

Clearwater Lights' Erica LED lights can be mounted in a number of different locations. In this case, a bracket is used to mount them under the R1200GS "beak."

Light Up Your Life

Installing Clearwater Lights and the CANopener to a new R1200GSW.

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PHOTOS: COHEN, CLEARWATER LIGHTS



IN THE DAYS "circa BC" (in BMW-speak that's "Before CAN bus"), adding auxiliary lights on a new GS wasn't too difficult. If I prepared everything well over several days beforehand, I could do a first-time decent installation in one day. Preparing meant purchasing the lights, mounting brackets, relays, on/off switches, multiple spools of color-coded wire, wire connectors, measuring and planning the wire runs... you get the picture. Of course, the unexpected extra trips to the auto store meant I would usually finish-up in another day or two. And when I was done, if I sized the wire right, fused it properly and made the correct connections, I could turn those lights on and off at will. The envy of all at the next club meeting.

But there are better ways today to achieve much more. With the latest



↑ **Plug and play.** Everything needed for the install is included. This kit includes Erica lights and crash bars mounts. Kits for other bikes and other mounting locations are available.

→ **Six thousand lumens** from 60 watts are produced by the 3.75-inch Erica LED lights.

implementation of CAN bus electronic systems by BMW Motorrad, along with advances in LED lighting technology, there are so many more features available in auxiliary lighting besides "on/off." Having recently purchased a water-cooled R1200GS with Multi-Controller and Nav



Prep, I knew I wanted state-of-the-art products and perhaps an easier installation. Clearwater Lights offer complete integration to the BMW CAN bus along with a line of high-quality LED lighting products.

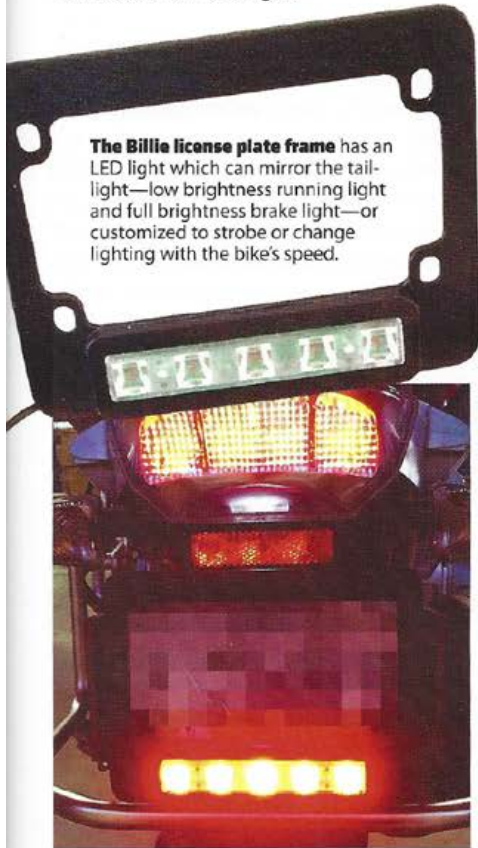
My shipment from Clearwater Lights



Fork leg brackets were used to mount the two-inch, 2,000 lumen Darla lights.



At full power, the four LED lights produce 16,000 lumens!



The Billie license plate frame has an LED light which can mirror the tail-light—low brightness running light and full brightness brake light—or customized to strobe or change lighting with the bike's speed.



The CANopener mounts discreetly under the seat.

included a pair of "Erica" 3.75-inch 6,000 lumens LED lights with mounts sized for my Touratech crash guards, a pair of "Darla" two-inch 2,000 lumens LED lights with fork leg mounts, and their "Billie" LED brake light license plate frame. Also enclosed with the Erica lights was the correct relay with attached wiring harness sized for my GS, a data cable, and the Clearwater "CANopener" module to interface with the CAN bus (CANopener for CAN bus, get it?). Each light included all wire ties, wire connectors and any mis-

cellaneous items as needed for the installation. And most importantly, included was an instruction sheet specific to my motorcycle with recommendations for wire routing and component mounting. The instructions seemed almost too simple.

