OMVL spa

Driving towards the future

Injection System
DREAM XXI N

Software and system set-up user's manual

REG
— by OMVL —

INDEX

Presentation

COMPANY OMVL spa

The Italian company **OMVL** is a leading player in the **Alternative Fuel Vehicles** (AFV) sector, designing, manufacturing and marketing complete fueling systems for gas-propelled vehicles and for the conversion of engines from petrol to CNG and LPG.

Established in 1980 at Argelato near Bologna, since 2001 **OMVL** has been part of the **SIT** Group, an Italian multinational specializing in safety, monitoring and control systems for domestic gas heating appliances and for Alternative Fuel Vehicles. The merger has given a further impulse to the internationalization of **OMVL**, which currently collaborates with the most important manufacturers of motor vehicles worldwide, including Volkswagen, Citroën, Ford and FIAT, selling to Europe (43%), the Americas (14%) and Australasia (43%).

The company's headquarters and manufacturing premises are now based in Pernumia (Padua), while commercial branches or production plants are located in Iran, Brazil and Argentina.

STATE OF ART

The popularity of motor vehicle gas fueling systems has been boosted mainly by 2 factors: fuel economy (the cost of CNG and LPG globally is much lower than that of petrol, and there is also the bonus of reduced engine wear), and lower emission levels.

All around the world, in point of fact, there is an increasing willingness to develop and encourage new technologies to exploit clean energy sources. Where environmental awareness is particularly keen, as in the countries of Northern Europe, and where levels of pollution are especially high (India, Mexico), local governments encourage the installation of CNG and LPG systems by offering tax breaks and subsidies.

MISSION E VISION

The adoption of gas as an alternative fuel for motor vehicles - and other applications too - can certainly be considered the stepping stone to a future characterized by the use of cleaner energy with a lower carbon content, since it is handy and economical, competitive and relatively plentiful, besides being by far the least pollutant of known fossil fuels. It would also provide a promising source of hydrogen, in the event that fuel cells should ultimately replace conventional fueling systems in the not too distant future.
All this is a matter of conviction for OMVL, and forms the basis of the company's mission statement: optimum performance with minimal emissions, a combination giving Customers maximum satisfaction and reliability, and a steadily cleaner future.

OUR PRODUCTS

OMVL products - all marketed under the REG® brand - are the outcome of long-term research and advanced technology.

Thanks to a wealth of know-how accumulated over a quarter-century of activity and experience in the field, solid investments and regular feedback from users on products and their applications, OMVL is able to offer business partners the most advanced and workably competitive solutions supplied within the most competitive time scales.

Reducers, mixers, ECUs, accessories and parts are designed and produced by OMVL, with pressure diecasting, machining, assembly and testing operations all organized entirely as internal procedures.

OMVL spa

Quality

QUALITY

OMVL is a Company certified with a Quality System **ISO 9001:2000.**
This certificate, released by TUV Italy - which belongs to the **German Group TUV Suddeutschland** - is related to the entire process of designing, manufacturing and marketing of gas components and complete fuel supplying systems for gas-propelled vehicles.

OMVL Company processes are defined, monitored and subjected to programs of constant improvements in order to reach high goals in efficency and effectiveness which guarantee a continuous and increasing consumer satisfaction of our products branded **REG®**.

REG® products are subjected to a process control for the entire manufacturing course which starts from in-coming material control to final tests under pressure performed on the production as a whole in accordance with the international and internal Regulations in order to guarantee and maintain continually a high standard of quality and safety.
The LPG and CNG converting components are approved in line with the European Regulations R67 01 and R110. Moreover, the CNG converting components are approved in accordance with ISO 15500 Regulation.
REG® converting systems for small, medium and high power engines are approved in line with the European standards for emissions of pollution Euro4.

Introduction

MINIMUM COMPUTER REQUIREMENTS FOR SOFTWARE INSTALLATION

• **Operating system:** .... Windows 98 SE or later

• **Memory (ram):** .... 16 Mbytes at least

• **Hard disk:** .... 20 Mbytes of free space at least

• **Screen resolution:** .... 800 x 600 or better

Internet Explorer version 5.5 or later should also be installed

INSTALLING THE SOFTWARE

When you are ready to install the software, insert the cd-rom in the computer and wait for the installation wizard to pop-up.

Should the wizard fail to start, click the **"Start"** button in the "Applications Bar" and select **"Run...". Enter: "D:\setup.exe"** (where D is your Cd-rom drive).
You will be asked to choose a directory where the software will be installed; we recommend to choose the default one.

Once the installation has been completed, the icon of the program will be automatically put on your desktop.

INTRODUCTION

It's not necessary to connect the ECU to start the software. However, if you want to program the ECU, you need to connect the it to the PC with an interface cable, part number OMVL 411028 (not supplied in the kit, should be ordered separately).

Furthermore, the control unit must be powered by the +12 V battery voltage (via the red-black wire) and properly grounded (black wire).

