

# User Manual of SkyMEMS Inclinometer Management Software

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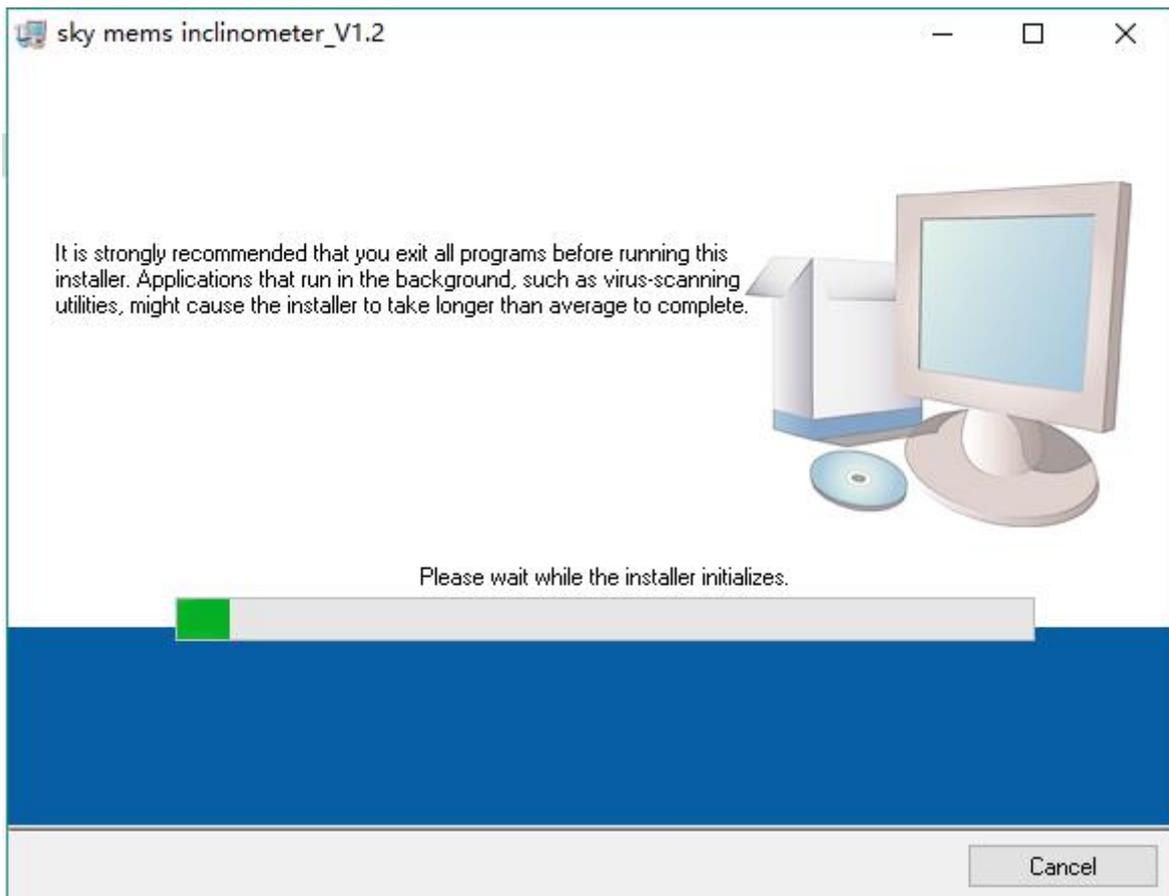
## Content

|  |          |
|--|----------|
| <b>1. Software Installation.....</b>   | <b>1</b> |
| 1.1 Installation.....                  | 1        |
| 1.2 Select Installation Folder.....    | 2        |
| 1.3 Start to Install the Software..... | 3        |
| 1.4 Installation Success.....          | 4        |
| <b>2. Software Operation.....</b>      | <b>5</b> |
| 2.1 Serial Port Setting.....           | 5        |
| 2.2 Reading Angles.....                | 7        |
| 2.3 Angles & Temperature Data.....     | 8        |
| 2.4 Data Save Path.....                | 8        |
| 2.5 Data Graphic Display.....          | 9        |
| 2.6 System Setting.....                | 10       |
| 2.7 Running & Stop button.....         | 11       |
| 2.8 Contact.....                       | 11       |

