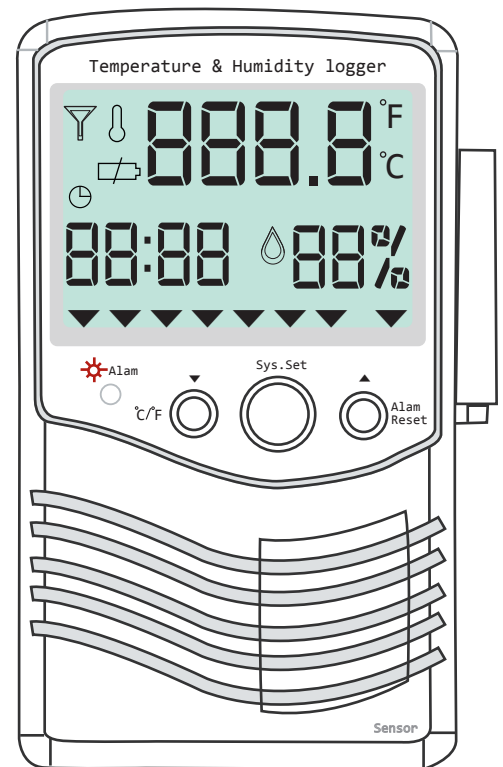




Nietzsche Enterprise CO,LTD.

STH-01

Temperature and Humidity
Data Logger User Manual



Content

00

◆ Hardware Overview	01-02
◆ Setting	03
◆ Logger Settings	03
◆ ZigBee Link Settings	04-05
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Accessories

- DC5V Adapter
- Battery (optional)
- USB Cable
- CD Quickview Data Software / User Manual CD

Safety notice

- Read and follow the instructions before use of this product.
- To prevent electrical shock or fire, do not attempt to disassemble this unit and do not expose it to moisture of any kind; ex., rain, liquid spills.
- Only use attachments/accessories specified by the manufacturer

*Note: pictures and contents are subject to change without prior notice

Hardware Overview

01

Hardware Data Logger Overview



USB / RS485 Series Models	
Built-in Sensor	External Sensor
STH-01DC	STH-01DCX,
STH-01	STH-01X
STH-01AC	STH-01ACX
STH-01DC485	STH01DC485X
STH-01485	STH-01485X
STH-01AC485	STH01AC485X



Bluetooth / ZigBee Series Models	
Built-in Sensor	External Sensor
STH-01DCBT	STH-01DCBTX
STH-01BT	STH-01BTX
STH-01ACBT	STH-01ACBTX
STH-01DCZB	STH-01DCZBX
STH-01ZB	STH-01ZBX
STH-01ACZB	STH-01ACZBX

1-1 Data logger Device

external sensor

Built-In Sensor

Flashing alarm LED indicating out-of-limits conditions

LCD Screen
 Temperature °C/°F
 Relative Humidity (RH %)
 Clock (Hour : Minute)

Name ~ Overwrite
 Please refer to the user manual "Setting"

°C/°F ▲▼ button
 1. Setting °C/°F
 2. Up/Down, Yes/No setting

Sys. Set
 Enter/Set Next
 Setting time(Y/M/D), ID, High/Low limits of temperature & humidity/logging interval
 recording mode: overwrite or stop when full.

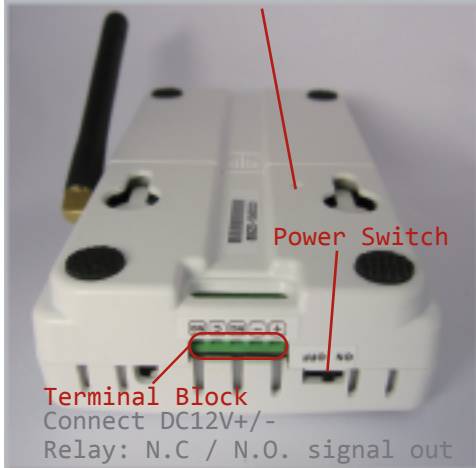
Alarm Reset
 To mute the beep
 Press when alarmed, the beep will be mute for 3 minutes, but the "Alarm LED" remains flash if failure or abnormal condition is not lifted, the state will repeat

Hardware Overview

Hardware Data Logger Overview

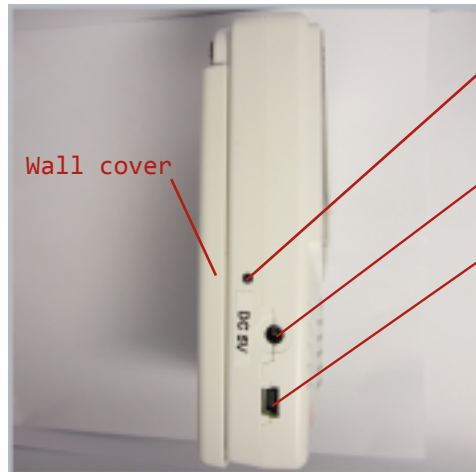
ID ZB Setting Hole (S1)

Reset / Remove ID
(specific to ZigBee series models)



Remarks:
STH-01/STH-01BT/STH-01ZB series models includes battery
STH-01AC / STH-01DC series models without battery

Remarks:
2400mAh Li-ion polymer battery
(Optional accessory)



1-2 ZigBee-Dongle (Optional)



2-1 Logger Settings



Name Time TUL TLL HUL HLL Sample Overwrite

Sys.Set Enter/Set Next

▲▼ Up/Down, Yes/No Setting

°C / °F Setting

Example Logger Settings:

Name: ID 001

Time: 2010: 05: 25: 08: 04

(Year / Month / Day / Hour / Min)

TU, TL, HU, HL, Sample, Overwrite:
40°C, 20°C, 90%, 30%, 1, Y

- TUL = Temperature Upper Limit
- TLL = Temperature Lower Limit
- HUL = Humidity Upper Limit
- HLL = Humidity Lower Limit

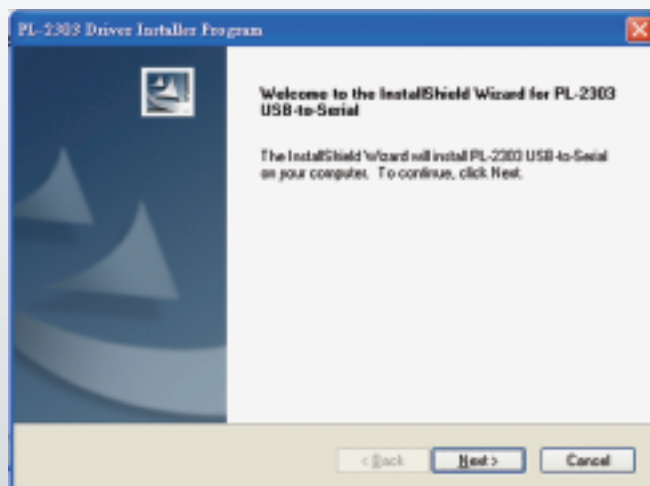
For ZigBee series Temperature and Humidity data logger

2-2 ZigBee Link Settings

To link both the ZigBee dongle and ZigBee data logger communicate successfully, please follow with below instructions step by step.

