



SET UP MANUAL

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1 – Introduction

Here below the instruction to use the FLYJET software.

1.1 Software features

Using the software you can adjust for example:

- Map (optional)
- Automatic calibration
- Change-over petrol gas
- Software adjustment for lpg and cng
- Visual of lambda probe
- Rail temperature sensor

2- Software installation

To install the software it is necessary:

Configuration PC:

- Processor 486
- 5 Mb free hard disk
- Vista, Windows XP, Windows 98 / 98SE, Windows Millenium, Windows NT, Windows 2000.
- Video resolution: 800x600 pixels
- USB port

FLYJET “**Serial Link Kit**”:

- 1 serial interface
- CD with software

To install the software:

- Insert CD-ROM
 - Double click My computer
 - Select **CD unit**
 - Find the **Software**
 - When request click execute
- Wait for the **Wizard** and follow the instructions

At the end of the installation a new voice will be present on the menu start → programs → YYY → XXX and a new directory C:\Program Files\YYY\XXX_YYY will present on the Hard Disk.

△ NOTE: *Please uninstall all old version of this software, if present, before to install it.*

△ NOTE: *In order to avoid any inconvenience during the use of the software please disable the screensaver and check the PC level battery.*

3 – Open the program

➔ Connect the serial interface between PC and gas ECU.

△ NOTE: Connect the serial interface before to start the program.

- Click **Start**
- Click **Programs**
- Click **Flyjet**

△ NOTE: Before to use the program please close others open applications.

3.1 Language

To change the language select the Tools -> language



Fig. 3.1 - 1

3.2 Connection

- **Opening:** The program will search the gas ECU to show the system configuration. The following window will appear:



Fig. 3.2 - 1

- **Program connected:** The program it makes a test of the various parameters present in the ECU. This procedure will recognize the Hardware, Software and Firmware version checking their compatibility.
- If update is necessary a window will be automatically opened. The DIAGNOSIS screen will appear.
- **The program cannot connect:** The coloured bar (indicated by the arrow) and any value appear in the software window

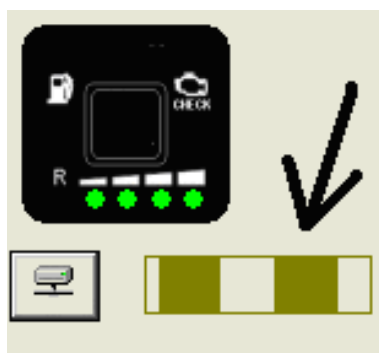


Fig. 3.2 – 2

Moreover the **VISUALISATION CONNECTION STATUS** (right side of the window) changes the colour and message:

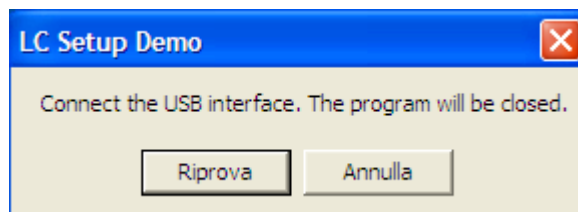


Fig. 3.2 – 3

- **The ECU is not connected** for one of the following reason:
 1. Serial interface not connected. Driver not installed
 2. The ECU it is not feed.
 3. The Com PORT is busy. Please close all the other software and try again.

