FIRETECH®
BY HIVIZ LED LIGHTING

GUARDIAN HYBRID LIGHT SERIES INSTRUCTION MANUAL

Guardian Hybrid & Guardian Junior Hybrid

FT-GSM-HY & FT-GSMJR-HY Models

ENGINEERED IN THE UNITED STATES
LIFETIME WARRANTY

HiViz Lighting, Inc
Phone: 703-662-3458
Email: firetech@hivizleds.com
PO Box 565, Naples, NC 28760

FT

TABLE OF CONTENTS

Safety Notice & Warranty 3

Guardian & Guardian Jr Hybrid Warning Light Assembly 4-5

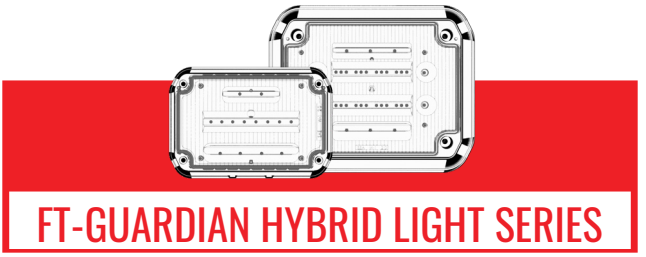
Mounting Dimensions 6-7

Technical Specifications 8

Installation Instructions 9

Fitting the Gasket 10

Wiring Information 11-12



FT-GUARDIAN HYBRID LIGHT SERIES

SAFETY NOTICE & WARRANTY

WARNING: INSTALLATION MUST BE CONDUCTED BY A QUALIFIED TECHNICIAN.

IMPROPER INSTALLATION CAN RESULT IN INJURY OR DEATH.

- Installation must be conducted by a qualified automotive electrician or emergency vehicle technician in accordance with the applicable NFPA standard(s) and procedures (Including but not limited to NFPA 1901, 1906, 1911, 414, 1900)
- Improperly installed, aimed, or operated lights can create significant hazard to motorists which can result in collision. Ensure light fixtures are installed and operated such that their beam does not shine into oncoming traffic
- All circuits must be fused at 125% of the rated power consumption of the loads on the circuit
- A voltage drop greater than 10% in the power feed to a fixture could be an indicator of an under-sized conductor. Use of improperly sized conductors will, at a minimum, result in poor performance, and at a maximum could result in fire
- Verify input voltage is within fixture range before installation. Voltage range information can be found in this manual or printed on the fixture body
- The use of personal protective equipment (safety glasses and gloves) is highly recommended
- Allow proper cooling time before handling the fixture if it has been installed & powered to prevent burns
- Any modifications to the fixture will void warranty and are not authorized by the manufacturer
- Always inspect the fixture for any damage prior to installing and DO NOT install if any damage is present