2-2-1 Install USB driver

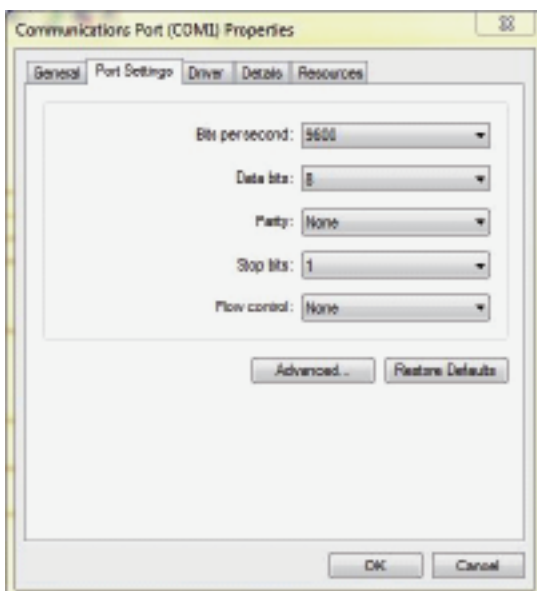
Find the PL2303-Prolific_Driver Installer_v1417.exe Software enclosed in the CD and run setup



2-2-2 COM Port setting



Ensure ZigBee dongle is plugged into the PC. Go to **My Computer**, click right button on the mouse, select **Content**, choose **Hardware**, click **Device Manager**, then set COM port (Prolific USB-to-Serial Comm Port) as below.



Power Switch	Off/On (Left - Right)
Baud rate	9600 bps
Data bits	8
Parity	None
Stop bits	1
Flow coontrol	None

2-2-3 Initialize ZigBee Dongle

When you first time to connect the ZigBee Dongle, please do the initial setting by following instructions.

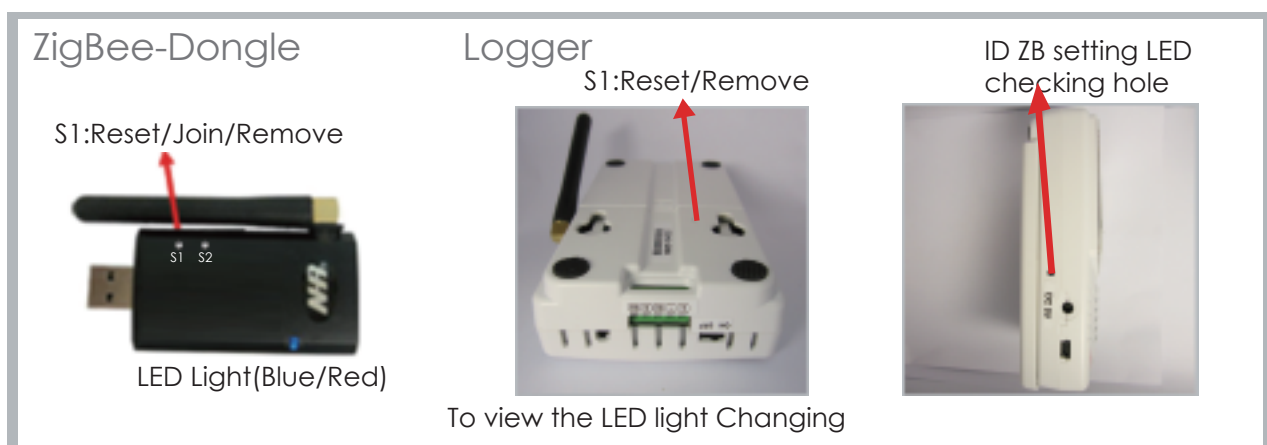
- To Initialize (Reset) ZigBee Dongle– Press dongle “S1” switch for 3 seconds the ● red and ● blue LED flashing simultaneously and then, turns into blinking ● blue means ready.

2-2-4 Resetting ZigBee data logger

- To (Reset) data logger standby to be joined – Press Data Logger “S1” switch for 3 seconds.the ● red and ● blue LED flashing simultaneously and then, turns into blinking ● blue means ready.

2-2-5 To Join logger ID to the ZigBee dongle

- Press Dongle "S1" switch once for join device from the LED Viewing hole, you will see the LED lights in solid blue when successfully connected.
Repeat 2-2-4 & 2-2-5 procedures to add/join new data logger ID, maximum acceptable for up to 31 data loggers



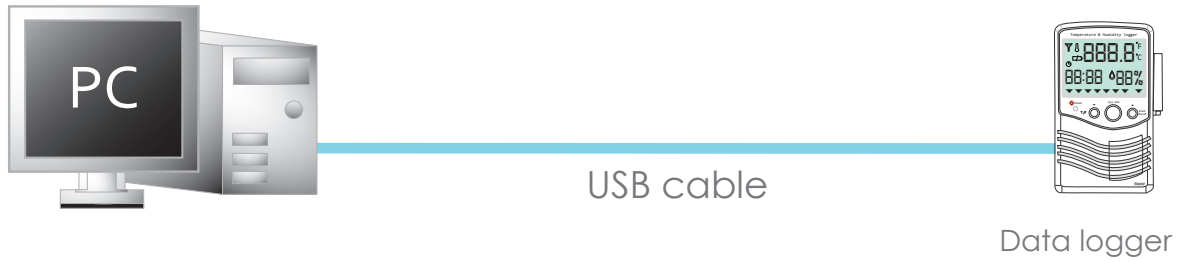
2-2-6 To remove joined device

When in some case needs to remove the joined data loggers, please refer to following instructions.

- Press the Dongle "S1" switch twice, the Blue LED flashing, next, press the Logger S1 switch 3 times, you will see the dongle Blue LED blinking means removed successfully.

