

NPC-1006 Progressive Controller

User Manual



Boogie Box

Important—if using the Throttle Position Input for activation refer to Wiring Diagram #3.

Induction Solutions

16121 Flight Path Dr
Brooksville, FL 34604

352-593-5900 Phone
352-593-5901 Fax

email: info@inductionsolutions.com

What is Included with the NPC-1006 kit.

NPC-1006 Nitrous Controller.

Wiring Harness with sealed automotive connectors.

Installation hardware kit.

User Manual

Important Information - When using a conventional style ignition coil (Not Coil on Plug) you must use Static Suppression Ignition Wires with this Controller.

Caution - Do NOT submerge Controller in liquid or directly wash unit with liquid of any type! (Do NOT spray when washing vehicle!)

It is the responsibility of the purchaser to follow all guidelines and safety procedures supplied with this product and any other manufactures product used with this product. It is also the responsibility of the purchaser to determine compatibility of this device with the vehicle and other components.

Induction Solutions assumes no responsibility for damages resulting from accident, improper installation, misuse, abuse, improper operation, lack of reasonable care, or all previously stated reasons due to incompatibility with other manufacturer's products.

Induction Solutions assumes no responsibility or liability for damages incurred from the use of products manufactured or sold by Induction Solutions on vehicles used for competition racing. Induction Solutions neither recommends nor approves the use of products manufactured or sold by Induction Solutions on vehicles which may be driven on public highways or roads, and assumes no responsibility for damages incurred from such use.

It is the purchaser's responsibility to check the state and local laws pertaining to the use of Nitrous Oxide for racing applications. Induction Solutions does not recommend nor condone the use of its products for illegal street racing.

Warranty

Induction Solutions warrants to the original purchaser that the controller shall be free from defects in parts and workmanship under normal use for 180 days from the date of purchase.

Induction Solutions obligation under this warranty is limited to the repair or replacement of any component found to be defective when returned postpaid to Induction Solutions. The Controller must be returned with evidence of place and date of purchase or warranty will be void. The warranty will not apply if the controller has been installed incorrectly, repaired, damaged, or tampered with by misuse, negligence or accident.

Contents

User Interface

Main Screen and User Interface Overview	Page 5
Drop Down Menu Overview	Page 6
Slider Bar, Value Adjust Overview	Page 6
Solenoid Output Graph Setup Overview	Page 7
Using the Integrated Help	Page 8
Viewing Help Text	Page 8

Setup Menu

Current Setup	Page 9
Hold & Wait	Page 9
Main Timer	Page 9
Tach Pulse Count	Page 10
Trans Brake Input Delay	Page 10
RPM Window Enable	Page 10
Minimum RPM	Page 11
Maximum RPM	Page 11
TPS (Throttle Position Sensor) Input Setup	
TPS Activation Enable	Page 11
Activation Percent	Page 11
Program TPS Voltage	Page 12
TPS Closed Voltage (Manually adjust voltage)	Page 12
TPS WOT Voltage (Manually adjust voltage)	Page 12
Help Text Enable/Disable	Page 13
Factory Reset	Page 13

Output1 Menu

Output1 Ramp Setup	
Graph View-Setup	Page 13
Copy Setup to Output2	Page 13
Number of Ramps	Page 14
Start Percent	Page 14
Ramp(x) Time	Page 14
Ramp(x) End Percent	Page 14
Output1 Delay	Page 15
Output1 Frequency	Page 15
Output1 Resume Percent	Page 15
Output1 Resume Percent Per Pulse	Page 15

Output2 Menu

Output2 Setup	Page 15
---------------	---------

Timer Menu

Timer1 Setup	Page 16
Timer1 Sync	Page 16
Activation input Enable	Page 16
Trans Brake input Enable	Page 17
Delay Timer Enable	Page 17
Timer On Delay	Page 17
Timer Off Delay	Page 17
RPM Control Enable	Page 17
On RPM	Page 18
Off RPM	Page 18
Timer2 Setup	Page 18

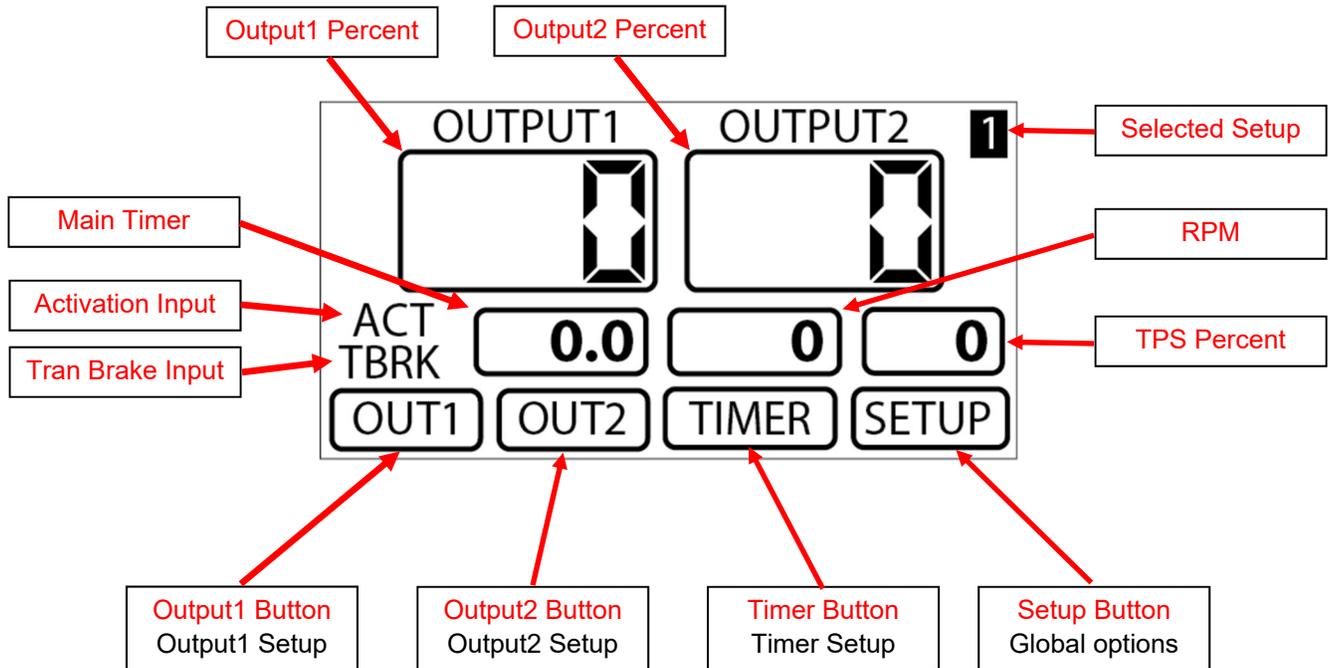
Controller Installation

Wiring Diagrams	Page 19, 20
Transmission Brake/Clutch Input Wiring	Page 21
RPM/Tachometer Input Wiring	Page 21
Timer1 +12 Volt Output Wiring	Page 22
Timer2 +12 Volt Output Wiring	Page 22
Throttle Position Sensor	Page 22

Electrical Specifications

Normal Operating Voltage:	10 to 16 volts.
Solenoid Output Maximum Current:	35 amps maximum.
Timer Output Maximum Current:	1 amp with .015 amp pulldown to ground when off.
Activation Input:	8 to 16 volts @ .04 to .08 amps respectively.
Throttle Position/Analog Input:	0 to 5 volts normal operating range, maximum 20 volt tolerant.
Tach/RPM Input:	5 to 16 volts square wave signal.

Main Screen and User Interface Overview



Output1 Percent—Readout that displays current Output1 duty cycle percentage.

Output2 Percent—Readout that displays current Output2 duty cycle percentage.

Main Timer—Main timer count, this timer starts when the controller is activated.

Activation Input—Activation input status, background and text colors invert when input is On.

Trans Brake Input—Transmission brake / Clutch switch input status, background and text colors invert when input is On.

Selected Setup—Readout that displays the selected setup.

RPM—Engine rpm, use to verify correct rpm input settings.

TPS Percent—Throttle position sensor percentage. Will only be active if the TPS is setup correctly.

