

***TRAIL TECH***



**ECLIPSE**  
**HID**  
**USER'S MANUAL**



**ECLIPSE**  
**HID**

***TRAIL TECH***



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Please read this user's manual before attempting to install or use Trail Tech Eclipse lighting products.

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# IMPORTANT

## **Trail Tech Eclipse HID Lighting:**

Trail Tech brings functionality and life to your motor vehicle with high quality and innovation. To ensure you enjoy long and trouble-free operation, this User's Manual contains valuable information about how to operate and maintain your lights properly.

Please read this manual carefully.

## **Please record important information:**

Whenever you call to request service for Trail Tech Eclipse HID lights, you need the date of purchase, dealer's name, address, and telephone number. Warranty service requires proof of purchase.

**PURCHASE DATE** \_\_\_\_\_

**DEALER NAME** \_\_\_\_\_

**DEALER ADDRESS** \_\_\_\_\_

**DEALER PHONE** \_\_\_\_\_

**Keep this book and sales slip together for future reference.**

# PRECAUTIONS

## WARNING:

When using Trail Tech Eclipse HID Lighting products, follow basic precautions:

- The lights will become warm during operation. **5-10 mph air flow is required for proper cooling.**
- Do not wash lights with high pressure water / pressure washer.
- Avoid contact with gasoline, degreasers or other chemical cleaners.
- Altering a Trail Tech lighting product in any way will void warranty.
- Respect the environment.
- Pay attention to the trail.
- HIGH VOLTAGE! Disconnect from power before service or maintenance, including lamp replacement. Extremely high voltage shock danger.
- Trail Tech HID lights are only servicable by qualified technicians.
- Use Trail Tech or vehicle lead-acid batteries with Trail Tech helmet lights. Use of third-party Li-Ion or NiMH batteries will void warranty.
- Use a fuse. Trail Tech lights should use a 10-20 amp fuse as close to the battery as possible on the (+)positive terminal side.

# ECLIPSE HID MR11

## MR11 Overview:

Trail Tech MR11 lights are small and compact. They are time-tested, proven performers. Perfect as lightweight helmet lights, lights for small machines, or backup lights for large machines. MR11's are great for custom/extreme applications. An MR11 puts out roughly the same amount of light as a 40W halogen lamp.

- Color Temperature: Daylight
- Reflectors: 6° Spot, 13° Flood
- Power Consumption: 13 Watt
- 13 Watt Lumens: 500 Lumens
- Auto-Restrike: Not Enabled
- Housing Diameter: 46mm (1.8")
- Housing Depth: 82mm (3.2")
- Weight: 185g (6.5 oz.)
- Lamp Diameter: 34.9mm (1.375")



## MR11 Post Mounted:

Post mounted lights are well suited for custom applications.

- Mounts in any M10 (3/8") hole.



**MR11 Bar Mounted:**

- Fits 7/8" through 1-1/8" Bars
- Rotates 30° left/right



**MR11 Helmet Lights:**

MR11's make perfect, rugged, lightweight helmet lights.



**MR11 on Barclamps:**

Mount MR11 lights to Trail Tech model-specific bar clamps.

- Points lights in the direction the bars are facing.



**MR11 Frame Mounted:**

Mount MR11's to the frame or in the stock light location.

- Model-specific fitment.
- Fits 7/8" - 1-1/8" frame sizes.

# ECLIPSE HID SCMR16

## SCMR16 Overview:

Trail Tech SCMR16 HID lights are optimized for performance. Trail Tech HID lights output 3 times the amount of light of Halogen per watt of power input. SCMR16 lights are the perfect balance of size and power.

- Color Temperature: Daylight
- Reflectors: 12° Spot, 36° Flood
- Power Consumption: 30 Watt
- 30 Watt Lumens: 1850 Lumens
- Auto-Restrike: Auto-Restrike Enabled
- Housing Diameter: 66mm (2.6")
- Housing Depth: 103mm (4")
- Weight: 365g (13 oz.)
- Lamp Diameter: 50.8mm (2")



## SCMR16 Post Mounted

Post mounted lights are well suited for custom applications.

- Mounts in any 3/8" hole.

Continued ... **SCMR16**



**SCMR16 Bar Mounted:**

- Fits 7/8" through 1-1/8" Bars
- Rotates 30° left/right



**SCMR16 Helmet Lights:**

- Light shines where you look.
- Hot-swap to bar mounts.



**SCMR16 on Barclamps:**

Mount SCMR16 lights to Trail Tech bar clamps.

- Points lights in the direction the bars are facing.



