

DMMEasyControl Software Guide

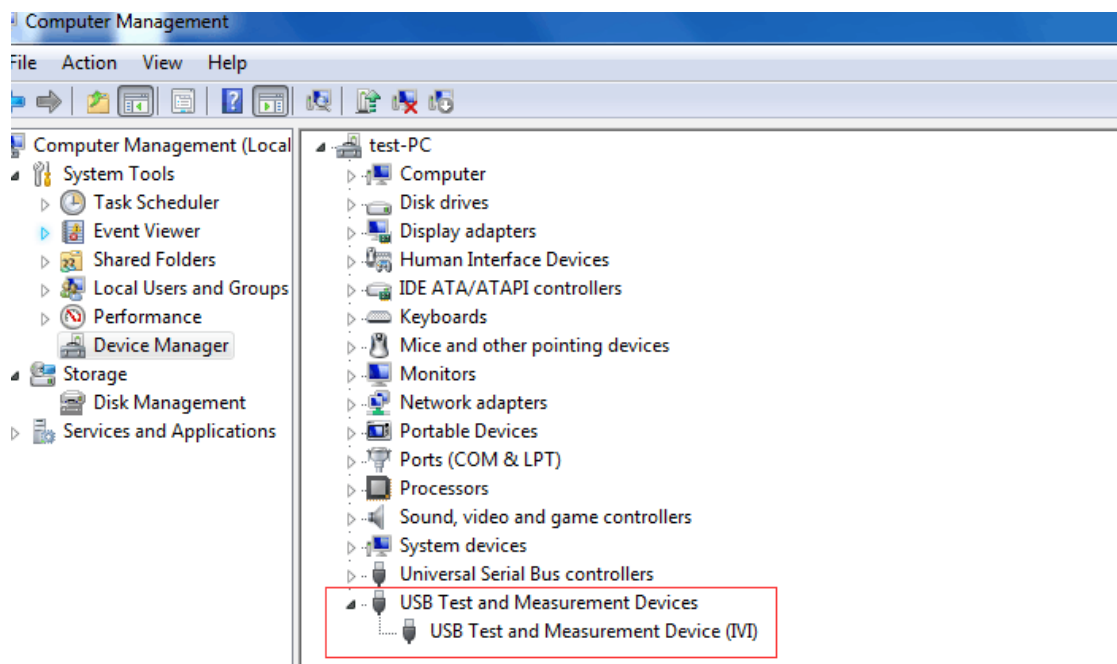
Install Driver

For MP730027/MP730028 mode

1. Before start DMMEasyControl, please download and install the driver from NIVISA:
Open <http://www.ni.com>, search "**NI-VISA**", click the link of NI-VISA Download. In the download page, select the supported OS and version (the recommended version is **15.0.1**), and then download the driver.
A warning information will pop out if you didn't install this driver before start.
2. Right click [**Computer**], you can find it on the desktop, or in [**Start**] menu. In the drop-down menu, click on [**Manage**], the "Computer Management" window opens.



3. Click on "**Device Manager**" on the left hand side. On the right hand side, double click on "**USB Test and Measurement Devices**".

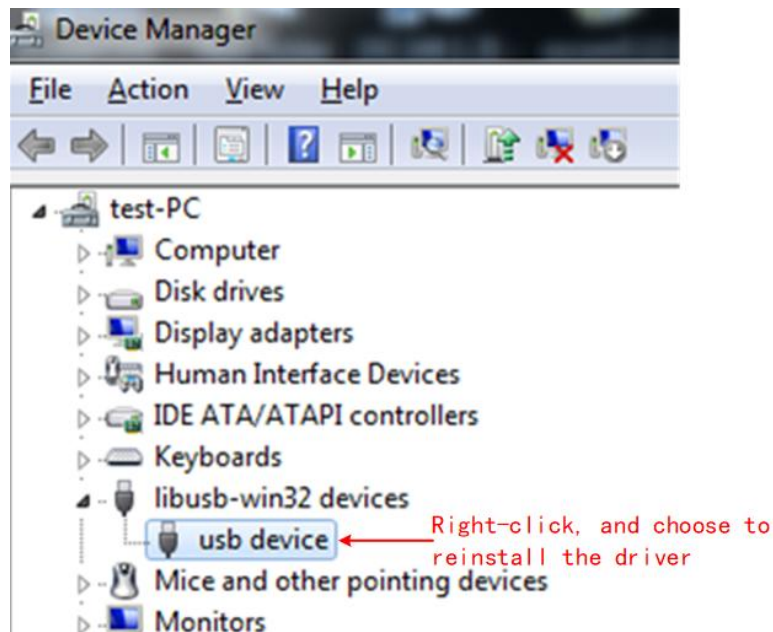


If "**USB Test and Measurement Devices (IVI)**" is displayed, that means the driver is installed successfully.

