

# DIABLOSPORT®

# Trinity™



**T-1000**  
**ONE PART NUMBER**  
**FOR ALL APPLICATIONS!**



C O M P R E H E N S I V E U S E R M A N U A L

**AFTERMARKET PARTS**-Use of the DiabloSport Trinity with aftermarket products is at the owners risk; some aftermarket products create rich or lean conditions based on design by the product's manufacturer. It is impossible to test every possible product so please proceed with caution when using any product related to adding airflow like throttle bodies, filters and cold air intake kits or boost in the form of pulleys, or blower upgrades, changes in exhaust systems or exhaust components. Customers with these modifications may need a custom tune from a DiabloSport CMR dealer. DiabloSport recommends the use of a dyno and wide band oxygen sensor to monitor data when adding aftermarket products to make the proper tune changes with Trinity.

Any change in voltage during flash programming procedures WILL interrupt the writing process. Please disconnect or disable any such add on part. In the event of such an occurrence, unplug the tool, wait 5 seconds and then plug it back in. The tool will recognize that an interrupted writing error has occurred and will automatically install the original backup. The vehicle is now in its original state. Please attempt to locate the voltage draw before Trinity is used again. Please feel free to contact DiabloSport directly at any time with questions related to this process. (800)-531-5484 to speak with DiabloSport Tech Support. **IMPORTANT: IT IS NOT NECESSARY TO CONTACT THE VEHICLE MANUFACTURER SHOULD SUCH ERRORS OCCUR. ANY AND ALL COSTS RELATED TO SUCH ACTIONS ARE THE RESPONSIBILITY OF THE END USER- NOT DIABLOSPORT OR ITS DEALERS.**

**Important Note: Make sure to remove, disable, or disconnect any of the following (including fuses if applicable due to possible power draw):**

- Aftermarket Electrical fans
- Shift lights
- Aftermarket TV or DVD Players and Speaker Amplifiers
- Aftermarket Alarm systems
- Trailer Brake Controllers
- Aftermarket GPS
- On-Star System Fuses

### Screen Care:

- Never use abrasive cleaning products.
- Don't use harsh cleaning chemicals
- Use a clean lint free terry cloth.
- Never use items such as keys or pens to touch the screen.
- Remove Trinity from temperatures in excess of 158 degrees or lower than 32 degrees Fahrenheit.

### Very important!

- Do not perform any tuning or flashing operations with your Trinity while the vehicle is running. The vehicle must be parked and engine OFF.
- Always have all the doors closed while installing the DiabloSport Performance Tune, and keep them closed until the process is complete.
- Do not activate any electrical accessories while installing the DiabloSport Performance Tune. Ensure that there are no electronic aftermarket accessories wired or plugged into the vehicle that can cause a substantial voltage drop. Please contact DiabloSport if you are uncertain about the effect of devices that are installed on your vehicle.
- Certain cellular phones or radio equipment might cause interference. Please remove or turn such devices off while tuning the vehicle.
- Do not try to install any tune on a vehicle with a low battery voltage - charge your battery if necessary.
- Do not unplug the Trinity while it is installing the DiabloSport Performance Tune or the Original Backup for ANY reason.

**Trinity Tuning:** DiabloSport Performance tunes are designed for stock to mildly modified applications. They are NOT for use with superchargers, turbochargers, or nitrous systems which require proper custom tunes from a DiabloSport CMR dealer.

## Warranty Information

- A. DiabloSport Trinity Warranty Policy
- a. DiabloSport offers a 30 day satisfaction guarantee on Trinity as well as a 1 year warranty against defects in materials or workmanship.
  - b. DiabloSport's liability under this warranty shall be limited to the correction or replacement of any defective part or product in question which DiabloSport determines to be necessary.
  - c. Screen damages will be reviewed on a case by case basis to determine the actual damage done to any screens, including user error. Warranty freight charges are the responsibility of the dealer, distributor and/or consumer.
  - d. The Trinity warranty is to the original purchaser and is non-transferable.
  - e. This warranty is void unless proof of purchase is submitted.
  - f. Removal of serial numbers and/or alteration of product or packaging will void all warranties.
  - g. DiabloSport shall not be held responsible for direct or indirect failures due to the use of our product.
  - h. DiabloSport shall not credit or repair any units that are not properly restored to the original backup upon time of return or that may be VIN locked.
    - i. VIN locked units, or improperly restored units, will be returned to the customer.
    - ii. It is the customer's responsibility to check any and all DiabloSport products to make sure they are not VIN locked before the product shall be returned.
- B. Technical Support can be reached by calling toll free (800)-531-5484 from 8:30 AM EST through 7:30 EST Mon-Thurs, and Friday 9:00 AM EST-5 PM EST on.
- C. Product updates
- a. DiabloSport will inform customers of any new updates on our website [www.diablosport.com](http://www.diablosport.com).
  - b. DiabloSport cannot be held accountable for any or all damages caused by using a Trinity that does not have the latest software revision, or is outdated.
  - c. Products that need updates will be handled in the following fashion:
    - i. DiabloSport will charge a labor and handling fee for products that are deemed non-defective.
    - ii. DiabloSport shall decide at time of receipt of RMA if units are defective.
    - iii. All products returned for update purposes must have a corresponding DiabloSport RMA number for processing- all others will be refused.
- D. Returns and RMA/RGA policies and procedures
- a. DiabloSport will not warranty, credit, or exchange any product returned without a valid RMA number.
  - b. All RMA numbers are issued by DiabloSport RMA department.
  - c. Defective units shall be repaired and returned in like kind. All units that must be re-furnished to like new condition are subject to labor and parts charges to be determined by DiabloSport.
  - d. All refunds for DiabloSport products are at point of purchase- DiabloSport will not credit dealers/customers that did not purchase products directly through DiabloSport.
- E. State Law. Some states do not allow limitations of implied warranties, or the exclusion or limitation of incidental, special or consequential damages, so the above limitations may not apply to you. In such states, liability shall be limited to the greatest extent permitted by applicable law.
- F. Governing Law & Venue. This warranty shall be governed by and construed in accordance with the laws of the State of Florida, and venue for any legal proceeding or action at law arising out of or construing this Agreement shall lie in the state or federal courts of Orange County, Florida, and the parties specifically waive any other venue.
- G. DISCLAIMER: Not legal for sale or use on any pollution controlled motor vehicles. Legal in California for racing vehicles ONLY- which may never be used upon a highway or other state road.
- H. DISCLAIMER: DiabloSport cannot be held liable for any accident or issue caused by users driving while looking at their Trinity Monitor.

**DiabloSport Inc. Satisfaction Guarantee-** All DiabloSport products have a satisfaction guarantee. If within the first 30 days from date of purchase you are not satisfied with the results, simply restore the Original Backup to your vehicle and return the product to the selling dealer. Under no circumstances will DiabloSport accept the return of a Trinity unit that is VIN locked or has not been restored to original settings.

**Trinity Revisions-** In such a technology-based industry, it is sometimes hard to provide our customers with the most recently updated information. In some cases, by the time our materials are printed, we have already made an update-making what you read out of date. DIABLOSPORT works very hard to update our tools to include calibration changes from the factory, additional features as requested by our customers, and improvements to our tunes on a daily basis if necessary. In order to keep our customers up to date with releases, applications, product information, vehicle specific questions and features, we advise you visit our website at [www.DIABLOSPORT.com](http://www.DIABLOSPORT.com) for the most up to date information.

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## Section 1: Setup & Installation

Thanks for your purchase of the DiabloSport Trinity! You now have one of the most powerful tuning and diagnostic tools on the planet! No other device on the market brings you the features like tuning, monitoring, a color touch screen, cutting edge graphics, data logging, and custom tuning options like the Trinity. Now that you've opened your box to see what's inside, let's make sure you got everything that's supposed to be there:

### 1.1-What You Should Have in the Box

1. Your New Trinity



4. Trinity Suction Cup Mount



2. Trinity OBD-II Connector



5. Trinity Drivers CD for Windows



3. USB Cable



### 1.2- Installing Trinity Suction Cup Mount

The Trinity comes with a suction cup mount designed specifically for windshield mounting of the device.



Step 1: Installation couldn't be easier, just line up the 4 points on the suction cup to the 4 slots on the back of the Trinity and you're in!



For an extra stable connection that will avoid "wobble" on the mount, try bending a "U" into the bendable section of the mount so the Trinity sits its weight on it on the dash. You will point the open end of the "U" toward the windshield and the bottom toward the dash.



### 1.3- Installing Optional Gauge Mount

In certain states, such as California, having any item mounted to your windshield may be considered an obstruction- additionally some Trinity users may already have an A pillar pod (for analog gauges). DiabloSport offers an optional gauge mount system for Trinity that allows the unit to be installed into and 2 1/16th A-pillar pod. Visit [www.diablosport.com](http://www.diablosport.com) for more information on this accessory and where it is available for purchase.



