



**LANDIRENZO®**

The Clean Air Company



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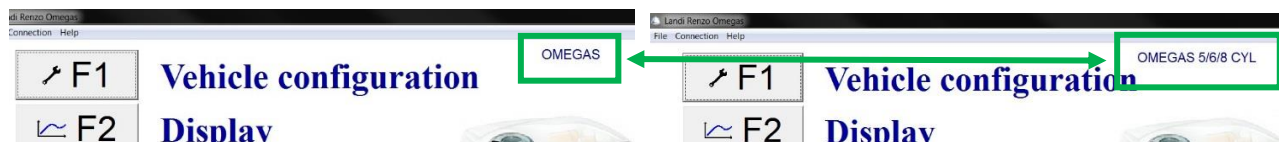
## LR Omegas software program Version 4.2.0.85

Dear Customer,

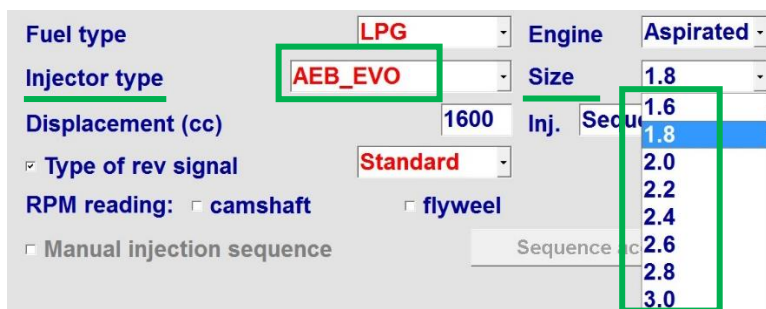
the LR Omegas 4.2.0.85 software program is available in the LR site reserved area, following the path:  
Download Landi Renzo Software / Software After Market / SW LR OMEGAS v. 4.2.0.85.

The most important updates of this version are:

- New firmware available for Omegas ECUs:
  - o EVO\_L\_#00572
  - o EVO\_#01171
  - o EVO\_OBD\_OMEGAS3\_#00985
  - o OMEGAS4\_#00186
  - o MP8C\_OBD\_#01354 (for OMEGAS 3.0 5-6-8 cylinder ECUs)
- Split the list of OMEGAS ECUs between LRE194 and LRE198, subdividing them into OMEGAS (for 2-3-4 cylinders) and OMEGAS 5/6/8 cylinders.



- LR Omegas3 ECU 5-6-8Cyl - Updated the parameters of the basic configuration of the "GI 25" injectors under the "Injector type" item.
- The basic calibrations have been optimized with the use of GIRS12 injectors.
- Updated texts in various languages.
- Solved small display problems.
- F1 Gas change-over, various page modifications:
  - Updated injector selection list for:
    - KIT in accordance with the UCIF project (only for Italy);
    - New KIT with EVO ECU and GIRS12 injectors;
    - Specific kits for some world markets.
- Injector type: when setting AEB\_EVO it is now also possible to set the size of the nozzles, thus allowing, in "Autocalibration", to start from a mapping as close as possible to the optimum.



- Injector type: when setting "Landi GIRS12, it is now possible to also set the XXS size, thus allowing, in "self-calibration", to start from a suitable mapping for the injectors used.



- The "Manual injection sequence" function depends on whether the "Type of rev signal" item is selected. Function used for EVO L control units as the engine revs wire is not present. With the use of other ECUs on which the brown wire is present (RPM signal), we suggest keeping this wire connected and setting the "Type of rev signal" item. The specific reading of the engine revs is an improvement for the management of all the strategies on which the calibration and carburation control depend.



- Buzzer. At the discretion of the customer, it is possible to activate/deactivate the beep of the switch when switching from petrol to gas and, when the gas reserve LED comes on.

- Buzzer, BEEP if petrol to gas transition occurs
- Buzzer, BEEP if tank reserve reached

- Gas level.  
With LROmega3 ECU, setting 8 cylinders, at the "Low pressure value for change back" parameter, the default value was set to 0.5 bar for LPG and 1.25 bar for CNG.

LPG	CNG
Low pressure value for change back <input type="text" value="0,5"/> bar	Low pressure value for change back <input type="text" value="1,25"/> bar
<input type="checkbox"/> Gas electrovalves opened in advance	<input type="checkbox"/> Gas electrovalves opened in advance

- Advanced  
The petrol contribution map has been inserted, if enabled, it works as an alternative to the "Petrol contribution" item in the "Gas / petrol" window.  
The possibility of using a map, in comparison to the previous function, allows you to set the petrol compensation in more precise points.  
The values from 0 to 100 that can be set in the map are expressed as a percentage, considering 100, the engine is powered only by petrol.

