FiatECUScan 3.4

User Guide

English

FiatECUScan is diagnostic software for Fiat, Alfa and Lancia vehicles. It allows you to perform various diagnostics tasks on the supported vehicles/modules.
In order to use the software you need an interface. The following interfaces are currently supported by the software: KL (also known as VagCom 409), ELM327 (1.3 or newer), OBDKey 1.40, OBDLink, ELM Scan 5, CANtieCAR. Bluetooth OBDKey, ELM 327 and OBDLink interfaces are fully supported but not recommended for special functions (like PROXI Alignment, remote control programming, IMA coding, etc.)!
CANtieCAR is a professional multi-protocol interface with multiplexing capabilities.
FiatECUScan currently has three editions - FREE, REGISTERED and MULTIPLEXED.

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I. Installation and License

1. FiatECUScan installation

FiatECUScan is a Microsoft .NET application. It requires Microsoft .NET Framework to be installed on your computer in order to use it. The Microsoft .NET Framework is available for free and can be downloaded from www.microsoft.com. FiatECUScan requires at least Microsoft .NET Framework 2.0 SP1 (version 3.5 also works perfect).
Please note that if you are using Windows Vista or Windows 7 then the Microsoft .NET Framework is most probably already installed on your computer.

FiatECUScan works on the following operating systems: Windows XP, Windows Vista and Windows 7. It supports both the 32-bit and the 64-bit versions of Windows.

In order to install FiatECUScan on your computer you need to download the installation program from www.fiatecuscan.net. Then you simply need to run the installation file and follow the instructions on screen.

2. Interfaces

In order to use FiatECUScan software you need to have an interface which connects your computer to the OBD port of the vehicle.
PLEASE NOTE that ALL interfaces have a COM port number. It is NOT only for the old serial port interfaces. The USB and Bluetooth interfaces also have a COM port number because they are recognized by Windows as a serial port. If you do not see the interface listed in Windows' Device Manager then you probably did not install its drivers properly.

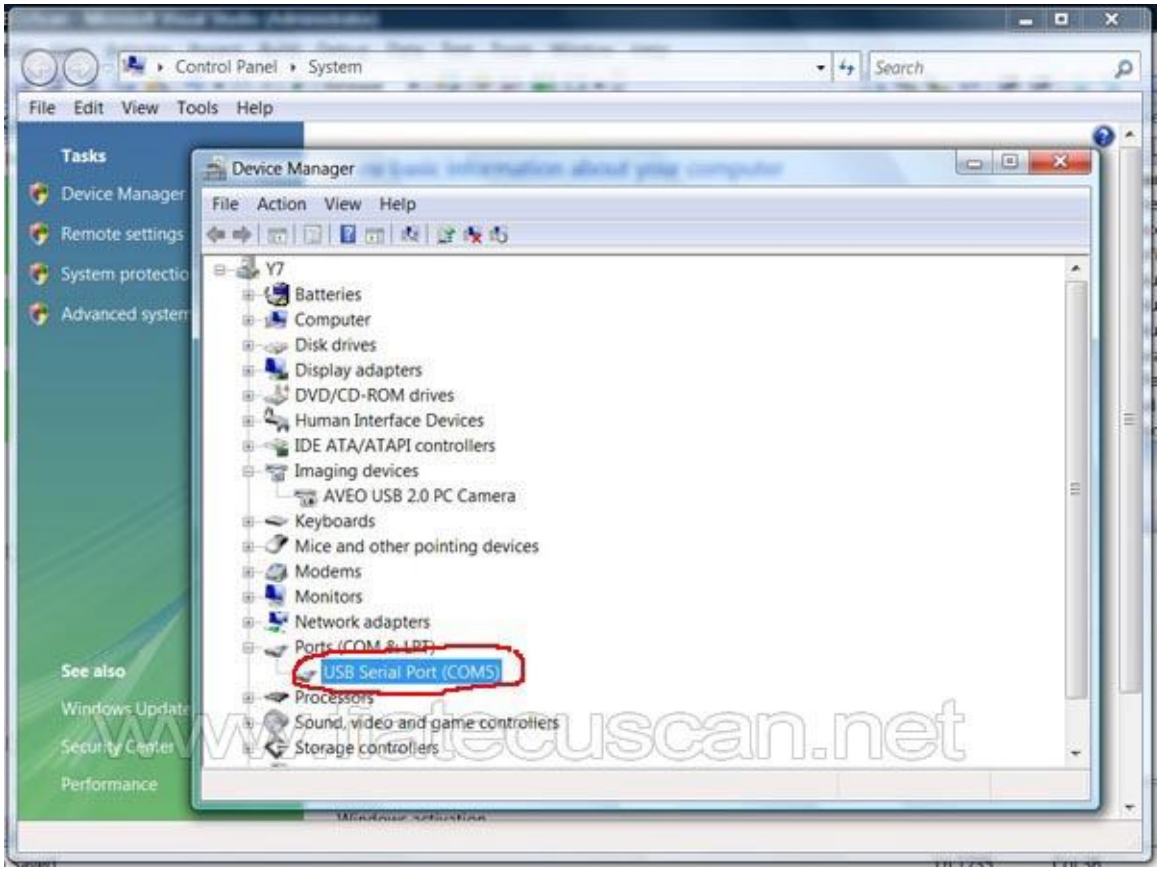
FiatECUScan is tested with and supports the following interfaces:

KL / VagCom 409 interfaces

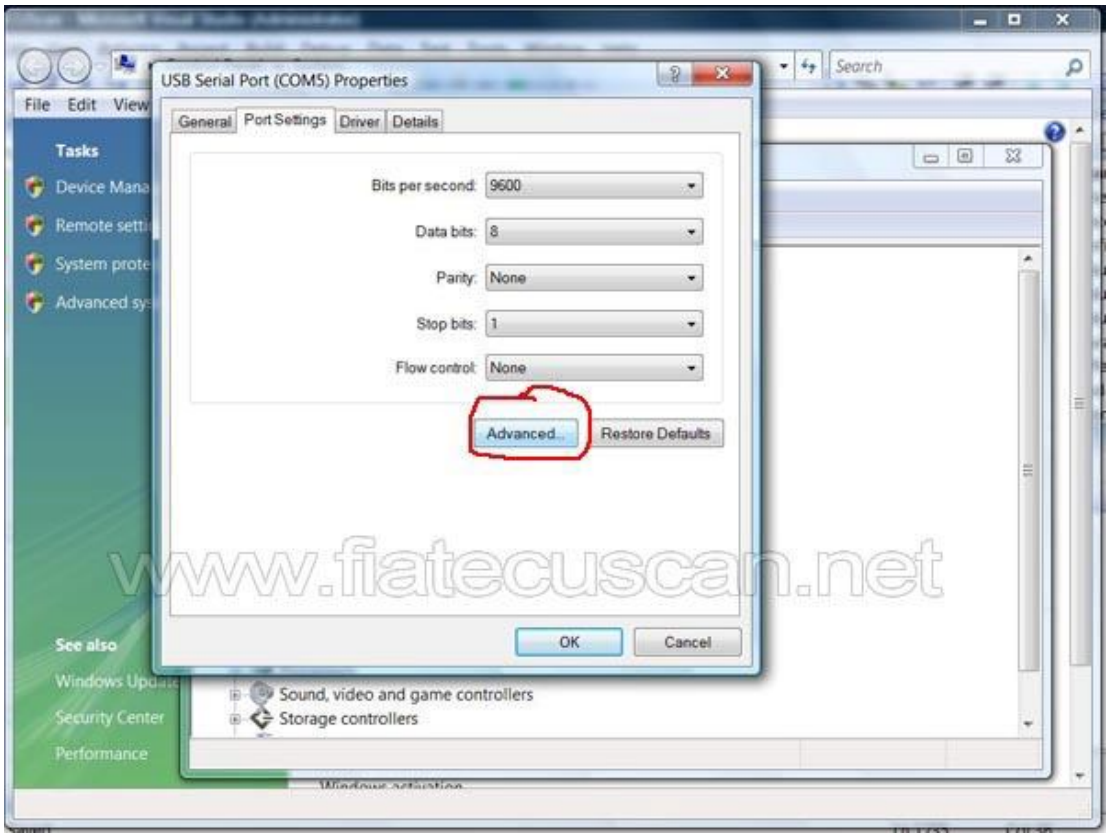
This is the most basic type of interface. These interfaces are suitable mostly for older vehicles. With this type of interface you can connect to most of the engine control modules, most of the gearbox control modules, older ABS modules, older power steering modules, older airbag modules and most of the XENON control modules.
These interfaces do not support connection to the CAN network of the vehicle.
In order to connect to ABS, Airbag, Power Steering and XENON modules you need to have an adapter cable, or you need to modify your interface.

The interface can be with either USB or Serial connection to the computer. In both cases it is recognized by the computer as a serial port!
NOTE: You can check the following link to see what type of adapters/modification you will need for your car: http://www.fiatecuscan.net/SupportedVehiclesList.aspx

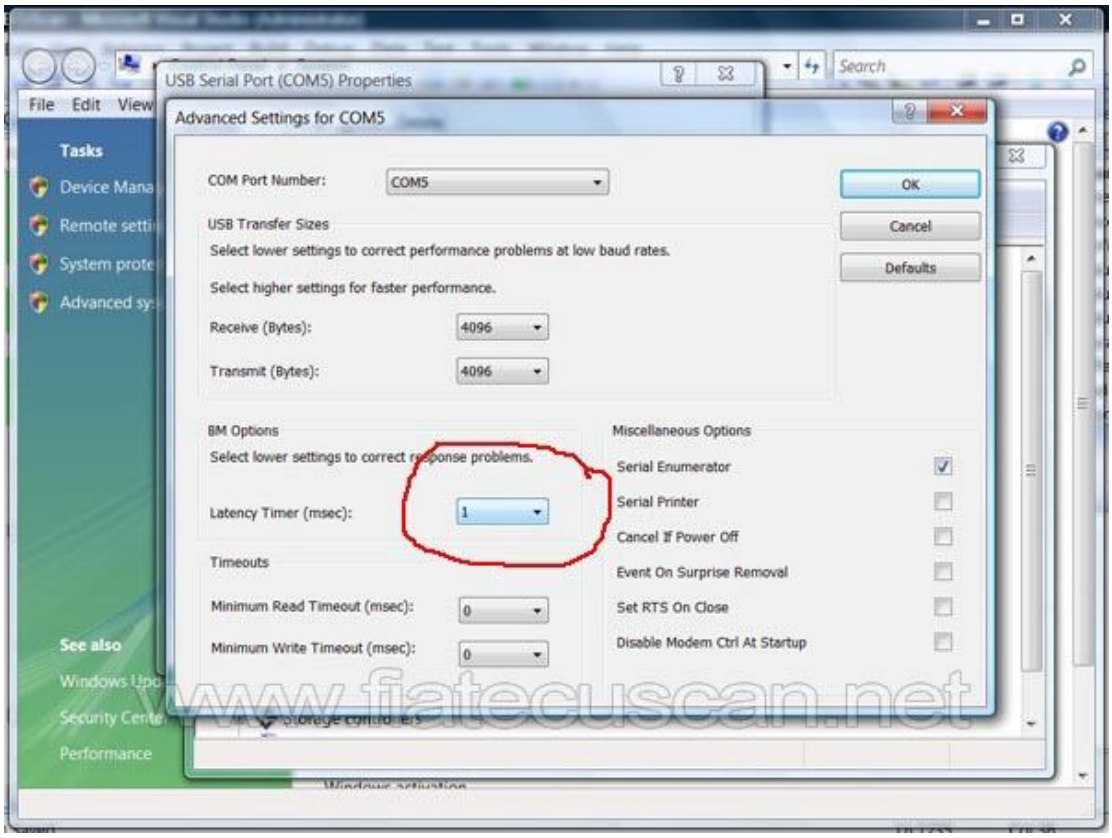
Installation Notes:
First, you need to install the serial port driver for the interface. The driver is usually supplied with your interface. If you don't have a driver then you can try to download and install drivers from FTDI site.
http://www.ftdichip.com/Drivers/CDM/CDM20814_Setup.exe
After successful installation of the drivers you have to change the default configuration of the installed serial port to make it work properly. Go to Windows' Device Manager and Double-click on USB Serial Port (or right-click and select Properties).



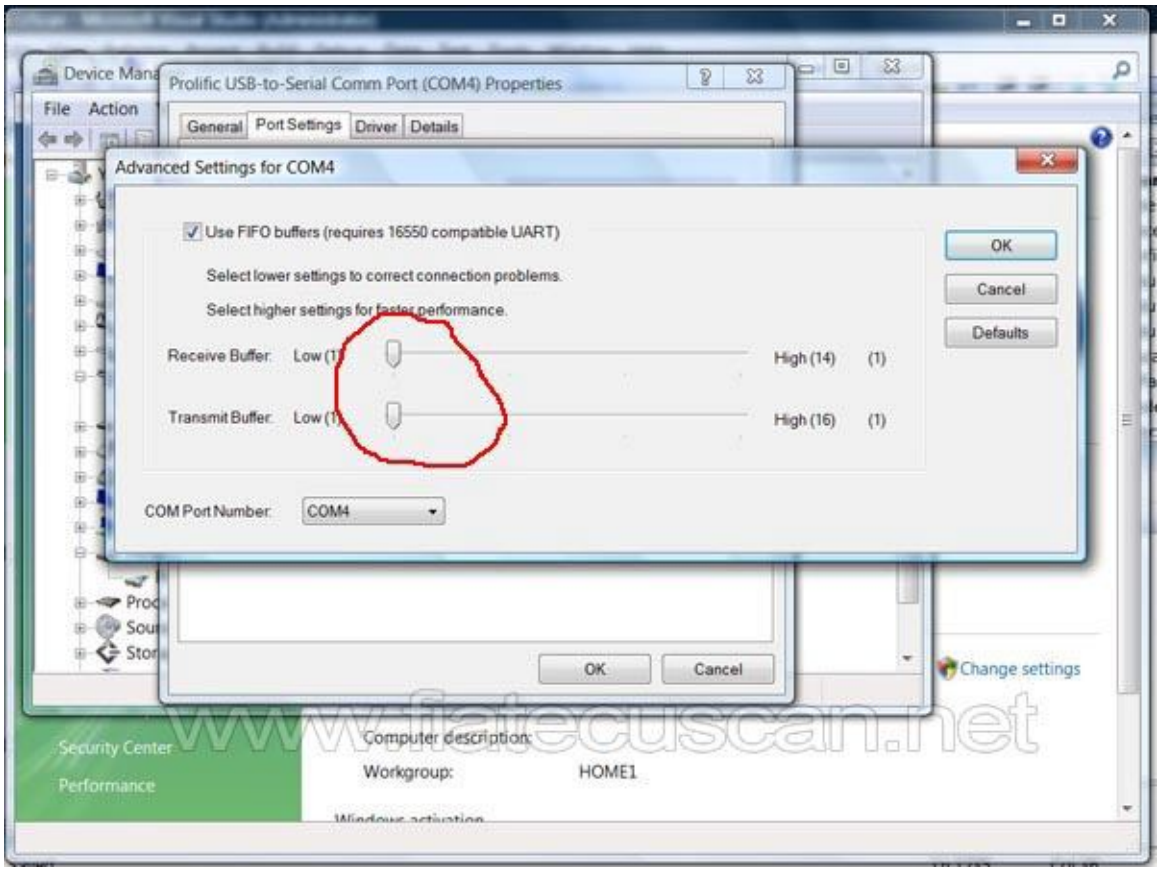
Go to Port Settings and click Advanced



On the next screen select the lowest possible value for "Latency Timer"



If you have a built-in serial port or PL2303 usb serial port you will need to lower the buffers to minimum as shown on the next screenshot. Note that for PL2303 USB serial port you will need to modify some registry settings in order to make it support 10400 bps.



Now, after changing these settings, you have to set the Interface Type to K-Line/VAGCOM in the Settings window of FiatECUScan. You also have to set the correct Serial port.

ELM 327 interfaces

This is a more advanced type of interface which supports multiple protocols. ELM 327 version 1.3 and newer is required for connection to the CAN network of Fiat, Alfa and Lancia.
PLEASE NOTE THAT THE VERSION MARKING ON THE CHINESE ELM 327 INTERFACES IS NOT THE SAME AS THE GENUINE ELM INTERFACES.
With this type of interface you can connect to all supported modules except for most of the old Airbag modules and some old ABS and engine modules.
In order to connect to ABS, Airbag, Power Steering and XENON modules you need to have an adapter cable, or you need to modify your interface.

Also, in order to connect to most of the control modules in Grande Punto, Punto Evo, 500, Mito and some Doblos you will need an adapter cable.
NOTE: You can check the following link to see what type of adapters/modification you will need for your car: http://www.fiatecuscan.net/SupportedVehiclesList.aspx
ELM 327 INTERFACE WARNING: Please note that almost all Chinese ELM 327 interfaces produced in the last few months have problems accessing the CAN network. The problem can be easily fixed by simply removing one resistor from the interface. The procedure is covered in the following topic on the forum:
http://forum.fiatecuscan.net/viewtopic.php?f=5&t=1493

Installation Notes:
First, you need to install the serial port driver for the interface. The driver is usually supplied with your interface. If you don't have a driver then you can try to download and install drivers from FTDI site.
After successful installation of the drivers you have to set the Interface Type to ELM 327 v1.3+ in FiatECUScan settings. You also have to set the correct Serial port and Port Speed. Port speed is usually 38400 for all ELM 327 v1.3 interfaces.
You can use the Test button to test your ELM 327 interface. It shows the version of the ELM 327 software and also tests how the ELM interface responds to various commands. You should see an OK response under each command.
If you see a message saying that COMX does not exists it means that you have selected incorrect serial port. If you see a message saying Timeout it most probably means that you have selected an incorrect port speed

OBDKey interfaces

This is also an advanced type of interface which supports multiple protocols. OBDKey version 1.4 and newer is required for connection to the CAN network of Fiat, Alfa and Lancia.
With this type of interface you can connect to all supported modules.
In order to connect to ABS, Airbag, Power Steering and XENON modules you need to have an adapter cable, or you need to modify your interface.
Also, in order to connect to most of the control modules in Grande Punto, Punto Evo, 500, Mito and some Doblos you will need an adapter cable.
NOTE: You can check the following link to see what type of adapters/modification you will need for your car: http://www.fiatecuscan.net/SupportedVehiclesList.aspx

OBDLink interfaces

This is also an advanced type of interface which supports multiple protocols.
With this type of interface you can connect to all supported modules except for some of the old Airbag modules and some old ABS and engine modules.

In order to connect to ABS, Airbag, Power Steering and XENON modules you need to have an adapter cable, or you need to modify your interface.
Also, in order to connect to most of the control modules in Grande Punto, Punto Evo, 500, Mito and some Doblos you will need an adapter cable.
NOTE: You can check the following link to see what type of adapters/modification you will need for your car: http://www.fiatecuscan.net/SupportedVehiclesList.aspx

ElmScan 5 interfaces

This is also an advanced type of interface which supports multiple protocols. In FiatECUScan you have to select "ELM 327 1.3+" and port speed 115,200 bps.
With this type of interface you can connect to all supported modules except for most of the old Airbag modules and some old ABS and engine modules.
In order to connect to ABS, Airbag, Power Steering and XENON modules you need to have an adapter cable, or you need to modify your interface.
Also, in order to connect to most of the control modules in Grande Punto, Punto Evo, 500, Mito and some Doblos you will need an adapter cable.
NOTE: You can check the following link to see what type of adapters/modification you will need for your car: http://www.fiatecuscan.net/SupportedVehiclesList.aspx

Bluetooth interfaces

FiatECUScan supports Bluetooth ELM, OBDKey and OBDLink interfaces. However, due to some limitations of these interfaces it is not recommended to use them for special functions (like PROXI Alignment, remote control programming, IMA coding, etc.)!

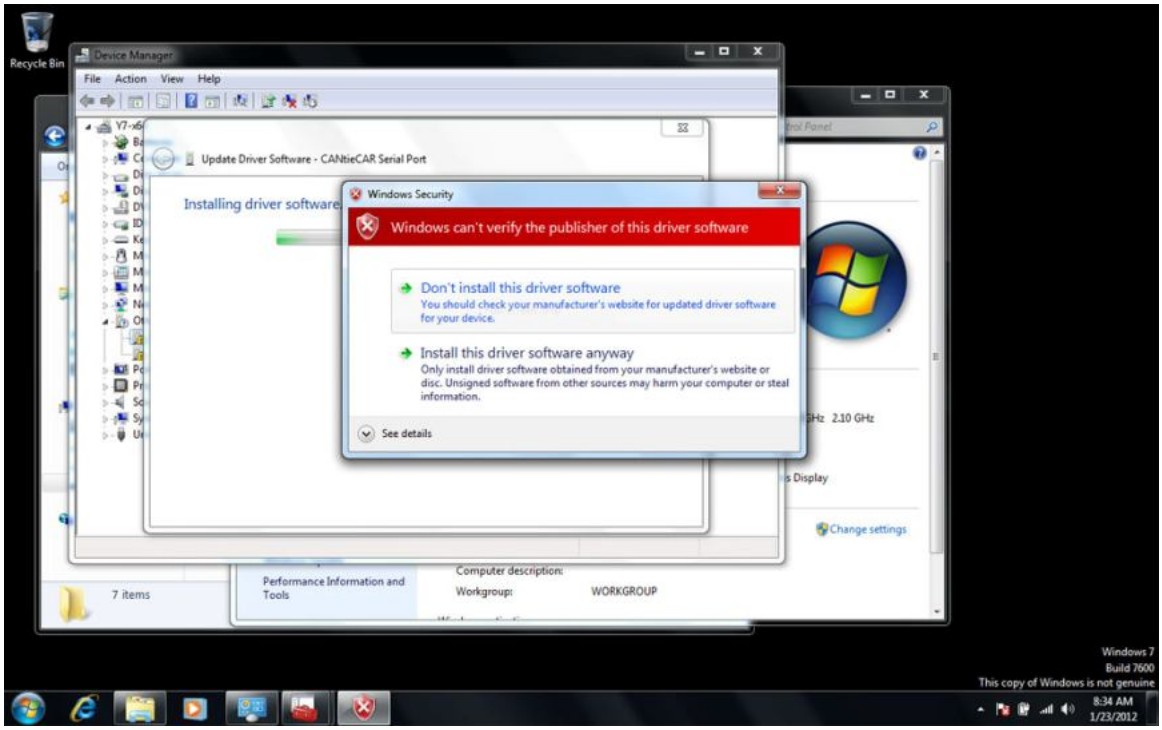
CANtieCAR interface

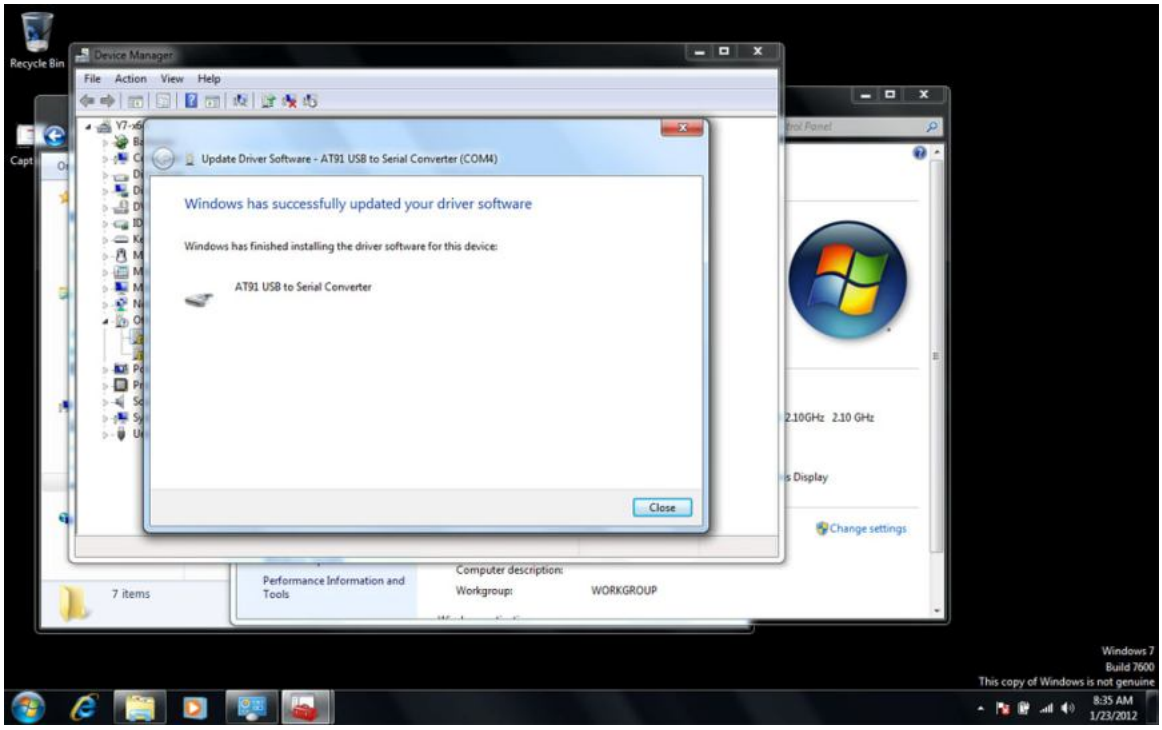
This is a professional multi-function and multi-protocol interface with multiplexing capabilities. With this interface you can connect to all supported modules. You do not need additional adapter cables or modifications to connect to all modules (except for the 3-pin adapter required for old vehicles).
This interface can work both in USB or Bluetooth mode. The Bluetooth mode fully supports all modules. PLEASE NOTE THAT IF YOU WANT TO USE THE INTERFACE IN USB MODE THEN YOU HAVE TO CONNECT IT TO THE COMPUTER FIRST AND THEN CONNECT TO VEHICLE.
This interface is included in FiatECUScan MULTIPLEXED bundle.

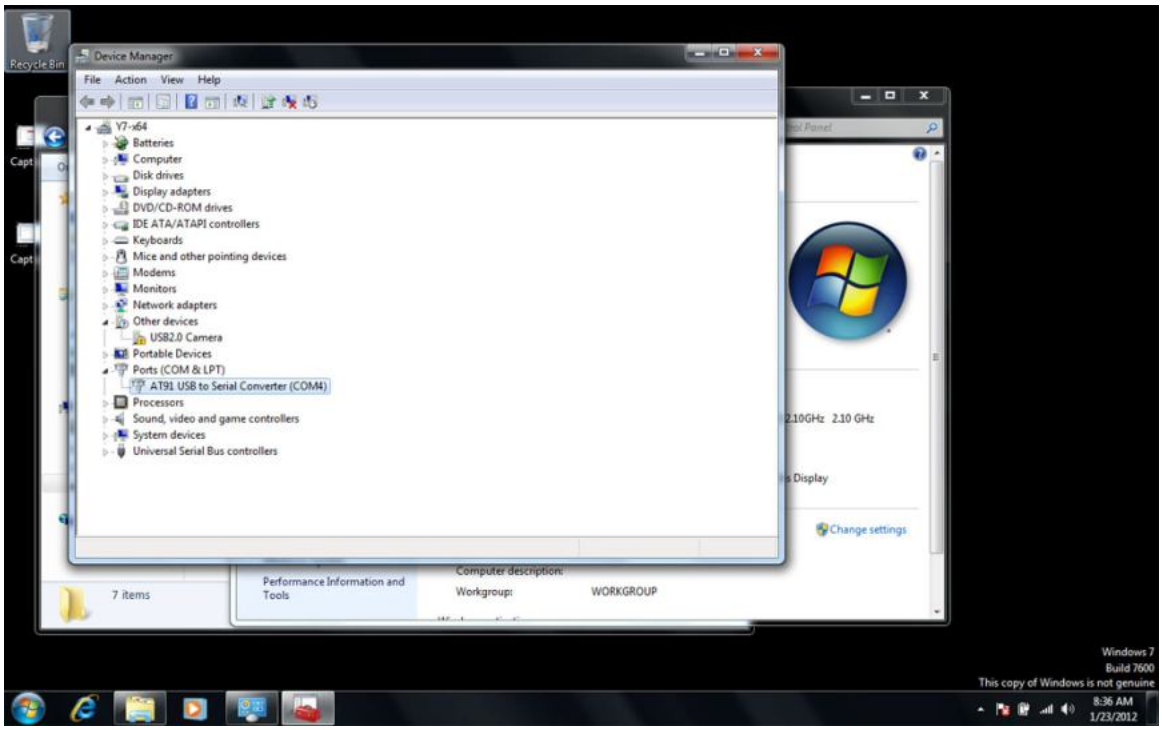
Installation Notes:

First, you need to install the driver of the interface. In order to install the driver you need to connect the CANtieCAR interface to a USB port on your computer. PLEASE NOTE THAT THE INTERFACE SHOULD NOT BE CONNECTED TO A CAR, IT HAS TO BE CONNNECTED TO THE USB PORT ONLY!

