



INSTALLATION INSTRUCTIONS - PN: NOS-6021

 **Thank you for your purchase.**
Please, read the instructions and watch the video before installing the JMS Progressive N2O Controller. Configuration and installation videos are available online: www.jms-nos.com.
If you have any questions, please contact JMS technical support via email: jms@jmschip.com or via phone **601-766-9424** (M-F 9:00am - 5:00pm CST).



 **OFF-ROAD NOTICE:**
Installation of this product signifies that you have read this document and agree to it's terms. This product is for Off-Road or Racing use only.

It is up to the user to follow the instructions and to determine the compatibility of this product with the intended vehicle and/or other manufacturer's products. If installed or used improperly, catastrophic engine damage could occur and/or the JMS Progressive N2O Controller might be damaged.

JMS Chip and Performance LLC assumes no liability or responsibility for any damages incurred from the use of this product.

 **PRODUCT WARNINGS:**

- ➔ Suppression type spark plug wires must be used to avoid RFI/EMI issues.
- ➔ JMS N2O Controller must be mounted inside the vehicle cabin or in the trunk. Install the unit so it does not come into contact with water or engine heat. The unit must be mounted away from ignition components or other EMI sources (ignition boxes, coil, spark plug wires).
- ➔ If your nitrous bottle is near the controller, take care to avoid hitting the controller with the bottle. The switches used to program the unit can be damaged. Switches that are broken due to neglect are not eligible to be covered under warranty.
- ➔ It is recommended that all pulsating nitrous systems utilize a safety solenoid.



INSTALLATION INSTRUCTIONS - PN: NOS-6021

TABLE OF CONTENTS

Off-Road Notice	1
Product Warnings	1
Kit Contents	4
Specifications Overview	4
Case Dimensions	4
Operating Voltage Range	4
Compatibility	4
Inputs	4
Outputs	5
Dual Independent Ramp Rates	5
Adjustable Solenoid Output Frequency	5
Independent Fuel and Nitrous Solenoid Control	5
Fuel Solenoid Settings	5
RPM Window Switch	5
Warnings	5
N2O Controller Configuration	6
Power up the controller	6
Three configuration modes	6
How to make a configuration change	6
Enter main configuration mode	7
Engine type	7
Solenoid frequency	7
Fuel solenoid output	8
Force end percentage value (end % = 0%)	8
Seconds Build Time Adjustment	8
Increment or Decrement Seconds Build	9
Time Adjustment Seconds Build	9
Start % x 10 (0% - 90%)	9



INSTALLATION INSTRUCTIONS - PN: NOS-6021

END % x 10 (10% - 100%) 10

Seconds Build (0.5 - 8 seconds) 10

Seconds Delay (0 - 1.6 seconds) 10

low rpm activation (1000rpm to 16,900rpm)..... 11

high rpm activation (1000rpm to 16,900rpm) 11

number of cylinders (1 - 16) 11

Wide-Open-Throttle Enable Triggers..... 12

 wot trigger - 1 (ground enable)..... 12

 wot trigger - 2 (0-5v enable)..... 12

 TPS/0-5v WOT Trigger 2 Configuration 12

 set wot trigger - 2 enable voltage..... 13

 configure voltage wot trigger 2 (Rise or Fall) 13

 Test the wot enable triggers..... 13

Enter tire spin ramp configuration 3..... 14

 Tire Spin Ramp Configuration 3 Setup..... 14

 Test -Tire Spin/gear lockout Input..... 14

 Test - Engine RPM Input..... 15

 Test - Nitrous Controller Output..... 15

 Nitrous Controller Cut-Off 15

Status Led Guide 16

Wire Color Guide 16

Warranty..... 18

Service..... 18

Contact Information..... 18

INSTALLATION INSTRUCTIONS - PN: NOS-6021



Kit Contents:

- (1) JMS NOS-6021 Progressive Nitrous Controller with built in RPM switch
- (1) Wire harness with six-position connector
- (1) Installation Parts Package (RING TERMINAL, WIRE SPLICES, SOLDER, SELF TAPPING SCREWS, TIE STRAPS)



Specifications Overview:

The NOS-6021 Progressive N₂O Controller has been designed to control a single stage nitrous kit. Nitrous can only be activated when the vehicles engine RPM is within the RPM Window **AND** the vehicle is at wide open throttle. There is no need for a laptop, all you need to configure the unit is a screwdriver. Everything is built into the unit: External relays, triggers and RPM switches are NOT required. Nitrous activation can be delayed by setting seconds delay or by grounding the Gear Lock Out input. When Nitrous is activated, the Gear Lockout Input becomes the Tire Spin Input. Multiple stages of Nitrous can be controlled by utilizing multiple NOS-6021 Progressive N₂O Controllers. Vehicles with diesel engines should use part number: NOS-5266.

Case Dimensions:

Silver Aluminum Case with four mounting tabs.

LENGTH: 5 1/2"
WIDTH: 2 1/2"
HEIGHT: 1 1/2"

Operating Voltage Range:

9.5V - 20V DC

Compatibility:

- Compatible with all 12V or 16V battery systems
- Engines from one to sixteen cylinders
- 720 or 360 fire ignition
- Automatically functions as a turbo nitrous controller when the Start % is higher than End %
- Works with most Solenoids (NOTE: VERIFY MAXIMUM SOLENOID FREQUENCY WITH MANUFACTURE)

Inputs:

RPM Monitor: Tan - 18 GAUGE WIRE, Connect to an ignition box tachometer output or to the negative wire on an ignition coil or fuel injector.

Wide-Open-Throttle Enable Trigger(s): Either of the wide-open-throttle triggers (1 OR 2) enable nitrous activation if engine RPM is within the user defined RPM window.

- **Trigger (1):** Green - 18 GAUGE WIRE, Micro-switch connects this input to ground at Wide Open Throttle.
- **Trigger (2):** Orange - 18 GAUGE WIRE, 0-5v DC (invertible); connect to an Electronic Throttle Body or TPS.

Tire Spin/Gear Lock Out: Purple - 18 GAUGE WIRE, Manually disables the activation of the controller or can be used to enable a second unique progressive ramp rate if the vehicle has tire spin.



INSTALLATION INSTRUCTIONS - PN: NOS-6021

OUTPUTS:

- **Fuel Solenoid Output:** Orange - 12 GAUGE WIRE, Pulsed ground output, 50amp maximum.
- **Nitrous Solenoid Output:** White - 12 GAUGE WIRE, Pulsed ground output, 50amp maximum.
- **12V Timing Retard Output:** Pink - 18 GAUGE WIRE, Connect to an ignition box timing retard. Output is +12V @ 50mA, short circuit protected. 12v is applied when the Nitrous or Fuel outputs are active.

DUAL INDEPENDENT RAMP RATES:

Adjust the Nitrous Starting Percentage, End Percentage, Build Time and System Activation Delay.

ADJUSTABLE SOLENOID OUTPUT FREQUENCY:

12.5hz, 20hz, 25hz, 40hz (40HZ REQUIRES THE USE OF SPECIAL SOLENOIDS)

INDEPENDENT FUEL AND NITROUS SOLENOID CONTROL:

- Increased amperage capacity.
- Improved solenoid accuracy and control.

FUEL SOLENOID SETTINGS:

Fuel solenoid output can be independently modified via the dip switches to control lean spikes:

- 100% duty cycle
- 85% duty cycle for the initial 0.5 seconds after activation and then matches the Nitrous Solenoid Output
- 75% duty cycle for the initial 0.3 seconds after activation and then matches the Nitrous Solenoid Output
- Matches the Nitrous Solenoid Output

RPM WINDOW SWITCH:

- **Minimum RPM to enable Nitrous Output:** 1000 RPM
- **Maximum RPM to disable Nitrous Output:** 16,900 RPM

WARNINGS:



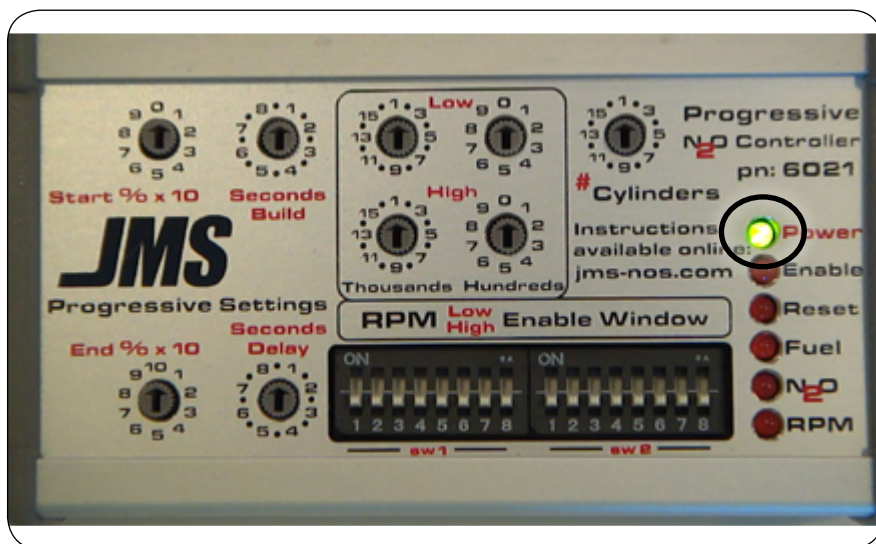
- Suppression type spark plug wires must be used to avoid RFI/EMI issues.
- JMS N2O Controller must be mounted inside the vehicle cabin or in the trunk.
- Install the unit so it does not come into contact with water or engine heat.
- The unit must be mounted away from ignition components or other EMI sources (ignition boxes, coil, spark plug wires).

