

ECU Diag

Quick Start Guide

Windows XP

Version 0.5

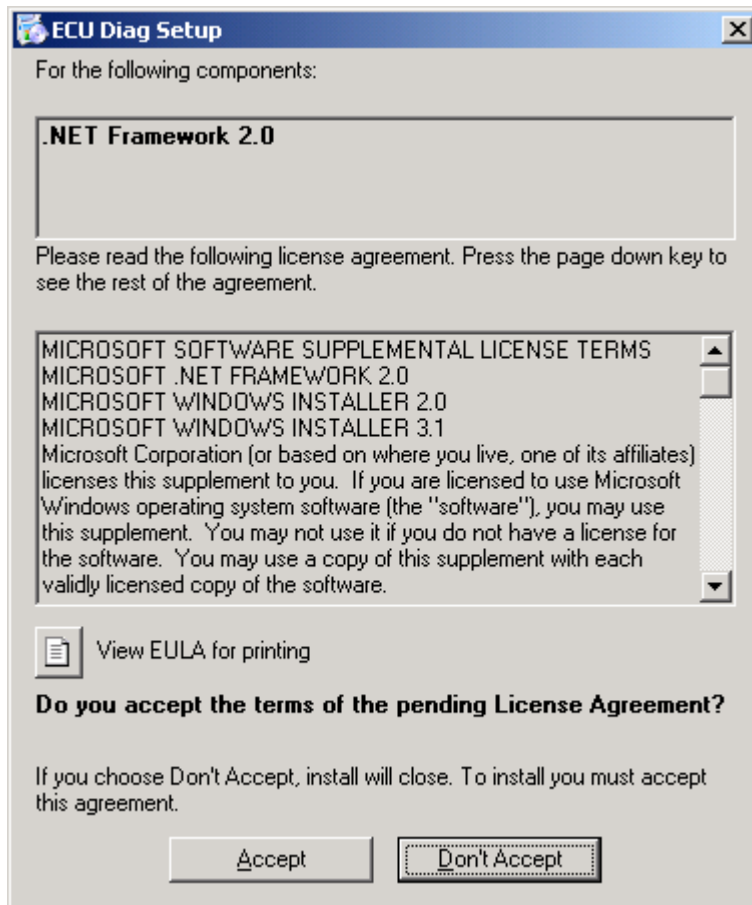
NOTE

Do not attach the cable to your computer until after you install the software. Please follow the steps in this guide to properly install the drivers for the cable.

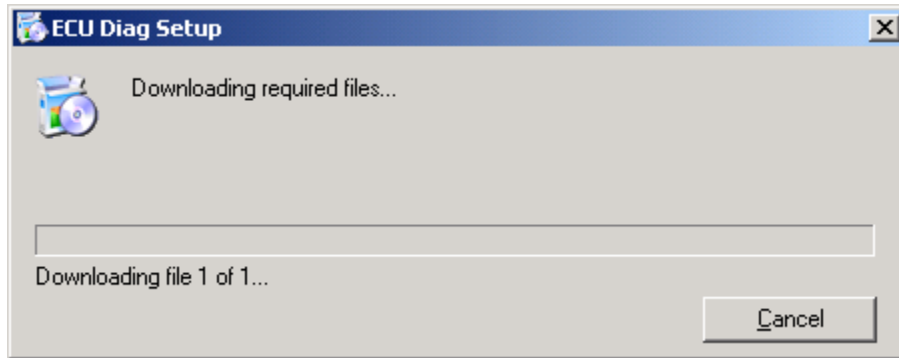
WARNING – Changing any of the settings using this tool requires knowledge of general fuel injection tuning. Any incorrect settings can result in damage to your engine. By changing any setting via this software, you are doing so at your own risk.

1. Installation:

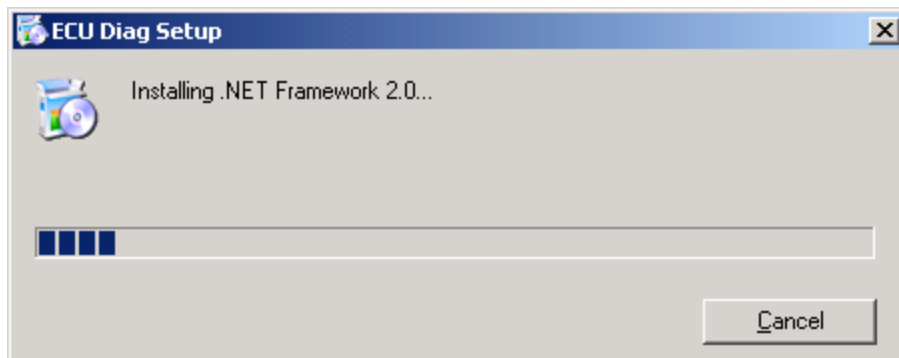
Double click on Setup.exe to launch the installer. The installer will check for any prerequisite software components that may need to be installed.