**Frame and Tube Mounts:**

Mount SCMR16 to common frame sizes and roll cages.

- Fits 7/8" - 1-1/8" frame sizes.
- Fits 1.5" - 1.75" tube sizes.

# ECLIPSE HID SC4

## SC4 Overview:

Trail Tech SC4 HID lights are sized for larger vehicles, buggies, UTV's, sand rails, and off-road trucks.

- Color Temperature: Daylight
- Reflector: 22° Driving
- Power Consumption: 30 or 40 Watt
- 30 Watt Lumens: 2775 Lumens
- 40 Watt Lumens: 3235 Lumens
- Auto-Restrike: Auto-Restrike Enabled
- Housing Diameter: 105mm (4.1")
- Housing Depth: 117mm (4.6")
- Weight: 510g (18 oz.)
- Lamp Diameter: 95mm (3.75")



### SC4 Post- Mount:

- Mounts in M12 (15/32") hole.

**Frame/Tube Mount:**

Mount to common frame, bumper and roll cages.

- 1.5" or 1.75" frame size
- Rotates 35° left/right.



# EXTREME RACE LIGHT

## Extreme Race Light Overview:

For technical terrain racing where track has tight corners and speeds over 50MPH are not common.

Featuring three integrated light switches, easy attachment, on-the-fly aiming, and auto-power-adjust.

**RACE  
WINNER**

- Color Temperature: Daylight
- Reflectors: Two SCMR16, one SC4
- Power Consumption: 90-100 Watt
- Foot Candles: 2600 FC
- Auto-Restrike: Auto-Restrike Enabled
- Housing Diameter: 250mm (10")
- Housing Depth: 165mm (6.5")
- Weight: 2kg (4.5 lbs.)



## Extreme Race Light:

Ideal for extreme night racing.

- Mounts easily to forks.
- Black, Orange, Red, Blue
- Well-rounded peripheral and forward light output.

# 8" RACE LIGHT

## 8" Race Light Overview:

For desert terrain racing where track is fast and speeds above 50MPH are common. Featuring an integrated light switch, easy attachment and on-the-fly aiming. Quality automotive components with 7075 aluminum frame.

**RACE  
WINNER**

- Color Temperature: Daylight
- Reflectors: Automotive Inspired
- Power Consumption: 35 Watt
- Foot Candles: 5300 FC
- Auto-Restrike: Auto-Restrike Enabled
- Housing Diameter: 250mm (10")
- Housing Depth: 165mm (6.5")
- Weight: 2.1kg (4.7 lbs.)



### 8" Race Light:

Ideal for high speed racing.

- Mounts easily to forks.
- Intense forward light output.

## X2 Motorcycle Headlight:

The Trail Tech Eclipse HID X2 motorcycle headlight features a dual reflector system and a superior performance/price ratio.

- Color Temperature: Daylight
- Reflectors: One SCMR16, one SC4
- Power Consumption: 70 Watt
- SCMR16 Lumens: 1850 Lumens
- SC4 Lumens: 3235 Lumens
- Auto-Restrike: Auto-Restrike Enabled
- Housing Height: 315mm (12.4")
- Housing Width: 325mm (12.8")
- Housing Depth: 100mm (3.9")
- Weight: 1100g (38 oz.)

**RACE  
WINNER**



### **X2:**

- 2-inch spotlight (distance lamp) for high speed riding and racing.
- 4-inch driving lamp increases vital peripheral vision used in cornering & technical terrain.
- Available in white, black, orange, red, blue, green and yellow, with customizable graphics.

# ANTI-VIBE POSTS

## Anti-Vibe Posts Explained: ONLY FOR TRAIL TECH HARDWARE

### Shape of the Post:

- Anti-vibe posts are not round. They are specially shaped to fit in Trail Tech anti-vibe grommets only (for ATV dashboards.)

### Rubber anti-vibe grommets:

- Rubber grommets reduce the amount of motor vibration that reaches the lights.

### Special Applications:

- Special applications should use solid-mount posts, which fit in a round hole.



### CAUTION:

#### Rubber anti-vibe grommets:

- Rubber can be damaged.
- When installing, make sure everything is lined up straight and cannot rotate.
- The rubber should not be pinched by the metal nuts and bolts. Damage may occur. Ripping may occur.
- DO NOT OVER-TIGHTEN.

# VEHICLE MOUNTING

## Vehicle Mounting Overview:

Trail Tech lights can be mounted to vehicles on the frame, handlebars, body or custom positioned. Regardless of location, installation/wiring is similar.

If there is enough power available, Trail Tech lights can be run in addition to stock lights. Some vehicles require HID lights to run on a separate circuit, because enough power is not produced to run all the lights simultaneously.