I started by mounting the Erica lights on the tank guards. I used the optional L bracket, as it seemed to give additional flexibility for future adjustments. The Darla lights were mounted on the lower fork legs and, per the instructions, the OEM reflectors were relocated above the brackets. The Billie brake light was easily mounted in place of the dealer license plate frame. All the lights, housings and mounts are impressive in quality—CNC machined aluminium, hard anodized and powder coated in a black finish.

For the electrical harness installation, I removed the seats, tank center panel, battery cover and right lower tank side cover. I also pulled the fuse from the positive wire of the harness and disconnected the negative battery terminal. The relay box was then mounted behind the forks in

the center under the frame tubes with cable ties. Attached to the relay box are the matching connections for the lights, the data cable that will run to the rear-mounted CANopener and the positive/negative power cables. I unplugged the wiring harness from the tire pressure monitor system (TPMS) under the passenger seat, plugged the CANopener inline between the wiring harness and the TPMS module and mounted the CANopener with the included self-stick Velcro™.

The wire runs could not be simpler. Up front, both pair of lights connect to the relay box. The power/ground cables and data cable that are connected to the relay box were fed down the right side wire trough on the GS. The power cables exit the trough just above the battery, while the data cable continues to the back of the bike where it plugs into the CANopener. There is a cover over part of the trough above the right cylinder that was carefully popped open to ease stringing the cables and then popped closed. The CANopener has an auxiliary five-wire cable that can be used to drive relays for "future products." The red and black power wires were used to connect the Billie light while the yellow wire can be used as a way to power a relay for my heated gear.

After just two hours, the bike was ready for a lighting test. The wires are run but need to be cable-tied down. The fuse is reinserted into the harness and the negative battery cable reconnected. Worthy of note here, I haven't needed to cut any wire or add anything outside of what was supplied by Clearwater. The only change to the bike's appearance is the lights themselves.

I fired up the bike and, as expected, the lights came on. The plug-and-play installation was as easy as advertised. The default programming has the driving lights turn on at a reduced setting with the headlight's low beam to act as additional daytime running lights, then go to 100% with the high beam. The Billie brake light defaults to mirror the stock rear lights: reduced brightness running light and higher intensity brake light. I tested the on-board photocell by covering it with my hand and the lights adjusted accordingly to "night mode." I tried a



few programming changes and per the instructions, the lights would blink to confirm the changes. I then set the lights back to default settings, received another confirmation, and shut it down. Perfect!

The CANopener interface uses the on-board switches, such as high beam, Flash-to-Pass and the BMW Multi-Controller (affectionately known as the *wonder wheel*) for programming the LED light use and intensity, without affecting their original functionality. The list of available features for these new auxiliary lights is far beyond the old on/off. Dimming can be automatic using the bike's photocell; programmable for day, night, and high beam; and both sets can be independently dimmed from 10-100% using the wonder wheel. The Erica lights use the bike's turn signal cancel button for on/off operation. For off-road use (meaning not necessarily street legal), the lights can go on or strobe with the horn button or when holding the hazard flasher button. The Billie brake light includes a strobe mode and a speed sensitive mode. Plus, I'm now all set to add other functions, such as heated gear, extra horn, etc., to my bike's electronics by use of included auxiliary CAN bus relay drives.

A 30-minute dry run was enough to show me the "wow factor." At 100% the lights are far and away the brightest I've ever installed. I should have expected this as the dimmable LED lights use so much less power to generate light compared to anything I have used in the past. On high, each Erica draws 60 watts and each Darla draws 24 watts. That's 16,000 lumens for about 12 amps at maximum. At idle, the on-board voltage display recorded a full 14.0 to 14.1 volts at 100% intensity, amazing for the sunlight I was creating. And the quality of the light was superb. There were no hot spots down the road, only broad coverage with the four lights filling in the road and the shoulder.

When you need a high quality lighting system that can plug-and-play with your late model BMW, and you'd rather be riding than wrenching, a system from Clearwater Lights is the way to go. They have lighting kits for most BMW models and will work with you to suit your original equipment. For further information, contact Clearwater Lights, 916-852-7029, clearwaterlights.com. ▀

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