Then Windows will start searching for a driver. It will actually detect 2 different devices – a USB drive, and a Serial Port interface. The USB drive should install automatically because it is using a standard Windows driver. The drivers for the Serial Interface are located on the USB drive. So, once the system asks you for the location of the Serial Device drivers you have to point it to the USB drive.
Windows may warn you that the driver is not signed, simply select option "Install this device driver anyway". Then Windows will install the driver as shown on the screenshots below.



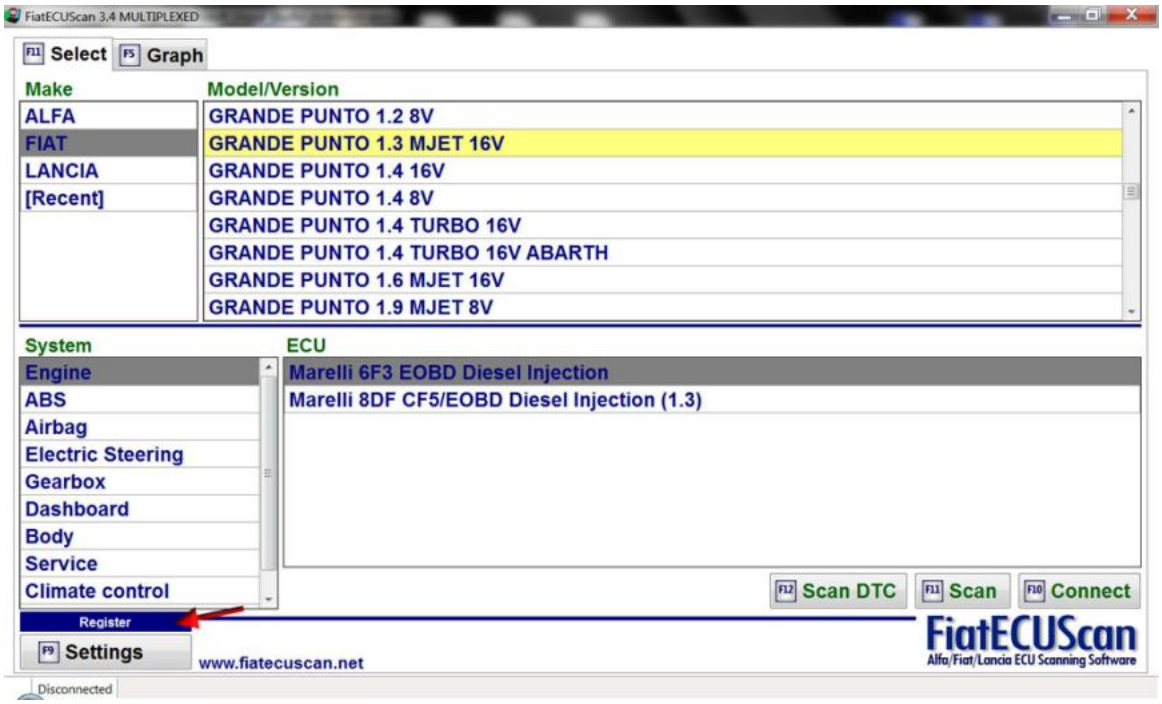




The CANtieCAR interface is now installed.
On the USB drive you may find additional software for CANtieCAR interface configuration and firmware upgrade.
The installation files of FiatECUScan MULTIPLEXED are also located on the USB drive.

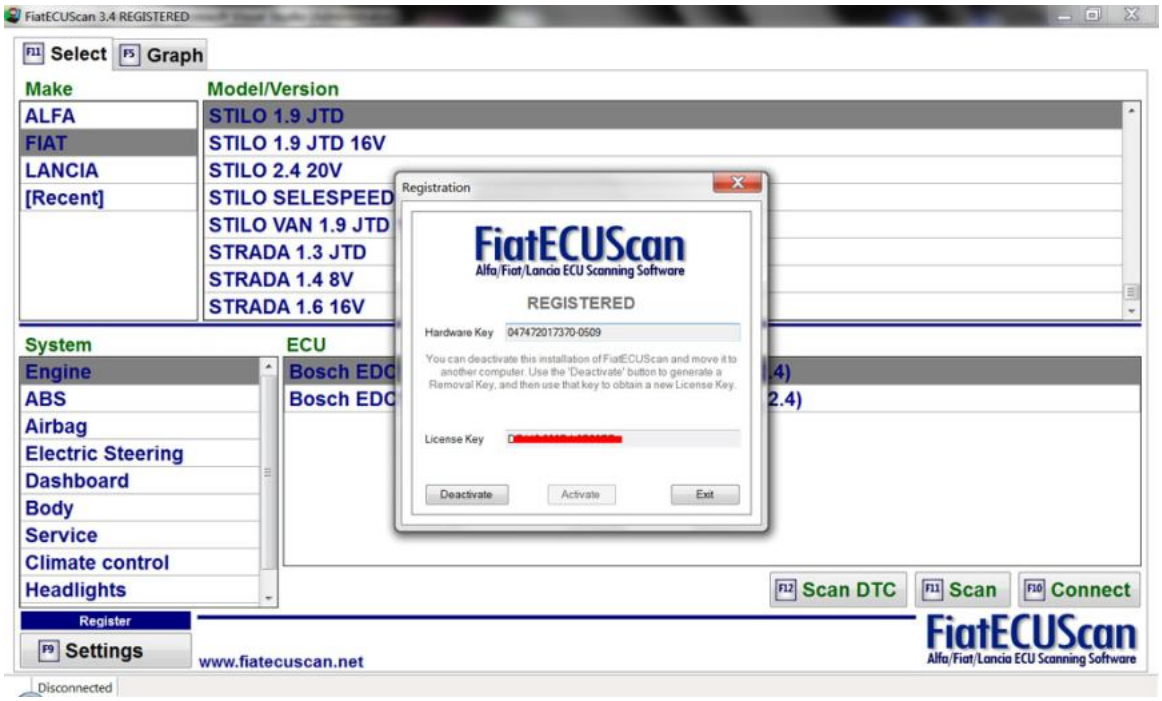
3. FiatECUScan License

In order to use the full functionality of FiatECUScan you need to purchase a License. The License comes in the form of License Key which you have to enter in the Registration window of FiatECUScan.
First you have to download and install FiatECUScan.
Then you have to start the program and open the Registration window. In order to open the Registration windows you have to click on the blue Register button as shown on the screenshot below.



On the Registration screen you can see the Hardware Key of your computer. You will need this key in order to purchase a License.
NOTE: The Hardware Key is not important for the owners of FiatECUScan MULTIPLEXED bundle.

With your License you will receive a License Key which you have to enter here and click button Activate. If the License Key is correct the program will close. Then you have to start it again and it will be activated.
NOTE: If you have a FiatECUScan MULTIPLEXED license then the CANtieCAR interface (supplied with your bundle) has to be connected to a USB port on your computer during activation!

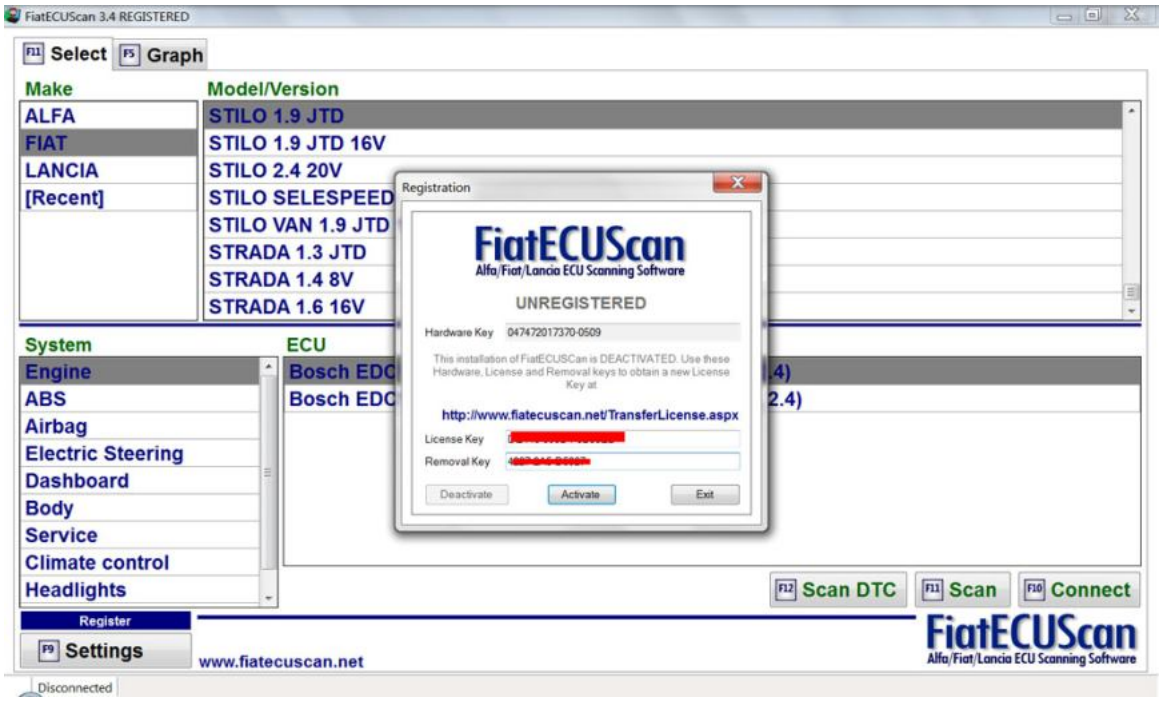


License Transfer functionality

In case you need to change or re-install your computer you can transfer the license to the new system by using the License Transfer functionality of FiatECUScan.
Here is how to use the License Transfer function:
1. Open FiatECUScan on the computer where you have license.
2. Go to "Register" window and click "Deactivate" button
3. The system will generate a Removal Key (see the screenshot below)
4. Write down all 3 keys from the Register window – Hardware Key, License Key, Removal Key.
5. Install FiatECUScan on the new computer.
6. Open Register window and write down the new Hardware Key.
7. Go to http://www.fiatecuscan.net/TransferLicense.aspx and enter the old data (Hardware Key, License Key, Removal Key) and the new Hardware Key and your email and click "Request License".
8. You will receive an email with the new License Key.

If you have any problems with the License Transfer function you can send us an email with the new Hardware Key to support@fiatecuscan.net.

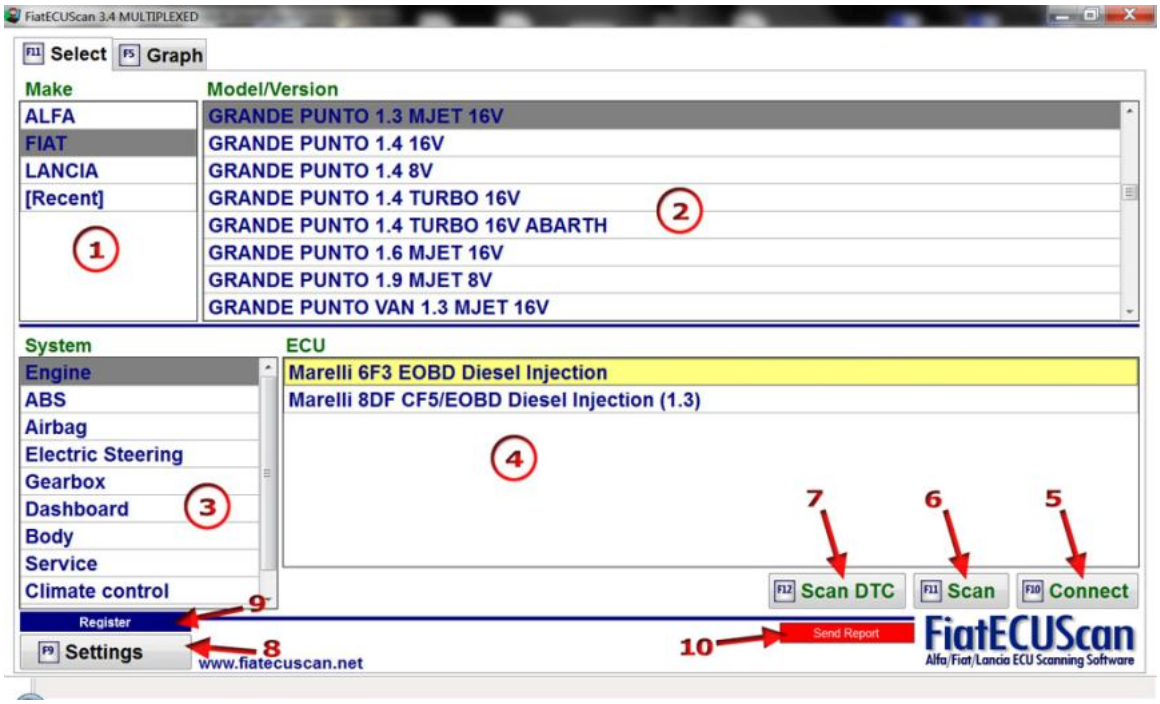
Please note that the License Transfer function has a limitation on the number of transfers.



II. User interface

1. FiatECUScan Main screen

When you start FiatECUScan it shows the following screen:



The main screen of FiatECUScan is divided into 4 parts. You can use the TAB button or the mouse to go from one part to another. You can also use the arrow keys to go up/down the lists.

1. Here you can select the "Make" of your vehicle – Alfa, Fiat or Lancia.
You also have an additional selection option [Recent] where you can see the last 20 vehicle models which you have used. You can clear this list from "Settings".

2. Here you can select the model and version of the vehicle.
You can also type letters from keyboard for fast searching through this list. For example you can type "STI" from keyboard and the list will scroll to STILO.

3. Here you have to select the type of system which you want to connect to.

4. Here the system will show the supported control modules for selected vehicle make, model, version and type of system. You have to select the control module which you have in your car. If you select an incorrect module and connect to it then the program will warn you with message "Incorrect ISO code".
To see which modules are available in your car you can use the SCAN function of FiatECUScan (see below).

5. Click this button (or press button F10 on your keyboard) to start connection with the selected module. In order to connect to the module you have to make sure that:
- The interface drivers are installed properly and "latency" settings for the interface are set to minimum
- The interface is configured properly in FiatECUScan settings (see below for Settings screen)
- The interface is connected to the USB port. Please note that most of the interfaces always need to be connected to the same USB port of the computer, otherwise the COM port number changes and you need to change the interface configuration in FiatECUScan settings
- The interface is connected to the vehicle.
- The correct interface adapter is connected (if required). The program will warn you if an adapter is required when you click on "Connect" button. If you don't want to see a warning message for the required adapter then you can turn it off from FiatECUScan Settings.
- The key of the vehicle is turned ON (position MAR).

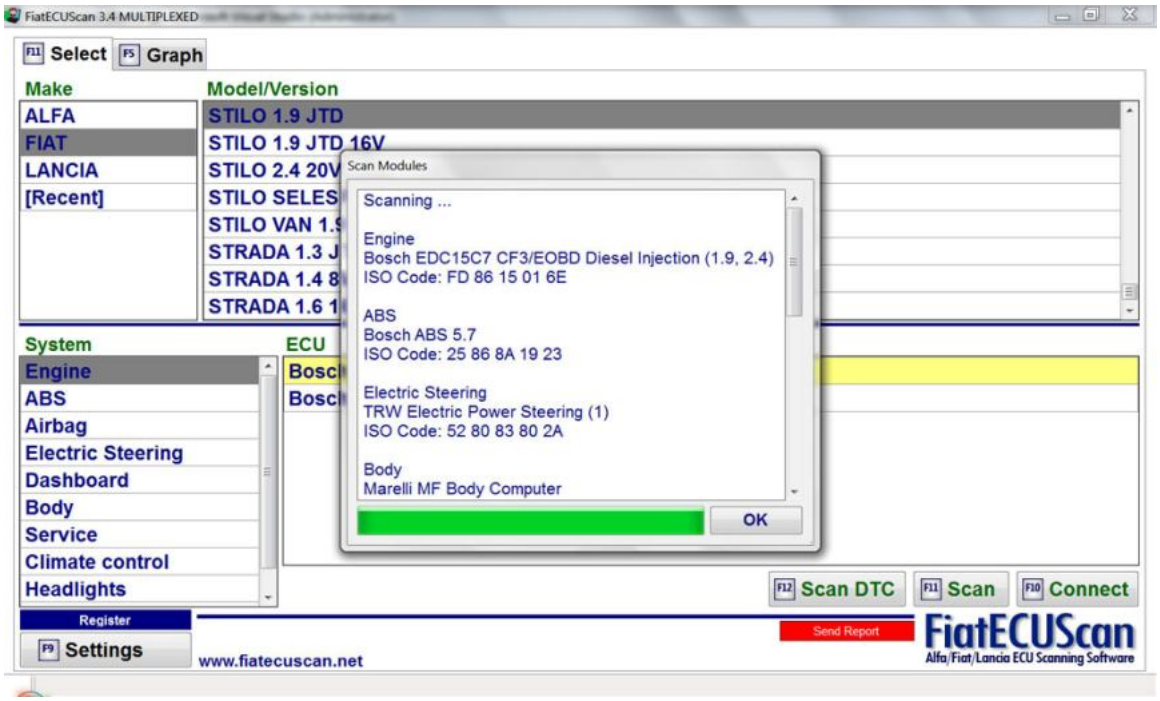
Simulation mode

You can click CTRL + Connect (or CTRL+F10) to start a connection in 'simulation' mode.
The 'simulation' mode lets you explore the functionality of the program without actual connection to a car. Using this mode you can see which parameters, tests and calibrations are available for any control module.

6. Click this button (or press F11 on your keyboard) to scan your vehicle for supported control modules. The program will start scanning your vehicle and display results of the discovered control modules.
Please note that the system will only discover the modules which can be accessed using the connected interface adapter (For example: If the RED interface adapter is connected then the system will only find the airbag control module), however, if you are using the MULTIPLEXED version with CANtieCAR interface then the system will discover all modules in your vehicle.
Please also note that in order to do a successful scanning you have to make sure that:
- The interface drivers are installed properly and "latency" settings for the interface are set to minimum
- The interface is configured properly in FiatECUScan settings (see below for Settings screen)
- The interface is connected to the USB port. Please note that most of the interfaces always need to be connected to the same USB port of the computer, otherwise the COM port number changes and you need to change the interface configuration in FiatECUScan settings

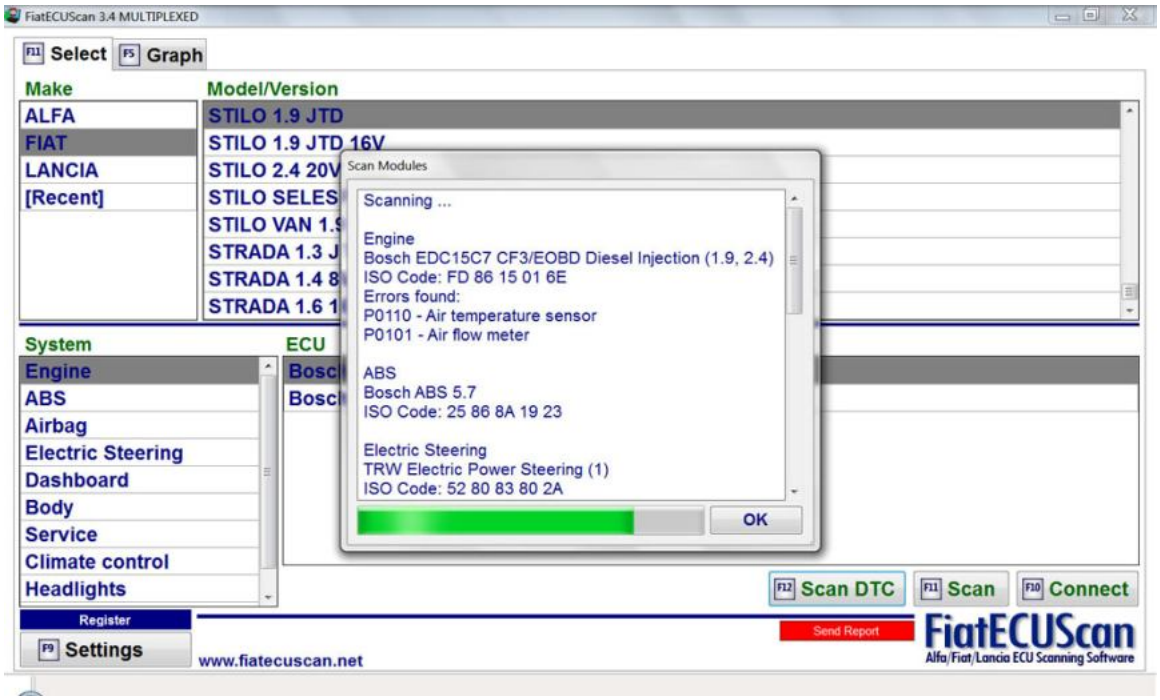
- The interface is connected to the vehicle.
- The correct interface adapter is connected (if required).
- The key of the vehicle is turned ON (position MAR).

The result looks like this:



7. Click this button (or press F12 on your keyboard) to scan your vehicle for supported control modules and check each module for errors. This function works the same way as the "SCAN" function but it also checks each of the discovered modules for errors and shows the error codes.

The result looks like this:



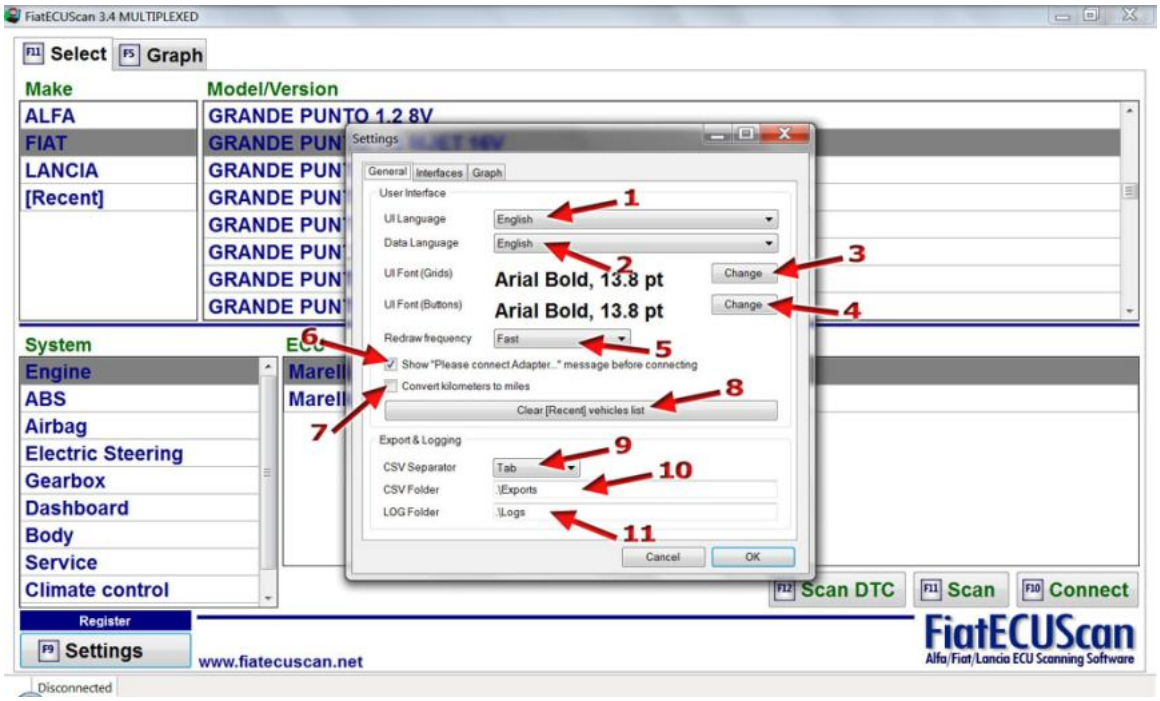
8. Click this button (or press F9 on your keyboard) to open FiatECUScan settings. See below for detailed description of the settings screen.

9. Click this button to open FiatECUScan registration window. There you can see your Hardware Key or enter your License Key. You can also deactivate your license on the computer.

10. Click this button to send Diagnostic Report to FiatECUScan server. The diagnostic reports help us to find and fix problems in FiatECUScan. The report contains information about your last connection (the data sent/received to your car). It does not contain any personal information or any information about your computer.
Please note that this button appears after you disconnect from a control module or after a failed connection.

2. FiatECUScan Settings screen

When you click on "Settings" button on FiatECUScan main screen (or press F9 on your keyboard) the program will open FiatECUScan settings window. The settings window is divided into 3 sections – General, Interfaces and Graphs. See below for detailed description of each option.



1. Here you can select the language for the FiatECUScan user interface. This is the language of all buttons, lists, help texts and various messages shown by the program.

2. Here you can select the language for the FiatECUScan data. This is the language of the data – errors, parameter names, parameter values, actuators, adjustments.

NOTE: The texts for each language are stored into Unicode text files. The files are located in "\Lang" folder inside your FiatECUScan setup folder. There are two types of texts files – files with extension TXT (these are the UI language files) and files with extension DAT (these are the data language files).

3. Click this button to select the font for all data grids in FiatECUScan. These are all tables with vehicle models, modules, parameters, errors, etc.

4. Click this button to select the font for all buttons and most texts in FiatECUScan.

5. This selection controls how fast will be redrawn the graphs when recording data. Setting it to "Fast" will make the drawing of the graphs faster and give smoother oscilloscope view. Set this option to "Slow" if you experience disconnection problems when recording data. Please note that this option does not affect the recorded data in any way, it only affects the graph drawing quality on screen.

6. This option controls the showing of message "Please connect adapter XX" after you click "Connect" button. It is recommended to leave this option checked, but you can turn it off if you find the warning message annoying.

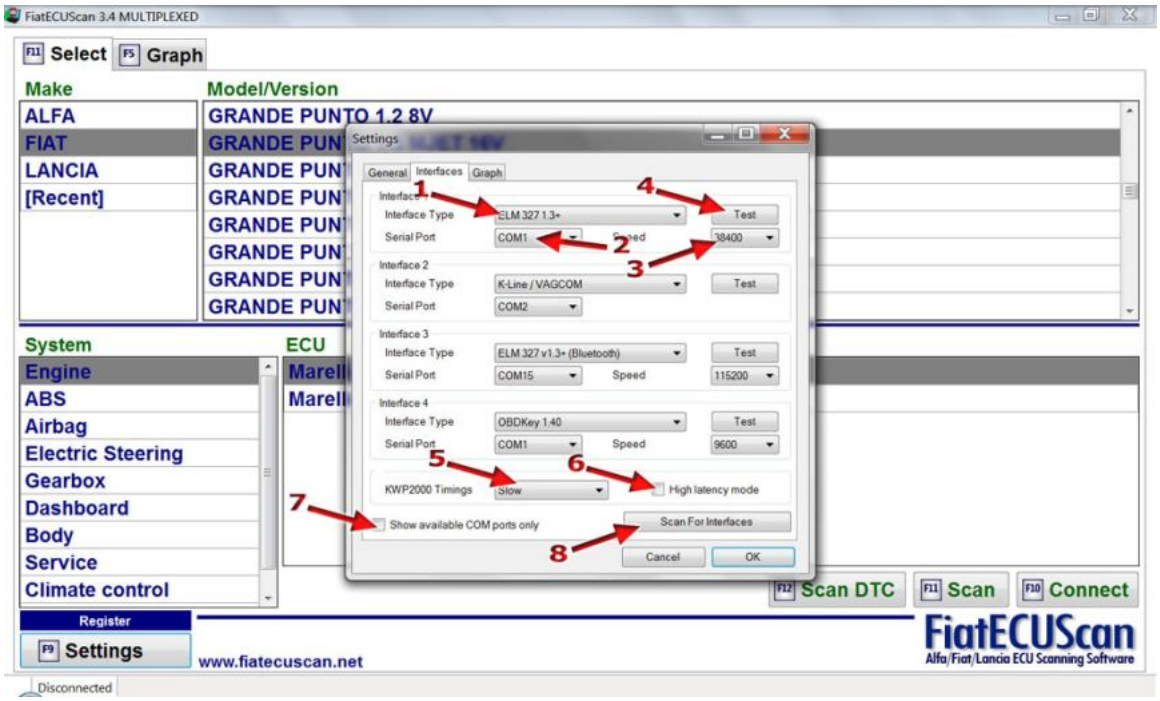
7. This option might be useful for the UK cars. When this option is checked FiatECUScan will convert and show the values of "km" parameters in miles and "km/h" to "mph".

8. Click this button to clear the list of [Recent] vehicles on main screen.
Each time you connect to a car it is added to that list of recent vehicles. It remembers the last 20 vehicles.

9. Select the separator character for the CSV files generated by FiatECUScan.

10. This is the folder on your hard drive where FiatECUScan will automatically save the generated CSV files. The folder must exist!
For example you can enter:
C:\FiatECUScan_CSV

11. This is the folder on your hard drive where FiatECUScan will automatically save the generated LOG files. The folder must exist!
For example you can enter:
C:\FiatECUScan_LOGS



Here you can configure your interfaces. The program allows you to configure up to 4 interfaces. Each time when you try to connect to a car the program will check which of the configured interfaces is connected to the computer and try to use it.
In most cases you can simply use the "Scan for Interfaces" functionality and it will automatically configure your interfaces. However, sometimes you need to configure the interfaces manually.

