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Intellitronix
Intelligent Electronics

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

INSTALLATION GUIDE
Chevrolet Van Digital Dash Panel
Part Number: DP1605
Year Series: 1978 – 1996

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

KIT COMPONENTS

One (1) Digital Circuit Board with Speedo/Tach combination gauge, plus temperature, fuel, oil
        pressure and voltmeter

One (1) Smoked Acrylic Lens
        * *Peel off protective covering from both sides of each lens*

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

One (1) Mounting Kit

     Four (4) - 6-32 X 2" Screws   Four (4) #6 X 5/16" Nylon Spacers

     Four (4) - #6 X 1" Nylon Spacers   Four (4) 6-32 Nylock Nuts

DASH PANEL INSTALLATION INSTRUCTIONS

1. Remove all gauges from the stock bezel and housing. Position the new dash panel into the stock gauge housing. Secure into place with the existing stock screws, spacers, and washers.

2. Turn the stock bezel face down and insert the acrylic lens into place (after removing paper from both sides). Place the included spacers over the existing screw holes. Lay the circuit board face down aligning the holes with the spacers. Insert and tighten the screws, securing the assembly to the housing.

HARDWARE ASSAMBLEY

Place 2'' Screw placed through lens. Overlay next followed by the 4 5/16 spacers. Next is the Board then the 1'' spacers followed be the Mounting plate and Nylock nuts. Tighten till spacers do not turn. Place assembly in bezel.
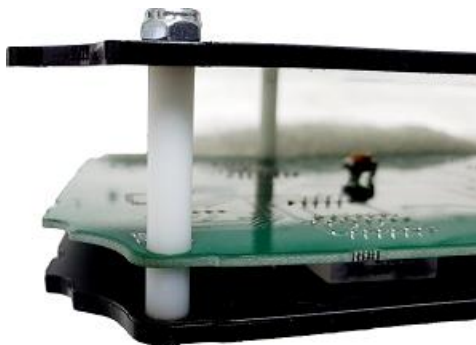
WIRING INSTRUCTIONS

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

Note: LS Engines or any other Computer based engine systems most use provides sensors and install new wires to new sensors

Note: 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 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 LS the Tachometer will need to be put into 4 cylinder mode by removing Resistors if the Tachometer does not have a push button for programing, 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.

Ground – **Black--This is the main ground for the display system. A wire should be run from this board to the vehicle engine block for the best 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 - Red--Connect the power terminal to accessory +12V power from the fuse panel or vehicle wiring harness. Using a 5-amp fuse or an inline 5-amp fuse holder 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.

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.

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.
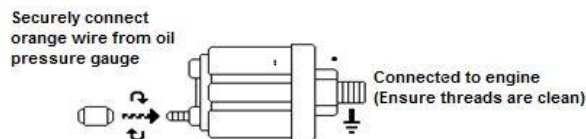
Dimmer – **Purple**   Connect to the parking lights to dim the LEDs 50% when the headlights are on. However, ***DO NOT*** connect to the headlight rheostat control wire, or the dimming feature will not work properly and may cause damage to Unit.

Brake – **Tan** - Connect to the parking brake wire from the dash to negative side of parking brake light switch. **NOTE**: If you are using a one wire switch you may need to switch to a two-wire switch. This wire is an optional wire some vehicles may not require

High-Beam – **Brown** - Connect the brown wire on the Dash unit to your high beam headlight circuit. This wire is powered on when the high beam is turned on.

Right Turn Signals - **Grey with White strip** 18-gauge wire is the - RIGHT turn signal

Left Turn Signals - **Grey with Black strip** 18-gauge wire is the – Left turn signal.
        Each wire is also labeled on the printed circuit board as 'LEFT' or 'RIGHT'. Connect each wire to its corresponding indicator circuit.

Voltage Gauge – This Gauge Requires no wire hookup. Volt Gauge is built into the dash panel and is powered by the main power and ground connection of the dash. It does have an Adjuster to fine tune the voltage. Note: you will   need to adjust it before fully installing the dash

FUEL SET UP: <u>Note set switches to correct setting and test before installing!</u>

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. Be sure the toggle settings on the switch match those displayed on the panel, as illustrated. <u>**NOTE**: If the switch is on the back of the circuit board the position is **UPSIDE DOWN**</u>!

