DYNOTUNE 2 STAGE RPM WINDOW SWITCH WITH TPS INSTALLATION INSTRUCTIONS

Introduction: ***READ ALL INSTRUCTIONS BEFORE STARTING!***

This DynoTune device will control up to two stages of nitrous oxide. They are two independent rpm window switches. It has a built in TPS WOT switch (Throttle Position Sensor used to detect Wide Open Throttle). It will turn your nitrous on at a certain RPM and shut if off before redline, fully programmable set points via the onboard digital display and push button. In order for the nitrous to turn on and spray, two things must be active at the same time. It must see an active TPS WOT signal (pedal be to the floor) and the engine be within the rpm window.

NOTE: DO NOT CONNECT THE NITROUS/FUEL SOLENOIDS DIRECTLY TO THE BLUE OR PURPLE OUPUT WIRES OR THE UNIT WILL BE DESTROYED AND THE WARANTY VOIDED. THE RPM SWITCH WILL ONLY TURN ON RELAYS! YOU MUST USE RELAYS ON THE PURPLE AND BLUE WIRES ONLY!

Installation: Mount the box in a dry location inside the car or under the seat or tail of a motorcycle as the box is not fully sealed so keep it dry!

Wire as follows:

RED WIRE- Attach to the 12VDC switched power (Nitrous arming switch 12V out when on).

BLACK WIRE- Attach to a solid chassis ground, if not sure, attach to the – terminal on the battery.

BLUE WIRE- Output 1, this wire provides a ground to control a relay. Hook this to pin 85 on your nitrous relay. If your pin 85 is currently going to ground, remove that ground and connect it to this blue wire. If you have a harness on your relay with lots of different color wires, typically the white wire on the relay harness goes to pin 85.

PURPLE WIRE- Output 2, hook up this wire the same as above for your second stage if you have one other wise tape up the wire so it does not short out to anything.

YELLOW WIRE- Attach this to an rpm signal. This can be a tach signal from your PCM, the primary side of your coil or coil pack or a fuel injector control wire.

WHITE WIRE- If the yellow wire does not get a clean rpm switch, disconnect the yellow wire try using this wire. Attach it only to a PCM output! Attaching this to a 12v signal will destroy the box and void your warranty. DO NOT ATTACH TO COIL!

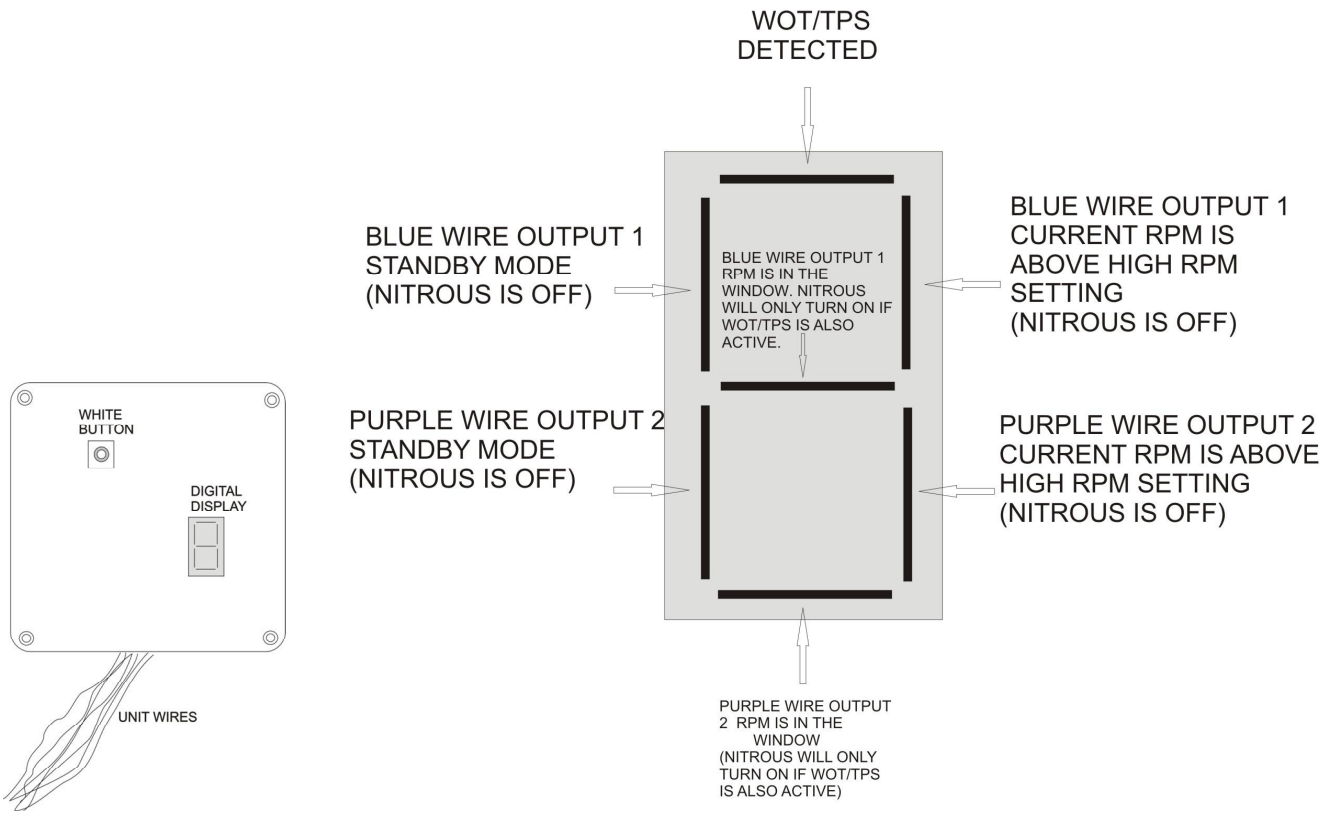
ORANGE WIRE- This will output an rpm to a shift light or dash tach