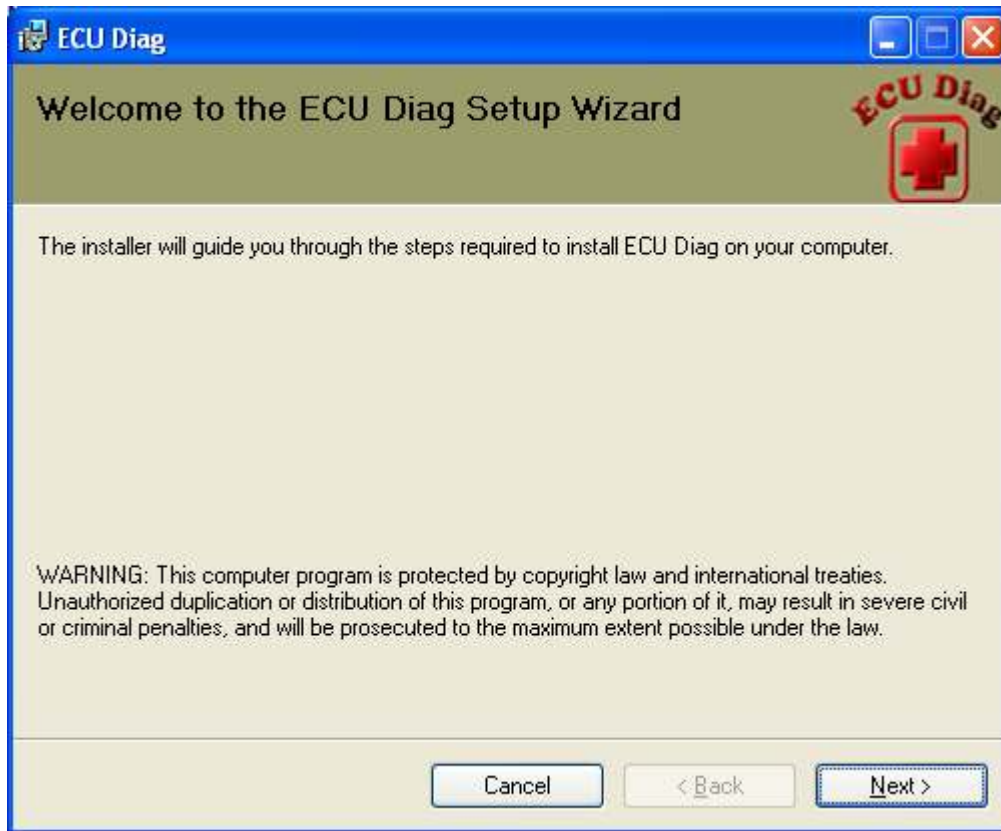
When the prerequisite components screen appears, press the *Accept* button.



