I. Software Install

First, you need to obtain the host software installation package from the official website, double-click it, and click according to the prompts until the installation is complete.
Secondly, Use the supplied USB cable to connect the oscilloscope to a PC through their USB ports.

Note:

- Please switch the USB interface protocol of the oscilloscope to PC (Press the Utility → Function (Output) → Device, switching to PC).
- If you use a USB cable that is not supplied by us, some problems such as connection error and signal disturbance might occur.

II. User Interface

When the software enters into the main interface as Fig 2-1-1 which has eight parts:

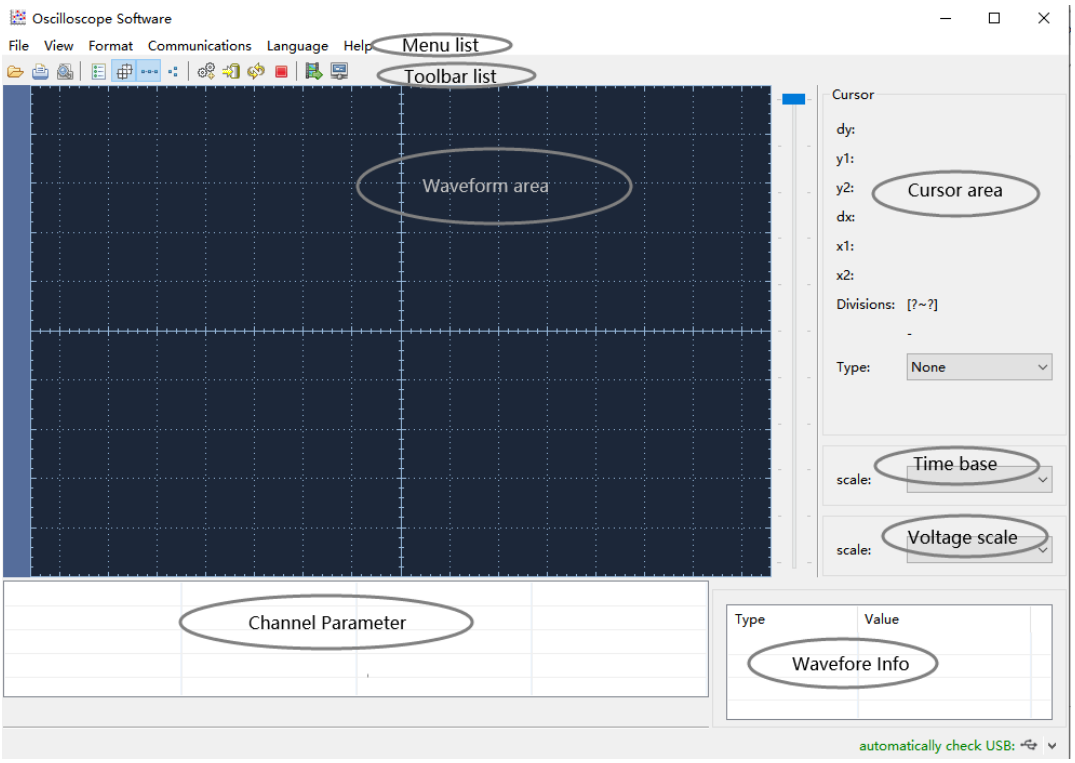


Fig 2- 1-1 User Interface

1. Menu Bar: provide various functions introductions
2. Tool Bar: provide the usual shortcut bar of menu options.
3. Waveform displayed range: the main range waveforms displayed.

4. Cursor range: provide the following four cursor types to observe and measure waveforms: none, horizontal line, vertical line, double line(the horizontal line and the vertical line shows simultaneously)
5. Channel box range: which provides information and sets waveforms displayed and hidden, also sets one channel as the current waveform
6. Time base division range: which is used for observing and setting the time base of the current waveform.
7. Voltage division range: which is used for observe and set the voltage division of the current waveform.
8. Parameter displayed range: which shows the period, frequency, and pk-pk of the current waveform. If the new waveform is non-periodicity, the period, and the frequency are all 0.

III. Menu

The following menus are shown in the menu bar: 1-File
2-View
3-Format
4-Communications
5-Language
6-Help
The following are the detailed descriptions:

(1) File Fig 3-1-1）

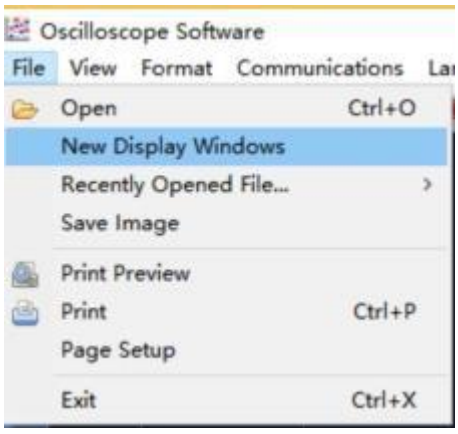


Fig 3- 1-1

1. Open: open the saved files with bin suffix.
2. New window display: When automatic acquisition is enabled, the waveform is displayed in HD in the new window.
3. Open recent: save the 10 open recent files.

