

# INSTALLATION

**COMMANDER**<sup>™</sup>  
CONTROL SYSTEM

# QUADZILLA

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# WARRANTY:

All QUADZILLA Performance Modules/Tuners Diesel Performance Enhancement Software- as specified below - is warranted against defective materials or workmanship for one million miles or ten years from date of purchase, whichever comes first. The Performance Modules/Tuners hardware units are covered by a one year unlimited mileage warranty.

## WHAT IS WARRANTED:

Any Performance Modules/Tuners Diesel Performance Enhancement Software specified for and Cummins, Powerstroke, and, Duramax diesel engines, except those units sold exclusively for racing and/or off-road use.

## WHO IS COVERED BY WARRANTY:

The original purchaser of a Performance Modules/Tuners who has completed the required warranty registration and provided proper proof of the original retail purchase and all other required information.

## WHAT IS NOT WARRANTED:

Any Performance Modules/Tuners used for any type of racing or competition, any off-road use, custom or modified applications, any non-legal or industrial applications. (These units are covered by a one year unlimited mileage warranty for both Software and Hardware.)

## WHAT VOIDS THE WARRANTY:

Incorrect Installation: The Performance Modules/Tuners must be installed following Quadzilla installation procedure as outlined in the product literature that accompanies the Performance Modules/Tuners. Physical damage to the unit due to improper care in installation or removal will not be covered under this warranty. No Registration: Failure to register your product within 90 days of purchase will void the one year unlimited mileage warranty. No Proof of Purchase: At time of warranty claim, buyer must provide proof of purchase (original receipt or invoice). Incorrect Use: Any damaged, abused or modified Performance Modules/Tuners will not be warranted.

## EXTENT OF WARRANTY:

Any defective Performance Modules/Tuners properly returned to QUADZILLA will be replaced or repaired by QUADZILLA. QUADZILLA will not be responsible for any other expenses incurred by the customer under the terms of this warranty, nor shall it be responsible for any damages consequential, special, contingent, or otherwise; or expenses or injury arising directly or indirectly from the use of the Performance Modules/Tuners unit or software. Any Performance Modules/Tuners returned to QUADZILLA must be sent at the customer's expense along with proof of purchase. QUADZILLA reserves the right to determine whether the terms of the warranty, set out above, have been properly complied with. In the event that the terms are not complied with, QUADZILLA shall be under no obligation to honor this warranty.

## SHORTAGES AND DAMAGED GOODS:

It is the responsibility of the customer to inspect and count products upon receipt. Any shortages or errors must be reported to Quadzilla immediately. Claims for shortages or damaged goods must be received within 3 days of receipt of the product. All merchandise is inspected before packing. Any damaged goods should be reported to the freight carrier immediately. All packaging of damaged goods must be kept for inspection by the freight carrier.

## RETURNS AND EXCHANGES:

An RMA (return merchandise authorization) must accompany all returns and exchanges. Returns must include a copy of the original invoice. Returns and exchanges must be shipped pre-paid or they will be refused.

Returned or exchanged products must be undamaged, or in "like new" condition. Damage occurred during freight due to improper packing is the responsibility of the customer. Unauthorized or refused merchandise are subject to a 10% restocking fee.

## ABOUT

***Before installation it is important to know what parts you have and the capabilities of the Commander.***

The Commander is the most powerful and useful digital monitoring system available for your diesel truck. You now have the ability to monitor up to 7 important engine parameters. You may display up to 4 parameters at once. However, the monitor will still monitor up to 7 parameters simultaneously. You may set warnings for 6 of the monitored parameters if you so desire. You may also select de-fueling options based upon 4 of these parameters. While monitoring these parameters the Commander also records the highest or lowest value of all parameters being monitored. In addition to recording min/max readings you also have the ability to data log these parameters. The Commander also has the ability to control multiple power modules.

These are the most important features of the Commander, but not all of them. In the following pages you will find detailed instructions on each individual function of the monitor. To get the most out of your Commander it is important to become educated on each function you are planning to use.

### THE COMMANDER CONSISTS OF 5 MAIN PARTS.

First is the monitor itself. The monitor comes with a wiring harness attached to it from the factory. While there is a built in strain relief it is important to be careful with the cable harness coming from the back of the monitor. Do not use too much force when installing the module and securing the cable harness.



Secondly you have a two part mounting system. This system consists of 1 base and 1 disk that will fit onto the base. The disk snaps directly to the back of the gauge. The disk's purpose is to allow adjustment so that you can mount your gauge on an un-even surface and view it from the desired angle. While we do provide a good amount of adjustment it is desirable to get familiar with this part before you permanently install the mount. The disk is attached to the base using two screws and nuts. To adjust the viewing angle you must loosen these screws and make your adjustment.

You also have the main wiring harness. This is designated as harness #1. It is important to read the instructions carefully so that the proper lines are hooked to the corresponding sensors and power supplies.

Lastly you have a thermocouple and lead wire. This allows you to monitor exhaust gas temperature, which is the most important parameter equipped on your monitor. You will be required to drill and tap your exhaust manifold to install the thermocouple and lead wire.

## COMMANDER ACCESSORIES

The Commander is very powerful in its basic form, but there are also a few accessories that you may want to use. These parts are as follows:

### **FUEL PRESSURE KIT:**

This gives you the ability to Command RPM, Injection Pressure, and Fuel Pressure. This kit also includes the needed pressure sensor for reading fuel pressure on the low pressure side from 0-100psi.

### **DATA LOGGING SOFTWARE:**

This gives you the ability to download logged data to a PC. You may also use this software to log directly to your PC for larger data capacity. You may also view all of the logged parameters in real-time on your PC or Laptop.

### **TRANSLATOR MODULE:**

This gives you the ability to control modules listed on our website or the ability to run 2 modules simultaneously.