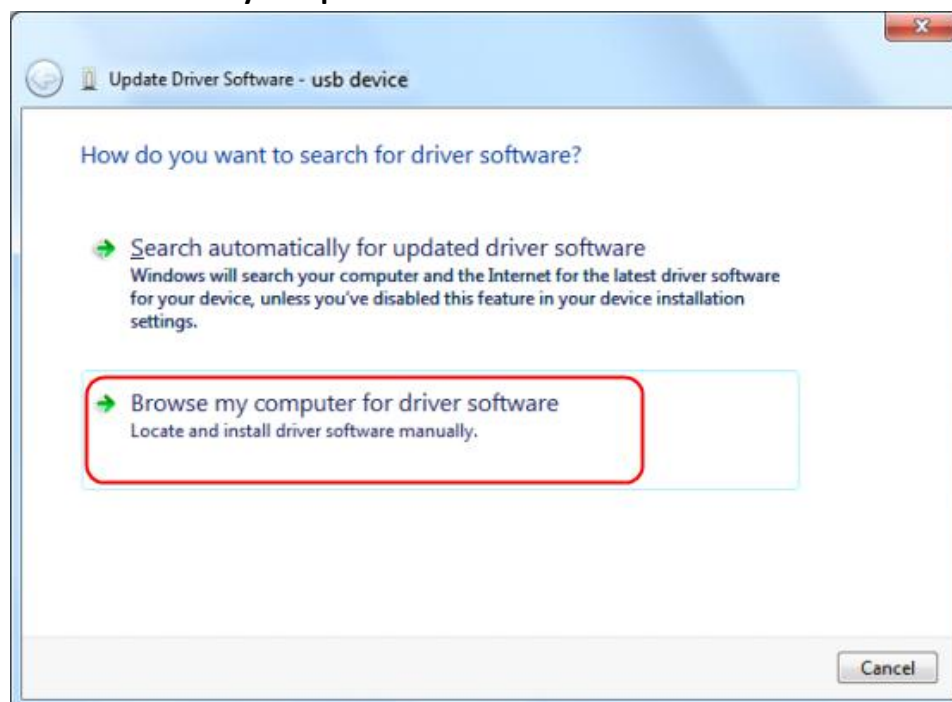
4. If "**USB Test and Measurement Devices (IVI)**" is not displayed, follow the steps

below to install the driver manually.

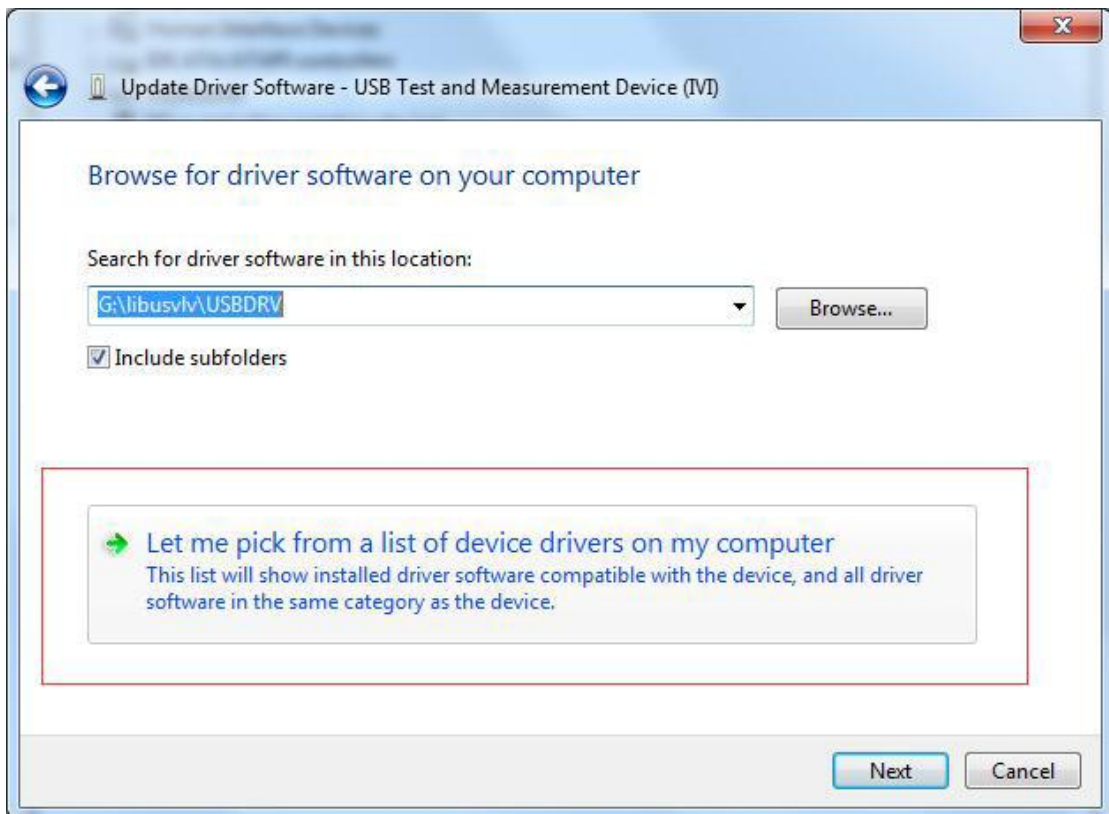
Right click the unknown device icon, in the drop down menu, click "**Update Driver Software...**".