4 - General parameters

As soon as the ECU is connected the window General - F2 will be opened

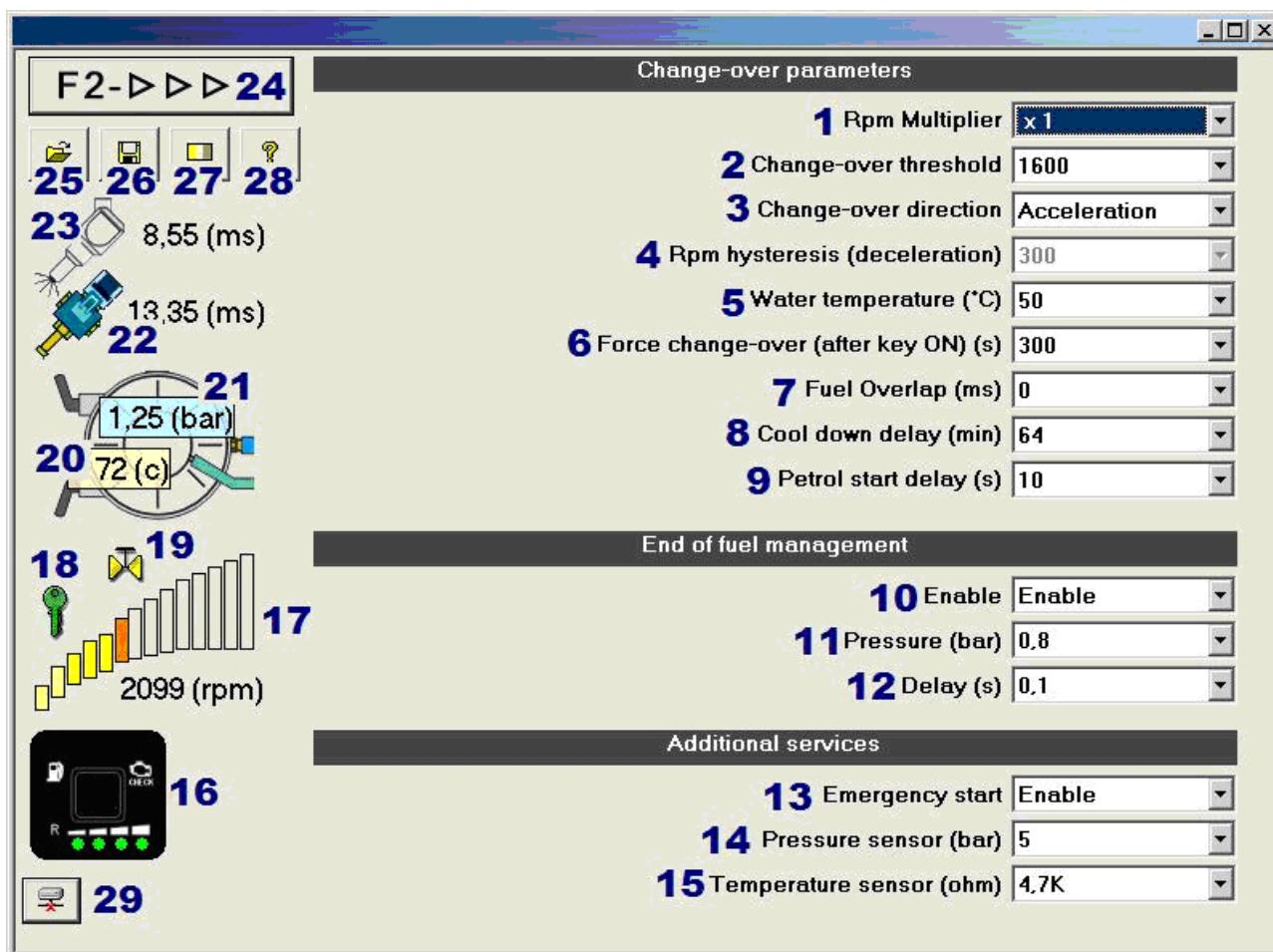
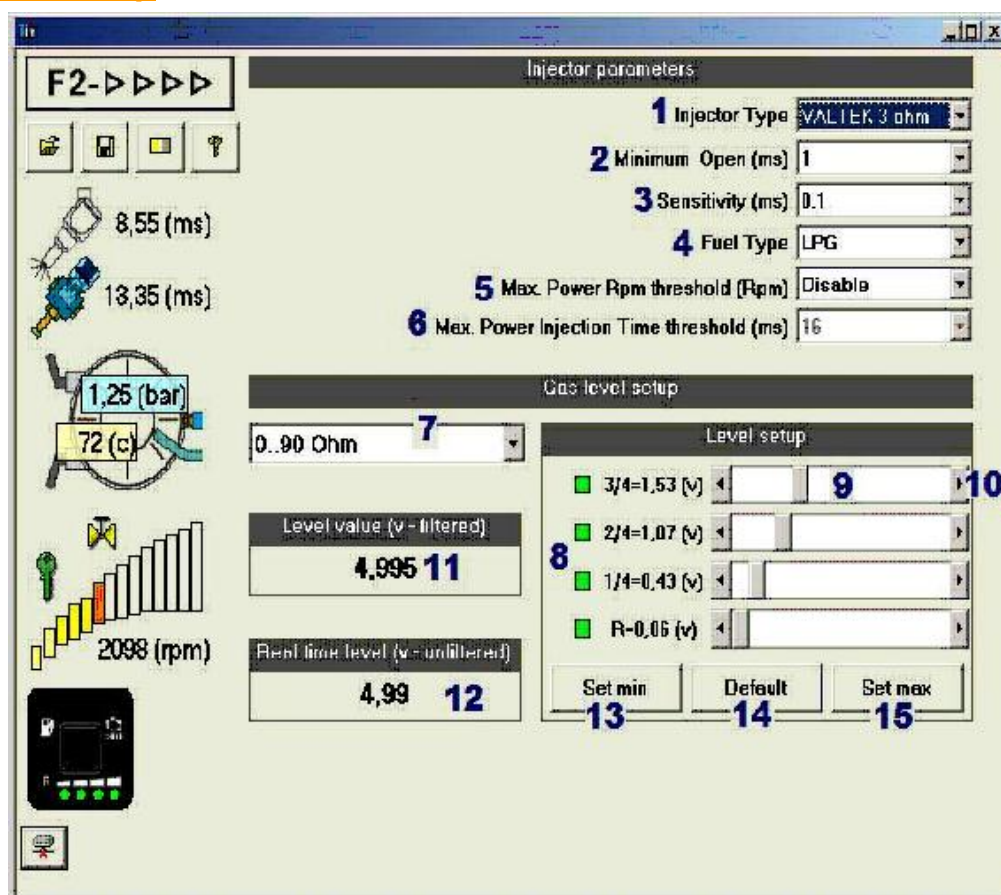


Fig. 4 - 1

1	RPM Multiplier: Value created during automatic calibration: X1 sequential, X2 other injection type	-----
2	Change-over threshold : to select the RPM number to switch on gas.	RPM
3	Changeover direction: acceleration/deceleration	-----
4	Rpm hysteresis: Only with deceleration: RPM required to switch.	-----
5	Temperature (°C): To select the temperature °C to switch on gas.	Degrees centigrade
6	Force (s): The switch on gas is forced after the settled time.	Seconds
7	Fuel Overlap : Petrol/gas overposition time during changeover swith.	Milliseconds

8	Cool down delay: if enabled, it fixes the delay time to switch on gas.	minutes
9	Petrol start delay: Changeover delay after the solenoid valve open.	Seconds
10	End gas: This function allows to automatically switch on petrol when the gas pressure drop down the settled value.	Default Disable
11	Pressure (bar): It allows to select the end gas pressure.	Default 0,5 bar
12	Wait (s): It allows to select the end gas time.	Default 0,1 seconds
13	Emergency start	Default Disable
14	Pressur sensor: Model	Bar
15	Temperature sensor : Model	Ohm
16	Switch: Dinamic Switch	-----
17	RPM Graphic	-----
18	Key indicator: Green Key is on	-----
19	Solenoid valve indicator: Yellow , solenoid valve ON	-----
20	Pressure indicator: Only with Map Sensor (optional)	-----
21	Gas injector: If coloured, it means that the gas injectors are ON	-----
22	Petrol injector: If coloured, it means that the petrol injectors are ON	-----
23	Folder select	-----
24	Save configuration	-----
25	Load configuration	-----
26	Select language	-----
27	Software information	-----
28	Connection status	-----

