

OPERATING INSTRUCTIONS MODEL TMD SERIES

SOFTWARE and USB/Wireless DRIVER



Install USB Driver: For WINDOWS VISTA_XP_2000 and USB Driver's Installation

1. Connect meter to PC with USB cable. Following dialogue box will appear automatically. Please select "Install USB [for WINDOWS7_VISTA_XP_2000]" to install.



Install PC software:

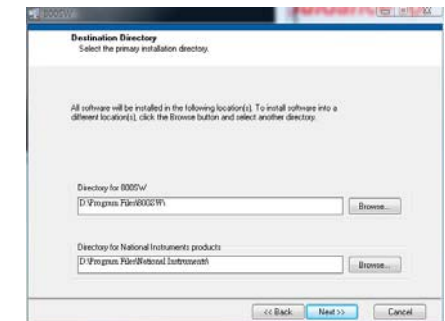
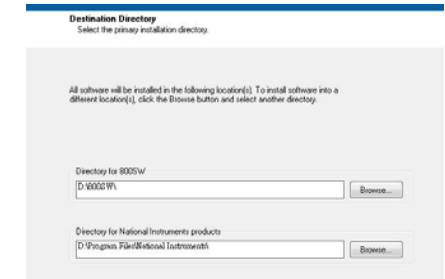
1. Put the disk in the disk drive. Following dialogue box will appear automatically. Please execute the "autorun.exe" if it does not appear.



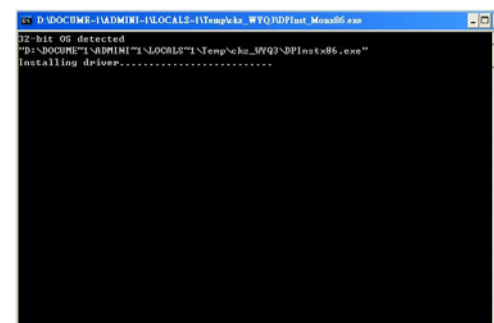
2. Button explanations

- Single Meter [Wireless & Line] : Install pc software for Single Meter.
- Multi Meter [Wireless & Line] : Install pc software for Multi Meter.
- INSTALL USB driver (for WINDOWS 7_VISTA_XP_2000): Please refer to the METER and USB DRIVER'S
- Instruction Manual: Operation instruction manual.
- EXIT: Exit install program.

- Single / Multi Meter installation window.

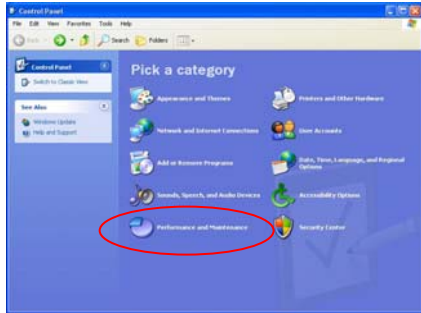


2. Installation.

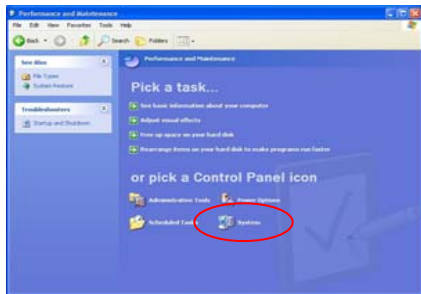


Check CONNECTION PORT

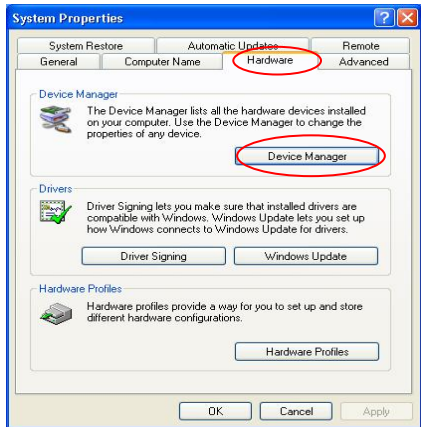
1. Start→Control Panel→Performance and Maintenance.



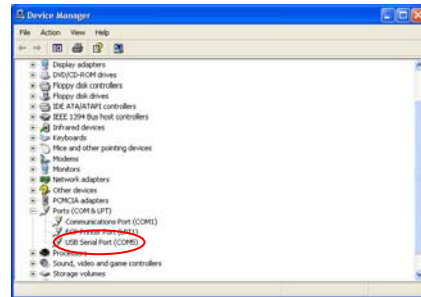
2. Select “System”.



