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

## **INSTALLATION GUIDE**

**Dodge Duster/Dart**

**Part Number: DP1805**

**Year Series: 1970-1976**



**Note: there is an installation video and tips on our [Intellection.com](http://Intellection.com) under support. \***

**\* 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) 1/8" Smoked Acrylic Lens** ***\* Peel off protective covering from both sides \****

**One (1) 1/16" Smoked Acrylic Lens** ***\* Peel off protective covering from both sides \****

**One (1) Cutout Black Film Overlay**

**One (1) Temperature Sending Unit (S8023)** - 1/8" NPT, 0-255 Deg., 1/2" NPT Bushing

**One (1) Pressure Sending Unit (S8868)** - 1/8" NPT, 0-100 PSI Oil Pressure

**One (1) Universal Speedometer Sensor (S9013)** - 7/8" NPT Industry Standard threads

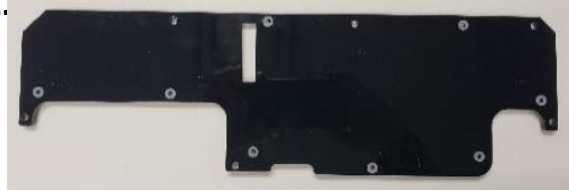
**One (1) Mounting Kit to Include:**

- **Five (5) #8 x 1 ¼" Thread Forming Screw**
- **Five (5) # 6-32 x 1 ¼" Flathead Machine Screw**
- **Three (3) 6-32 1 ½" Panhead Machine Screw**
- **Eight (8) # 6 Nylon Locking Nuts**
- **Two (2) #6 x 3/8" Nylon Spacer**
- **Three (3) #6 x ¾" Nylon Spacer**
- **Three (3) #6 x ½" Nylon Spacer**
- **Sixteen (16) #6 Nylon Washers**

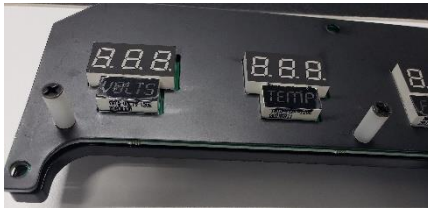
# DASHBOARD REMOVAL AND INSTALLATION

## Disassembly

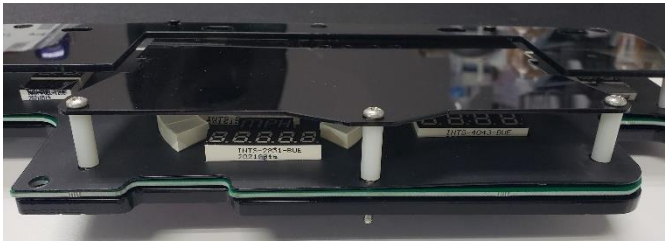
1. Remove the existing dash cluster from the vehicle. Separate the front bezel from the back housing and gauges.
2. Remove the bezel, inner gauge frame and gauges from the old assembly. All mounting screws will have an additional nylon washer that goes between the circuit board and the ¼" acrylic back plate. This allows a gap between the two pieces. **This is very important to avoid damage to the circuit board.**



3. Apply the ¼" inch back plate behind the circuit board and place the black cutout film on to the top of the circuit board. Then slide 1 ¼" Screw through the ½" spacer and fasten the pieces together using a nylon washer and locking nut on the back of the assembly. Do this in the following three (3) locations.



4. Lay the two pieces of acrylic lens onto the front of the circuit board as pictured below.



4. Attach the acrylic lens panel using 2 1 ¼" screws with 3/8" spacers at the top of the lens and the the 1 ½" screws with ¾" spacer at the bottom of the panel as demonstrated in the above pictures. Secure all screws with a nylon washer and locking nut on the back of the assembly.



