Nitro Dave's Nitrous Outlet
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NO-61001
SINGLE STAGE PROGRESSIVE, TPS, RPM WINDOW SWITCH

Operation

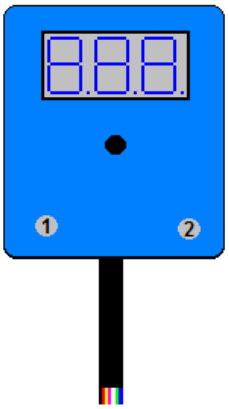
The Nitrous Outlet PROGRESSIVE/RPM WINDOW SWITCH is a single stage progressive controller with an RPM activated window switch (RPMWS) and integrated throttle-position activation switch (TPAS). The unit accepts most tach signals, including low-voltage and irregular signals such as those found on many V-10s. The TPAS accepts all analog throttle-position sensor signals as well as a "hot" or "grounded" wide-open-throttle (WOT) switch.

This unit has settable ON/LOW and OFF/HI RPM points and a multi-gear lockout feature. Multi-gear lockout delays the stage from turning ON until you have cycled through the RPM window (X times). The internal TPAS can be configured to prevent the RPMWS channel from activating until you are at WOT .

The Nitrous Outlet RPM WINDOW SWITCH requires 9~18 volts to operate correctly.
NOTE: Output lines are rated for a maximum current of 1 amp and the progressive output is only for use with the high current driver.

In run mode, the LEDs (A.B.C.) will show the unit's status.
A = throttle position activation switch status [0 = OFF / 1 = ON]
B = gear lock out [0 = feature OFF / L = locked out]
C = rpm window status [0 = not in RPM range / 1 = in RPM range]
Press and hold switch #2 and the unit will display the current RPM (AB.C). This will be very useful to verify your setting in STEP 1 of the configuration. *Example:* ***12.5*** *= 12500 RPM.*

Programming the RPM Window Switch



Switch #1 - toggles through the configuration menu. As you toggle through the configuration menu, the stored value will be displayed. Each time you push Switch #1 it will move the flashing character to the next digit. EXP. Space "B" will be flashing while making changes to this field (using switch 2), push switch 1 when you are ready to move to space "C" Each step is programmed the same way.

Switch #2 - increments the flashing value that was selected by switch #1. Push Switch #2 to get the flashing character to the number you need for programming your application. EXP. Each time switch #2 is pushed the field that is flashing will increase by a value of 1.

LED A.B C displays the configuration step number and its setting
A: = configuration item. The Set up Number can be shown solid or a brief moment depending on configuration screen.
A B C = value for the current configuration step

To enter the programming mode, press and hold both switches until “Pro” is displayed. Now release the switches and the unit will automatically go to the first configuration step.

STEP 1. Progressive START %

LED A is Step#
LED B C is your Progressive START %.

0 1 0 = Starting ramp percentage is 10%.

0 2 5 = Starting ramp percentage is 25%.

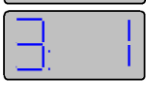
STEP 2. Progressive RAMP TIME. This is how much it will take to go from activation to 100% progressive power.

2 5 0 = Ramp time of 5 seconds.

2 1 4 = Ram; time of 1.4 seconds.

STEP 3. Reset / Resume: This is useful for clutch cars.

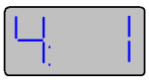
3 0 = Progressive unit will reset the ramping to the beginning if WOT is cycled.



3 1 = Progressive unit will pick up where it left off ramping if WOT is cycled.

STEP 4. Standard / Advanced Mode. This setting will allow you to stop your programming here and use the controller as a progressive unit only. OR continue programming for added features; RPM window switch, TPS mode, Gear lock out

4 0 = Standard Mode: Unit is being used as a progressive unit only. In this mode your BLUE wot input wire must be connected to a mechanical WOT switch. Using the STANDARD programming wiring digram.



4 1 = Advanced Mode: All the features are available in this mode. Including all WOT options.

