



AlienRider

M902PRO User Manual

(Motorcycle Intelligent Auxiliary Spotlight)

ATS ELECTRONICS TECH CO.,LTD

1. Introduction

M902 is an intelligent auxiliary spotlight that features automatic illumination and cornering light assistance. This product utilizes light sensing to perceive ambient brightness, automatically turning the spotlight on and off. Through manual button control, it can flash the lights to alert preceding and oncoming vehicles. By calculating the changes in the body posture of the motorcycle during cornering, along with corresponding direction and angle data, providing synchronized level-one/level-two cornering illumination to light up the front corner, enhancing visibility and safety for nighttime riding.

2. Product Pictures



Left and Right Spotlights

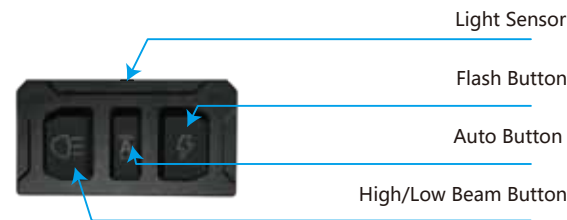


Buttons

Main Control Box

Power Box

3. Button Functions



1: High/Low Beam Button:

Short Press: Turns on low beam (green indicator light steady)-Turns on both high and low beams (green indicator light steady); Cycles through the above functions.

Long press (3 seconds): Activate/deactivate automatic auxiliary lighting function (Factory defaults to activate automatic auxiliary lighting function, power-off memory state).

2: Auto Button:

Short press: Activate/deactivate light sensor and AUTO function (green indicator light steady - AUTO mode enabled, red indicator light steady - AUTO mode disabled) (Factory defaults to deactivate Auto function, power-off memory state).

Long press (3 seconds): Calibrate initial values of motorcycle posture detection (red indicator light flashes - calibration in progress, green indicator light on - calibration succeeds, red light flashes for more than 10 seconds - calibration fails)

3: Flash Button:

Short press:

A. When Low Beam or Both High and Low Beams are on: turns off all the lights (red indicator light flashing).

B. When Low Beam or Both High and Low Beams are off: Flash low beam (green indicator light flashing) -- Flash high and low beams simultaneously (green indicator light flashing) -- Turns off (red indicator light flashing)-- short press, cycles through the above functions.

Long press (3 seconds): Set cornering auxiliary lighting sensitivity level (high, medium, low) (factory default is medium, power-off

memory state), (after long-pressing the flash button for 3 seconds, all 3 buttons will flash. Press the high/low beam button for high level, press the AUTO button for medium level, press the flash button for low level, afterwards the light returns to normal and the setting is completed)

4. Cornering Auxiliary Light function

The auxiliary light function of the M902 spotlight increases the illumination angle, expands the field of vision for nighttime riding, enhances riding convenience, and ensures nighttime riding safety.

There are 3 modes (Sensitive mode, Standard mode, and Delay mode) of this auxiliary light. Riders can choose the preferred mode according to their personal riding habits. The mode selection settings are as follows:

Long press the flash button for 3 seconds, all three button indicator lights will flash simultaneously.

Press the low/high beam button for Sensitive mode;

Press the AUTO button for Standard mode;

Press the flash button for Delay mode.

5. Installation Instructions

1、 This product is designed for fuel-powered motorcycles. If installing it on electric bicycles or motorcycles, an inverter is necessary to reduce the voltage to 12V.

2、 Power Supply

2.1、 B+(Main power: Connect the red power cord to the positive terminal of the battery.

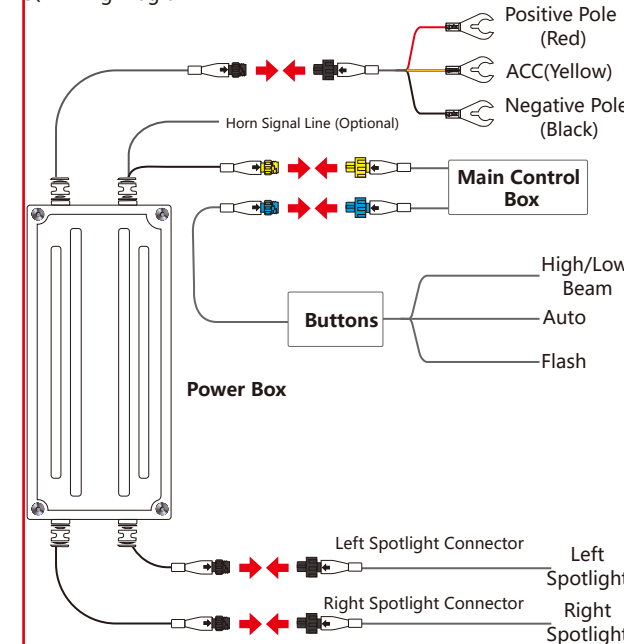
2.2、 GND: Connect the black power cord to the negative terminal of the battery.

2.3、 ACC: The yellow cable serves as the ACC power cord. Locate the fuse box, switch off the ACC (dashboard is off) to measure 0 voltage. When the ACC is on or the motorcycle is started, there should be a 12V fuse or an empty fuse slot available to serve as an ACC power supply.

Note:

It's crucial to connect all three wires correctly to ensure the device functions properly and to avoid any potential issues!

