www.zeeltronic.com
info@zeeltronic.com

updated 18.07.2018
application version: 00.180718

PROGRAMMING MANUAL
ZeelProg PDCI-R11T

Supported control units: **PDCI-R11T**

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 INSTALLATION GUIDE

CD content:
- driver (USB programmer driver)
- NET Framevork
- 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.

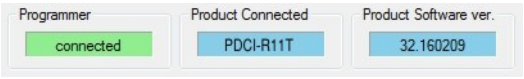
If ***ZeelProg*** does not start, install "NET Framework" from CD-ROM "NET Framework" directory.

ZeelProg USER INTERFACE

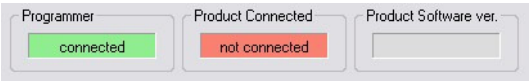
Auto detection

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

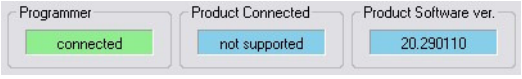
⇨ Programmer connected, product (*control unit*) connected:



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



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



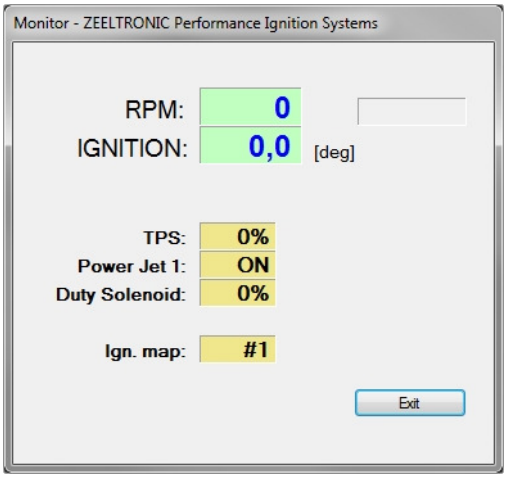
⇨ Programmer not connected, product (*control unit*) not connected:

Menu structure

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

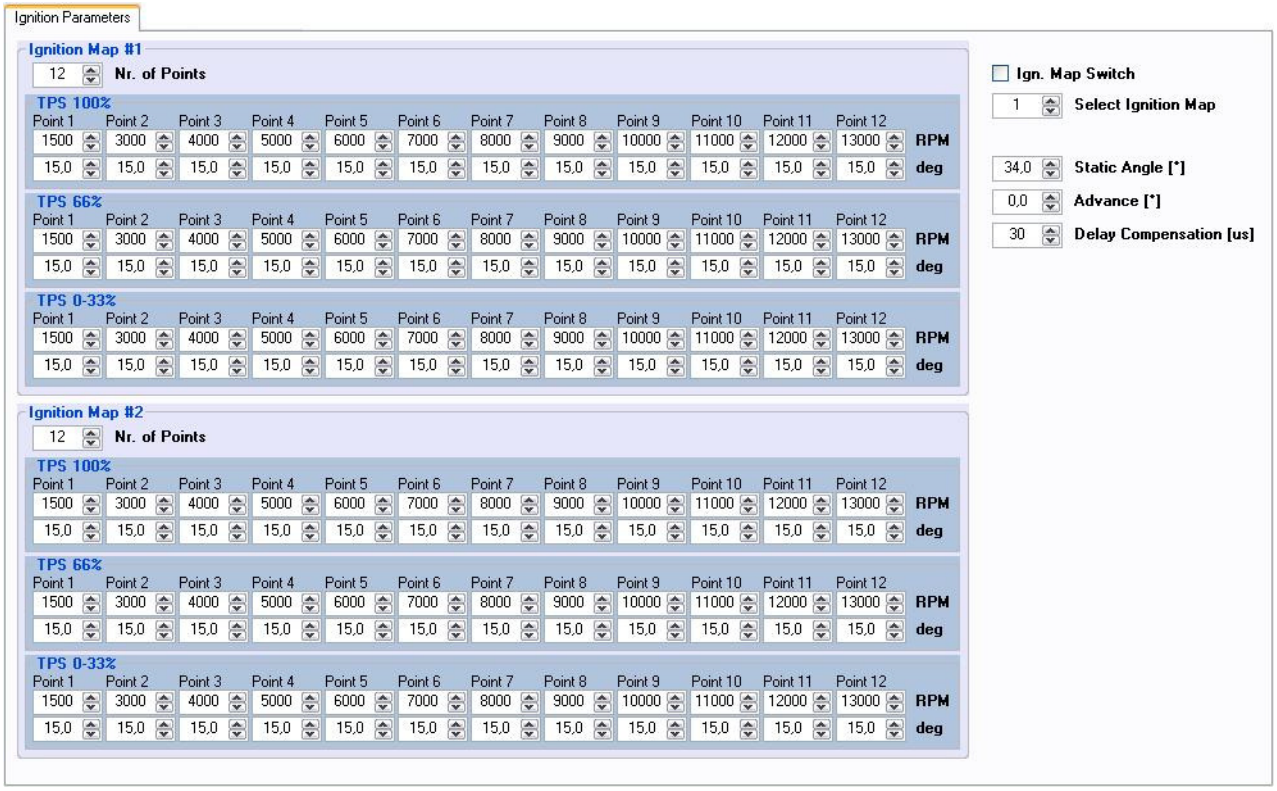
Open → Open an existing *.zee file
Save As → Save all parameters to *.zee file

