



# CLASS<sup>®</sup> Quick Operating Guide

**LIQUIDSPRING™ LLC**

3416 RASCAL DRIVE

LAFAYETTE, IN 47909

PH: 765-474-7816

WWW.LIQUIDSPRING.COM

This document is a quick guide to **CLASS<sup>®</sup>** operation. For complete instructions, please refer to the operator manual shipped with every **CLASS<sup>®</sup>** kit.

For the latest manuals, visit [www.liquidspring.com](http://www.liquidspring.com).

## Automatic Vehicle Leveling:

**CLASS<sup>®</sup>** automatically levels the vehicle to the selected ride height regardless of load in the vehicle. Leveling does not occur under certain conditions such as cornering or braking. To get to the selected ride height quickly upon startup, these conditions are ignored for the first 30 seconds. Below 10 mph the ride height can be set to LOW height to ease the loading and unloading of luggage and/or passengers or in situations where vehicle roof clearance is limited, or set to HIGH height to provide added clearance between the rear bumper or exhaust and the ground when negotiating steep driveways or ramps. At speeds greater than 15 mph, the system will automatically revert to NORMAL height, regardless of prior selection. See Ride Height Adjustment below for more details.

## Automatic Ride and Handling Control:

**CLASS<sup>®</sup>** provides both a luxury ride and sports car handling by instantaneously and seamlessly transitioning between a low spring rate (for optimum ride) and a high spring rate (for optimum handling). Sensor data including vehicle speed, steering wheel position / rate of rotation, and suspension height are used in conjunction with the driver selected ride mode to determine when and how to control the suspension (see Ride Mode Adjustment below).

## Driver Display:

The driver display located in the vehicle cabin provides the operator a means to enable/disable the suspension, change ride mode and height settings, and indicates on-board diagnostic codes.

## On/Off Button:

Pressing the ON/OFF button will enable/disable the suspension. When the suspension is ON, relevant LED's are lit up. When the suspension is OFF, none of the LED's are lit. It is recommended to leave the suspension ON at all times unless the vehicle or suspension is being serviced.

## Green LED's:

When the vehicle ignition is turned on and the system is ON, all LED's will flash briefly then the green ride mode and green ride height LED's will light up to show the current ride mode and ride height.

## Yellow LED's:

The four yellow LED's will light up if the steering wheel is within 20° each side of straight ahead, but will not light up when steering wheel exceeds 20° from center. If the vehicle is steered straight ahead and the four yellow LED's are not lit (and the red warning LED is not lit) see "Calibrating the Steering Sensor" in the Operator Manual.

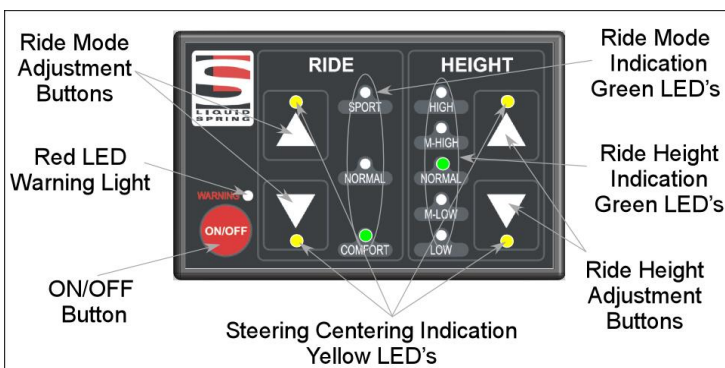
## Red Warning LED:

If the red LED is flashing, or on continuously, see "troubleshooting" in the Operator Manual.

## Ride Height Adjustment with Driver Display:

Press the "HEIGHT" UP/DOWN arrow buttons to change ride height from NORMAL to HIGH (body up) or LOW (body down or kneeled position).

- A solid green LED will indicate the selected height. A flashing green LED will indicate the current height and that height adjustment is occurring. When a single solid green LED is lit, the selected height has been achieved.
- Two solid green LEDs will be lit if the current height is not the selected height and height adjustment is not occurring.
- If LOW or HIGH heights are selected while the vehicle is traveling at less than 10 mph or stopped, the suspension height is either lowered or raised.





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- If LOW or HIGH heights are selected while the vehicle is traveling at greater than 10 mph, the suspension will ignore the selected height and remain in NORMAL height unless the vehicle speed goes below 10 mph within 2 minutes of selecting the height. In this instance, the NORMAL height green LED will flash and the selected height green LED will be lit solid until the speed goes below 10 mph within 2 minutes of selecting the height. If the vehicle speed doesn't go below 10mph within the 2 minute period, the suspension will remain in NORMAL height indicated by only the NORMAL height green LED lit solid.
- If LOW height is selected and the ignition is turned off before LOW height is achieved, the system will continue to lower to LOW height. When LOW height is selected the system will monitor and maintain the kneeled position by only lowering as needed for 4 hours after the ignition is turned off.
- If HIGH height is selected and the ignition is turned off before HIGH height is achieved, the system will stop adjusting ride height. When HIGH height is selected the system will monitor and maintain the current position by only lowering as needed for 4 hours after the ignition is turned off.
- The door switch function (if equipped) is disabled when the driver display LOW or HIGH height is selected before the door is opened on vehicles equipped with a door switch for kneeling.

## Suspension Kneeling with Rear Door Switch (if equipped):

- This function is only active if the driver display is set to NORMAL height, the system and ignition are turned ON, and for 2-1/2 minutes after the vehicle ignition is turned off.
- Opening the rear door will set the suspension to LOW height and the suspension will lower to a kneeled position.
  - If the system and ignition are ON and the door is closed before the system achieves the kneeled position, the system will return to NORMAL height.
  - If the system and ignition are OFF and the door is closed before the system achieves the kneeled position, lowering will cease.

- If the system and ignition are ON and the door is re-opened, the suspension will resume lowering to the kneeled position.
- If the system and ignition are OFF and the door is reopened, the suspension will only resume lowering to the kneeled position if the 2-1/2 minute time period hasn't elapsed since turning off the ignition.
- The door switch can be over-ridden by the driver display height selections.

## Ride Mode Adjustment with Driver Display:

Press the "RIDE" UP/DOWN arrow buttons to change the ride mode between COMFORT, NORMAL, and SPORT. A green LED will show the selected mode. The ride mode setting can be changed at any time. All three modes will feel similar on a smooth road, and will provide similar handling in an emergency evasive maneuver.

- **COMFORT Mode** provides a smooth, soft ride. Use for normal city, highway, and gravel road driving.
- **NORMAL Mode** is a balance between COMFORT and SPORT.
- **SPORT Mode** provides more "feel" or response. Use where road conditions or personal preference demand more control (e.g. twisty country roads or high/gusty wind conditions).

## Ride Height Changes Due to Temperature:

**CLASS<sup>®</sup>** utilizes a compressible liquid for its spring and damping, which expands and contracts with temperature changes. When the vehicle and / or suspension system is turned off, moderate ambient temperature changes will cause the suspension ride height to change; ride height will increase with increased temperature and decrease with decreased temperature. When system is turned on again, it automatically returns the suspension to the selected ride height. While the suspension system can be used immediately upon start-up, it is recommended to allow the suspension system to automatically adjust the ride height for a brief period (less than 30 seconds) before driving away. Some ride harshness may be noticed until NORMAL ride height is achieved. The suspension system functions normally within a temperature range of -40°C and +125°C.