



How To: Upload a Custom Tune to Your Predator or Trinity

NOTE to Ford Owners: If you have a Predator number U7146/U7142/U7153, you must use the instructions titled "U7146/U7142/U7153 Custom tune installation instruction"

PREP:

NOTE: DSDownloader does not work with Belkin brand USB-serial cables

Purchase

From:

<http://www.diablosport.com>, click **Products**, then **Online Store**

-buy part #U7778 for PCs that have USB ports, OR U7777 for PC's that have a serial port

OR

from Radio Shack, Best Buy etc:

-USB to Serial cable OR a straight 9-pin Serial/Serial cable
and a

-12 v 1 amp power cable, center pin is positive

Download the Software:

Go to <http://www.diablosport.com>, click **Support**, then **Downloads**, enter **Vehicle Type** or **Predator Part number (U71##)**:

Tip: Make sure to download all files by right-clicking the link and selecting "save as", then put the file on the Desktop before hitting "save"

Driver Programs

The Driver program allows the tool to communicate to the computer through the data cable. USB/Serial cables contain a microchip and the driver simply controls it.

If you are using a USB/Serial cable: Make sure to download the appropriate driver for your version of Windows under "**Diablosport USB Serial Drivers**". For Windows 7 download the one titled

"[PL2303_Prolific_DriverInstaller_v110.exe](#)", or under "Old Prolific Drivers" choose the one specific to your version of Windows.

In most cases, the driver will not work until the computer is rebooted. Once you have installed the DSDownloader, installed the driver program and RESTARTED your computer, you may proceed to the first step in the instructions.

If you are using a straight serial/serial cable, you don't have to install a driver program and reboot the computer. Just install the DSDownloader as described below.

The DSDownloader program

This manages the transfer of information from a computer to a Diablosport tool. Download and run the installer program in the in the red link titled, "[DS Downloader Installer 2.2.1.7.exe](#)".

Tips When running the DSDownloader Installer Wizard

1. Microsoft will tell you "The Publisher could not be verified". This is normal, just click 'Yes'.
2. Before the install begins, it will also give you the option to Create Desktop Icon. Make sure to check this box if you want to have the DSDownloader in a convenient place.
3. The DSDownloader will also want to install the Trinity driver program. You can let it install if you want, or cancel it. It's not used for the Predator.
4. You can also delete the installer programs from your Desktop once the actual programs themselves are installed to avoid confusion.

IF YOU HAVE A TRINITY

The tool should already be registered, and the DS Downloader and Trinity driver program should already be installed on your PC. Reference the Start Up disc that comes with the Trinity for instructions on this procedure. . Information on registration can be found on the DC-Rom that came with your Trinity

UPLOADING CUSTOM TUNE

1. To start, make sure the tuner is "married" to your car:

On the tool press OPTIONS/SHOW LAST TUNE WRITTEN

-If the screen reads anything other than "Original Backup" that means the tool is married to your car. This is good, bring the tool to your computer.

-If it says "Original Backup" bring the tool back to your car, and write any one of the Performance tunes to the computer, this will make sure there is an Original Backup stored in the tool, and will marry the tool to the vehicle's ECU (gifts will not be necessary).

2. Connect the tool to the computer, and power it up. If you do not have the DS Downloader and correct driver program installed on your computer, follow the **PREP** instructions at the bottom of the page.

3. Open the DS Down loader program and wait for it to connect to the tool. When it does, a window will pop up on the DS Downloader that reads "A Diablosport tool was detected on COM#" (you can hit the 'close' button on that window), and the screen of the tool will read "The tool is now under remote control...". **NOTE:** If the DS Downloader will not connect to the tool, reference the **Driver Troubleshooting** at the end of these instructions.

4. If you do not have a copy of the vehicle's Original Backup (the ORIGINAL STOCK TUNE) on your computer's hard drive, first make one (If you already have a copy of the Original Backup upon your hard drive, proceed to step 5):

Go to the 'Express Tune Mode' tab on the DS Downloader, and select 'Get Tune File From Tool'. The Program will instruct you to 'Select tune and click OK to continue'. Just highlight 'Original Backup from Tool' and click 'OK'. A window will pop up with a status bar that reads, 'Downloading Backup', and when it's finished it will give you a 'Save File' window to choose where to save. Highlight the folder you want to save it in (Desktop is the easiest to retrieve, but you can save it anywhere), and click 'Save'.