4. Save: save the current waveforms as pictures and support bmp, png, gif etc.
5. Print preview: preview the print effect.
6. Print: by printer.
7. Page setup: set the boundary value for printing.
8. Exit: exit from the software.

(2) View menu（Fig3-2-1）

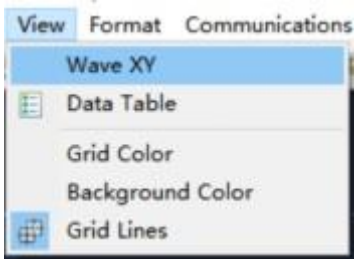
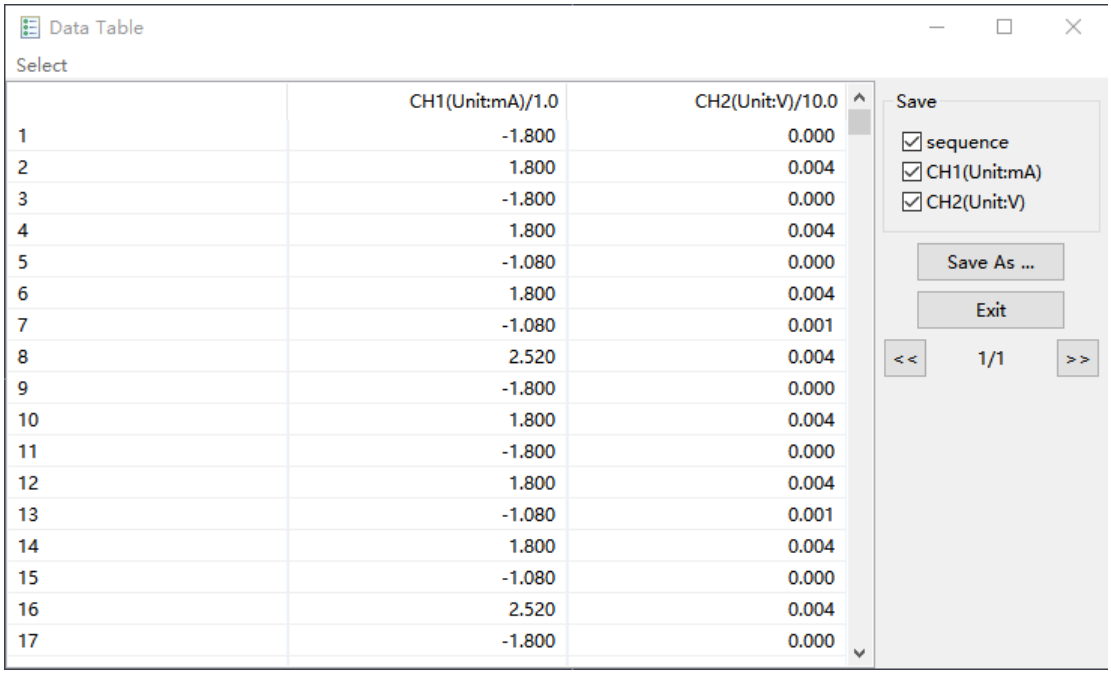


Fig 3-2 1

1. XY waveform: The voltage values of sampling points in CH1, CH2 are shown as X,Y of point coordinates. If only one of the channels, the function is not available.

2. Value list: The sequence of voltage values in the sampling point of every channel is shown in the list which could be saved as .txt or .xls (Windows Office Excel) files exported to other documents. The list supply checks all or check none, the right part as saved channel, and click EXIT to close the list.



	CH1(Unit:mA)/1.0	CH2(Unit:V)/10.0
1	-1.800	0.000
2	1.800	0.004
3	-1.800	0.000
4	1.800	0.004
5	-1.080	0.000
6	1.800	0.004
7	-1.080	0.001
8	2.520	0.004
9	-1.800	0.000
10	1.800	0.004
11	-1.800	0.000
12	1.800	0.004
13	-1.080	0.001
14	1.800	0.004
15	-1.080	0.000
16	2.520	0.004
17	-1.800	0.000

Fig 3-2 2 Value list

3. Grids color: Bring out the color dialogue box and change the color.

4. Background color: Double-click the waveform area of the display to bring out the color dialogue box and change the background color.