Data Logger Connectivity

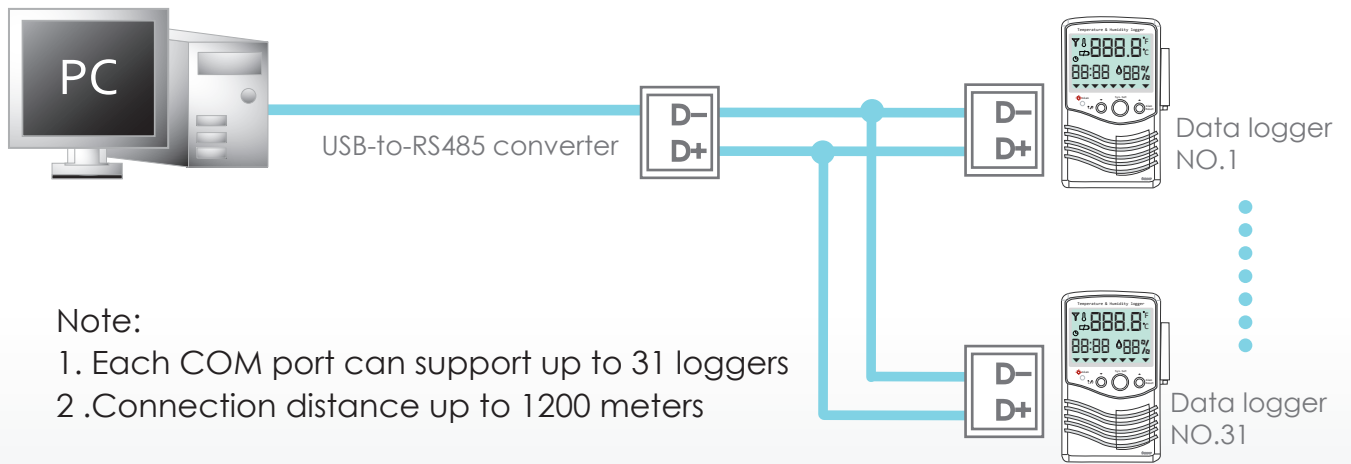
3-1 USB data logger



Note:

- 1. Each USB virtually can support only one logger
- 2. Suggest connection distance within 3 meters

3-2 RS485 data logger



Note:

- 1. Each COM port can support up to 31 loggers
- 2. Connection distance up to 1200 meters

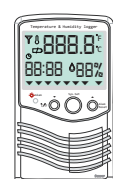
3-3 Bluetooth Wireless data logger



(Bluetooth dongle plugged into PC)



Data logger NO.1



Data logger NO.7

Note:

1. NHR WBT-02USB Bluetooth dongle can support virtual COM to connect up to 7 loggers, other Bluetooth dongle in the market can support 4 loggers
2. Transmission distance 150 meters for Bluetooth Class 1; 20 meters for Class 2 (in open space)

3-4 ZigBee Wireless data logger



(ZigBee dongle plugged into PC)



Data logger NO.1



Data logger NO.31

Note:

1. Each COM port can support up to 31 loggers
2. Connection distance is 500 meters in open space

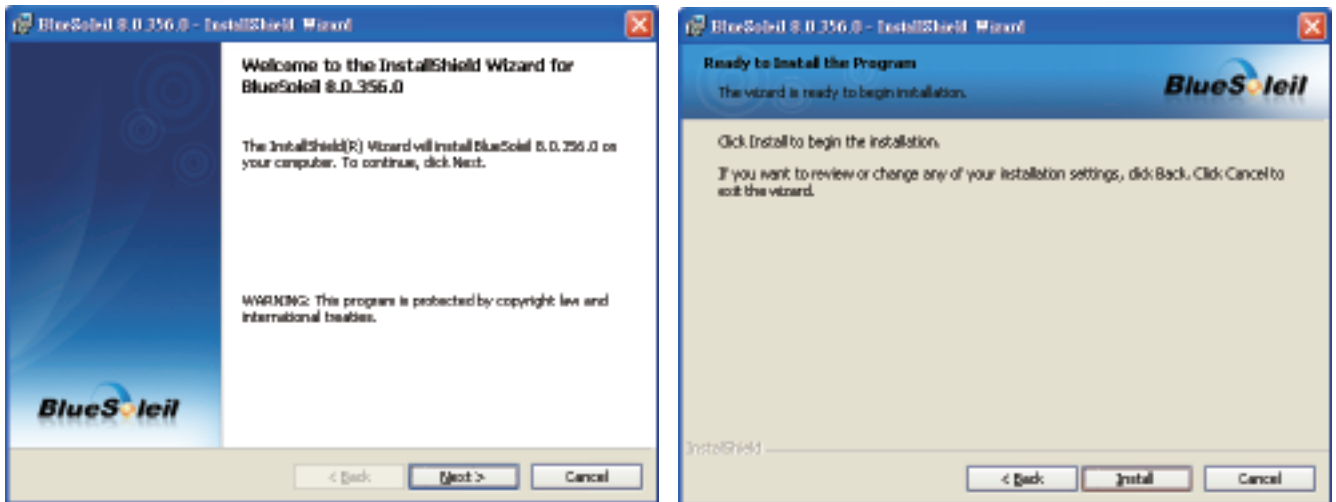
Bluetooth Set Up

For Blue tooth series Temperature & Humidity Data logger

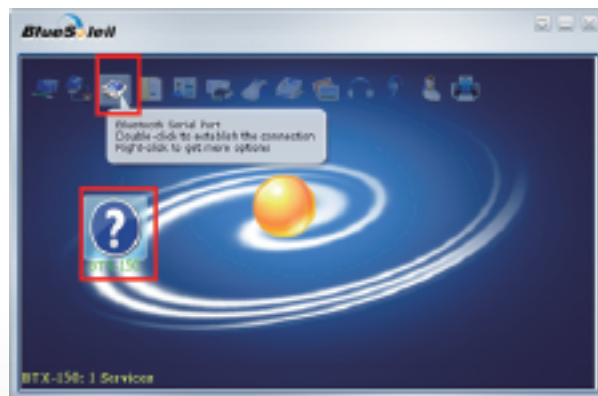
08

Bluetooth Set Up

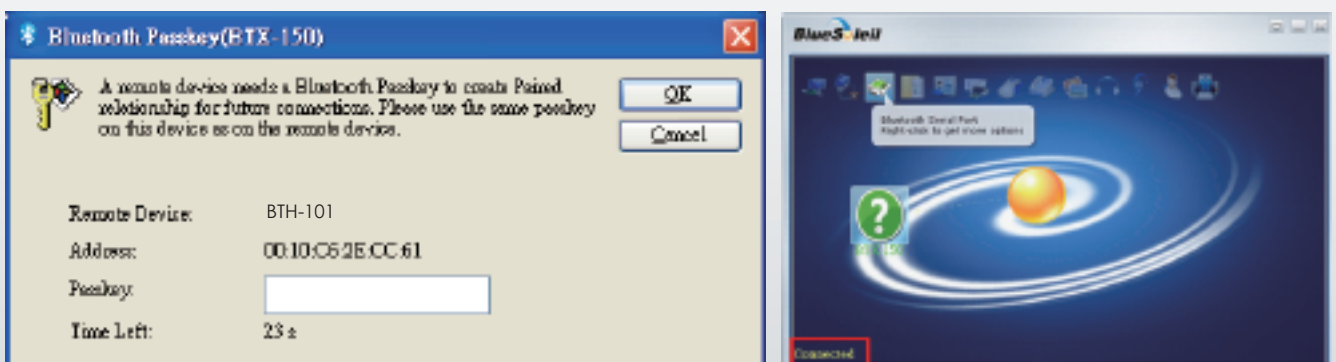
Ensure Bluetooth data logger is switched on and the Bluetooth dongle is plugged into the PC. Click on the Bluetooth icon in the system tray, select **Bluetooth Settings**, select **Express Mode**, and then click on **Next**.