5. Make sure that you download the custom tune as well (if it has been emailed to you), to the Desktop or any folder that you can find it in. (It is best to download it by right-clicking the link and selecting "Save As", so you can tell Windows where to save it).

6. Select 'Send Tune File to Tool', a window titled "Select PCM File for Download" will pop up where you can browse for the Custom Tune, select 'Open'. The DS Downloader program will then ask you to select a matching Original Backup, just browse for and select the stock tune you copied in step 4, and click 'Open'.

7. The DS Downloader will then begin uploading the tune. When it is finished you can bring it to the vehicle and install it.

NOTES ABOUT CUSTOM TUNES:

- If you have to go back to the dealer for any reason, OR need to update the tool, make sure to restore the Original Backup, but bear in mind that it will wipe the tool's memory of the custom tune and the Custom Tune will have to be uploaded onto the Predator again when you get your vehicle back.

-If you select Original Backup (under the Performance menu) as the tune to install it will clear the tool's memory of any saved Custom Tunes and its copy of your vehicle's stock tune(the Original Backup), i.e. "unmarrying" it from your car. As long as there is a tune written to the vehicle, the tool will have a copy of the Original Backup (the original stock tune) stored in its memory. So in other words, unless you have to go back to the dealer, OR need to apply a software update to the tool, you don't really need to restore the Original Backup.

-When the DS Downloader is asking for the 'matching original backup', it is asking for the copy of the stock tune that you uploaded, to compare to the Custom Tune*.

*For clarification (and if you're interested), what the DS Downloader does is takes the Custom Tune, compares it to the Original Backup, writes a differential file to the tool, and installs that differential file to the tuner. That file is what the tool will have stored in its memory to install on your vehicle's ECU.

-You can switch back and forth between tunes (you can use the Modified Stock tune if you want the vehicle to run and drive like factory) with the Predator and it will stay married to the ECU (and save the custom tune)

-Customs tunes can be erased without resetting the tool under the Options menu of the Predator or Trinity

-**WARNING:** Driving a vehicle equipped with a supercharger on the Modified Stock or Original Backup file will damage your engine!

-You can still use the Modify Parameters selection to make adjustments to a custom tune:

1. All you have to do is go under PERFORMANCE/select the tune you want to install/MODIFY TUNE/MODIFY PARAMETERS

2. After the change(s) are made return to the INSTALL TUNE menu with the 'Esc' button and it will write the tune with the adjustments made.

Driver Troubleshooting:

If the DS Downloader program searches but does not find the tool:

For XP:

Right click 'My Computer'/PROPERTIES/HARDWARE/DEVICE MANAGER/double-click PORTS/ then find the line describing the cable (Prolific USB, Radio Shack whatever...) and double-click it, under DEVICE STATUS it has to read 'This device is working properly' to insure that the driver program is installed.

For Vista:

The procedure is the same as XP, but you can click right to 'DEVICE MANAGER' after right-clicking on the 'Computer' icon.

Note about Vista: if the Device Status reads 'This device cannot start Code 10', that is an issue with Windows and you will have to have someone diagnose the problem (like the Geek Squad or equivalent), or try another computer. However, sometimes uninstalling and reinstalling the driver program will solve this issue.

For Windows 7:

Click the Start Menu and select 'Control Panel', then Device Manager, and find the line describing the cable (Prolific USB, Radio Shack whatever...), double-click it, and under DEVICE STATUS it has to read 'This device is working properly' to insure that the driver program is installed.

OR

If your version of Windows 7 does not have a 'Control Panel' selection in the START menu, you can select 'Devices and Printers', and the port the cable is plugged into will be listed under the 'Unspecified' heading. Double-click that icon, then the 'Hardware' tab. The cable will be listed under 'Device Functions', double-click that line to see the Device Status. It should read 'This device is working properly' to insure that the driver program is installed.

If the driver program is installed (Device Status reads "Device is working properly") and the tuner is not connecting:

It is likely a bad cable or faulty USB port.

If you have any along the way, please contact our technical support at 800-531-5484 (option 1), visit our technical support forums at www.diablosport.com, or email support@diablosport.com.

-Tech Support