Trail Tech HID lights will only run on a DC electrical system (12 volts DC.) A qualified technician can convert most AC systems to DC systems (Banshee, 250R, etc.) Contact your local Trail Tech dealer for details.

## Polarity Requirement:

Trail Tech HID lights have a polarity requirement. The red lead must go to the positive(+) battery terminal or lead, and the negative lead must go to the negative(-) battery terminal or ground.

**BACKWARDS WIRING WILL  
DAMAGE THE LIGHTS!**



# Continued ... **VEHICLE MOUNT**

## **CONNECT VEHICLE MOUNTED LIGHTS TO VEHICLE POWER:**

**STEP 1:** Locate power wire behind the vehicle key switch.

### **Key Switch (+) Wire Colors:**

<b>Raptor 660/700:</b>	Brown/White
<b>Yamaha YFZ450:</b>	Brown
<b>Suzuki Z400:</b>	Orange
<b>Kawasaki KFX700:</b>	Brown
<b>DS650:</b>	White
<b>Honda 400EX:</b>	Black/White
<b>Polaris Predator:</b>	Red/Black
<b>Honda TRX450:</b>	Black

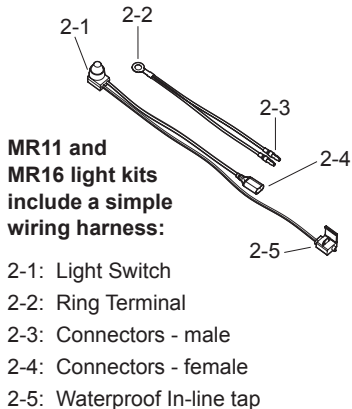
### **Step 2:**

Clip the the in-line tap (2-5) onto the power wire behind the key switch (located in Step 1.) Make sure the wire will be long enough so that the switch (2-1) can be installed in the desired location.

### **Step 3:**

**A)** Connect one positive(+) lead from each light to the female connectors (2-4.)

**B)** Connect one negative(-) lead from each light to the connectors (2-3), then connect the ring terminal (2-2) to the negative battery terminal or to frame ground (under a bolt.)



# HELMET MOUNTING

## WARNING:

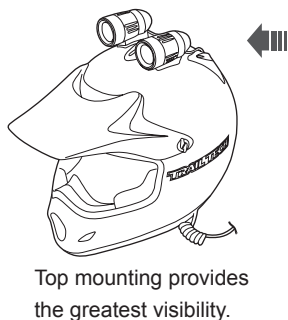
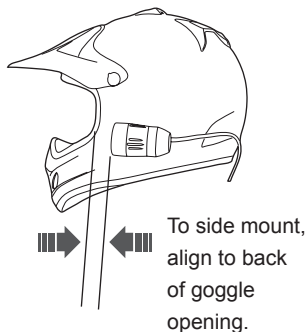
Use either Trail Tech Li-Ion batteries with Trail Tech helmet lights, or wire to the vehicle battery using the included connector. Third-party batteries may damage the system. Altering the bungee or any other part of the helmet light system will void warranty.

## ATTACH HELMET LIGHTS TO HELMET:

Trail Tech helmet lights are attached with permanent 3M VHB tape. The adhesive will strengthen with time: allow 1 hour before use.

Before attaching the lights, wear the helmet in a riding position. Hold the lights in the desired position to confirm aim angle.

Use the illustrations below to position the lights on the helmet.



# Continued ... **HELMET MOUNT**

## **HELMET LIGHT DOCKS:**

**Included in all helmet light kits.**

### **Helmet Mount Docks:**

- Helmet dock attaches to helmet with high-strength VHB tape.
- Hot swap to included bar mount docks.
- Easy clip release.

### **Handlebar Mount Docks:**

- Rubber inserts allow for mounting on 7/8", 1-1/8" and 1-1/4" handlebars.
- Pivots 30° for precise aiming.
- Easy clip release.

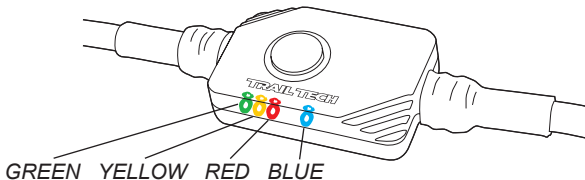


**Hot swap helmet lights from helmet docks to handlebar docks.**

# Continued ... **HELMET MOUNT**

## **HELMET LIGHT BUNGEE SWITCH:**

The helmet light switch shows on/off status and how much power is left in the battery using colored LED's. Use the soft touch button to turn the lights on and off. The lights have a 10 second warning phase, during which their color and intensity will vary. Do not re-fire the lights immediately after they have turned off. Wait 10 seconds before turning back on.