Select BTX+150 and click twice on Bluetooth Serial Port connection under the **Bluetooth** menu.



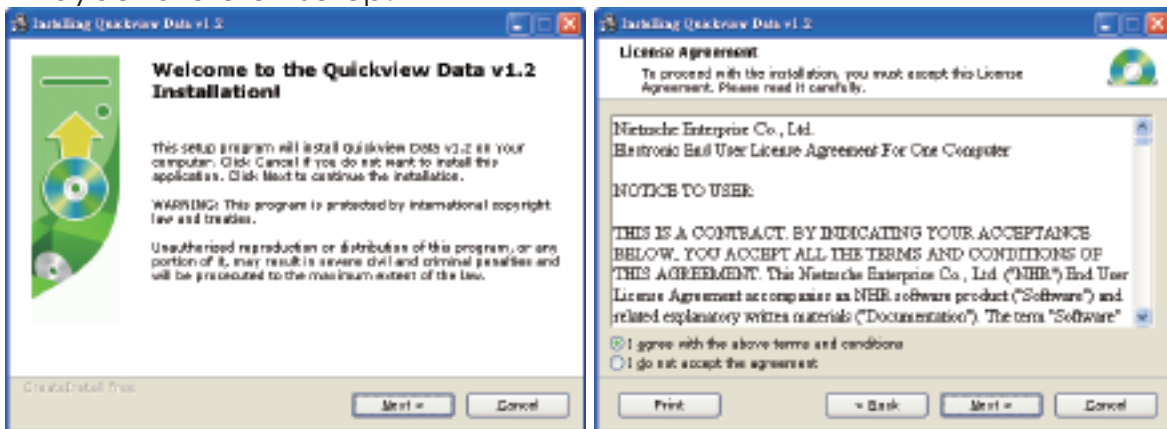
In the **Bluetooth Manager - Bluetooth Security** window, enter **1234** for Bluetooth Paskey (PIN) and click on **OK**. The set up is now complete. Please Not of the COM.port# for setting COM port in the Quickview Monitohing software



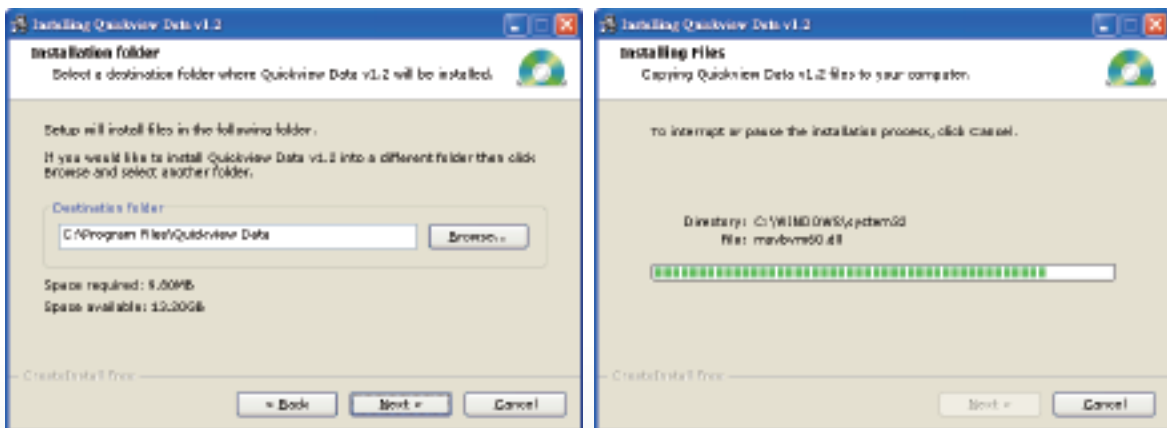
Launch and Install the Quickview software

Step 1

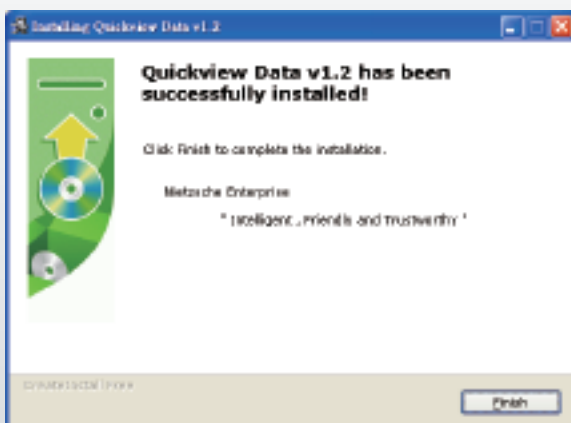
Find the Quickview Data V1.2 software enclosed in the CD and run setup. Please be sure you are the authorized administrator to set up software, otherwise maybe failure on setup.



Step 2



Step 3










PC Software Operation

10

PC Software Operation

To set up the logger to start monitoring or recording data, follow the steps as below:

Functions	Icon	Meaning
Setting	 Setting	Setting up the logger to record data
Polling	 Polling	Polling for reading the data
Save	 Save	Save real time data in .CSV Excel format manually
Monitor	 Monitor	Real-Time monitoring data/Temp Unit/Clear data/Alarm sound
Chart	 Chart	View Chart
Function	 Function	Download, remote setting Date/Time Correcting, Alarm limits to logger
Analyzer	 Analyzer	Analyzer for logger data
Exit	 Exit	Exit Quickview software and save current setting

Notes:

- Quickview software compatible: Win98, Win2000, Win XP, Vista, Win 7
- System will auto save every 30,000 readings to .dlg file and clear screen to refresh with new data.