5. Grids line: display or hide the grid scale of the image background.

(3) Format menu Fig 3-3-1）

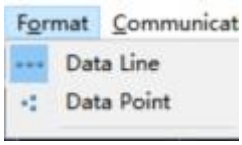


Fig 3-3 -1

1. Data line: draw the sampling point and connect by lines.

2. Data point: draw the sampling point discretely.

(4) Communications menu Fig 3-4-1）

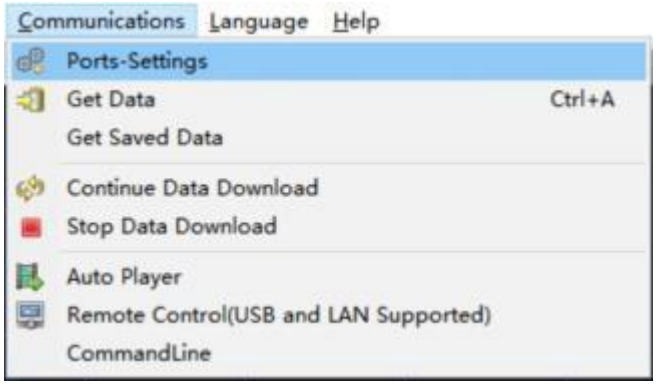


Fig 3-4- 1

1. Set as USB and search USB port from connecting oscilloscopes then refresh connecting USB ports.

Custom USB transfer instructions: send a command to get which type of data from the machine by software.

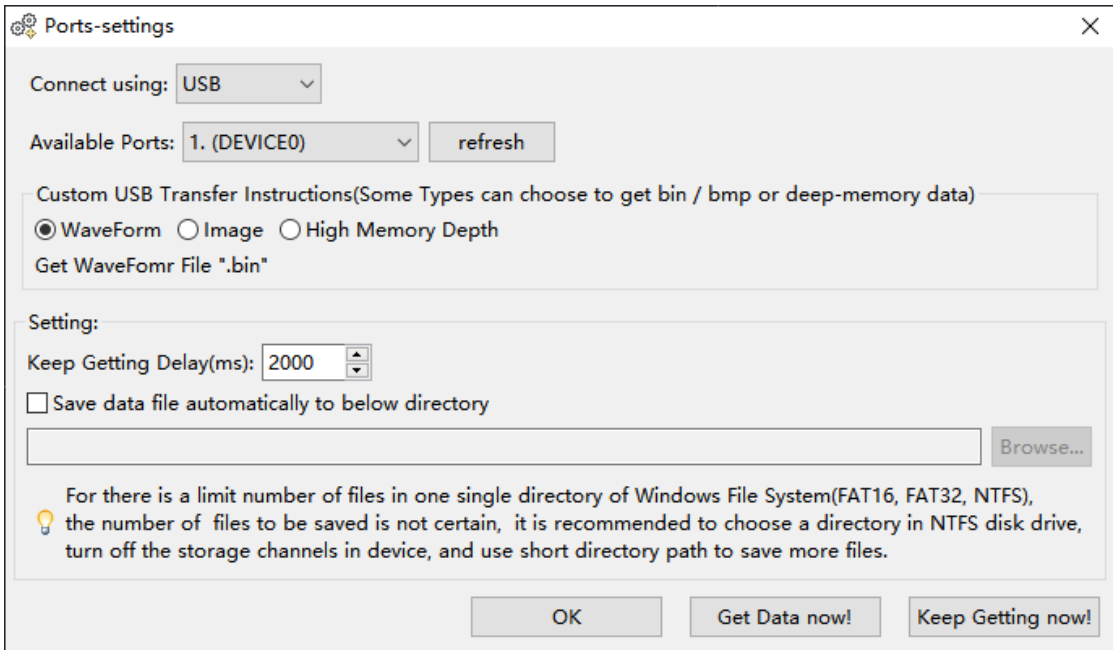


Fig 3-4- 2

When set to LAN, the default parameter (3000) is used.

