



COREMORROW Piezo Controller Software User Manual

[Home](#) » [COREMORROW](#) » COREMORROW Piezo Controller Software User Manual 

Contents

- 1 COREMORROW Piezo Controller Software
- 2 Introduction
- 3 Standard Waveform
- 4 Programmable Control
- 5 System Information
- 6 Connect
- 7 Documents / Resources
 - 7.1 References
- 8 Related Posts



COREMORROW Piezo Controller Software



The user manual describes the following products

- E70 series
- E53.C series

- E53.D series
- E01.C series
- E01.D series
- E00.C series
- E00.D series

Introduction

The introduction is based on 1 channel, similar to Multi-channel.

Home Screen

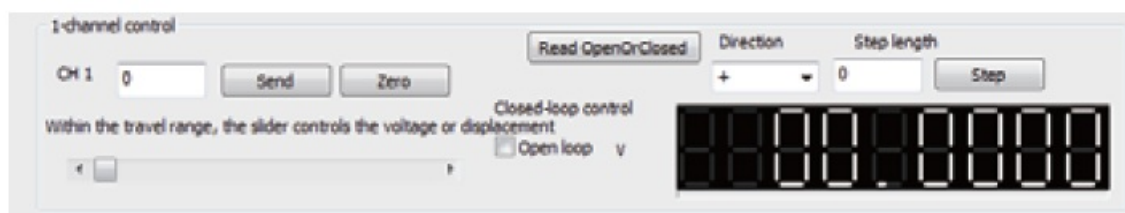


CH1 home screen: single point sending, zero setting, slider control, open/closed loop switch, voltage/displacement automatic display of piezo controller.

Function optional: connect, edit waveform, system information, calibration, standard waveform, programmable control, PID calibration, digital/analog set and exit system.

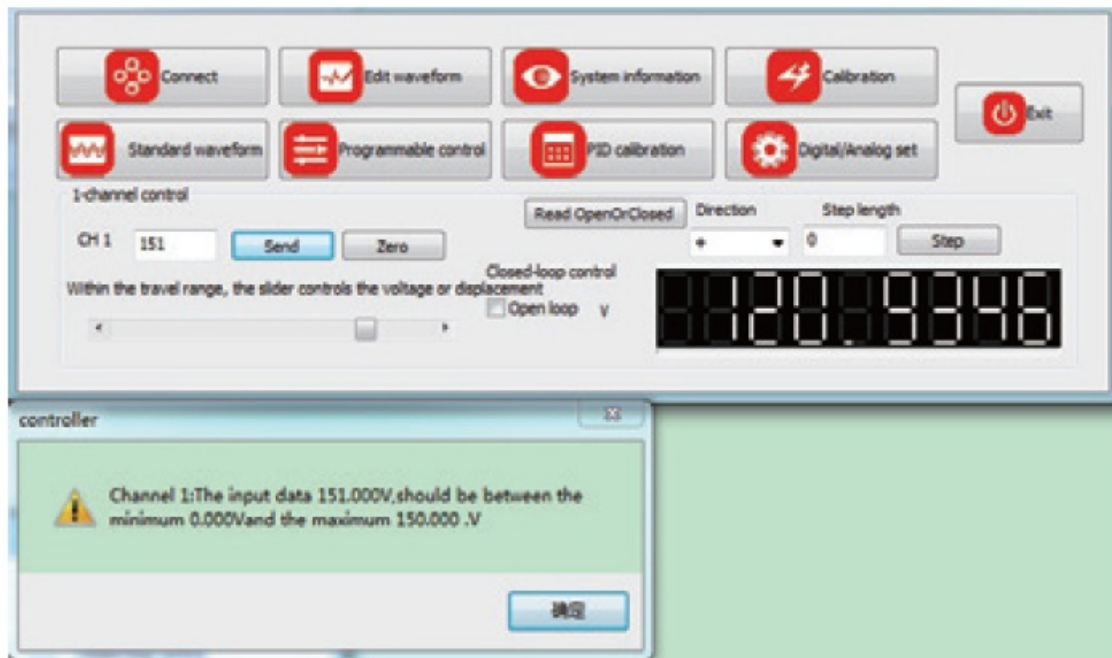
Single point sending: Fill sending data, click "Send" button. For closed loop control, click "Open loop", piezo controller turn onto closed loop, uncheck "Open loop", the controller is open loop (E18 series switch open/closed loop through dip switch on the controller). For other model piezo controller (E18/E53/E70), all channels correspond to each other.

