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INSTALLATION GUIDE
Six Gauge Universal Analog Dash Panel
Part Number: AP10002



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

KIT COMPONENTS

- ◇ **One (1) Assembled Analog Circuit Board** (with Speedometer, Tachometer, Voltmeter, Water Temp., Fuel Level and Oil Pressure Gauges – with lens and two attached mounting brackets.
- ◇ **One (1) Temperature Sending Unit (S8013)**
** 1/8" NPT, 0-255 Deg., 1/2" NPT Bushing*
- ◇ **One (1) Pressure Sending Unit (S8434)**
** 1/8" NPT, 0-100 PSI Oil Pressure*
- ◇ **One (1) Universal Speedometer Sensor (S9013)**
** 7/8" NPT Industry Standard threads*

PANEL MOUNTING INSTRUCTIONS

Carefully remove existing gauges. You may need to alter the dashboard in your vehicle to accommodate this new Analog panel. Remove the two mounting brackets from the back of the new panel and reinstall them on the backside of your vehicle's dashboard.

WIRING INSTRUCTIONS

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

Ground - Black This is the main ground for the display system. A wire should be run from this board to the vehicle's main engine block ground. Use 18 AWG or larger wire to ensure sufficient grounding. Proper vehicle grounding is extremely important for any gauges (or electronics) to

operate correctly. The engine block should have heavy ground cables to the battery, frame, and firewall. Failure to properly ground the engine block, senders, or digital dash can cause incorrect or erratic operation.

Power - Pink Connect the power terminal to accessory +12V power from the fuse panel or vehicle wiring harness. This terminal should have power when the key is on or in accessory position. Use 18 AWG wire to ensure the system receives a sufficient power feed.

Battery Red Connect the +12 Volt terminal to constant +12V power from the battery.

Dimmer Purple Connect to the parking lights to dim the LEDs 50% when the headlights are on. However, do not connect to the headlight rheostat control wire; the dimming feature will not work properly.

Turn Signals - Grey Two 18-gauge wires, one for each signal. Connect each wire to its corresponding indicator circuit.

High-Beam - Brown Connect the brown wire on the speedometer panel to your high beam headlight.

Brake - Tan Connect to the parking brake wire from the engine.

Oil Pressure - Orange Replace the existing oil pressure sending unit with the unit included. Do not use Teflon tape or other sealer on the new sending unit's threads to avoid inaccurate ground connections as the sending units get their ground from the threads. The oil sender gets its grounding from the threading into the engine block and it is crucial it is grounded properly. Connect to the sending unit.

Water - Blue Replace the existing water temperature sending unit with the unit included. The gauge is incompatible with other sending units. Do not use Teflon tape or other sealer on the new sending unit's threads to avoid inaccurate readings. Connect the blue wire to the sending unit.



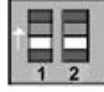

Fuel - Yellow The fuel gauge sending unit is not normally supplied because in most cases, the display system can use the existing fuel level sending unit in the tank. If your wiring harness already has a single wire routed through the vehicle for the fuel sender then it may be used. If using a wire from an external harness, make sure that the wire does not have power. Fuel senders reference their ground from the sender mounting plate. Connect the yellow wire to the factory sending unit. Be sure the toggle settings on the switch match those displayed on the panel, as illustrated.

Both switches in the **up** position for Ford/Chrysler

For GM - #1 toggle is up, # 2 toggle is down.

Both switches in the **down** position for VDO

For Universal/Stewart Warner - #1 toggle is down, # 2 toggle is up.

Fuel Selector Switch Position		
Manufacturer	Switch Position	Ohm Range (Empty to Full)
Ford/ Chrysler		73-10 OHM
GM		0-90 OHM
VDO		10-180 OHM
Universal/ Stewart Warner		240-33 OHM

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.

There are two recall buttons on this dash: one at the bottom of the speedometer, the other at the bottom of the tachometer. This tachometer is initially calibrated for use with 8 cylinder engines. If you are using it with a 4 or 6 cylinder engines, you must recalibrate it for your specific application by pushing the tach recall button in accordance with the programming modes shown below.