Main Menu

This menu is used to access all the submenus contained in the software, all of which are listed and described below:

The following information is provided at the bottom of the page:

1) This indicates if the control unit is connected or not connected to the PC. It is important to remember that any settings made when the control unit is not connected will be lost at the time of connection, unless they have been already saved in a configuration file.

The program will automatically attempt to connect to the control unit when you open it.
If the program can't connect to the ECU, a window will pop-up reporting an error. You should check:

- the connection of the serial interface,
- the connection of the control unit to the battery and to ground,
- if the key has been switched off for more than an hour, you should switch it on for a few seconds or crank-up the car, if the switch doesn't light up with the instruments.
To attempt a connection again, open the "Connection" menu at the top of the window and select "Connect".

2) This is the name that can be given or has been given to the configuration of the vehicle; for a new control unit, the standard configuration is "standard LPG". The control unit must be connected to the configuration software in order to download an existing configuration into the control unit.

3) This is the version of the control unit's software; select the "ECU REPROGRAMMING" sub-menu to update it.

Note: this is only possible if INTERNET EXPLORER version 5.5 or later is installed on your PC.

4) This indicates if the current configuration downloaded into the control unit uses the operating parameters for CNG or LPG; go to the "VEHICLE CONFIGURATION" sub-menu to select the type of fuel.

Vehicle configuration

This sub-menu is made up of 7 pages (when the REG009 dongle-key is plugged into the PC) where you can change the parameters that define the behaviour of the gas control unit. These parameters must be set according to the signals that are present on the vehicle.
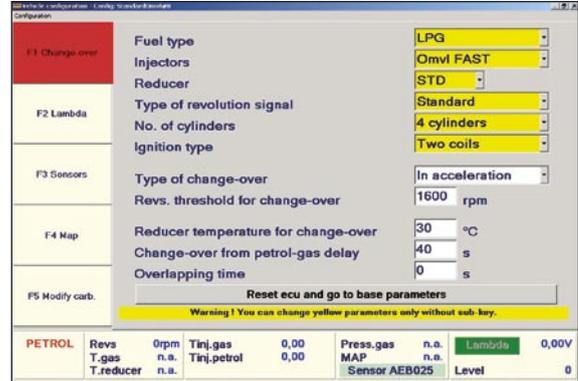
At the bottom of any page you have a resuming sight of the gas ECU parameters.

(1)	(2)		(3)		(4)		(5)	
PETROL	Revs	0rpm	Tinj.gas	0,00	Press.gas	n.a.	Lambda	0,00V
	T.gas	n.a.	Tinj.petrol	0,00	MAP	n.a.		
	T.reducer	n.a.			Sensor AEB025		Level	0

1) This box displays whether the vehicle is powered by petrol or gas. The description CUT-OFF may also appear when the system is in cut-off.

2) This box displays the:
  Engine Revs currently read by the control unit.
  T.gas is the temperature of the gas inside the injection rail.
  T.reducer is the temperature of the water inside the pressure reducer.

3) This box displays the gas (Tinj.gas) and petrol (Tinj.petrol) injection times.

4) In this box you can see:

Press.gas the difference in pressure between the injection rail and the manifold air pressure of the intake, read by the pressure sensor supplied in the kit
MAP Manifold Air Pressure reading (only if you are using an AEB025 sensor) and type of sensor used.

5) This box displays the voltage of the lambda probe and the gas level in the tank (in a 0 to 255 range).

Info: if you do not connect the purple wire to the lambda probe, you can't read the lambda voltage on the screen.

F1 Change - over

(1) Note: all the parameters painted in YELLOW ·············· **can be changed only when the key is off and the change-over switch is off.**

FUEL TYPE

This box is used to reset the control unit to the default parameters for the selected fuel type. Select:
- **GPL** for vehicles powered by LPG;
- **METHANE** for vehicles powered by CNG.
  The selecion of **LPG** or **METHANE** changes also the directory where the configuration files are saved (see Load configuration paragraph).

INJ.

ISelect the type of petrol injection of the original ECU:
- **Sequential:** the petrol injection is sequential
- **Full-group:** the petrol injection is half-group or full-group.

INJECTORS

Choose the type of gas injectors installed: **OMVL Standard or OMVL Fast**

REDUCER

This parameter is only available in the LPG configuration, because there are 3 types of reducers:
- **STD:** : Standard (0.9 bar) for 4 cylinders engines up to 110KW of power
- **MP:** Medium Power (1.2 bar) for 4-5 or 6 cylinders engines up to 150KW

- **HP:** High Power (1.7 bar) for 6-8 cylinders engines up to 220KW

TYPE OF REVOLUTION SIGNAL

This sets up the control unit to read the engine's revs with the BROWN wire:
- **STANDARD**, select this when the BROWN wire i connected to:
- crank or cam shaft position sensor giving a 0 ÷ 12 V, square-wave output;
- negative post of the coil pack.**;**
WEAK SIGNAL: select this when the BROWN2 wire is connected to:
- crank or cam shaft position sensor giving a 0 ÷ 5 V, square-wave output;
- static ignition control giving 0 ÷ 5 V square-wave output.