1. Here you can select the type of interface. Current version of FiatECUScan recognizes 5 types of interfaces – K-Line/VagCom, ELM 327 1.3+, OBDKey, OBDLink and CANtieCAR.
- K-Line/VagCom interface is the most basic type interface, also known as VagCom 409. It can connect to most of the older systems, but it cannot connect to any CAN system.
- ELM 327 1.3+ interface is a popular interface. It has to be version 1.3 or newer as the older versions of ELM do not support Fiat CAN system.
A very common problem of the ELM interfaces is a CAN termination resistor which prevents the interface from connection to Fiat CAN network. Please check the following link to see how to identify and fix this type of problem:
http://forum.fiatecuscan.net/viewtopic.php?f=5&t=1493
NOTE: If you have an ElmSCAN 5 interface you can select ELM 327 1.3+ and set Port speed to 115,200.
Please also note that although Bluetooth ELM and OBDKey interfaces are supported by FiatECUScan these interfaces are not recommended for special functions (like PROXI Alignment, remote control programming, IMA coding, etc.)!
- CANtieCAR interface is available only in FiatECUScan MULTIPLEXED.

2. Here you have to select the COM port number of your interface. You can see the port number in Windows' Device Manager.
PLEASE NOTE that ALL interfaces have a COM port number. It is NOT only for the old serial port interfaces. The USB and Bluetooth interfaces also have a COM port number because they are recognized by Windows as a serial port. If you do not see the interface listed in Windows' Device Manager then you probably did not install its drivers properly.

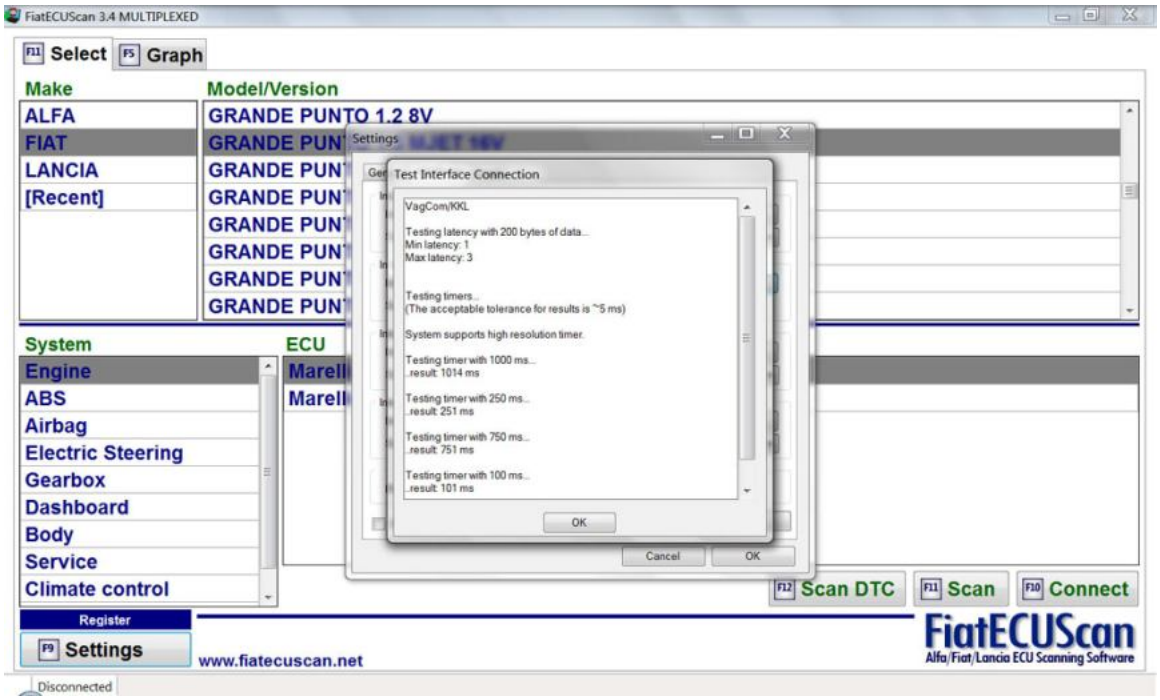
3. This is the serial port speed at which the interface works. The usual speed setting for the different interfaces is:
- ELM 327 – 38400
- OBDKey – 9600
- Bluetooth (all) – 115200
- ELMScan 5 – 115200
- OBDLink – 115200
- CANtieCAR – 115200

There are some interfaces which do not follow the rules. You can use the "Test" function to see if the interface is configured properly.

4. Click this button to run a test on your interface.
Please note that in order to do a successful test you have to make sure that:
- The interface drivers are installed properly
- The interface is connected both to the computer and to the car

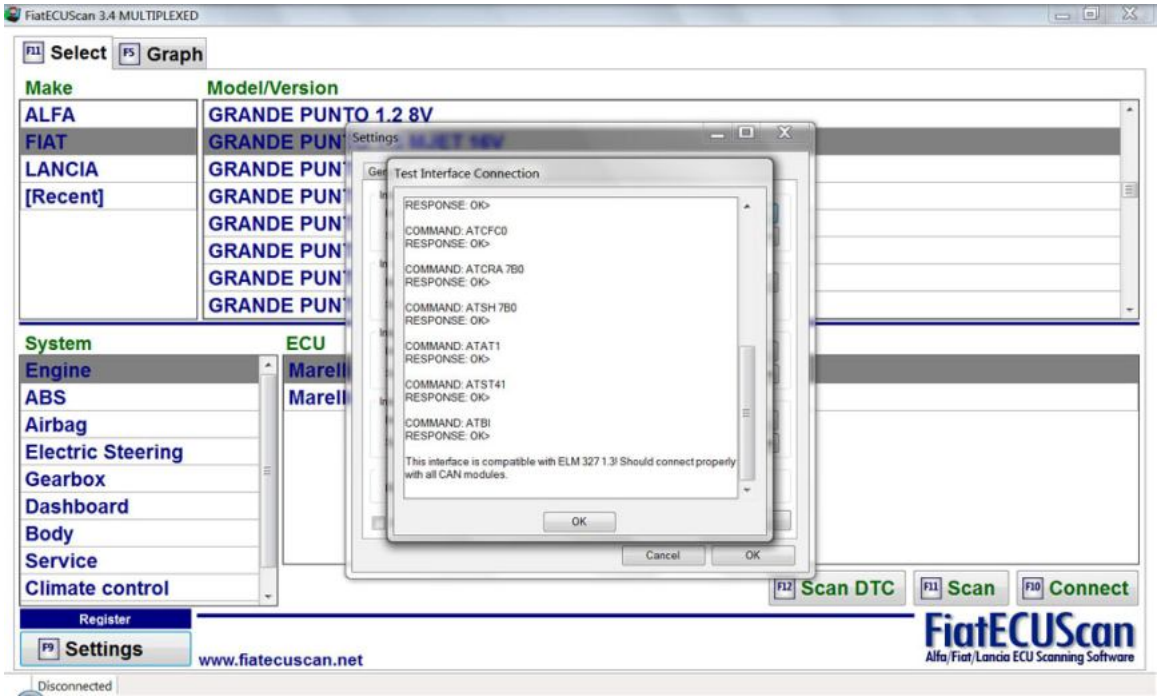
If the test window shows error message similar to "COM port X does not exist" then you have set incorrect COM port number!
If the test window shows error message similar to "Timeout" then most probably the port speed is not correct. Try with different speed.

The result of testing K-Line/VagCom interfaces looks like this:



The "latency" values should be as low as possible. Usually it is below 10.
The timer tests should match the reference values. A difference of up to 5% should not be a problem for correct operation.

The test result of ELM interfaces looks like the screenshot below:



The result of all commands should be OK. If any of the commands has a different result then most probably the software inside the ELM interface is not compatible with ELM 1.3.
At the end of the ELM tests the program shows a message if the interface is compatible with ELM 1.3 or ELM 1.4.
If you see a messages that the interface is NOT compatible with ELM 1.3 or ELM 1.4 then your interface may not be able to connect to the CAN control modules.

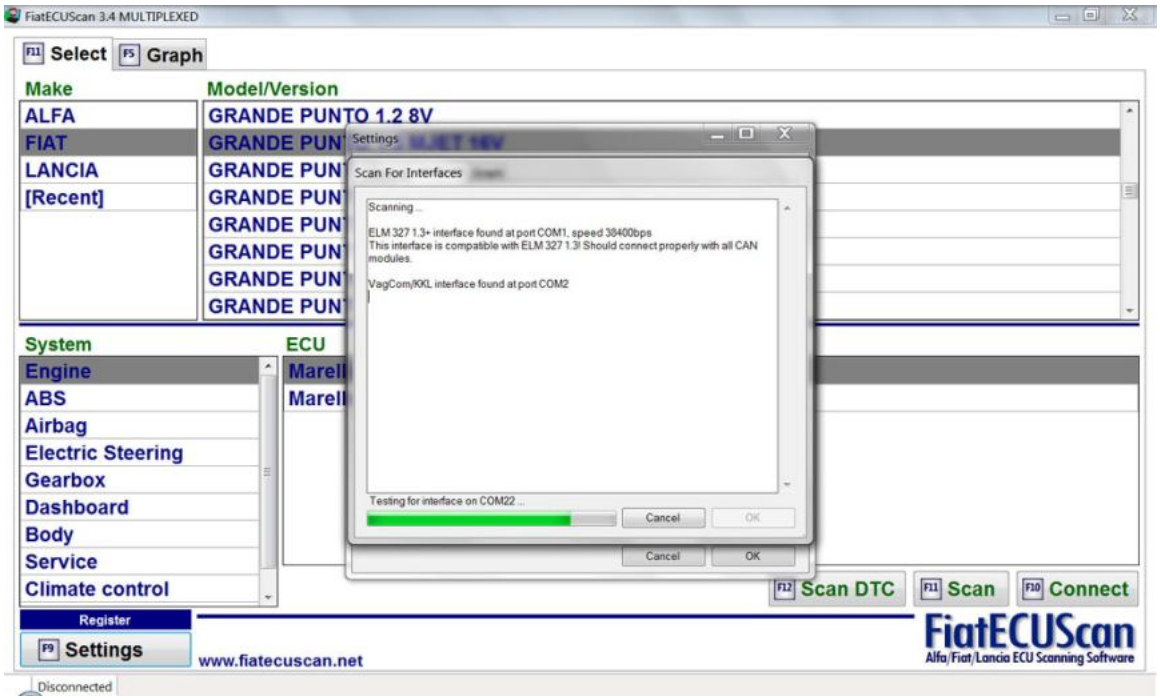
5. KWP2000 Timings - Here you can control the connection speed when connecting to engine ECUs which use the KWP2000 protocol (most of the cars after year 2000 use this protocol except Grande Punto, Punto Evo, 500, Mito and some Doblos.
In most cases it is recommended to leave this value to "Default"!
When setting this value to "Optimal" and "Fast" it is possible to achieve a high rate when reading parameters. For example when reading 1 parameters it is possible to have update speed of >900 readings per minute.
Using the "Slow" option may solve some disconnection problems in slower computers.

6. High Latency mode – LEAVE THIS OPTION UNCHECKED!
It is only for experimenting purposes. If you have disconnection problems then you may try to check this option. However, if it doesn't help then it is highly recommended to uncheck it and leave it that way.

7. If you check this option then FiatECUScan will show only the COM ports available in the system. By default the serial port selection boxes show COM ports from 1 to 30 regardless if the ports are actually available on the computer. When you check this option the selection will be limited to the ports which are reported by Windows as available on your computer.

8. Click this button to scan your system for connected interfaces.
Please note that in order to do a successful scan you have to make sure that:
- The interface drivers are installed properly
- The interface is connected both to the computer and to the car
The program will start searching for connected interfaces and display the results. The scan may take up to a few minutes!

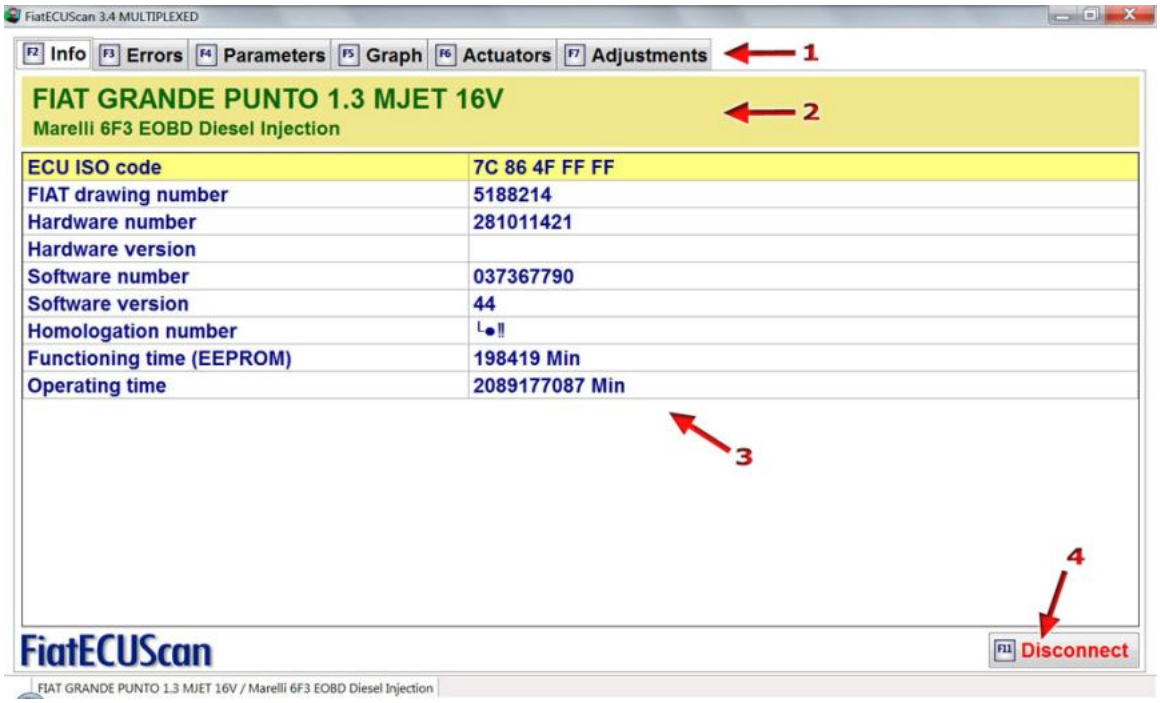
The result looks like the screenshot below:



After the scan finishes you can click button OK and the interfaces (which have been found) will be saved in FiatECUScan settings.

3. Info screen

After successful connection to a module the program will take you to the "Info" screen. Here you can see basic information about the control unit.



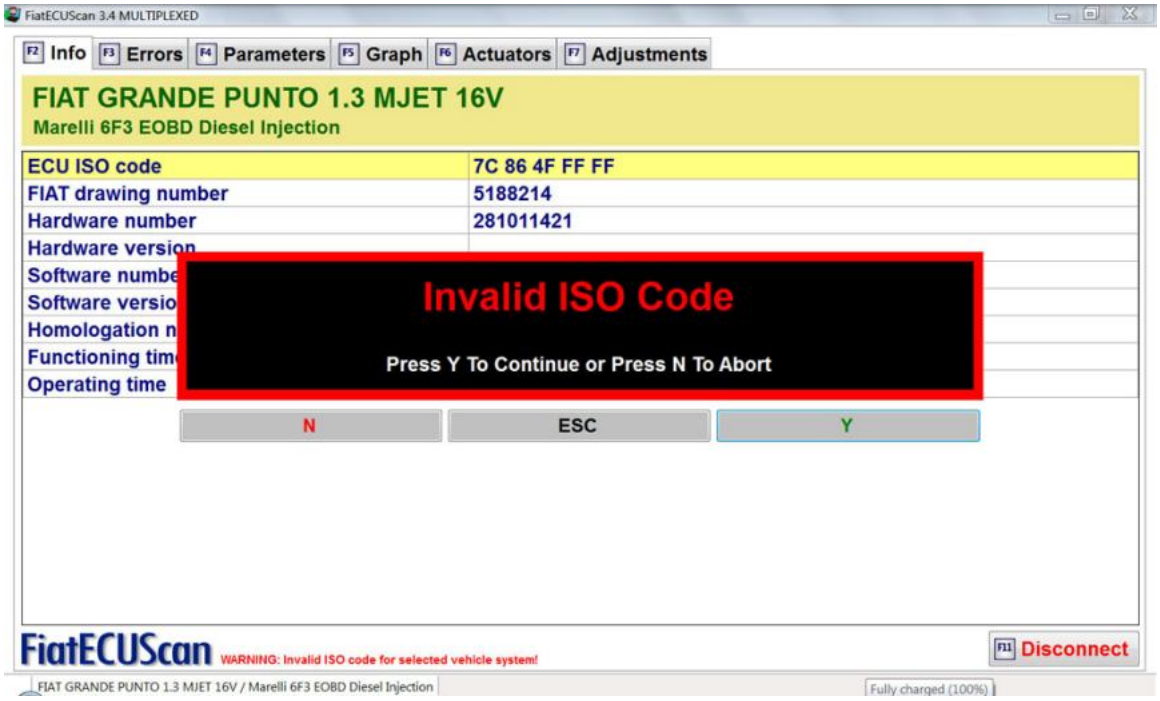
1. Using these buttons you can switch between the diagnostic windows of FiatECUScan. You can either click on the buttons or press the corresponding key on your keyboard:
F3 – go to Errors screen
F4 – go to Parameters screen
F5 – go to Graph screen
F6 – go to Actuators screen
F7 – go to Adjustments screen

2. Here you can see the car make, model and version and the control module which you have selected from FiatECUScan main screen.

3. This information is obtained from the control module during connection process.
The "ISO code" is a unique identifier of the type of control module.

4. Click this button (or press F11 on your keyboard) to disconnect from the control module and go back to FiatECUSCan main screen.
NOTE: You can press F11 on your keyboard at any time (even if you are on Parameters, Errors, Actuators, etc. screen) to disconnect from the module.

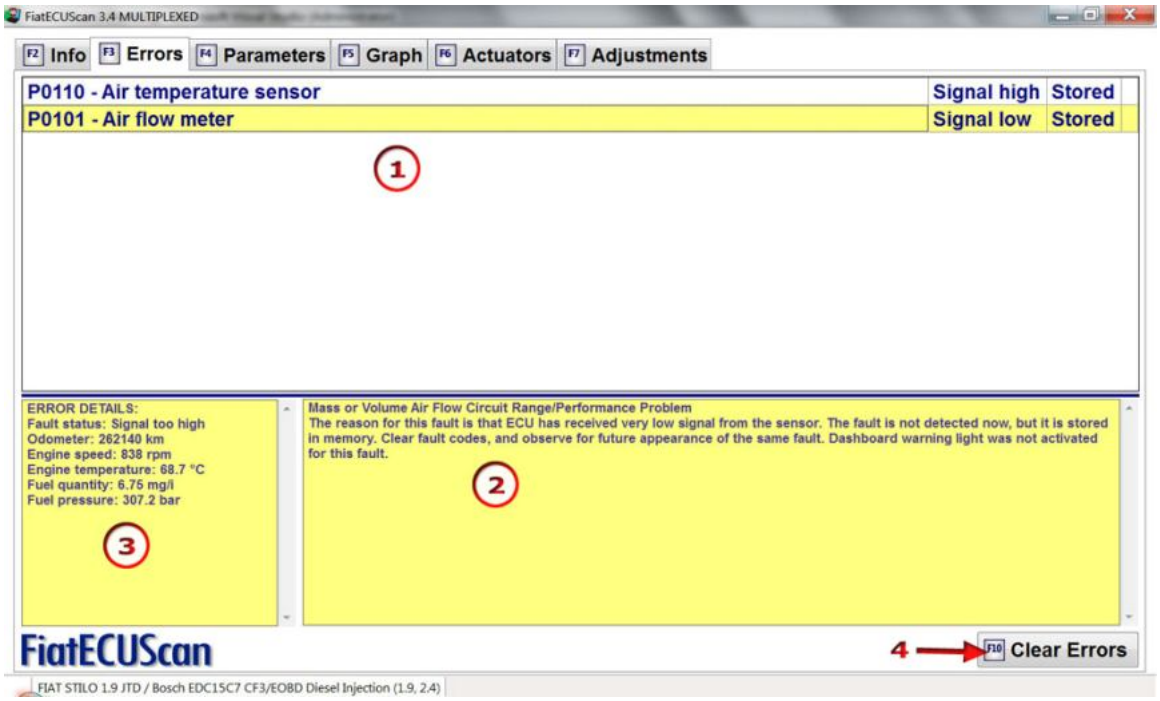
PLEASE NOTE THE FOLLOWING MESSAGE THAT MAY APPEAR ON YOUR SCREEN AFTER CONNECTION!



The "Invalid ISO Code" message means that the ISO code obtained from the vehicle is not recognized by FiatECUScan as correct for selected control module.
In most cases this simply means that you have selected incorrect control module from FiatECUScan main screen. So, that you simply have to disconnect, then select different control module from FiatECUScan main screen and try to connect again.
For example you may see this message if you try to connect to your car by selecting "Bosch EDC 15C7 CF3 Diesel Injection" from FiatECUScan main screen but your car actually has a "Bosch EDC16C39 Diesel Injection" control unit.
You can ignore this message and continue, but most probably the errors codes and parameter values will not be correct and adjustments will not execute properly. Actually, it is not recommended to execute actuators and adjustments when ISO code is not recognized.

4. Errors screen

On this screen you can read and clear the fault codes from the control module.



1. On this section of the screen you can see a list of the detected error codes. When you select an error code you can see some details about it in the bottom part of the screen. You can go up/down the list using up/down arrow keys on your keyboard or using the mouse.

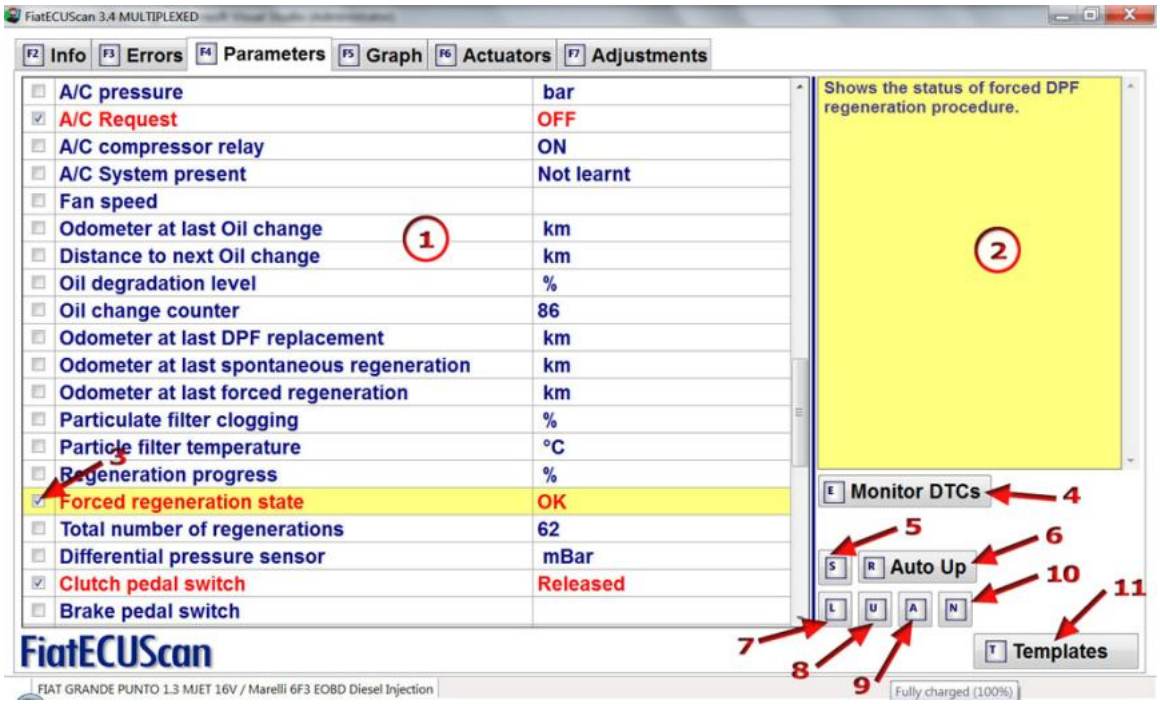
2. In this section you can read some detailed description of selected error code.
Please note that this information is ALWAYS IN ENGLISH!!!
You can copy this text and paste it into some translation software (like Google Translator) to see it translated in your language.

3. In this section you can see details about the conditions when the error was detected by the control module. This information is available on some control modules only.

4. Click this button (or press F10 on your keyboard) to clear the stored fault codes from the control modules.
NOTE: If some of the errors are still available after "Clearing" this means that you have not fixed the problem that causes these errors (faulty sensor, open circuit, etc.)

5. Parameters screen

On this screen you can monitor live data from the control module.



1. On this section of the screen are listed all available parameters for the module. You can go up/down the list using up/down arrow keys on your keyboard or using the mouse.
You can select/unselect a parameter by clicking on the checkbox (3) or by pressing "space" key on your keyboard. The active parameters are in red color.
You can also sort this list using keys S, R, L, U, A, N on your keyboard or by clicking on buttons (5), (6), (7), (8), (9), (10).
The reading speed of the parameter values depends on the number of selected parameters. So, when you select more parameters the speed of reading the data from the control module will decrease.
NOTE: The parameters which you select on this screen are also used for "Graph" and "Actuators" screens!

2. This is a short description of the parameter.
Please note that this information is ALWAYS IN ENGLISH!!!
You can copy this text and paste it into some translation software (like Google Translator) to see it translated in your language.

3. You can click on the checkbox to select/unselect the parameter. You can also press the "space" key on your keyboard to select/unselect a parameter.
When the parameter is selected (checked) FiatECUScan reads its value from the control module and displays it on screen.

4. This is a toggle ON/OFF button. Click this button to turn it ON or OFF, or you can press E on your keyboard.
When this function is ON the program will periodically check the control module for errors and report any error codes that it finds.
NOTE: When error monitoring is ON the error codes are also displayed on the Graph screen and recorded in the generated CSV files.

5. Click this button (or press S on your keyboard) to re-arrange the list of parameters and move the selected (checked) parameters on top of the list.

6. This is a toggle ON/OFF button. Click this button to turn it ON or OFF, or you can press R on your keyboard.
When this function is ON the program will automatically move parameters on top of the list when you select them. So, that you can go through the list and select the parameters you want and after that you can scroll to top of the list and watch the values of these parameters.

7. Click this button (or press L on your keyboard) to re-arrange the list of parameters and sort it by parameter name.

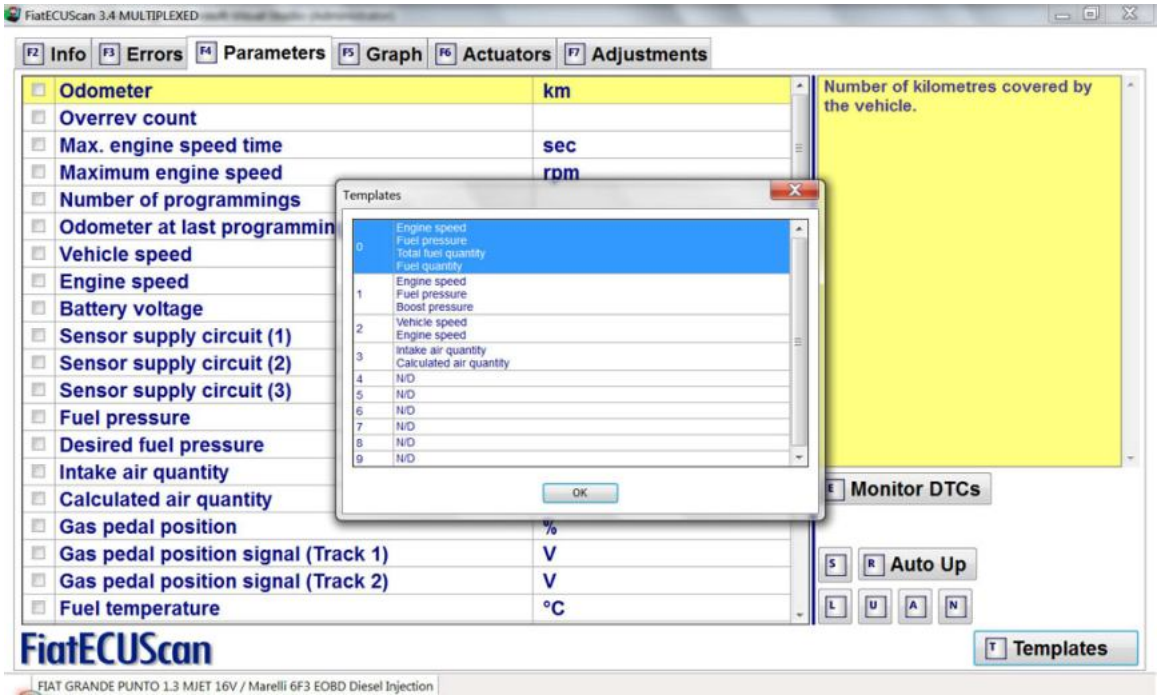
8. Click this button (or press U on your keyboard) to re-arrange the list of parameters and sort it by units.

