



**Installation
Instructions**



Part # 35804000 - Instinct Shock Controller



Instinct Shock Controller Installation Instructions

Table of contents

- Page 2..... Included components
- Page 3..... ECU Installation
- Page 4..... GSensor Installation
- Page 5..... Sensors Installation
- Page 6..... Mode Switch Operation & Launch Control
- Pages 7-9..... Drive By Wire TPS Calibration



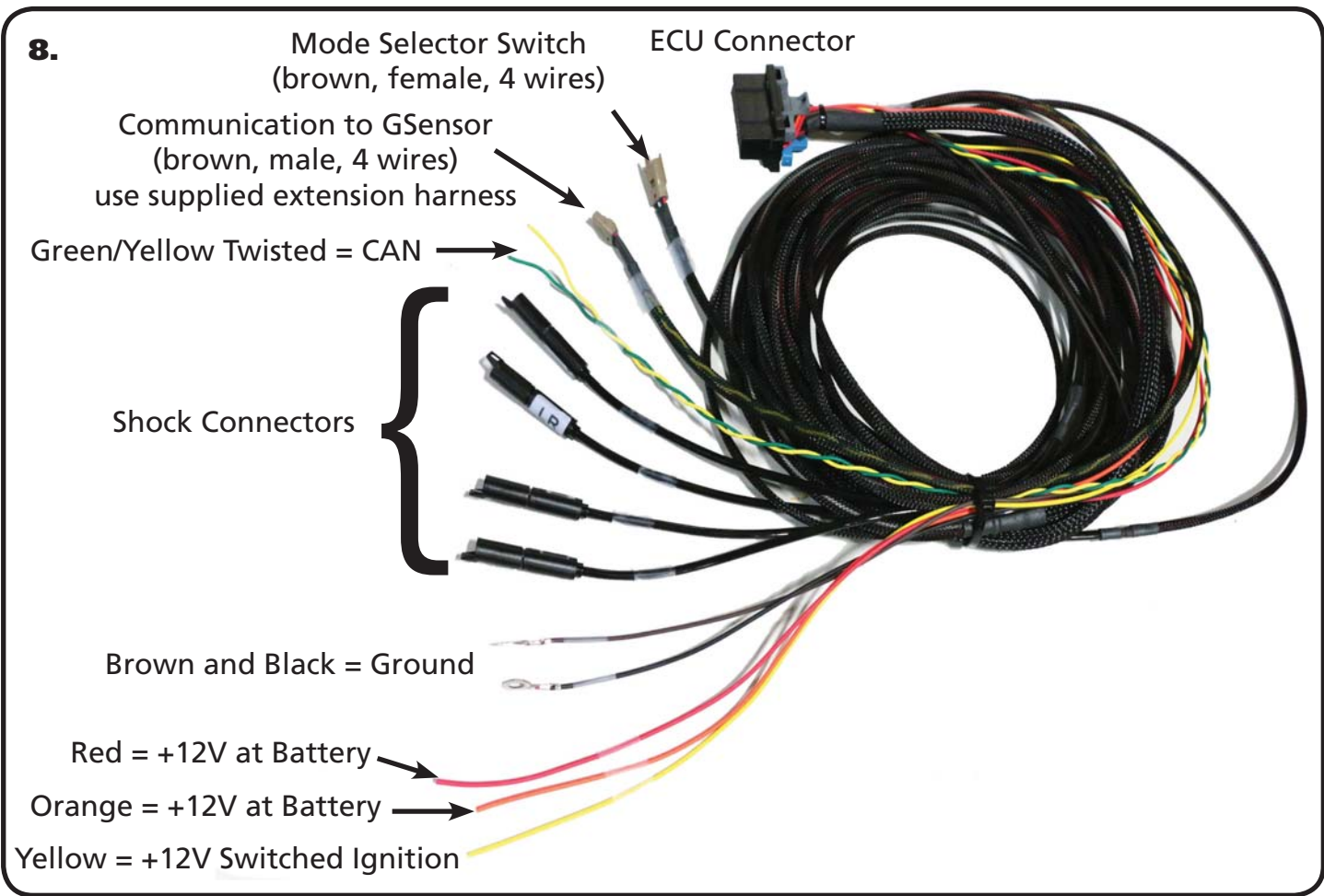
Major ComponentsIn the box

Item #	Part #	Description	QTY
1	35800001	ECU	1
2	35800002	Main Harness	1
3	35800003	GSensor	1
4		Mode Select Harness - Included in Main Harness	1
5		GSensor Extension Harness - Included in Main Harness	1
6	35900011	Brake Pressure Sensor Harness	1
7	35900012	Speed Sensor Harness	1





