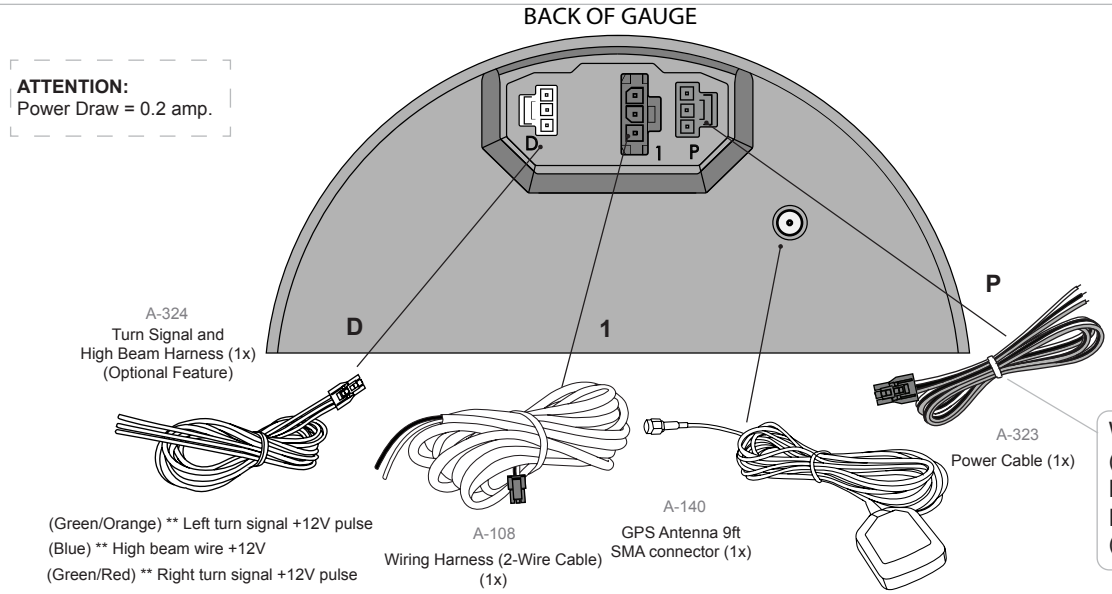
# 4”, 4-1/2” Dual GPS Fuel/Speedometer Instructions

SPEEDHUT




## INSTALLATION

1. DISCONNECT your vehicle’s negative (-) battery cable.
2. MOUNT your gauge to the panel using the spin lock ring.
3. CONNECT the gauge wiring.
4. RECONNECT your vehicle’s negative (-) battery cable.

## ANTENNA CONNECTION

1. Hook up speedometer power requirements as shown.

2. Thread on GPS receiver antenna into back of speedometer. (Make sure it is threaded on all the way for a good connection.)

3. For best performance, mount GPS antenna with as much view of sky as possible (preferebly on the roof of the vehicle). The GPS antenna is waterproof and magnetic. If the car’s roof is not accessible then mount the antenna on top of the vehicle’s dash with as much exposure as possible to the sky through the window. (Antenna is able to receive signal through some thin material i.e. wood, glass, fiberglass, and plastic. All types of metal will block the signal.)

## GPS QUICK START

GPS location is saved internally for up to a 4 hour period. After 4 hours it will take 30-40 seconds to acquire signal again.

## MENU FEATURES

Select different menu items by pressing the button once the GPS has acquired.

### Odometer and Trip




Odometer (shows up to 999,999)

Trip Odometer (shows up to 99,999.9)

Press and hold button to reset trip.

### Clock




Clock Feature. Time is acquired from GPS satellites. User only needs to adjust the hour setting for their time zone.

PRESS AND HOLD button to set clock hours. (Color will invert)
Toggle through A.M./P.M. hours until correct time is reached.
Release button for several seconds and time is stored. (Color will return to normal)

### Elevation




Elevation feature is acquired from GPS satellites and shows the current elevation from sea level in feet or meters depending on the model.

### Speed (MPH or KMH)




Speed feature shows MPH or KMH in display depending on the model.