5. Mount the completed assembly back into the original stock bezel using the five (5) thread forming screws provided.



6. Reinstall the bezel into the dash using the original hardware.

## 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.

**Battery Red--**Connect the +12 Volt terminal to constant +12V power from the battery power source. Using a 5-amp fuse or an inline 5-amp fuse holder Use 18 AWG wire to **Battery Red--** Connect the +12 Volt terminal to constant +12V power from the battery. Use 18 AWG wire to ensure the system receives a sufficient power feed.

**Power – Pink--**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.

**Use 18 AWG wire to ensure the system receives a sufficient power feed.**

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

**Water –Black/ Blue -**This is ground for water temp sender and must be wired to corresponding wire on dash.

**Oil Pressure – Orange (Signal wire)** Replace the existing oil pressure sending unit with the unit included. Connect to the signal post on the oil sender.

**Oil Pressure – Orange/Black (Ground wire)** Connect to the ground post on the oil sender.

**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** RIGHT turn signal. This wire works when 12v is activated.

**Left Turn Signals – Grey with Black strip** Left turn signal. This wire works when 12v is activated.

**Check Engine - Green/Yellow** Connect to the Negative side of the Check Engine Light circuit. Check Engine light will come on when working with a PCM

## **FUEL GAUGE**

**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.

**Fuel –Black/Yellow** – Run a new ground wire and attach to your Fuel sending unit housing to ensure proper fuel gauge operation. If the sending unit does not have a sufficient ground it will not work properly.

**Note:** *The default setting for this dash is the Mopar industry standard of 73-10Ω*

**Note: FUEL GAUGE TEST** The most common problem with our Fuel Gauge not working is the circuit is not complete. The easiest way to test this is to use a voltmeter and test for continuity on wires going to fuel sender. With wire disconnected from Fuel Gauge check for continuity to ground. Without this the Gauge will not work.

**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



## **LEFT TWO BUTTONS**

**Trip/Cal Button – First 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 – Second 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.

## **SPEEDOMETER**

**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)

**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.

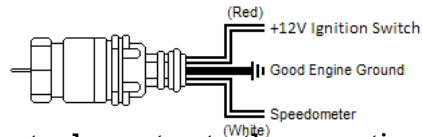
**Speedometer - White (Intellitronix Speed Sender)** - Disconnect the mechanical speedometer cable from the transmission and thread the new electronic sensor onto the transmission. This panel comes with a 3-wire sensor. If you are using this sensor you must follow these wiring instructions.

**White** -Wire is the speed signal; connect this to the speed signal wire on your gauge.

**Red** - Wires switch power (12VDC) and must be wired to **Red/White** on your Gauge.

**Black** - Wire is speed sensor ground and must be wired to **Black/White** on the Gauge.

**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



**Tachometer – Green wire** – 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. With high output Ignition systems may also create frequency noise that may interfere with operation of gauges that may require a tachometer filter.

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

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 or may need a Tachometer adapter for proper operation of your Digital Gauges.

Diesel engines will require a Diesel Tachometer adapter for proper operation of your Digital Gauges.

**Clock Setting:** The two right buttons are hours and minutes for setting the clock.

## **PROGRAMBLE TACHOMETER SETTINGS**

### **To change settings:**

The display will stay in Settings Mode until it receives a signal from the ignition system. To program the unit after starting the engine, shut the engine off and turn on only to the accessory position.

When in accessory mode, the settings menu will scroll through the settings menu. A light tap on the button engages the menu system.

1. Sets # of digits in RPM display, using button, display shows: (hundreds) 8800, (tens) 8880, and (ones) 8888.
2. Sets # of cylinders using button, display shows: 1cy, 2cy, etc.
3. Sets first digit on max RPM on gauge bar display (in thousands) using button, display shows: 1000 to 9990.

## **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. 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 and press the button again, the microprocessor will NOT have received any data. 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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**Lifetime Guarantee**

**Technical Support**

**Monday – Friday**

**9am to 5 pm EST**

**(440) 210 7646**

**[support@intellitronix.com](mailto:support@intellitronix.com)**

**Please call technical support for RO# and instruction before sending in return or warranty repair, thank you**

**This product carries a limited Lifetime Warranty.**

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