Injectors setup



1	Injector Type: Select	-----
2	Minimum Open: Minimum gas injector opening time	Default 2,5 milliseconds
3	Sensitivity: Value of the gas injected not considered and not calculated.	Default 1,3 milliseconds
4	Fuel type: LPG/CNG	LPG/CNG
5	Max Power RPM : Max RPM limit to switch on petrol	RPM
6	Max Power Injection: Gas injection time limit to switch on petrol	milliseconds
7	Gas level setup: To select the level sensor type	-----
8	Level setup: Gas level indication	Green: level reached Grey: level not reached
9	Level setup: Volt setup bar.	Volt
10	Arrows: adjuster	-----
11	Level value: Slow mode to avoid strong interference	Volt
12	Real time level: It helps to evaluate default value adjustment	Volt
13	Set min: To select when the tank is on reserve	-----
14	Default: Production values	-----
15	Set max: To select when the tank is full	-----

5 – Tuning

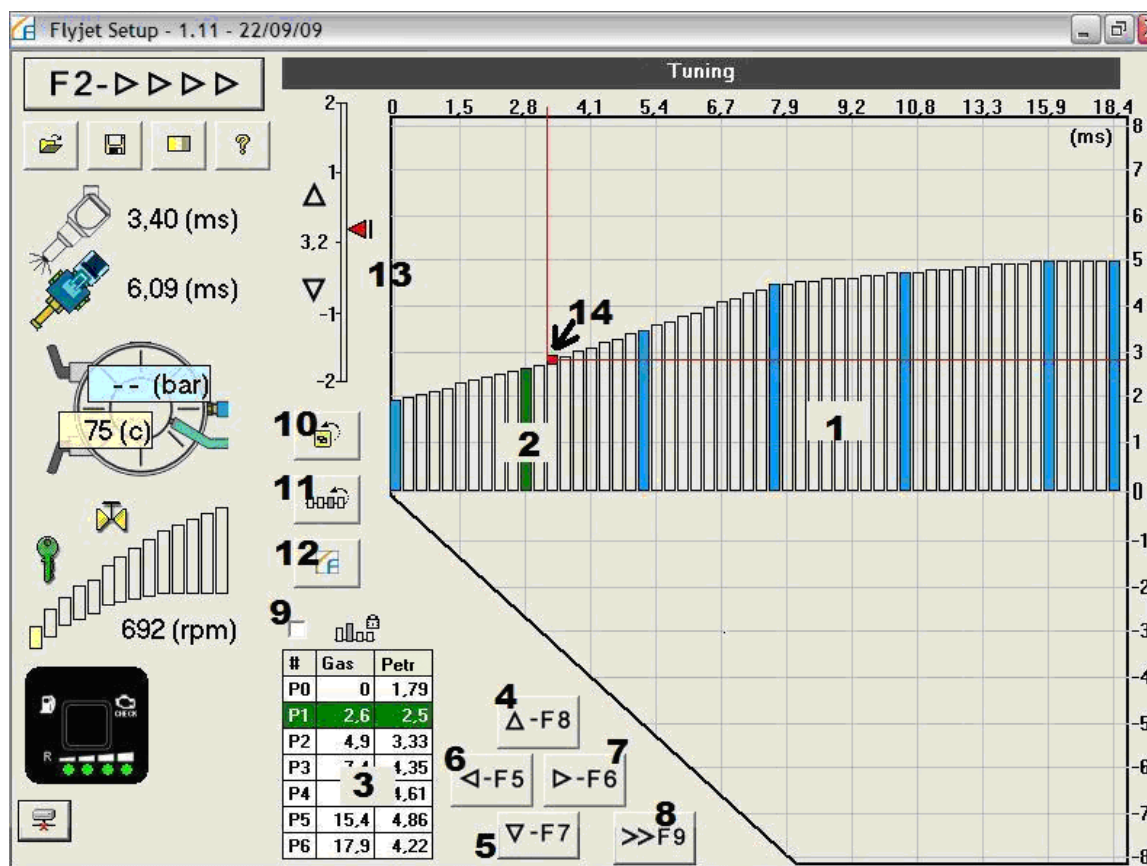


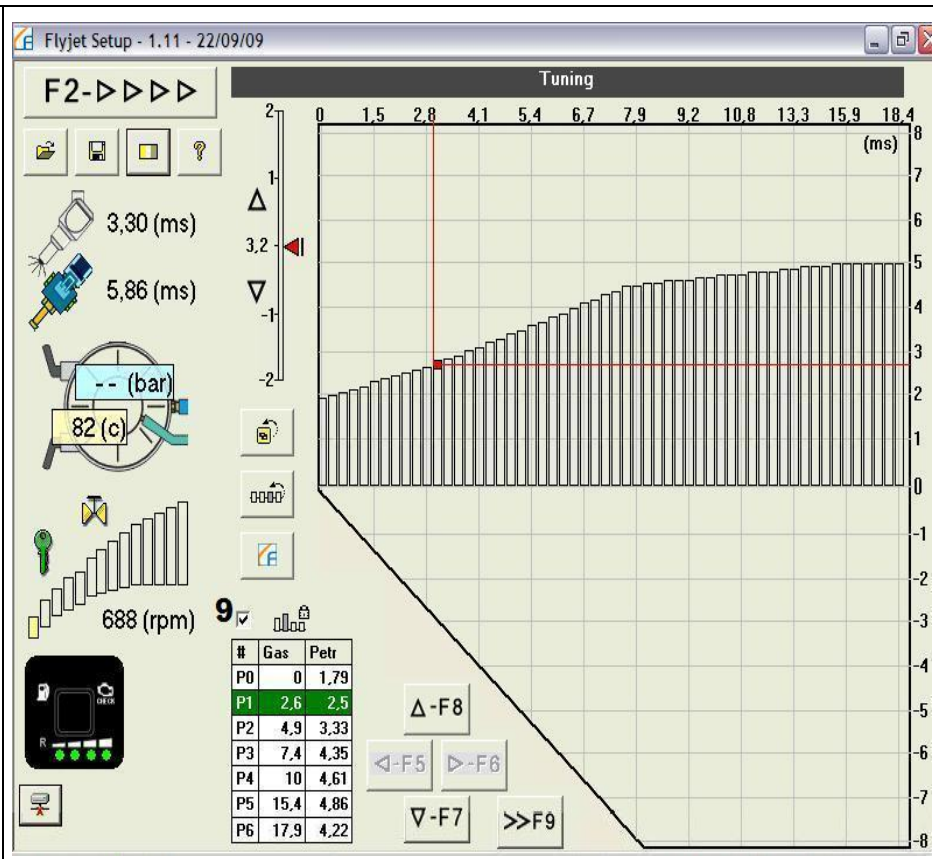
Fig. 5.1 - 1

1	Map: Complete map	-----