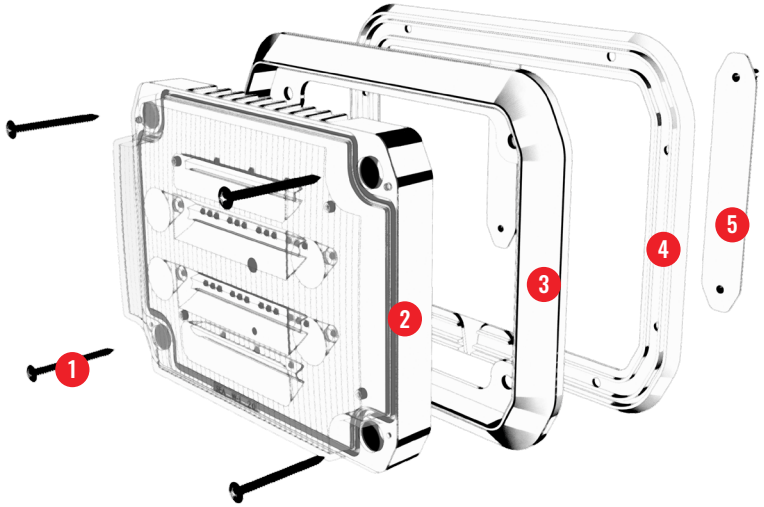
PLEASE READ ALL INSTRUCTIONS BEFORE INSTALLATION

Warranty Information: Full policy available Online at www.hivizleds.com/warranty

- Proof of purchase may be required to validate warranty. All FireTech products are warranted for the useful service life of the vehicle for which they were first installed
- Improper installation, accident, physical damage, neglect, and normal wear and tear are not covered under warranty
- Lights operated in environments over 150° Fahrenheit are not covered under warranty
- All advance-exchange warranty claims must be validated with HiViz Technical Support prior to issuance of a shipping label. Failure to return defective product will result in an invoice for the full replacement value of the product
- HiViz Lighting will repair or replace defective product at its discretion. Replacement product will be in similar or better cosmetic condition than the defective part.
- Warranties should be handled through the dealer/reseller the product was purchased from; customer is responsible for delivery
- If product is found to have damage not covered under warranty, customer will be responsible for return shipping charges and/or cost of repair
- Non-warranted items can be repaired at the customer's expense of parts and labor, at the discretion of HiViz LED Lighting, who will provide an estimated repair cost before proceeding with the repair.

HiViz Lighting INC | PO Box 565, Naples, NC 28760 | Phone: 703-662-3458 | Email: firetech@hivizleds.com

GUARDIAN HYBRID LIGHT ASSEMBLY



PIECES INCLUDED

1. **Screws (4)**
   P/N: ASC872
2. **Fixture**
3. **Bezel**
   P/N: AHOSMCR
4. **Gasket**
   P/N: AGKSMBK
5. **Isolator**
   P/N: AWPSMBK

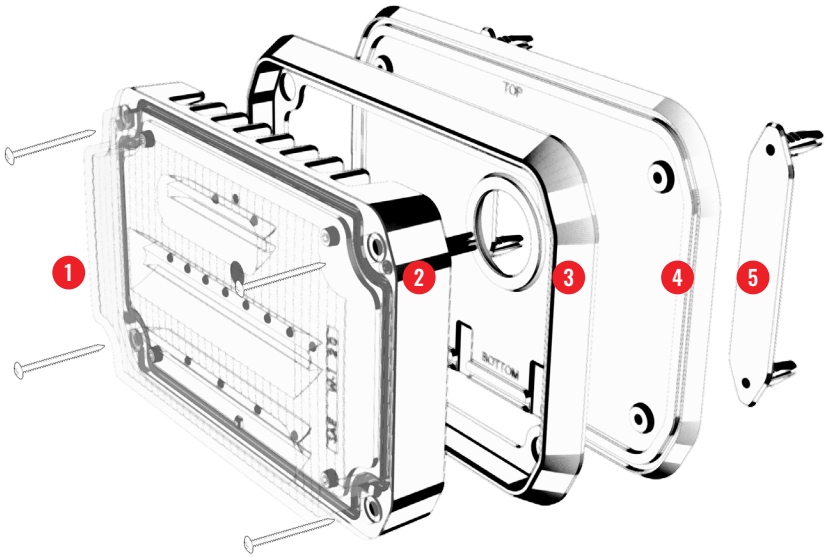
TOOLS REQUIRED

- Phillips Screwdriver
- Heat-shrink butt connectors
- Wire Strippers

NOTE:
Tighten screws by hand/screwdriver. Power-tools can cause damage to isolators and cause an insecure attachment.

HiViz Lighting INC | PO Box 565, Naples, NC 28760 | Phone: 703-662-3458 | Email: firetech@hivizleds.com

GUARDIAN JR HYBRID LIGHT ASSEMBLY



PIECES INCLUDED

1. **Screws (4)**
   P/N: ASC495
2. **Fixture**
3. **Bezel**
   P/N: AHOSMJCR
4. **Gasket**
   P/N: AGKSMJBK
5. **Isolator**
   P/N: AWPSMJBK

