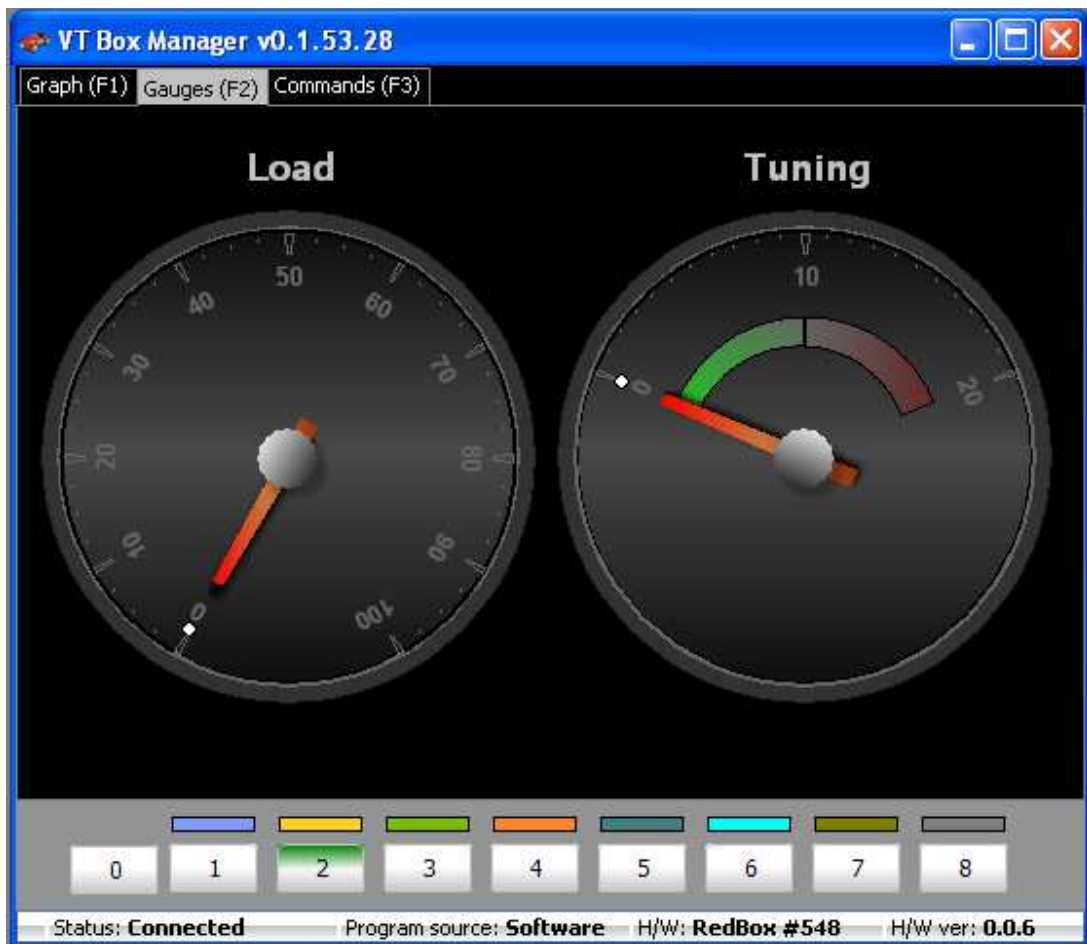




VT Box Manager



User Manual

ver. 1.1EN

TABLE OF CONTENTS

Chapter 1	3
Introduction	3
Chapter 2	4
Drivers installation.....	4
Chapter 3	10
Connecting box to PC.....	10
Chapter 4	11
Launching VT Box Manager.....	11
Chapter 5	14
Selecting the required program	14
Chapter 6	15
Command screen.....	15
How to extend box functionality	15
Updating VT Box Manager application	19
Exiting VT Box Manager	23
How to import and export maps	24
Changing the scale	27
Chapter 7	29
Graph screen – maps editing.....	29

CHANGES RECORD

Version	Date	Changes
1.0	2008-11-27	First non-official release
1.1	2008-11-28	Domain names changed to v-tech-tuning.eu Driving on dynamometer added in chapter 7 Contact your dealer added in chapter 6 Information on delivery USB cable together with L0 password added in chapter 6

Chapter 1 Introduction

VT Box Manager is a Windows application designed to program and control digital electronic modules that increase output and economy in diesel engines – commonly known as “boxes” (and this is how we call these modules in the further part of this manual). Box is programmed on-the-fly, i.e. while driving a car. Box can be connected to PC via special USB cable or Bluetooth.

There are four different boxes available:

- 1) GreenBox. It's a box focused on increasing increase fuel economy. It also slightly increases engine output. It has only 1 program, equipped with specialized AI (artificial Intelligence) algorithm, however can be very easily unlocked to have a functionality of RedBox Professional. It's connected to PC via USB.
- 2) RedBox Standard. This box is focused on increasing both engine output and fuel economy. It's achieved by selecting 1 of 8 different programs out of which program no. 1 is focused on fuel economy (same algorithm as in GreenBox). The box is locked for editing by the end-user but can be personalized by the dealer. It can be also unlocked to have a full functionality of RedBox Professional. It's connected to PC via USB.
- 3) RedBox Professional is a version of RedBox Standard, fully unlocked for editing by the end-user. It's connected to PC via USB.
- 4) BlueBox is the high-end box, equipped with Bluetooth interface instead of USB. Functionally it's equal to RedBox Professional.



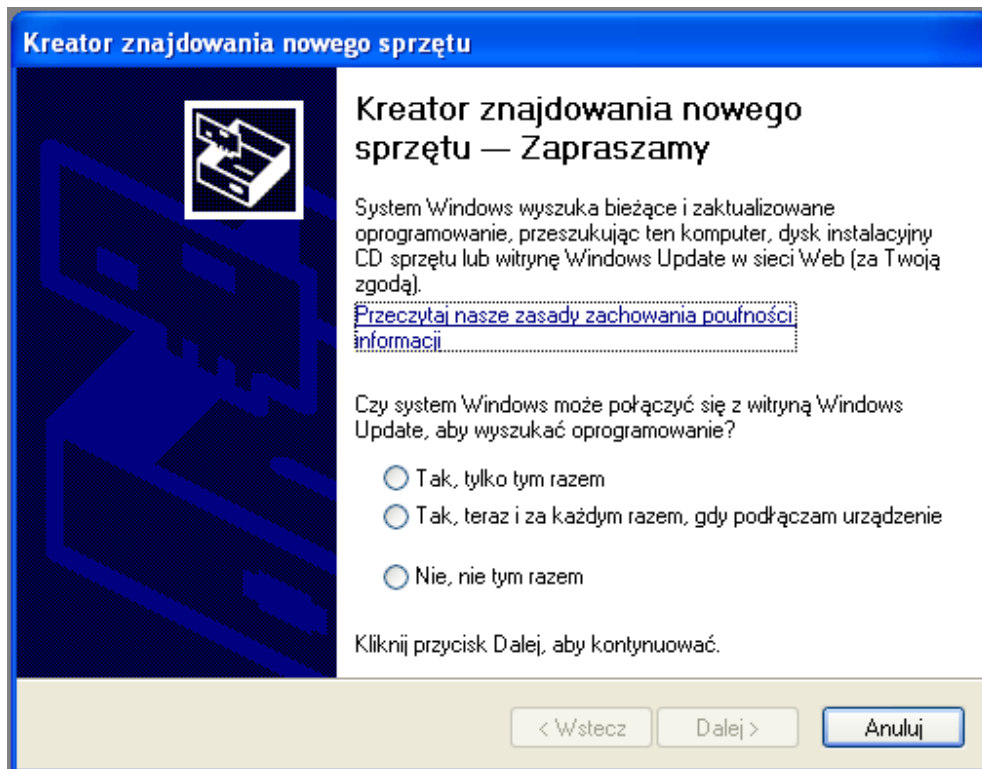
Notice for BlueBox users: this chapter is dedicated only for customers who connect the box to PC via USB. If you connect your box via Bluetooth you should follow the instructions of your Bluetooth adapter for establishing a connection between BlueBox and PC. Keep in mind you should create a COM port. Please write down the number of COM port established as you will need to select it in VT Box Manager.

Please follow the below procedure to install the drivers for USB cable.

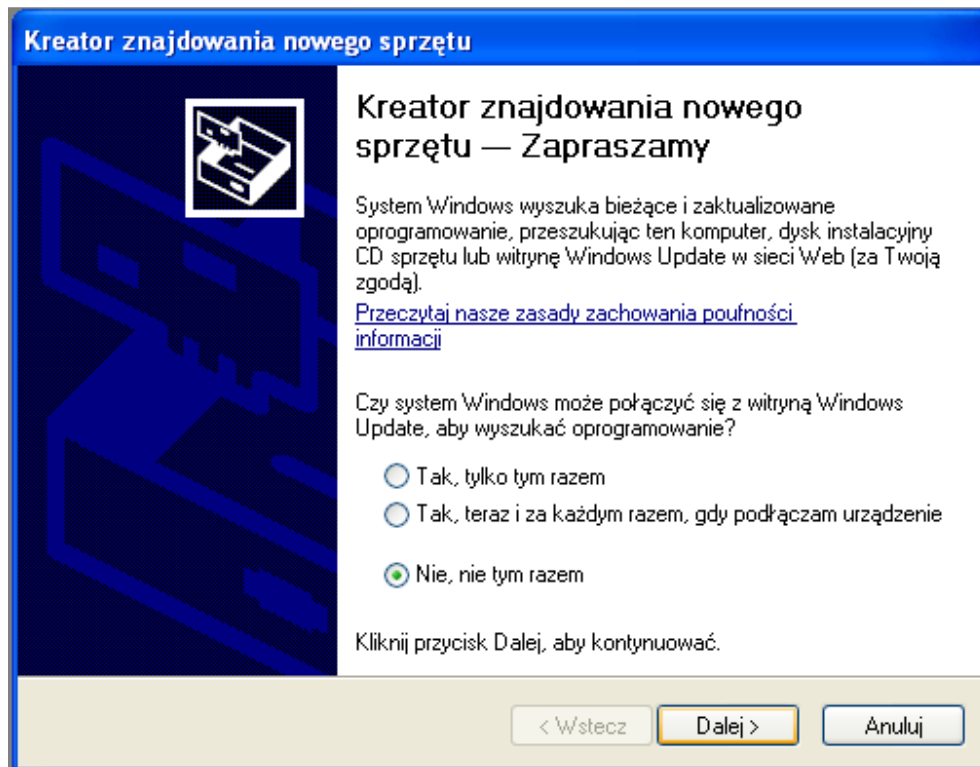
1. Please choose a disk and folder that you would like to use for VT Box Manager – e.g. C:\Program Files\VT Box Manager. If the folder does not exist, please create it.
2. Please copy all the files and folder from installation CD to this folder.
3. Connect the USB cable to the available USB port. You should see the information about new hardware found.



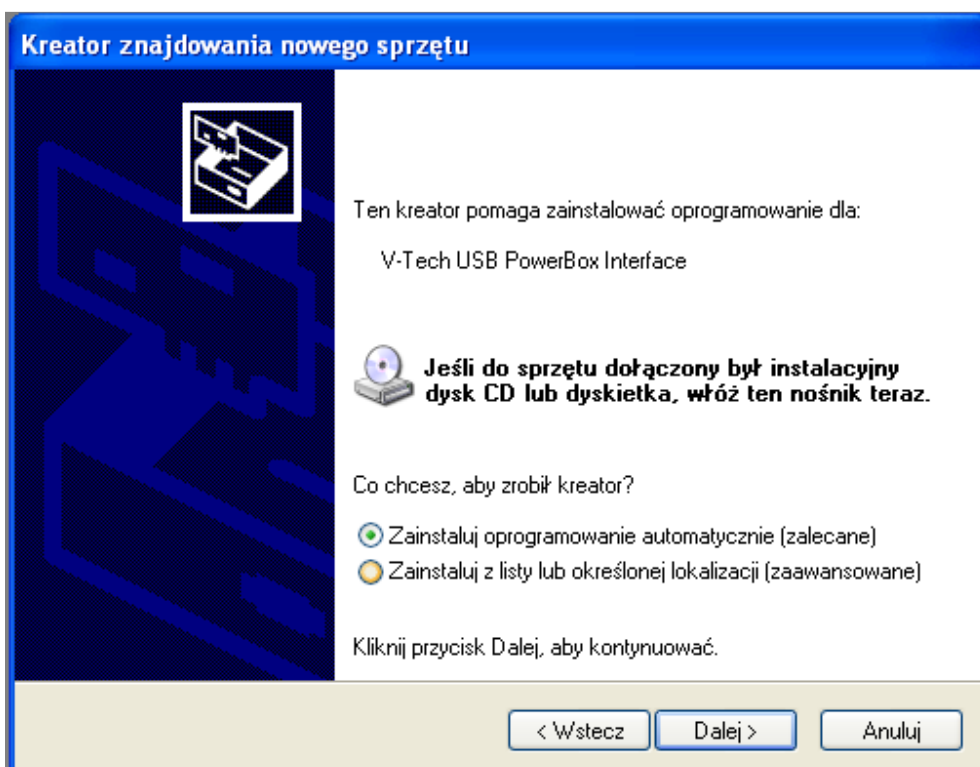
4. The new window will appear and you will be asked to agree to look for drivers at Windows Update internet site.



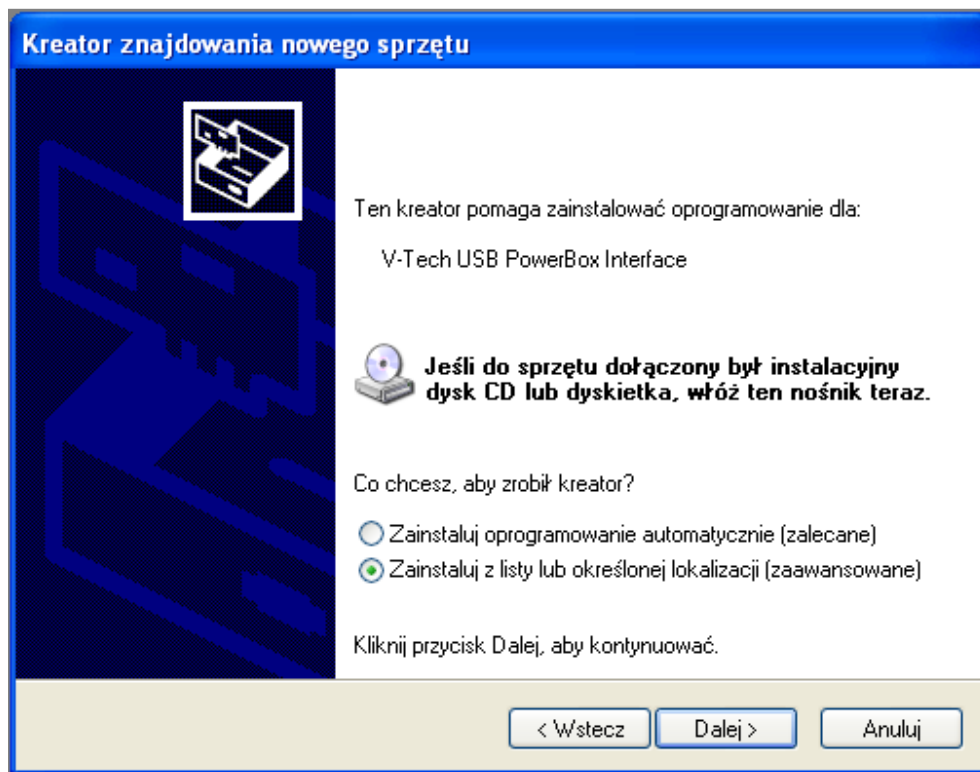
5. Please choose “No, not this time” and press “Next”.



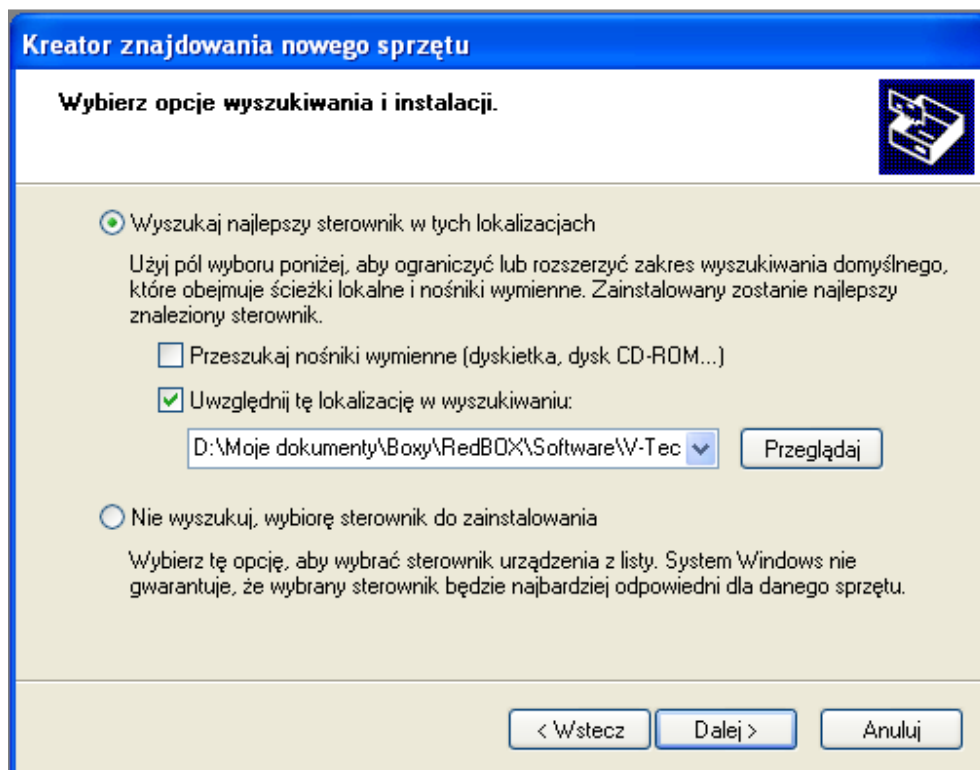
6. The next window will appear. You will be asked to agree for automatic drivers installation.