INSTALLATION INSTRUCTIONS - PN: NOS-6021

N20 CONTROLLER CONFIGURATION

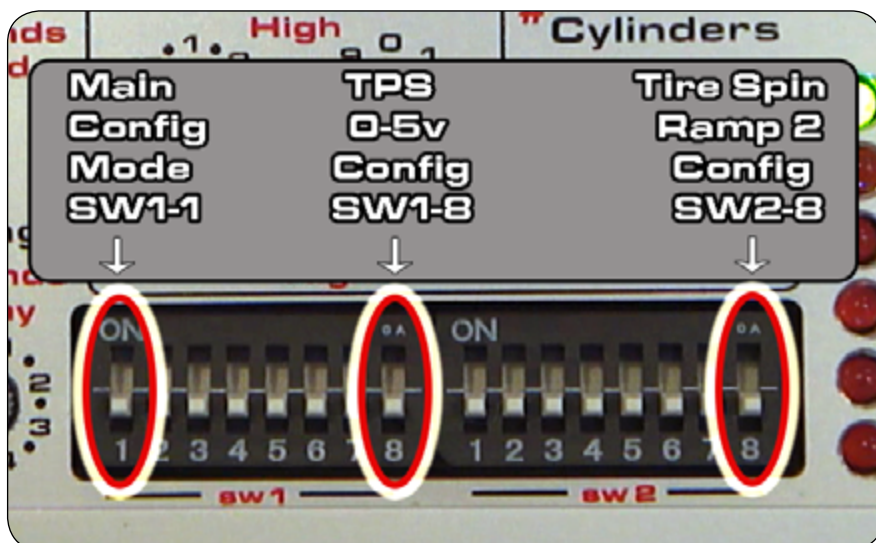
POWER UP THE CONTROLLER

- Connect Black 10 GAUGE WIRE to Ground via Ring Terminal
- Connect Red 10 GAUGE WIRE to +12v Power.
- Anytime the unit is Powered, the Green Power LED will be illuminated.



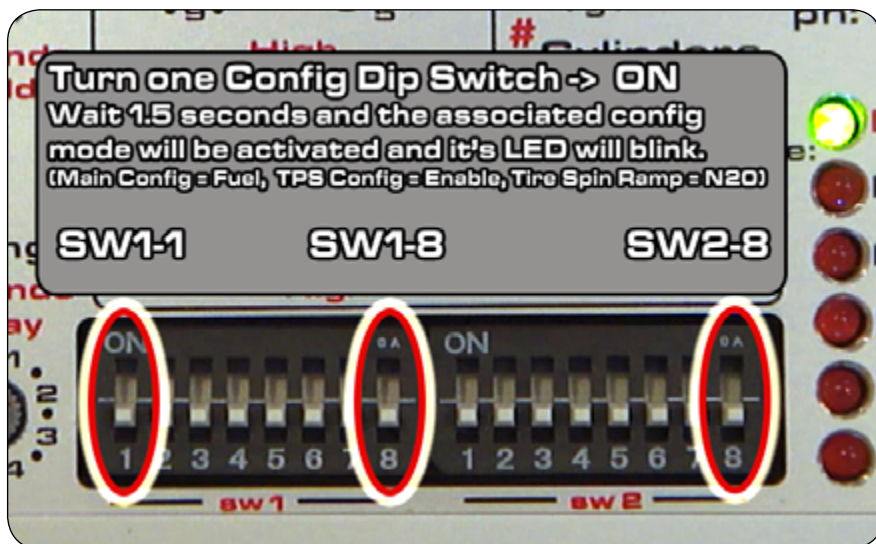
THREE CONFIGURATION MODES

- Main Configuration Mode - **Mandatory**; This is the basic configuration mode. It must be configured before the controller can be used.
- TPS/0-5v WOT Trigger 2 Config - **Optional**, This configuration mode defines how the 0-5v WOT trigger works and when the controller thinks WOT is occurring.
- Tire Spin Ramp Configuration - **Optional**, This configuration mode defines the settings used for Tire Spin Ramp Rate 2.



HOW TO MAKE A CONFIGURATION CHANGE

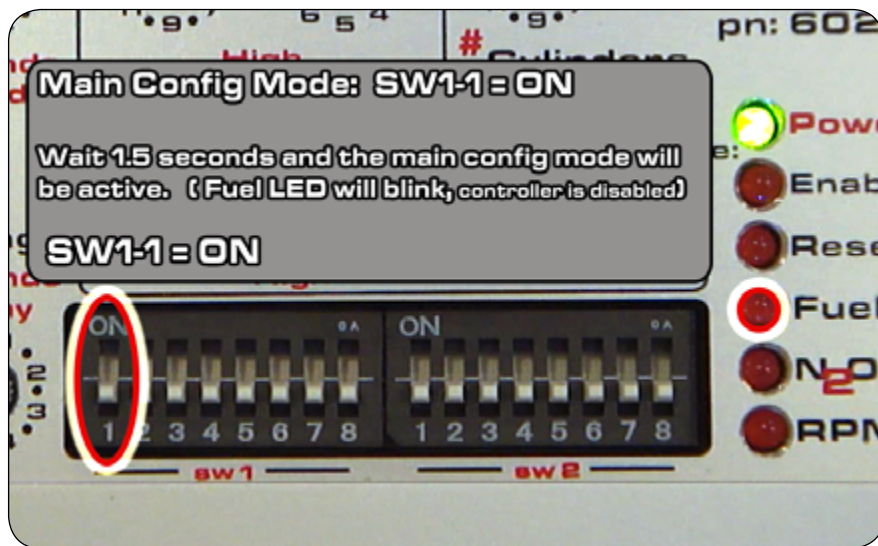
- Turn **on** one of the Configuration DIP switches.
- After 1.5 seconds the device is disabled and the corresponding configuration LED **blinks**.
- Adjust the Rotary and Dip Switches
- Save settings - Turn **off** the configuration DIP switch and the blinking config LED will **twinkle**.
- Each time you save settings, the previous saved settings are overwritten.
- Controller is **not active** while in config mode.



INSTALLATION INSTRUCTIONS - PN: NOS-6021

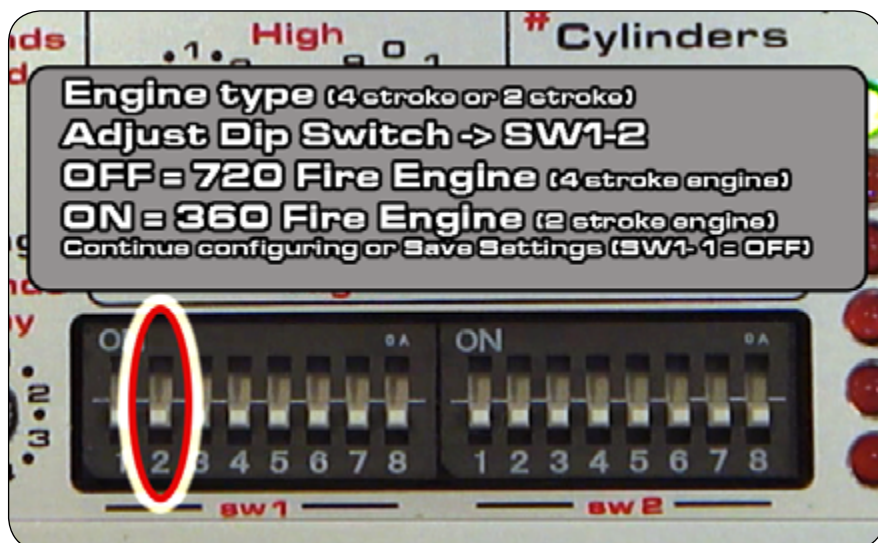
ENTER MAIN CONFIGURATION MODE

- Turn dip switch SW1-1 = ON
- Wait 1.5 seconds and the FUEL LED will blink.
- While configuring, the NOS controller is disabled. It is unable to turn on the NOS/Fuel solenoid outputs until the settings are saved.
- Configure the rotary and dip switch settings.
- To save the Main Configuration settings - turn off dip switch SW1-1 = OFF. The FUEL LED will twinkle and the settings will be saved.



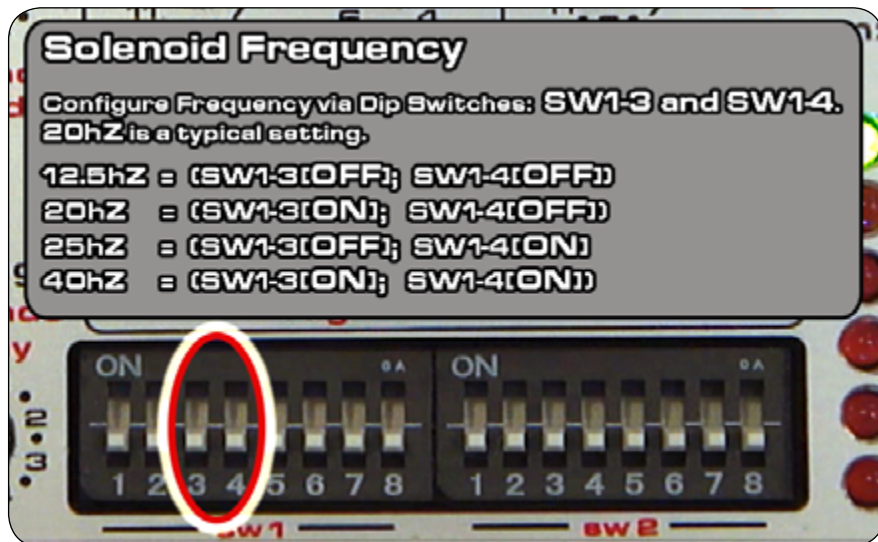
ENGINE TYPE

- Enter Main Configuration Mode
- Adjust Dip Switch -> SW1-2
- **SW1-2[OFF]** = 720 Fire Engine (4 stroke engine)
- **SW1-2[ON]** = 360 Fire Engine (2 stroke engine)
- Most engines are 720 fire.
- Continue configuring or Save Settings (SW1-1 = OFF)



