

# CANNON®

ENGINEERING EXCELLENCE



H-2219

## INSTRUCTION MANUAL



Fenix Product Copyrights This price List and the mentioned Fenix products include or describe copyrighted Fenix material. Laws in the United States and other countries preserve for Fenix Industries and its licensors certain exclusive rights for copyrighted material, including the exclusive right to copy, reproduce in any form, distribute and make derivative works of the copyrighted material. Accordingly, any copyrighted material of Fenix and its licensors contained herein or in the Fenix products described in this Price List may not be copied, reproduced, distributed, merged or modified, transmitted, transcribed, stored in retrieval system or translated into any language or computer language, in any form or by any means, without prior written permission of Fenix Industries, Inc.. Fenix and the stylized Fenix logo are registered in the U.S. Patent & Trademark Office.



# TABLE OF CONTENTS



|   |   |
|---|---|
| <b>Safety Regulations &amp; Warranty</b> .....              | 3 |
| Service after Expiration .....                              | 3 |
| Copyright .....   | 3 |
| Feniex Product Copyright .....                              | 3 |
| <b>Box Contents, Specifications, &amp; Dimensions</b> ..... | 4 |
| Box Contents .....  | 4 |
| Flash Patterns .....  | 4 |
| Specifications .....  | 4 |
| Dimensions .....  | 4 |
| <b>Wiring, Configuration &amp; Mounting</b> .....           | 5 |
| Wiring Diagram .....  | 5 |
| Power .....   | 5 |
| Setting Master/Slave .....                                  | 5 |
| Patterns & Synchronization .....                            | 5 |
| Mounting Instructions .....                                 | 5 |

# 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 5 years from the date of purchase for all LED products. Feniex Industries warranties speakers, sirens, flashers, & controllers for 2 years.

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.

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

## 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.

## COPYRIGHT

This instruction manual and the Feniex products described in this instruction manual may include or describe copyrighted Feniex material. Laws in the United States and other countries preserve for Feniex Industries and its licensors certain exclusive rights for copyrighted material, including the exclusive right to copy, reproduce in any form, distribute and make derivative works of the copyrighted material. Accordingly, any copyrighted material of Feniex and its licensors contained herein or in the Feniex products described in this instruction manual may not be copied, reproduced, distributed, merged or modified in any manner without the express written permission of Feniex Industries, Inc.

## FENIEX PRODUCT COPYRIGHTS

The products described in this document are the property of Feniex Industries, Inc. It is furnished by express license agreement only and may be used only in accordance with the terms of such an agreement. Products and documentation are copyrighted materials. Making unauthorized copies is prohibited by law. No part of the product or documentation may be reproduced, transmitted, transcribed, stored in retrieval system or translated into any language or computer language, in any form or by any means, without prior permission from Feniex Industries, Inc.

# BOX CONTENTS, SPECIFICATIONS, & DIMENSIONS



| COMPONENTS | QUANTITY |
|------------|----------|
| 1. Cannon  | 1        |
| 2. Screws  | 2        |
| 3. Gasket  | 1        |



| ADD-ONS (NOT INCLUDED WITH PURCHASE) | PART NUMBERS |
|--------------------------------------|--------------|
| 1. 360 Lens Kit                      | H-4219       |
| 2. Bezel Kit                         | H-3219       |

## SYSTEM SPECIFICATIONS

|                   |                                    |
|-------------------|------------------------------------|
| Input Power       | 12 VDC                             |
| Current Draw      | 1 Amp                              |
| External Fuse     | 125% of Circuit Load               |
| Colors            | R, A, B, W, RW, BW, AW, RB, RA, BA |
| SAE Certification | J595, CT13, SAE J1113-11           |
| Flash Patterns    | 14 Single Color, 39 Dual Color     |
| Dimensions        | 1" H x 1" L x 1.59" W              |
| Light Spread      | 120° or 360° [Interchangeable]     |
| Mounting          | 1" Hole or Surface Mount Bezel     |
| Warranty          | 5 Years                            |

| SINGLE COLOR FLASH PATTERNS                              | FLASH RATE: |
|--|-------------|
| Single Slow  | 75 FPM      |
| Single Fast  | 120 FPM     |
| Single Combo   | 75/120 FPM  |
| Double Slow  | 75 FPM      |
| Double Fast  | 120 FPM     |
| Double Combo   | 75/120 FPM  |
| Triple Slow  | 75 FPM      |
| Triple Fast  | 120 FPM     |
| Triple Combo   | 75/120 FPM  |
| Attack 1   | N/A         |
| Attack 2   | N/A         |
| Brake Pop  | N/A         |
| Steady On (12 LEDs for 3 seconds then reduced to 6 LEDs) | N/A         |
| Steady On (6 LED)  | N/A         |
| Steady On Dim (12 LEDs 25% brightness)                   | N/A         |