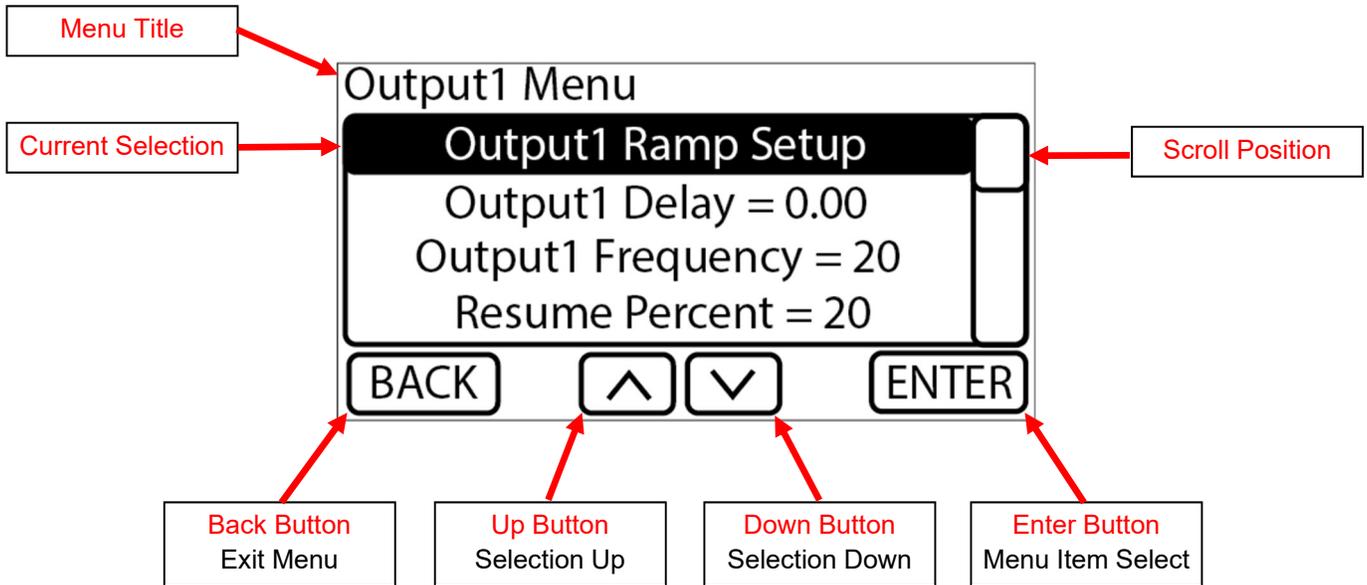
Output1 Button—Open the Output1 setup menu.

Output2 Button—Open the Output2 setup menu.

Timer Button—Open the Timer setup menu.

Setup Button—Open the Setup menu, all settings in this menu are global and are not changed when a new Setup is selected.

Drop Down Menu Navigation



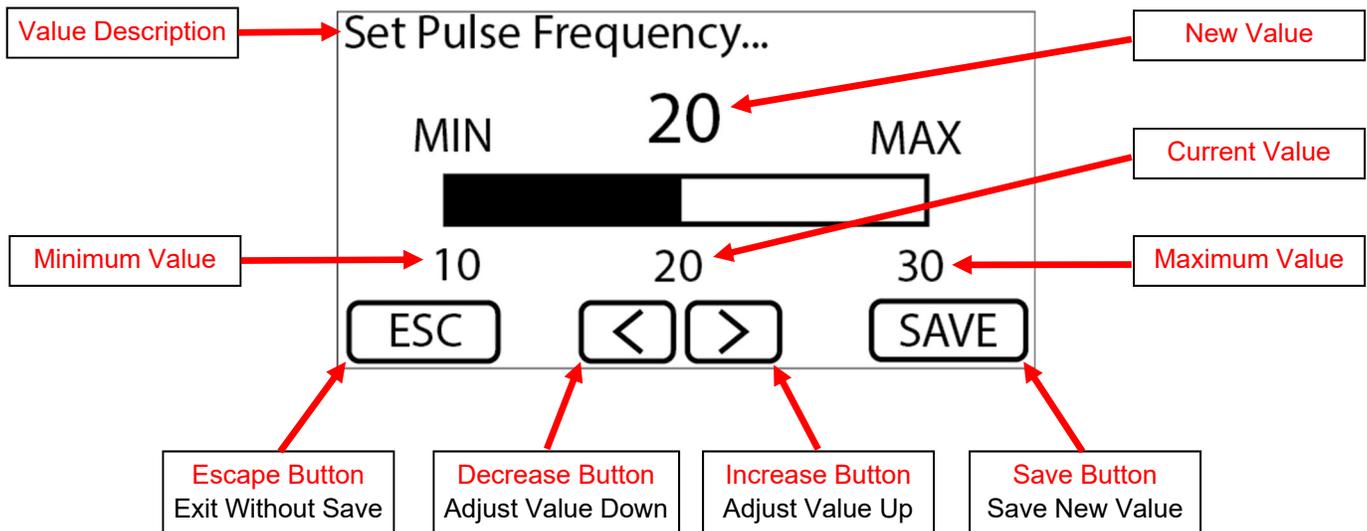
Back Button—use this button to go back or exit to previous screen.

Up Button—use this button to move the highlighted menu item up.

Down Button—use this button to move the highlighted menu item down.

Enter Button—use this button to select the highlighted menu item.

Slider Bar, Value Adjust Overview



Escape Button—use this button to exit without saving.

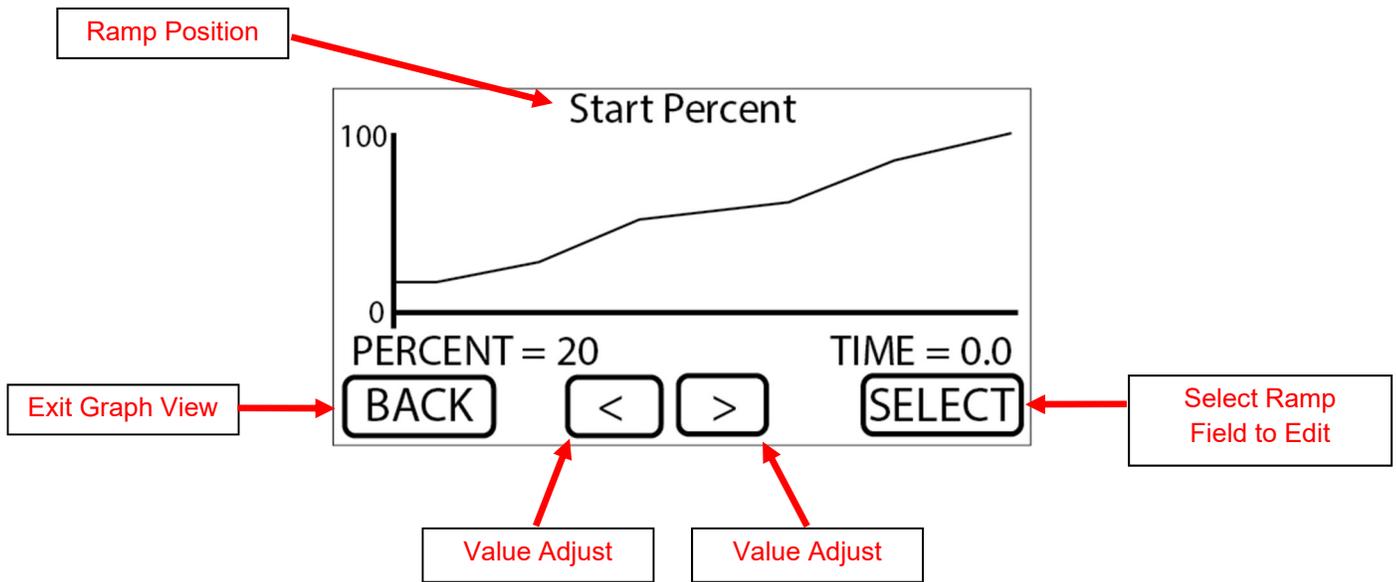
Decrease Button—use this button to decrease value.

Increase Button—use this button to increase value.

Save Button—use this button to save new value and exit.

Helpful Hint—press and hold the decrease or increase button for large value changes.

Solenoid Output Graph View Navigation



Select ramp position to edit.