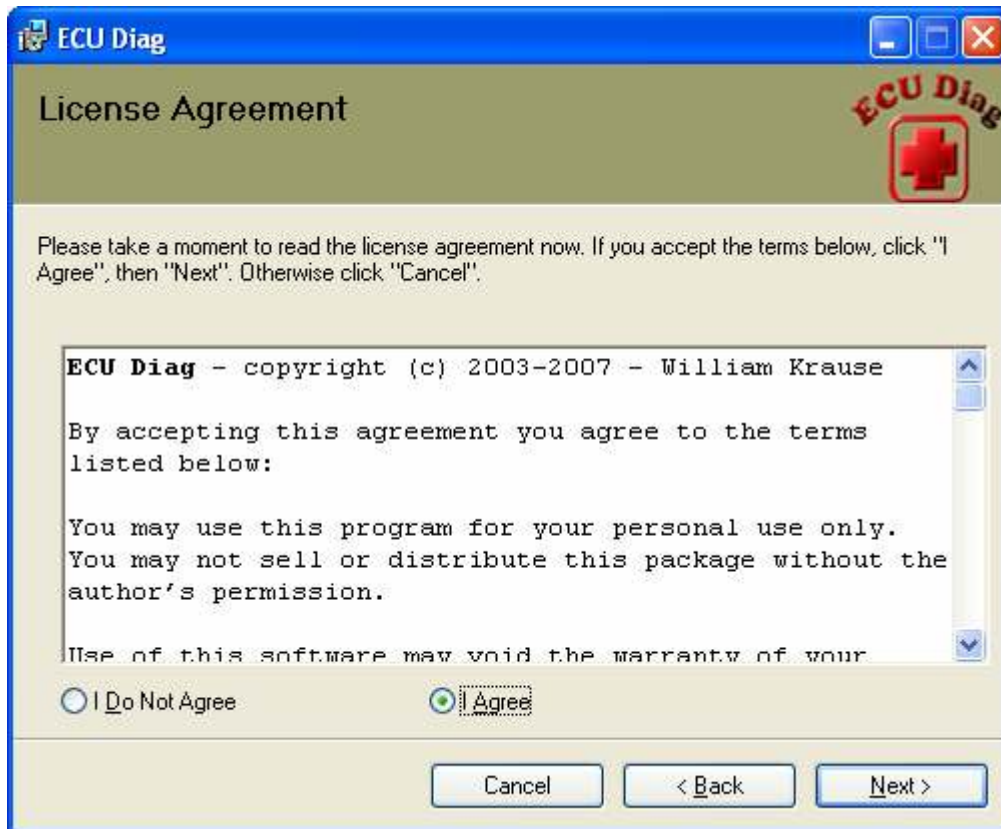
Any components required to run the application will be downloaded from the internet. **NOTE** – *Some components may be as large as 30 Megabytes. Depending on you connection speed, this may take awhile.*



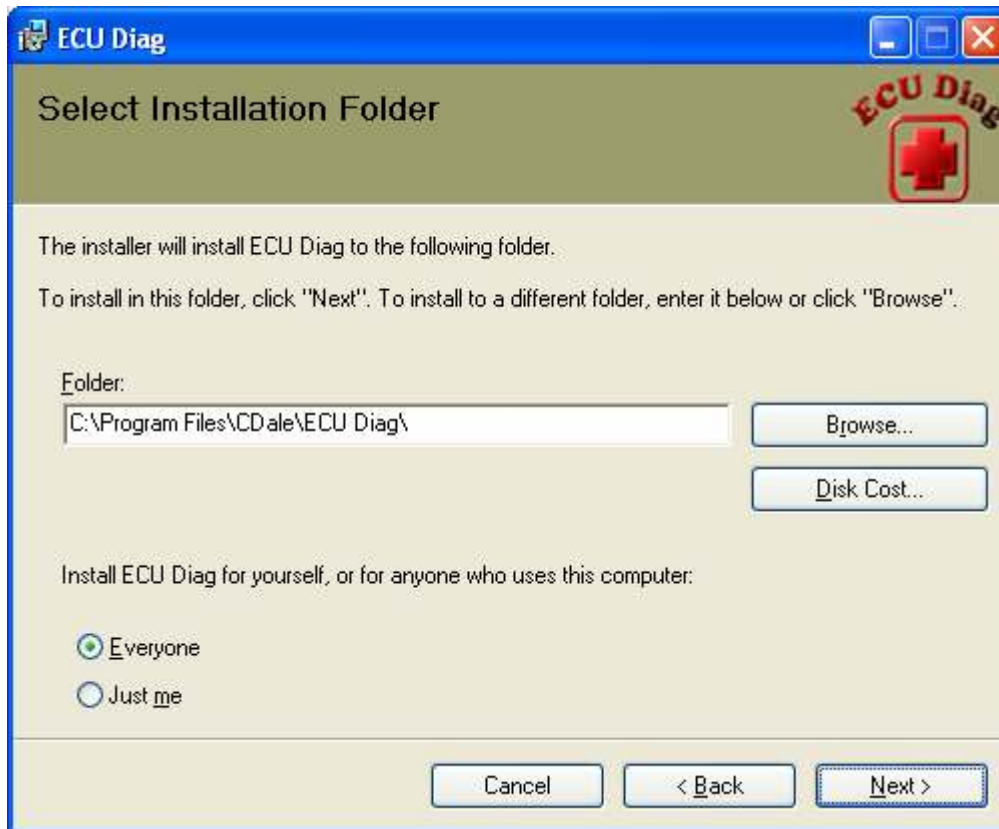
Once the components have been downloaded, the component install will start. **NOTE** – *.NET Framework 2.0 takes a while to install. Be patient!*