### 1.4- OBD-II Cable Connection



There are several options for running the OBD-II connection cable to your Trinity. On some vehicles it the vehicle diagnostic connector on one end of the cable will fit perfectly in the vehicle and stay out of the way while on others due to the shape of the connector the cable may hang down under the dash (obstructing the use of the vehicle pedals). For proper installation of Trinity in vehicles that require more space under the dash you can easily move the OBD-II port itself under the steering column.

### Option 1: Purchase Trinity right angle connector

The Trinity Right Angle OBD-II connector is available for purchase at [www.diablosport.com](http://www.diablosport.com) where you can find an authorized dealer or order directly from our website.



### Option 2: Relocate the OBD-II Connection

**Note: If you use option 2 you will need to put your OBD-II port back to normal position before visiting a dealership for service work.**

**Step 1:** Plug the Trinity's OBD-II connector in to the vehicle and see if it will be in the way by your feet. If it is, look under the vehicle dash for your OBD-II port.

**Step 2:** You can easily "unhook" your OBD-II port- some vehicles will have a "pop" style connector that you can easily unclick while others may have 2 small screws that need to be undone. Unhook the OBD-II connector.

**Step 3:** Now plug your Trinity's OBD-II connector into the OBD-II port and move the cabling up underneath the dash. Use Velcro, Tape, or zip ties to secure it under the dash.

### 1.5- Trinity Buttons and Interface

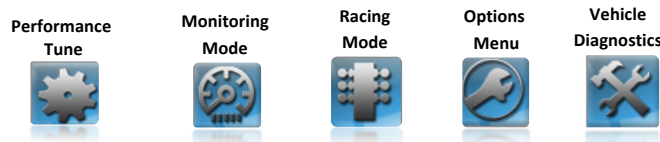


1. The Trinity's touch Screen: All of your functions will be accessible from the Trinity's touch screen. While the Trinity also has physical buttons on it, you will find it is just as easy to touch your screen as it will be to touch the buttons.
2. Mini USB connection to update your Trinity: This port will also power it at your desk!
3. Trinity OBD II Connector: This allows you to hook the Trinity to your vehicle for tuning and diagnostic functions.
4. Trinity Analog I/O: For using aftermarket sensors such as wide band O2 or EGT in conjunction with your Trinity.
5. SD Card Slot: Support for SD cards allows users to have extra data on their Trinity, to load files to and from the Trinity, or put updates on it!
6. Trinity Buttons: With the Trinity facing the direction in the picture above, the round circle of buttons on the right are names as follows: Up, Down, Left, Right respectively, and then enter in the center. These buttons can be used instead of the touch screen to navigate through menus and select functions

7. Screen buttons 1 and 2: The screen buttons allow you to quickly enter menu functions such as “back” or “edit” when prompted on the screen. Button one is the button on top, button two is on the bottom.
8. Digital L.E.D.s: These programmable LEDs are designed for use with the virtual tree function.

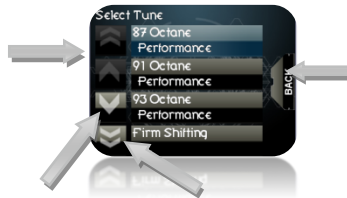
## Trinity Menu Navigation

As one of the most advanced tuning devices on the market one can only expect the Trinity to have one of the most advanced user interfaces on the market as well. The Trinity allows several ways for the user to navigate through it’s menus and make selections. In this section we will go over some basic information about some of the Trinity’s touch screen features. **NOTE: Your Trinity’s physical buttons can always be used to navigate through menus using the up, down, left right and enter keys or the Screen Button 1 & 2 which correspond to right screen menu items.**



## Trinity selection menu buttons:

A Blue Flashing Light on a screen object means that it’s the current selection. To enter it either tap the Trinity Screen on it, or press the round physical enter key.



When the back button is present on the right side of the screen, press it go back to the previous menu screen. Note you may be prompted to make a decision depending on what menu

The Single Arrow on the Trinity Screen moves the selection up or down by one.

The Double Arrow moves the selection up or down by an entire page, or group of options.

Tap a gauge while on the screen to modify what parameter it is monitoring. You will be prompted to choose from a list of available parameters. A Detailed list is available later in this manual.



Other buttons on the right hand side of the screen will access addition menu options for the current mode the Trinity is in. This can be anything from edit, record, modify, or back.

A Single Arrow is referred to as a “Fine” adjustment in the modify parameters menu while a Double Arrow is referred to as a course adjustment. Fine adjustments modify a parameter by the smallest increment and likewise a course adjustment is a larger increment.



The buttons on the right side of the screen are enter and cancel respectively. These will either enter your selection for a parameter, or cancel any changes.

The number on the bottom left represents the lowest possible increment for an adjustable parameter.

The number in the center represents the current setting for an adjustable parameter.

The number on the bottom right represents the maximum setting for an adjustable parameter.

## Section 2: Trinity tuning options

The Trinity’s tuning options vary depending on the vehicle being tuned., If you have a 2008 Chrysler 300C your options in the performance tune menu might be: 93 Octane Performance tune or 91 Octane Performance Tune versus a 2007 F-350 with a 6.0L PowerStroke which might have the options like 40 HP Towing Tune, 65 HP Economy Tune, and 100 HP Extreme Tune.

**Note: These options may vary based on the vehicle application and the Trinity’s software version.**

## Trinity Application/Vehicle Support

**Note:** Check [www.DiabloSport.com](http://www.DiabloSport.com) for latest application support

- 🔧 **2006-2009 6.6L Duramax Diesel LLY/LBZ/LMM Motors**  
**Vehicles Models:** Silverado/Sierra 2500/3500/4500 Diesel
- 🔧 **2003-2009 6.0L/6.4L Ford Power Stroke Diesel**  
**Vehicles Models:** Ford F-250/350/450/550
- 🔧 **2003-2007 5.9L Dodge Cummins Diesel**  
**Vehicles Models:** Ram 2500/3500/4500
- 🔧 **2005-2009 Chrysler SRT-8 & RT Vehicles**  
**Vehicles Models:** Magnum, 300C, Charger, Challenger, Jeep Grand Cherokee (SRT8 only)
- 🔧 **2005-2008 Chrysler HEMI Cars**  
**Vehicles Models:** Magnum, 300C, Charger, Challenger
- 🔧 **2003-2005 Dodge Neon SRT-4**
- 🔧 **2003-2006 Chrysler PT Cruiser GT**

## Diesel Tuning

Diesel trucks have massive horsepower and torque potential that can be unlocked just by programming a vehicles PCM (Powertrain Control Module). Your vehicle may have tunes for any of the following or more!

- 🔧 **Towing:** This setting is generally 40-60 HP. It adds an average of 100 Ft/Lbs of torque (depending on application) and is used when towing heavy loads near the vehicles factory towing capacity. This setting is designed to increase drivability while towing and increase fuel economy when cruising at highway speeds . This option is especially helpful for mountain driving or while towing uphill.

- 🔧 **Economy:** This setting adds between 60-100 HP and 120-180 Ft/Lbs of Torque. Economy gains average 2-4 MPG over stock mileage (depending on the vehicle make and model)! This tune is not designed for heavy towing: Do not tow in excess 6,000-8,000 pounds while using the economy tune without modifications to lower exhaust gas temperatures. DiabloSport highly recommends the use of an aftermarket cold air intake and exhaust (4 inch diameter at the down pipe) when using this tune. Fuel gains will vary depending on vehicle application, driving conditions, and of course driving style. While the numbers you will see throughout this catalog are very attainable, “Lead-Foot” syndrome is a major factor in fuel mileage. While we expect you to be thrilled with the performance and power increases you will see with all of our products, we encourage you to resist the urge to “floor it” and drive under normal conditions to experience maximum gas savings. DIABLOSPORT diesel products are intended for race use only.

- 🔧 **Extreme:** This tune adds anywhere from 100 to 185 horsepower and 220+ Ft/Lbs of torque over stock. This tune is specifically designed for peeling out down the strip! DiabloSport recommends only using the extreme tuning options if you have an exhaust and cold air intake due to a possible increase in EGT.

**Note:** The Trinity allows users to connect an aftermarket EGT sensor to monitor increased exhaust gas temperatures.

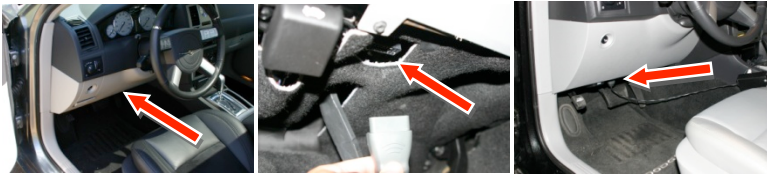
## Gas Tuning

DiabloSport performance tuning with 93 octane yields average performance gains of 15-20 wheel horsepower and 20 + ft/lbs of torque (Some applications gain more or less, depending on engine size and platform). If you have a gasoline vehicle make sure to run at least the octane rated in the tune’s description. For instance if you install the 93 Octane Performance Tune you must run 93 octane in order to avoid spark knock or detonation; however, if you install the 87 Octane Performance

Tune and you fill up with 89 octane you have exceeded the minimum octane rating. Some areas of the US and abroad may not have access to 91/93 octane fuel, but if you happen to be somewhere where premium fuel is not available have no fear- the Trinity allows users to modify their spark advance so they can run lower/higher octane fuels. For more information on modifying a tune with Trinity, see section 2.2 later in this manual.