Instinct ECU Installation



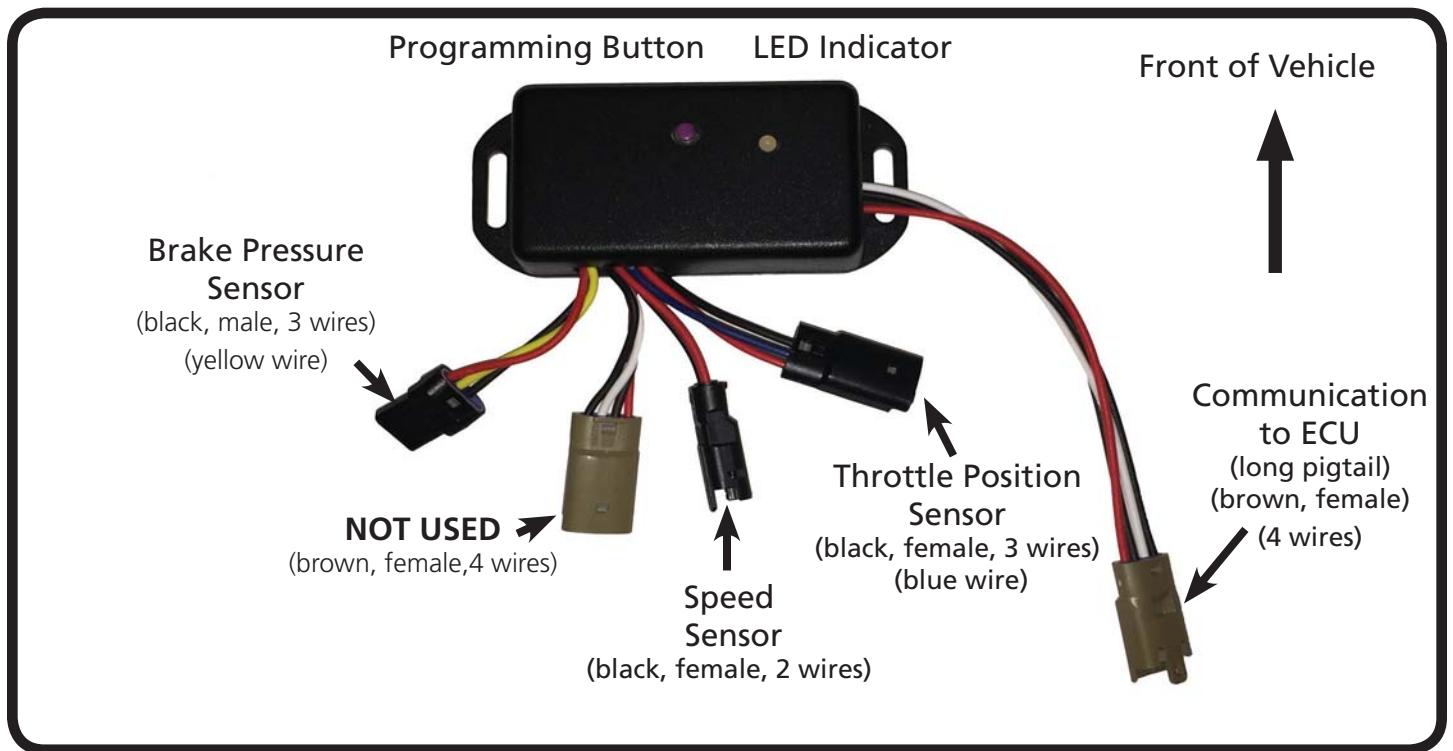
1. First lay out the harness in the vehicle with the main ECU connector located at the rear, typically in the trunk on the seat back support or under the package tray. Ensuring there is enough wire length to adequately reach the shocks at each corner.
2. Locate a suitable location to mount the ECU. On the seat back support or under the package tray are popular options.
3. Mark and drill two holes and utilize the appropriate mounting hardware for your installation to secure the ECU enclosure.
4. Plug in the wire harness and begin routing wire through the vehicle.
 - The shocks at each corner have a dedicated connector with a label.
 - The GSensor communication wires should be run down the center of the vehicle. The Extension Harness supplied will plug into the GSensor and the Main Harness.
 - The Mode Selector Switch plugs into the harness that runs with the Front Shock Harness.