Note: if you are not sure of the signal you get on the BROWN wire, you should check it using an oscilloscope.

NO. OF CYLINDERS

This parameter is used to set how many cylinders the vehicle has and therefore how may gas injectors the ECU should control: set **3 CYLINDERS** or **4 CYLINDERS** according to the number of the vehicle's cylinders.
Should you use a control unit for 5-6-8 cylinders, the following options will also be displayed in the selection box: select **5 CYLINDERS, 6 CYLINDERS** or **8 CYLINDERS** according to the number of the vehicle's cylinders.

IGNITION TYPE

This parameter is used by the control unit to compute the engine speed accurately, depending on the type of signal the BROWN2 wire reads.

- **ONE COIL:** for vehicles with one coil per spark-plug and the BROWN2 wire connected to the negative of a coil;

- **TWO COILS:** for vehicles with one coil each two spark-plugs and the BROWN2 wire connected to the negative of a coil;

- **RPM SENSOR:** for vehicles with one coil and mechanical distributor (BROWN2 wire connected to the negative of the coil) and for vehicles where the BROWN2 wire is connected to a shaft position sensor.

- **RPM SENSOR2:** for all 8 cylinders vehicles that give a double RPM reading with the RPM SENSOR selected.

NOTE[2] : the BROWN wire is in the gas control unit harness

REVS. THRESHOLD FOR CHANGE-OVER
This sets the number of revs required for changeover to gas. Set the number of revs that you want to reach before the petrol to gas changeover takes place.

REDUCER TEMPERATURE FOR CHANGE-OVER
This sets the temperature of the pressure reducer required for the changeover to gas: the control unit WILL SWITCH TO GAS under this temperature.
The control unit will continue to operate on GAS even if the temperature falls below the threshold temperature while running on gas.
We recommend setting a temperature between 20°C and 45°C: if you set a too low temperature, the Petrol to Gas changeover will take place when the reducer is not warm enough to ensure a sufficent gas supply; if the temperature you set is too high, it will take a long time to switch to gas.

CHANGE OVER FROM PETROL-GAS DELAY
Set the minimum time the ECU waits from the engine start before switching to gas (even if the reducer's temperature has already reached the threshold temperature). This delay lets the original ECU perform all the checks it needs on the vehicle's sub-systems, whitout annoying it with the gas power.

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Reset ecu and go to base parameters

If you press this button, all the parameters in the control unit are cleared and the configuration is reset to the default one. We recommend to use this button ONLY in the following circumstances:

- after each use of the "ECU REPROGRAMMING" feature to update the ECU to a new firmware: we recommend you press this button before any other modification on the configuration;

- if you are not sure that all the parameters have been set correctly and you want to start from scratch again: press this button to restore the default configuration and clear all parameters.

PAGE F2 LAMBDA

TYPE OF LAMDA PROBE

the control unit car clearly read the lambda probe voltage only if you set this parameter correctly. Please check that the lambda probe is working with a digital multimeter, before you select the type of Lambda Probe.
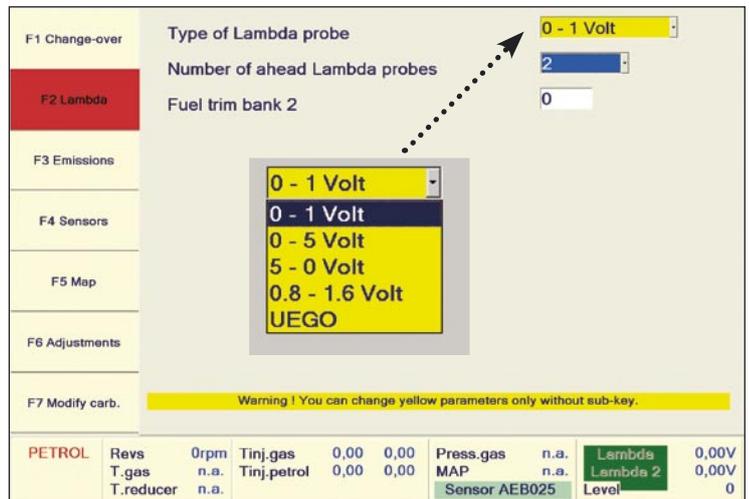
WARNING: ⚠️
Connect only the PURPLE wire to the lambda probe: the GREY wire MUST REMAIN DISCONNECTED!
If you do not connect the PURPLE wire, it is not necessary to set the "TYPE OF LAMBDA PROBE"
The GREY wire should be connected only for the emulation.

0 ÷ 1 V Select this option if the voltage output of the lambda probe is:
approximately 0 ÷ 0.2 V for lean mixture;
approximately 0.8 ÷ 1 V for rich mixture.

0 ÷ 5 V Select this option if the voltage output of the lambda probe is:
approximately 0 ÷ 0.2 V for lean mixture;
approximately 4.8 ÷ 5 V for rich mixture.