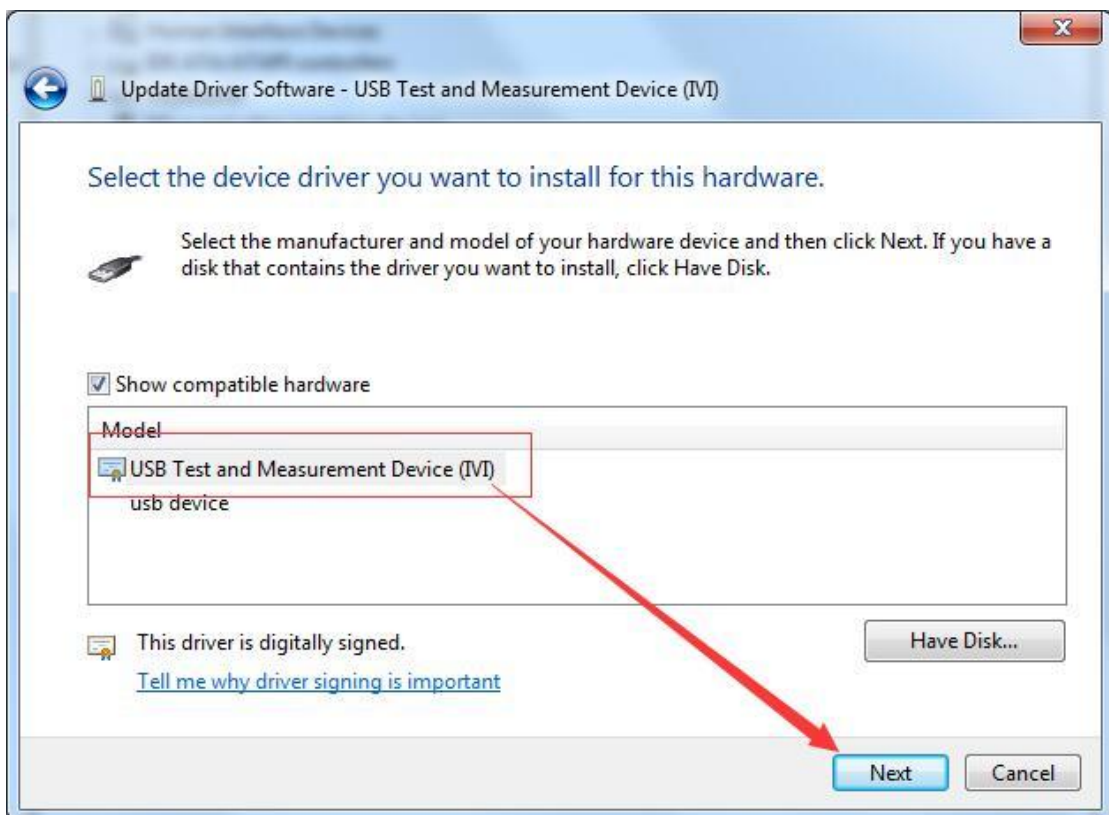
Select "**Browse my computer for driver software**".



Select a directory path for the driver, and click **"Next"**.



Click **"Next"**.



After installing successfully, click "Close".

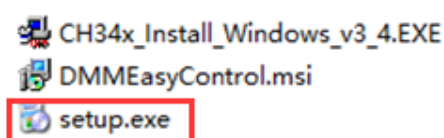
In Device Manager, check if "**USB Test and Measurement Devices (IVI)**" is displayed under USB Test and Measurement Devices.