GSensor Installation

5. The GSensor should be mounted low and as close to the center of the vehicle as possible. Typically this means on the transmission tunnel or center console, just under the dash area. This provides a secure location with easy access to the wiring.

- The sensor should be mounted as level with the ground as possible, with the mounting flanges on the bottom (like it was sitting on a table), with the wires protruding pointing to the rear of the vehicle.



- Hook and Loop fastener (Velcro) is the preferred mounting method as it's quick, easy, removable, and the GSensor prefers slight vibration isolation from the vehicle.
- You will need to access the Programming Button on the GSensor when calibrating vehicle speed, so it needs to be accessible at least once after installation. (you can have it hidden, so long as you pull it out to learn vehicle speed, then hide it once again).
- Plug in each sensor as illustrated in the image above.

6. Install the Mode Selector Switch by locating a suitable mounting location, within the drivers reach while belted into the car. Drill a 1/2" hole and insert the Mode Selector Switch connector first into the hole.

- Route the Mode Selector Switch wire (**Brown Female Plug, 4 wire**) from the main harness to the Mode Selector and plug in. (see step #4)



Instinct Sensor Installation

7. Install the Sensors:

7a. Brake Pressure Sensor (Black Male Plug - 4 wire - yellow wire - short pigtail)

- The Brake Pressure Sensor should be installed in the front brake circuit. Typically the easiest, most convenient location is directly off the master cylinder using a "T" fitting.
- Route the wire harness to the GSensor and plug it in as indicated in the image above.

7b. Throttle Position Sensor (Black Female Plug - 3 wire - blue wire - short pigtail)

- Installation of the TPS sensor depends on your application. If you are using a drive by wire GM LS Series or Ford Coyote it is as simple as unplugging the throttle pedal and plugging in the Ridetech TPS adapter harness.
 - If you are utilizing a different fuel injected motor you will need to utilize the Universal Ridetech TPS harness, connecting the black wire to the ground at the OE TPS sensor, and the red wire to the 0-5V signal wire of the OE TPS sensor. Please reference your particular applications wiring documentation for proper connections.
 - If you are running a carburetor you will need to source a TPS kit that fits your particular carb, and utilize the Universal Ridetech TPS harness to plug it into the GSensor.
- Whichever option you have, route the wire harness to the GSensor and plug it in as indicated in the image above.

7c. Vehicle Speed Sensor (Black Female Plug - 2 wire - short pigtail)

- Connect the Ridetech Vehicle Speed Sensor harness to any pulse generating speed signal. This could be the OE sensor in the tail shaft of the transmission, or an aftermarket inductive sensor located on a wheel or driveshaft. Splice the 2 wires into the 2 wires for the Speed Sensor, polarity isn't critical.
- Whichever option you choose, route the wire harness to the GSensor and plug it in as indicated in the image above.

SETTING THE VEHICLE SPEED IS NECESSARY FOR PROPER OPERATION!

