



autogas systems

NEVO



NEVO sequential gas injection system



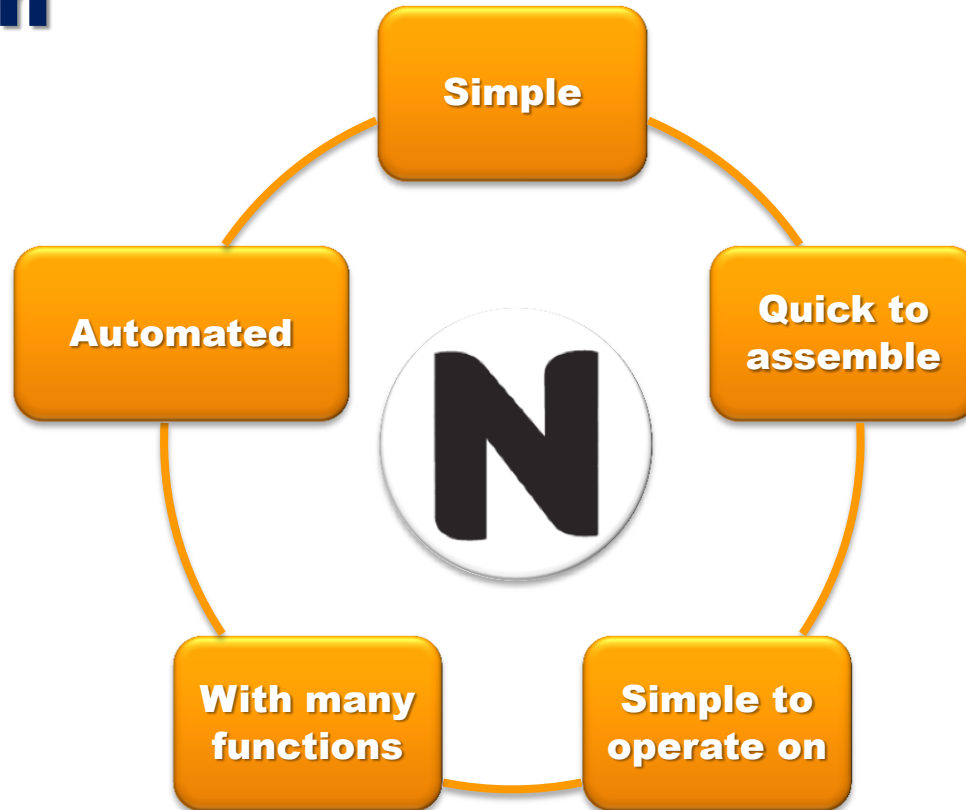


New sequential gas injection system NEVO

- **Answer for market expectations**
- **Modern cars**
- **Demanding users**
- **Workshop time saving**
- **KME trademark**



Major assumptions of NEVO system





NEVO controller



One connector, one harness – quick assembling

Small dimensions

Operating with 3- and 4-cylinder engines

Providing automatic configuration and calibration of the system



NEVO-PLUS controller



Operating with 3- to 8-cylinder engines

Small ECU dimensions

4 easy to configure analog inputs (Lambda sensors, temperature sensors) and 2 analog outputs

Configurable +12V output



NEVO-PRO controller



Operating with 3- to 8-cylinder engines

Small ECU dimensions

4 easy to configure analog inputs (Lambda sensors, temperature sensors) and 2 analog outputs

Configurable +12V output

Integrated OBD module



New enlarged group of NEVO products

	NEVO	NEVO-PLUS	NEVO-PRO
Standard NEVO functions	✓	✓	✓
Maximum number of cylinders	4	8	8
Additional analog inputs	✗	✓	✓
Analog outputs	✗	✗	✓
Controllable output	✗	✓	✓
Integrated OBD	✗	✗	✓
Cooperation with OBD v2 Adapter	✓	✓	✗





New driver's panel



Built-in buzzer

Buzzer volume adjustment

Connector

Two diodes indicating state (red and blue)

