




PERFORMAX



ELECTRONIC SIGNAL PROCESSOR (ESP) INSTALLATION INSTRUCTIONS


1  **Disconnect batteries.** Do not reconnect battery power until system is fully configured to avoid risk of shock or fire.

2  Mount the ESP box on the driver's side fender area. Box can be mounted anywhere but should be kept away from the exhaust, so that it is not exposed to extreme temperatures. ESP can be exposed to general under-hood temperatures without damage.


 **Maximum temperature to ESP should never exceed 125°C (257°F).**


3 The group of 5 wires is connected as follows:


- *Ground* – The brown wire should connect to a clean ground in the engine such as the battery negative terminal or a factory ground bolt.
- *Power* – The red wire should connect to a constant battery positive terminal that is not turned off with the key switch. An under-hood fuse box or the battery positive cable is a possible connection.

 **Wire should be fused so as not to exceed 3 amps. If the circuit does not have a fuse, or the existing fuse is higher than 3 amps, use an inline fuse.**

- *Ignition* – The pink wire should be connected to a circuit that switches on with the key switch. The under-hood fuse box is a possible location for such a circuit. If possible, this should be a circuit that stays on during engine cranking, as you may encounter a troubleshooting situation where you need to monitor gauges while cranking.

 **Ignition wire should be fused so as not to exceed 15 amps. If the circuit does not have a fuse or the existing fuse is higher than 15 amps, use an inline fuse.**

- *Dimmer* – Connect the green wire to the factory gauge dimmer circuit by either tapping into the in-cab fuse block (see the next step for getting the wiring into the cab), or by connecting directly to the wire running from the dimmer on the headlight switch.
-  *Mode* – The blue wire connects to the optional mode button, and is used to customize the dimmer curve to match the factory lighting. Install a normally open (N/O) momentary switch between the mode button and ground.


4  Run the remaining wires from the ESP into the cab. Look for existing plugs in the firewall, such as the plug for a clutch-pedal linkage on an automatic transmission equipped vehicle. If the plug is too large, drill a hole in the plug and add a grommet.

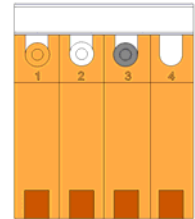
5 Route the three (orange, white, and black) to-gauge wires through to the A pillar and stop there, or continue through to the overhead rearview mirror if the gauges are to be mounted there.


ICON KEY	
	CAUTION
	Tools may be required
	Shown in picture

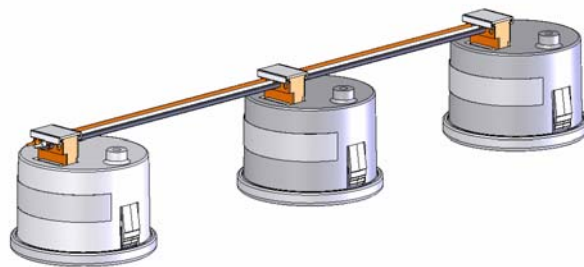
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6 Run the wires up to each individual gauge and leave enough extra wire to pull the gauge out of its mount so it can be unplugged.

7  Once the length of the wires has been determined, install the three wires into the insulation displacement connector (orange connector). The orange, white, and black wires are the +7V, data, and ground output to gauges, and connect to cavities 1, 2, and 3 of the orange connector respectively.



8  To install, carefully lay the wires across the connector cavities, hold the connector steady with a vice or pliers and press the wires into each cavity with a small screwdriver. Do this for each gauge to be installed as shown in the illustration. Slide the white dust cover over each orange connector once the wires are securely installed.



9  Secure all wiring so that it does not interfere with moving parts or chafe on sharp edges. This may be accomplished by routing the wiring within the factory wire harness sheath, using wire ties and sheathing, and using appropriate grommets when passing through the firewall.

10 OPTIONAL: Adjust the backlighting to match the output of the factory gauges. This adjustment should be completed when it is dark outside the vehicle.

- a. Turn on the ignition, so that your Performax™ gauges are powered on.
- b. Adjust the factory dimmer so that the factory instruments are at a comfortable lighting level.
- c. Press and hold the mode button. After 5 seconds, the backlight level will begin to adjust, getting brighter initially (until it reaches the brightest setting), then getting dimmer until it reaches the dimmest setting, and repeating the cycle. Release the button when the Performax™ gauge lighting intensity matches the factory instrument lighting intensity.

The lighting setting will be automatically saved in the ESP, and will now be the default. The Performax™ gauge lighting will get brighter and dimmer as you change the factory dimmer adjustment.

If you are just making this adjustment one time to match the factory gauges, you can temporarily run mode switch wires outside the vehicle and into the cab (rather than permanently routing them through the firewall).

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