Setting Vehicle Speed

- 1-** Push and hold the purple Program button on the GSensor
-the LED will turn orange
- 2-** Push and hold the purple Program button on the GSensor again
-the LED will flash with the speed of the vehicle (so if you are sitting still it WILL NOT flash until the vehicle starts moving!)
- 3-** Once the vehicle is traveling 40mph, press the purple Programming button once more
-the LED will turn solid orange, then turn off
- 4-** Cycle the power, including the USB if you have it plugged in
- 5-** You can now verify the speed sensor was learned correctly by checking your speed in the DSC software



Mode Switch Operation & Launch Control

The Mode Switch is used to turn the system on and is used to select which mode the system is in. The Mode Switch has a Green LED to help identify which mode the system is in.

Initially the system is off, LED will be off. Each time you press the button it toggles to the next mode.

- LED off - Normal Mode
- One Press - LED Solid - Sport Mode
- 2nd Press - LED Flashing - Track Mode
- Press again and the system turns off, returns to Street Mode

Launch Control:

The Instinct system is equipped with and automated Launch Control feature.

Launch Control is activated when:

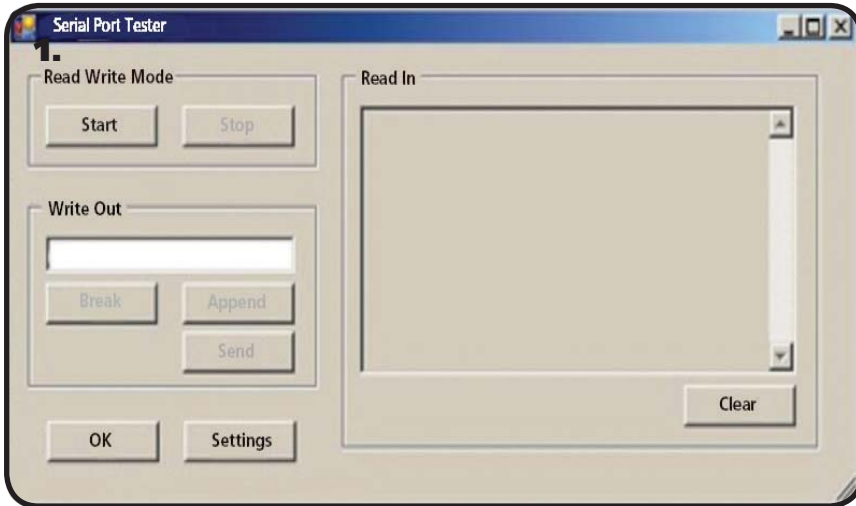
- brake pressure over the setting in the brake table (default setting is 25bar)
- mph less than or equal to zero
- throttle beyond the setting in the accel table (default setting is 20%)

When Launch Control is active the Mode Selector button will flash rapidly.

IF YOU ARE USING A DRIVE BY WIRE ENGINE, THE SYSTEMS THROTTLE POSITION PARAMETERS MUST BE RECALIBRATED. PAGES 7-9 DEMONSTRATES THE PROPER PROCEDURE TO RECALIBRATE THE THROTTLE POSITION SENSOR PARAMETERS.