2	Map sectors: It is divided in six sectors. They can be moved up/down nad left/right by means the buttons : 4-5-6.7. They are divided from P0 to P6 and they can be selected with the mouse or directly in the panel3. if selcted they change colour (green)	-----
3	Sector map In the gas column there are the gas injector time limit present in every sector. In the petrol column there are the correction value in milliseconds compared with the petrol time	milliseconds
4	F8 – Move up (the sector)	milliseconds
5	F7 – Move down (the sector)	milliseconds
6	F5 – Move left (the sector)	milliseconds
7	F6 – Move right (the sector)	milliseconds
8	F9 – It automatically change the map sector from left to right.	-----

9

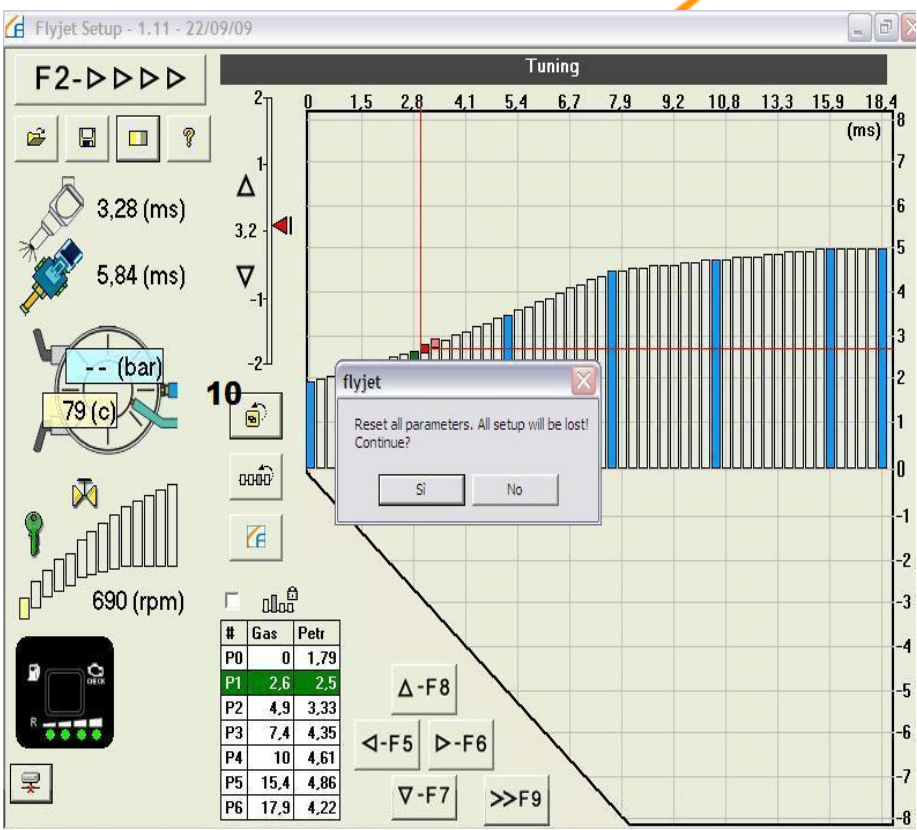
Map without sector

If enabled, the map sector disappear.
It allows to increase/decrease the gas correction value by F8 and F7 buttons. (see the pic at sight)



Reset parameters
All the parameters
will be reset if “YES”
clicked.

