

Wecon Servo Configurator User Manual











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1. Software requirements

[Operating system]

This software is designed to run on the windows platform, the version requires windows NT and above, and windows 10 system is recommended.

[Required space]

52 MB of free disk space.

[Monitor]

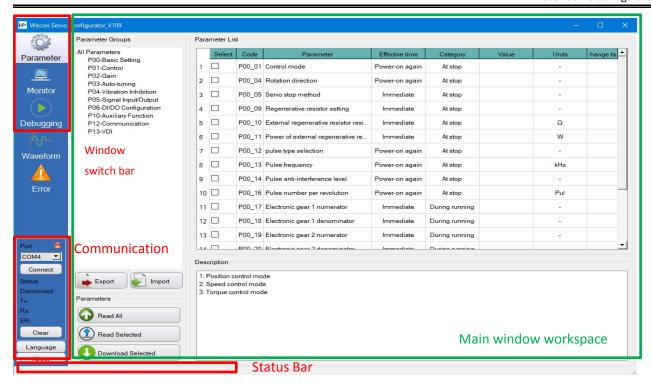
Minimum screen resolution requirement: 1280 x 768, font setting is 100%.

2. Software Instructions

2.1. Introduction to the basic situation of the interface

The software interface includes Window switching work bar, Communication bar, Main window work area, and Status bar, as shown below





Window switch bar Used to switch between different interfaces of the main window.

Communication bar Used to connect and disconnect devices.

Main window workspace The working and display area of the main window.

Status Bar Used for communication and display of operation results.

2.1.1 Connect the device

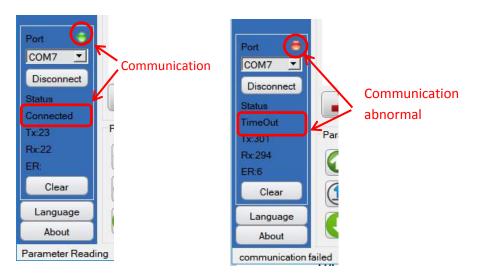
Select the communication port, select the corresponding port from the list box



- 1. Select the communication port
- 2. Click "Connect Device"

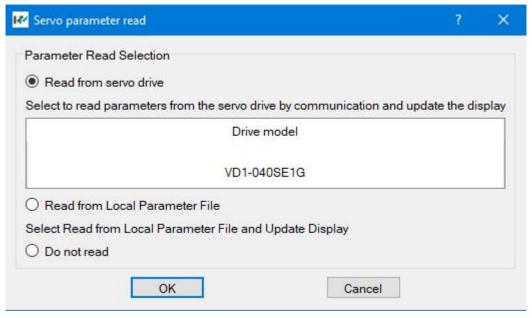


After the connection is normal, the prompt box is as follows, when abnormal, as shown on the right



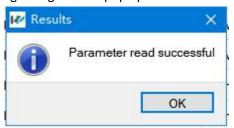
For abnormal communication problems, please refer to: 3.1 Troubleshooting for communication connection problems.

The following dialog box pops up after connection:



Generally select "Read from Servo Drive" and click OK, the host computer software will read the data from the servo.

After reading successfully, the following dialog box will pop up:





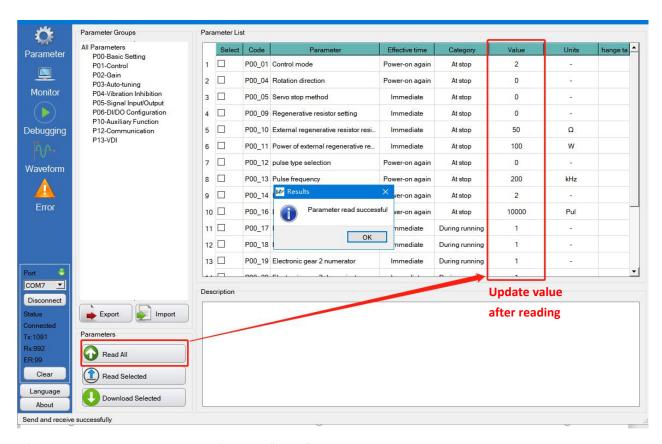
2.2. Parameter function code interface

The default interface when the software opens is the parameter. If it is not in this interface, you can click on the window switch bar to switch to this interface. This interface includes: parameter reading, modification and

import and export functions. Parameter

2.2.1 Parameter reading

After connecting the device, click "Read all parameters" to read the parameters, as shown in the figure below:



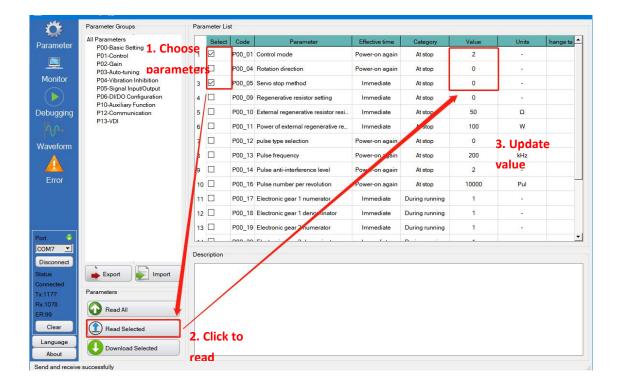
After the parameter is read successfully, the "value" column in the parameter list will be updated and displayed.