SOLENOID FREQUENCY

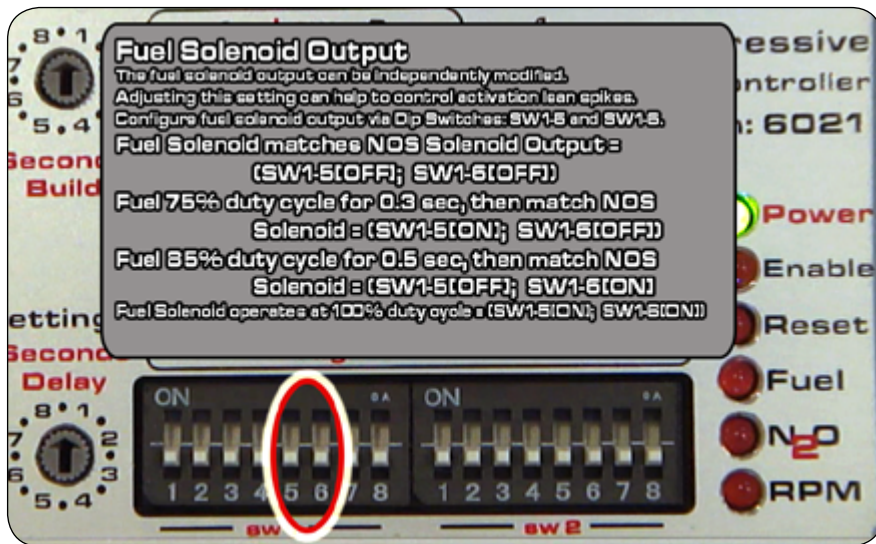
- Enter Main Configuration Mode
- Configure Solenoid Frequency via Dip Switches **SW1-3 and SW1-4.**
- **20hZ** is a typical setting.
- **12.5hZ** = (SW1-3[OFF]; SW1-4[OFF])
- **20hZ** = (SW1-3[ON]; SW1-4[OFF])
- **25hZ** = (SW1-3[OFF]; SW1-4[ON])
- **40hZ** = (SW1-3[ON]; SW1-4[ON])
- The use of 40hZ requires **special** solenoids.
- Continue configuring or Save Settings (SW1-1 = OFF)



INSTALLATION INSTRUCTIONS - PN: NOS-6021

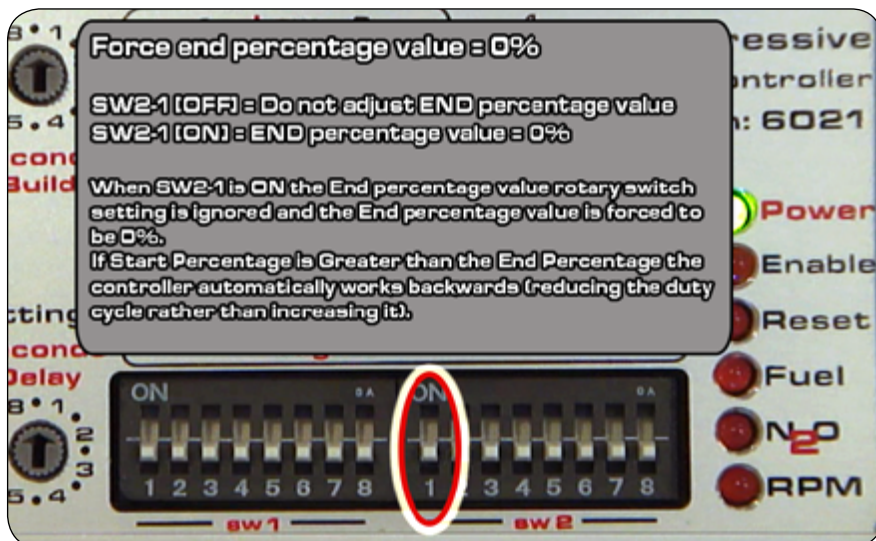
FUEL SOLENOID OUTPUT

- ➔ Enter Main Configuration Mode. Configure fuel solenoid output via Dip Switches **SW1-5** and **SW1-6**.
- ➔ Fuel Solenoid **matches** NOS Solenoid Output (SW1-5[OFF]; SW1-6[OFF])
- ➔ Fuel 75% duty cycle for 0.3 sec, then match NOS Solenoid = (SW1-3[ON]; SW1-4[OFF])
- ➔ Fuel 85% duty cycle for 0.5 sec, then match NOS Solenoid = (SW1-3[OFF]; SW1-4[ON])
- ➔ Fuel Solenoid operates at 100% duty cycle (SW1-5[ON]; SW1-6[ON])
- ➔ Continue configuring or Save Settings (SW1- 1 = OFF)



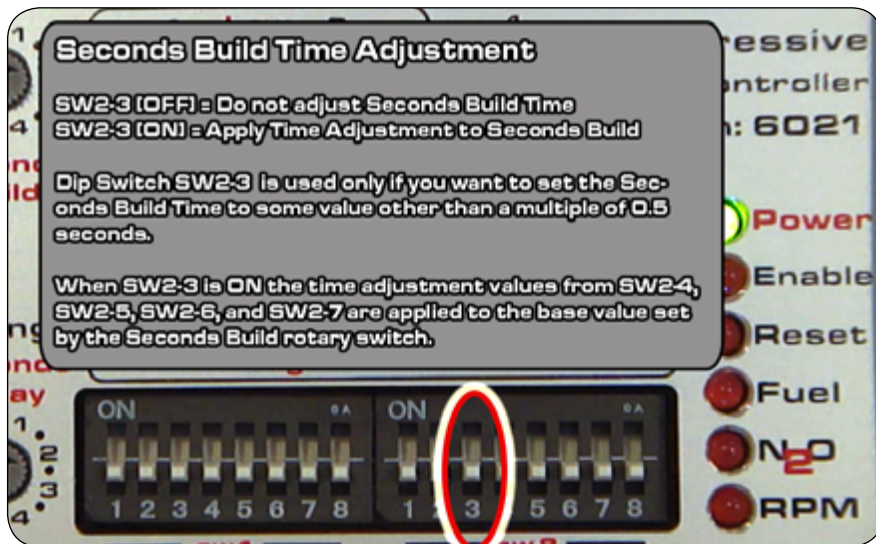
FORCE END PERCENTAGE VALUE (END % = 0%)

- ➔ Enter Main Configuration Mode.
- ➔ Typically this Dip Switch is only enabled when Nitrous is used with a turbocharger.
- ➔ When SW2-1 is ON the End percentage value rotary switch setting is **ignored** and the End percentage value is **forced** to be 0%.
- ➔ If Start Percentage is Greater than the End Percentage the controller automatically works backwards (reducing the duty cycle rather than increasing it).
- ➔ SW2-1 [OFF] = Do not adjust END percentage value
SW2-1 [ON] = END percentage value = 0%
- ➔ Continue configuring or Save Settings (SW1- 1 = OFF)



SECONDS BUILD TIME ADJUSTMENT

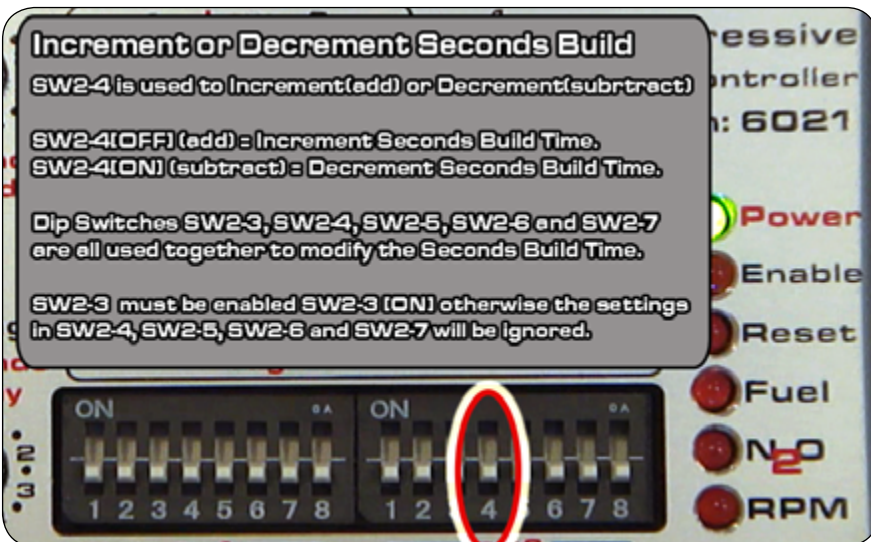
- ➔ Enter Main Configuration Mode.
- ➔ SW2-3 [OFF] = Do not adjust Seconds Build Time
- ➔ SW2-3 [ON] = Apply Time Adjustment to Seconds Build
- ➔ Dip Switch SW2-3 is used only if you want to set the Seconds Build Time to some value other than a multiple of 0.5 seconds.
- ➔ When SW2-3 is ON the time adjustment values from SW2-4, SW2-5, SW2-6, and SW2-7 are applied to the base value set by the Seconds Build rotary switch.
- ➔ Example: -> End % = 100, Seconds Build = 0.5, Subtract 2 seconds When the controller is activated the NOS output is 100% duty cycle (or whatever value is set for End %).
- ➔ Continue configuring or Save Settings (SW1- 1 = OFF)



INSTALLATION INSTRUCTIONS - PN: NOS-6021

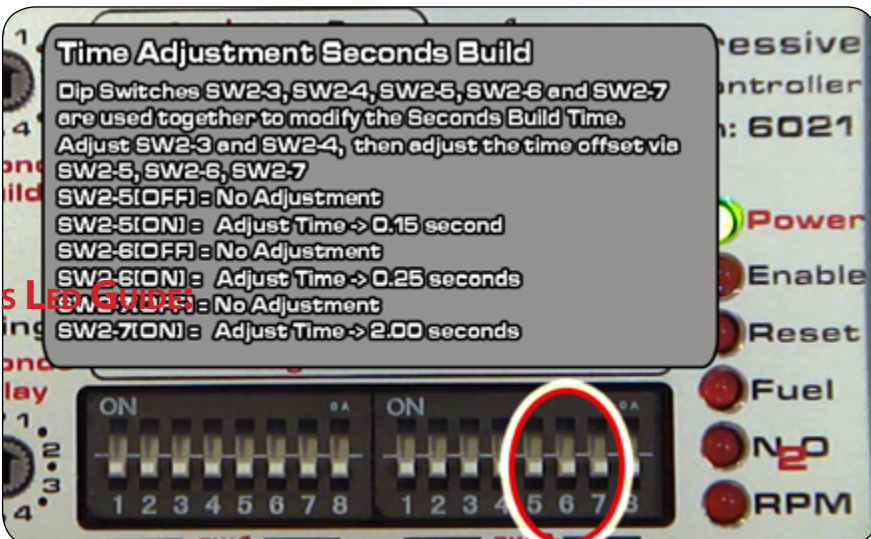
INCREMENT OR DECREMENT SECONDS BUILD

- Enter Main Configuration Mode.
- SW2-4 is used to Increment(add) or Decrement(subtract)
- SW2-4[OFF] (add) = Increment Seconds Build Time.
- SW2-4[ON] (subtract) = Decrement Seconds Build Time.
- Dip Switches SW2-3, SW2-4, SW2-5, SW2-6 and SW2-7 are all used together to modify the Seconds Build Time.
- SW2-3 must be enabled SW2-3 [ON] otherwise the settings in SW2-4, SW2-5, SW2-6 and SW2-7 will be ignored.
- SW 2-5, SW2-6 and SW2-7 define the adjustment value
- Continue configuring or Save Settings (SW1- 1 = OFF)



