



PRESSURE ON DEMAND

NITROUS P.O.D.

P/N 14182NOS (w/ bottle opener and heater)

P/N 14181NOS (w/o bottle opener)

P/N 14180NOS (P.O.D. only)

CONGRATULATIONS on purchasing your NOS Nitrous Oxide Accessory! If you have any questions regarding the performance of your product, **call NOS Technical Service at 1-866-GOHOLLEY, fax to 1-270-781-9772, or for online help, please refer to the Tech Service section of our website: www.holley.com.**

1.0 INTRODUCTION:

The NOS P.O.D. is a single controller for the bottle opener, bottle heater, and bottle pressure control. With the P.O.D., the user can now control bottle pressure automatically. It allows for the user to open and close the bottle, as well as control nitrous bottle pressure from inside the vehicle. NOS nitrous systems are calibrated for a nitrous bottle pressure of 950 psi, which requires a bottle temperature around 85° F. The NOS P.O.D. allows the operator to reach the performance levels that all NOS products are designed to achieve.

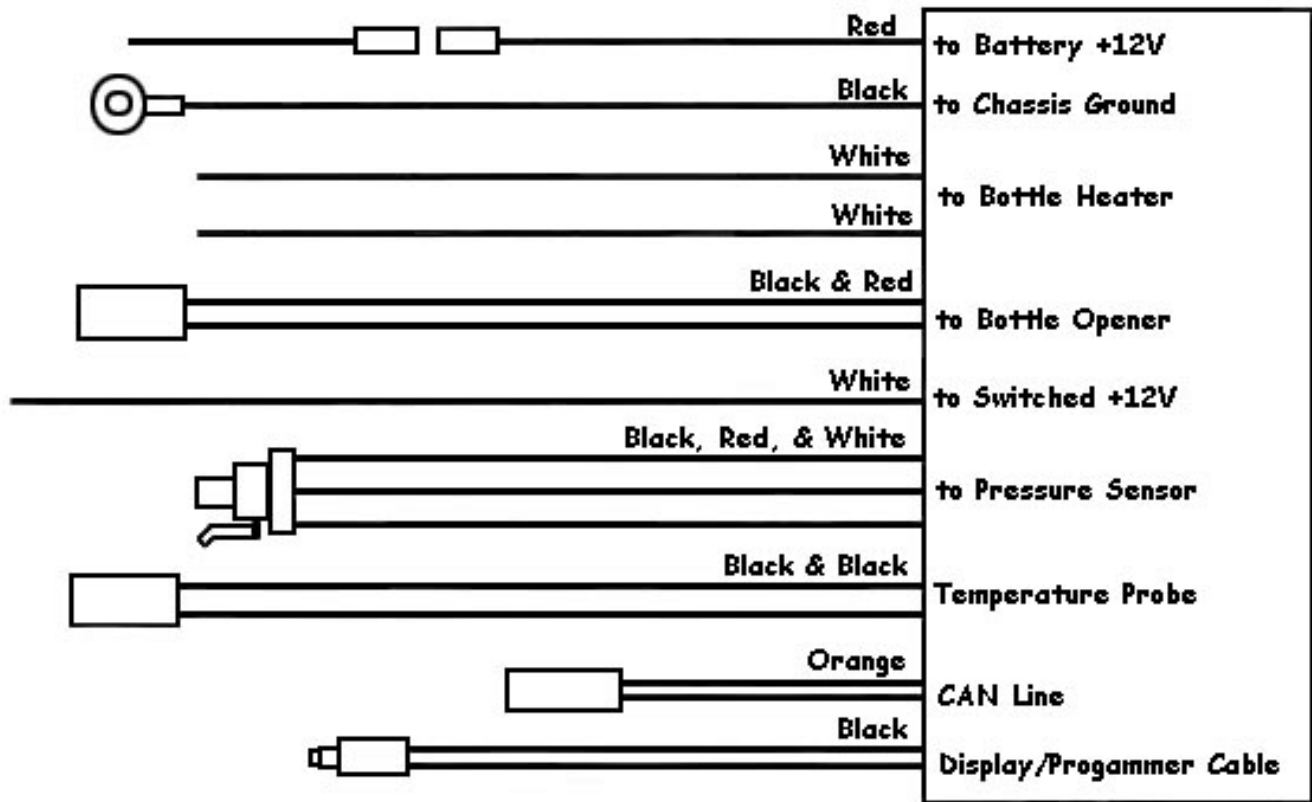
This instruction sheet outlines the setup and usage of the NOS P.O.D. controller. It is important to pay attention to the **NOTES / IMPORTANT** highlights that head some of the sections, as they explain each function key and what they mean.