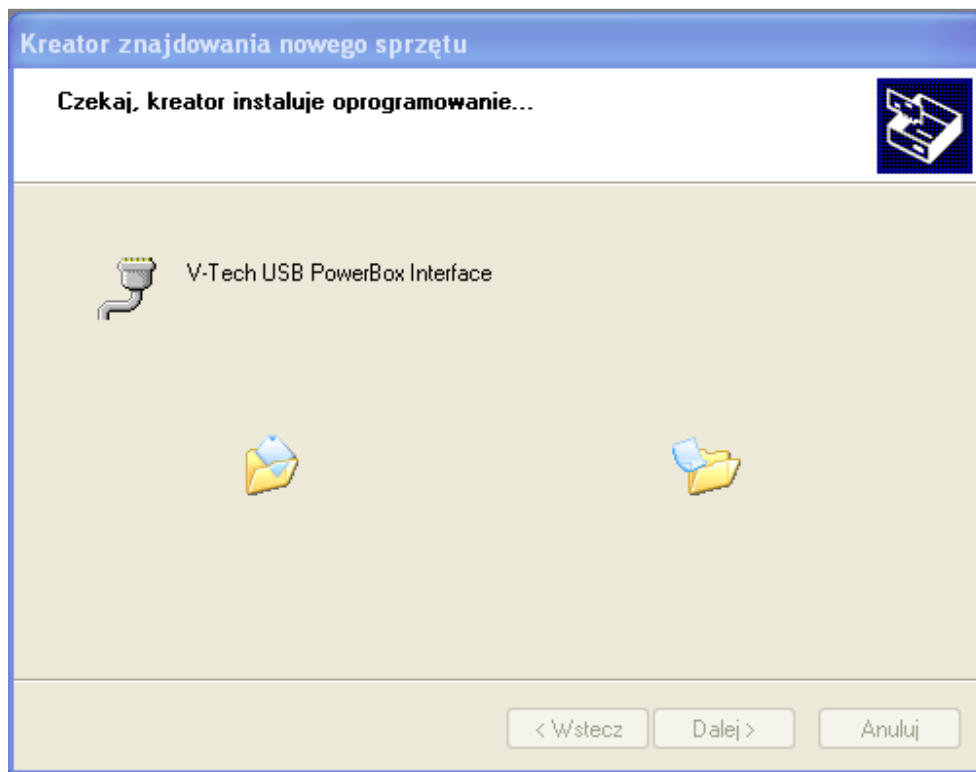
7. Please choose "Install the software from specified location" and press "Next".



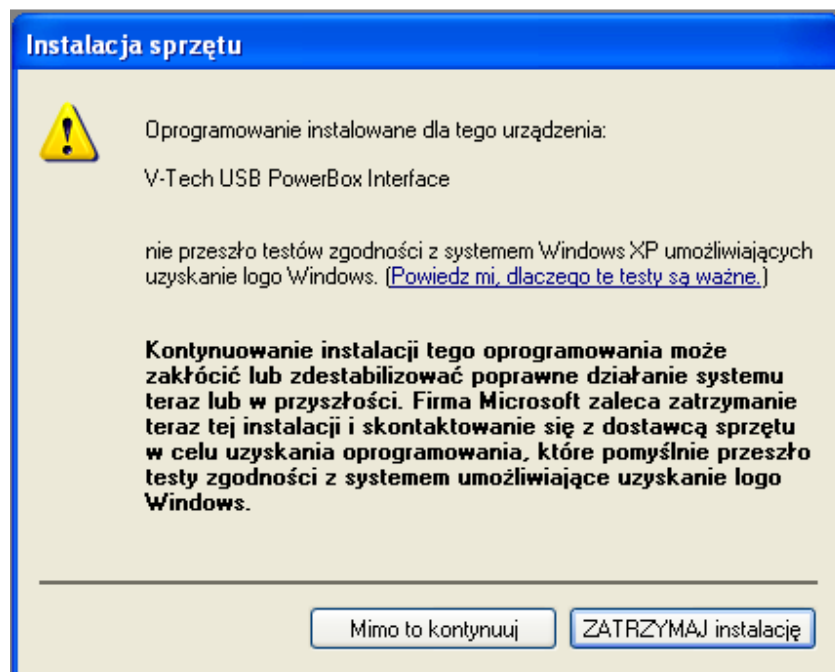
8. Specify the location in which Windows should look for the driver. It should be the same disk drive and folder as mentioned in step 1.



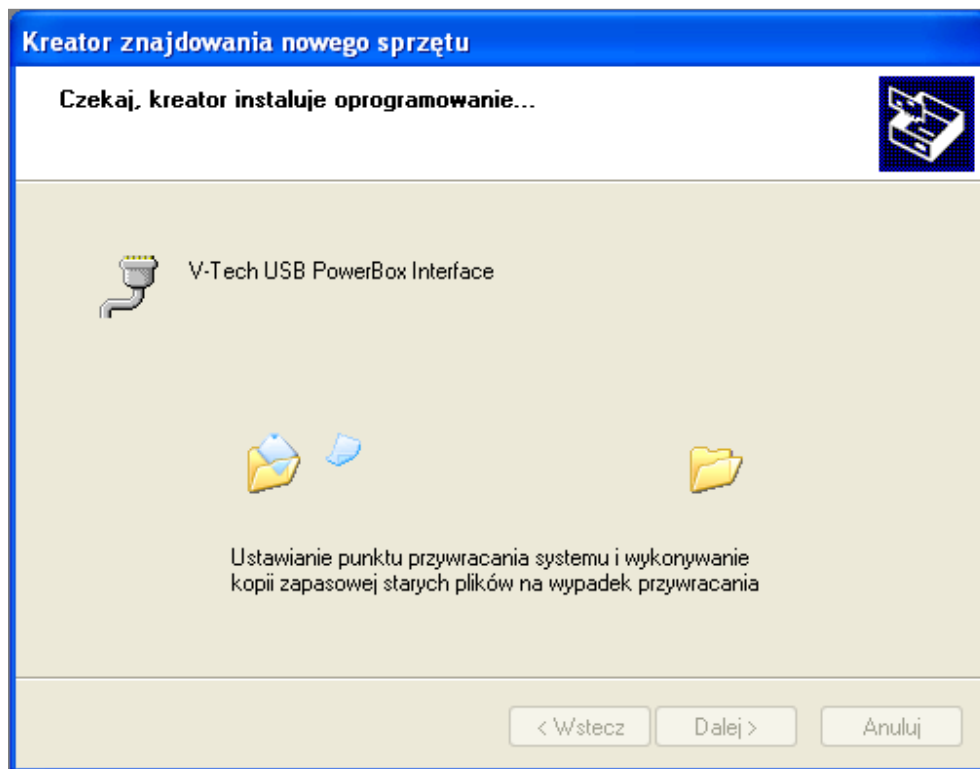
9. Windows will start copying files.



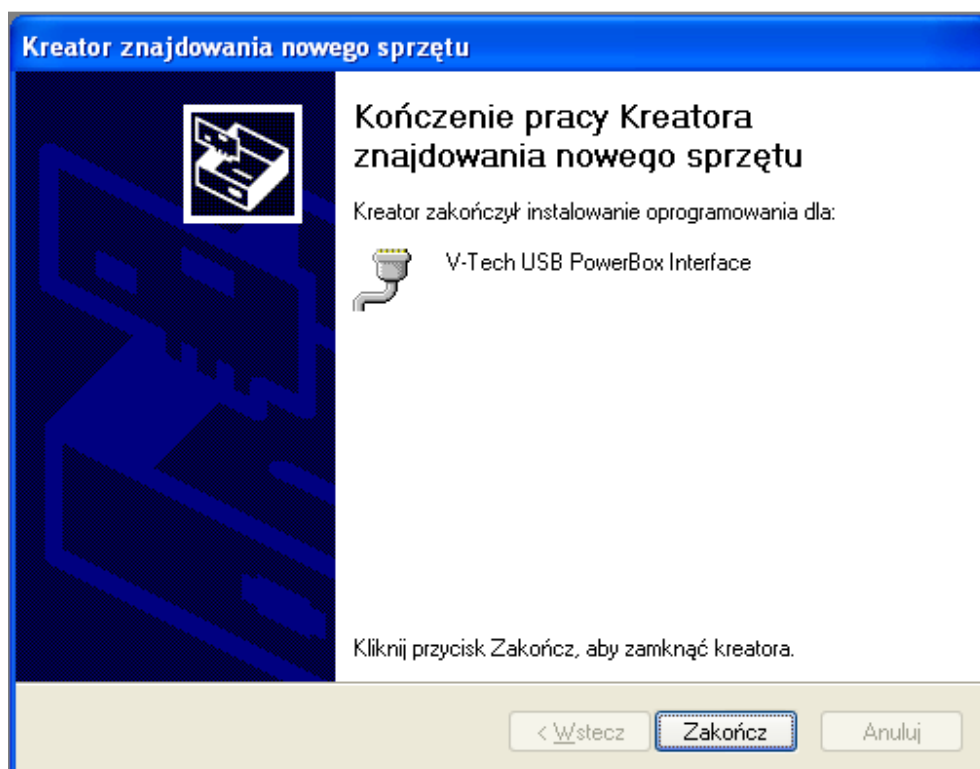
10. You will be informed that drivers has not been tested for compliance with your operating system and asked if you agree to install the drivers that are not digitally signed. Press “Continue anyway”.



11. Windows will create a rescue point and make a backup of old files.

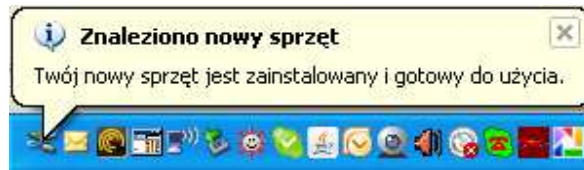


12. After copying of all the files Windows will inform you that the installation has been completed. Press "Finish".

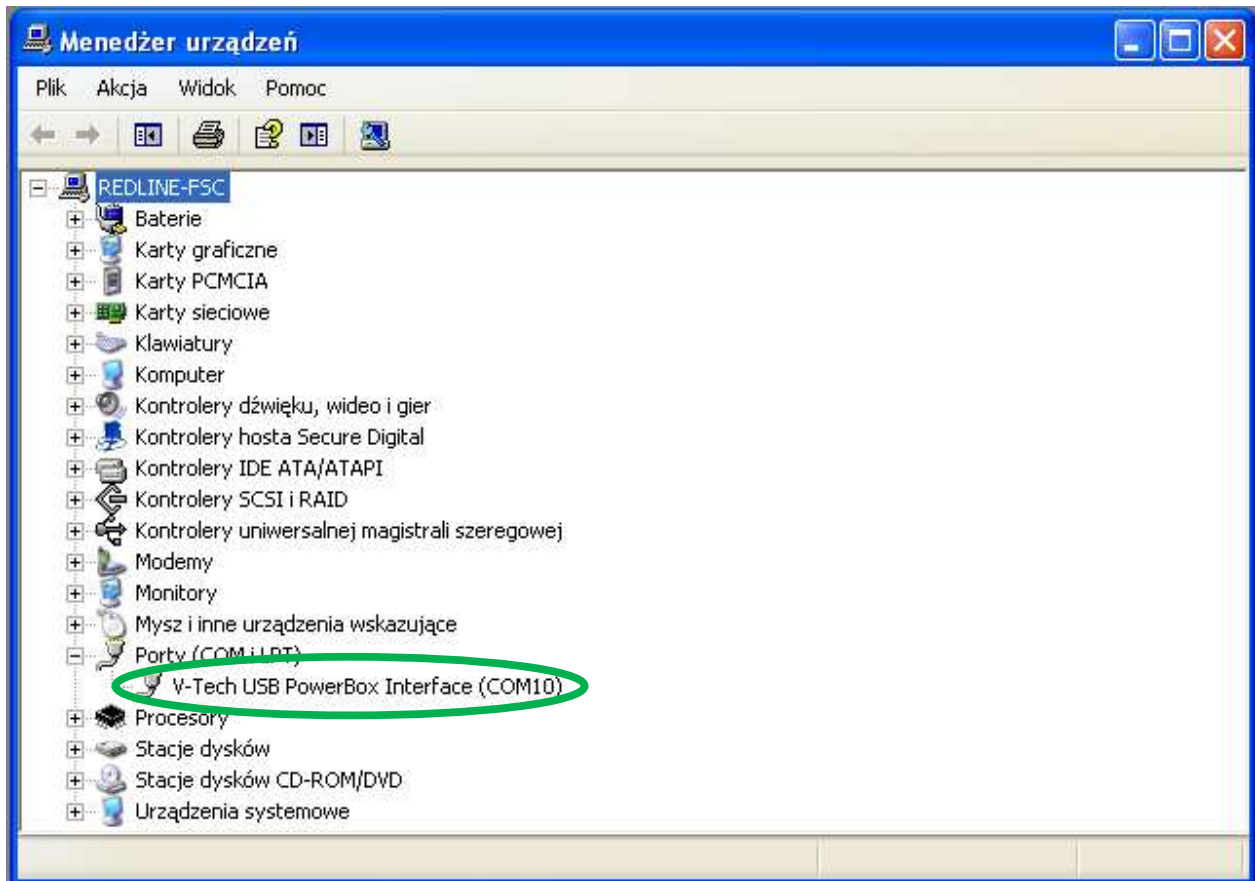


13. Depending on the USB cable hardware revision and the version of your operating system steps 4 to 12 might be repeated once more.

14. At the end of the drivers installation procedure Windows will inform you that the new hardware has been installed and is ready for use.



15. You should notice the number of created COM port. Launch Windows Hardware Manager according to your Windows manual (e.g. Start / Settings / Control Panel / System, then tab "Hardware" and press "Hardware Manager"). In our example the port is COM 10 (green circled on the picture below).



All the pictures in driver installing procedure have been made using Windows XP Home Edition, Polish version. If you use a different language and/or Windows Vista instead of XP you will have a bit different information displayed however the whole installation process will run very similar way.

Chapter 3

Connecting box to PC

Before connecting box to PC you have to connect box to the engine of your car. Please follow the separate box installation manual.

Below steps take into consideration that box has already been connected to the engine.

1. Unscrew the box back plate (the one without cables outgoing from the box).
2. Connect USB cable to mini-USB port in the box (blue circled on the below picture).

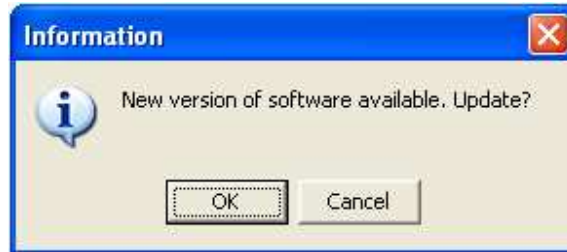


3. Start the engine. The green LED (Light Emitting Diode, green circled on the above picture) in the box should constantly light informing you that the box is powered.
4. Connect the USB cable to your PC. Please remember to use the same USB port you used for installing drivers otherwise you will have to proceed with drivers installation again.

Chapter 4
Launching VT Box Manager

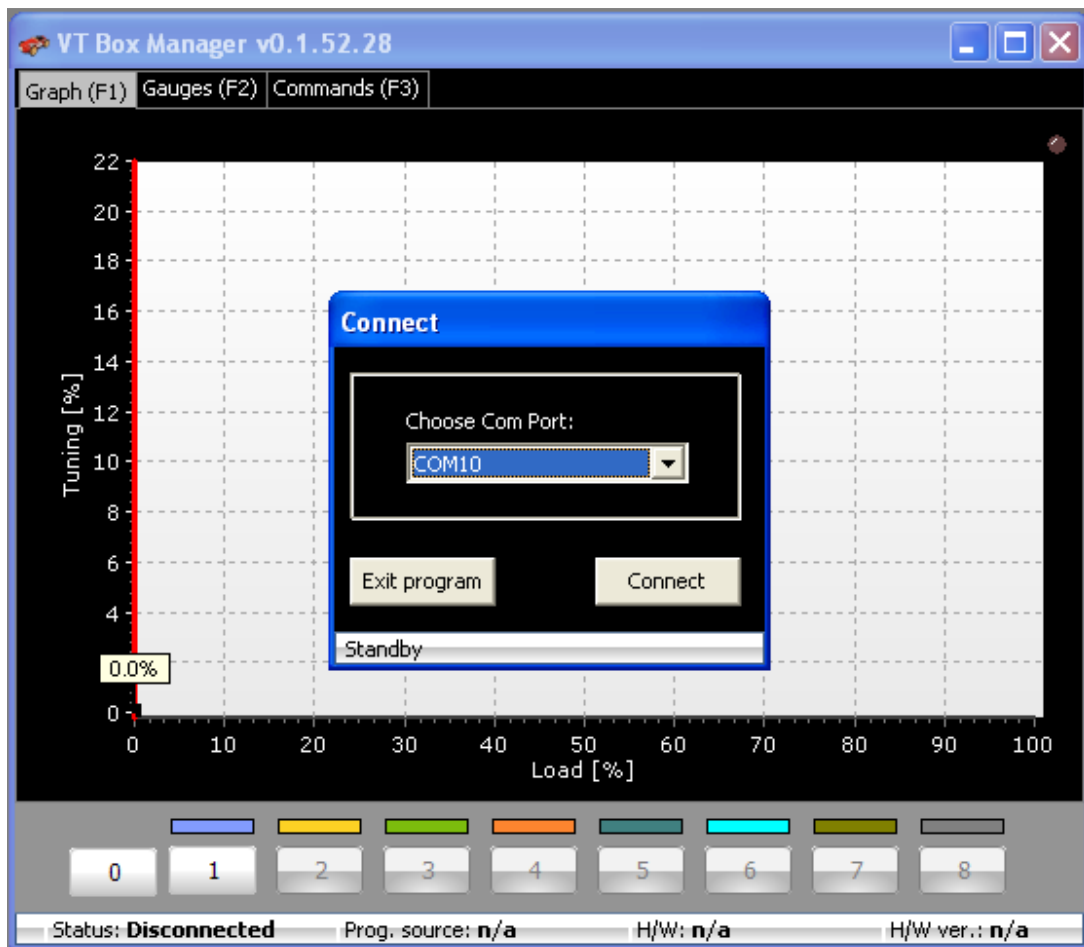
VT Box Manager does not require any installation.