- 1—make sure SELECT button reads SELECT, if not press the button until it reads SELECT.
- 2—use the left and right arrow keys to move the cursor between the ramp positions. The ramp position readout will change and display the current ramp position.

Adjust ramp position percentage.

- 1—press the SELECT button until it reads PERCENT.
- 2—use the left button to adjust the percentage down and the right button to adjust the percentage up.

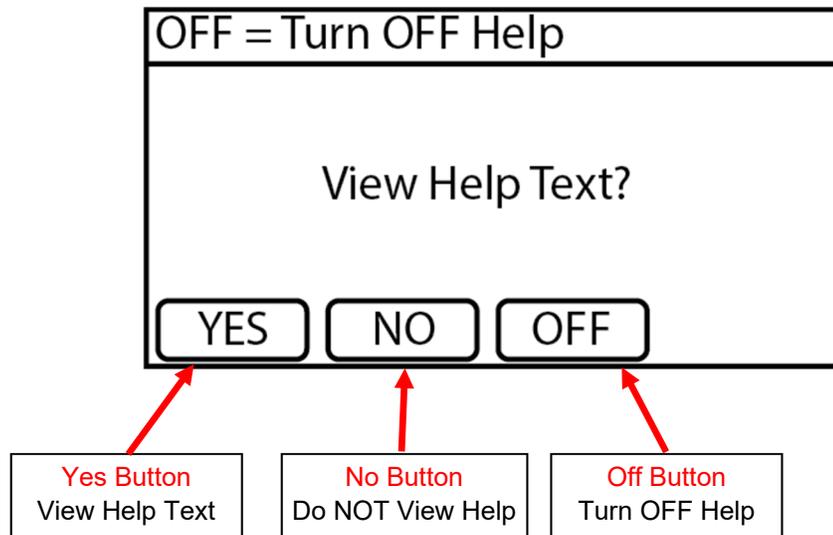
Adjust ramp position time.

- 1—press the SELECT button until it reads TIME.
- 2—use the left button to decrease ramp position time and the right button to increase.

Saving changes.

- 1—press the BACK button.
- 2—if any changes have been made to the solenoid output ramp you will be prompted to confirm setting save.

Using the Integrated Help



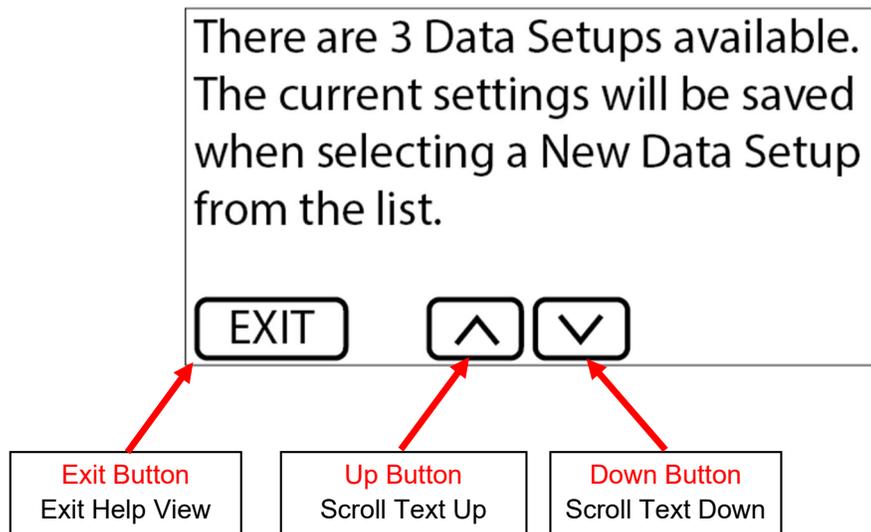
Yes Button—use this button to view help text associated with the current menu selection.

No Button—use this button to decline viewing help text.

Off Button—use this button to turn Off this screen for all menu selections.

Important—the help system may be turned On/Off using the “SETUP” menu from the main screen.

Viewing Help Text



Exit Button—use this button to exit the help view screen.

Up Button—use this button to scroll the help text up.

Down Button—use this button to scroll the help text down.

Setup Menu—Current Setup

There are 3 Data Setups available. The current settings will be saved when selecting a New Data Setup from the list. This way multiple User Setups can be stored and recalled at a later time.

Example - you have a Setup that is working well, you decide that you would like to try a few different settings. You could then Select and Copy current Setup Data to a New Setup and make changes without losing the original setup.

- 1—Press the SETUP button from the main screen.
- 2—Highlight the Current Setup menu selection and press the ENTER button. (If Help is on choose option)
- 3—Highlight the setup you would like to switch to and press the ENTER button.
- 4—Choose if you would like to copy the current settings to the new setup.
- 5—Press the BACK button to return to the main screen.

Important—all of the settings in the Setup menu are global. These settings are not copied or changed when selecting a new Setup.

Setup Menu—Hold & Wait

Hold & Wait Option - This setting allows the Progressive system to Hold & Wait when the Activation signal is removed. Example - the throttle is lifted due to wheel spin or ? This allows the Progressive system to resume at the point where the throttle was lifted. Hold & Wait is enabled by default from the factory.

Note—If this option is OFF the Progressive system and All Timers will reset each time the Activation is removed. Also the Resume ramp is disabled for each output.

- 1—Press the SETUP button from the main screen.
- 2—Highlight the Hold & Wait menu selection and press the ENTER button. (If Help is on choose option)
- 3—Choose YES or NO to enable or disable the option.
- 4—Press the BACK button to return to the main screen.

Setup Menu—Main Timer

Main Timer - This setting controls the Main Timer period. This controls the total time elapsed before a System Timeout occurs. This limits the total amount of time the solenoids can be On if the Activation signal is never removed. This setting also allows the system to be used with Hold & Wait option and the Progressive Timers will reset after the Timeout Period has elapsed and the Activation signal is removed. This enables a Reset without powering the unit down.

This setting is in Seconds with a range of 20 to 300 seconds. Factory setting is 20 seconds and a longer timeout period would be used in special cases such as speed records.

- 1—Press the SETUP button from the main screen.
- 2—Highlight the Main Timer menu selection and press the ENTER button. (If Help is on choose option)
- 3—Adjust the value as desired. (See “Slider Bar, Value Adjust Overview”)
- 4—Press the BACK button to return to the main screen.

Setup Menu—Tach Pulse Count

Tach Input Pulse Per Revolution - this setting determines the number of Tach Pulses per revolution of the crankshaft.

Example - if the Tach Signal input is connected to a common V8 engine multi-spark ignition controller a setting of 4 Pulse per Revolution would be used.

Common settings are,

- 1 Pulse per Two Revolutions = modern coil on plug systems with white wire connected to single coil wire.
- 1 Pulse per Revolution = single cylinder engine and some twin cylinder motorcycle engines.
- 2 Pulse per Revolution = 4 cylinder car and motorcycle engines.
- 3 Pulse per Revolution = 6 cylinder engines.
- 4 Pulse per Revolution = 8 cylinder engines.

- 1—Press the SETUP button from the main screen.
- 2—Highlight the Pulse Per Rev menu selection and press the ENTER button. (If Help is on choose option)
- 3—Highlight the Pulse per Rev setting desired and press the ENTER button to save.
- 4—Press the BACK button to return to the main screen.

Setup Menu—Trans Brake Input Delay

Trans Brake/Clutch Input Delay Timer - this setting controls how long the Trans Brake/Clutch input must be On before accepting the signal. The clutch input hold delay setting is ignored until the controller is Activated. Before the controller is Activated the clutch input is recognized in real time with no delay. This setting could be used to ignore shifts with a manual transmission (1 second) or a very low setting would act as noise filter to ignore spurious signals (.005 second). If a clutch input signal is received and accepted after the controller is activated the system will turn off the progressive system and timers. This would allow the nitrous to be turned Off during a shift and resumed when the clutch is released.

- 1—Press the SETUP button from the main screen.
- 2—Highlight the Tbrake In Delay menu selection and press the ENTER button. (If Help is on choose option)
- 3—Adjust the value as desired. (See “Slider Bar, Value Adjust Overview”)
- 4—Press the BACK button to return to the main screen.

Setup Menu—RPM Window Enable

Enable RPM control - this setting enables a RPM Window function for both Outputs.

