

Disclaimer

You are using this product at your own risk. No guarantees, stated or implied, are made about the use of this product. I will guarantee proper working order of the product for 90 days from date of purchase, excluding damage/failure due to improper installation/use.

Questions/Comments/Problems

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2-step Installation and Operating Instructions

Chose the mounting location:

The wiring harness for the 2-step should provide you with enough flexibility to mount the control box in many locations. Chose a location that will allow you to route the harness to each coil pack on the engine while maintaining some slack in the harness to account for movement of the engine. Be sure to route the harness and mount the control box away from the exhaust and serpentine belt path.

Electrical Connections:

There are 3 parts to the wiring harness:

Coil pack connections (Large bundles terminated with connectors)

Activation inputs (Long white and gray wires)

Relay output (Short yellow wire)

Coil Pack Connectors:

The coil pack connections are made by intercepting the PCM control signals at the large gray connector in the center of each coil pack. The harness has 2 pairs of connectors, one pair for each bank. Unplug the connectors on both coil packs and jumper them using the paired connectors of the 2-step wiring harness. Either connector pair may be used on either engine bank.

Activation Inputs:

The 2 inputs can be used to provide two different modes of operation. Simple On/Off operation and latched operation.

On/Off Operation

On/Off operation allows the user to activate and de-activate the 2-step manually.

White wire(**Arming Switch**): Momentary switch to ground.

Normally Open, close switch to active.

Gray Wire: Connect to ground or parallel with White wire

Latched Operation

Latched operation allows the user to either activate the 2-step manually, or “arm” the 2-step with deactivation based upon a secondary input. This is useful for manual transmission applications where the 2-step should deactivate when the clutch pedal is released, or in automatic transmission applications where the foot brake is used for staging.

White wire(**Arming Switch**): Momentary switch to ground.

Normally Open, close switch to active.

Gray wire(**Hold Switch**): Clutch pedal switch, foot brake switch, or custom.

Normally Closed to ground, open switch to active.

Relay Control Output:

The relay output provides a switched ground whenever the 2-step is armed or active. This can be used to deactivate a nitrous system that normally uses a wide open throttle switch for activation of the nitrous, or for an indicator that the 2-step is active.

Setting the 2-step rev-limiter:

To use the 2-step you must first set the RPM point at which the rev-limiter is activated. This is done using the two rotary switches at the top left corner of the circuit board. The two switches are for setting 1000's and 100's places, the switches are labeled on the circuit board.

Example: To set the 2-step rev-limit at 3500 RPM, the switches should be set to 3 and 5.

1. Remove the cover from the control box.
2. Set the rev-limiter RPM by rotating the switches, make sure that the number is clearly visible in the cut-out on each dial.
3. Replace the control box cover.

Setting the switches both to zero (0) will put the 2-step in bypass mode. This mode turns the 2-step off, all control inputs are ignored and the 2-step rev-limiter is never activated.

Manual Operation:

When using the 2-step in manual operation mode, you simply press and hold the **Arming Switch**. As long as the switch is pressed, you can go to Wide Open Throttle and engine speed will be held at the point you have set via the rotary switches. Once the **Arming Switch** is released the 2-step limiter will be turned off, and the engine will return to full power.

Latched Operation:

When configured for latched operation, the 2-step may still be activated/deactivated manually using the **Arming Switch** as outlined above. However, you may only use this functionality if the **Hold Switch** has not been activated.

To latch the 2-step on using the **Hold Switch**, activate the **Hold Switch** by depressing the clutch pedal or foot brake (this will vary by application). While the **Hold Switch** is active, press and release the **Arming Switch**. The 2-step is now active, and will remain active until the **Hold Switch** is released. While the **Hold Switch** is still active, you may press and release the **Arming Switch** again to deactivate the 2-step.

Precautions:

Make sure all of the switch connections and relay control connections are secure. Loose connections may result in unexpected or improper operation. Be sure the coil pack connectors are fully seated and the latches are latched.

DO NOT USE THIS DEVICE ON VEHICLES EQUIPT WITH CATALYTIC CONVERTERS!!!!

The 2-step maintains engine RPM by reducing the engine torque to near zero as engine speed approaches the set limit, this is done by dropping ignition to an increasing number of cylinders in a rotating pattern. Although ignition is cut, fuel is still being delivered. Raw fuel is VERY damaging to the catalyts, and using this device on a vehicle equipped with catalyts WILL damage them. If you do use the 2-step on a catalyts equipped vehicle, you are doing so at your own risk. You have been warned.

You should only use the limiter for as long as you need, avoid extended periods on the limiter. Extended periods on the limiter can cause a Misfire SES to set in the PCM and possible backfiring in the exhaust.