TOOLS REQUIRED

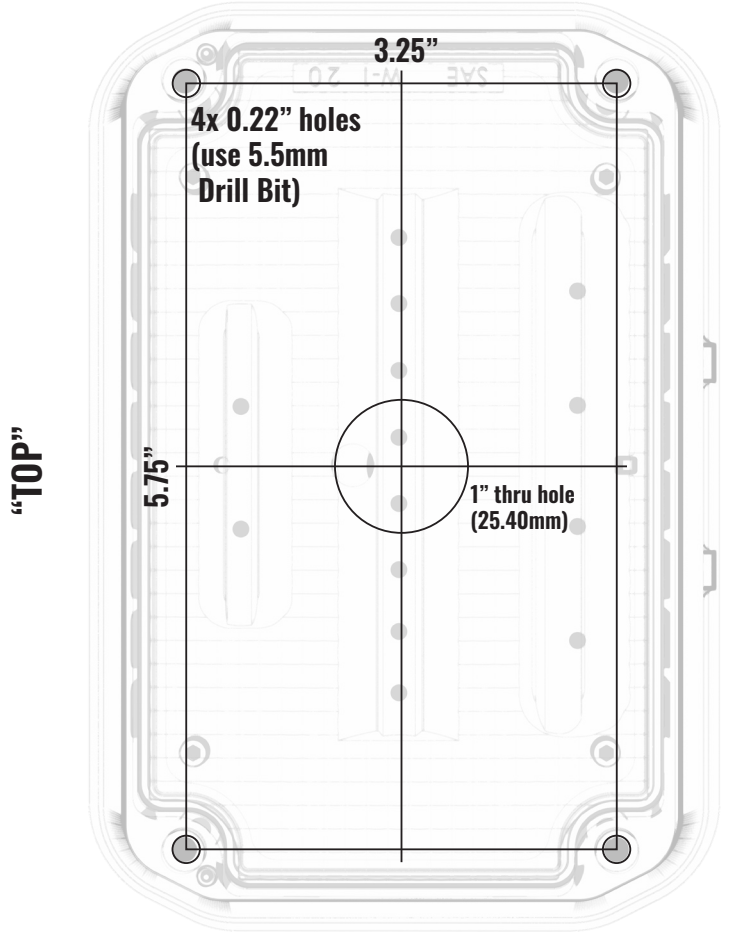
- Phillips Screwdriver
- Heat-shrink butt connectors
- Wire Strippers

NOTE:
Tighten screws by hand/screwdriver. Power-tools can cause damage to isolators and cause an insecure attachment.

HiViz Lighting INC | PO Box 565, Naples, NC 28760 | Phone: 703-662-3458 | Email: firetech@hivizleds.com

MOUNTING DIMENSIONS

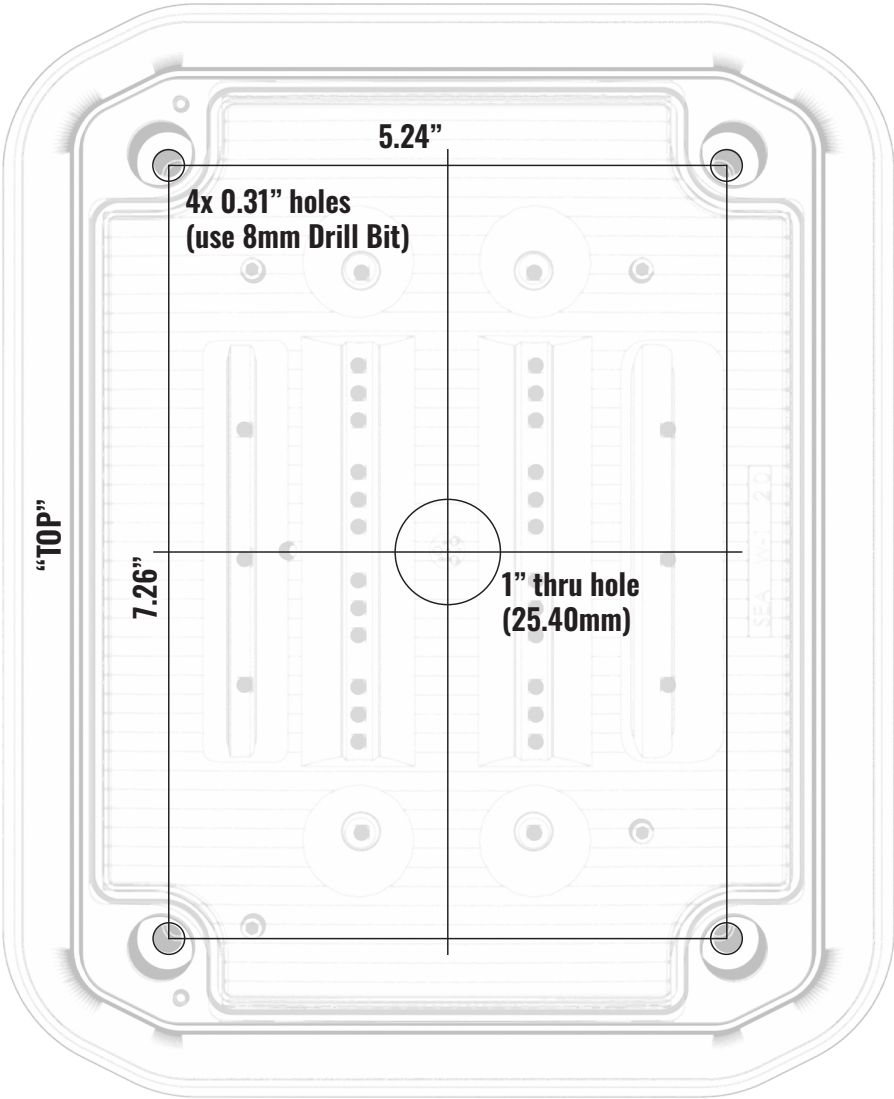
***Please see template on separate full size pieces of paper included in package to use. The template below is NOT to scale.**