1. Double click file VT_BoxManager.exe At the beginning VT Box Manager is looking if there is any software update available. If there are any updates available the following windows will be displayed.

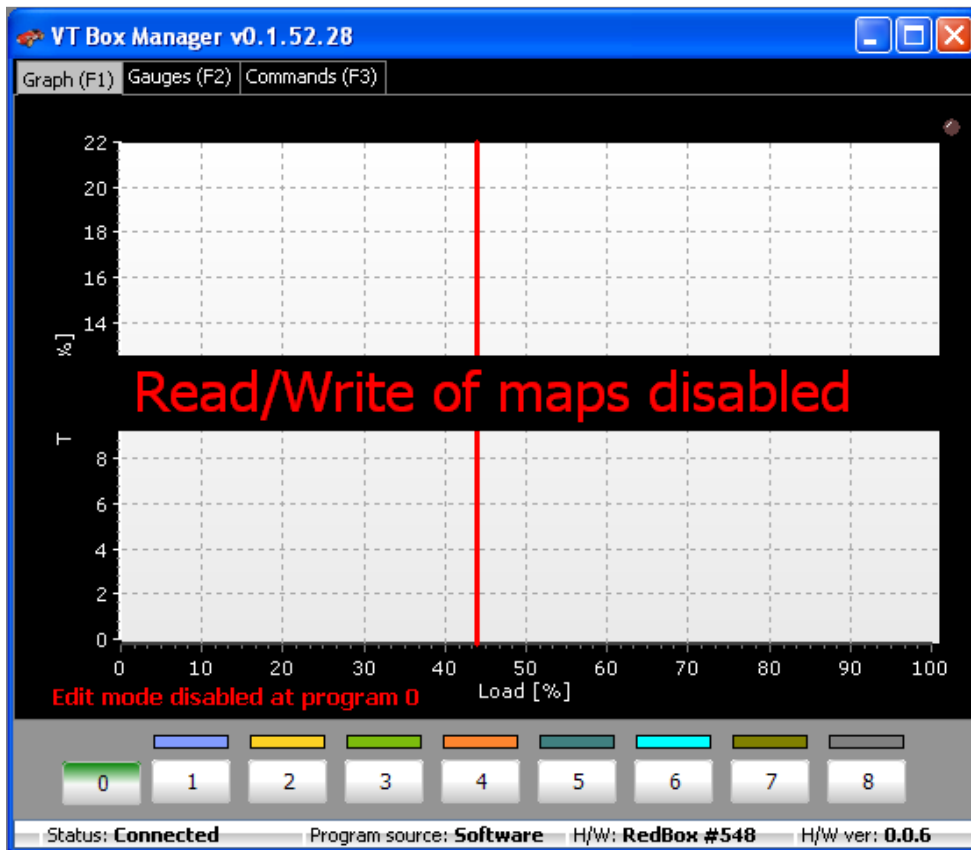


We assume that you have the latest software version – no updates are available. Please note the updating procedure is also possible to be launched manually and is described in the further part of his manual.

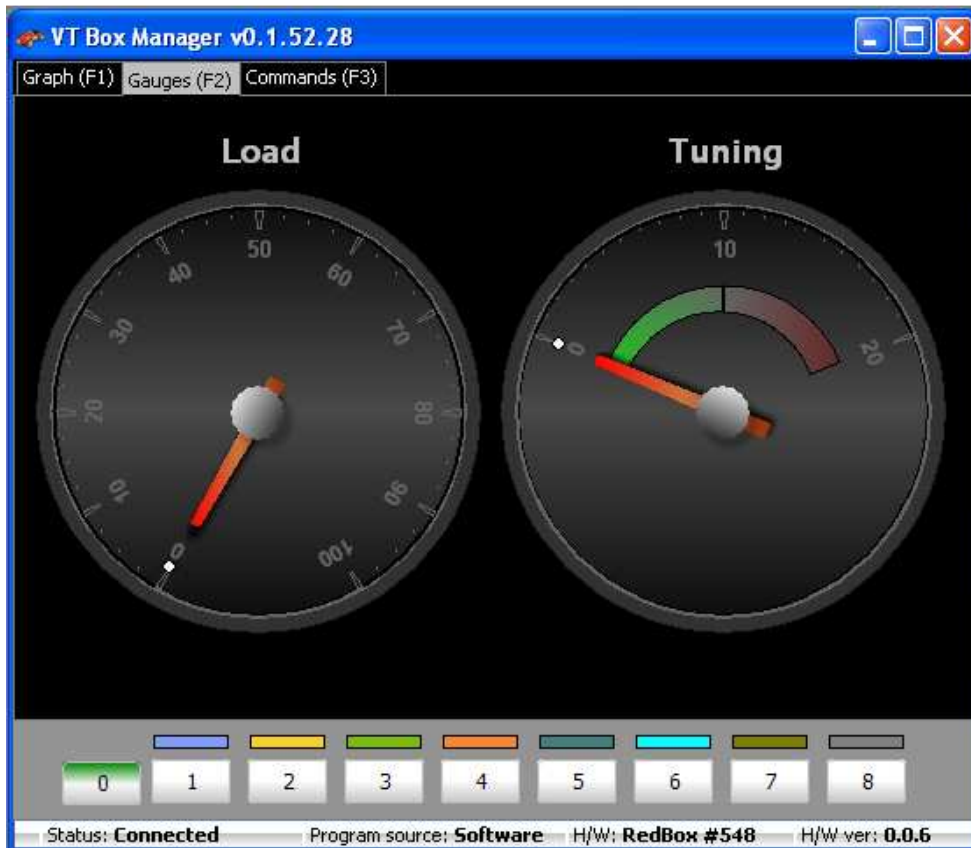
2. If there is no update available – or if you pressed “Cancel” in the previous window – the new window will be launched and you will be asked to choose the COM port. Please select the port you noticed in step 15 of procedure described in chapter 1 – in our example this is COM 10.



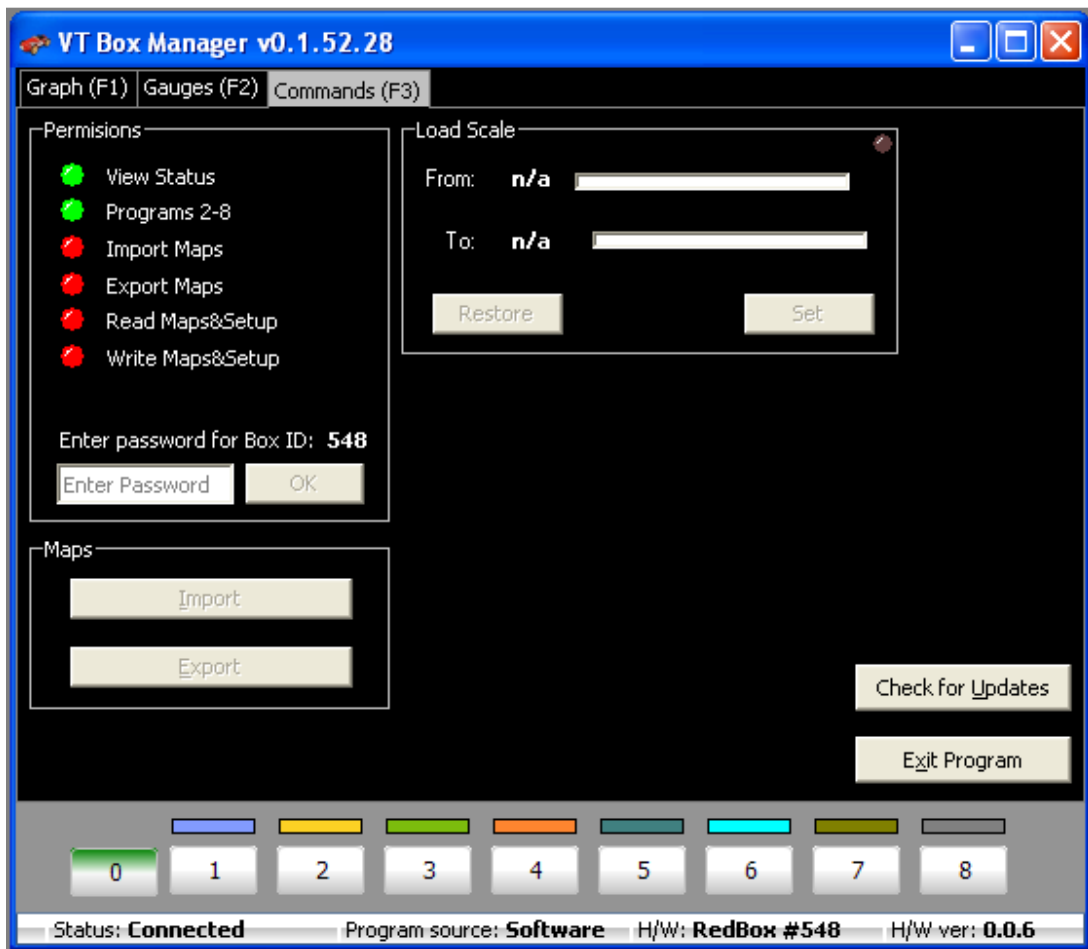
3. If there is a proper communication between box and PC the window will switch to the one below.



4. By pressing F2 or clicking tab "Gauges (F2)" you can move to the Gauges screen showing you two virtual gauges – current engine load and current tuning level. You can observe these gauges while driving.



5. By pressing F3 or clicking at tab "Commands (F3)" you can move to the Command screen where you can setup several box functions.

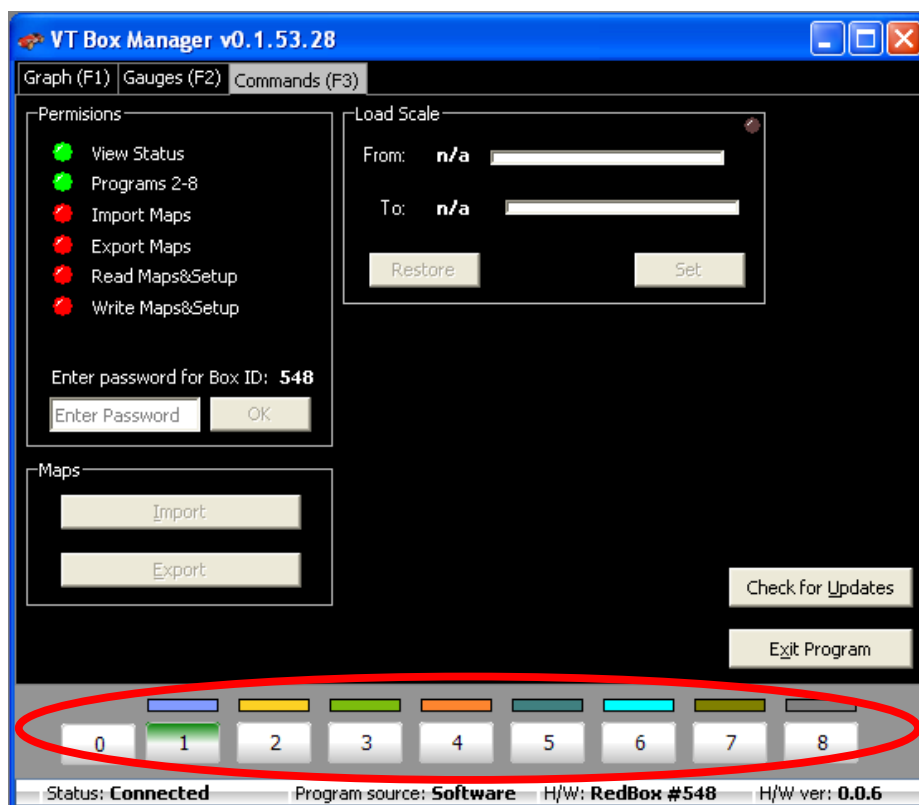


Chapter 5
Selecting the required program

You can change the required program with a rotary switch available under the back plate – green circled on the below picture. Moving a switch to position “0” will select a flat program – i.e. the characteristics are not changed and the engine is not tuned at all.



By moving a rotary switch to position “9” you make it possible to switch the program remotely from every screen of VT Box Manager (Graph, Gauges and Command) – the virtual switch is available at the bottom of each screen (red circled on the below picture). In the further part of this manual we assume the rotary switch is in position “9”.



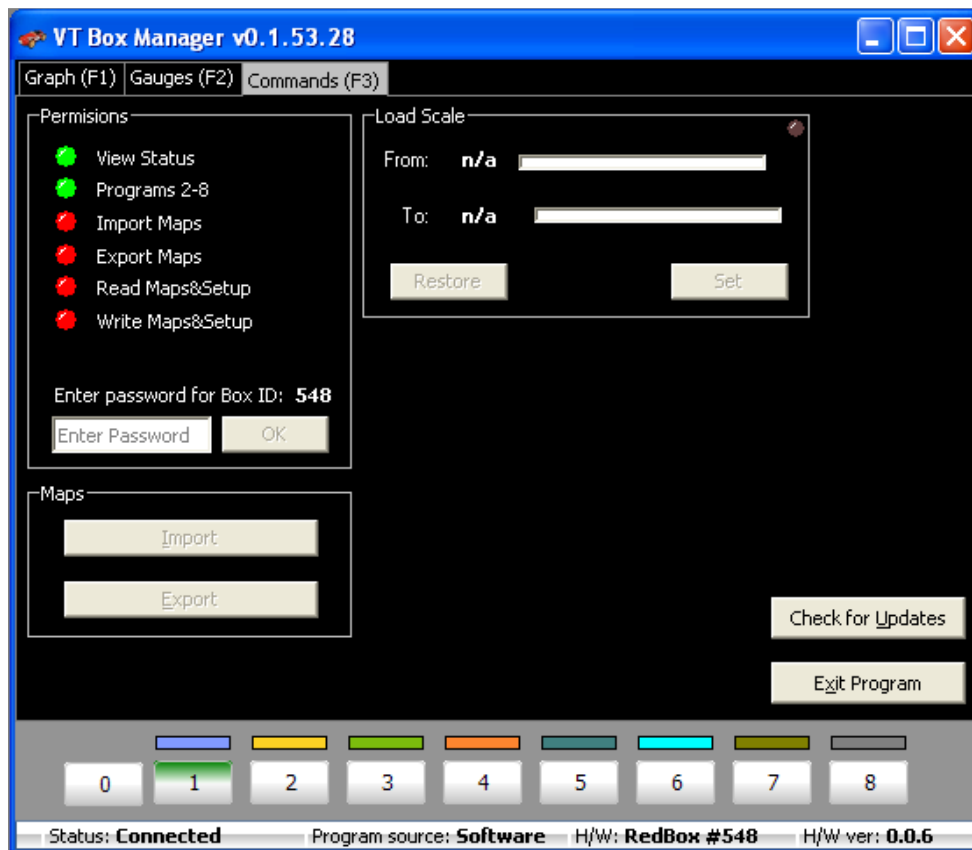
Chapter 6 Command screen

Command screen makes it possible to:

- 1) control and extend the functionality of your box by entering unique passwords (“Permissions” window)
- 2) import/export maps (“Maps” window)
- 3) change the scale in Graph screen (“Load Scale” window)
- 4) check for updates (“Check for Updates” button)
- 5) exit VT Box Manager application (“Exit Program” button)

How to extend box functionality

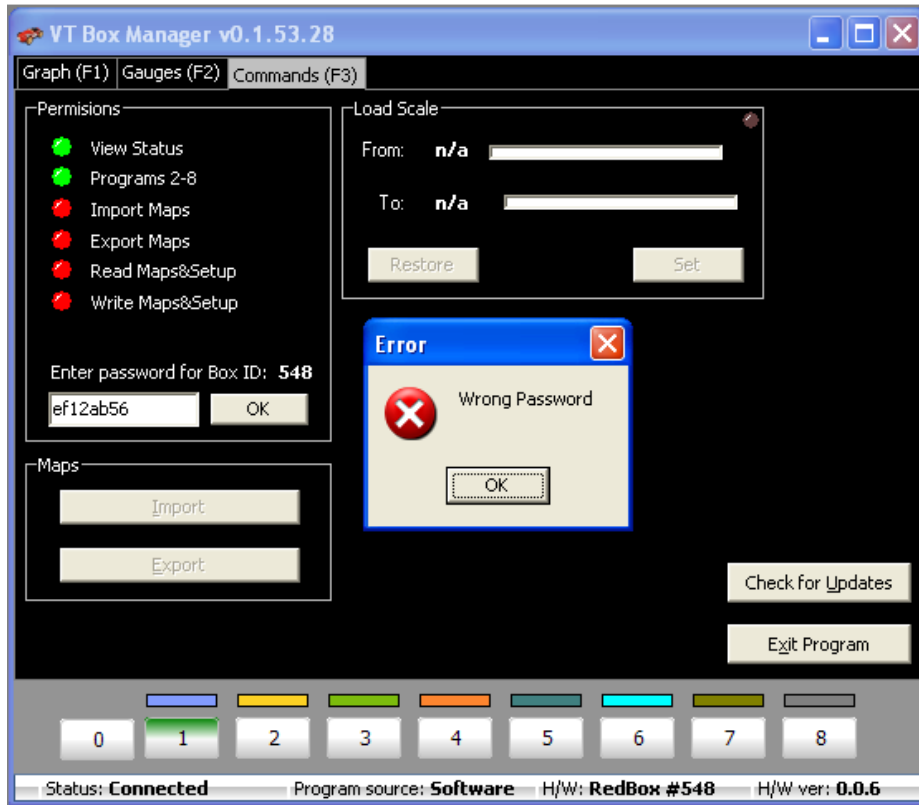
Each functionality is indicated by virtual Permissions LEDs which might be either red (functionality not available) or green (functionality available). In the example below, it’s allowed to view box status and use programs from 2 to 8 (please note in GreenBox programs from 2 to 8 will not be allowed) and it’s not allowed to perform import/export operations nor edit the programs in box memory.