NOTE - If the RPM window feature is enabled and the engine is not running the solenoids can be dry fired for testing. Once an RPM signal is present the solenoids will only fire at the desired RPM range.

- 1—Press the SETUP button from the main screen.
- 2—Highlight the RPM Window (ON/OFF) menu selection and press the ENTER button. (If Help is on choose option)
- 3—Choose YES or NO to enable or disable the option.
- 4—Press the BACK button to return to the main screen.

Setup Menu—Minimum RPM

Minimum RPM - this setting controls the minimum engine RPM that must be achieved before Outputs will turn On. A setting of 0 will disable the Minimum RPM function and the Maximum RPM setting will be used to turn off the Outputs if the engine RPM exceeds the setting.

- 1—Press the SETUP button from the main screen.
- 2—Highlight the Minimum RPM menu selection and press the ENTER button. (If Help is on choose option)
- 3—Adjust the value as desired. (See “Slider Bar, Value Adjust Overview”)
- 4—Press the BACK button to return to the main screen.

Setup Menu—Maximum RPM

Maximum RPM - this setting controls the maximum engine RPM that the Outputs remain On. When the engine RPM exceeds this setting The Outputs will be turned Off. The Maximum RPM must be at least 100 RPM greater than the Minimum RPM setting.

- 1—Press the SETUP button from the main screen.
- 2—Highlight the Maximum RPM menu selection and press the ENTER button. (If Help is on choose option)
- 3—Adjust the value as desired. (See “Slider Bar, Value Adjust Overview”)
- 4—Press the BACK button to return to the main screen.

Setup Menu—TPS (Throttle Position Sensor) Input Setup

TPS Activation option - this feature allows the throttle position sensor input to control system activation.

Important—The Activation Input must also be used even if this option is selected and use wiring diagram #3.

- 1—Press the SETUP button from the main screen.
- 2—Highlight the TPS Input Setup menu selection and press the ENTER button.
- 3—Highlight the TPS Activation is (ON/OFF) menu selection and press the ENTER button. (If Help is on choose option)
- 4—Choose YES or NO to enable or disable the option.
- 5—If turning this option On you must program and/or set the TPS closed and wide open voltages before the controller will activate.

Note—the TPS voltage must have a minimum span of 2.5 volts between the closed setting and the wide open throttle setting. The voltage can sweep up or down. Once the setup is complete the TPS position will be calculated and displayed as a percentage with a range of 0 to 100%.

Setup Menu—TPS Input Setup—Activation Percent

TPS Activation Percent - this setting determines the TPS percent at which system activation will occur. The “Activation Input” must be ON as well.

Note—recommended setting is 90%.

- 1—Press the SETUP button from the main screen.
- 2—Highlight the TPS Input Setup menu selection and press the ENTER button.
- 3—Highlight the Activation % menu selection and press the ENTER button. (If Help is on choose option)
- 4—Adjust the value as desired. (See “Slider Bar, Value Adjust Overview”)
- 5—Press the BACK button to return to the main screen.

Setup Menu—TPS Input Setup—Program TPS Voltage

The TPS Input Closed and Wide Open Throttle can be set using Live data from the TPS Input or these values can be set manually. With the key on but the engine off, with your foot off the throttle press the SET MIN button, apply full throttle and press the SET MAX button. The actual TPS input voltage will be displayed and this should be used to verify correct operation. On some electronic throttle vehicles you will not be able to set the Wide Open Throttle voltage with the engine off and the settings must be entered manually.

Important—If this module causes the ECM to set a code or causes any other engine operation issues, disconnect and discontinue the use of this module immediately. Although this interface has been tested on a variety of vehicles it may not be compatible with all.

Important—Some throttle position sensors no longer provide an analog signal to the ECM, these sensors send a digital data stream to the ECM. This controller is NOT compatible with this type of sensor.

- 1—Press the SETUP button from the main screen.
- 2—Highlight the TPS Input Setup menu selection and press the ENTER button.
- 3—Highlight the Program TPS Voltage menu selection and press the ENTER button. (If Help is on choose option)
- 4—With the throttle in the closed position and engine OFF press the SET CLS button.
- 5—With the throttle in the wide open position and the engine OFF press the SET WOT button.
- 6—Press the BACK button to return to the main screen.

Setup Menu—TPS Input Setup—TPS Closed Voltage

TPS Closed Voltage - this setting is the TPS voltage with the throttle in the closed position.

- 1—Press the SETUP button from the main screen.
- 2—Highlight the TPS Input Setup menu selection and press the ENTER button.
- 3—Highlight the TPS Closed Voltage menu selection and press the ENTER button. (If Help is on choose option)
- 4—Adjust the value as desired. (See “Slider Bar, Value Adjust Overview”)
- 5—Press the BACK button to return to the main screen.

Setup Menu—TPS Input Setup—TPS WOT Voltage

TPS WOT Voltage - this setting is the voltage with the Throttle Position Sensor in the wide open throttle position.

- 1—Press the SETUP button from the main screen.
- 2—Highlight the TPS Input Setup menu selection and press the ENTER button.
- 3—Highlight the TPS WOT Voltage menu selection and press the ENTER button. (If Help is on choose option)
- 4—Adjust the value as desired. (See “Slider Bar, Value Adjust Overview”)
- 5—Press the BACK button to return to the main screen.

Setup Menu—Help Text Enable/Disable

This setting turns the help text on or off.

- 1—Press the SETUP button from the main screen.
- 2—Highlight the Help is (ON/OFF) menu selection and press the ENTER button.
- 3—Choose YES or NO to enable or disable the option.
- 4—Press the BACK button to return to the main screen.

Setup Menu—Factory Reset

Factory Reset - Selecting this option will return ALL Settings to the original Factory settings.

- 1—Press the SETUP button from the main screen.
- 2—Highlight the Factory Reset menu selection and press the ENTER button. (If Help is on choose option)
- 3—Choose YES, NO or CANCEL to confirm the reset action desired.
- 4—Press the BACK button to return to the main screen.

Output1 Menu—Output1 Ramp Setup

This selection will open the Output1 Ramp menu, this is where the start percentage, build time, and final percentage for the output are set. Each output can have up to five timed progressive ramps.

To enter the output ramp setup menu,

- 1—Press the OUT1 button from the main screen.
- 2—Highlight the Output1 Ramp Setup menu selection and press the ENTER button.

Output1 Menu—Graph View - Setup

This menu selection will open a graph view of the solenoid output ramp. This option may be used to view the current setup as a graph view and/or edit the output ramp. Individual output ramp settings can also be adjusted using the Output1 Ramp menu. Using either the graph view or the menu selections may be used, both methods are provided and it is user preference as to which one to use.

- 1—Highlight the Graph View menu selection and press the ENTER button. (If Help is on choose option)
- 2—Refer to page 7, Solenoid Output Graph View Navigation for more information.

Output1 Menu—Output1 Ramp Setup—Copy Setup to Output2

Use this function to copy this output channel setup to the other output setup. This provides an easy way to sync both outputs.

Important—only the settings from the output ramp setup menu will be copied with this option.

- 1—Highlight the Copy Setup to Output2 menu selection and press the ENTER button. (If Help is on choose option)
- 2—Confirm the copy function by pressing the YES button or NO to exit without copying the ramp setup data.

Output1 Menu—Output1 Ramp Setup—Number of Ramps

This setting determines the total number of progressive ramps available for this output channel. The number of ramps is adjustable from 1 to 5.

Note—each output can have a different number of ramps (set points).

- 1—Highlight the Number of Ramps menu selection and press the ENTER button. (If Help is on choose option)
- 2—Adjust the value as desired. (See “Slider Bar, Value Adjust Overview”)
- 3—Press the BACK button to exit the ramp setup menu.

Output1 Menu—Output1 Ramp Setup—Start Percent

This setting determines the output starting percent. This is the output duty cycle when Activation starts. If the output channel has a Delay programmed the output will remain off until the delay time has expired.

- 1—Highlight the Start Percent menu selection and press the ENTER button. (If Help is on choose option)
- 2—Adjust the value as desired. (See “Slider Bar, Value Adjust Overview”)
- 3—Press the BACK button to exit the ramp setup menu.