3. Select “Hardware” →Device Manager.

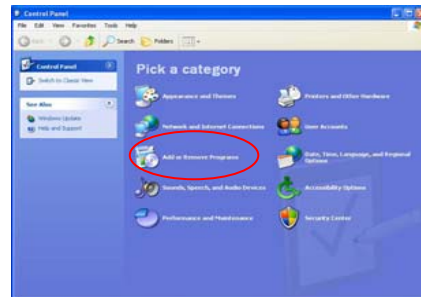


4. In this window, you see the number of the port selected by system automatically. You can change it. Please write down the port number, it will be needed for manual connection.

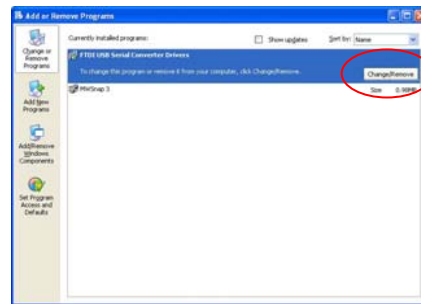


Uninstallation of USB Driver

1. Start→Setting→Control Panel→Add or Remove Programs→Change/Remove.



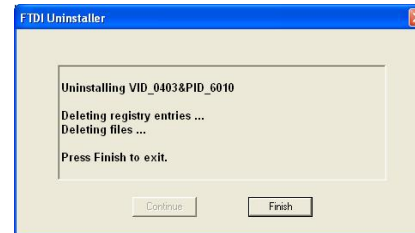
2. Select “FTDI USB Serial Converter Drivers”→Change/Remove.



3. Click “Continue”.



4. Click “Finish”.

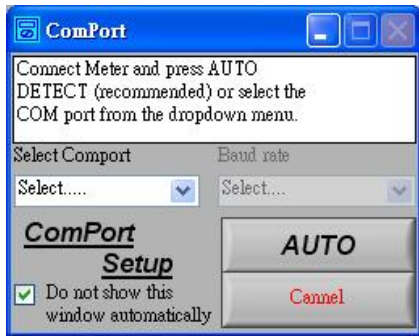


Description of “Single Meter” PC software

1. Following window comes up automatically after PC software turn on.

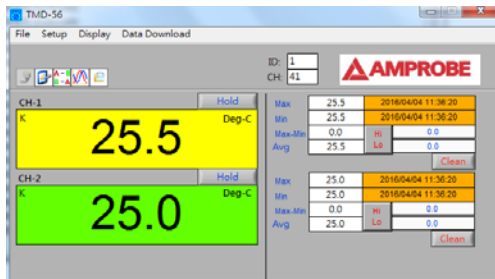


2. For first time use following communication port setup dialog box. Comes up automatically



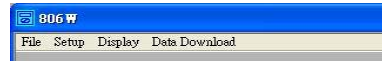
3. For communication port setup please refer to 6.1.

4. After finishing communication port setup following Main display window comes up.



Model number shown at up-left corner varies according to meter.

5. Explanations of comments



5.1 File

- About Display manufacturer information.
- Exit Exit program.

5.2 Setup

- Options Environment selection settings (please refer to 6.2)
- Communication port Check Search/Settings/Connection /Showing the current Communication port used.

Log Setup 1. Log Interval:

Meter Log Interval setup. (Default 1sec)

2. Key Delay Time: Key delay time setup. (Default 0sec)



User Linear User Linear operation

5.3 Display

- Graphic 1. View real time reading and curves.
- 2. Window setup refer to 6.4.
- Relative Set and display the difference between two channels.

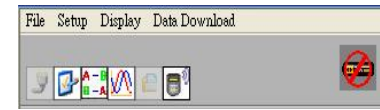



Received Signal strength indication.
Only available for meters with wireless function.

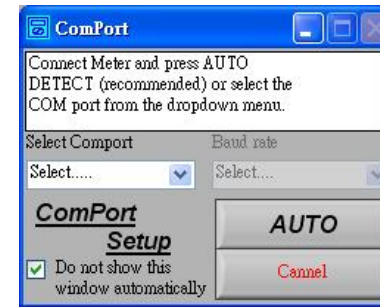
5.4 Data Download

Download the saved data from the meter.
(Only for save/data log function mode)

6. Explanations of Toolbar



- 6.1  Communication port setup dialog box.



• Auto connection

AUTO : Click the button let system select communication port automatically.

