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application version: 00.200706

USER MANUAL
ZeelProg PDCIS-A02T

Supported control units: **PDCIS-A02T**

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.

CONTENT

ZeelProg SOFTWARE

Software can be downloaded from web site:
http://www.zeeltronic.com/page/zeelprog.php

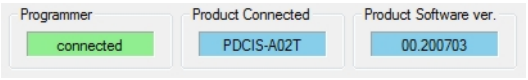
ZeelProg application can be installed on Windows XP/Vista/7/8/10.

ZeelProg USER INTERFACE

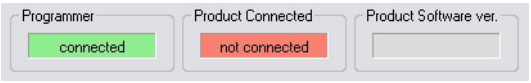
Auto detection

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

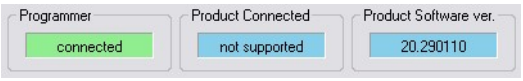
⇨ Programmer connected, product (*control unit*) connected:



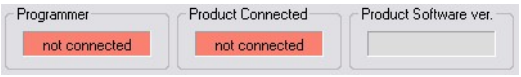
⇨ Programmer connected, product (*control unit*) not connected:



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

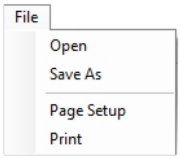


⇨ Programmer not connected, product (*control unit*) not connected:



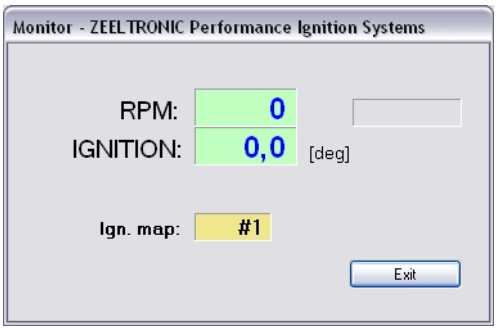
Menu structure

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



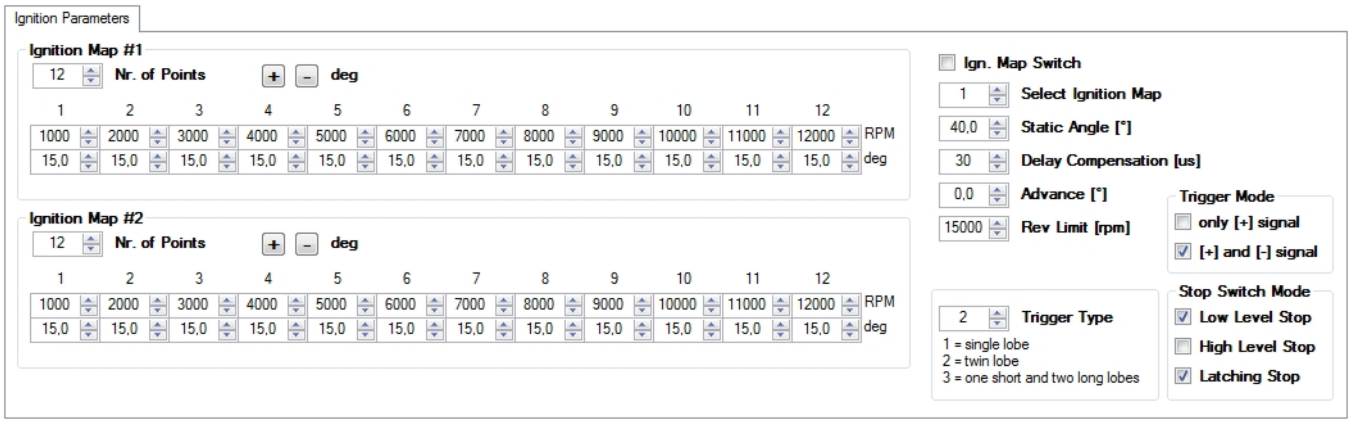
Open → Open an existing *.zee file
Save As → Save all parameters to *.zee file
Page Setup → Page setup for printing
Print → Print ZeelProg screen with all parameters and charts

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

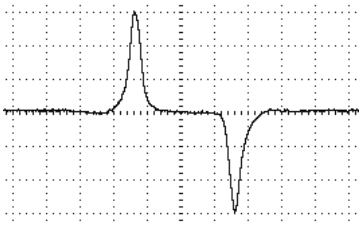


⇨ Clicking on **About** opens About window and show some basic information about ***ZeelProg*** application.

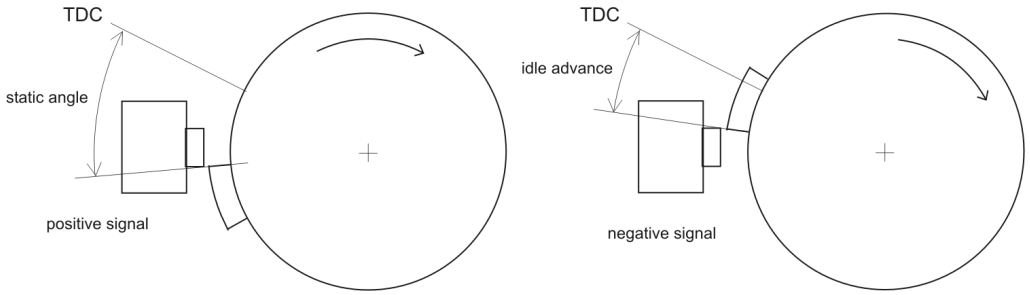
Ignition Parameters



- ⇨ **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
- ⇨  ...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)
- ⇨ **Trigger Type** ... trigger rotor type.
  - 1 = single lobe, for single cylinder engine
  - 2 = twin lobe for twin cylinder 180°engine running as wasted spark
  - 3 =one short and two long lobes for twin cylinder 180°engine running as wasted spark. Such configuration is used on Yamaha GP760 flywheel.
- ⇨ **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 1500rmp, 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.

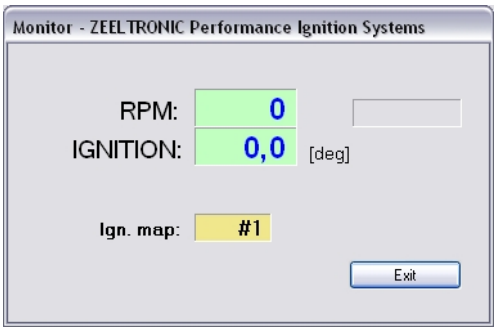
② Set parameters

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