



Super Talent  
Oscilloscope Spectrum Analyzer  
User's Manual v1.0

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## Package contains

1. USB Oscilloscope \*1
2. Micro-B to USB-A cable \*1
3. Test Probe (Red & Black) \*2
4. User Manual \*1



## How to connect Oscilloscope to PC :



Insert Micro-B connector to Oscilloscope

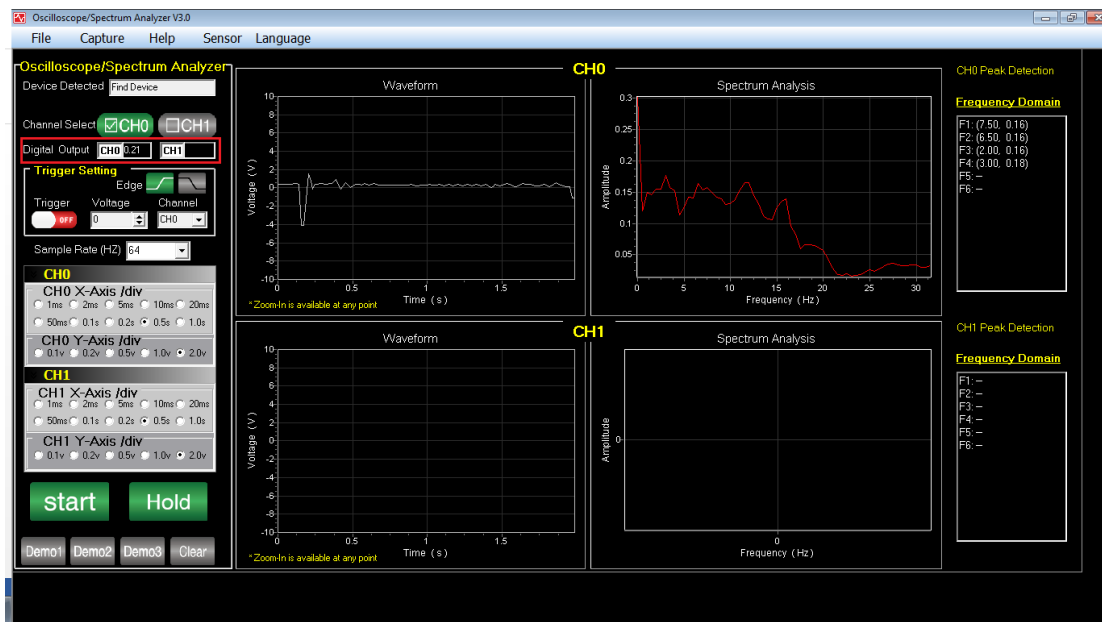


Insert USB-A connector to PC

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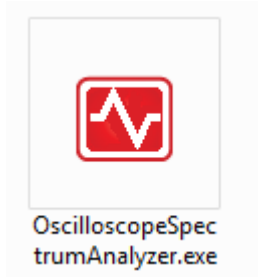
# Application Program (AP)

on your computer screen



## 1. How to run the application program:

Right click the icon to run the program as Administrator.



## 2. Settings

### a. Device Detect

When the device's power is turned on, the status will be changed from **No device found** to **Device detected**



### b. Channel Select

Click to select single channel (CH0 or CH1) or dual channel (CH0 and CH1). Program will show selected channel's data value when starting acquisition.



### c. Trigger Settings

**Trigger:** Click to switch trigger on/off status.

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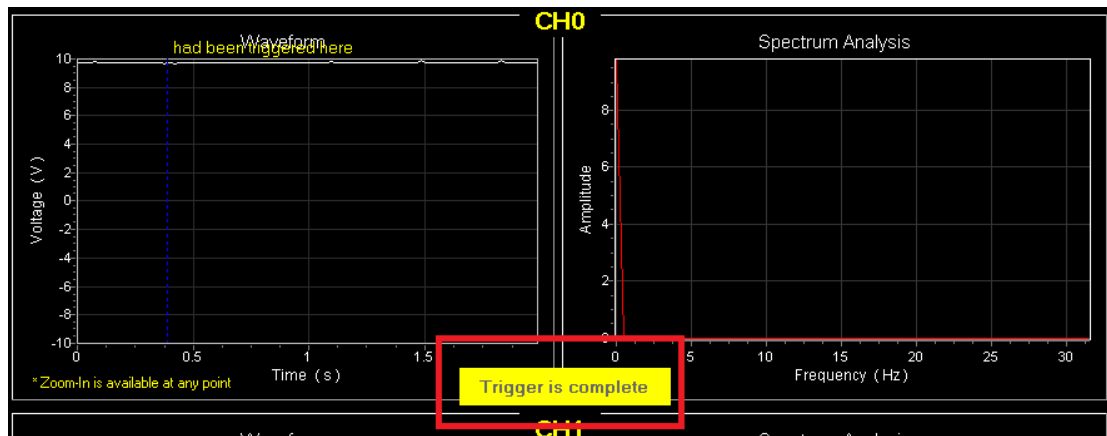
**Voltage:** Set trigger voltage.

**Channel:** Select trigger channel.

**Edge:** Select trigger edge, click to switch rising/falling edge.

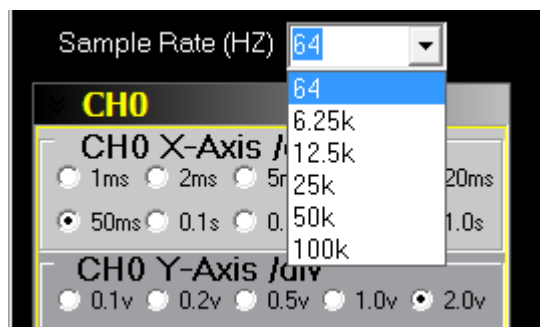


When the voltage is triggered, program will automatically mark the trigger location in Waveform chart.



#### d. Sample Rate

The selectable rates are 64, 6.25k, 12.5k, 25k, 50k and 100k. The default value is 64Hz.



#### e. X-Axis /div Options And Y-Axis /div Options

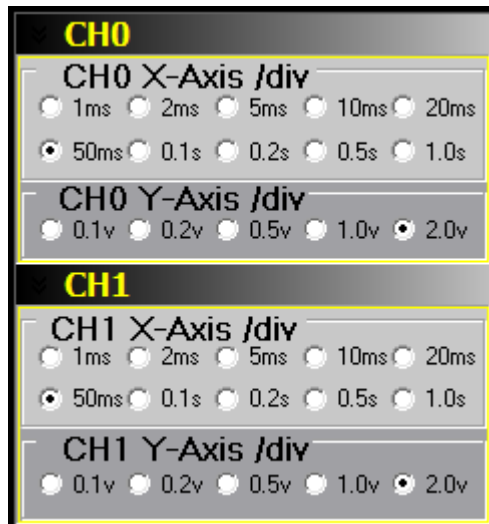
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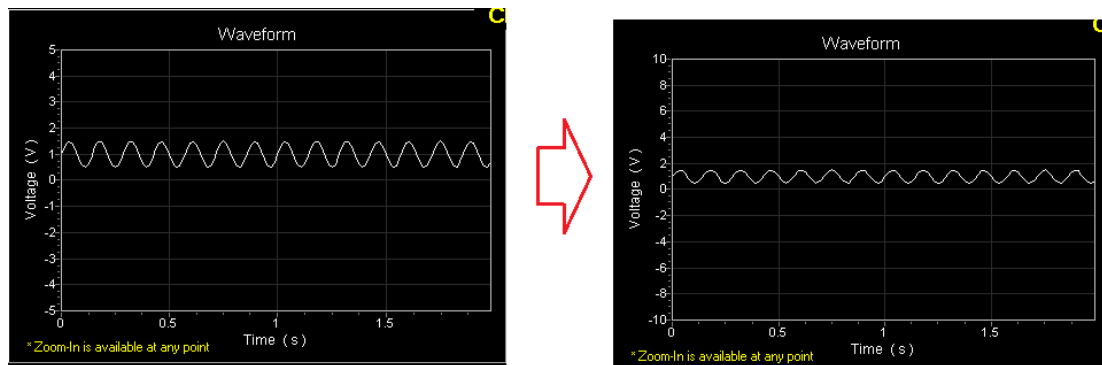
**X-Axis/div:** 1ms~1.0s, ten time-division options.

