



I can Flash my car

DIESELPOWER iFlash user manual

1 Contents

1	Contents	1
2	Explanatory notes.....	1
3	Safety warnings before programming.....	1
4	Package contents.....	2
5	How do you get your iFlash application	2
5.1	System requirements	2
6	iFlash application installation.....	3
6.1	Installation of iFlash application.....	3
6.2	Installation of the adapter drivers.....	5
7	iFlash program – function overview.....	7
7.1	Pairing the adapter with the vehicle	13
7.2	Programming window	15
7.2.1	Verification of the installed control unit and retrieving of the "calibration data".....	16
7.2.2	Reading of original software/calibration data of the ECU	17
7.2.3	Programming of the modified calibration data.....	18
8	Programming of original file (factory calibration).....	20

2 Explanatory notes

iFlash adaptor or iFlash device	electronic device used as a communication gateway between PC and vehicle OBD diagnostic socket
OBD/OBD-II	diagnostic standard (OnBoard Diagnostics)
OBD diagnostic socket	16-pin diagnostic socket located in the car (usually bellow a steering wheel near driver's pedals)
Calibration data/maps	files containing original or modified/tuned data (control unit settings)
Factory calibration	original/stock calibration of control unit
Flash file/remap	tuner slang - calibration data
Engine control unit	Computer device that controls a series of actuators on an internal combustion engine to ensure optimal engine performance

3 Safety warnings before programming

PLEASE MAKE SURE THAT:

- iFlash device is connected in the OBD socket of the vehicle and opposite side of iFlash device is connected directly to your PC using USB cable. **Do not use USB HUB!**
- your PC battery is fully charged or your PC is connected to electrical supply! (programming of certain ECU types takes up to several tens of minutes)
- your vehicle's battery is fully charged or vehicle is connected to an external power supply!

4 Package contents

1) OBD iFlash adaptor



2) USB connection cable USB-A/USB-mini-B



3) Basic instructions

5 How do you get your iFlash application

First step is to download the latest version of iFlash software. You will find this software through the following website: <http://www.dp-race.com/iflash>

Download application's installation program into your PC.

5.1 System requirements

- Intel Pentium or higher
- min. 2MB of RAM memory
- min. 20MB of HDD space
- Windows XP or higher

6 iFlash application installation

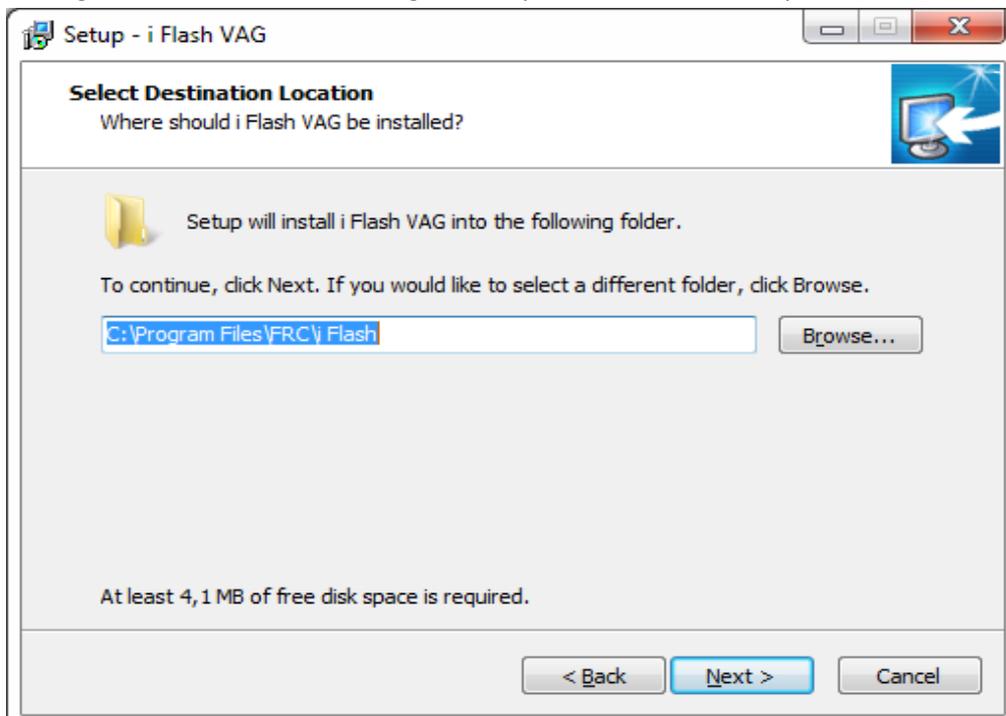
6.1 Installation of iFlash application

Run installer and follow the steps in this manual.

