SHORT MANUAL

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Control Software

OWISoft 3.1

9013. 0017 / 12.05.2025

Content:

- Create new configuration (Setup Wizard)
  - select configuration
  - select interface
  - define axes, change axis configuration
  - initialize axes
- Calibrating of positioning units
- Save configuration
- Configuration of power amplifier

This short manual does not replace the user manual.
It is only an additional instruction for qualified personnel.

You can download the complete manual and the OWISoft on the OWIS website.

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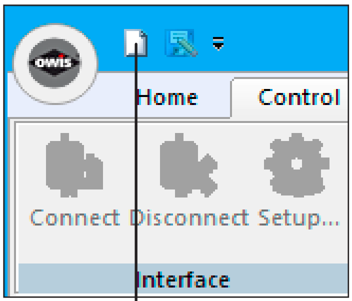
Start OWISoft software and select the control unit to be operated

Supported operating systems: Windows XP, Windows Vista (32/64 bit), Windows 7 (32/64 bit), Windows 8.x (32/64 bit), Windows 10 (32/64 bit) and Windows 11 (32/64 bit).

Please be aware that files saved with OWISoft 2.x are not compatible to OWISoft 3.1.

For working with the software administrator rights are not required.



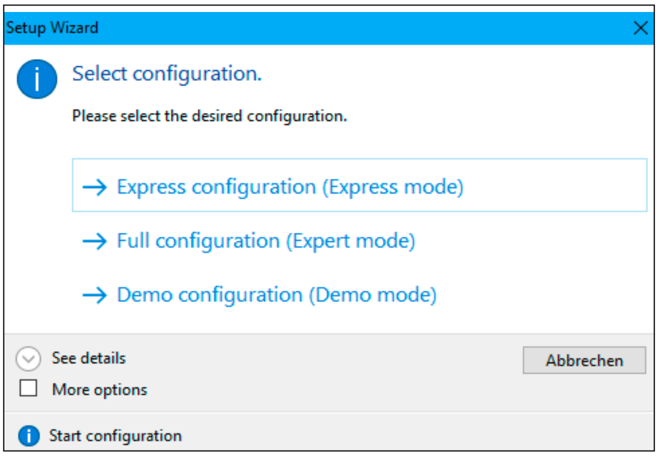
(1) Create new configuration

START SETUP WIZARD

Select New menu (File tab in the Ribbon) or icon (1) in the Quick Access Toolbar.

The hardware configuration is created by using the integrated hardware configuration wizard automatically in only 3 steps.

Step 1 (select configuration)



Select the desired configuration:

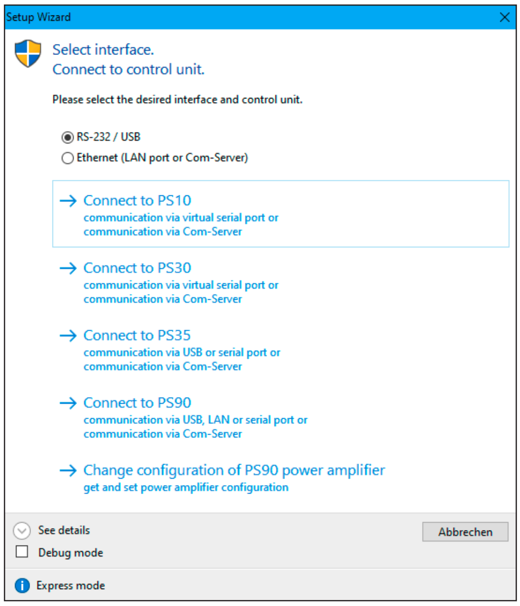
- Express configuration (Express mode),
- Full configuration (Expert mode),
- Demo configuration (Demo mode).

More options

Activate the configuration with serial number. It can only be used for defined hardware.