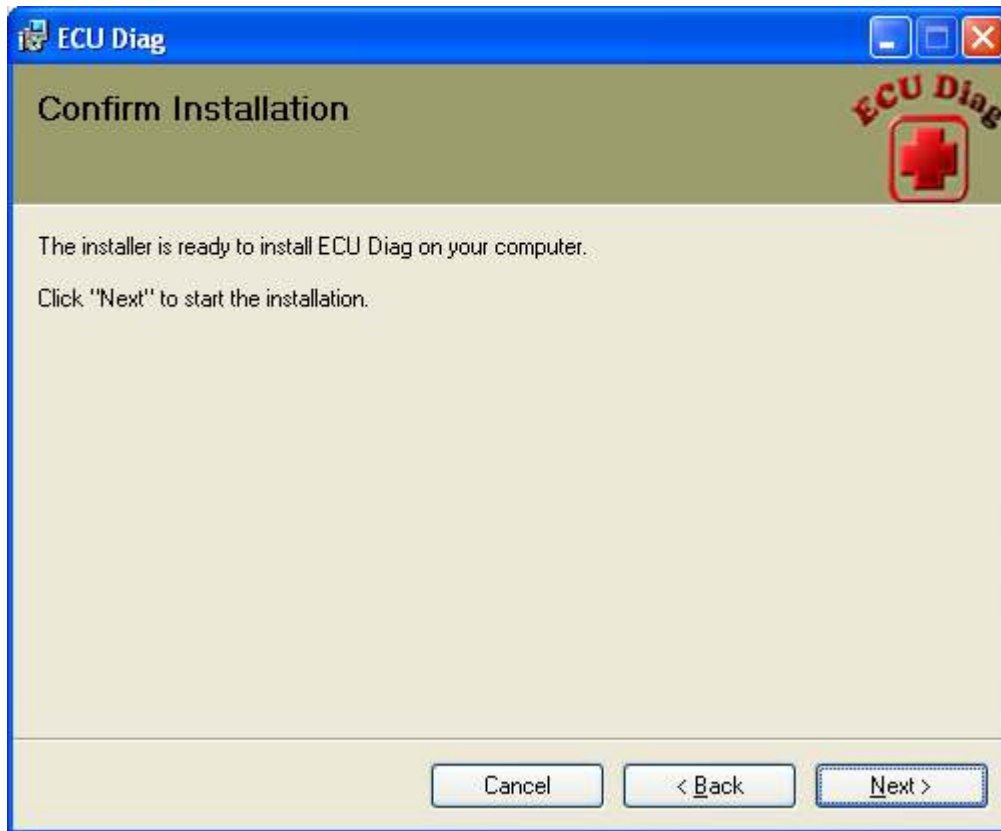
Once all prerequisite components have been installed, you will see the Welcome screen of the ECU Diag installer. Press the *Next* button to continue.



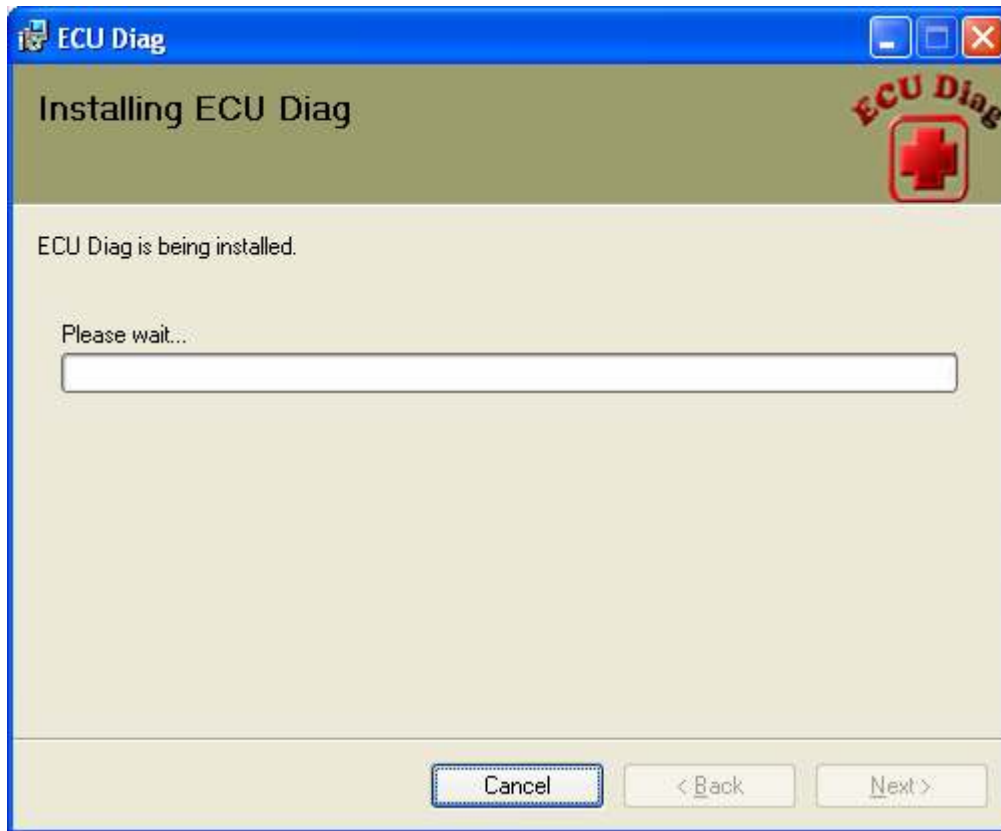
Read the license agreement, select *I Agree* then press the *Next* button.