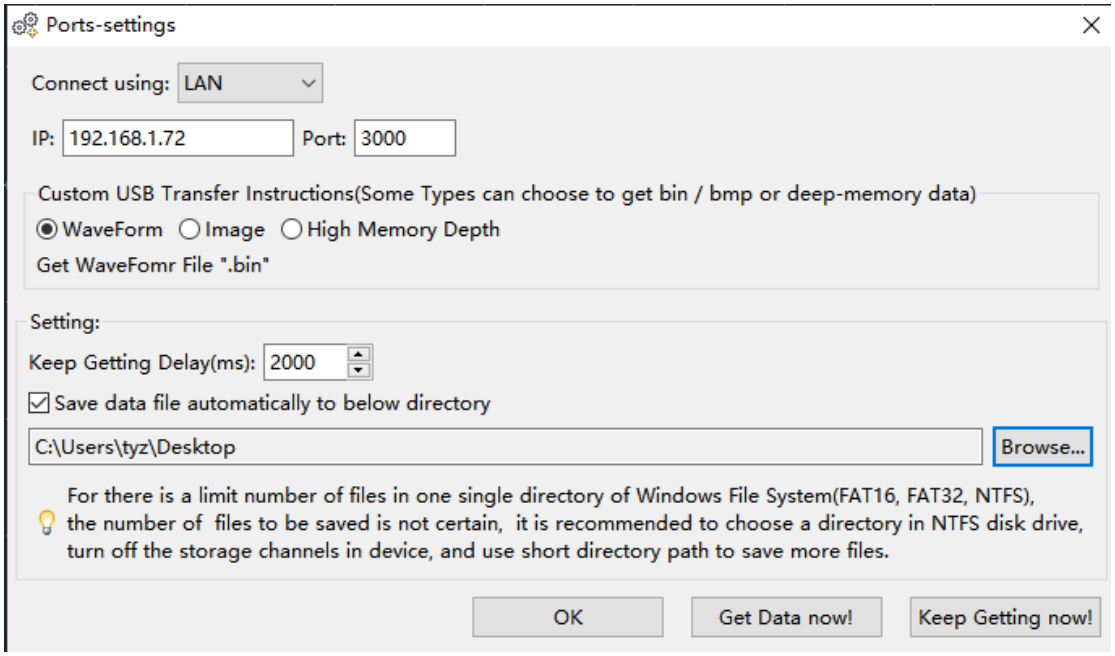


Fig 3-4- 3

The bottom of the port setting window is the auto-obtained area in which interval time and save a catalog of auto-obtained could be set up.

2. data acquirement: acquire waveform data from the instrument.

Note: You can get the data from the instrument after connecting PC with a USB cable installing the driver and then choosing the correct interface setting.

Click "Browse" to bring out the "save file" dialogue box and set the save path and file name.

File type may be Vector or Bitmap corresponding suffix .bin or .bmp which will be acquired after the correct setting in the instrument. At the beginning the file format can be viewed from file types and choose "close window and load" When finishing, only the bin file can load software and show, bmp open by the picture tool.

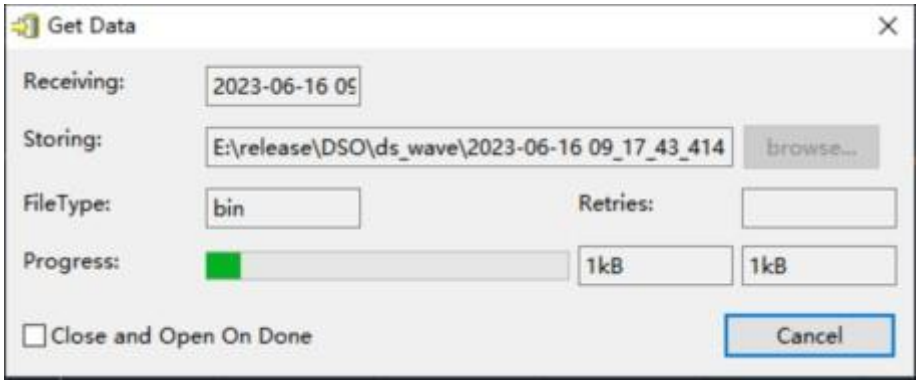


Fig 3-4- 4

3. Auto acquirement: Gain data using interval time in interface set based on continuous "data acquirement" until clicking Stop.(the interval time should be 500ms or more to guarantee transmission and operation.).

   Vector data will be uploaded and shown immediately, recorded in hardware. Bitmap files are recorded in the same way except for uploading.

4. Stop: Stop auto acquiring
5. Auto Player: automatically display the waveform data.

   Before using the function of Auto Player, you should make sure that you use the function of auto acquirement to record data files in hardware, which use a data record directory path. When

you open the AutoPlay Dialog, [Add] this directory path as a display [History], Choose [Play Mode] as [Turn] or [Reverse], set the [Time Delay(ms)], then you can click the Start Arrow Button to display the record waveform data, it also provides Stop, Next, Previous to operate, you can also drag the progress item to location.

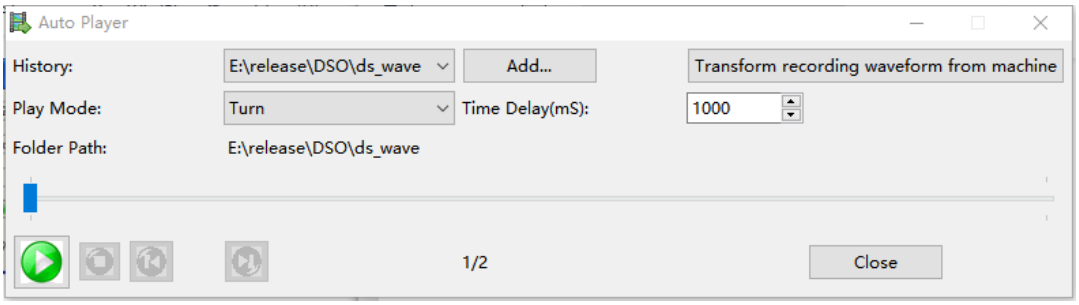


Fig 3-4- 5 Auto Play Window

Remote Control and LAN Supported）

Through the operation of the software to remotely control the the instrument set the required parameters.