STEP 5. TACH set-up

B C is the number of cylinders. This setting is used by the RPMWS to calculate the correct RPM.

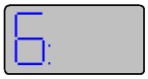
0 0 0 = individual coil per cylinder systems where the tach wire is connected to the coil trigger wire.

0 0 1 = coil packs that fire in pairs (waste spark systems) where the tach wire is connected to the coil trigger wire.

0 0 2 ~ 0 1 2 = cylinder combinations from 2 to 12 where the tach wire is connected to the tach signal from the engine electronic controller or distributor. EX. 002 would be for a 2 cylinder application. NOTE: LS1 vehicles connecting to the tach wire at the pcm will use 004, if connecting to a coil pack use 000.

STEP 6.. Gear Lockout

A = not used at this time
B = not shown.
C = how many times you must pass the deactivation set point before the switch will activate. 0 turns this option off.
EXAMPLES BELOW


You will only see this screen with the right digit blinking.


6: 0 = NO gear lock out is selected. System will activate at the preset RPM window and TPS WOT settings.


6: 1 = You must pass your deactivation RPM 1 time, before that system will activate.


6: 4 = You must pass your deactivation RPM 4 times, before that system will activate.

STEP 7. RPM set up for Channel 1 Activation.


You will only see this screen for a brief moment.

Activation RPM

A B C = RPM where 02.3 = 2300 RPM. The digit you are adjusting will be blinking. Never set below 00.5.

STEP 8. RPM set up for Channel 1 Deactivation RPM


You will only see this screen for a brief moment.

Deactivation RPM

A B C = RPM where 06.6 = 6600 RPM

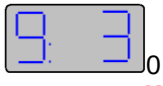
STEP 9. TPAS Mode

A B C = throttle position activation switch mode.


0 0 0 **=** “grounded” WOT switch


0 0 1 **=** “hot” WOT switch


0 0 2 = TPS signal to PCM.


0 0 3 = turns this feature off if you are not connecting the blue wire.
WARNING!!! This option should only be chosen IF you have a WOT device controlling the relay. Using this feature will activate the relay anytime the system is armed and inside the Activation and Deactivation window. Primarily used for systems that are already wired and want to have features of a window switch.

STEP 10. TPS WOT setting

Note: only applies if Step 5 is configured as 002
9:B.C = WOT voltage
While at IDLE, press switch #2 to read and display the TPS signal. Pop the throttle to open it all the way – the unit only needs to see WOT for a fraction of a second. Now press switch #1 to save the displayed value. (You do not have to be at WOT when you press switch #1 to save)
Drive By Wire cars should go for a test drive for step 9. Since the throttle blade may have some delay in throttle speed vs pedal speed.
Push Switch #1 and You will see **End** this shows the programming is complete. If at any point you see **Err**, the unit has had an internal malfunction. Turn the power off and back on and try again.

Understanding the LED readout.

Your window switch has an LED readout that is for more than programming, it also tells you what your window switch is doing. Refer to the following codes to help you diagnose a problem if one arises:

0 = Off, 1 = Activated, L = Locked
In advanced mode
0.x.x - not at WOT
1.x.x - WOT
x.0.x - lockout OFF
x.L.x - gear lockout ON
x.1.x - lockout off and RPM inside window
x.x.0 - RPM outside of window
x.x.1 - RPM inside window
1.1.1 - stage active

In standard mode
0.1.1 - unit not triggered
1.1.1 - stage active

DISCLAIMER:
Nitro Dave's, LLC may not be held responsible for any damages, how so ever caused, to any persons or equipment during the installation and or operation of this product. Trick Performance Products are meant for OFF-ROAD use only, and make no claims as to this products ability to meet local safety or emissions laws.

