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INSTALLATION GUIDE
Chevrolet Monte Carlo Dash Panel
Part Number: DP9002
Year Series: 1978-88

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

KIT COMPONENTS

◊ **One (1) Digital Circuit Board** (with Speedometer, Tachometer, Fuel, Voltmeter,
   Water Temp, Oil Pressure Gauges)
◊ **One (1) Smoked Acrylic Lens**
   * Peel off protective covering from both sides
◊ **Two (2) Sending Units:** *(1-S8013 – water temp. & 1-S8434 oil pressure)*
   * 1/8" NPT, 0-255 Deg., 1/2" NPT Brushing
◊ **One (1) GM Universal Speedometer Sensor** *(S9013)*
   * 7/8" NPT Industry Standard threads
◊ **One (1) Mounting Kit: 4 #6 – 1¼" recessed Phillips head screws and nylon
   nuts; 4 - 3/8" nylon spacers.**

DASHBOARD REMOVAL AND INSTALLATION

Disassembly
1. Remove the existing dash cluster from the vehicle. Separate the front bezel from the back housing and gauges.
2. Remove the bezel, inner gauge frame and gauges from the old assembly.
3. Attach the acrylic lens to the front of the panel, using provided mounting kit.
4. Attach the new panel to the front of the housing, and re-insert the frame into the housing, and reattach to the bezel, re-using the original screws and other hardware.
5. Wire the gauges and sending units to the panel as indicated by the instructions below.

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 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 panels can cause incorrect or erratic operation.

Power – **Red**   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.

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, or the dimming feature will not work properly.

Turn Signals – **Grey**   Two 18-gauge wires, one for each signal. Each wire is labeled on the printed circuit board as 'LEFT' or 'RIGHT'. 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 brake indicator.

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. This will avoid inaccurate ground connections as the sending units get their ground from the threads. The oil sender gets its ground from the threading into the engine block, thus proper grounding is crucial. Connect to the sending unit.

Water – **Blue**   This gauge is incompatible with other sending units, so you must replace the existing water temperature sending unit with the included sender. **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.

Trip/Cal Button – **Grey**   There are two grey wires connected to the push-button for the speedometer board. Mount the switch in a convenient location such as under the steering column so that you may easily reset your trip odometer or other speedometer functions.

Fuel – **Yellow**   Connect to the factory fuel sending unit.

Note: *The default setting for this dash is the GM industry standard of 0-90Ω*

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 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 or ECM, tap into the VSS 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 digital dash. *Note: If the vehicle is equipped with an electronic transmission, the electronic vehicle sender will have either two or three wires.*

To ensure that the ignition system does not interfere with any other dashboard functions, do not run the tachometer wire alongside any other sender or input wires. **Do not** use solid core spark plug wires with this dashboard system. Solid core ignition wires cause a large amount of electromagnetic and radio frequency interference which can disrupt the system's operation.

Tachometer (memory capable) – **Green**
If your vehicle has a **separate ignition coil**, connect the green wire to the **negative** (-) side of the coil – the wire that goes to the points or electronic ignition module.

If your vehicle has a **GM HEI ignition**, connect to the terminal marked 'TACH', or, on some systems, a single white wire with a spade terminal.

If your vehicle has an **after-market ignition** – some systems will connect to the TACH output terminal.

If your vehicle has a **computer controlled ignition** system, consult the service manual for the wire color and location.

If your vehicle has a **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.

The default setting for the tachometer is for an 8-cylinder engine.

Note: If doing an LS engine swap, pick up the tach signal wire from the ECM/ECU and then set the tach switch to 4-cylinders.

CALIBRATION

Note: If using the Intellitronix GPS Sending Unit, (S9020 – 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 calibrate 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 then need to drive your vehicle to the predetermined measured mile. During this trip, the speedometer should read something other than 0 MPH. <u>If it does not change, return and locate the problem before continuing.</u> 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 <u>push-button</u> 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 and 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.*

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 **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 5 pm EST

(440) 210-7646
support@intellitronix.com