

# AT 43X Data Acquisition Software Instruction

## 1. Overview

Applent Multi-channel Temperature Meter is a single chip temperature detecting system with thermocouple as temperature sensor. Through RS232C interface, data communication is available between line software operating on computer and Applent Multi-channel Temperature Meter, Data can be received, curves drawing and printing. Users can also handle by themselves by importing data into Excel.

## 2. Install and Uninstall

Please open the setup initialization file "AT43X setup.exe", which we have distributed to user. It's easy if you follow the step of operation tips. In general, except adapting install path to non-system disk file path (recommended action), the other operation just click "next step". Normal use of the software need the support of driver, please make sure the driver has been installed correctly.

If you need to uninstall the data acquisition software of Applent Multi-channel Temperature Meter, clicking "Start" → "Programs" → "AT43X data acquisition software" → "Uninstall AT43X data acquisition software," following the operation tips can uninstall quickly. Uninstall is also available in Control Panel. To avoid data loss, before uninstalling, please check whether the data from the database has been reserved, or removing database to other files if necessary (can use data package function or copy out the database file "applent\_at4340. mdb" which under the software install path.

## 3. Function



Figure 3-1

After the installation has been completed, please double-click "AT43X Software" (appearing on table) to open the software. The software will firstly check the communication screen, instrument state and settings, shown in Figure 3-1. User can know whether the setting of instrument is correct according to the testing process. After the testing process, following is the main screen of the software. Software mainly related to the following function:

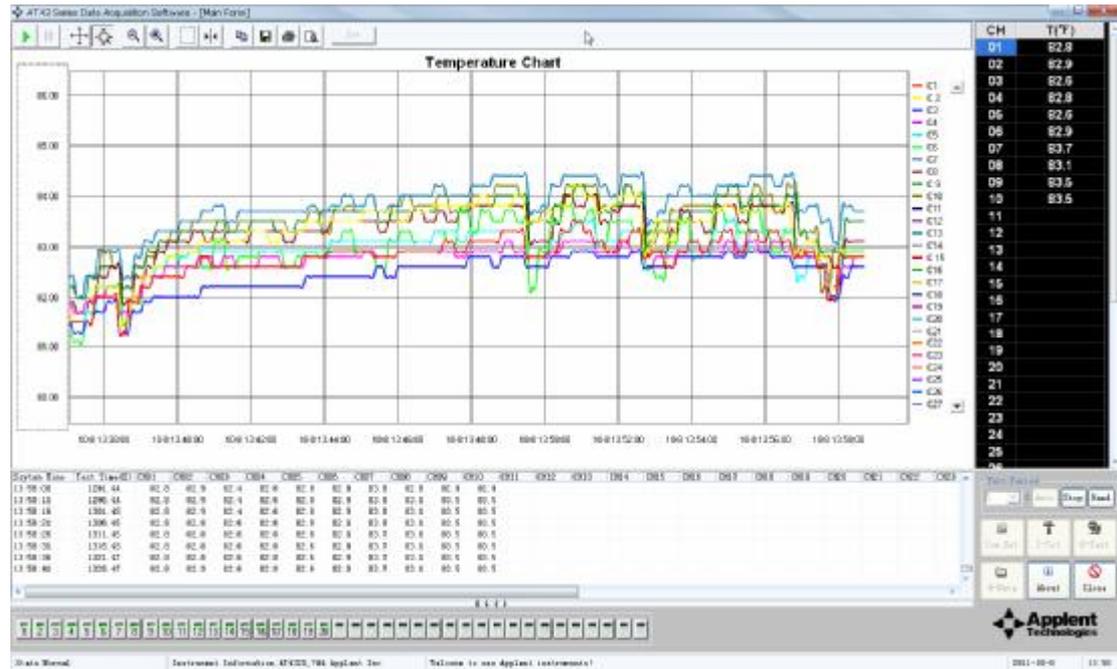


Figure 3-2

1. Real time data

Shown in Figure 3-2, the screen is the main screen of the software, used to display real-time curve and data of the temperature. Curve function button is described below (introduce from left to right)

- 1) Play, recovery curve to the default settings and real-time display of data
- 2) Pause, pause the curve continues to display data
- 3) Drag and drop, click the X or Y axis, rolling the mouse wheel can drag the scope of data
- 4) Zoom, click the X or Y axis, rolling the mouse wheel can scale the scope of data

If you need to observe 20 ~ 30 °C of the data curve, you can drag, zoom the Y axis to achieve. If you need to observe entire curve during the collecting time, you can drag, zoom X-axis to achieve. Drag, Scale X-axis will lead to pause.

