

## CR3 Bluetooth and software

**SOFTWARE CR3 BLUETOOTH** is a Windows application designed to program and control **CR3 BLUETOOTH**, digital electronic module that increase output and economy in diesel engines – commonly known as “box” (and this is how we call this module in the further part of this manual). Box can be programmed in real time mode, i.e. while driving a car. Box can be connected to PC via bluetooth or USB cable.



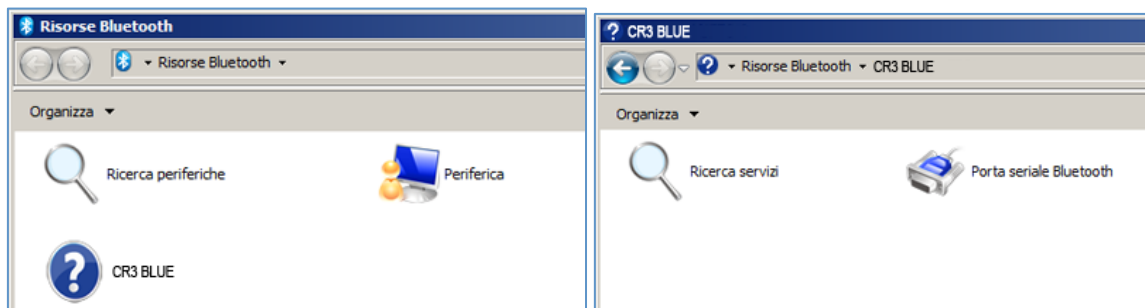
## CONNECTING CR3 BLUETOOTH TO COMPUTER

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

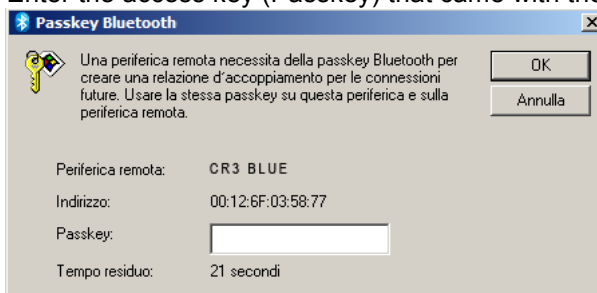
Below steps take into consideration that box has already been connected to the engine.

Start the engine. Search for bluetooth devices with the dedicated software.

Click on “CR3 BLUE” e then click on “Porta seriale Bluetooth”.



New window will be opened. Enter the access key (Passkey) that came with the box.