Configurable options with software



New driver's panel



Reminder of forthcoming inspection of gas installation

Function of automatic switching to gas supply

Function of automatic switching to petrol in case of lack of gas

Function of automatic reading of the level of gas in the tank

Function of automatic adjustment of brightness of the panel diodes

Displaying the time to switching (during engine heating)

Emergency start on gas function



New software for NEVO system



Legible look of the interface

Easy to operate

Always visible major values of the system

Special „FUNC” panel informing of active functions

Maximal ergonomomy of work and quick system configuration

Separate readings window helpful during calibration process

Program interface

Legible actual readings

Topical tabs

Major functions buttons

The screenshot displays the KME NEVO software interface, version 4.0.2.0, running on a G4 NEVO PRO - 4.0C r2 (7.3 r1) system. The interface is divided into several sections:

- Top Bar:** Contains the KME logo, version information, and a menu bar with options: Start, Diagnostics, Installation, Recorder, In/Out, and OBD.
- Left Panel:** Features a 'Status [F1]' button and a 'Connect [Ctrl+R]' button. Below these are four large buttons for 'Automatic setting [F6]', 'Diagnostics [F3]', 'Manual configuration [F7]', and 'Manual calibration [F9]'. The 'Manual calibration [F9]' button is highlighted with an orange callout.
- Right Panel:** Contains a 'Manual' button and a 'Schemas' button, both highlighted with a red box. Below these are 'Lock device', 'Unlock device', 'Load settings', 'Save settings', and 'Factory settings' buttons. A 'Language' dropdown menu is also present.
- Bottom Section:** Displays system information, including the KME logo, company name (KME Sp. z o.o.), address (Teresy 103a, PL-91-222 Lodz, POLAND), contact details (tel +48 (42) 611 00 26, fax +48 (42) 611 82 52), and website (www.kme.eu). Below this, it shows the OBD Adapter version (not connected) and its serial number (unknown).
- Rightmost Panel:** Displays 'READINGS' for various engine parameters. A table of readings is shown, including RPM (1073), Pcol / Ppsys (0,94 / 0,97 bar), Tred / Tgas (79,7 / 44,9 °C), Tb / Tg (12,89/14,26 ms), Load (Tb/Tg) (11 / 12 [%]), Engine load (16 [%]), Supply voltage (11,29 [V]), and PCB temp. (38,6 [°C]). Below the readings is a 'GAS' section with a circular gauge and a warning icon.

Connection guide for NEVO control unit

8	7	6	5	4	3	2	1	BLACK
GASIn3	GASIn1	PETIn4s	PETIn3s	PETIn2s	InBEN1s	s.level	+12VValve	A
GASIn4	GASIn2	PETIn4w	PETIn3w	PETIn2w	InBEN1w	RX	GND	B
+12VGInj	RPM	+12VIgnit	+12Vbus	GND	s-bus	TX	+12VBatt	C

