Rudy's ***UNIVERSAL***

SmartLight Traveler

- **Low Alternator Charge Warning** – Immediate and obvious charge failure notification that you will notice before your battery runs down and leaves you stranded.
- **Visual Deterrent Mode** – Warns people around your ride to leave it alone, when parked.
- **Automatic Night Dimming** – Relocatable Sensor.
- **Won't drain your battery** – Has the lowest power usage of any monitoring system.
- **Works on ANY 12v motorcycle**, vehicle, snowmobile or boat!
- **2 Year Materials and Workmanship Warranty!**

Congratulations on the purchase of your new SmartLight Traveler system. This dual-purpose electronic system will provide you with many years of enjoyable riding and improved safety and security. SmartLight Traveler provides you with two essential information services which many find important and useful. Moreover, it does this at a cost that is below what these features might cost if bought separately or similar products that provide some of these features.

Overview:
SmartLight Traveler provides one of the most important pieces if information you need when traveling on your motorcycle. It serves as a critical electrical system health monitor to alert immediately you of any signs of charging system problems. It does this sooner and more obviously than add-on voltmeters and it does this in any gear when the motorcycle key is on. SmartLight Traveler also makes a great enhancement for systems that already have voltmeters installed because it can tell you when to start paying attention to your voltmeter. SmartLight Traveler also acts as a visual security deterrent when your motorcycle is parked by signaling to passers-by that *something* is active and the vehicle should not be touched. It does all of these things intelligently and fully automatically, without need for any added switches or for user actions of any kind.
SmartLight Traveler's LED brightens in the daylight and dims in intensity when it is dark. It is designed to work with other SmartLight devices using the proprietary SmartBus that is present on every Smart product.
The included control unit (SmartModule) is completely encased and is weather, water, fuel and dirt-proof. Smartlight comes ready to Plug & Play with everything needed, including all harnesses and connectors. It is made with top quality brand name components with industrial ratings and gold-plated connectors making it so reliable that we warranty it against any defects in materials and workmanship

for two full years from date of purchase.

All Smart products are proudly made, engineered and tested in America by Americans and shipped world-wide for the benefit of our customers and fellow riders.

What is Included:

- **1 - SmartLight Module**
- **1 - Power Harness with Fuse**
- **1 - Indicator L.E.D. with Harness**
- **1 - Photo-detector with Harness**
- **1 – Bike noise and spike suppression Clamping Diode**
- **1 - Instruction Manual (this document)**
- **2 - Year Materials and Workmanship Warranty**
- **Unlimited Lifetime email Technical Support**

INSTALLATION

With proper but simple installation, you will enjoy many years of use with with your SmartLight as you find it a useful and trusted companion. Here, we cover:

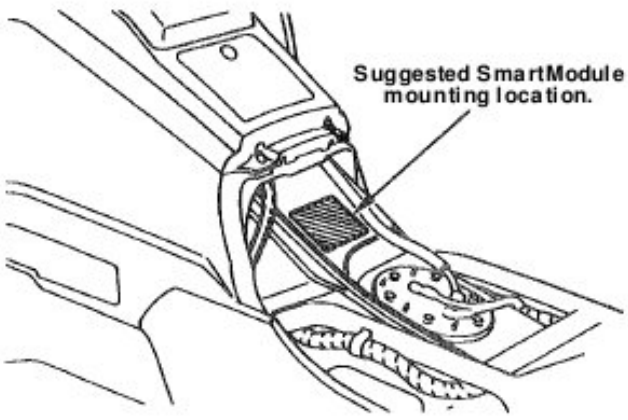
- **Power Requirements**
- **Where to Mount the SmartModule (mounting)**
- **L.E.D. Indicator Placement**
- **Mounting the Photo Detector**
- **Installation of the Power Harness**
- **Connecting Everything to the SmartModule**

Power Requirements:

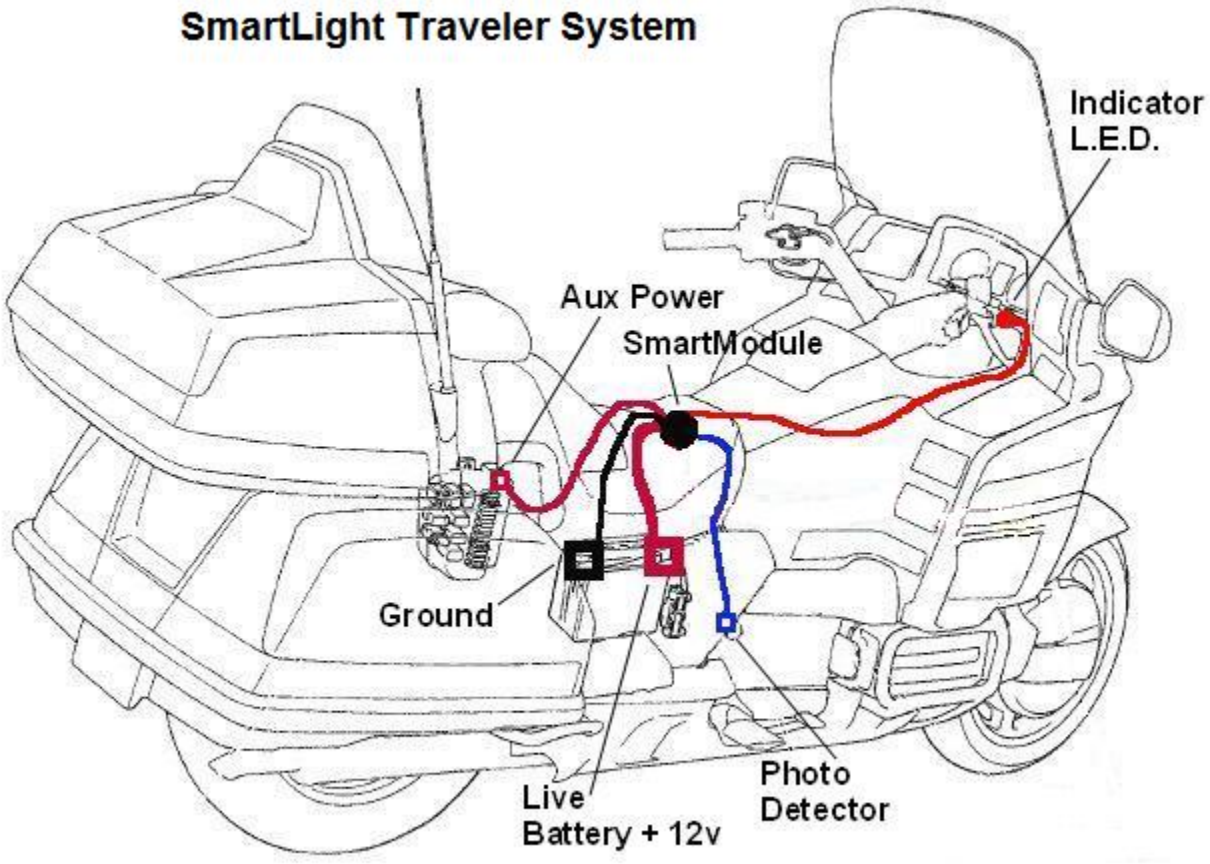
+12v battery @180 micro-amps (plus LED current when actually lit) 5 amp fuse.
+12vdc aux power @ 1.5 milliamps (while key is on)
Ground connection anywhere.

Mounting:

The SmartLight module may be placed anywhere you wish in any position using the supplied industrial adhesive Velcro attached to the module.. The harnesses are fitted to assume the SmartModule will be placed on top of the gas tank near the front of the seat near the front seat bracket. You may cut and splice the harnesses to suit your own needs and desires for other mounting locations. This system draws very little electrical current so virtually any wire spliced in should work. Splicing is not needed for the normal Plug & Play installation, unless your battery, running light power or LED placement will be unusual. Splicing into the harnesses to add or reduce length will <u>not</u> affect the warranty as long as it does not electrically damage the SmartModule or harnesses.