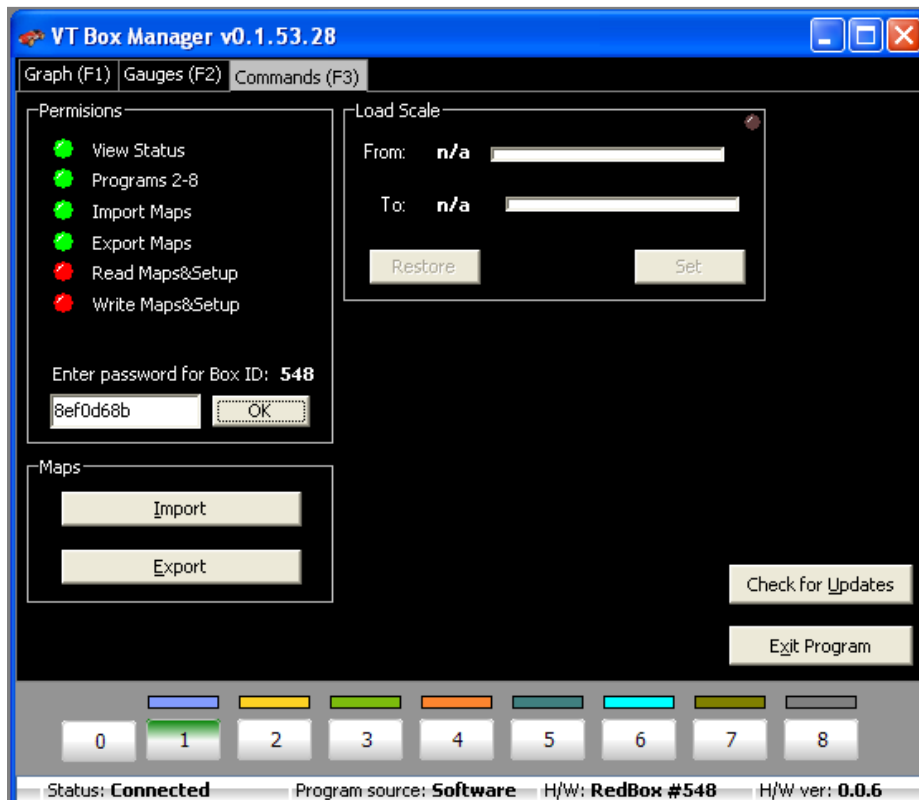
To extend functionality the correct password has to be entered. There are several passwords available. Each of them is unique and matches only the particular box. To get a password please send e-mail to order@v-tech-tuning.eu in which you indicate your box unique ID (in the example below the ID is 548) or contact your dealer. Following passwords are available:

- 1) L2 password which allows to import/export maps (a map is the amended engine characteristic). This password is available only to your dealer.
- 2) L1 password which allows to import/export and to edit maps. This is a single usage password, required each time the box is connected to PC. This password is available only to your dealer.
- 3) L0 password that fully unlocks the box and makes it possible to import/export and edit maps without necessity to enter L1 password. This password also converts GreenBox to RedBox Professional. This password is available for the end-users of GreenBox and RedBox Standard upon separate payment. To order L0 password please send an e-mail to order@v-tech-tuning.eu in which you indicate your box unique ID or contact your dealer. L0 password comes in a package together with USB cable.

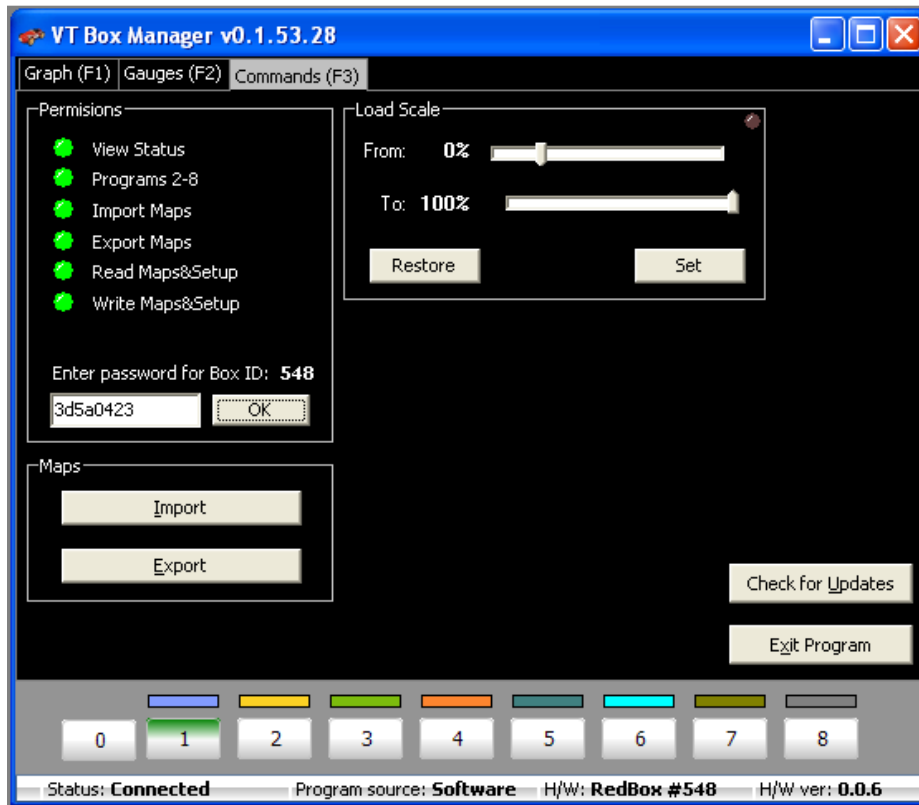
If you want to extend required functionality the correct password should be entered in “Enter Password” field. After entering the right password press “OK” button. If the password is correct the virtual Permission LED will change from red to green. If you enter wrong password you will get the below information – press “OK” and re-enter password.



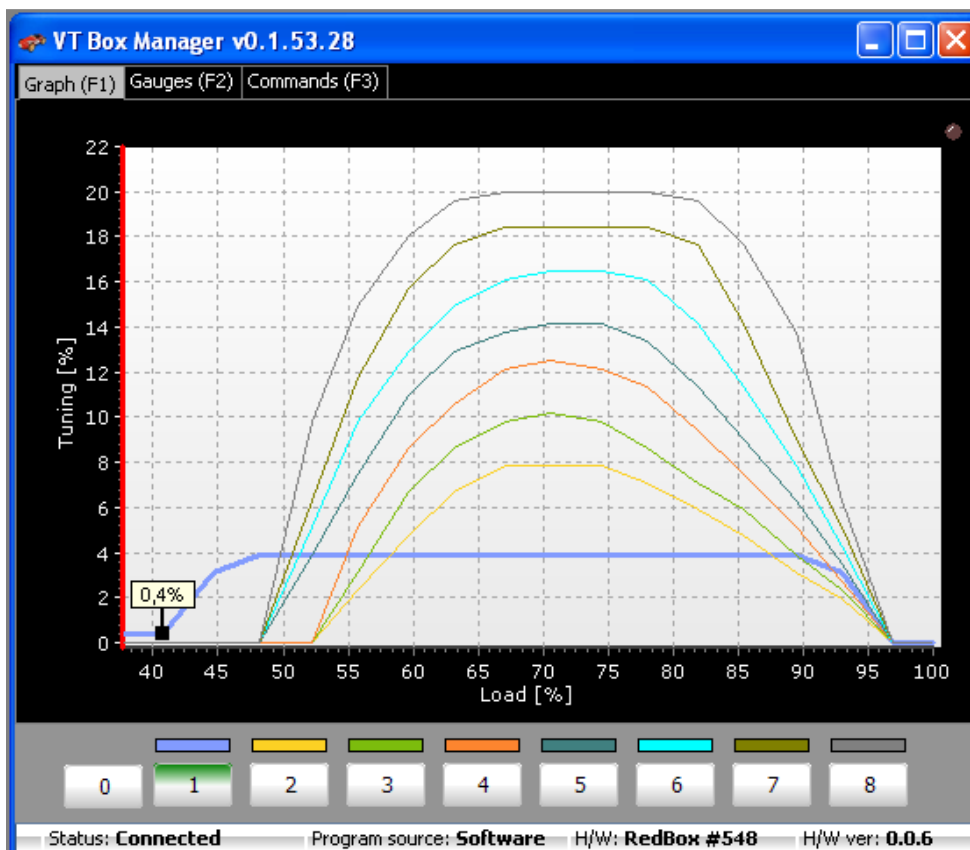
Below you can find an example of screen after entering the correct L2 password. Please note buttons “Import” and “Export” are now available.



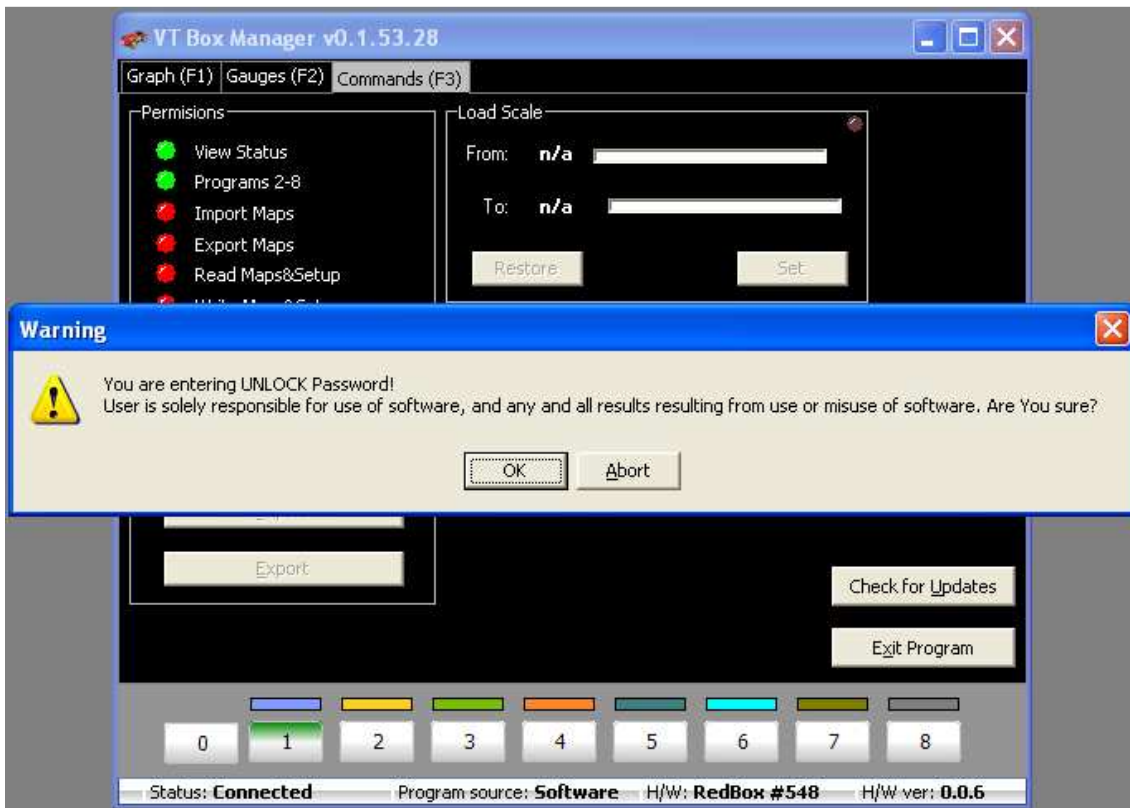
If you enter the correct L1 password the Command screen will change to the one below. Please note buttons “Import” and “Export” as well as “Load Scale” window (“From” and “To” slides, “Restore” and “Set” buttons) are now available.



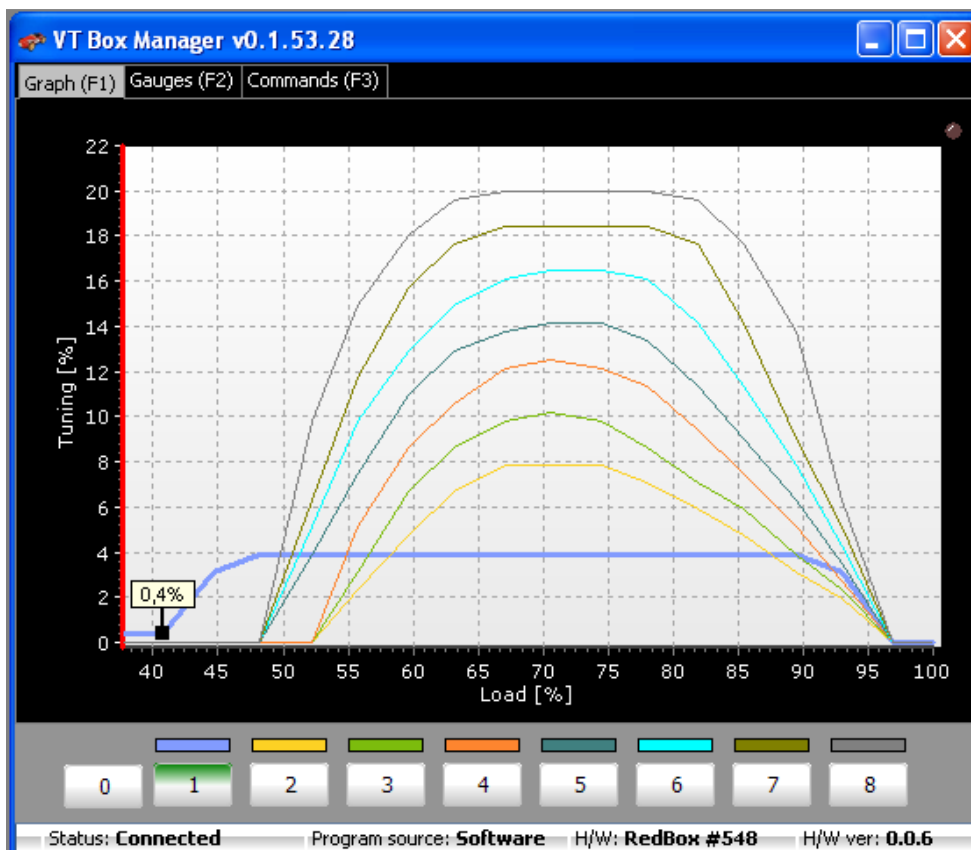
You should also notice that Graph screen will differ – it should look similar to the picture below.



When you enter the correct L0 password you will get additional information as below.



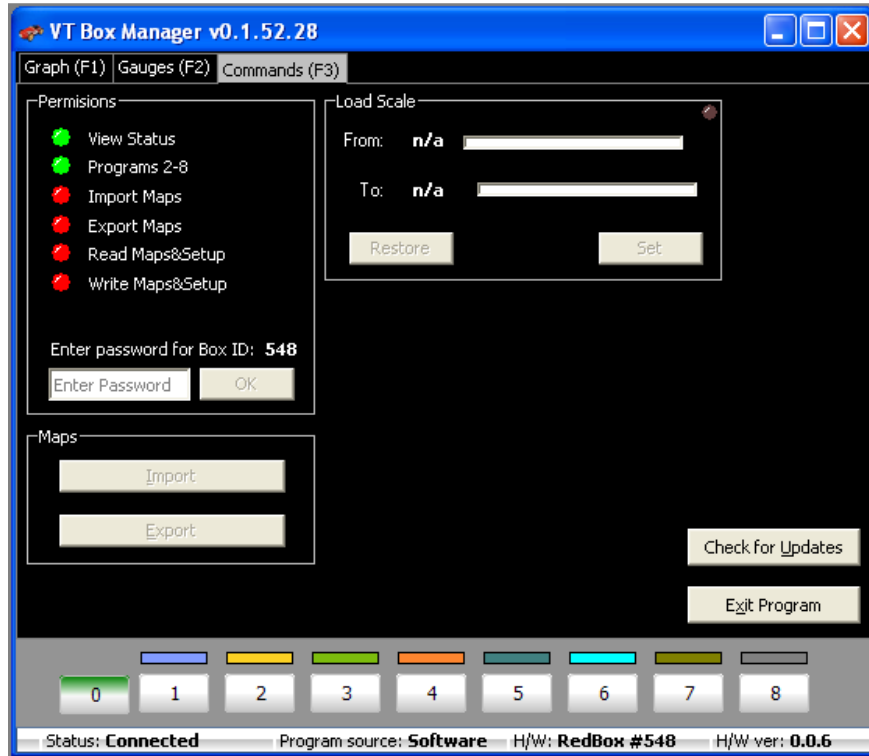
Pressing OK means you unlock the box permanently under condition that you are solely responsible for all the results of using the software. This will also change the Graph screen to similar to below picture.