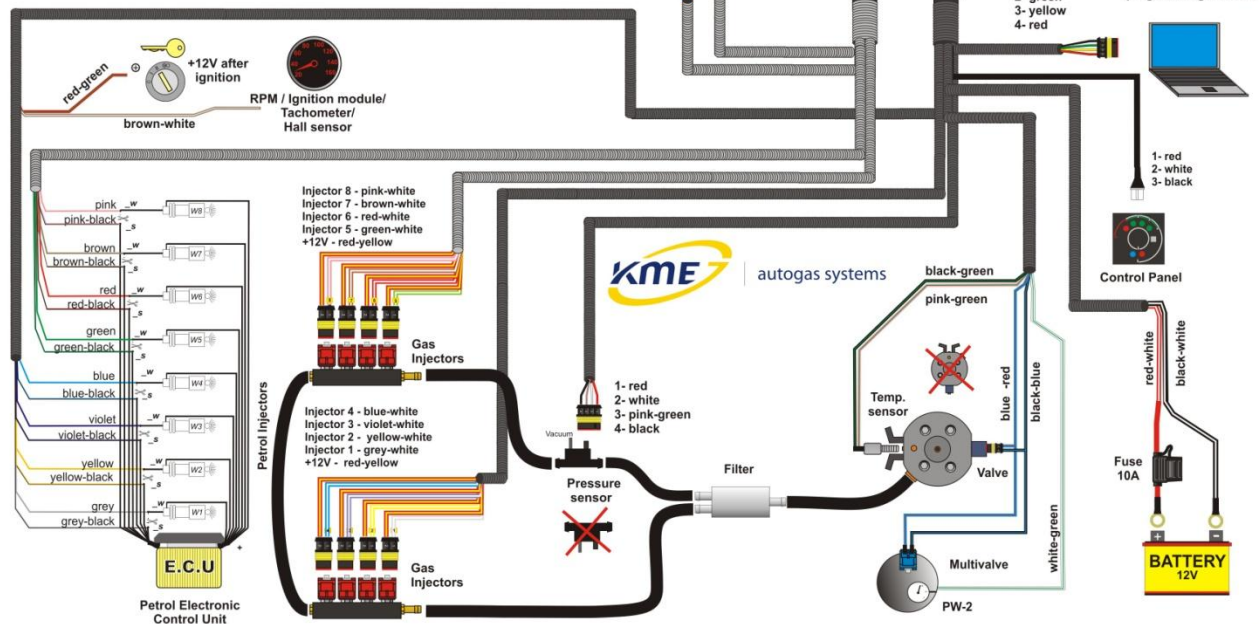
8	7	6	5	4	3	2	1	GREY
INan4	PETIn8s	PETIn7s	PETIn6s	PETIn5s	INan1	GASIn8	GASIn6	A
INan3	PETIn8w	PETIn7w	PETIn6w	PETIn5w	OUTan1	GASIn7	GASIn5	B
+12Vout	CAN-H	CAN-L	L-Line	K-Line	INan2	OUTan2	+12VGInj	C



grey - K-line (OBD pin 7)
violet - L-line (OBD pin 15)
yellow - Can-L (OBD pin 14)
blue - Can-H (OBD pin 6)

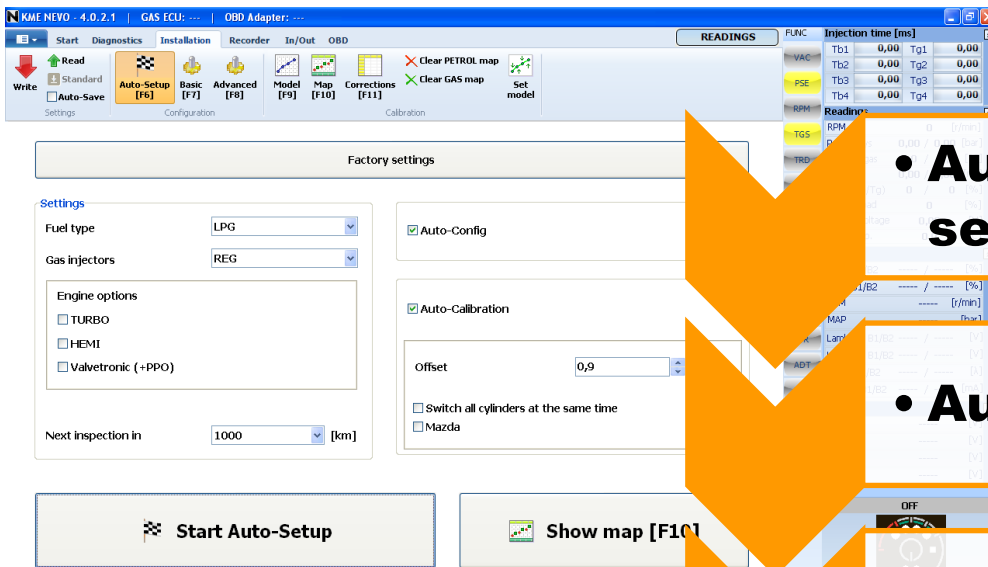
+12V OUT - blue-red
INan4 - blue-white
INan3 - violet-white
OUTan2 - yellow-black
INan2 - yellow-white
OUTan1 - grey-black
INan1 - grey-white