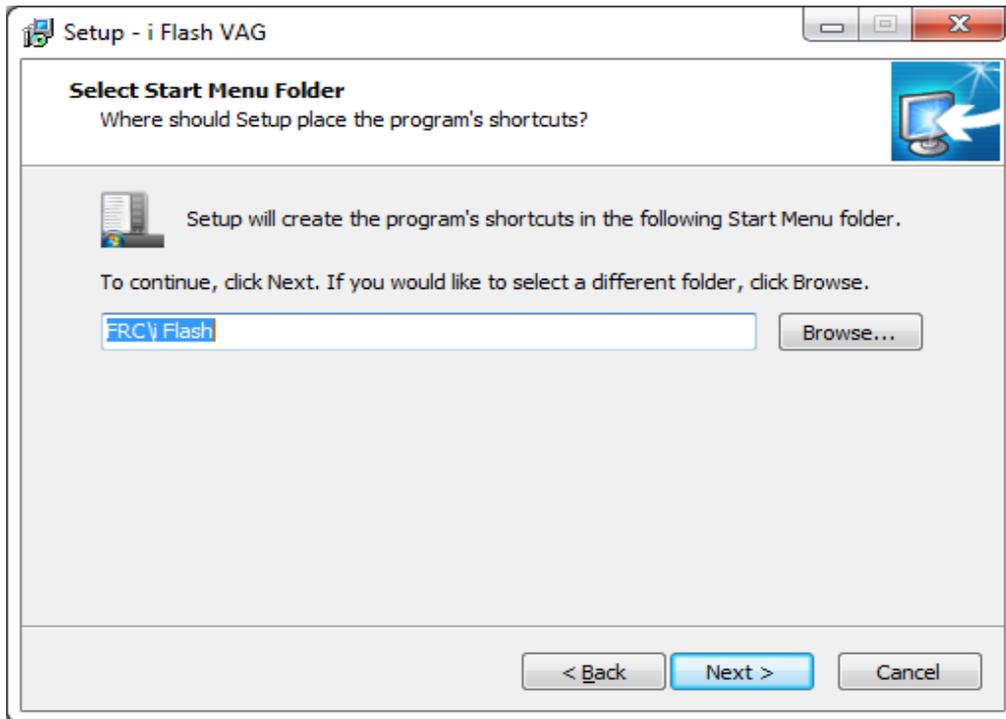
1. Start screen press [Next] button.