5 ÷ 0 V Select this option if the voltage output of the lambda probe is:
approximately 4.8 ÷ 5 V for lean mixture;
approximately 0 ÷ 0.2 V for rich mixture.

0,8 ÷ 1,6 V Select this option if the voltage output of the lambda probe is:
approximately 0.7 ÷ 0.8 V for lean mixture;
approximately 1.4 ÷ 1.6 V for rich mixture.

UEGO Select this option only for wide-band resistive probes with 5 wires.

NUMBER OF FRONTAL LAMBDA PROBES

Set the number of pre-cat lambda probes installed in the vehicle: **1** or **2**

FUEL TRIM BANK 2

If you set 2 frontal lambda probes, you can increase or decrease this correction value (form –20 to +20) for the second bank, in case of 6-8 cylinders engine.
This correction is applied to the K ratio defined in the map of the first bank. If the correction is set to 0, both banks use the same K ratio.

PAGE F3 EMISSIONS

The parameters on this page are used only for emission tests. They become effective only if you cut the wire of the lambda probe (black wire, in a 4 wires probe), connect the piece coming from the probe to the PURPLE wire of the gas ECU and the piece going to the original ECU to the GREY wire of the gas harness.
Please take a look to the connection scheme, if your probe is a 5 wires UEGO probe.

HIGH EMULATION LEVEL*

While idling the car in petrol, read the maximum lambda probe's voltage and set this parameter accordingly.

LOW EMULATION LEVEL*

While idling the car in petrol, read the minimum lambda probe's voltage and set this parameter accordingly.

*: the default values are set accordingly to the type of lambda probe you choosed in the "F2 Lambda" page.
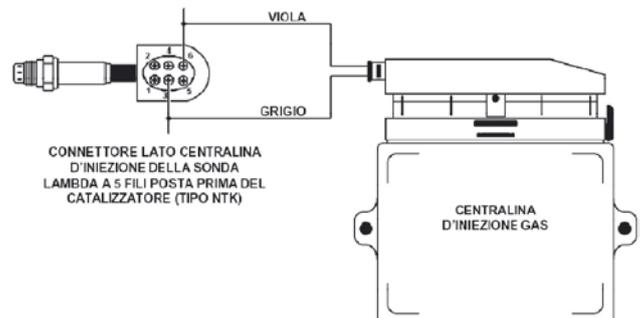
INITIAL EMULATION DELAY

When you start the engine, the gas ECU will activate the emulation after the amount of time you set. Set it to 0 to disable the emulation.

Connection scheme for UEGO, 5-wires lambda probes

Type BOSH

Type NTK

PAGE F4 SENSOR
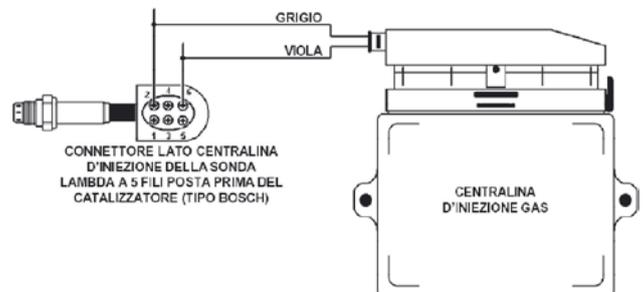
TYPE OF MAP SENSOR
Lets you choose the type of MAP sensor installed: AEB025 or AEB013.

TYPE OF GA LEVEL SENSOR
This sets the type of level sensor that you use:

AEB -set this if you are using a sensor with standard AEB output signal (like the AEB1050); for connection instructions, look to the installation diagram for the gas control unit.

0 - 90 ohm -set 0 - 90 ohm if the sensor gives an output from 0 to 90 ohm (like the AEB1090); refer to the installation diagram for the gas control unit.

Non standard – select this option for all non AEB sensors that give an output directly proportional to the gas level in the tank (0, 255).
With this option selected you can define the thresholds for the level gauge in steps of 1⁄4 of the tank. The maximum value is for the full level, the minimum for the empty level.

Non standard inverted – select this option for all non AEB sensors that give an output inversely proportional to the gas level in the tank (255, 0).
With this option selected you can define the thresholds for the level gauge in steps of 1⁄4 of the tank. The maximum value is for the empty level, the minimum for the full level.

PAGE F5 MAP

It is possible to modify the gas mixture in this page, adjusting the map created by the automatic calibration procedure. **Changing the map is not mandatory: we recommend to check the mixture and modify the map only if necessary.**
You can check if the engine is correctly carbureated while on gas using a diagnostic tool capable of reading the petrol ECU fuel trims (for example you can use an OBD-II scan tool on OBD-II equipped cars): simply check the fuel trims at different revs. You can check the carbureation also without a scan-tool, checking the strobing of the lambda signal while switching form petrol to gas and vice-versa. You can still make some test, even if the lambda probe is not connected to the gas ECU: just compare the petrol injection timings while on petrol and while on gas, switching from petrol to gas and vice-versa.