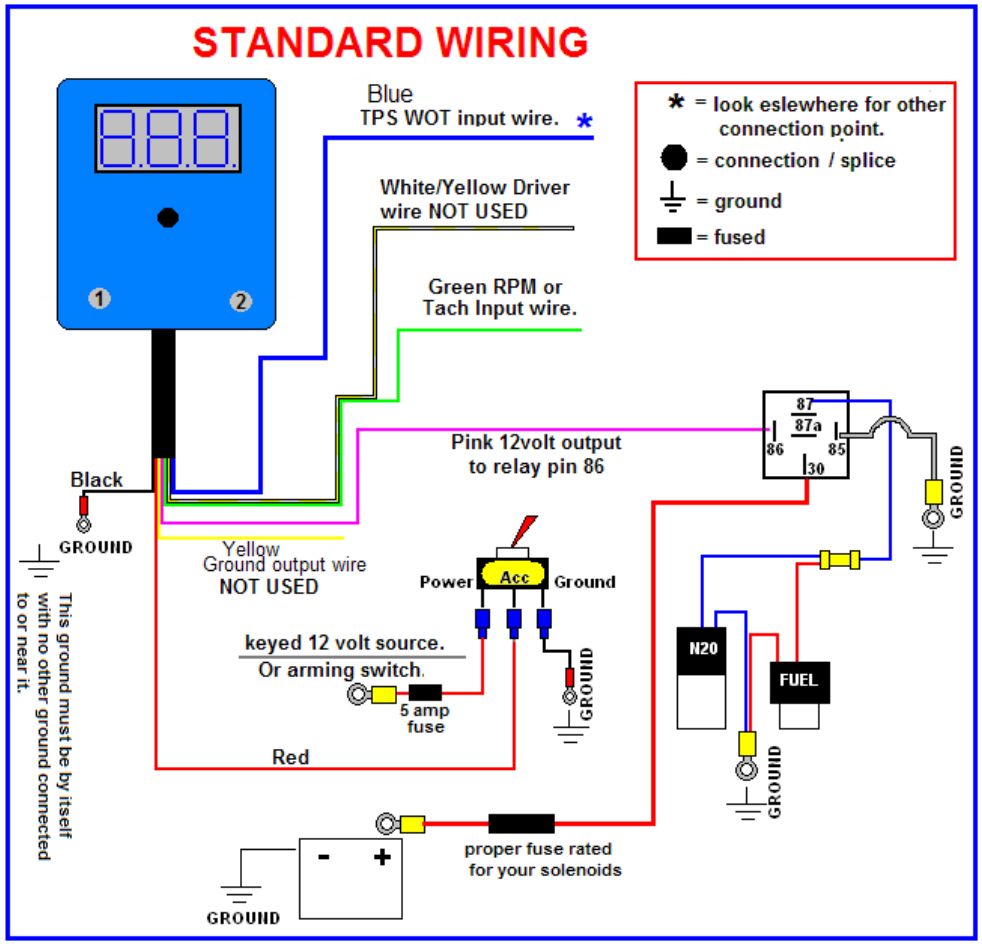
WARRANTY:
Nitro Dave's, LLC (ND) warrants the material and workmanship of the equipment, components and parts manufactured by ND LLC against defects under normal use and service. This warranty shall extend for 90 days from the date of purchase provided that the customer first returns the defective part or component through an authorized dealer, shipping costs prepaid. Prior to returning a product for warranty inspection, the customer must contact ND's service department with the product serial number to receive a WARRANT CLAIM NUMBER. Units returned without this number will be delayed or refused.