**Y-Axis/div:** 0.1V~2.0V, five voltage-division options.

You can set different division for CH0 and CH1 to display Waveform.



Example: **CH0 X-Axis /div 0.5s; Y-Axis /div: 1.0v→2.0v**

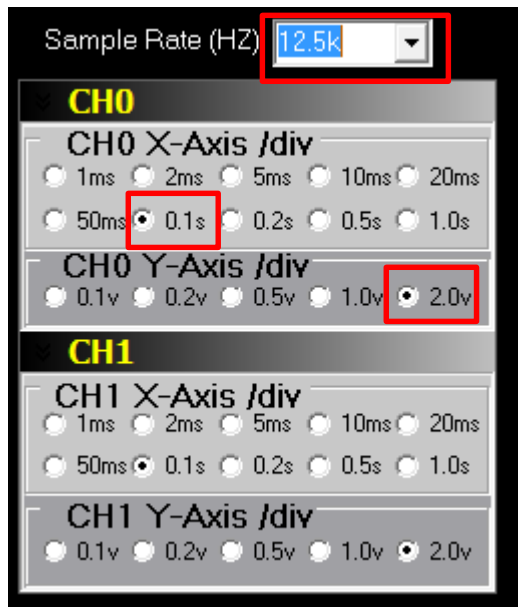


For better displaying the Waveform, we suggest to adjust a proper time-division for different sample rate.

Example: For **Sample rate: 12.5k**, **X-Axis /div sets 0.1s** time-division; For **Sample rate: 100k**, **X-Axis /div sets 10ms** time-division.

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**f. Start/Hold**

After completing the settings, click **Start** to collect data.

Click **Hold** to stop data acquisition and keep it still.



**g. Demo/Clear**

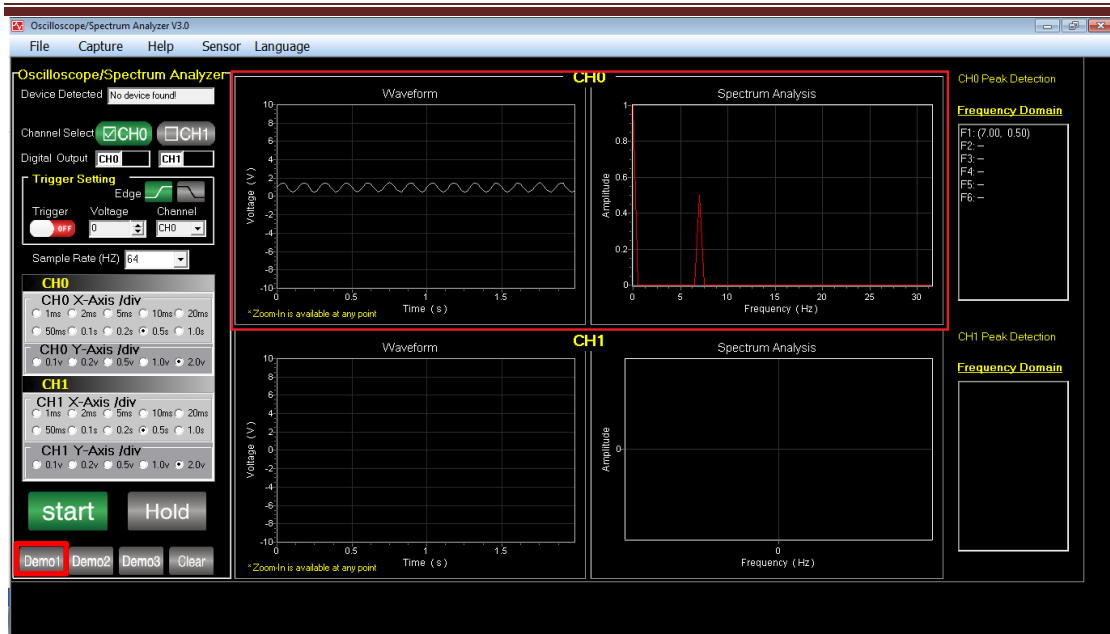
**Demo:** three demos display three different fixed waveforms and frequency spectrum, which has nothing to do with the acquisition signal.

**Clear:** Clear all charts' data.

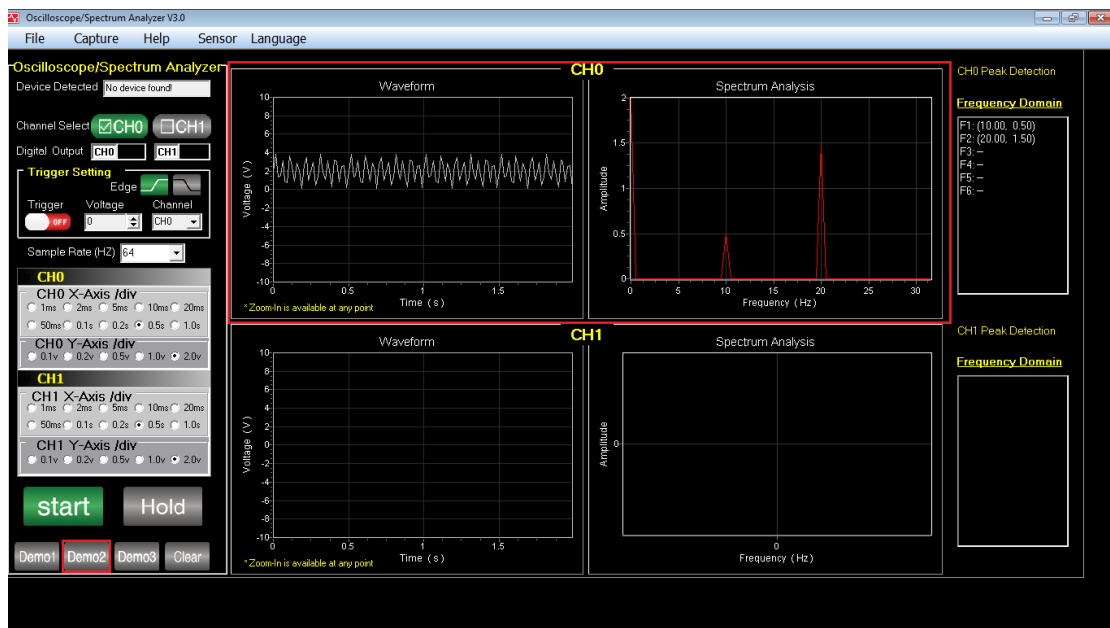


Example: Demo1 shows one Sine wave and one frequency.

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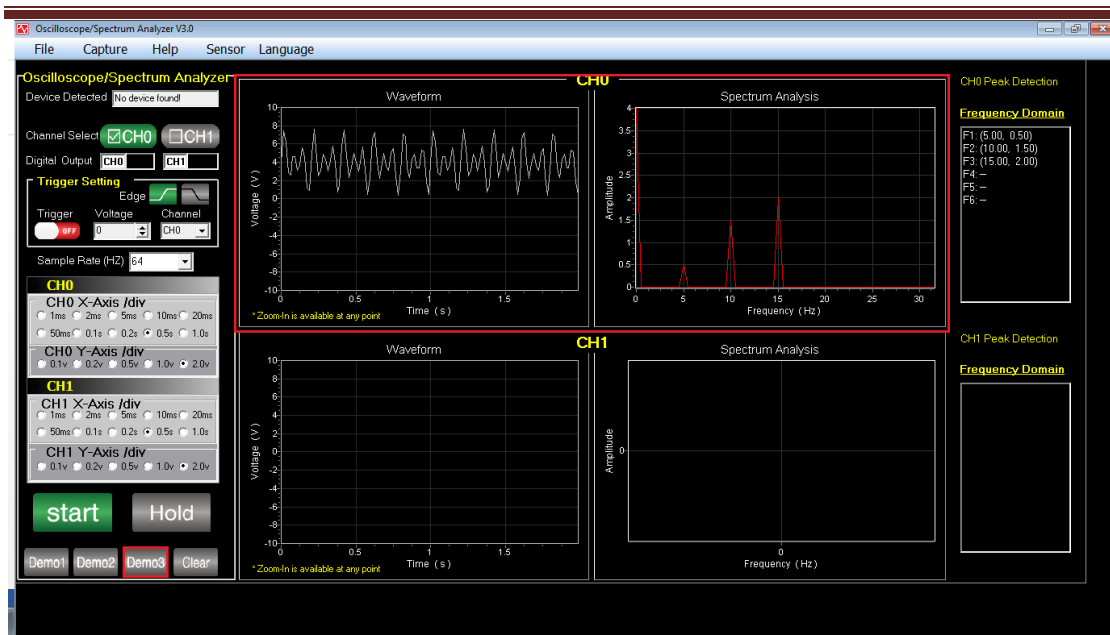
Example: Demo2 shows two Sine wave and two frequencies.