You should check that the K figures in the map change smoothly from one cell to the other; eventually modify the map to achieve a smoother map.

If you need to modify a figure of the map, select its cell and double-click the left mouse button on it, or press ENTER on the keyboard. You can select also a whole area of the map and press ENTER to change all the figures in the selected cells at the same time.

There are three way of modifying the figures:

- **Absolute:** changes the selected figures into the new value you enter.
- **Linear:** sum/subtract the value you enter to the selected figures.

- **Percentage:** increase or decrease the figures in the cell/cells by the percentage you enter.

PAGE F5 MAP

SWITCH FROM PC
With this button you can switch to petrol or to gas without using the switch inside the car (when you select the Switch from PC button, the switch inside the car is momentary disabled).
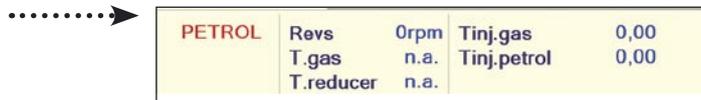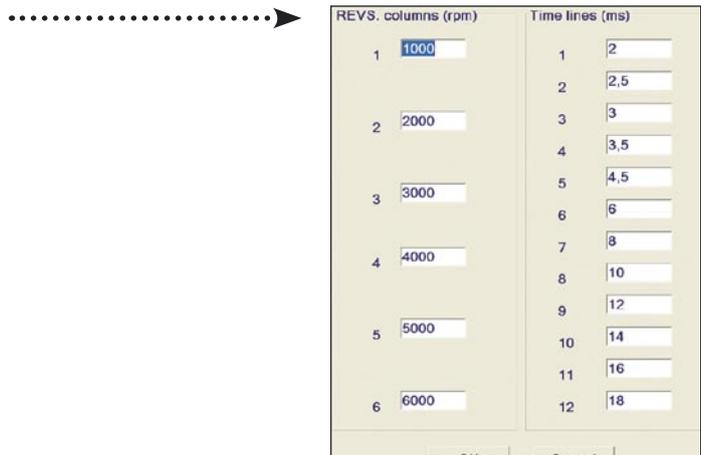

MODIFY MAP REFS
The value of the first time line should be checked at idle (with all loads off, like A/C, head lamps, etc.), while on petrol. Take a value lower or equal to the petrol injection time you read in the parameters panel, on the bottom of the window.

Fill the 12th time line with the same procedure (take the max petrol injection timing while driving the car at the highest revs).

The values in the time lines should increase smoothly in the first 5-6 rows, while the other values should increase proportionally till the 12th line.

REVS. columns (rpm)		Time lines (ms)	
1	1000	1	2
		2	2,5
2	2000	3	3
		4	3,5
3	3000	5	4,5
		6	6
4	4000	7	8
		8	10
		9	12
5	5000	10	14
		11	16
6	6000	12	18

PETROL				
	Revs	0rpm	Tinj.gas	0,00
	T.gas	n.a.	Tinj.petrol	0,00
	T.reducer	n.a.		

PAGE F6 ADJUSTMENTS

REDUCER TEMPERATURE CORRECTIONS
You can change the temperatures and the correction percentages. You should modify the temperatures only if the reducer tempeta-ture for change-over is lower than the figures in the correction table.
You should change the correction percenta-ges only if you think that the mixture is too rich at a specific temperature.

GAS TEMPERATURE CORRECTIONS
This table lets you compensate the variation of the gas density over temperature.

F1 Change-over
F2 Lambda
F3 Emissions
F4 Sensors
F5 Map
F6 Adjustments
F7 Modify carb.

Reducer temperature corrections (°C)

20	25	30	35	40	50	60	68	Over	(°C)
-21	-18	-15	-12	-10	-7	-4	-2	0	(±100%)

Gas temperature corrections (°C)

0	5	10	20	32	45	56	68	Over	(°C)
-22	-19	-16	-11	-5	0	3	6	9	(±100%)

PETROL								
	Revs	0rpm	Tinj.gas	0,00	Press.gas	n.a.	Lambda	0,00V
	T.gas	n.a.	Tinj.petrol	0,00	MAP	n.a.		
	T.reducer	n.a.			Sensor AEB025		Level	0

PAGE F7 MODIFY CARB.