TIME ADJUSTMENT SECONDS BUILD

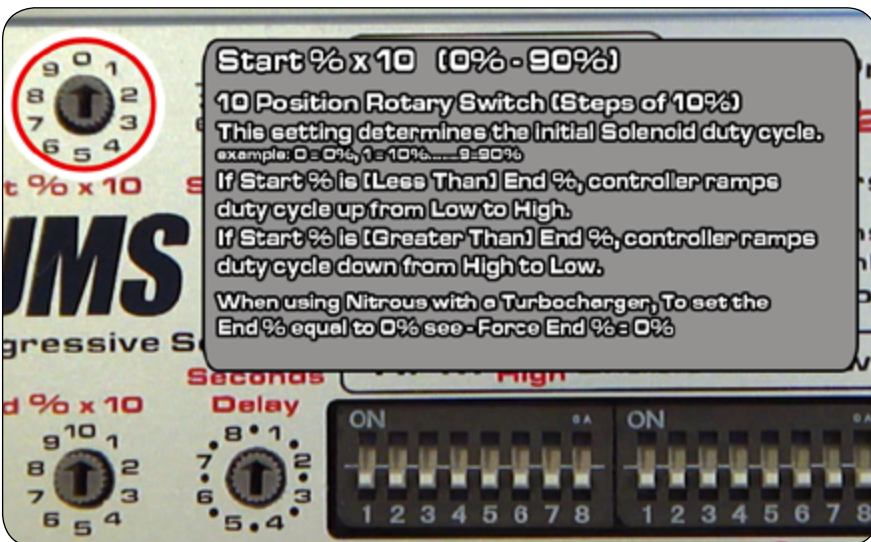
- Enter Main Configuration Mode.
- Dip Switches SW2-3, SW2-4, SW2-5, SW2-6 and SW2-7 are used together to modify the Seconds Build Time.
- Adjust SW2-3 and SW2-4, adjust time via SW2-5, SW2-6, SW2-7
- SW2-5[OFF] = No Adjustment
- SW2-5[ON] = Adjust Time -> 0.15 second
- SW2-6[OFF] = No Adjustment
- SW2-6[ON] = Adjust Time -> 0.25 seconds
- SW2-7[OFF] = No Adjustment
- SW2-7[ON] = Adjust Time -> 2.00 seconds
- Continue configuring or Save Settings (SW1- 1 = OFF)



STATUS LED GUIDE

START % x 10 (0% - 90%)

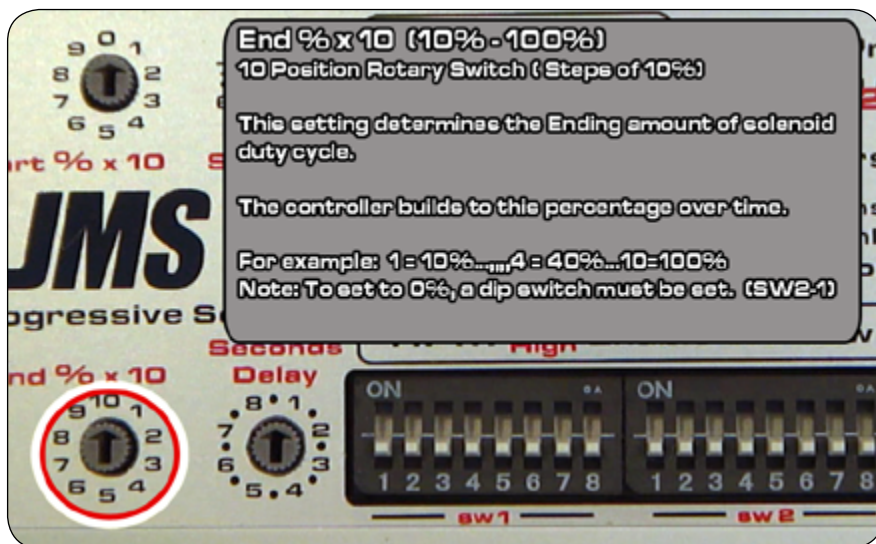
- Enter Main Configuration Mode.
- 10 Position Rotary Switch (Steps of 10%)
- This setting determines the initial Solenoid duty cycle. (0 = 0%, 1 = 10%.....9=90%)
- If Start % is [Less Than] End % the controller ramps duty cycle up from Low to High.
- If Start % is [Greater Than] End % the controller ramps duty cycle down from High to Low.
- When using Nitrous with a Turbocharger, To set the End % equal to 0% see - Force End % = 0%
- Continue configuring or Save Settings (SW1- 1 = OFF)



INSTALLATION INSTRUCTIONS - PN: NOS-6021

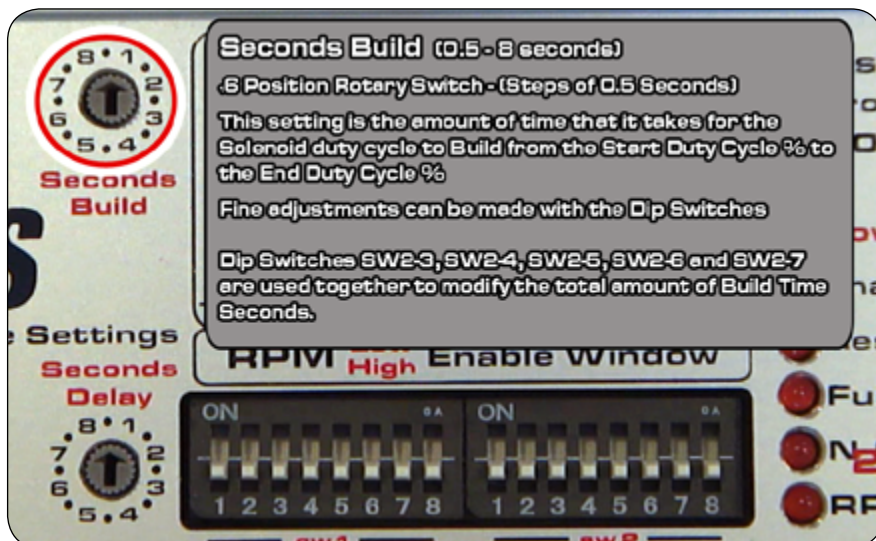
END % x 10 (10% - 100%)

- ➔ Enter Main Configuration Mode.
- ➔ 10 Position Rotary Switch (Steps of 10%)
- ➔ This setting determines the Ending Solenoid duty cycle. (1= 10%, 2 = 20%.....10= 100%)
- ➔ If Start % is **[Less Than]** End % the controller ramps duty cycle up from Low to High.
- ➔ If Start % is **[Greater Than]** End % the controller ramps duty cycle down from High to Low.
- ➔ When using Nitrous with a Turbocharger, To set the End % equal to 0% see - Force End % = 0%
- ➔ Continue configuring or Save Settings (SW1- 1 = OFF)



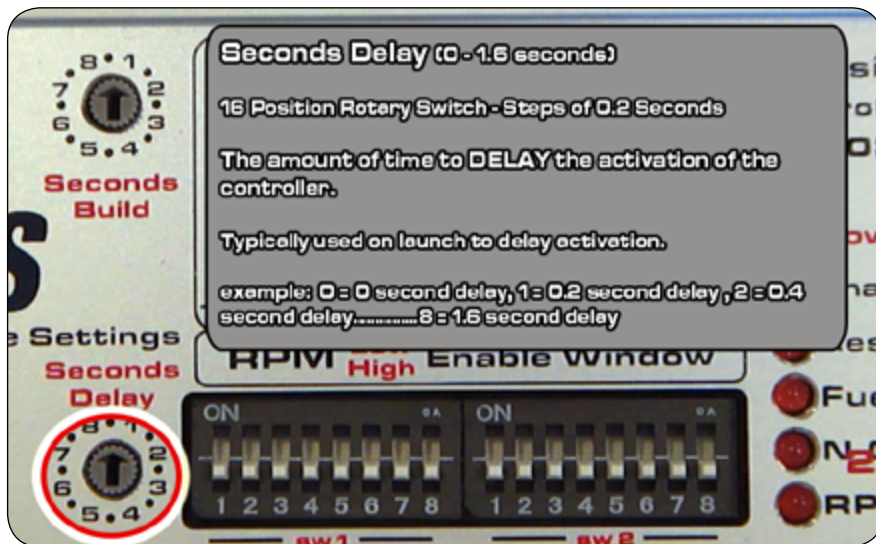
SECONDS BUILD (0.5 - 8 SECONDS)

- ➔ Enter Main Configuration Mode.
- ➔ 16 Position Rotary Switch (Steps of 0.5 Seconds)
- ➔ This setting is the amount of time that it takes for the Solenoid duty cycle to Build from the Start Duty Cycle % to the End Duty Cycle %
- ➔ Fine time adjustments can be made with the Dip Switches.
- ➔ Dip Switches SW2-3, SW2-4, SW2-5, SW2-6 and SW2-7 are used together to modify the Seconds Build Time.
- ➔ Continue configuring or Save Settings (SW1- 1 = OFF)



SECONDS DELAY (0 - 1.6 SECONDS)