9. Click this button (or press A on your keyboard) to select (check) all parameters in the list.
Please note that selecting many parameters makes the reading speed very slow.

10. Click this button (or press N on your keyboard) to deselect (uncheck) all parameters in the list.

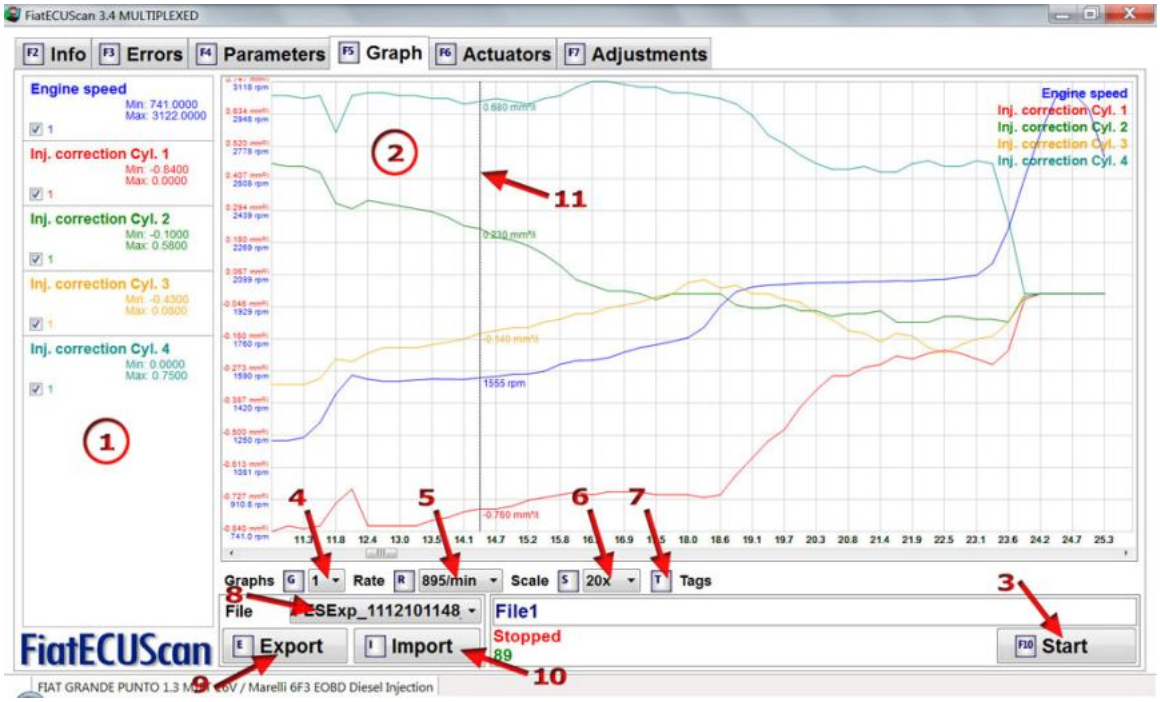
11. The “Templates” function allows you to quickly select a group of parameters by pressing the keys from 0 to 9.
You can store a template by pressing CTRL-X where X is a key between 0 and 9.
You can load a template by simply pressing a key between 0 and 9.
You can view the stored templates by clicking on the "Templates" button (or by pressing T).

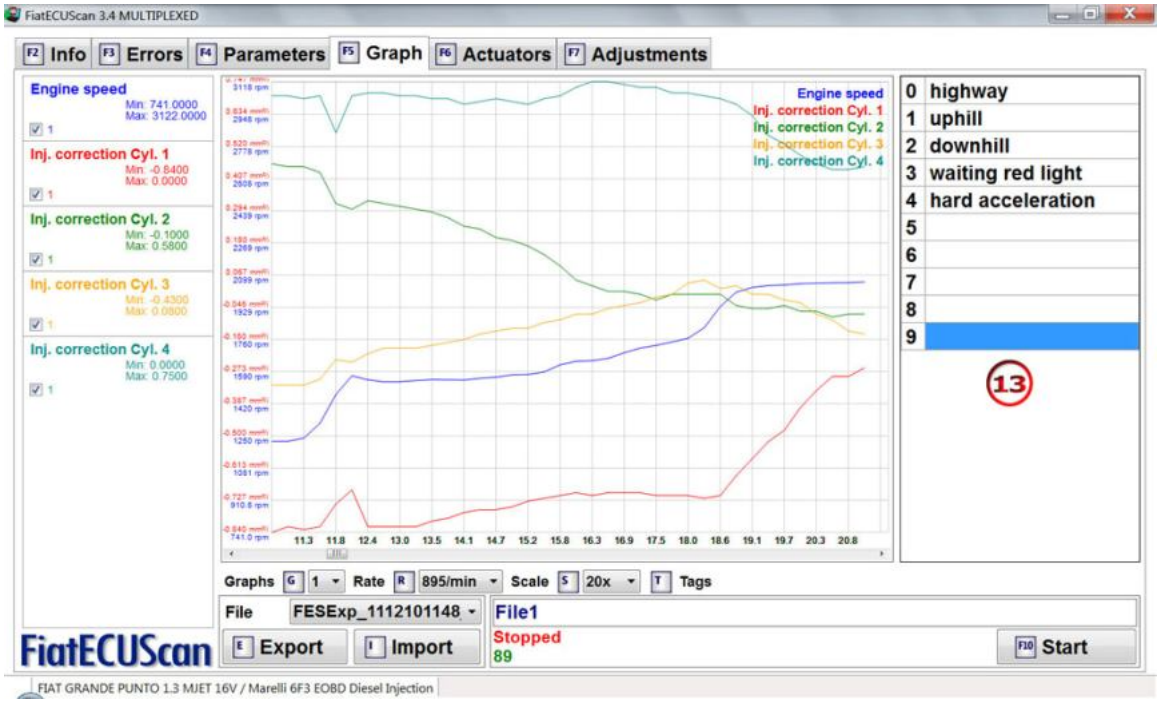
Here is an example of predefined templates:



6. Graph screen

On this screen you can create graphical representation of the live data from the control module. You can also record data in CSV files.
You have to select the parameters on Parameters screen!





1. On this section of the screen you can watch real-time from the control module. The program also monitors for min/max values of the parameters.
You can also select which parameters to draw on each graph.

2. On this section of the screen you can watch a graphical representation of the data. You can control the data rate and x-scale. You can display 1, 2, 3 or 4 graphs.
You can click anywhere on a graph to see the actual values of the data in that position.
You can change the colors, fonts and line thickness on this graph from FiatECUScan settings.

3. Click this button (or press F10 on your keyboard) to Start or Stop recording of data. Each time you start a new recording FiatECUScan will create new CSV file. When you stop the recording FiatECUScan will automatically write the CSV file (In FiatECUScan settings you can configure where to write these files).

4. Here you can select how many graphs to display.

5. Here you can select the rate at which FiatECUScan will record the data.

6. Here you can select the horizontal scale of the data.

7. Click this button (or press T on your keyboard) to show/hide the tags panel. On the tags panel you can enter or edit tag assignments (see 13).

The “tags” functionality allows you to insert tags in recorded data which will allow you to recognize certain conditions when examining recorded data.
The tags are assigned to keys 0 to 9, and you can insert them into the recording by simply pressing a key between 0 and 9 during data recording.

8. Here you can select which file to draw on the graph.
FiatECUScan can manage multiple CSV files in memory. From this list you can select which of those files to display.

9. Click this button (or press E on your keyboard) to export currently selected CSV file from memory into a file.

10. Click this button (or press I on your keyboard) to import a CSV file into memory.

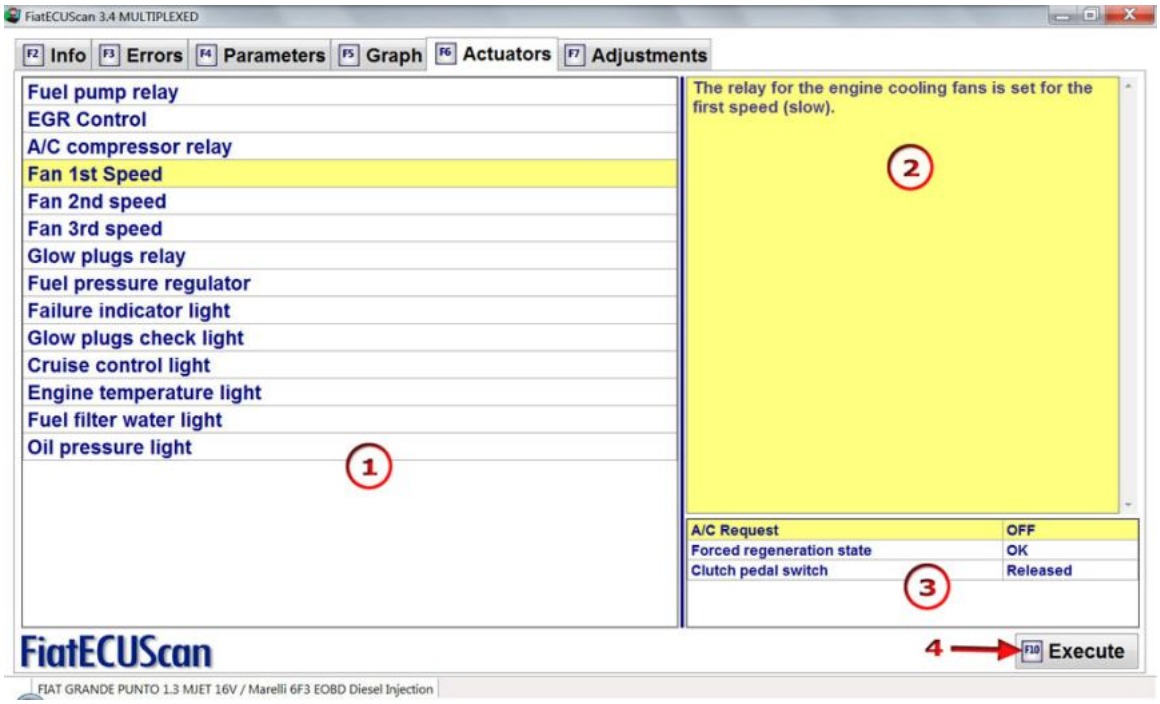
11. You can click anywhere on a graph to see the actual values of the data in that position. The program will draw a vertical line on the place where you clicked and draw the actual data values of each parameter at this point.
You can use the left/right arrow keys on your keyboard to move this vertical line. You can also press CTRL+left/right for larger steps.

12. The program can draw 1, 2, 3 or 4 graphs. These checkboxes control where you want to draw each parameter.

13. This panel shows the tag messages. You can edit those messages here.
The program shows or hides this panel when you press T on your keyboard.

7. Actuators screen

On this screen you can run various actuator tests.



1. On this section of the screen are listed all available actuator tests for the module. Here you can select which test you want to execute.
You can go up/down the list using up/down arrow keys on your keyboard or using the mouse.

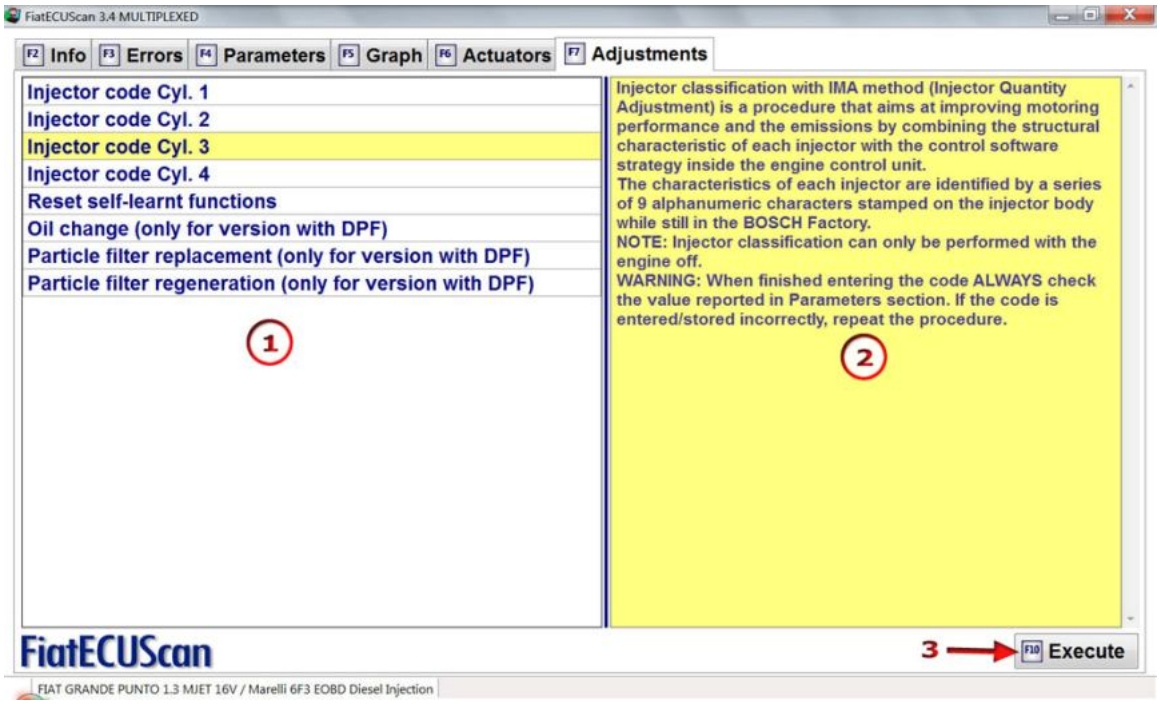
2. This is a short description of the test. Sometimes this description contains explanation how to perform the test.
Please note that this information is ALWAYS IN ENGLISH!!!
You can copy this text and paste it into some translation software (like Google Translator) to see it translated in your language.

3. On this section of the screen you can see live data from the control module. The parameters listed here must be selected on Parameters screen.

4. Click this button (or press F10 on your keyboard) to execute selected test. The program will show "Please wait" message during the execution of the test.
For many tests it is possible to cancel the execution before the test has finished. For these test the program will show message "Press ESC to cancel".
After execution has completed the program will provide feedback for the results. You may get a "Test Failed" message with additional description of the reason.
Please note that some tests are simply not supported on all versions of a control module, others require specific conditions to execute properly (most of them require the engine to be turned off).

8. Adjustments screen

On this screen you can run various calibration or configuration routines.

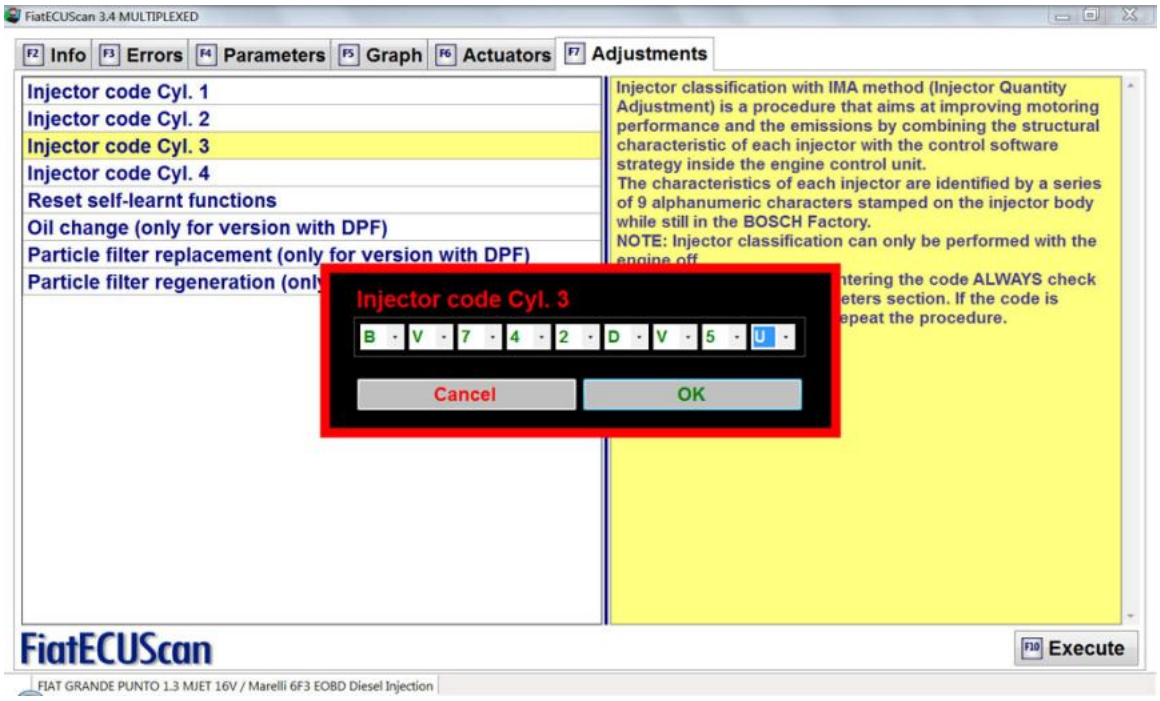


1. On this section of the screen are listed all available calibration/configuration procedures for the module. Here you can select which procedure you want to execute.
You can go up/down the list using up/down arrow keys on your keyboard or using the mouse.

2. This is a short description of the procedure. In most cases this description contains explanation how to perform the procedure. There are many procedures which require specific sequence in order to be performed properly. The description contains this information.
Please note that this information is ALWAYS IN ENGLISH!!!
You can copy this text and paste it into some translation software (like Google Translator) to see it translated in your language.

3. Click this button (or press F10 on your keyboard) to start executing selected procedure.
The program will show "Please wait" message during the execution of the test.
After execution has completed the program will provide feedback for the results of the procedure. You may also get a "Test Failed" message with additional description of the reason.
Please note that some procedures are simply not supported on all versions of a control module, others require specific conditions to execute properly.

Some procedures require the user to enter some data in order to execute them. The program will show the following data entry form where you can enter this data:



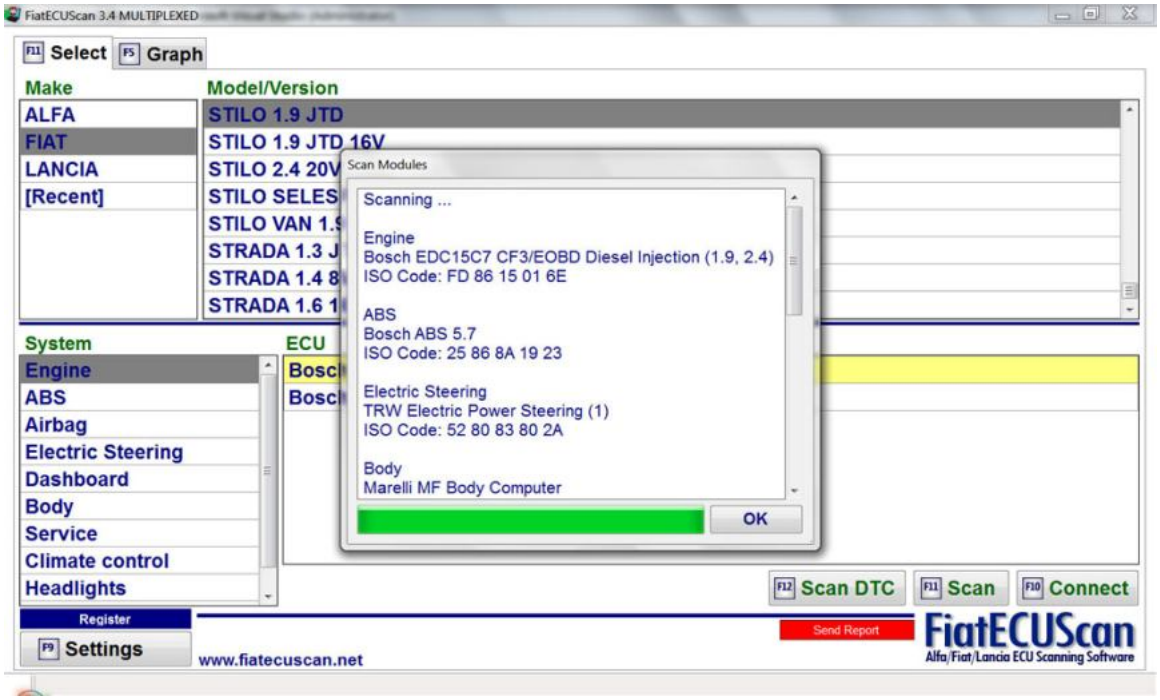
You can click with the mouse on each character/digit and select the value from a drop-down list of possible values.
You can also type the letters/digits from your keyboard. In the example above we simply typed: **bv742dv5u**
After entering the value you can click button OK (or press Enter key on your keyboard) to continue with the procedure. You can also click button Cancel (or press ESC key on your keyboard) to abort the execution.

III. Connecting to your car (examples)

1. Scan function

The SCAN function allows you to scan your car for control modules. Click the "Scan" button (or press F11 on your keyboard) on FiatECUScan main screen to start scanning your vehicle. The program will start scanning your vehicle and display results of the discovered control modules.
Please note that the system will only discover the modules which can be accessed using the connected interface adapter (For example: If the RED interface adapter is connected then the system will only find the airbag control module), however, if you are using the FiatECUScan MULTIPLEXED version with CANtieCAR interface then the system will discover all modules in your vehicle.
Please also note that in for successful scanning you have to make sure that:
- The interface drivers are installed and configured properly
- The interface is configured properly in FiatECUScan settings
- The interface is connected to the USB port
- The interface is connected to the vehicle.
- The correct interface adapter is connected (if required).
- The key of the vehicle is turned ON (position MAR).

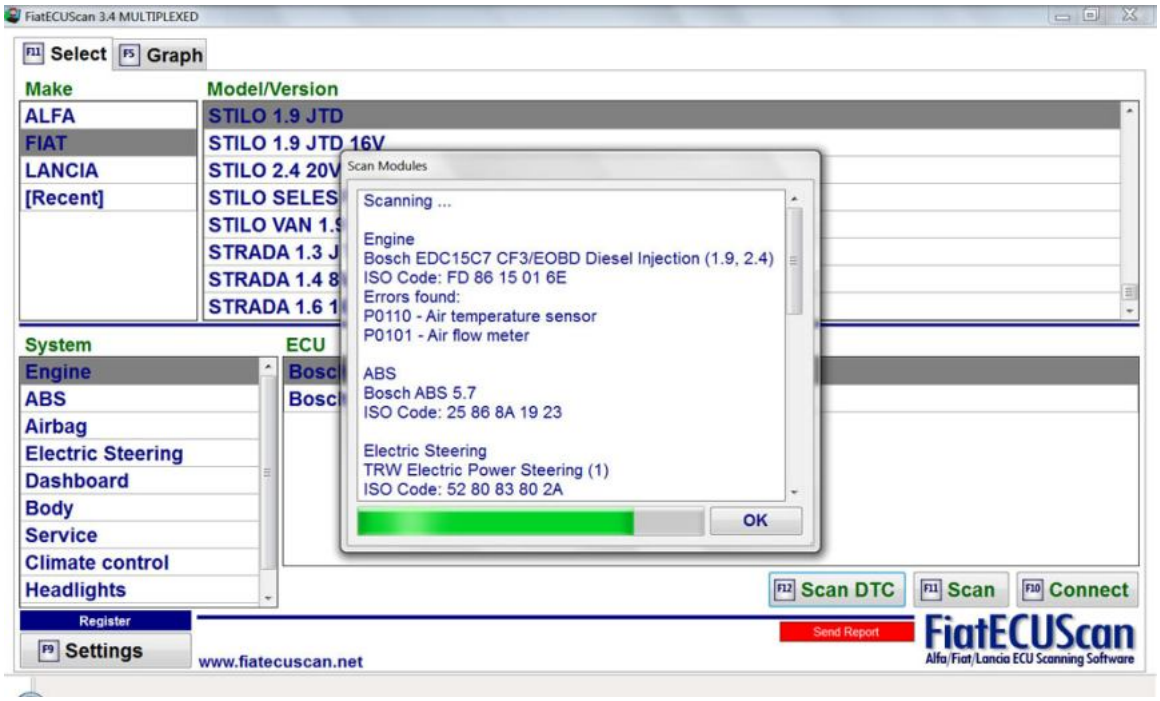
The result contains basic info about each discovered module – type, description, ISO Code. The ISO code is a unique identifier of each control module modification. The result looks like this:



2. Scan DTC function

The SCAN DTC function is similar to the SCAN function but it allows you to scan your car for control modules and check each of the discovered modules for errors. Click the "Scan DTC" button (or press F12 on your keyboard) on FiatECUScan main screen to start scanning your vehicle. The program will start scanning your vehicle and display results of the discovered control modules and error codes.

The result looks like this:

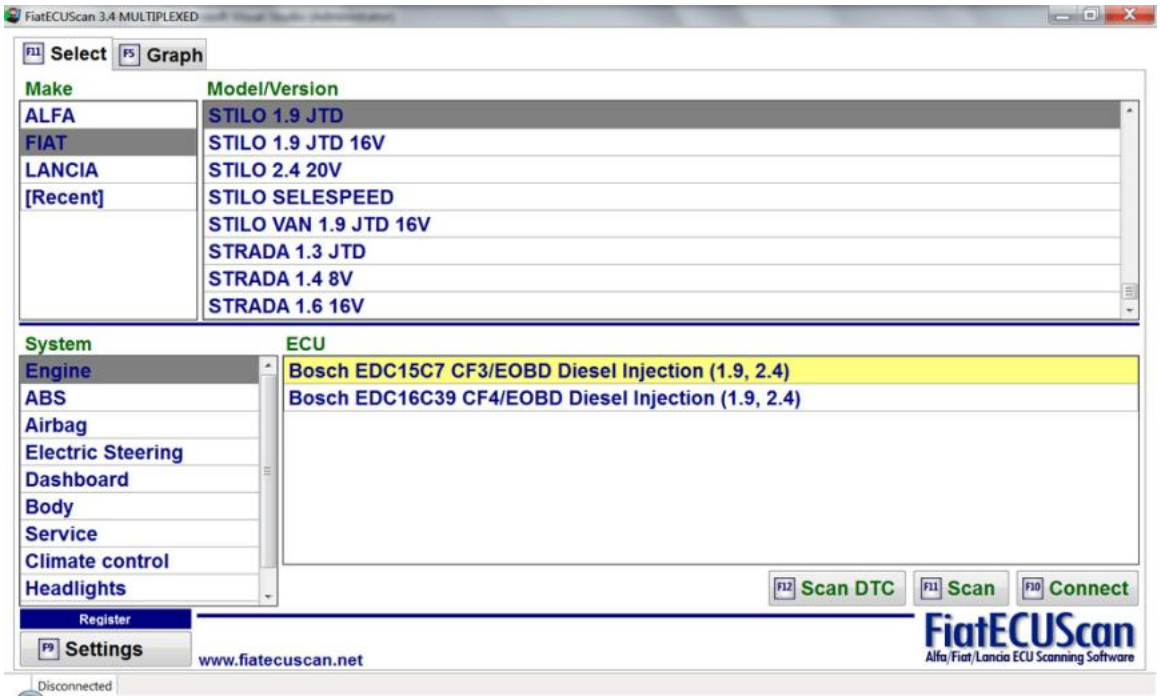


3. Connect to engine control module

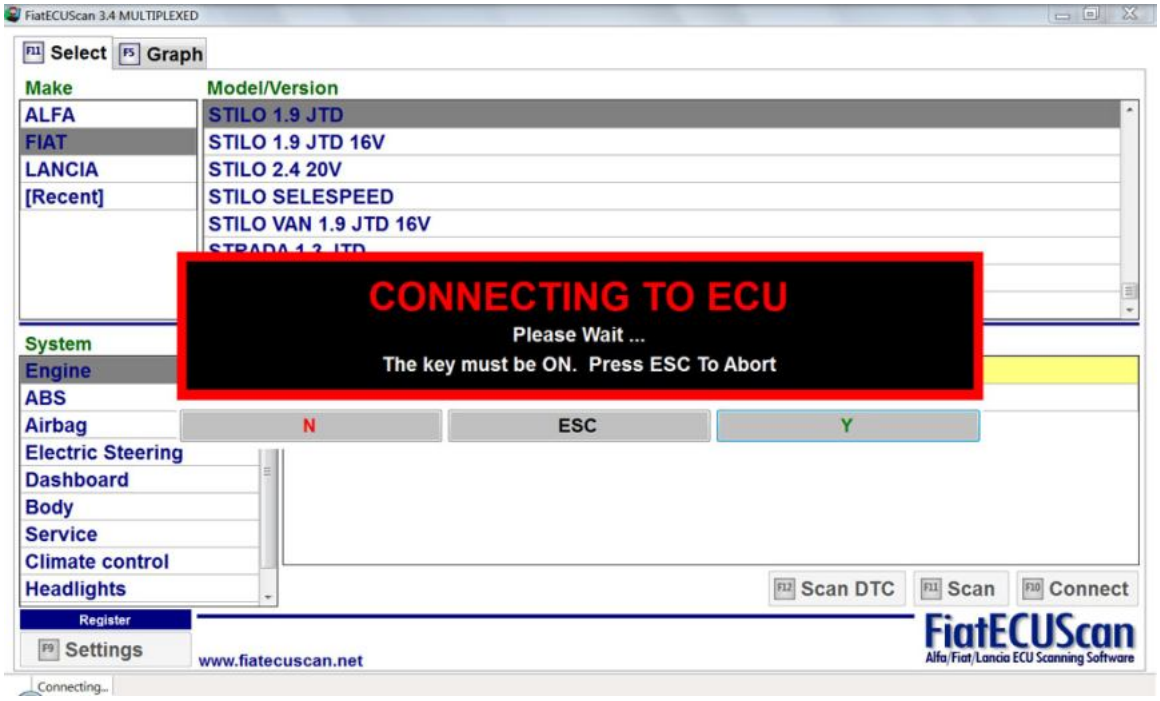
In this example we will connect to the engine control module of Fiat Stilo 1.9 JTD, then check for errors and check some live data.