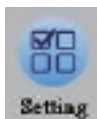
Start Quickview for real-time monitoring



Before start Quickview software, be sure the wired data loggers are connected to the PC or wireless data loggers are setup properly

Setting

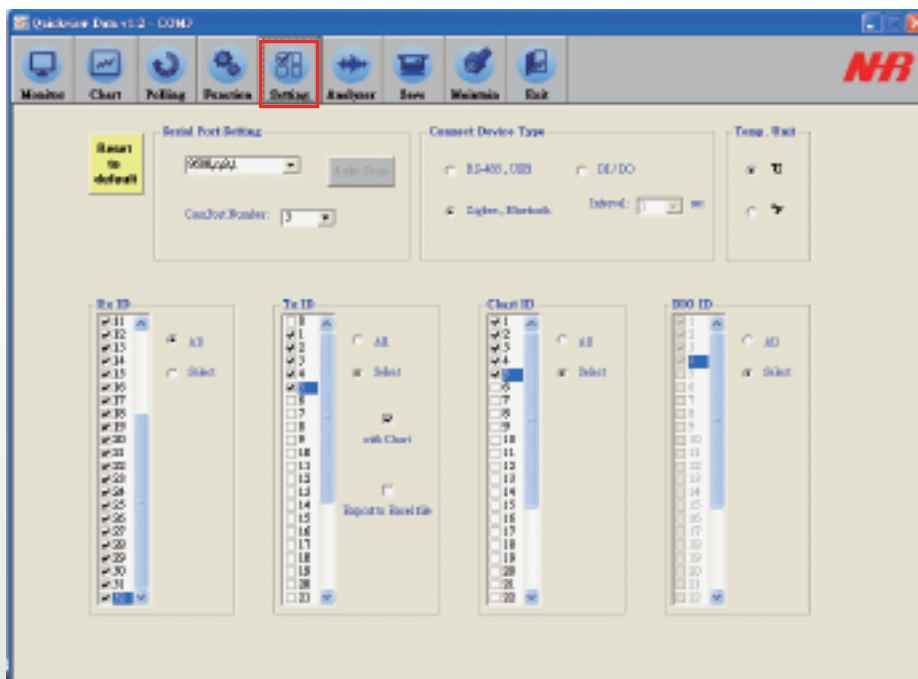
Click



to configure loggers ID to be read and recorded through following steps

- Auto Scan and then select COM Port number
- Connective Device Type: select RS-485, USB or ZigBee, Bluetooth
- Temperature °C / °F (changeable by click in the Temp. Unit section)
- Interval (by second)
- Select Rx ID (Received by Dongle)
- Select Tx ID 1-31, (the connective data loggers)
- Select Chart ID (configure ID to view data chart)

* Note: for data loggers, no need to set DIO ID



PC Software Operation

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Polling

Click  to read real-time data of configured ID,  to stop polling.

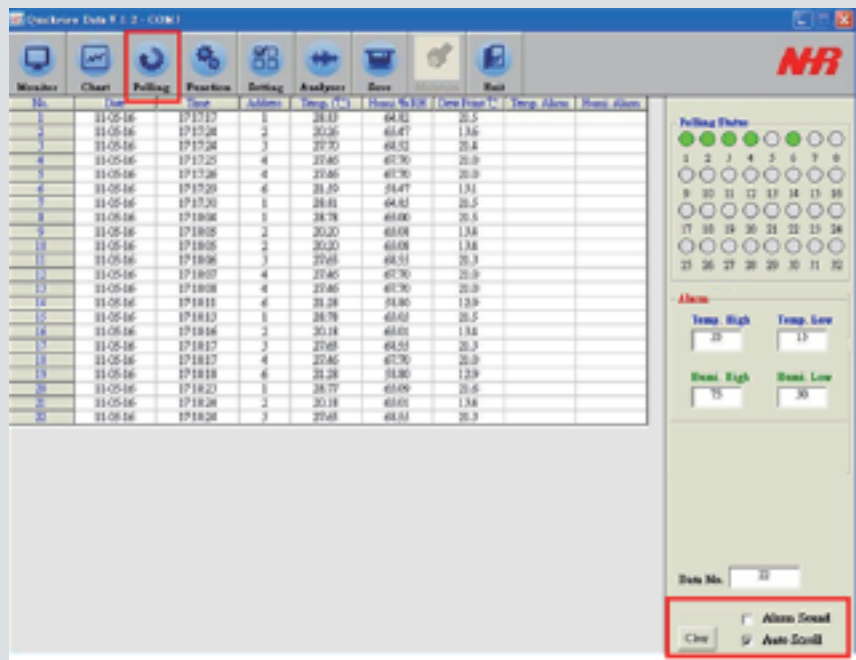
- No. of readings
- Date (Y/M/D)
- Time (H/M/S)
- Address of loggers
- Temperature °C / °F
- Humidity % RH
- Dew Point °C
- Temperature Alarm (highlight in red indicate Alarms)
- Humidity Alarm (highlight in red indicated Alarms)

** Temperature °C / °F setting: Click °C or °F to change Temperature Unit

** Click  to clear screen readings manually

** Click  to able or disable Alarm siren from PC when out of limits

** Click  to able or disable



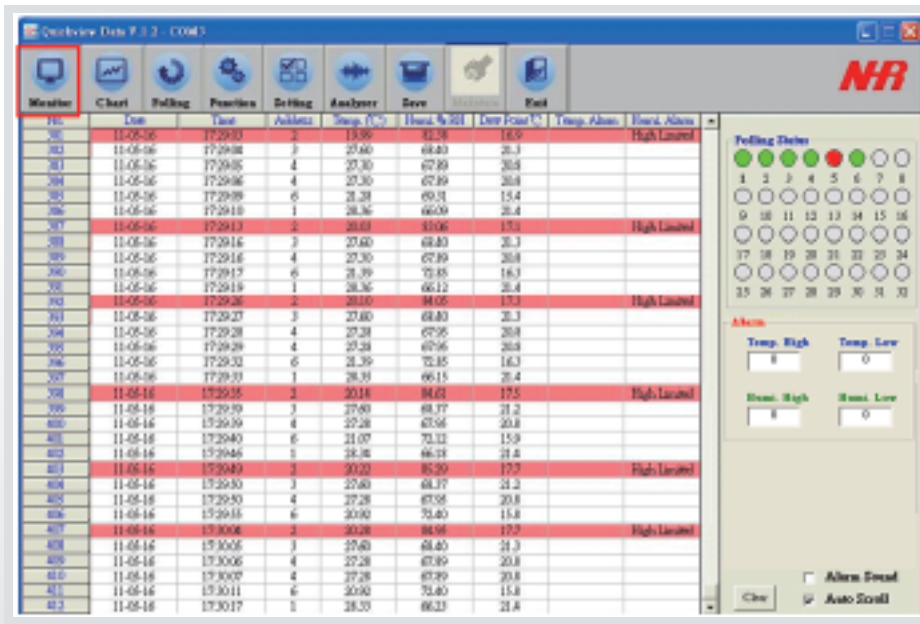
The screenshot displays the 'Data Entry Data v. 1.2 - (3/16)' software interface. The main window contains a table with columns for 'No.', 'Date', 'Time', 'Address', 'Temp. (C)', 'Hum. % RH', 'Dew Point (C)', 'Temp. Alarm', and 'Hum. Alarm'. The 'Polling' button in the top toolbar is highlighted with a red box. On the right side, there is a 'Polling Status' section with a grid of 32 indicator lights. Below that, an 'Alarm' section shows 'Temp. High' and 'Temp. Low' values (25 and 15 respectively), and 'Humid. High' and 'Humid. Low' values (75 and 30 respectively). At the bottom right, there are 'Clear', 'Alarm Sound', and 'Auto Scroll' buttons, with the 'Clear' and 'Auto Scroll' buttons highlighted by a red box.