Example: Demo3 shows three Sine wave and three frequencies.



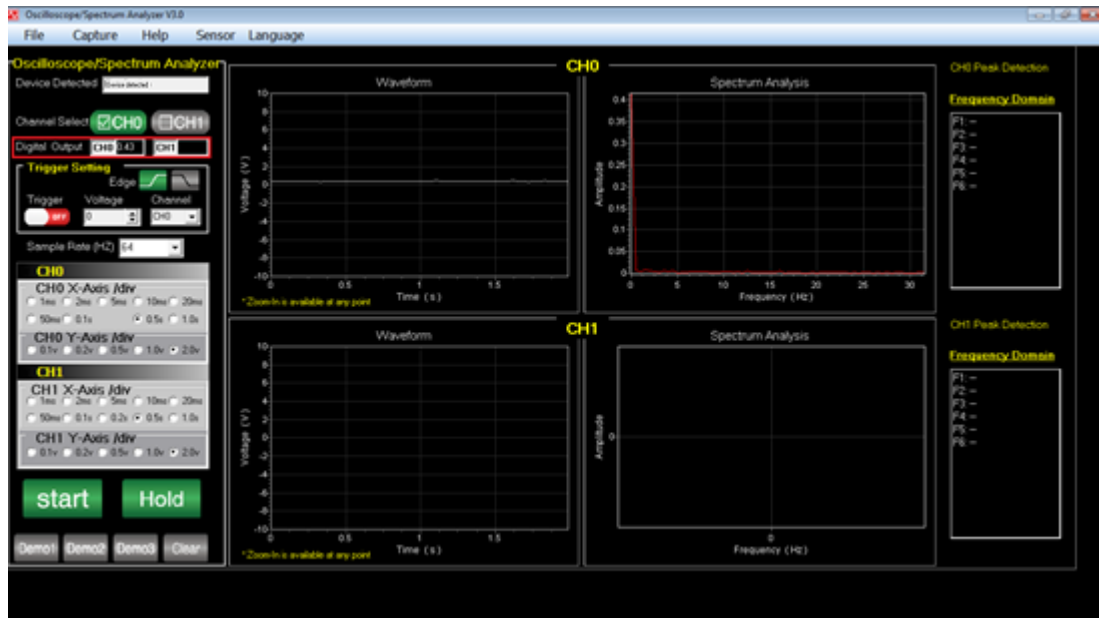
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## 3. Display

### a. Digital Output

This Function shows the newest Digital Output voltage.



Example:



### b. Waveform and Spectrum Analysis

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**Waveform:** This function shows the trend of Voltage (v) over Time (s).

**Spectrum Analysis:** This function shows the trend of Amplitude over Frequency (Hz).

Example:

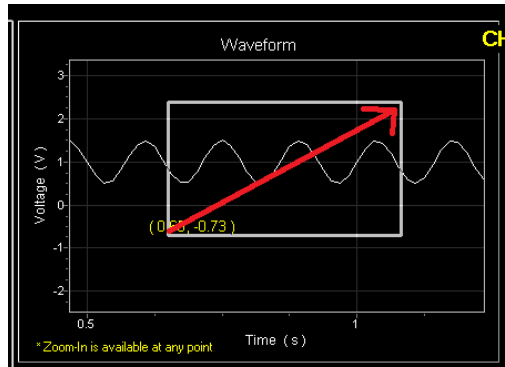


You can **Zoom-In** or **Restore** chart to observe all charts in detail or in general.

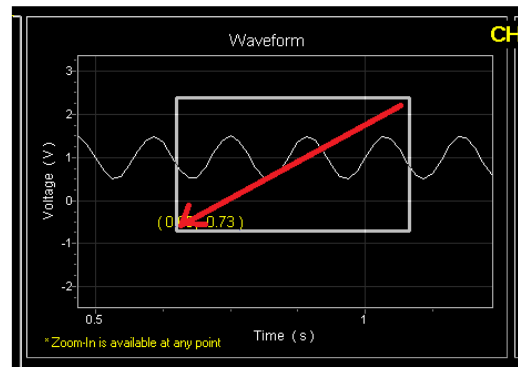
**Left-click and drag the mouse** in the **chart** from **upper left to lower right** to zoom-in to observe in detail and from **upper right to lower left** to restore the chart.

Example:

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**Zoom-In**



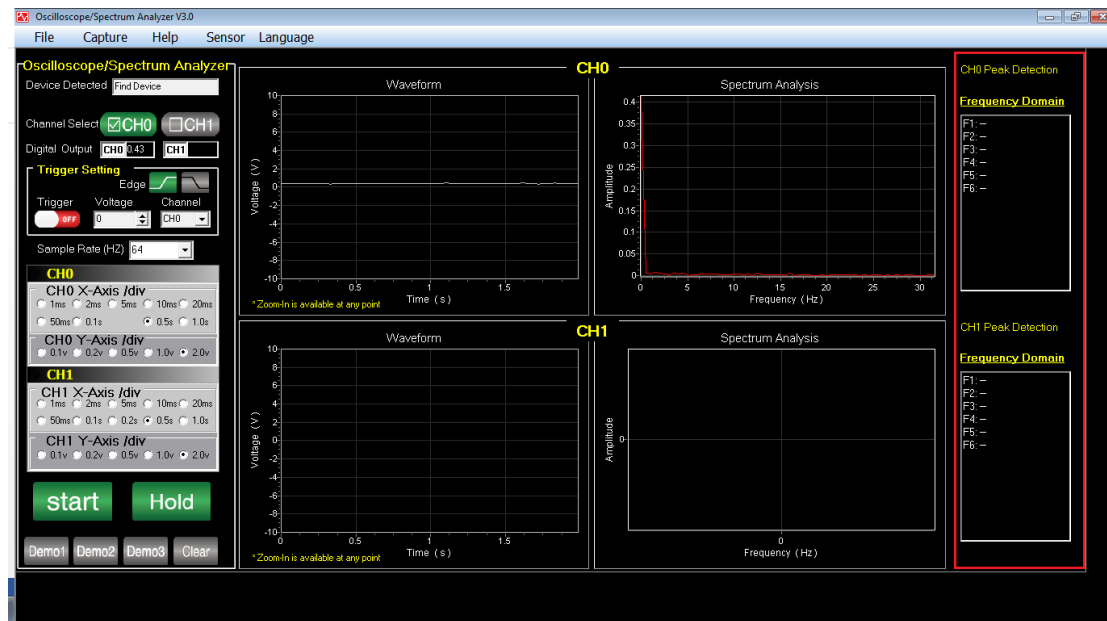
**Restore**

**c. Peak Detection**

Frequency Domain: shows high peak **Amplitude** in Right **Spectrum**

**Analysis** chart in X-Axis and Y-Axis.

Example:



## 4. Start the Voltage Analysis

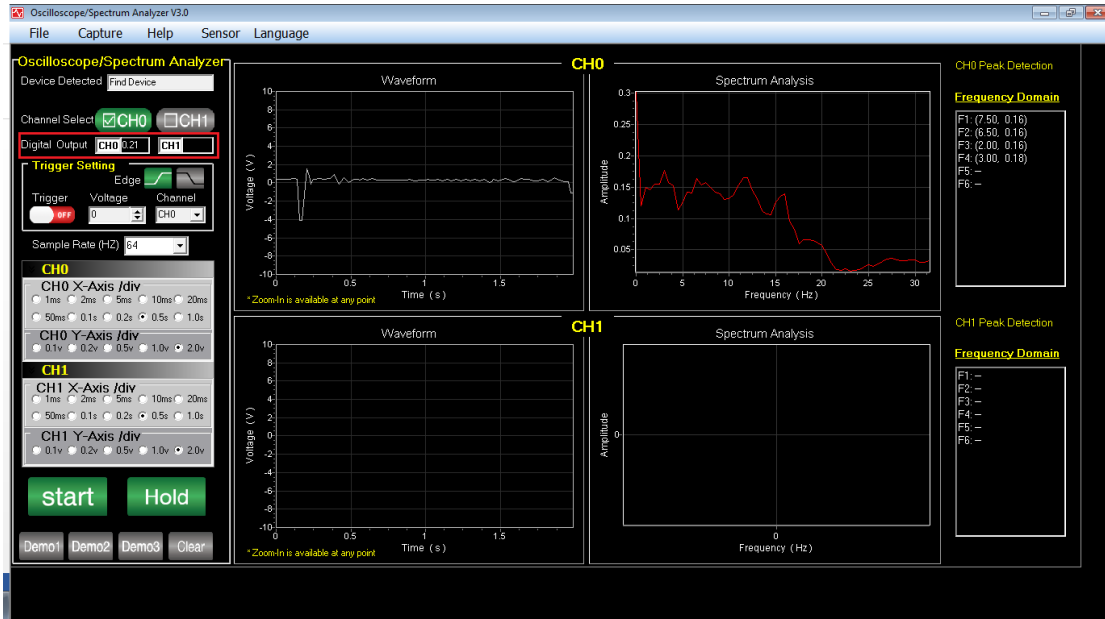
- a. After running the program as **Administrator**, finish all the parameter settings. The most important part is to make sure that the detected

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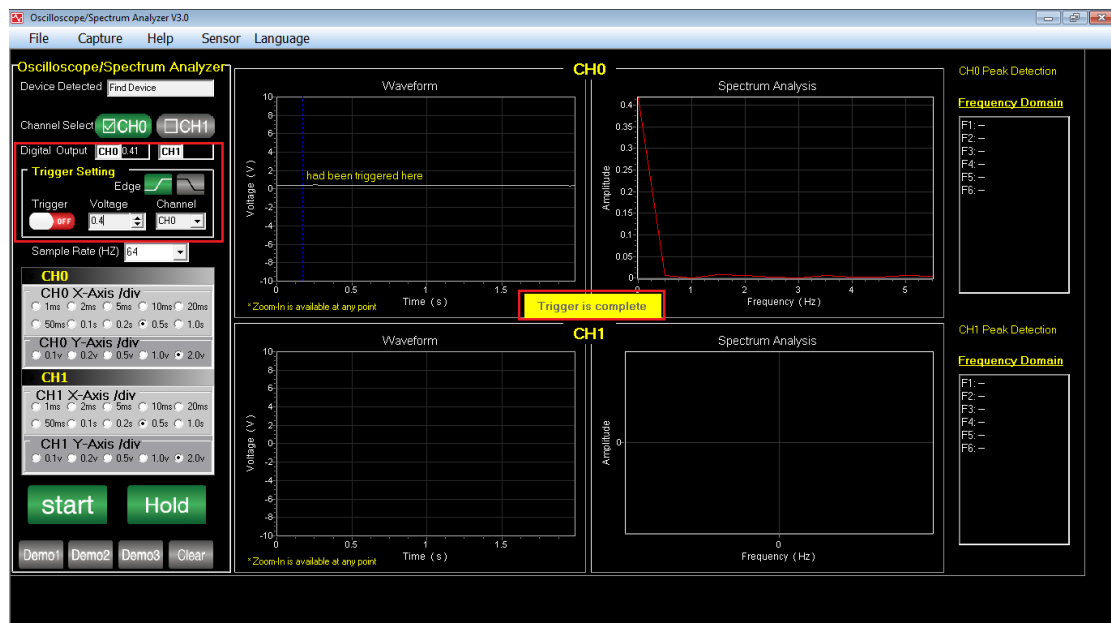
device has been inserted and turned on power.

- b. Then click **Start** to run the acquisition, this program will keep running until clicking **Hold** or meeting the **Trigger**.

Example:



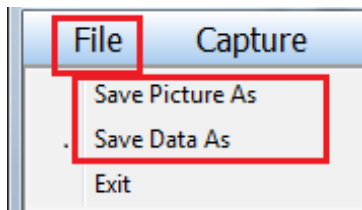
Or



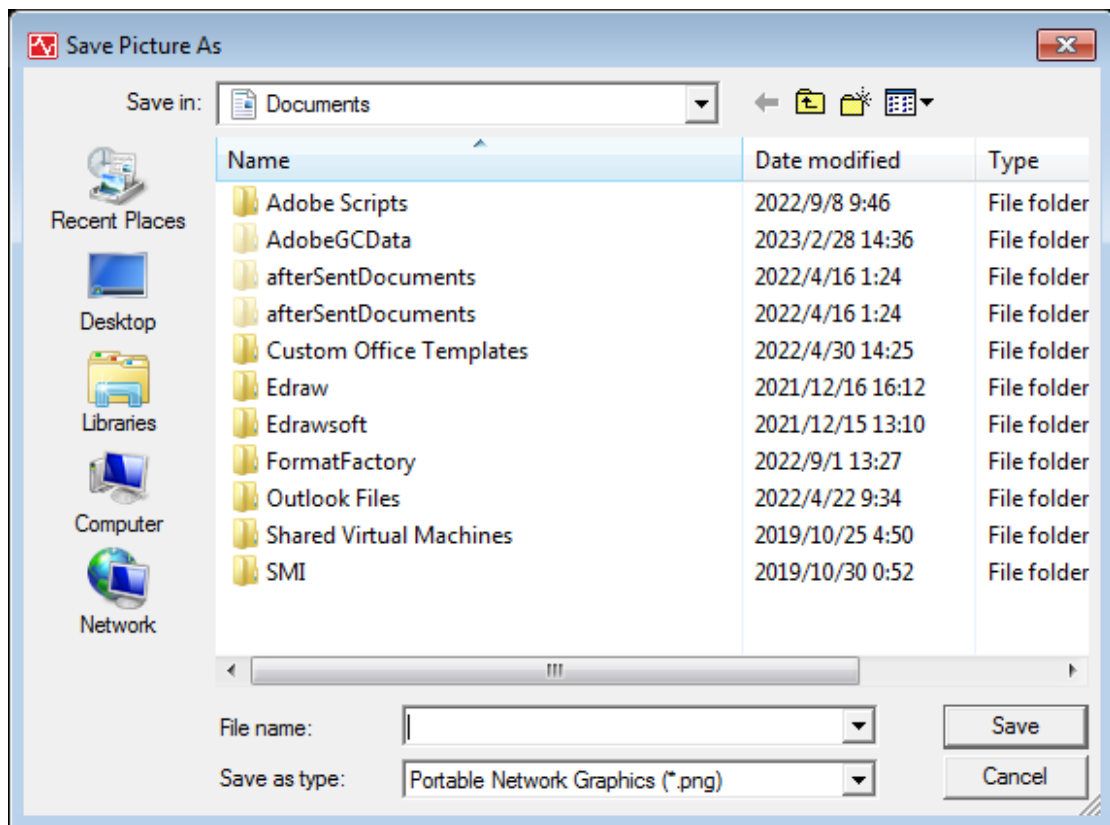
## 5. Menu Bar

## a. File

You can select to reserve these data as picture or text by clicking **File** on **Menu bar**.



Click **Save Picture As/ Save Data As**, then enter file name and select the path, then save as picture/text.

