

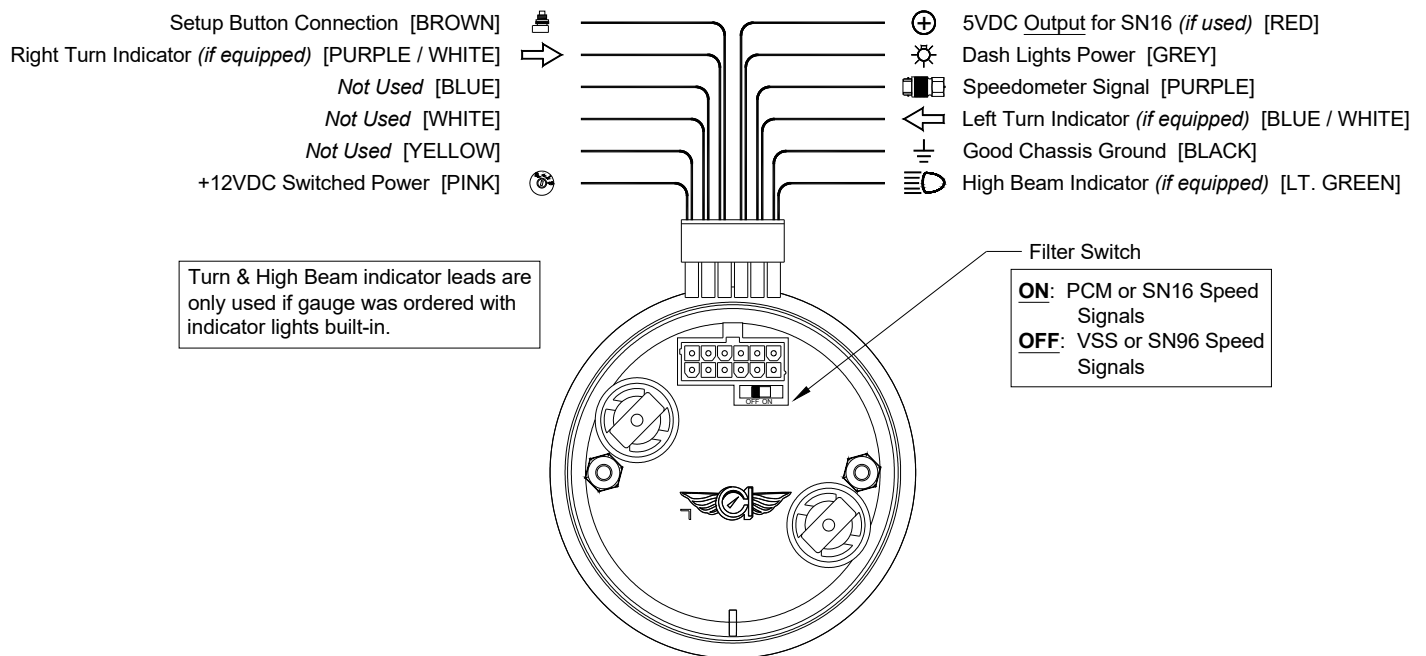
ZST Speedometer

Installation Manual

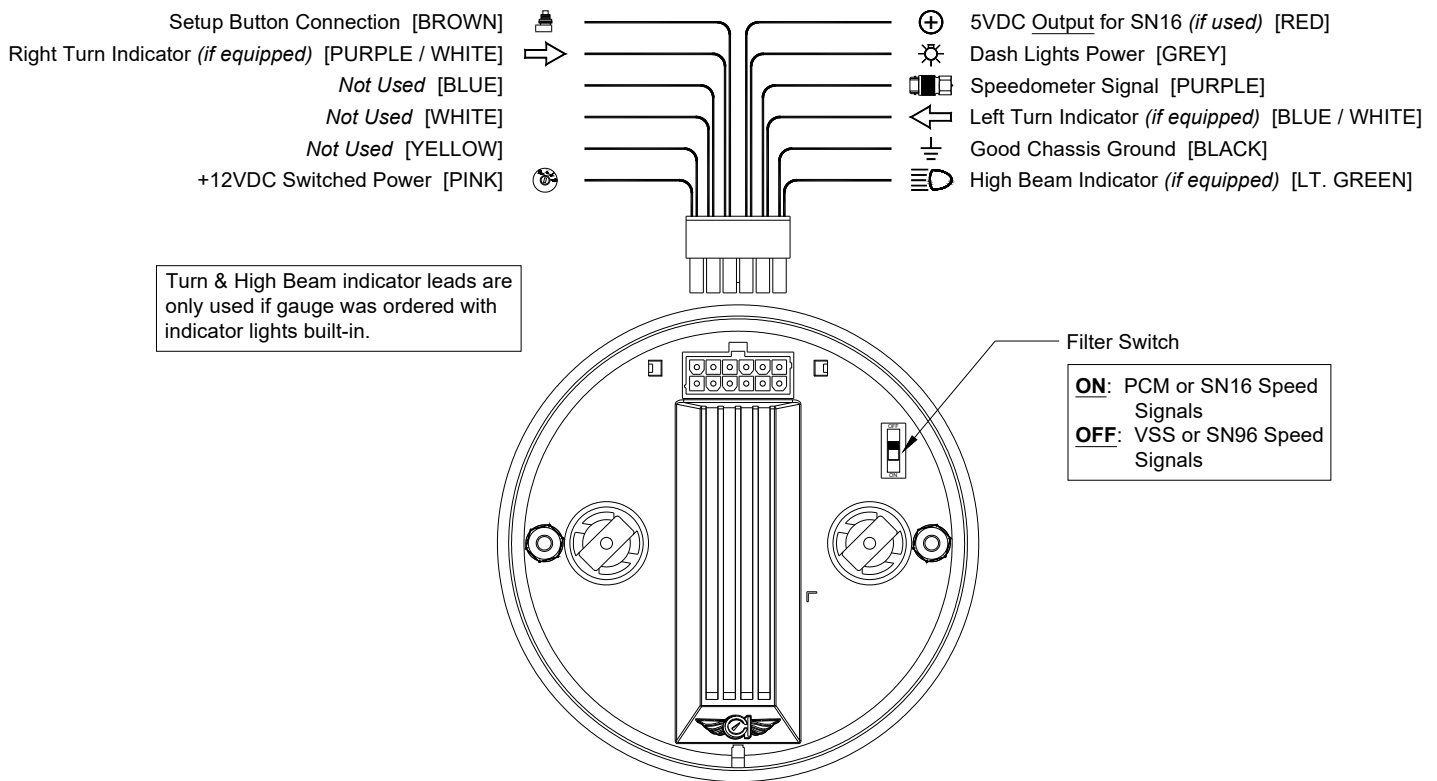
Wiring

- 1) Always disconnect the ground lead from the vehicle battery before wiring any gauge.
- 2) Connect a good chassis ground to the **Black** wire of the gauge harness.
- 3) Connect switched +12VDC power to the **Pink** wire of the gauge harness.
- 4) Connect a speed signal to the **Purple** wire of the gauge harness:
 - a. White wire from a pulse signal generator [SN16]
 - i. Connect the **Red** wire of the SN16 to the **Red** wire of the gauge harness.
 - ii. Connect the **Black** wire of the SN16 to a good chassis ground.
 - [OR]
 - b. One wire (either) of an electronic transmission 2-wire vehicle speed sensor (VSS).
 - i. Connect the other wire of the VSS to the same point as the **Black** wire of the gauge harness.
 - [OR]
 - c. Speedometer signal wire of the vehicle computer (PCM).
 - i. Set the filter switch on the back of the speedometer to ON.
- 5) Connect dash light power to the **Grey** wire of the gauge harness.
- 6) Connect one of the setup button's wires to the **Brown** wire of the gauge harness.
 - a. Connect the other setup button wire to a good ground.
- 7) Optional connections: *(if ordered with integrated signal lights)*
 - a. Connect high beam indicator power to the **Green** wire of the gauge harness.
 - b. Connect right turn indicator power to the **Purple / White** wire of the gauge harness.
 - c. Connect left turn indicator power to the **Blue / White** wire of the gauge harness.
- 8) The **Blue, White** and **Yellow** wires of the gauge harness are NOT USED.

3 3/8" Speedometer



4 5/8" Speedometer



Speedometer Calibration

Note: Before performing speedometer calibration, insure you have a good speed signal. Take a test drive and make sure the speedometer shows a speed (even though it may not be correct)! If the speedometer doesn't show a speed, troubleshoot the speed signal before attempting to calibrate the speedometer.

Only one calibration method is necessary to perform to calibrate the speedometer. Pick the method that works best for you.

- The "Instant" calibration method requires a GPS reference speed signal (or pace car). You will need to drive at 30mph. This method is convenient if the speedometer is more than 10mph off at a known 60mph.
- The "Real-time" calibration method requires a GPS reference speed signal (or pace car). This method allows you to drive at any known speed and make changes to the speedometer reading as you go. This method is best used if the speedometer calibration is less than 10mph off at a known 60mph.
- The "Measured Mile" calibration method requires you to drive a known mile. This is convenient when a GPS is not available to use as a reference and also if the calibration is off more than 10mph at a known 60mph. The speed at which you drive the known mile can be varied, a GPS reference or pace car is not necessary.