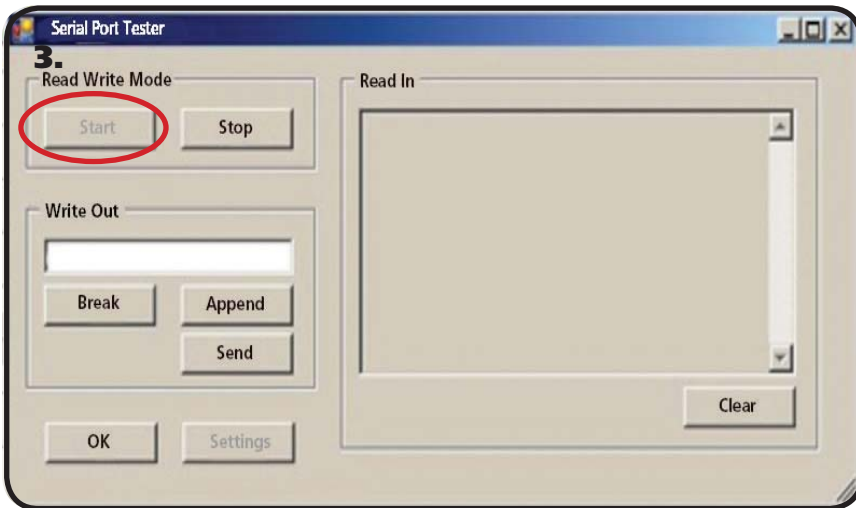


Drive By Wire Throttle Position Sensor Calibration

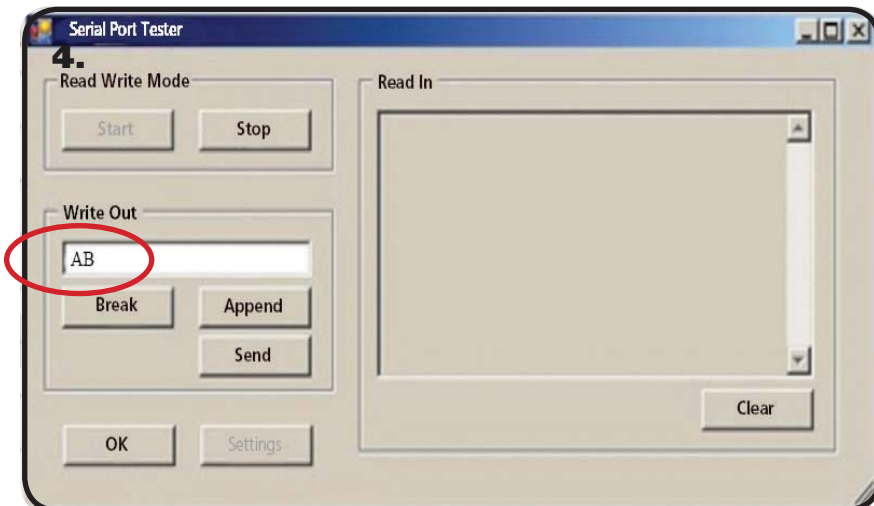


1. Once you have the DSC Tuner software open; Select the "Tools" dropdown from the top of the screen.

2. Select "Test Serial Port".
-The "Serial Port Tester" box appears.



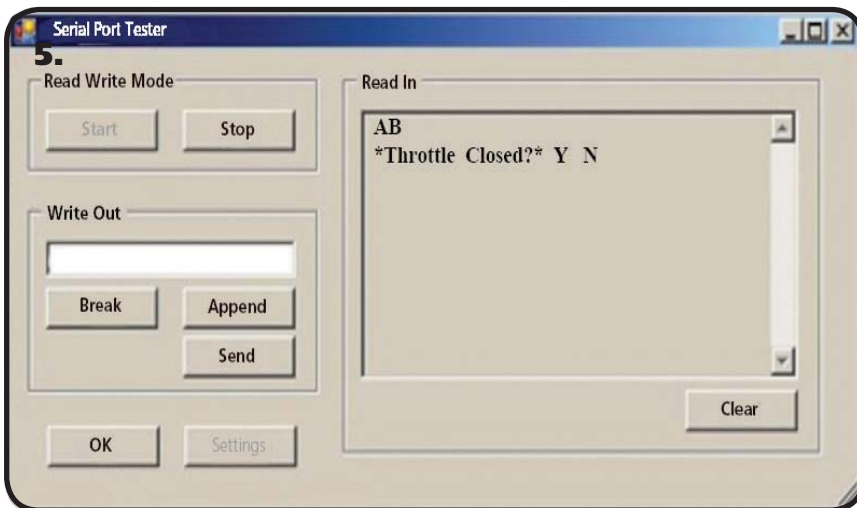
3. Hit the "Start" button.
-The "Write Out" box is now active.