HYBRID GUARDIAN JR: 7.48" X 5.11"

HiViz Lighting INC | PO Box 565, Naples, NC 28760 | Phone: 703-662-3458 | Email: firetech@hivizleds.com

***Please see template on separate full size pieces of paper included in package to use. The template below is NOT to scale.**

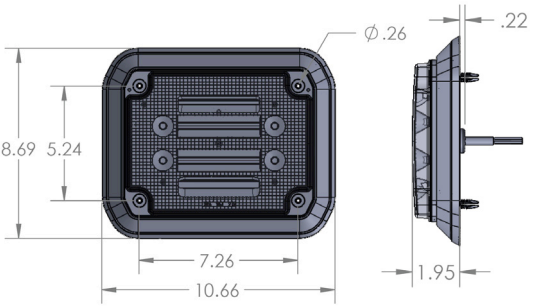


HYBRID GUARDIAN: 10.66” X 8.69”

HiViz Lighting INC | PO Box 565, Naples, NC 28760 | Phone: 703-662-3458 | Email: firetech@hivizleds.com

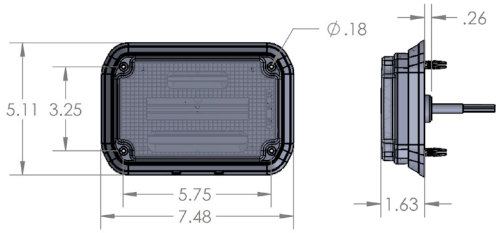
TECHNICAL SPECIFICATIONS

GUARDIAN HYBRID LIGHT



GUARDIAN HYBRID LIGHT	
DIMENSIONS	8.69" X 10.66" X 1.95"
WEIGHT	4.4 LBS.
BEZEL	CHROME
INPUT VOLTAGE	11-32V DC
AMPERAGE SCENE	1.6A (@12.8V DC)
WATTAGE SCENE	20W
CERTIFICATIONS	SAE J595 CLASS 1; SAE J578
LED COLOR OPTIONS	RED, BLUE, AMBER, WHITE, RED & BLUE, RED & AMBER, RED & WHITE, BLUE & AMBER, BLUE & WHITE, AMBER & WHITE

GUARDIAN JR. HYBRID LIGHT



GUARDIAN JR HYBRID LIGHT	
DIMENSIONS	5.11" X 7.48" X 1.63"
WEIGHT	1.7 LBS.
BEZEL	CHROME
AMPERAGE SCENE	1.1A (@12.8V DC)
WATTAGE SCENE	14W
INPUT VOLTAGE	11-32V DC
CERTIFICATIONS	SAE J595 CLASS 1; SAE J578
LED COLOR OPTIONS	RED, BLUE, AMBER, WHITE

GUARDIAN JR. & GUARDIAN HYBRID OPTIONAL ACCESSORIES

GUARDIAN JR. BLACKOUT BEZEL
P/N: P-GSMJR-BOBEZEL
Matte black replacement bezel for FireTech Guardian Jr Series Product.

GUARDIAN RETROFIT GASKET
P/N: P-GSM-RGKIT
For replacing older style fixture or halogen side scene light. Covers old or oversized holes in the body.

GUARDIAN BEZEL DELETE GASKET
P/N: P-GSM-BDKIT
Allows installation of Guardian/Guardian Elite without chrome bezel for a reduced mounting profile.

GUARDIAN BLACKOUT BEZEL
P/N: P-GSM-BOBEZEL
Matte black replacement bezel for FireTech Guardian Series Product.

HiViz Lighting INC | PO Box 565, Naples, NC 28760 | Phone: 703-662-3458 | Email: firetech@hivizleds.com

INSTALLATION INSTRUCTIONS

1. Make sure the battery switch **is in the off position** before beginning.

2. For Guardian sized fixtures: If an older light is removed and a large hole is left in its place, a **retrofit gasket kit** will be required (the standard fitment requires exact hole sizes for proper water ingress protection).

