



With technology today, I was hoping I didn't have to bring my motorcycle in. Can't you just log onto it and fix it remotely?

Next
Month

V-Twin Cruisers Compared:

- Harley-Davidson Iron 883
- Indian Scout 60
- Star Bolt C-Spec

Clearwater Billie Brake Light

INNOVATION
OF THE MONTH

ONE OF THE principal benefits of Clearwater's previously tested CANopener device for late model BMWs (MCN, January 2016 Innovation of the Month) is its ability to control the optional Billie brake light kit, offering the rider truly intelligent auxiliary brake lighting capabilities. This month, we will cover the Billie in more detail. As shown in the accompanying photo, the Billie is essentially an LED light bar integrated into a thick, CNC-machined, aluminum license plate frame.

The CANopener processes the data available from the motorcycle's CANbus system to control the Billie, according to a myriad of custom programmable operation modes. Both running and brake light outputs offer independent 10-step adjustable brightness ranges, automatically switching between day and night modes using real-time data from the bike's photocell. For brake lighting, the Billie offers four main selections:

1. **No brake light** (Running light only.)
2. **Standard Mode** (Illuminates on/off in concert with bike's standard brake light.)
3. **"California Compliant" 4Hz Mode** (Flashes brake lights at four flashes per second for four seconds, followed by constant "on.")
4. **Active Brake Mode** (Brake lights activate in a four-flash sequence during deceleration even if the brakes are not engaged. Using CANbus data, CANopener determines that deceleration exceeding a preset threshold constitutes downshifting, and illuminates the Billie brake lights dynamically in order to alert traffic that the rider is slowing down. The deceleration threshold can be preset by the rider at either 0.2G for high sensitivity, or 0.4G for low sensitivity.)

California Compliant and Active Brake Modes are automatically disabled below 5mph, to avoid nuisance flashing of traffic following the rider, but a quick "double pull" on the front brake lever while stationary will activate a four-flash sequence, if the rider requires it. Likewise, the brake light brightness in these two modes automatically varies between 25% of preprogrammed level for light braking to full brightness as deceleration trips past the preset G threshold. To keep the rider informed as to the Billie's behavior, a small red LED "Billie indicator light" is included, and can be mounted via zip tie somewhere near the dashboard.



This LED apes the Billie's lighting sequences, alerting the rider when the brake lights are actuated, which is especially useful in Active Brake Mode.

Installation of the Billie is as easy as it gets. The red and white Billie wires connect to the red and white CANopener wires, and the indicator LED can be posi-locked to the same red and black CANopener wires. On the road, the Billie garners attention instantly, both for its flashing sequences and the sheer intensity of its LED illumination. If conspicuity is a part of your safety strategy, the Billie certainly delivers!

The American-made Billie is currently available for CANopener-equipped BMWs, including the K1600-Series (all years and models), the S1000XR, and water-cooled versions of the R1200GS (2013+), R1200RT (2014+) and R1200R (2015+). MSRP is \$149, an outstanding bargain considering the active capabilities and superb quality of this device.

—Moshe Levy

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