GREEN WIRE- Attach this wire to your TPS sensor output wire, or a mechanical WOT switch connected in series to 12V(arming switch). Typical TPS output is .8V at idle and 4.8V at WOT.

Setup and Programming:

Remove the 4 screws retaining the cover and remove the cover. The digital display will allow you to program the box and see what's going on with the inputs and outputs after you program the box. These segments will display important information used to setup your box.

See the chart below for what the segments mean when they are lit (digital display on the PC board)



In order for nitrous to spray, you need to see the upper segment lit (WOT/TPS (pedal to the floor) is detected. You also need to have the engine rpm within the window you programmed. The middle or lower segments(outputs) plus the upper WOT/TPS must be lit to spray nitrous. Remember, the two channels are independent and can be programmed to different rpm windows. If you are using only one output, program both outputs the same so the lights will always be lit the same time as this might help reduce the confusion when the lights start turning on. When toggling through the setup menu you will see symbols that have meaning.

1)Power the box on. These two left segments (¦) should be on and in "standby mode".

2) Press the small white push button on the PC board and hold it while it cycles through the program modes and release it when it stops on the menu you wish to setup below.

d -- Display. Displays all the current settings (just cycles through the program shows settings)
b -- Blue. Set/configure or display the Blue wire rpm settings for output 1
P -- Purple. Set/configure or display the Purple wire rpm settings for output 2
S -- Setup. Set/configure the pulse/CYL settings
t -- TPS. Set/configure the TPS/WOT settings. Learn the TPS voltage at WOT.

The d display Menu: This menu displays all the current settings for all the menus. It will cycle automatically through the program menus showing the settings. It goes quickly, you might have to do it a few times to get use to what it displays. It displays exactly the same way you enter in the information, step by step.

Setup the b and P Menu:

Each window switch output (blue and purple) requires that you set two different RPM points, a Low(L low turn on rpm) and a High(H high turn off rpm). Note: Below we will describe the series of actions required to set each RPM window switch point, you will first set the Low RPM, followed by the High RPM for each window switch separately.

To set/program your RPM, press the button and hold until a b or P is displayed then let go! b = blue wire output 1, P = Purple wire output 2.

3) The display will automatically change to a L indicating you are about to set the Low turn on rpm.

When setting the RPM's the display will show you which position you're setting (thousands, hundreds, tens).

Example to set a 3150 rpm Low turn on point:
Press and hold the white button until it reads the thousands of RPM's for the Low turn on rpm.., hold until it reads 3 which stands for 3000 RPM's then release the button quick! The display will jump to the next digit to program which will be the Hundreds. Press and hold the button until it reads 1 then release the button quick, it will now jump to the tenths. Press and hold the button until it reads 5 then release the button quick! The last digit is always default at 0 and cannot be changed.