For MP730424 mode(Only for COM)

1. Before start DMMEasyControl, please download and install the driver from NIVISA:

Open <http://www.ni.com>, search "**NI-VISA**", click the link of NI-VISA Download. In the download page, select the supported OS and version (the recommended version is **15.0.1**), and then download the driver.

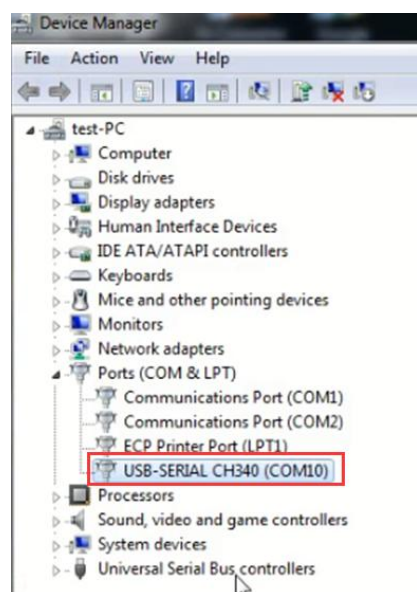
2. Find "**setup.exe**" in the installation package, and click to install the software as prompted.



3. Drive selection: Find the "**My Computer**" or "**Computer**" icon on the computer desktop, right-click the icon, and then click "**Manage**" to open the Computer Management window.



4. Select the serial port driver corresponding to the connection cable of the instrument (Note: Use different serial port connection cable, the driver may be different), as shown in the figure below:



5. After completing the above installation steps, you can use the multimeter PC software.

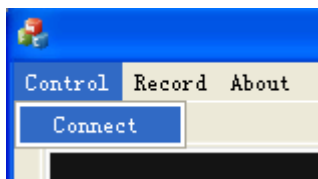
How to Connect

The desktop multimeter can communicate with the computer through its own interface, which is USB, LAN or COM interface .

For MP730027/MP730028 mode

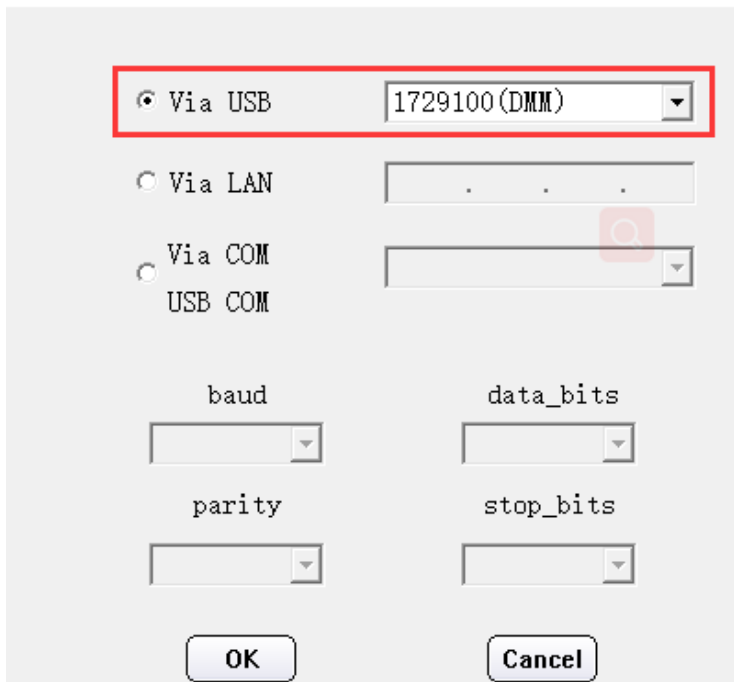
Connect by USB

1. Start DMMEasyControl.
2. **Connection:** Use USB cable to connect the bench multimeter USB port with PC USB port.
3. **Connection Setting:** Click **Control** on left-top side of software menu bar, select **Connect** on list.



4. Select Via USB and choose the corresponding serial number on list(Select the port with the suffix DMM, as shown in the red box in the figure below). Click OK.

