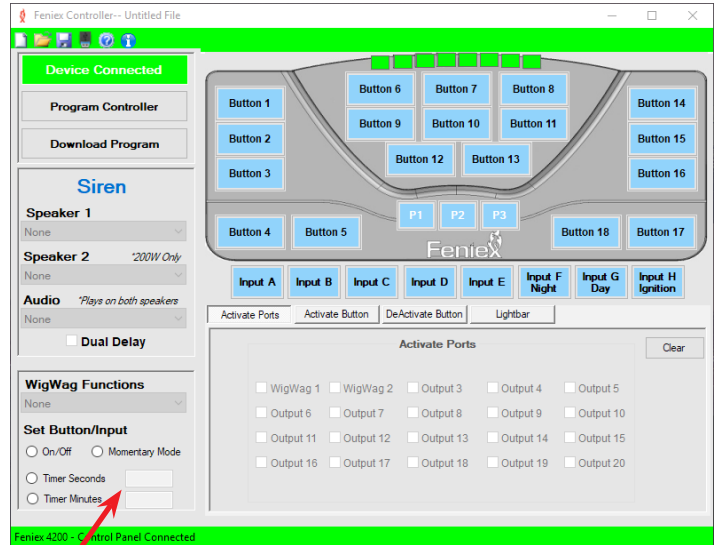
## 4) Activate Button

This function programs the slide switch (p1, p2, p3) or inputs A-E to activate a button. Please note a button cannot activate another button. Multiple buttons can be activated through the slide switch or input set up.



## 5) Deactivate Button

This function allows any input, slide switch or button to turn off an activated button. For example. Arrow function: Left arrow button #6, right arrow button #8, center out button #7. When activating button #6, deactivate button #7 and #8.

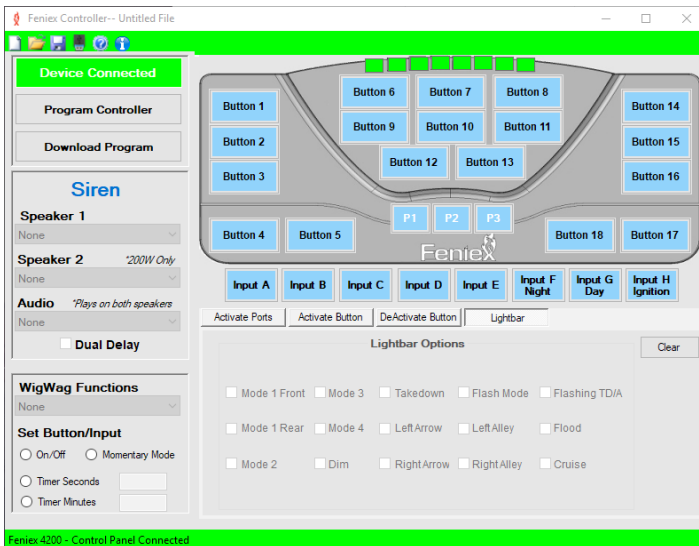


## 7) Timer

The timer function allows any button to continue functioning for a set period of time after it's been disabled. Timer can be set for any duration between 1 second to 1 hour. This applies for all inputs A-H and all buttons. The slide switch cannot be programmed for timer or momentary functions.

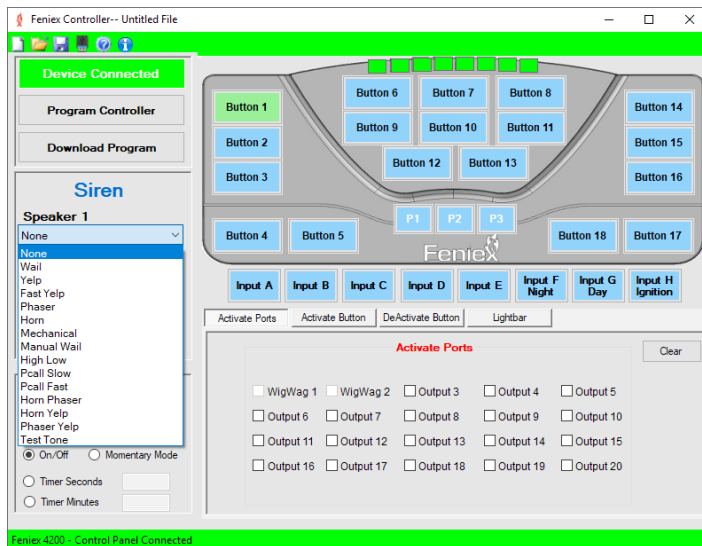
The momentary function only applies to buttons and allows a button to activate only when the user holds the button down. It will not remain active once pressure is released.