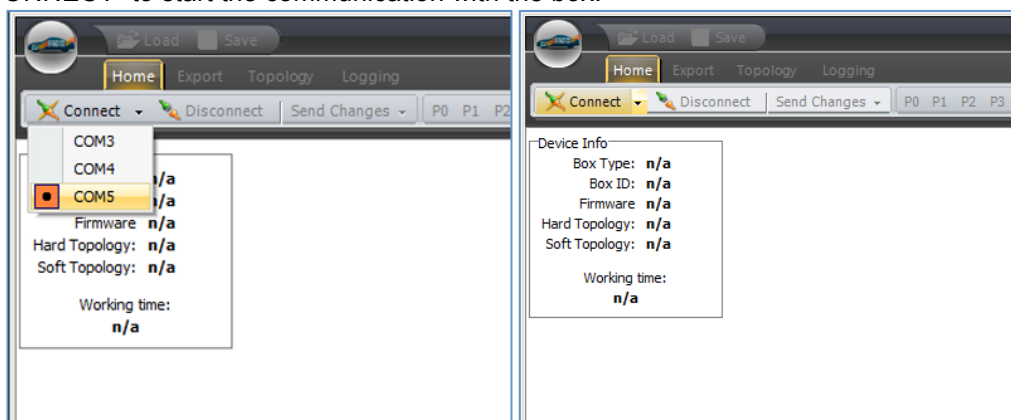


## SOFTWARE CR3 BLUETOOTH

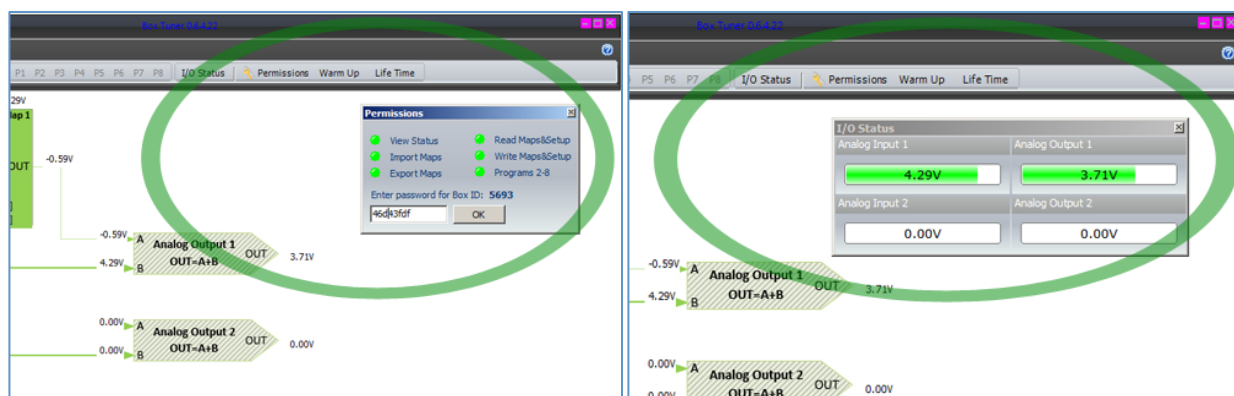
Download our “Software CR3 Bluetooth” from the Download area in our site [www.house-tuning.de](http://www.house-tuning.de). “House-Tuning.rar” will be downloaded. Open the file (if a problem occurs with the opening of the file, download software winrar from [www.winrar.it](http://www.winrar.it)). Extract the contents to a folder of your choice. Click on BoxTuner.exe. Software CR3 Bluetooth will be opened without an installation.



Choose the appropriate COM port for PC/Box communication (visible on Bluetooth software). Click on “CONNECT” to start the communication with the box.



Click on “PERMISSIONS” to unlock the box by code. Write unlock code to the white field to get access to features. Code is specified for each box. It isn't the Passkey.

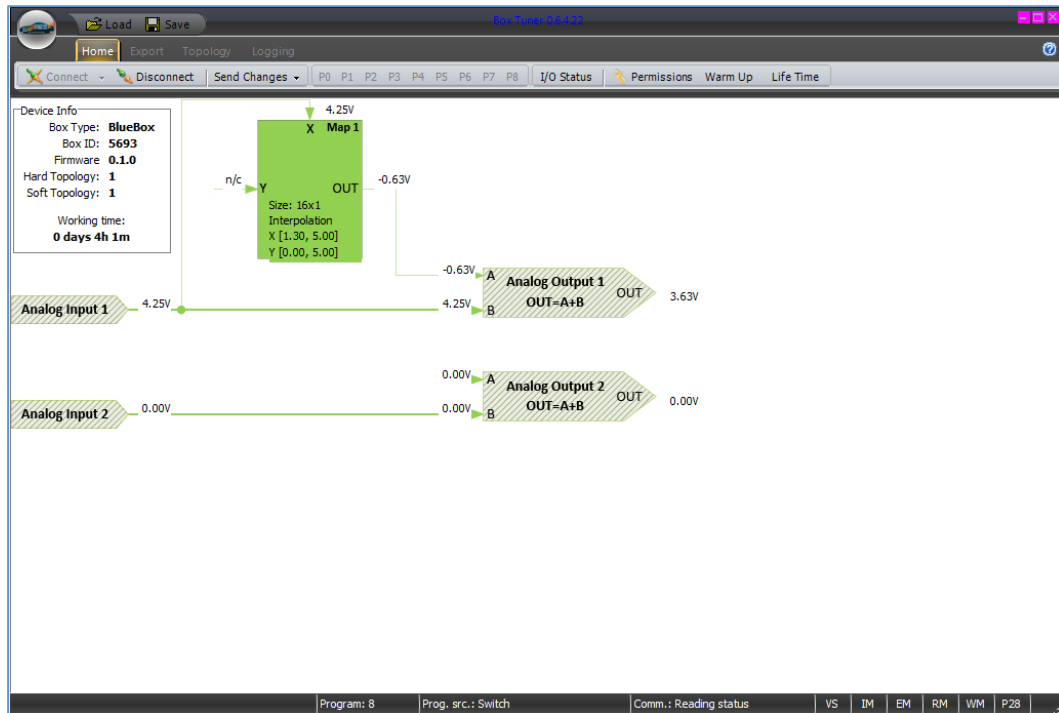


Click on su “I/O STATUS” to display window that show the input and output signals. Input signal is the signal from fuel pressure sensor (RAIL). Output signal is the signal modified by the box which is sent to the cars ECU.