2. Target installation folder settings. Leave predefined value and press [Next] button.

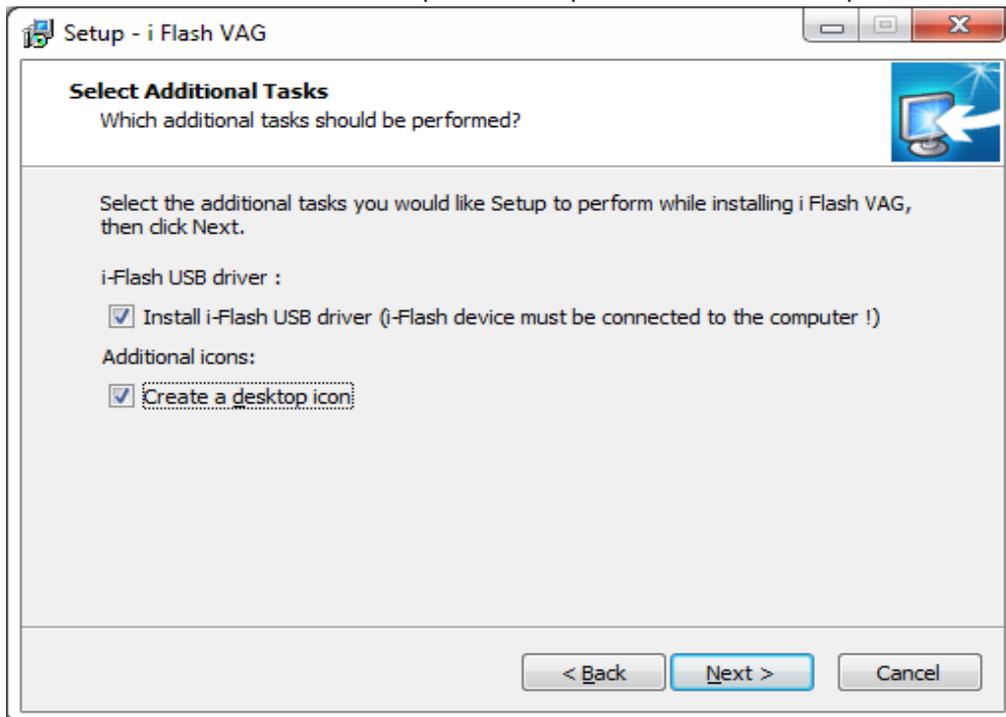


3. Folder name in the start menu. Leave default and press [Next].



4. Additional tasks. Check both options (!) And press [Next].

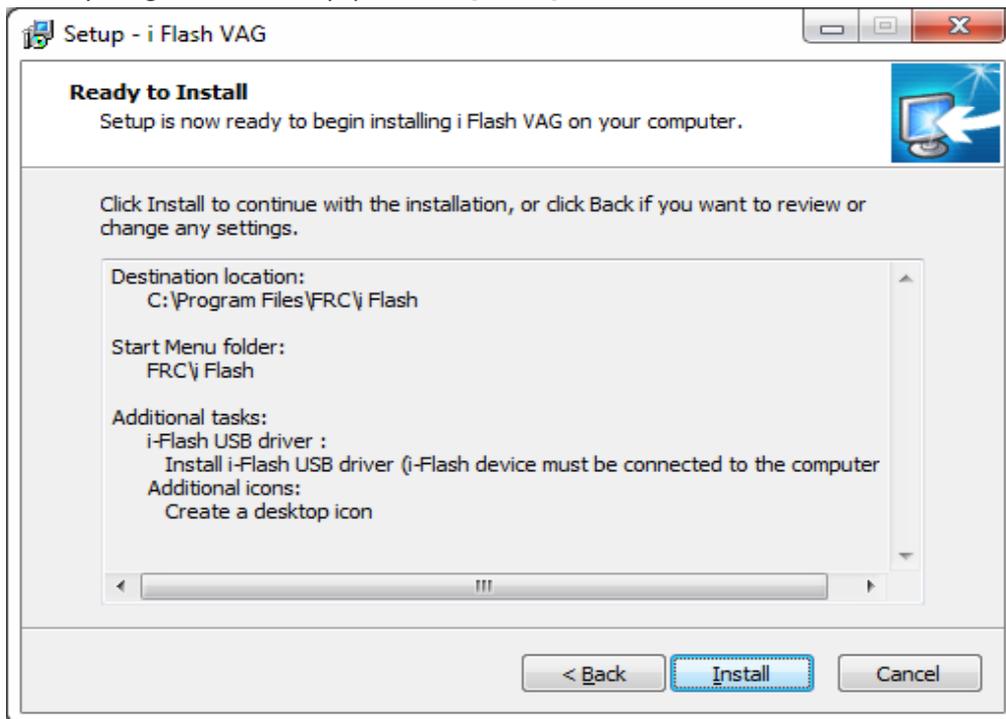
This will install the driver to the adapter. It's not possible to use the adapter without this driver.



5. Recap of the settings.

If you, let's say, forgot to install a device driver (item Install iFlash USB driver), you can use the [Back] button to go back and fix it.

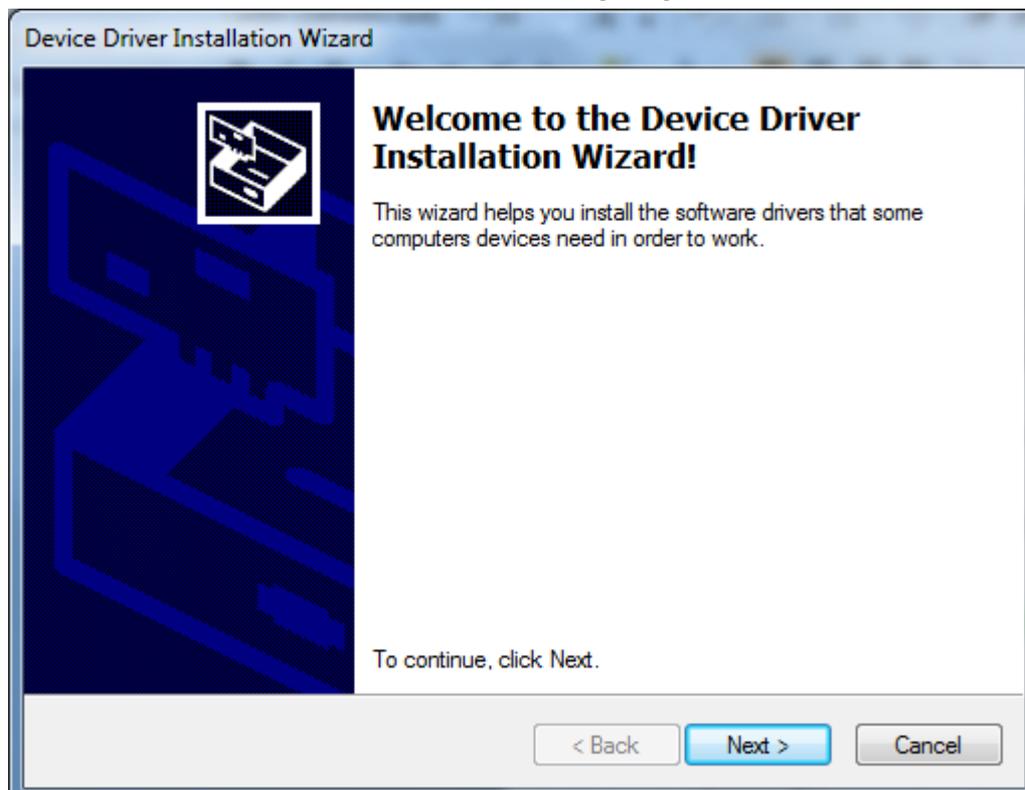
If everything is set correctly, press the [Install] button.