NOTE: INDEPENDENT OPERATION - This is used when the operator wants to mount the nitrous pressure sensor directly into the bottle valve so the sensor will see bottle pressure, even if the valve is not open. This is so the heater can be operated and bottle pressure can be raised without requiring that the bottle be open. These threaded ports are usually found in the bottle valve itself. If you are using an NOS brand bottle, the valve should say SUPER HI-FLO on the side of the valve. If your NOS brand bottle is not a SUPER HI-FLO, it will not contain these ports. Standard NOS HI-FLO valves do not contain this port. (The type of valve is forged into the side of the housing).

IMPORTANT!!! DO NOT OPERATE THE POD IN INDEPENDENT MODE WHEN USING A HI-FLO VALVE OR ANY BRAND BOTTLE THAT DOES NOT HAVE THE SENSOR MOUNTED IN THE BOTTLE!!! THIS WILL DISABLE THE SAFETY/HIGH PRESSURE WARNING AND COULD LEAD TO POSSIBLE VEHICLE DAMAGE, PERSONAL INJURY, OR DEATH!!! ONLY OPERATE AN NOS HI-FLO VALVE IN DEPENDENT MODE WITH THE NOS POD!!!

NOTE: DEPENDENT OPERATION - This operation is required when the operator mounts the nitrous pressure sensor after the outlet of the bottle valve. **This mounting style is MANDATORY for a HI-FLO valve.** For those using the SUPER HI-FLO valve, this mounting style is optional. To operate the P.O.D. in this manner, the pressure sensor is anywhere after the outlet of the bottle valve, where the main nitrous feed line would be attached. If this is the way you chose to mount your pressure sensor, select DEPENDENT for heater/opener independent/dependent operation in the setup menu.

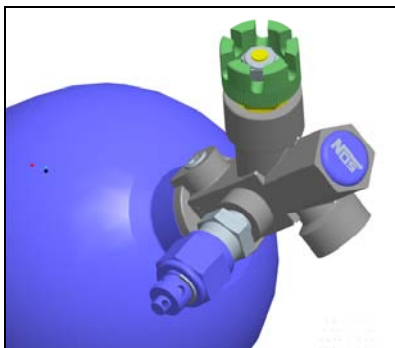
WARNING! Be very careful when removing any fittings in the nitrous bottle. Make sure that the bottle has been completely emptied!



Wiring Diagram

2.0 OPENER AND WIRING HARNESS INSTALLATION

1. Disconnect the negative battery cable.
2. Use a small flat-head screwdriver or pick to remove the cap from your NOS bottle valve handle.
3. Use a 1/2" socket to loosen the nut (**BE VERY CAREFUL NOT TO OPEN THE BOTTLE VALVE**) and remove the handle from the top of your NOS bottle.
4. Slip the bottle gear over the square brass stem on top of the valve and reinstall the lock nut. Tighten securely.



5. Carefully use a straight blade screwdriver to quickly crack the valve open and closed. Be very careful not to expose skin or eyes to nitrous spray if there are no attachments on the bottle opening. This step is to ensure that the bottle valve was not over torqued and too tight for the motor to open.

WARNING! Don't inhale nitrous; death may occur. Contact with skin can cause frostbite.

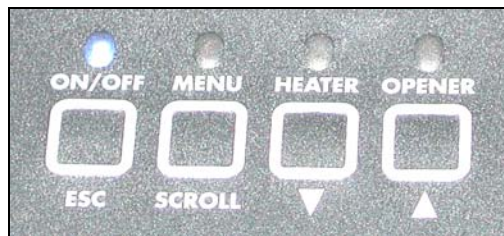
6. Install the bottle opener motor assembly over the bottle gear, making sure the gear on the motor meshes with your bottle gear.
7. Once the motor assembly is installed correctly, tighten the opener assembly securely.

NOTE: The bottle must be closed when the unit is first started. The unit always assumes the bottle is in a closed position.