In this page you can modify the gas carbureation to fine-tune the map created by the auto-calibration.
This operation is not mandatory and we strongly suggest to check the carbureation before making any modification.
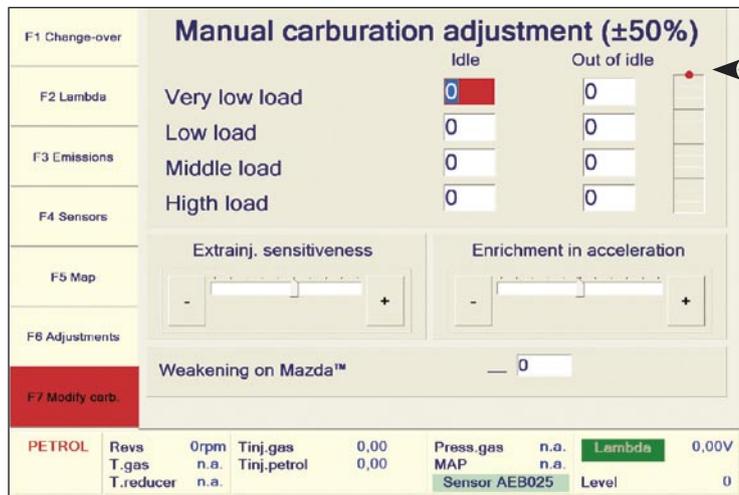
There are 2 columns in the MODIFY CARB section:
Idle: when the engine's speed is below 1100 RPM;
Out of idle: when the speed is above 1100 RPM.

Both columns are divided up into 4 boxes showing the engine load.

The boxes are painted in red to show the actual working point of the engine.

EXTRAINJ. SENSITIVITY

The DREAM XXI N ECU converts the extra-injection pulses generated by the petrol ECU into gas injections. However, the petrol extra-injection timings are very short and under some conditions the gas injectors could not fully open, giving thus an inaccurate flow of gas. To avoid this problem you can change the **Extra-injection sensitivity:** when you set the extra-injection fader to the minimum value, the gas ECU converts the petrol injection timings into gas injection timings without extra-injection (thus the extra-offset time is 0).
When the fader is set to the maximum, the DREAM XXI N ECU converts the petrol injection timings into gas injection timings with the maximum extra-injection time (extra-offset time is 3.6 ms). The suggested settings for the fader are 0 for CNG systems and middle position for LPG systems.

ENRICHMENT IN ACCELERATION

This feature is active only when the bar under the fader is painted in blue: this happens while you are accelerating or decelerating. In these conditions, you can enrich or lean the mixture to enhance the drivability. (You can use this only if you installed an AEB025 pressure sensor).
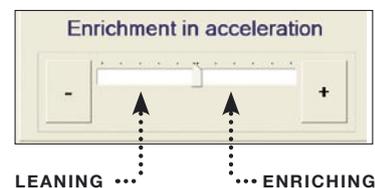
WEAKENING ON MAZDA

We found out that some Mazda engines under certain conditions switch their injection strategies from sequential to full-group.

When this happens, the petrol injection timings decrease by a 50% and the dot on the map moves to a higher row, pointing at wrong figures. The engine then starts to shake and the car doesn't run smoothly.

The **Weakening on MAZDA** lets you set a value that will be subtracted from the figures in the map, taking them back to the right value.

PROCEDURE FOR VERIFYING CARBUREATION

PROCEDURE FOR VERIFYING CARBUREATION

Before proceeding with any modifications, first verify that the vehicle runs fine while on petrol, because the Gas injection is based on the Petrol one.

- Start the vehicle on petrol and wait for the engine to reach its normal operating temperature (approximately 90°);

- select the box where you intend to verify carburetion and keep the position of the accelerator steady;

- verify the reading of the petrol fuel trims using an OBDII palm-top;

- switch to gas, trying to get back to the same number of engine revs and returning to the same box;

- verify the reading of the fuel trims;

- if, while on gas, the reading of the fuel trims changes more than 3-4 units from their original value (for example the trim changes from 8% to to 11-12%), correct the carburetion following these rules:

• if the fuel trim drifts up increasing its value, the petrol control unit has detected a lean carburetion. Therefore, a value that is more or less the same as the increase of the fuel trim should be entered in the corresponding box.

• If the fuel trim drifts down decreasing its value, the petrol control unit has detected rich carburetion, and a negative amount must therefore be entered.

- Verify that the fuel trim show has same reading while on Gas and on Petrol after each modification.

- Repeat this procedure for each single box. Please note that on-road vehicle testing is necessary to select some boxes.

There is no need to modify the carburetion if the fuel trim shows the same reading during gas and petrol operations.

NOTE: it's important that you perform any modification only while running on petrol.

DISPLAY

This page displays all the signals that are acquired by the control unit:
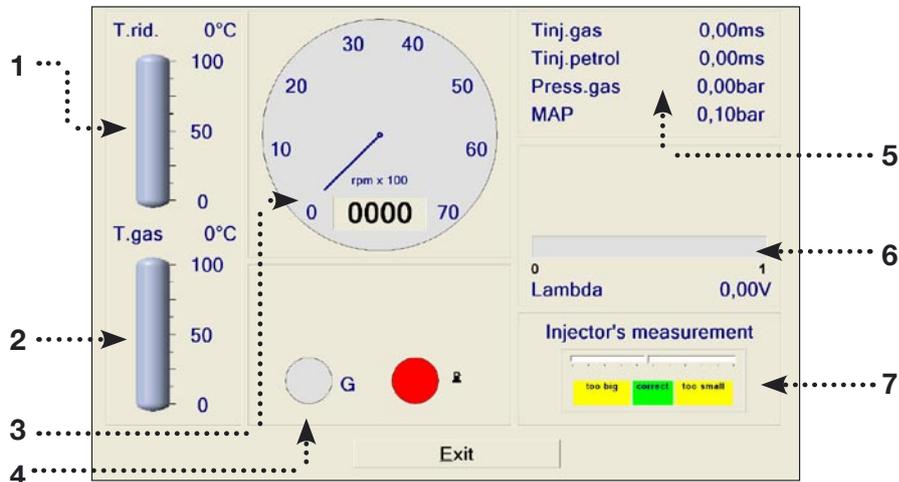
1) Displays the temperature of the gas reducer;