• Manual connection

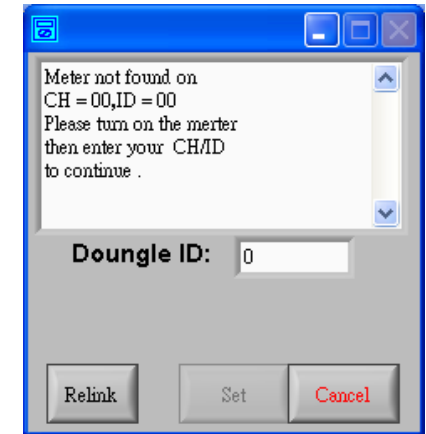


Select communication port and baud rate manually. (Wireless mode, please select 57600 bps, USB mode, please refer to operation manual).

After click on “Do not show this window automatically” it will not bring up the dialog box automatically. It will only function when you call from the Setup.

For first use, after communication port setting following dialogue box comes up.

• Set meter ID and CH (Only for wireless models)



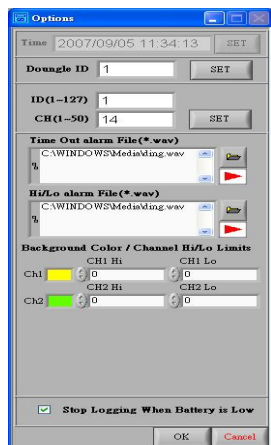
1. When message “Meter is found on CH=00, ID=00” is shown in dialogue box.
Click “Set” to connect.
2. When message “Meter not found on CH=00, D=00” is shown in dialogue box, please reset ID and CH as following:
 - I. Turn off the meter.
 - II. Press and hold wireless starting key (>2S) and press power “on/off” key (>5S) for longer than five seconds. Display will shown “00”.
 - III. Turn on wireless function by pressing wireless starting key (>2S).
 - IV. Click “Relink”.
 - V. Repeat 1.

Note

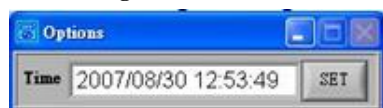
If there are more than one wireless transceivers operate at same location.

1. Different dongle ID's should be given.
2. Distance between 2 dongles must be more than 30 cm. (12 inches)

6.2 Environment selection settings dialog box.



• Time setting



Only available for meters with time setting function.
Click “SET” synchronize the clock in meter with the time of PC.


• Doungle ID setting



Only available for meters with wireless function.

• Sound of Hi/Lo limit setting

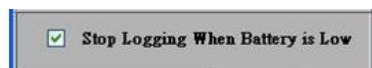


Click data folder icon on the right , and select sound effect. (Only use WAVE format).

• Hi/Lo limit setting



1. Setting the Limits.
Audio alarm will be actuated, when measurements are out of limits.
2. Background color of each channel can be selected.

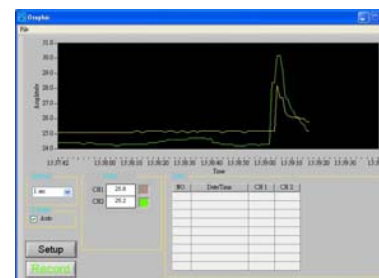


Enable or disable the function which stop data logging when battery is low.

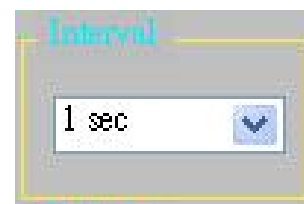
6.3 Relative dialog box.



6.4 Graphic dialog box.



• Interval setting



• Y scale setting




Select auto mode to accept Y scale automatically set by PC.
Turn off the auto mode to freeze Y scale at that moment.

• Data area


NO.	Date/Time	CH 1	CH 2
28	2007/10/09 18:50:42	25.2	25.7
29	2007/10/09 18:50:43	25.2	25.7
30	2007/10/09 18:50:44	25.2	25.6
31	2007/10/09 18:50:45	25.2	25.7
32	2007/10/09 18:50:46	25.2	25.6
33	2007/10/09 18:50:47	25.2	25.6
34	2007/10/09 18:50:48	25.2	25.6
35	2007/10/09 18:50:49	25.2	25.7
36	2007/10/09 18:50:50	25.1	25.6
37	2007/10/09 18:50:51	25.1	25.6

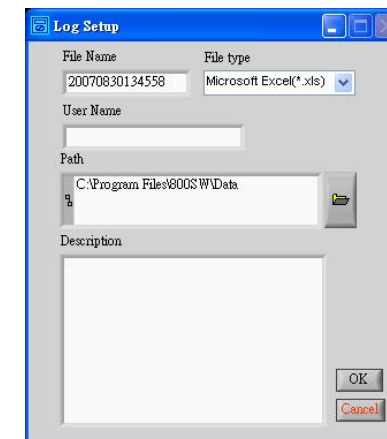
Display last ten measurements.

