UltiGuard OEM Security Impact Sensor

Description

The easy-to-install **UltiGuard** adds **dual-zone** impact sensing to any OEM antitheft security alarm system. The sensor becomes operable whenever the ignition key is turned off. Upon turning off the ignition the Status Light rapidly flashes, and after 35 seconds it changes to slowly flashing, indicating that the sensor has become fully operational.

When the OEM security system is armed, should the **UltiGuard** detect an impact greater than either of its adjustment thresholds it will:
a) either beep the vehicle horn 3 times if the impact is light; or
b) activate the OEM security alarm via a trigger output wire which is connected to one of the OEM security alarm's trigger wires.
Either or both of the **UltiGuard**'s trigger output wire may be configured (+) Positive or (-) Negative to match the OEM circuit.

The vehicle operator may turn on or turn off the **UltiGuard** as desired, with a Valet Switch contained within the Status Light housing.

Installation

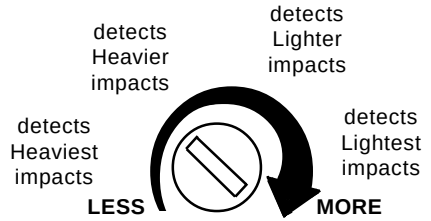
Mount the UltiGuard sensor module to any structural part of the vehicle, behind the driver-side or center of the dashboard. A nylon tie-strap, Velcro and screws are provided as mounting method options.

WIRING the UltiGuard sensor- SEE THE REVERSE SIDE

Mount the Valet Switch and Status Light assembly in a driver-accessible location, such as below the driver's dash. The Status Light flashes rapidly when the sensor is setting up, and then flashes slowly when the sensor is on. The Status Light will also light steady for 3 seconds when the sensor detects an impact over the set threshold (it does this for both prewarn and alarm).
The Valet Switch is a latching push-button type When it is depressed the sensor will operate; and when it is extended the sensor will not operate. If the sensor is turned off, there will not be any Status Light indications (note- the trigger indicator LEDs on the sensor will operate while the sensor is off, to assist the installer in adjusting the sensor).

VERY IMPORTANT! After the sensor is mounted, its wiring connections made, and the Valet Switch and Status Light module is mounted, **adjust** the sensitivity for **both** prewarning AND alarm triggering, and **thoroughly test** the sensor operation.

Turn the **Sensitivity Adjustments** on top of the sensor clockwise or counter-clockwise so that the prewarning ("Prewarn") is slightly higher than the alarm ("Trigger"). Carefully apply impact by hand to an appropriate area (such as the dash or steering wheel) to assist in the intial adjustments. To aid in this initial adjustment, the green Prewarn and red Trigger LED indicator lights on the sensor illuminate when the sensor detects impacts exceeding adjustment thresholds, even when the sensor is off.



Sensitivity adjustments- both zones are similar

Arm the **OEM alarm** (typically by remotely locking the doors- if in doubt refer to the vehicle's owner manual), wait for the arming delay to expire (the Status Light slows from a fast to slow flash after 35 seconds).
Once the UltiGuard is set up, carefully apply impact to the vehicle by striking its exterior in various locations with a open hand. Ensure that the UltiGuard beeps the horn for lighter impacts, and activates the OEM alarm for heavier impacts.

Note: The beeping horn for prewarning may be adjusted for different pulse lengths, with the "Horn Pulse" adjustment on the sensor.

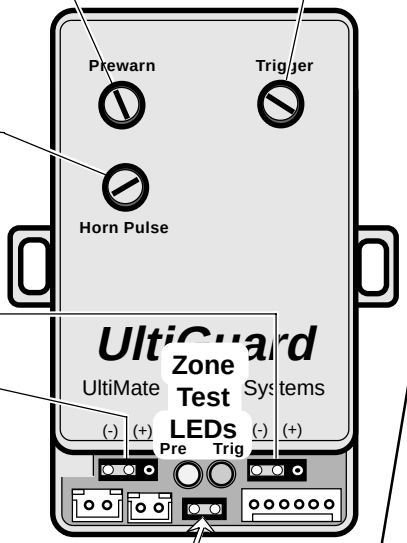
Take the time and carefully set both Prewarn and Trigger zone adjustments, so that the UltiGuard operates correctly and effectively!

Complete the installation after adjustment and testing by securing any removed vehicle components and then **place the customer-use hang tag in the vehicle** and placing the peel-and-stick the "UltiGuard Security Protection" window labels onto the vehicle's side glass. Be sure to remove any packaging materials or leftover surplus kit parts from the vehicle.

UltiGuard sensor WIRING

Prewarning (Green wire)
trigger adjustment
(clockwise = MORE sensitive)

Alarm (Blue wire)
trigger adjustment
(clockwise = MORE sensitive)



Horn (Green wire)
prewarn beep adjustment
(clockwise = LONGER beeps)
This adjustment allows the installer to "fine tune" the pulse length of the prewarning horn beeps.

Polarity programming
The **Blue and Green wires can be (+) or (-)**
In the factory setting both wires will output (-) Negative when the sensor detects and reacts to an impact. Should (+) Positive polarity be needed in either case, remove a jumper and reposition it on the open and center pins, as denoted by the case markings.

DO NOT remove this jumper
Doing so changes the alarm trigger (blue wire) to a 30 seconds pulsed output

Pink wire
This is an "override" wire for the Green prewarning wire. Once the sensor is on, if this wire has a change in polarity the sensor's prewarning function will not operate for 60 seconds. The purpose of this wire is prevent a prewarning (beeping the horn) in the period between the user unlocking the vehicle doors, entering it, and turning on the ignition. Several connection points within the vehicle are possible; the most likely connections are to the vehicle's door open detection wire, or to the courtesy lights (the later especially, if remote illuminated entry is present). This wire "learns" polarity, so the polarity of the target wire does not matter.

Green wire
This is the sensor's prewarn trigger output, which can be used to beep the vehicle's horn when the sensor detects a light impact. Connect this wire to the vehicle's horn switch wire, which is found in the steering column area, between the vehicle's horn switch and horn relay.

Orange wire
This wire turns the sensor on and off, and this wire should be connected to Ignition (+) 12 Volts in the vehicle. The recommended connection point of the Orange wire is to an ignition power wire at the ignition switch wiring harness, or to an ignition source at the fuse box. Or, as an alternative, if the host OEM alarm has a "grounded when armed" output, the Orange wire can be connected to it.

Red power wire
Connect to Constant (+) 12 Volts. Good sources are the ignition switch harness or at the fuse box. An included QuickTap may be used to connect the Red wire to a vehicle power wire, or the nylon sleeve of the Red wire's terminal can be trimmed back to allow plugging into an available fuse box constant power terminal, if one is available.

Blue wire
This is the sensor's alarm trigger output, which causes the OEM alarm to activate when the sensor detects a heavy impact. Connect this wire to a wire in the vehicle which will trigger the OEM alarm. An existing hood open or trunk open detection wire is recommended. Most OEM security alarms do have the recommended hood open and/or trunk open detection circuit. Otherwise a door open detection wire may be used, but in some cases this may cause the domelight to occasionally flash, or activate the illuminated entry, as the sensor becomes operable 35 seconds after the ignition key is turned off, whether the OEM is armed or not armed, and it will react to an impact and provide the trigger output.

Black ground wire
Connect to (-) Ground. Securely attach this wire's ring terminal to a good chassis grounding point. Use an existing small bolt or self-tapping screw, and attach the ring terminal to clean, bare metal.