One Channel Control



Zero: set zero, send "0" to the piezo controller and also slider control to "0". Direction: "+" means current position plus step data and "-" current position minus step data.

Step: The relative position of "+" and "-" to control the displacement. There is edge detection when in single pointing send and step control, if the output exceeds the range, it will not output and appear prompt.



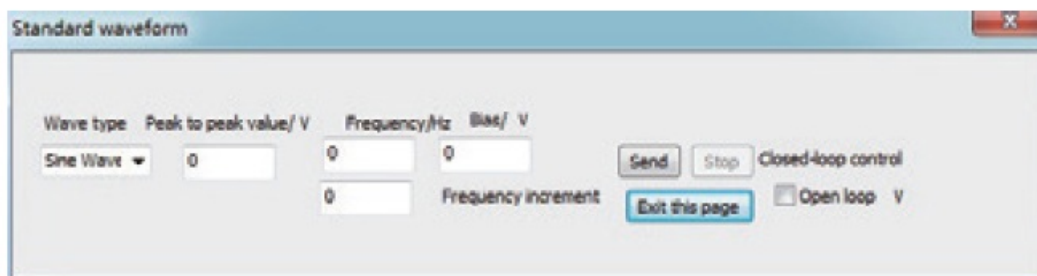
Data Collection

Piezo controller output/display on software: CH1 data is for voltage/closed loop displacement, appr. once a

second,  CH1 unit: open loop.....V

Standard Waveform

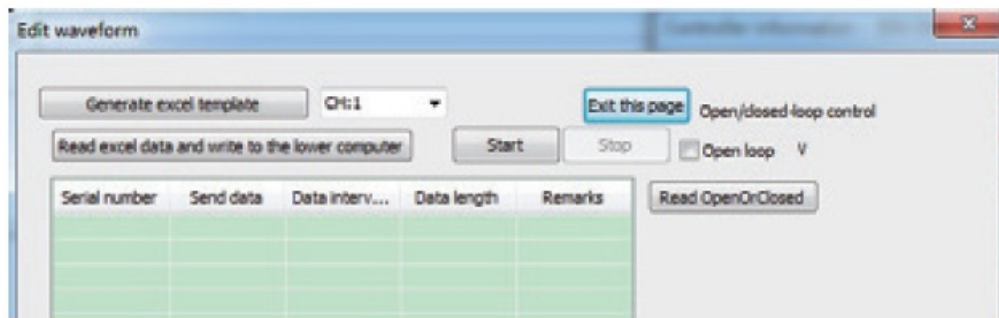
CH1 standard waveform: click "standard waveform".



Fill in "Peak-to-peak value", "Frequency", "Bias" and "Wave type(sine wave, square wave, sawtooth, triangle wave, noise waveform to be added)", click "Send", and the software will send the waveform data according to open/closed loop to the piezo controller. The piezo controller sends the waveform, at the same time, the "Send" button becomes dark and the "Stop" button lights up. Send the waveform, and the data acquisition function is stopped. It will resume after stopping to send waveform, stopping to send edit waveform, sending programmable control completed, sending single point, zero clearing, slider control or step point prompting stop waveform sending(including standard and edit waveform).

Edit Waveform

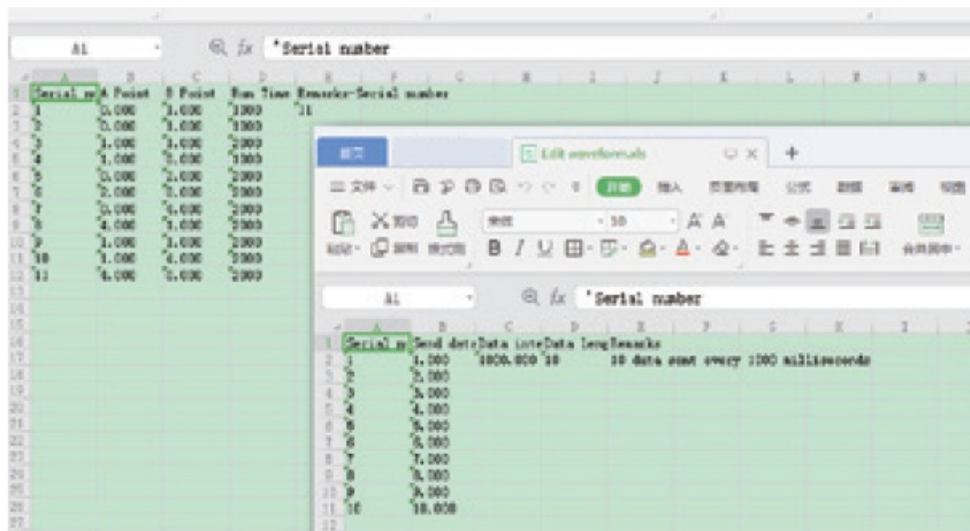
Edit waveform: Import the pre-set excel to realize the storage of the waveform, the time setting of point and point (between 1ms and 500ms, please note the software is not limited), and control the start and stop of edit waveforms through "Start" and "Stop" buttons. Generate Excel Template



Generate Excel Template

Click "Generate excel template", and select the corresponding folder to generate a file named "Edit Wave.xls".