3. Using the included template, measure and mark the holes using a permanent marker, check to be sure there is no wiring or other critical infrastructure behind the mounting location (and that you have adequate access to run wiring) then center punch (**measure twice**, **cut once**).

4. Drill holes. Exact diameters are important for water sealing and secure mounting.

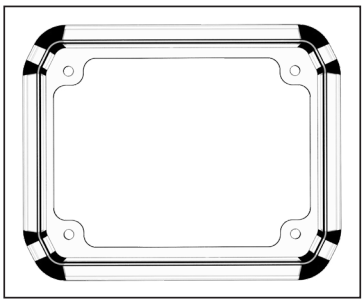
5. Once holes have been drilled, install the **isolators** (they prevent the light fixture and mounting hardware from coming in contact with the body, preventing galvanic corrosion), a rubber mallet can be used to pop them in place.

6. Install the gasket on your bezel and the bezel with your fixture before connecting wiring. Be sure the FireTech logo is facing upright and the gasket drains are at the bottom.

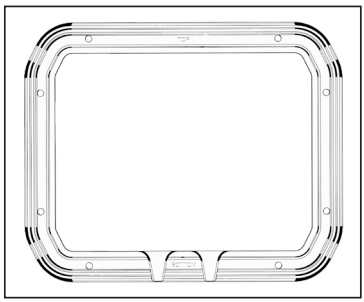
7. Connect wiring to fixture (it may be necessary to have a helper hold the light wile you connect the wiring). Be sure to leave a service loop (slack in the wire) to allow for removal and re-installation if needed.

8. Pull wiring through center hole.

9. Align fixture with isolators and install fixture **using included mounting screws**. Use a manual screwdriver to prevent damage to the isolators.



a. Bezel



b. Gasket

HiViz Lighting INC | PO Box 565, Naples, NC 28760 | Phone: 703-662-3458 | Email: firetech@hivizleds.com

FITTING THE GASKET

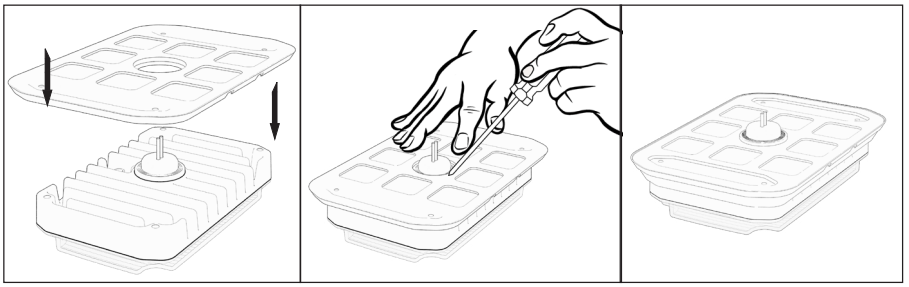
When using the Retrofit Gasket, or any Guardian Junior product, it is important to ensure the gasket seats properly under the wire bushing on the back of the fixture for a water-tight seal.

To install the gasket around the bushing:

1. Line the gasket, fixture, and bezel up in place (be sure drain holes are at the BOTTOM).

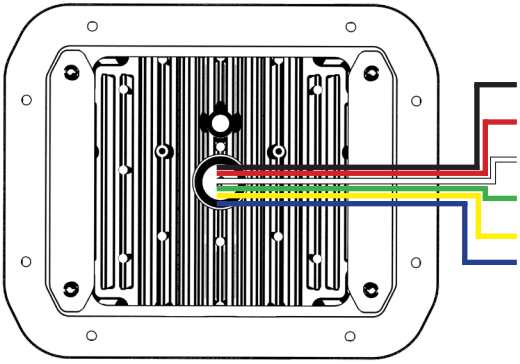
2. On the gasket, push the rubber material **down and underneath** the bushing on the back of the light. Pulling on the corners of the gasket to stretch the rubber material and allow for the gasket to seat is helpful.

3. The gasket needs to be hooked over top of the light. **If needed,** use a flat screwdriver to work the gasket around until it seats in place.