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



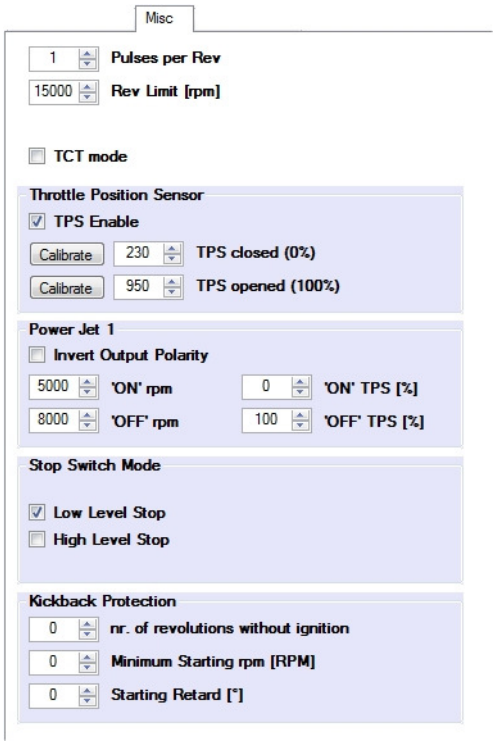
⇨ Clicking on **About** opens About window and show some basic information about ***ZeelProg*** application.

Ignition Parameters



⇨ **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
⇨ **Static Angle** is pickup advance position from TDC (Top Dead Centre)
⇨ **Advance**...advances, or retards whole ignition map from -10deg to 10deg in 0,1deg steps. Positive value advances and negative value retards.
⇨ **Delay Compensation**...ensure correct ignition angle through whole revs. Default value is 30us.
⇨ **Ignition Map Switch**...enables, or disables ignition map switch. Ignition map can be selected with switch, when function is enabled.
⇨ **Select Ignition Map**...selection is active only when **Ignition Map Switch** is not enabled.