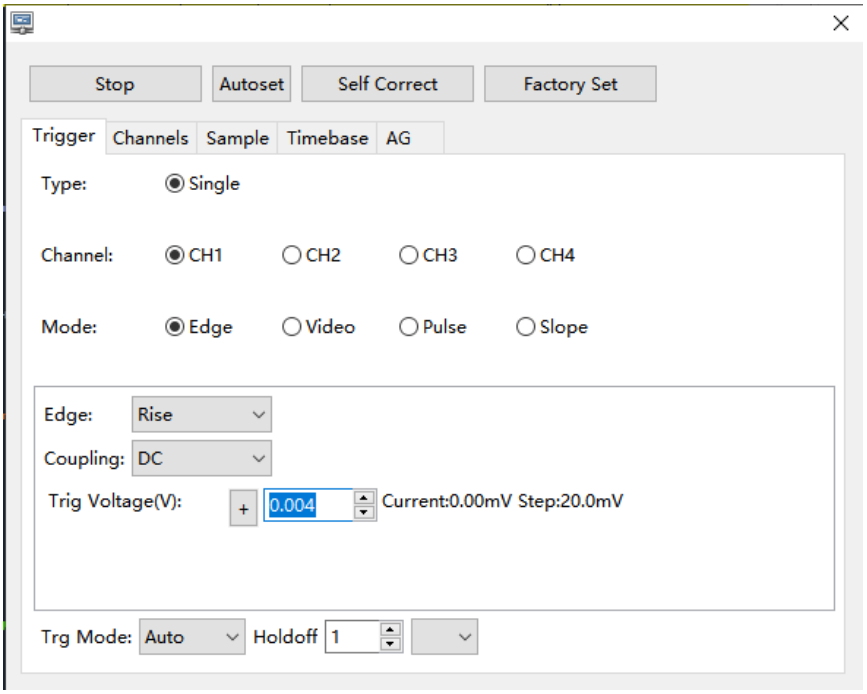


Fig 3-4- 6 Remote control Windows

Command line
Example Query or set the SCPI command.



Fig 3-4- 7 Commands line Windows

(5) Language（Fig 3-5-1）



Fig 3-5 1 language menu

In this menu, the users can make the language conversion between English and Espanol.

(6) Help Fig 3-6-1）



Fig 3-6 -1

About: about soft information

IV. Toolbar:

Toolbar shortcuts common menu items about 13 numbers of knobs as follows:



1 2 3 4 5 6 7 8 9 10 11 12 13

icon	name	function
1	Open	Open saved files with suffix bin
2	Print preview	Preview the print effect
3	Print	Print by printer
4	Data display	Display every voltage sequence of sampling point
5	Display/hide grids	Display or hide grids scale of waveform background
6	Display linked waveform	Draw the sampling point and connect in direct line
7	Display data point	Draw the sampling point discretely
8	Communication setting	Set communication parameter
9	Manual acquirement	Open waveform acquirement interface
10	Auto acquirement	Auto acquiring files
11	Stop	Stop auto acquiring
12	Auto Play	Auto play the .bin file
13	Remote control	Turn on remote control

V. Relevant operations

Some related operations of the software.

1. Operation for waveforms display range:（Fig 5-1-1）

1) Waveform moving up and down:

Firstly, the position as Fig （CH1）is the zero voltage position of current waveform.

- Fine adjustment: drag "CH1" and make the waveform move up and down on the screen.
- Coarse adjustment: drag the ruler slider on the right and make the waveform move up and down, the moving area is the maximum movable area on time base division (which could be checked the current blocks on the right of the cursor area, a block 1/8 of the height of the screen.).

2) Waveform move left and right: Move the mouse to the waveform, it becomes an icon, then drag the mouse to make the waveform left and right as Fig 5-1-1;

