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Intelligent Electronics

Thank you for purchasing this instrument panel from Intellitronix. We value our customers!
<u>INSTALLATION GUIDE</u>
Camaro Digital Dash Panel
Part Number: DP4005
Year Series: '91 - '92

* Always disconnect the battery *before* attempting any electrical work on your vehicle.*
Power up the unit before installing to ensure everything is working properly

KIT COMPONENTS

- One (1) Digital Circuit Board
- One (1) Smoked Acrylic Lens
- One (1) Black Overlay
- One (1) Temperature Sending Unit **(S8013 or S8021)** *1/8" NPT, 1/2" NPT Bushing*
- One (1) Pressure Sending Unit (**S8868**) 1/8" NPT, 0-100 PSI Oil Pressure

Hardware:

- (7) 6 – 20 x 1 ¼ " sheet metal screw
- (7) 1/2" long white spacers
- (3) 7/8" long white spacers
- (3) 5/8" long white spacers
- (3) 6 - 32-3/4" screws and locking nuts
- (3) nylon washers

Panel Removal

1. Remove the two bottom mounting screws (near the steering column) and the trim piece (this snaps into place).
2. Remove the clear plastic cover from the instrument panel by removing the six (6) mounting screws (you do not need to keep this cover).
3. Remove the four (4) mounting bolts that attach the wire housing to the dashboard (KEEP these for re-installation).
4. Remove the instrument panel from the dashboard.

Panel Installation

Attach the Digital Dash Panel (DDP) and the bezel to the housing using the seven 6 - 31 x 1" screws. Place the bezel on top of the DDP and place the assembly on top of the housing. The spacers fit between the DDP and the housing. Insert the three 5/8" white spacers on the four bottom mounting locations and insert the three 1/2" white spacers on the three top mounting locations. Insert the screws through the bezel, DDP, and spacers and into the housing. The new DDP is now ready to be wired and inserted into the dashboard.

WIRING INSTRUCTIONS

Note: Automotive circuit connectors are the preferred method of connecting wires. However, you may sol- der if you prefer.
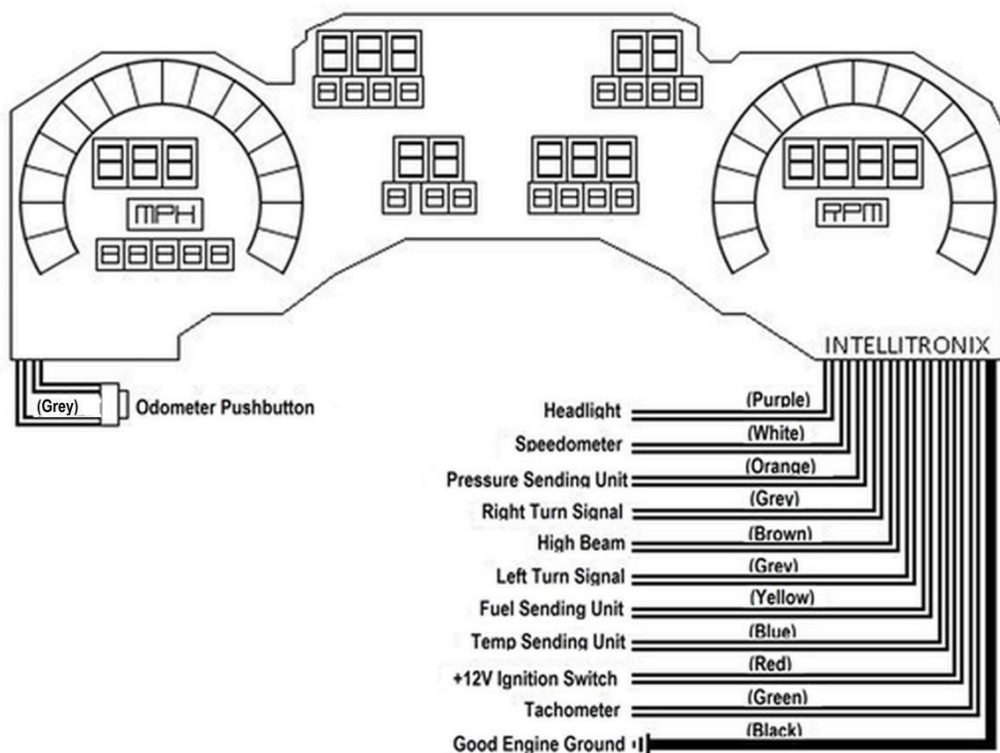
Ground - **Black** This is the main ground for the display system. A wire should be run from this board to the vehicle's main engine block ground. Use 18 AWG or larger wire to ensure sufficient grounding. Proper vehicle grounding is extremely important for any gauges (or electronics) to op- erate correctly. The engine block should have heavy ground cables to the battery, frame, and fire- wall. Failure to properly ground the engine block, senders, or digital dash 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; 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' and 'RIGHT'. Connect each wire to its corresponding indicator circuit.