### 2.1-Tuning Your Vehicle the First Time.

**Step 1:** Plug the Trinity in to your vehicle’s diagnostic port (located under the dash).



**Step 2:** Once the Trinity powers up, select your vehicle from a list of supported applications. The Trinity will now boot to the main menu. Select “Performance” from the top left corner of the menu.



**Step 3:** The Trinity will prompt you to select your vehicle’s transmission type. Once you’ve made your selection carefully review the disclaimer on screen. If you agree to the disclaimer, select “agree” on the Trinity screen.



**Step 4:** The Trinity will begin to save an “Original Backup” from your vehicles internal memory. The original backup is an exact duplicate of the data from your vehicles computer - it will be stored in the Trinity’s memory until you choose to restore it to the vehicle.

**NOTE:** Always restore the “Original Backup” to the vehicle before bringing the vehicle to the dealership for warranty service work or before emissions testing.

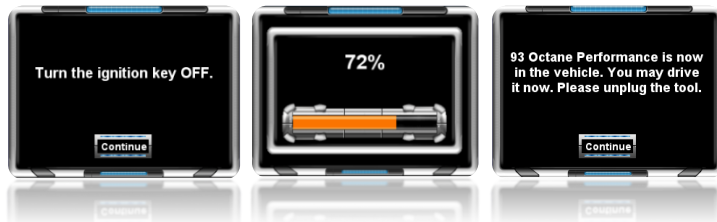


**Step 5:** Once the “Original Backup” is saved the Trinity will grant you access to a bank of pre-set DiabloSport Performance tunes. Choose if you would like to install the default DiabloSport tunes or modify that tune for aftermarket parts installed on your vehicle. For more information on modifying your tune, please see section 2.4 later in this manual. For this example, we will install the default “93 Octane Performance”. Select “Install Tune”.





**Step 6:** The Trinity may prompt you to “turn your key on, but don’t start engine” and then ask you to turn the key on/off a few times. It will begin flashing your vehicle with the chosen tune. When the flash process is complete, the button and Trinity will reboot. **DRIVE YOUR VEHICLE WITH THE NEW TUNE!!!**



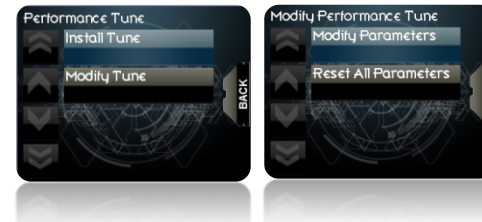
## 2.2- Modifying your Vehicle’s Tune

In the previous section we showed an example of installing a tune with the Trinity. In this section we will go over how to modify the tune you selected to reflect aftermarket parts you’ve installed on your vehicle (such as larger gears or oversized tires).

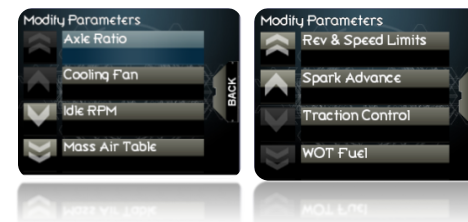
Different vehicles have different tuning options in Trinity- it’s possible that some of these options may not apply. If you have advanced questions or you aren’t sure how modify a tune for the best results, no need to worry: DiabloSport has a nationwide network of CMR (ChipMaster Revolution) custom tuning dealers who are experts in Electronic Fuel injection (EFI) tuning. To find a CMR dealer near you, log on to our website [www.diablosport.com](http://www.diablosport.com) and click the dealer locator. Now let’s look at how to make some minor adjustments:

**Step 1:** Make sure your Trinity is plugged in to the OBD II port on your vehicle and it has already saved an original backup (See **Section 2.1** for more information). Select the tune you previously installed in the vehicle select “Modify Tune” from the “Performance Tune” Menu and then “Modify Parameters”

**Note:** To restore any tunes you’ve modified back to factory settings, select “Reset all parameters”



**Step 2:** Now you are in the “Modify Tune” Menu. You can scroll through the list of adjustable parameters by using the arrow icons on the left hand side of the screen, or alternatively with the buttons to the right of the Trinity’s screen. Choose the parameter you wish to modify and select it by touching it on the Trinity screen, or using the buttons on the Trinity and clicking the option with the center button.

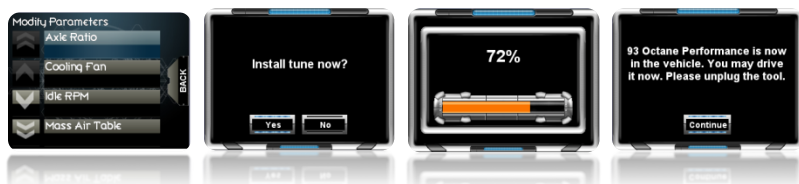


**Step 3:** To make changes to the parameter, use the touch screen on your Trinity and touch either the fine or coarse adjustment arrow (Fine adjustment is the single arrow, Coarse Adjustment is the double arrow). The numbers on the bottom right represent maximum parameter value

and the bottom left the minimum value- you can find your current setting on the bottom center. Move the parameter to the desired location and confirm your modification by either touching the enter button on the right side of Trinity touch screen, pressing Button 1, or using the center button.



**Step 4:** Continue the process in step 3 until you are satisfied with your modifications. When you are finished, press the “back” button on the right hand side of the Trinity’s screen. The Trinity will ask “Install Tune Now”? Select “yes” and the Trinity will flash your vehicle with the new modified program. The Trinity may prompt you to “turn your key on, but don’t start engine” and then ask you to turn the button on/off a few times. It will begin flashing your vehicle with your modified tune. When the flash process is complete, the Trinity will prompt you to reboot. Simply unplug your Trinity from the OBD-II port and plug it back in and drive your vehicle with the new tune!



### 2.3- Tuning/Parameter Descriptions

The DiabloSport Trinity has the largest bank of adjustable parameters on the market today. This list of parameters may not be available for all applications. For more information on what is available for your vehicle,

check [www.diablosport.com](http://www.diablosport.com) for a detailed list of adjustable parameters by vehicle year/make/ model.

- Spark Advance (Multiple RPM bands) - Gas vehicles only:** The Trinity allows you to alter you spark advance at WOT. Depending on your application, you will be asked to raise or lower the value in either degrees (°) or based on a percentage (%) of total timing. To calculate a change in percent, log the total timing at WOT. If you have 25° of timing, and need to remove 2.5°, you would pull 10%.
- Fuel Tables/WOT fuel (Multiple RPM bands) - Gas vehicles only** this parameter modifies your fuel delivery at WOT (Wide Open Throttle) based on a percentage of your vehicle’s total fuel. This function works the same way as your spark advance settings. Most incremental changes in this setting yield a 1% increase/decrease.
- Cooling Fans- Gas vehicles only:** Cooling fan settings allow you to turn the vehicles cooling fans on and off at different temperatures or adjust their operation temperatures. Use this parameter with an aftermarket thermostat.
- Idle RPM- Gas vehicles only:** Allows you to raise or lower your vehicle’s idle RPM based on RPM in drive and neutral.
- Gear/Axle Ratio:** Calibrates the PCM/TCM to take non-stock rear end gears into consideration.
- Mass Air Table- Ford Gas vehicles only:** Allows users to raise/lower the global mass air curve from current MAF readings based on percentage.

**NOTE: If you are unsure on how to use this parameter do not modify it without consulting DiabloSport or a CMR tuning shop.**

- 🔧 **Rev Limits- Gas vehicles only:** Increase or decrease the point your vehicle hits a rev limit in gear based on RPM. This setting can be set higher or lower per gear.
- 🔧 **Speed Limits:** The Speed limiter Parameter will raise or remove the speed limiter from the vehicle.
- 🔧 **Shift Points RPM/MPH:** Allows users to set the shift points of their vehicle for up and down shifts based on either a preset mile per hour, or a specific RPM. This setting may vary from vehicle to vehicle.
- 🔧 **Shift Pressure:** Over all shift pressure or line pressure adder. This setting allows for firmer or softer shifts.
- 🔧 **Tire Size:** This setting allows users to calibrate their speedometer for non-stock or oversized tires. Maximum sized are up to 55 inches depending on application, check [www.diablosport.com](http://www.diablosport.com) for information on your specific vehicle's maximum tire size.
- 🔧 **Boost Control (SRT4 Only)** Raise or lower the boost level in PSI based on percentage of total boost. 2% equals around 1 PSI; please consult a tuning professional before making major changes to this setting.