• CH1/CH2 Setting

 : Click this button to turn on or off CH1 and CH2 and select the background colors.


• Start data logger

 : Click this button to bring up “Log Setup” window.




- File name: To define the name of the file in which you want to store the logged data. The default file name is current time. (YYYYMMDDHHMMSS).
- File type: It can be saved as (*.csv or *.xls).
- User name: The user's name.
- Path: Saved path.
- Description: information added by user.
- User name and Description will be saved in the data file.
- Click “OK” to start recording.

• Stop data logger

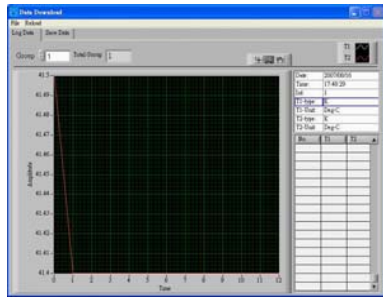
 : Click to stop data logging and save the data.

- Return to the main window after data logging ended.
File → Exit

6.5  To export data stored in meter to PC.

Only available for meters with save/data log function.

Click this icon to bring up “Data download dialog box”.




File menu

File

Exports Data exports

Exit Exit program.
Reload re-load data.

6.6  Received signal strength indication.

Only available for meters with wireless function.




I. The barograph and number are Received Signal Strength Indicator (RSSI).

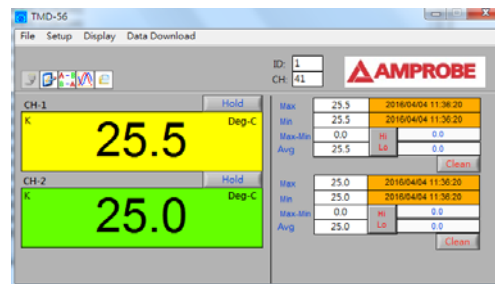
- RSSI ≥ 60 signal is better (in green range).
- $60 < \text{RSSI} \leq 50$ signal is good (in yellow range).
- RSSI ≤ 50 signal is weak. (in red range)

II. Suggestions for weak signal:

- Change the location & orientation of dongle (vertical to the ground is best.)
- Change location of orientation of meter.

6.7  Low battery warning,, please change batteries as soon as possible.


7. INTRODUCTION OF MAIN DISPLAY




Left hand side shows reading of each channel with unit at right-upper corner.

When measure with thermocouple, the type of thermocouple is shown at left-upper corner.

Right hand side shows maximum (MAX), minimum (MIN), range (MAX-MIN) and average (AVG) value of readings, and times of maximum and minimum value occur.

• 

Click the button to holds the current reading.

• 

Click the button to reset the reading and time of MAX, MIN&AVG.

• 

Click the button to activate out of limit alarm. Hi/Lo limit values are set in 6.

8. USER LINEAR OPERATION

• 

Click this button to create a new blank file based on the default template.

• 

Click this button to open project.

• 

Click this button to open or find a file.

• 

Click this button to save the active file with its current fine name, location and file format.

• 

Click this button to edit data.

• 

Click this button to add data.

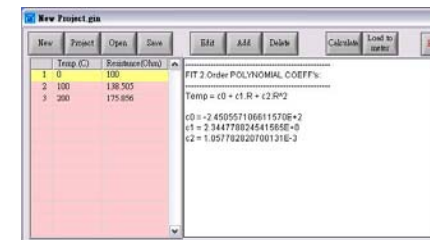
• 

Click this button to delete data.

• 

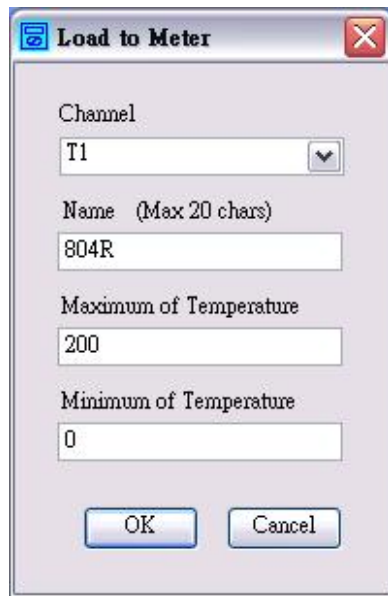
Click this button to calculate this polynomial.