2) Displays the gas temperature;

3) Displays the current number of engine's revs;

4) Indicates if the vehicle is running on Gas or Petrol;

5) This box displays the current Gas injection time; the current petrol injection time; the difference in pressure between the gas in the injection rail and the intake manifold, read by the pressure sensor supplied in the kit;

6) This is the voltage of the lambda probe of the car. Nothing will be displayed if the lambda wires (purple and grey) are not connected;

7) Detects the size of the nozzles checking the map generated with the auto-calibration.

Nozzle Dimension Table: CNG SYSTEM

Nozzle code	Nozzle diam.	Nozzle section	Power for cylinder	Cylinder volume	Nozzle diam. on mainfold
	mm	mm²	kW	cc	mm
01444	1,75	2,41	0 - 17	300	3,5
01442	2	3,14	13 - 20	350	3,5
01408	2,5	4,91	19 - 28	450	3,5
01445	3	7,07	24 - 30	500	3,5

Nozzle Dimension Table: LPG SYSTEM

Nozzle code	Nozzle diam.	Nozzle section	Power for cylinder	Cylinder volume	Nozzle diam. on mainfold
	mm	mm²	kW	cc	mm
01442	2	3,14	0 - 18,5	350	3,5
01408	2,5	4,91	18 - 22	450	3,5
01445	3	7,07	21 - 28	500	3,5

AUTOCALIBRATION

The calibration of the control unit can be done in this section so that correct carburetion of the vehicle can be achieved when running on GAS.

Before starting the automatic calibration procedure, verify that the vehicle runs smoothly on petrol, because the injection is based on the Petrol one.
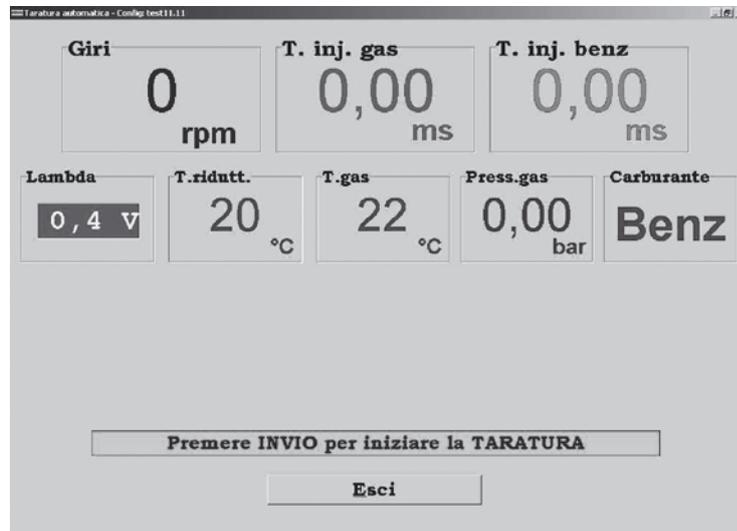
Follow these instructions to proceed to the automatic calibration:

1) Start the vehicle on petrol and wait for the engine to reach its normal operating temperature (approximately 90°);

2) Start the automatic calibration procedure by pressing the ENTER key and follow the instructions shown on screen.

When the engine revs have reached the value specified on screen, the control unit will perform several switch from petrol to gas. The engine's revs will probably drift during the first stages. It is important to keep the accelerator pedal steady even if the revs drift, without trying to correct the revs.

If the engine stalls during the automatic calibration procedure, enter "VEHICLE CONFIGURATION" in the "F1 Change-over" section and select "Reset ecu and go to base parameters". After resetting, restore the settings for the parameters in " VEHICLE CONFIGURATION", if necessary.
• **Check the nozzles size !**

Return to AUTOCALIBRATION and start the automatic calibration procedure again, as described above.
- Try the auto-calibration while driving on the road, if it seems that it's difficult to complete it while on idle.