Step 1: Connect the interface to the computer and to the OBD port of the vehicle.

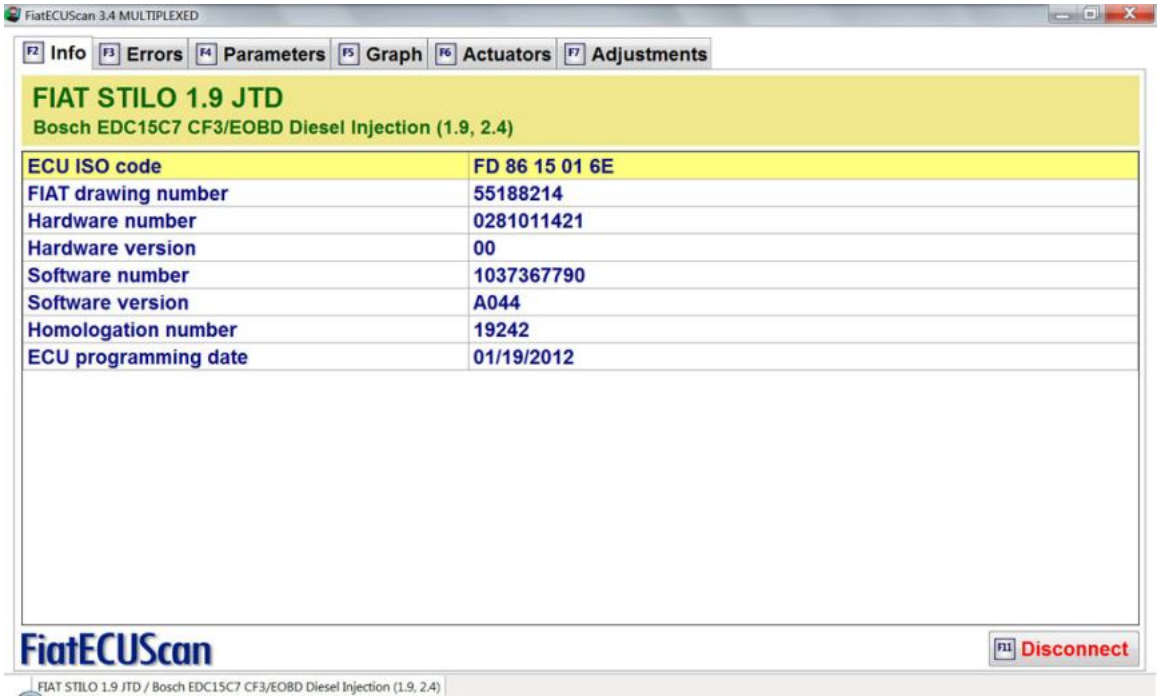
Step 2: Select make, model, version and control module.



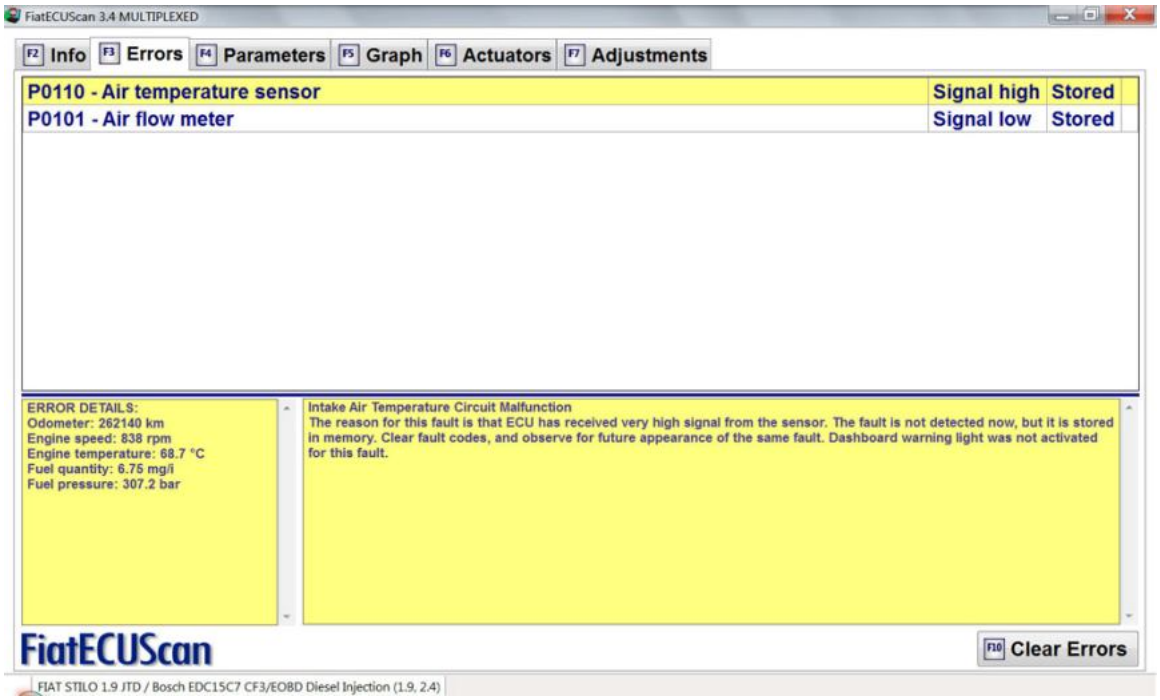
Step 3: Click button "Connect" (or press F10 on your keyboard). FiatECUScan will start connecting to your car.



Step 4: After successful connection FiatECUScan will show the Info screen.

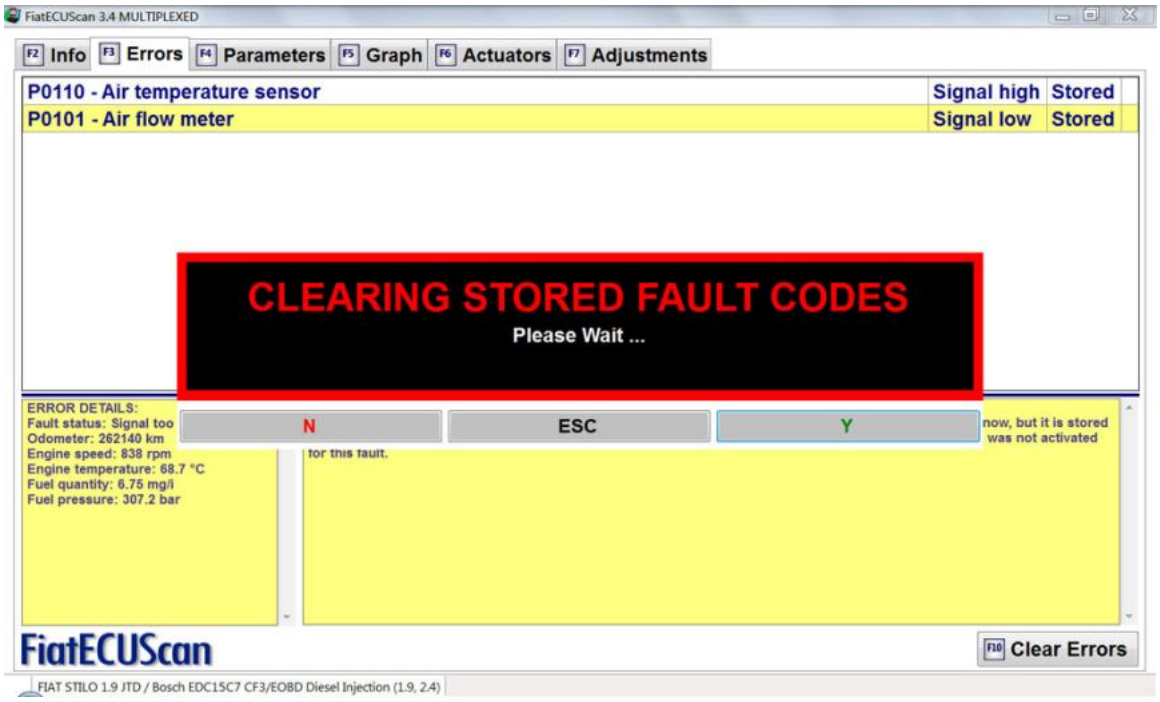


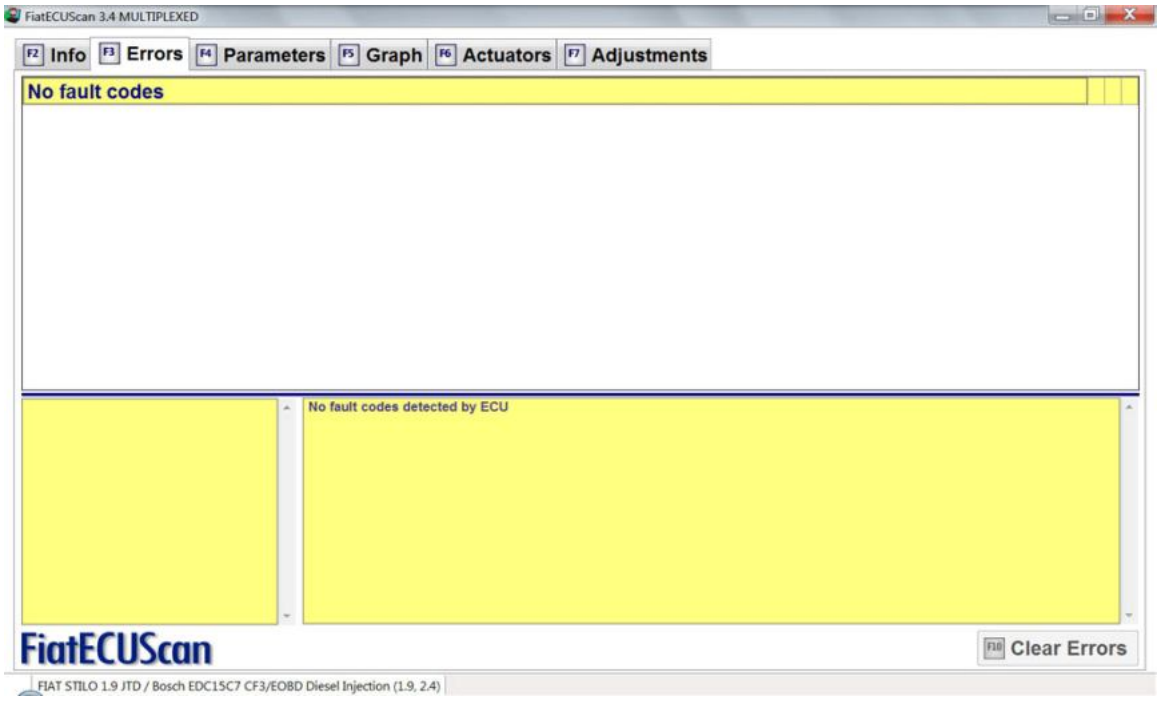
Step 5: Now we can go to the Errors screen and check for stored fault codes.



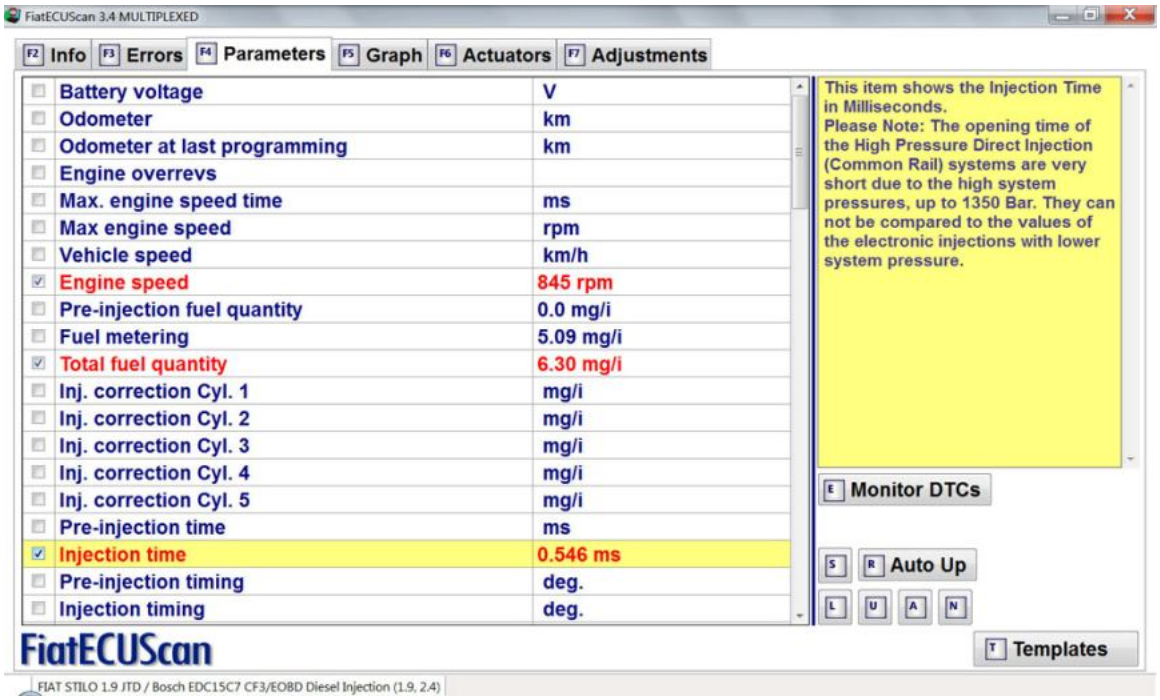
As you can see this control module reports 2 errors. Actually, I intentionally created these 2 errors by unplugging the MAF connector while the engine was working.
In the lower left window you can see details about the conditions when the error code was detected.

Anyway, since we know that we have fixed the reason for the errors (I plugged the connector back), we can clear the errors.
Simply click the "Clear Errors" button (or press F10 on your keyboard) and FiatECUScan will clear those errors.





Step 6: Now we can go to the Parameters screen and check some live data.

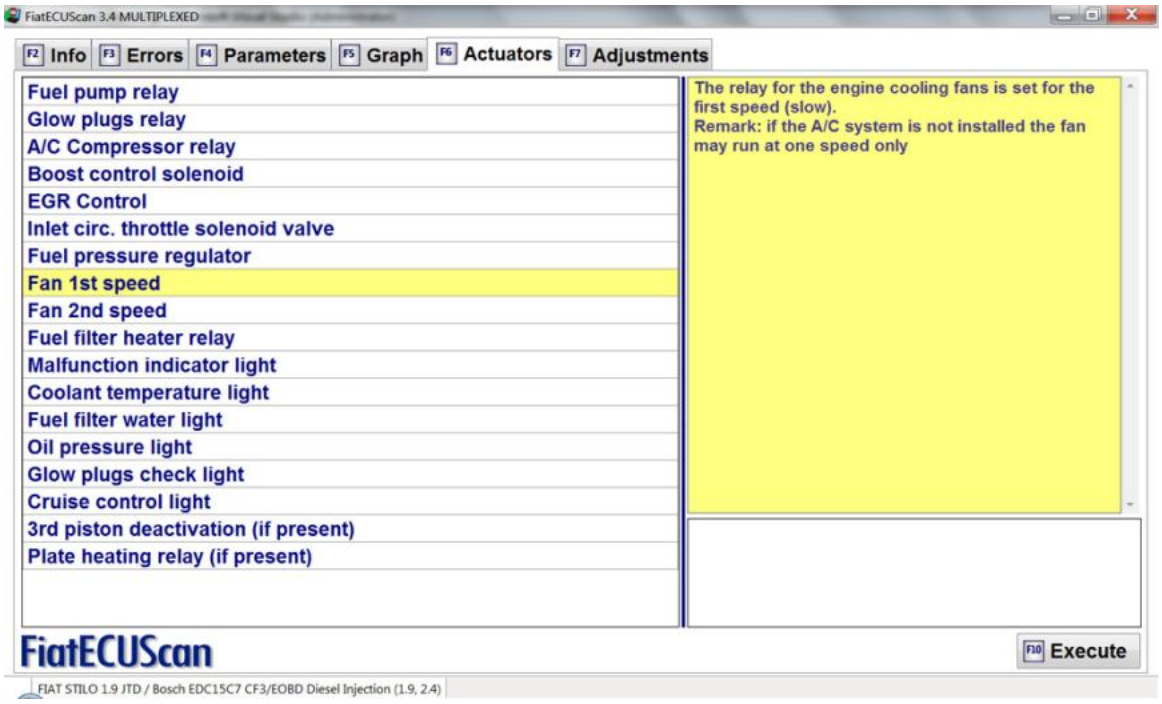


Here we selected 3 parameters – Engine speed, Total fuel quantity and Injection time.
FiatECUScan marks the selected parameters in red and begins to show live data for these 3 parameters.

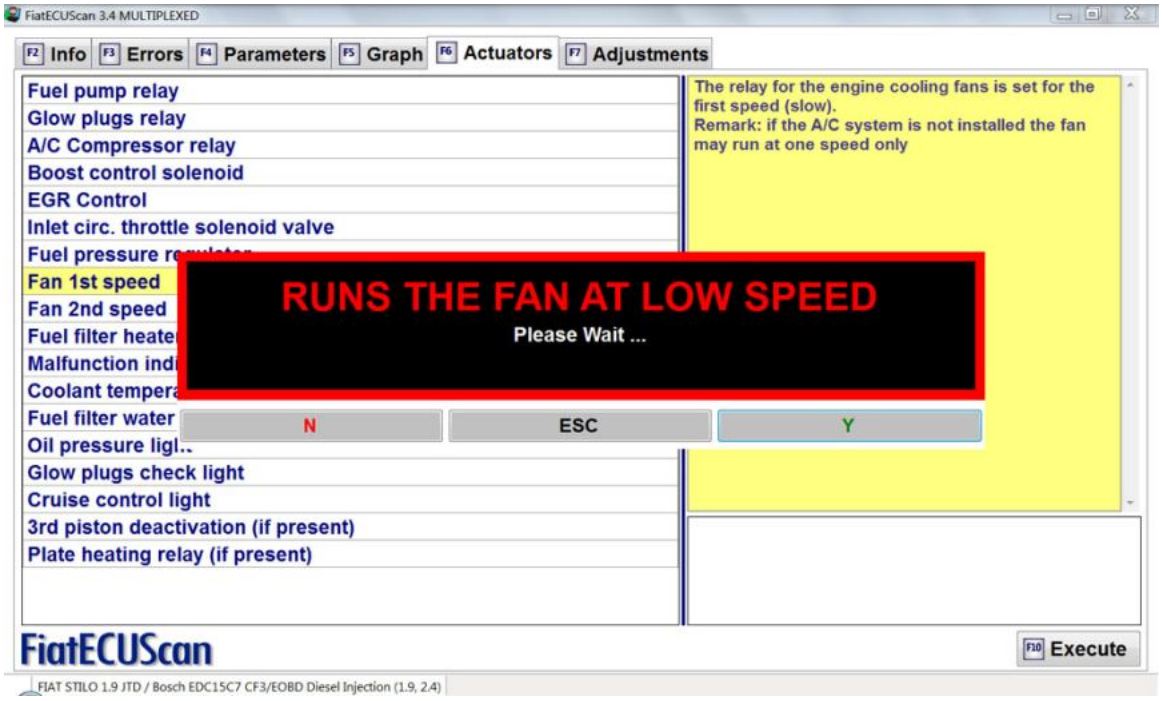
Step 7: Now we can go to the Graph screen and make a CSV recording of the live data.

On this screen we see the parameters which we already selected on the Parameters screen.
The left part of the screen shows live data for our parameters. It also monitors min/max values during the data recording.
You can click the Start/Stop button to create a recording.

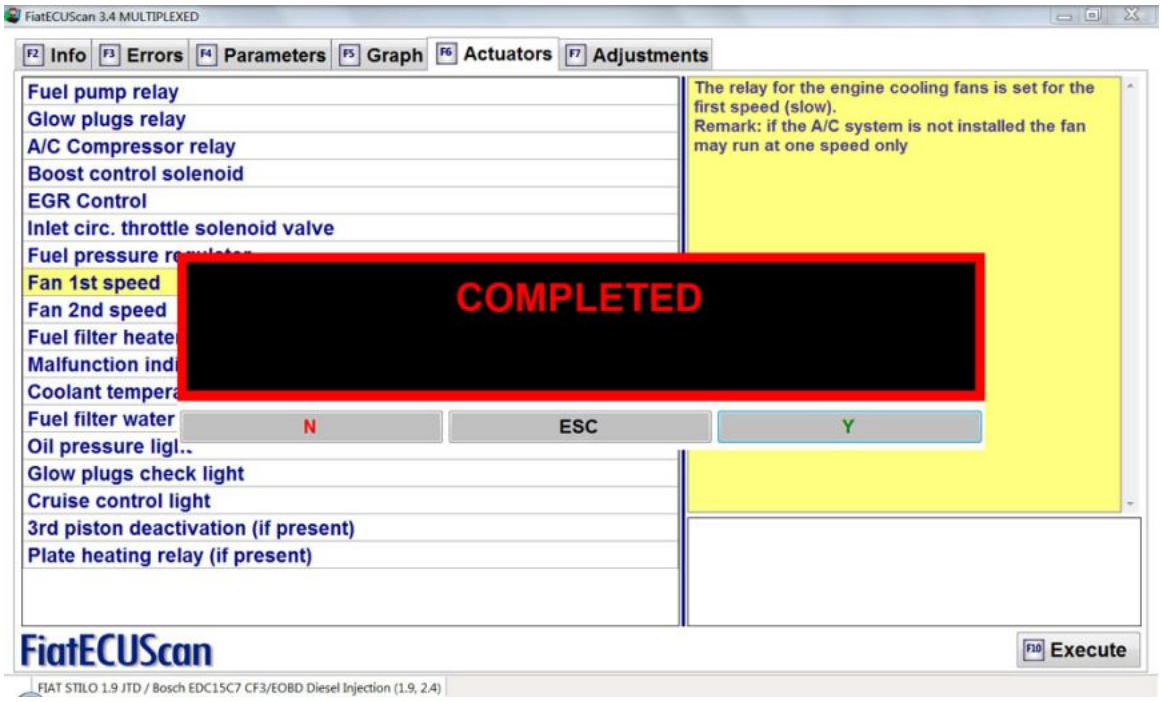
Step 8: Now we can go to the Actuators screen and make some tests.



We see all tests which are available for this control module. We will select "Fan 1st speed" and execute it.



We press F10 and FiatECUScan will start executing this test. The engine cooling fan starts to work at low speed for a few seconds.
When the test has finished FiatECUScan will show message "Completed".



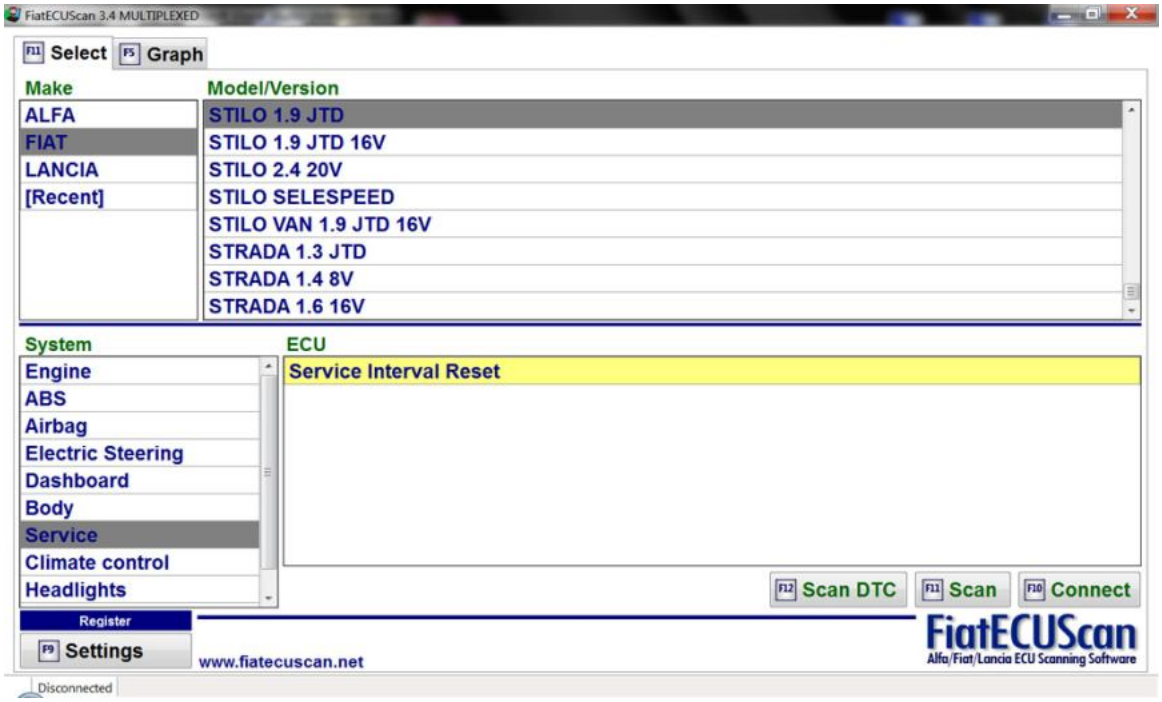
Step 9: Disconnect from engine control module. You can disconnect from the control module and return to FiatECUScan at any time by pressing F11.

4. Service interval reset

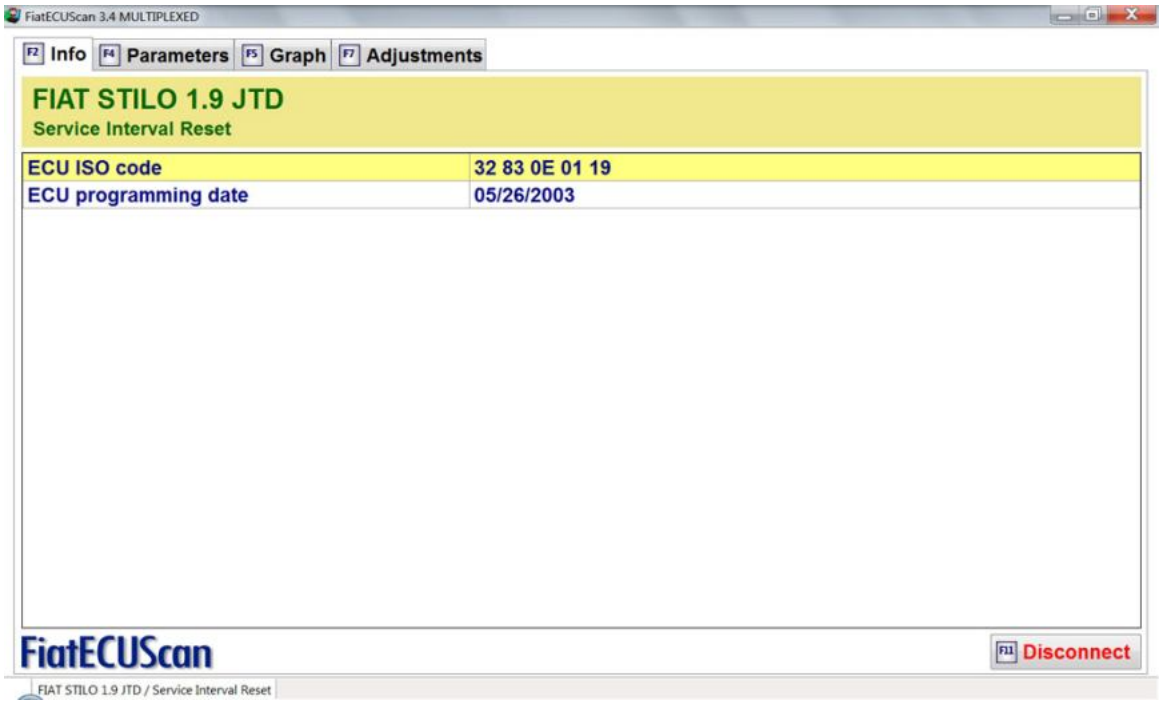
In this example we will connect to the instrument cluster control module of Fiat Stilo and will reset the service distance. This operation is usually required after oil change.