### Direction




Shows the current direction

Note: Default direction is North(N). Correct direction is displayed only when moving.

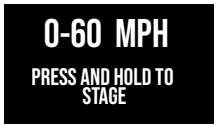
### Peak




Shows the top speed reached.

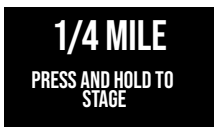
Press and hold to clear peak.

### 0-60 MPH Time



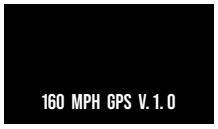

Press and hold button to stage while car is stopped.Timer will start as soon as car starts to move. Accelerate to 60+ MPH/100+ KMH. Timer will stop once 60MPH/100KMH is reached and show the time to nearest 1/100th of second on screen and distance in feet traveled.

### 1/4 Mile Time

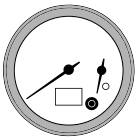



Press and hold button to stage while car is stopped.Timer will start as soon as car starts to move. Drive through 1/4 mile. Timer will stop once 1/4 mile distance is reached and show the time to nearest 1/100th of second and speed to nearest 1/10th mph.

### About Screen




Displays gauge version.



# 4”, 4-1/2” Dual GPS Fuel/Speedometer Instructions

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## FUEL LEVEL SETUP MENU

Follow the steps below for all menu items
1. PRESS AND HOLD button down while turning on gauge power to enter tachometer setup menu.
2. A quick button press will toggle LCD screen through all available menu settings below.
3. PRESS AND HOLD to select the menu item (2-3 seconds).
4. PRESS AND HOLD button to change setting.
5. RELEASE button and menu will be saved after 5 seconds.




Calibration with fuel level sensor connected to the gauge:
1. Move sensor to the empty position.
2. Press and hold the button for 3 seconds.
3. The gauge will read the ohms from the sensor.
4. Release the button and wait 5 seconds for the reading to be saved.

Calibration with fuel level sensor NOT connected to the gauge:
1. Determine the empty ohm value of your fuel level sensor.
2. Press and hold the button for 3 seconds.
3. The gauge will read the ohms from the sensor.
4. Press and hold the button to change the reading on the gauge to match the empty ohm value of your sensor.
NOTE:Releasing the button and holding it down again will change the direction of the numbers.
5. Release the button and wait 5 seconds for the reading to be saved.




Calibration with fuel level sensor connected to the gauge:
1. Move sensor to the full position.
2. Press and hold the button for 3 seconds.
3. The gauge will read the ohms from the sensor.
4. Release the button and wait 5 seconds for the reading to be saved.

Calibration with fuel level sensor NOT connected to the gauge:
1. Determine the full ohm value of your fuel level sensor.
2. Press and hold the button for 3 seconds.
3. The gauge will read the ohms from the sensor.
4. Press and hold the button to change the reading on the gauge to match the full ohm value of your sensor.
NOTE:Releasing the button and holding it down again will change the direction of the numbers.
5. Release the button and wait 5 seconds for the reading to be saved.




Set Low Fuel Warning

Note: PRESS AND HOLD the button to move the pointer to the desired warning point. To change the sweeping direction of the pointer release the button and press and hold the button again. To save the setting release the button and it will be saved after 5 seconds.




Set Day LED Brightness

Note: PRESS and RELEASE button to toggle through the brightness settings. There are 5 brightness settings including off.




