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application version: 00.180816

USER MANUAL ZeelProg PCDIS-02T

Supported control units: **PCDIS-02T**

ZeelProg is PC application for programming ZEELTRONIC engine *control units*.
For programming special PC-USB programmer is needed.

- **ZeelProg** automatically detects PC-USB programmer connection and enables all functions (without PC-USB programmer, **ZeelProg** application is locked).
- **ZeelProg** automatically detects type of engine *control unit* connected to PC-USB programmer.

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***ZeelProg* SOFTWARE INSTALLATION GUIDE**

CD content:

- driver (USB programmer driver)
- NET Framework
- ZeelProg

Software can be also downloaded from web site:

<http://www.zeeltronic.com/page/zeelprog.php>

ZeelProg application can be installed on Windows XP/Vista/7/8/10.

"NET Framework 3.5" needs to be installed.

Installation:

- ① Insert CD-ROM and browse content.
- ② Install USB programmer driver with running "CDM20600.exe" from CD-ROM "driver" directory.
- ③ Install ***ZeelProg*** with running "setup ZeelProg.exe" from CD-ROM "ZeelProg" directory.

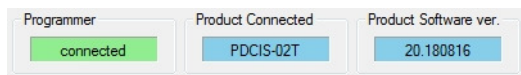
If ***ZeelProg*** does not start, install "NET Framework" from CD-ROM "NET Framework" directory.

***ZeelProg* USER INTERFACE**

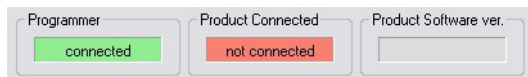
Auto detection

Zeelprog automatically detects USB-Programmer connection and type of *control unit*.

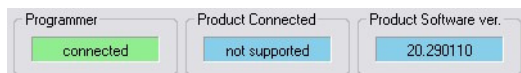
⇒ Programmer connected, product (*control unit*) connected:



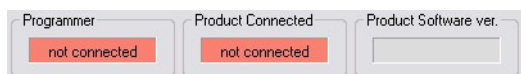
⇒ Programmer connected, product (*control unit*) not connected:



⇒ Programmer connected, product (*control unit*) not supported:



⇒ Programmer not connected, product (*control unit*) not connected:



Menu structure

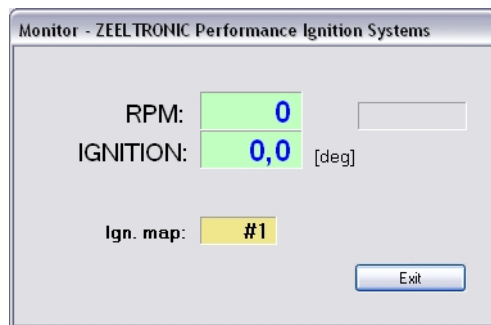


⇒ **File menu** is active when PC-USB programmer is connected



Open → Open an existing *.zee file
Save As → Save all parameters to *.zee file

⇒ **Monitor** is active when *control unit* is connected to PC-USB programmer.
Clicking on the **Monitor** opens Monitor window.



⇒ Clicking on **About** opens About window and show some basic information about **ZeelProg** application.



Ignition Parameters

Ignition Parameters

Ignition Map #1

Nr. of Points: 5 deg

Point 1	Point 2	Point 3	Point 4	Point 5	Point 6	Point 7	Point 8	Point 9	Point 10	Point 11	Point 12	RPM	deg
1500	3000	6000	10000	12000	12100	12200	12300	12400	12500	12600	12700		
15,0	15,0	15,0	15,0	15,0	15,0	15,0	15,0	15,0	15,0	15,0	15,0		

Ignition Map #2

Nr. of Points: 6 deg

Point 1	Point 2	Point 3	Point 4	Point 5	Point 6	Point 7	Point 8	Point 9	Point 10	Point 11	Point 12	RPM	deg
1500	3000	8500	11000	12000	13000	13200	13300	13400	13500	13600	13700		
18,0	18,0	18,0	18,0	18,0	18,0	18,0	18,0	18,0	18,0	18,0	18,0		

☐ Ign. Map Switch

1 Select Ignition Map

40,0 Static Angle [°]

1 Pulses per Rev

30 Delay Compensation [us]

0,0 Advance [°]

