

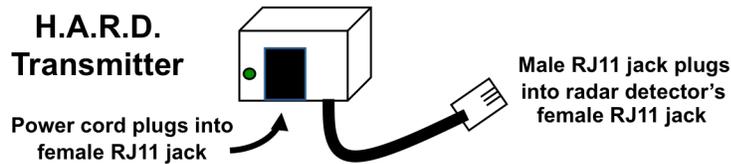
Installation and Usage Guide

Helmet Assisted Radar Detection (H.A.R.D.) System V

One of the primary benefits of the H.A.R.D. System is the ease of installation. No modifications to your radar detector are required. In most cases, no modifications are required of your helmet. The H.A.R.D. System consists of two components: a transmitter (plugs into the detector), and a battery-powered receiver (the helmet part).

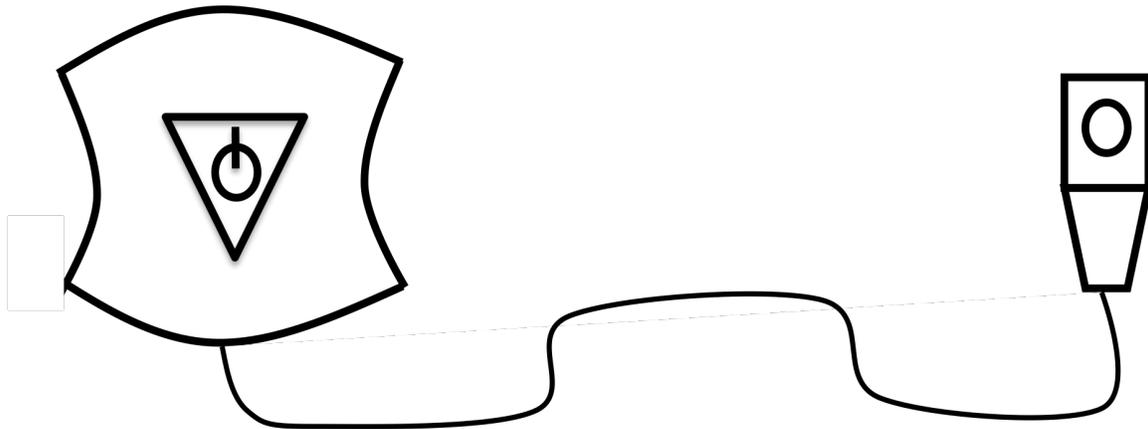
Installing the H.A.R.D. Transmitter:

- The H.A.R.D. transmitter has a female and male RJ11 jack. Unplug the power cord from the radar detector. Plug the male RJ11 jack, found at the end of the transmitter's cord, directly into the radar detector's female RJ11 jack. The power cord that originally plugged into the radar detector now plugs into the female RJ11 jack on the transmitter and powers both the detector and the H.A.R.D. transmitter. See figure below for details:



- A green light located next to the female RJ11 jack on the transmitter will flash when sending a signal to the helmet receiver unit. **This light is only on when the transmitter is sending a signal to the helmet receiver unit.**
- You can attach the transmitter to either the top or bottom of your detector using the piece of square Velcro enclosed with your system.
- The transmitter and receiver should be within 10 feet of one another for optimal reception. Each installation is unique so some minor adjustments in transmitter location may be required to find the optimal location.

Installing the H.A.R.D. Receiver:



- The H.A.R.D. receiver unit can be installed on the backside of your helmet by using the supplied round Velcro.
- The cord between the receiver housing and the LED warning light is extra long to allow for easy placement of the LED enclosure.
- When mounting the LED enclosure, found at the end of the cord, it should extend from the 'port-hole' like a miniature stop sign. The term 'port-hole' refers to the opening in a full-face helmet that you look out. The LED enclosure can extend from anywhere around the porthole opening. Most helmets allow the cord to slip between the padding of the helmet permitting the LED enclosure to be placed comfortably in the peripheral vision area of the porthole opening.
- An extra piece of Velcro is included for protecting the LED cord from where it exits the receiver housing and enters the back of the helmet. This should be placed over the cord so when the helmet is sitting on a flat surface, the cord does not touch the surface but is under the Velcro. Visit our website, www.legalspeeding.com, and view the video of 'How to Install the H.A.R.D. System V Receiver in Your Helmet' should you need assistance with your install.