# 1. Software Installation

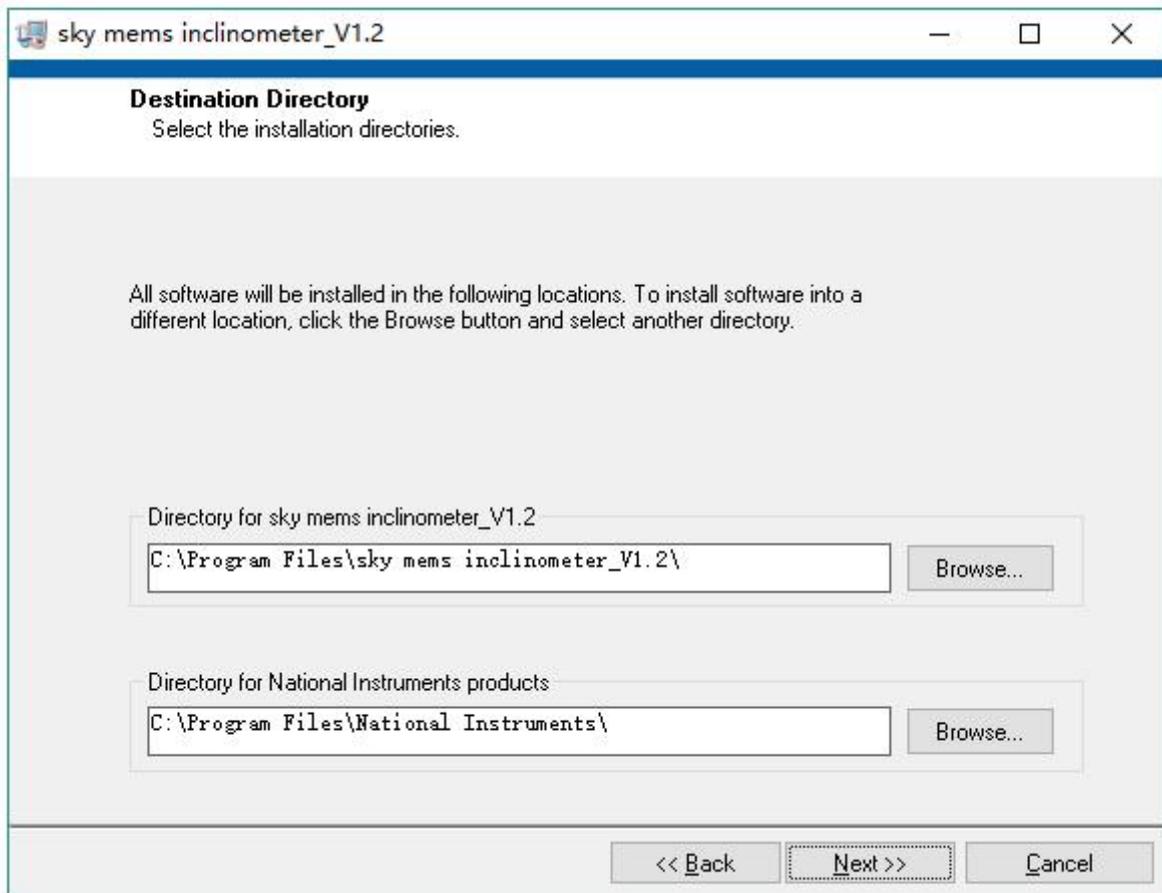
## 1.1 Installation

Open the folder: SkyMEMS Inclinometer Management Software\_V1.2 2019, then click “setup”  to install the software. The following figure will be pop-up.