Step 1: Connect the interface to the computer and to the OBD port of the vehicle.

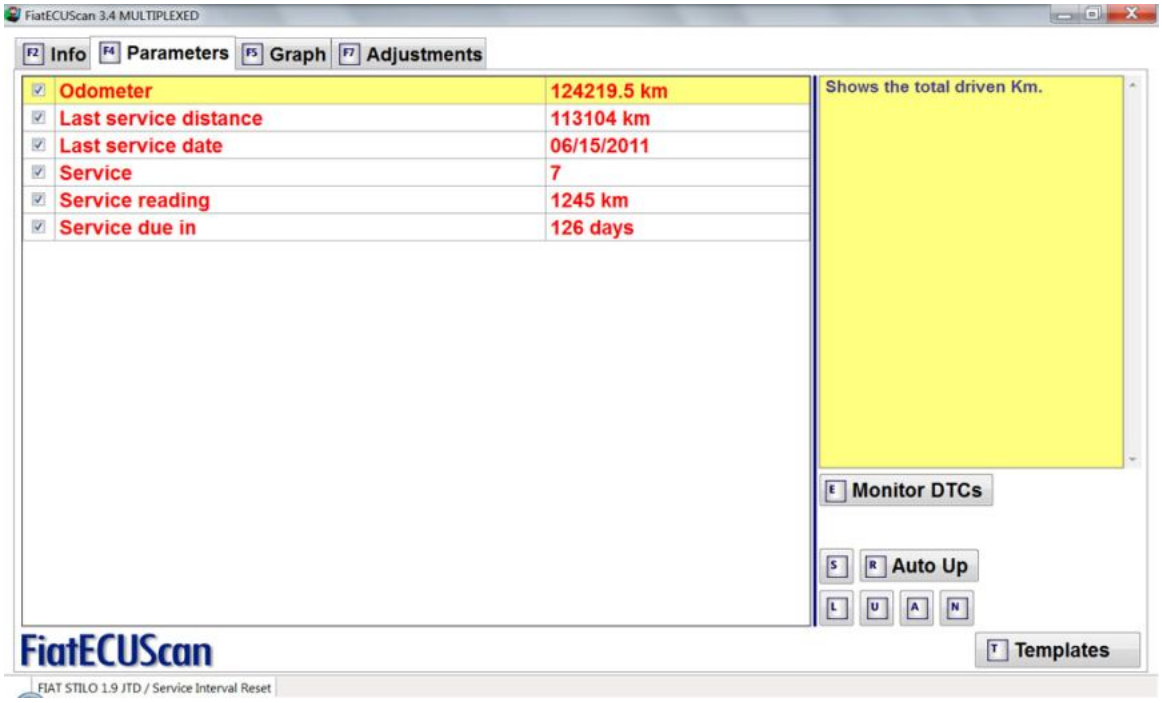
Step 2: Select make, model, version and control module.
Then click button "Connect" (or press F10 on your keyboard). FiatECUScan will start connecting to your car.



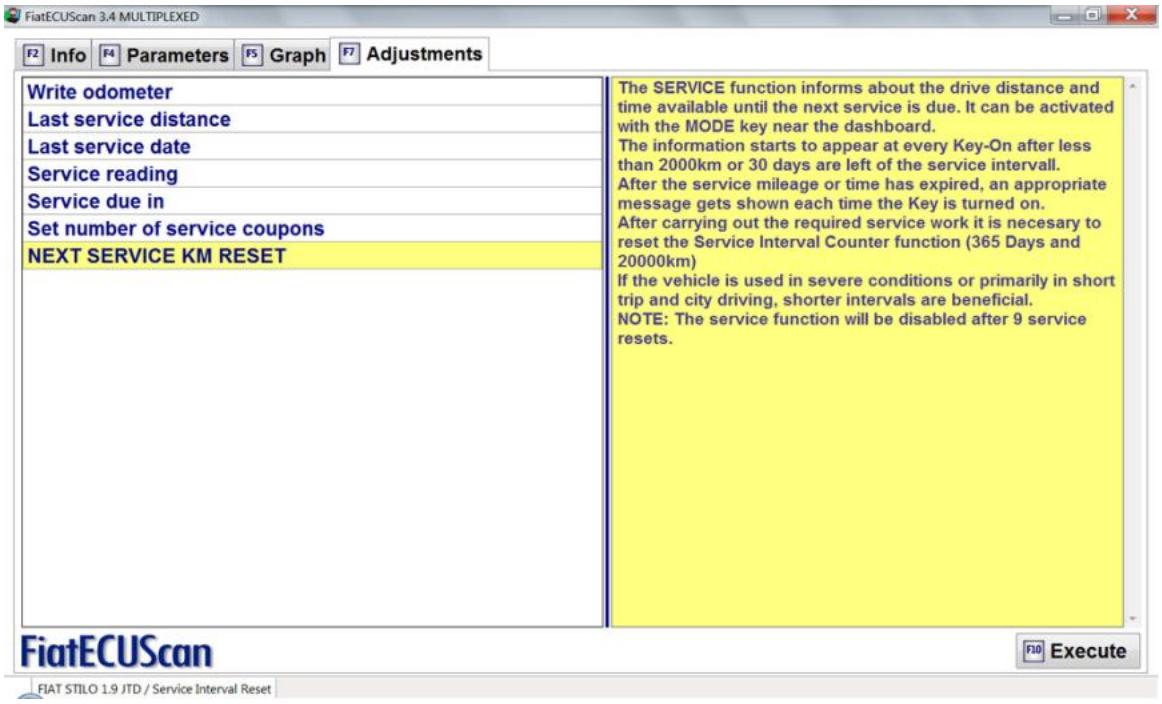
Step 3: After successful connection FiatECUScan will show the Info screen.



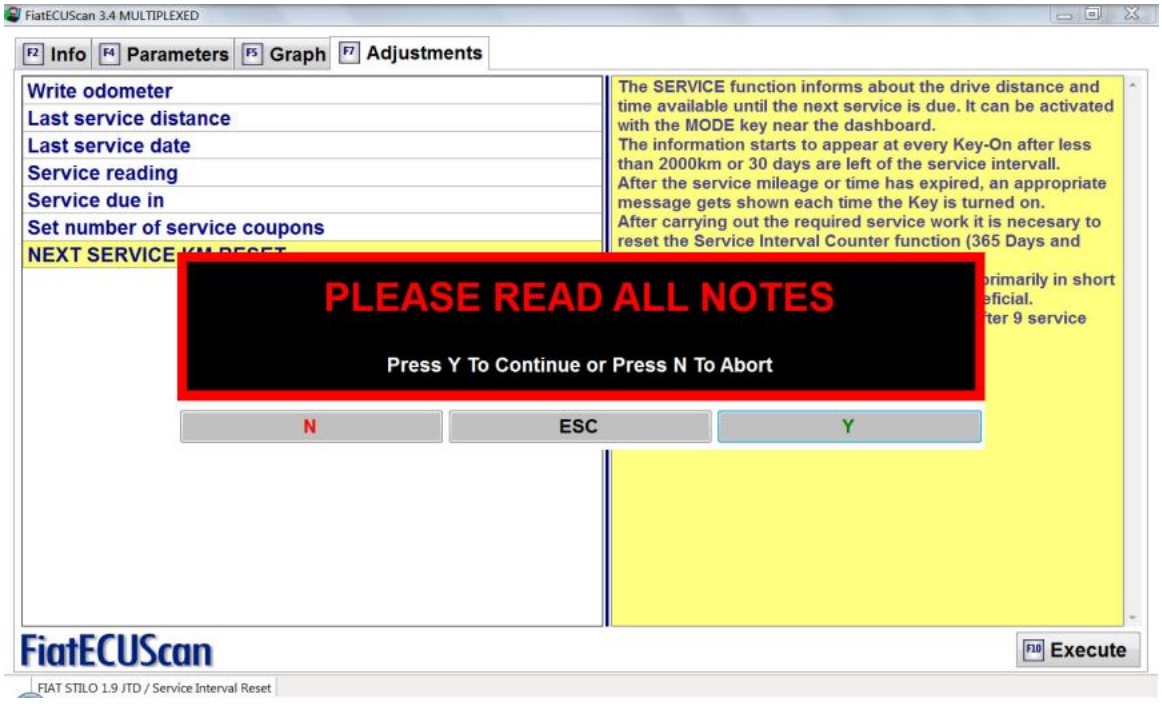
Step 4: Now we can go to the Parameters screen and check current "service distance" and "days to next service".
As we can see on the screenshot below the last "service reset" was performed at 113,104 km and now the odometer is 124,219 km. Also, the last "service reset" was performed on 15/06/2011. We can also see that there are 1245km or 126 days till the car has to go to service.
We can also see that there are 7 "service coupons" left (when this value is 0 the service due message on dashboard will be disabled).



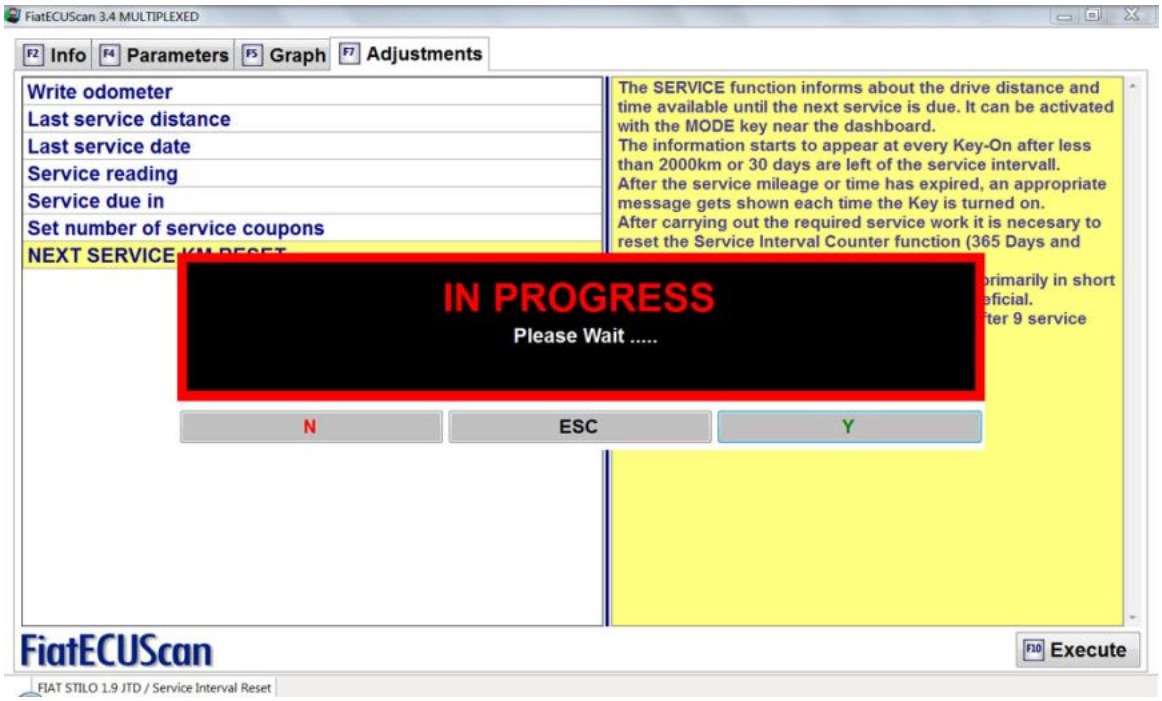
Step 4: Now we can go to the Adjustments screen and execute the service reset procedure.
As you can see on the screen below it is also possible to run other procedures (like directly setting days and distance to next service), but the "service reset" procedure is the recommended method. Also, the other procedures are not guaranteed to work on every car.

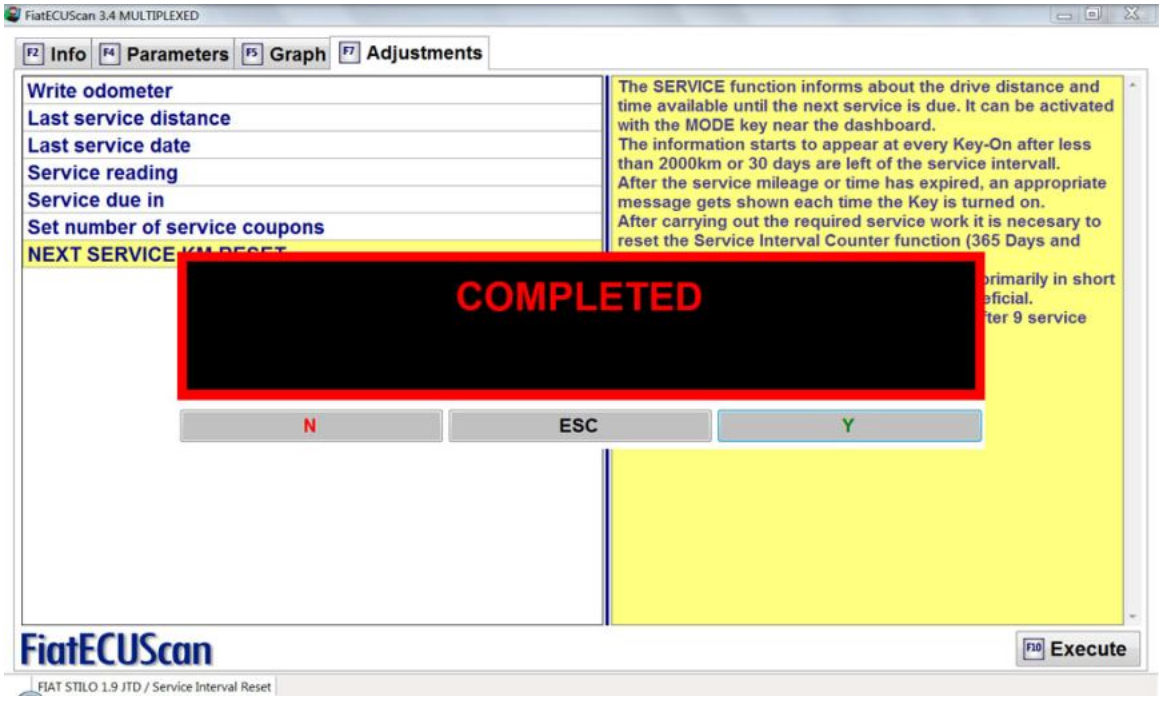


Step 5: Now we select "NEXT SERVICE KM RESER" and press F10. Then the system will ask us to confirm that we have read all notes.

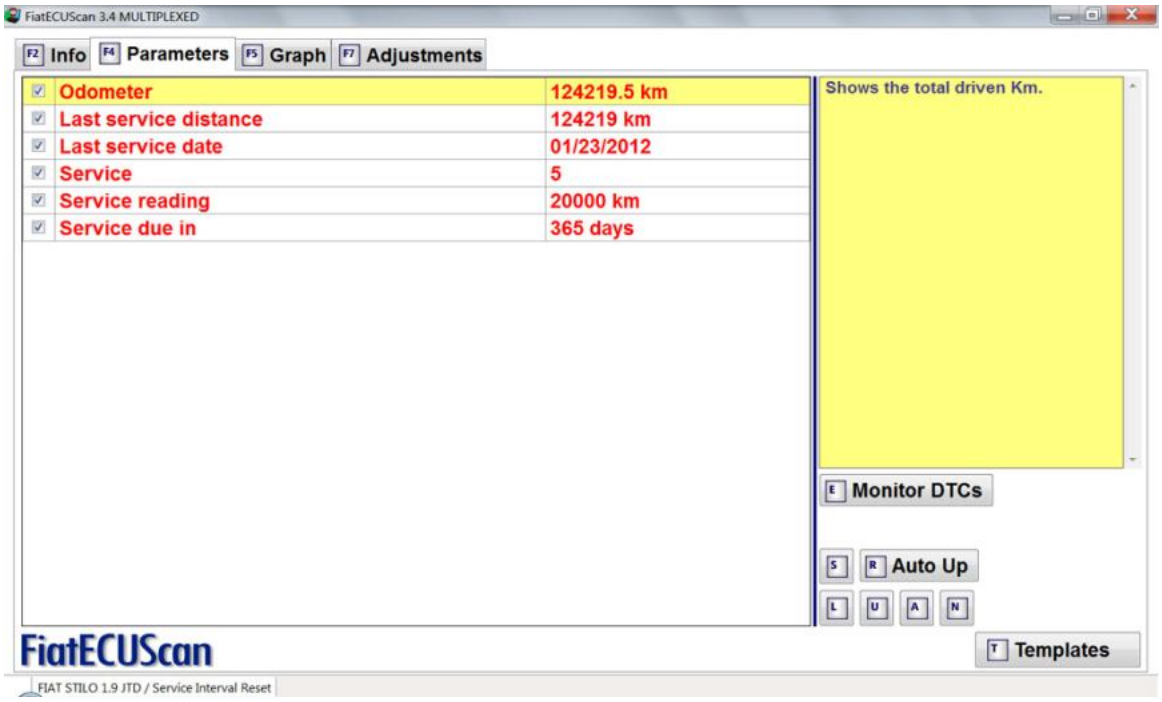


Step 6: The system will start executing the procedure and will display the results after that.





Step 7: Now we can go to parameters and check the updated values…



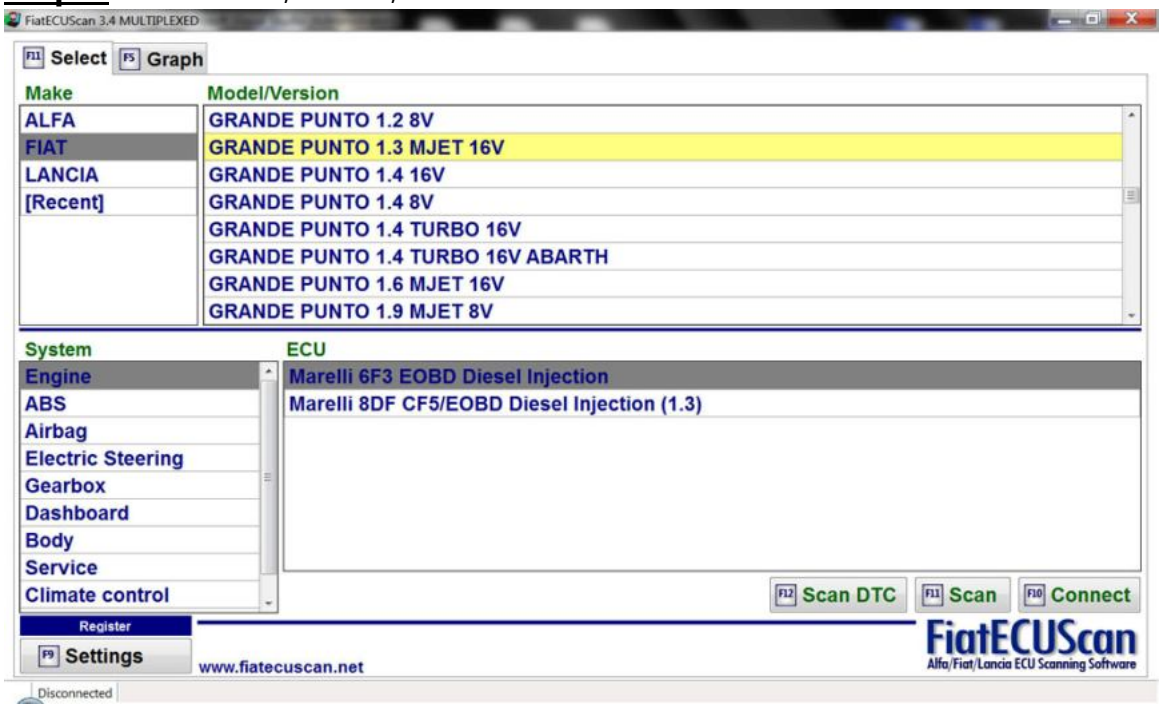
Step 8: Disconnect from the control module. You can disconnect from the control module and return to FiatECUScan main screen by pressing F11.

Please note that for vehicles equipped with DPF you also need to reset the Oil Change indicator in engine control module. You have to connect to the engine control module, then go to Adjustments and execute "Oil Change" procedure.

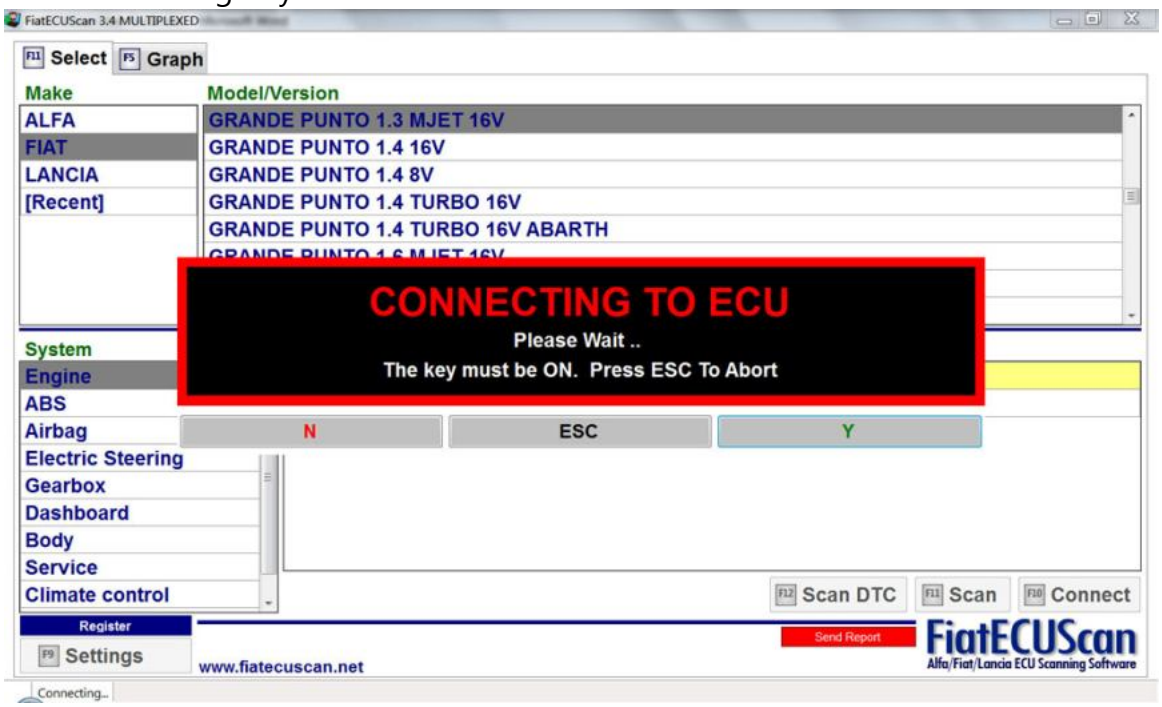
5. Connect to engine and change injector IMA codes

In this example we will connect to the engine control module of Fiat Grande Punto 1.3 Multijet and will change the IMA code of an injector.

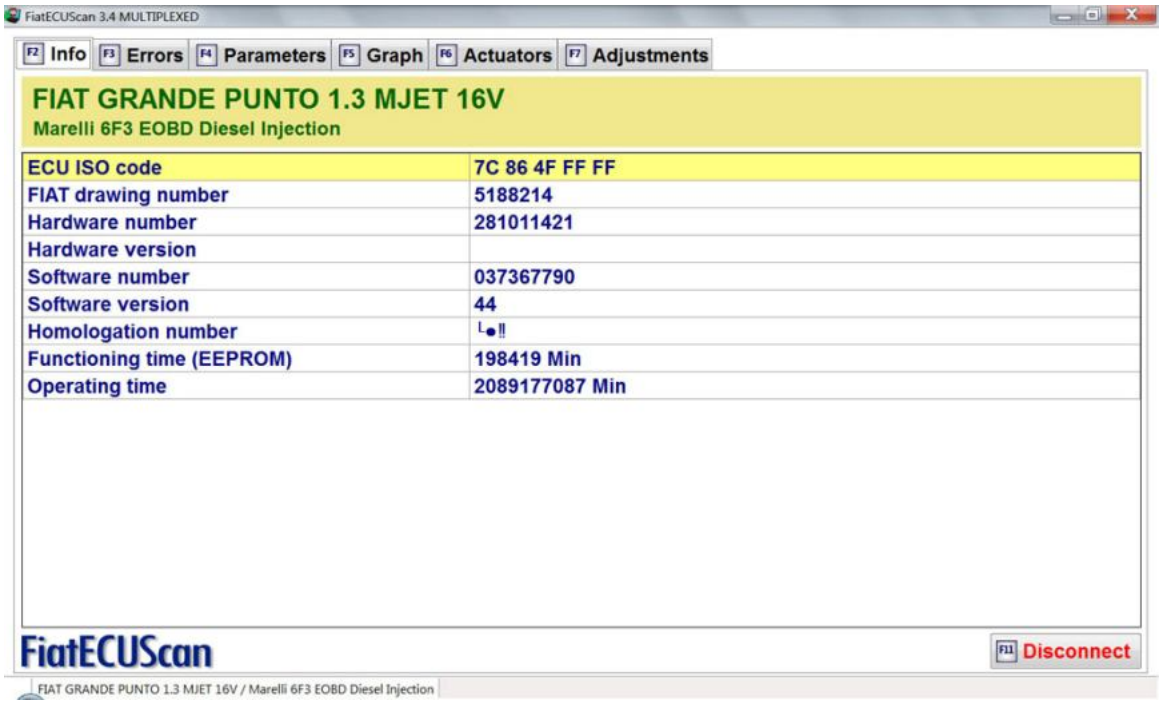
Step 1: Connect the interface to the computer and to the OBD port of the vehicle.
Step 2: Select make, model, version and control module.



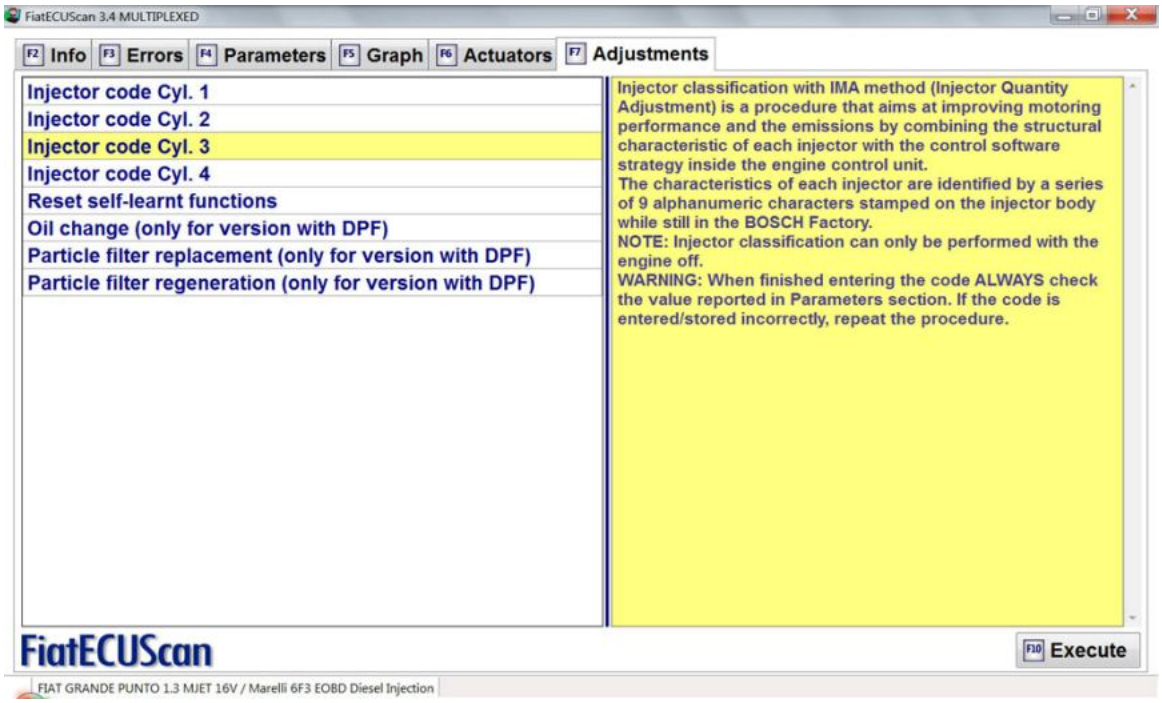
Step 3: Click button "Connect" (or press F10 on your keyboard). FiatECUScan will start connecting to your car.