- 5) Reducing, reducing the curve of X and Y axis simultaneously.
- 6) Enlarging, enlarging the curve of X and Y axis simultaneously.
- 7) Enlarging partly, select partial curve with the mouse to enlarge
- 8) Measurement, measurement the data of a point on the curve, if you need to switch curve, by clicking curve color legend the corresponding channel name to achieve
- 9) Copying, Copy the current graph to the clipboard.
- 10) Save as, save the current graph as image files
- 11) Printing, print the current image curve
- 12) Print preview, preview the print effect
- 13) Curve show switch, you can click the switch button to control the display of curve, when the color of switch is green, the switch corresponds to the curve shown, otherwise do not show

Selecting acquisition cycle from trigger cycle box, clicking on "Auto" start to collect temperature data automatically in accordance with acquisition cycle. Click "Stop" to stop collecting



Figure 3-2-1

## 2. Setting

Click on the main screen graph, the top of the "Settings" button, you can open the software setting screen as shown in Figure 3-2-1. Here you can set the X-axis showing time type, the temperature value unit displayed in software, graph line style. Time Type: System time is the current time, the format of "month - day hour: minutes: seconds"; sampling time for sampling from the beginning to the current total time, in seconds (S). Software can be set before starting to acquisition, once started can not be set, if you need to change, the data can be packaged, then, re-open to start collecting.



Figure 3-3

## 3. Serial Setting

Shown in Figure 3-3, this operation interface is used to set the serial port and baud rate. View the current port number location of the instrument in computer device manager. Check baud rate in instrument, selecting appropriate option, click "OK" to complete the setup.

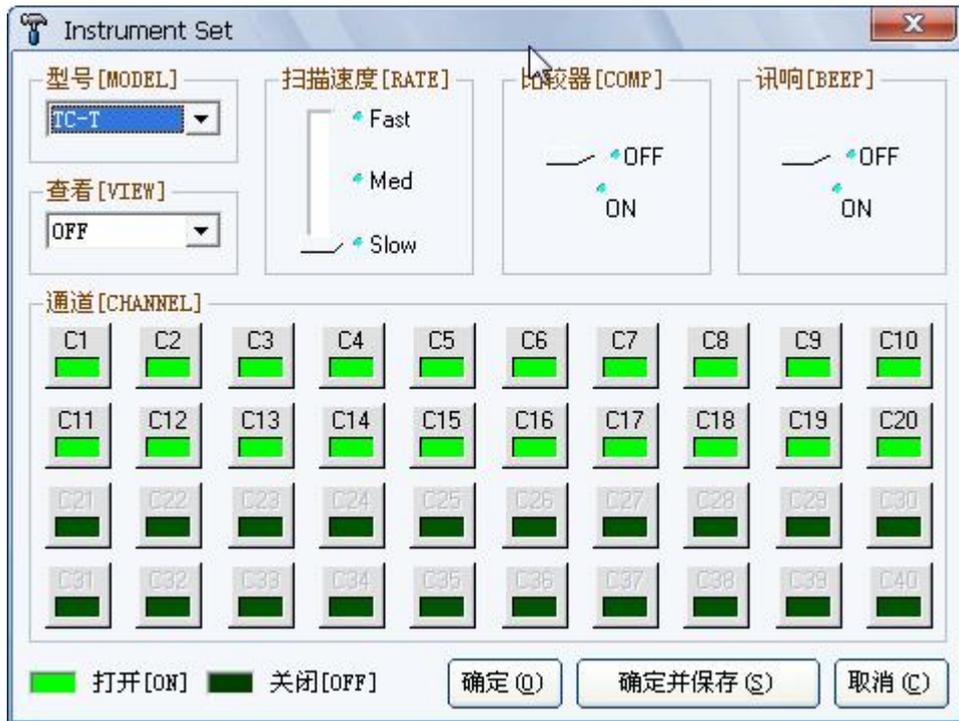


Figure 3-4

#### 4. Equipment Setting

Shown in Figure 3-4, this operation interface is used to set the instrument model, scanning speed, comparator switch, beep switch, way of view, channel switch. Click "OK" button, set the instrument but it was not saved to the instrument; the instrument will be restored to its original setting after turned off. Click "OK and save to the instrument," and the setting will be saved.