Generate data



Note! Please be sure that the data can be completely converted into numbers, or use character types, pay special attention to the uniform format. Otherwise, the table data is invalid. The data in the table could be changed. The send data is 1.000 when the piezo controller is an open-loop data value, which means 1V voltage. If it is closed-loop, that means 1 μ m or 1mard which is determined by the units in the table. That is to say, if the piezo controller switch open or closed loop state which it does not conform to the expected unit of stored data value, it needs to change the excel data and import it to the piezo controller again so that it can be output correctly.

Principle of editing data

Principle: Data "1" will be converted to the data value between 0 and 65535 which send by DA according to the open and closed loop state. 0~120V open-loop voltage is the same as the DA value from 0 to 120 μ m, but if the closed-loop stroke is 0 to 10 μ m, the data value sent by DA corresponding to data "1" is completely different. This is the reason why it is necessary to reimport the excel data corresponding to the open or closed loop state of the piezo controller. Sending open loop data changed range: between minimum voltage and maximum voltage, and within travel range for closed loop Data interval is an integer of greater than 1 and less than 5000 in milliseconds.

Data length indicates sending data from 1 to 192, if more than 192, it will be calculated according to 192. The header name and relative position couldn't be changed, and neither could the first sheet name of the table. The data must be a floating point number or an integer greater than 0. Serial number: This is used to record how much data is sent. Edit waveform function: through Excel, it could import the data calculated by other programs, and store it to the piezo controller for quick and convenient output.

Programmable Control

Generate Template

Operational control from A to B, setting the coordinates of A and B, then run time from A to B which composes run track of A to B, run time of serial port and USB by sending points data. Edit data interval time: please be within 200 milliseconds to 5000 milliseconds.

Programmable control

Operation control from point A to point B

Cycle: 1

Point A: 0

Point B: 10

A to B run time: 1000 ms

Ctrl: 1

Start

Stop

Read Open/Closed

Open/closed-loop control

☐ Open loop V

Multi-point operation control

Generate excel template

Import excel data

Cycle: 1 Numbers

Ctrl: 1

Start

Stop

Exit this page

Serial number	A Point	B Point	Run Time ms	Remarks-Seri...

Info:

Generate table-programmable control catalog:

CH1 indicates Channel 1. For multi-channel, it will display CH2, CH3.....CHx. Read Open or closed, it will be consistent with the corresponding channel for multi-channel.

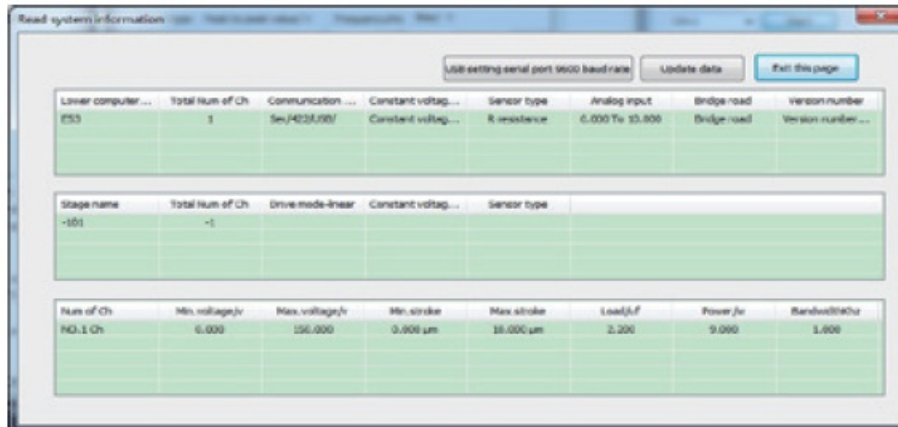
Multi-point Operational Control

Multi-point operational control represents the run time between two points by the import of multiple point-to-point data from excel so that it could easily control the piezo stage operations. Generate an excel template to the corresponding folder.

open loop state and need to be in the travel range in closed loop state. The excess data will not be displayed.