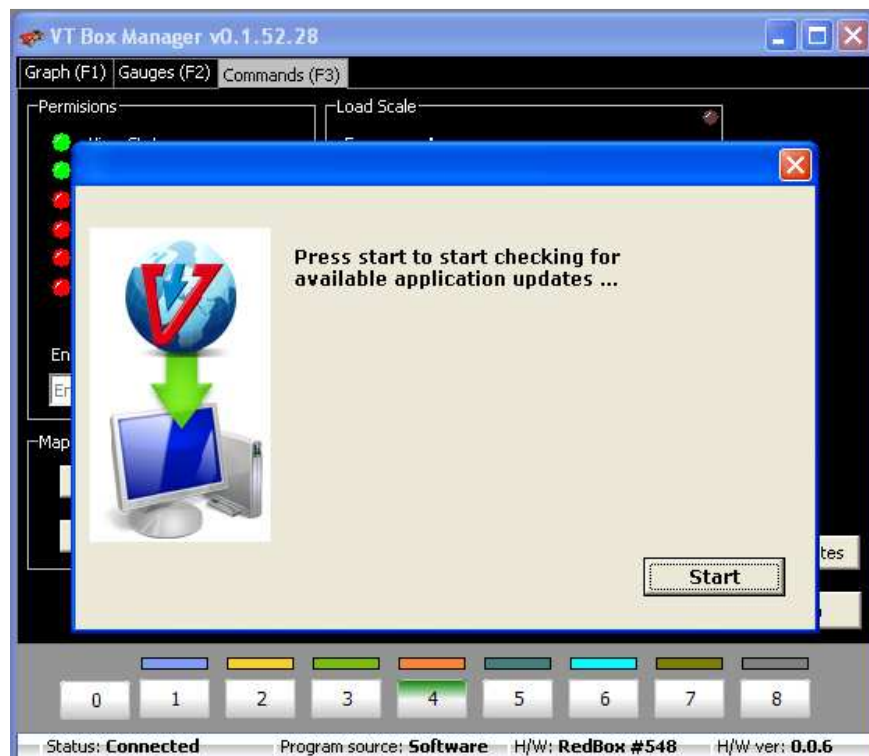
Updating VT Box Manager application

Every time you launch VT Box Manager it searches for any software updates – see step 1 of procedure described in chapter 3. To manually update VT Box Manager application please follow the below procedure.

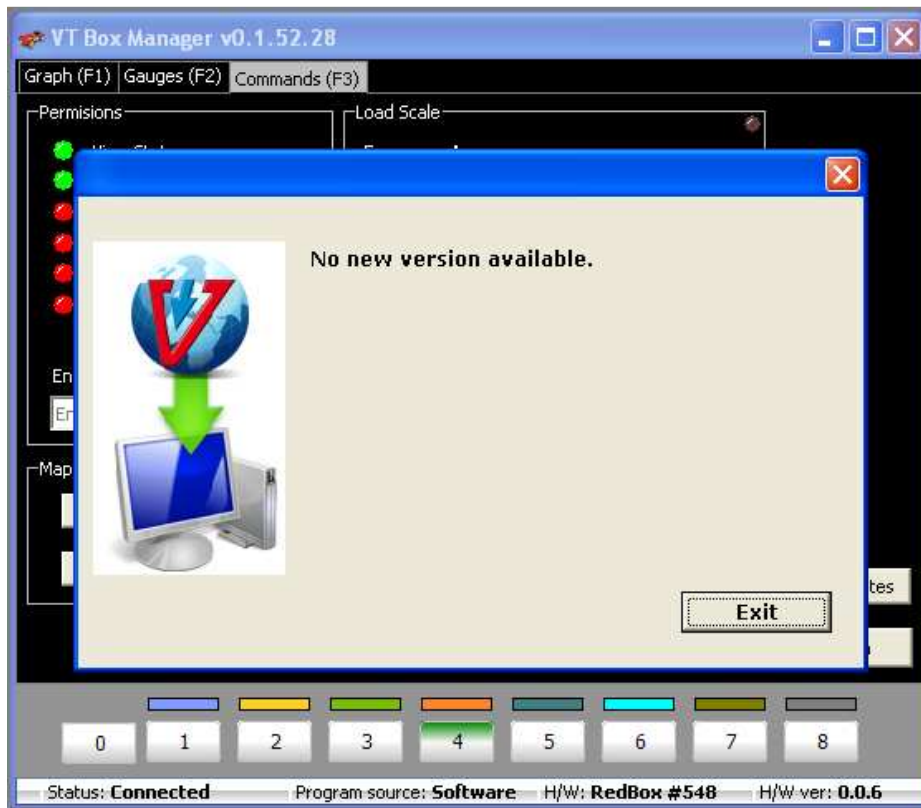
1. Press “Check for Updates” in the Commands screen.



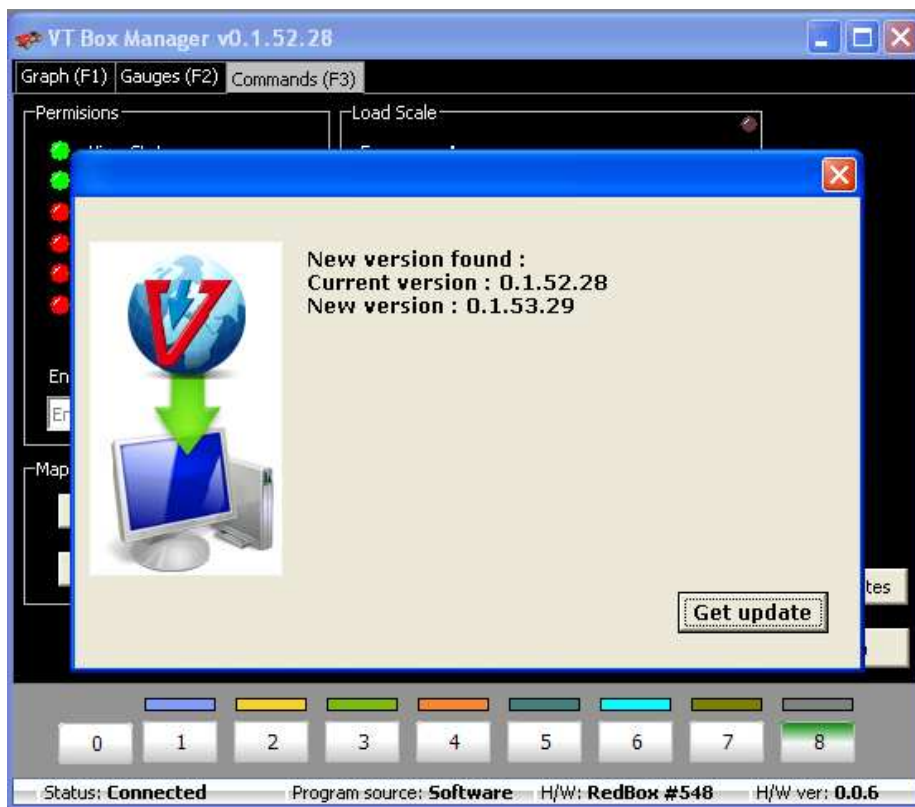
2. The below window will be displayed. Press start to begin searching for updates.



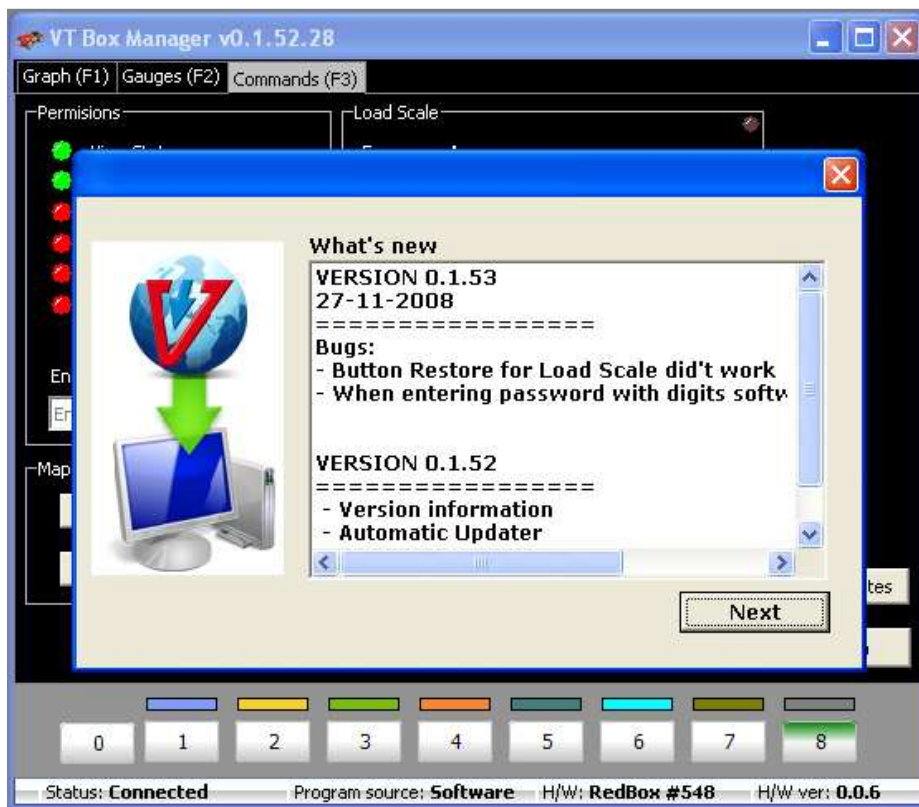
3. If there are no updates available the below window will be displayed. Press “Exit” to return to Command screen.



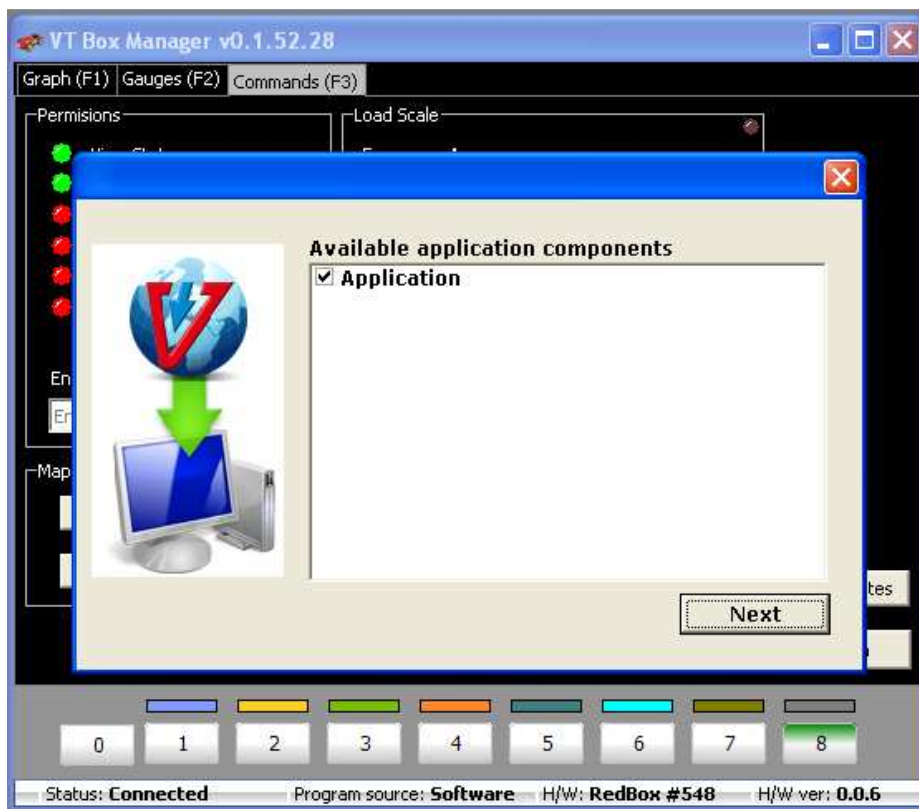
4. If there are any updates available the below window will be displayed. Press “Get update” to begin automatic update procedure.



5. The new window will be displayed, showing detailed update information. Press "Next" to proceed.



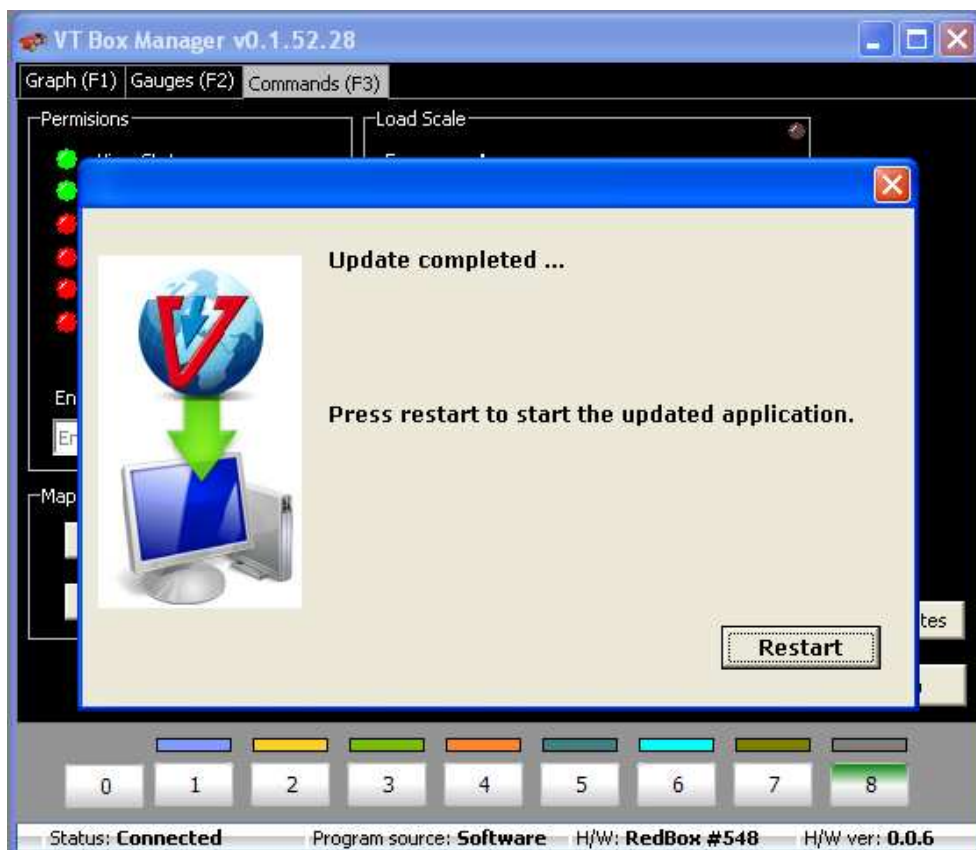
6. The new window will be displayed, showing components that will be updated. Please do not uncheck any component and press "Next" to begin downloading.



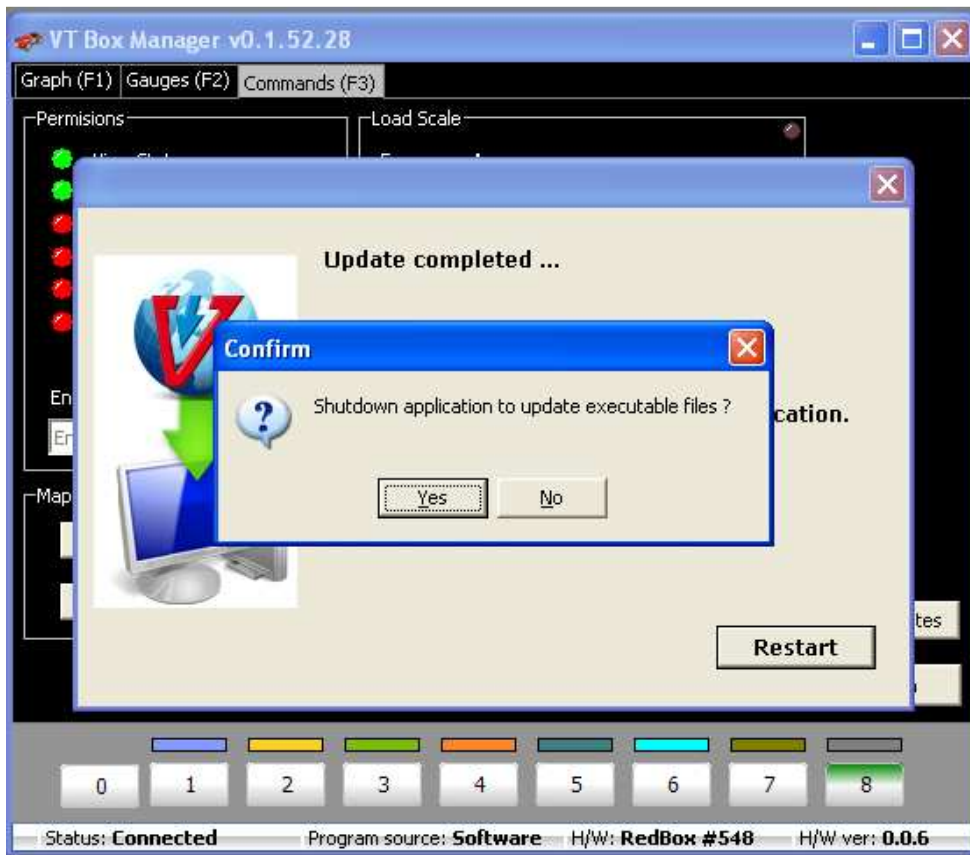
7. The new components are being downloaded...



8. After successful downloading you will be asked to restart the application. Press "Restart" in the below window.



9. Confirm beginning of updating files on your hard disk by pressing “Yes” in the below window.

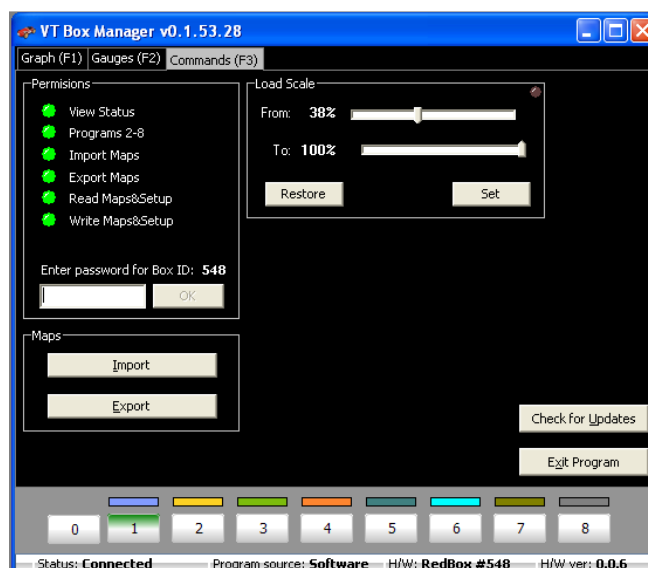


10. VT Box Manager application will now close, update executable files and start again automatically. There is no need to start it again manually.