Select Connection

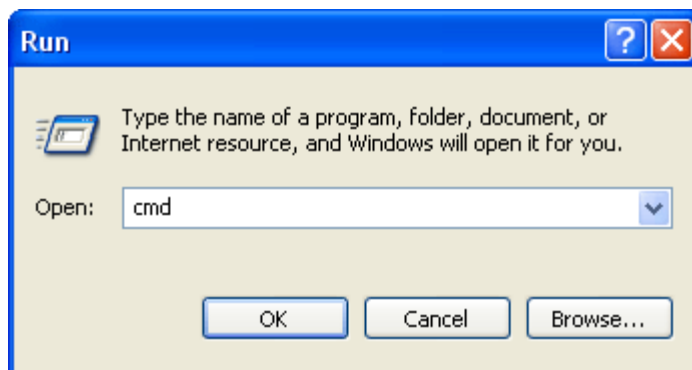
A screenshot of a 'Select Connection' dialog box. It has a title bar and a light gray background. At the top, there are three radio buttons: 'Via USB' (selected), 'Via LAN', and 'Via COM'. To the right of 'Via USB' is a text box containing '1729100 (DMM)' with a dropdown arrow. Below 'Via LAN' is a text box with three dots. Below 'Via COM' is a text box with a dropdown arrow. Further down, there are four labels: 'baud', 'data_bits', 'parity', and 'stop_bits', each followed by a dropdown menu. At the bottom are 'OK' and 'Cancel' buttons. A red rectangle highlights the 'Via USB' radio button and its associated text box. A red magnifying glass icon is positioned over the 'Via COM' text box.

How to check serial number in bench multimeter: Press **Utility** on multimeter front panel, select **Next**, select **System Info**, the serial number (Sernum) will display on screen.

Connect by LAN

1. **Connection:** Use LAN cable to connect the bench multimeter LAN port with PC LAN port.
2. **View the network parameters of the computer.**

Click on your **Start** button, and then hitting **Run**, and type in **CMD** in the box and hit Enter to bring up your command prompt.



Type in **IPCONFIG** after the new prompt that is opened in the Dos window. This will bring up the network information on your system.

```
C:\WINDOWS\system32\cmd.exe
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

C:\Documents and Settings\Administrator>ipconfig

Windows IP Configuration

Ethernet adapter Local Area Connection:

    Connection-specific DNS Suffix  . : 
    IP Address. . . . . : 192.168.1.249
    Subnet Mask . . . . . : 255.255.254.0
    Default Gateway . . . . . : 192.168.1.254

C:\Documents and Settings\Administrator>
```

3. Set the network parameters of the multimeter.

Press the front panel **Port** key, press the **NET Type** softkey to select **LAN**.

Press the **LAN Setting** softkey, set the IP address, subnet mask, gateway, port.

IP address: The first three bytes is same as the IP of computer, the last byte should be different. Here, we set it to 192.168.1.99.

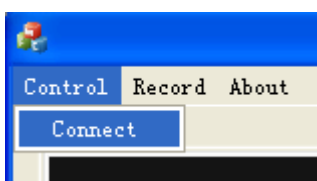
Subnet mask and **gateway** should be the same as the computer.

Set **port** as "3000".

Restart the multimeter for the parameter changes to take effect.

4. Set the network parameters of the Software.

Start DMMEasyControl. Click **Control** on left-top side of software menu bar, select **Connect**.



Select **Via LAN**, then set the IP to the same as multimeter. Click OK. (The software port is 3000 by default, can not be edited.)

Select Connection

☐ Via USB
☒ Via LAN
☐ Via COM
☐ USB COM

IP Address: 192 . 168 . 1 . 99

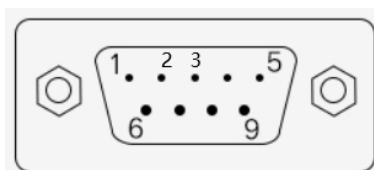
baud: [dropdown]
 data_bits: [dropdown]
 parity: [dropdown]
 stop_bits: [dropdown]