No.	Date	Time	Address	Temp. (C)	Hum. % RH	Dew Point (C)	Temp. Alarm	Hum. Alarm
1	11-05-16	17:17:17	1	33.13	64.32	25.5		
2	11-05-16	17:17:24	2	30.26	63.47	13.6		
3	11-05-16	17:17:28	3	37.70	68.52	20.4		
4	11-05-16	17:17:25	4	29.65	67.30	20.0		
5	11-05-16	17:17:26	4	29.65	67.30	20.0		
6	11-05-16	17:17:29	6	31.20	54.47	13.1		
7	11-05-16	17:17:30	1	34.81	64.62	20.5		
8	11-05-16	17:18:04	1	34.78	64.60	20.5		
9	11-05-16	17:18:05	2	30.20	63.68	13.8		
10	11-05-16	17:18:05	3	30.20	63.68	13.8		
11	11-05-16	17:18:06	3	29.68	68.51	20.3		
12	11-05-16	17:18:07	4	29.65	67.30	20.0		
13	11-05-16	17:18:08	4	29.65	67.30	20.0		
14	11-05-16	17:18:11	6	31.28	51.80	12.9		
15	11-05-16	17:18:13	1	34.79	63.62	20.5		
16	11-05-16	17:18:14	2	30.18	63.61	13.8		
17	11-05-16	17:18:17	3	29.65	68.51	20.3		
18	11-05-16	17:18:17	4	29.65	67.30	20.0		
19	11-05-16	17:18:18	6	31.28	51.80	12.9		
20	11-05-16	17:18:23	1	34.77	63.66	20.6		
21	11-05-16	17:18:24	2	30.18	63.61	13.8		
22	11-05-16	17:18:24	3	29.68	68.51	20.3		

Monitor

Click  to monitor the real-time data

- No. of readings
- Date (Y/M/D)
- Time (H/M/S)
- Address of loggers
- Temperature °C / °F
- Humidity % RH
- Dew point °C
- Temperature alarm
- Humidity alarm
- Polling status (disconnect in red/connect in green)
- Temperature High/Low limits
- Data No. of reading data
- Clear of all data
- Alarm sound
- Auto scroll



Data No.	Date	Time	Address	Temp. (°C)	Humid. % RH	Dew Point (°C)	Temp. Alarm	Humid. Alarm
381	11-05-16	17:29:03	2	19.95	61.78	16.9		
382	11-05-16	17:29:04	2	27.60	68.80	26.3		High Limited
383	11-05-16	17:29:05	4	27.30	67.89	26.8		
384	11-05-16	17:29:06	4	27.30	67.89	26.8		
385	11-05-16	17:29:09	6	28.28	69.91	15.4		
386	11-05-16	17:29:10	1	28.36	66.09	26.4		
387	11-05-16	17:29:13	2	26.63	63.06	17.1		High Limited
388	11-05-16	17:29:14	3	27.60	68.80	26.3		
389	11-05-16	17:29:16	4	27.30	67.89	26.8		
390	11-05-16	17:29:17	6	28.39	70.88	16.3		
391	11-05-16	17:29:19	1	28.36	66.12	26.4		
392	11-05-16	17:29:20	2	20.10	84.05	17.1		High Limited
393	11-05-16	17:29:27	3	27.60	68.80	26.3		
394	11-05-16	17:29:28	4	27.28	67.95	26.8		
395	11-05-16	17:29:29	4	27.28	67.96	26.8		
396	11-05-16	17:29:30	6	28.39	72.85	16.3		
397	11-05-16	17:29:33	1	28.34	66.15	26.4		
398	11-05-16	17:29:35	2	20.14	84.04	17.5		High Limited
399	11-05-16	17:29:39	3	27.60	68.77	21.2		
400	11-05-16	17:29:39	4	27.28	67.94	26.8		
401	11-05-16	17:29:40	6	21.07	73.12	15.9		
402	11-05-16	17:29:44	1	28.36	66.18	26.4		
403	11-05-16	17:29:49	2	20.22	85.09	17.7		High Limited
404	11-05-16	17:29:50	3	27.60	68.77	21.2		
405	11-05-16	17:29:50	4	27.28	67.96	26.8		
406	11-05-16	17:29:55	6	20.90	73.40	15.8		
407	11-05-16	17:30:06	2	20.28	84.96	17.7		High Limited
408	11-05-16	17:30:06	3	27.60	68.40	21.3		
409	11-05-16	17:30:06	4	27.28	67.89	26.8		
410	11-05-16	17:30:07	4	27.28	67.89	26.8		
411	11-05-16	17:30:11	6	20.90	73.40	15.8		
412	11-05-16	17:30:17	1	28.35	66.23	21.8		