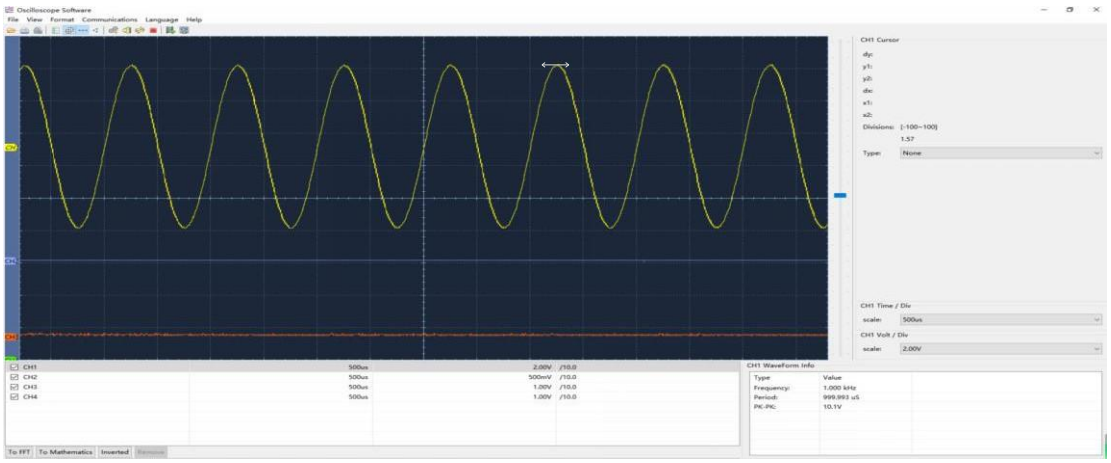


Fig 5-1- 1

3) Change the color of the waveform: double click "CH1" to bring out the color dialogue box to change the color.
4) The time base division of the current waveform can be shown and adjusted in such area (as Fig 5-1-2) which is the time range about one scale on the vertical line (10 scales in the following), and adjust the scale in the come box, the waveform zoom to the corresponding division with the center scale mark as center shaft. (Fig 5-1-3).

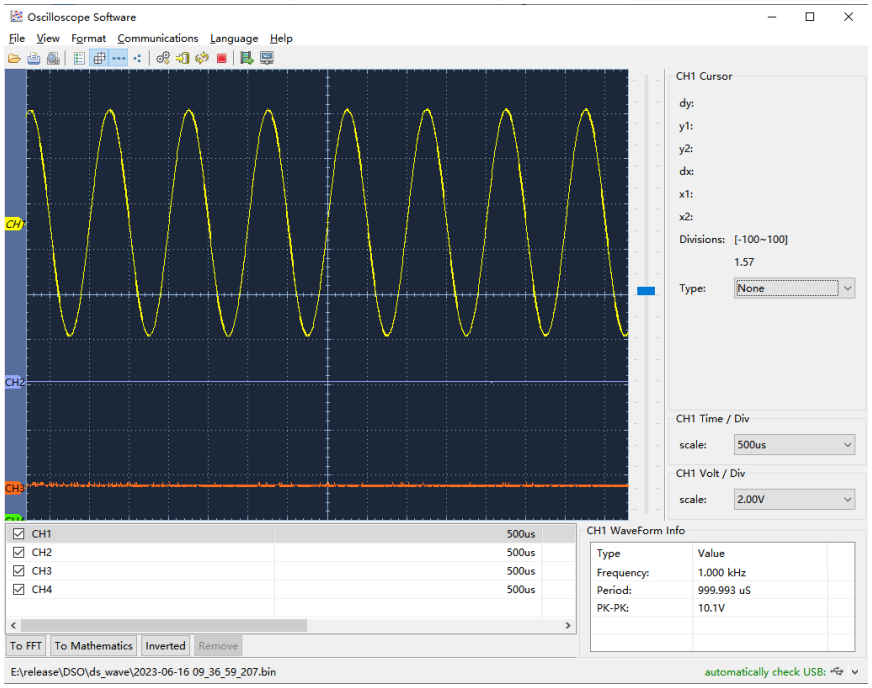


Fig 5-1- 2

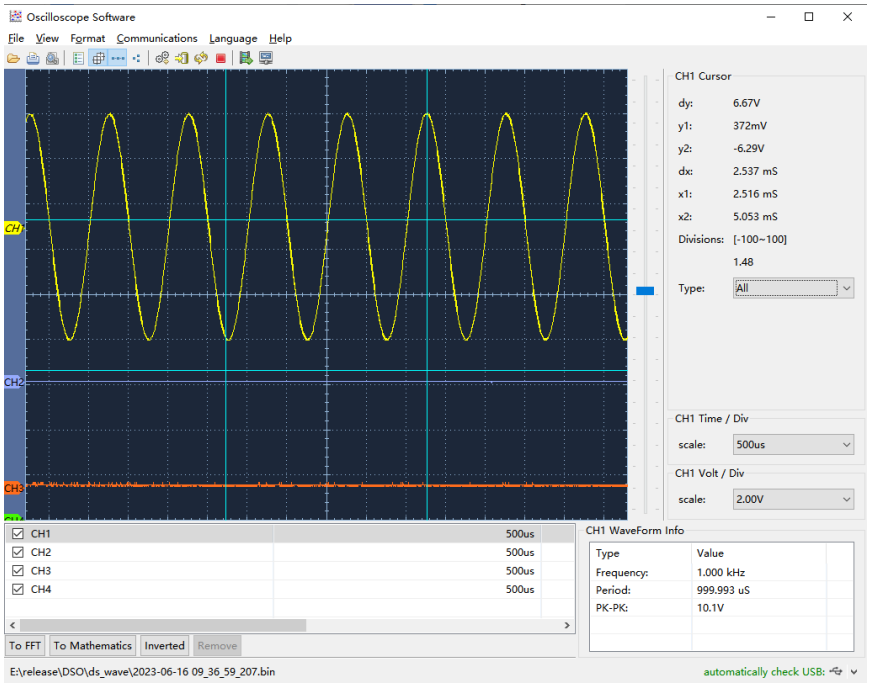


Fig 5-1- 3

5) In this aspect, voltage division can be used to show and adjust the current waveform which is one scale on the horizontal line (12 scales in the following, different series with different format

which are only for reference.) and adjust the scale in the come box, the waveform zooms to the corresponding division with the zero-voltage position as the center shaft.

