Thank you for purchasing this instrument from Intellitronix. We value our customers!

INSTALLATION GUIDE

Digital led Speedo/Tach Combo
Part Number: M9250

After completing all wiring reconnect battery and power up the unit. Test all gauges before reinstalling dash, bezels, and hardware to prevent having to remove it all for any future troubleshooting.

Always disconnect the battery before attempting any electrical work on your vehicle.

INCLUDES

- One (1) Universal Speedometer Sending Unit **(S9013)**
  - ❖ 7/8" NPT

OPERATION (3 Display Modes)

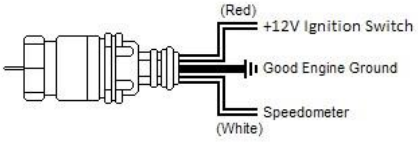
# Of Taps		Mode
One	➢	Speedo /Tach (Tach rpm in the odometer along with sweep function)
Two	➢	Full speedometer mode with trip distance,
Three	➢	Full speedometer mode with odometer reading.

INSTALLLATION

Black, Wire to the vehicle engine block ground. The engine block should have heavy ground cables connected to the battery, frame, and firewall.
Red, Wire to switched +12V power from the fuse panel or vehicle wiring harness. (Recommended to use at minimum a 3-amp inline fuse). This wire should have power when key-on and starting ignition.
Violet, Wire to the +12V side of the parking lights. This will dim the dash lighting 50% when your headlights turn on.

White Wire:
Obtain your VSS signal using one of the 3 setups below that best fits your vehicle's configuration.

1. INTELLITRONIX SENDER, Disconnect the mechanical speedometer cable from the transmission and insert the new electronic sensor into the transmission. Follow this wiring for the Intellitronix speedometer sending unit:
   - ➢ **White**, Wire white wire on sender to **White** wire on dash panel.
   - ➢ **Red**, Wire red wire on sender to **Red/White** wire on dash panel.
   - ➢ **Black,** Wire black wire on sender to **Black/White** wire on the dash panel.



If you are not using the INTELLITRONIX sender you will not use the Red/White and and Black/White wire on the dash unit.

1. Computer-based engines using a PCM/ECM need to locate the correct pin for VSS out and run to the white wire on the INTELLITRONIX unit. (Consult vehicles factory manual for correct pin #)
2. Most vehicles built after 1984 have an electronic transmission sender. The electronic VSS will usually have two wires attached to it. One connects to the Signal wire on dash (we prefer this to be high output). The other wire (low output) ground at the engine block. To find the high and low output wire color or pin location will need to be looked up by Vehicle VIN or Model and year and consult your factory Pinout Chart.

Not every two wire VSS will work in this situation. If this is the case, there are two attachments you can purchase to resolve this issue.

- ❖ Speed Interface Signal Box (Intellitronix does not carry this part)
- ❖ GPS Speed Sender (part # S9020)

When using an LS engine swap, you will need to pick up the Speedometer signal wire from

the PCM Pin 50 on the red connector. (This pin may Differ. Refer to your vehicle's pinout chart for accuracy).

❖ **Programming and Calibration**

1. Hold in programming button until you see "HI-SP" and release (This can only be done when showing the odometer display).
2. The first three items to display are the last recorded performance information. It resets every time you cycle power on the dash panel.
   - **"HI-SP",** Displays highest speed reached.
   - **"0-60"**, Displays time recorded to reach 60 MPH.
   - **"1/4",** Displays time recorded to reach a quarter mile.
   - **"SSP"** Allows you to change the max speed limit for the sweep. Can be set in increments of 5, between 30 and 200 miles per hour. (This function not available on Speedo/Tach combination units).
   - **"ODO",** Allows you to enter vehicles current odometer reading. When "ODO" Displays tap the program button to enter the value of the farthest left digit in your current odometer reading. Then hold the program button to advance to the next digit. You enter them in order from left to right. When finished on the last digit wait for it to go past "CAL" (This will be completed in a separate step). and back to MPH screen. The data is now recorded.
   - **"CYLS",** Allows you to change your number of cylinders to 1, 2, 4, 6, 8, 10, 12
   - **"CAL",** Allows you to calibrate your exact pulses per mile (para. 3 below).

   For Example: To enter the mileage reading 23456. Press 2 times and hold, press 3 times and hold, press 4 times and hold, press 5 times and hold, press 6 times and hold.

Read the next step completely to understand it before you begin.

3. **"CAL",** Default Setting is 8,000 ppm (pulses per mile). Follow steps below to calibrate to the exact PPM for your vehicle.
   1. Choose a safe starting point to drive a designated mile or kilometer. This can be done using a mile marker or GPS on a phone or electronic device.
   2. Enter programming mode as explained above and wait for the screen to reach **"CAL"** mode.
   3. Tap the programming button again when the default 8,000 ppm shows. You will now see "0."
   4. Start driving until you reach the one (1) mile point and then tap the programming button again. You will now see **"CAP".**
   5. Wait until it returns to MPH screen (data is now recorded).

If the Speedometer did not receive any data during this process the display will show "Err" (error). Recheck all connections and ensure the sender, or computer is putting out the correct signal. The speedometer operates on at a minimum 3 VDC square wave.

TACHOMETER (default setting is 8-cylinder)

If doing a LS engine swap, pick up the tach signal wire from the ECM/ECU and then set the tach switch to 4-cylinders. You may also need to order the INTELLITRONIX LS Series 1, 2 and 3 Engine Swap Adapter Kit (Part # 8014LS).

The tachometer requires at a minimum a 9VDC square wave signal.

Green Wire:

- **Ignition Coil**, Run wire to the negative (-) side of the coil or the wire that goes to the points or electronic ignition module.
- **GM HEI ignition**, Run wire to the terminal marked 'TACH' or, on some systems, a single white wire with a spade terminal.
- **After-Market Ignition and CDI Box** – Most systems offer a 12 VDC Square Wave TACH output terminal. Refer to those system instructions for setup.
- **Magneto** system, connect the tach signal wire to the negative side of the coil. Do not connect the tach terminal to the positive (+ *or* high voltage) side of the ignition coil. Many tachometers, shift lights or RPM-activated switches will not read directly from a Magneto, so your installation may need a Magneto Signal Converter to function properly.

- **Diesel,** The tachometer will not work correctly for a diesel engine without the use of a diesel tachometer adapter (Intellitronix does not sell this part).

A vehicle's engine can generate a large amount of electromagnetic interference. To ensure that the ignition system does not interfere with dashboard functions check to ensure the following conditions are met.

- Do not run tachometer wire alongside other sender or input wires.
- Do not use solid core spark plug wires with this dashboard system.
- Do not run wires close to alternator.
- Check for cracked spark plug wires and boots.
- Use of Dielectric grease on connectors and in distributor is recommended.
- Use of grounded tin-plated copper sleeving can help to remove EMI.
- Use of ferrite tape and beads can help to remove EMI.