8. Install the nitrous pressure transducer. If set up for “independent” operation, install the sensor in the nitrous bottle gauge port (make sure bottle is empty!!). If the sensor is to be installed after the bottle, a -4 AN adapter is included to install the pressure sensor. If the line is a -6, a -6 gauge adapter must be purchased. Use some Teflon paste (never tape) on the sensor threads only when installing or it will leak.
9. Next, mount the main controller next to the nitrous bottle.
10. Run the 12 ga. red power wire to a good source of full-time battery power. There is a separate wire included as well as a ring terminal if needed. The best place is to run this to the battery.
11. Run the black single ground wire to a good, clean bare-metal chassis ground.
12. Run the single white power wire to a switched +12 volt power source (only has power when the ignition switch is in the “run” position. There is a scotchlock connector included to tap into a switched power wire in the kit.
13. Connect the 3-wire (red, black, & white) connector from the controller to the pressure sensor.
14. Connect the 2-wire (black & red) connector from the controller to the opener motor.
15. Secure the heater element around the bottle with the Velcro straps, making sure to install the temperature sensor underneath the nitrous heater strap. This will allow for monitoring of the bottle temperature.
16. Then connect the two white wires from the controller to the bottle heater. There are two crimp connectors provided in the kit for this. It doesn't matter which wires are connected to the bottle heater.
17. Route the Display/Programmer cable from the controller into the passenger compartment, making sure the cable is not in danger of being crimped or cut. Reroute, as necessary. Install the Display/Programmer and connect to the Display/Programmer cable on the controller. If the length is not long enough, a mouse/keyboard extension cable (called PS/2) can be purchased at most computer stores.
18. The unit should now be ready for use.

Let's Set Up Your New P.O.D.!

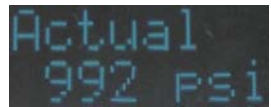
3.0 KEYPAD OPTIONS:



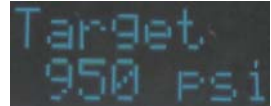
- **On/Off and ESC** – Turns unit on and off. Esc escapes when in the config menu.
- **Menu and Scroll** – The menu key is used to get into the main menu and config menu. The scroll key is used to scroll through the main menu and setup menu.
- **Heater and ▼ (down key)** - The heater button is used to turn the heater on and off. The down arrow key is used to select options when in the menus.
- **Opener and ▲ (up key)** - The opener button is used to open and close the bottle. The up arrow key is used to select options when in the menus.
- **LED's** – When the LED's are on, it indicates which function is activated.

4.0 MAIN MENU:

1. Hitting the menu key will scroll through the main menu selections. The following overviews them:
 - **ACTUAL** – The actual pressure in PSI. This pressure will be at the location of the pressure sensor.
 - **TARGET** – The target pressure in PSI. This will be the pressure that the heater will maintain the bottle at. This value can be moved up and down by pushing the ▲ (up) and ▼ (down) keys. This value will only be changed for that one use. To permanently change the target pressure, go into the Config Menu (See **Section 5.0**).
 - **TANK TMP** – This is the temperature in degrees Fahrenheit of the bottle where the temperature sensor is located at.
 - **BATTERY** – This is the voltage of the P.O.D. unit. This is used to troubleshoot any low voltage problems. When the heater is on, the voltage will be less (typically 1 volt). The unit should have 11-12 volts when the engine is not running and 12.5-14 volts when the engine is running.
 - **ERROR** – This last screen shows any errors. Errors are described in **Section 7.0**. If there are no errors, the unit will display “No Errors”.



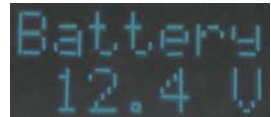
Actual
992 Psi



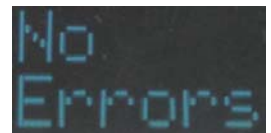
Target
950 Psi



Tank Temp
101 °F



Battery
12.4 V



No
Errors

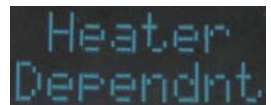
5.0 CONFIG MENU:

1. The setup menu allows for the user to select from various options. To enter the setup menu, *press and hold* the menu button, then at the same time, press the *Heater* button. The unit should then say * Config Mode*.
2. Press the menu/scroll button to move through the setup options. Use the ▼ (down) and ▲ (up) buttons to change the options.
3. When done with changes, hit the esc key twice to save changes and then get out of the config mode.
4. The following reviews the options in the config menu:



CONFIG
MODE

HEATER – DEPENDENT (spelled DEPENDNT on P.O.D.) or INDEPENDENT (spelled INDPNDNT on P.O.D.) – This allows for the user to select for either Dependent operation or Independent operation.