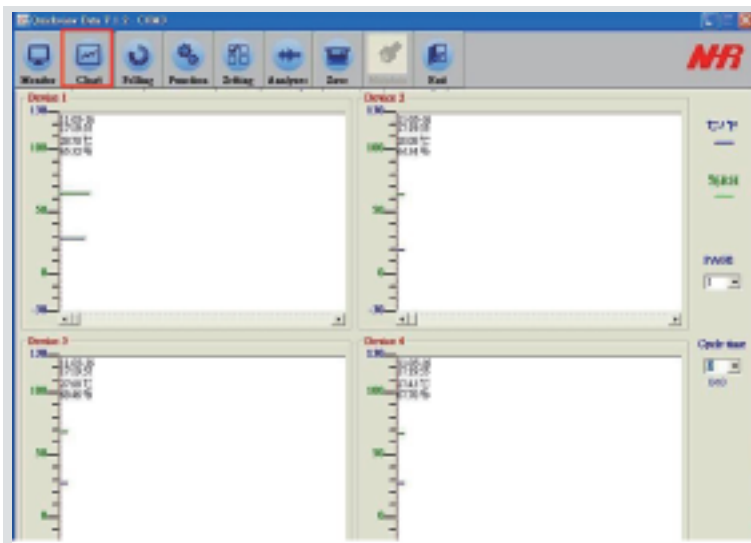
PC Software Operation

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Chart

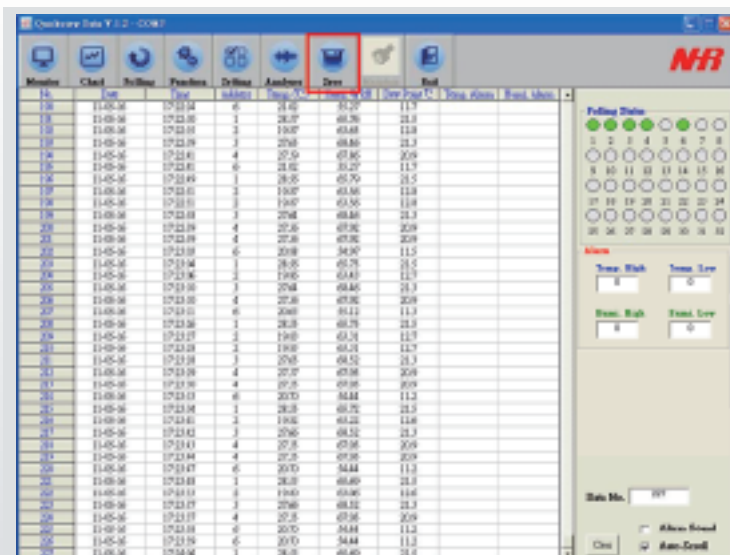
Click  to view real-time data in Chart Mode

- 4 charts per page, Maximum 8 pages
- Select Cycle time (by Sec.) for page exchange



Save

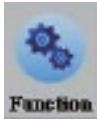
Click  to save real-time data in .CSV Excel format manually






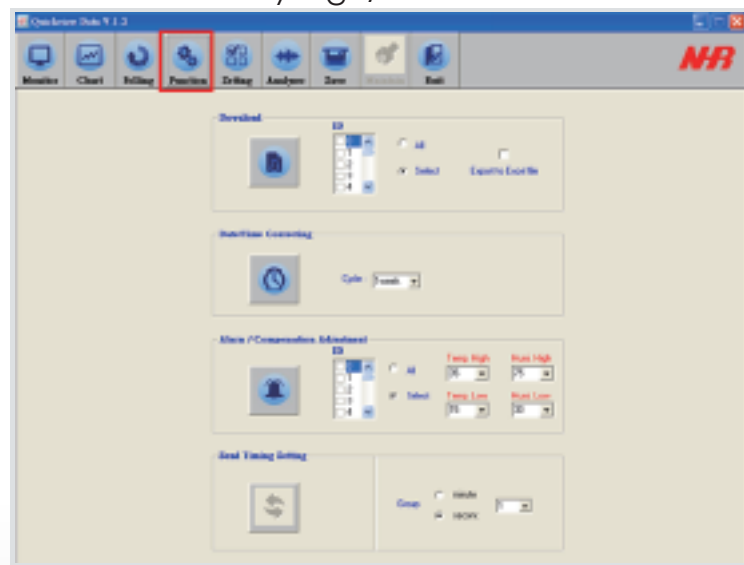
Time	Cycle	Value 1	Value 2	Value 3	Value 4	Value 5	Value 6	Value 7	Value 8
17:21:24	6	21.52	61.27	11.7					
17:21:25	1	28.27	68.26	21.3					
17:21:26	2	19.07	63.68	12.8					
17:21:27	3	27.65	68.85	21.3					
17:21:28	4	22.59	63.85	20.9					
17:21:29	5	31.22	71.27	11.7					
17:21:30	1	28.25	65.70	21.5					
17:21:31	2	19.07	61.86	12.8					
17:21:32	3	19.07	63.85	12.8					
17:21:33	4	27.65	68.85	21.3					
17:21:34	5	27.65	68.85	21.3					
17:21:35	6	20.88	54.90	11.5					
17:21:36	1	28.25	68.75	21.5					
17:21:37	2	19.07	63.67	12.7					
17:21:38	3	27.64	68.85	21.3					
17:21:39	4	27.65	68.85	20.9					
17:21:40	5	27.65	68.85	20.9					
17:21:41	6	20.88	54.90	11.5					
17:21:42	1	28.25	68.75	21.3					
17:21:43	2	19.07	63.68	12.7					
17:21:44	3	27.65	68.85	21.3					
17:21:45	4	27.65	68.85	20.9					
17:21:46	5	27.65	68.85	21.3					
17:21:47	6	20.77	63.68	20.9					
17:21:48	1	27.65	68.85	20.9					
17:21:49	2	19.07	63.68	12.7					
17:21:50	3	27.65	68.85	21.3					
17:21:51	4	27.65	68.85	21.3					
17:21:52	5	27.65	68.85	21.3					
17:21:53	6	20.77	63.68	20.9					
17:21:54	1	19.07	63.68	12.7					
17:21:55	2	27.65	68.85	21.3					
17:21:56	3	27.65	68.85	21.3					
17:21:57	4	27.65	68.85	21.3					
17:21:58	5	27.65	68.85	21.3					
17:21:59	6	20.77	63.68	20.9					
17:22:00	1	28.25	68.85	21.3					

Function

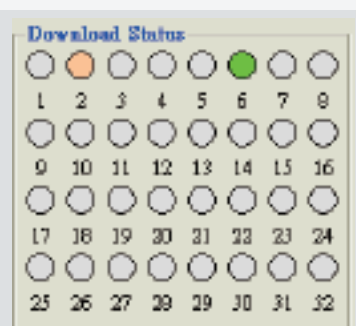
Click



- Download : Select Logger ID to export data, select **Export to excel file** (Default in .dlg format), click  to save data in .dlg file or .CSV Excel format (C:\NHR Quickview\connective PORT\)
- Date/Time correction: click  to simultaneously setting time calibration intervals (1 day/week/month) to all configured ID device to run time calibration simultaneously as scheduled.
- Alarm/Compensation Adjustment : Click  to simultaneously setting temperature and humidity high/low limits



Function - Download status



- When complete assigning ID for download, the indication light of all the line-up assigned IDs are shown in green color, the indication light turns into orange while downloading and ended in gray color.