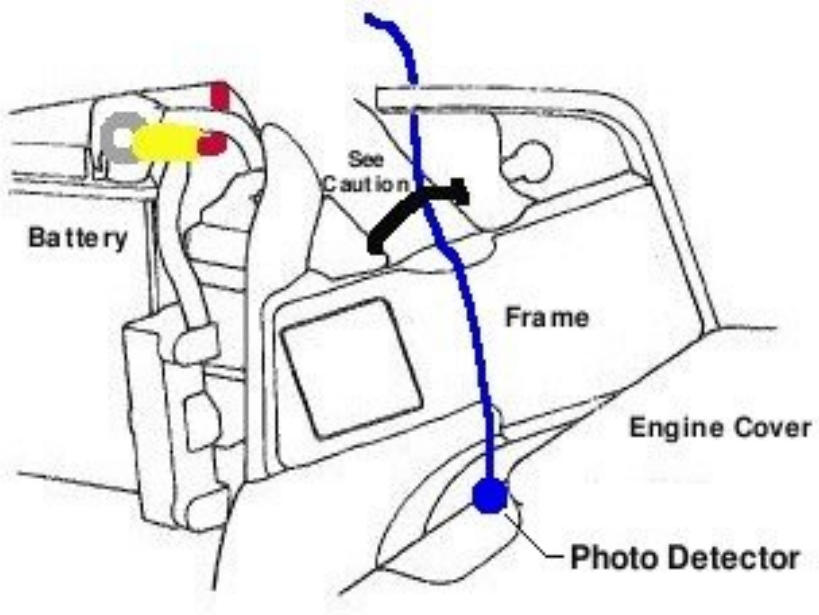
Everything plugs into the SmartModule and connects to your vehicle. A 1/4" diameter. mounting hole (or just under) for the indicator L.E.D. Location or your choice of mount will be required. You may choose to use a different L.E.D. or location for the mount. If you do, it MUST be 12v DC ready. Contact us for assistance and advice for any deviation from the standard use of this kit.



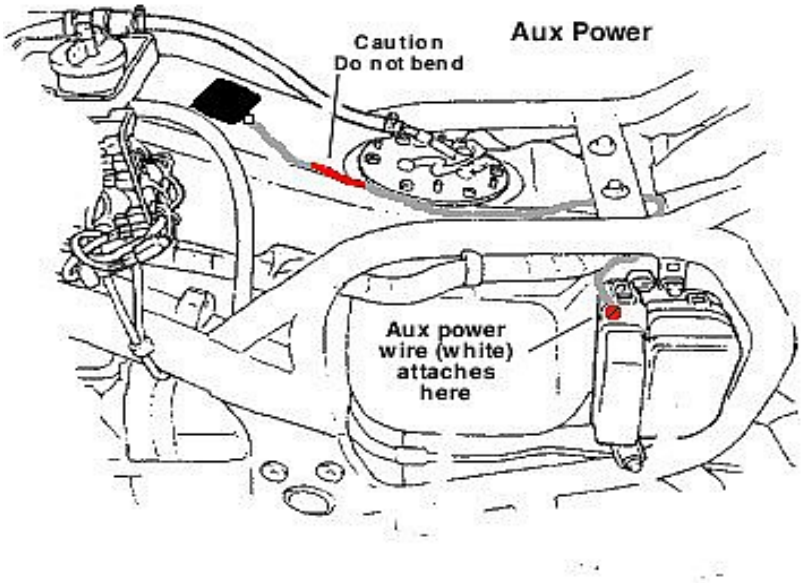
The L.E.D. may be placed in your choice of locations but it is intended to be placed looking upward (not directly at your eyes) and forward, near the instrument panel to avoid any problems with windscreen reflections appearing in the normal viewing area. CHECK THE WINDSREEN REFLECTION WHILE SITTING ON THE BIKE IN RIDING POSITION BEFORE DRILLING THE MOUNTING HOLE. Often the preferred location is the small triangle of plastic that connects the two sides of the speaker grill part of the dash, as shown in the picture on page 1. Mounted this way, the key bridge is removable without wires attached to it. Alternatively it can be inserted in a spare cell in the instrument panel, which eliminates the need for a visible, drilled hole, but loses visibility. Some blanking paint may need to be removed if this method is chosen.

