– HEADS UP BRAKE LIGHT –

BY GEORGE WOODSIDE

Since 1986, vehicles in both the USA and Canada have been required to have a Center High Mounted Stop Light, sometimes referred to as a "CHMSL." This requirement does not apply to motorcycles, although some Gold Wings are fitted with a trunk spoiler that includes brake lights.

Now, InnerVision by Henry, Inc. has introduced the Heads Up Braking System, or HUB. The HUB is a wireless receiver mounted on the back of the rider's helmet, combined with a transmitter that mounts elsewhere on the motorcycle. Both components are waterproof. While the HUB is equally functional with motorcycles, snowmobiles, ATVs and other equipment where the operator wears a helmet, this review will focus on use with a Gold Wing.

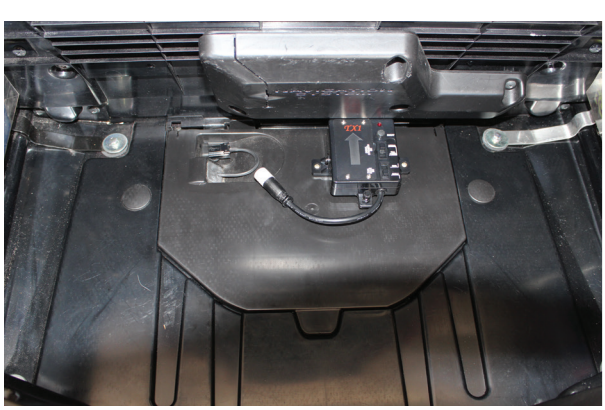
The transmitter can be attached inside the trunk, on the trunk lid, below the seat, or anywhere that allows it to be properly mounted. The documentation stresses the importance of insuring that the transmitter is level and facing forward. It is a "black box" about 3 inches square, with three switches, an indicator LED, and a battery compartment.

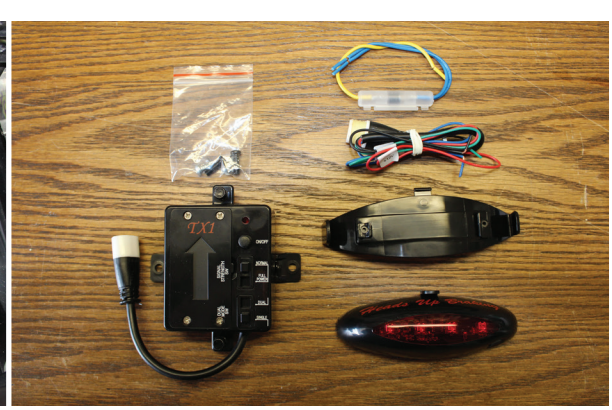
There are two ways to install the transmitter, Single Mode and Dual Mode. In Single Mode, the transmitter is powered by two AA batteries and simply mounted on the motorcycle wherever the user prefers, so long as it is level and facing forward. In Single Mode, the HUB operates only a row of LEDs on the back of the rider's helmet. In Dual Mode, the transmitter is hard wired into the motorcycle with power and ground wires, and it is inserted in-line with the brake light wiring. Dual Mode requires cutting the factory brake light wires, connecting them to the HUB's transmitter, and then connecting the output wires of the transmitter to the brake lights. For installations such as the Gold Wing, where there are two brake light wires, the HUB package includes an adapter to provide two output wires, one for each brake light. In Dual Mode, the transmitter does not require batteries.

The HUB receiver is attached by double-sided adhesive to the back of the rider's helmet. A bracket is permanently attached to the helmet by the adhesive; the HUB display unit can easily be removed from that bracket. For riders who sometimes ride solo but other times two-up, a second bracket is available from the manufacturer. That allows the HUB display to be moved to whichever helmet is visible to following traffic. The HUB receiver is always powered by two AAA batteries. The manufacturer estimates that the battery life for the HUB receiver is about six months. This can be increased by turning the HUB receiver off when not in use.

The HUB receiver also includes a beeper function. This beeper can be turned on or off and is useful in becoming acquainted with the operation of the HUB. The beeper activates simultaneously with the HIB's LED display, so the rider can hear when the LED display illuminates. Note that with both the transmitter and receiver, the power button must be held down for two seconds to turn the device on or off.

The primary function of the HUB is to act as a CHMSL, only with additional capabilities. In either Single or Dual Mode, proprietary logic in the transmitter detects the motorcycle slowing. As soon as the transmitter detects deceleration, whether by closing the throttle, downshifting, or braking, it sends a trigger signal to the receiver, causing it to begin flashing. This will trigger flashing well before the brakes are applied when the rider is throttling down or downshifting. The flashing should alert following vehicles that the motorcycle is slowing much sooner than actual braking begins, hopefully alerting following drivers to slow





as well. When operating in Dual Mode, the motorcycle's brake lights will trigger along with the helmet mounted receiver during throttle or downshift deceleration. Once the brakes are applied, the motorcycle brake lights will stay on as they do normally; the receiver will continue to flash until the motorcycle has come to a stop, or the rate of deceleration is so minimal that that the flashing ceases.

There are two other functions of the HUB. The first is trailer mode. When the transmitter is hard wired into the motorcycle, the motorcycle is being trailered, and the transmitter is powered on in Dual Mode, the motorcycle's brake lights will act as additional trailer brake lights. Once again, the lights will activate on deceleration, even before the brakes are applied.

The other additional function is named "Proximity Automatic Hazard Detection." This mode is designed to increase visibility of the rider when away from the motorcycle. When the rider leaves both units powered on and moves away from the motorcycle, the receiver will begin flashing. This will make the rider more visible, particularly at night, when moving on foot. The distance at which flashing begins varies with conditions and can be changed by a switch on the transmitter. In open air, operating in Single Mode, my testing showed flashing began at around 24 feet in normal power mode.

One of my concerns with the HUB was riding in a group. I didn't want the HUB to flash if I had to make moderate speed corrections when maintaining proper spacing during chapter rides. That could cause riders following me to overreact. Testing at speed in beeper mode, I found I could easily make those adjustments without triggering the HUB. I did find myself triggering it during upshifts while accelerating briskly. Using the beeps as a training tool, as I made my upshifts smoother, I was able to progress through the gears without triggering the HUB. By concentrating on smoothness, I was also able to slow without triggering the HUB, but only by slowing very gradually. Normal deceleration caused the HUB to act as expected, providing an alert to following traffic. Riding with the HUB in beeper mode, I began noticing which of my actions caused it to trigger when I didn't want it to. By focusing on those actions, and learning to avoid the beep, I found myself becoming a smoother operator, particularly in traffic.

Since the installation instructions were so specific about the transmitter being mounted level, I had concerns about riding up and down steep slopes. We have plenty of those in the Sierra Nevada Mountains. Here in Reno, we're at 4,900 feet. Nearby is one of America's most scenic places, Lake Tahoe, at 6,200 feet. To get there, you ride over one of several mountain passes, some as high as 8,000 feet. That means both climbing and descending steep grades. When I tested on some significant inclines, the HUB always performed as expected.

The HUB is a well-made and very sophisticated device, and there are more features to it than I've described here. It is developed and marketed by InnerVision by Henry, of Minnetonka, Minnesota. You can find more information at their website: www.HeadsUpBraking.com. WW