Automatic configuration (Express mode)

Step 2 (select interface)

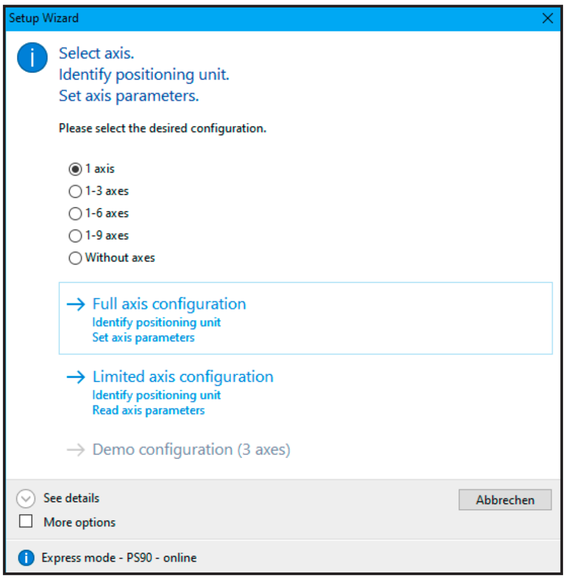


The Express Mode detects connected control unit and the required axes are configured automatically (with OWISid). The demo configuration is used for product demonstration (without hardware).

Debug mode

- Activate debug mode for communication.

Step 3 (define axes, change axis configuration)



Select the desired number of axes.
Select the desired configuration:

full axis configuration

- identify positioning unit, set axis parameters;
limited axis configuration

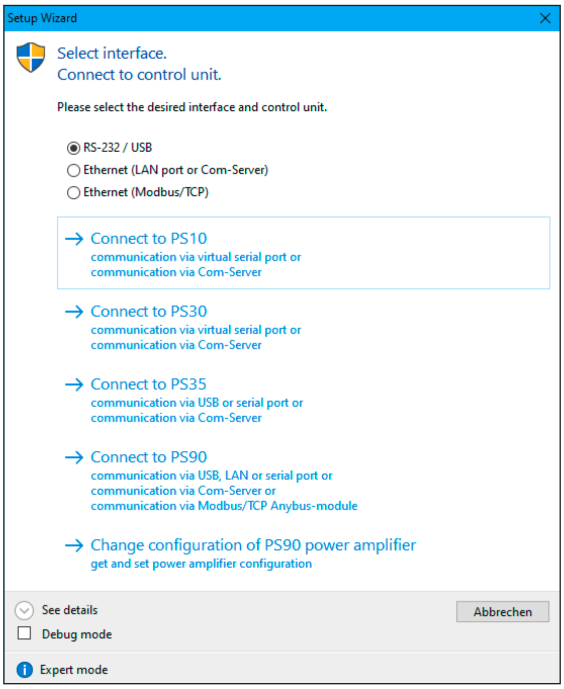
- identify positioning unit, read axis parameters;
demo configuration (3 axes).

More options

If the axes cannot be configured automatically, the axis configuration is load and saved from text file or in the dialog box (without OWISid).

Automatic configuration (Expert mode)

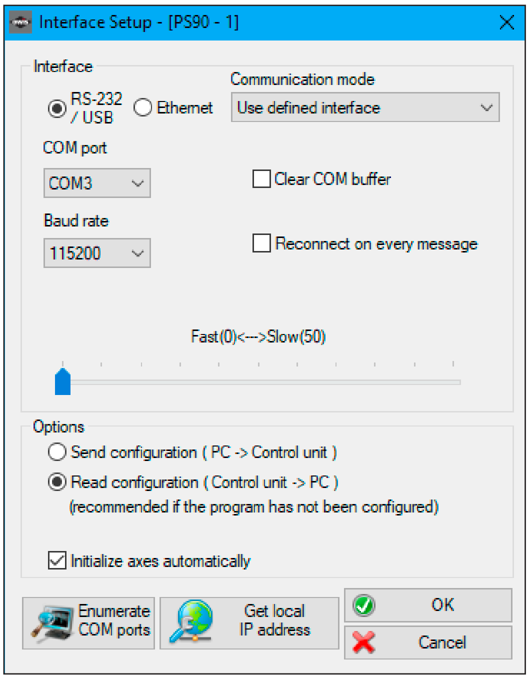
Step 2 (select interface)