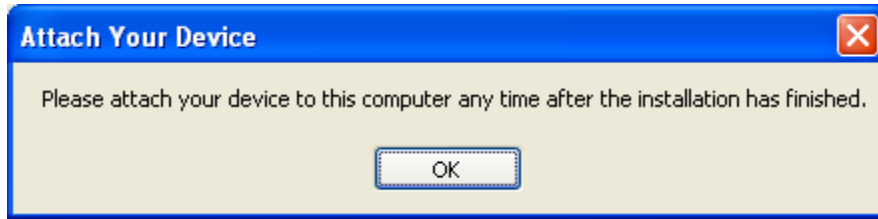
Verify the default settings then press the *Next* button.



Press the *Next* button.

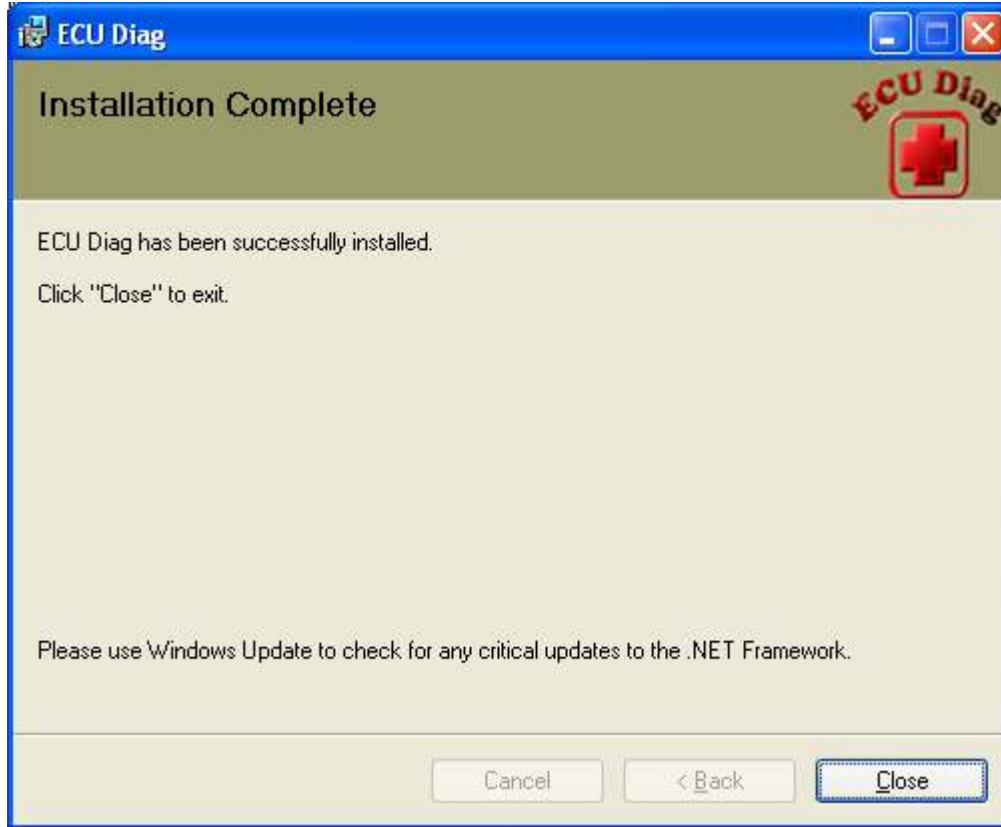


Wait while the application is being installed to your system.



This is just a reminder to connect the ECU Diag cable to the computer once the installation has finished. Press *OK* to continue.

NOTE: Sometimes this window can be hidden behind other windows, making the installer appear to have hung. If this should happen, check the task bar for the tab “Attach Your Device” and click on it to bring the window to the foreground.