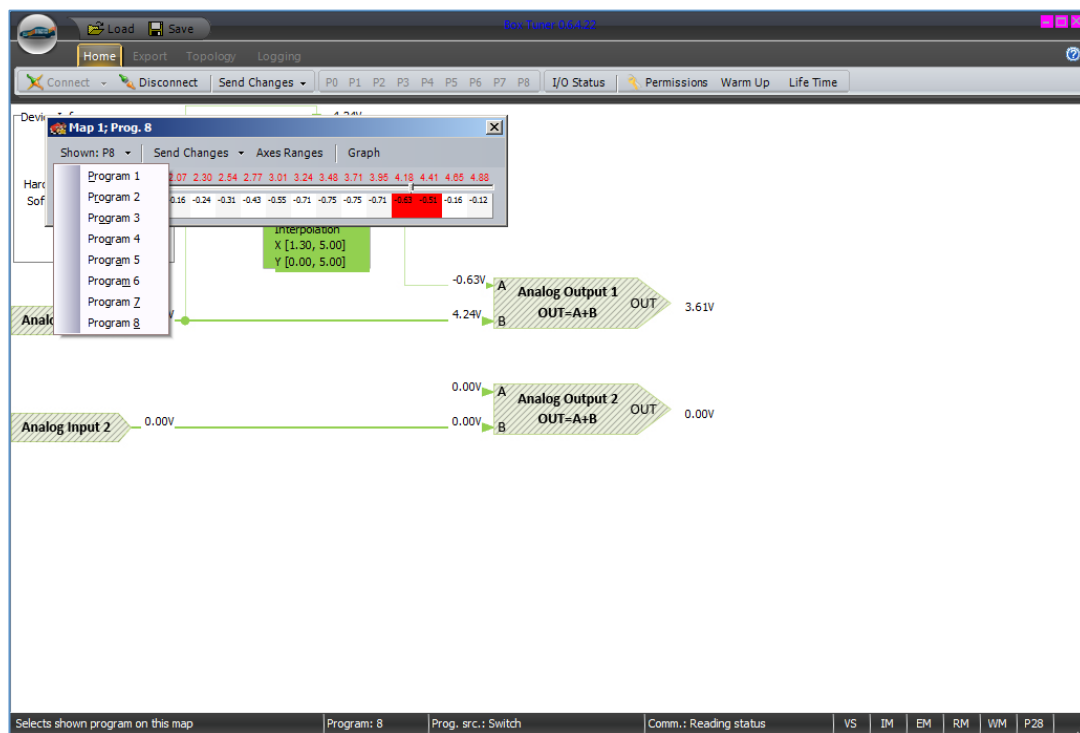
Click on “DISCONNECT” will terminate the communication with the box.

## MODIFICATION OF THE MAPS

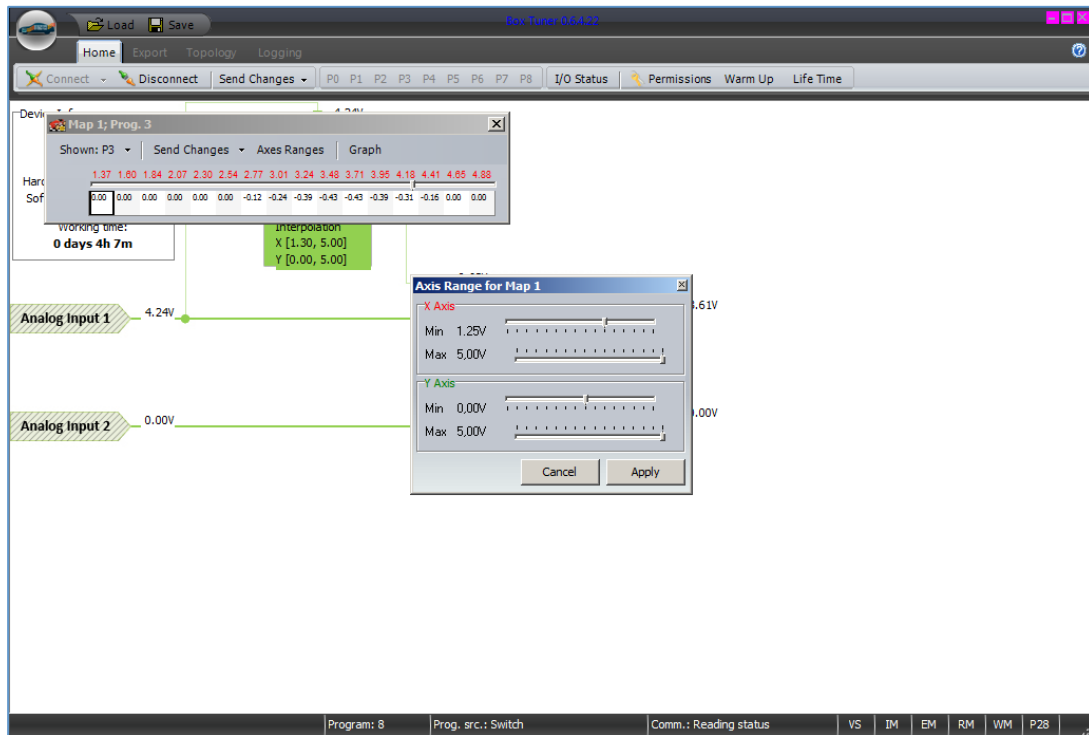
1 - There is possibility to change the fuel pressure by double clicking on the green diagram. Analog Input1 is a signal from RAIL.