**Ignition/Day/Night:** These buttons in the software can only be used for their respective functions. Please refer to the wiring diagram on pages 8 & 9 for wiring examples.



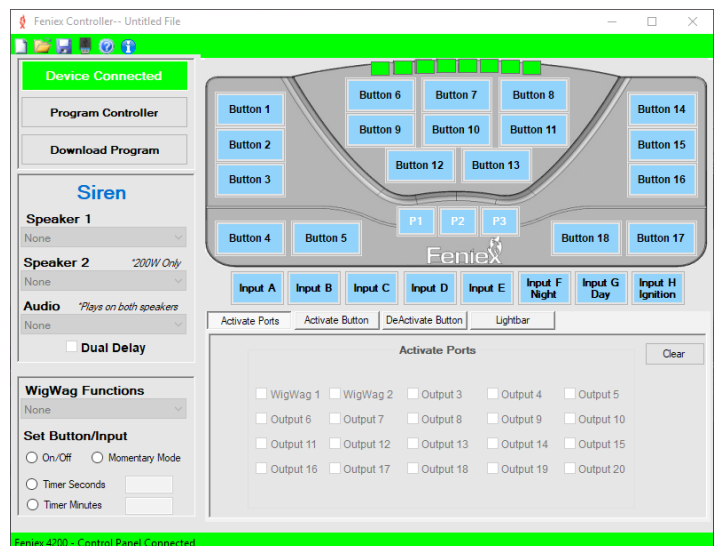
## 6) Lightbar

This function works when you have a full size lightbar connected. To activate a function of the lightbar, select a desired switch (input, slide switch, button) then select the lightbar function. Multiple functions can be selected on 1 switch.



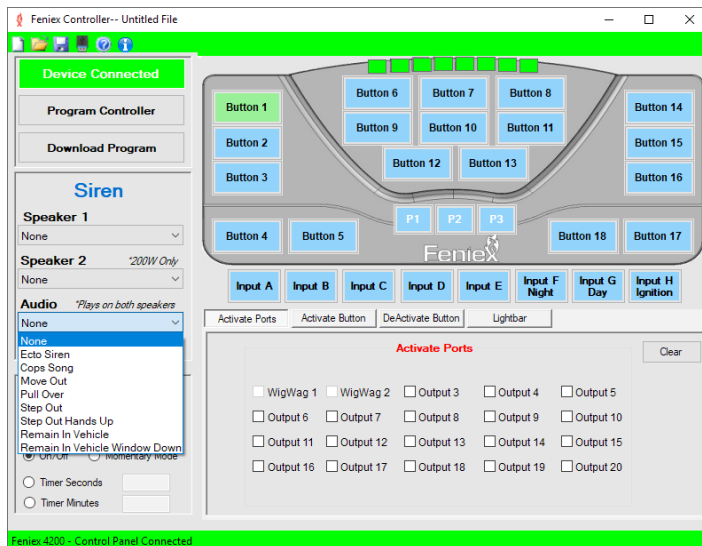
## 8) Siren

This function only works when you have a 100W or 200W Storm siren connected. Select the desired switch (input, slide, or button), then select the tone from the drop down menu. If using a 100W siren, only select speaker 1. For 200W sirens, make sure to highlight speaker 1 and speaker 2.