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

For GM - **#1** toggle is **ON**

       # 2 toggle is **OFF**.

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

For Universal/Stewart Warner

#1 toggle is **OFF**

 # 2 toggle is **ON**.

Fuel Selector Switch Position

Manufacturer	Switch Position	Ohm Range (Empty to Full)
Ford/Chrysler	1 2	73-10 OHM
GM	1 2	0-90 OHM
VDO	1 2	10-180 OHM
Universal/Stewart Warner	1 2	240-33 OHM

Intellitronix Digital Performance Speedo/Tach Combo

Speedometer – White - (**Factory sender with Powertrain Control Module**) When using a 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 vehicles Pinout Chart for accuracy). Any other Computer based engine will need to use to use the PCM/ECM to run the speed signal for the Speedometer.(Consults Pinout Chart)

Speedometer – White - (**Factory two wire sender no PCM**) - 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 Signal wire on dash (we prefer this to be high output). The other wire (Low output) Ground at the Engine block. To find High and Low output wire color or pin location will need to be looked up by Vehicle vin or Model and year or (Consults Pinout Chart).

Speedometer - **White (Intellitronix Speed Sender)** - Disconnect the mechanical speedometer cable from the transmission and thread the new electronic sensor onto the transmission. This panel 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 switch power (12VDC) and ground, respectively. **NOTE**:(Twist all Three wires together and this 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

(Red) +12V Ignition Switch
Good Engine Ground
Speedometer (White)
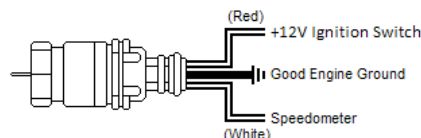
CABLE BUTTONS

Trip/Cal Button - **Grey Cable Button or Push button on Dash** - 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.

Tach program Button – **Grey Cable Button or Push button on Dash** There are two grey wires connected to the push-button for the tachometer board. Mount the switch in a convenient location such as under the steering column so that you may easily set the other functions of the tachometer.

Tachometer

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 engines, you must recalibrate the tach for your specific application by pushing the recall button in accordance with the programming modes shown below.

Modes

By pushing the recall 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 ¼ mile elapsed time (ET). It can also be calibrated with a push of the recall 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 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 recall button 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, Speed,	Displays Highest speed reached
0-60	Displays time to go from 0 to 60 MPH
¼	Displays Time over ¼ mile distance
8 Cylinder	Sets cylinder selection
Odo	Sets odometer display
Cal	Calibrates Speedometer

While "CAL" is being displayed, press the recall button 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 recall button 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 recall button 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 **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 recall 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 recall button again 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.

#   #   #

Intellitronix
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Technical Support

Monday – Friday

9am to 5 pm EST

(440) 359 7200

support@intellitronix.com

CHECK OUT THE **SUPPORT** PAGE AT

www.intellitronix.com

FOR QUICK ANSWERS (**Q&A**) TO YOUR QUESTIONS

This product carries a limited Lifetime Warranty.
This warranty is limited to replacement or repair of the unit at the discretion of Intellitronix.

RETURN POLICY PROCEDURES

Return Policy Instructions

1. Download the Intellitronix Return/Repair Form and fill in the information on the form about the product.

2. Place the product being returned in the original packaging that it came in and include a copy of the completed Intellitronix Return/Repair Form.

3. All packages must be accompanied with an RMA Number.

   Please call Technical Support at +1 440-359-7200 to receive an RMA Number.

4. Mail the product being returned with the completed Return/Repair Form and a copy of the original sales invoice.

Request for Product Refund

1. All returns for a refund must have a completed Intellitronix Return/Repair Form included in the package with the returned product.

2. If the return is for a product that is not defective a 20% restocking fee will be charged. The product must be in the same pristine condition that it was sent to you.

3. Proof of purchase is required. Please include a copy of the original sales order with the returned product.

4. All product must be returned undamaged and in working order in the original packaging including plexiglass, sending units, mounting hardware, or you will be subject to additional charges for product and accessories not returned.

5. All refunds will be reviewed by the Accounting Office.