Output1 Menu—Output1 Ramp Setup—Ramp(x) Time

This setting determines the time for the progressive ramp to reach the end percent. There is a ramp time for each Ramp that is enabled using the Number of Ramps setting.

- 1—Highlight the Ramp(x) Time menu selection and press the ENTER button. (If Help is on choose option)
- 2—Adjust the value as desired. (See “Slider Bar, Value Adjust Overview”)
- 3—Press the BACK button to exit the ramp setup menu.

Output1 Menu—Output1 Ramp Setup—Ramp(x) End Percent

This setting determines the output duty cycle percent at the end of the current ramp. The end percent can be higher or lower (output percent can go up or down) than the previous end percent if desired.

- 1—Highlight the Ramp(x) End Percent menu selection and press the ENTER button. (If Help is on choose option)
- 2—Adjust the value as desired. (See “Slider Bar, Value Adjust Overview”)
- 3—Press the BACK button to exit the ramp setup menu.

Output1 Menu—Output1 Delay

This setting controls the delay time in seconds before the output starts after activation.

- 1—Highlight the Output1 Delay menu selection and press the ENTER button. (If Help is on choose option)
- 2—Adjust the value as desired. (See “Slider Bar, Value Adjust Overview”)
- 3—Press the BACK button to return to the main screen.

Output1 Menu—Output1 Frequency

The solenoid pulse frequency (or also known as Hertz) is how many times the solenoids open and close per second when not at 0 or 100 percent operation. There are many different styles of solenoids available and they will react differently to changes in the operating frequency. It is up to the user to verify that the solenoids are opening properly with the settings used for operation.

- 1—Highlight the Output1 Frequency menu selection and press the ENTER button. (If Help is on choose option)
- 2—Adjust the value as desired. (See “Slider Bar, Value Adjust Overview”)
- 3—Press the BACK button to return to the main screen.

Output1 Menu—Resume Percent

This setting determines the percent the output resumes at if the user has to lift the throttle during Activation. This setting is only valid if the Hold And Wait option is ON. This setting is used with the Resume Percent per Pulse setting to build a Resume Ramp. If the Resume Start Percent is greater than the current output percent the resume ramp is ignored.

- 1—Highlight the Resume Percent menu selection and press the ENTER button. (If Help is on choose option)
- 2—Adjust the value as desired. (See “Slider Bar, Value Adjust Overview”)
- 3—Press the BACK button to return to the main screen.

Output1 Menu—Percent Per Pulse

This setting determines the rate at which the output Resumes if the user lifts the throttle during Activation. This setting is used with the Resume Start Percent to build a Resume Ramp. This allows the user to adjust how quick the output comes back on if the Activation signal is removed.

- 1—Highlight the Percent Per Pulse menu selection and press the ENTER button. (If Help is on choose option)
- 2—Adjust the value as desired. (See “Slider Bar, Value Adjust Overview”)
- 3—Press the BACK button to return to the main screen.

Output2 Menu

Please refer to the Output1 instructions and apply the operations to Output2.

Timer Menu—Timer1 Setup

Stage1 Timer, Timing Retard Control - this setting configures the Stage1 Timer, +12V output to be On whenever Output1 is On (Solenoids functioning).

If this setting is Off then the Timer1 output can be configured by selecting which control parameters are used to turn On the timer output. When more than one control parameter has been selected all must meet the conditions as configured before the timer output will function.

Example - Activation Input Enabled and RPM Enabled, RPM On = 2000 and RPM Off = 4000, the Timer1 output will only be on when the Activation Input is active and the engine rpm is between 2000 and 4000 rpm.

This output supplies +12V when On. This output may be used to drive an external relay with a load of no more than 1 amp.

To enter the timer setup menu,

- 1—Press the TIMER button from the main screen.
- 2—Highlight the Timer1 Setup menu selection and press the ENTER button.

Timer Menu—Timer1 Setup—Timer1 Sync

Timer1 Sync - this setting configures Timer1 to be On whenever Output1 is active. This configuration can be used to control ignition retard.

If this setting is Off then the Timer1 output can be configured by selecting which control parameters are used to turn On the timer output. When more than one control parameter has been selected all must meet the conditions as configured before the timer output will function.

- 1—Highlight the Timer1 Sync (ON/OFF) menu selection and press the ENTER button. (If Help is on choose option)
- 2—Choose YES or NO to enable or disable the option.

Timer Menu—Timer1 Setup—Activation Enable

When this setting is On the Timer1 output will be on when the Activation Input has +12V applied.

Note—if the TPS input is enabled the Activation Input and the TPS Input determine if the output is on.

- 1—Highlight the Activation Enable (ON/OFF) menu selection and press the ENTER button. (If Help is on choose option)
- 2—Choose YES or NO to enable or disable the option.

Timer Menu—Timer1 Setup—Activation Enable

When this setting is On the Timer1 output will be on when the Activation Input has +12V applied.

Note—if the TPS input is enabled the Activation Input and the TPS Input determine if the output is on.

- 1—Highlight the Activation Enable (ON/OFF) menu selection and press the ENTER button. (If Help is on choose option)
- 2—Choose YES or NO to enable or disable the option.

Timer Menu—Timer1 Setup—Trans Brake Enable

When this setting is On the Timer1 output will be on when the Trans Brake Input has +12V applied.

- 1—Highlight the Tbrake Enable (ON/OFF) menu selection and press the ENTER button. (If Help is on choose option)
- 2—Choose YES or NO to enable or disable the option.

Timer Menu—Timer1 Setup—Delay Timer

This setting enables a Delay Timer with a programmable On and Off time.

- 1—Highlight the Delay Timer (ON/OFF) menu selection and press the ENTER button. (If Help is on choose option)
- 2—Choose YES or NO to enable or disable the option.

Timer Menu—Timer1 Setup—Timer On Delay

If the On setting is 0 there will be No delay and the output will remain ON for the amount of time set by the Off setting.

If the Off setting is 0 the output will remain OFF until the On Delay setting times out after activation.

- 1—Highlight the Timer On Delay (ON/OFF) menu selection and press the ENTER button. (If Help is on choose option)
- 2—Adjust the value as desired. (See “Slider Bar, Value Adjust Overview”)
- 3—Press the BACK button to exit the Timer1 menu.

Timer Menu—Timer1 Setup—Timer Off Delay

If the On setting is 0 there will be No delay and the output will remain ON for the amount of time set by the Off setting.

If the Off setting is 0 the output will remain OFF until the On Delay setting times out after activation.

- 1—Highlight the Timer Off Delay (ON/OFF) menu selection and press the ENTER button. (If Help is on choose option)
- 2—Adjust the value as desired. (See “Slider Bar, Value Adjust Overview”)
- 3—Press the BACK button to exit the Timer1 menu.

Timer Menu—Timer1 Setup—RPM Control

This setting enables a RPM Window switch for the Timer1 output.

- 1—Highlight the RPM Control (ON/OFF) menu selection and press the ENTER button. (If Help is on choose option)
- 2—Choose YES or NO to enable or disable the option.

Timer Menu—Timer1 Setup—On RPM

Engine RPM On, Off - these settings control the Timer output based on Engine RPM.

If the On setting is 0 the output will be On until the engine rpm exceeds the OFF RPM setting. If the OFF RPM setting is 0 the output will remain Off until the engine rpm exceeds the ON RPM setting.

If neither the ON or the OFF setting is 0 the output will only be On when the engine rpm is within the ON RPM and OFF RPM range.

1—Highlight the On RPM menu selection and press the ENTER button. (If Help is on choose option)

2—Adjust the value as desired. (See “Slider Bar, Value Adjust Overview”)

3—Press the BACK button to exit the Timer1 menu.

Timer Menu—Timer1 Setup—Off RPM

Engine RPM On, Off - these settings control the Timer output based on Engine RPM.

If the On setting is 0 the output will be On until the engine rpm exceeds the OFF RPM setting. If the OFF RPM setting is 0 the output will remain Off until the engine rpm exceeds the ON RPM setting.

If neither the ON or the OFF setting is 0 the output will only be On when the engine rpm is within the ON RPM and OFF RPM range.