When the installation is finished, press the *Close* button to close the installer.

2. Installing the Cable:

Now that the software is installed on your system, you can install the drivers for the cable.

Plug the cable into an available USB port on your system.

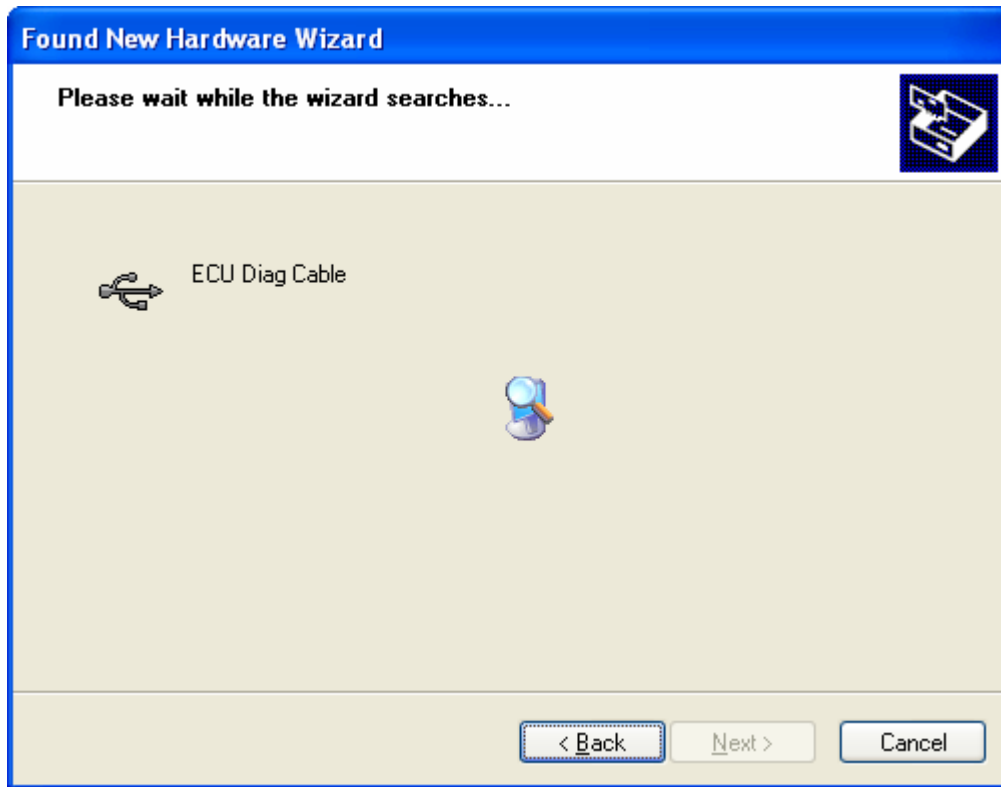
You will see the Found New Hardware wizard appear.



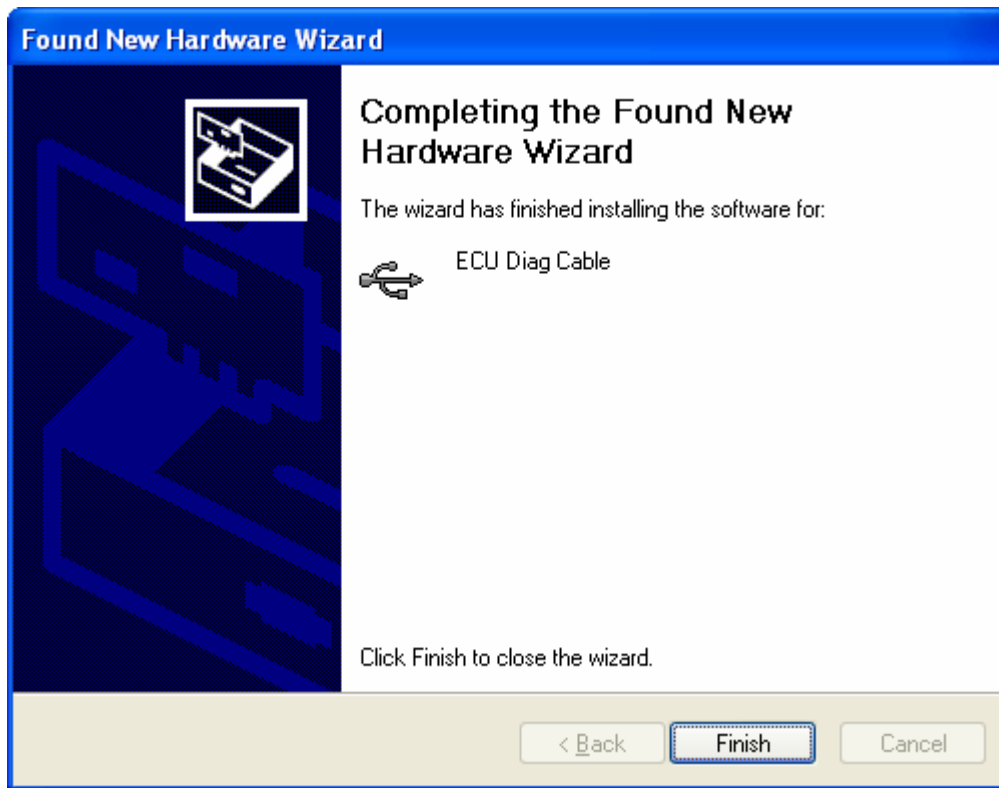
If prompted with this screen , select *No, not this time* and press the *Next* button.