## 2.4- Restoring the "Original Backup"

From time to time you may need to bring your vehicle in for service work or emissions testing. With a performance tune installed on the vehicle, the dealership's diagnostic equipment may not connect or read your PCM. To avoid this it is essential that you restore the "Original Backup" to the vehicle before you bring it in for service or testing. Keep in mind that only the "Original Backup" will restore the true factory settings to your vehicle with no watermarks or footprints left in the PCM. Any tune labeled "Factory HP Tune" or "Factory Tune" is not the same as your "Original Backup"- it is actually a Diablo Tune File that lets you modify the vehicle's stock program without power gains. You may also want to

use your Trinity on another vehicle. The Trinity will not tune another vehicle until the "Original Backup" has been restored and it is no longer married/ VIN locked to a vehicle. Let's review how to restore your vehicle's "Original Backup":

**Step 1:** Plug the Trinity in to your vehicle's OBD II port and press the "Performance" menu button the Trinity Screen, Agree to the disclaimer, then scroll down on the Screen until you see "Restore Original Backup" and select this option.



**Step 2:** The Trinity will ask you "Restore original backup now?"- Press "Yes" to restore the original backup.



**Step 3:** The Trinity will begin writing the original backup to your vehicle and prompt you to turn the key on and off. After the flash process is complete, reboot the Trinity when prompted. Your Trinity will now be unlocked / unmarried from your vehicle and you can use it on a different vehicle, return to the dealership for service work, or bring it in for emissions testing!



## SECTION 3: The Trinity Monitor

**NOTE: Monitor mode does not record live data, for information on recording logs please see section 3 later in the manual.**

For today's fuel injected vehicles data monitoring is an essential part of the tuning process. In the old days, mechanics and technicians hooked up sensors to vehicles to find out what was going on under the hood, but today computers do all of this seamlessly. '96 and newer Ford, Chevy, and Dodge vehicles use a special protocol system called OBD-II to send information to diagnostic equipment and monitor vehicle data. OBD-II is the modern way technicians find out if it is time for an oil change, if you need a new rear O2 sensor, or if your vehicle is having issues with spark knock/ detonation. Diagnostic data parameters are called either PIDS or DMRs depending on the make/model/year of the vehicle but from here on we will simply refer to them as "parameters". Your vehicle's computer monitors many parameters each second to make sure that the engine is running at the most efficient performance level. The ECU uses this information to alter things like fuel, spark advance, or boost to keep a vehicle running smoothly.

Automotive tuning shops and Trinity owners can use this information while tuning on the dyno or the street to make the highest possible horsepower, best fuel economy, and better drivability when towing. Parameter data is used to calibrate aggressive tunes and allows users to make sure the vehicle is running safely. More precise monitoring solutions yield a more precise tune.

The Trinity is one of the most advanced diagnostic tuning devices on the market today. With over 100MB of on board memory devoted solely to recording and playing back diagnostic PID/DMR parameter data, it allows

users to record hours and hours of continuous data streamed directly from the vehicle's PCM.

The Trinity interprets PID and DMR parameter data received from your vehicles OBD-II Diagnostic port and converts it into a readable format: A Virtual Gauge! As the corner stone of the Trinity's diagnostic functionality, Trinity's virtual gauges are highly customizable. Users have the option of loading pre-set gauge layouts designed by DiabloSport tuners or creating their own custom gauge layouts. With Trinity's dynamic gauge layout there is literally an infinite number of combinations of gauges to view!

**Note: For optimum performance users should only monitor 10-15 parameters at once.**

### 3.1- Trinity Gauge Types

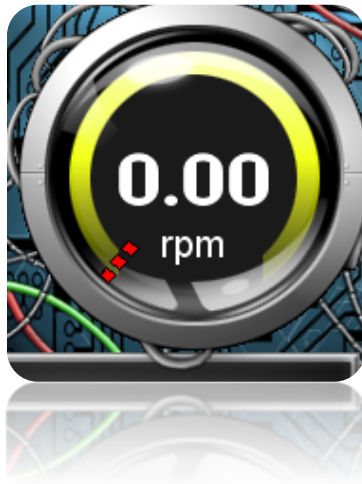


**Small/medium Digital Gauge:** A Digital Numerical Read out.

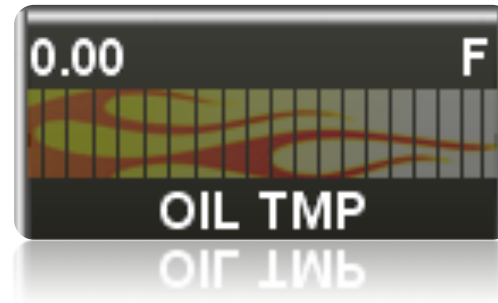




- **Small/medium/large Radial Gauge:** a 270 degree sweeping style gauge similar to most standard analog gauges.



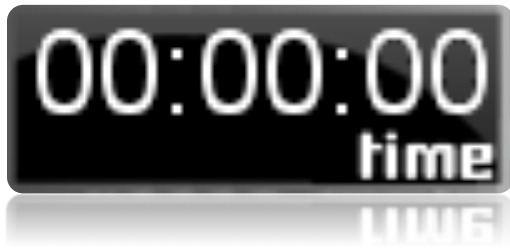
- **Horizontal Slider:** This Gauge type is designed to monitor from zero to peak values. As you begin using this gauge it will flutter until the Trinity finds a peak parameter value. Once Trinity has found a high and low value the gauge will settle and flow normally left to right as data increases or decreases.



- **Small/Medium/Large Wiper Gauge:** The wiper gauge is a 90 degree sweeping gauge similar to the radial gauge, but with less total movement. This is an excellent choice for monitoring engine fluid levels or EGTs.



- **Playback Timer:** A digital read out of the time passed while recording a data log. This is useful while tuning because it will tell you at what point in your log certain events happen. It's always wise to use this option while logging data.

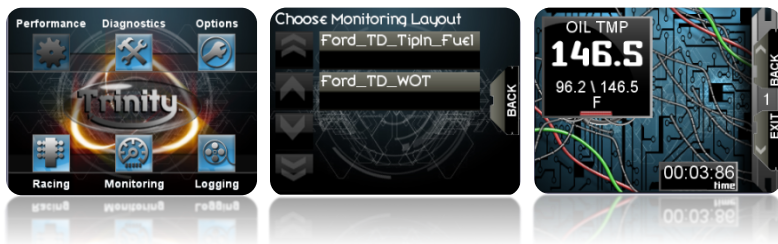


### 3.2- Accessing Monitor Mode

The Trinity Allows users to view virtual gauges at the touch of a button (or screen if you prefer)! Let's look at how you can start monitoring live data as soon as you plug the tool in.

**NOTE:** Monitor mode does not record live data, for information on recording logs please see section 4 later in the manual.

**Step 1:** Select "Monitoring" from the Trinity's main menu. Choose from a pre-existing gauge setup- this can be either a DiabloSport factory default, or a custom gauge setup that you have created! For more information on creating your own gauge setup, see the **Section 4.3** later in this manual.



**Step 2:** Drive your vehicle and view the virtual gauges in real time. Many DiabloSport setups will have more than one "Gauge Page" or bank of virtual gauges. You can switch between different gauge pages on the fly by touching the screen or using the up and down buttons to the right of your Trinity screen.

## SECTION 4: Trinity Logging Menu

The Trinity comes with several pre-set gauge layouts already optimized for your vehicle; however, you may need or want to create your own custom gauge layout. This section will detail the specifics of making your own layouts with your Trinity.

Trinity owners can not only view data streaming directly from the vehicle's PCM, but also record this data for viewing at a later time. This is extremely useful while road testing when a user can not pay attention to the gauges.

In the logging menu you will be able to play back any previously recorded data. You can fast forward or rewind to search for specific events in a time line. The Trinity's logging section is broken down into three main items:

**Log files:** A log file is recorded PID data from your vehicle. When you record a log file the Trinity saves the gauge layout it was recorded in for later viewing. In addition to viewing log files on the Trinity screen they can also be loaded to your PC and viewed with DiabloSport's free Data Viewer software (available for download at [www.diablosport.com](http://www.diablosport.com)). See **Section 5.7** for more information.

The more parameters you log with Trinity, the longer the interval between samples from the vehicle's computer. A vehicle's PCM only has so much bandwidth to send diagnostic data to external equipment. The PCM sends one sample of parameter data and then moves to the next parameter in queue and sends that data. The more parameters the PCM has in queue to send to the Trinity, the longer the interval between samples. Best results are obtained when

monitoring 10-15 parameters at once, but the Trinity has the capability of logging many, many more.