Set Night LED Brightness

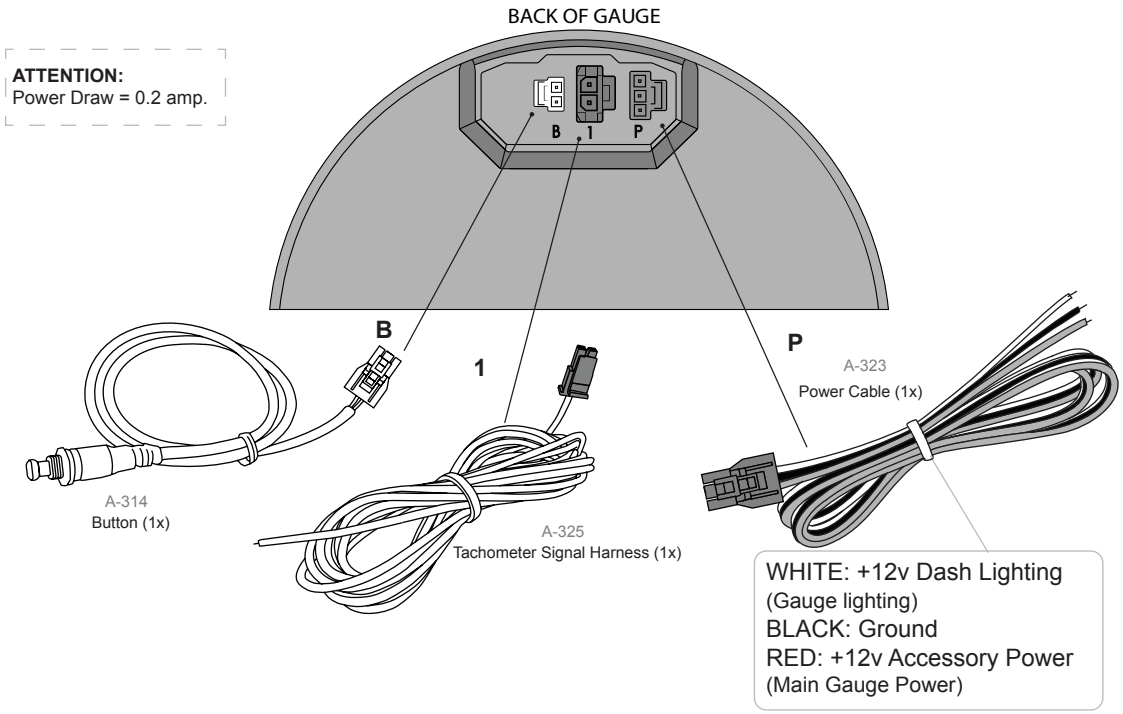
Note: PRESS and RELEASE button to toggle through the brightness settings. There are 5 brightness settings including off.

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**LIFETIME WARRANTY**
We take pride in the products we make and offer a Lifetime Warranty on gauge electronics and a 5-year warranty on hardware for every gauge, tachometer and shift light purchased since Jan 1, 2006. Every SPEEDHUT product is built for a lifetime of service, and we warrant to the person who originally purchased the product that all SPEEDHUT products will be free from defects in workmanship and materials for their applicable warranty period. If a defect occurs during the warranty period as the result of the product’s intended use, we will repair or replace the defective product or part, to our discretion. The warranty does not cover defects caused by third-party modifications, repairs or replacement parts. Any holes, scratches, normal wear and tear, and the natural breakdown of colors and materials over extended time and use are not warranted.

# 4” & 4-1/2” Tachometer Instructions (Non Shift-Light Version)

SPEEDHUT




**ATTENTION:**
Power Draw = 0.2 amp.

## INSTALLATION

1. DISCONNECT your vehicle’s negative (-) battery cable.
2. MOUNT your gauge to the panel using the spin lock ring.
3. CONNECT the gauge wiring.
4. RECONNECT your vehicle’s negative (-) battery cable.

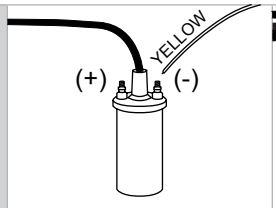
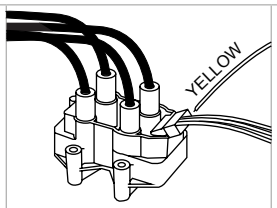
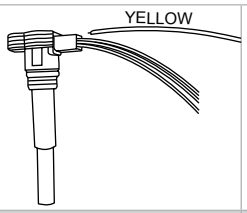
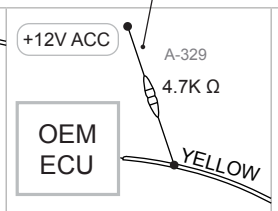
### TACHOMETER SIGNAL WIRE

The vehicle’s type of ignition system determines where to connect the tachometer signal wire and how to calculate the correct Pulses Per Revolution (PPR).