### **MODULE WIRING ADAPTER:**

The wiring adapter will allow you to adapt almost any power module to the Commander.

## COMMANDER MONITORING SYSTEM

This document covers the basic installation of the Commander System on your truck. For individual purposes you may want to customize your installation.

PLEASE READ ALL OF THE INSTRUCTIONS FOR YOUR VEHICLE BEFORE STARTING. IT IS IMPORTANT TO UNDERSTAND THESE INSTRUCTIONS BEFORE STARTING INSTALLATION.

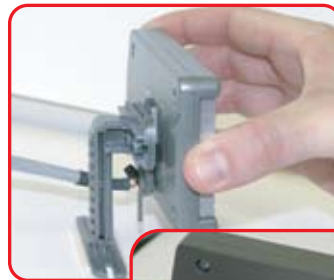
**SPECIAL TOOLS NEEDED:** Power Drill, 21/64 Drill Bit, 1/8 NPT Tap, Teflon Tape

### IN CAB INSTALLATION:

**1** Choose a location in your vehicle where you want to mount your Commander. It is important to do a test fitting to make sure it is plainly visible while driving, but not an obstruction of your driving view. We recommend beside the A-pillar on the driver's side. The rest of these instructions assume that you chose this location. If you choose a different location you may have to use different techniques to route the cable harness under the dash.



**2** Loosen or Remove the A-pillar. You need the pillar to be loose enough to route the connectors down the pillar and beside the dash. The ultimate goal is to get the 3 connectors on the end of the cable harness under the dash and below the steering wheel. Most A-pillars have plenty of room to route the cable and still install the A-pillar back in the factory position without any modifications. It is ok for the pillar to be tight against the cable as long as it does not have enough pressure to damage the harness.



**3** Once the cable is routed pull any slack down under the dash, but leave enough room to stand the Commander up in the mounted position.



**4** Clip the assembled base onto the Commander. Hold the Commander with the base intact in the position you want to mount it. Make sure the viewing angle is correct for the location. If the base needs to be adjusted you may do so by using a #2 Phillips head screw driver. Simply loosen the 2 screws holding the base onto the adjustable disk. Do not remove the screws completely; just loosen them enough to move the Commander's position. Once you have your desired angle, tighten the screws.

**5** There are two ways to secure the base to your dash. You may permanently mount it with the 2 supplied screws or you can use the supplied double sided 3M tape. This tape is plenty strong to hold your gauge in position and is removable.

## CONT: COMMANDER MONITORING SYSTEM

### SCREWS:

Holding the Commander in place carefully mark a spot on the dash on both sides of the disk where the screw slots are located. Carefully drill a 1/8 hole in these spots for a pilot hole. You want to make sure to try and drill in the center of the provided slots so that you leave some room for adjustment. Holding the gauge back into place carefully install the screws into the pilot holes. Although the dashes are fairly thick it is important to not over tighten the screws and strip the plastic material.

### TAPE:

Clean the desired mounting area and the bottom of the mount with the provided alcohol wipe. Apply the double sided tape to the bottom of the mount. It is best to only peel one side of the tape protector off at a time. Once you are ready to mount it carefully stick it to the dash. Once it is in its desired location press firmly down on the dash. It is best to apply pressure on all parts of the base that has the tape on so it takes a good hold.

## THERMOCOUPLE INSTALLATION:

*Please review the recommended positioning for the thermocouple for your specific vehicle.*

### DODGE 98-06

On the passenger side of the vehicle locate the exhaust manifold. On the top side of the manifold between cylinders #2 and #3 is the ideal location for the thermocouple.



### FORD 99-06

On the driver's side of the vehicle locate the exhaust manifold. You will need to drill from underneath the vehicle. The ideal location for the thermocouple is located just as the manifold turns up to the turbo inlet pipe. See figure for reference. Make certain that you drill at an angle that will accept the length of the thermocouple.



### GM 01-06

Remove the passenger side fender well. Once this is removed you will see the exhaust manifold. Towards the rear of the manifold there is a flange that the manifold bolts to. Just in front of this flange is the ideal place to drill for the thermocouple. See figure for reference.

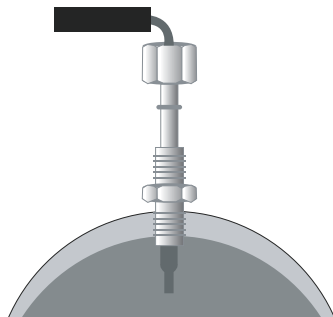


## CONT: THERMOCOUPLE INSTALLATION:

*This section provides instructions for the generic installation of the thermocouple.*

### *Pre-Turbo Installation:*

- 1** You must drill a 21/64 hole in your exhaust manifold. There are 2 ways to do this. The best way is the way that makes you most comfortable. You can remove the manifold to do this or you can do it on the vehicle while the engine is idling. It is also desirable to drill a 1/8" pilot hole. Leaving the engine idling will allow any small shavings to safely exit the exhaust. It is recommended to apply a small amount of grease to the drill bit before drilling.
- 2** Use a 1/8-27 or 1/8NPT tap to make threads in the hole you just drilled. You will not want to run the tap all the way into the manifold. This is a tapered tap so the threads at the top are larger than on the bottom. You need to tap it far enough to screw the thermocouple bushing into the manifold.



- 3** Screw the thermocouple bushing into the manifold. Be careful not to over tighten.
- 4** Insert the supplied thermocouple into the bushing and tighten the locking nut.

## POST TURBO INSTALLATION

- 1** Drill a 21/64 hole in your turbo down pipe. There is no need for the engine to idle or to remove the exhaust piece from the truck. The metal shavings will simply exit the exhaust system when you run the engine.
- 2** Use a 1/8-27 or 1/8NPT tap to make threads in the hole you just drilled. You will not want to run the tap all the way into the manifold. This is a tapered tap meaning the threads at the top are larger than on the bottom. You need to tap it far enough to screw the thermocouple bushing into the exhaust pipe.
- 3** Screw the thermocouple bushing into the pipe. Be careful not to over tighten because it is easy to strip the threads in the thin exhaust pipe.
- 4** Insert the supplied thermocouple into the bushing and tighten the locking nut.