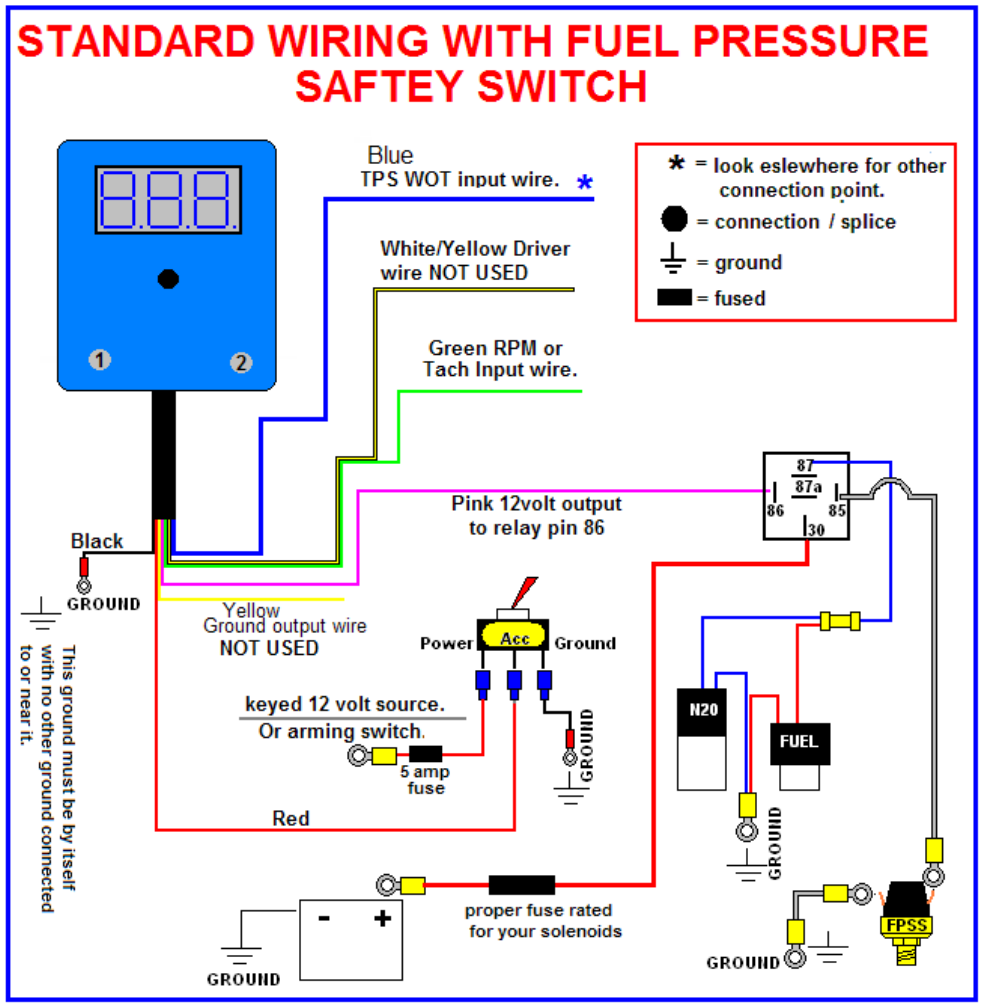
ND may at its option, repair or replace without cost for parts and labor, the defective product. This warranty does not cover finishes, normal wear and tear, nor does it cover damage resulting from accident, misuse, dirt, tampering, unreasonable use, service attempted or performed by unauthorized service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

ND specifically does not warrant equipment, parts or components purchased by ND or the customer from any third party manufacturers or suppliers. Rather, for and defect equipment, parts and components purchased from third party manufacturers or suppliers, the customer shall have a recourse only to the terms of the warranty of that particular manufacturer or supplier. Any recommendations made by the third party manufacturer or suppliers concerning the use or application of their products are those of the manufacturer or suppliers, and ND extends no warranty with respect to the results obtained for their use. ND does not warranty those products in any way beyond the tern of the warranty extended by the manufacturer or supplier.

The warranty provided above, ND's obligations and liabilities hereafter, and the rights and remedies of the customer are exclusive and is substitution for, and the customer waives all other warranties, guarantees, obligations, liabilities, rights and remedies, expressed or implied, arising by law or otherwise, including (without limitation) the implied warranties of merchantability or fitness or purpose, and any obligations or liability or ND arising from tort, or loss of use, revenue or profit, or the incidental or consequential damage.

