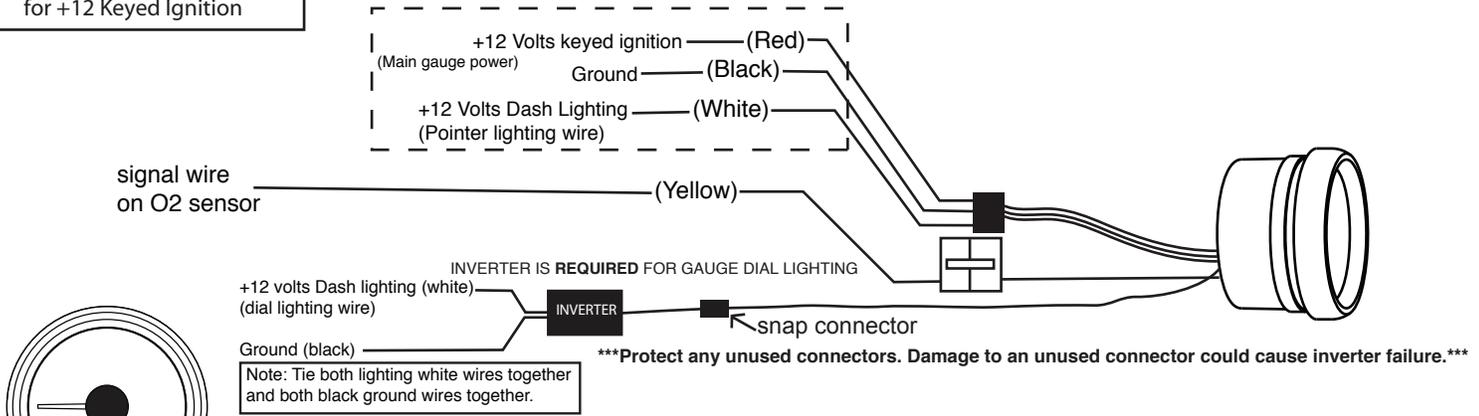


Power Draw = 0.2 Amp
3A to 5A Inline Fuse Recommended
for +12 Keyed Ignition

Note: When gauge power is off the pointer(needle)
will remain in last powered position.



Installation

1. Disconnect negative (-) Battery Cable
2. Connect wiring as above.
3. Mount Gauge for easy viewing.
Use spin lock ring (included) to mount to panel.
Spin ring threads in both directions
(depending on your dash panel thickness).
Snap Gauge connector to wiring connector.
4. Reconnect negative (-) battery cable.

O2 theory of operation

Oxygen sensors produce a voltage signal that recognizes the amount of unburned oxygen in the exhaust. An oxygen sensor is essentially a battery that generates its own voltage. When hot (at least 250C), the zirconium dioxide element in the sensor's tip produces a voltage that varies according to the amount of oxygen in the exhaust compared to the ambient oxygen level in the outside air. The greater the difference, the higher the sensor's output voltage.

Sensor output ranges from approx 0.2 Volts (lean) to 0.8 Volts (rich). A perfectly balanced or "stoichiometric" fuel mixture of 14.7 parts of air to 1 part of fuel gives an average reading of around 0.45 Volts.

Since O2 sensors aren't terribly accurate when representing air/fuel ratios higher or lower than stoichiometric (a "perfect" air/fuel ratio of 14.7 parts air to 1 part fuel), the ECM likes to see the sensors cross over the stoichiometric mid-point (a voltage around 450mV) as often as possible. That's a pretty good indication the engine is running near its optimal air/fuel ratio. A "lazy" worn-out sensor crosses over the mid-point less frequently, costing power and increasing emissions.

The Speedhut Air/fuel gauge is designed to work with factory OEM O2 sensors operating from 0-1 volts. The gauge will work with both heated and non heated O2 sensors. In normal operation gauge pointer will slightly oscillate back and forth within the stoich range of dial indicating a properly functioning O2 sensor and good air/fuel mixture. Under heavy load/acceleration the pointer will move into the rich area of dial as the ECM module takes over using pre programmed fuel delivery curves- this is normal. Under heavy deceleration the pointer could momentarily move to lean condition. However, a pointer that tends to oscillate back and forth in the lean or rich areas indicates improper fuel mixture.