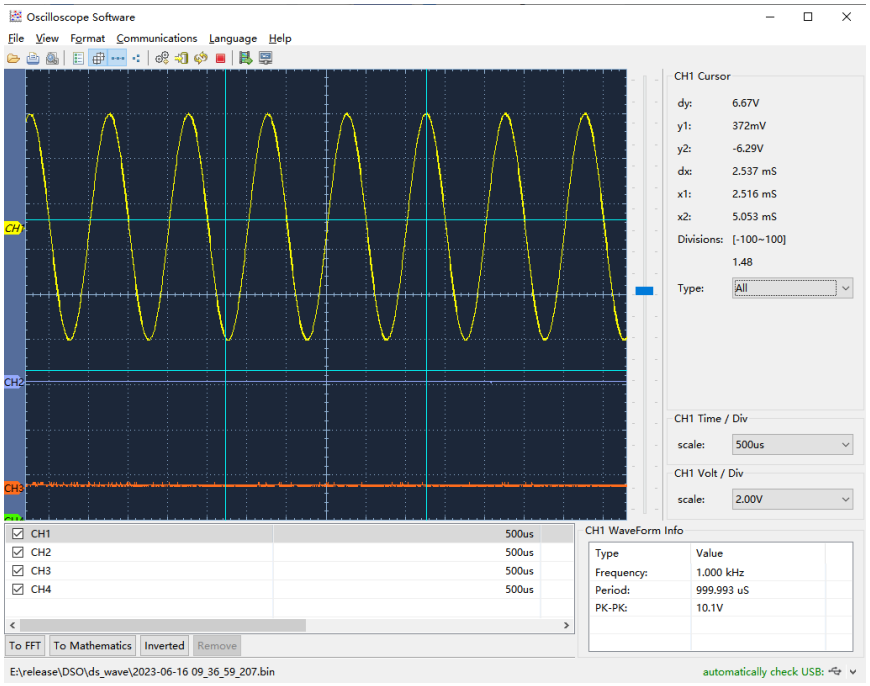


Fig 5-1- 4

2. Operation in cursor area（Fig 5-2-1）

There are four cursor types for selection to measure and locate, such as none, horizontal line, vertical line, and double line (that is horizontal line and vertical line displayed at the same time) (Fig 5-2-1)