4) The display will jump to the H indicating your about to set the High turn off RPM.
Repeat Example above to set H. Note: for higher than 9000 RPM you need to start using letters. Once you cycle through the numbers from 0-10 they will then start showing letters! See below
1 -- 9 = 1000-9,000 RPM's A = 10,000 RPM's b = 11,000 RPM's C = 12,000 RPM's

d = 13,000 RPM's E = 14,000 RPM's F = 15,000 RPM's

NOTE: If you reverse the low and high RPM numbers the box will not work. Example, setting the L at 6000 RPMS and the H to 3000 RPMS it will not work! The L RPM must always be lower than the H setting!
Repeat all this for the other output wire if you're using it.

After setting the L and H the r (TPS/WOT) will light up and will need to be setup.

Setup the ⊢ (TPS/WOT) Menu:

5) Note: To toggle from 0 to 1 you need to start in the output menu and cycle through that menu in order to allow it to change the 0 to 1. When you **press and hold** the button the display will toggle from 0 to 1 and keep cycling back and forth until you release the button while the digit you want it lit. Setting to 0 will mean the box will ignore the TPS/WOT input and turn the output on any time the RPM goes into the window (above the L setting). Danger, do not set to 0 for nitrous use, only use this for things like shift lights. Always use 1 for nitrous use!
Note: To change the above setting, after initial programming, you always must program the unit as in steps 3 and 4 to gain access to this menu.

6) Press the small white push button on the PC board and hold it while it cycles through the program modes and release it when it stops on the TPS menu below.
⊢ -- TPS. Set/configure the TPS/WOT settings. Learn the TPS voltage at WOT.

The display will show L this is the low throttle position setting! With your foot **off the throttle**, and the car running, press the button once. The display will then show H for high throttle setting. Now, drive the car in a safe location do a wide open throttle run for a few seconds(put the gas to the floor) Remember, only in a safe location in safe conditions!!. While the gas pedal is fully to the floor, have a friend press the button on the box once to save that setting, then it will go back into the standby mode (1). The box has now learned what the voltage is at idle and at wide open throttle. Remember, The nitrous can only spray at WOT and the RPM is inside the window!

To check and see if the TPS/WOT setting is correct, first Make sure your nitrous fuse is disconnected so the nitrous will not spray!

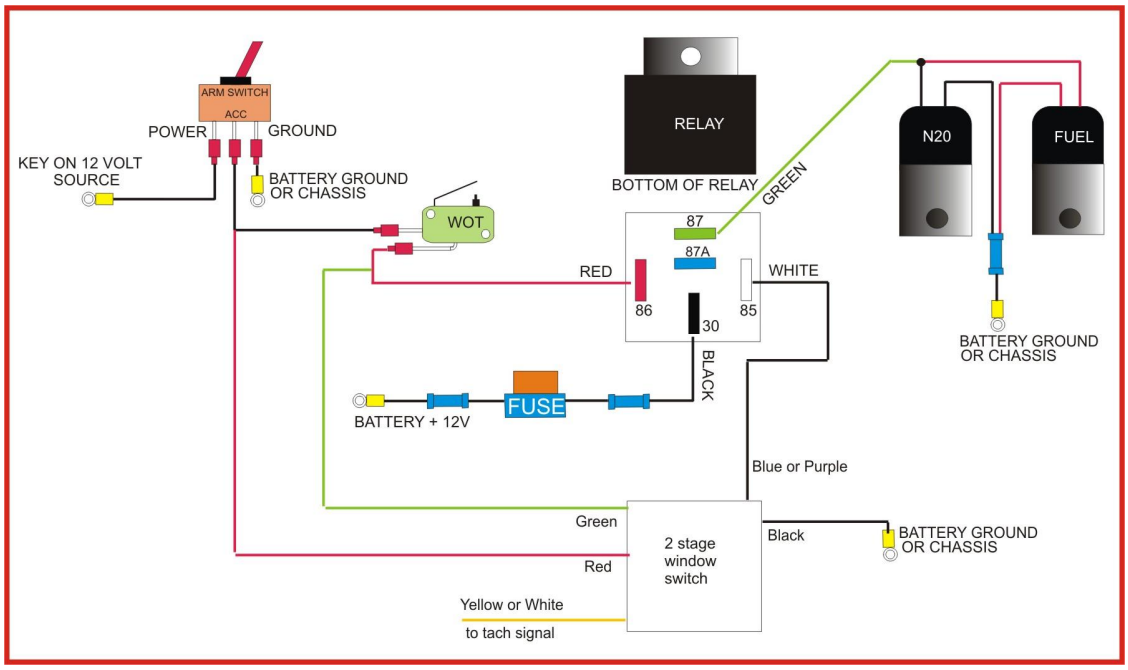
Now, have a person drive with you in the car while watching the box display. Go drive again and at wide open throttle the display should light the very top digit! If you let off the throttle to ¾ throttle than the top digit should shut off as you are no longer at WOT. Repeat setup if the TPS/WOT did not work perfect, if you still have an issue make sure you are connected to the correct TPS wire on that sensor!