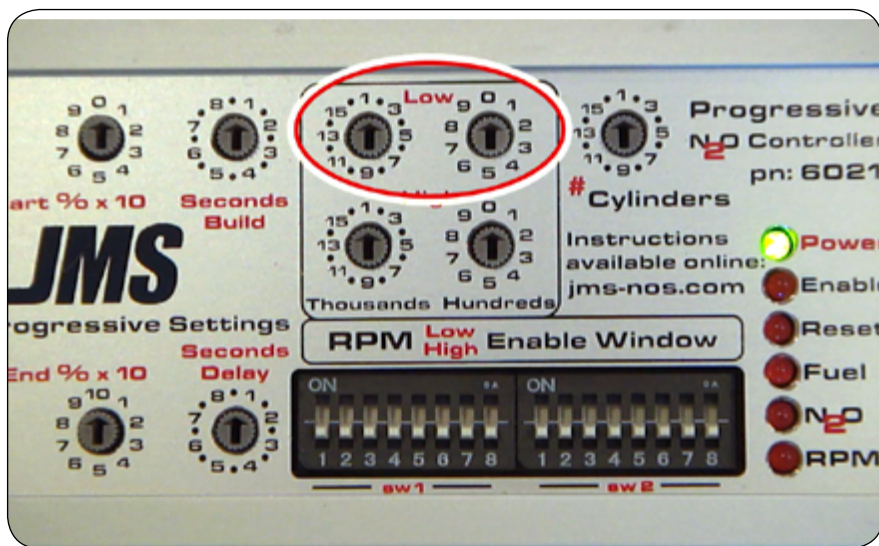
- ➔ Enter Main Configuration Mode.
- ➔ 16 Position Rotary Switch - Steps of 0.2 Seconds
- ➔ The amount of time to DELAY the activation of the controller.
- ➔ Typically used on launch to delay activation.
- ➔ example: 0 = 0 second delay, 1 = 0.2 second delay, 2 = 0.4 second delay.....8 = 1.6 second delay
- ➔ Continue configuring or Save Settings (SW1- 1 = OFF)



INSTALLATION INSTRUCTIONS - PN: NOS-6021

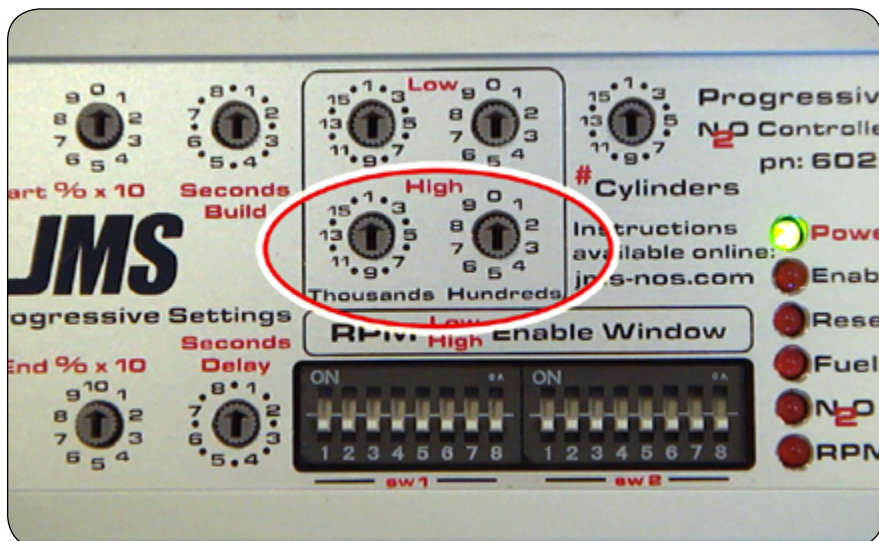
LOW RPM ACTIVATION (1000RPM TO 16,900RPM)

- Enter Main Configuration Mode.
- Left SW = 16 Position Rotary Switch - Steps of 1000 RPM
- Right SW = 10 Position Rotary Switch - Steps of 100 RPM
- An Engine RPM **lower** than this value will **DISABLE** the controller.
- NOS/Fuel solenoids are active when the Engine RPM is within the RPM window and at least one of the WOT enables are active.
- For the RPM Input to function correctly: Engine Type, # of Cylinders must be configured and the Tan RPM wire must be connected.
- Continue configuring or Save Settings (SW1- 1 = OFF)



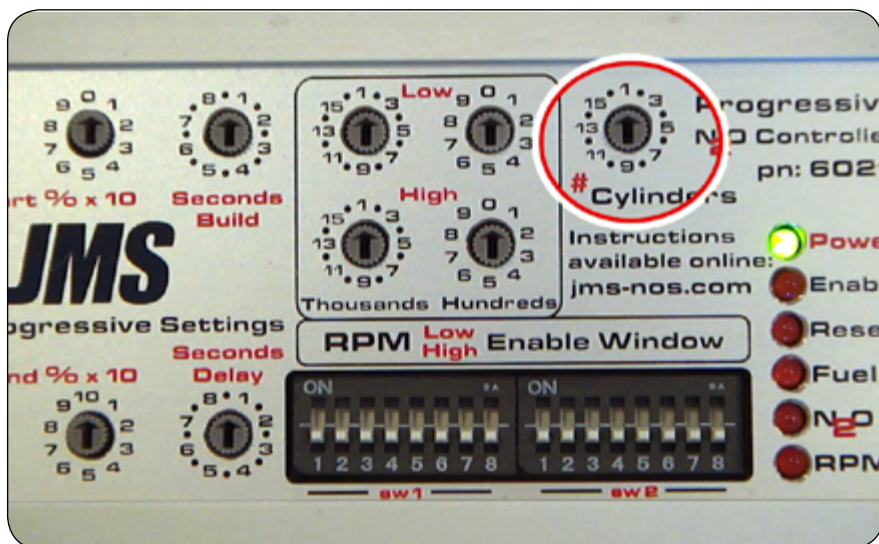
HIGH RPM ACTIVATION (1000RPM TO 16,900RPM)

- Enter Main Configuration Mode.
- Left SW = 16 Position Rotary Switch - Steps of 1000 RPM
- Right SW = 10 Position Rotary Switch - Steps of 100 RPM
- An Engine RPM **higher** than this value will **DISABLE** the controller.
- NOS/Fuel solenoids are active when the Engine RPM is within the RPM window and at least one of the WOT enables are active.
- For the RPM Input to function correctly: Engine Type, # of Cylinders must be configured and the Tan RPM wire must be connected.
- Continue configuring or Save Settings (SW1- 1 = OFF)



NUMBER OF CYLINDERS (1 - 16)

- Enter Main Configuration Mode.
- 16 Position Rotary Switch - Steps of 1 (cylinder)
- This setting will reflect the number of cylinders that you are monitoring via the TAN RPM Input wire.
- When monitoring a Single Sequential Fuel Injector or Coil On Plug Ignition: set this value to 1.
- If you have a V-8 engine and are monitoring a single Coil used on all 8 cylinders or the MSD Tach output: set this value to 8.
- If you have a 4 or 6 cylinder engine and are monitoring a single Coil used on all 4 or 6 cylinders or a MSD output: set this value to 4 or 6.
- Continue configuring or Save Settings (SW1- 1 = OFF)

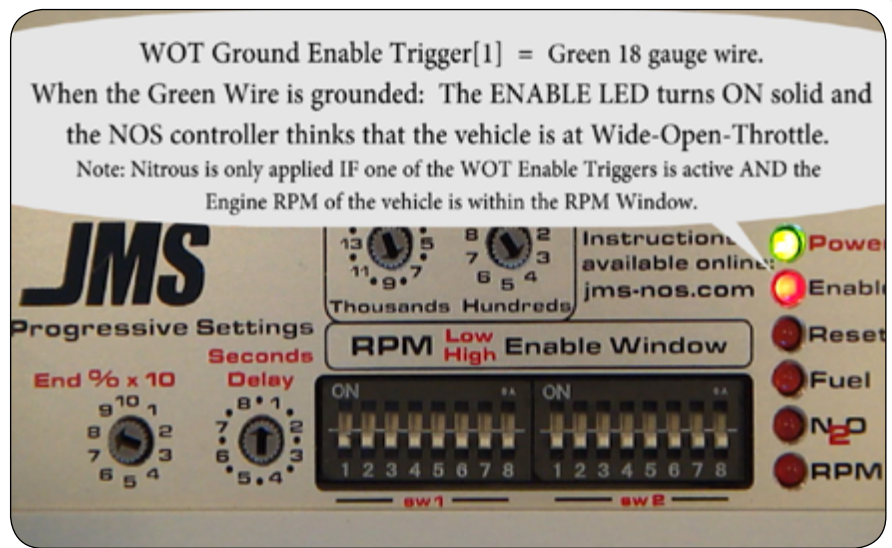


INSTALLATION INSTRUCTIONS - PN: NOS-6021

WIDE-OPEN-THROTTLE ENABLE TRIGGERS

WOT TRIGGER - 1 (GROUND ENABLE)

- Either WOT trigger can be used to indicate a WOT condition (Wide-Open-Throttle). Nitrous & Fuel Solenoids are enabled when the both vehicle is at WOT and the Engine RPM is within the RPM window.
- WOT Trigger - 1 is a GROUND ENABLE Trigger. The Ground Trigger does not require setup.
- When WOT Trigger - 1 is enabled, the Enable LED will be on Solid and the controller will think that the vehicle is at WOT. Typically the throttle is setup on a microswitch.
- Test this feature by powering up the controller and grounding the Green Wire. The Enable LED should be solid.