To set the cylinder selection: With the ignition off, hold in the right button and power the dash on. The tach will then enter a setup mode where the needle will move (between the zero and one on the face of the instrument) to indicate 400 (4 cylinder), 600 (6 cylinder) or 800 (8 Cylinder) continuously. When the needle gets to the desired setting, tap the right button once more. It is now set and will enter normal operating mode. To see the high RPM/tach setting, hold down the right button. It will reset after five seconds.

Intellitronix Digital Performance Speedometer

Speedometer – White Disconnect the mechanical speedometer cable from the transmission and thread the new electronic sensor onto the transmission. This unit comes with a 3-wire sensor. If you are using this sensor, the **white** wire is the speed signal; connect this to the speed signal wire on your gauge. The **red** and **black** wires in the cable are switched power (12VDC) and ground, respectively. Twisting the ground and signal wires around each other will provide an additional level of interference protection. The speed signal wire should not be routed alongside the tachometer, ignition, or any other high-current or high-voltage wires. For vehicles which have a vehicle speed signal from a transmission -- one wire goes to the speedometer, and the other to the ground -- or **Emission Control Module**. Tap into the **Vehicle Speed Sensor** wire (consult a vehicle service manual or wiring diagram to determine the correct wire color) and connect it to the white speed sending wire on the dash.

The recall button on the speedometer operates as follows:
Once – cycles between Trip Mode, Odometer Mode and the clock.

Clock – To set the clock push quickly push both buttons simultaneously and release . Use the buttons to scroll to the correct setting.

While in Odometer Mode:

1. Hold LEFT to enter Recall/Setting Mode
2. ¼ Mile Recall
3. 60 Second Time Recall
4. Odometer Setting
5. Calibration

CALIBRATION

Note: If using the Intellitronix GPS Sending Unit (not included), the speedometer does not need to be calibrated.

The speedometer leaves the factory with a pre-set industry standard setting of 8,000 pulses per

mile. Chances are that you may not need to recalibrate your speedometer, unless you have changed the original tire size or the rear end gear ratio.

Note: Do not attempt to recalibrate your speedometer until after it is working properly and you have determined that the speed is incorrect. The calibration procedure will NOT correct a faulty installation or improper wiring. If you attempt to recalibrate your speedometer without making sure the speedometer is receiving pulses from the sending unit, the speedometer will display 'Err' and default back to the factory settings.

To calibrate:

1. **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. There is a small recall push-button in the center of the panel used to calibrate and read all of the data stored in the speedometer. After installing your speedometer according to the wiring instructions, when the ignition is on it should immediately display the default screen of 0 MPH, if the vehicle is not moving.

NOTE: You will now need to drive your vehicle to the predetermined measured mile. During this trip, the speedometer should read something other than 0 MPH. If it does not change, return and locate the problem before continuing. Otherwise, proceed with the calibration.

2. Stop at the beginning of the measured mile with your vehicle running and in odometer mode (NOT trip mode), press and hold the push-button until the odometer displays 'HI-SP'. On its own, the gauge will then cycle through the recorded performance in the following order: '0 - 60', '1/4', 'ODO', and 'CAL'.

3. While 'CAL' is displayed, quickly tap the push-button once. This will put the speedometer in Program Mode. If you did not tap while 'CAL' is displayed, the pulses per mile will be displayed on the odometer and the display will go back to MPH mode. Otherwise, you will now see 'CAL' displayed along with the number '0'. This indicates that the microprocessor is now ready for calibration.

4. When you are ready, begin driving on the metered mile. You will notice that the reading will start counting up. The odometer will begin to display the incoming pulse count. Drive the vehicle through the measured mile (speed is not important, only the distance traveled).

5. At the end of the mile, stop and press the push-button again. The odometer will now display the new number of speedometer pulses that were registered over the distance. The odometer will continue to display the pulse reading for a few seconds. Once it reverts to the default mode, you have successfully calibrated your speedometer.

Warning: If, while in 'CAL' mode, you do not move the vehicle but press the button again, the microprocessor will NOT have received any data and the unit will display 'Err' and will revert to the factory settings. At a minimum, drive some distance and return to the start if necessary. If you miss stopping the display at 'CAL', simply repeat the steps.

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 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 20 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.

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Technical Support

Monday - Friday

9am to 5pm EST

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This product carries a limited Lifetime Warranty.

This warranty is limited to replacement or repair of the unit at the discretion of Intellitronix.