Select *Install the software automatically* and press the *Next* button.



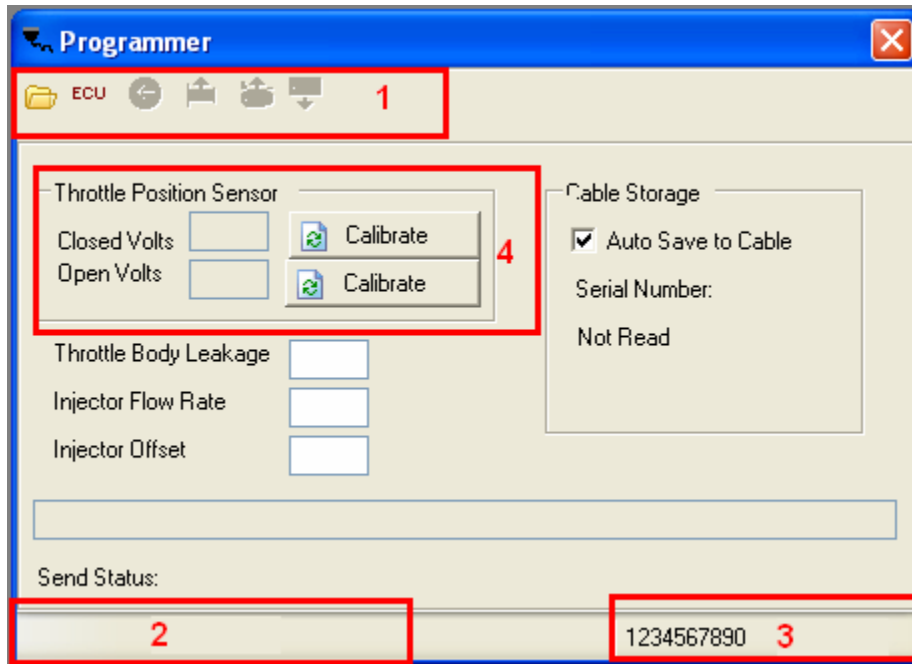
Wait while Windows finds and installs the cable driver.



After the drivers have been installed, press the *Finish* button to close the New Hardware Wizard. The cable has now been installed and is ready to be used.

3. Running ECU Diag:

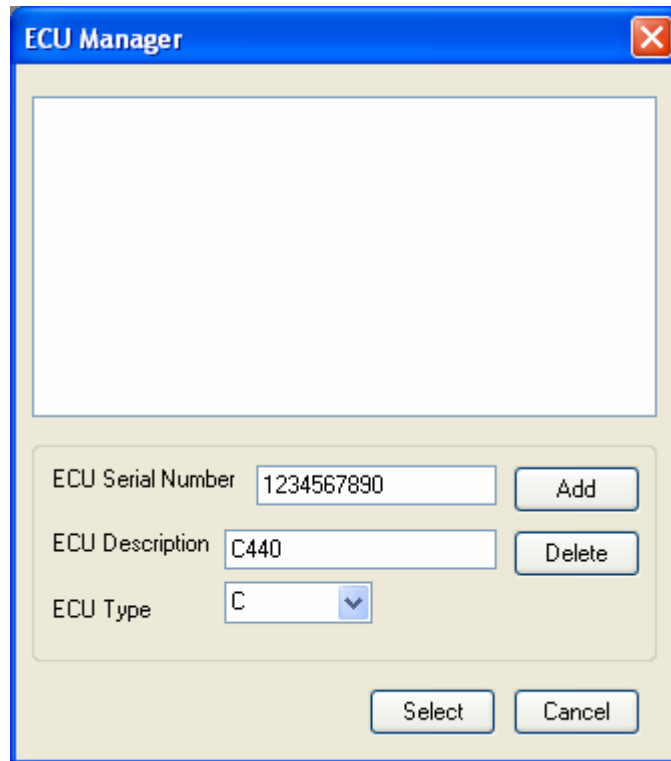
Go to the start menu, navigate to Programs->Ecu Diag, and click on the ECU Diag option to launch the program.