Identify your vehicle’s ignition system by comparing the total # of spark plugs to the total # of engine coils, or by checking the ECU.

Use the table below to determine ignition type and connection location. Use the table on page 2 to determine correct PPR.

**WARNING**: **HIGH VOLTAGE can be present on ignition coil wires.** Ensure engine is OFF before connecting yellow tachometer signal wire to a coil.

| Example Image |  |  |  |  |  |
|---|---|---|---|---|---|
| **Ignition System** | **Distributor-Based (Single-Coil)** | **Distributorless (Coil Packs)** | **Coil - On - Plug (COP)** | **OEM ECU Connection** | **Aftermarket ECU Connection** |
| **Description** | All spark plugs are connected to the same 1 coil. | There are twice as many spark plugs as there are engine coils. | There is an equal number of engine coils and spark plugs. | The vehicle’s ECU has a tachometer output wire. | The vehicle’s ECU has a tachometer output wire. |
| **Connect Signal Wire (Yellow)** | Connect signal wire to negative (-) coil terminal. | Connect signal wire to the trigger wire of any 1 coil. | Connect signal wire to the trigger wire of any 1 coil. | Connect signal wire to ECU tachometer output. Requires a resistor. | Connect signal wire to ECU tachometer output. Does NOT require a resistor. |


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# 4” & 4-1/2” Tachometer Instructions (Non Shift-Light Version)

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## DETERMINE PULSES PER REVOLUTION (PPR)- RECOMMENDED STARTING POINT

| | Distributor-Based (Single-Coil) | Wasted-Spark (Distributorless) (Coil Packs) | Coil - On - Plug (COP) | OEM ECU Connection | Aftermarket ECU Connection |
|---|---|---|---|---|---|
| **12 Cyl (4-Stroke)** | 6 PPR | 1 PPR | 0.5 PPR | 2 PPR | 6 PPR |
| **10 Cyl (4-Stroke)** | 5 PPR | 1 PPR | 0.5 PPR | 2 PPR | 5 PPR |
| **8 Cyl (4-Stroke)** | 4 PPR | 1 PPR | 0.5 PPR | 2 PPR | 4 PPR |
| **6 Cyl (4-Stroke)** | 3 PPR | 1 PPR | 0.5 PPR | 2 PPR | 3 PPR |
| **4 Cyl (4-Stroke)** | 2 PPR | 1 PPR | 0.5 PPR | 2 PPR | 2 PPR |
| **2 Cyl (4-Stroke)** | 1 PPR | 1 PPR | 0.5 PPR | 2 PPR | 1 PPR |
| **1 Cyl (4-Stroke)** | 0.5 PPR | 1 PPR | 0.5 PPR | 2 PPR | 0.5 PPR |
| **3 Cyl (2-Stroke)** | 3 PPR | 3 or 6 PPR | 1 PPR | 3 or 6 PPR | 3 or 6 PPR |
| **2 Cyl (2-Stroke)** | 2 PPR | 2 PPR | 1 PPR | 2 PPR | 2 PPR |
| **1 Cyl (2-Stroke)** | 1 PPR | 2 PPR | 1 PPR | 1 PPR | 1 PPR |

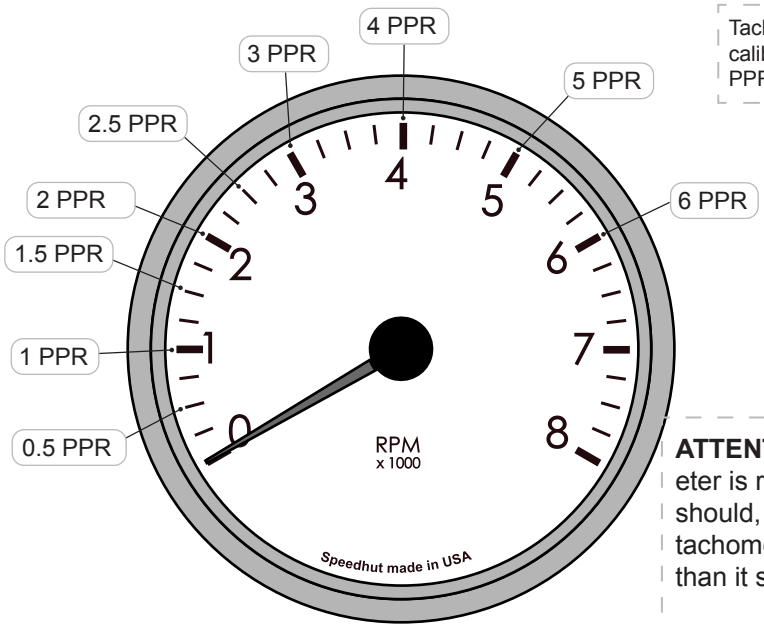
## SETTING PULSES PER REVOLUTION (PPR)