NEVO-PRO





Innovative solutions - Autosetup



- **Auto-configuration - automatic setting of key engine parameters**

- **Autocalibration at idle**

- **Autoverification**



Built-in test for gas injectors

KME NEVO - 4.0.2.1 | GAS ECU: --- | OBD Adapter: ---

Start Diagnostics Installation Recorder In/Out OBD

Write Read Standard Diagnostic errors [F2] Clear errors Read errors Action settings Installation tests [F3] Injectors test [F4] Workshop info [F5]

Settings Errors Tests Workshop

READINGS FUNC Injection time [ms]

Injectors being tested

Selected injectors for test

☒ 1 ☒ 2 ☒ 3 ☒ 4

Injectors status

☐ ☐ ☐ ☐

Calculated corrections [%]

1: 0 2: 0 3: 0 4: 0

Copy corrections to device

Device corrections [%]

1: 0 2: 0 3: 0 4: 0

Clear

Visualisation of injectors efficiency

Start (0%)

0 1 2 3 4

RIGHT PANEL:

READINGS

Pcol / Psys	0,00 / 0,00	[bar]
Tred / Tgas	0,0 / 0,0	[°C]
Tb / Tg	0,00 / 0,00	[ms]
MAP	0 / 0	[%]
Engine load	0	[%]
Supply voltage	0,00	[V]
PCB temp.	0,0	[°C]

OBD

STFT B1/B2	----	/	----	[%]
LTFT B1/B2	----	/	----	[%]
RPM	----			[r/min]
MAP	----			[bar]
Lambda1 B1/B2	----	/	----	[V]
Lambda2 B1/B2	----	/	----	[V]
UEGO B1/B2	----	/	----	[λ]
UEGO-I B1/B2	----	/	----	[mA]

In/Out

Input 1	----	[V]
Input 2	----	[V]
Input 3	----	[V]
Input 4	----	[V]

OFF

OFF-LINE



Innovative solutions

Indicator of the activity of particular mechanisms



Adding petrol

Switching system to petrol with automatic return to gas functions.

KME NEVO - 4.0.2.1 | GAS ECU: --- | OBD Adapter: ---

Start Diagnostics Installation Recorder In/Out OBD

Read Save Standard Auto-Setup [F6] Basic [F7] Advanced [F8] Model [F9] Map [F10] Corrections [F11] Calibration

Clear PETROL map Clear GAS map Set model

for acceleration 0 [%] Aggressiveness

for high RPM

RPM > Disabled to 8000

Petrol injection time > 7 [ms] Enrichment

Added petrol value 2 [ms]

Cut-off

Setting off 2.5 [bar]

0 [%]

☐ Semi-sequential gas injectors control - CARS WITHOUT OBD ONLY

Gas injection time

Minimum Disabled [ms]

Shifted injection system

Number of shifted inject

☐ Activate strategies

☒ Activate strategies

Switching to PETROL with automatic return to GAS when:

RPM < Disabled [r/min] -

RPM > Disabled [r/min] -

Petrol time > Disabled [ms] -

Load (petrol) > Disabled [%] -

Engine load > Disabled [%] -

Vacuum < Disabled [bar] -

Gas temperature < Disabled [°C] -

and load (petrol) > 90 [%] -

Reducer temperature < Disabled [°C] -

and load (petrol) > 90 [%] -

Long cut-off > Disabled [s] -

with cylinder switch-over 0.5 [s] -

MAP Tb / Tg 0,00 / 0,00 [ms]

Load (Tb/Tg) 0 / 0 [%]

INJ Engine load 0,0 [%]

Supply voltage 0,00 [V]

ACC PCB temp. 0,0 [°C]

OBD

STFT B1/B2 ----- / ----- [%]

LTFT B1/B2 ----- / ----- [%]

RPM ----- [r/min]

ISC* MAP ----- [bar]