## 1.2 Select Installation Folder

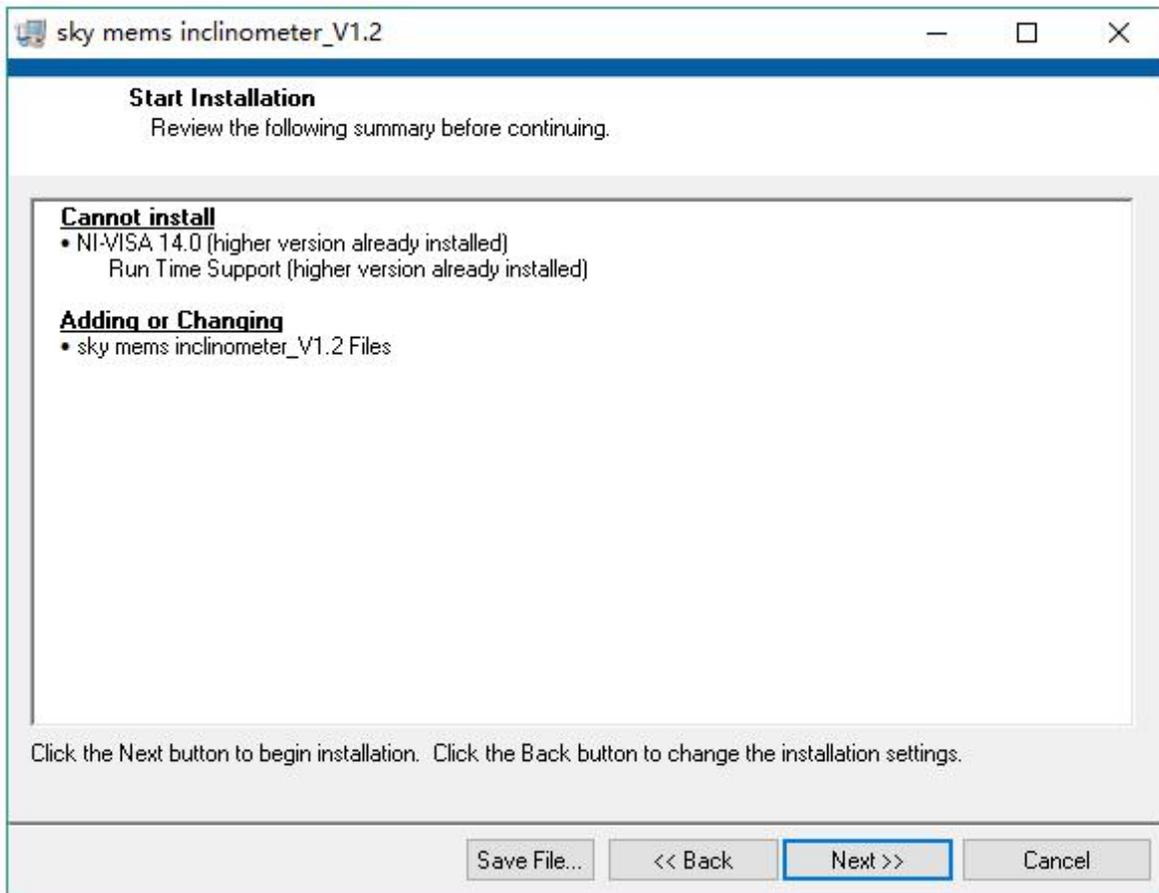
Click "Next" button will enter the interface of selecting the installation folder, see as the following figure.



Please select the folder that will be used to install the software.

### 1.3 Start to Install the Software

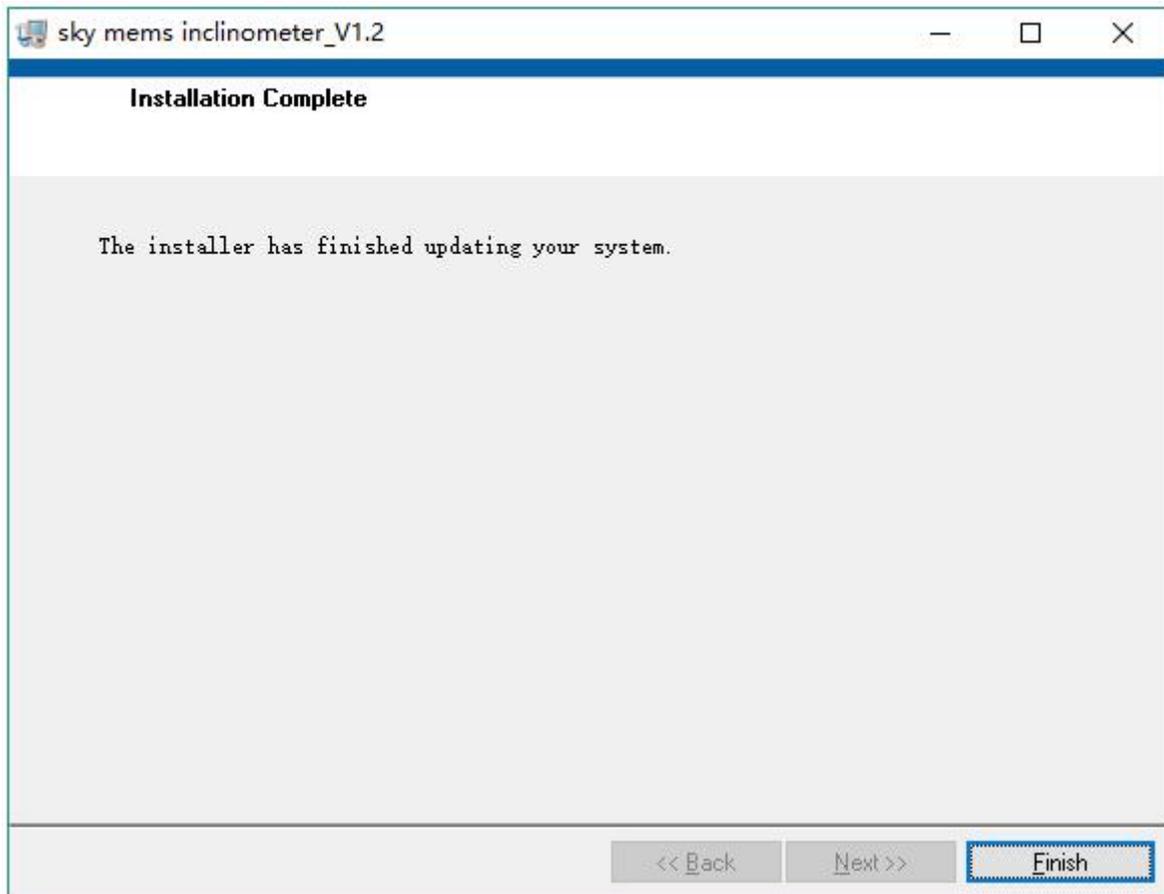
After selecting the folder to install the software, then click "Next" button to enter the following figure:



If the installation settings are ok, then click "Next" button to start the installation.

## 1.4 Installation Success

After the installation is finished, the following figure will be pop-up.

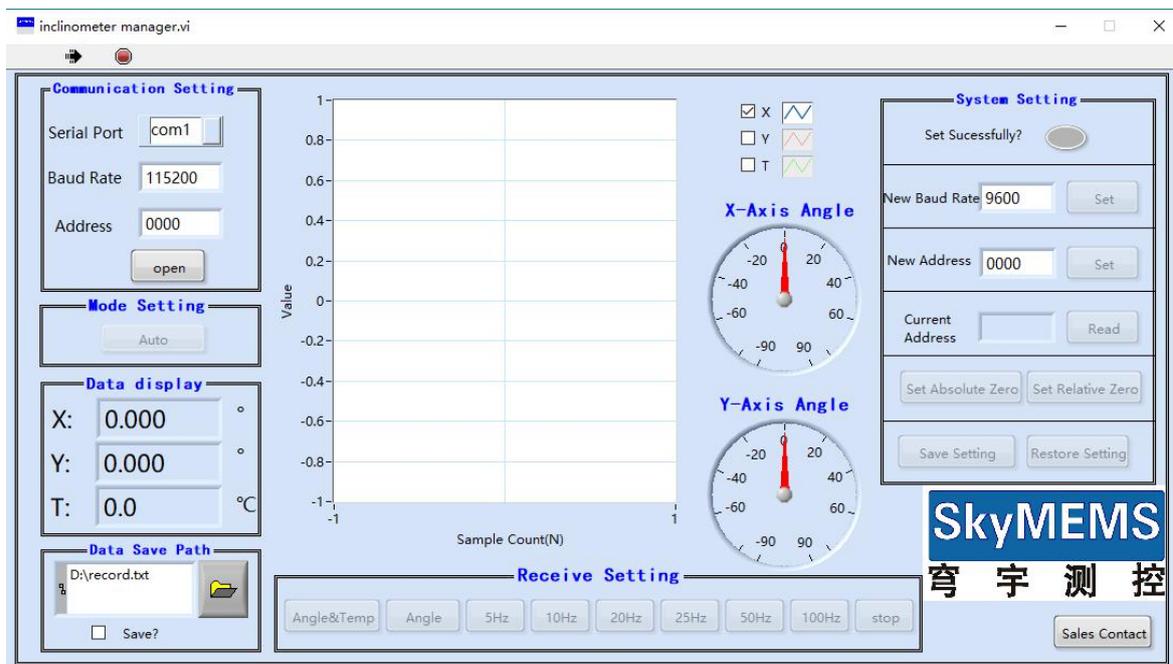


Click "Finish" button to finish the software installation.

## 2. Software Operation

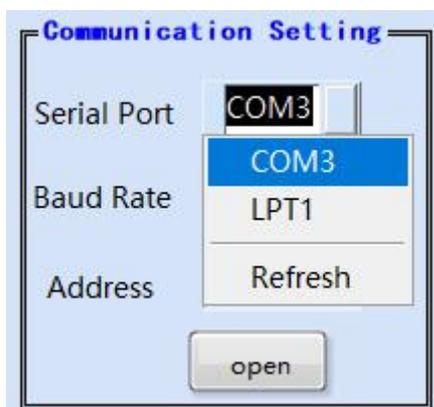
After finishing the software installation, then open My Application->sky mems

inclinometer\_V1.2, then click  to enter the frame of SkyMEMS Inclinometer Management Software, see as follows:



### 2.1 Serial Port Setting

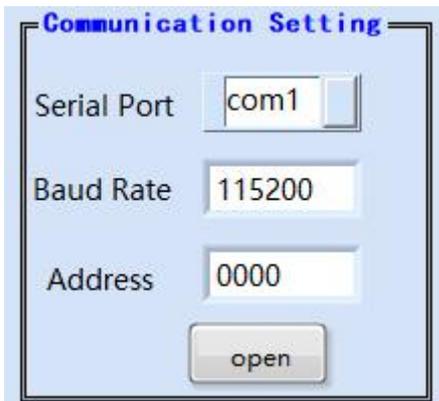
When the USB of USB-485 serial port converter is connected with PC, the serial port will be refreshed automatically (if the serial port is not refreshed, please install the serial port drive software of USB-485 or USB-232), then select the serial port, see as follows:



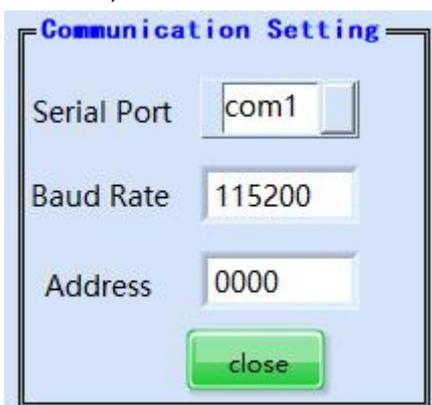
Set the baud rate of the inclinometer, the default baud rate is 115200.

And input the address of the inclinometer to connect, the default connected address is 0000 (the address domain is from 0000 to FFFF, Hexadecimal.) .

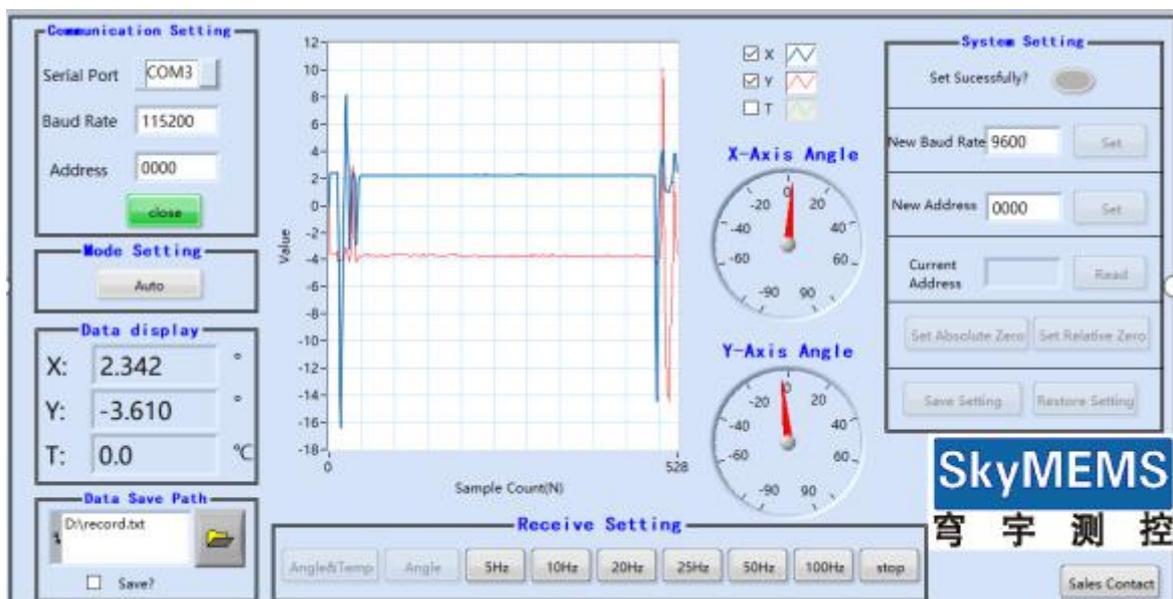
And set the waiting time, the default is 200ms. See as following figure:



After finishing these setting, click the “Open” button to connect the serial port to get the data from the inclinometer **automatically**, this is **automatic output mode** (the system is default set as autotmaic output mode), and the “Open” button will turn to “Close”, see as follows:



And the inclinometer data will be automatically output, the default output fequency is 5Hz. See as follows:



## 2.2 Reading Angles

If wanting to change the inclinometer working mode from “Automatic Output” mode to “Question and Answer” mode, please operate the system as the following steps:

1. Click “Stop” button in “Receive Setting”, see as follows:



Then the inclinometer stops automatic output data.