1—Highlight the Off RPM menu selection and press the ENTER button. (If Help is on choose option)

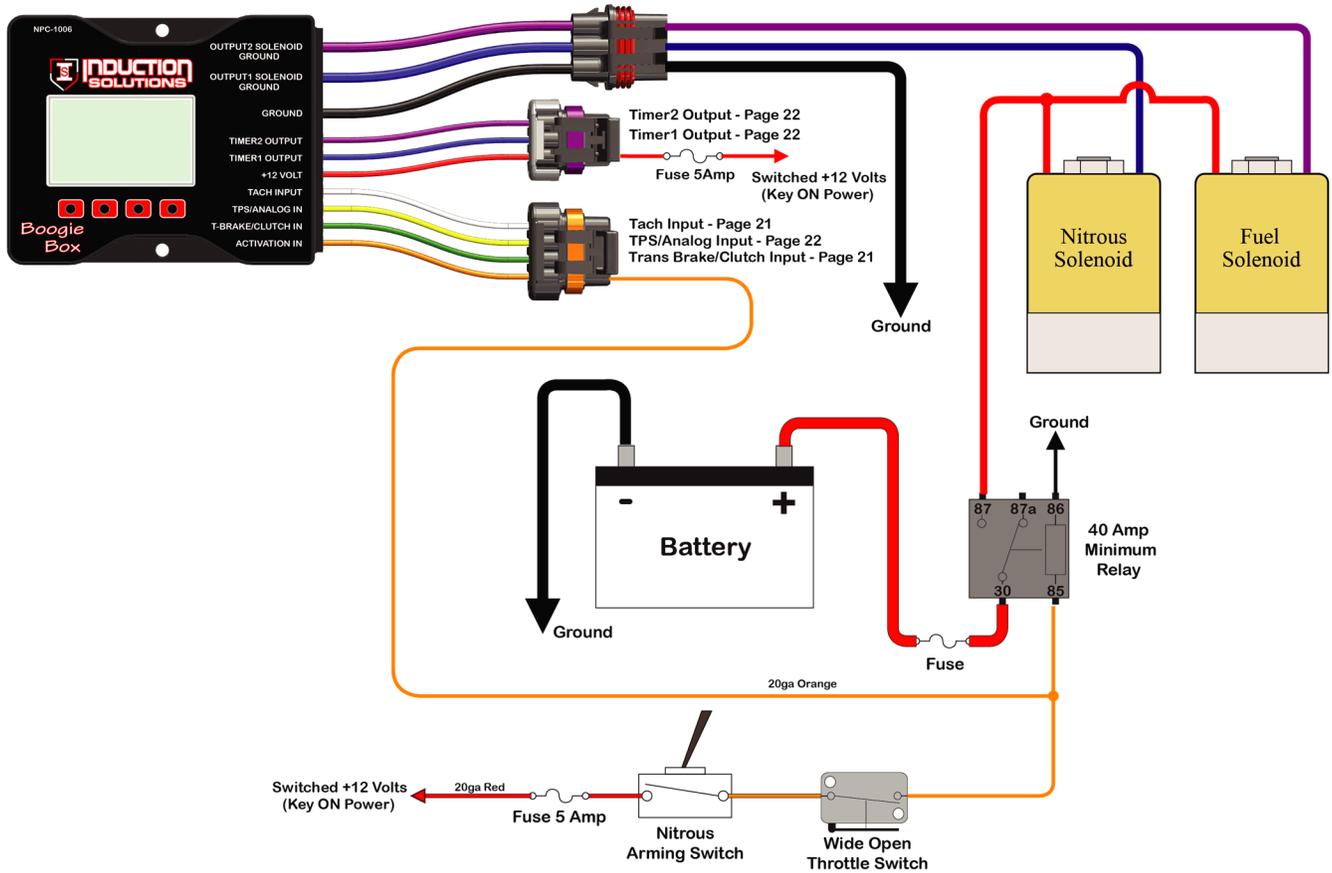
2—Adjust the value as desired. (See “Slider Bar, Value Adjust Overview”)

3—Press the BACK button to exit the Timer1 menu.

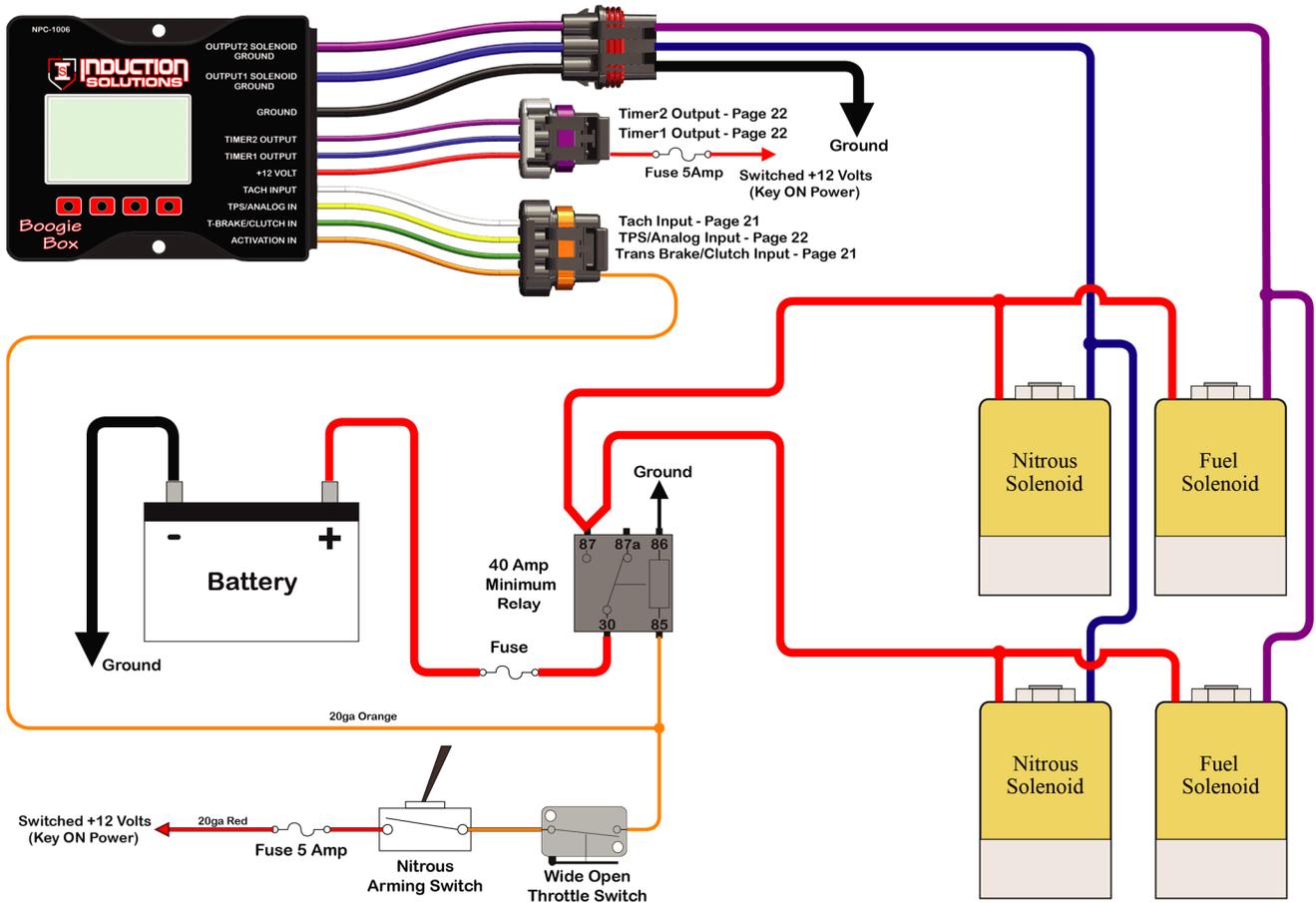
Timer Menu—Timer2 Setup

Please refer to the Timer1 instructions and apply the operations to Timer2.