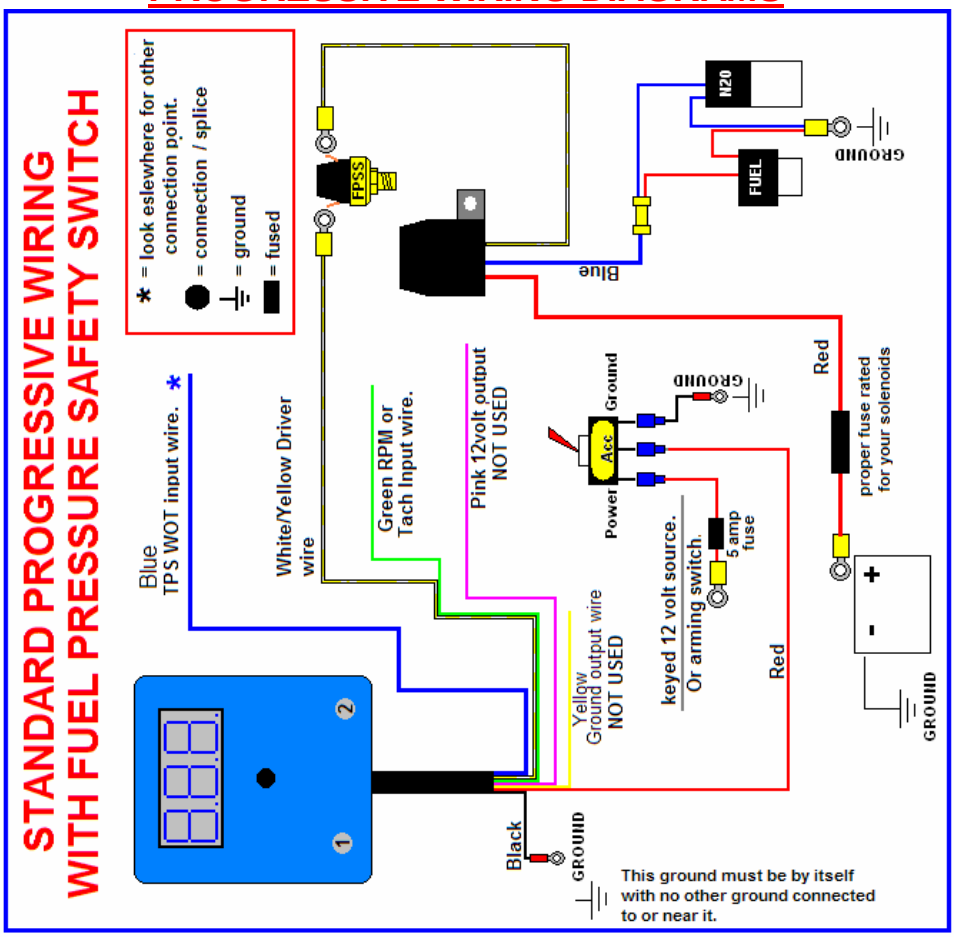
WINDOW SWITCH ONLY DIAGRAMS

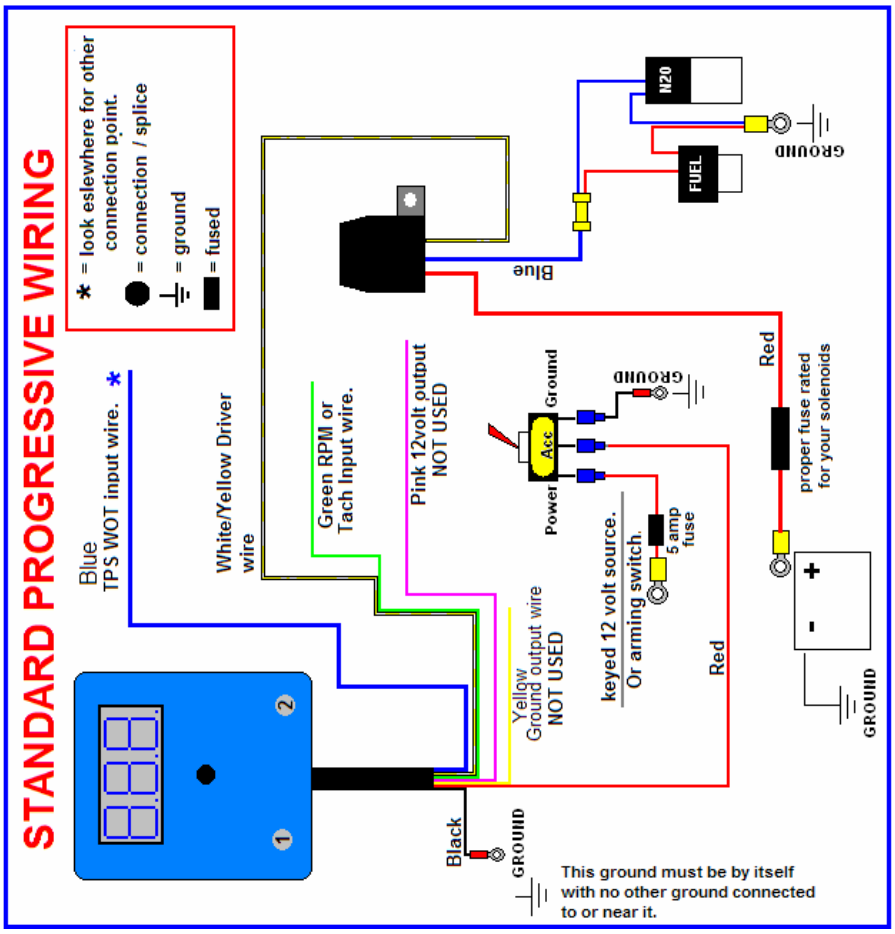




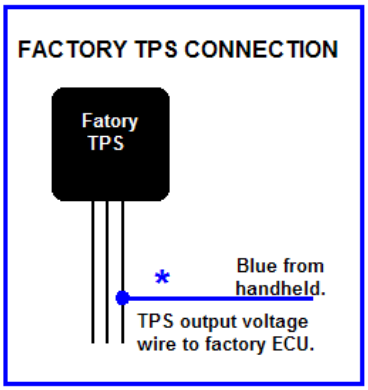
Rev H

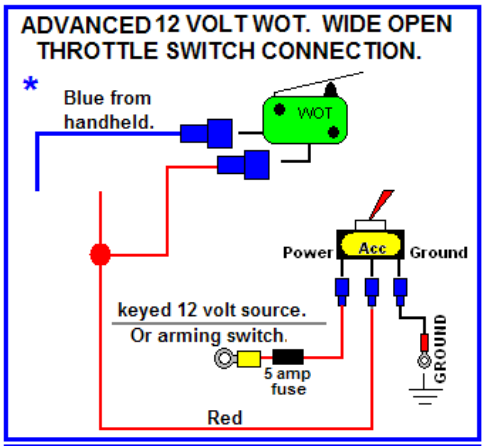
PROGRESSIVE WIRING DIAGRAMS

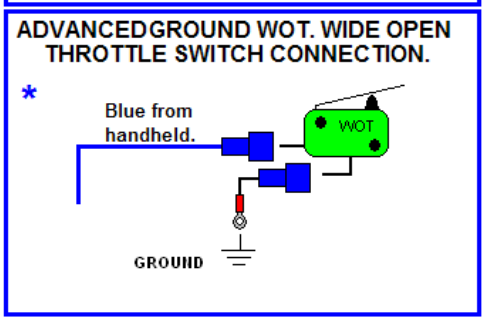




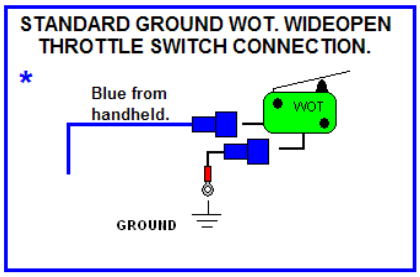