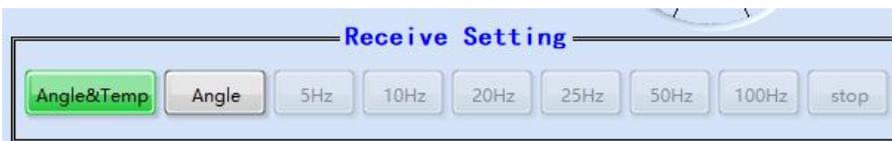


2. Click “Auto” button in “Mode Setting”, it will turn to

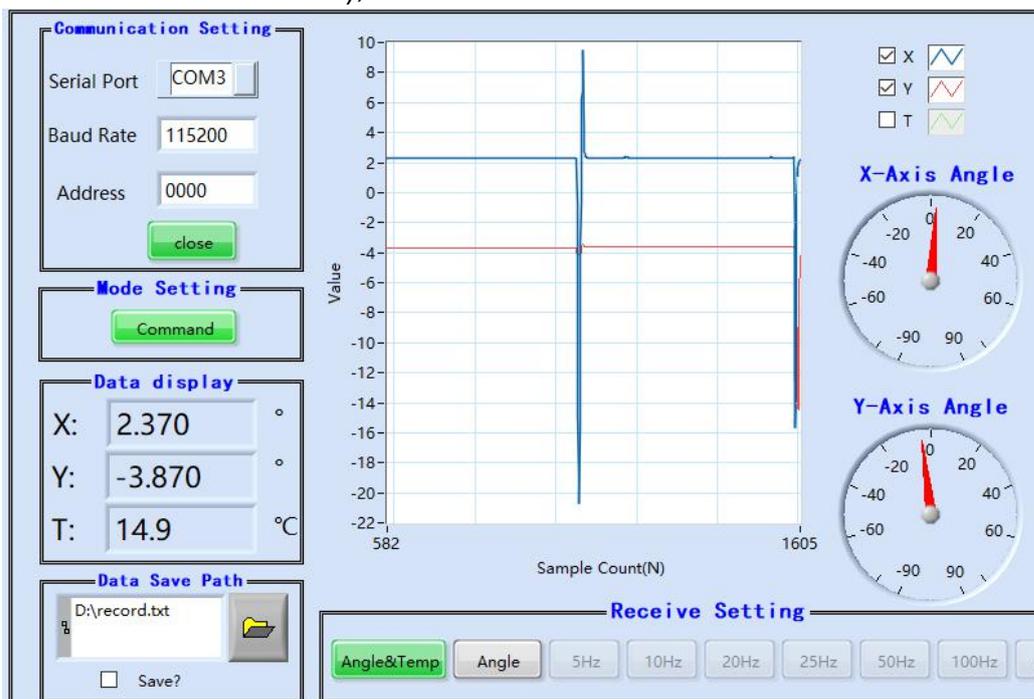


“Command” button, then it turns to “**Question and Answer**” mode”.

3. Click “Angle&Temp” or “Angle” button



in “Receive Setting”, it will output data. (if clicking “Angle&Temp” button, it will output angle and temperature data of the inclinometer, if clicking “Angle” button, it will answer angle data of the inclinometer.), see as follows:

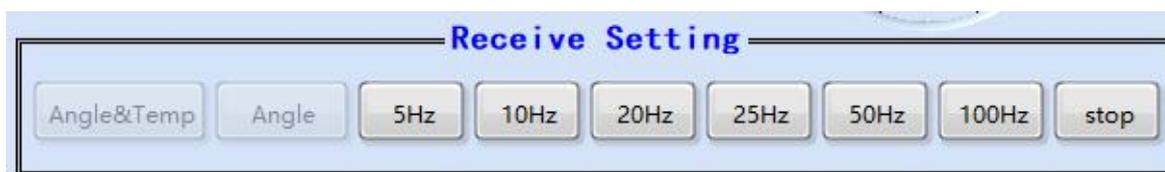


If wanting to change the inclinometer working mode from “Question and Answer” mode to “Automatic Output” mode, please follow the following steps:

1. Click “Command” button  , it will turn to

“Auto”  button.

2. Select the output frequency in “Receive Setting”

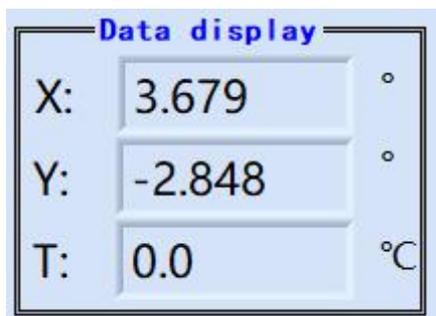


Then the inclinometer’s working mode will turn to “Automatic Output” mode from “Question and Answer” mode.