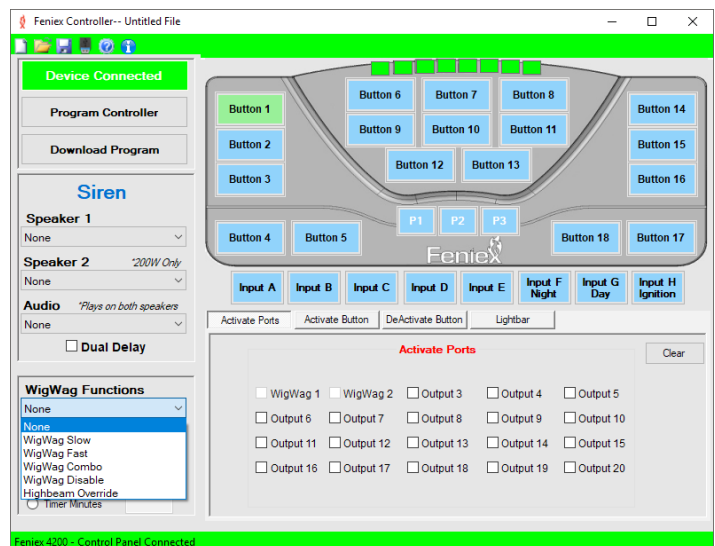
## 10) Dual Delay

This function works when a 200W Storm siren is connected to the 4200. Dual delay is a check box at the bottom of the siren section. When using a 200W siren and have one switch activating the same siren tone, dual delay will offset the 2 tones so that they alternate. Note: this is only needed when using the same tone and wanting the dual tone functionality.



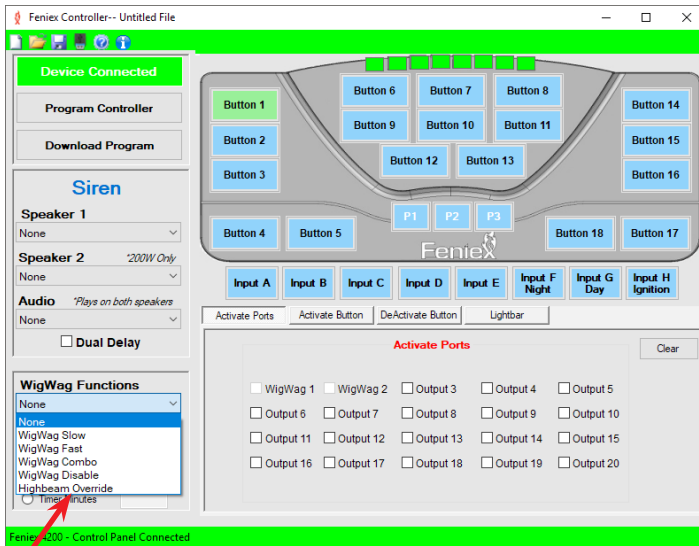
## 9) Audio (under Siren section)

This function only works when you have a 100W or 200W Storm siren connected. This function allows any input, slide switch or button to activate a desired audio tone. Select the desired switch (input, slide switch, or a button) then select the audio tone from the drop down menu. If a 200W Storm siren is installed, the audio tones will always play on both speakers. For example: Tone 1 programmed on speaker 1 will play through both speakers #1 and #2 on a 200W siren.

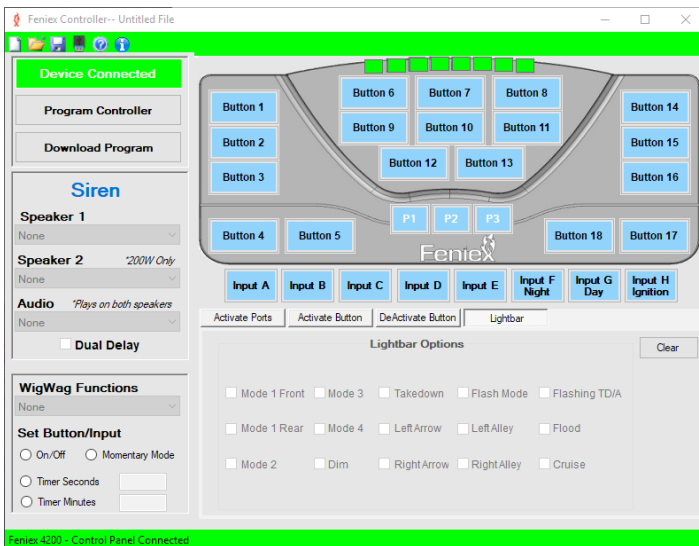


## 11) Wig Wag

This function works when output 1 and output 2 are connected to two separate halogen or LED lights. To enable, select the desired switch (input, slide switch, or a button) and select the speed from the drop down menu.



Program the appropriate input (highbeam signal) to override the flashing wig-wag function with a stead-on signal.