11. The procedure of automatic updating that is launched every time you launch VT Box Manager (see step 1 of procedure described in chapter 3 and assume you answered “OK”) runs in the same way.

Exiting VT Box Manager

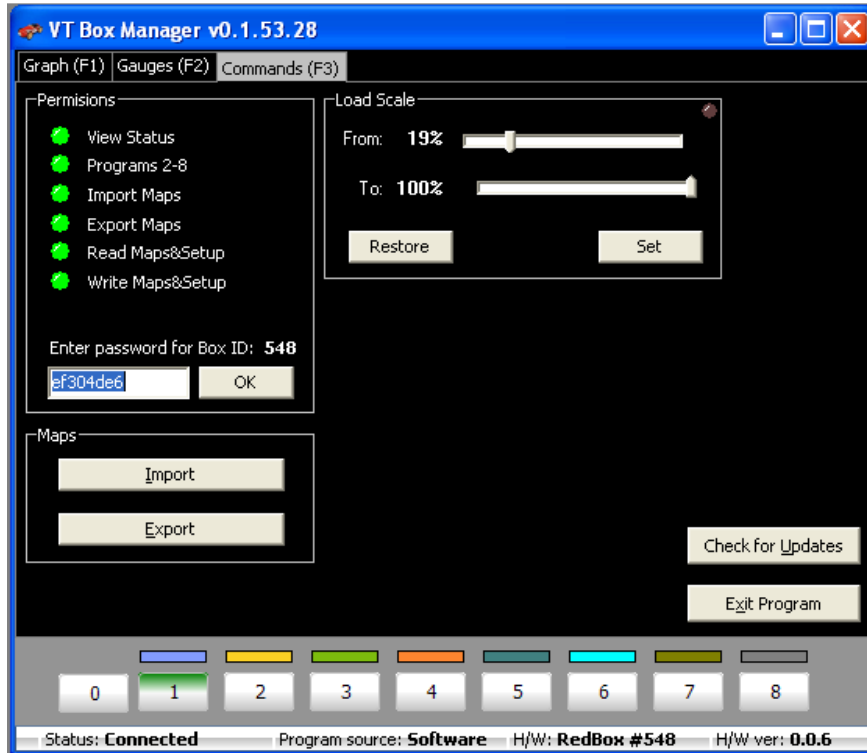
Simply press “Exit Program” button in Command screen.



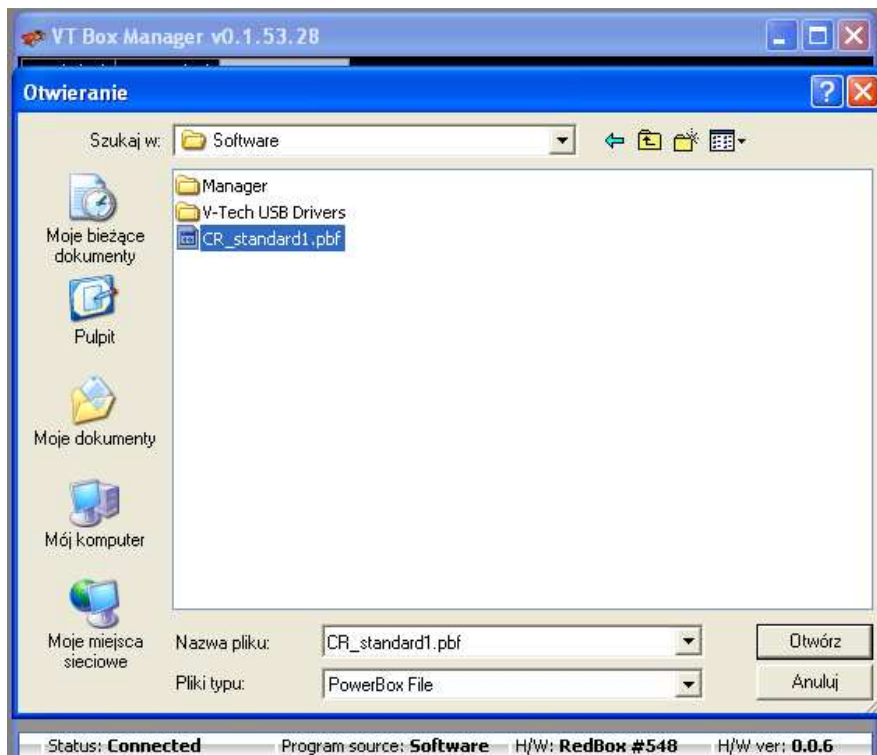
How to import and export maps

To import maps please follow the procedure described below.

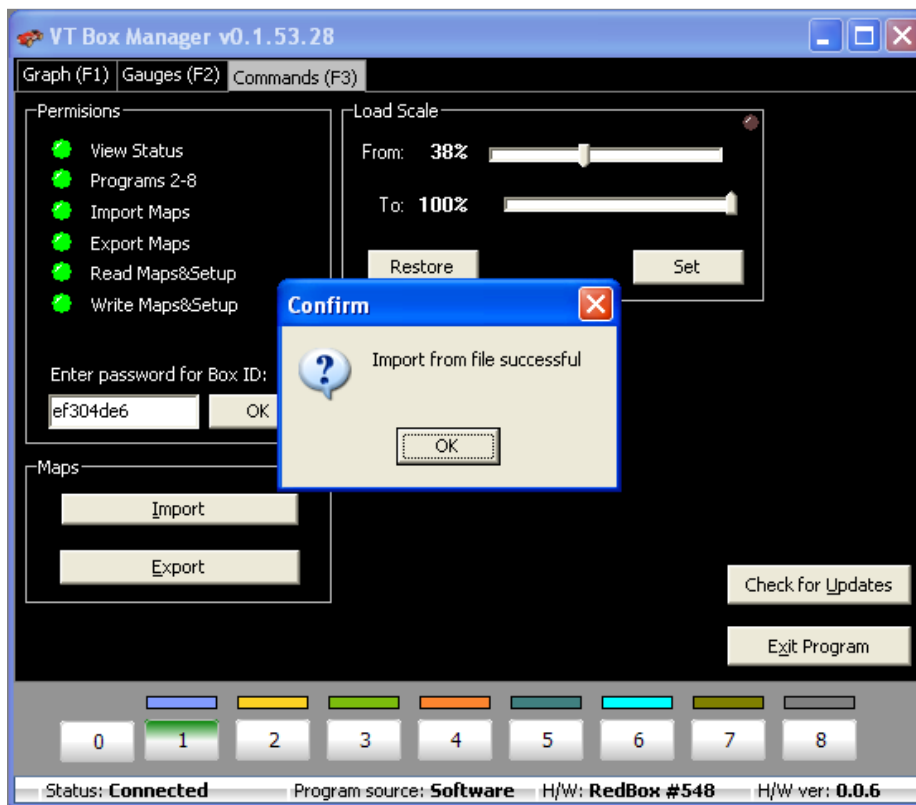
1. Go to Command screen.



2. Press "Import". When the new window pops-up select the file you want to write to box. In the below example this is CR_standard1.pbf.

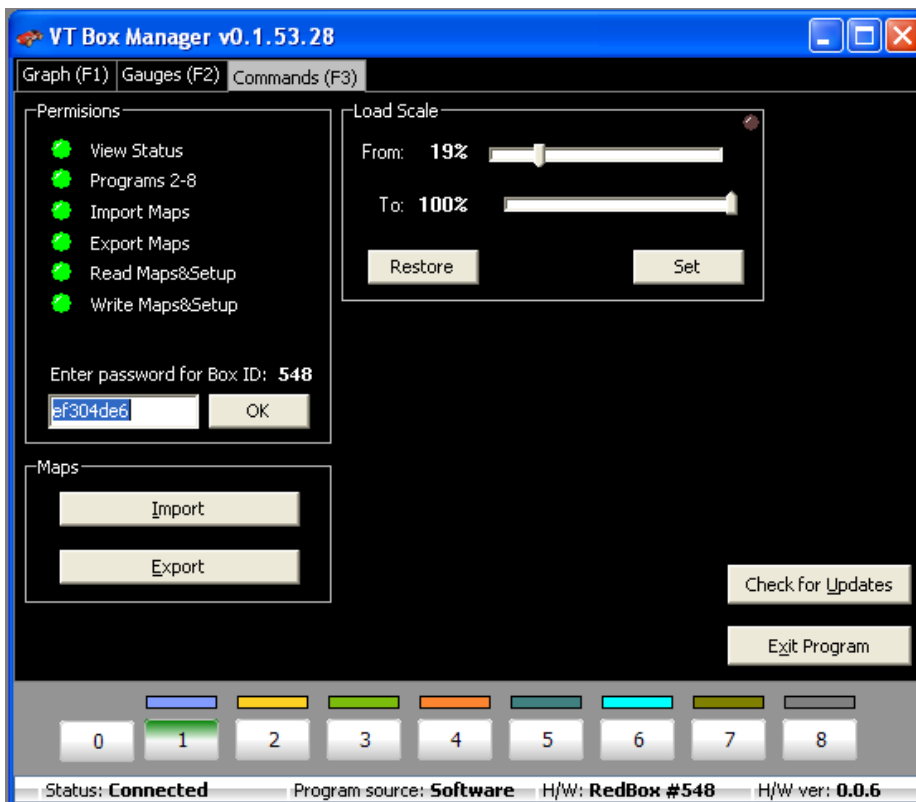


3. After successful import you should get the following information displayed.

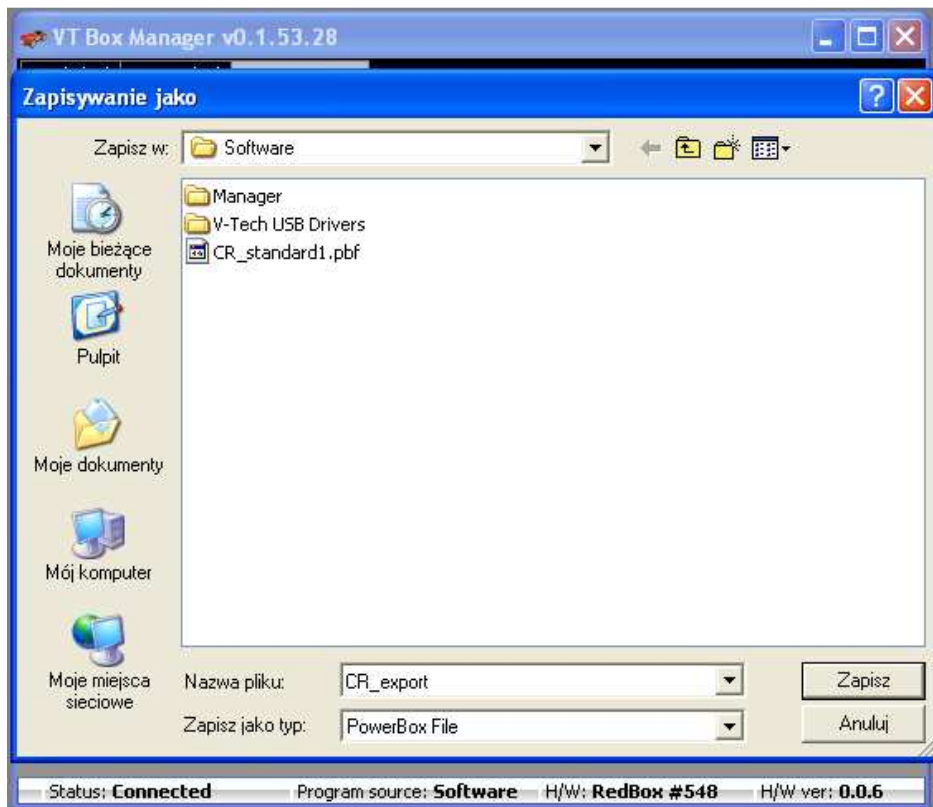


To export maps please follow the procedure described below.

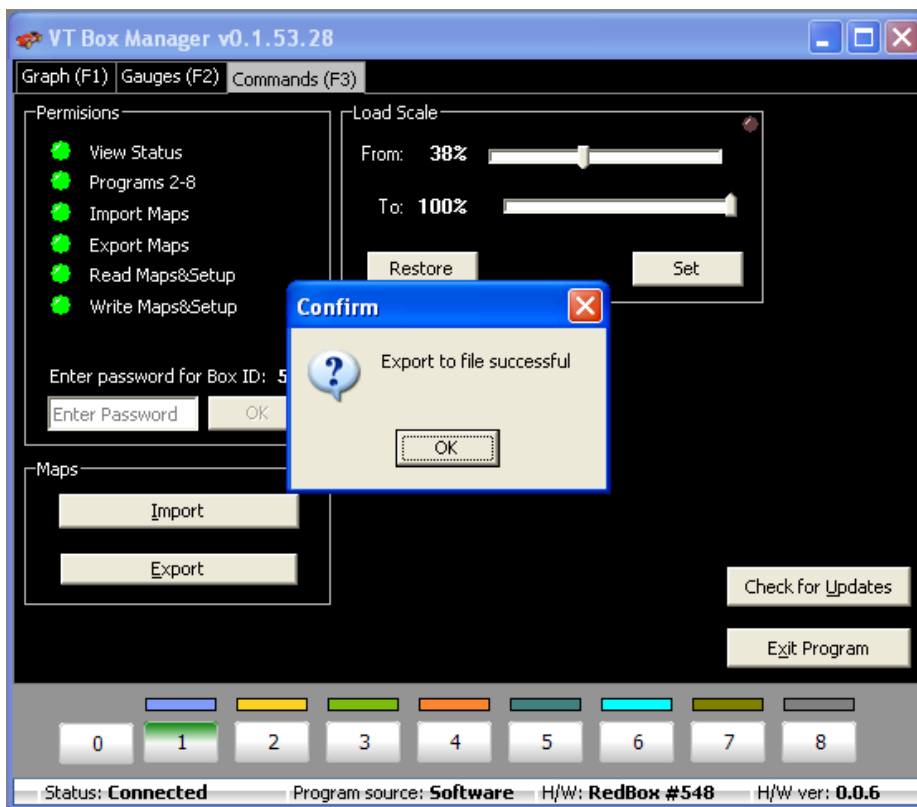
1. Go to Command screen.



2. Press "Export". When the new window pops-up select the file name and location you want to use for exported maps. In the below example this is CR_export



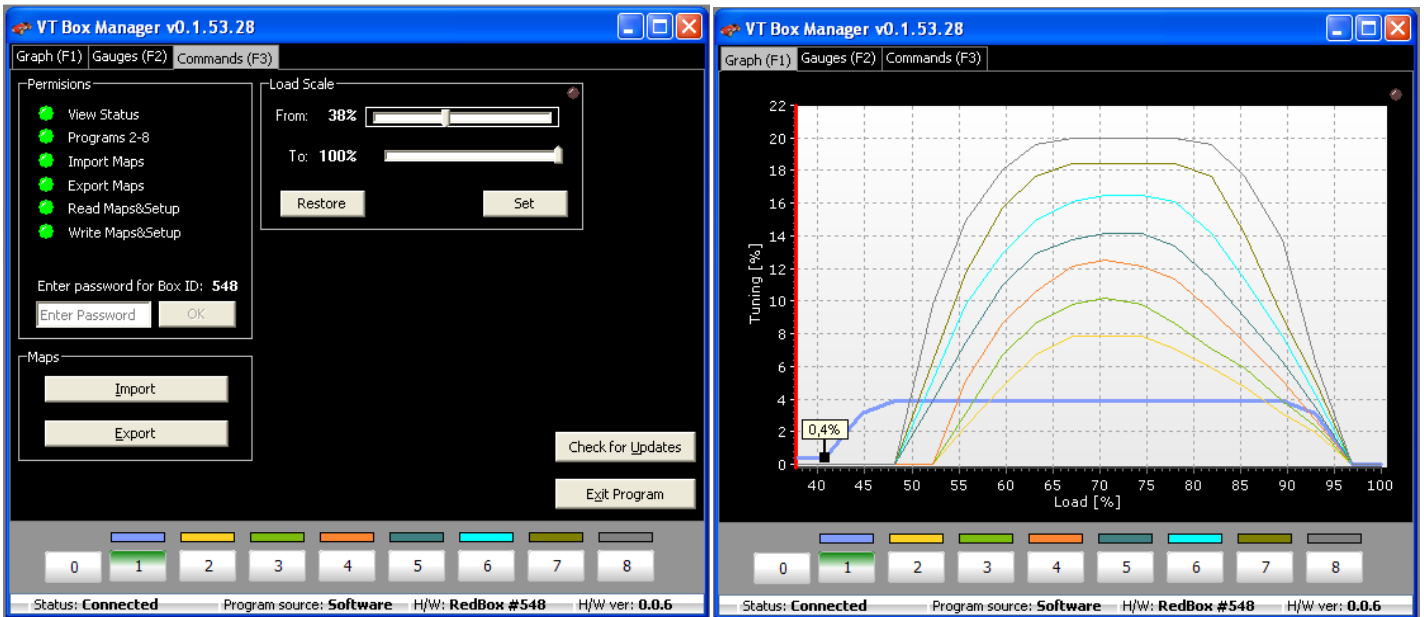
3. After pressing "Save" the file will be saved and you should get the following information.