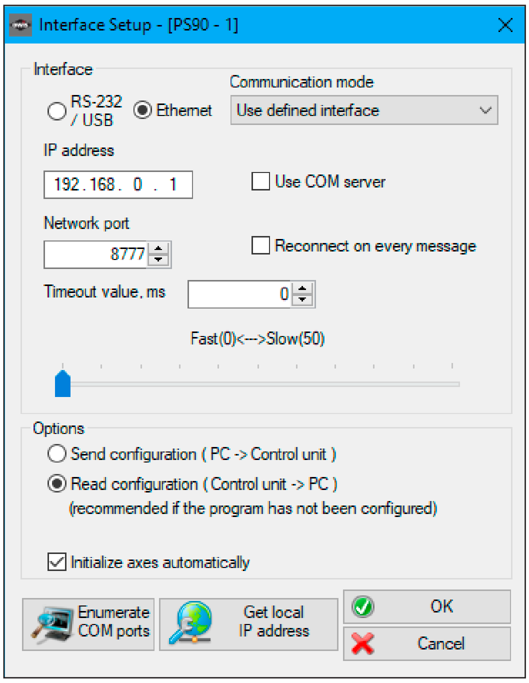


In the Expert Mode, the interface to control unit is selected, the axis configuration is load and saved from text file or in the dialog box (with or without OWISid).

Debug mode

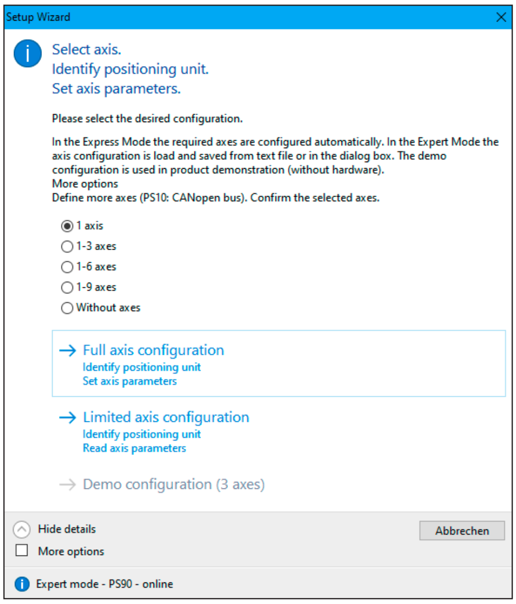
- Activate debug mode for communication.





- Select COM port.
- With the option (communication mode “Find control unit automatically“) the control unit (PS 10, PS 30, PS 35, P 90) will be searched automatically. There is no need to choose parameters.
- With the OK button the software identifies the control unit. If the connection is not possible, an error message occurs. (details: OWISoft manual, chapter 3.2)

Step3 (define axes, change axis configuration)



Select the desired number of axes.
Select the desired configuration:

full axis configuration
- identify positioning unit, set axis parameters;

limited axis configuration
- identify positioning unit, read axis parameters;

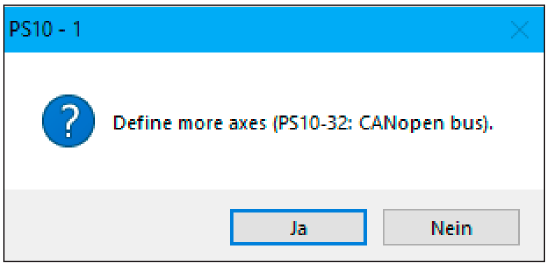
demo configuration (3 axes).