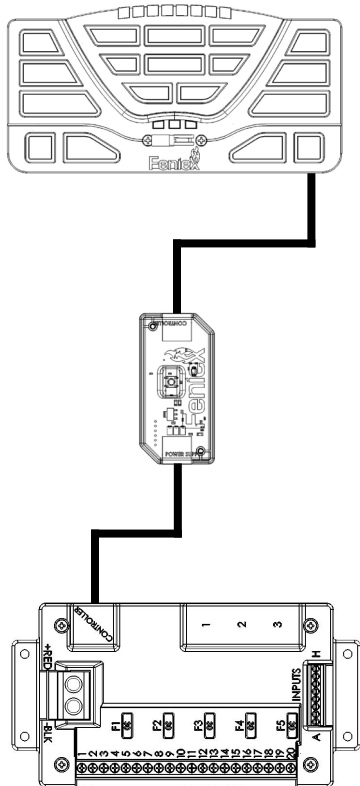


## 12) Lightbar

This function works when you have a full size lightbar connected. To activate a function of the lightbar, select a desired switch (input, slide switch, button) then select the lightbar function. Multiple functions can be selected on 1 switch.

## Bluetooth Hardware

The Feniex 4200 has the option of being controlled via a smart phone or tablet. To enable this feature you will require the Feniex in-line Bluetooth module (part #: C-4200WB-AD for Android Bluetooth; C-4200WB-AP for Apple Bluetooth). Follow the installation instructions below to pair the 4200 with a smart phone or tablet.



**1)** Connect the provided RJ45 cable exiting the 4200 power supply to one end of the BT module.

**2)** Connect the other end to the 4200 controller and follow the marking on the Bluetooth unit for proper connectivity.

Follow instructions on page 15: "4200 App Requirements" and "Bluetooth Software" to complete Bluetooth installation.

**3)** Upload software to your handheld device.

- To download for apple devices, go to the App Store.
- To download for android devices, visit the Feniex website at: <http://www.feniex.com/s-4200>

\*The app is not yet available on Google Play

**4)** Turn Bluetooth on using handheld device.

**5)** Press and hold pairing switch button on Feniex Bluetooth device for 3 seconds.

**6)** In the 4200 app, select "connect" in the upper right corner.

**7)** Select "Search for device" for Android or "Scan" for Apple

**8)** Enter password:

- For android devices, select Feniex 4200 and enter password: 1111.
- For apple devices, select Feniex 4200 and choose enter 8 digit password: 11111111

**9)** When the app is successfully paired with the Bluetooth module, the circle next to "connect" changes from red to green.

### 4200 App Requirements:

**Android** App minimum requirements are the following:

- Android 2.2 or higher
- Bluetooth 2.0 EDR with SPP support

The app should be compatible with most phones made in 2011 or after.

**Apple** App should work on the following devices:

- iPhone 5 or newer
- iPad Air or newer
- iPod Touch 5th Gen or newer
- iPad 3rd Gen or newer

Devices must have Bluetooth 4.0 and iOS 6.0 software or newer.



## FREQUENTLY ASKED QUESTIONS



### 1) How do I know if there is power to my 4200 Relay?

A flashing green LED light on the PCBA will indicate if there is power to the board if the firmware is fully operational.

### 2) Why can't I program to outputs 1 - 2?

Outputs 1 - 2 are only for the WigWag Function Box.

### 3) My controller does not turn on after I programmed it?

Make sure to provide 12V+ into the "Ignition Input" (Input H).

### 4) What is the password for Fenieux Bluetooth Module?

Android: The password is: 1111

Apple: The password is: 11111111

### 5) Can I still use my high beams with the WigWag function?

Yes, please use the wiring diagram (see fig. 7.1) as a reference.

- To program, select Input C, D, or E
- Select "Highbeam Override" (see right, fig 7.2).

### 6) How do I use my wig wag option?

Each output will support 1 high beam light assembly. This option can be used for low beams. Make sure to wire each output to the positive side of the high beam or low beam. Be sure to completely cut the wire to not splice into it to percent feedback.

### 7) How do I wire the "highbeam" function from the vehicle?

Run the "switch side" wire, after its cut off from the high beam bulb, into the 4200's input (C,D or E). In the programming software, select the input of the vehicle's highbeam wire and on the left column of the programmer under "Wig Wag Function" select "high beam" override.

### 8) My controller button is not illuminating?

Make sure to provide 12V+ into Input G (day mode).

### 9) The program software will not acknowledge my 4200 controller.

Make sure the 4200 control panel is plugged in via provided USB to the computer.

### 10) Can I change button labels on the App for handheld device?

Yes. If using Android app, press and hold button on handheld device. Enter new name for button when text box appears. On Apple app, select "settings" to edit labels on buttons.