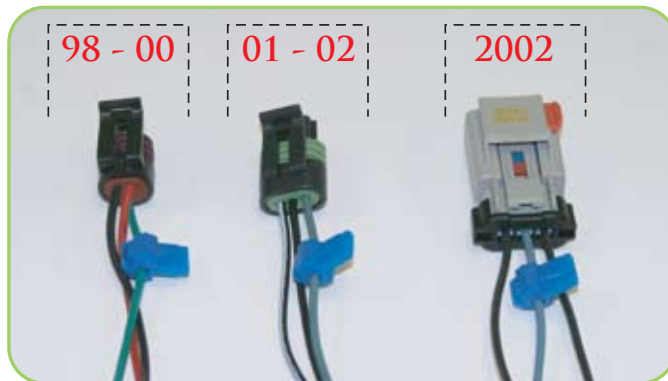
## DODGE 98-02

- 1** Find the Lead wire. This is a 2 wire harness with an Orange and Black wire. The larger connector needs to be connected to the thermocouple.
- 2** Route the lead wire across the engine bay to the driver's side. Tie the lead wire out of the way of any moving or hot parts to avoid damage to the wires.
- 3** On the drivers side firewall there is a rubber plug. Cut a slit in the outer portion of the plug to route the small connector and wire into the cab.
- 4** Plug the small 2 wire plug into the corresponding plug on the cable harness.
- 5** Lay wiring harness #1 out on your engine. The green plug will go inside the cabin using the same location you routed the lead wire through.



- 6** Locate the engines MAP sensor. This is on the driver's side of the engine and behind the fuel filter canister. The year model determines the shape of the connector

**(a)** For 98-00 trucks the MAP sensor is round. There are 2 wires in the top of the plug and 1 wire in the bottom of the plug. Connect the supplied wire tap to the wire that is on the bottom of the plug. This should also be labeled pin C on the connector.



- (b)** For 2001 trucks the MAP sensor is an oval shape. It also has 3 wires. . Connect the supplied wire tap to pin C on the plug. To locate pin C look at the back of the plug where the wires go into the plug and the retaining clip is on top, pin C is on the right side.
- (c)** For 2002 trucks the MAP sensor is also an oval shape, but it has a red lock that you must remove to get the sensor off. It also has 3 wires. Connect the supplied wire tap to the wire that is in the center of the plug.

If you have a power module installed you will need to connect to the same wire on the modules wiring harness to receive an accurate reading. Only tap the wire of the plug that is going into the sensor. Do not tap the wire on the factory plug when you are using a power module. This will result in a false reading.

- 7** Connect the blue wire to the wire tap.
- 8** Locate the Engine Coolant Temperature Sensor (ECT) on the front of the engine. This is a 2 wire connector located on the top of the engine in front of the valve cover.

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CONT: DODGE 98-02

- 9 Connect the Orange wire to the wire tap.
- 10 Find the 1/8" male X 1/4" female and the 1/4" male X 1/8" female brass fittings supplied in the kit.
- 11 Screw the 1/4" male end of the brass fitting into the 1/4" female fitting. Use Teflon tape to make sure it will not leak.
- 12 Screw the supplied 1/8" temperature sensor into the 1/8" female side of your brass connector.
- 13 Locate test port #2 on your transmission. This port is on the passenger side of the vehicle. The transmission is round on the front passenger side corner. Moving towards the rear of the transmission you will see an inset part of the transmission. There is a small plug in the test port. Remove the plug.
- 14 Using Teflon tape screw the temperature probe and fittings into the test port. Do not over tighten.
- 15 Route the Purple wire from the wiring harness to the temperature sensor.
- 16 Remove the nut and washers from the sensor and install the purple wire. Replace the washers and tighten the nut to secure the wire.
- 17 Go over the wiring harness and secure it to the vehicle out of harms way using the supplied wire ties. Keep all wires as far away from moving parts and hot parts of the engine as possible.
- 18 Slide the green plug through the rubber grommet where you ran the lead wire. Pull enough of the wire harness inside the cab so that the switch port connection (white and black wires) the black wire with the ring terminal and the red wire with the fuse tap are inside the cab.
- 19 Find the bolt located by the firewall and remove it. Place the bolt through the ring terminal of the black wire and screw it back into its location.
- 20 Open the fuse box located on the inside of the truck on the driver's side of the dash. You will be required to open the driver's side door to access the fuse compartment.



CONT: DODGE 98-02

- 21** Remove fuse #17 and install the fuse tap over the leg of the fuse. Re-install the fuse.
- 22** Once everything is secure and installed you will want to start your engine. The Commander comes pre-set for these 4 parameters. To make sure everything is installed correctly use these basic guidelines:

*EGT's temperature should be in the 250-350 degree range depending on engine temperature and outside temperature. Boost pressure should read 0psi at idle and up to 5psi while revving the engine at the idle position. ECT should be similar to your factory gauge. If the vehicle is cold it should read close to ambient temperature and slowly rise.*

*Transmission temperature will most likely read 100 deg. It can take up to 20 miles depending on the outside temperature, driving style and load to reach temperatures above 100 degrees. Operating temperatures range from 110-180 degrees dependant upon load and driving style.*

- 23** Using the supplied wire ties, tie up the wire and cable harness under the dash.

Connecting to a Module:

In its basic form the Commander will connect to all Xzillaraider modules. Simply connect the 4 pin connector to the switch port on the Xzillaraider wiring harness.