- Gauge layouts:** The Gauge layout is the actual setup you create for your gauges on the screen. It exists independently of any parameters you have selected to log, and can be set to view different parameters at any time. A gauge layout with pre-selected parameters will be helpful when you are in monitor mode since you can immediately view the parameter data when you start the vehicle. You can save your gauge setup as a separate file from the log you created it with.
- Gauge Pages:** Trinity Gauge pages allow for a few different basic setups that you can customize. The following guidelines that should help you create your own gauge layouts, the Trinity will fit the following options on screen at once:

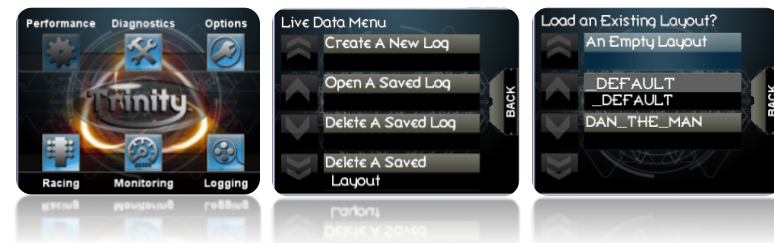
  - 4 small style gauges (Small Radial, Small Wiper, Small Digital, or a playback timer)
  - 1 medium style gauge, 2 small style gauges and a horizontal slider
  - 4 horizontal sliders
  - 2 small style gauges and 3 horizontal sliders
  - 1 large style gauge
  - Your own Custom layout!

Your placement of these gauges on the screen will determine how many gauges are available. Each Trinity Gauge page allows only so much space on the screen to display your virtual gauge, if you overlap gauges on the screen, they will not display properly.



### 4.1- Logging with the Trinity

**Step 1:** To access the Trinity’s logging features touch the “Logging” button from the main menu. Choose “Create A New Log”. Choose a layout for the log file you are opening. Remember that the log file and the gauge layout are independent and can be saved separately.



**Step 2:** You are now in the “Log Play/Record” menu and should see gauges present on the screen. Press the “RECORD” button on the right hand side of the Trinity screen, or use button 1. You can now choose if you would like to monitor real time data, or record the data you are viewing. Select “Record a New Log” and drive your vehicle.

**Step 3:** When you have completed your test drive you will need to save your log file if you would like to view later. See **Section 4.8** later in this manual for more information on saving a log with Trinity.



## 4.2- Creating a New Gauge Layout

**Step 1:** Touch the Trinity's touch screen on the "Logging" button. In the Live Data Menu, you have the choice of creating a new log file (select this to add a new blank gauge layout page), "Open a Saved Log File" (See section 3.1), "Delete a Saved Log", or "Delete a Saved Layout". For this example, select "Create a New Log".



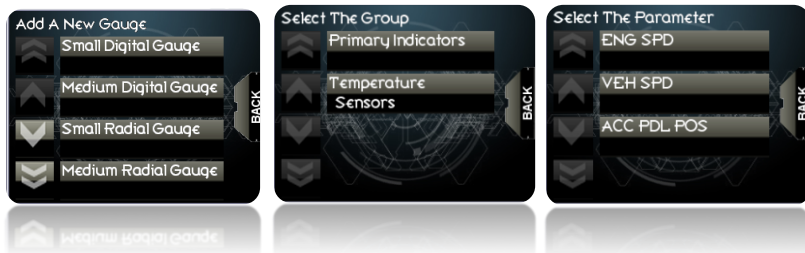
**Step 2:** You will now be on a "blank" gauge layout page. Now it's time to populate your gauge page with new gauges! In order to do so, select the "EDIT" button on the right side of the screen (or hit button 2).

**Step 3:** You are now in the "Live Data Edit Menu". This menu allows you to add a new gauge to your existing gauge page, access your gauge pages (different pages of custom gauge sets in the same layout), or close the current log file you are working with. For this example press "Add a New Gauge" to bring up the gauge selection screen.



**Step 4:** To choose a gauge type, simply touch the gauge type you want to add (for more information on gauge types see section 2.1) to scroll through the different gauge types tap the arrow icons on the left side of the screen or use the arrow buttons to the right of the Trinity screen. For the purposes of this demonstration, let's select a large radial and then the parameter you wish to view (Engine Speed or RPM).





At this point you may be asking, how will I monitor everything I need with a maximum of 5 gauges on the screen simultaneously? This is where gauge pages come in to play! The Trinity can hold dozens of custom gauge pages per log file. This means you can monitor several gauges at once with the pages switchable on the fly using the directional buttons or by tapping the touch screen!

**Step 1:** Press the “Logging” button on the Trinity Main Menu and “Open a Saved Log File”. Choose your log file and touch a gauge on screen to bring up the Gauge Edit Menu.



**Step 7:** You will now see your large radial gauge on screen displaying engine speed. Repeat steps 2 through 6 until you are satisfied with your Gauge page then enter the Log Play/Record menu to start recording your custom gauges!!!

**Step 2:** Select “Move Gauge” from the “Gauge Edit” menu. You can now use the Trinity’s directional buttons to the right of the screen to move the gauge up, down, left or right depending on your desired position. Tap the gauge on the screen to lock it in place when you are happy with its location.



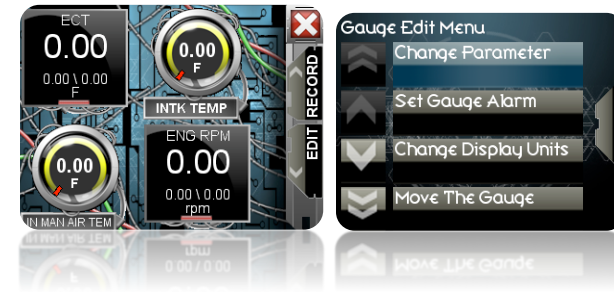
### 4.3- Working with Gauges

In the last section, we worked on creating a new gauge layout, now we will look at how to modify this setup to allow for multiple gauges, how to move gauges on the screen, and working with gauge pages.

**Step 3:** Now Press the “EDIT” button on the right side of the screen to enter the Live Data Edit menu. From the Live data Edit Menu select manage gauge pages and then “add a new gauge page”. This will bring up a new empty gauge page.



**Step 4:** Continue adding gauges and pages until you are happy with your selections. You can now change your gauge page on the fly by pressing button 1 to move to the previous page, press button 2 to move to the next page, or use the touch screen.



**Step 1:** Select “Change the Display Units” and choose “yes” to convert the measured unit to PSI.



#### 4.4- Converting Units of Measure

Most of the vehicles Trinity supports use the metric system to read and display data. However many will want to view the data in imperial or “standard” units of measure for specific gauges such as boost. An example of this would be Boost is supported in the vehicle’s OEM software in kPa, but most users will want to see PSI. Converting the readings the Trinity displays is easy:

**Step 1:** From the logging menu, tap a gauge that you would like to convert the units, bringing up the “gauge edit” menu. For this example choose a gauge that displays a pressure value based in “kPa” to convert to the Imperial Standard “PSI”.



#### 4.5- Setting Gauge Alarms

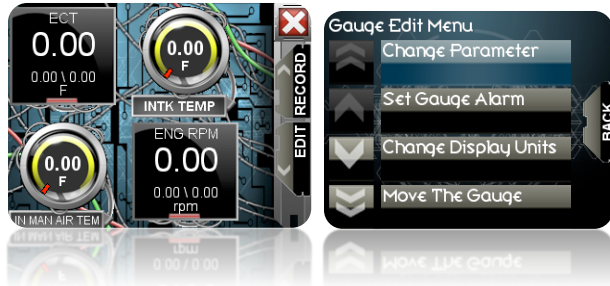
With all of the options for monitoring vehicle data with the Trinity, it may be difficult to keep an eye on all of the gauges you have in a layout. Luckily the Trinity has a solution: The gauge alarm.

Using the Trinity gauge alarm feature you can set the 5 colored LEDs on the side of the screen to light a user pre-defined LED for any gauge in a layout.

**Note:** Setting gauge to “All LEDs” or using a “progressive shift light” may cause issues with other single LED alarms that are set. Any alarms that have been set to use the SAME LED can cause a blinking effect which can make it difficult to distinguish which alarm is being triggered. While this could be advantageous in certain situations, for best results try to keep your alarms set up on multiple LEDs.

Let's look at how to set up an Alarm in your setup:

**Step 1:** From the logging menu, tap a gauge that you would like to set an alarm for, bringing up the "gauge edit" menu.



**Step 2:** Select "Set Gauge Alarm" and choose an Alarm type. You have the choice to make all the LEDs light or just one LED. Select "Single LED" and you will be prompted to choose which color (Green, Yellow, or Red). For this exercise we will choose the Red LED, next you will choose which Red LED you would like to set the alarm for (top or bottom).