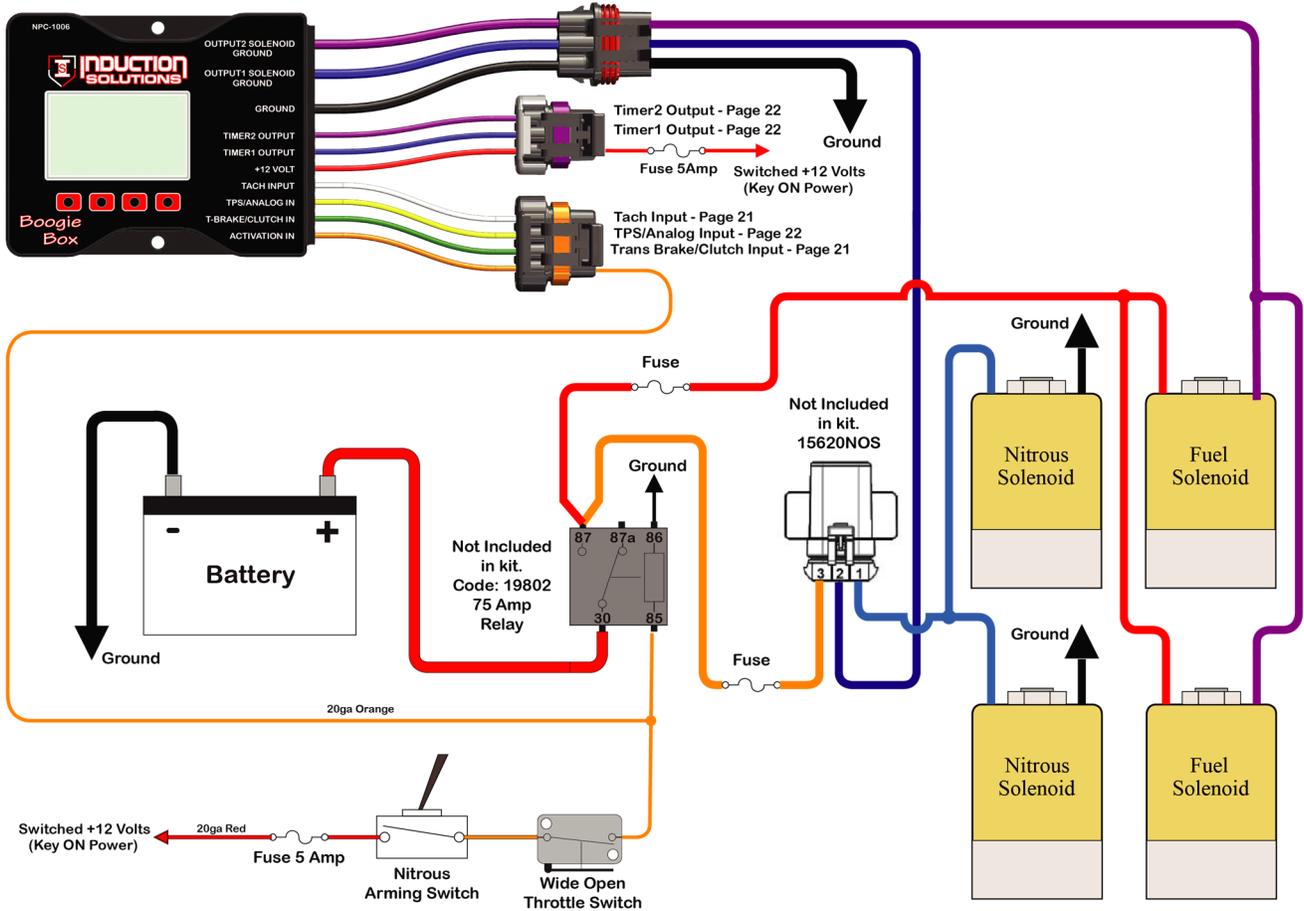
Wiring Diagram #1—(Common Plate System) current draw less than 30amps combined.



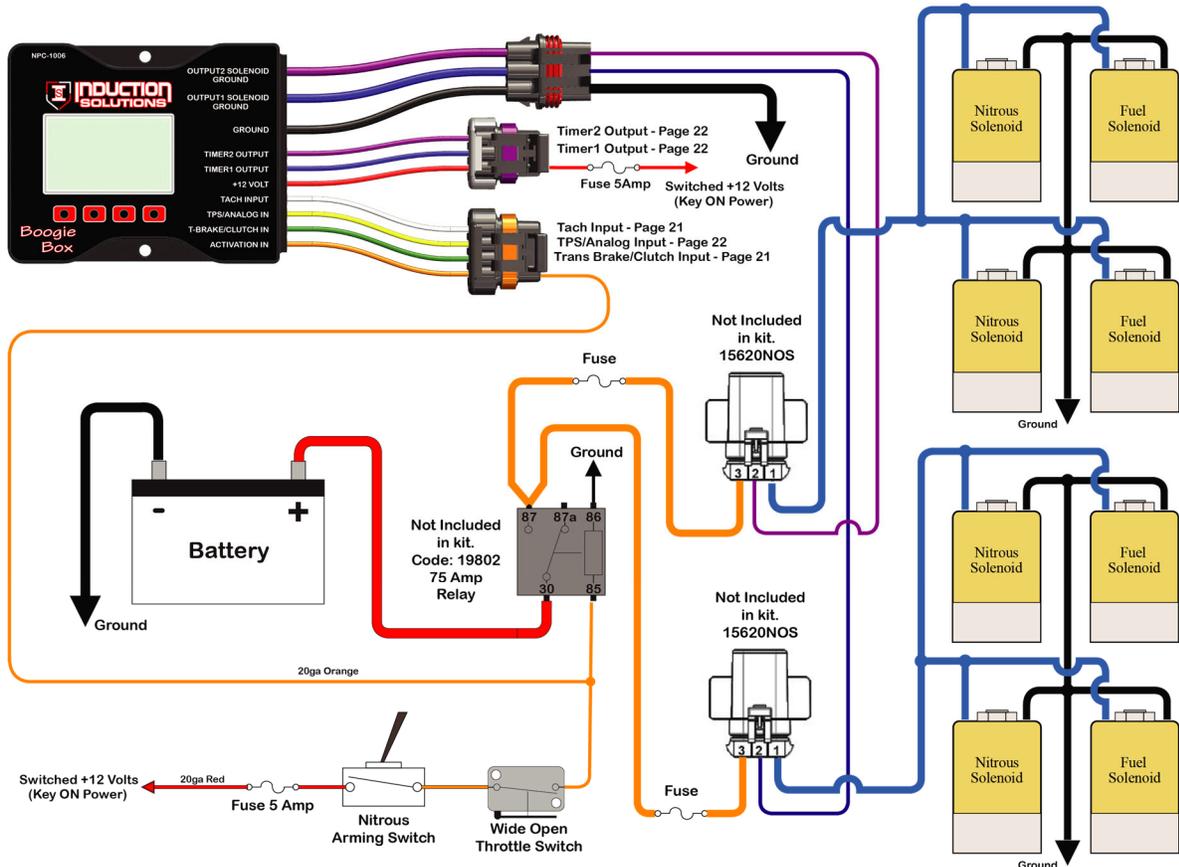
Wiring Diagram #2—(Direct Port System) current draw less than 35amps combined.



Wiring Diagram #3—(Direct Port High Amp) current draw more than 35amps combined.