**If you are using another module you can purchase an adapter to simply plug the Commander into your chip or module.**

## DODGE 03-06

- 1** Find the Lead wire. This is a 2 wire harness with an Orange and Black wire. The larger connector needs to be connected to the thermocouple.
- 2** Route the lead wire across the engine bay to the driver's side. Tie the lead wire out of the way of any moving parts or hot parts to avoid damage to the wires.
- 3** On the driver's side firewall there is a rubber plug. You can either pop the rubber plug out or cut a slit in it to route the small connector and wire into the cab.
- 4** Plug the small 2 wire plug into the corresponding plug on the cable harness.
- 5** Lay wiring harness #1 out on your engine. The green plug will go inside the cabin using the same location you routed the lead wire through.



# QUADZILLA

## CONT: DODGE 03 - 06

- 6** Locate the engines MAP sensor. This is on the driver's side of the engine next to the valve cover. It has 4 wires coming from it.



- 7** Connect the supplied wire tap to pin D. When you look at the back of the plug where the wires go into the plug and the retaining clip is on top, pin D is on the right side. If you have a power module installed you will need to connect to the same wire on the module's wiring harness to receive an accurate reading. Only tap the wire of the plug that is going into the sensor. Tapping the factory wire when using a power module will result in a false reading.
- 8** Connect the blue wire to the wire tap.
- 9** Locate the Engine Coolant Temperature Sensor (ECT) on the front of the engine. This is a 2 wire connector located on the top of the engine in front of the valve cover.
- 10** Because of various wire colors used by the factory it is recommended to use a voltmeter to determine the correct wire. With the key in the on position check voltages on both wires. One wire should be ground or read .006 and the other wire should read .9-3.5V. Connect the wire that has voltage on it. Once the proper wire is determined, install the supplied T-Tap. On 2003-2004 truck you should connect to pin 2 as labeled on the top of the connector. On 2005-2006 truck you should connect to pin B as labeled on top of the connector.
- 11** Connect the Orange wire to the wire tap.
- 12** Find the 1/8" male X 1/4" female and the 1/4" male X 1/8" female brass fittings supplied in the kit.
- 13** Screw the 1/4" male end of the brass fitting into the 1/4" female fitting. Use Teflon tape to make sure it will not leak.
- 14** Screw the supplied 1/8" temperature sensor into the 1/8" female side of your brass connector.
- 15** Locate test port#2 on your transmission. This port is on the passenger side of the vehicle. The transmission is round on the front passenger side corner. Moving towards the rear of the transmission you will see an inset part of the transmission. There is a small plug in the test port. Remove the plug.
- Using Teflon tape screw the temperature probe and fittings into the test port. Do not over tighten.
- 16** Route the Purple wire from the wiring harness to
- 17**



## CONT: DODGE 03 - 06

- 18** Remove the nut and washers from the sensor and install the purple wire. Replace the washers and tighten the nut to secure the wire.
- 19** Go over the wiring harness and secure it to the vehicle out of harms way using the supplied wire ties. Keep all wires as far away from moving parts and hot parts.
- 20** Slide the green plug through the rubber grommet where you ran the lead wire. Pull enough of the wire harness inside the cab so that the switch port connection (white and black wires) and the black wire with the ring terminal are inside the cabin.
- 21** Find the bolt located by the firewall and remove it. Place the bolt through the ring terminal of the black wire and screw it back into its location.
- 22** In the engine compartment locate the red wire with the installed fuse tap.
- 23** Open the fuse box located under the hood on the driver's side fender.
- 24** Remove fuse #28 and install the fuse tap over the leg of the fuse. Re-install the fuse.
- 25** Once everything is secure and installed you will want to start your engine. The Commander comes pre-set for these 4 parameters. To make sure everything is installed correctly use these basic guidelines:

EGT's temperature should be in the 250-350 degree range depending on engine temperature and outside temperature. Boost pressure should read 0psi at idle and up to 5psi while revving the engine at idle. ECT should be similar to your factory gauge. If the vehicle is cold it should read close to ambient temperature and slowly rise. Transmission temperature will most likely read 100 deg. It can take up to 20 miles depending on the outside temperature, driving style and load to reach temperatures above 100 degrees. Operating temperatures range from 110-180 degrees dependant upon load and driving style.

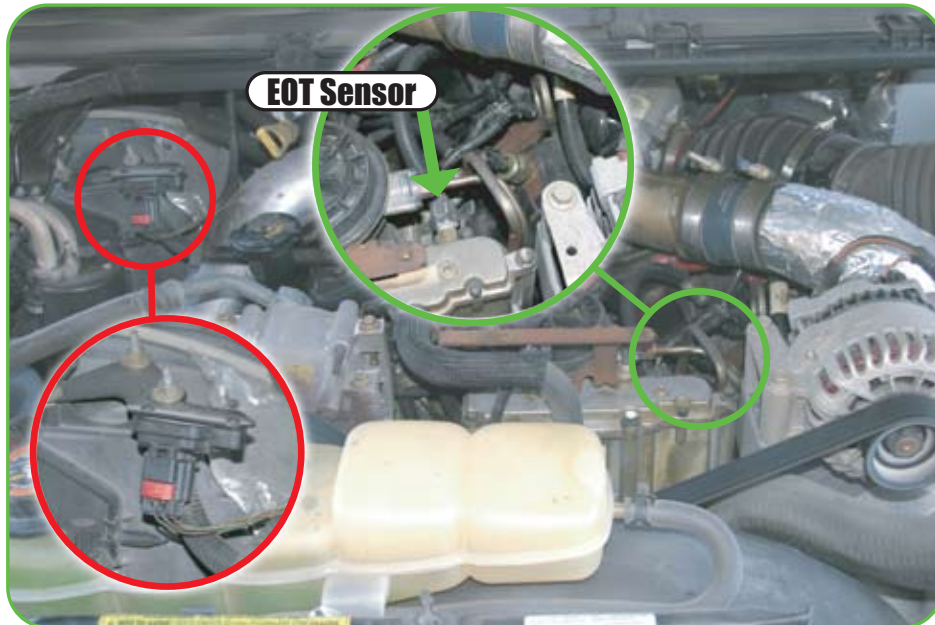
- 26** Using the supplied wire ties, tie up the wire and cable harness under the dash.
- 27** Connecting to a Module:

In its basic form the Commander will connect to all Xzillaraider modules. Simply connect the 4 pin connector to the switch port on the Xzillaraider wiring harness.