Step 1 **Step 2** **Step 3**

WIRING INFORMATION



WIRING:

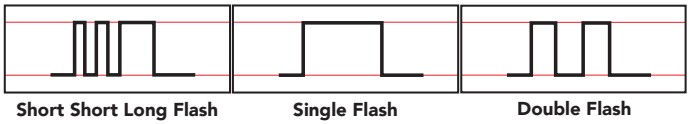
Black Wire: Ground
Red Wire: Power
White Wire: Flash Pattern A/B
Green Wire: Day / Night
Yellow Wire: Sync Wire
Blue Wire: Scene Light

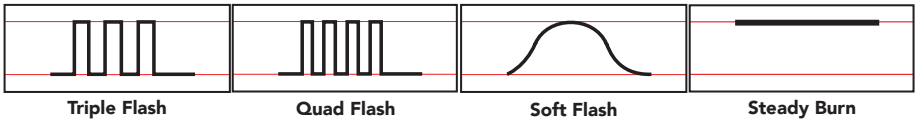
Connect **yellow wires** of multiple lightheads together for synchronization.

HiViz Lighting INC | PO Box 565, Naples, NC 28760 | Phone: 703-662-3458 | Email: firetech@hivizleds.com

WIRING INFORMATION (CONT.)

FLASH PATTERNS





FIXTURE OPERATION

The Scene and Warning Lights operate like totally independent fixtures who share a common ground. The "Scene" function operates like all standard "scene" lights and steady-burns. It is powered by the **Blue Wire**. There is no problem flashing this circuit externally, but it is not controlled by the micro-controller and operates independently.

For Warning Light functions, when power is applied to the **Red Wire**, the light boots and runs "Pattern A". If a second flash pattern mode is desired, applying power to the **White Wire in addition to the Red Wire** will change the light fixture's mode and execute "Pattern B". Pattern B will disable white light circuits and is recommended for use when the vehicle is parked. Changing the flash pattern for either mode can be done by following the programming instructions below. Day/Night mode is applied to both patterns A and B when ever power is applied to the **Green Wire**.

PROGRAMMING MODE

To enter Programming Mode for Flash Pattern A, hold **Yellow Wire** to Power for 5 seconds. A clockwise spinner will spin once indicating successful entry.

To enter Programming Mode for Flash Pattern B, hold the **White Wire** and the **Yellow Wire** to Power for 5 seconds. A clockwise spinner will spin twice indicating successful entry.

To change Flash Pattern, touch the **White Wire** to Power:
- To move forward do a short tap
- To move backwards do a long hold (5 Seconds)

Flash patterns listed in order from the factory default setting:

1. Short Short Long Flash (SAE)
2. Single Flash (SAE)
3. Double Flash (SAE)
4. Triple Flash (SAE)
5. Quad Flash (SAE)
6. Soft Flash

(Continued on next page)

WIRING INFORMATION (CONT.)

7. Soft Slow Flash*
8. Steady Burn**
9. Random***

To change Flash Rate and Flash Mode, touch the **Green Wire** to Power:

- To move forward do a short tap
- To move backwards do a long hold (5 Seconds)

Flash Rates and Flash Modes listed in order from the factory default setting:

1. 75 FPM - Solid Flash
2. 150 FPM - Solid Flash
3. 75 FPM - Left/Right
4. 150 FPM - Left/Right
5. 75 FPM - Up/Down
6. 150 FPM - Up/Down
7. 75 FPM - Crisscross
8. 150 FPM - Crisscross

Note: Guardian JR Hybrid will only have Solid Flash and Left/Right Flash Modes.

Flash Mode Examples:

GUARDIAN HYBRID

Solid Flash

Left/Right

Up/Down

Crisscross

GUARDIAN JR HYBRID

Solid Flash

Left/Right

To change Sync Mode, touch the **Yellow Wire** to Power:

- To move forwards do a short tap

Note: There should be one Master light per Sync Group.

Sync Modes listed in order:

1. Master - Indicated by only the left side of the light illuminating
2. Slave - Indicated by only the top right side of the light illuminating
3. Slave Alt. - Indicated by only the bottom right side of the light illuminating

Visual Indication of selected Sync Mode:

GUARDIAN HYBRID

Master

Slave

Slave Alt.

GUARDIAN JR HYBRID

Master

Slave

Slave Alt.

To exit Programming Mode (and save settings), hold **Yellow Wire** to Power for 5 seconds. A counterclockwise spinner will indicate successful exit (and save).

*: Soft Slow Flash is always 30FPM, regardless of Flash Rate chosen (not SAE compliant)
**: Steady Burn is always all circuits regardless of Flash Mode chosen (not SAE compliant unless flashed externally)
***: Random is a random pattern of the SAE compliant flash patterns

Note: When in programming mode, long holding the **Green Wire + White Wire** together will factory reset device

HiViz Lighting INC | PO Box 565, Naples, NC 28760 | Phone: 703-662-3458 | Email: firetech@hivizleds.com