After reading all the parameters, you can also choose to read some of the parameters. The method is: in the "Select" column of the parameter list, check the parameters that need to be read, and then click in the lower left

corner to read the selected parameters Update, as shown in the figure below:



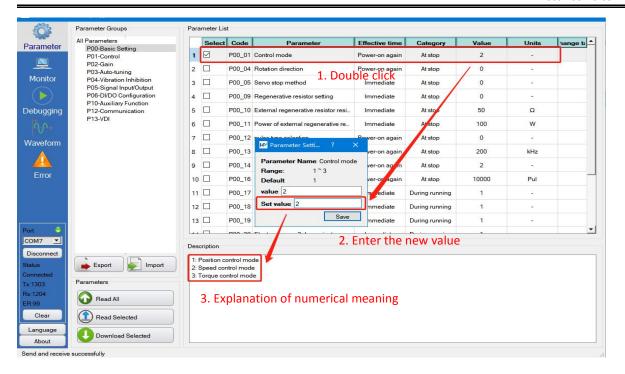




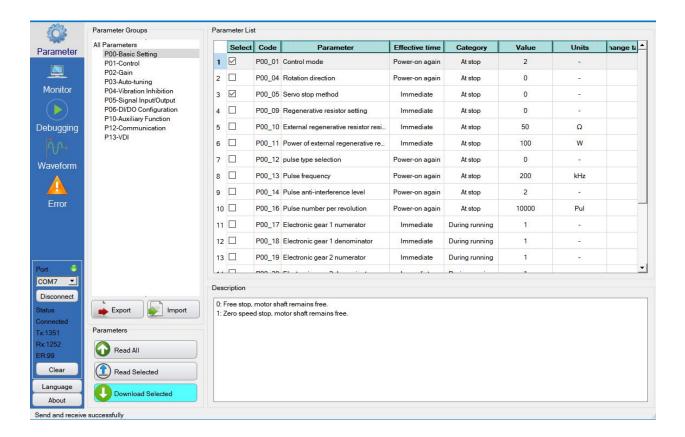
2.2.2 Parameter modification

Select the corresponding line in the parameter list, and then double-click. The software will pop up a dialog box, in which the parameter name and current value will be displayed; the user enters a new value in the "Setting Value" column. For specific parameter values, please refer to the "Parameter Description" at the bottom of the interface to select appropriate parameters ,As shown below:





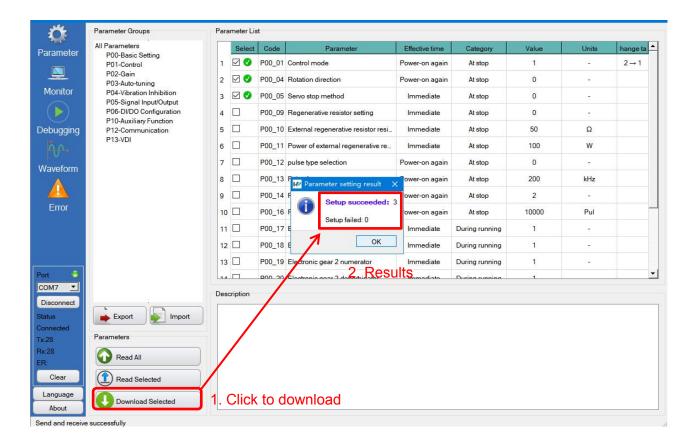
After modifying the value, press "save" or directly enter enter, the corresponding entry in the parameter list will be highlighted (the background color changes to orange), and the button "download selected parameters" will turn orange, as shown in the figure below



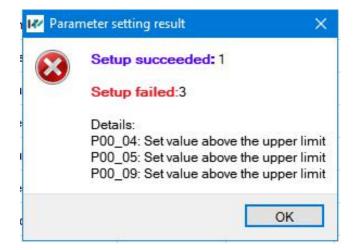


(Note: At this time, the modified parameters are only cached in the upper computer, not set to the servo drive!)

Click "Download Selected" in the lower left corner of the interface to download to the servo. After clicking download, a dialog box will appear showing the setting result, as shown in the following figure:

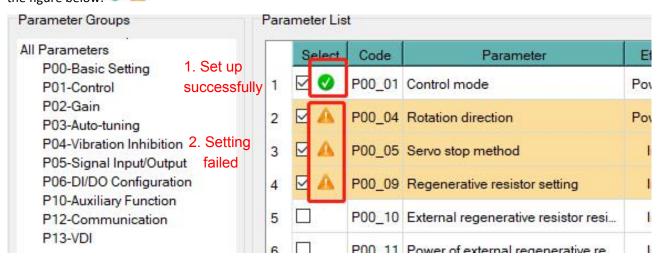


Generally, the parameters can be set successfully (that is, the "Setup failed:" in the dialog box is displayed as "0"). If it is not 0, the corresponding function code will be displayed, as shown in the following figure:





After the parameter is set, the status will be displayed in the "Select" column in the first column of the parameter list box, if the setting is successful, will be displayed, if the setting fails, it will be displayed, as shown in the figure below:



To troubleshoot the corresponding errors, please refer to: 3.3 Parameter setting failure, and troubleshoot accordingly.

2.2.3 Parameter import and export

You can import parameter values from the configuration file for setting functions, click the button to start

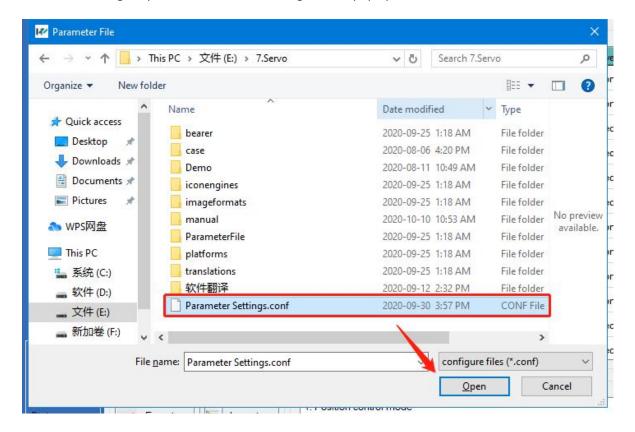
Import

parameter import, as shown in the figure below:

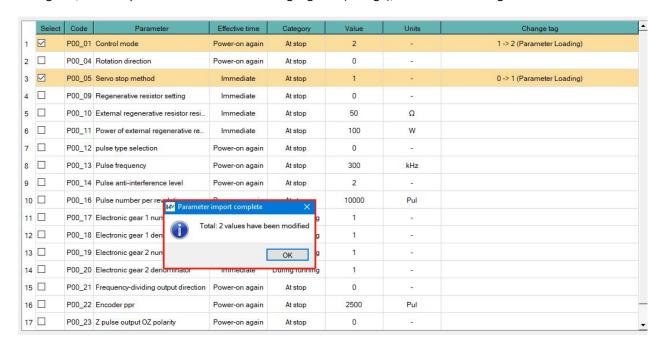




After clicking "Import", a file selection dialog box will pop up,

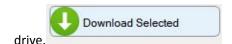


After importing, if any parameter is modified, the number of modified parameters will be prompted in the dialog box, and the parameter list box will be highlighted (orange), as shown in the figure below:



After importing, the user can click to download the modified parameters to the servo





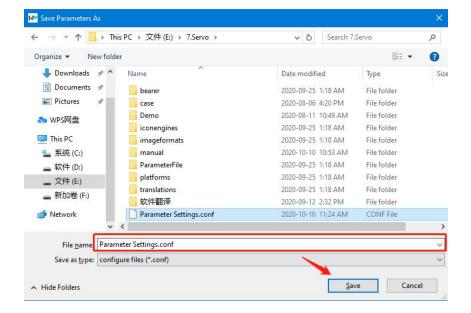
[Export]

The parameter values can be exported to a configuration file and saved as a file for subsequent use. Click the

button to start parameter export, as shown below:



After clicking "Export", a dialog box for selecting a file will pop up, select the storage path in the dialog box, enter the file name, and click "Save", as shown below:

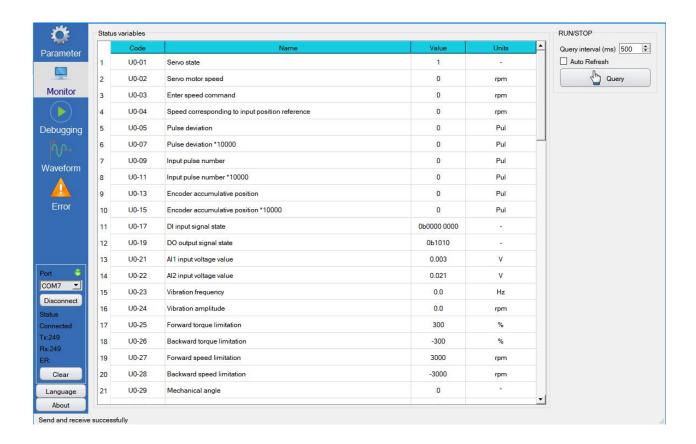




2.3. Monitoring amount display interface



Click in the window switching bar to switch to the monitoring interface, as shown below:

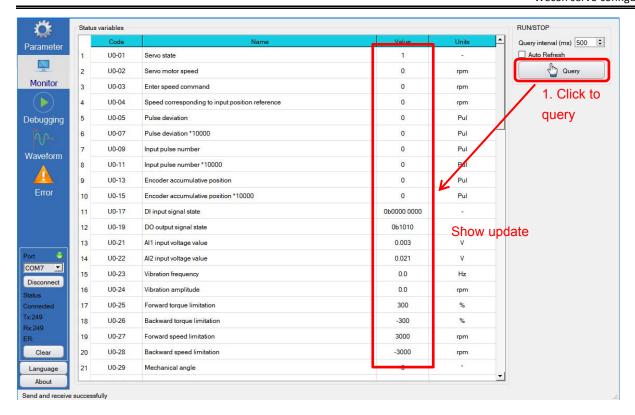


2.3.1 Monitoring volume query function

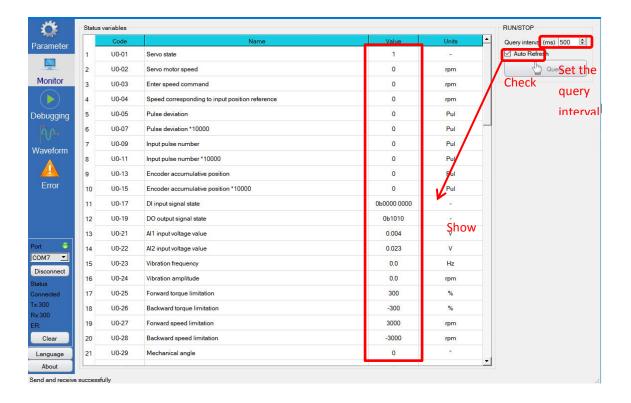
In the operation area of the monitoring interface, click to perform a single query. After clicking, the parameters are successfully read and the display is updated, as shown in the following







In addition to manual query, automatic query can also be performed for periodic timing query. First set the query time interval (in ms) in "Query Interval", the smaller the setting value, the faster the query, the longer the setting value, the slower the query; it is recommended to set the interval not less than 500ms!