***If you are using another module or 4bank chip you can purchase an adapter to simply plug the Commander into your chip or module.***

## FORD 99 - 03

- 1** Find the Lead wire. This is a 2 wire harness with an Orange and Black wire. The larger connector needs to be connected to the thermocouple.
- 2** Route the lead wire from the thermocouple to driver's side firewall. There is a plastic plug that is diamond shaped on the firewall. From the inside pop the plug out. You can either leave the entire plug out or drill a hole large enough to fit the lead wire plug and the plug from harness #1 into the cab. Tie the lead wire out of the way of any moving or hot parts to avoid damage to the wires.
- 3** Plug the small 2 wire plug into the corresponding plug on the cable harness.
- 4** Lay wiring harness #1 out on your engine. The green plug will go inside the cab using the same location you routed the lead wire through.



- 5** Locate the engines MAP sensor. This is on the passenger side of the engine beside the hot side of the intercooler tube. It has 3 wires coming from it.
- 6** Connect the supplied wire tap to the wire in the middle of the connector. If you have a power module installed you will need to connect to the same wire on the module's wiring harness to receive an accurate reading. Only tap the wire of the plug that is going into the sensor. Tapping the factory wire when using a power module will result in a false reading.
- 7** Connect the blue wire to the wire tap.
- 8** Locate the Engine Oil Temperature Sensor (EOT) towards the front of the engine. This is a 2 wire connector located on the top of the engine just behind the High Pressure Oil reservoir. The Sensor will be mounted horizontal to the truck. Note\* On the 7.3L engines we monitor the oil temperature instead of coolant temperature. This will cause the temperatures to be slightly higher than water and you should adjust your warnings and warm up mode accordingly.

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CONT: FORD 99 - 03

- 9** Connect the supplied wire tap to pin #2. If you are holding the connector with the clip release facing up and looking at the back side where the wires enter the connector, the correct wire should be on the left side.



- 10** Connect the Orange wire to the wire tap.
- 11** Locate the high pressure test port on your transmission. This port is on the driver's side of the vehicle. There is a small plug in the test port. Remove the plug.
- 12** Using Teflon tape screw the temperature probe and fittings into the test port. Do not over tighten.
- 13** Route the Purple wire from the wiring harness to the temperature sensor.
- 14** Remove the nut and washers from the sensor and install the purple wire. Replace the washers and tighten the nut to secure the wire.

- 15** Go over the wiring harness and secure it to the vehicle out of harms way using the supplied wire ties. Keep all wires far away from moving parts and hot parts.



*Picture indicates a 6L transmission however test port is in same general location*

- 16** Slide the green plug through the rubber grommet where you ran the lead wire. Pull enough of the wire harness inside the cab so that the switch port connection (white and black wires), the black wire with the ring terminal, and the red wire with the fuse tap are inside the cab.
- 17** Find the bolt located by the firewall and remove it. Place the bolt through the ring terminal of the black wire and screw it back into its location.
- 18** Open the fuse box located on the driver side below the steering wheel. You will need to remove the dash panel to access the fuse box.
- 19** Remove fuse #27 and install the fuse tap over the leg of the fuse. Re-install the fuse.
- 20** Once everything is secure and installed you will want to start your engine. The Commander comes pre-set for these 4 parameters. To make sure everything is installed correctly use these basic guidelines:

*EGT's temperature should be in the 250-350 degree range depending on engine temperature and outside temperature. Boost pressure should read 0psi at idle and up to 5psi while revving the engine at idle.*

CONT: FORD 99 - 03

*ECT should be similar to your factory gauge. If the vehicle is cold it should read close to ambient temperature and slowly rise. Transmission temperature will most likely read 100 deg. It can take up to 20 miles depending on the outside temperature, driving style and load to reach temperatures above 100 degrees. Operating temperatures range from 110-180 degrees dependant upon load and driving style.*

- 21** Using the supplied wire ties, tie up the wire and cable harness up under the dash.

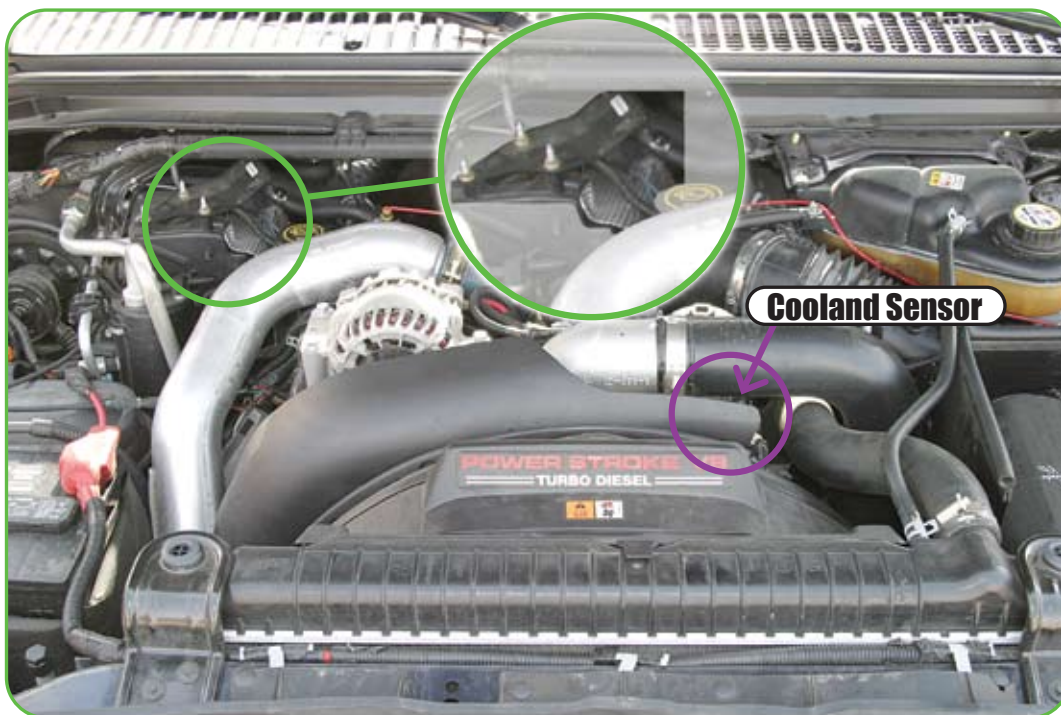
Connecting to a Module:

In its basic form the Commander will connect to all Xzillaraider modules. Simply connect the 4 pin connector to the switch port on the Xzillaraider wiring harness.

***If you are using another module or 4bank chip you can purchase an adapter to simply plug the Commander into your chip or module.***

## FORD 03 - 06

- 1 Find the Lead wire. This is a 2 wire harness with an Orange and Black wire. The larger connector needs to be connected to the thermocouple.
- 2 Route the lead wire from the thermocouple to driver's side firewall. There is a plastic plug that is diamond shaped on the firewall. Some trucks have foil tape that has to be removed for access through the firewall instead of the plastic plug. From the inside pop the plug out. You can either leave the entire plug out or drill a hole large enough to fit the lead wire plug and the plug from harness #1 into the cab. Tie the lead wire out of the way of any moving or hot parts to avoid damage to the wires.
- 3 Plug the small 2 wire plug into the corresponding plug on the cable harness.
- 4 Lay wiring harness #1 on out on your engine. The green plug will go inside the cabin using the same location you routed the lead wire through.



- 5 Locate the engines MAP sensor. This is on the passenger side of the engine next to the hot side of the intercooler tube. It has 3 wires coming from it.
- 6 Connect the supplied wire tap to the wire in the middle of the connector. If you have a power module installed you will need to connect to the same wire on the modules wiring harness to receive an accurate reading. Only tap the wire of the plug that is going into the sensor. Tapping the factory wire when using a power module will result in a false reading.
- 7 Connect the blue wire to the wire tap.
- 8 Locate the Engine Coolant Temperature Sensor (ECT) on the front of the engine just below the upper radiator hose. This is a 2 wire, gray connector.

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CONT: FORD 03 - 06

- 9 Connect the supplied wire tap to pin #2. If you are holding the connector with the clip release facing up and looking at the back side where the wires enter the connector, the correct wire should be on the left side.
- 10 Connect the Orange wire to the wire tap.



- 11 Locate the high pressure test port on your transmission. This port is on the driver's side of the vehicle. There is a small plug in the test port. Remove the plug.
- 12 Using Teflon tape screw the temperature probe and fittings into the test port. Do not over tighten.
- 13 Route the Purple wire from the wiring harness to the temperature sensor.
- 14 Remove the nut and washers from the sensor and install the purple wire. Replace the washers and tighten the nut to secure the wire.
- 15 Go over the wiring harness and secure it to the vehicle out of harms way using the supplied wire ties. Keep all wires far away from moving parts and hot parts.
- 16 Slide the green plug through the rubber grommet where you ran the lead wire. Pull enough of the wire harness inside the cab so that the switch port connection (white and black wires), the black wire with the ring terminal, and the red wire with the fuse tap are inside the cab.
- 17 Find the bolt located by the firewall and remove it. Place the bolt through the ring terminal of the black wire and screw back into its location.



CONT: FORD 03 - 06

- 18** Open the fuse box located on the driver side below the steering wheel. You will need to remove the dash panel to access the fuse box.
- 19** Remove fuse #45 and install the fuse tap over the leg of the fuse. Re-install the fuse.
- 20** Once everything is secure and installed you will want to start your engine. The Commander comes pre-set for these 4 parameters. To make sure everything is installed correctly use these basic guidelines:

*ECT's temperature should be in the 250-350 degree range depending on engine temperature and outside temperature. Boost pressure should read 0psi at idle and up to 5psi while revving the engine at idle. ECT should be similar to your factory gauge. If the vehicle is cold it should read close to ambient temperature and slowly rise. Transmission temperature will most likely read 100 deg. It can take up to 20 miles depending on the outside temperature, driving style and load to reach temperatures above 100 degrees. Operating temperatures range from 110-180 degrees dependant upon load and driving style.*

- 21** Using the supplied wire ties, tie up the wire and cable harness under the dash.

Connecting to a Module:

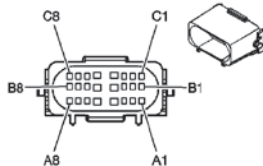
In its basic form the Commander will connect to all Xzillaraider modules. Simply connect the 4 pin connector to the switch port on the Xzillaraider wiring harness.

**If you are using another module or 4bank chip you can purchase an adapter to simply plug the Commander into your chip or module.**

## DURAMAX 01-06

- 1** Find the Leadwire. This is a 2 wire harness with an Orange and Black wire. The larger connector needs to be connected to the thermocouple.
- 2** Route the lead wire across the engine bay to the driver's side. Tie the lead wire out of the way of any moving or hot parts to avoid damage to the wires.
- 3** On the drivers side firewall there is a rubber plug. Cut a slit in the outer portion of the plug to route the small connector and wire into the cab.
- 4** Plug the small 2 wire plug into the corresponding plug on the cable harness.
- 5** Lay wiring harness #1 out on your engine. The green plug will go inside the cabin using the same location you routed the lead wire through.