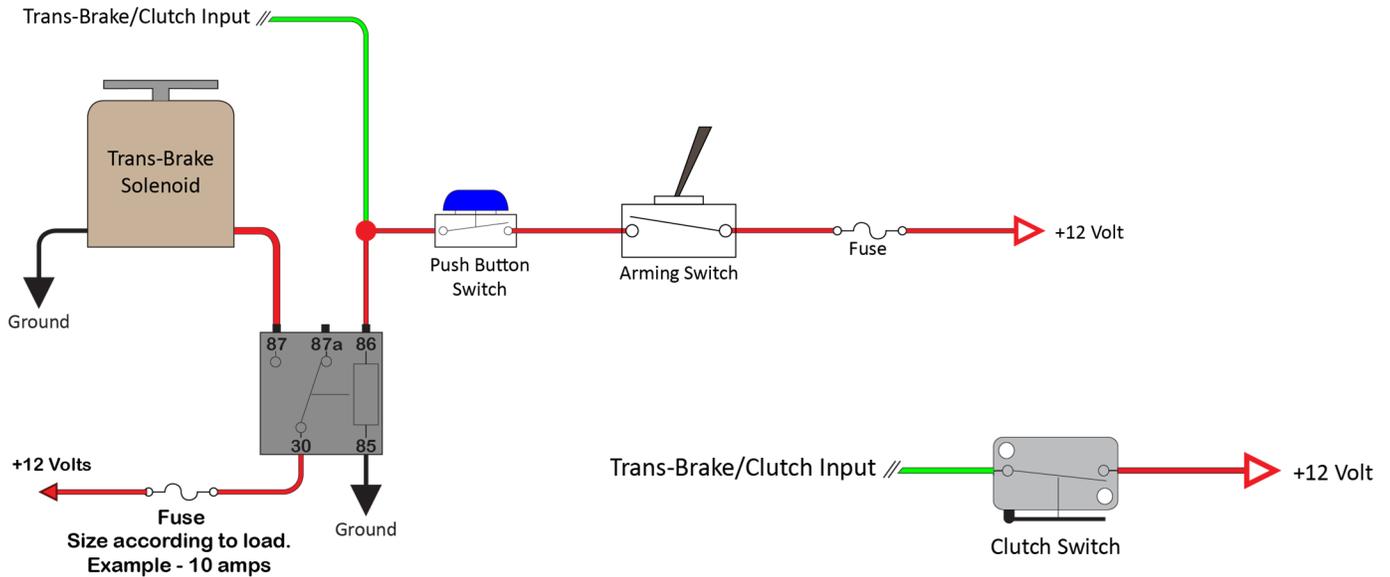


Wiring Diagram #4—(2-Stage Direct Port High Amp) current draw more than 35amps combined.



Transmission Brake/Clutch Input Wiring

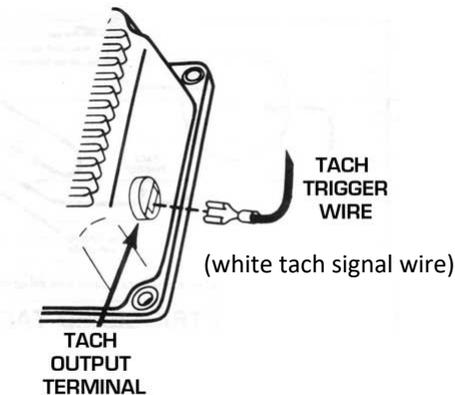
Important Information—when the Trans-Brake/Clutch input is ON the Activation input will be ignored until the transmission brake or clutch is released. This keeps the nitrous OFF when the Trans-Brake/Clutch input is ON and the throttle is wide open.



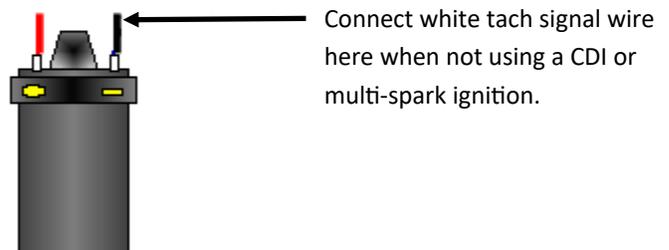
RPM/Tachometer Input Wiring

Typical aftermarket CDI ignition tachometer wiring. See ignition manufacturer instructions for more information.

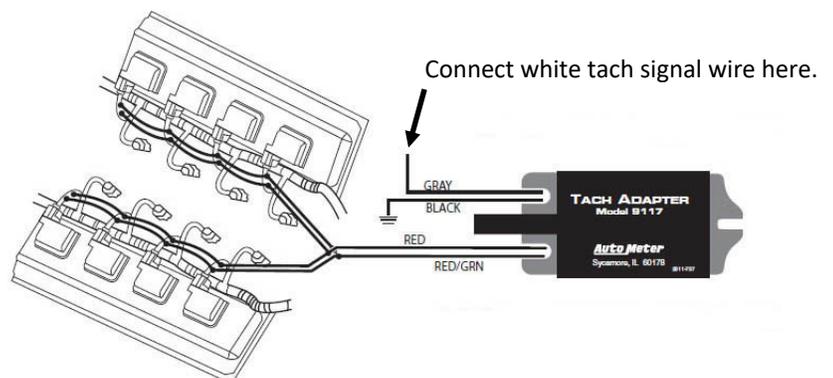
Caution—never connect the white tach signal wire directly to the coil negative wire with a multi-spark ignition.



Coil negative (not CDI)



The tach input signal can also be connected to a +5 volt or +12 volt square wave signal on newer fuel injected vehicles. You will need to research the vehicle in question and check to see if the ECM provides a tach (rpm) signal. You may also purchase an aftermarket tach signal adapter if needed.

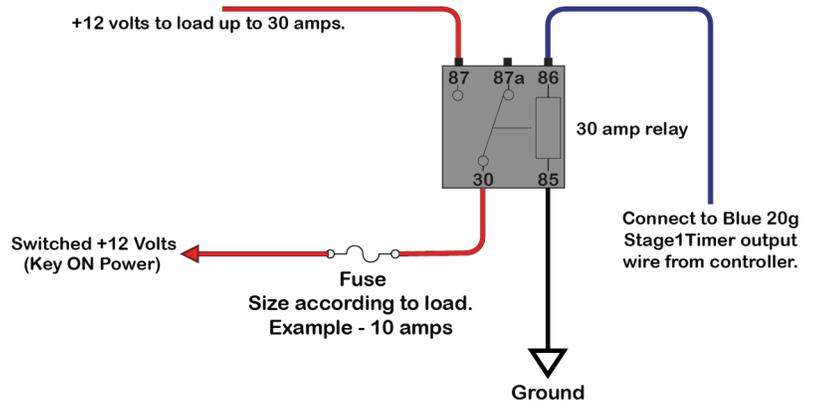


Timer1 +12 Volt Output Wiring

This output provides +12 volt at 1 amp maximum, there is an internal 1k ohm resistor to ground so the output is not floating when in the off state. If your ignition and/or ignition timing controller is activated by a +12 volt signal the 20ga Blue Timer1 Output wire can be connected directly to retard activation.

Important—always test for proper timing retard operation before spraying nitrous! You can use a timing light or a data logger if it is equipped to log ignition timing. Do a dry test (engine running, solenoids unplugged) to confirm proper timing retard.

To control a load greater than 1 amp a relay will need to be wired into the system as outlined to the right.

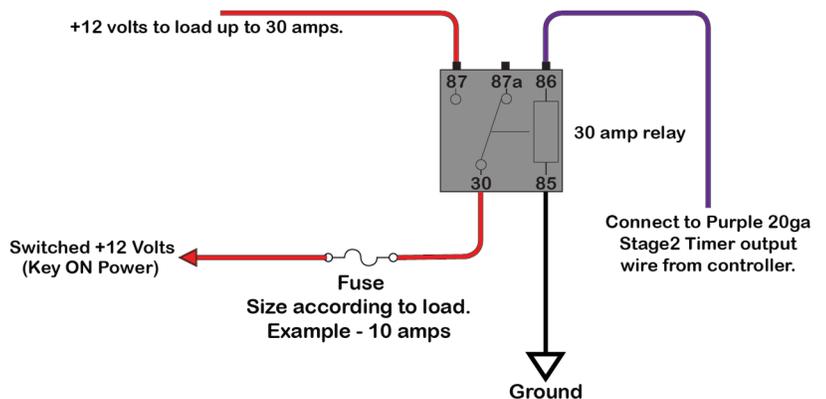


Timer2 +12 Volt Output Wiring

This output provides +12 volt at 1 amp maximum, there is an internal 1k ohm resistor to ground so the output is not floating when in the off state. If your ignition and/or ignition timing controller is activated by a +12 volt signal the 20ga Purple Timer2 Output wire can be connected directly to retard activation.

Important—always test for proper timing retard operation before spraying nitrous! You can use a timing light or a data logger if it is equipped to log ignition timing. Do a dry test (engine running, solenoids unplugged) to confirm proper timing retard.

To control a load greater than 1 amp a relay will need to be wired into the system as outlined to the right.



Throttle Position Sensor

For proper connection to the throttle position sensor you will need to research and find data in regards to your application. It is the users responsibility to insure that the installation is within local laws and Induction Solutions assumes no responsibility for improper installation or violation of laws.

Do not cut or splice the sensor wires, you will need to find the proper connectors for your application.

There are jumper harnesses available for several applications via an internet search.

Connect the sensor signal wire to the Yellow TPS/ANALOG IN wire.