**ATTENTION:** PPR calibration **REQUIRED**. Tachometer **WILL NOT** operate correctly until PPR has been set.

**1** PRESS and hold the menu button while gauge is powered OFF.

**2** POWER gauge ON and release the button. Pointer will move to the factory default position (4 Pulses per Revolution) at 4000 RPM.

**3** PRESS the button to toggle between PPR settings (Figure 1) until pointer reaches desired PPR. After 5 seconds, the gauge will save the setting, the pointer will return to 0, and the tachometer will resume normal operation.




Tachometer PPR can be calibrated from 0.5 PPR - 6 PPR.

**ATTENTION:** If the tachometer is reading higher than it should, raise the PPR. If the tachometer is reading lower than it should, lower the PPR.

## PEAK RECALL

**1** POWER gauge ON.

**2** PRESS AND HOLD the button. Pointer will travel to high peak until button is released.

**3** To RETAIN peak reading, release button and wait 2 sec. Gauge will return to normal and retain reading.

**4** To CLEAR peak reading, release button and then PRESS AND HOLD for 2 sec. Pointer will travel to zero to indicate peak has been cleared.

## TROUBLESHOOTING

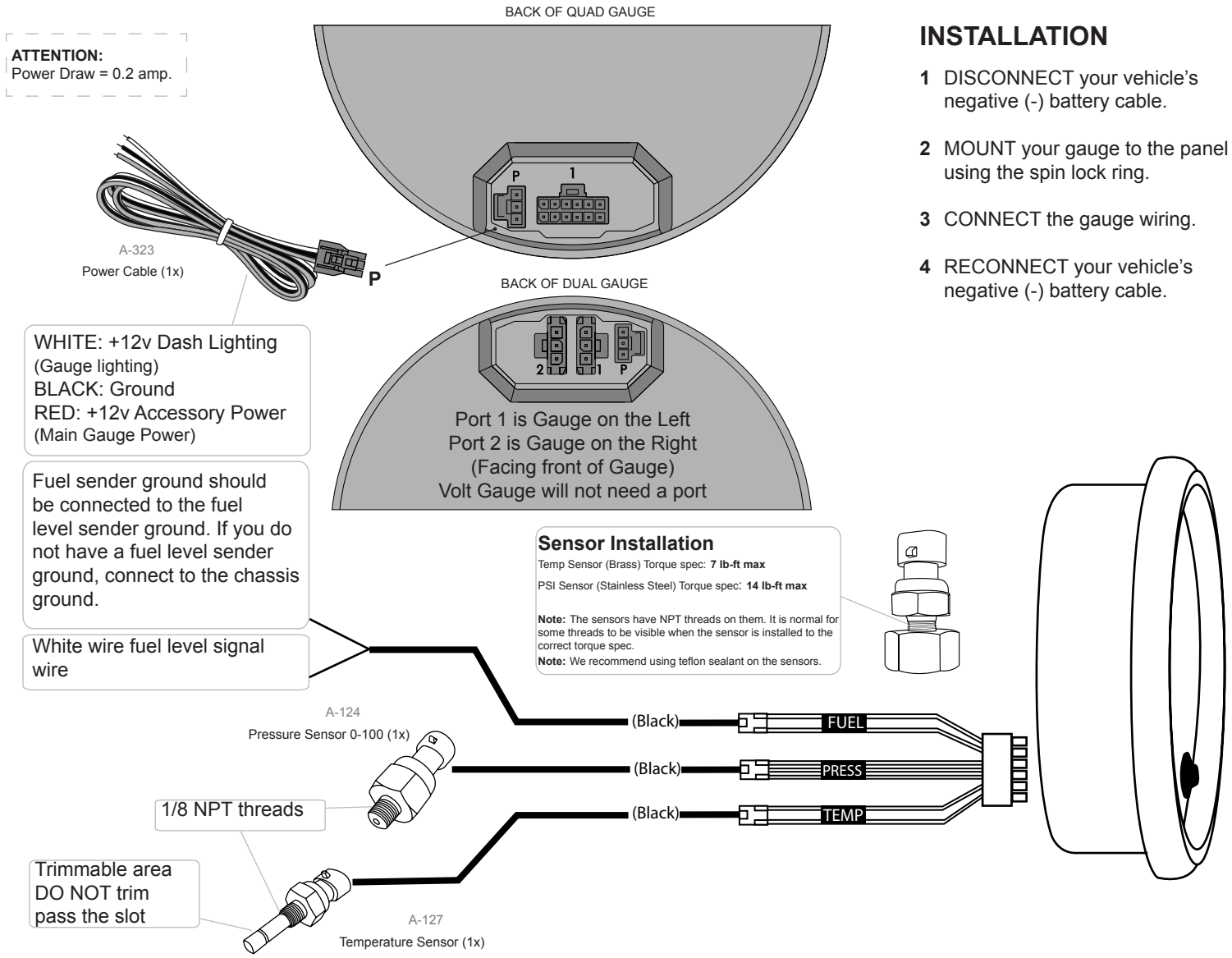
If the tachometer pointer is not moving, check that you are connected to the correct coil wire and that the gauge is getting power. If connecting to an OEM ECU, you may need a pull up resistor as shown on page 1.