More options

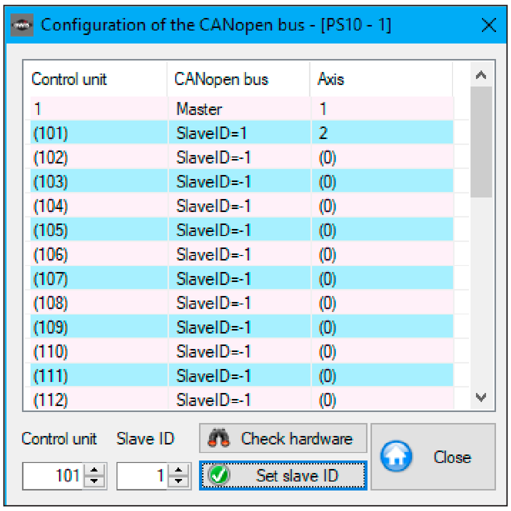
If the axes cannot be configured automatically, the axis configuration is load and saved from text file or in the dialog box (without OWISid).

More options (Expert mode)

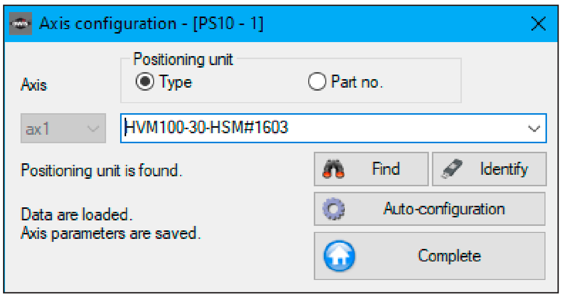
Define more axes (PS 10: CANopen bus). Confirm the selected axes.



- By clicking No button this step can be skipped.
- By clicking Yes button you can define more axes (alternative, Control tab in the Ribbon, CANopen slaves).



- The corresponding control IDs can be looked up in the acceptance certification (Slave-ID parameter). By selection of the control unit and input of the corresponding Slave-ID, the connected unit will be set by clicking the Set slave ID button.



To simplify the setting you can select a suitable positioning unit from the defined program database (Find button) or from OWISid (Identify button). With the Auto-configuration button the axis configuration will be selected and saved.

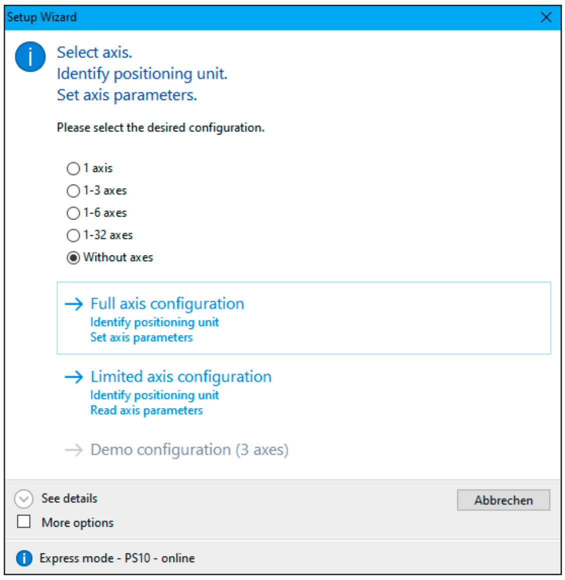
Finish the configuration with the Close button.

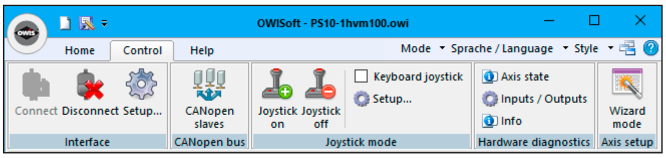
(details: OWISoft manual, chapter 3.8)

Manual configuration

Step 3 (define axes, change axis configuration)

No axis is defined. A later configuration is possible.