System Information

System information: display the basic information of the connected piezo controller and piezo stage.



USB setting serial port 9600 baud rate means that in USB communication state, set serial port baud rate to 9600. It is used if the piezo controller does not know baud rate or set it to 23400, it will reset it to 9600 and restore to serial communication to 9600 baud rate. Update data means to update the data on this page after piezo controller calibration.

Calibration

It is used for calibration or piezo controller upgrade supporting, and the password is required to set it up. If the setting is improper, it will cause unnecessary errors and losses. It could only be used with the support of manufacturer.

Digital/Aanlog Set

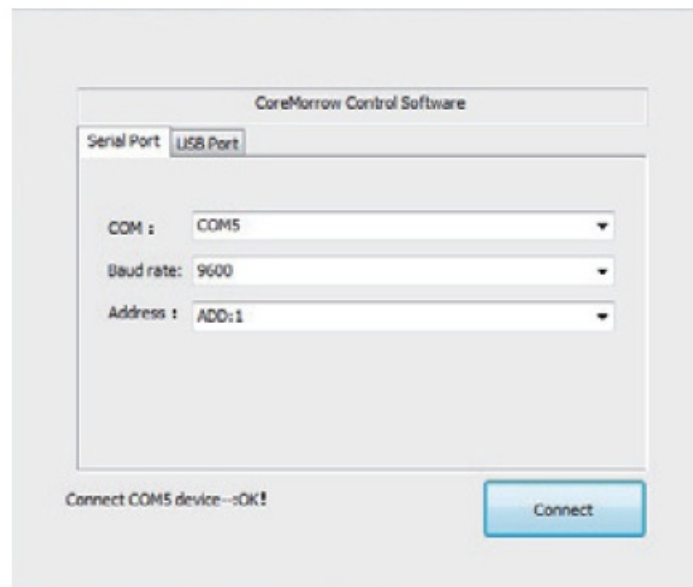
Switch the control state of the piezo controller.



Connect

Serial Port Control

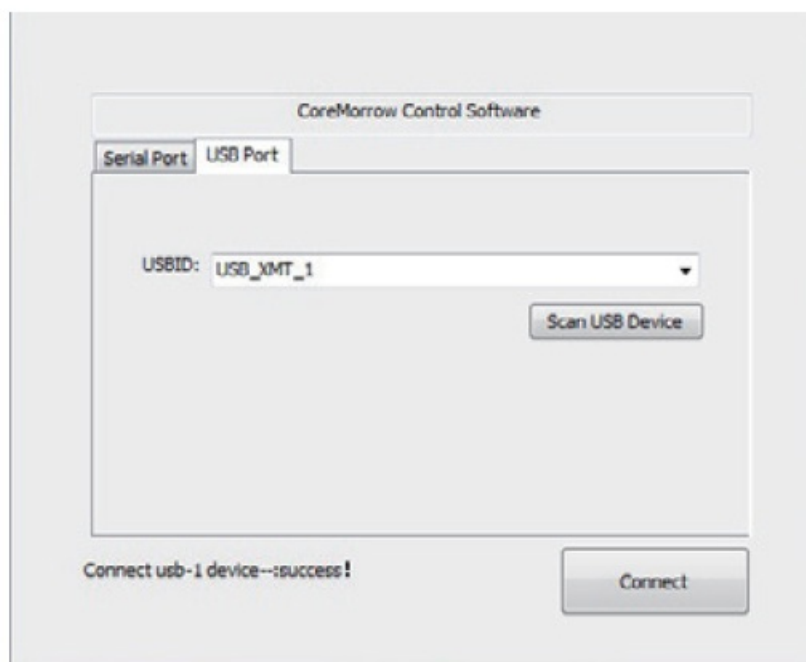
Connect controller: Serial port and USB prot.



Serial port: according to the actual situation, connect COM port, Win7->Device manager- COM. Baud rate: Set the baud rate of the piezo controller to 9600. Similarly, you can select 115200 baud rate to control the piezo controller. Please maintain the last serial baud rate. If the piezo controller is turned off.

