

See With LED

BY TRACY MARTIN

Anthing we can do to make our motorcycles more visible increases our ability to manage the risk of riding in traffic; adding extra lighting is the best way to be noticed. For several years now, light emitting diodes (LED) have been available for tail-, stop-, and turn signal lights. LED lighting offers advantages over standard incandescent bulbs, such as more light output, vibration-proof design, 50,000 hours of bulb life, and less power usage. What has been missing are LEDs that can provide enough light to see by at night — until now. Clearwater Lights' Glenda HPLED (high-powered LED) motorcycle light kit not only allows oncoming drivers to see an approaching motorcycle, but provides extra light for night riding.

For its small size (2" in diameter), the Glendas put out a high-intensity white light that is four to five times brighter than a halogen bulb and stands out against any background. In fact, at full power it's too bright and can dazzle oncoming drivers. To solve this problem, the Glenda lights come with a dimmer control, allowing the rider to set the level of light intensity. The light kit also comes with a relay that automatically turns the lights to full power when the high beam is switched on. For nighttime riding, they produce light output equivalent to a 50 watt halogen bulb in a wide pattern that fills in areas where stock lighting is lacking.

The Glenda housings are machined from billet aluminum and powdercoated for durability. Mounting brackets are either hard-anodized or powdercoated and use stainless steel hardware. Housings are available in red, orange, silver, blue, and black. Clearwater makes kits for all brands of motorcycles. To give this new LED technology a test, we installed a set of Glenda lights on a 2005 Yamaha FJR.



1

Here are the components that come with the Glenda kit for our FJR. The dimmer is on the upper right with the high beam relay below. Mounting brackets are powdercoated and hardware is stainless steel.



2

Normally, LEDs can't be dimmed like conventional bulbs. The Glendas use a microprocessor that turns the LEDs off and on over 250 times per second, so fast our eyes cannot detect the lights switching on and off; instead, they appear dim.

hard data

CLEARWATER LIGHTS
Glenda LED Kit, \$475
(\$499 for BMW with CANbus electrical systems)
916/852-7029
www.ClearwaterLights.com



3 The fender attachment point on our FJR will be used to mount the bracket that the lights are bolted to. The lights are adjustable up and down via a curved slot in the bracket.



4 The brackets are fastened to the lights prior to mounting them on the side of the fender. We hand-tighten the fasteners as the lights will have to be adjusted once the bracket is mounted on the bike.



5 With a rider holding the bike upright on a level surface, the lights are aimed using a level. The housing should be 90 degrees to the ground. A 2' x 2' board can be substituted for the level.



6 Motorcycle engines vibrate, so we're using Thread Locker from Loctite to keep the bolts from backing out.



7 Here are the Glenda lights mounted on the bike. The mounting bracket and light have a clean appearance and almost look like factory-installed accessories.



8 Tie wraps are used to affix the light's wires. When routing the wiring, make sure to leave enough slack for suspension movement. Brake lines are good for attaching wires to the bike.



9 Use a 12-volt test light to locate a switched power source and the wire that operates the high-beam circuit. These will be connected to the dimmer and relay that comes with the wiring kit.



10 The Glenda lights use a rotary dimmer to adjust the level of light intensity. Light output can be modified to suit riding conditions and to keep from blinding oncoming drivers.



11 Because LEDs draw so little power (only 12 watts for the Glenda at full power), we used small crimp connectors for some connections. Use the correct tool when crimping the wires; don't use pliers as the wires can come loose.



12 The relay that's included in the Glenda kit switches the lights to full power automatically when the high beam is switched on. Use of the relay allows the lights to be dimmed for normal riding and switched to full power when you really need to get noticed.

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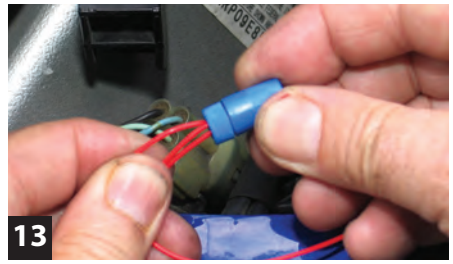
The screenshot displays the RoadBikeMag.com website interface. At the top, there are navigation links for Home, About Us, RoadBike Forum, Contact Us, and Back Issues & Gear. The main content area is divided into several sections: 'LATEST MOTORCYCLE NEWS' featuring articles like 'Memphis Shades Presents the Wings Across Tennessee Charity Ride', '2011 NEW BIKE NEWS: Star/Yamaha', and 'Harley To Remain in Wisconsin'; 'FEATURE VIDEOS' with a video player; 'RIDEOLGY' with articles such as '2009 BMW F 650 GS' and '2010 Zero S Electric'; 'ROAD TRIPS' with 'Icefields Parkway Canada, Part I' and 'Part II'; and 'VIDEO REVIEWS' for the '2010 Triumph Rocket III Roadster'. A sidebar on the right contains a 'SUBSCRIBE TODAY' offer for \$23.95 per issue and a 'FEATURED BLOGS' section. A large black arrow points from the website towards the wiring diagram section.

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13

Wires from the dimmer switch, relay, and lights are 22-gauge. Posi-Lock connectors (provided) are perfect for connecting multiple wires together. They are vibration and waterproof as well.



14

We mount the Glenda dimmer next to the hazard and heated grip switch on the left body panel of our FJR.



15

Here is how the Glenda lights look mounted on the FJR. The black-anodized housings provide a clean look and complement the color of most bikes.



16

Here, the Glenda lights are switched on and compared to the high-intensity discharge (HID) aftermarket lights on our FJR.

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