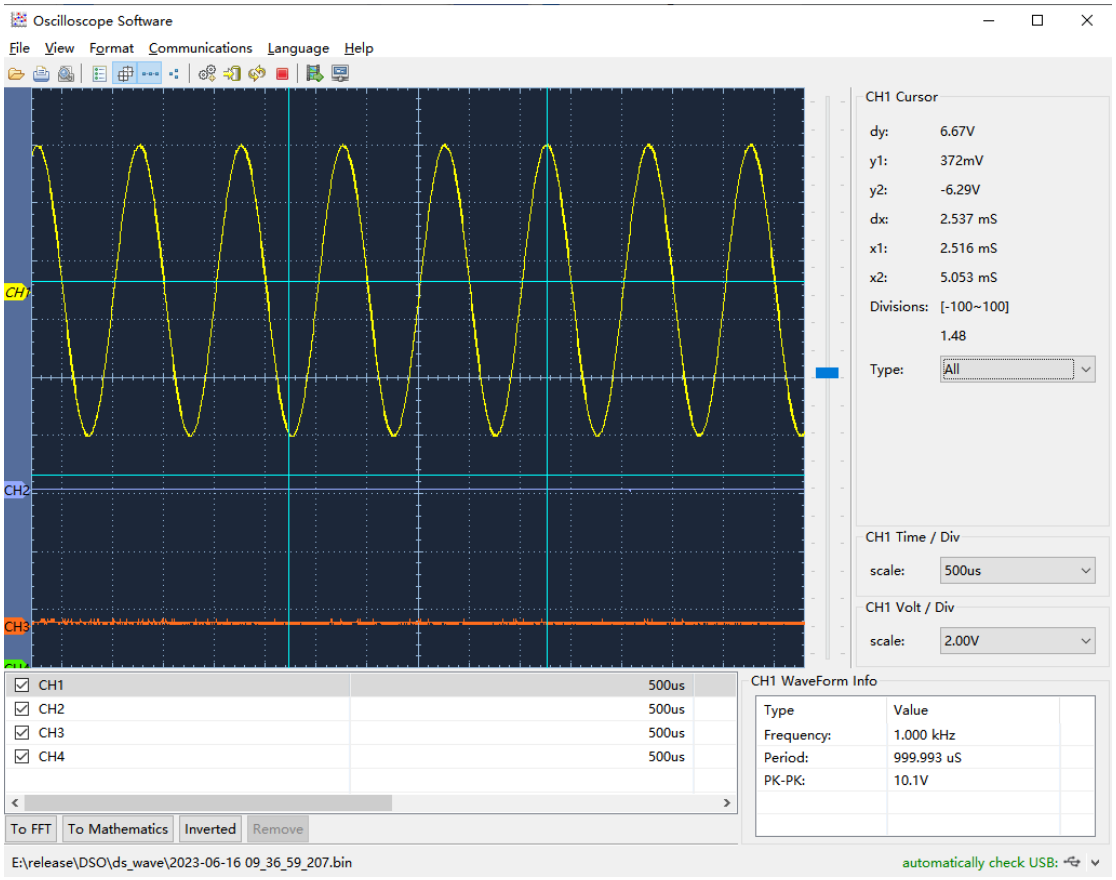


Fig 5-2- 1

1. None: without measure cursor.
2. Horizontal line: Drag the two horizontal lines in the waveform area up and down to measure every voltage value on the vertical of the current waveform, as the above Fig the Y1,Y2 shows the actual voltage values of the two vertical lines corresponding to the zero point of current waveforms and dy=y1-y2 which is the voltage difference value of the two cursor lines;
3. Vertical line: Drag the two vertical lines in the waveform area left and right to measure every time value on the horizontal of current waveform, as the above Fig the x1,x2 shows the time value of the two vertical lines(the leftmost is zero value of time), dx=x1-x2 which is the time difference value of the two cursor lines.;
4. Double lines (Fig 5-1-3): The vertical line and the horizontal line are all in the waveform area and be measured at the same time.

3. Operation in channel box Fig 5-3-1）

The user can click some channel in the channel box or some waveform in such area to set the current waveform (select 1-> or sampling point in the waveform), then the selected channel would be high light marked and the corresponding data will be displayed

in the time base division, voltage division and parameter area simultaneously.

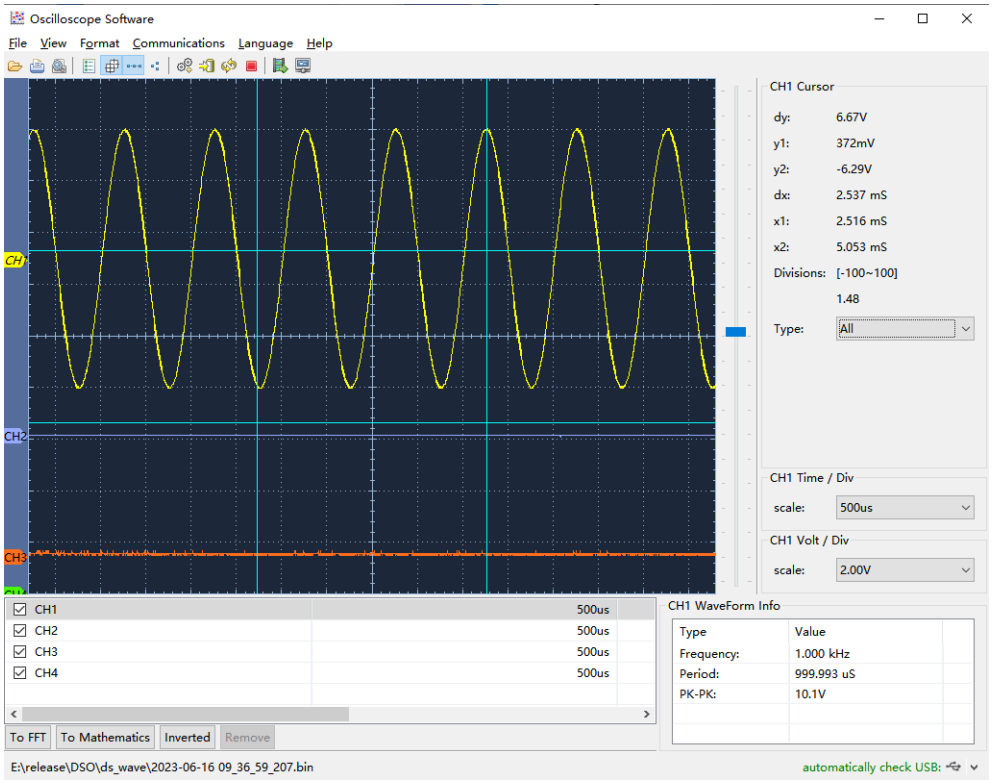


Fig 5-3- 1