If the tachometer pointer is not stable and bounces around, this may indicate that the tach is picking up electrical noise. Isolate the wire and move it away from any high-voltage sources like spark plugs and relay switches.

**ATTENTION:** If the tachometer signal wire is connected to the wrong coil wire, the tachometer will NOT function. **This will NOT damage the tachometer or the vehicle’s ignition system.**

# 2-5/8”, 3-3/8”, 4”, 4-1/2” Quad/Dual Instructions

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## INSTALLATION

1. DISCONNECT your vehicle’s negative (-) battery cable.
2. MOUNT your gauge to the panel using the spin lock ring.
3. CONNECT the gauge wiring.
4. RECONNECT your vehicle’s negative (-) battery cable.

## Setting the warning light option.

Setting warning LED for both low and high.

LED can be set to turn on for both a low and high condition for temperature, pressure gauges, and voltage gauges. Fuel level warning light is ONLY for the low fuel condition.
To Reset LED set point at any time follow this procedure again.

1. To enter warning point mode, PRESS and HOLD the button with gauge off. While holding the button, power on the gauge. When one warning light comes on, release the button. You will see each warning LED light up for 2 seconds. Pressing and releasing the button on the gauge that is lit will enter the set point for that gauge.

2. Pointer will slowly scan clockwise from low condition on dial. PRESS the button at desired low warning set point. LED will blink to indicate low warning has been set. **Note: Pressing the button at the lowest point will turn off the low LED warning so it will not light up.**

3. Pointer will now travel to 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 the button at max high position will turn off the high LED warning so it will 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.

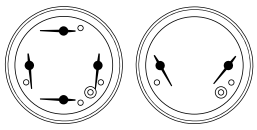
4. Repeat procedure for next gauge.