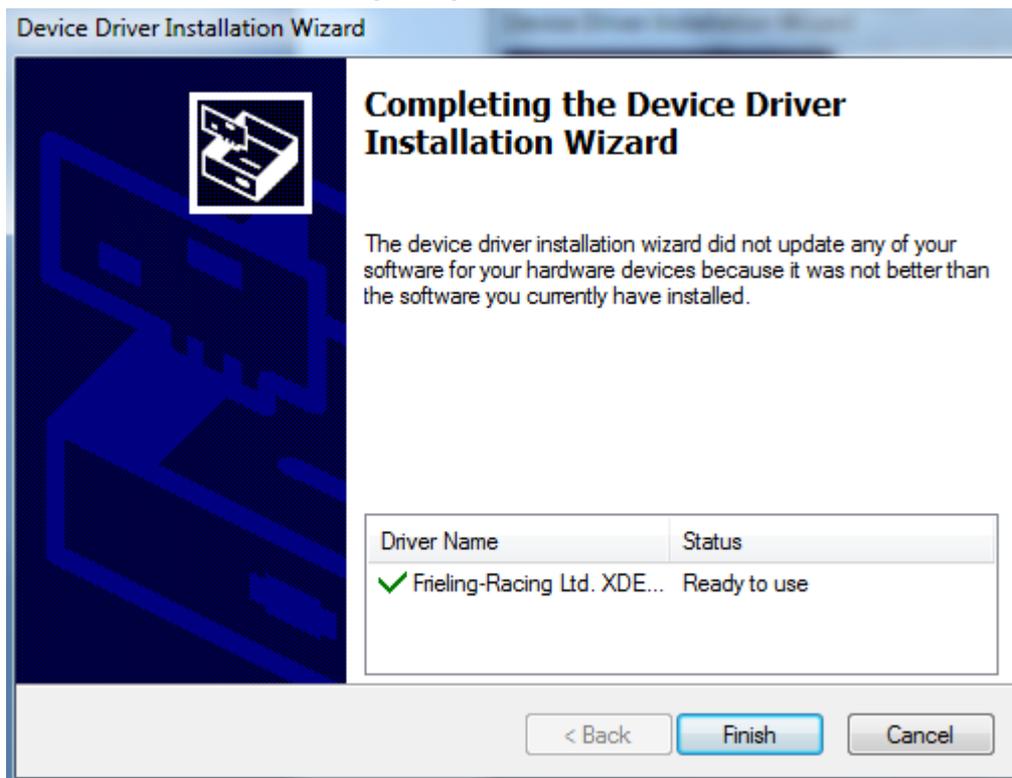
6. The installation will now proceed. If you checked the "Install iFlash USB drivers" option, the device driver installation wizard will appear at the end of the installation (see next chapter).

6.2 Installation of the adapter drivers

Device Driver Installation Welcome Screen. Press [Next].



Driver will be installed and the following message will be displayed if installation finished correctly. Finish the installation with the [Finish] button.



The installation is complete and you can now run iFlash by checking Run iFlash (The application will start automatically after installation). Press [Finish].



7 iFlash program – function overview

iFlash should start automatically as soon as the program installation is complete.

If program does not start automatically, please use the iFlash icon on your desktop (double click to run the program).

Connect the iFlash adapter with the provided USB cable to your computer's USB port. The operating system should now detect the newly attached adapter and automatically install the appropriate adapter driver. This procedure may take up to several tens of seconds.

After starting the program, you will see the following window with basic information about iFlash.



Click the [Next] button..

Next window contains info about Your computer. If everything is highlighted in green, you may continue by clicking the [Next] button.



In the following step communication with the vehicle will be established.

SECURITY WARNING BEFORE PROGRAMMING –PLEASE READ VERY CAREFULLY!

PLEASE MAKE SURE THAT:

- iFlash device is connected in the OBD socket of the vehicle and opposite side of iFlash device is connected directly to your PC using USB cable. **Do not use USB HUB!**
- your PC battery is fully charged or your PC is connected to electrical supply! (programming of certain ECU types takes up to several tens of minutes)
- your vehicle's battery is fully charged or vehicle is connected to an external power supply!

Turn the ignition to the ON position (dash lights must be illuminated)!

If you made sure that you've met all previously mentioned conditions, you may press the [Next] button. Test of the adapter will be carried out, as well as test of the connection and identification of the ECU of your vehicle.



Communication with the vehicle and identification of communication protocol is in progress .
Do not interrupt, please!



If communication is successfully established, VIN of your vehicle will be retrieved:



In many cases iFlash is able to automatically identify type of your ECU.

If the automatic ECU type identification fails, you will have to select the type of ECU manually (see the example).

Manual selection of the engine control unit type (automatic identification failed – program is not doing anything).

In this example, vehicle used is:

Make	Škoda
Model	Superb III
Engine	2.0tdi 140kW/190HP - kód DDAA
Engine control unit (ECU)	Bosch EDC17C74

Expand "Detected ECU Type" selection and select correct ECU type.

In your specific case always proceed according to information to Your vehicle, which will be provided to you! ECU in your specific vehicle may be a different type.