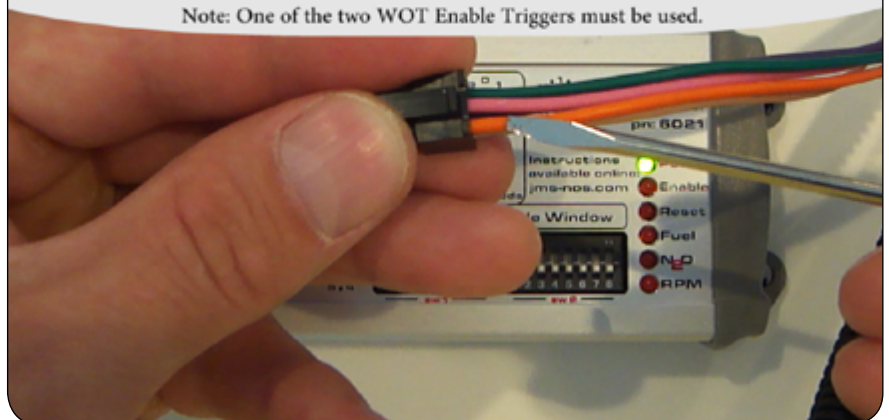
WIDE-OPEN-THROTTLE ENABLE TRIGGERS

WOT TRIGGER - 2 (0-5v ENABLE)

- Either WOT trigger can be used to indicate a WOT condition (Wide-Open-Throttle). Nitrous & Fuel Solenoids are enabled when both the vehicle is at WOT and the Engine RPM is within the RPM window.
- WOT Trigger - 2 is a 0-5v DC Voltage Enable Trigger.
- The Orange 18 gauge wire monitors the voltage of a TPS Sensor (Throttle Position Sensor).
- WOT Trigger - 2 is typically enabled when the TPS voltage exceeds the voltage programmed (rising voltage).
- The unit can also be programmed to enable when the TPS voltage falls below a programmed value (falling voltage)

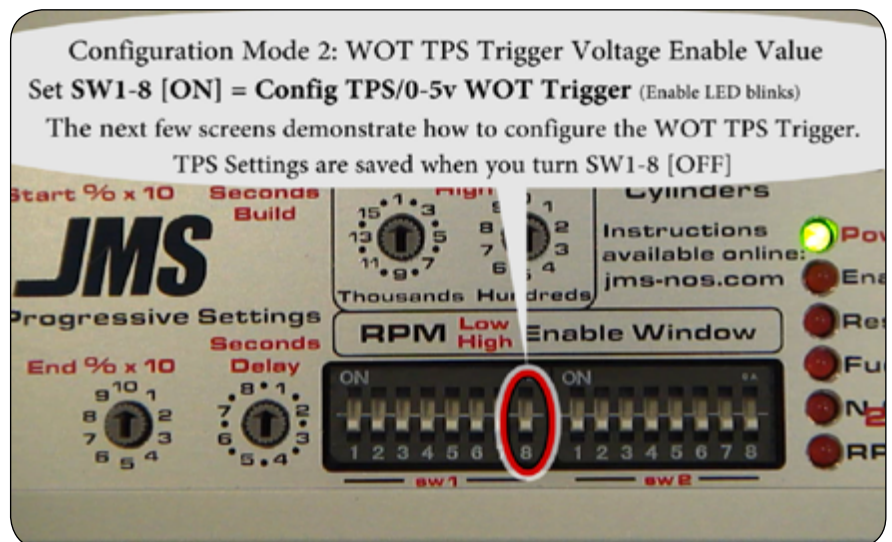
Orange 18 gauge wire = 0-5v Wide-Open-Throttle Enable Trigger 2
Optional - Connect to Throttle Position Sensor Output

Note: One of the two WOT Enable Triggers must be used.



TPS/0-5v WOT TRIGGER 2 CONFIGURATION

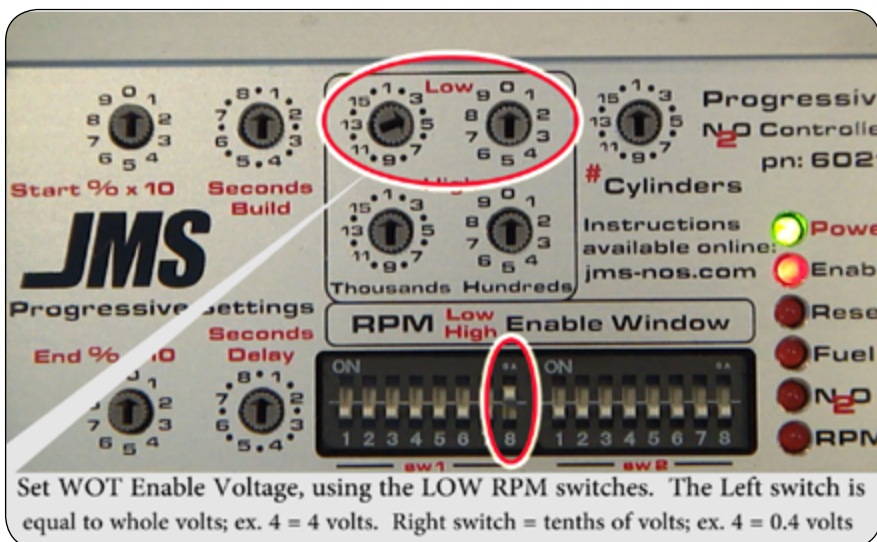
- Enter TPS WOT Trigger 2 Configuration Mode.
- Turn dip switch SW1-8 = ON
- Wait 1.5 seconds and the Enable LED will blink.
- While configuring, the NOS controller is disabled. It is unable to turn on the NOS/Fuel solenoid outputs until the settings are saved.
- Configure the rotary and dip switch settings.
- To save the TPS/0-5v WOT Trigger 2 Configuration settings:- turn off dip switch SW1-8 = OFF. The Enable LED will twinkle and the settings will be saved.



INSTALLATION INSTRUCTIONS - PN: NOS-6021

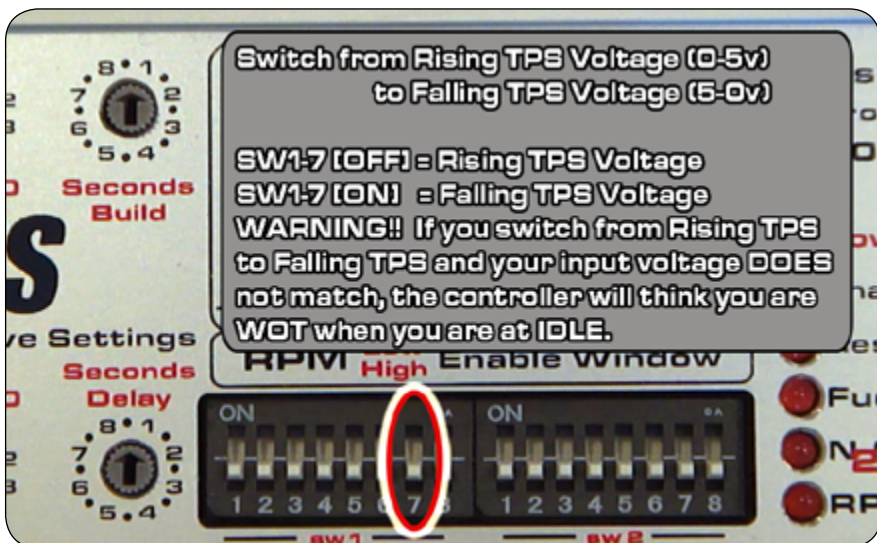
SET WOT TRIGGER - 2 ENABLE VOLTAGE

- ➔ Enter TPS WOT Trigger 2 Configuration Mode.
- ➔ The LOW RPM Window switches double as the WOT Enable Voltage values.
- ➔ Set the Left Switch equal to the whole volt value. Example 3 = 3 volts. A value set greater than 5V = 5.0v.
- ➔ Set the Right Low RPM Window switch value equal to the tenth of a volt value. Example: 5 = 0.5 volts.
- ➔ To set the enable voltage to 4.6 volts, the Left Low RPM Switch would be set to 4 and the Right Low RPM switch would be set to 6.
- ➔ To save the WOT Trigger 2 settings:: - turn off dip switch SW1-8 = OFF. The Enable LED will twinkle and the settings will be saved.



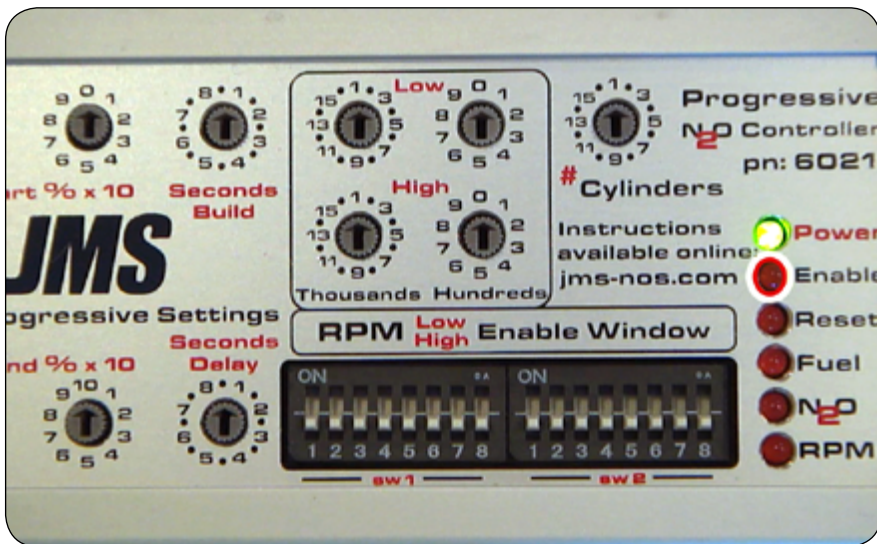
CONFIGURE VOLTAGE WOT TRIGGER 2 (RISE OR FALL)

- ➔ Enter TPS WOT Trigger 2 Configuration Mode.
- ➔ Switch from Rising TPS Voltage (0-5v) to Falling TPS Voltage (5-0v)
- ➔ SW1-7 [OFF] = Rising TPS Voltage
- ➔ SW1-7 [ON] = Falling TPS Voltage
- ➔ WARNING!! If you switch from Rising TPS to Falling TPS and your input voltage DOES not match, the controller will think you are WOT when you are at IDLE.
- ➔ Be sure that you know what you are doing before you enable SW1-7.
- ➔ To save the WOT Trigger 2 settings:: - turn off dip switch SW1-8 = OFF. The Enable LED will twinkle and the settings will be saved.