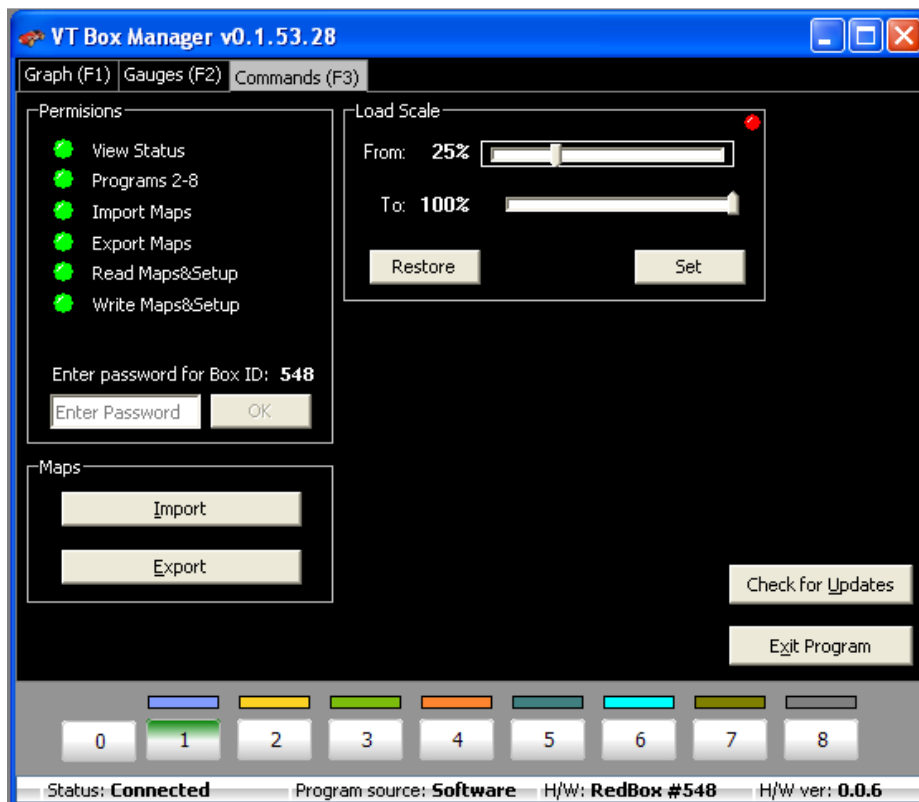
Changing the scale

“Load scale” window in Command screen adjust minimum and maximum values of load available for editing in Graph window. To adjust the required values please follow described below procedure.

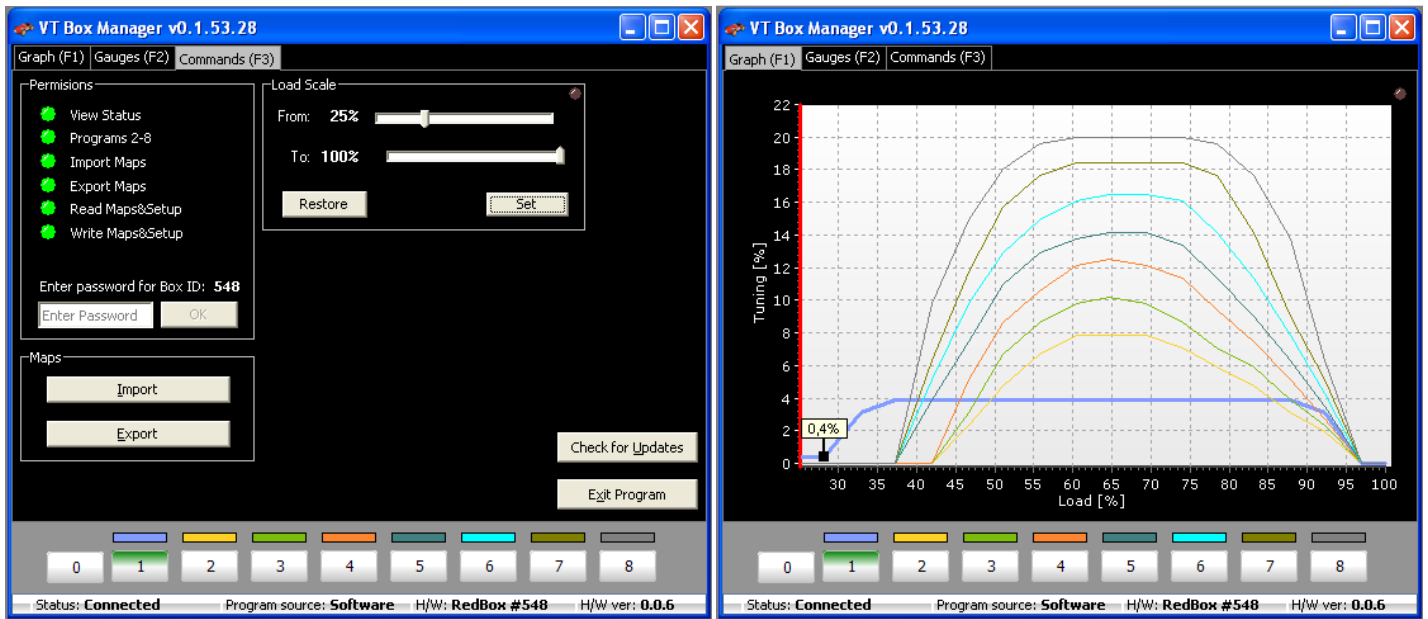
1. Determine the load area for which you want to modify the characteristics. Usually maximum value will be 100%. To determine the minimum value you should observe gauges while driving and read the engine load on the highest gear at the lowest engine rotations. In example below we want to change the minimum value from 38% to 25%. The starting points looks as below:



2. Move the slide to required position. The indicator in right upper corner of “Load Scale” window lights red showing that the new value has not been yet stored in the box.



3. If you want to cancel the change you made – press “Restore”. If you want to store the new value in the box – press “Set”. In the example below “Set” was pressed which gave the following results.

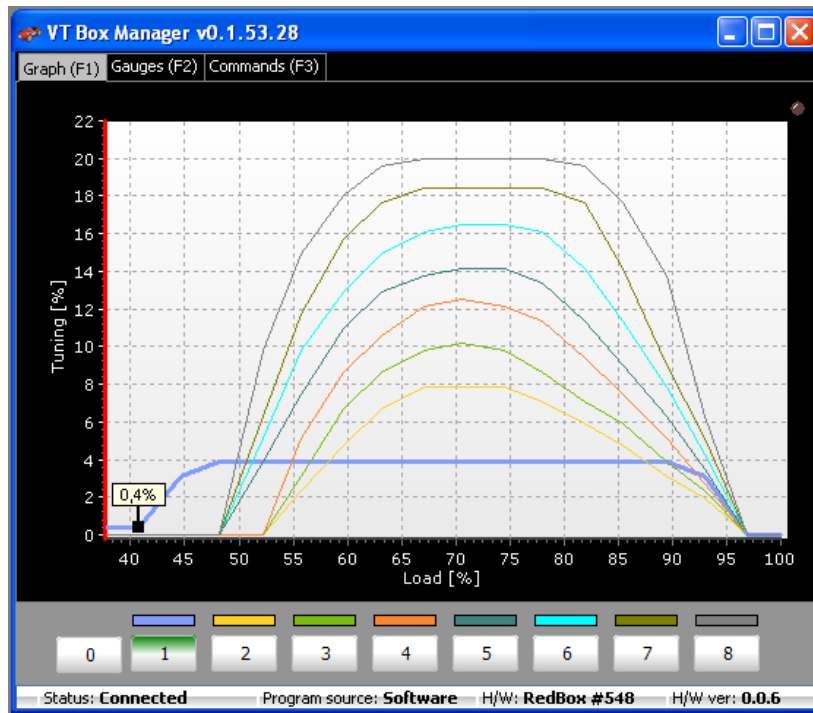


You can see the indicator in right upper corner of “Load Scale” windows turned off and the Load scale in Graph screen extended from 38% to 25%.

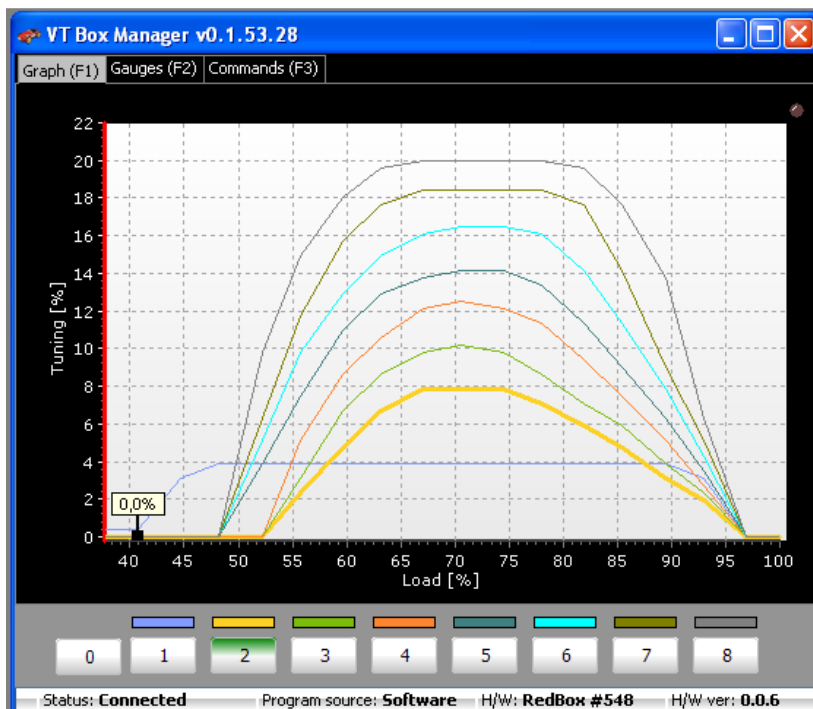
Chapter 7
Graph screen – maps editing

Graph screen allows you to individually tune the box to the engine characteristics of your car, following your requirements. To edit the maps, please follow described below procedure.

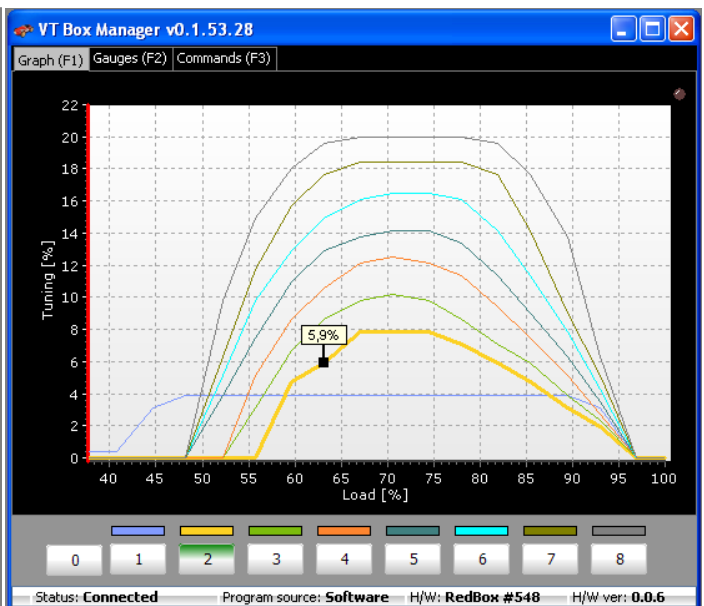
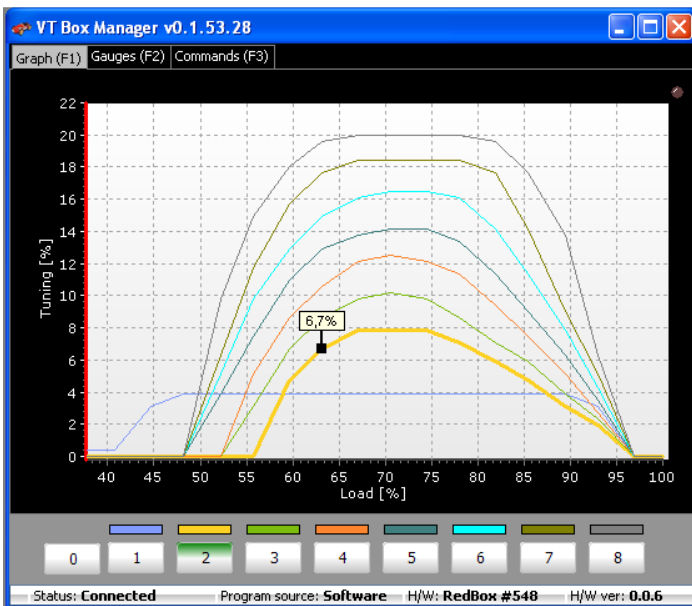
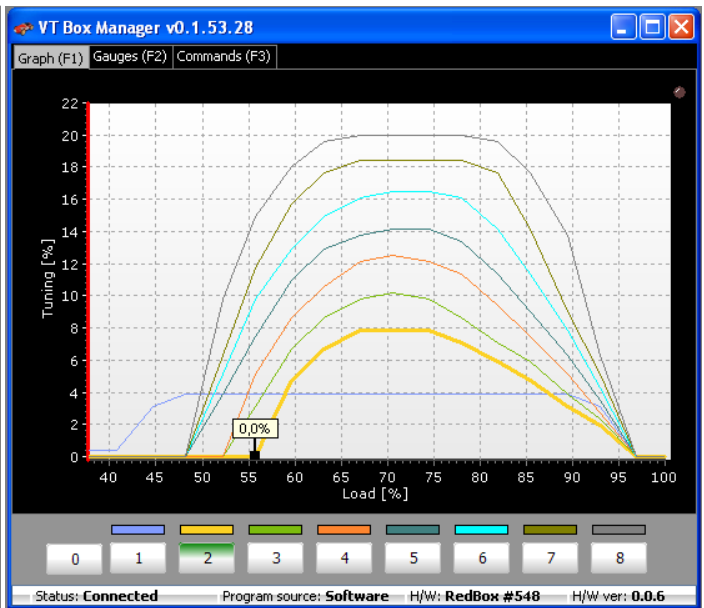
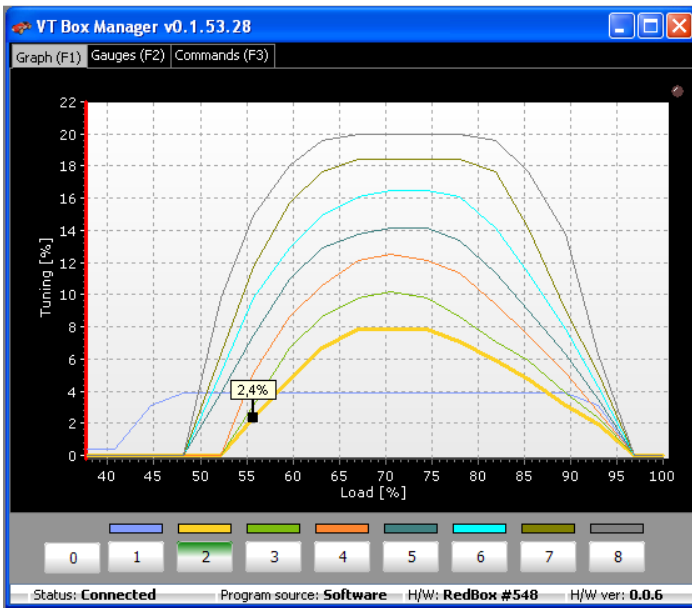
1. Find minimum and maximum values of load factor and set them according to procedure described in chapter 5.
2. Go to Graph screen. Please note currently program 1 is selected.