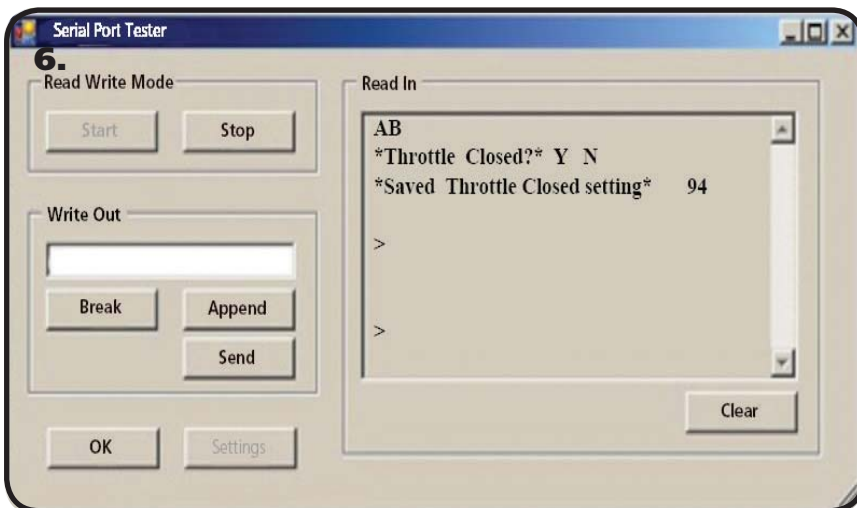
4. With the throttle pedal in the idle position, type **AB** in the "Write Out" box.
*****Must be capital letters*****



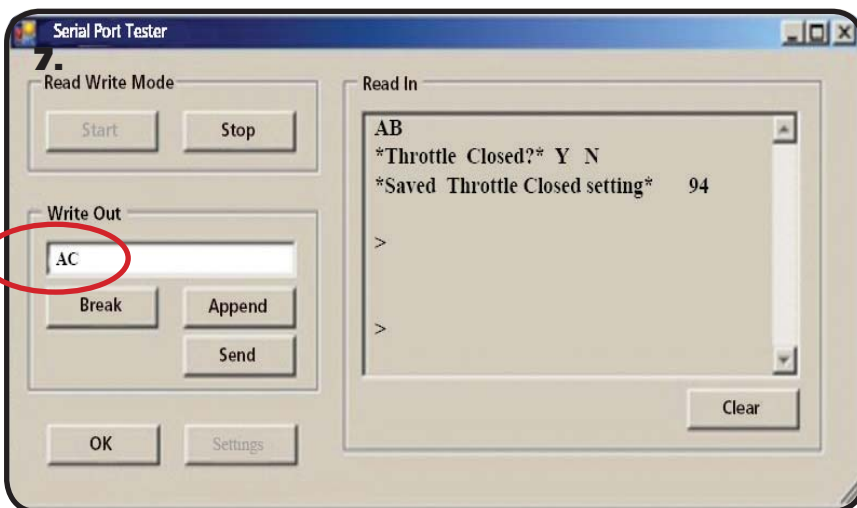
TPS Calibration



5. Hit "Send" or press the "Enter" button on your keyboard
- "AB *Throttle Closed?* Y N" will be displayed in the "Read In" box to the right.



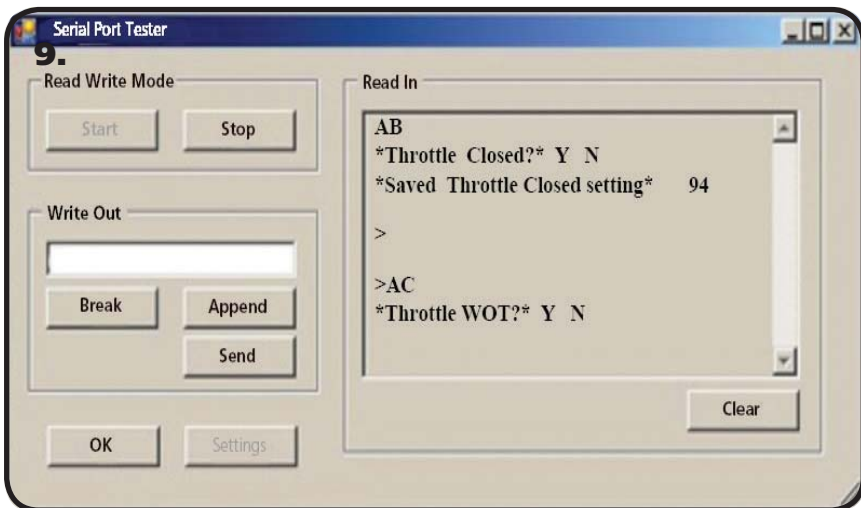
6. Type the letter **Y**
*****Must be capital letters*****
- "Saved Throttle Closed setting" will be displayed in the "Read In" box to the right with the value that has been saved.