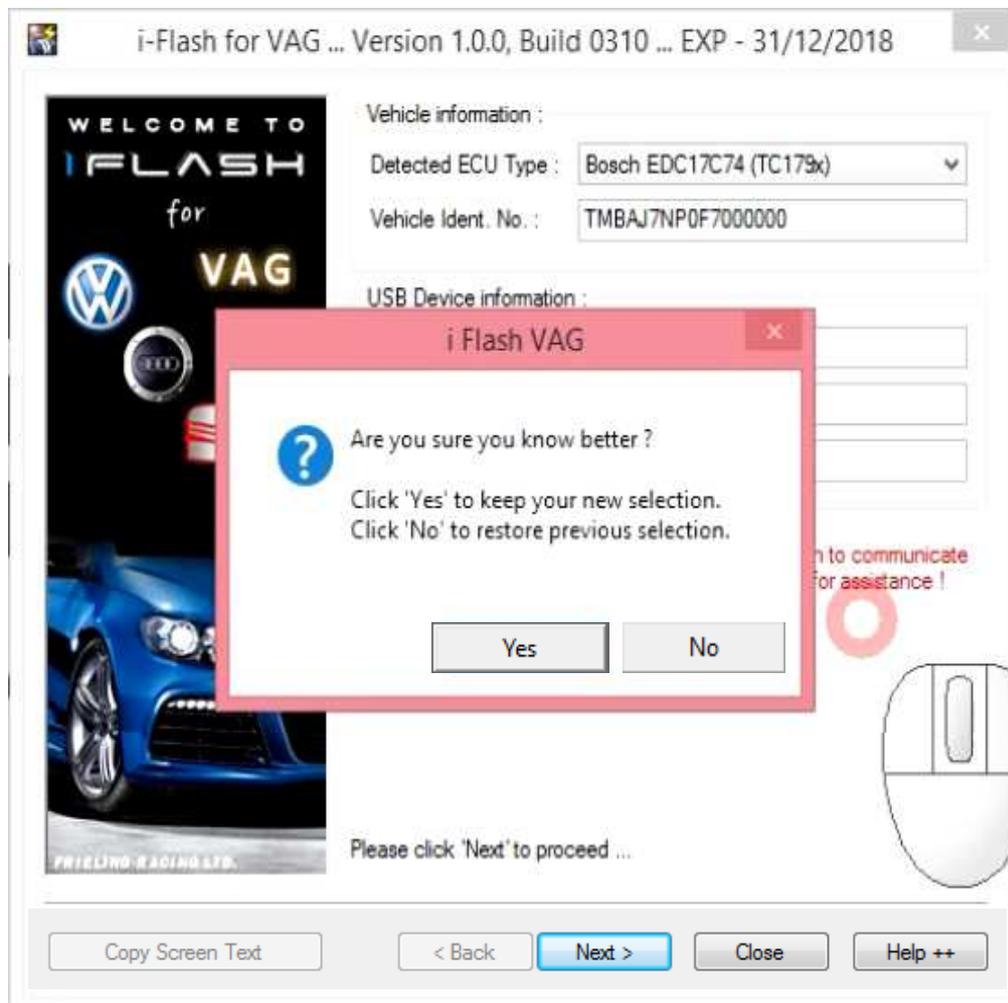
If you are not completely sure, please contact us and we will provide assistance!



After selection is complete, iFlash will ask you if you are really sure of the choice. Once again, make sure you choose the right type of control unit specifically according to your vehicle's instructions.

Pressing [No] button will return you to the ECU selection page.

Pressing [Yes] button will confirm your selection and you may continue to the next step.



7.1 Pairing the adapter with the vehicle

If you started iFlash for the first time and the programming adapter has never been paired with any vehicle, it must be paired with a particular vehicle / VIN to continue.

This step can be performed only once and no subsequent pairing will be possible. Please pay close attention to all steps.

Please check all entered information (especially selected ECU type).

If everything is in order press [Next] button.



The screenshot shows the 'i-Flash for VAG' software window. The title bar reads 'i-Flash for VAG ... Version 1.0.0, Build 0310 ... EXP - 31/12/2018'. On the left is a vertical banner with the text 'WELCOME TO iFLASH for VAG' and logos for Volkswagen, Audi, Skoda, and SEAT. Below the logos is a blue car. The main area contains two sections: 'Vehicle information' and 'USB Device information'. The 'Vehicle information' section has a dropdown for 'Detected ECU Type' set to 'Bosch EDC17C74 (TC179x)' and a text box for 'Vehicle Ident. No.' containing 'TMBAJ7NP0F7000000'. The 'USB Device information' section has text boxes for 'USB Device SN' (4333 - End User), 'Coded ECU Type' (No ECU type coded), and 'Coded Ident. No.' (No identification coded). Below these is a red warning message: 'Clicking the 'Next' button will code your hardware device with the following information : ECU Type : Bosch EDC17C74 (TC179x) Identification number : TMBAJ7NP0F7000000 Please verify these details are correct ...'. At the bottom, there are buttons for 'Copy Screen Text', '< Back', 'Next >', 'Close', and 'Help ++'. A footer note says 'Please click 'Next' to proceed ...'.

Vehicle information :	
Detected ECU Type :	Bosch EDC17C74 (TC179x)
Vehicle Ident. No. :	TMBAJ7NP0F7000000

USB Device information :	
USB Device SN :	4333 - End User
Coded ECU Type :	No ECU type coded
Coded Ident. No. :	No identification coded

Clicking the 'Next' button will code your hardware device with the following information :

ECU Type : Bosch EDC17C74 (TC179x)
Identification number : TMBAJ7NP0F7000000

Please verify these details are correct ...

Please click 'Next' to proceed ...