After completing the AUTOCALIBRATION, try the vehicle on gas and verify that it runs smoothly.
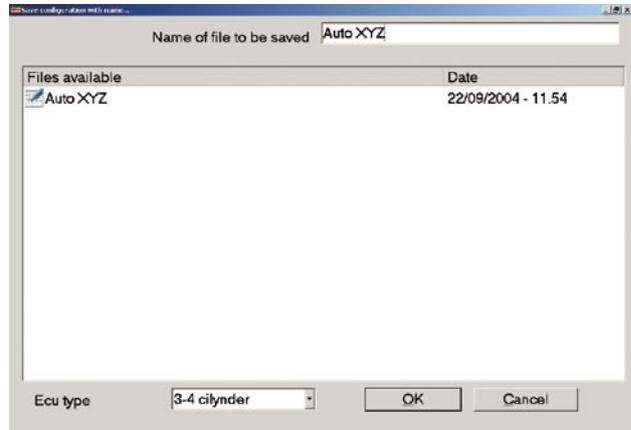
Note:
Starting from software version 4.1.0, the default starting injection time has been changed from 4.2ms to 3.5ms. This should ease out the auto-calibration process, most of all with Range Rovers, that had some troubles during this process in the past.

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SAVE CONFIGURATION

All the parameters set in "vehicle configuration" can be saved using this menu, in a file that can be used later for the programming of other control units installed on the same model of vehicle that use the same type of fuel:
Methane or LPG.

To save it, specify the "Name of file to be saved" and click OK.

Note: *selection of the number of cylinders (in the bottom section of the window) only appears if the control unit **is not connected** to the computer. If the control unit **is connected** to the computer, this information will be saved when you select "NO. OF CYLINDERS" in the "vehicle configuration" page.*

LOAD CONFIGURATION

An existing configuration can be loaded into a control unit using this menu.
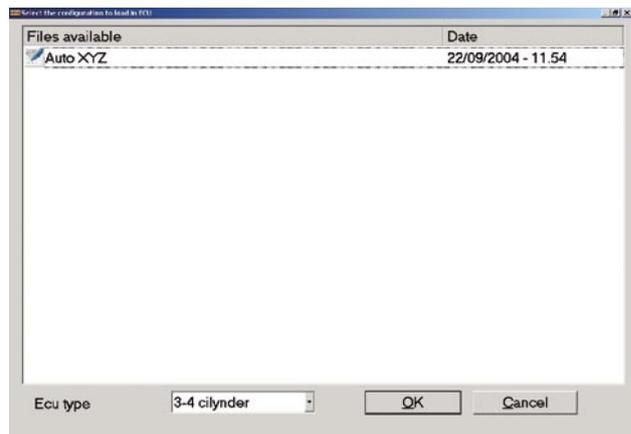The configuration files are contained in two separate directories: one for LPG configurations and the other for METHANE configurations.

Before loading a configuration, you must enter "VEHICLE CONFIGURATION" and select METHANE or LPG in "Fuel type" according to the configuration that you want to load.

Selection of the number of cylinders (in the bottom section of the window) only appears if the control unit is not connected to the computer.
If the control unit is connected to the computer, this information will be saved when you select "NO. OF CYLINDERS" in the "vehicle configuration" page.

Select the file that you want to load and click OK.

Note: *To avoid problems during the control unit programming stage, do not rename configurations and avoid moving them to directories other than the original ones.*

ECU REPROGRAMMING

It is possible to update the **FIRMWARE** (the management program inside the control unit) for the gas control unit using this menu.

The installation CD-Rom for the calibration software always includes the latest version of the firmware available at the time the CD-Rom is produced, whereas any later firmware versions may be sent by e-mail or by disk and must be requested to your dealer.

To update the FIRMWARE, select "ECU REPROGRAMMING" and the "Select programming file" window will appear.
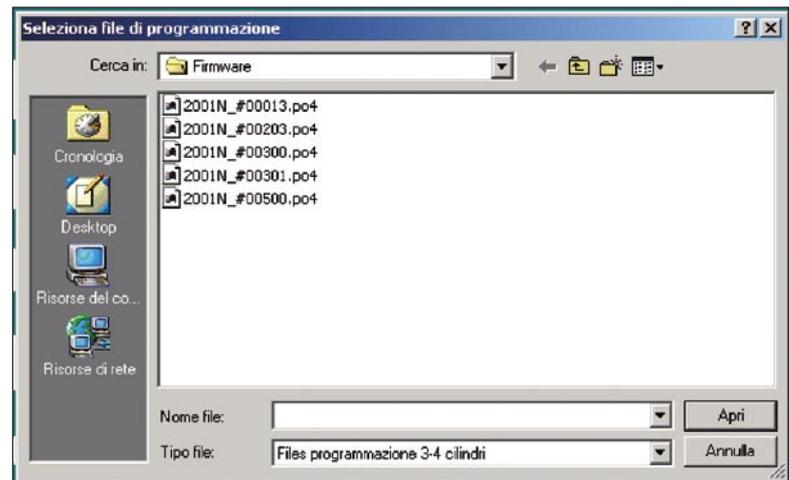
Select the update file and click open. Should there be more than one file, select the one with the highest number (the latest version).

Note: *in order to avoid the loss of the configuration in the control unit, check that the control unit is connected to the computer before updating the FIRMWARE.*

IMPORTANT ⚠️
Reprogramming is only possible if INTERNET EXPLORER version 5.5 or above is installed on your PC

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Components

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