2.3.2 Monitoring quantity display format

The monitoring volume includes:

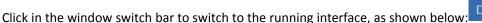
- 1. IO display (binary),
- 2. Decimal display,
- 3. Fault alarm display

IO display is used to display DI input signal status and DO output signal status, in binary display; fault alarm display, used to display fault alarm information, display fault name in text; other general data display is displayed in decimal, as shown in the figure below:



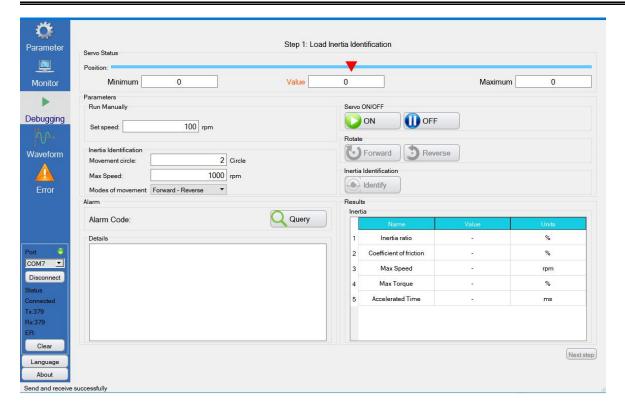
(Tips: hover the mouse on the display fault alarm name, there will be a prompt box to explain the fault)

2.4. Debug interface









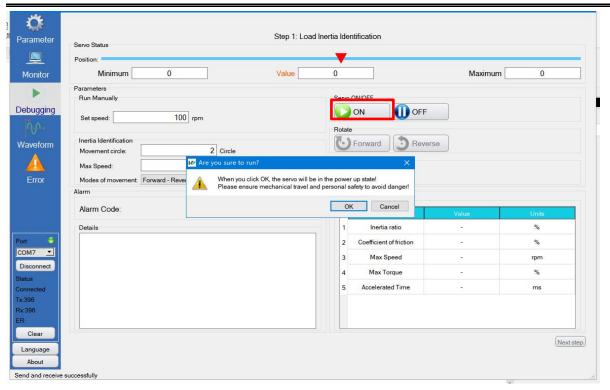
2.4.1 Servo on and off

First confirm that the servo is powered on, the hardware wiring is intact, and the digital tube has no fault

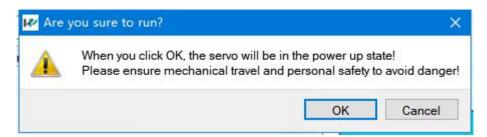
warning prompt; click on the interface, as shown in the following figure:







The software will pop up a system safety warning box, prompting: "When you click OK, the servo will be in the power up state! Please ensure mechanical travel and personal safety to avoid danger!" As shown in the following figure:

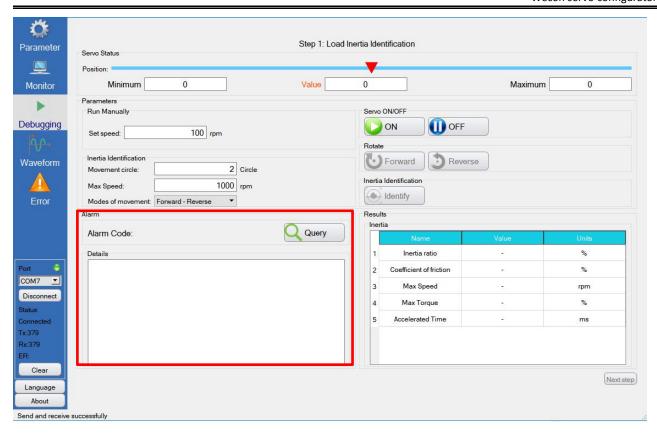


(Note: Please reconfirm the mechanical stroke and personal safety to avoid danger!)

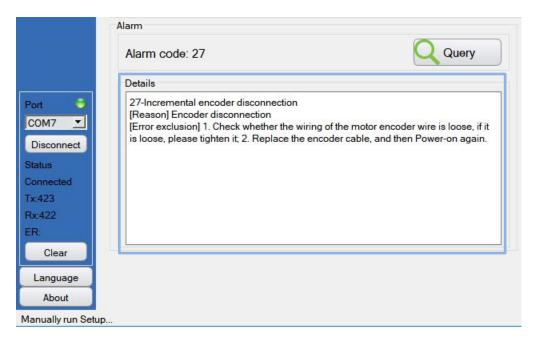


After confirming that it is correct, click OK to start the servo and enter the power-on operation state. Please confirm whether the alarm box has alarm information (the red box area in the figure below), there should be no alarm normally, and the display is blank, as shown in the figure below:





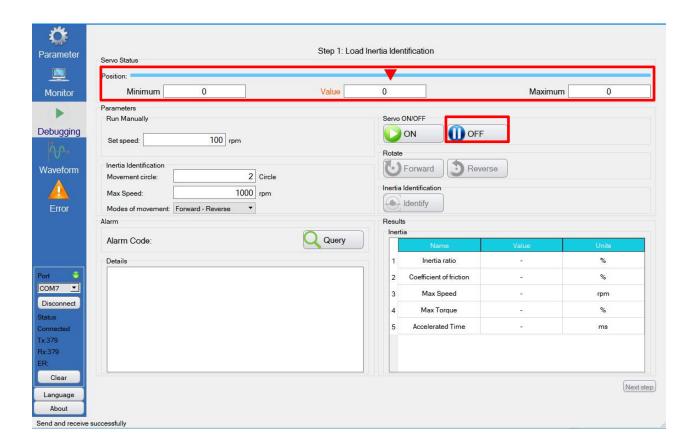
If there is an alarm, the corresponding prompt will be given in the alarm area, including "Alarm code" and "Details", as shown in the figure below:



Perform troubleshooting according to the content prompted in "Details", and then proceed after troubleshooting the alarm.