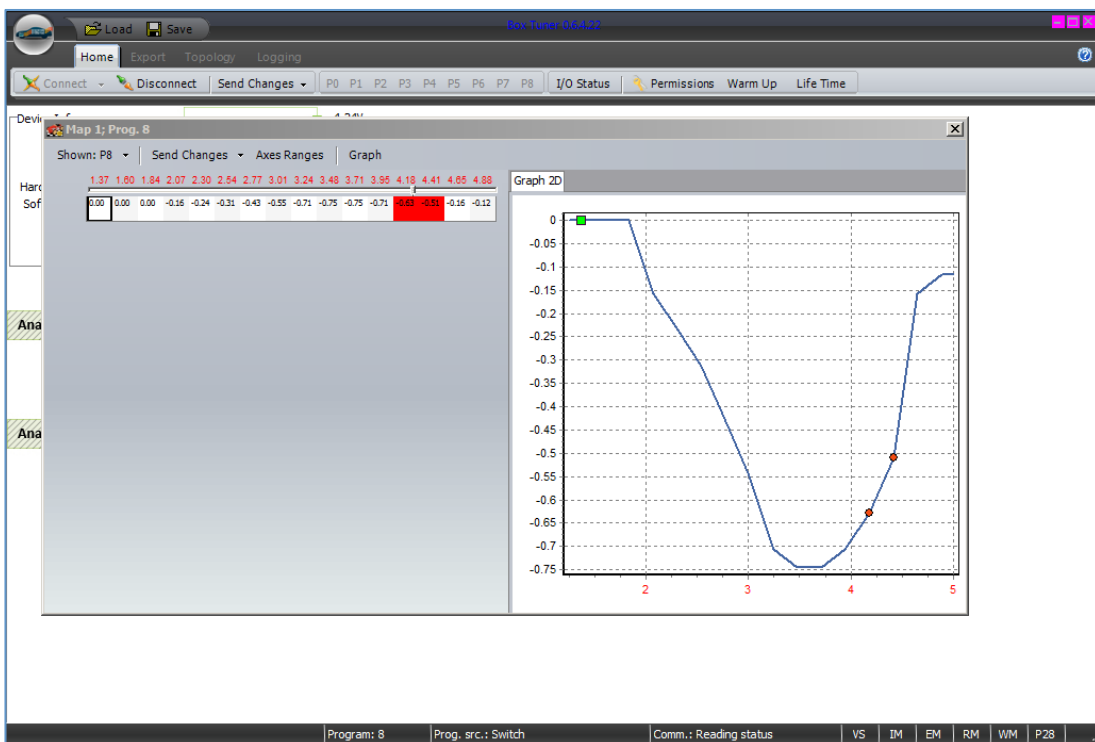
2 - After double clicking on the diagram the map will be displayed. There is possibility to edit maps in programs P0-P8. Switching programs can be done using "Shown:".



3 – After choosing the program it is needed to set the range of modified signal. Choose the “Axes Ranges” and set the range of signal of X-axis. The signal range can be from -5V to 5V. To accept axes range choose “Apply”. The Map range will be changed. Use full range is from 0 to 5V, but the best way is to test the range which car’s sensor use and set the appropriate range.



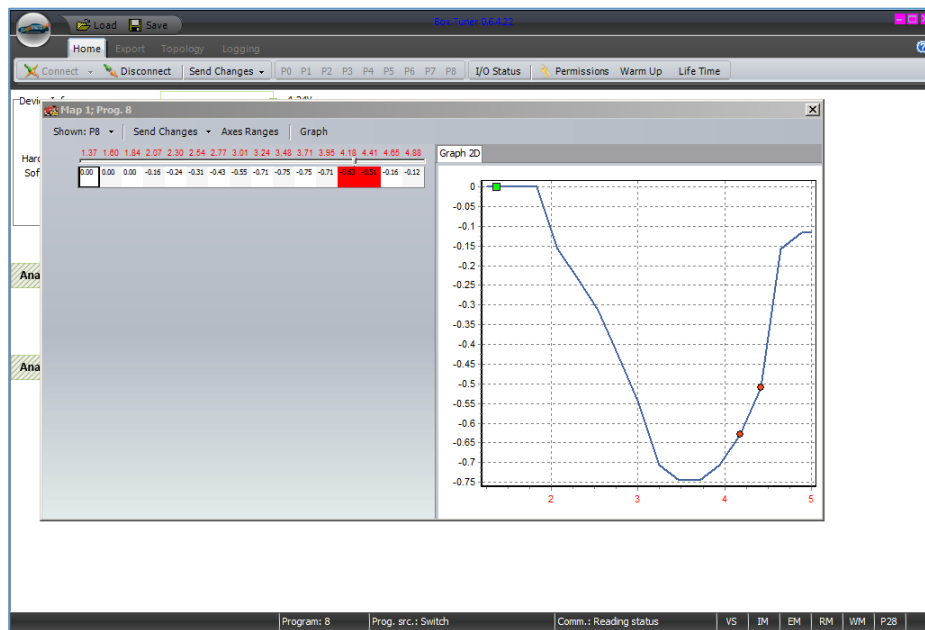
3 – Choosing Graph will show the 2D visualization of the Map.