Lean range - 0 - .249v
Stoichiometric range .250 - .749v

-----Note: For Revolution Series gauges with setable warning light see below-----

Setting warning LED for both low and high.

Led can be set to turn on for both a low or high condition, or turned off in either/both case(s).

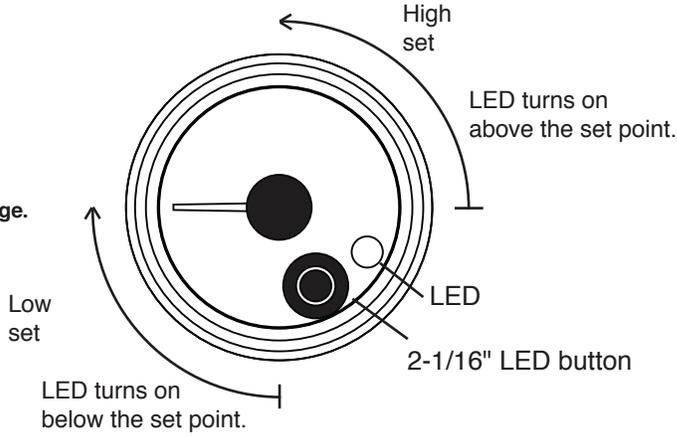
To reset LED set point at any time follow this procedure again.

Note for 2-5/8" gauges plug button in left side back of gauge.

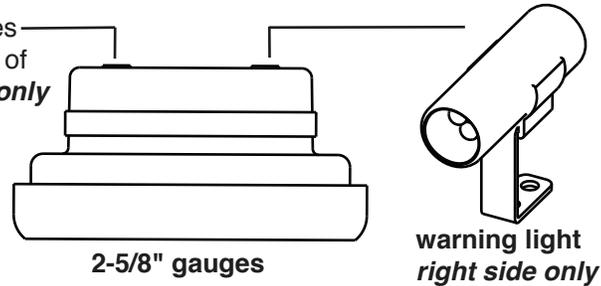
1. To enter LED calibration mode, Press and hold LED button with gauge power off. Turn on gauge power. Release button.
2. Pointer will slowly scan clockwise from full low condition on dial. Press button at desired low warning set point. LED will blink to indicate low warning has been set. Note: Pressing button at full low (6 o'clock position) on dial will turn off LED warning so that it does not light up.

- 3 Pointer will now travel to full high condition on dial and slowly scan counterclockwise. Press button at desired set point for high condition. LED will blink to indicate high warning has been set. Note: Pressing button at max high position on dial will turn off high LED warning so that it does not light up.

Note: Setting a low warning will turn on LED when pointer travels below the low set point. Setting a high warning will turn on LED above the high set point.



Note: 2-5/8" gauges plug button in back of gauge on **left side only**



Setting LED brightness both day and night.

At any time while gauge is running, press and release LED button to show current LED brightness. After a couple second delay, if button is not pressed this current setting is re-saved. LED will blink to indicate setting has been saved. To change LED brightness press and release the button to advance to next higher brightness level. LED brightness will loop through 5 possible brightness settings including off as you press and release the button. At acceptable brightness level do not press button for couple second delay. LED will blink to indicate setting has been saved. Note: Setting the brightness level when gauge lighting is on, will set the night brightness level. Setting the brightness level when gauge lighting is off will set the day brightness level.

Peak recall memory (Revolution line only)

Press and hold gauge button down and gauge needle will move between low and high peak. Gauge will continue toggling between low and high peaks as long as button is pressed.

Note: low peak becomes active once gauge needle travels up at least 1/8 scale initially. Once this condition occurs low peak becomes active and will record the lowest reading the gauge achieves.

To retain peak reading (NOT CLEAR IT)

While showing peak reading, release button, wait 5 seconds, gauge will return to normal and retain the peak reading.

To clear peak reading

While showing peak reading, release button, and immediately press and release again within 5 seconds. LED will flash 2 times and pointer will travel to zero to indicate peak has been cleared

Dual Peak Feature
Boost
Pressure
Air Fuel

Max Peak Feature
Temperature
EGT
Voltage

NO Peak Features
Fuel level
Vacuum