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

*Oil Pressure – **Orange** - Replace the existing oil pressure sending unit with the unit included with your gauge. The Orange wire will be wired to the S terminal on the sending unit. This gauge is incompatible with other sending units.*

*Oil Pressure – **Ground Wire**- From the G terminal on sender will be wired to ground on the engine block using 18 Ga wire to ensure proper ground*
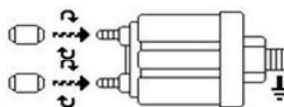
Water – **Blue** - This gauge is incompatible with other sending units, so you must replace the existing water temperature sending unit with the included sender. Do not use Teflon tape or other sealer on the new sending unit's threads to avoid inaccurate readings. Connect the blue wire to the sending unit. For best results we suggest running a new wire.

NOTE: THE FOLLOWING INSTRUCTION ONLY PERTAINS TO THE TWO TERMINAL SENDER AND CIRCUIT BOARDS THAT ARE WIRED FOR THIS SENDER. NOT ALL KITS WILL CONTAIN A TWO TERMINAL SENDER.

Water – **Black/ Blue -** This is a ground wire for the two terminal water temp sender. If your dash kit came with the single terminal sender this wire will go to the engine block ground. If using the two terminal sender this will go to the black/blue wire on the sender's harness. If your kit contains a two wire sender and your dash circuit board does not have the Black/Blue wire installed then run this wire coming off the senders harness to the same ground that the dash board is grounded too.

Fuel – **Yellow** The fuel gauge sending unit is not normally supplied because the display system can use the existing fuel level sending unit in the tank in most cases. 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.

NOTE: This dash has a default setting for GM 0-90 Ohms.

Speedometer – **White** Most vehicles built after 1984 have an electronic transmission sender. If your vehicle is already equipped with an electronic transmission, then the electronic vehicle sender will usually have TWO wires attached to it. One connects to the ground, the other to the signal. **In this instance only**, the colors of the wires are immaterial. However, if there are *three* wires, they are power (red), ground (black) and signal (white) and are connected as follows. The **white** wire connects 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.

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. You may also need to order the Intellitronix LS Engine Swap Adapter Kit – for Series 1, 2 and 3 engines. The part number is 8014LS. If you are getting the tach signal from the ECU, the resistor in the adapter kit will help pull a stronger signal for the tachometer. If your engine is a 4 cylinder, please call Tech Support at Intellitronix, as you may need to send the gauge back to us to be reconfigured. There is no charge for this additional service.

Note: *If your vehicle is equipped with an electronic transmission then there will be an electronic vehicle sender with either two or three wires.*

Trip/Cal Recall Button – **Grey** There are two long grey wires connected to a push-button on the speedometer board. Mount the button in a convenient location such as under the steering column so that you may easily reset your trip odometer or other speedometer functions. Alternatively, your speedometer may have a small pushbutton on the face of it which will accomplish these same set- tings.

DIGITAL PERFORMANCE SPEEDOMETER

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 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 output- ted by the speedometer sensor during a specific measured distance. It will then use this ac- quired 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. 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 dis- played 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.*

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.

This product carries a limited Lifetime Warranty.

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