**Attention:** if needing high frequency output, the baud rate should be set as 115200.

## 2.3 Angles & Temperature Data

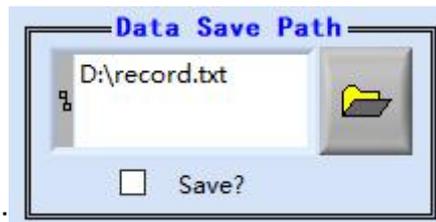
The angles and temperature will be displayed here, see as follows:



## 2.4 Data Save Path

Firstly user can create one txt file in the folder you want, and then click 

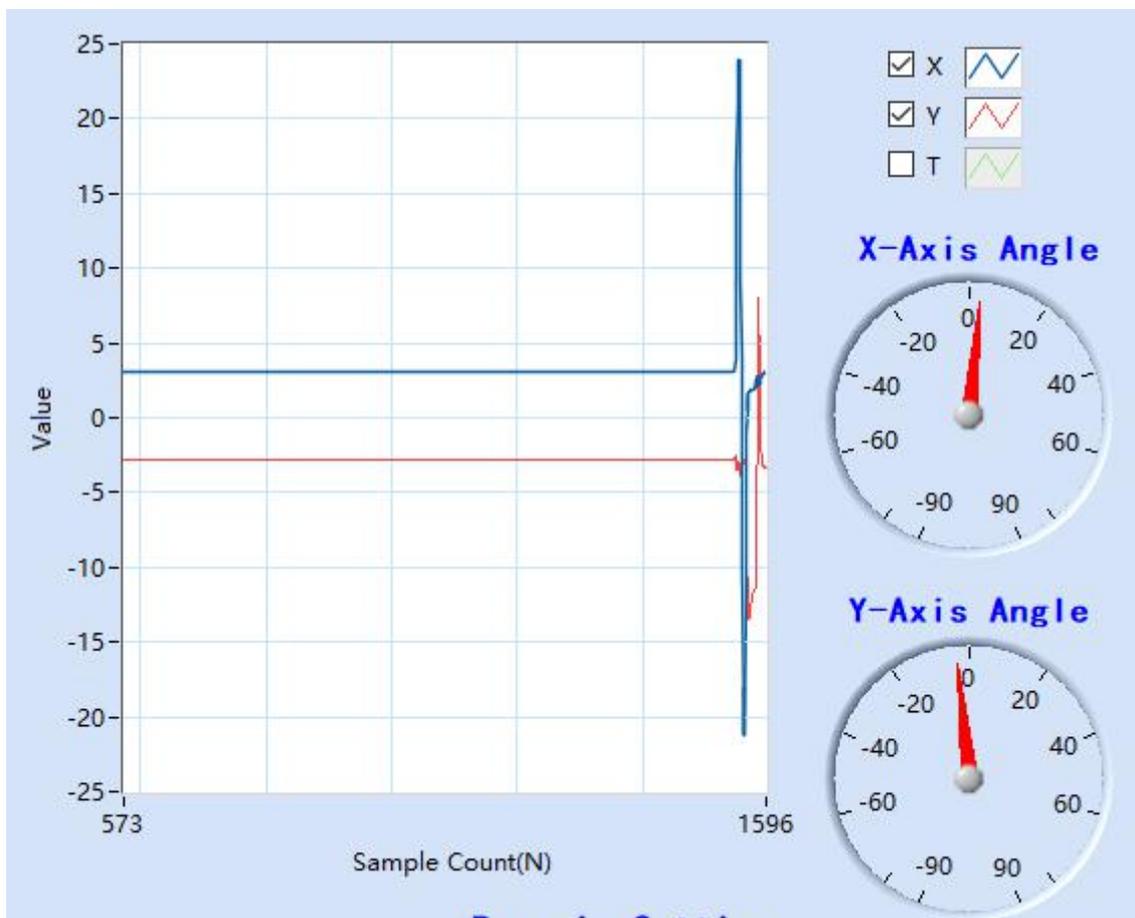
button to open that txt file, and select the checkbox  Save? to save the the data into the txt file. The default txt file is named as record.txt, and which is saved in D



disc. See as follows:

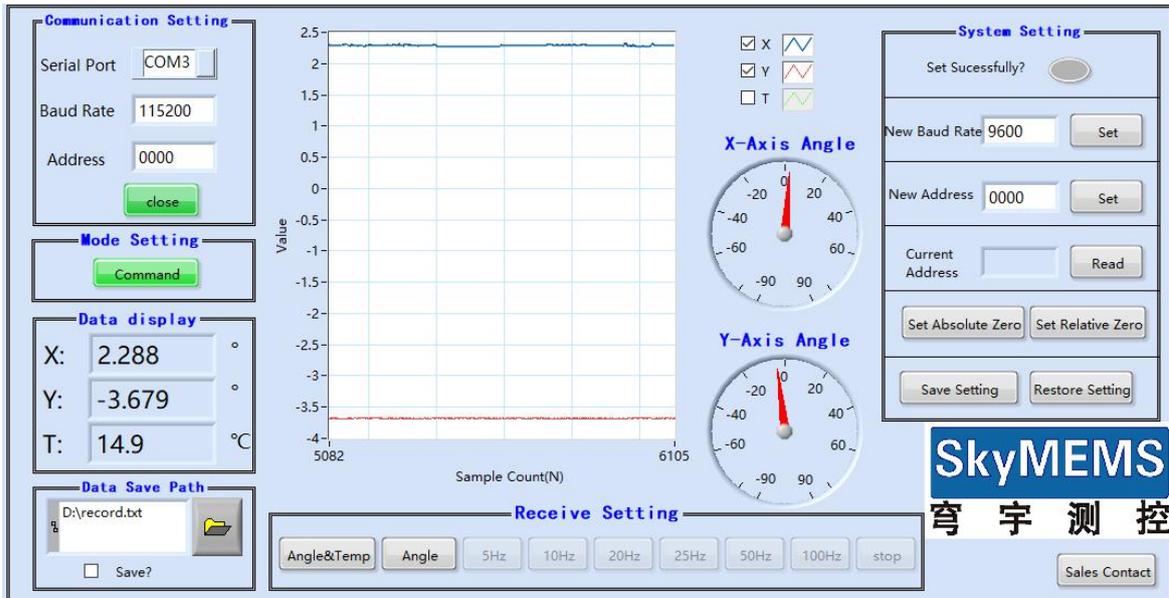
## 2.5 Data Graphic Display

The inclinometer data can be display in graphic format in the middle of the frame, X axis, Y axis and temperature data can be selected. See as follows:

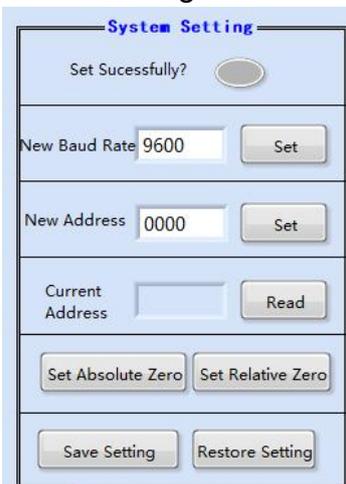


## 2.6 System Setting

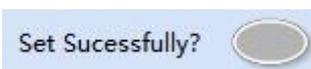
During system setting, only the system is in “Question and Answer” mode, and “Angle&Temp” and “Angle” button are not selected, then the parameters in System Setting can be set. See as follows: (it can't be set in “Automatic Output” mode.)



The “New Baud Rate”, “New Address”, “Set Absolute Zero” “Set Relative Zero” “Save Setting” “Restor Setting” can be set in the System Setting



, when it is successfully set, the status button



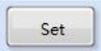
will be lit green

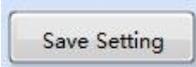


to indicate that

the setting is successfully set.

**Attention:** After setting new baud rate, please restart the serial port, then the inclinometer can communicate with the management software at the new baud rate.

Remarks: when click “Set”  button, the setting will be saved temporarily, if the inclinometer sensor is powered off, the setting parameter will become its previous setting.

Only click “Save Setting”  button, the parameters will be saved into the inclinometer sensor permanently.

**Attention:** after setting “New Baud Rate” and “New Address” in the “System Setting”, the corresponding “Baud Rate” and “Address” in “Communication Setting” should be the same as those that are set in “System Setting”, or the communication between the inclinometer management software with the inclinometer sensor will fail.

**Attention:** during setting the “Address”, PLEASE REMEMBER ITS NEW ADDRESS, IT CAN’T COMMUNICATE WITH THE INCLINOMETER WITHOUT ADDRESS, SO PLEASE REMEMBER THE ADDRESS DURING YOUR SETTING NEW ADDRESS!

Remarks: in one system, the inclinometer’s address should be set into different unique address, the address domain is from 0000 to FFFF, Hexadecimal.

## 2.7 Running & Stop button

The running and stop button in on the left top of the inclinometer management software frame, the default status is running status , click the stop button  to stop the software

## 2.8 Contact

If having more questions, please click  button to contact with our international department, we will serve you with heart!