TEST THE WOT ENABLE TRIGGERS

- ➔ Test WOT Trigger 1 (if used) by powering up the controller and grounding the Green Wire. The Enable LED should be solid.
- ➔ Test WOT Trigger 2 (if connected and configured). Power the controller. Nitrous disconnected, with the vehicle's Engine and the Ignition Key set to the ON position. Depress the accelerator pedal to the WOT position (fully open the throttle).
- ➔ WOT Trigger 2 is working correctly if the Enable LED is blinking. Note: This test may not work correctly on a OEM ETC throttle body (It may not open to WOT with the engine off).



INSTALLATION INSTRUCTIONS - PN: NOS-6021

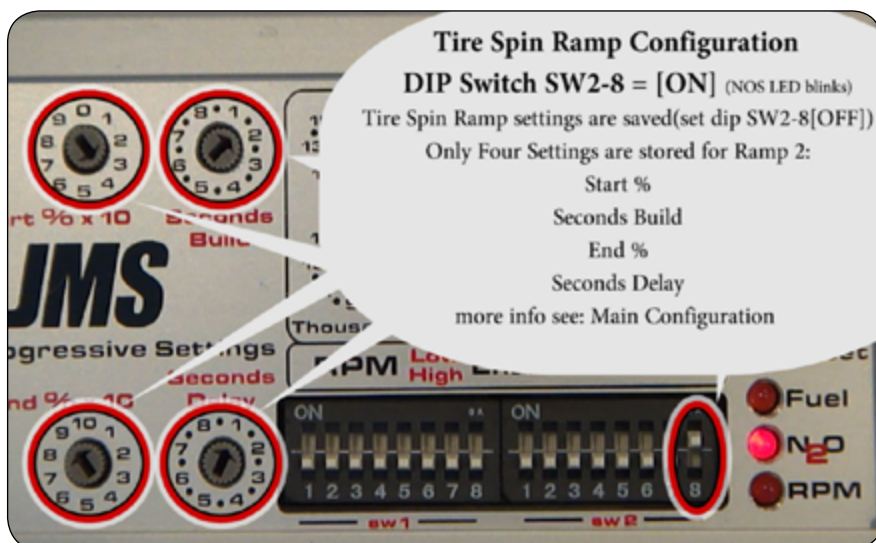
ENTER TIRE SPIN RAMP CONFIGURATION 3

- Turn Dip switch SW2-8 = ON
- Wait 1.5 seconds and the N2O LED will blink.
- While configuring, the NOS controller is disabled. It is unable to turn on the NOS/Fuel solenoid outputs until the settings are saved.
- Configure the rotary switch settings.
- To save Tire Spin Ramp 3 settings - turn off Dip switch SW2-8 = OFF. The N2O LED will twinkle and the settings will be saved



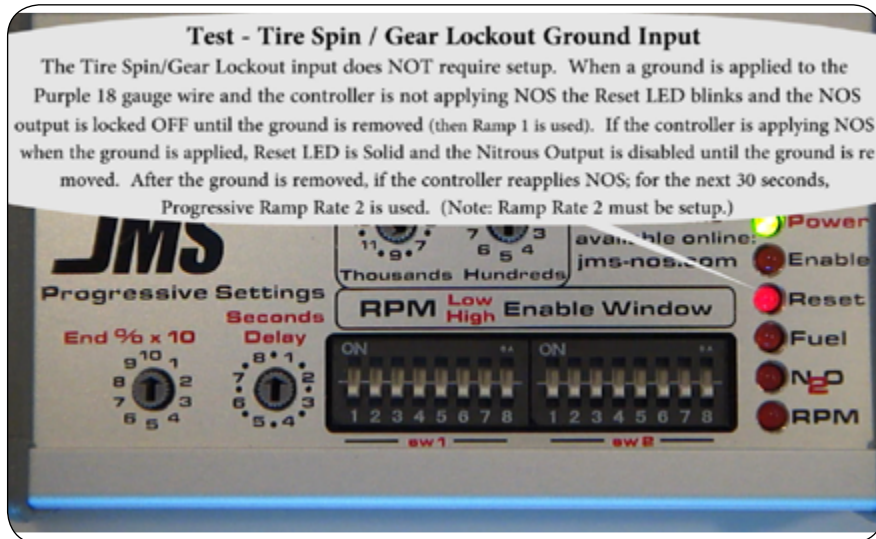
TIRE SPIN RAMP CONFIGURATION 3 SETUP

- Enter TPS WOT Trigger 2 Configuration Mode.
- Four settings can be adjusted and stored for Tire Spin Ramp 2.
- Start % x 10
- Seconds Build
- End % x 10
- Seconds Delay
- Each of these settings function in the same way for the Tire Spin Ramp as they do for the Main Ramp.
- After making the appropriate adjustments.
- Save Tire Spin Ramp 3 settings: - turn off dip switch SW2-8 = OFF. The N2O LED will twinkle and the settings will be saved



TEST -TIRE SPIN/GEAR LOCKOUT INPUT

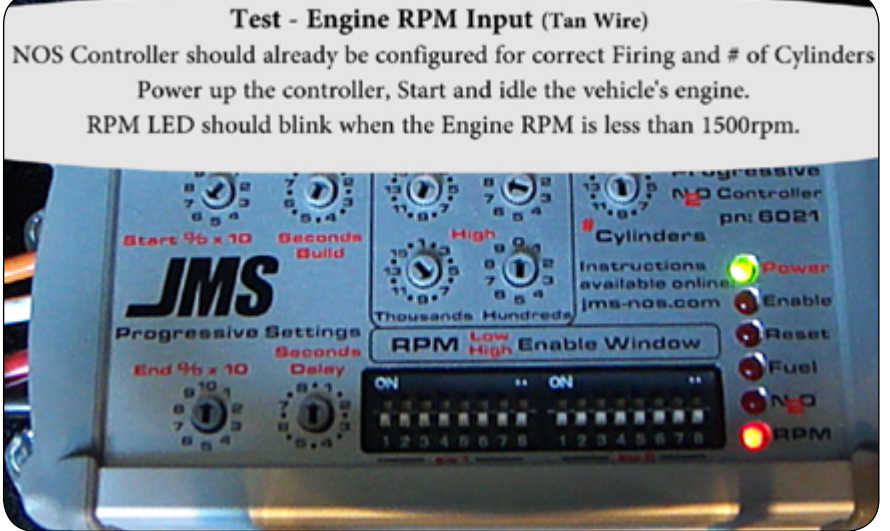
- The Tire Spin/Gear Lockout Input does not require setup.
- When a Ground is applied to the Purple 18 gauge wire and the Nitrous/Fuel Solenoids **are not** enabled, the controller is LOCKED OUT from turning on until the ground is removed. Reset LED has a SLOW Flash. When the ground is removed, the controller turns on and acts like normal (Ramp 1).
- When a Ground is applied to the Purple 18 gauge wire and the Nitrous/Fuel Solenoids **are** enabled and the controller is Disabled, until the ground is removed.. When the ground is removed, the controller turns on and utilizes the Tire Spin Ramp 2 over the next 30 seconds.



INSTALLATION INSTRUCTIONS - PN: NOS-6021

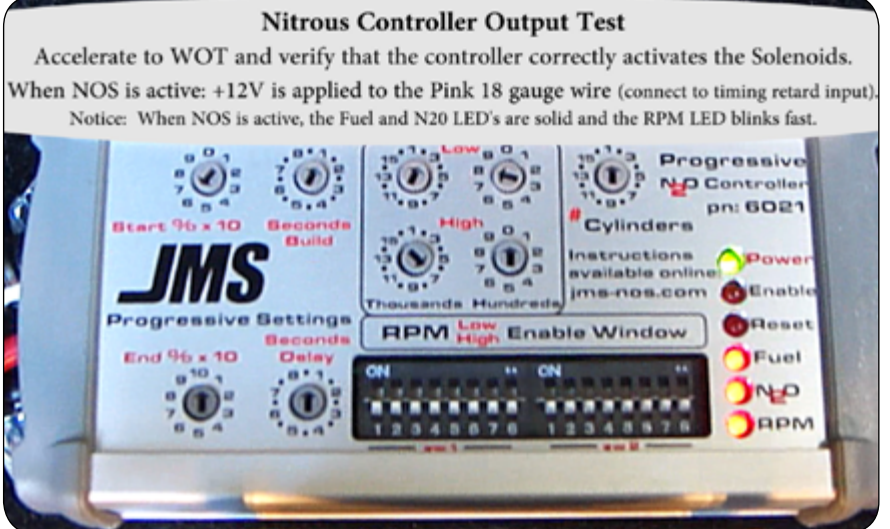
TEST - ENGINE RPM INPUT

- Nitrous Oxide source = OFF, Fuel source = OFF
- Start the engine and let the vehicle Idle
- When the Engine RPM is less than 1500rpm the RPM LED will blink.
- When the Engine RPM is greater than 1500rpm the RPM LED will be solid.
- If this is not the case, re-verify your configuration and setup.



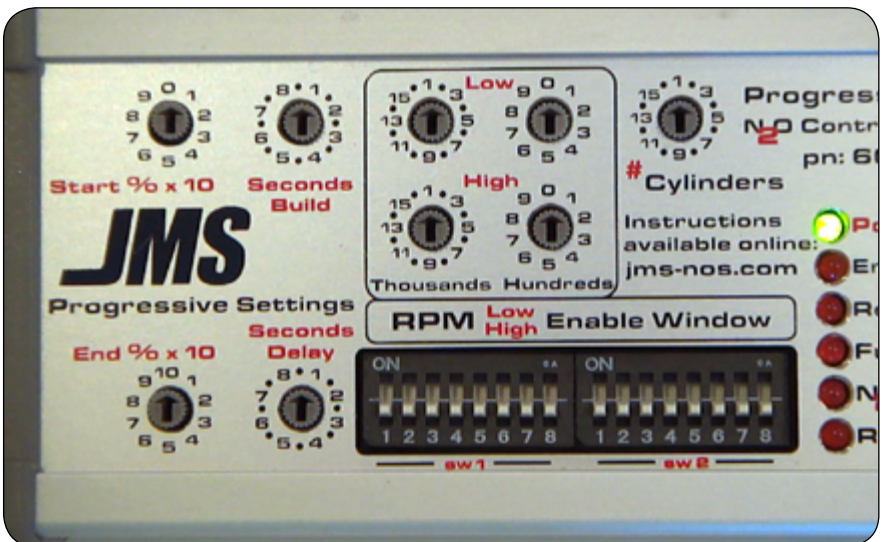
TEST - NITROUS CONTROLLER OUTPUT

- Nitrous Oxide source = OFF, Fuel source = OFF
- With the controller active, accelerate to WOT and verify that the controller functions as expected.
- The ENABLE LED should activate when the vehicle is at WOT.
- When the vehicle is at WOT and the RPM is within the defined RPM window the FUEL and N₂ LED's should be ON solid.
- When the FUEL and N₂ LED's are solid the timing retard wire will have +12v applied. This wire should be connected to an aftermarket ignition box timing retard input.