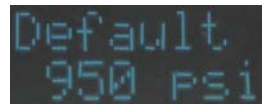


Heater
Dependnt

- **Dependent** – Must be used when the pressure sensor is NOT installed in the nitrous bottle. The bottle must be opened for the heater to function, if not the unit will not be able to read the bottle pressure as it rises. In dependent mode, the bottle **MUST** be opened before the heater can be turned on. When the bottle is closed, the heater is automatically turned off.
- **Independent** – Can only be used when the pressure sensor is installed in the nitrous bottle, allowing for the unit to read pressure whether the bottle is opened or closed. This mode allows for the heater to be turned on with the bottle closed.

WARNING! Using the independent setting with the pressure sensor installed after the bottle valve could result in excessive pressure leading to bottle discharge or rupture. If unsure as to which setting to use, contact the NOS technical support line.

- **DEFAULT** – This is the default target pressure (PSI) the unit targets every time the unit is turned on. The default value is 950 PSI.
- **BAT SAVR** – This is a battery saver feature. Use the ▲ and ▼ buttons to change it. The following can be selected:
 - **NONE** – Disables feature. Will keep heater on no matter what the battery voltage
 - **HTR & CLSE** – Automatically shuts bottle and turns heater off if the battery voltage goes below 9 volts
 - **HTR ONLY** – Automatically turns heater off if the battery voltage goes below 9 volts

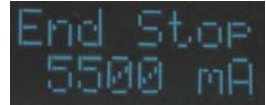


Default
950 Psi



Bat Savr
NONE

- **END STOP** – This is the current at which the unit will shut off at when opening and closing the valve. If the value is too low, the valve will not fully seal when it is closed. If it is too high, it will prematurely wear the valve or tighten the valve too much and it will stick when it is opened or closed. For NOS openers, testing has found a value of 5500 Milli-Amps (mA) to be the best value. Normally, this value should not have to be changed.
- **CONTRAST** – This is the value of contrast on the LCD screen. The default value is “Auto”. It can be adjusted from a value of 0-9.
- **VERSION** – This shows the firmware version in the unit and serial number.



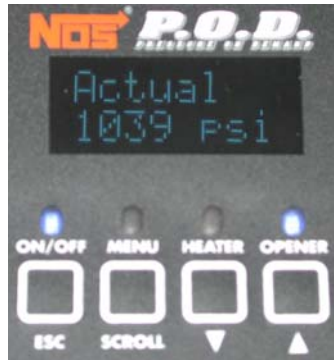


6.0 NORMAL USE:

The unit is easy to use. Simply turn the unit on and it will show the pressure in the bottle. If in dependent mode, the bottle must be opened before the heater can/will turn on. If in independent mode, the heater can be turned on and off without the bottle being open. If the bottle is not up to the target pressure, turn the heater on. The heater will automatically regulate the pressure to the target setting. When nitrous is to be used, open the bottle.

When the LED above the opener button is on, the bottle is open. When the LED above the heater is on, the heater has been activated. Once the target pressure is reached, the heater may cycle on and off, but the LED will remain on if it is activated.

NOTE: When the power is shut off, the bottle will always automatically close.



7.0 ERROR CODES:

The following are error codes that will show if there is a problem with the unit. If an error occurs, the LED above the menu/scroll button will blink. Scroll to the error code and the error will show.

- **Pressure Too Hi!** – Shuts off the heater if pressure goes over 1500 PSI
- **Pressure Too Low!** – Shuts off the heater if the pressure is below 250 PSI, suggesting that the sensor is not seeing real pressure, or the bottle is empty.
- **No Press Rise!** – If the unit does not see a 4 PSI pressure rise in 15 minutes, this error will occur. This would occur if misusing independent mode and turning the heater on without the sensor seeing real bottle pressure.
- **No Opener?** – If opener runs for 5 seconds and doesn't hit an end stop.
- **Opener Stuck?** – Valve stuck too tight for opener to open or close
- **No Heater?** – Heater failed or not connected
- **No Press Sensor?** – Pressure sensor disconnected or failed
- **No Temp Sensor?** – Temp sensor not connected or failed
- **No Disp Comms** – If display is not communicating with controller
- If the Battery saver mode is enabled, no error message will be displayed, but the power LED will flash

In the unlikely case that the valve is “stuck” when it is opened or closed (you will get the “Opener Stuck” message, hit the OPENER button again. This will “hit” the valve again and may unseat the valve.

If you have a valve that gets stuck, the “End Stop” current may have to be lowered. Contact NOS technical services for any assistance.

8.0 ACCESSORIES

- Replacement Heater – 14162NOS

NOS Technical Support
Toll-Free Phone: 1-866-GOHOLLEY
Phone: 1-270-781-9741
Fax: 1-270-781-9772

For online help, please refer to the Tech Service section of our website: www.holley.com

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