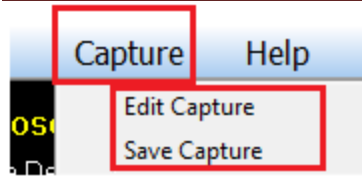


## b. Capture

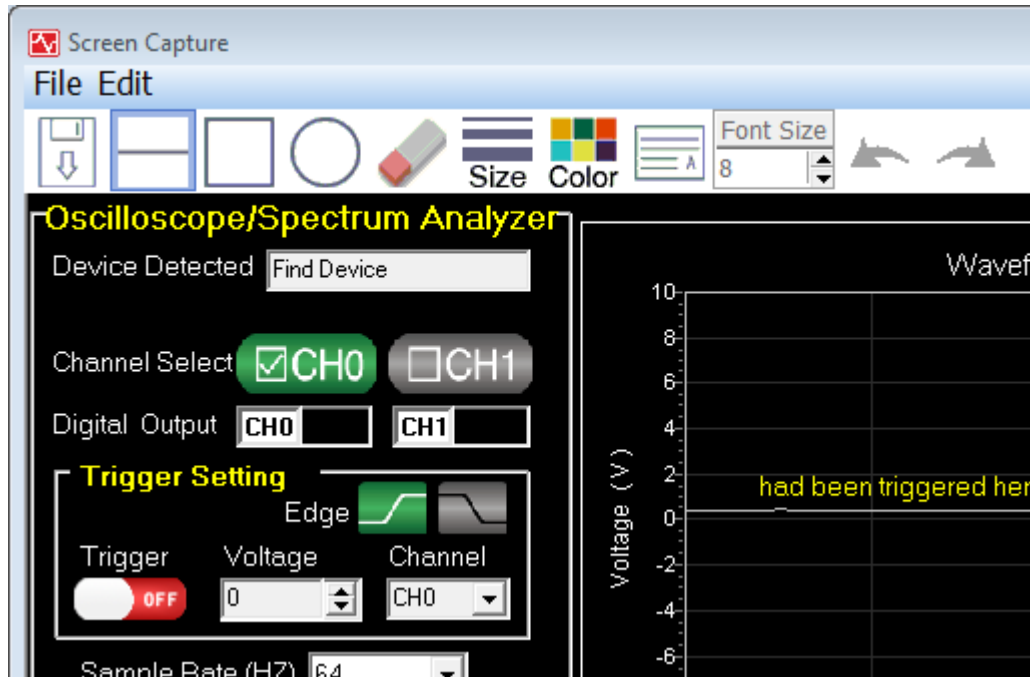
If you want to **Edit Capture** or **Save Capture**, you can just click **Capture** on **Menu Bar**.

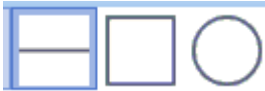
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**Edit Capture:** make capture clearer to read.

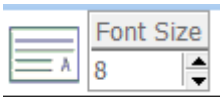


Click  to draw **Line**, **Rectangle** and **Ellipse**.

Click  to **Erase** the editions.

Click  **Size** to set the **Size** of drawing lines, rectangles and ellipses.

Click  **Color** to select a **Color** of lines, rectangles, ellipses and text.

Click  to add **Text** and adjust **Font Size**.

Click  to **Undo** or **Redo** the edition.

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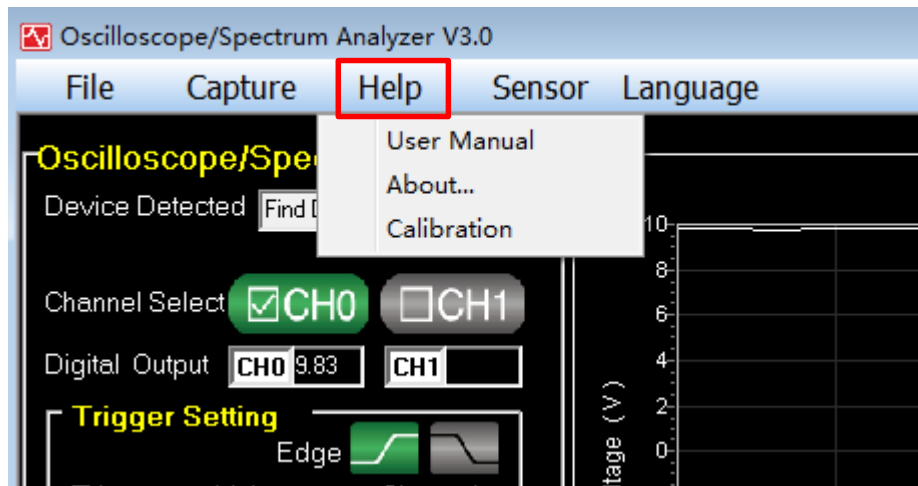
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**Save Capture:**

Please refer to **Save Picture as**.

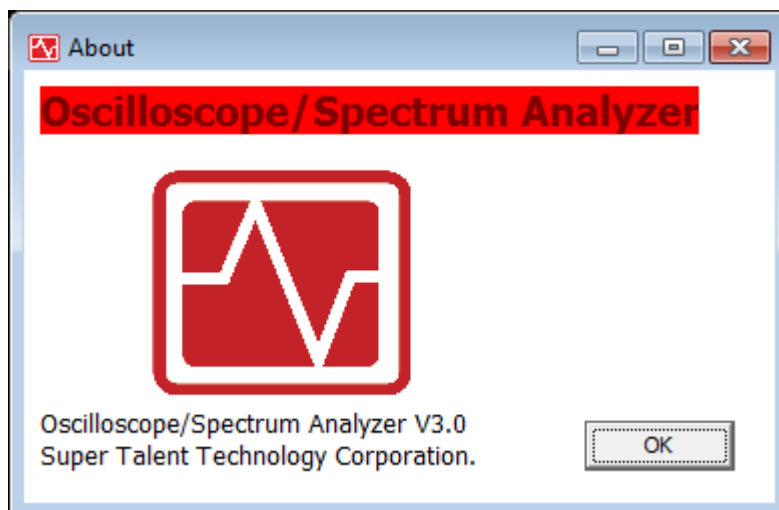
## c. Help

You can click **Help** on **Menu Bar** to get more help.



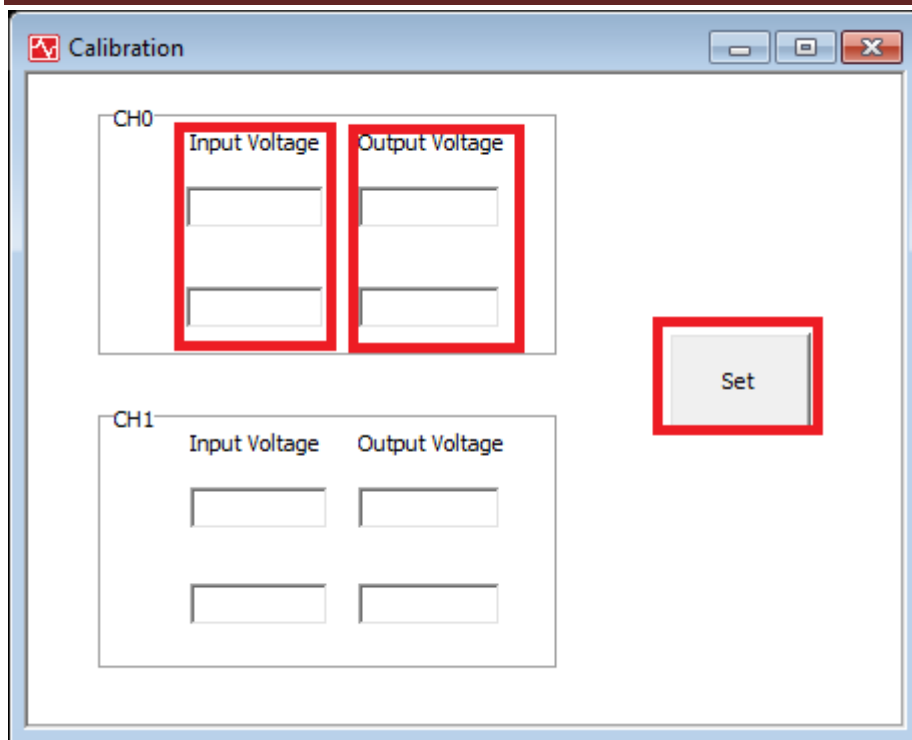
**User Manual:** Click it to get instruction for this program.