USB Control

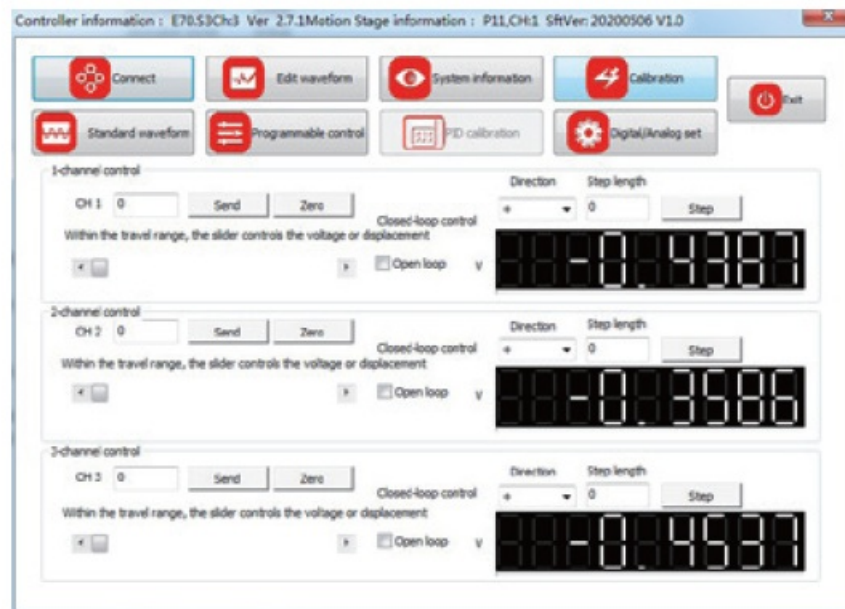
USB control mode: If USB device is connected, it will be displayed from USB_XMT_1 to USB_XMT_2..., you can control USB device separately.



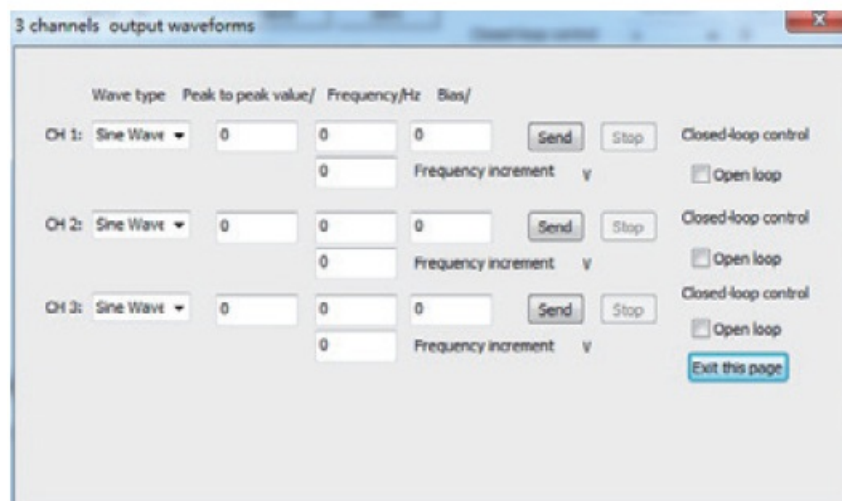
Click "Connect", connection is successful.

Interfac Display

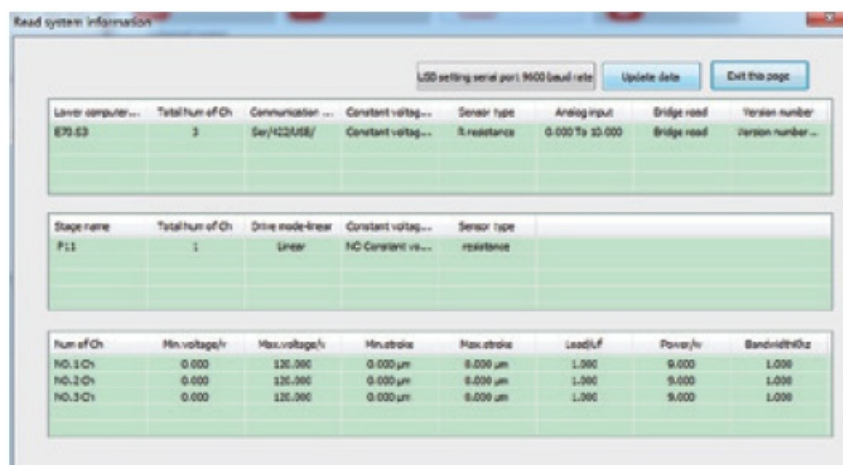
3 channels home screen:




3 channels output waveform screen:



3 channels acquisition screen:



3 channels edit waveform screen:

	<p>COREMORROW Piezo Controller Software [pdf] User Manual</p> <p>Piezo Controller Software, Piezo Software, Controller Software, Software, E70 Series, E53.C Series, E53.D Series, E01.C Series, E01.D Series, E00.C Series, E00.D Series</p>
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References

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