STR Lambda1 B1/B2 ----- / ----- [V]

ADT Lambda2 B1/B2 ----- / ----- [V]

UEGO B1/B2 ----- / ----- [A]

OBD UEGO-I B1/B2 ----- / ----- [mA]

In/Out

Input 1 ----- [V]

Input 2 ----- [V]

Input 3 ----- [V]

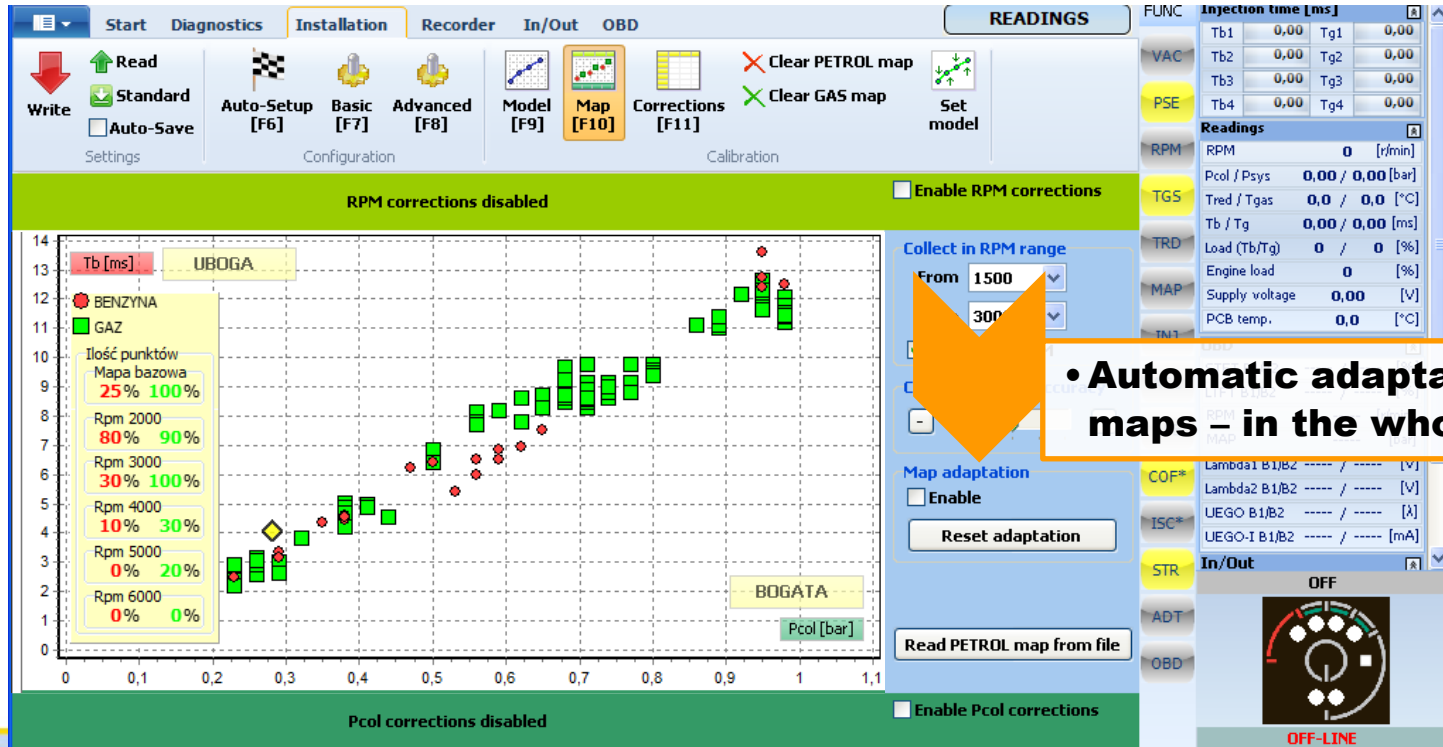
Input 4 ----- [V]