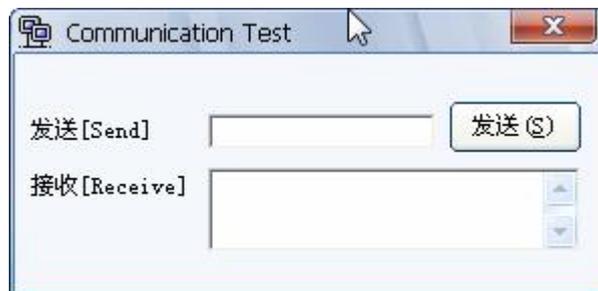


Figure 3-5

#### 5. Communication Setting

Shown in Figure 3-5, in input box, please input the test command which need to be sent to instrument, click the "Send" button to send, if has data returns, will be displayed in receive box.

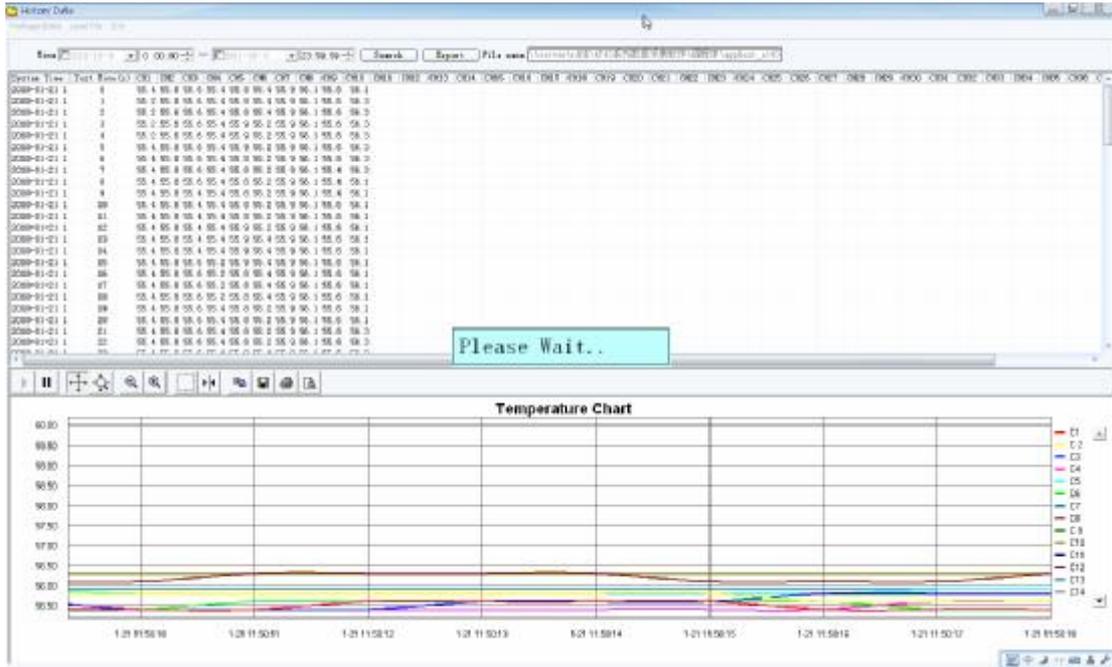


Figure 3-6

#### 6. History Data

Shown in Figure 3-6, is mainly used to package current acquisition data, load and display the history temperature acquisition data. Click the "Package Data" menu button, click OK in the pop-up "data collection package is saved as" dialog box, then, the collected but not package saved data will be package saved. Package acquiesces in "year, month, day, hour, minute, and second" format as file name, and saved in 'DB' file of software installation directory, if need, please manual modify. Click "Load File" menu button, in the pop-up "Open" dialog box, select historical acquisition data package file which need to loaded, click "OK", the file loads successfully and display the data table and temperature curves. If you need to query a given time acquisition data of package, you can input start time in date box, then, click the "Search Data" button. If you need to export data to EXCEL, click "Export EXCEL" button, select save path to complete data export.

#### 7. Related Software

Software Version Information

#### 8. Close the Software

Before closing the software, the system will prompt user to save the current collected temperature data. In condition of shuttle down normally, the software can start package compression and repair tool to improve the performance of package. Damaged package caused by illegal operation will lead data acquisition failure. If so, please re-open the software and close again to repair the damaged package file.

### 4. Others

Software shuts down unexpectedly, when re-open the software, the serial port initialization failure phenomenon occurs. At this time, open the Task Manager, see if is there "AT4340 data acquisition," program in the "application", if its, end task, and then re-open the software.

Applent at4340.mdb file, which in software installation directory, is acquisition data cache database, please do not revise or delete, otherwise, may lead data acquisition failure.

To avoid data acquisition delay, please do not use button of instrument conducting other operations while using the software to collect data.