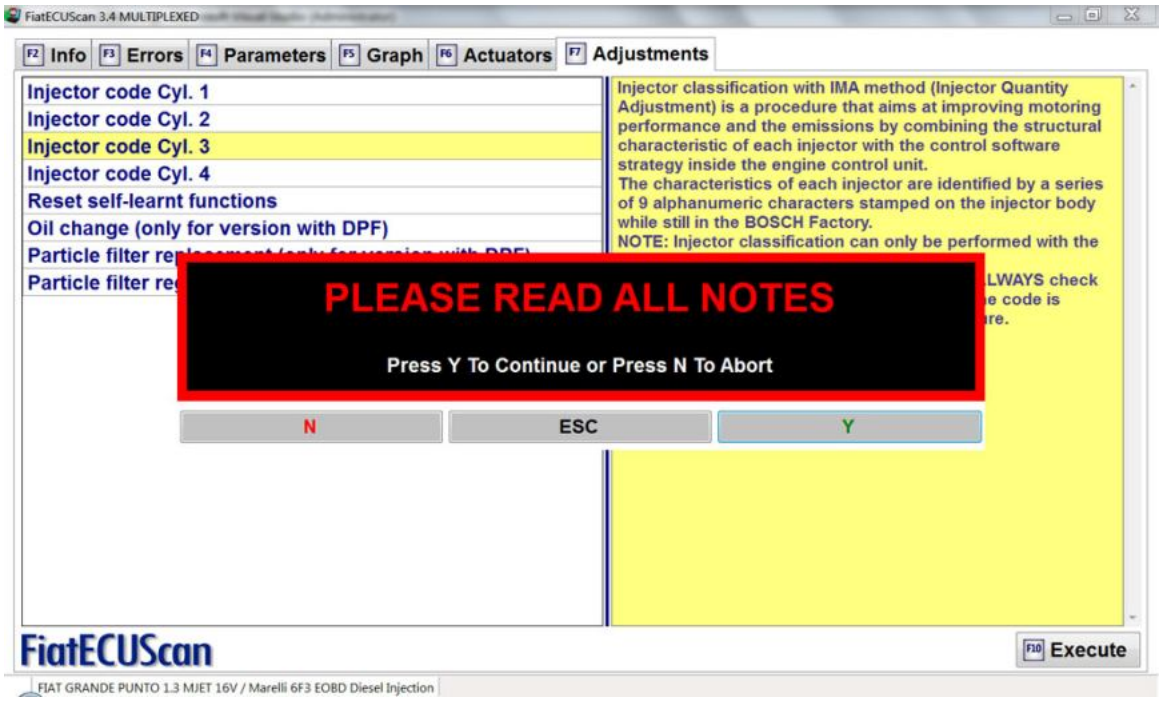
Step 4: After successful connection FiatECUScan will show the Info screen.



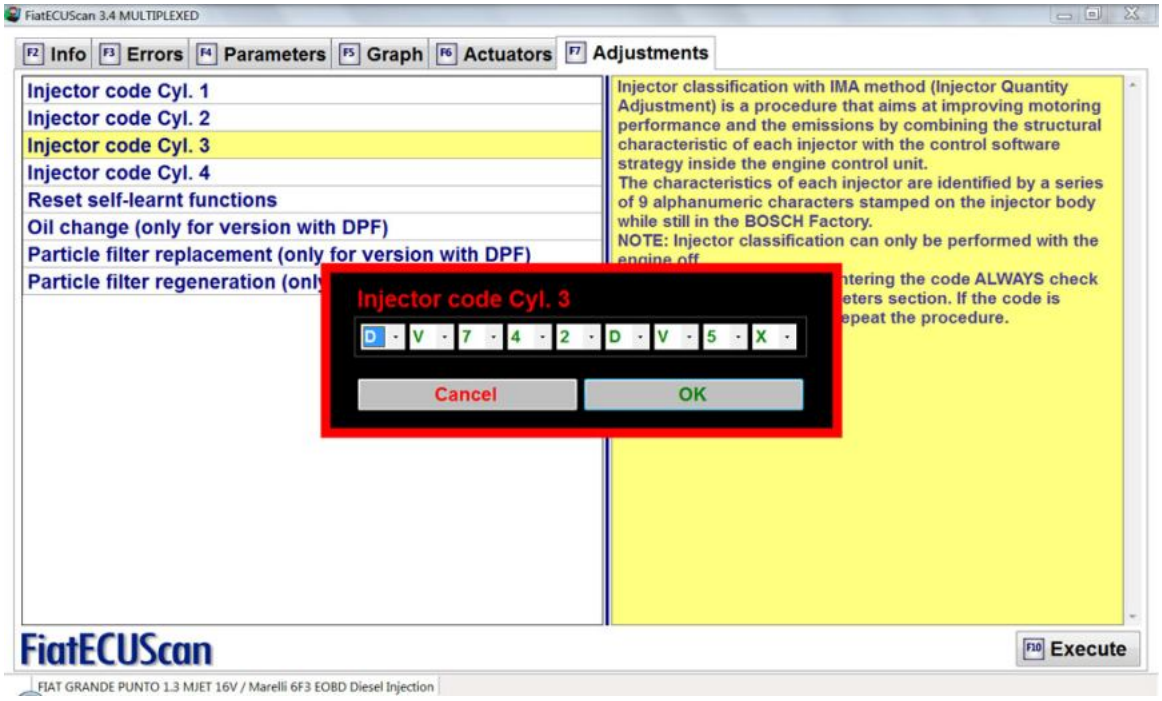
Step 5: Now we go to the Adjustments screen by pressing F7.



Step 6: Now we select "Injector code Cyl. 3" and press F10. Then the system will ask us to confirm that we have read all notes.

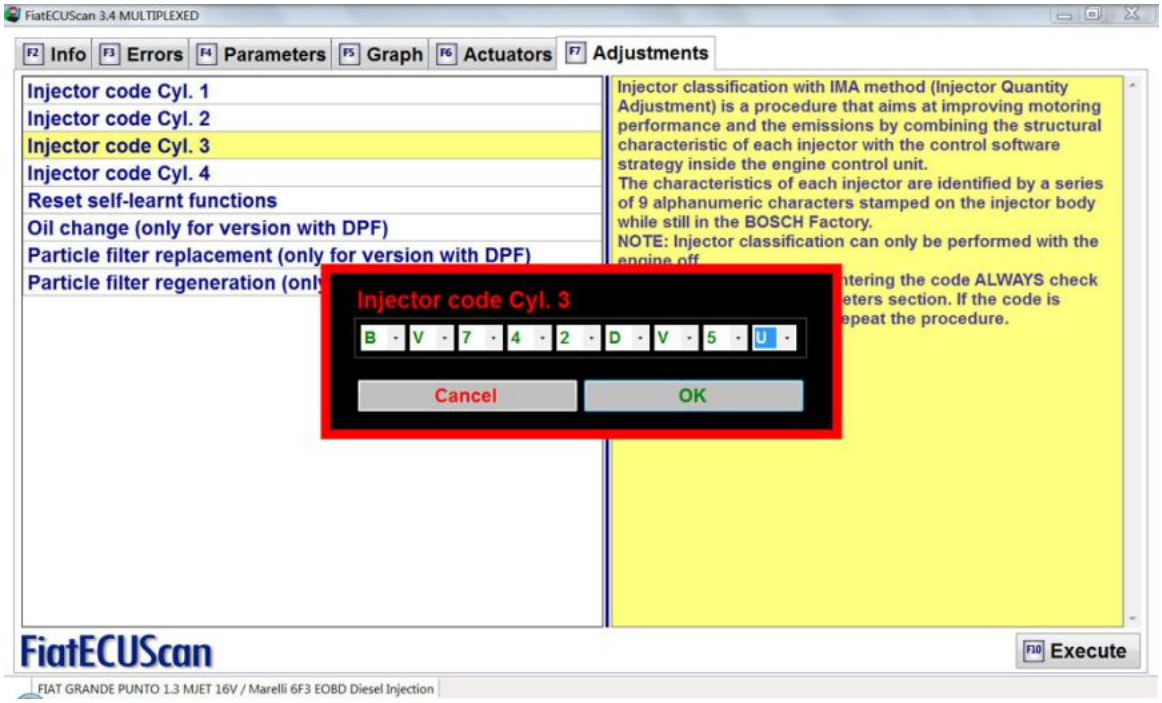


Step 7: We confirm that we have read the notes by pressing Y. Then the system will show a data entry window with current IMA code (obtained from the engine control module).

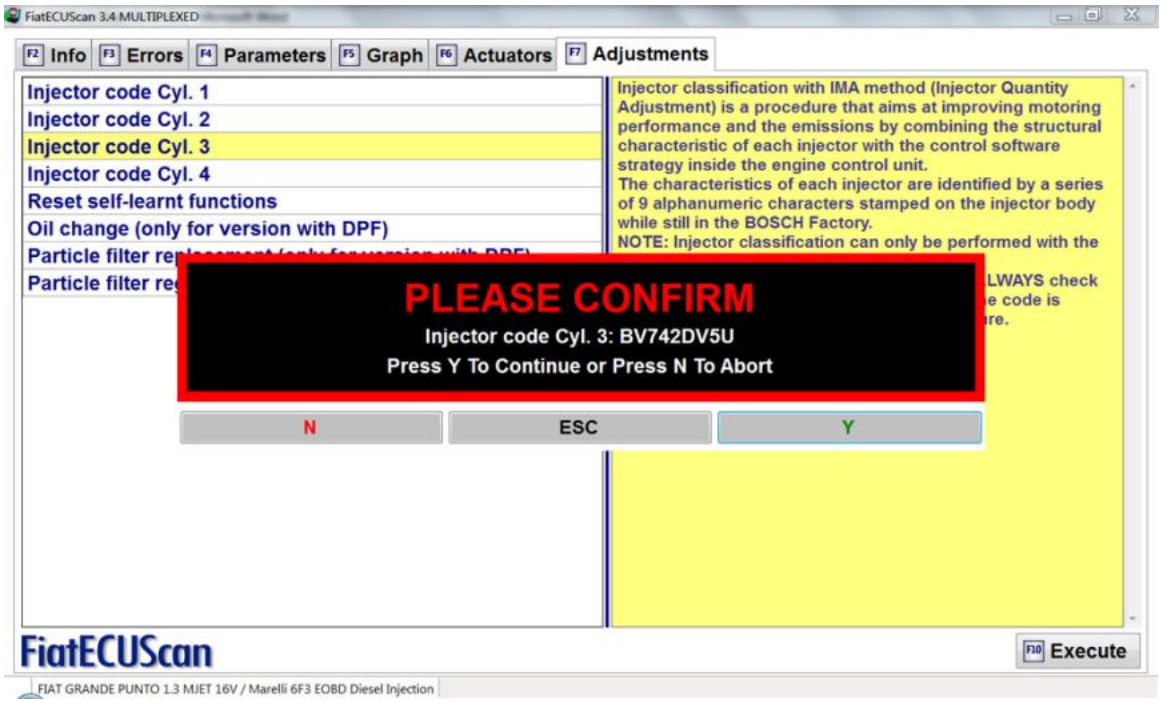


Step 8: Now we can enter the new injector code. We simply type **bv742dv5u** from the keyboard (or we can use the mouse and change each character).

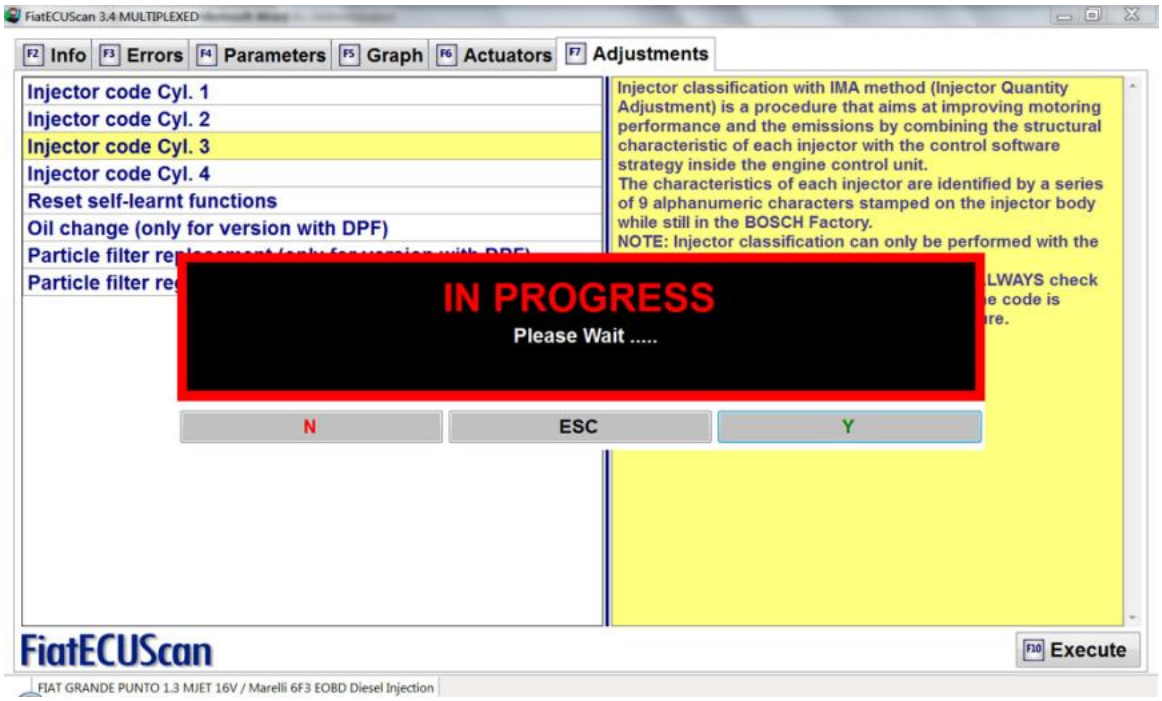
Then we press "Enter" key to go to next step (or we click on the OK button).
We can also press button Cancel and abort the procedure.

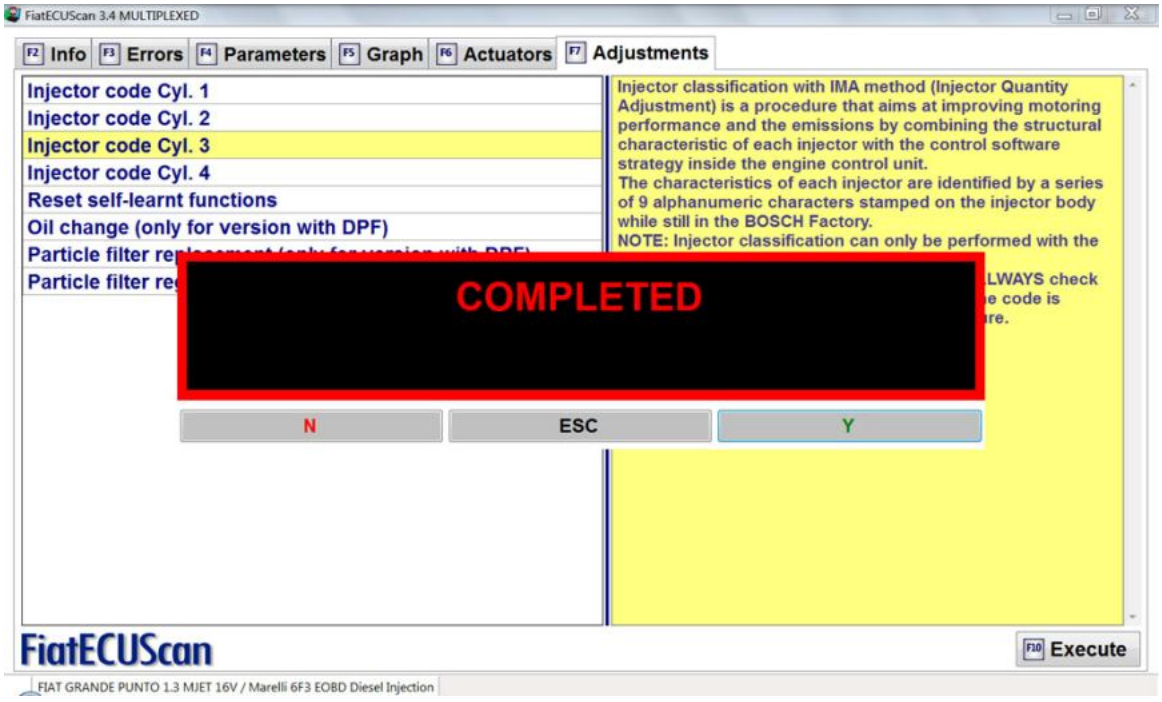


Step 8: Now the system will ask you to confirm that the data you entered is correct.
You can press Y to go to next step and write the new code in the engine control module.
You can also press N to abort the procedure.



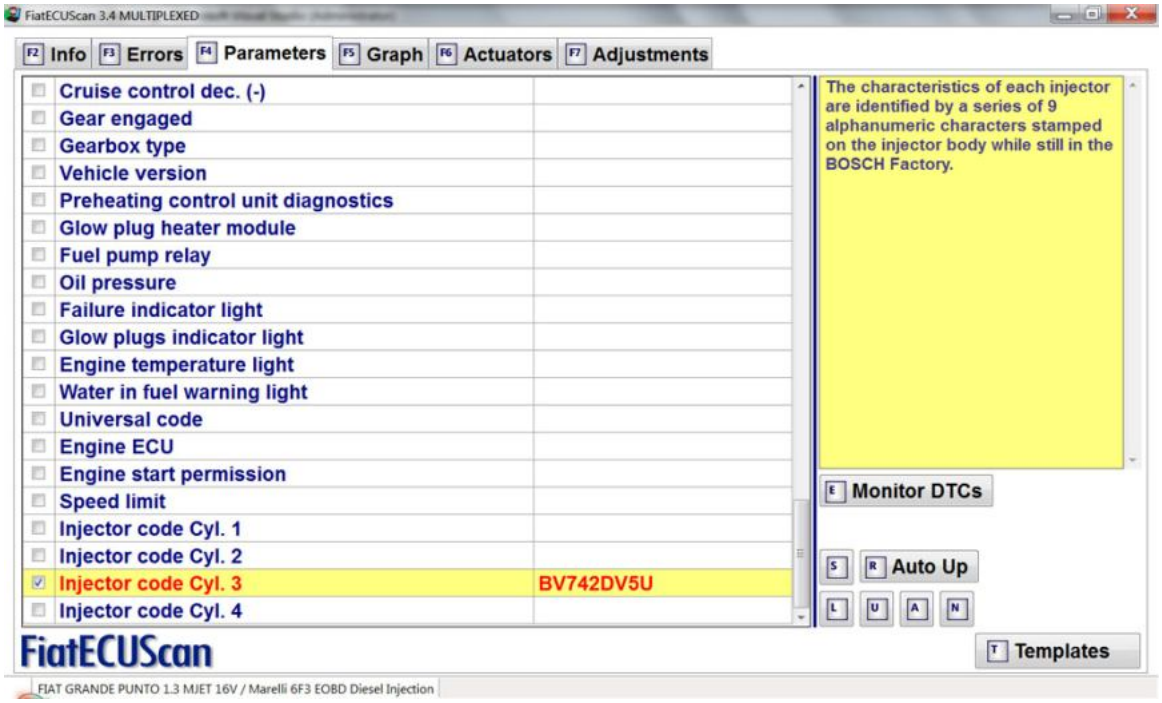
After you press Y the system will start writing the new code to the engine control module.





The procedure may fail here if the new code is not correct.

Step 9: Now you can go to parameters and check the value of "Injector code Cyl. 3".



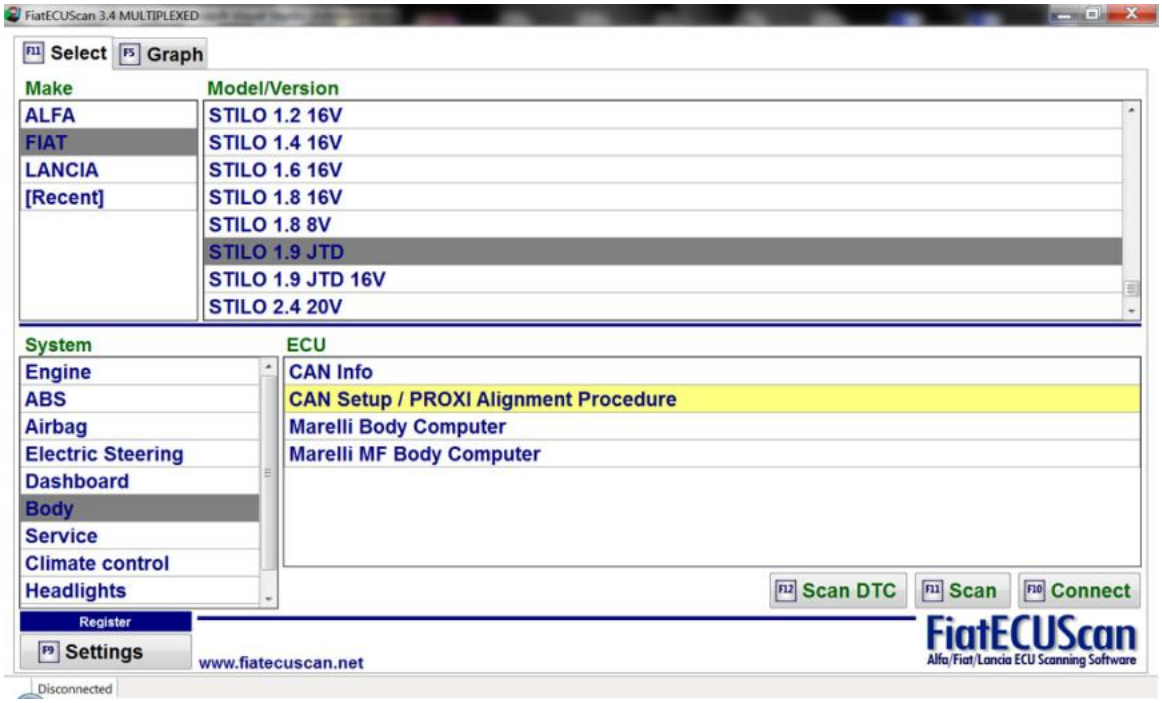
Step 10: Disconnect from engine control module. You can disconnect from the control module and return to FiatECUScan main screen by pressing F11.

6. Connect to PROXI Alignment and activate Cruise Control light on Fiat Stilo

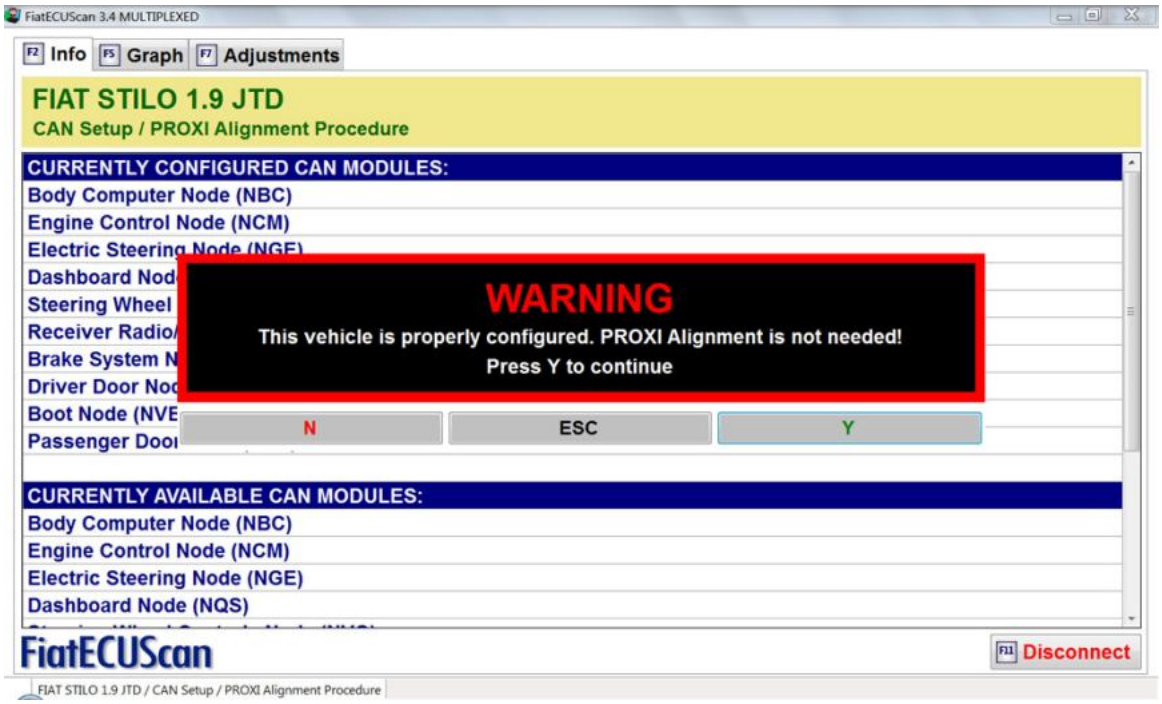
In this example we will connect to Fiat Stilo and use the PROXI Alignment procedure settings to enable Cruise control light on dashboard.

Step 1: Connect the interface to the computer and to the OBD port of the vehicle.

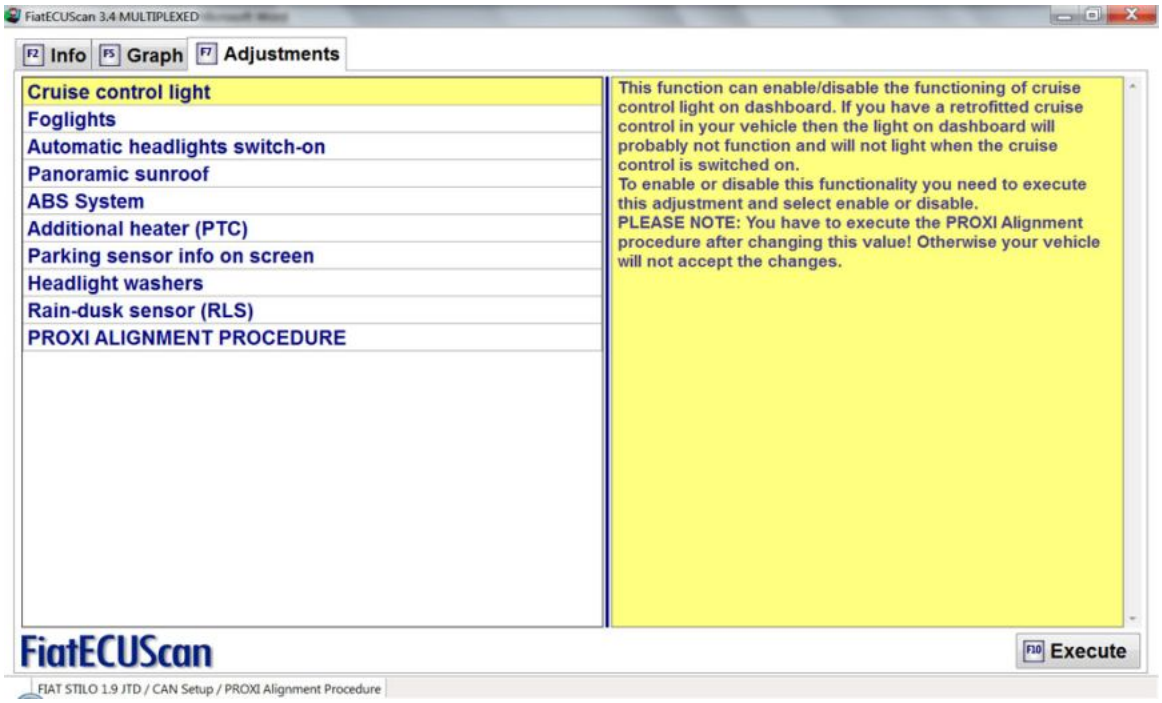
Step 2: Select make, model, version and control module.