5. Turn gauge power off and back on to exit menu.


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# 2-5/8”, 3-3/8”, 4”, 4-1/2” Quad/Dual Instructions

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## Setting LED brightness both day and night

At any time while gauge is powered on, press and release the button to show current LEDs brightness. If the button is not pressed for 2 seconds, the setting will be saved. LEDs will blink to indicate setting has been saved. To change LEDs brightness press and release the button to advance to next brightness level. LEDs brightness will loop through 5 possible brightness settings including off as you press and release the button. At the desired brightness level, wait 2 seconds to save the setting. LEDs 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

Press and hold the gauge button, the pointers will move between low and high peak on all gauges (except fuel level). Gauge will continue toggling between low and high peaks as long as button is pressed.
Note: Low peak becomes active once the gauge needle travels past 1/8 of the scale. 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 the button, and allow the gauge to return to normal.

**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 the pointers will travel to zero to indicate peak has been cleared

## CALIBRATING FUEL LEVEL
Preset or Manual

### Fuel level gauge calibration

**1** DETERMINE your vehicle’s ohm range.

**2** If your ohm range is listed on the chart (figure 1), proceed to preset calibration.

**3** If available presets do not fit your application, proceed to manual calibration.

Scan Me

**How To Test Your Fuel Level Sensor.**

https://bit.ly/32igYAe

| Empty | Full | Vehicle Application |
|---|---|---|
| 240 ohms | 33 ohms | Speedhut factory default. Use with Speedhut A-300 sensor. |
| 70 ohms | 10 ohms | Most pre-’87 Fords & most Chrysler |
| 40 ohms | 250 ohms | Most GM ‘98-present |
| 0 ohms | 90 ohms | Most GM ‘65-98 |
| 16 ohms | 158 ohms | Most Fords ‘87-present |

Figure 1. Preset ohm Ranges

**ATTENTION:** Calibration **REQUIRED**. Fuel level gauge **WILL NOT** operate correctly until calibrated to vehicle’s fuel level sensor.

**ATTENTION:** Only **ONE TYPE** of calibration required. If calibrating using a preset, manual calibration is **NOT** needed. If manually calibrating, preset calibration is **NOT** needed.

### OPTION 1: PRESET CALIBRATION

**1** POWER gauge ON.

**2** PRESS and HOLD the button 12 seconds. Pointer will move to 1/8 tank.

**3** PRESS the button to toggle through preset options until pointer is at desired ohm range (figure 2).

**4** PRESS AND HOLD the button for 2 sec to save preset. Pointer will point at ‘E’ and then begin displaying current fuel level.

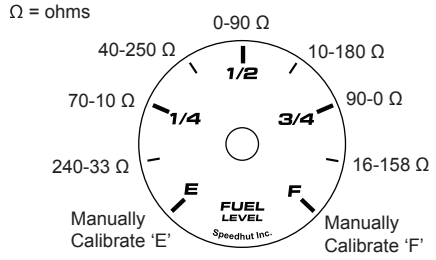



Figure 2. Calibration Menu Options

### OPTION 2: MANUAL CALIBRATION

**1** PREP for Empty calibration.

**EMPTY CALIBRATION PREP:** 1) Fuel level sensor MUST be connected to gauge. 2) If fuel sensor is installed in your fuel tank, the tank must be empty OR with desired gallons of reserve fuel to calibrate empty condition. 2) If fuel sensor is NOT installed in your fuel tank, the fuel sensor must be in “empty” position to calibrate empty condition.

**2** POWER gauge ON.

**3** PRESS and HOLD the button 12 seconds. Pointer will move to 1/8 tank.

**4** PRESS the button to toggle through preset options until pointer points at ‘E’ (figure 2).

**5** PRESS and HOLD the button for 2 sec to calibrate Empty.

**6** Gauge will exit calibration menu and it will display current fuel level.

**7** PREP for Full calibration.

**FULL CALIBRATION PREP:** 1) If fuel sensor is installed in your fuel tank, the tank must be full to calibrate full condition. 2) If fuel sensor is NOT installed in your fuel tank, the fuel sensor must be in “full” position to calibrate full condition.

**8** POWER gauge ON.

**9** PRESS and HOLD the button 12 seconds. Pointer will move to 1/8 tank.

**10** PRESS button to toggle through preset options until pointer points at ‘F’ (figure 2).

**11** PRESS AND HOLD button for 2 sec to calibrate Full.

**12** Gauge will exit calibration menu and display current fuel level.