OFF

OFF-LINE

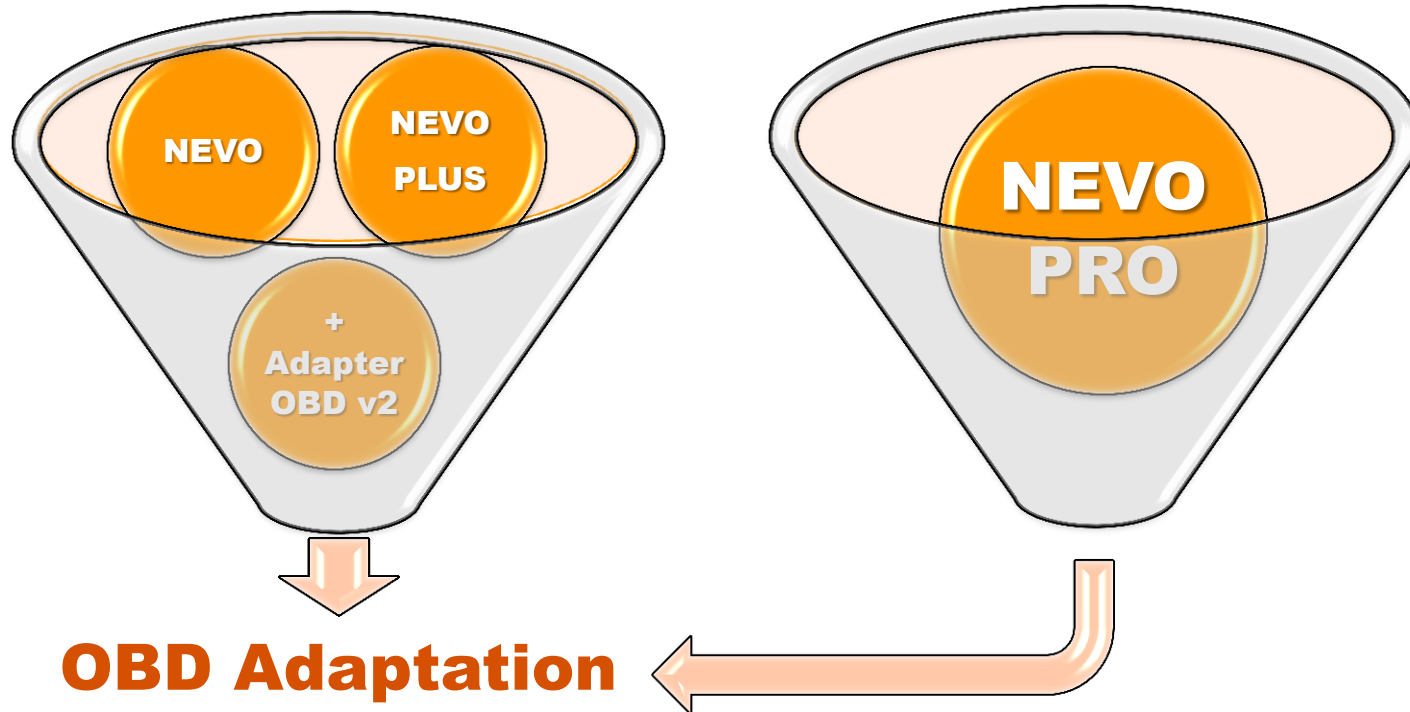


Innovative solutions – Map adaptation





Innovative solutions – OBD Adaptation





OBD Adapter v2



Cooperation with NEVO and DiegoG3 family

Can operate without gas system as OBD scanner

OBD Live Data (with registration possibility)

Trouble codes clearing

Modifies gas dose on the basis of information gathered from the OBD interface of the petrol controller



New functions of the controller



Opportunity of choosing the type of temperature sensor of the reducer

Sequential return to petrol

Configurable switching delay

Advanced self-diagnosis system

Registration of working time on petrol and on gas



New functions of the controller



Configurable RPM range of collecting map points (standard 1500-3000rpm)

Configurable map points accuracy

„Set model" function which automatically calibrate the system



Five steps of calibrating NEVO system