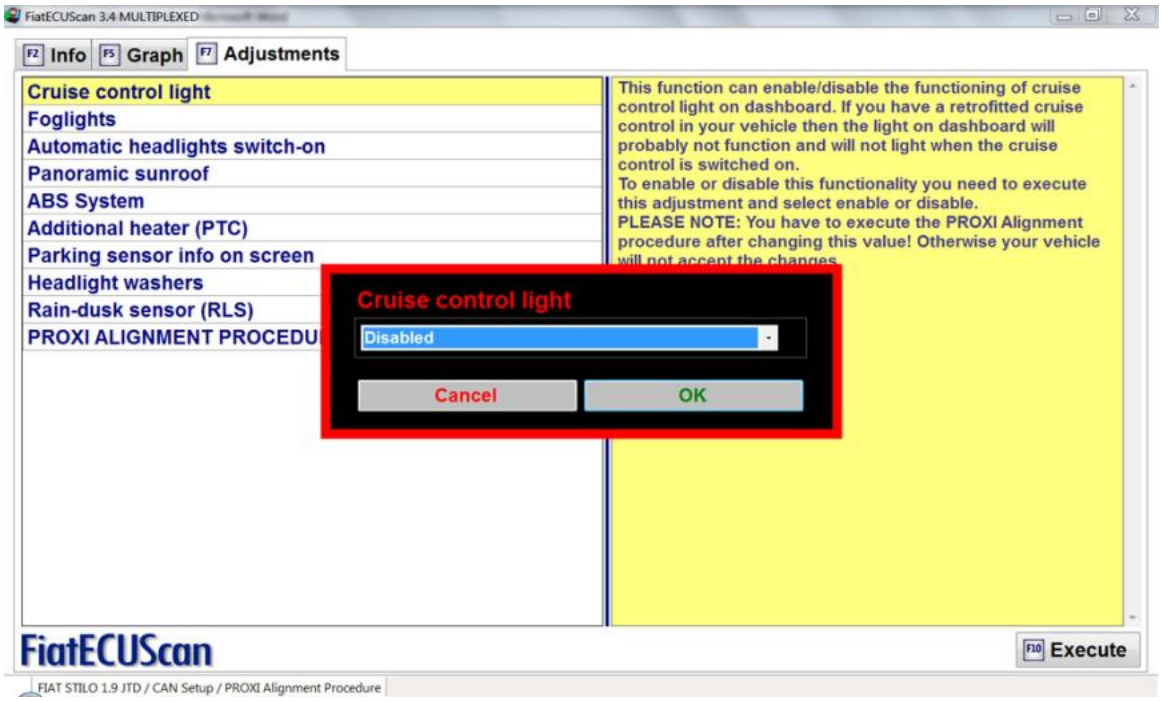
Step 3: Click button "Connect" (or press F10 on your keyboard). FiatECUScan will start connecting to your car.
After successful connection FiatECUScan will show the Info screen.
In this example the car is configured properly and doesn't need to be aligned. So, the system will warn us that PROXI Alignment is not needed.
We can just press Y and continue.



Step 4: Press F7 to go to the Adjustments screen.

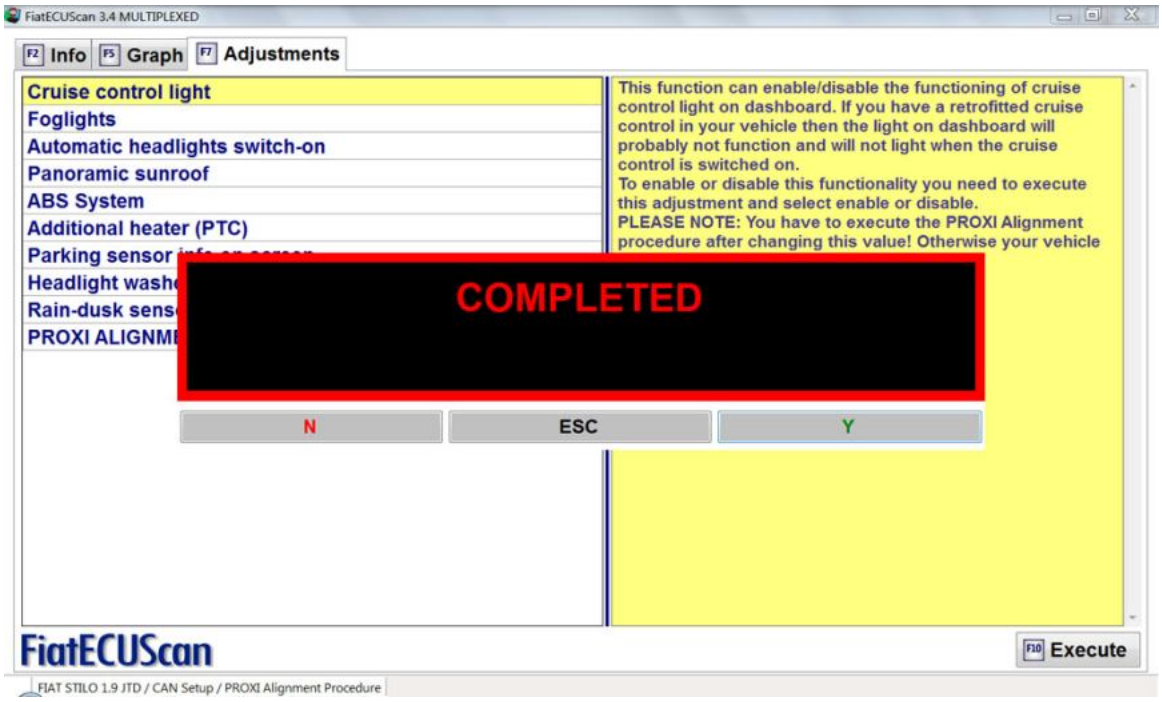


Step 5: Select "Cruise control light" and press F10 to execute this adjustment. The system will show current value of the setting.

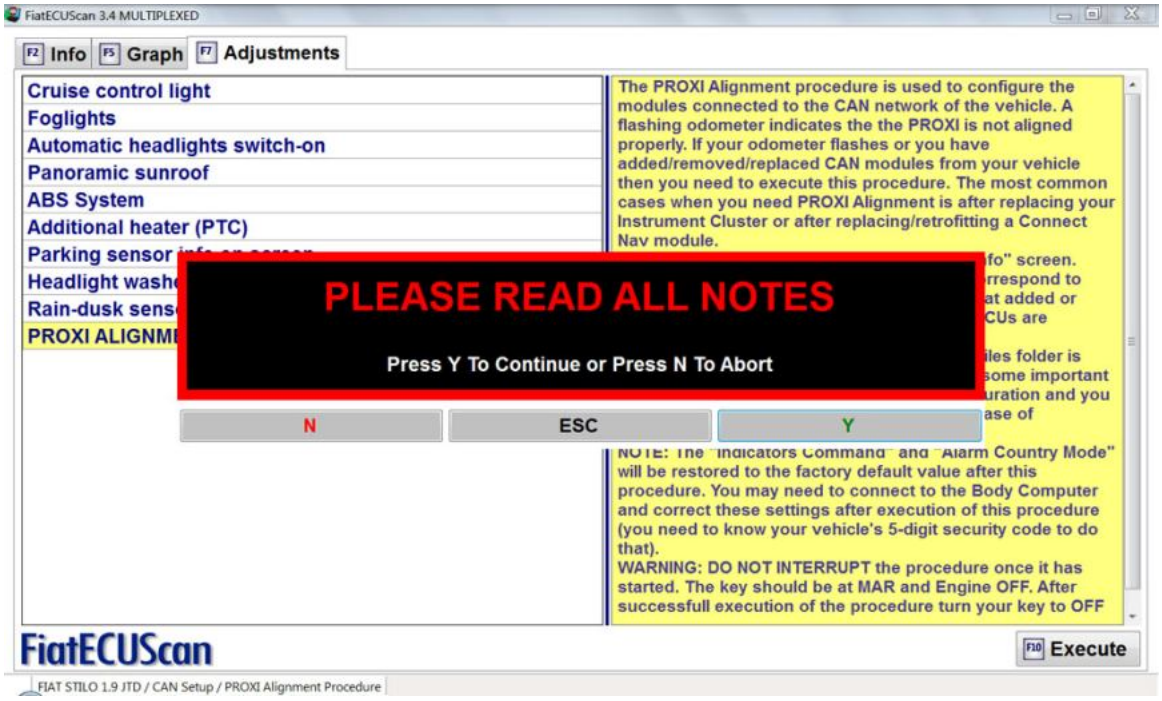


Step 6: Change the value to 'Enabled' and press Enter (or click OK).

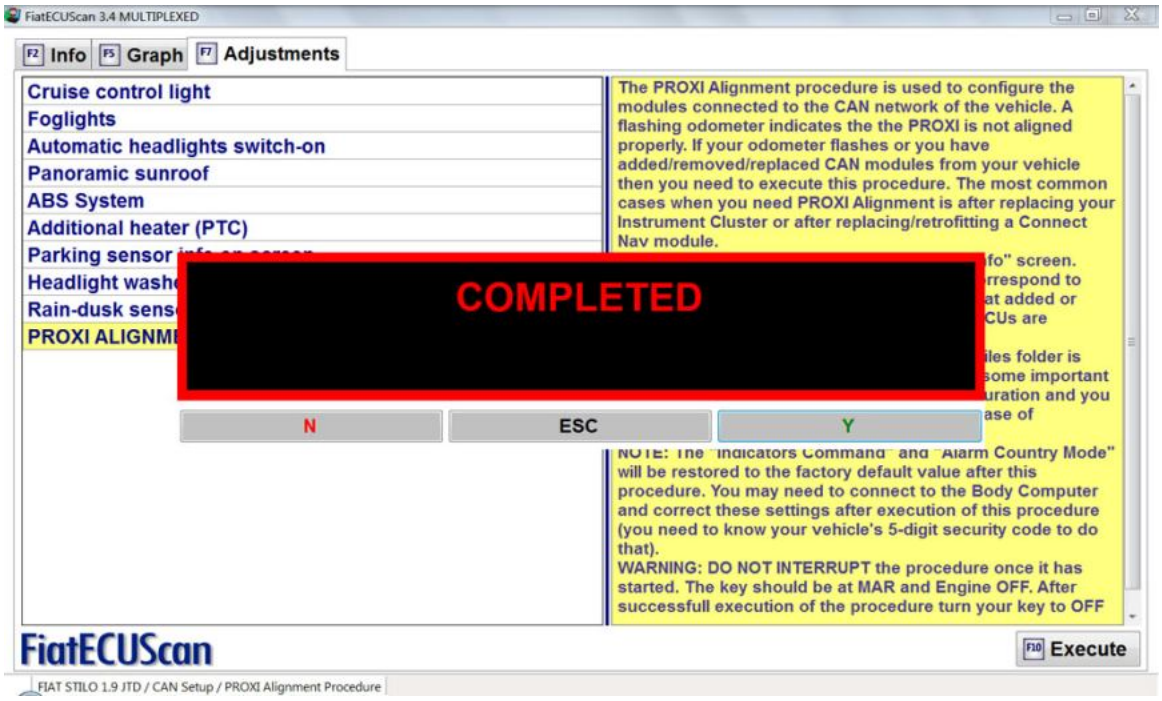
Step 7: The system will confirm that operation is complete.



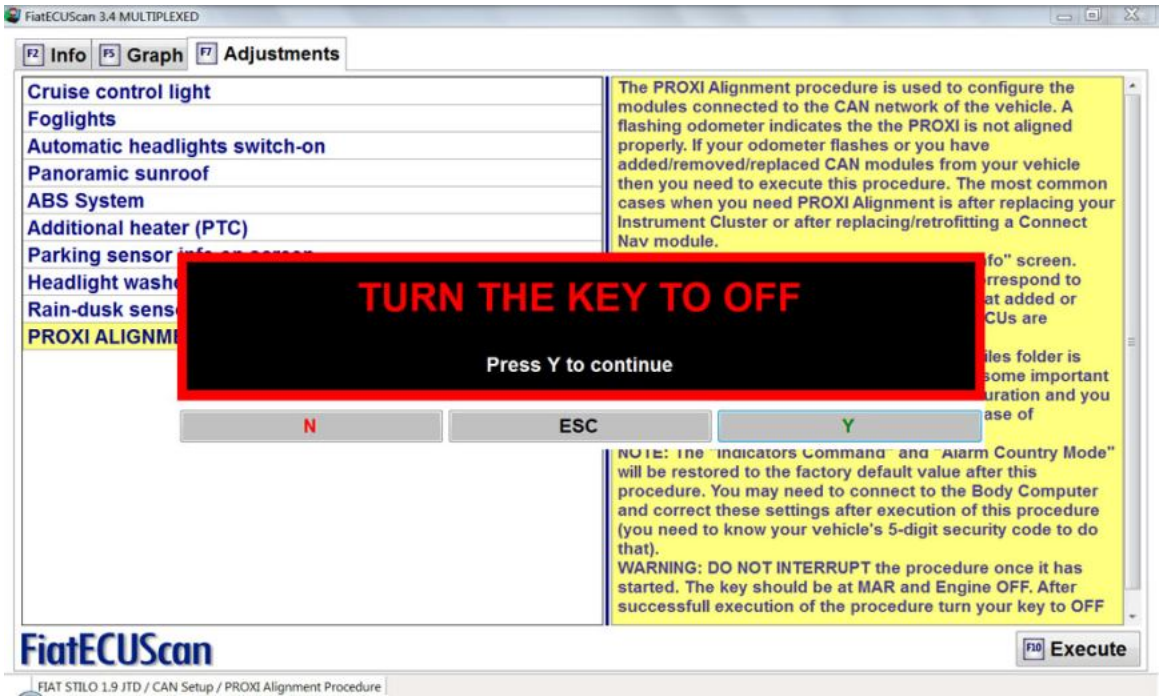
Step 8: Now we have to execute the PROXI Alignment procedure to write the new settings to the car.
So, we select "PROXI ALIGNMENT PROCEDURE" and press F10.
The system will ask you to confirm that you want to continue.



Step 9: After we confirm that we want to continue by pressing Y FiatECUScan will start the procedure.
When the process finishes the system will show the status (success or failure).



Step 10: After successful execution the system will ask you to turn car's key to OFF position.
That is all. Now the Cruise control light should be enabled and working properly when you switch ON the cruise control.



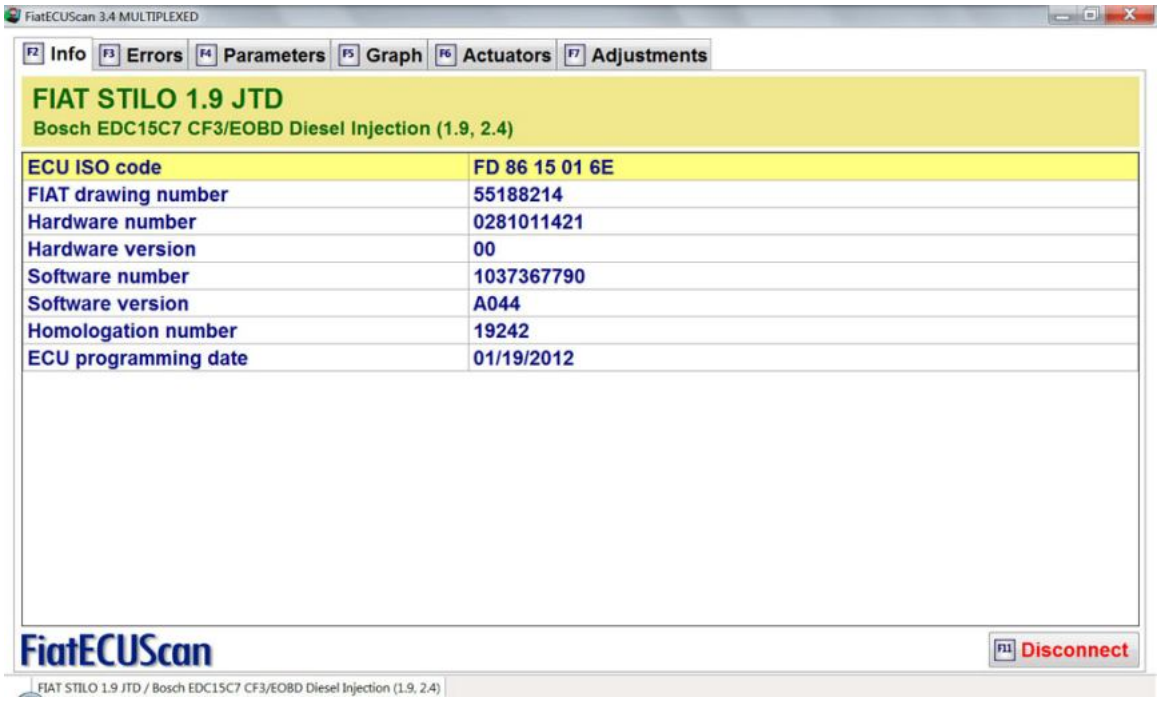
7. Send diagnostic report to FiatECUScan server

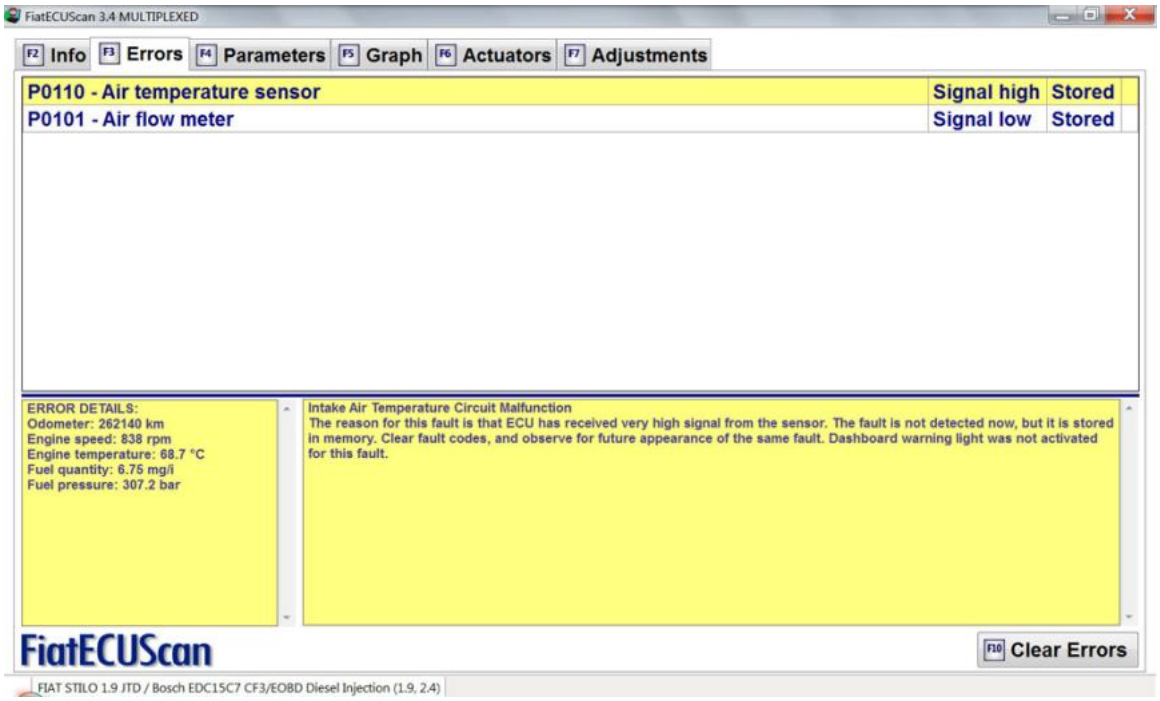
The diagnostic reports help us to find and fix problems in FiatECUScan. The report contains information about your last connection (the data sent/received to your car). It does not contain any personal information or any information about your computer.

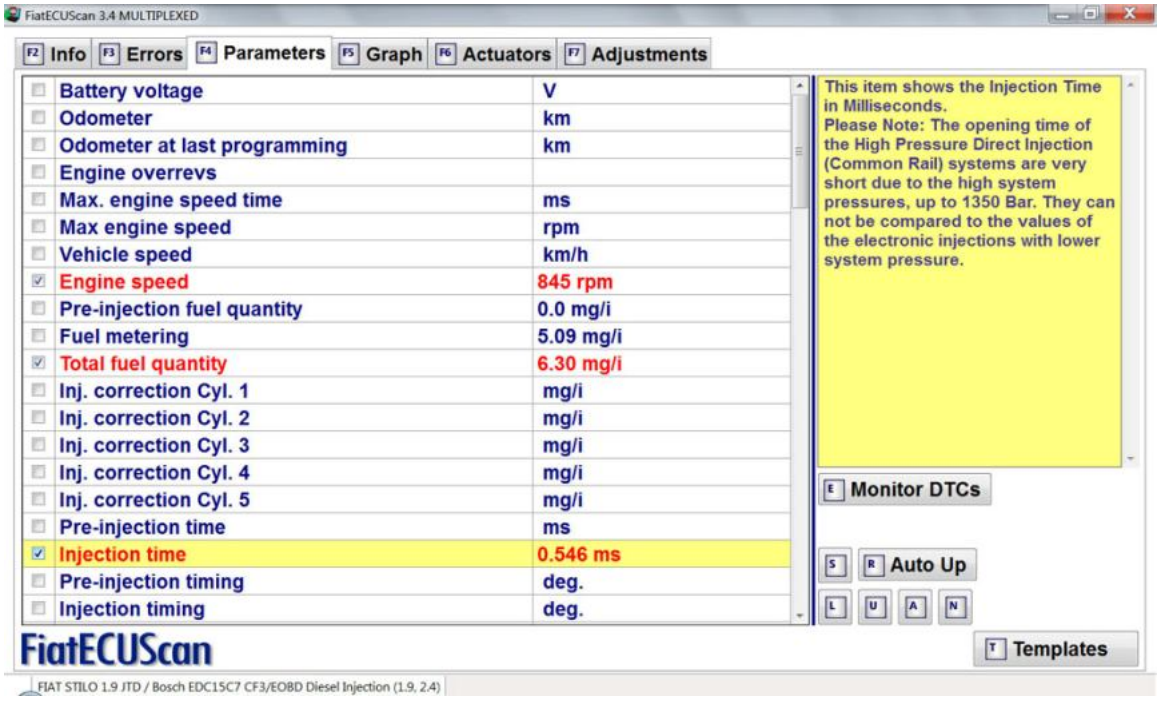
FiatECUScan shows a small red button "Send Report" on the bottom right part of FiatECUScan main window. The button appears after you disconnect from a control module or after failed connection.

Step 1: Connect to a control module.

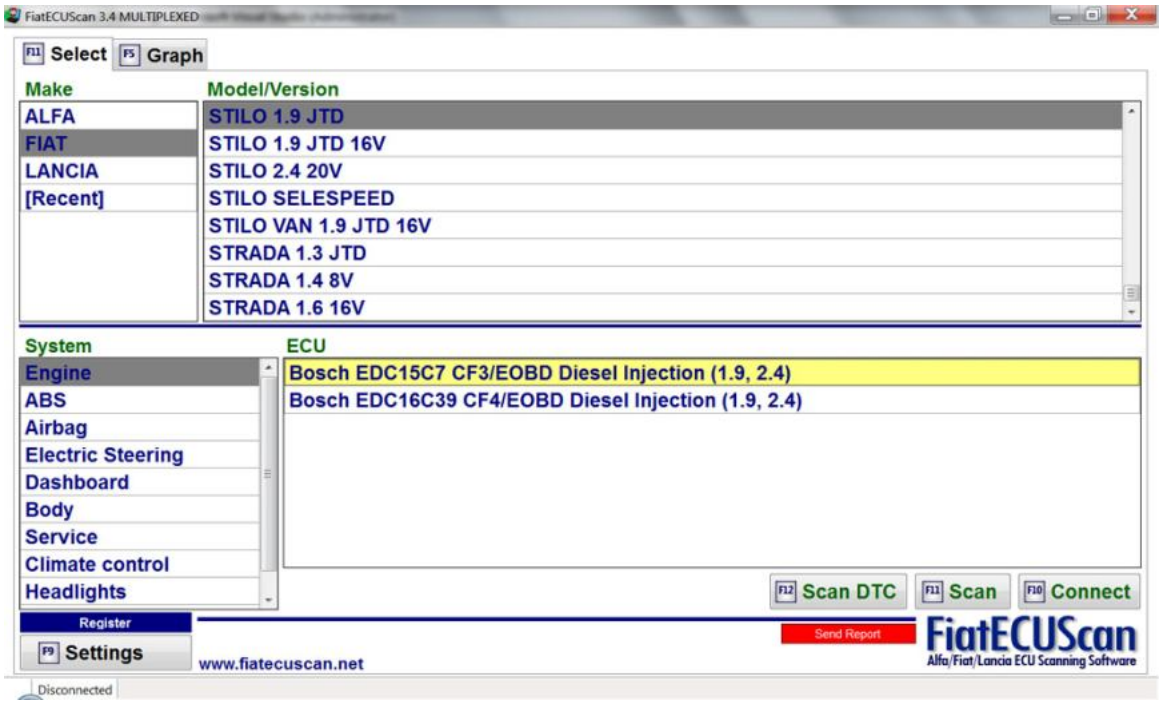
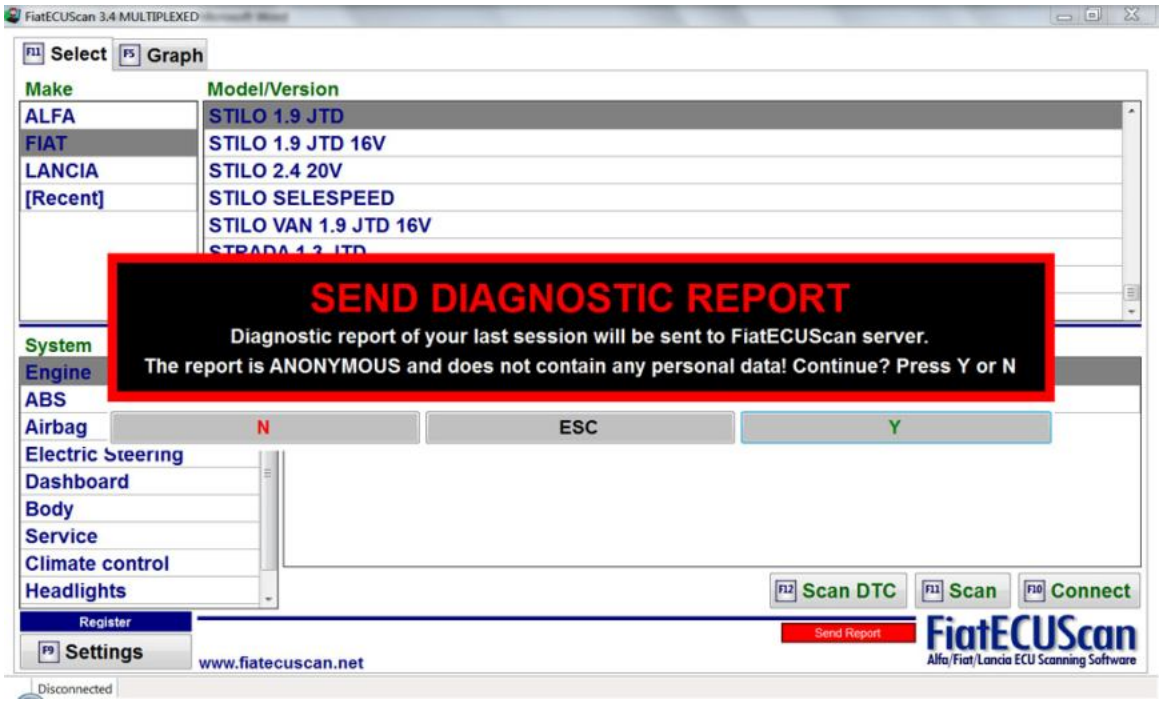
Step 2: Go to errors, parameters, etc.




FiatECUScan 3.4 MULTIPLEXED
F2 Info
F3 Errors
F4 Parameters
F5 Graph
F6 Actuators
F7 Adjustments
P0110 - Air temperature sensor
Signal high
Stored
P0101 - Air flow meter
Signal low
Stored
ERROR DETAILS:
Odometer: 262140 km
Engine speed: 838 rpm
Engine temperature: 68.7 °C
Fuel quantity: 6.75 mg/i
Fuel pressure: 307.2 bar
Intake Air Temperature Circuit Malfunction
The reason for this fault is that ECU has received very high signal from the sensor. The fault is not detected now, but it is stored in memory. Clear fault codes, and observe for future appearance of the same fault. Dashboard warning light was not activated for this fault.
FiatECUScan
F10 Clear Errors
FIAT STILO 1.9 JTD / Bosch EDC15C7 CF3/EOBD Diesel Injection (1.9, 2.4)


FiatECUScan 3.4 MULTIPLEXED
F2 Info
F3 Errors
F4 Parameters
F5 Graph
F6 Actuators
F7 Adjustments
Battery voltage V
Odometer km
Odometer at last programming km
Engine overrevs
Max. engine speed time ms
Max engine speed rpm
Vehicle speed km/h
Engine speed 845 rpm
Pre-injection fuel quantity 0.0 mg/i
Fuel metering 5.09 mg/i
Total fuel quantity 6.30 mg/i
Inj. correction Cyl. 1 mg/i
Inj. correction Cyl. 2 mg/i
Inj. correction Cyl. 3 mg/i
Inj. correction Cyl. 4 mg/i
Inj. correction Cyl. 5 mg/i
Pre-injection time ms
Injection time 0.546 ms
Pre-injection timing deg.
Injection timing deg.
This item shows the Injection Time in Milliseconds.
Please Note: The opening time of the High Pressure Direct Injection (Common Rail) systems are very short due to the high system pressures, up to 1350 Bar. They can not be compared to the values of the electronic injections with lower system pressure.
E Monitor DTCs
S R Auto Up
L U A N
FiatECUScan
T Templates
FIAT STILO 1.9 JTD / Bosch EDC15C7 CF3/EOBD Diesel Injection (1.9, 2.4)

Step 3: Disconnect from the control module by pressing F11.



Step 4: Click on the red "Send Report" button. Your computer has to be connected to the internet when doing this.
The system will ask you for confirmation. Press Y to confirm.