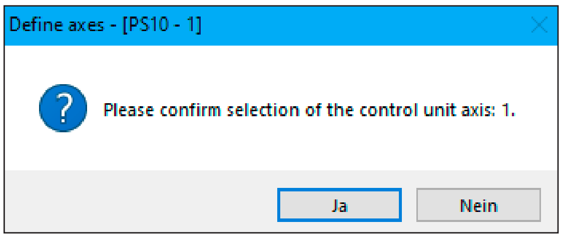
Step 1: Additional configuration for PS 10.

For PS 10-32 with CANopen crosslinking only (axis 2, axis 3 etc.). Click the CANopen slaves menu (Ribbon, Control tab).

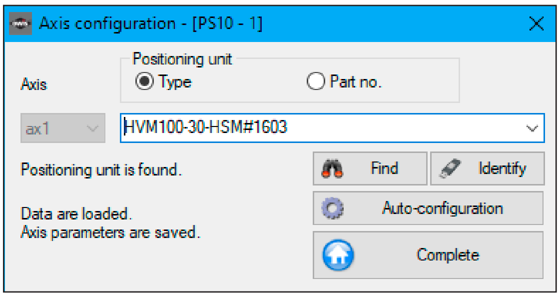
Step 2.1: Start Wizard mode.

Click the Wizard mode menu (Ribbon, Control tab).

Step 2.2: Confirm the selected axes manually.



Step 2.3: Axis configuration.



To simplify the setting you can select a suitable positioning unit from the defined program database (Find button) or from OWISid (Identify button).

With the Auto-configuration button the axis configuration will be selected and saved.

Finish the configuration with the Close button.

(details: OWISoft manual, chapter 3.8)

Step 3 (optional): Assign the corresponding position stages to the defined axes.

Click the Define positioning unit menu (Ribbon, Control tab, Axis setup).

(details: OWISoft manual, chapter 3.9)

Step 4 (optional): Select power supply.

Click the Justify power supply menu (Ribbon, Control tab, Axis setup).

(details: OWISoft manual, chapter 3.10)

! Note:
The parameters can be found in the acceptance certification or the data sheet (for standard version) and the delivery note (for customized products), respectively.

Step 5 (optional): Set axis parameters.

Click the Axis parameters menu (Ribbon, Control tab, Axis setup).
(details: OWISoft manual, chapter 3.11)

! Note:
The default parameters stored in OWISoft apply for the idle operation (no load).
For optimal positioning the standard parameters of the PID control must be adjusted for the specific application.

Customized systems (customized positioners and control units) are tested and preset by OWIS®. The parameters are stored in the memory of the control unit. We advise not to overwrite these with the default settings from OWISoft.

Step 6: Initialize the defined axes.

The defined axes must be initialized in order to be moved.

Calibrating of positioning units

Start, stop axes (Ribbon, Home tab)

Clicking the Stop All menu you can stop the movement of all axes, break chain execution, program execution and execution of a script file.

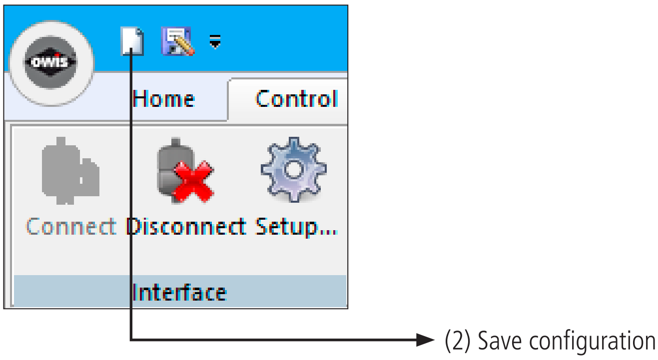
Clicking the Stop selection menu you can stop the movement of the axes (selection), the calibration and the travel measurement. The axes belong to the selected control unit.

Here you can start relative or absolute positioning to the defined positions. The axes can be driven to home positions (absolute positioning). You can start the calibration or the measurement of the stage travel. All these operations are valid for the selected axes only. You can confirm the axis selection manually.