| DUAL COLOR FLASH PATTERNS   | FLASH RATE: |
|---|-------------|
| Color 1: Single Slow  | 75 FPM      |
| Color 1: Single Fast  | 120 FPM     |
| Color 1: Single Combo   | 75/120 FPM  |
| Color 1: Double Slow  | 75 FPM      |
| Color 1: Double Fast  | 120 FPM     |
| Color 1: Double Combo   | 75/120 FPM  |
| Color 1: Triple Slow  | 75 FPM      |
| Color 1: Triple Fast  | 120 FPM     |
| Color 1: Triple Combo   | 75/120 FPM  |
| Attack 1  | N/A         |
| Attack 2  | N/A         |
| Color 2: Single Slow  | 75 FPM      |
| Color 2: Single Fast  | 120 FPM     |
| Color 2: Single Combo   | 75/120 FPM  |
| Color 2: Double Slow  | 75 FPM      |
| Color 2: Double Fast  | 120 FPM     |
| Color 2: Double Combo   | 75/120 FPM  |
| Color 2: Triple Slow  | 75 FPM      |
| Color 2: Triple Fast  | 120 FPM     |
| Color 2: Triple Combo   | 75/120 FPM  |
| Color 2: Attack 1   | N/A         |
| Color 2: Attack 2   | N/A         |
| Color 1 & 2: Single Slow  | 75 FPM      |
| Color 1 & 2: Single Fast  | 120 FPM     |
| Color 1 & 2: Single Combo   | 75/120 FPM  |
| Color 1 & 2: Double Slow  | 75 FPM      |
| Color 1 & 2: Double Fast  | 120 FPM     |
| Color 1 & 2: Double Combo   | 75/120 FPM  |
| Color 1 & 2: Triple Slow  | 75 FPM      |
| Color 1 & 2: Triple Fast  | 120 FPM     |
| Color 1 & 2: Triple Combo   | 75/120 FPM  |
| Color 1 & 2: Attack 1   | N/A         |
| Color 1 & 2: Attack 2   | N/A         |
| Color 1: Steady On (12 LED/6 LED)                                 | N/A         |
| Color 1: Steady On (6 LED)  | N/A         |
| Color 1: Steady On Dim (25%)                                      | N/A         |
| Color 2: Steady On (12 LEDs for 3 seconds then reduced to 6 LEDs) | N/A         |
| Color 2: Steady On (6 LED)  | N/A         |
| Color 2: Steady On Dim (12 LEDs 25% brightness)                   | N/A         |

# WIRING, CONFIGURATION, & MOUNTING INSTRUCTIONS



## WIRING DIAGRAM

| COLOR  | FUNCTION | POLARITY | CONNECTION       |
|--------|----------|----------|------------------|
| Red    | Mode 1   | 12v (+)  | Latching Switch  |
| Yellow | Mode 2   | 12v (+)  | Latching Switch  |
| Green  | Mode 3   | 12v (+)  | Latching Switch  |
| Blue   | Pattern  | 12v (-)  | Momentary Switch |
| Black  | Ground   | 12v (-)  | Chasis Ground    |

## POWER

1) To power the unit, extend the red wire to a 12v (+) post. Extend the black wire to the ground post of the vehicle's battery.

**!** To achieve synchronization, the patterns must match on all products connected to the synchroniztion circuit.

## SETTING MASTER/SLAVE

1) Apply 12v (+) power and 12v (-) ground to the unit.

2) For the light heads to alternate, one light head must be set as master and the other set as slave. To do so, hold the blue (flash pattern changer) wire to ground for 3 seconds. If all LEDs turn on, this indicates master mode. If no LEDs activate, this indicates slave mode.

**!** Each time the master/slave mode is set, the pattern will reset to the default setting (Single Flash [Slow]). This simplifies the process of synchronizing two or more compatible products.

**!** The Cannon can be synchronized with other compatible products with matching patterns (single color). Consult the instruction manual of each product as the process may differ by model.

## PATTERNS & SYNCHRONIZATION

1) Momentarily tap the blue wire to a ground 12v (-) source to cycle through the flash patterns.

2) Synchronization: To synchronize two or more Cannons (or compatible products) together:

**A)** Apply 12V+ power to a mode wire and apply 12V- to a black wire to power the unit on.

**B)** Cycle through all patterns by tapping the blue (flash pattern changer) wire to the activated black ground wire until the steady burn pattern is selected.

**C)** Turn power off. Connect one of the same colored mode wires (red, yellow or green) of the two light heads together, connect the black wires of the light heads together and then connect the blue wires of the light heads together. Turn power back on.

## ALTERNATE LIGHT HEADS:

**D)** Follow steps A-B.

**E)** For the light heads to alternate, one light head must be set as master and the other as slave on the mode wire intended for use. To do so, hold the blue (flash pattern changer) wire to ground for 3 seconds. If all LEDs turn on, this indicates slave mode.

**F)** Follow step C. Change patterns by tapping the blue wire to the activated black ground wire.

## MOUNTING INSTRUCTIONS

1) Place the unit against the selected mounting surface.

2) 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.

3) Drill two mounting holes in the marked surface, as well as a 0.5" diameter hole for wire passage (if mounting on a vehicle). Use the rubber pad to position the 0.5" hole for the wires. Make sure to deburr holes thoroughly. Use a grommet if needed.

4) Pass the wires through the 0.5" diameter hole, and secure the light head to the mounting surface with the provided hardware.

## CHANGING THE 120° LENS TO THE 360° LENS

The Cannon has the 120° lens installed when sold. To remove the 120° lens and replace it with the 360° lens and reflector, follow the steps listed below:

1) Remove the 120° lens by pushing the tabs on each side of the bottom of the LED heatsink towards the center of the cannon with a flat screwdriver. The lens will gently pop off. Please do not remove the o-ring from the heatsink.

2) Place the chrome reflector over the screw head, ensuring that the center hole of the reflector covers the screw head.

3) Place supplied o-ring on top of chrome reflector.

4) Then add the 360° lens to the assembly, by pushing the tabs on each end of the lens through the heatsink. Be sure the tabs engage the heatsink.