Data complete



• 

Download user linear to meter



Load to Meter

Channel
T1

Name (Max 20 chars)
804R

Maximum of Temperature
200

Minimum of Temperature
0

OK Cancel



Click this button to close this program after prompting you to save any unsaved files.

Wireless Features:

Frequency range:

910~920MHz.

868.1~868.5MHz.

Current consumption: Less than 1mA.

Transmission distance: 25M of sight distance without magnetic interference.

FEDERAL COMMUNICATIONS COMMISSION

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection. This equipment generates, uses and can radiated radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Shielded interface cables must be used in order to comply with emission limits.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Description of Multi-Meter PC software

Multi Wireless communication

Note: Please insert the Dongle after SW installation.

Insert Dongle to PC/USB port

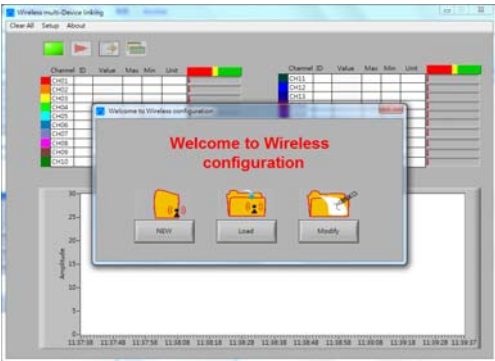
System will detect dongle and install the driver while connecting to PC USB port.

Wireless Multi-Linking version instruction:

- 1. Insert USB dongle to PC's USB slot.
- 2. Start PC software.

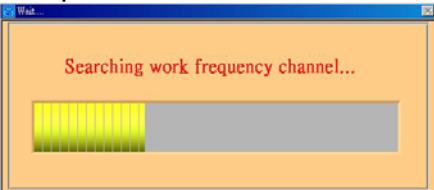
PS Software description

- 1. Enter start page.



- 2. "New ": Start with new project (First use)

2-1 System will search free channel, please wait.



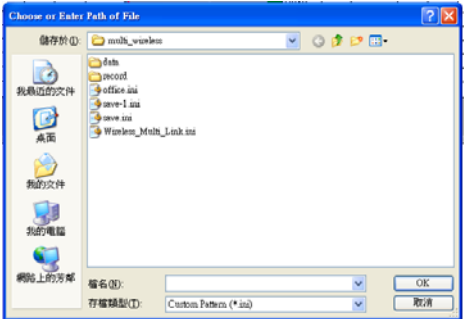
2-2 Wizard configuration: Please follow step by step



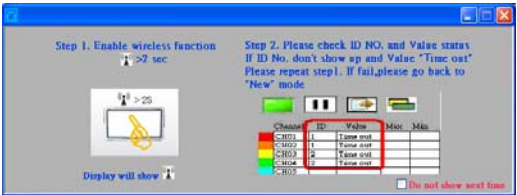
Note: Please add the wireless instrument (ID/CH) one by one to the system to avoid working channel collision.

- 3. "Load " : Only operate with saved project. System will load previous " ID/CH" from saved file.

3-1 Please select the saved file

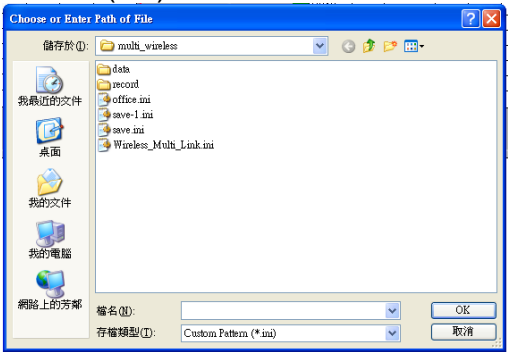
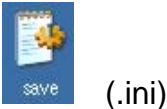


3-2 Please follow wizard configuration.

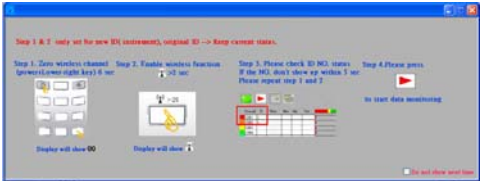


4. "Modify" : Load saved project (.ini) and can also add new meters.