Operating the H.A.R.D. Receiver:

- To turn on the receiver, hold down the power button for three seconds until you see three long flashes of the LED.
- To verify the receiver is in the operating mode, press and release the power button and you will see a single flash of the LED which verifies the receiver is in operating mode. At any time you can verify the system is on by pressing and releasing the power button.
- To turn off the receiver, hold down the power button for five seconds until you see four (4) short flashes followed by two (2) long flashes. To verify the receiver is in the off mode, press and release the power button once. The LED should not light if the receiver is properly shut down.
- The receiver has a low battery warning system. Once the battery voltage reaches 2.7 volts, the LED will flash four (4) short flashes every five (5) minutes. These four (4) short flashes parallel the flash sequence found when manually turning the receiver off. If you are unsure of the flash signal for the low battery warning, manually shut down the receiver. You will see four (4) short flashes followed by two (2) long flashes. Those initial four (4) short flashes are what is also used to indicate a low battery. If the LED is constantly on, the battery has fallen below 2.4 volts, the receiver CPU has shut down, and the LED is then locked in the 'on' mode until a new battery is installed.
- The receiver has built in auto-off circuitry to shut down the receiver after four (4) hours of use. The four (4) hour timer begins from the last time the power button was pressed. You **DO NOT** have to power down and power up the receiver to reset the timer. A simple press of the power button and a flash of the LED resets the timer and the four (4) hours begin. When the four (4) hours have elapsed, you will see two (2) long flashes before the receiver shuts down. These two (2) long flashes parallel the flash sequence found when manually turning the receiver off. If you are unsure of the flash signal for the auto-off circuitry, manually shut down the receiver. You will see four (4) short flashes followed by two (2) long flashes. Those last two (2) long flashes are what is also used to indicate an auto-shut down has occurred.

Maintenance of your H.A.R.D. System V:

- The **H.A.R.D.** System is a wireless, electronic system. Proper care should be exercised when using and maintaining the system.
- To combat the effects of moisture, the transmitter and receiver circuitry has been coated with a waterproofing material. Additionally, the receiver unit is sealed in a waterproof housing. When properly mounted on the backside of the helmet it will be protected from the danger of water damage.
- The only item that needs to be replaced is the one battery inside the receiver unit. In motorcycle miles, the battery life is approximately 2,500+ miles (50+ hours). The number of radar signals detected affects battery life. **IT IS RECOMMENDED THE RECEIVER BE TURNED OFF AFTER EACH USE TO MAXIMIZE BATTERY LIFE.** By turning the system on and off between uses, this allows a certain amount of "battery recovery" and will provide up to 25% more life when compared to a receiver that has been left 'on' continuously. While the system has an auto-off feature after four hours of use, it is recommended to manually shut down the system if the four (4) hours have not been attained.
- To replace the battery, remove the four screws from the back of the receiver unit. Remove the back cover of the receiver unit. Remove the one CR2450 battery and replace with a new battery. Reattach the back of the receiver to the receiver housing using the four screws and continue your ride.

H.A.R.D. System V Usage Tips:

- The **H.A.R.D.** System is activated by an electronic signal from the radar detector. When the detector's audible alert is sounded the **H.A.R.D.** System is activated. There is one exception for owners of the Valentine detector. On the Valentine detector, the audible alert **DOES NOT** always correspond to the lighted arrows found on the detector. The audible alert sounds when the initial radar signal is detected and when there is a change in the status of the radar threat. It is possible to ride around with lighted arrows on the Valentine without the audible alert being sounded, hence the **H.A.R.D.** System not being activated. **Do not interpret this as the H.A.R.D. System malfunctioning.**
- When you power up the radar detector the device goes through an initialization process or a 'boot up' similar to that of a computer. This boot up also sends a signal that triggers the **H.A.R.D.** System and provides confirmation the system is properly functioning. On Beltronics detectors, a signal is not sent during the boot up process.
- The **H.A.R.D.** System has a safety alert to notify the user if the radar detection system is not 100% functional. If there is power going to the **H.A.R.D.** transmitter but it comes unplugged from the detector the LED will stay constantly flashing. This eliminates the chance of the transmitter accidentally becoming unplugged during riding.
- The **H.A.R.D.** System, possibly your first introduction to military type Heads Up Display (HUD) usage, could take some getting used to. It was designed to give you an immediate notification that your detector is going off without the rider having to take their eyes off the road. This design is known as 'line-of-sight' warning. When first using the system, you may find yourself moving the LED enclosure 'tighter' within your peripheral vision. As you become familiar with the system, the LED enclosure can be moved to the outer edge of your peripheral vision.
- Everyone has different peripheral vision capabilities much like everyone has different vision and hearing capabilities. Experiment with the placement of the LED enclosure to find the optimal location for your particular use. This position will be unique to you and your helmet.
- The LED turns red when illuminated. It is very bright in order to be seen during daytime riding. At night, moving the LED enclosure off to the side may be necessary. A stiffening wire is inside the cord to 'hold the position' once adjusted.

A **Troubleshooting Guide** for the **LEGAL SPEEDING H.A.R.D.** System is available on our website as a PDF file. Our website address is: www.legalspeeding.com

You can also call 214-673-9443 for personal assistance.