The 2D visualization can be change. All the changes in 2D will be done in Map table.

## EDITING MAPS

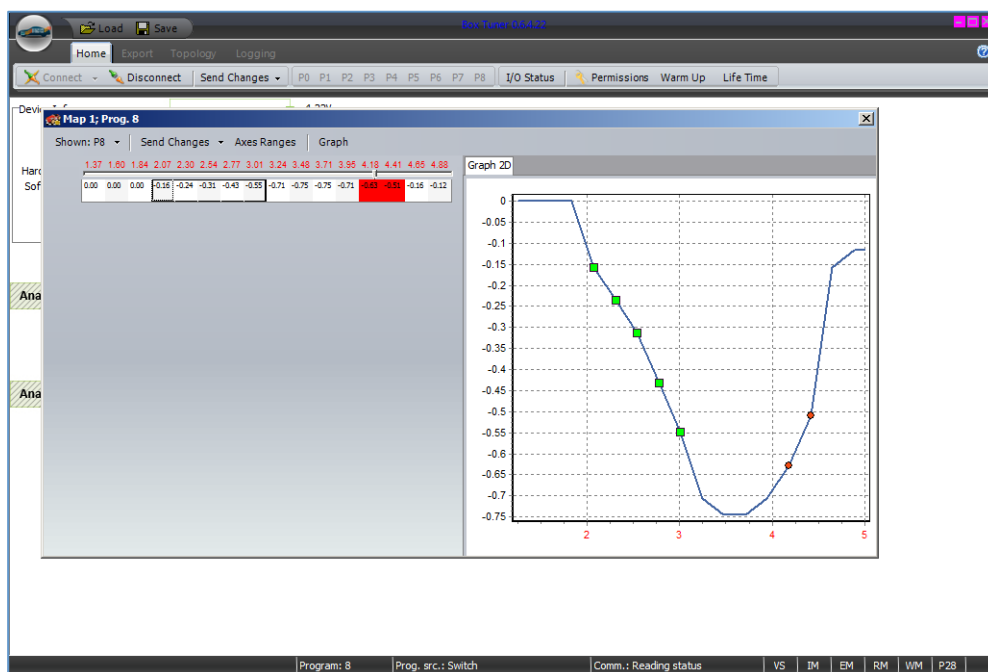
Cells that are corresponded to actual engine state are marked red.



On the picture above, there is a black cursor on the first cell of the table (in Graph 2D there is green dot).

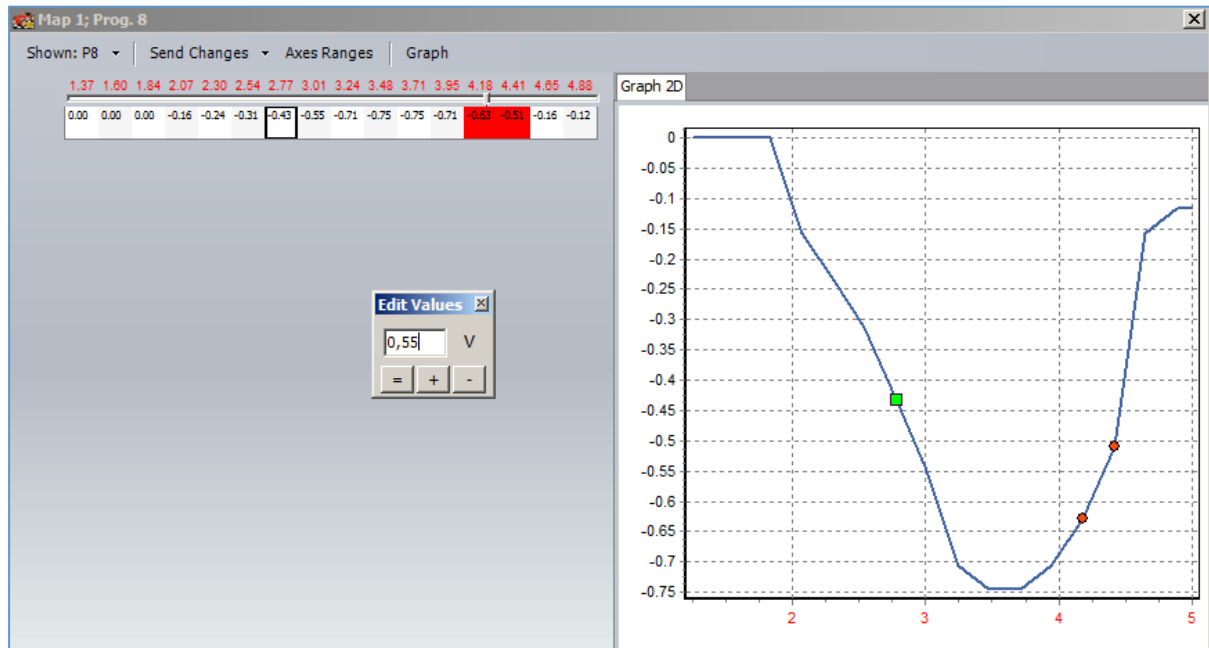
Cursor can be moved in the table by using arrow keys (left-right, up-down) or using mouse by clicking on each cell. Marked with the cursor cell can be modified by using +/- keys. Minus button is used to subtract the value in the cell from the fuel pressure sensor signal (Input1). This will increase the fuel pressure in the rail. Plus button is used to add the value from cell to the fuel pressure sensor signal (this will lower fuel pressure). During working with map It is not recommended to modify the cells regarded to the idle and low gas pedal positions. The values in these cells should be 0.