The new generated axes are predefined for calibration (presetting, type=4). You can select type of reference run (calibration) in the Axis parameters dialog box.

After having connected the control units, defined the necessary axes, and set the desired parameters, the preparation of the system is finished.

Save configuration



Click the Save as menu (File tab in the Ribbon) or icon (2) in the Quick Access Toolbar to save the settings of the active control.

Hardware diagnostics

A problem analysis can be made in OWISoft and, if applicable, errors can be corrected (Ribbon, Control tab, Hardware diagnostics):

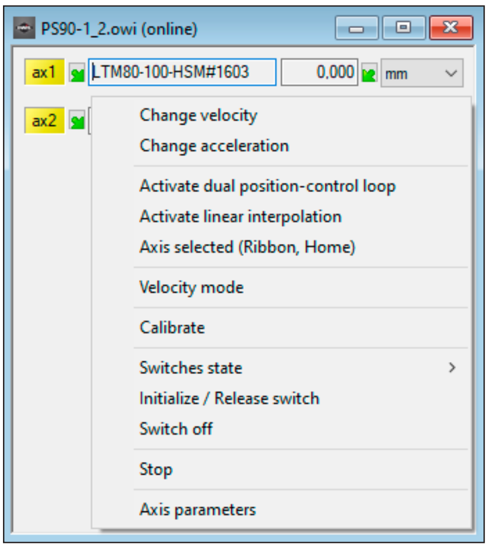
- show axis state,
- assign inputs and outputs,
- activate or deactivate the logging,
- perform hardware reset,
- show control unit information.

(details: OWISoft manual, chapter 3.5)

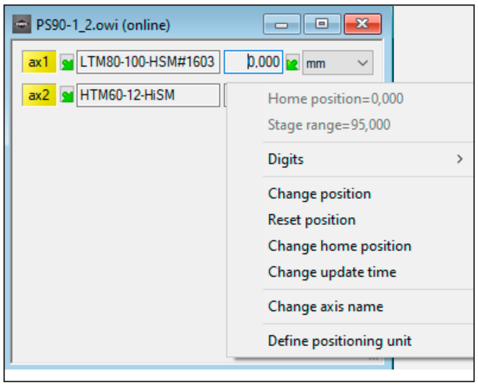
Pop-up menus (control unit view)

The background colour and the QuickInfo of the axis name change according to the axis state. For the positioning unit and position text boxes further pop-up menus are defined. They enable quick access to the most important functions of the control units.

Positioning unit, functions of the pop-up menu



Position, functions of the pop-up menu



Positioning

Chain

Using the Chain docking window (work area), you can define and execute simple movements (coordinate table).

(details: OWISoft manual, chapter 4.1)

Program

The Program docking window (work area) enables you to define complex movements, to store them as a program script into a script file and execute them later.

(details: OWISoft manual, chapter 4.3)

Additional features

In its standard configuration, the software starts with a reduced range of functions (user mode). Select option "Mode/Expert mode" (tab bar in the Ribbon) to enable a full range of functions.

In addition, there are following adjustment possibilities:

Joystick control chapter 3.4

Define continuous path control chapter 3.12

Define trigger control chapter 3.13

Properties window (define variables and function keys, send direct commands) chapter 4.4

Watch window chapter 4.5

File view chapter 4.6

Output windows chapter 4.7

(For details please see the corresponding chapter in OWISoft manual)

Change configuration of PS90 power amplifier

All axis modules are preconfigured for the operation of 2-phase stepper motors (open loop). For other motor types a new configuration is needed. You can change the power amplifier configuration with a software tool (..\OWISoft\OWIStools\PS90 PowerAmp config.exe). This can be done connecting the control unit using USB or RS232. Select motor type of power amplifier (release for automatic power amplifier configuration).
The settings are changed after a reboot of the control unit and an axis initializing.