During or after running, you can click to turn off the servo drive. When it is turned off, the position signal is reset to 0 and the button is displayed in red, as shown in the following figure:

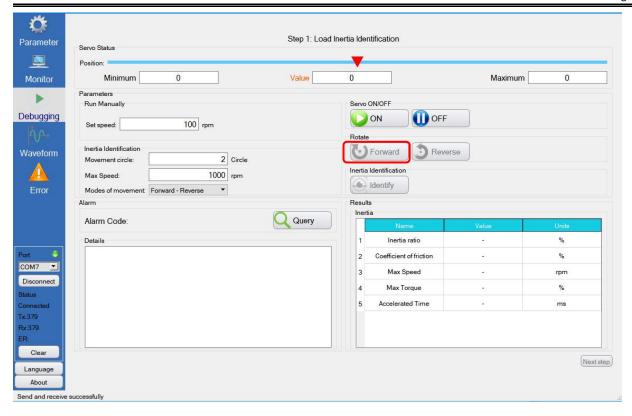


2.4.2 Servo forward and reverse

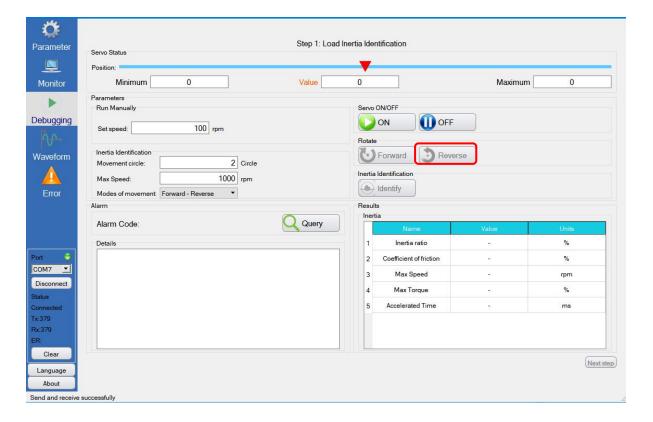
(Note: Before use, please confirm the motor installation direction and the setting of the function code regarding the motor rotation direction to ensure that the actual rotation direction of the motor is consistent with the expected direction of movement! Avoid accidents!)

Press the "forward rotation" button and the motor starts to rotate forward. The servo status displays the position information and the current speed. Please confirm whether the displayed speed is consistent with the "set speed". Release the button to stop the operation, as shown in the figure below:





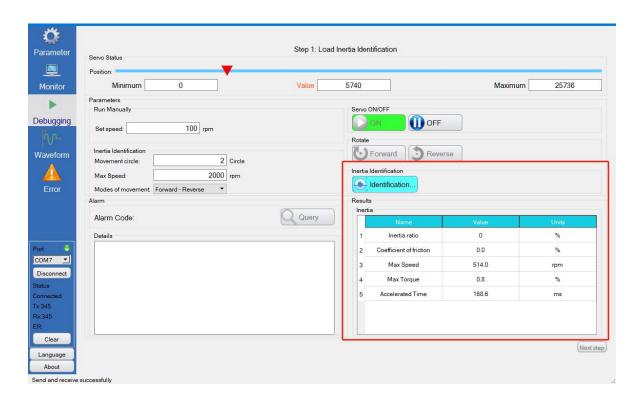
Press the "Forward" button and the motor starts to reverse, and the servo status displays the position information and current speed. Please confirm whether the displayed speed is consistent with the "set speed". Release the button to stop the operation, as shown in the figure below:





2.4.3 Inertia recognition

In the process of manual forward/reverse rotation, the stroke meets the condition (more than or equal to the setting value of "moving circle"), the inertia recognition button turns from gray to light, click to start the inertia recognition, as shown in the figure below:

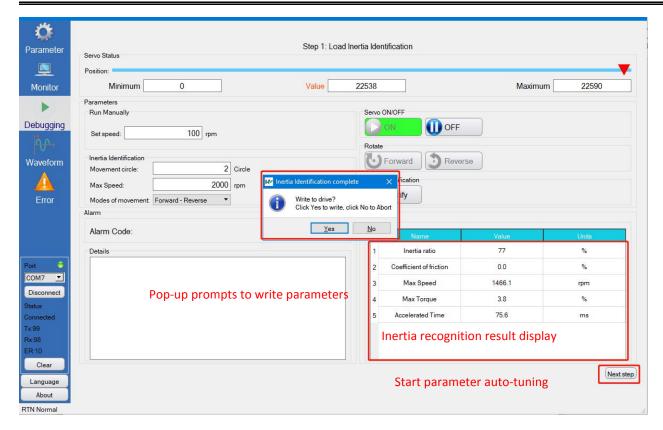


Note that inertia recognition is only valid in position mode. If it is in non-position mode (such as speed mode or torque mode), the software will prompt that inertia recognition cannot be performed, as shown in the following figure:



After the inertia recognition is completed, a pop-up window will prompt that the inertia recognition is completed, "Whether to write to the drive? Click Yes to write, and click No to not write". At the same time, the inertia recognition button is displayed from "Recognizing..." to "Start Recognition". And the "Next" in the lower right corner turns from gray to light, you can click to the next page, as shown below:





OFF

In this process, you can click to close the servo drive and end the operation ahead of time!

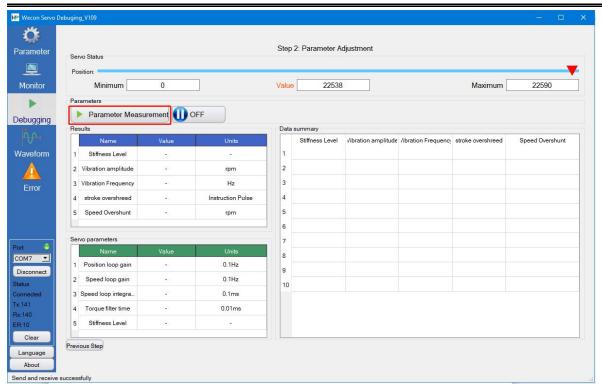
2.4.4 Parameter self-tuning

After the load inertia is identified, click "Next" to go to the parameter auto-tuning interface, and click to start