4-1 Please select the saved file



4-2. Please follow wizard configuration



5. Function row.



- : Comport Find.
- : Start recording data
- : Start execution key
- : Enlarge display icons.

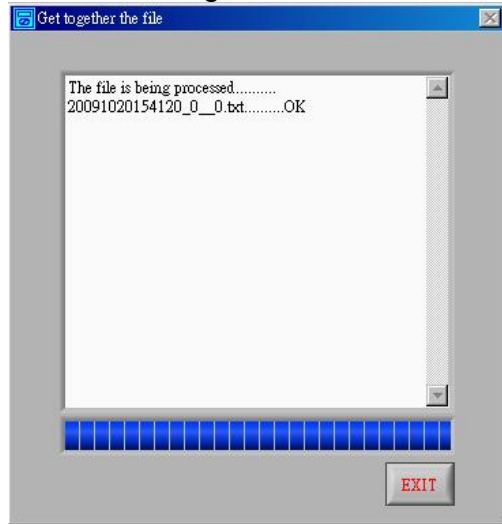
5-1. Auto Comport Find :

- : Comport connection
- : Comport connection fail

5-2.




: Start recording channel's data and measuring values into txt file.



Default File Save at:

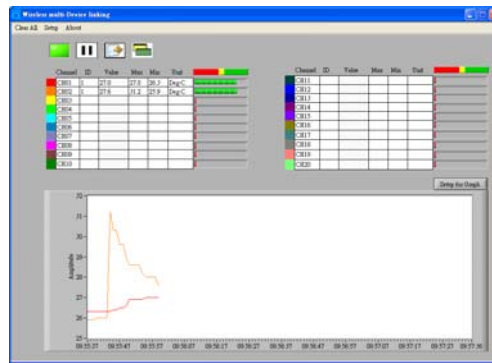
C:\800_Multi\record

The default file name is current time.
(YYYYMMDDHHMMSS_ID__ File Member).

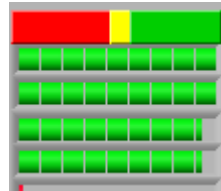
5-3 .  "Start key" to activate connection.

5-3.1 Real time measuring values display dialogue

Add channels respectively and display measuring values on the chart.



5-3.2 Connection status dialogue
Display the connection status of each meter.



- **Signal strength** RSSI ≥ 60 means good (within green area)
 - **Signal strength** $60 \geq \text{RSSI} \geq 50$ means normal (within yellow area)
 - **Signal strength** RSSI ≤ 50 means not good. (within red area)
- PS: Suggestions as follows: When the signal is weak.



6. Magnify display dialogue

For easy and clear to monitor the channels and data.



7. Dropdown menu

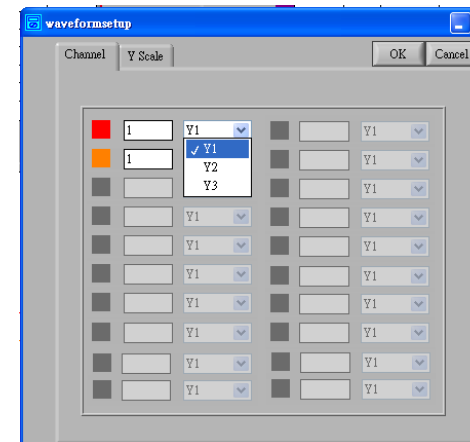


7.1 Clear All : clear List & chart to empty

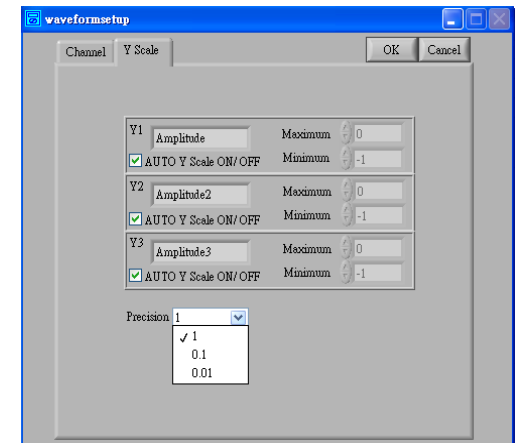
7.2 Setup : Set Hi & Lo setting value to be blinking when they are over setting values.