**About:** Click to pop up below window.



**Calibration:** This is a function to adjust the imprecise Digital Output.

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\*Input Voltage: the true voltage that provided.

\*Output Voltage: the imprecise digital voltage that program displays in Digital Output.

We need to adjust the **Output Voltage** value, and click **Set**, then

**Calibration Complete** window pops up, click **OK**.

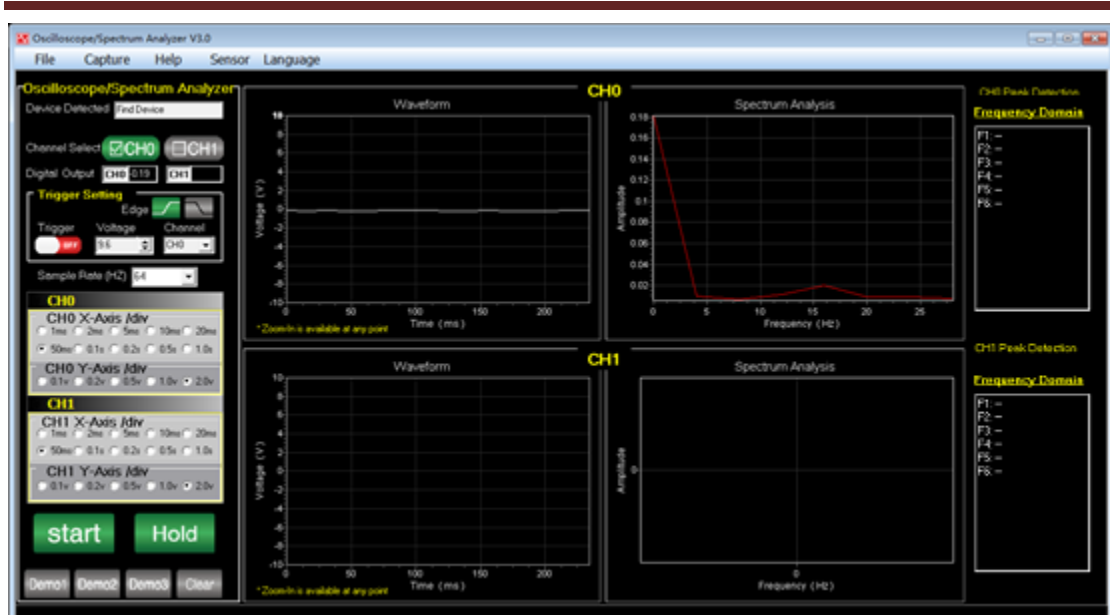
Example:

**Without calibration**

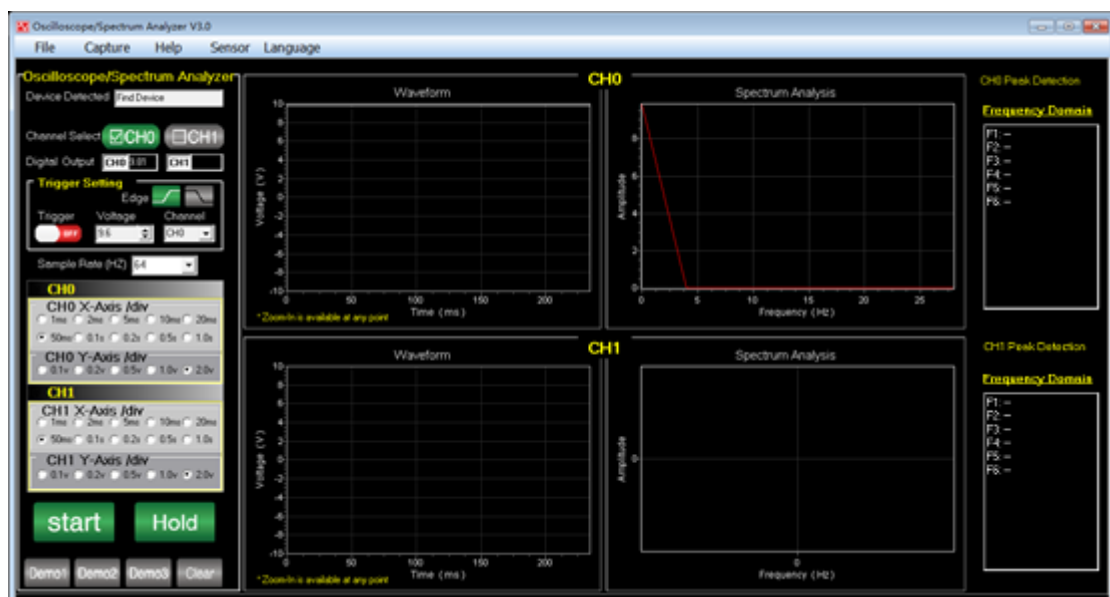
The stable **0V** input voltage shows as **-0.19V**.



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The stable **10V** input voltage shows as **9.81V**.



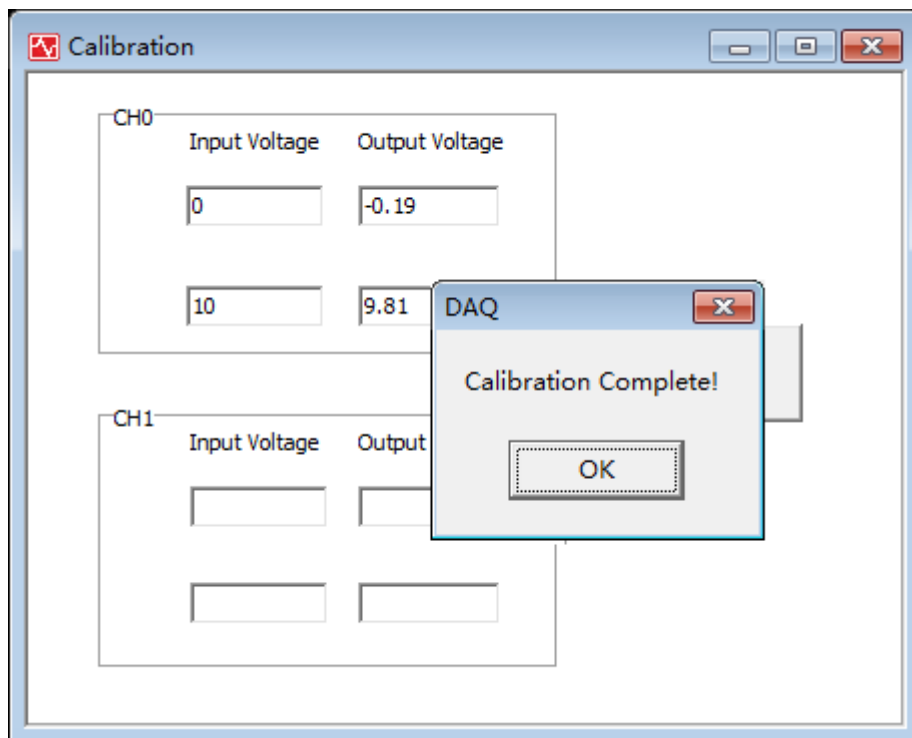
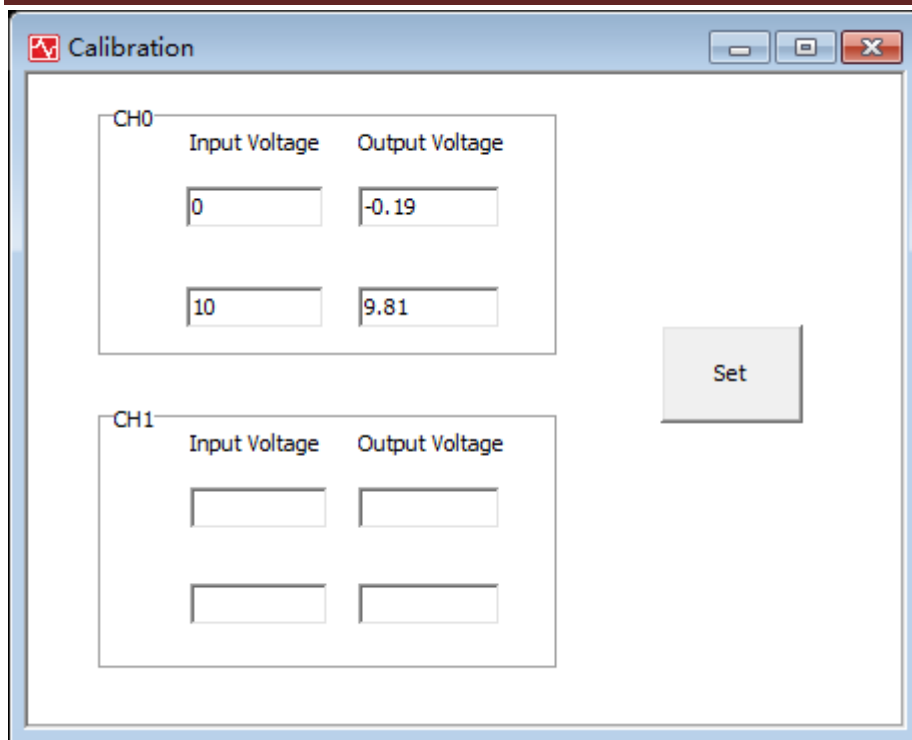
Set calibration as below capture:

Click **Help**, select **Calibration**, and set **Output Voltage**.

0v→-0.19v; 10v→9.81v.

Then click **Set** and **OK**.

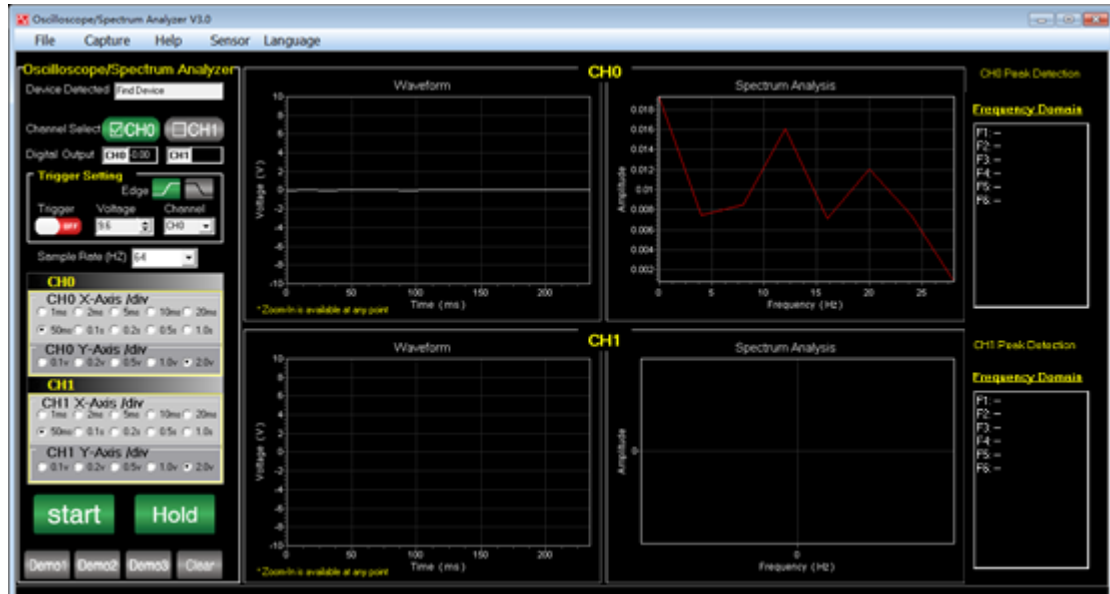
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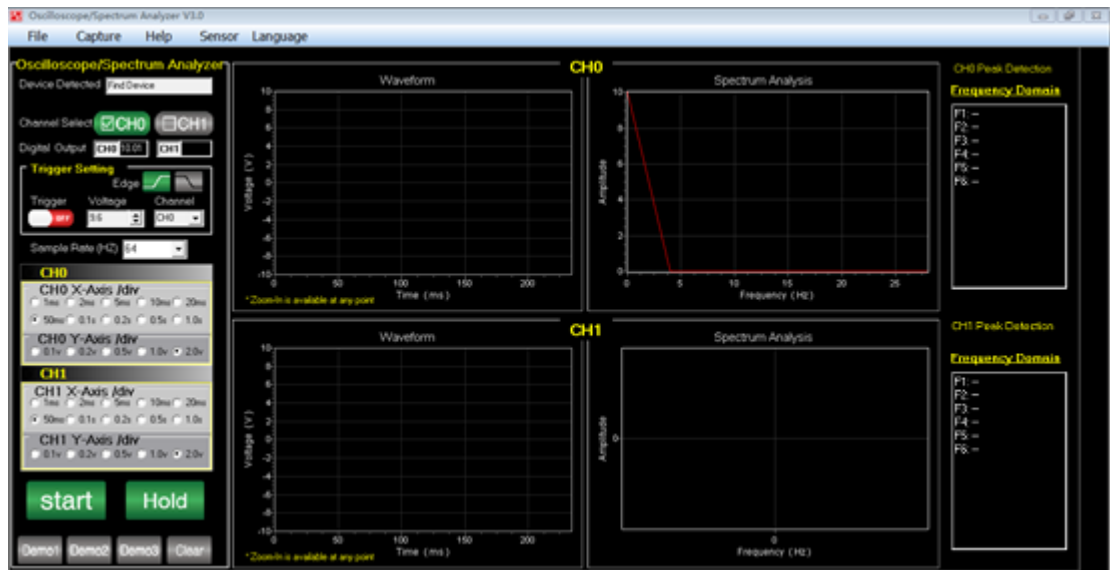
With calibration

The stable **0V** input voltage shows as **-0.00V**.

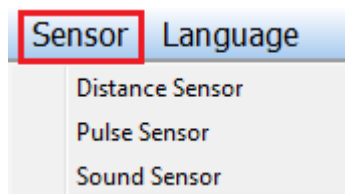
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The stable **10V** input voltage shows as **10.01V**.