15000 Rev Limit [rpm]

Trigger Mode

☐ only [+] signal

☒ [+] and [-] signal

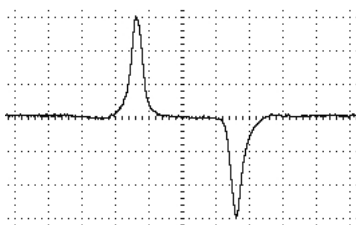
Stop Switch Mode

☒ Low Level Stop

☐ High Level Stop

☒ Latching Stop

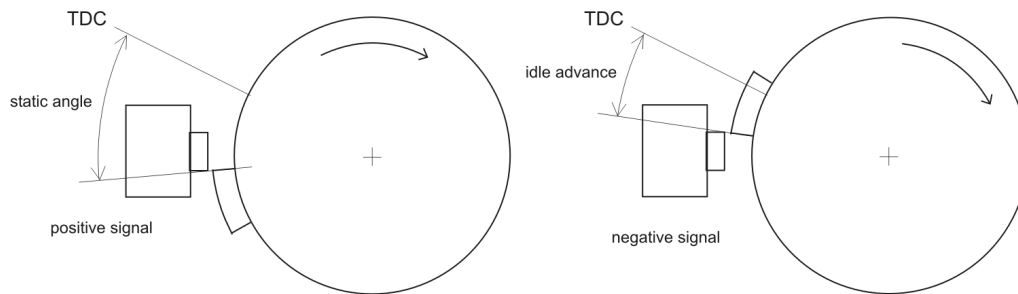
- ⇒ **Nr. of Points** for each ignition map can be set from 4 to 12.
- ⇒ **RPM** of each ignition point can be set from 100rpm to 20000rpm in 100rpm steps.
- ⇒ **deg**...advance of each ignition point can be set from 0deg to 85deg in 0,1deg steps
- ⇒ deg ...increasing, or decreasing advance of all ignition points in the ignition map
- ⇒ **Ignition Map. Switch**...enables, or disables ignition map switch. When checked, ignition map can be selected with switch.
- ⇒ **Select Ignition Map**...selection is active only when **Ignition Map Switch** is not checked.
- ⇒ **Static Angle** is pickup advance position from TDC (Top Dead Centre)
- ⇒ **Pulses per Rev**...for singles set to 1 and for twins (wasted spark) set to 2.
- ⇒ **Delay Compensation**...ensure correct ignition angle through whole revs. Default value is 30us.
- ⇒ **Advance**...advances, or retards ignition advance of all ignition map, from -10deg to 10deg in 0,1deg steps. Positive value advances and negative value retards.
- ⇒ **Rev limit**...limits maximum revolutions. Set to maximum 20000rpm in 100rpm steps.
- ⇒ **Stop Switch Mode: Low Level Stop**... engine stops when low level signal (when stop switch connected to the ground)
- ⇒ **Stop Switch Mode: High Level Stop**... engine stops when high level signal (when stop switch is opened)
- ⇒ **Stop Switch Mode: Latching Stop**... engine stops with short push on stop switch (when latching stop enabled)
- ⇒ **Trigger Mode:**



Trigger signal from pickup consist of positive and negative pulse. Positive pulse must be first and is generated by leading edge of trigger bar...negative pulse must be second and is generated by trailing edge of trigger bar.

If trigger signal is opposite (first negative and second positive), then wires from the pickup need to be switched...that changes polarity of signal from pickup.

Positive pulse defines static angle position and negative pulse defines idle running timing position.



- ⇒ When "**only [+] signal**" is checked, then only positive signal is detected and ignition timing is calculated with all revs as programmed with ignition map.
- ⇒ When "**[+] and [-] signal**" is checked, then both signals are detected. Revs of first ignition point define switching point between, programmed ignition map and idle running timing position.
 - Ignition timing is defined with trailing edge of trigger bar, at revs lower then first ignition point (idle advance...se drawing above).
 - Ignition timing is defined with programmed map, at revs higher then first ignition point.
- Example: if first ignition point is programmed at 1500rpm, then below 1500rpm, ignition timing is defined with trailing edge of trigger bar (idle advance...se drawing above) and above 1500rpm, ignition timing is defined by programmed ignition map.
- ⇒ Set "**only [+] signal**" when using custom, or modified trigger rotor, or upgrade from static ignition timing CDI.
- ⇒ Set "**[+] and [-] signal**" when using original trigger rotors, or flywheels. First ignition point should be programmed somewhere between 1000-2000rpm.

PROGRAMMING AND SETTING NEW PARAMETERS

- ☞ While programming or reading, *control unit* does not need to be connected to power supply, because it is supplied through PC-USB programmer.

Changing control unit parameters

- ① Read parameters from connected *control unit*, by pressing **Read** button.



Progress bar indicate read and verify process.

Successful reading is indicated as:



Error while reading is indicated as:



If error occurs, then repeat reading.

- ② Change parameters
- ③ Program parameters to connected *control unit*, by pressing **Program** button.



Progress bar indicate program and verify process.

Successful programming is indicated as:



Error while programming is indicated as:



If error occurs, then repeat programming.

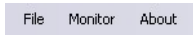
Make new *.zee file without connecting control unit

- ① Connect PC-USB programmer to PC.
- ② Set parameters
- ③ Save parameters by clicking **Save As** from **File menu**.

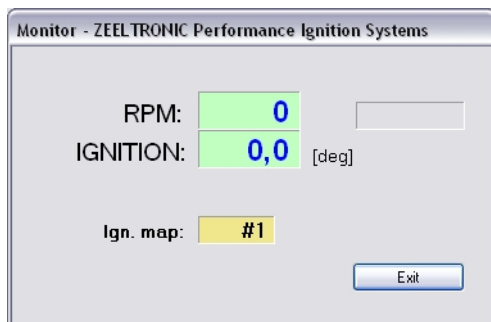


MONITOR FUNCTION

⇒ **Monitor** function is active when *control unit* is connected to PC-USB programmer.



Clicking on **Monitor** opens Monitor window.



⇒ Monitor show engine revolution, ignition advance angle, selected ignition map and rev limit activation.

NOTES