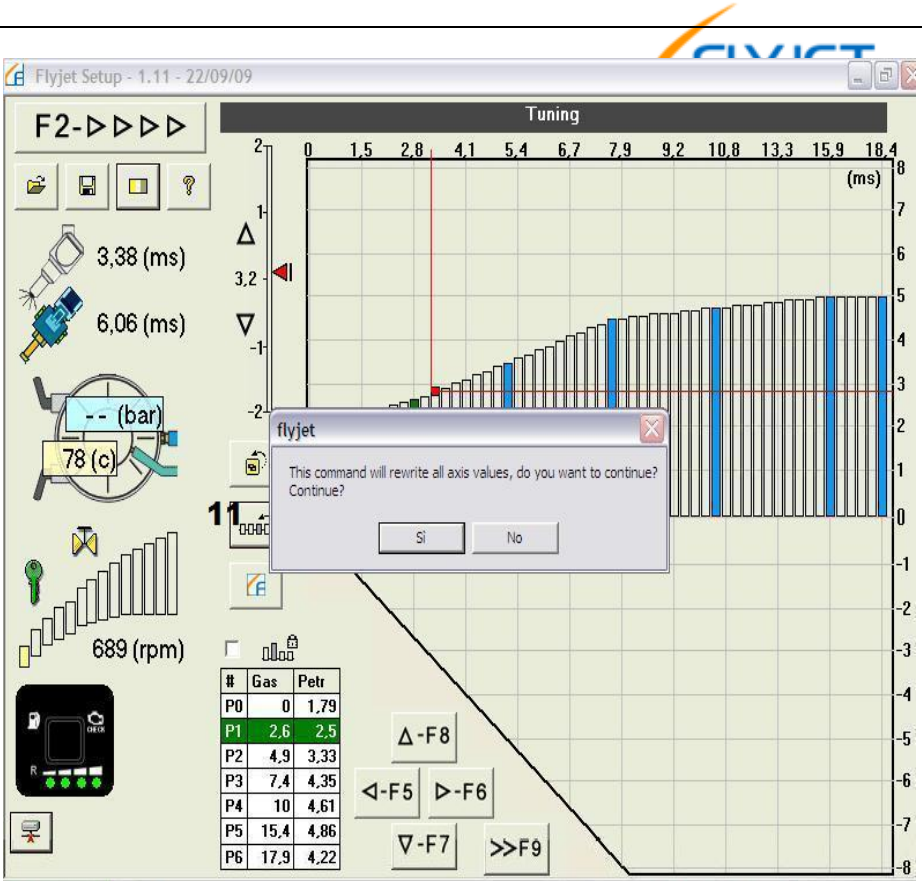
10



11

Reset map

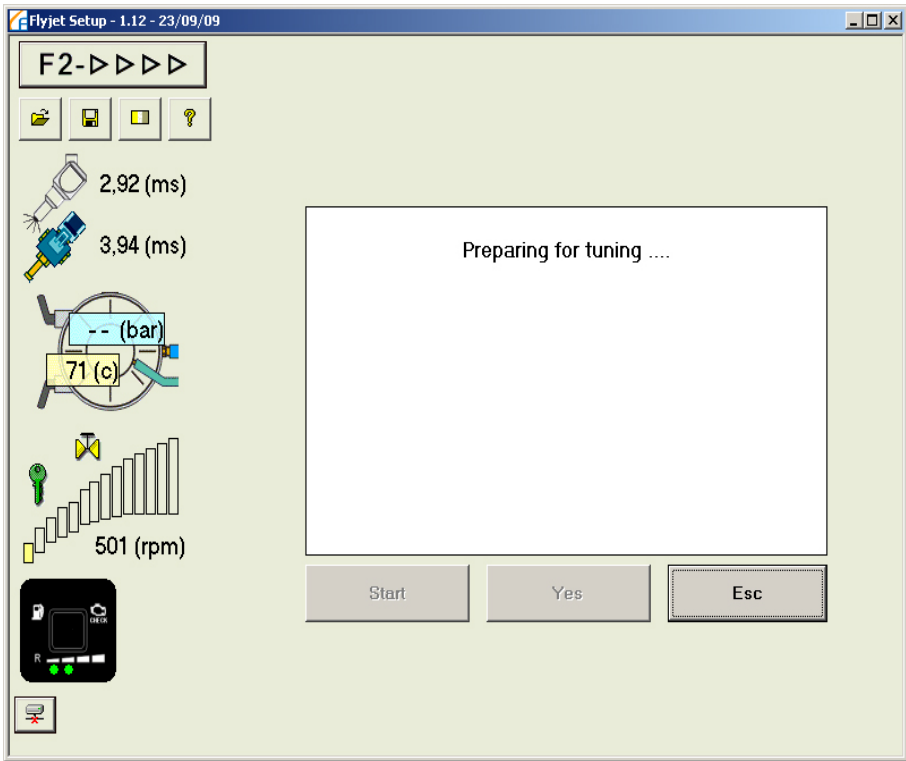
The map will be erased if "YES" clicked.