WARNING: DO NOT LOOK INTO, OR POSITION THE HIGH INTENSITY L.E.D. DIRECTLY AT YOUR EYES. THIS CAN CAUSE POTENTIAL EYE DAMAGE!

The light sensing, Photo-detector Harness is simply a matter of plugging it in and mounting it where natural light can get to it.
Mount this in a location where the lighting of other vehicles and your own lighting won't cause it to react unexpectedly. Use the suppled cable tie to secure it or other means of your choosing. The recommended location is shown. You may mount it elsewhere to achieve a different light/dark sensing point you prefer. Protect the red wire from the frame of the chassis as it carries +12 volts at all times.

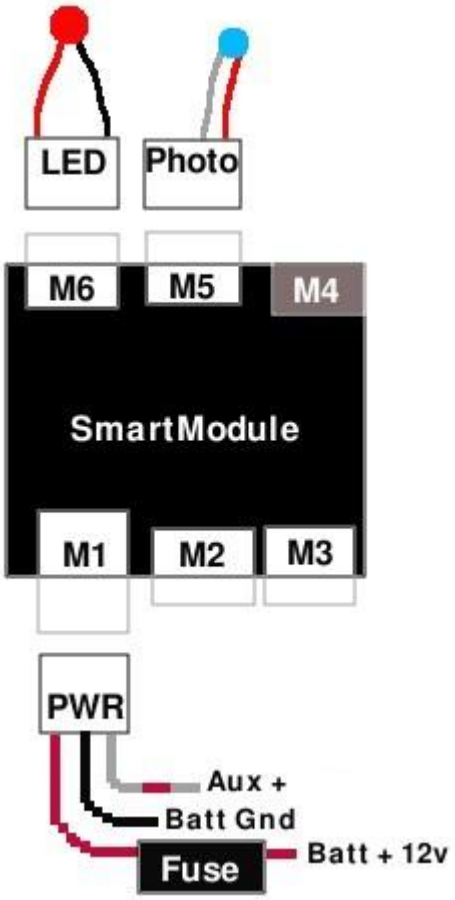


The fused Power Cable Harness black wire goes to Ground on the battery. The fused red wire goes to the + terminal on the battery. The white/red wire goes to the aux power terminal on the fuse block (as shown in the diagram). Make certain that the aux fuse in the bike's fuse holder is 5 amps as specified by Honda. Smart Modules are protected from incorrect polarity and incorrect attachment points. The power connector should be the last thing plugged into the SmartModule.
It is supplied with a weatherproof fuse (5 A) and terminals to attach to the positive and negative side of the battery terminal.
Be careful not to flex or bend the red portion of the white wire. It contains some components necessary for normal voltage sensing levels and break easily if bent repeatedly or crushed. Be sure to pay attention to the routing of and protection from ground for any red wires or wires with red heat shrink sections as most are at +12 volts. We recommend plastic duct tubing to protect all +12v wiring, where practical.



Next, add the supplied noise Clamping diode across the aux terminals or the running light circuit where you attached the white power wire from the Smartmodule, with the silver band going to the + side terminal and the black side going to the ground terminal. This protects SmartLight Traveler from electrical glitches the bike produces as the key is turned on and off. It is mainly necessary when you have extra relays clicking on and off in the system. (See the picture on the top of the next page.)

SmartModule hookup should be the **last** thing done. MAKE SURE all connections at the far ends of the cables have been properly made. Plug in the LED (M6), the photodetector into (M5) and the Power (M1) connectors and the L.E.D. should begin flashing once every 5 seconds if everything has been connected properly. With the key off, the L.E.D. should blink as referenced in Security Warning Indicator mode, described below, and with the key on, it should blink as when not charging, also as described below.