There is a possibility to mark more than one cell. To do this mark one and then drag the cursor to cells that will be modify.



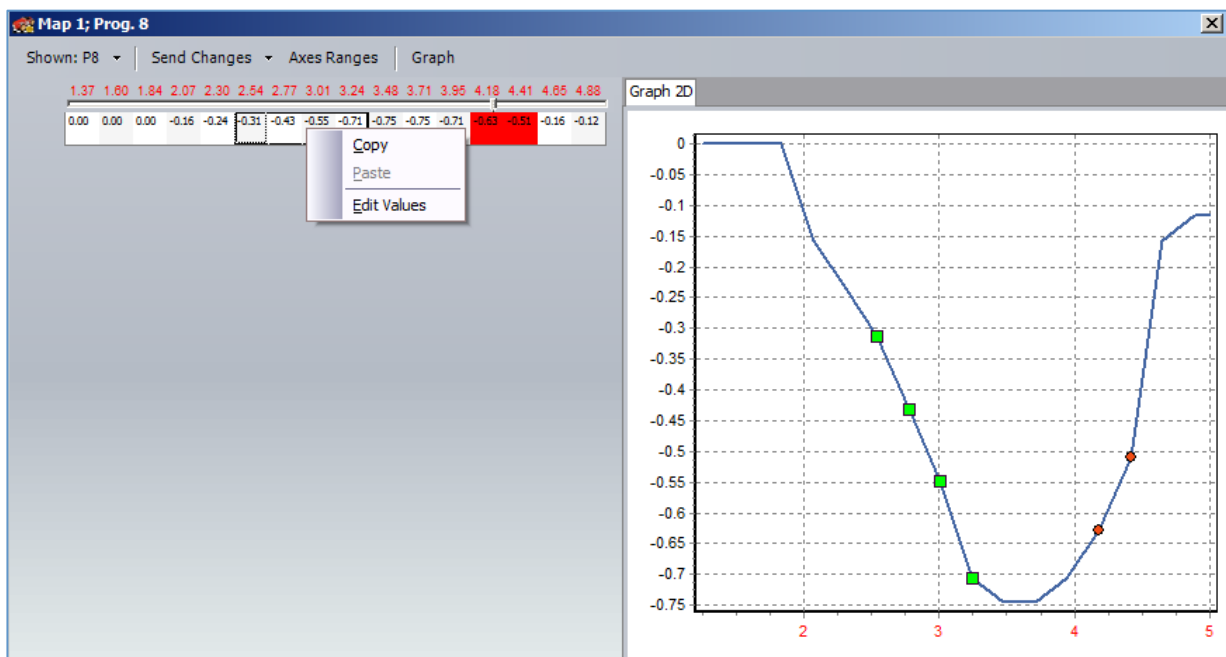
Marked cells can be modified by using + and – buttons.

There is possibility to write any values, which we want to subtract ,add or write value in cell. To do it, put cursor on cell that will be modify and press Enter ( ↵ ) or click right button. Choose Edit Values will show window:

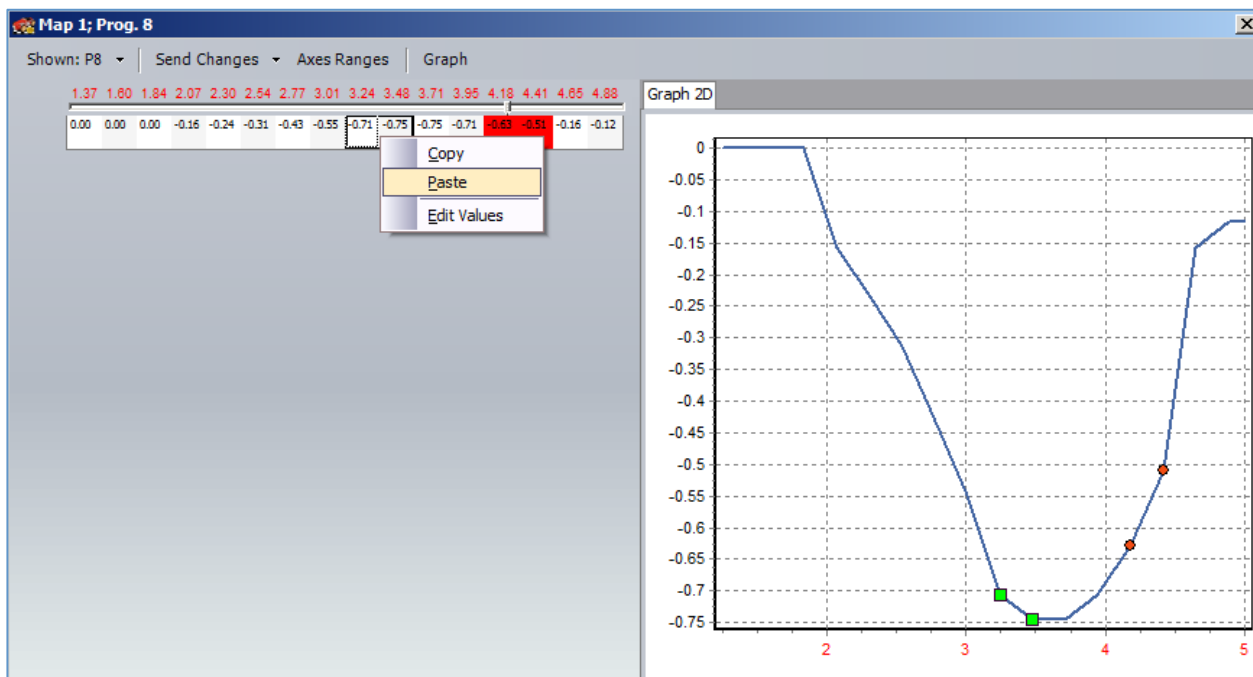


In Edit Values window we can write any values in volts. We can write values, increase value or subtract values in cell we want to change. In this case if we press “=” we write value 0,55 volts, if press button “+” we add 0,55 volts to value in cell, if press “-” we subtract 0,55 volts from value in cell.

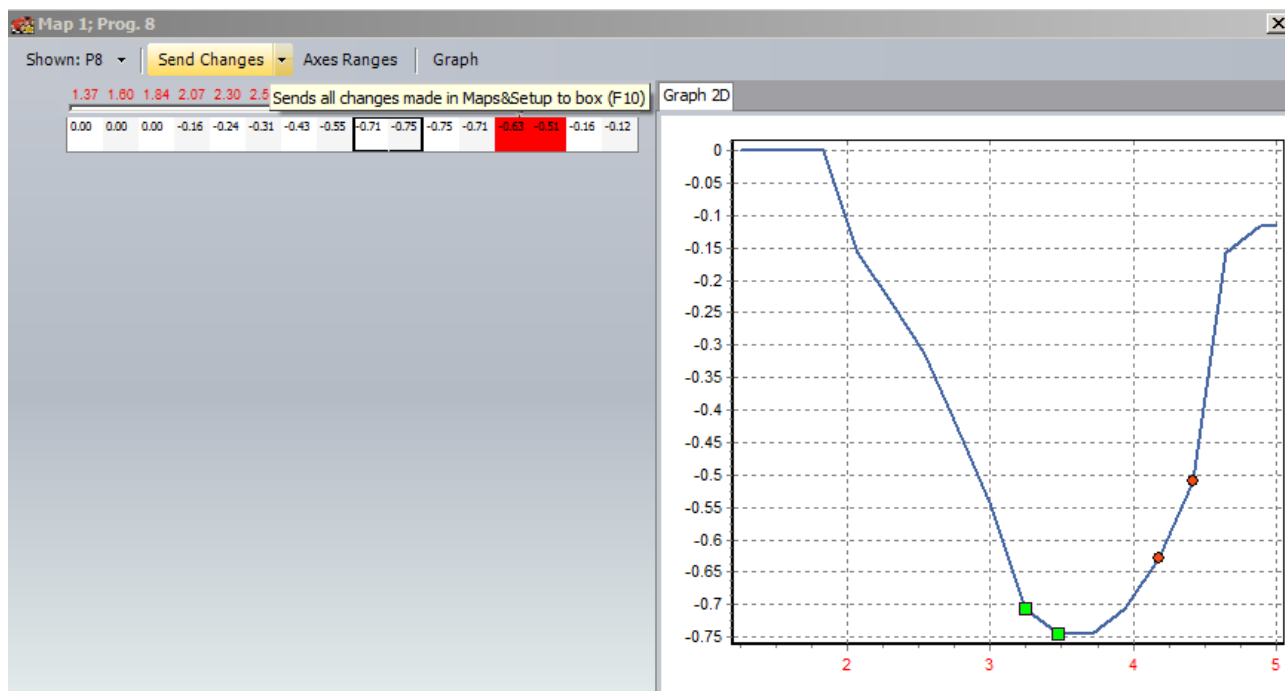
There is possibility to copy and paste values in cells from one to another one or from group of cells to another group. To copy values press right button and choose copy.