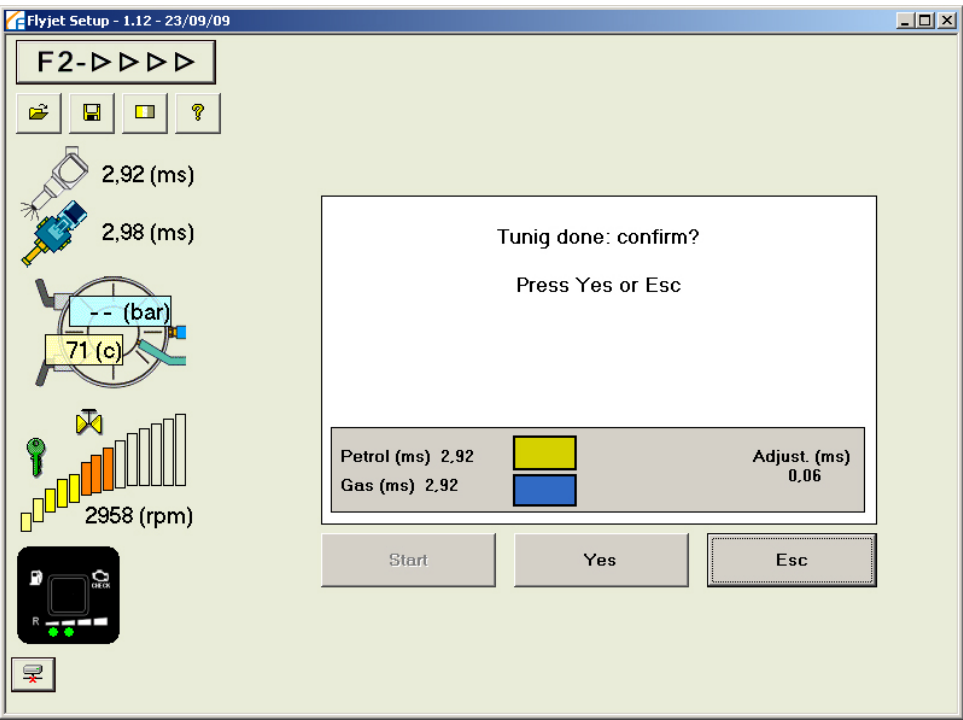


12

Automatic calibration

Start



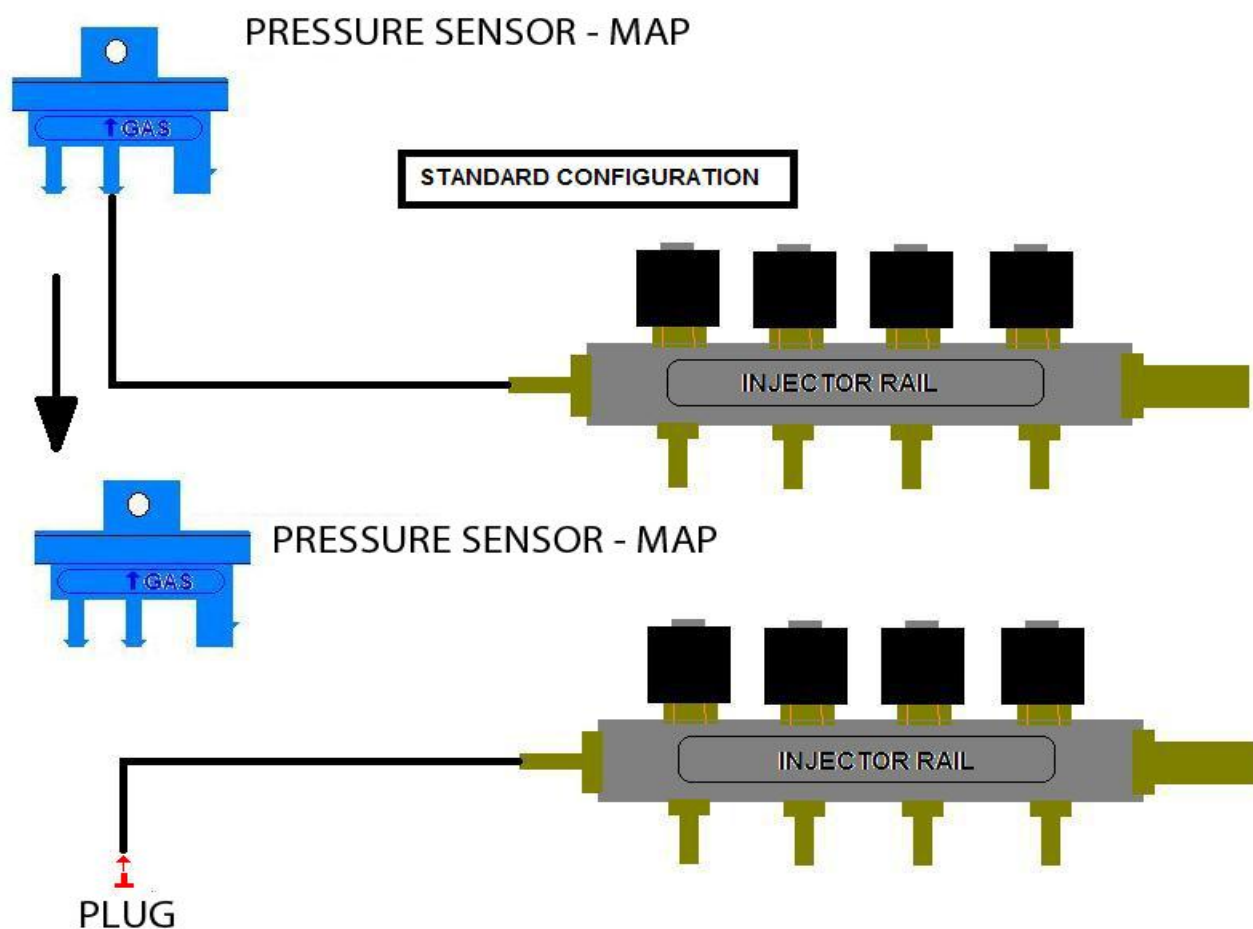
13	Map correction advice -With engine on petrol and constant rpm , switch on gas. -The injection time is recorded between the up/down arrow. -Keeping steady RPM, on gas, the red indicator will turn towards “side +2 or “side –“, to show the difference between gas and petrol. -With red indicator turned towards “side +”, increase gas map. -With red indicator turned towards “side -”, decrease gas map.	-----
14	Cursor It show the point in the map where the engine is turning in that moment.	-----
15	 Calibration finish At the end of the calibration click “YES” to confirm.	

6 – Self adjusting MAP

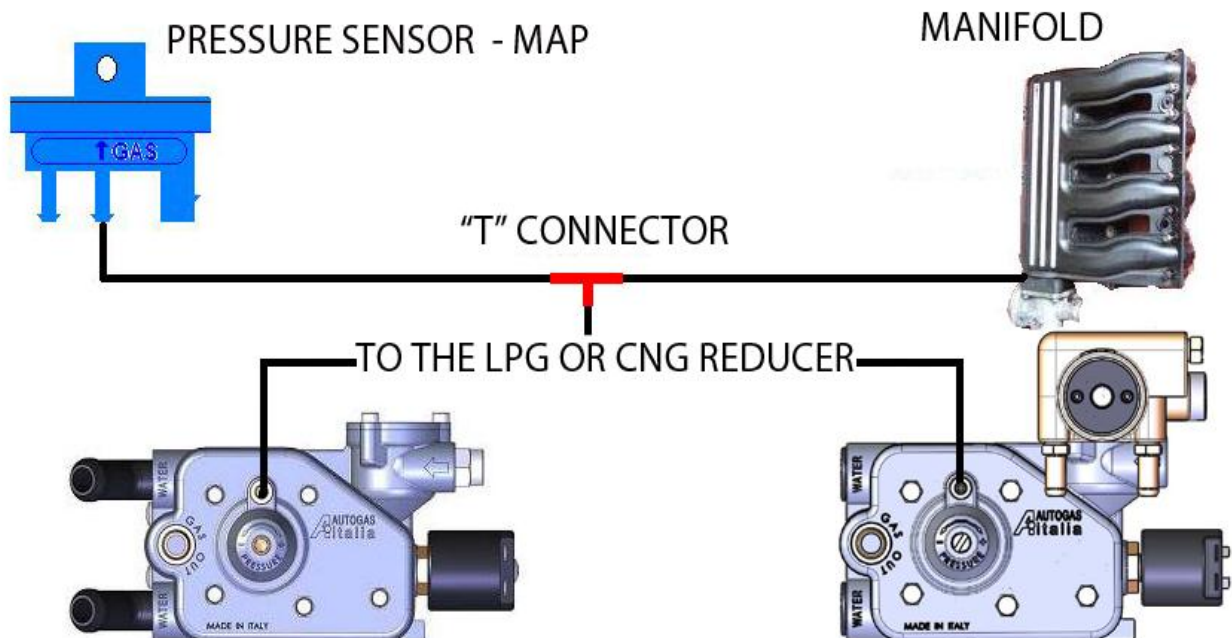
With Flyjet software version 1.22 is possible to optimize the fuel mixture on the road.