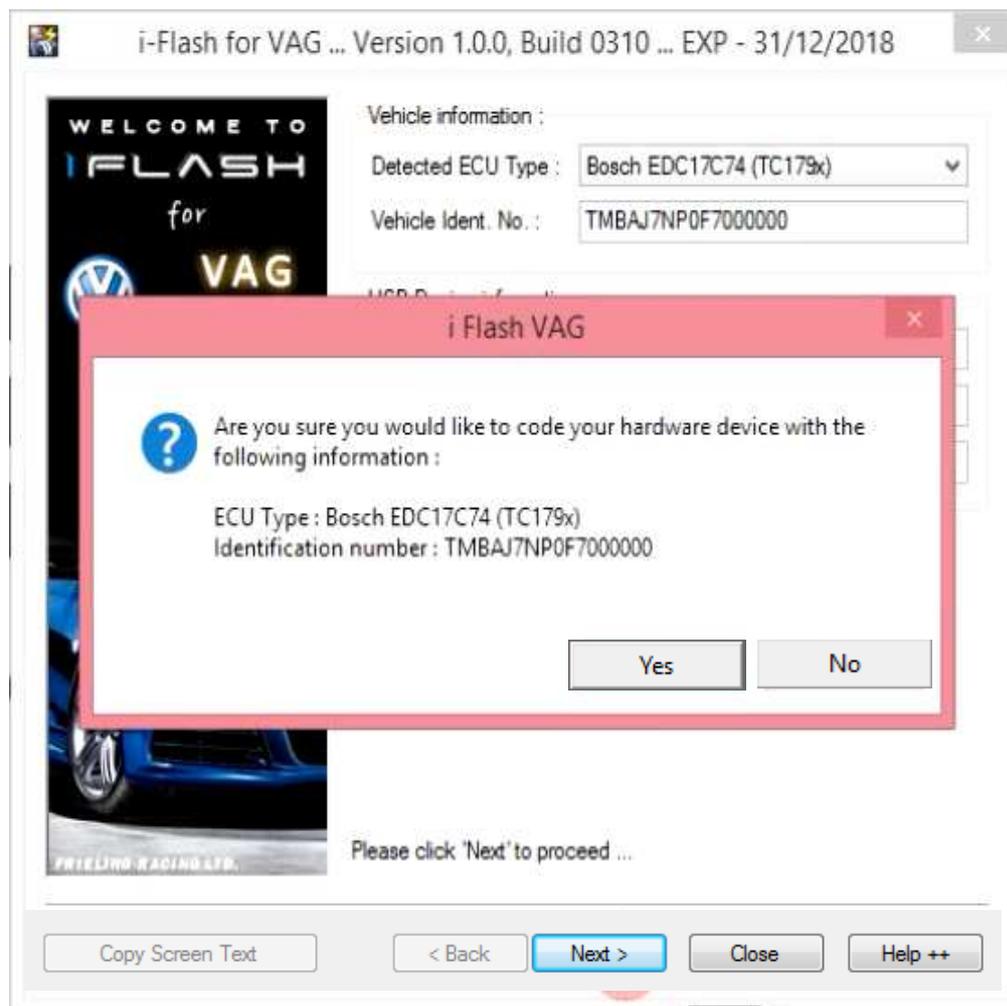
Copy Screen Text < Back Next > Close Help ++

Last chance to verify all the information before pairing adapter with Your car!

By pressing [Yes] button you'll confirm that all the entered information is correct. After doing that Your selection for the adapter will be recorded and your vehicle's VIN number will be paired with the adapter. After that, it will no longer be possible to change this option or use the adapter with another vehicle.

Incorrectly entered information will cause the adapter to malfunction. The only way to repair / recode the adapter into an unpaired state is to send the adapter back to the dealer. Unfortunately, this step will have to be associated with additional charges, therefore it is necessary to verify entered information extremely carefully.

If everything is in order, please continue by pressing [Yes] button.