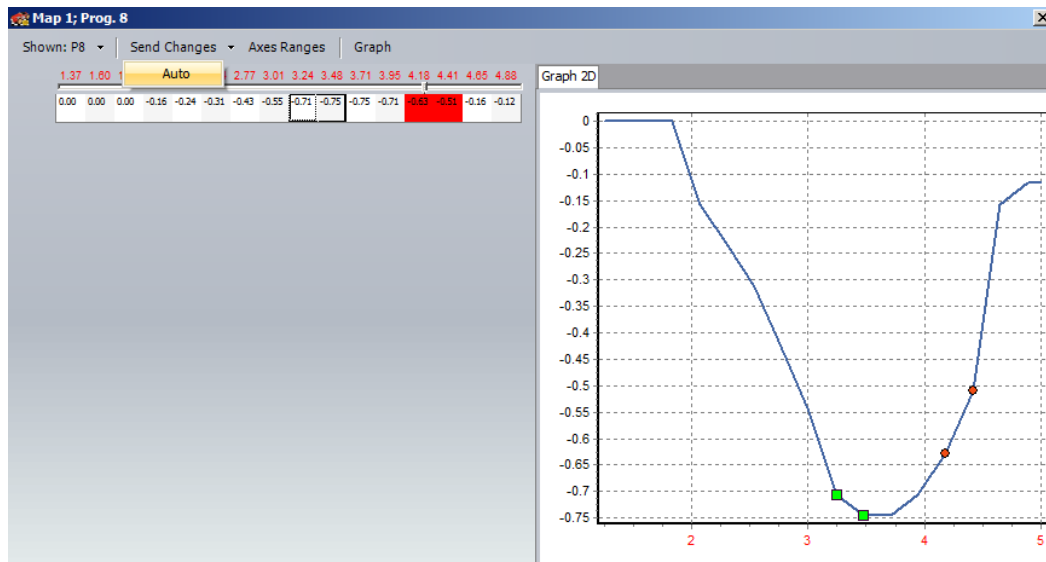
To paste copied values to cell or group of cells we have to choose right cell, press right button and then choose paste.



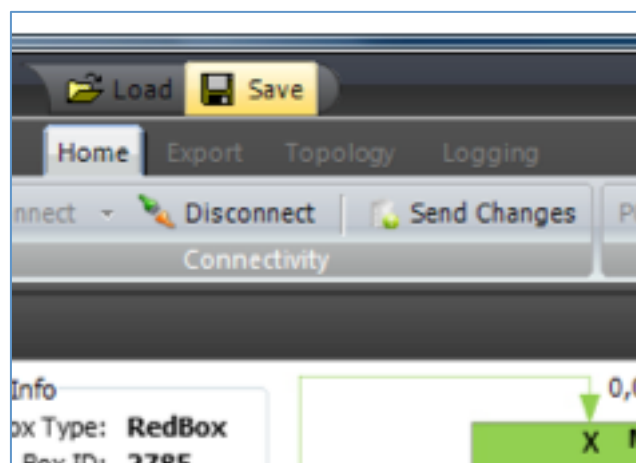
To make the map changes permanent click "Send Changes". Without pressing this button box will work at values that were before entering the modification.



There is an automatic mode in “Send Changes”. To set it, press on black arrow near “Send Changes” and then click “Auto”. Changes will be automatically remembered.

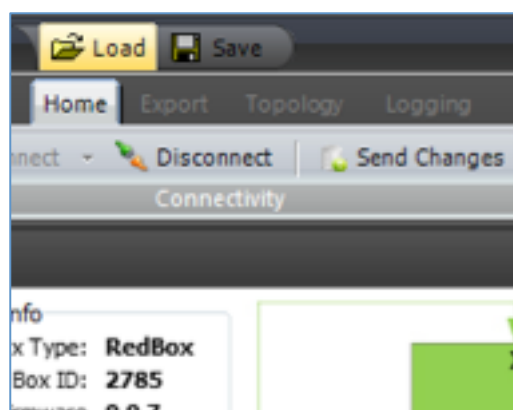


To Save the ready configuration please press “Save”.



After clicking Save there will be a windows to type the file name and press “Save”.

To load the ready configuration to the module press “Load”. Then choose the configuration file and click “Open”.



To terminate the connection with the module press “Disconnect”.



## CHANGING BOX PROGRAMS

Changing box programs can be set in two ways:

1 – First is setting using a switch (marked green on the picture);

2 – Second is using Software CR3 Bluetooth. Important! To use Software CR3 Bluetooth the switch in the box must be set to 9 position.