Speedometer Calibration Modes

Speedometer Indication	Calibration Mode
50 MPH	Speedometer "Instant" Calibration
60 MPH	Speedometer "Real-time" Calibration
70 MPH	Speedometer "Measured Mile" Calibration
80 MPH	Factory Defaults Reset Mode
90 MPH	Exit calibration Mode

Entering Calibration Mode:

- 1) Start with power to the gauge OFF.
 - 2) Press and HOLD the calibration pushbutton.
 - 3) Start engine.
 - 4) Release the pushbutton after the engine is started. The speedometer will indicate 50MPH.
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Speedometer "Instant" Calibration:

(steps 1-4 may be skipped if the gauge is already in calibration mode)

- 1) Start with power to the gauge OFF.
- 2) Press and HOLD the calibration pushbutton.
- 3) Start engine.
- 4) Release the pushbutton after the engine is started. The speedometer will indicate 50MPH.
- 5) With the speedometer indicating 50MPH, press and hold the calibration pushbutton until the speedometer changes to 0 MPH. *If the speedometer pointer is not at 50MPH, tap the button to cycle the pointer through the calibration modes until it comes back to 50MPH.*
- 6) Drive the vehicle at exactly 30MPH using a GPS or pace car as a reference. Press and hold the pushbutton while traveling 30MPH for approximately 4 seconds until the speedometer moves up to 30MPH. The speedometer will now track your speed. Verify that the speedometer is now reading accurately.
- 7) If you are satisfied with the speedometer calibration, tap the pushbutton to get back to the calibration mode options. If you would like to re-do the calibration, press and hold the pushbutton to restart the Instant Calibration process.
- 8) When you are finished, tap the pushbutton (as many times as needed) to move the speedometer pointer through the calibration modes to get to the 90MPH (Exit Calibration Mode) option. With the pointer at 90MPH, press and hold the button for about 6 seconds until the speedometer moves down and starts indicating your actual speed. The speedometer calibration is now saved.

Speedometer “Real-Time” Calibration:

(steps 1-4 may be skipped if the gauge is already in calibration mode)

- 1) Start with power to the gauge OFF.
- 2) Press and HOLD the calibration pushbutton.
- 3) Start engine.
- 4) Release the pushbutton after the engine is started. The speedometer will indicate 50MPH.
- 5) Tap the calibration pushbutton once to move the speedometer pointer up to 60MPH. *If you missed stopping the pointer at 60MPH, continue to tap the button to cycle the pointer through the calibration modes until it comes back to 60MPH.*
- 6) With the speedometer indicating 60MPH, press and hold the calibration pushbutton until the speedometer changes to 0 MPH.
- 7) Begin driving a known speed using a GPS or pace vehicle as a reference.
- 8) Press and hold the pushbutton to slowly change the indicated speed. The first time the button is pressed will increase the speedometer reading. The next time the button is pressed will decrease the speedometer reading. The speedometer will alternate between increasing and decreasing speed each time the button is pressed and held.
- 9) Continue to press and hold the pushbutton until the speedometer is indicating the correct speed.
- 10) Once the correct speed is dialed in on the speedometer, wait 8 seconds without pressing the pushbutton to have the current calibration saved. *If you still need to adjust the speed after this 8 second timeout, press and hold the button to re-enter the “Real Time” calibration mode again.*
- 11) If you are satisfied with the speedometer calibration, tap the pushbutton (as many times as needed) to move the speedometer pointer through the calibration modes to get to the 90MPH (Exit Calibration Mode) option. With the pointer at 90MPH, press and hold the button for about 6 seconds until the speedometer moves down and starts indicating your actual speed. The speedometer calibration is now saved.

Speedometer “Measured Mile” Calibration:

(steps 1-4 may be skipped if the gauge is already in calibration mode)

- 1) Start with power to the gauge OFF.
- 2) Press and HOLD the calibration pushbutton.
- 3) Start engine.
- 4) Release the pushbutton after the engine is started. The speedometer will indicate 50MPH.
- 5) Tap the calibration pushbutton twice to move the speedometer pointer up to 70MPH. *If you missed stopping the pointer at 70MPH, continue to tap the button to cycle the pointer through the calibration modes until it comes back to 70MPH.*
- 6) With the speedometer indicating 70MPH, press and hold the calibration pushbutton until the speedometer changes to 30 MPH.
- 7) Begin driving a known measured mile. *The speed at which you drive the mile does not matter.*
- 8) At the end of the mile, press and hold the pushbutton until the speedometer moves from 30MPH up to 90MPH. *To get a more accurate calibration, stop at the end of the mile.*
- 9) If you are satisfied with the speedometer calibration, press and hold the button (with the pointer indicating 90MPH) for about 6 seconds until the speedometer drops down to 0MPH or starts indicating your speed. The speedometer calibration is now saved.

Reset Gauge Calibration to Factory Defaults:

(steps 1-4 may be skipped if the gauge is already in calibration mode)

- 1) Start with power to the gauge OFF.
- 2) Press and HOLD the calibration pushbutton.
- 3) Start engine *(or just turn the key ON)*.
- 4) Release the pushbutton after the engine is started *(or the key has been turned ON)*. The speedometer will indicate 50MPH.
- 5) Tap the calibration pushbutton three times to move the speedometer pointer up to 80MPH. *If you missed stopping the pointer at 80MPH, continue to tap the button to cycle the pointer through the calibration modes until it comes back to 80MPH.*
- 6) With the speedometer indicating 80MPH, press and hold the calibration pushbutton until the speedometer changes to 90 MPH. The factory speedometer calibration is now set.
- 7) With the speedometer pointer at 90MPH, press and hold the button for about 6 seconds until the speedometer pointer moves down to zero.