NITROUS CONTROLLER CUT-OFF

- The Nitrous Controller is designed to turn off after 130 seconds of continuous use.
- After the cut-off occurs, the controller can be used immediately if you re-enable the inputs.



INSTALLATION INSTRUCTIONS - PN: NOS-6021**STATUS LED GUIDE:**

Power GREEN LED - When the NOS Controller has power, the Power LED has a solid light output.

Enable RED LED - Four potential states:

- OFF = WOT Indication Enable is not enabled
- ON Solid = Enable input is grounded - GREEN WIRE, 18 GAUGE
- Slow Flash = 0-5v TPS Input Voltage is Enabled **or** Configuring TPS Voltage 0-5v . - ORANGE WIRE, 18 GAUGE
- Twinkle = When saving the TPS voltage values, the Enable LED Twinkles while the values are saved

Reset RED LED - Three potential states:

- OFF = Reset/Tire Spin is not enabled
- ON Solid = Tire Spin/Gear Lockout input grounded and the Measured RPM was greater than the Low RPM Window Switch value - PURPLE WIRE, 18 GAUGE; TURNS OFF NOS OUTPUT, WHEN RE-ENGAGED; RAMP RATE 2 IS ACTIVE FOR: 30 SECONDS
- Slow Flash = Tire Spin/Gear Lockout input grounded and the Measured Engine RPM was lower than the Low RPM Window Switch value - PURPLE WIRE, 18 GAUGE; LOCKS OUT CONTROLLER ACTIVATION, WHEN ENGAGED; RAMP RATE 1 IS USED

Fuel RED LED - Four potential states:

- OFF = No solenoid output
- ON Solid = NOS Active - Fuel Solenoid Ground Output Enabled
- Slow Flash = Programming main configuration/ramp 1 values
- Twinkle = Saving main configuration/ramp 1 values

N2O RED LED - Three potential states:

- OFF = No solenoid output
- ON Solid = NOS Active - NOS Solenoid Ground Output Enabled
- Slow Flash = Programming ramp 2 values
- Twinkle = Saving ramp 2 values

RPM RED LED - Four potential states:

- OFF = No RPM input
- Slow Flash = measured vehicle rpm is less than 1500rpm
- ON Solid = measured vehicle rpm is greater than 1500rpm
- Fast Flash = NOS Active

WIRE COLOR GUIDE:**HEAVY GAUGE WIRES:**

+12V Power - Red (10 GAUGE)

Ground - Black (10 GAUGE)

NOS Solenoid Pulsed Ground - White (12 GAUGE)

Fuel Solenoid Pulsed Ground - Orange (12 GAUGE)

SIX WIRE CONNECTOR:

Pin 1 - Enable Circuit 1 (GROUND ENABLE) - Green (18 GAUGE)

Pin 2 - Tire Spin/Gear Lockout - Purple (18 GAUGE)

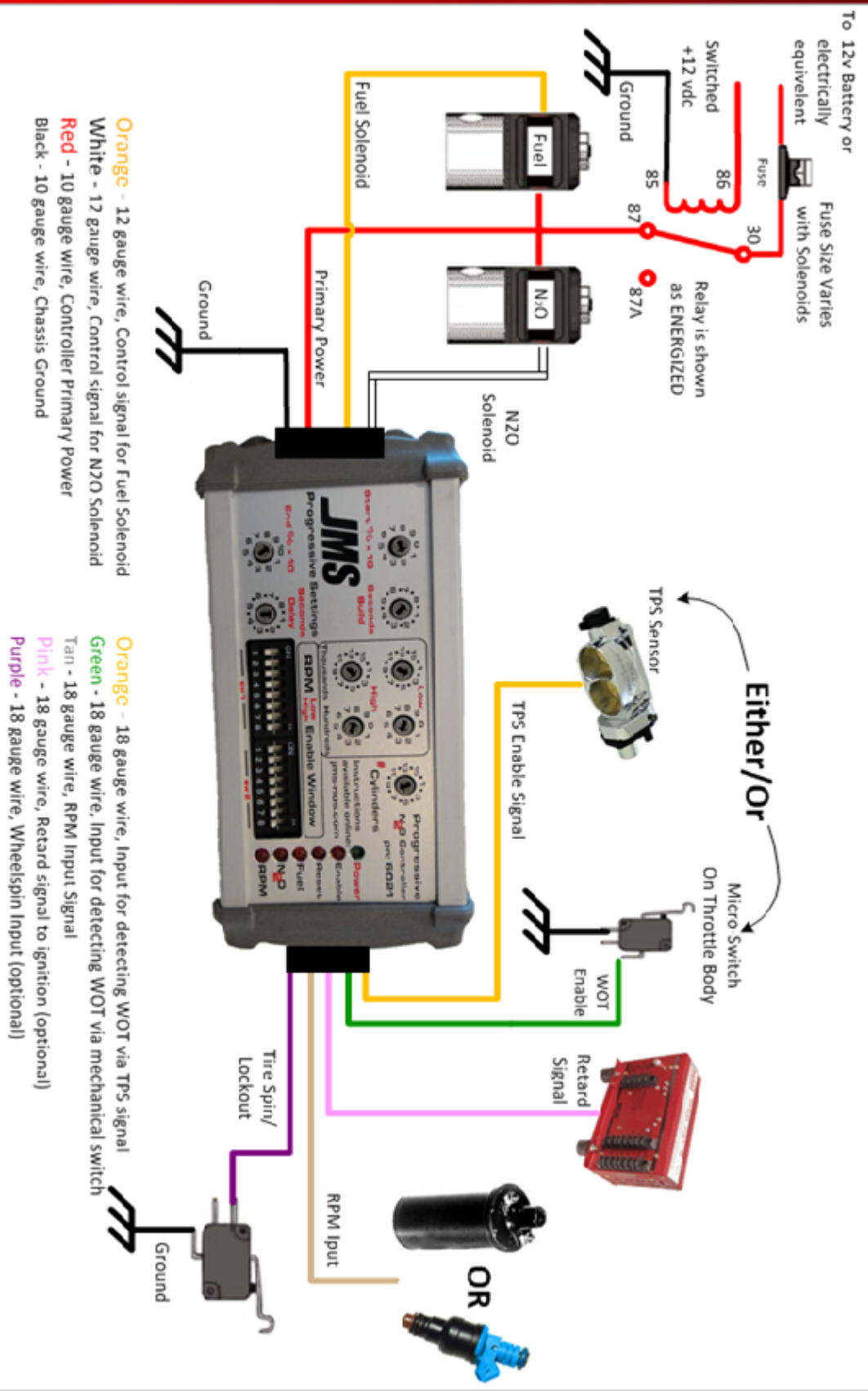
Pin 3 - Primary Engine Coil Input (RPM) - Tan (18 GAUGE)

Pin 4 - Enable Circuit 2 (0-5V ENABLE) - Orange (18 GAUGE)

Pin 5 - Timing Retard +12v Output - Pink (18 GAUGE)

Pin 6 - Not used

INSTALLATION INSTRUCTIONS - PN: NOS-6021



Orange - 12 gauge wire, Control signal for Fuel Solenoid
White - 12 gauge wire, Control signal for N2O Solenoid
Red - 10 gauge wire, Controller Primary Power
Black - 10 gauge wire, Chassis Ground

Orange - 18 gauge wire, Input for detecting WOT via TPS signal
Green - 18 gauge wire, Input for detecting WOT via mechanical switch
Tan - 18 gauge wire, RPM Input Signal
Pink - 18 gauge wire, Retard signal to ignition (optional)
Purple - 18 gauge wire, Wheelspin Input (optional)

INSTALLATION INSTRUCTIONS - PN: NOS-6021**WARRANTY:****JMS warrants to the original purchaser the following:**

The product Progressive N2O Controller NOS-6021 will be free from defects in materials and or workmanship for a period of six months from the original purchase date. The warranty only covers the product itself and not the cost of removal and re-installation.

Specific conditions that will void the product warranty:

If the product has been opened, modified or repaired.

If the product was not installed or used correctly.

If the product has been tampered with by: negligence, misuse or accident.

If the product is returned without explanation of the problem or Return Authorization.

Contact JMS @ 601-766-9424 for a Return Authorization Number. All warranty returns should be returned freight pre-paid and include inside the box: proof of purchase and a letter that contains a clear explanation of the exact problem. The Return Authorization Number should be clearly written on the outside of the box.

Send all returns to: JMS 3247 HWY 63 S, Lucedale, MS 39452

JMS Chip & Performance LLC is not liable for any and all consequential damages arising from the breach of any implied or written warranty in regards to the sale of this product, in excess of the purchase price.

SERVICE:**If your Progressive N2O Controller (NOS-6021) needs service.**

Please contact JMS @ 601-766-9424 for a Return Authorization. All service returns should be sent freight pre-paid to: JMS 3247 HWY 63 S, Lucedale, MS 39452. The Return Authorization number clearly written on the outside of the box and a letter should be included in the box that contains a clear explanation of the exact problem.

CONTACT INFORMATION:

JMS 3247 Hwy 63 S, Lucedale, MS 39452

601-766-9424

Technical Support Hours: Monday - Friday 9:00am - 5:00pm (Central Standard Time)

Configuration and installation videos are available online: www.jms-nos.com.

If you have any questions, please contact JMS technical support via email: jms@jmschip.com

Follow JMS on FaceBook: www.facebook.com/jmschips

JMS on YouTube: www.youtube.com/jmschip

JMS Website: www.jmschip.com