Please follow this procedure:

1. Turn off the engine
2. Disconnect the hose from the gas pressure sensor MAP
3. Close the hose gas pressure (see below)



4. Connect the regulator vacuum outlet (use a "T" connector). Picture below



5. Open the Flyjet software

6. Go to page "Additional service"

Additional services	
Emergency start	Enable
Pressure sensor [Tuning map]	Tuning Map (AA-612)
Temperature sensor (ohm)	10K

7. Select the sensor Pressure sensor " Tuning map (AA612)"

8. Automatically the following window will open. **Select “ Speed (ms) 1500.**

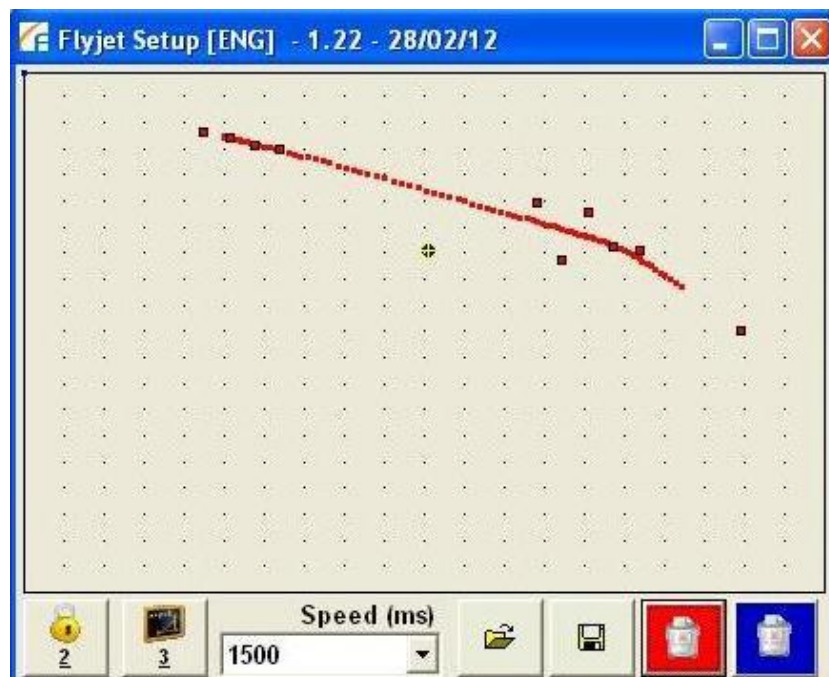


9. Switch on gasoline

10. Turn on the engine and drive the car trying to drive in different driving conditions.

11. Red dots will appear during the data record. (gasoline samples)

12. When “gasoline samples” are enough, a red line automatically appear



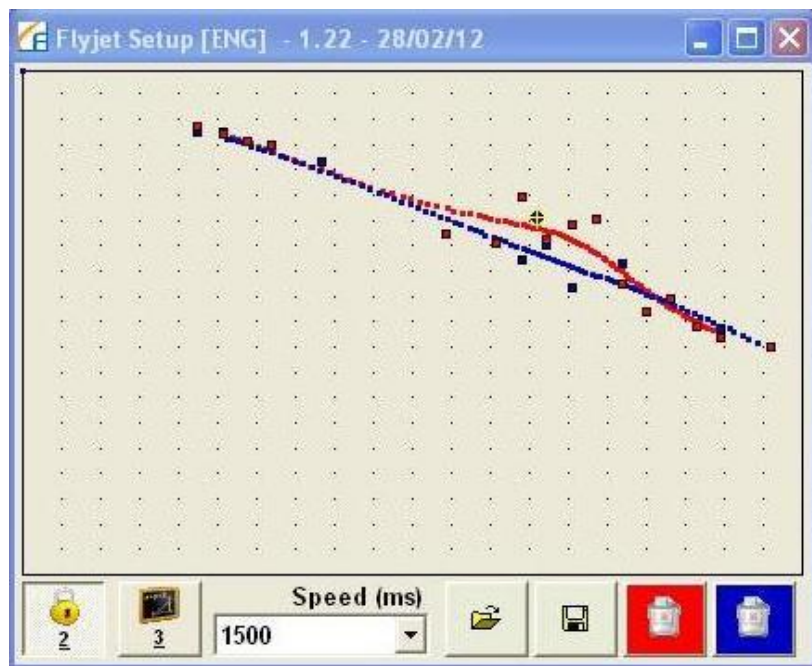


13. Click the button to record the gasoline samples.