Enable map of petrol contribution

inj/rpm	750	1200	1500	2000	2500	3000	3500	4000	4500	5000	5500	6500
2,00	0	0	0	0	0	0	0	0	0	0	0	0
2,50	0	0	0	0	0	0	0	0	0	0	0	0
3,00	0	0	0	0	0	0	0	0	0	0	0	0
3,50	0	0	0	0	0	0	0	0	0	0	0	0
4,50	0	0	0	0	0	0	0	0	0	0	0	0
6,00	0	0	0	0	0	0	0	0	0	0	0	0
8,00	0	0	0	0	0	0	0	0	0	0	0	0
10,00	0	0	0	0	0	0	0	0	0	0	0	0
12,00	0	0	0	0	0	0	0	0	0	0	0	0
14,00	0	0	0	0	0	0	0	0	0	0	0	0
16,00	0	0	0	0	0	0	0	0	0	0	0	0
18,00	0	0	0	0	0	0	0	0	0	0	0	0

*NOTE: the values are percentae of petrol injection time*

<p>With enabled petrol contribution map</p> <p>Operation at high RPM</p> <p><input checked="" type="radio"/> Gas    <input type="radio"/> Petrol addition    <input type="radio"/> Petrol</p>	<p>With petrol contribution map disabled</p> <p>Operation at high RPM</p> <p><input type="radio"/> Gas    <input checked="" type="radio"/> Petrol addition    <input type="radio"/> Petrol</p> <p>RPM for petrol addition    from 4500 to 9000 rpm</p> <p>Petrol inj. time for petrol addition    15 ms</p> <p>Amount of petrol addition    2 ms</p>
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In the lower bar of the screen the value of the petrol contribution is expressed in msec. (like other injection times).

Revs	0	Gas Tinj.	0,00	T.water	n.a.	Lambda	n.a.
		Petrol Tinj.	0,00	T.gas	n.a.		
Level	0	Contrib.benz	0,00	Press.	n.a.		
		Press.diff.	n.a.	MAP	n.a.		

- Injectors  
New function: "Extra-injections cutting".  
The values of "Gas extra-injection minimum opening time" and "Petrol extra-injection maximum time" can be set, and the DEFAULT value are set at 0.1ms and 1.4ms.