7. Depress the throttle pedal to Wide Open Throttle (WOT).
8. While holding the pedal to the floor, type **AC** in the "Write Out" box.

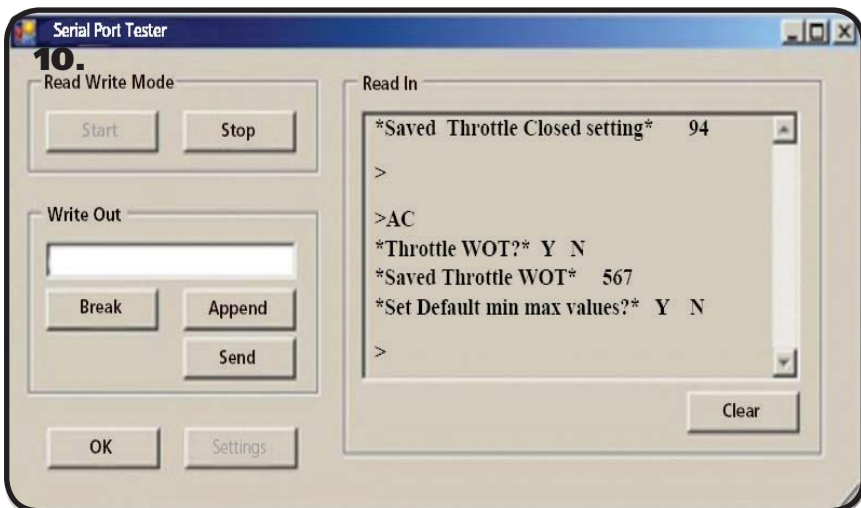


TPS Calibration



9. Hit "Send" or press the "Enter" button on your keyboard.

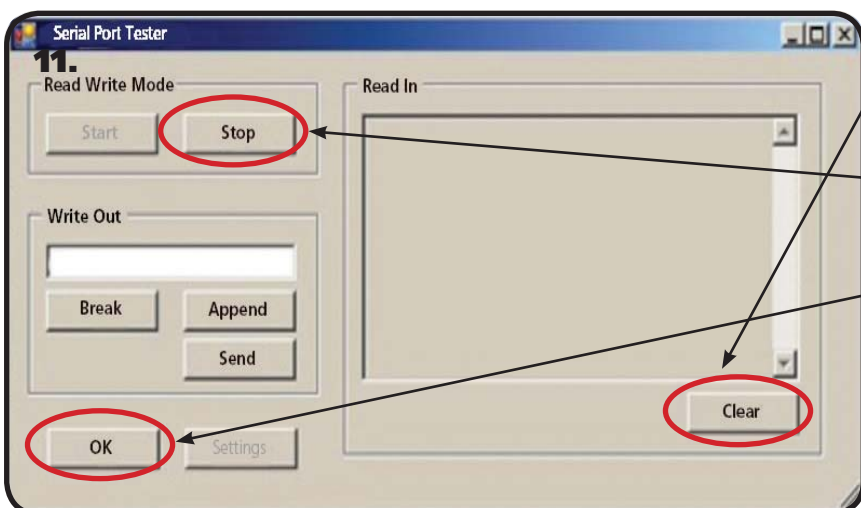
- "AC *Throttle WOT?* Y N" will be displayed in the "Read In" box to the right.



10. Type the letter **Y**

*****Must be capital letters*****

- "Saved Throttle WOT" will be displayed in the "Read In" box to the right with the value that has been saved.



11. You may now release the throttle pedal from the WOT position, returning back to the idle position.

12. Hit the "Clear" button to clear the "Read In" box.

13. Hit the "Stop" button to stop communicating with the ECU.

14. Hit the "OK" button to exit the Serial Port Tester box.

- you will be returned to the main DSC Tuner software screen.