14. Now, switch on gas and drive the car as before in petrol condition.

15. Blue dots will automatically appear (gas samples).

16. When gas samples are enough, a blue line automatically appears and the button “3” will flash.

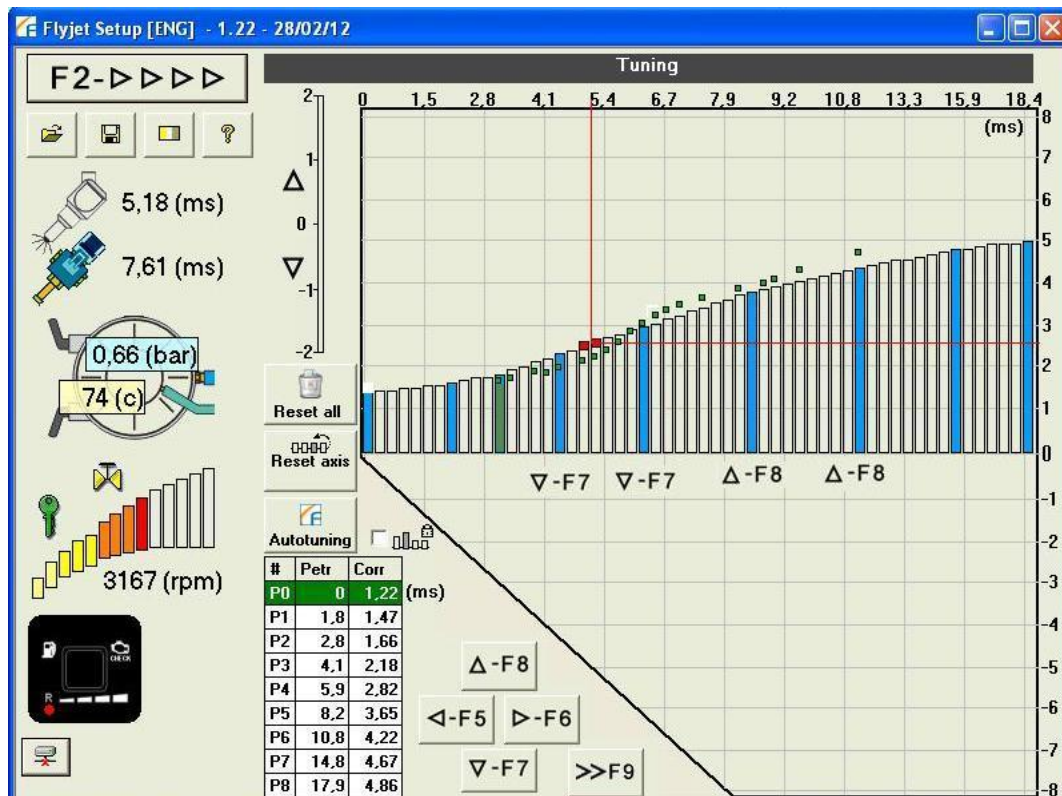


17. Click the button

18. Samples are shown on the map. A message warns you to cancel the gas samples after map adjustment.



19. Select the vertical bars to modify and adjust the map in according to the suggested green dots.



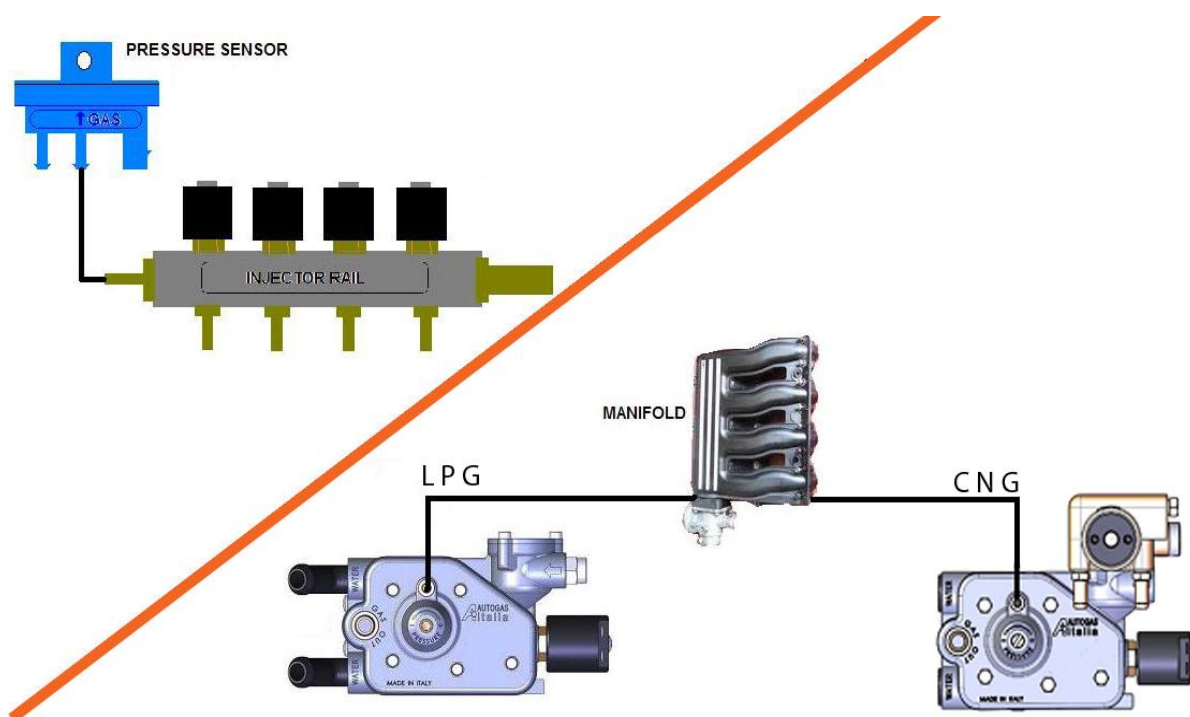
20. Use F7 and F8 arrows to raise or lower the bar until that match with the green dots.



21. As soon as the adjustment is completed, click the button **Reset all** to reset “gas samples”

22. Turn off the car.

23. Remove the reducer and map connection. Connect the vacuum hose to the reducer.
24. Remove the plug from gas pressure hose and connect it to the MAP.



25. The operation is finished and you can use the car in gas

Gas Injection System

Electric Wiring