OPERATION

To verify the functionality of your SmartLight Traveler, simply plug everything into the Smartmodule, as shown, including the power connector and the LED. Turn off the ignition key. This will cause the LED to blink briefly once every 5 seconds in security mode. You may be asked to perform this test if you contact us with a problem with your SmartLight. Turn on the key without starting and SmartLight Traveler will begin to flash rapidly and continuously until the key is returned to the off position or until the engine is started and begins charging the battery back up again.

Modes of operation (all completely automatic)**:**

Security Visual Deterrent Indicator: This is the normal function whenever the vehicle ignition is turned off. The L.E.D. will flash briefly once every 5 seconds and then repeat. It draws only 180 microamps in this state, which is less than the natural discharge rate of a disconnected battery and much lower than most motorcycle's own backup power system current draw that have one. The L.E.D. will draw more current while lit but because it is lit only about 100 milliseconds each time, the current usage is very minimal.
Battery charge monitoring does not occur when the key is off since nothing would be charging at that time.
Note: If, for some reason you would prefer not to use this mode and wish to disable this feature completely, (over the winter for example), simply connect both +12 power wires to the aux power terminal or running light power source and not connect the live power wire to the battery. In this arrangement, the SmartLight Traveler will have no current draw and will not function when the key is turned off. The charging system monitor will still work as normal in this configuration when the ignition is on.
However, leaving this feature running over the winter provides an easy and visual notification that the battery has a reasonable charge and not dead.

Low System Charging Alerter: This feature is active whenever the key is on and in any gear. When lower than charging voltage is detected, it will blink in a constant barrage of fast flashes, specifically designed to attract the rider's attention from their peripheral vision and be as bright and noticeable as possible. Voltmeters won't do this and those that do some blinking, don't do it early. They do it as a last resort.

When you turn on the key, SmartLight Traveler will be blinking at you rapidly because you have not started charging and recovered the battery voltage yet. This is normal and it also tells you that SmartLight Traveler is on the job and working correctly.

The detection sensing voltage is determined by the reference sensor in the SmartModule combined with sensors in the power cable. It is designed this way to allow the greatest flexibility in voltages and at the same time ensure that no accidental adjustment will cause an incorrect sensing indication. In this design, voltage sensing is fixed and cannot get out of adjustment or drift with time.

The factory default senses low voltage as anything below 12.75 volts, +- 0.35 volts. Users who wish a lower or higher sense voltage may do so by ordering a custom power cable. The change of detection voltage from the factory setting is not commonly required.

The lowest sense voltage that can be achieved with the SmartModule is 10.5 volts measured at the aux power terminals or at the tap point into the running lights.

This feature is intended to provide early warning of system charging failures while traveling. It will normally blink after startup and low RPM on some systems. It is intended to give you the time needed to get someplace where the electrical system can be tested and corrected safely and early. Most systems exhibit low voltage at times. You will quickly learn the normal voltage fluctuations for your particular system. It is the abnormal alerts you need to be aware of. Lower voltage sensing harnesses are available if you wish to lower the detection voltage for the indicator. Most prefer a high sensing point for the earliest possible notification of system problems when they occur.
The low charge monitor is not active when the ignition switch is turned off since you aren't charging at that time.

Safety Notice: This SmartLight Traveler system is supplied with a 5 amp fuse for power from the battery. The aux power wire or running light tap is intended to be protected by the vehicle's internal fuses for that circuit. If you wiring problems or just want to clean up the wiring on you bike, we recommend that you visit our web page where we offer wiring kits and information to assist you with this: http://goldwingtech.info/auxwiring/auxpwrwiring.html

Please contact us about any questions or problems you may have with your SmartLight Traveler installation or operation at support@thefarend.com Any comments or suggestions are always welcome.

We have done our best to make this kit as complete, reliable and easy to install as possible for you. For additional installation, user updates, and more details on SmartLight, Traveler or to download this document in color, please go to the following web page:
http://smartlight.rudysproducts.com/ownerinfo.html
Thanks for purchasing SmartLight Traveler.