For MP730424 mode

Connect by COM

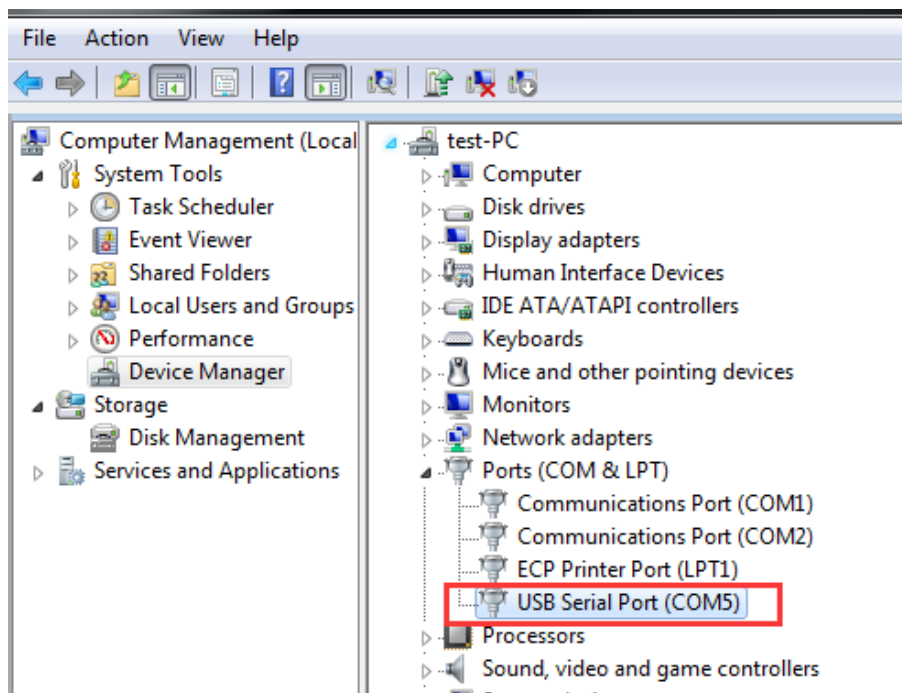
1. Start DMMEasyControl.
2. **Connection:** Use RS232 cable to connect the bench multimeter COM port with PC USB or RS232 port.

Note that DB9 male connector is defined as follows:

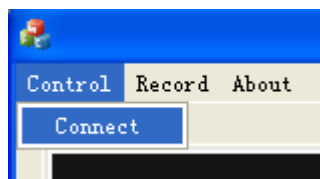


Pin	Function
2	Data transmission TXD
3	Data receiving RXD

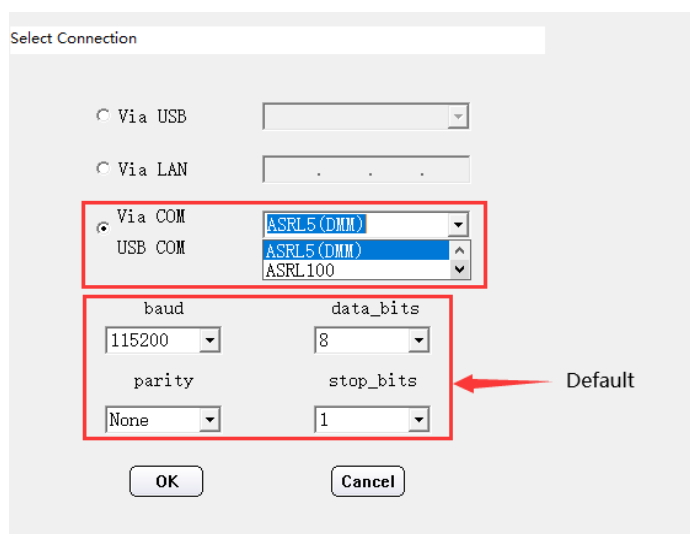
3. After installing "NI-VISA", check the port of "**Device Manager**" in **Computer Management** of PC, as shown in the red box in the figure below.



4. **Connection Setting:** Click **Control** on left-top side of software menu bar, select **Connect** on list.

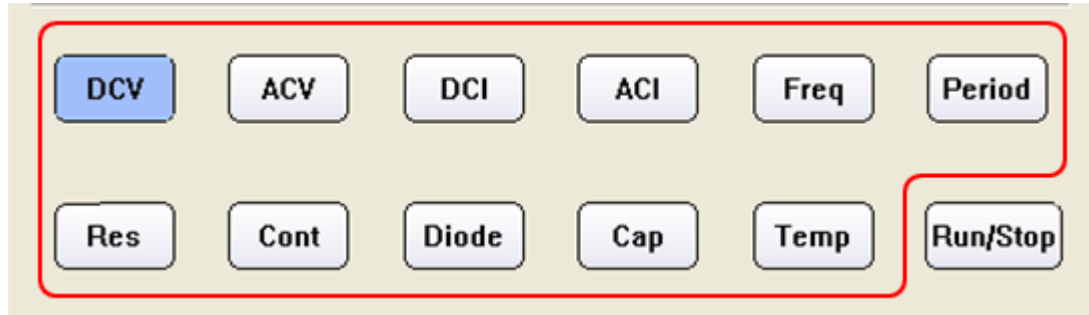


5. Select Via COM, and choose the corresponding serial number on the list (Select the port with the suffix DMM, as shown in the red box in the figure below). Click OK.



Select and Configure Measurement

Click measure button in function area to start measure, they are: DC voltage, AC voltage, DC current, AC current, Frequency, Period, Resistance, Continuity, Diode, Capacitance and Temperature.