ADVANCED MODE: BLUE TPS WOT INPUT WIRE CONNECTION DIAGRAMS

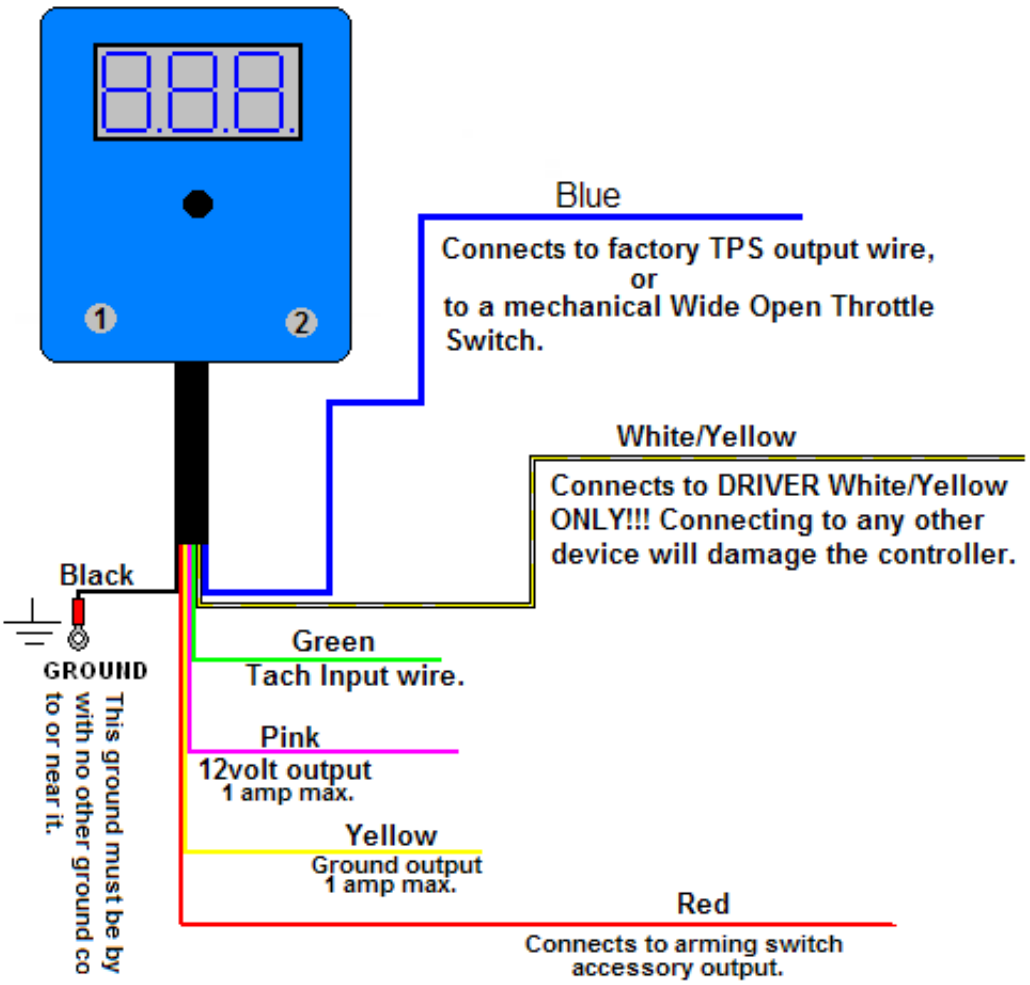






STANDARD MODE: BLUE TPS WOT INPUT WIRE CONNECTION DIAGRAM




Blue
Connects to factory TPS output wire,
or
to a mechanical Wide Open Throttle
Switch.
White/Yellow
Connects to DRIVER White/Yellow
ONLY!!! Connecting to any other
device will damage the controller.
Black
GROUND
This ground must be by
with no other ground co
to or near it.
Green
Tach Input wire.
Pink
12volt output
1 amp max.
Yellow
Ground output
1 amp max.
Red
Connects to arming switch
accessory output.
1
2