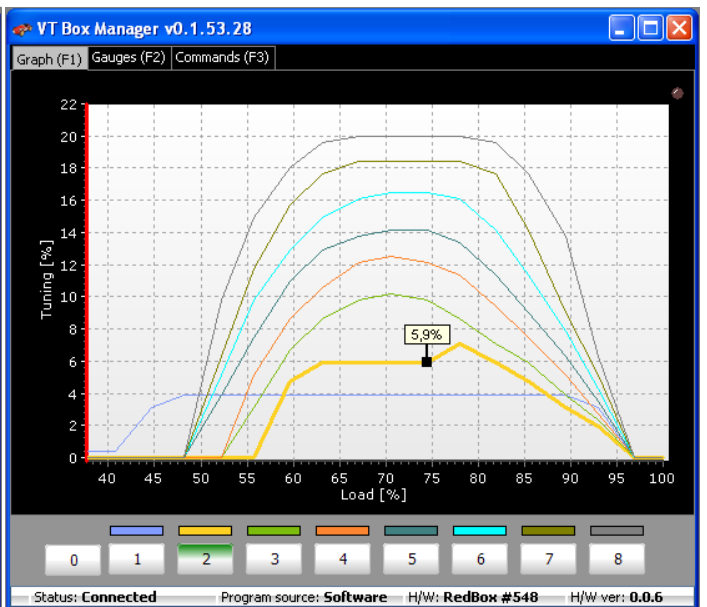
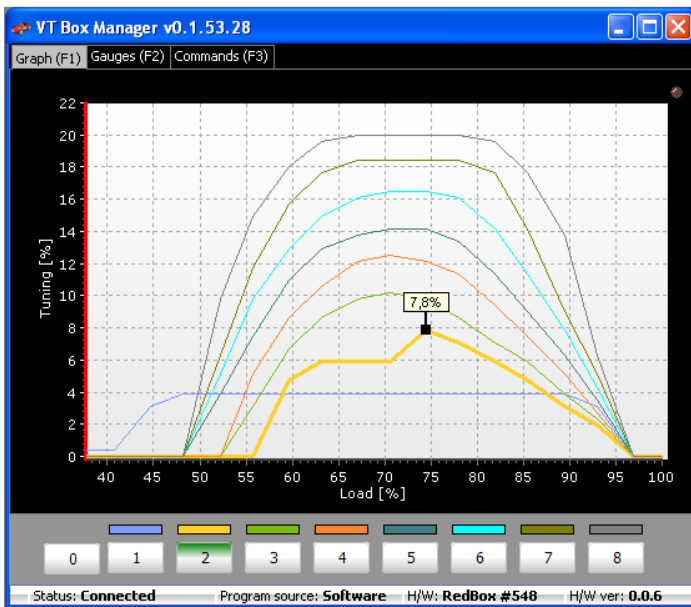
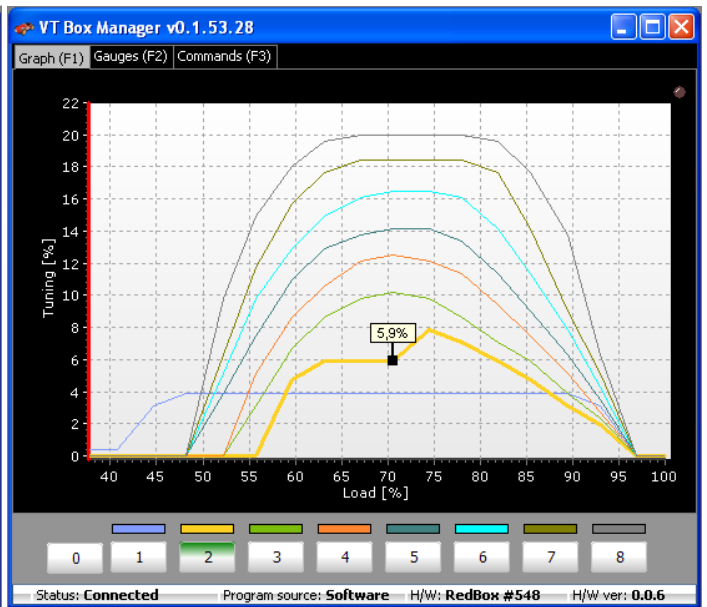
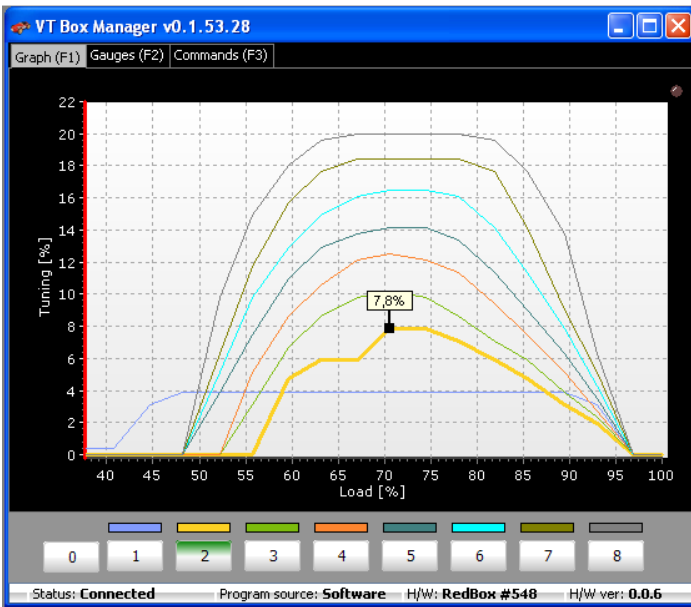
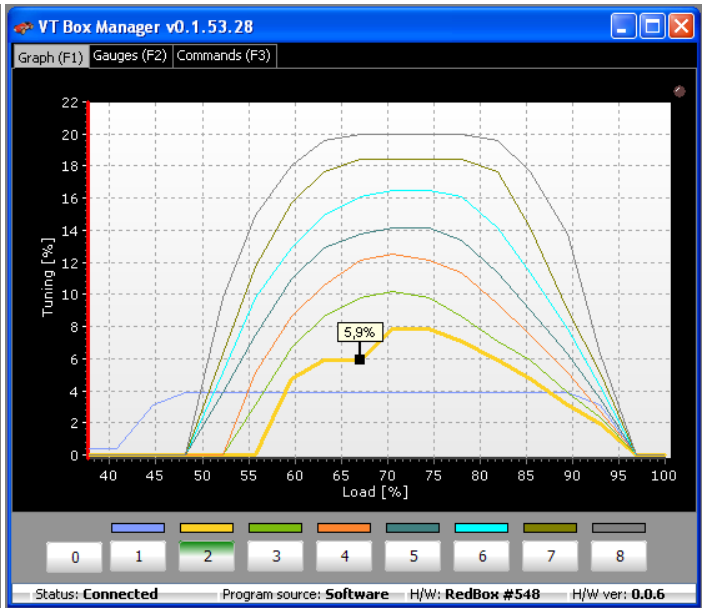
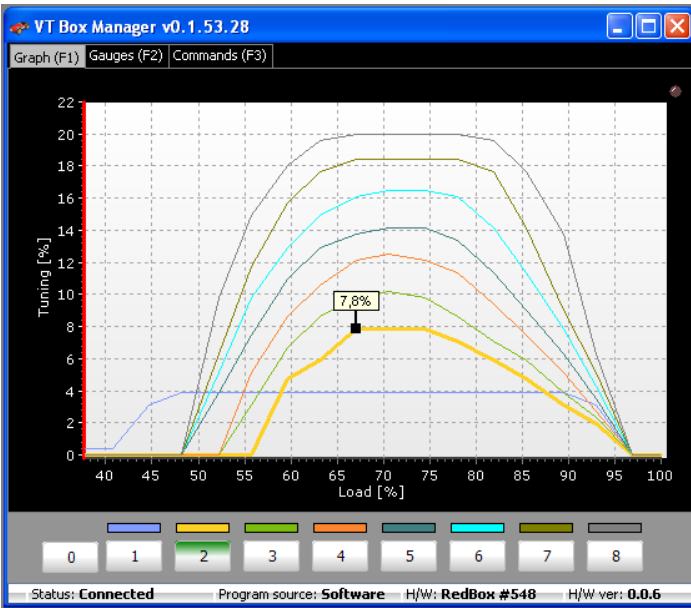


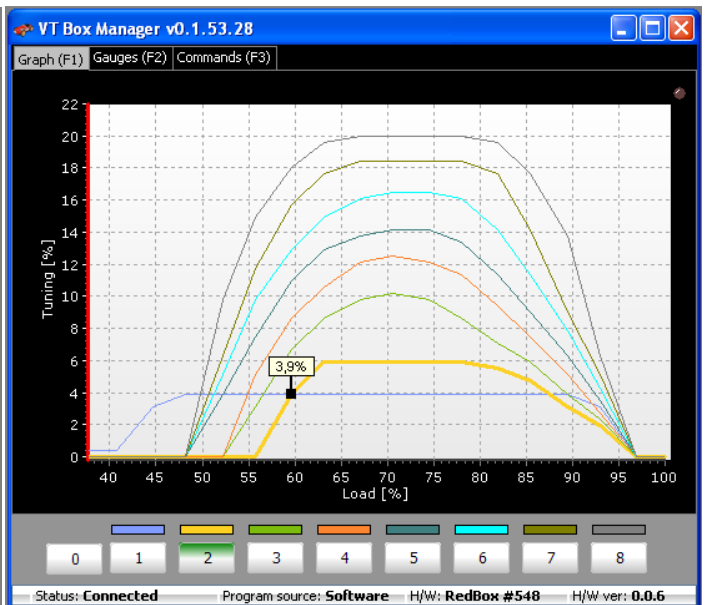
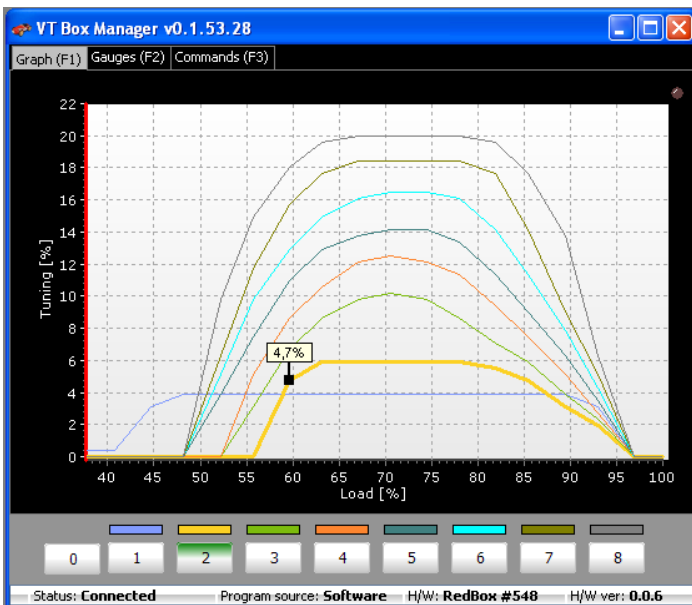
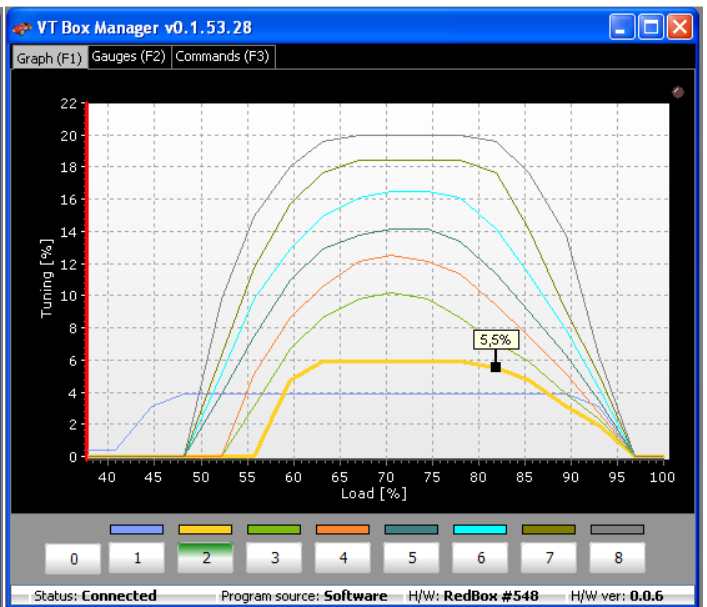
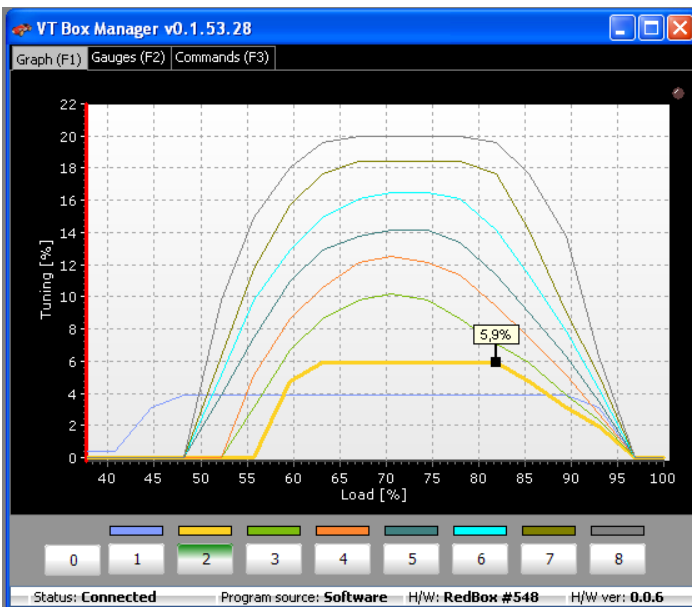
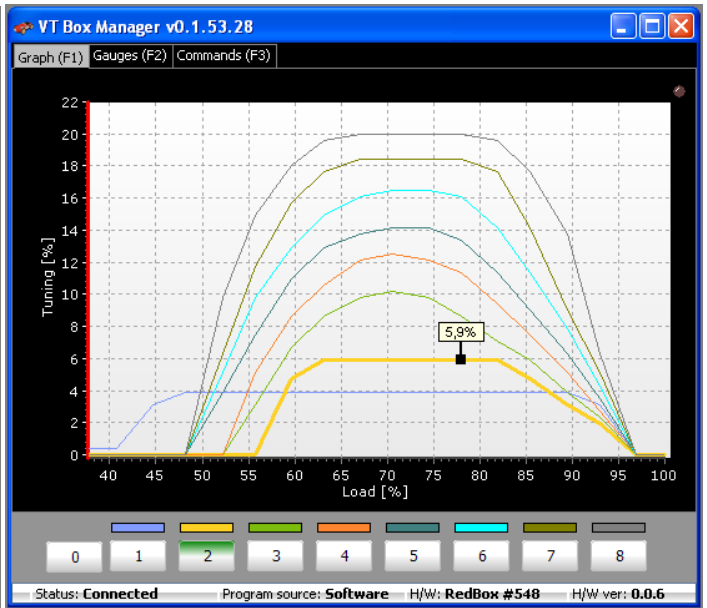
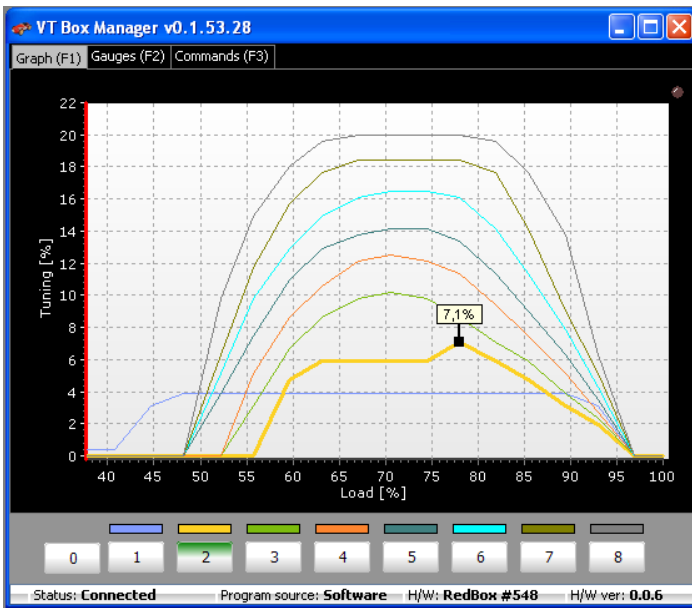
3. Select the program you want to edit – in the below example this is program 2.

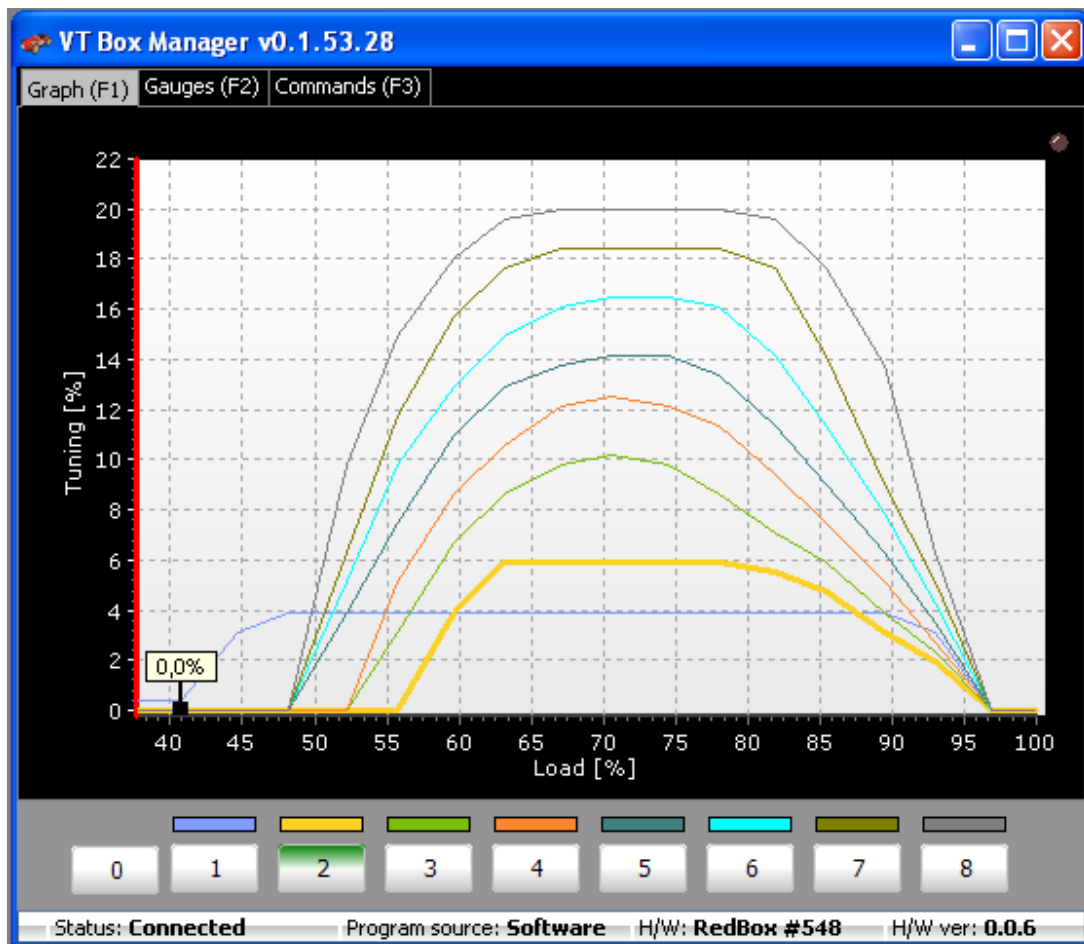


- By using cursor keys (arrows) adjust the characteristics according to your needs. In the example below the target was to decrease tuning from 8% to 6% and start it at 58% load.









It's recommended to adjust the characteristic while driving the car – on the road or dynamometer. In such conditions the red vertical line, that you can see on the left, will be moving through the screen, showing the current engine load.

ATTENTION – it's against the law to simultaneously drive the car and have your hands busy with any other operations. Please remember to ask your tuner or friend for help.

You can adjust any type of characteristics – from less (starting at higher engine load and giving smaller tuning) to more aggressive (starting at lower engine load and giving higher tuning). You should also take into account the possibility of having MIL (Malfunction Indicator Lamp, often called as "Check Engine") turned on if you use too aggressive curve.

If you need any support please contact your dealer or e-mail us directly at tuning@v-tech-tuning.eu