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## **INSTALLATION GUIDE**

### **Digital Performance Speedo/Tach Combo**

**Part Number: M9250**

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

***This speedometer requires a pulse generating electronic speed sending unit or a transmission with an electronic output. If a cable drives the current speedometer in your vehicle, please order our electronic sending unit (S9013) for GM and universal applications or (S9024) for Ford transmissions.***

## **WIRING INSTRUCTIONS**

***Note: Automotive circuit connectors are the preferred method of connecting wires. However, you may also solder if you wish.***

In order to isolate the signal wire from electrical noise, we recommend that you use a shielded cable to connect the speedometer to the sending unit. Be sure to run the cable as far away as possible from the ignition system and any power wires to electric fuel pumps, motors, blowers, etc., particularly spark plug wires. For best results, we also recommend the use of resistor-type spark plugs and spark plug wires that are in good condition.

**Power – Red** Connect to a switched +12 volt source (such as the ignition switch).

**Ground – Black** Connect directly to the engine block, preferably the same ground source as the sending unit. Make sure there is no grease or corrosion as this will cause erratic readings. .

**Dimmer – Purple** Connect to the headlight switch to dim the LEDs by 50% when the headlights are on. **Do not** connect to the headlight rheostat control wire or the dimming feature will not work.

**Speedometer – White** Connect to the corresponding White wire on the sending unit or the output of your transmission. (Connect the other speedometer sending unit wire to the ground, preferably to the same exact location as the gauge ground.)

**Tachometer – Green** Connect the wire from the tachometer to the negative terminal of the coil or a direct tach output lead from your distributor or electronic control module. If you are using an aftermarket capacitive discharge ignition system, such as an MSD, you must use the designated 'tach output' connection on the electronic box. Do not make any connections directly to the coil with this type of system.

This tachometer is initially calibrated for use with 8 cylinder engines. If you are using it with a 4 or 6 cylinder engine, you must recalibrate the tach for your specific application by pushing the selector button in accordance with the programming modes shown below.

## Modes

By pushing the selector button in accordance with the chart below you can set the S/T combo for various modes and programming functions.

Push	Mode
Once	Tach /Speed Combo
Twice	Speed and Trip Odometer
Three	Speed and Odometer

After installing your speedometer according to the wiring instructions, with the ignition on, the speedometer will be in Speedometer only mode. The speedometer leaves our factory with an industry standard pre-set calibration of 8000 pulses per mile. You may recalibrate the gauge for your specific application. To accomplish this, locate a measured mile where you can safely start and stop your vehicle. By running the vehicle over this measured distance, the speedometer will learn the number of pulses outputted by the speedometer sensor during a specific measured distance. It will then use this acquired data to calibrate itself for accurate reading.

## Instructions

This electronic speedometer/tachometer displays your speed and rpm reading. It also includes an odometer, trip meter, high speed recall, 0-60 time and  $\frac{1}{4}$  mile elapsed time (ET). It can also be calibrated with the push of a button to adjust the gauge for different tire sizes, wheel sizes and gear ratios. The odometer and trip odometer can switch back and forth by gently tapping the push button. While in Trip mode, if you press and 'HOLD' the button, the trip meter will reset to zero. In odometer mode, if you press and 'HOLD' the button, the performance data will then be displayed, in addition to 'CAL' mode which will allow you to again 'TAP' to reprogram the pulses per mile stored info.

When in speedometer only mode, press in and hold selector switch until it starts to run through the various functions. The chart below shows what each display mode is and how to utilize that function.

Display	Function
Hi Spd	Displays Highest speed reached
0-60	Displays time to go from 0 to 60 MPH
$\frac{1}{4}$	Displays Time over $\frac{1}{4}$ mile distance
8 Cylinder	Sets cylinder selection
Odo	Sets odometer display
Cal	Calibrates Speedometer

While 'CAL' is being displayed, press the pushbutton briefly one time. This will put the speedometer in Program Mode. It is very important that you drive to the end of the measured mile and tap the button again. **WARNING:** If while in 'CAL' mode you do not move at all and press the button again, the microprocessor will NOT have received any data whatsoever and the unit will need to be sent back to the factory for reprogramming. At a minimum, drive some distance and you can always go back and start again if need be.

If you miss stopping the display at 'CAL', simply repeat the steps. With 'CAL' displayed, the speedometer is now waiting to record the pulse count data accumulated over the measured mile. When you are ready to begin driving, press the pushbutton once. The odometer will display the incoming pulse count. Drive the vehicle through the measured mile (speed is not important). As

you move, the odometer will begin showing the speedometer pulses as they are being counted. At the end of the mile, stop and press the pushbutton again. The odometer will now display the number of speedometer pulses that were registered over the distance.

## **Trip Distance**

A single *tap* of the recall button will activate the trip meter in the odometer display. A decimal point will appear which will indicate that you are in trip meter mode. *Holding* the recall button will clear out the trip distance. To return to the default odometer display, *tap* the recall button again. The decimal point will disappear, indicating that you are back in the default odometer display.

## **Setting the Odometer**

While scrolling through 'CAL' mode you will see 'ODO' appear. This will allow you to enter the vehicle's actual mileage. Press the trip button again at this point and you will enter the odometer set up mode. Press quickly to change the number of the digit on the right. Press and hold to advance to the next digit. Do this for all 5 digits. **For Example:** To enter the mileage reading 23456 into the odometer, at the 'ODO' prompt, tap the small black button (quickly) two times, until the number **2** is displayed. Then press and hold the button until the numbers **2+0** are displayed. Tap the button 3 times until **23** is displayed. Press and hold the button until **230** is displayed, and continue in this manner until **23456** is displayed. The speedometer will advance to the home screen, five seconds after the last number is entered.

## **Recording and Viewing Performance Data**

Follow these steps to record and recall Performance Data (high speed, ¼ mile ET, and 0-60 time):

1. Before each run, your car must be at a complete stop at the starting position. *Press and hold* the push-button as it cycles through the performance data. At the end, the odometer will reset and all performance data will be cleared. This will not affect your stored calibration value or the odometer reading.
2. Press the push-button until 'HI-SP' is displayed. The gauge will automatically cycle through the performance data.
3. Start the run, pass, session, etc., as mentioned above.
4. When finished, repeat *Step 2* to view the data gathered from the run. While stopped, you can view this data as often as you wish. However, once it finishes scrolling one time, the memory is ready to record new data and will begin recording again once the vehicle starts to move. The highest speed measured over multiple runs will be retained in memory.