When the program starts, you will see the main window and the programmer. The programmer is divided into the following parts:

- 1 – Main toolbar
- 2 – Left status panel (Last completed send).
- 3 – Right status panel (Active ECU).
- 4 – Throttle calibration.

The first thing you need to do is add an ECU using the ECU manager. Press the ECU Manager button on the toolbar of the programmer to open the manager.



Enter your ECU serial number in the *ECU Serial Number* Field and enter a description in the *ECU Description* field. Select your ECU hex type from the *ECU Type* selection box. Choose 'C' for Cannondale and 'A' for ATK. Press the *Add* button to add it to the list. Once added, select the ECU from the list and press the *Select* button.

The lower right status panel of the programmer will display the serial number you just selected. This serial number is the 'active' number that will be used during all communications with the ECU. If you need to change the active ECU, use the ECU manager to do so.

4. Sending a Map to the ECU:

Once you have selected an active ECU, you are ready to communicate with the ECU. To open a map for sending, press the Open Map button on the toolbar of the programmer. Select the map you wish to open and send, and press the *Open* button. Once the map is open, you will see the settings displayed in the programmer.

NOTE: The settings that are displayed on the screen are the settings that are sent to the ECU. You must update the throttle and fuel settings with the ones for your bike/quad before sending.

NOTE: It is good practice to turn off your bike/quad, let the ECU time out, and then turn it back on again before performing a map send. Following this

method will reduce the risk of corrupting the hex due to the ECU timing out in the middle of a send.

To send the map, press the *Send Full Map* button on the toolbar of the programmer. During the send, you will see the send progress bar displayed on the form. The text in the status bar will show the data being sent. When the send has finished, the lower left status panel will display the time and date the last send completed, and the send status bar will no longer be displayed.

5. Throttle Calibrations:

Receiving:

To get the current throttle and fuel settings from your ECU, press the *Get Throttle Cals* button on the toolbar of the programmer. You will be prompted with a dialog box showing you the returned settings and ask if you would like to use these settings. Choosing *Yes* will update all of the settings in the programmer with the ones from your ECU. Choosing *No* will keep the current displayed settings.

Sending:

Throttle calibrations are sent when you send the map to the ECU. See *Sending a Map to the ECU* for instructions on how to send the map.

Calibrating the throttle:

From normal riding and wear and tear on your bike/quad, the throttle low and hi limits can vary slightly over time. To correct this, you should perform a throttle calibration to sync the ECU to your throttle body sensor.

To calibrate the throttle low limit, first back out the idle screw until the throttle is completely closed.

Next, press the button next to the *TPS sensor closed volts* value on the programmer. You will be prompted with a dialog box confirming this is what you want to do. Make sure the bike/quad is powered on, and press *Yes* to get the current reading from the ECU. The new value will be displayed in the *TPS sensor closed volts* box.

To calibrate the throttle hi limit, press the button next to the *TPS sensor open volts* value. You will be prompted with a dialog box confirming this is what you want to do. Make sure the bike/quad is powered on, hold the throttle in the wide open position, and press *Yes* to get the current reading from the ECU. The new value will be displayed in the *TPS sensor open volts* box.

If you are happy with the new values, you can now update the ECU by sending the new settings. See *Sending a Map to the ECU* for instructions on how to send the map.

Once the map has been sent, you can now adjust the throttle position for proper idle.

Open the ECU Monitor by choosing *Window->ECU Monitor* from the menu. Make sure your ECU is powered on, then press the *Start* button.

Take note of the *Throttle Position %* value. Turn your idle screw in until the value increases by 2%. For example, if you started with a setting of 1.2%, adjust the idle screw until the monitor shows 3.2%.

Press the *Stop* button on the monitor.

Your throttle has now been calibrated. To fine tune the idle, start the bike/quad and let it fully warm up. Once warm, your idle should be between 2000-2200 RMP. You can achieve this by starting the monitor, and making small adjustments to the idle screw until the RPM setting falls within this range.

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