## d.Sensor

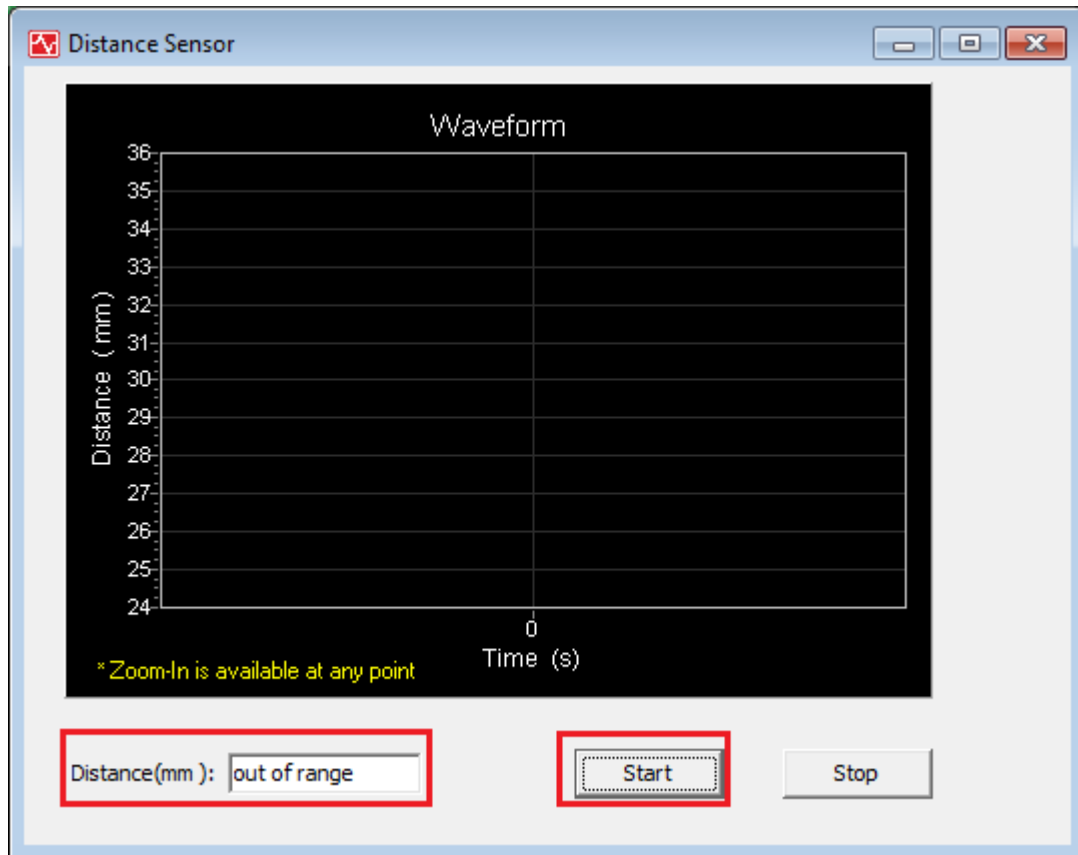


**Distance Sensor:** open distance sensor to measure the distance between

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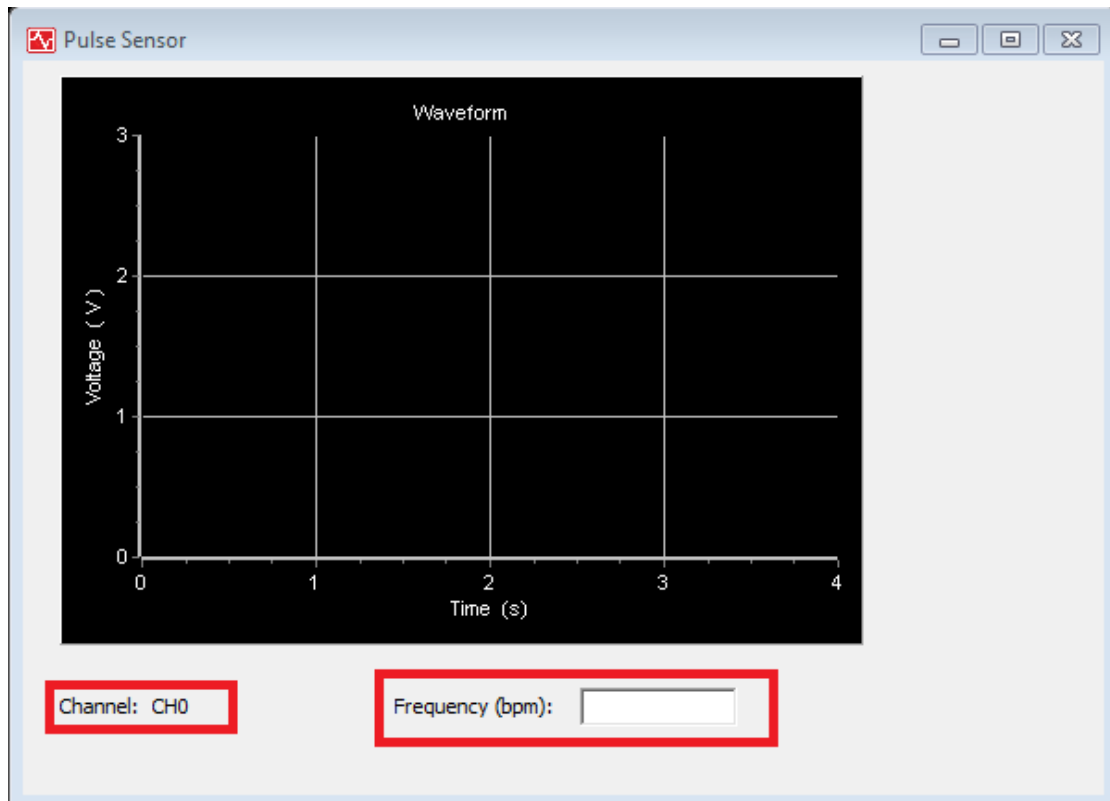
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object and the sensor. Click **Start** to run this sensor. If it shows **out of range**, it means that the distance is more far than your sensor's limit.

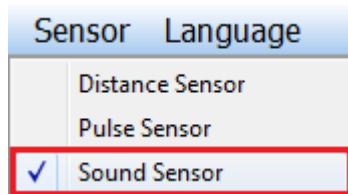


**Pulse Sensor:** open pulse sensor to measure heart rate. After you connect the heart beats sensor, it will show the **Frequency** (bpm).

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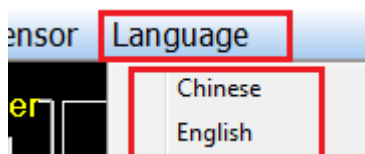
**Sound Sensor:** open sound sensor to capture sound on **Waveform** chart.



## e. Language

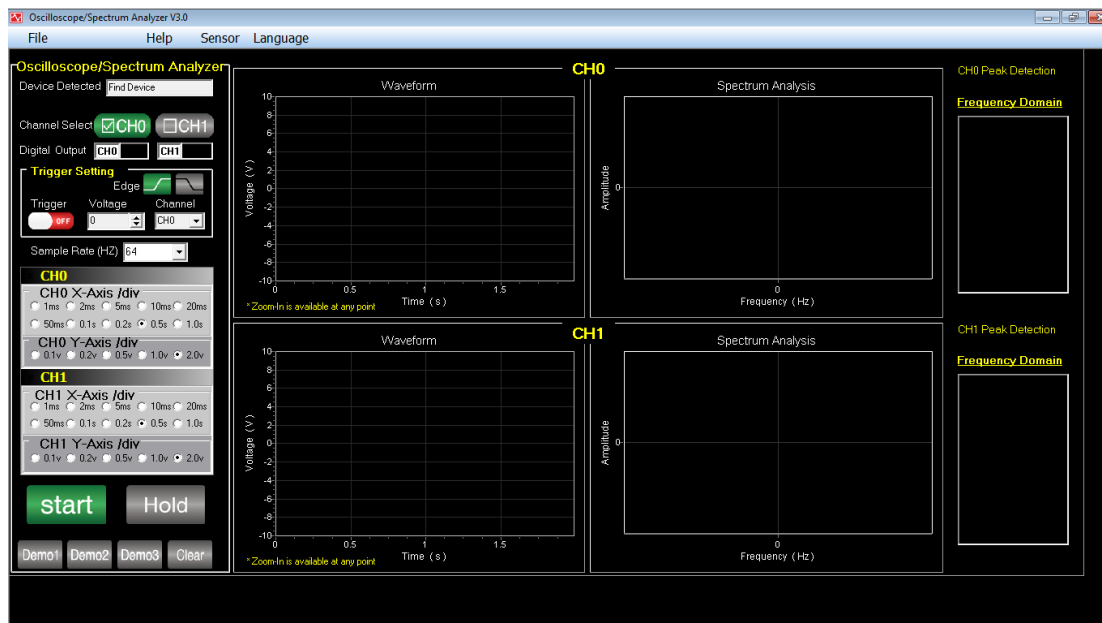
For different display language system, this program can automatically change its **Language**.

Or you can click **Language**, select **Chinese** or **English**, and then display language changed.



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Example: English.



Example: Chinese.



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**FOR MORE INFORMATION**

For Technical Support:

If additional support is needed, please visit the Super Talent Web site at [www.supertalent.com](http://www.supertalent.com) for spec.

For More Information or Further Technical Support Please Contact:

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Sales: [Sales@supertalent.com](mailto:Sales@supertalent.com)

OEM Sales: [OEMSales@supertalent.com](mailto:OEMSales@supertalent.com)