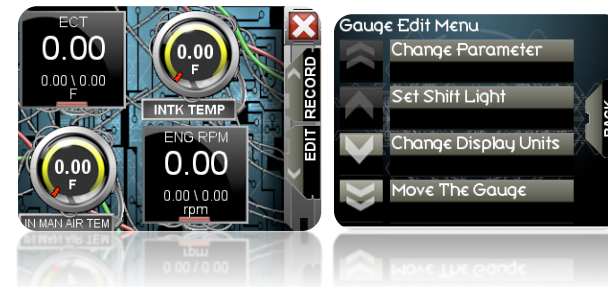
**Step 3:** Now enter the value at which you would like the Gauge Alarm to be triggered. Press "OK" and the gauge alarm is now set.

**Example:** you would like to set an alarm for your engine temp to go off at 244 degrees to avoid over heating.



#### 4.6- Setting A Shift Light

**Step 1:** From the logging menu, tap a gauge that is set to "Engine Speed" or RPM in order to enable the shift light function in the "Gauge Edit Menu."



**Step 2:** Select "Set Shift Light" and choose a Shift Light Type. You will have the option to choose between a single LED shift light, All the LEDs, or a Progressive display (the lights "count-down" incrementally to your specified shift point from green to red to prepare you to shift). Note that setting all LEDs or Progressive may affect the display of other alarms you have set. If you are using in conjunction with gauge alarms you may want to set it for a single LED.



**Step 3:** Now set the value at which you would like the Shift Light to be triggered using the fine/coarse adjustment on the Trinity screen!



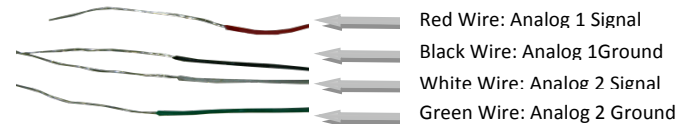
#### 4.7 - Monitoring/Logging Analog Inputs

The Trinity has 2 analog inputs or 1 input/1 output for monitoring external sensors not accessible through OBD-II Port, or for controlling external devices. Some examples of non-factory sensors include boost gauges, Air/Fuel meters, EGT sensors and many others. The Trinity will allow you to input any volt analog input to be viewed on screen or logged in logging mode.



Example: Trinity Part # T1015 Analog I/O Cable available at [www.diabloSPORT.com](http://www.diabloSPORT.com). The T1015 is produced by DiabloSport to make hooking up external sensors much easier take a look at the following diagram to see which wire to use to connect your analog signal.

**NOTE:** If you have only 1 analog input device to use with the Trinity you should always choose "CHANNEL TWO" as the input.



Popular sensor manufacturing companies such as PLX, Innovate, and many others already have pre-designed devices that can receive and send data from single or multiple inputs. If you already have an analog sensor device there's more good news: The Trinity is compatible with any 5 Volt signal that is mapped with a linear curve. While it may take some tinkering and some tools, (soldering iron, clamps, etc...) you can hook any device that sends a 5V signal to a Trinity by using the DiabloSport Analog I/O Extension Harness. For more information on how it works, recommended sensors, or what you will need to do to get your analog device working visit [www.diabloSPORT.com](http://www.diabloSPORT.com)

**Note:** Some devices may need to be rewired or soldered to function with Trinity. DiabloSport does not offer tech support on 3<sup>rd</sup> party devices. If you have questions about how a 3<sup>rd</sup> party sensor functions in relation to voltage check with the original equipment manufacturer.

**In order to access these options do the following:**

**Step 1:** From the main menu of the Trinity press "Options" and scroll down to select "Configure Analog Input".





**Step 2:** From the configuration menu select “Add a New Parameter” and the Trinity will prompt you to enter a name for your parameter. For this example enter “EGT” and then you will need to choose which channel the Trinity will receive the analog input on.



**Step 3:** Now select the unit of measure for your device and follow the instructions provided with the device to choose high and low values that will be scaled from zero (0) volts “low value” to five(5) volts “high value”. Many devices have temperatures or values that can be mapped in Metric or Standard for this example we will use (F) or Fahrenheit.

**Example:** DiabloSport EGT Module T1010 “Measurement Range” can be set to 0-1023 Deg Celsius OR 32-1873 Deg Fahrenheit.

Physical Dimensions	2" x 2.875" x 1.125" (52mm x 75mm x 28mm) L x W x H
Accuracy	+ - 2 Deg C (+ - 3.6 Deg F)
Measurement Range	0-1023 Deg C (32-1873 Deg F)
Analog Outputs	Linear 0-5V (Driving Current 20mA)
Operating Voltage	8V - 18V
Power Consumption	0.3 Watts
Operating Temperature	0-85 Deg C
Sensor	One K - Type Thermocouple
Enclosure	Extruded Aluminum



**Step 4:** Once you’ve selected your high and low values press continue and you will be brought back to the options menu. You will now be able to select this parameter in the logging menu or monitor mode. Create or open a saved log file in the DiabloSport logging menu (Section 4 of this manual) and **click a gauge to modify it.**



**Note:** You must have at LEAST 1 other OBD-II Parameter included in a NEW gauge layout in order for the analog input to function properly. This gauge can be included on the same page or on another gauge page.

**Step 5:** Now in the “Gauge Edit Menu”, select “Change Parameter.” Scroll down to where it says “analog inputs” and then select the analog device you configured previously in this section **EGT (F)**.



**Step 6:** Now that you have selected the analog input for your gauge, make sure the analog device is hooked up properly and test that you are getting a reading on screen. If everything is functioning as expected, save your log file and you will then be able to record a new log with it, or view it in monitoring mode!



#### 4.8- Saving Log Files & Gauge Layouts

We’ve gone over creating totally custom gauge layouts for the Trinity, now for the most important part: saving all that work for use later on the road! Here’s how to save a log file and gauge layout:

**Step 1:** From the Live Data menu press the “EDIT” button and select “Close This Log”, you will then be prompted to save the log file, or exit without saving. Select “Save Log File.”



**Step 2:** Use the Trinity’s touch screen to name your file. The Log File and Layout File name will now be available the next time you start a log or enter monitor mode!



## SECTION 5: Clearing Trouble Codes

Sometimes your vehicle may throw a check engine light. The Trinity will not only allow you to view the OBD-II Trouble code (engine codes are generally “P” in OBD-II Designation) but you can also view the full text code description. At this point you have the choice to leave the code active in your vehicle’s PCM or you can clear them. The Clear trouble codes feature clears ALL trouble codes found in the PCM, you cannot select which. Follow these easy steps to access these functions:

**Step 1:** Select “Diagnostics” from the main menu then “Show Trouble Codes”. This will show the last trouble codes your vehicle’s PCM displayed. Press the desired trouble code to see a full text description of that code.



**Step 2:** Once you have seen the trouble codes listed in your vehicles computer, you may want to clear them. In order to do this, press the back button on the right hand side of your Trinity’s screen and select “Clear Trouble Codes” from the trouble codes menu. The Trinity has cleared your trouble codes! Press continue...



**Step 3:** You have now cleared all trouble codes from your vehicles computer!

## SECTION 6: Trinity Racing Menu

In section 2 we discussed the Trinity’s virtual gauge system and how vehicle sensors can be displayed on the screen in real time- but did you know that there is information coming from your vehicle that can allow the Trinity to approximate all kinds of interesting read outs? One of the most intriguing is the Virtual Drag Tree! Using parameters like vehicle speed the Trinity is able to give you an estimated quarter mile, eighth mile or 0-60/0-100 time trials. Keep in mind that these numbers may or may not be accurate depending on variables, but they sure are fun to see!

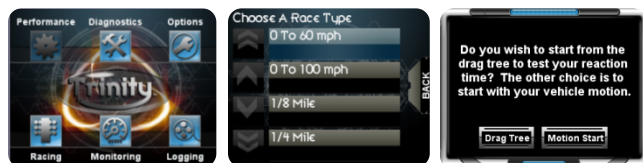
The Trinity’s virtual tree allows users to choose whether they would like to see their reaction time (like a real world race track tree) or have the time trial start when they press the gas from a stop. There are advantages to both- If you are using reaction time, you will gain experience for the track when launching off the line while the motion start will show you the time with no human error but is easier to do on the street at a stop light or highway on-ramp.

Let’s look at how you can access your Trinity’s virtual Drag Tree and the different options it has for you racers out there!

### 6.1- The 0-60/0-100 MPH Drag Tree

The 0-60/0-100 Drag tree calculates your vehicle’s 0-60 or 0-100 MPH time respectively. Let’s explore some of the options you have in this mode and how to use it:

**Step 1:** Press “Racing” From the main menu and select “0 to 60 MPH”. Choose between the drag tree or motion start modes.



**Step 2:** Regardless of which option you chose in step 1, you will need to bring your vehicle to a full stop. If you chose Motion Start the Trinity will begin to calculate your 0-60 time as soon as you press the gas after a full stop. If you chose drag tree, the Trinity will start the countdown lights once you’ve stopped the vehicle- hit the gas when the light turns green! The Trinity will show you your reaction time.



## 6.2- Quarter & Eighth Mile Drag Race

**Step 1:** Press “Racing” from the main menu and select “1/4 Mile” or “1/8 mile”. Choose between the drag tree mode and motion start mode.