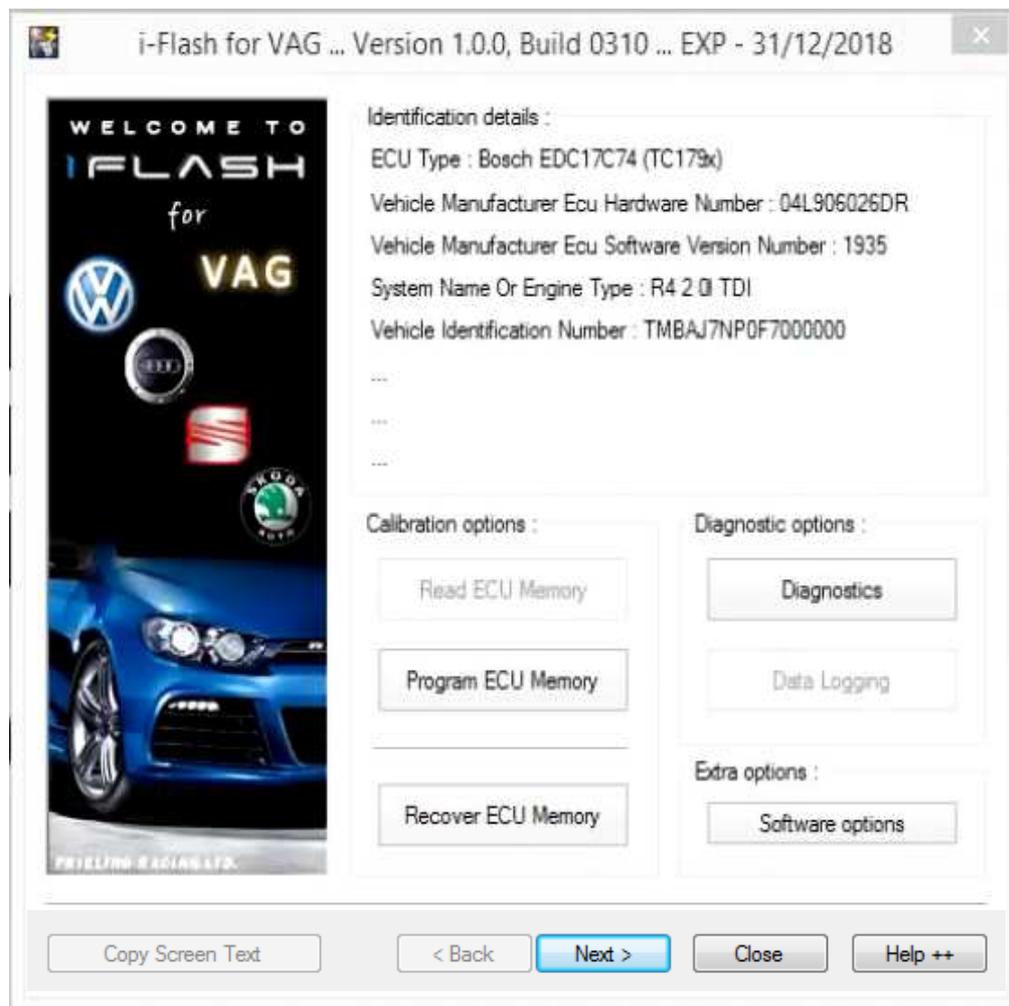


7.2 Programming window

If you have correctly paired the iFlash adapter with your car and have gone through the initial communication with the controller, now you are entering the most important part of the program. It's called programming window and all operations regarding the vehicle control unit take place here.

Available functions in the programming windows:

Copy Screen Text	Copy ECU identification to the clipboard
Read ECU Memory	Read memory of the ECU and save it to the file
Program ECU Memory	Programming of the ECU with the modified "flash" data file with ".mod" suffix, which will be provided by us
Recover ECU Memory	Programming the ECU memory with original ONLY "flash" data file ".org" suffix, which will be provided by us or retrieved from the ECU memory via "read" function (if possible)
Diagnostics	Read/erase DTC memory, if possible
Data Logging	Live data recording (measured values), if possible
Software options	Setting up parameters of the communication - not necessary to use



7.2.1 Verification of the installed control unit and retrieving of the "calibration data"

Before downloading and programming modified "calibration data" for your vehicle, we need to be absolutely sure that a specific control unit is installed. Programming calibration data of different ECU into your ECU could result in permanent damage to the ECU.

Verification can be done as follows:

Press [Copy Screen Text] button.

Sign in the DIESELPOWER web system and using keyboard shortcut [CTRL + V] insert copied text to the specified field and press [Send] button.

Copied identification data are subsequently verified. If identification data are verified as correct and modified data are available on our server, page will appear and you will be able to download all needed files.

If [Read ECU Memory] button is available, we strongly recommend downloading original data from the ECU and save them in the file named "originaldata.org". Please upload this file to our web interface for verification.

Alternative procedure – in case our DIESELPOWER web server is unavailable:

In case our web server is unavailable, attach data with structure as specified above to the email and send to the address: iflash@dp-race.com

Data will be analyzed and email will be sent with all available instructions. Alternative procedure will take longer to process and response to your request may take up to several hours.

7.2.2 Reading of original software/calibration data of the ECU

Whenever you upload data to the control unit for the first time, it is good practice to read the original data and create a backup. Sometimes car may be previously modified from the previous owner, or have some interference with the SW for unknown reasons. This ensures that the original data can be restored to the control unit if necessary.

This operation can only be performed on some control units. Most of the newer controllers do not allow data reading ca. since 2009 production year.

7.2.2.1 Reading original calibration data (possible only if [Read ECU memory] button is available and if control unit is not read protected):

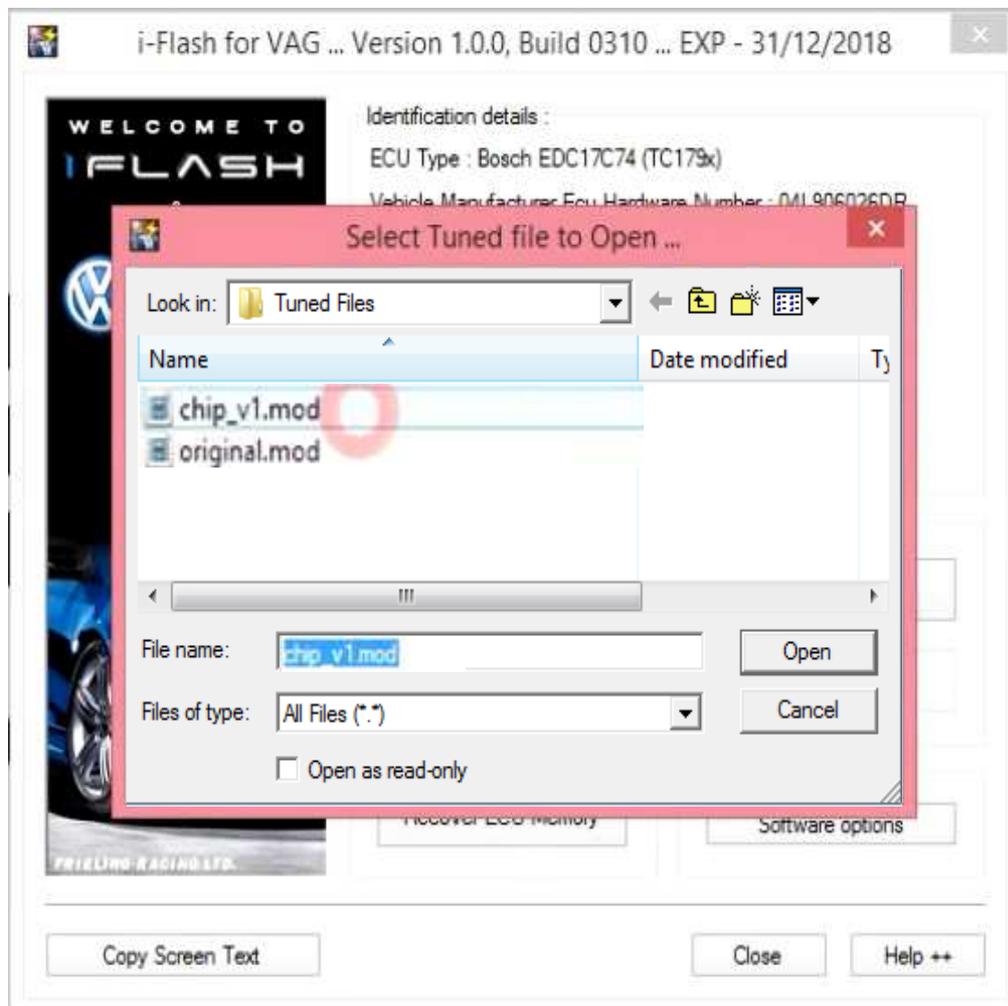
- 1) Turn ignition to the ON position
- 2) Press [Read ECU memory] button
- 3) You will be asked where do you want to save the original data – please pick the location and name of the file (for example originaldata.org)
- 3) iFlash program will try to connect to the control unit and will read the data (procedure may take up to several minutes)
- 4) Do not switch off the ignition and do not disconnect communication adapter before read is finished