7.3 About: Display manufacturer information.

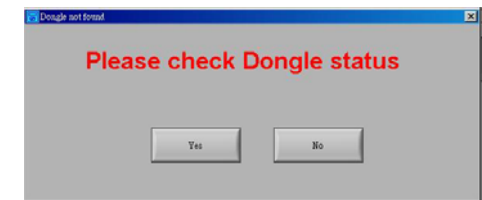
8. Y axis setting for each channel.



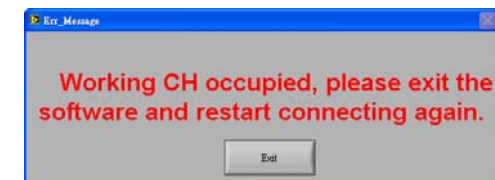
Precision : Y axis resolution setting
AUTO Y Scale ON/ OFF : Select Auto-scale



FAQ



Dongle was not found, please reconnect dongle or check USB port status as page2/step2 (CHECK Dongle CONNECTION PORT)



Working CH occupied, please exit the software and restart connecting again.

Description of Multi Lines PC Software Insert USB to PC' s USB port

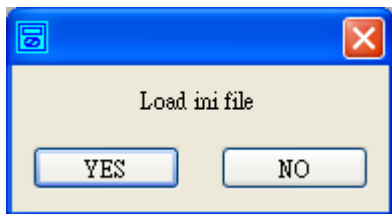
1. Enter start page.

Please insert USB cable with meter, PC software will auto detect meter device and set ID number for the meter.

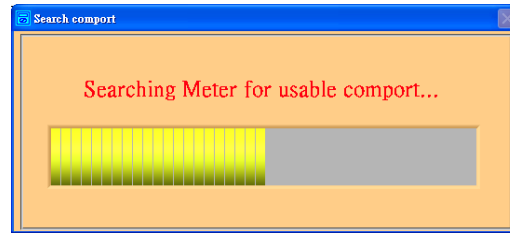



2.“Load “ : Only operate with saved project.

System will load previous
“ ID/COM” from saved file.

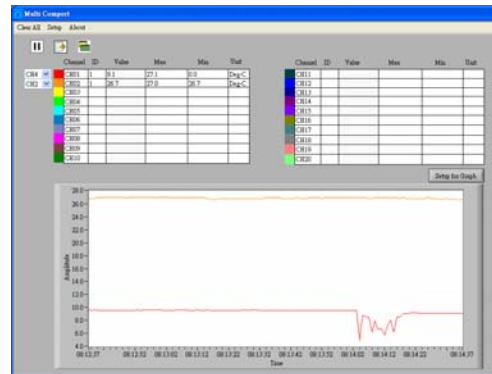


3.“Comport search .




4.  ”Start key” to activate connection.
Real time measuring values display.

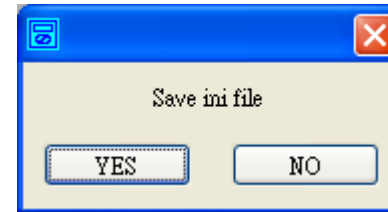
Add channels respectively and display measuring values on the chart.




5.  Record data

 Start recording channel's data and measuring values into txt file.

6.Save previous “ ID/COM” to ini file.



7.  Magnify display dialogue

For easy and clear to monitor the channels and data.



8 . Dropdown menu



8.1 Clear All : clear List & chart to empty

8.2 Setup : Set Hi & Lo setting value to be blinking when they are over setting values.

8.3 About: Display manufacturer information.

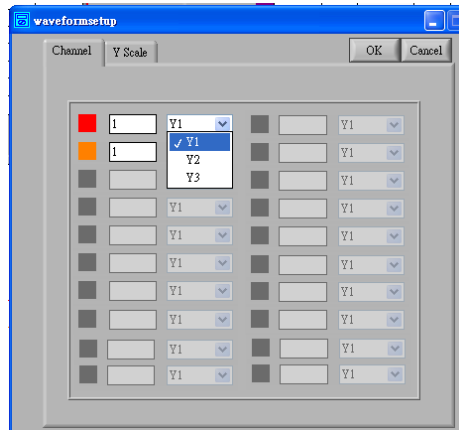
9. Default File Save at:
C:\800_Multi\record



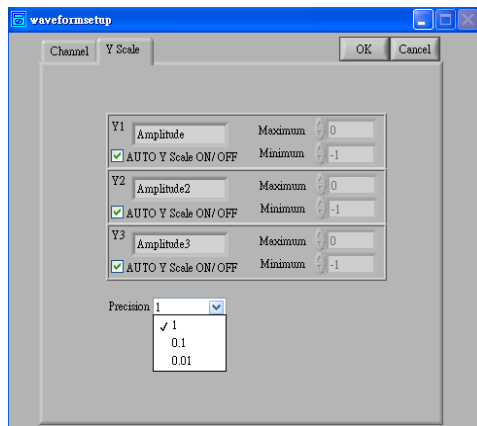
The default file name is current time.