Locate the Main Engine Plugs. These are located on the drivers side of the engine, directly above the valve cover. There are 2 large connectors stacked on top of each other. You are looking for the smaller plug that is on top. This is a 24pin connector. Connect the supplied wire tap to PIN C8. This should be a Light Green wire, located in the top row of wires and nearest the firewall.



- 6** Connect the Blue wire from your Commander to the blue wire tap.

If you have an after market transmission pan you may now install the 1/8 NPT sensor into the oil pan fitting. On factory transmissions there is also a test port located on the bottom and towards the front of the transmission. You may desire to get the proper AN fitting to take a reading at this location, but it is not recommended due to the fact that the sensor could be damaged from protruding to low off of the transmission. We recommend using the 1/8" NPT probe to measure Oil temperature on the Duramax engines.

- 7** Find the 3/8" X 1/8" NPT bushing included with your kit.
- 8** Using Teflon tape install the temperature probe into the bushing.

# QUADZILLA

CONT: DURAMAX 01-06

- 9** Locate the oil filter housing. This is easiest to find from under the driver side of the engine. On the Oil filter housing look for the 3/8" bushing that uses a 6mm hex head for removal. This port should be located towards the front of the housing and should be facing the driver's side front tire. Have a rag ready as you will spill some oil. Make sure the vehicle has cooled off as the oil can be very hot.



- 10** Using Teflon tape install the bushing into the port. Be careful not to over tighten
- 11** Route the Purple wire from the Commander wiring harness to the temperature sensor. Remove the nut and washers from the sensor and install the purple wire.
- 12** Replace the washers and nut on the temperature sensor. Make sure the nut is secure but do not over tighten
- 13** Go over the wiring harness and secure it to the vehicle out of harms way using the supplied wire ties. Keep all wires as far away from moving parts and hot parts of the engine as possible.
- 14** Slide the green plug through the rubber grommet where you ran the lead wire. Pull enough of the wire harness inside the cab so that the switch port connection (white and black wires) the black wire with the ring terminal and the red wire with the fuse tap are inside the cab.
- 15** Find the bolt located by the firewall and remove it. Place the bolt through the ring terminal of the black wire and screw it back into its location.
- 16** Open the fuse box located on the inside of the truck on the driver's side of the dash. You will be required to open the driver's side door to access the fuse compartment.
- 17** Re-install the fuse. Attach the red wire with the fuse tap to the fuse labeled IGN.
- 18** Once everything is secure and installed you will want to start your engine. The Commander comes pre-set for these 4 parameters. To make sure everything is installed correctly use these basic guidelines:

*ECT's temperature should be in the 250-350 degree range depending on engine temperature and outside temperature. Boost pressure should read 0psi at idle and up to 5psi while revving the engine at the idle position. ECT should be similar to your factory gauge. If the vehicle is cold it should read close to ambient temperature and slowly rise.*

*Transmission temperature will most likely read 100 deg. It can take up to 20 miles depending on the outside temperature, driving style and load to reach temperatures above 100 degrees. Operating temperatures range from 110-180 degrees dependant upon load and driving style.*

CONT: DURAMAX 01-06

**\*Special note\***

We are not currently supporting the Coolant temperature feature on 01-06 Duramax's. This may be a feature that will be available with a future update available on the web.

**19** Using the supplied wire ties, tie up the wire and cable harness under the dash.

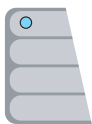
Connecting to a Module:

In its basic form the Commander will connect to all Xzillaraider modules. Simply connect the 4 pin connector to the switch port on the Xzillaraider wiring harness.

**If you are using another module you can purchase an adapter to simply plug the Commander into your chip or module.**

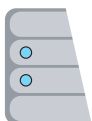
## DISPLAY FUNCTIONS

The Commander has 4 buttons for control. The buttons have a reference on the display screen for ease of use.



The top Button is the Menu/Esc button. This button can be used to enter the Main Menu anytime you have the Commander in the monitoring mode. Simply press the top button once and you will enter the Main Menu.

The top button is also the Escape button or it could be called the Back button. Once you are in the Main menu you can press the top button again to go back to the main display that you have selected. At anytime in the menus if you desire to go back this button will take you back one menu. You can use this button to completely escape from the menus if you desire.



The 2nd and 3rd buttons are used to move up and down in the menus. You may also hold a button to scroll rapidly through any menu. These buttons are also used for adjusting power levels up and down if connected to a module or chip.



The bottom button is the Select button. You use this button to choose your options in the menu. This button will advance you to the next menu or screen.

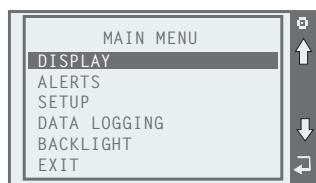
The Commander uses a highlighted cursor so that you can easily navigate the menu. The selection that the cursor is over will be in black and the numbers or letters will appear in white.

The Commander defaults to a 4 function display upon initial start up. Egt, Boost, Transmission Temp and Coolant Temp will be displayed. The power level will be defaulted at Zero. De-fueling and all warnings will be turned to the off position.

### MAIN MENU:

To get to the main menu press the top or Menu button one time.

You will see the following Menu:

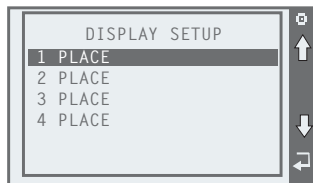


## CONT: DISPLAY OPTIONS

### Display Menu:

The Commander has 4 different display options. Depending on how many parameters you choose to view at one time will determine the correct layout for you. Below are examples of all 4 display options. Once you select your desired number of functions to view you will be able to customize that view to your liking.