<b>Blue LED:</b>	Connected to Power
<b>Green LED:</b>	14.5V +
<b>Yellow LED:</b>	10.8V
<b>Red LED:</b>	10.25V
<b>Blinking Red LED:</b>	10V
<b>Power Off:</b>	8.5V -
<b>Restrike Enabled:</b>	9.5V +

Regardless of the maximum voltage of the connected battery, the colored LED's will continue to operate at the values listed above.

**Removal of the switch or other alterations will void warranty.**

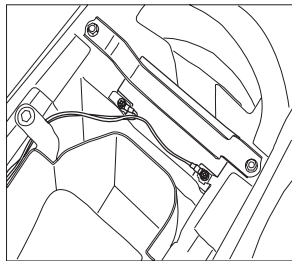
Continued ... **HELMET MOUNT**

## **CONNECT HELMET LIGHTS TO VEHICLE POWER:**

**Included in all helmet light kits.**

### **STEP 1: Connect to battery.**

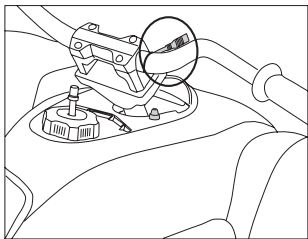
Trail Tech helmet lights can be run off of the vehicle lead-acid battery. Attach the battery cable connector shown below to the to the vehicle battery. Remember that there is a polarity requirement: the red wire goes to the positive terminal, and the black wire goes to the negative terminal. Use a 10-20 amp in-line fuse.



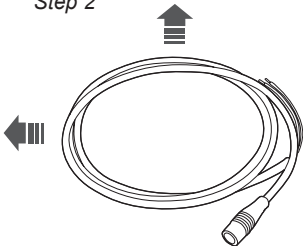
*Step 1*

### **STEP 2: Mount connector to bars.**

Run the cable under the seat and gas tank to the handlebars. Zip-tie connector to bars for easy access.



*Step 2*



*Battery Cable Connector*

# WIRE COLORS

Use this table as a general guide when locating wires.

Your model year may have different wire colors.

	KEYSWITCH	HI	LO	GROUND
<b>YAMAHA</b>				
Raptor 700	Brown	Yellow	Green	Black
Raptor 660	Brown	Yellow	Green	Black
YFZ450	Brown	Yellow	Green	Black
Raptor 350	Brown	Yellow	Green	Black
<b>HONDA</b>				
TRX700XX	Pink	Blue/Black	White	Green
TRX450R	Black	Blue	White	Green
TRX400EX	Black/White	Blue	White	Green
TRX300EX	Black/White	Blue	White	Green
TRX250EX	Black/White	Blue	White	Green
<b>KTM</b>				
525XC ATV	Green	Blue	Green	Brown
<b>SUZUKI</b>				
Z400	Orange	Yellow	White	Grey
LTR450	Yellow/Black	Yellow	White	Grey
<b>KAWASAKI</b>				
KFX400	Orange	Yellow	White	Grey
KFX450	Yellow/Red	Yellow	White	Grey
KFX700	Brown			
<b>POLARIS</b>				
PREDATOR	Red/Black	Yellow	Green	Brown
OUTLAW	Red/Black	Yellow	Green	Brown

# AVAILABLE POWER

## DC POWER:

TRAIL TECH HID LIGHTS REQUIRE DC POWER.

If your vehicle does not have DC power (no battery=no DC), Trail Tech can provide a DC conversion. Stator modifications and a regulator/rectifier are also required for a DC conversion. Contact your local Trail Tech dealer for details. DC conversions should be performed by a qualified technician.

## AVAILABLE POWER BY MODEL (STOCK):

ATV's		Motorcycles	
Banshee	70W AC	KTM 2K2	40W AC
250R	70W AC	KTM 2K3	55W AC
Raptor 660	120W DC	KTM 4K3B	55W AC
Predator 500	120W DC	CRF250X/450X	35W DC
Z400/KFX/DVX	70W DC	WR400	55W AC
400EX	70W DC	WR250/450	55W DC
DS650	150W DC	XR 250/400/600/650	55W AC
TRX450R	120W DC	DRZ/KLX	150W AC
YFZ450	26W DC		
Cannondale	20W DC		
Raptor 700	120W DC		
Raptor 80	13W DC		
Predator 90	26W DC		
Outlaw 550/525	120W DC		

MADE IN



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