7.2.3 Programming of the modified calibration data

If you have downloaded file (or several files) with modified calibration data from our system, you can upload these files to control unit of your vehicle anytime you want.

You can do this in calibration window by pressing [Program ECU Memory] button.

After that you will see a window for selecting the calibration data file you want to program. Please select the correct file - in the picture "chip_v1.mod" - and press the [Open] button.



Window with information about calibration data will appear. Here you can verify if you chose the right file. Under the text "Vendor comments for this file:" you will find – in this case "Tuning file - V1" – modified file V1.



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- your PC battery is fully charged or your PC is connected to electrical supply! (programming of certain ECU types takes up to several tens of minutes)
- your vehicle's battery is fully charged or vehicle is connected to an external power supply!

Turn the ignition ON if it is OFF!

If you are sure you want to program these calibration data, press [Yes] button.

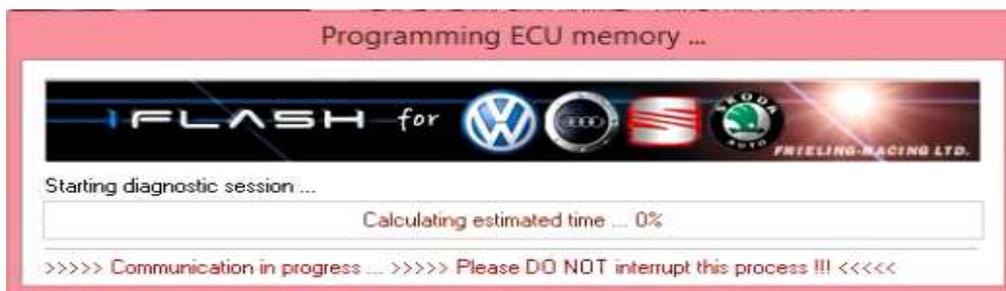
If you are not sure, or want to install another file, you can interrupt the procedure by pressing [No] button.

After pressing [Yes] programming of the ECU will begin with display of actual state of programming.

At this point you must not interrupt programming, otherwise ECU may be damaged!

- DO NOT SWITCH OFF IGNITION!

- be careful not to disconnect USB cable or OBD adapter intentionally or by mistake!

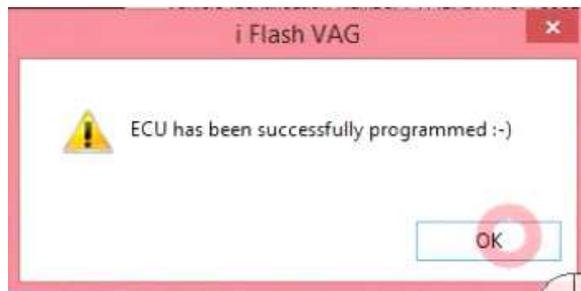


In this window elapsed time is displayed (left) and estimated remaining time (right).

After programming of the ECU is finished "Toggle ignition" pop-up window will appear. Please turn the ignition OFF and press [Ignition is OFF] button.



Leave ignition OFF and wait, until "ECU has been successfully programmed :-)" message appears. Your ECU has now been successfully programmed.



Congratulations! You have just tuned your car yourself.

8 Programming of original file (factory calibration)

iFlash program allows to program both modified and original files. You can program either file which you downloaded from the ECU or files that are issued by vehicle manufacturer as a software update, (iFlash file format needed) – so called update – by which manufacturer corrects various bugs in software, which can become apparent during vehicle service life.

1) First method - download original calibrations through iFlash web system:

You should be able to download original calibration files through your iFlash web system account. These files are usually marked as Factory/Original calibration.

Original factory calibrations can be programmed in the same way as modified/tuned calibration data described in the previous chapter.

2) Second method - program ECU backup

In case you have been able to "Read ECU memory" and make a direct backup of the ECU, use [Recover ECU memory] function and select previously read original file with ".org" suffix.

Proceed further as per instructions for programming modified calibration data (previous chapter).

Attention: [Recover ECU memory] button must not be used to program files with ".mod" suffix!!