Setup the 5 Menu: This will setup your tach signal. For a 4 stroke engine with a distributor, set the pulse to ½ the number of cylinders you have. Example, if you have an 8 cyl, set the pulse to 4. For a single cylinder 4 stroke that fires every other rotation set the pulse to 0. If you still do not know how to set the pulse or it's still not working correctly, try each pulse setting starting at 0 and testing after. Check to see if the rpm is tracking correctly the display should light the lowest segment when the rpm goes into the window. Set the RPM for both outputs to 2000 RPM's. Rev the engine to 2500 RPM's and the segment should light! If it does not light or lights up at a wrong RPM, then try the next pulse setting and test again.

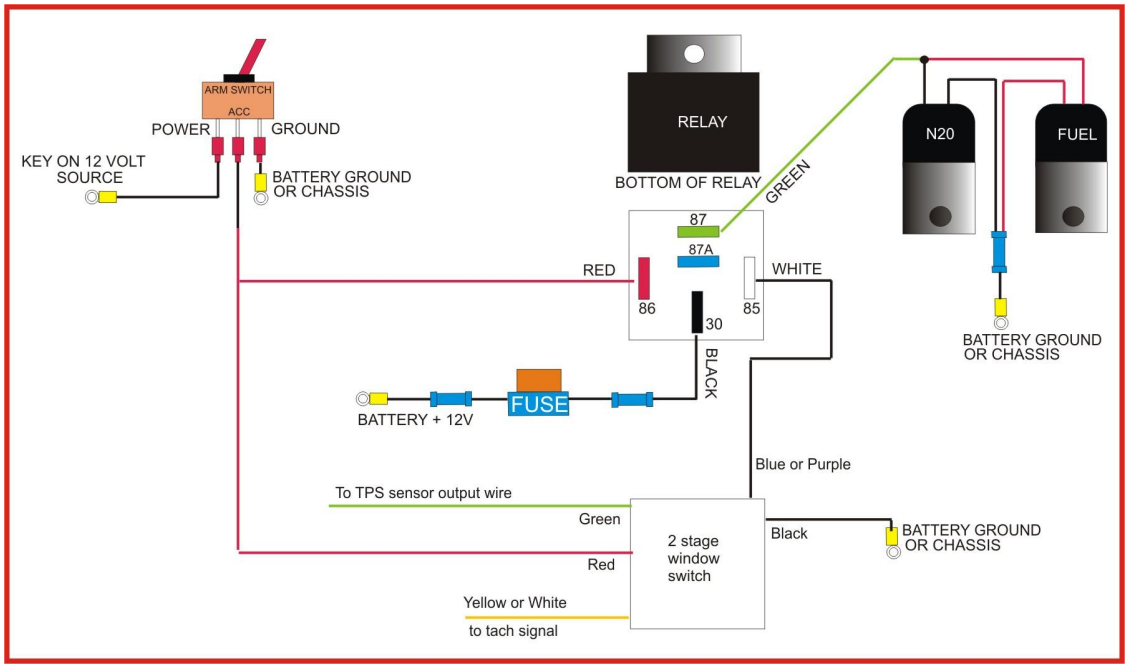
7) To set the pulse, press the white button and hold until the 5 menu is displayed then release the button quick. A P will show on the display. Press and hold the white button and let it cycle through the menu until it displays the number you want and release the button quickly. You can select between 0 and 6 (0-6) as these are your only choices.

You are done programming, you can go back into any of the menus and cycle through the memorized numbers without changing any of them, just make sure and do not hold the button down too long or it will start to change that number, just let it cycle back around to the number you want and release the button quickly.

BASIC WIRING WITH WOT SWITCH



WIRING WITH A TPS SENSOR INPUT



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DYNOTUNE INC. may at its option, repair or replace without cost for parts and labor, the defective product. This warranty does not cover finishes, normal wear and tear, nor does it cover damage resulting from accident, misuse, dirt, tampering, unreasonable use, service attempted or performed by unauthorized service agencies, ACTS of Devine intervention, failure to provide reasonable maintenance, or that have been modified or used for commercial reasons.

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