PC Software Operation

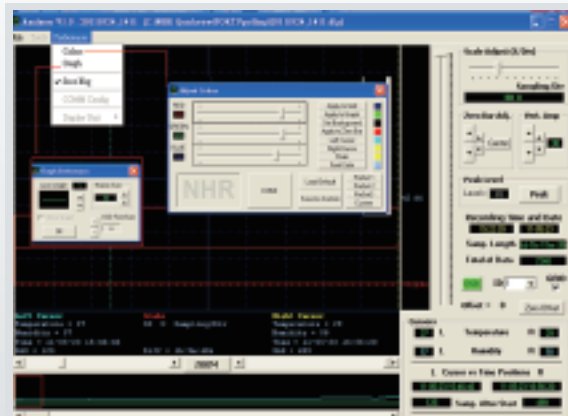
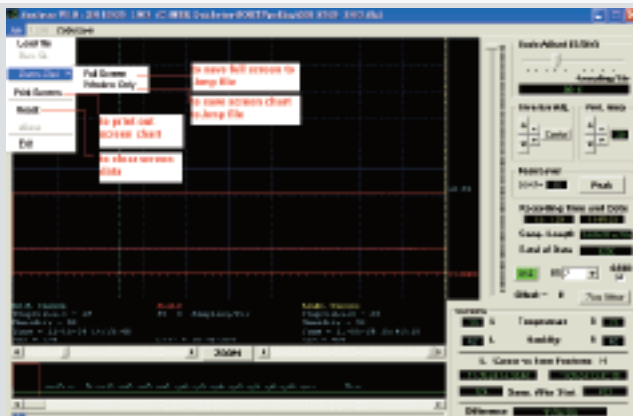
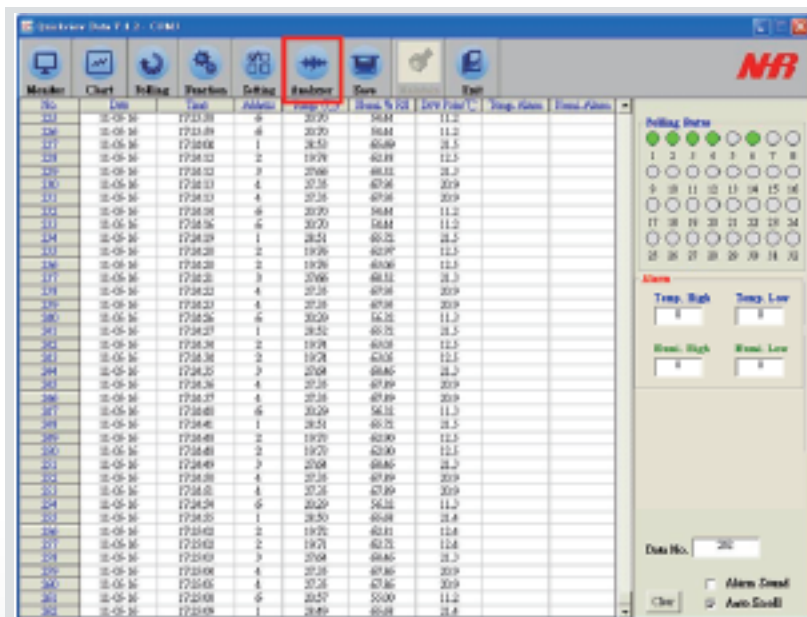
16

Analyzer

Click  to read and analyze old data

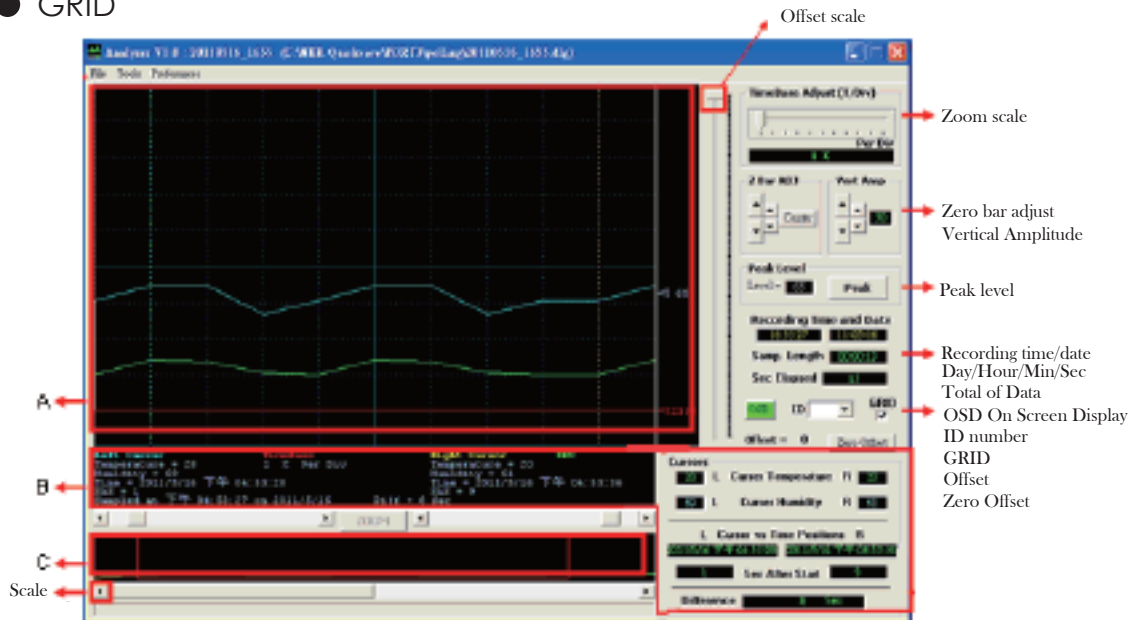
Key function summary :

- File ➔ Load File : to access old data from C:\NHR Quickview\ PORT #\
- Screen Shot ➔ Full Screen: to save full screen chart in .bmp file
Screen Shot ➔ Window Only: to save chart only in .bmp file
Print Screen : to print out screen chart by printer
- Reference/Colors : to set background colors
Reference/Graph : to set graph preference, ex. Chart line thickness



A: Display historical temperature and humidity data in graphic, you can also draw the left/right ROOM bar to tap specific time frame. Each time can only review one ID's data, you can switch to different ID by click ID number.

- Offset : to clear up screen data
- zoom/display scale : to tap specific timeframe
- Zero bar adjust and Vertical amplitude
- Peak level
- Recording time/date/day/hour/min/sec and total of data
- OSD : On screen display
- ID number : select ID to view analyzer chart
- GRID



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