(YYYYMMDDHHMMSS_ID__ File Member).

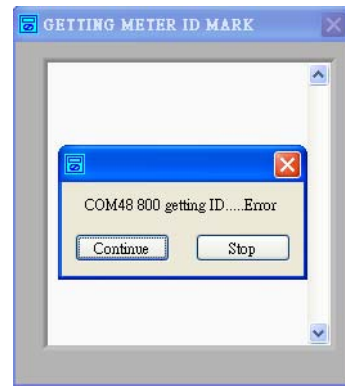
10. Y axis setting for each channel.



Precision : Y axis resolution setting
 AUTO Y Scale ON/ OFF : Select Auto-scale



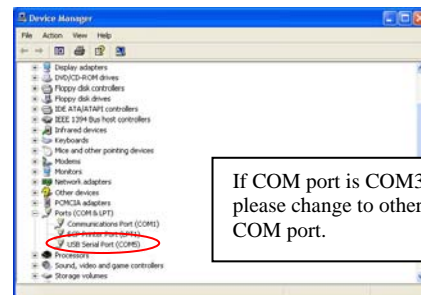
FAQ



Before play must to check meter power on, if show message err may be meter power off or meter has not connection.

PS: The data displayed was list by connecting sequence, instead of ID NO. First connecting instrument might not be ID 01.

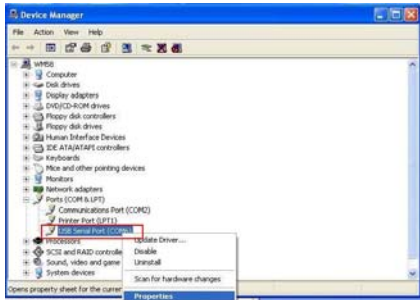
●If the ID NO. was not displayed while connecting to USB cable. Please check COM port status as page2. Or if the COM port is COM3 or COM10, please change COM port NO. to others.



If COM port is COM3, please change to other COM port.

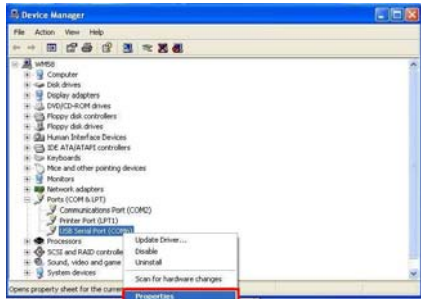
Comport Confirmation Procedure

1. Confirm to see if the port (COM&LPT1) of PC is assigned to the meter like the following illustration, but it could be other Comport not COM6.

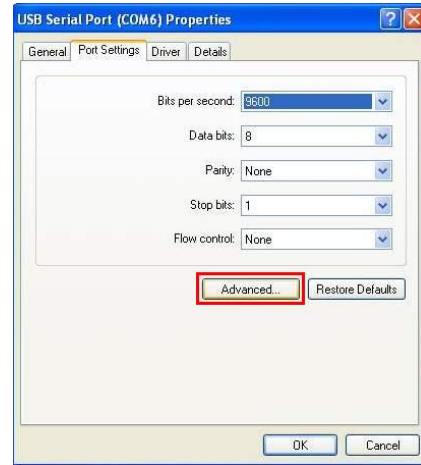


2. If it is normal, then the change of the port (COM&LPT1) of PC must follow the following step to make Comport changes.

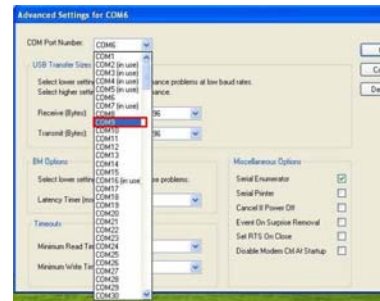
Setup1. Click on the Properties of the red frame.



- Step2. Choose the Advanced of the red frame as the illustration blow



- Step3. Choose Comport other than COM10, COM3 and the COM without "IN USE" like the illustration below.



- Step4. Complete the above steps and re-scan the device. And start opening the software to do Auto-Connection.