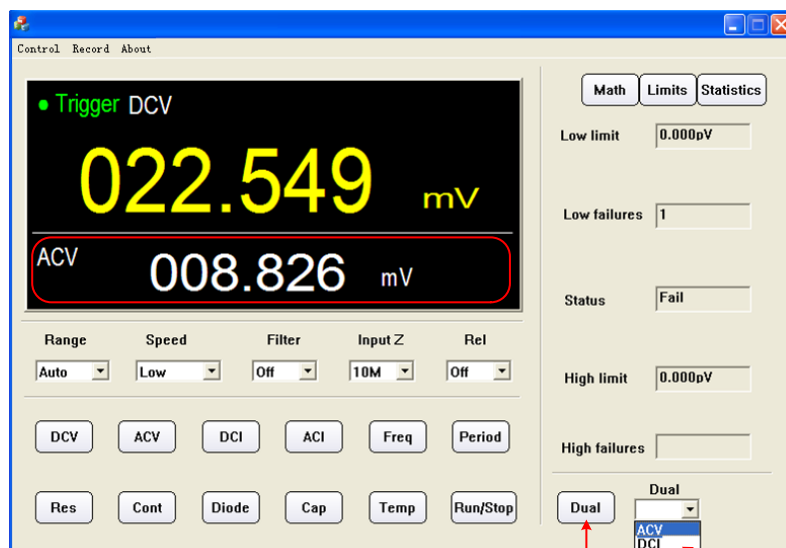
Configure the parameter in parameter setting area.



Dual Display

After selecting measure subject, click **Dual**, right side drop down list will show the supported sub-display subject. Select the sub-display subject and begin dual display mode.

Note: If **Dual** is in grey, it means the measure subject doesn't support dual display.

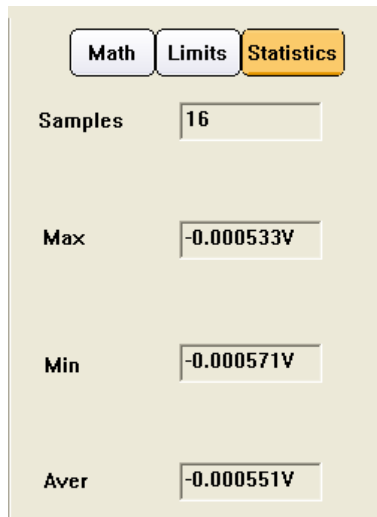


Dual Display List

Statistics

Click **Statistics** to start the function, the result display under the button line, they are: Sample amount, Maximum value, Minimum Value, Average value.

Note: If **Statistics** is in grey, it means the measure subject doesn't support statistics mode.

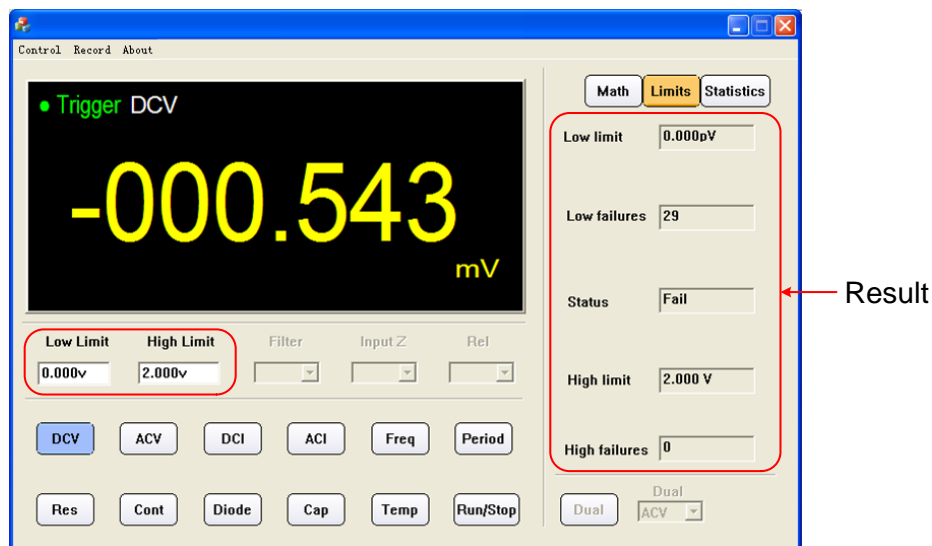


The image shows a software interface for the Statistics function. At the top, there are three buttons: 'Math', 'Limits', and 'Statistics'. The 'Statistics' button is highlighted in orange. Below the buttons, there are four input fields with labels: 'Samples' (value: 16), 'Max' (value: -0.000533V), 'Min' (value: -0.000571V), and 'Aver' (value: -0.000551V).