**Step 2:** The Trinity will start the count-down once you’ve stopped the vehicle- hit the gas when the light turns green! The Trinity will show you your reaction time.



## SECTION 7: Interfacing the Trinity with a PC

**VERY IMPORTANT BEFORE YOU PROCEED WITH ANY PC RELATED FEATURES YOU MUST COMPLETE [SECTION 7.1](#)**

The DiabloSport Trinity can interface with a PC in various ways. You can download updates for the Trinity’s firmware from the internet, download custom tunes from a CMR dealer, or upload your data log files for view on the free DAT Viewer.

In order to use your Trinity with your PC there is some preparation you will need to do on your PC to make sure everything runs smoothly. Before you hook the Trinity up to the PC for any reason, make sure you follow the steps detailed in this section.

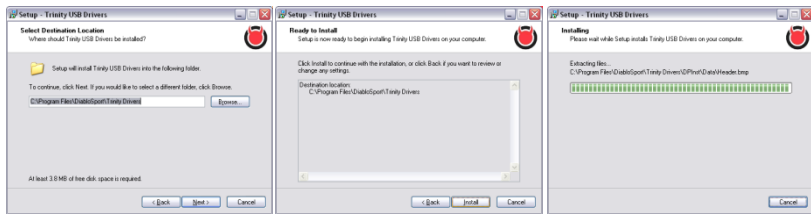


## 7.1- Installing Trinity USB Drivers

**Step 1:** Insert your Trinity CD into your PC. The “Open file” Dialog will appear on your screen, select “Run”. You are now in the Trinity Setup menu. Select “Next” and carefully read the end user license agreement. Choose agree if you accept the terms of the agreement, then click the “next” button.



**Step 2:** You will need to browse for where you would like the drivers to install on your PC. For most users the default position will be satisfactory. If you have a specific need to place the drivers somewhere else on your PC click browse, otherwise click “next”. Select “Install” to begin the driver installation process.



**Step 3:** The Trinity Driver installer has 2 stages, when stage two begins simply click “next”. On some PCs you may get a note from windows regarding “logo testing”, select “Continue Anyway”.



**Step 3:** ***VERY IMPORTANT!!!*** When prompted, plug your Trinity in using the USB cable included in the box. A “Found New Hardware Wizard” window will pop up; allow windows to find your drivers automatically. Next select “Finish” on the driver setup wizard and you are ready to interface your Trinity with a PC!!!

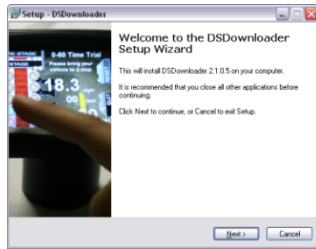


## 7.2- Installing the DS Downloader.

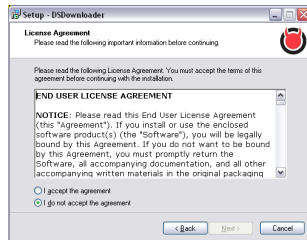
**Step 1:** Insert the CD that came with your Trinity into your CD-Rom drive. If the CD does not automatically come up on your screen, select “Run” via the start menu in windows. The disc will automatically bring up several options. Select “Install Trinity Drivers”.

**Step 2:** The DS Downloader Setup Dialog will appear. Select “Next” on the display.

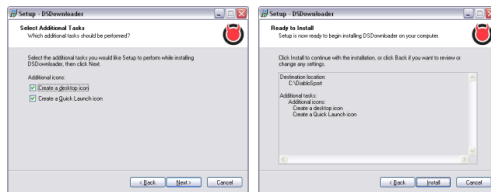
**NOTE:** Always check DiabloSport’s website to make sure you have the most current version of DS Downloader.



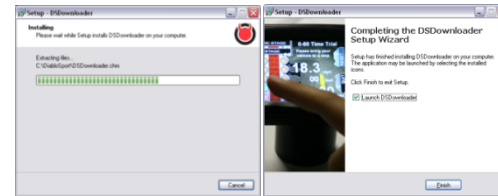
**Step 3:** Read the disclaimer and choose “I accept the agreement” or “I do not accept the agreement”. If you choose “I do not accept the agreement” you will be unable to continue.



**Step 4:** If you would like to set up a Desktop shortcut or Quick Launch Icon for the DS Downloader mark the appropriate check box in the installer. We recommend setting up a desktop icon for this example. Select “Next” and you will be able to review all of your choices so far.

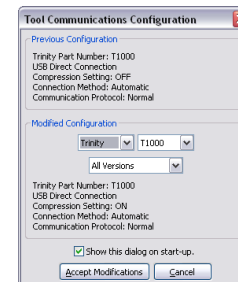


**Step 5:** The DS Downloader will install and when it’s complete select “Finish” to end the installation process.



### 7.3- Registering the Trinity

**Step 1:** MAKE SURE TO PUT YOUR TRINITY CD IN YOUR COMPUTER BEFORE YOU BEGIN THIS STEP. Plug your Trinity into the USB port on your PC then open the DS Downloader by double clicking the desktop icon you created in the last section. Select which DiabloSport device the DS Downloader is going to connect to. Select “Trinity” from the pull down menu and click “Accept Modifications” on the bottom.



**Step 2:** You are now in the DS Downloader main menu, the DS Downloader will search for the Trinity and find new hardware.



**Step 3:** Once the PC finds the Trinity you will be prompted to register the device. Fill out the information in full, DiabloSport does not share this information with 3rd parties for any reason. Select “OK” When you are done- You have registered your Trinity with DiabloSport



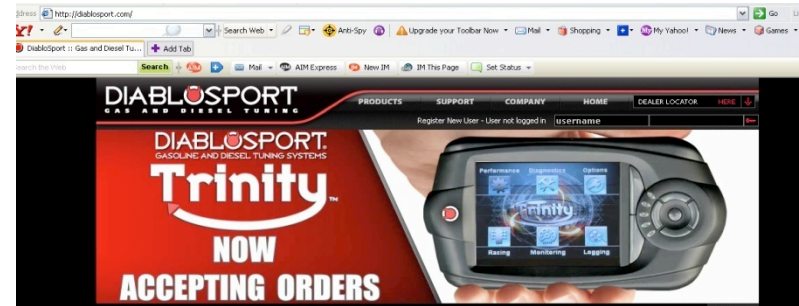
## 7.4- Updating the Trinity

From time to time DiabloSport will release updates for the Trinity on our website [www.diablosport.com](http://www.diablosport.com). These updates can include new tunes, updated vehicle support, or new user options! In order to get an update for your Trinity you will first need to register it with DiabloSport.

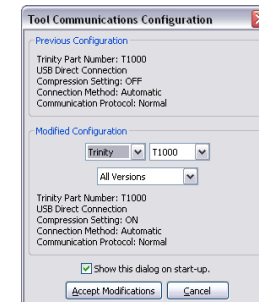
**Step 1:** Make sure you have completed Section 7.1 and Section 7.2 before you attempt to update the Trinity. Navigate to the website at [www.diablosport.com](http://www.diablosport.com) in your browser and find the latest update for your Trinity. You will be able to find the latest update by clicking on

“Support” then “Downloads”. There will be a pull down list where you will select “T1000”.

Pictured below: DiabloSport.com home page



**Step 2:** Plug your Trinity into the USB port on your PC then open the DS Downloader by double clicking the desktop icon you created in the last section. Select which DiabloSport device the DS Downloader is going to connect to. Select “Trinity” from the pull down menu and click “Accept Modifications” on the bottom.



**Step 3:** The DS downloader will now check your PC’s USB connections to find a Trinity or other DiabloSport hardware. Make sure you have any firewalls running on your PC turned off to avoid issues.



**Step 4:** Next select “Send CROM file to Tool” and the DS downloader will prompt you to choose a CROM file. Select the CROM file that pertains to your application for the Trinity.



**Step 5:** The DS Downloader will now search for your Trinity again and begin loading the CROM file. When the DS Downloader reaches 100% the new CROM file will be in your Trinity! You are now on the latest update.