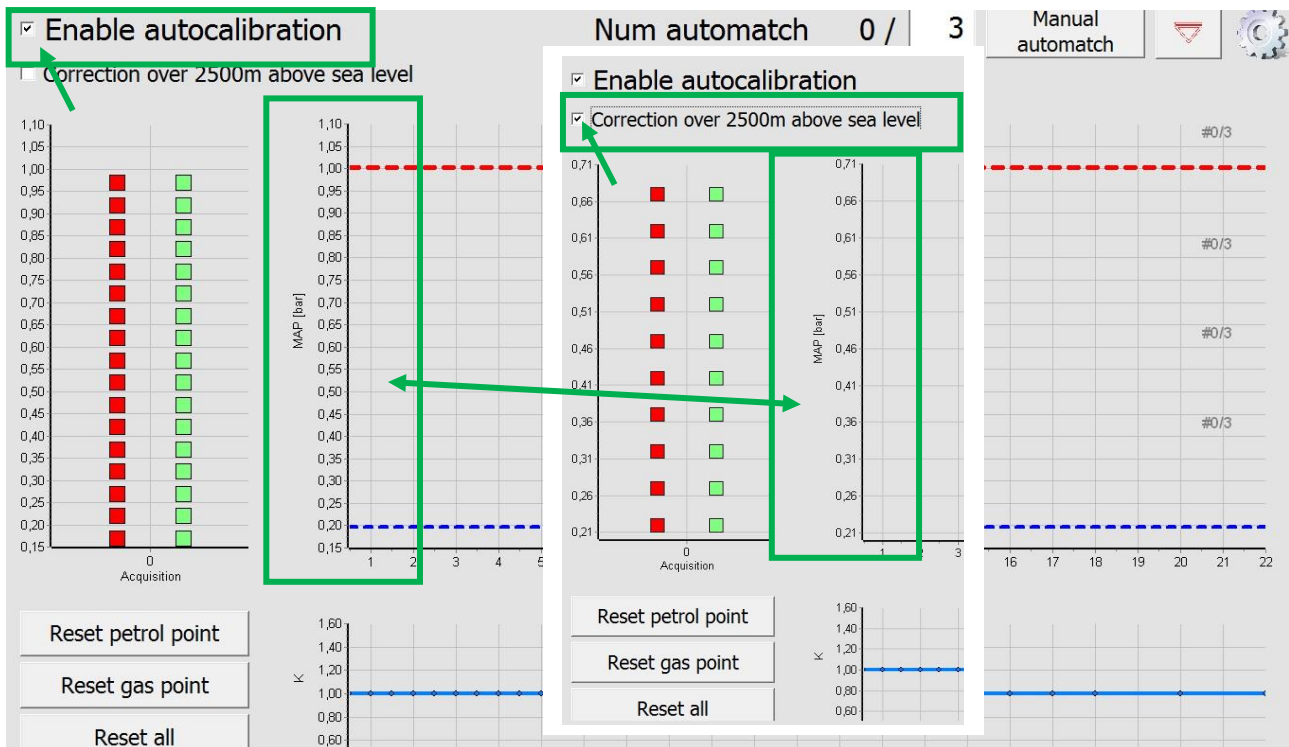
Extra-injections cutting

Gas extra-injection minimum opening time  ms

Petrol extra-injection maximum time  ms

- Autocalibration

You can select the "Correction over 2500m above sea level" item. By varying the MAP pressure values, this function allows the completion of the auto-calibration, avoiding the need to acquire points with high engine load, on occasions when it is not possible to reach them due to altitude conditions (eg: some South American countries), or particular engine characteristics (eg: some cars with automatic gearbox).



- Adaptivity

The settable item has been inserted: "Enable PID44 correction" and its display.

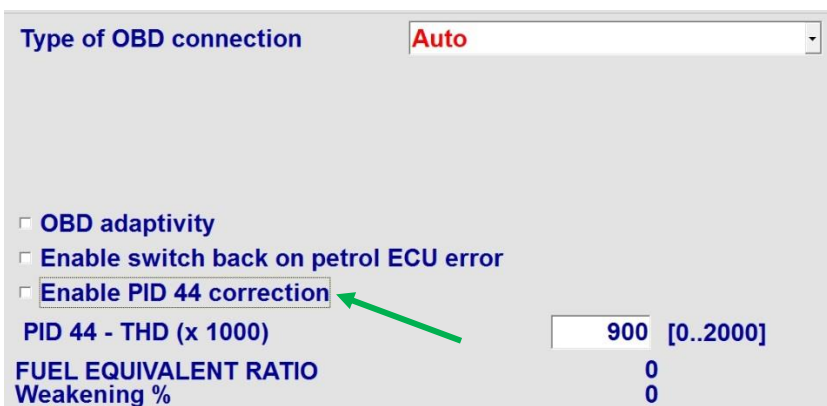
This function can be used if the vehicle's ECU is set up to manage this function and with the LROmega3, EVO-OBd and LROmega4 ECUs, because the connection to the EOBD connector is necessary.

To check if the petrol injection ECU manages the PID 44 you can use the AEB OBD tester.

- the connection must be type 8 or 9;

- in the "Parameters" menu by selecting the "Lambda set value" (target) item, the value is displayed;

or, after the connection between the gas control unit and the OBD diagnostic socket of the vehicle, the value of the "Fuel equivalent ratio" item will be "1".



This strategy allows to correct the "Rich" carburetion peaks, without having to intervene on the carburetion map, so that every time the carburation drops below the value set in the box ("900" value of the recommended security), the ECU makes a carburation towards the "lean", such as to be within the correct values so as to improve vehicle driveability (particularly suitable for CNG systems).

**Enable PID 44 correction**

<b>PID 44 - THD (x 1000)</b>	<b>900 [0..2000]</b>
<b>FUEL EQUIVALENT RATIO</b>	<b>0</b>
<b>Weakening %</b>	<b>0</b>

- F3 - DIAGNOSIS

Even with the "C" version of the software program it is possible to activate / deactivate each diagnosis item and the consequent "Action".

Diagnosis checks	State	Action
<input checked="" type="checkbox"/> (20x) Gas injectors	OK	Switch to petrol
<input checked="" type="checkbox"/> (231) Reducer valve	OK	Switch to petrol
<input checked="" type="checkbox"/> (190) Gas pressure sensor	OK	Switch to petrol
<input checked="" type="checkbox"/> (105) Map sensor	OK	Switch to petrol
<input type="checkbox"/> (180) Gas temperature sensor	OK	Only petrol
<input checked="" type="checkbox"/> (600) Changeover switch present	OK	Only petrol
<input checked="" type="checkbox"/> (460) HP sensor	OK	None
<input type="checkbox"/> (181) Gas temperature too low -15	OK	None
<input type="checkbox"/> Low pressure insulation	OK	Switch to petrol
<input type="checkbox"/> High pressure insulation	OK	Only petrol
<input type="checkbox"/> Low pressure	OK	None
<input type="checkbox"/> Over pressure	OK	None
<input type="checkbox"/> High pressure plausibility	OK	None
<input type="checkbox"/> Low gas pressure	OK	None

For additional support or details, please get in touch with our Technical Assistance.  
Best regards

Landi Renzo  
Sales Team

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Ti informiamo infine che in relazione ai predetti trattamenti potrai esercitare i diritti di cui inviando una e-mail all'indirizzo [info@landirenzo.com](mailto:info@landirenzo.com)