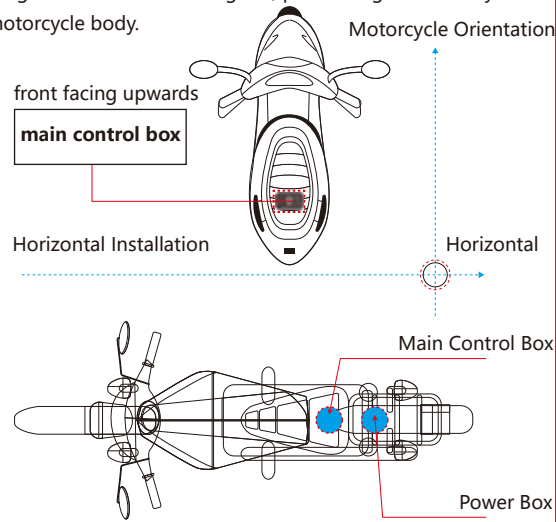
3. Wiring Diagram



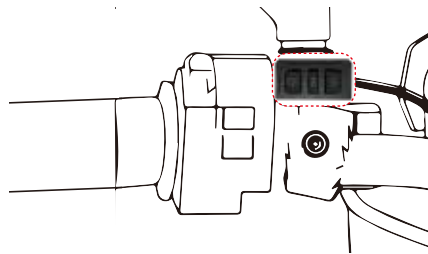
4. Installation of Power Box and Main Control Box

4.1、 Secure the power box in a location near the power supply wiring to prevent loosening and abnormal noise during daily riding caused by vibrations.

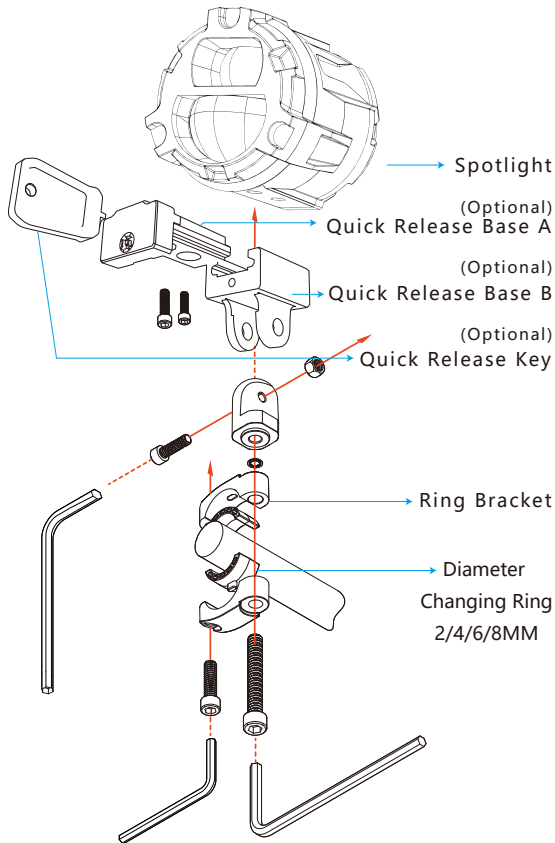
4.2、Install the main control box with its front facing upwards, referring to the installation diagram, positioning horizontally across the motorcycle body.



5、Button Installation: Install it on the left rearview mirror mounting position, ensuring the light sensor is facing upwards and unobstructed.



6、Spotlight Installation and Quick Release



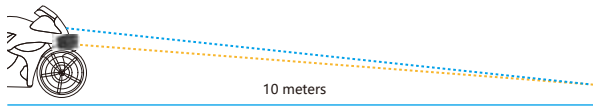
7、Light Angle Adjustment

(1) Park the motorcycle in a flat and open area, ensuring that the motorcycle is perpendicular to the ground at a 90-degree angle; Turn on the motorcycle' s original low beam headlights and shine them on a wall;

(2) Adjust the spotlight's low beam to be at the same horizontal level as the motorcycle' s original low beam; Complete the adjustment of the spotlight's height;

(3) Adjust the width of the spotlight horizontally according to the width of the motorcycle' s original low beam;

(4) Once adjustment is completed, use a tool to secure the joint of the mounting bracket.



8、Initial Calibration of motorcycle horizontal attitude: After installing the spotlights, stop the motorcycle on a flat surface, ensuring that the motorcycle body is perpendicular to the ground at 90 degrees; Turn on ACC (without starting the engine), long press the AUTO button for three seconds, after the AUTO button indicator light blinks for 3 seconds and then returns to green, the calibration of the motorcycle' s horizontal attitude is completed. If the blinking exceeds 10 seconds, it indicates a calibration failure and needs to be re-calibrated.

6. Product Configuration Parameters

Item	Parameters
Main Low Light	Yellow light, rectangular light source, 45W*2
Main High Light	White light, rectangular light source, 45W*2
Auxiliary Light 1	White light, rectangular light source, 15W*2
Auxiliary Light 2	White light, rectangular light source, 15W*2
Auxiliary Light Activation Method	Automatically activate according to motorcycle' s posture and inclination angle
Flash	Support
Spotlight Mode	Convex Lens
Riding Light	Yellow bar indicator light, illuminated when the motorcycle starts, extinguished when the motorcycle is turned off
Voltage&Power	DC12V, 180W
Standby	Entering standby mode after turning off ACC, standby current 10μA
Light Sensitivity	Supports automatic control of the spotlight switch based on ambient light brightness in Auto mode
Horn Signal Line	Long press the horn for more than 1 second, the high beam and low beam will flash simultaneously three times
Quick-release Bracket	Optional
Button Control	High/Low Beam、Auto、Flash
Waterproof Rating	IP67, it should not be washed with a high-pressure water jet or soaked in water