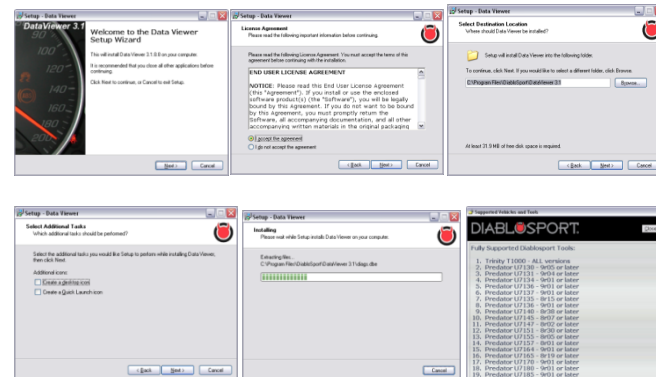
## 7.5- Uploading/Downloading Log Files, Data Streaming

Not only can the Trinity log data and view it back on the full color screen, but you can also load your saved data log files to your PC to view them in different formats or analyze them more thoroughly in the comfortable environment of your office. In order to load these files you will need to download some free software from DiabloSport’s website. Let’s look at how to load log files from your Trinity to your PC and then view them:

**Step 1:** Go to [www.DiabloSport.com](http://www.DiabloSport.com) and click the top of the page where it says “support” and from the pull down menu select “downloads”, then click on the picture of the Trinity. You are now on the Trinity Downloads page. On the bottom of the page you will see a link to the DiabloSport “data viewer”. Click the link and select “Save as” or “Save target as”



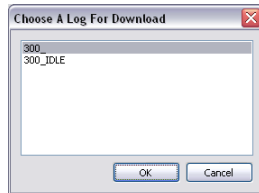
**Step 2:** Once the download is complete you will need to install the Data Viewer software on your PC by double clicking on the Data Viewer icon that is now on your desktop. Follow the prompts on the installer until it is complete at which point the Data Viewer Application will open.



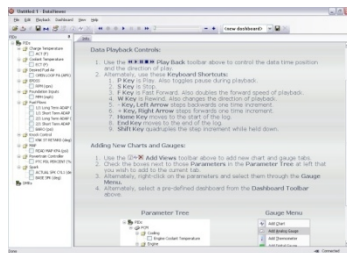
**Step 3:** Connect your Trinity to your PC and the Data Viewer will automatically detect the device. To Load your log from your Trinity to the PC Click the following button on the screen.



**Step 4:** Choose the log you wish to upload (choose log pic)



**Step 5:** Carefully read the instructions displayed on screen.



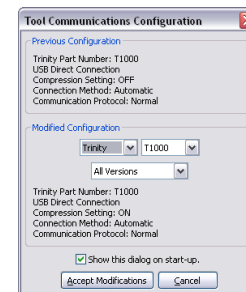
**Step 6:** Click play and select the parameters you wish to view. You will see something similar to playback picture.

### 7.6- Uploading/Downloading Tunes

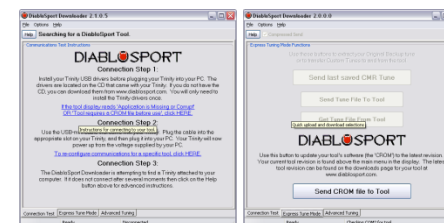
The DiabloSport Trinity allows users to install custom tuning options for any bolt on setup they may have (on gasoline applications). In order to do this the Trinity must have a backup file already saved into its memory. Make sure that the Trinity has saved an “Original Backup” from your vehicle before starting this process.

If you are getting a custom tune via mail order the CMR dealer making the tune will always require an original backup from your vehicle before they can make the program. This is where we will start the custom tune loading process.

**Step 1:** Plug your Trinity into the USB port on your PC and then open the DS Downloader by double clicking the desktop icon. Under “Modified Configuration” select Trinity and then part number T1000, “All Versions” is the default in the lower pull down menu. Now press “Accept Modifications”.



**Step 2:** Now Click “Get Tune File from Tool”. The DS Downloader prompts you to select if you would like to upload the “Original Backup”.



**Step 3:** The DS Downloader needs you to name the file as it comes in. Make sure to choose a location where you will find it (such as the DiabloSport folder where DS downloader is. DS Downloader automatically chooses the proper file type this when the file is saved.



## Section 8: Trinity Options Menu



### 8.1- Show Information

The Show information option in the Options Menu shows you all of the pertinent information related to your vehicle. It will show your Trinity's Serial number, Trinity software version number, the "Born" date (the manufacturing date of your Trinity) and other information about your device.



### 8.2- Show Last Tune Written

If you are unsure if your vehicle has been properly returned to stock of if you want to check to see which tune you last installed on your vehicle you will need to use the "Show Last Tune Written" Function in your Trinity. To check the last tune written from the main menu of the Trinity select "Options" then scroll down to the button "Show Last Tune Written"

**Note:** To make sure your vehicle is at original factory settings the "Last Tune Written" should always say "Original Backup". Anything other than this will mean there is still a "tune" in your vehicle.

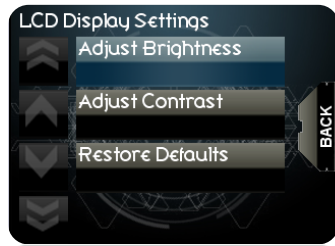


### 8.3- Troubleshooting

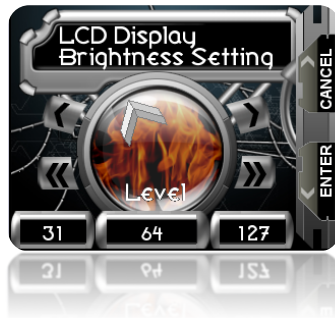
This menu should only be entered under the direction of a DiabloSport Technical representative.

### 8.4- Adjusting Trinity LCD Contrast

**Step 1:** From the main menu of the Trinity select "Options" then scroll down to the "LCD Display Settings" menu and tap it on your Trinity Screen.



**Step 2:** You will now have the following options: Adjust Brightness, Adjust Contrast, and Restore Defaults. Make a selection as to which you'd like to modify and then using the Trinity touch screen make the changes to the selection until you are satisfied with the results and hit "enter" on the right side of the Trinity Screen.



**Step 3:** You have now adjusted your Trinity's LCD settings.

### **8.5- Erase Custom Tune**

If you need to clear a custom tune from your Trinity for any reason this option will delete all custom tunes currently in memory.

### **8.6- Display Animating Logo**

If you do not want to display gauges on your screen, and would not like to stare into the main menu of Trinity, this option is a good choice. It simply displays the Trinity Boot up animated logo on a continuous loop.

### **8.7- Change Transmission Type**

If you selected the wrong transmission type when you originally installed the Trinity Performance Tune you can change it in this menu.



## Section 10: FAQ's

🔊 [Q: How can I keep my Trinity screen clean and dust free without damaging it?](#)

A: Use a clean, lint free dry cloth. Gently rub the screen, but do not apply excessive pressure. Do not use any cleaning solution or chemicals on your Trinity Screen as they could cause permanent discoloration or damage.

🔊 [Q: The Trinity's Touch screen isn't working, what should I do?](#)

A: Call DiabloSport Tech support at 800-531-5484 for a solution.

🔊 [Q: Why Doesn't My Trinity power up in my vehicle?](#)

A: Check to make sure that you have made all necessary connections to both a vehicle's OBDII port and the Trinity. If you have verified the proper connections, you may need to replace your cigarette lighter fuse. If you continue having issues, contact DiabloSport.

🔊 [Q: When I try to install a tune with my Trinity, it says application not supported-what should I do?](#)

A: From time to time an OEM dealership releases new calibrations for the vehicles it manufactures. There is a possibility that the update occurred after DiabloSport shipped the Trinity. If that's the case your vehicle's "CAL ID" is

not in the software revision that's currently on the tool. DiabloSport recommends visiting [www.diablosport.com](http://www.diablosport.com) to see if there are any updates available for your Trinity that will add new CAL ID support, or alternatively bring your Trinity back to the DiabloSport dealer from which it was originally purchased for an update.

🔊 [Q: Can the Trinity tune more than one vehicle at a time?](#)

A: You can only use the Trinity with one vehicle at a time; however, it does not stay "married" or "VIN Locked" forever. When you restore the "original backup" to the vehicle you tuned first the Trinity will be re-set to factory defaults and can then tune a different vehicle. The easiest way to think of this would be to imagine it's a hard part like a Cold Air Intake: You can only install a cold air intake on one vehicle, but if you take it off you can put it on another.

🔊 [Q: Can I use the Trinity on multiple vehicles?](#)

A: Yes, You can use the Trinity on any supported OBD II vehicle. DiabloSport is adding more supported applications every day. The Trinity will allow you to check and clear trouble codes, do data monitoring, and racing functions on these applications but you cannot install a performance tune on them or make any tune modifications.

🔊 [Q: Will the Trinity void the factory warranty on my vehicle?](#)

A: The Trinity's tuning process does not leave footprints or watermarks in your vehicle's PCM. This means that as long as you restore the "original backup" back to your vehicle you should not have any warranty issues. However, should you leave a tune in the vehicle when you go to the dealership, the OEM scan tools may have issues reading your vehicles calibration and raise a flag to the dealership that the vehicle has been tuned.

🔊 [Q: I loaded 45 parameters into a gauge layout and gauges are sluggish or no longer move, what happened?](#)

A: The issue you are experiencing is due to your vehicle's ability to send data. While you can certainly load as many gauges into a custom set up with

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the Trinity as you wish, it will not yield the best performance- the more gauges added to a setup, the longer the time between each sample the Trinity will receive from the vehicle's PCM. For optimal performance, DiabloSport recommends using between 10-15 gauges in a layout/log file.