Limit Value Mathematics

Click **Limit** to start this function. Set the high and low limit value in parameter area. Limit result displays under the button line, they are: Low limit, low limit break times, limit mathematics status (Pass means the readings don't exceed the limit, Fail means exceeding), High limit, High limit break times.

Note: If **Limit** is in grey, it means the measure subject doesn't support limit value mode.



The image shows a software interface for the Limit Value Mathematics function. At the top, there are three buttons: 'Math', 'Limits', and 'Statistics'. The 'Limits' button is highlighted in orange. Below the buttons, there are four input fields with labels: 'Low limit' (value: 0.000pV), 'Low failures' (value: 29), 'Status' (value: Fail), and 'High limit' (value: 2.000 V). Below these, there are two more input fields: 'High failures' (value: 0) and 'Dual' (value: ACV). A red box highlights the 'Low limit', 'Low failures', 'Status', and 'High limit' fields, with an arrow pointing to the 'Status' field labeled 'Result'. The main display area shows a large yellow number '-000.543 mV' and a green dot labeled 'Trigger DCV'. At the bottom, there are several buttons: 'DCV', 'ACV', 'DCI', 'ACI', 'Freq', 'Period', 'Res', 'Cont', 'Diode', 'Cap', 'Temp', and 'Run/Stop'.

dB/dBm Mathematics

Click **Math**, select dB or dBm in parameter area to begin mathematics.

Note: If **Math** is in grey, it means the measure subject doesn't support dB or dBm mathematic.



Data Record Function

Data could be saved as XLS format after record.

Click left-top menu and select **Record**, select **Save** from pull-down menu. Choose the save path, input the folder name and click save. Data will be saved in this way. Click the **Record** and select **Stop** can stop saving data.



XLS file format:

1	Date/Time	DCV (V)	ACV (V)	DCI (A)	ACI (A)	Freq (Hz)	Period (S)	Res (Ω)	Cap (F)	Temp ($^{\circ}$ C)
2	2017/5/26-14:14:42	0.286	-	-	-	-	-	-	-	-
3	2017/5/26-14:14:59	0.286	-	-	-	-	-	-	-	-
4	2017/5/26-14:15:00	0.286	-	-	-	-	-	-	-	-
5	2017/5/26-14:15:00	0.286	-	-	-	-	-	-	-	-
6	2017/5/26-14:15:01	0.286	-	-	-	-	-	-	-	-
7	2017/5/26-14:15:01	0.286	-	-	-	-	-	-	-	-
8	2017/5/26-14:15:01	0.286	-	-	-	-	-	-	-	-
9	2017/5/26-14:15:02	0.286	-	-	-	-	-	-	-	-
10	2017/5/26-14:15:02	0.286	-	-	-	-	-	-	-	-
11	2017/5/26-14:15:03	0.286	-	-	-	-	-	-	-	-
12	2017/5/26-14:15:03	0.286	-	-	-	-	-	-	-	-
13	2017/5/26-14:15:03	0.286	-	-	-	-	-	-	-	-
14	2017/5/26-14:15:04	0.286	-	-	-	-	-	-	-	-
15	2017/5/26-14:15:04	-	3.099	-	-	-	-	-	-	-
16	2017/5/26-14:15:05	-	3.099	-	-	-	-	-	-	-
17	2017/5/26-14:15:05	-	3.099	-	-	-	-	-	-	-
18	2017/5/26-14:15:05	-	3.1	-	-	-	-	-	-	-
19	2017/5/26-14:15:06	-	3.1	-	-	-	-	-	-	-
20	2017/5/26-14:15:06	-	3.1	-	-	-	-	-	-	-
21	2017/5/26-14:15:07	-	3.1	-	-	-	-	-	-	-
22	2017/5/26-14:15:07	-	3.099	-	-	-	-	-	-	-
23	2017/5/26-14:15:07	-	3.099	-	-	-	-	-	-	-
24	2017/5/26-14:15:08	-	3.099	-	-	-	-	-	-	-
25	2017/5/26-14:15:08	-	3.1	-	-	-	-	-	-	-
26	2017/5/26-14:15:09	-	3.1	-	-	-	-	-	-	-

Computer configuration

The minimum computer configuration is as follows:

Item	Configuration
Operating system	XP SP2 /Windows7/Windows10
CPU	Dual-core 2 GHz
RAM	2 GB @ 2.20Hz
Storage space occupied by files	300MB
Drive	NI-VISA 15.0.1
GPU	Intel®G41 Express Chipset(Microsoft Corporation_WDDM1.1)
Sound card	DirectX® compatible

V1.4.3