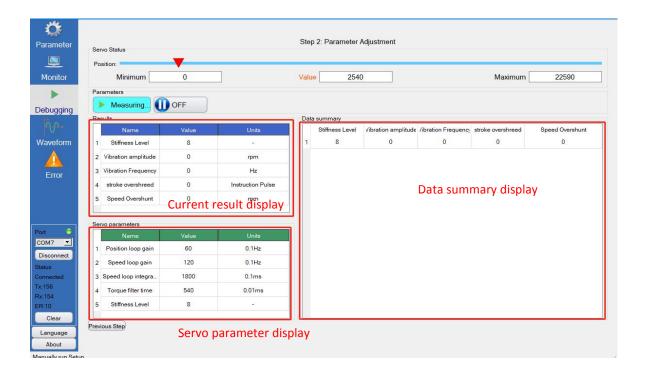
Parameter Measurement

automatic parameter measurement, as shown in the figure below:





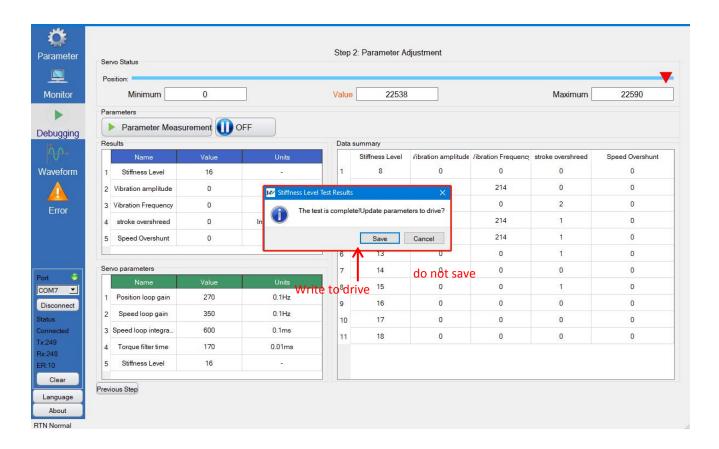
After clicking "parameter measurement", parameter measurement will begin. The current parameters and control effects will be displayed in the "current results" and "servo parameters", and they will be simultaneously displayed to the "data summary" interface for collection and summary display, as shown below Shown:



There may be a short whistling sound during the test. If the sound continues, you can click to turn off the servo drive and end the operation early!



After the measurement is over, the software will pop up a dialog box, prompting: "The test is complete!Update to drive?", click "Save" to write the measured parameters to the servo drive, and "Cancel" will not save and still use the original There are parameters. As shown below:

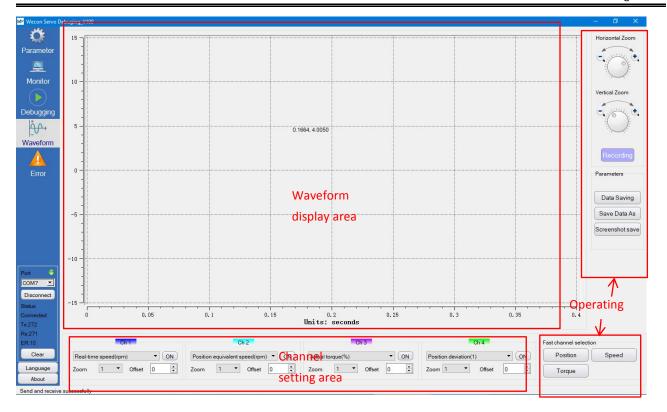


2.5. Wave interface

Click in the window switch bar to switch to the waveform interface, including the waveform display area,

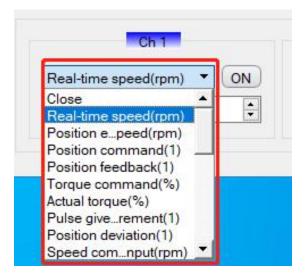
channel setting area, and operation area, as shown below:





2.5.1 Waveform channel selection

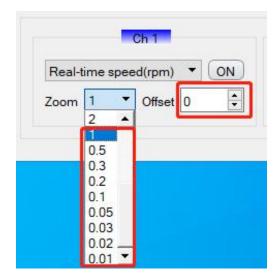
Before use, select the waveform channel corresponding to the waveform variable to be viewed. There are 4 channels of waveform selection from CH1 to CH4 in the channel setting area. You can select the corresponding waveform variable in each drop-down box, as shown in the figure below:





2.5.2 Zoom and offset settings

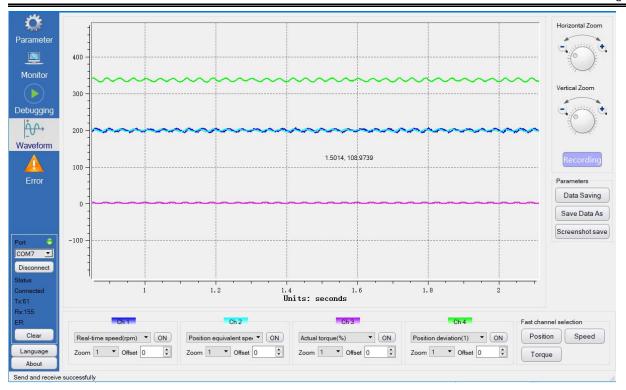
In actual use, for the convenience of waveform comparison and display, you can zoom and offset the waveform display. This operation can be performed on 4 channels, as shown in the following figure:



2.5.3 Waveform sampling starts

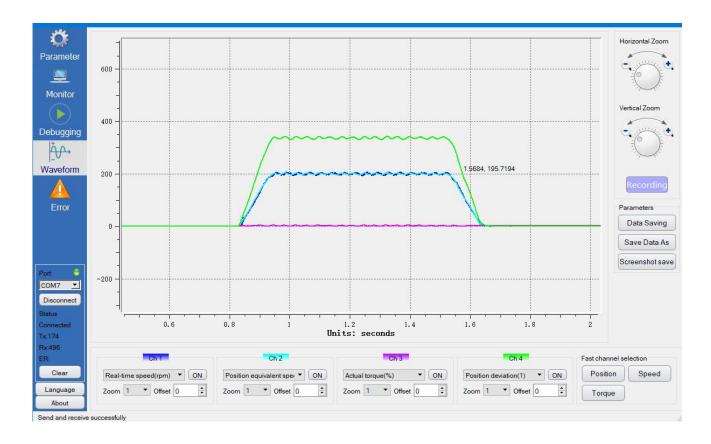
After setting the waveform channel, zoom, offset, etc., you can start waveform acquisition and display, click to perform continuous sampling, as shown in the following figure:





Click again to stop the waveform sampling, and the waveform refresh in the main window can be paused, and

important waveform details can be analyzed. Recording





Click and hold the left mouse button and drag on the waveform window to move the waveform;

Select the "Zoom" and "Offset" of the channel to set the zoom factor and offset of the corresponding channel respectively;

Click OFF the waveform channel to turn off the display of the current channel, and it will change to after clicking "ON" ON; click OFF the waveform to display again;

Rotate and can uniformly zoom and display the horizontal and vertical coordinates of the



2.5.4 Data and waveform saving

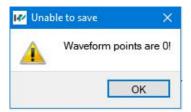
Click and to save the waveform data to a csv file. "Data save" is to save directly to the directory where the application is located. "Data Save As" is used to save the waveform data as a csv file. You can select the storage path.

Data Saving Save Data As

After clicking, if there is a waveform in the waveform window, the pop-up window prompts "Save successfully!", as shown in the figure below:



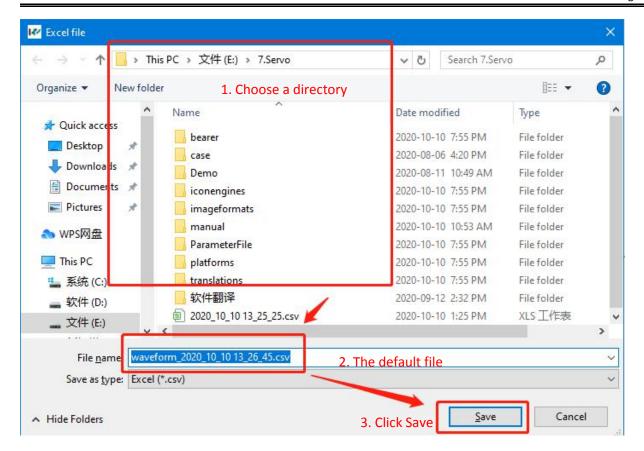
If there is no waveform in the main window, it will prompt that it cannot be saved, as shown in the figure below:



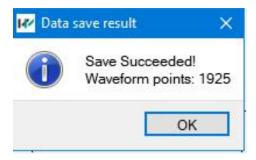
Click, a file path dialog box will pop up, select the directory, enter the file name (or you can use the default file name provided by the program), and click "Save (S)", as shown in the following figure:

Save Data As





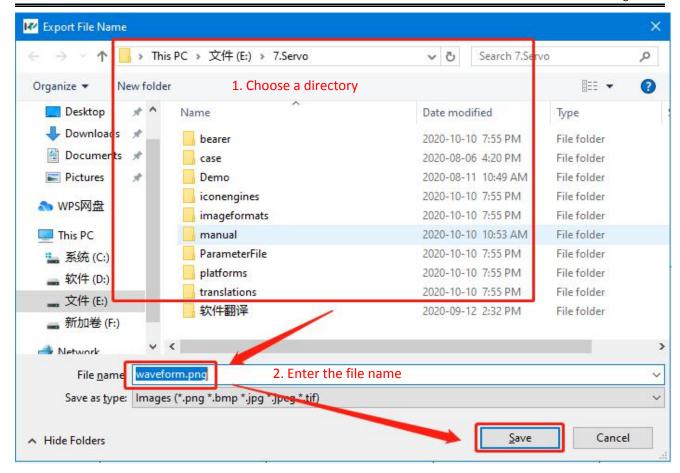
After clicking "Save(s)", a pop-up window prompts that the save is successful:



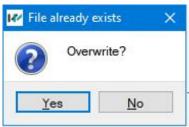
Click to display the waveform display area as a picture, and the default export picture file format (*.png

Click "Waveform Hold", a file path dialog box will pop up, select the directory, enter the file name, and click "Save (S)", as shown in the figure below:





If there is a file with the same name in the directory, it will prompt "File already exists, do you want to overwrite?", as shown below:



Click "Yes" to overwrite and save, click "No" to abandon saving.

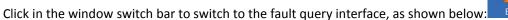
After the save is successful, a pop-up window prompts that the save is successful:



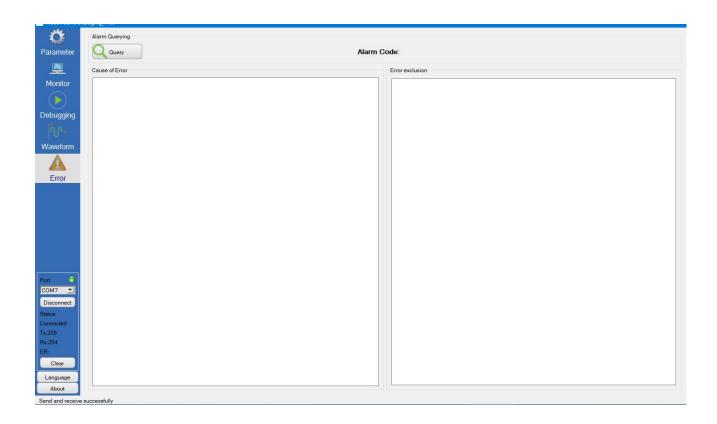


2.6. Fault query interface

2.6.1 Fault alarm query

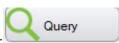




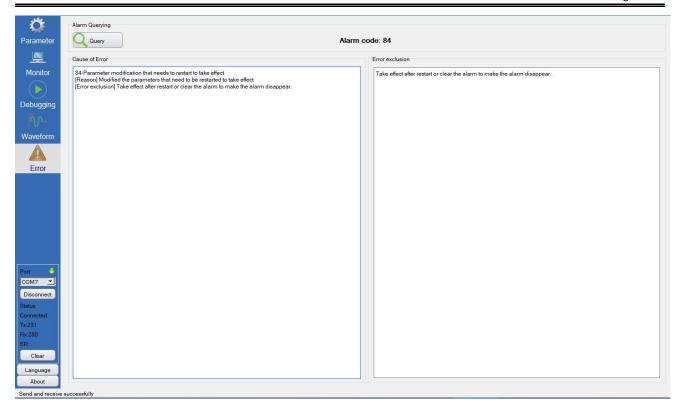


Click to query. If there is a fault or alarm, a pop-up window will prompt "the system is currently faulty", and the alarm code, cause of the fault, and troubleshooting will be displayed in the main window. Users can check

according to the corresponding prompts, as shown in the figure below:





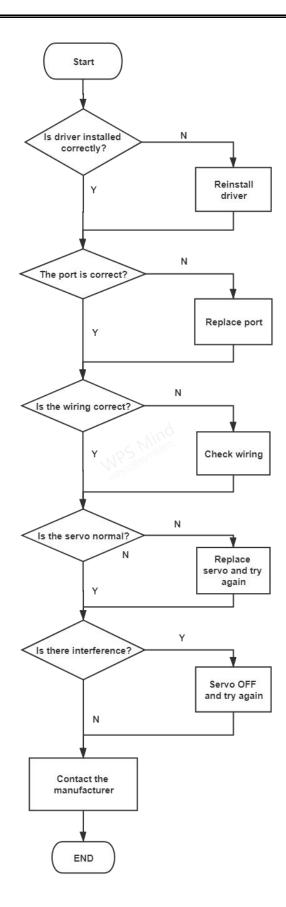


3.Use troubleshooting

3.1. Communication connection problem

In the process of connecting the servo drive, if there is a problem and the connection cannot be made, please follow the process steps below to troubleshoot:

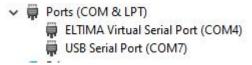






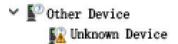
3.1.1 Is the driver installed correctly?

Open the device manager, in "Ports (COM and LPT)", check whether there are related devices, as shown in the figure below:



Exclamation marks should not appear on normal devices. If you see the device, but the device icon displays an exclamation mark, it prompts that the driver may not be installed correctly and you need to reinstall the driver. (For driver installation, please refer to: 3.4 Driver Installation)

If the device cannot be found, check whether the driver has been successfully installed. Check whether there are unknown devices in the device manager, as shown in the following figure:



If there is an unknown device, you need to install the driver manually. (This problem is more common in lower version operating systems and computers that cannot connect to the internet). (For driver installation, please refer to: 3.4 Driver Installation)

3.1.2 Is the port selected correctly and is it occupied?

Carefully confirm whether the port number is correct. If necessary, you can plug and unplug the communication cable to confirm whether the port is the target port (Please note: disconnecting the communication port in use may cause the software to crash (not the software), or the operating system Crash or blue screen!), after confirming the port number, try to open the port. If the port cannot be connected (the prompt is occupied), you need to check whether other software is occupying the port. Or restart the computer and try to open it again.

3.1.3 Is the wiring correct?

If there is no problem with the port, please check whether the wiring is correct and whether the wire is loose or disconnected. The specific communication line interface definition can be found in the servo manual.



3.1.4 Is the servo drive damaged?

If the above steps have been checked and confirmed, please confirm whether the servo drive is damaged, you can try to replace the servo drive to troubleshoot the fault.

3.2. Software compatibility issues

For software compatibility, please confirm whether the software cannot be opened or the software display problem.

3.2.1 Software cannot be opened

- Please confirm the version of the operating system (for operating system requirements, please refer to:
 Software requirements);
- (2) Please confirm whether the file in the program directory is lost (whether it was accidentally deleted by anti-virus software).

3.2.2 Display Error

- (1) Part of the software area is blocked or displayed outside the screen; check whether the resolution setting of the monitor is the minimum requirement (for the minimum resolution requirement of the monitor, please refer to: 1. Software requirements);
- (2) Part of the font of the software is displayed too large or partially covered. Check whether the font size used by the operating system is 100%. After setting it to 100%, close the software and reopen it (some versions of the operating system may require restart or logout);
- (3) The function code interface is blank, please confirm whether the parameter.xml file in the folder where the software is located exists and is damaged.

3.3. Parameter setting failed

Parameter setting failure means that the communication can be successful, but cannot be set to the servo



drive. Generally, there will be a dialog box prompting abnormality. The following situations are related to the corresponding fault type:

Serial	Set failure type	Processing method
number		
1	The set value exceeds the upper limit	After confirming the parameter range of the servo
		drive, download the parameters again.
2	The set value is lower than the lower limit	After confirming the parameter range of the servo
		drive, download the parameters again.
3	The parameter belongs to the shutdown	Confirm whether the servo is turned on, set it to
	setting type (currently it is the power-on state	turn off, and then download the parameters.
	that does not allow setting)	
4	The set parameter does not exist	Confirm whether the parameter exists and the
		number is correct.
5	The set parameters are not allowed to be set	Confirm whether the parameter exists and
	(read-only, internal reserved)	whether it can be set.

3.4. Driver installation

If it is a higher version of the operating system (Windows 10) and can connect to the Internet, the operating system will automatically update the driver. If the operating system version is lower or the network cannot be connected. You need to install the driver manually. For specific driver installation, please refer to the communication device manual for details, and install the driver according to the manual.