Selecting the Display Menu will show you the following screen:



Selecting any of the above options will allow you to set up how you display the monitored parameters. A check mark will show you which parameters you have already selected.

Once you make your selections you will be returned to the Main Menu. You may move to another area of the menu or you may choose the exit button. You may also just use the Esc/Back button if you desire. The Commander automatically saves any changes you make.

### Alerts Menu:

The Alerts menu is where you can set up engine de-fueling if you have a module or chip, or you may set warnings.

You will see this menu if you select Alerts:

Selecting the defuel setting will show you all of the parameters that you may de-fuel your engine on as long as they are monitored. You may select one or all of the parameters to de-fuel your engine on, but it is recommended to be practical in your selections.



The de-fuel function is meant for safety under normal driving and towing conditions. Selecting values that will be reached on a normal basis will affect drivability as the truck will constantly be de-fueling. If you are drag racing it is recommended to turn the de-fuel settings to OFF. The de-fuel settings will be functional even if you choose not to view the parameter. Example: If you choose a 1 function display for EGT, but you want to de-fuel based on Boost, the Commander will display EGT at all times, but it will de-fuel the engine when the Boost level reaches your set maximum. The Commander will return the full amount of power that you have selected once the parameter that was exceed is back in a normal operating range.

## CONT: DISPLAY OPTIONS

### Warnings:

Once you enter the warnings menu you will be able to set a visible warning to any monitored parameter. You do not have to be viewing the parameter in order for it to give a warning. You may set as many warnings as you desire. Once again it is recommended to keep your warnings practical as constant warnings flashing on your screen may become undesirable. The Commander has the ability to display as many as 4 different warnings at 1 time.

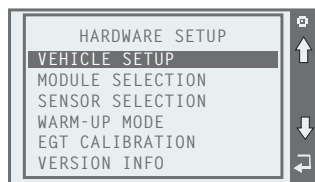
If 1 warning is reached then the Commander will switch to a 1 Function display, and Flash the parameter that has reached your maximum. If 2 warnings are reached the Commander will show the 2 function display with a warning on each side. The 3 and 4 Function screens will appear if 3 or 4 warnings are reached. The Commander will continue to display the warnings until the parameters fall back below you set maximum, or you reset the warnings.

Once again, it is not necessary to view any of the parameters that you choose to set warnings for. The warnings are meant for parameters that you choose not to watch and that you want the Commander to watch for you. This gives you the ability to view only those parameters that you desire to see all the time.

### Setup:

This menu allows you to select your particular vehicle, choose a power module or chip to control, turn sensors on and off, set Warm up mode, calibrate your EGT Gauge, or retrieve version and serial numbers.

The Setup Menu is as follows:



#### **Vehicle Setup**

This menu allows you to choose what vehicle you are installing the Commander in. If you choose to move it to another vehicle, you may switch vehicles at any time. It is important to select the proper vehicle as the proper data is needed for Coolant and Boost monitoring.

#### **Module Selection:**

This provides the list of the supported power modules and chips that you can control. Some modules and chips are not supported on the standard version of the Commander and may require additional hardware.

## CONT: DISPLAY OPTIONS

### **Sensor Selection:**

This section allows you to turn parameters on or off. If you choose to view a parameter that is turned off the Commander will display OFF in the corresponding window that it is to be viewed in. If you are connected to this parameter and choose to monitor it you must turn it ON.

### **Warm Up Mode:**

The Warm Up Mode is only for vehicles using a module or chip. This allows you to choose what temperature your module or chip starts adding power. The Commander will turn the power adder to the last used power level. The default is at Zero. This works for any module or chip that the Commander is controlling. If your module already has cold engine protection you can turn this off, or you may want to raise the temperature at which it starts adding power. The Commander will supercede the modules set warm up temperature as long as the turn on point is higher than the module's.

### **Egt Calibrate:**

This function allows you to slightly alter the EGT reading of your gauge. If you already have an analog gauge that you trust, you want to use an existing thermocouple, or you have a thermocouple test tool, you may dial the Commander in to read exactly like your existing gauge. The amount of scaling is not large and is used for fine tuning if you desire. The Commander comes set to match perfectly with the supplied thermocouple and should only be altered if you have the proper equipment.

### **Version Info:**

This is where you may retrieve your software version number as well as the Commander's serial number. This is very helpful information if technical assistance is ever needed. The version number will also be needed in order to download updates to the Commander.

## CONT: DISPLAY OPTIONS

### Data Logging:

This is where your records are stored. The Commander keeps a log of all minimum and maximum values it records from the time you start your truck. Each time you turn your vehicle off the Commander resets the Log and starts a new one. If you desire to reset your parameters while the vehicle is running you may do so by selecting RESET ALL.

To retrieve the logged data simply select the RECORDS item, then select the desired Parameter.

### Backlight:

The Commander is equipped with a fully adjustable backlight. By selecting the Backlight menu you will be able to dim or brighten the backlight to suit your viewing needs.

These are the basic functions of the Commander. While there is a lot to learn this is just the beginning to the Commander. The Commander has the ability to control almost any power module on the market. If it was not listed in the menus, there will be an update for it in the near future.

The Commander also has the ability to control multiple power modules at once. You will be able to adjust both power modules on the fly and de-fuel both power modules in a variety of ways. As there are almost endless combinations, the information for these functions will be available online at [www.quadzillapower.com](http://www.quadzillapower.com).

The Commander also has full data logging features when the data logging software is purchased. The command will be able to log a period of data or you may log it directly to a laptop or pc using the USB connection.

The Commander is also updatable and upgradable online via the USB port. For more information please visit our website.

Instructions for any additional parameters monitored power module connection, and data logging are in the supplemental instructions that come with the Commander accessories.