Misc Parameters

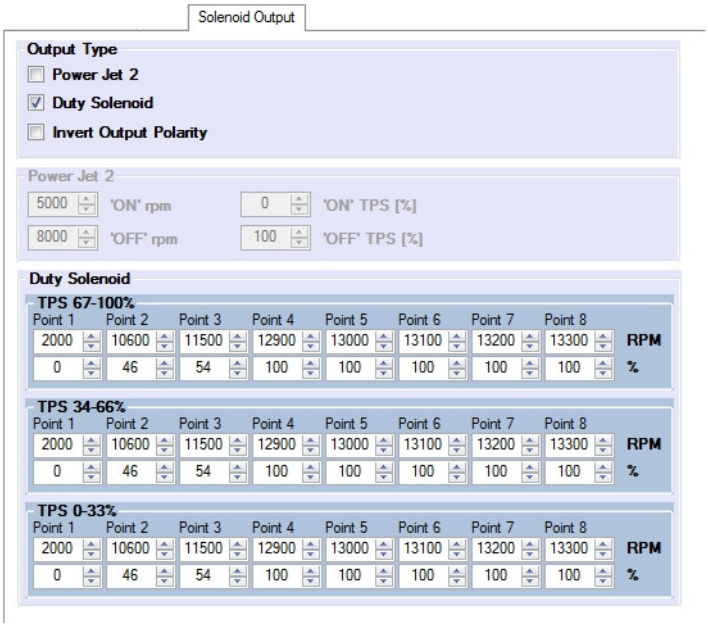


- ⇨ **Pulses per Rev**...set to 1 for single cylinder and set to 2 for wasted spark twin cylinder.
- ⇨ **Rev limit**...limits maximum revolutions. Set to maximum 20000rpm in 100rpm steps.
- ⇨ **TCT mode**... Throttle Close spark Termination mode, reduces number of sparks above 8000rpm (spark is active every third revolution), when throttle is closed. TCT mode ensure better engine cooling.
- ⇨ **TPS Enable**... enable, or disable TPS (Throttle Position Sensor).
- ⇨ **TPS closed [0%]**... for correct TPS operation, TPS close position must be calibrated!
- ⇨ **TPS opened [100%]**... for correct TPS operation, TPS open position must be calibrated!
- ⇨ **Stop Switch Mode: Low Level Stop**... engine stops with low level signal (stop switch connected to the ground)
- ⇨ **Stop Switch Mode: High Level Stop**... engine stops with high level signal (stop switch is opened)
- ⇨ **Kickback Protection: nr. of revolutions without ignition**... nr. of revolutions required for starting
- ⇨ **Kickback Protection: Minimum Starting RPM**... minimum RPM required for starting
- ⇨ **Kickback Protection: Starting Retard**... retarding ignition advance while starting
- ⇨ **Power Jet 1 'ON' rpm**... revs for activating Power Jet 1
- ⇨ **Power Jet 1 'OFF' rpm**... revs for deactivating Power Jet 1
- ⇨ **Power Jet 1 'ON' TPS**... throttle position for activating Power Jet 1
- ⇨ **Power Jet 1 'OFF' TPS**... throttle position for deactivating Power Jet 1

Power Jet 1 example:
Power jet 1 ON (RPM) = 8000rpm
Power jet 1 OFF (RPM) = 10000rpm
Power jet 1 ON (TPS) = 70%TPS
power jet 1 OFF (TPS) = 90%TPS

Power jet is switched on when revs are between 8000-10000rpm and throttle position is between 70-90%, otherwise power jet is switched off.

Solenoid parameters



⇨ **Output Type**... Solenoid output function can be configured as Power Jet 2, or Duty Solenoid. Duty solenoid is used for adjusting A/F ratio on some carburettors.
⇨ **Invert Output Polarity**... when checked, operation of power jets is inverted.
⇨ **Power Jet 2 'ON' rpm**... revs for activating Power Jet 2
⇨ **Power Jet 2 'OFF' rpm**... revs for deactivating Power Jet 2
⇨ **Power Jet 2 'ON' TPS**... throttle position for activating Power Jet 2
⇨ **Power Jet 2 'OFF' TPS**... throttle position for deactivating Power Jet 2
⇨ **RPM** of each Duty Solenoid point can be set from 100rpm to 20000rpm in 100rpm steps.
⇨ **%** of each Duty Solenoid point can be set from 0% to 100%.

Power Jet 2 example:
Power jet 2 ON (RPM) = 8000rpm
Power jet 2 OFF (RPM) = 10000rpm
Power jet 2 ON (TPS) = 70%TPS
power jet 2 OFF (TPS) = 90%TPS

Power jet is switched on when revs are between 8000-10000rpm and throttle position is between 70-90%, otherwise power jet is switched off.

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

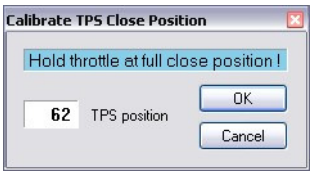
③ Save parameters by clicking **Save As** from **File menu**.

TPS Close Position [0%]

For correct operation of TPS function, TPS close position must be calibrated!

TPS close position can be set manually by entering number, or calibrated by clicking on **Calibrate** button.
Using **Calibrate** function is more recommended.

Clicking on **Calibrate** button opens **Calibrate TPS Close Position** window.



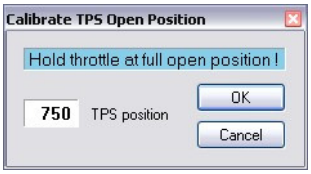
⇨ to finish calibration: hold throttle at full close position and press **OK** button
⇨ to cancel calibration: press **Cancel** button

TPS Open Position [100%]

For correct operation of TPS function, TPS open position must be calibrated!

TPS open position can be set manually by entering number, or calibrated by clicking on **Calibrate** button.
Using **Calibrate** function is more recommended.

Clicking on **Calibrate** button opens **Calibrate TPS Open Position** window.

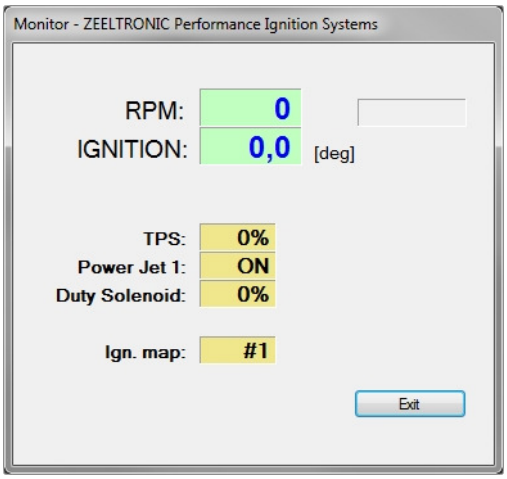


⇨ to finish calibration: hold throttle at full open position and press **OK** button
⇨ to cancel calibration: press **Cancel** button

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, TPS position, selected ignition map, rev limit operation, power jet 1 operation, duty solenoid operation

NOTES