

Thermo Recorder for Windows®

Unit User's Guide

Please read this User's Guide carefully to ensure proper use of the unit

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Exclusive software

- This software (Version 4.** for Windows®) is exclusively designed for the Thermo Recorder TR-7 and TR-5 Series.
- Peripheral equipment such as a personal computer, printer, etc., which run MS-Windows® are required for using this software.
※ Windows 3.1, Windows 95, WindowsNT 3.51 and WindowsNT 4.0
- The method for operating the software is explained in detail in the Help menu of the software as well as in this manual.

Functions of the exclusive software

- Display function
Collects data of up to 8 channels such as data with different recording dates, intervals and temperature measurement ranges and displays in a single graph or table.
 - Graphic display
· Alteration of the recorded data, list of data information
 - Data list display
· Year, month, date, hour, minute and second; channel name, maximum valueP (Max.), minimum value (Min.), Average value (Avg.) and unit of temperature measurement (Unit.)
- Communication functions
 - Recording start (Programmed start/Immediate start) Channel name, date of recording start (Only for programmed start), recording interval, recording mode (recording method), unit of temperature measurement
 - Set cancelling (only for TR-7)
- Download of the data recorded
Recorded data, Channel name, unit of temperature measurement, date of recording start, recording mode (recording method), recording interval
- Printing function
Free setting for printing size according to paper size is available.
 - Graphic printing (monotone and color)
 - Printing lists
- Filing functions
 - Data saving
(Saving all data or only the range displayed on the graphic screen.)
 - Loading the data saved
 - Preparing the text file of lists
(Data can be used through table calculation software.)

Graphic Display Screen

Note: Some portions are modified for more effective explanation.
Information: For a detailed explanation of the operation method of software, see the Help screen.

- Menu bar
· A detailed description of the operation method of the software is shown in the Help menu.
- Button for horizontal-axis movement
· Click on the button with an arrow mark, and the time axis moves.
- Horizontal gauge bar
· Present display range is on the screen regarding the oldest data to the latest data as full scale in the data from channels 1 to 8. Drag the gauge and simultaneously move it right and left, and the gauge moves to the targeted point.
- A and B cursor buttons
· Drag A or B button and simultaneously move it right and left, and the cursor moves.
· Click A or B button, and the objective for movement can be thrown ON or OFF.
- Cursor movement button
· Click the button with an arrow mark, and cursor A or B moves right and left. (only for the cursor with the objective for movement ON)
- Time for cursor at A or B
● Time gap between A and B
● Effective calculation range (Max., Min., Avg.)
- Channel No. button
· By clicking the channel button, graphic display can be switched ON and OFF.
· Drag the channel button and simultaneously stop it at another channel button, and the data moves to another channel.
· Double-click the channel button, and the dialog box is displayed to delete the data or modify the recording conditions.
- Data name
● Recording intervals
● Number of data
● The data of cursor A
● The data of cursor B
● The gap between A and B
- Maximum value (Max.)
● Minimum value (Min.)
● Average value (Avg.)
● Unit (Unit)
· Double-click maximum value or minimum value, and the graph moves to the position of the value.
- Button for vertical-axis movement
· Click the button with an arrow mark, and the vertical axis moves.
- Vertical gauge bar
· Present display range is on the screen regarding the oldest data to the latest data as full scale in the data from channels 1 to 8.
· Drag the gauge and simultaneously move it up and down, and the gauge moves to the targeted point.
- Expansion and contraction using the mouse
· Magnification
Drag the area for expansion using the left button and simultaneously encircle it with the box cursor.
· Contraction
The area is contracted at a constant rate every time the right button is double-clicked.

Ch.	Name	Interval	Sample	Cursor A	Cursor B	A~B	Max.	Min.	Avg.	Unit
1	Kitchen	2sec	4095	26.2	26.8	0.6	29.2	25.3	26.8	°C
2	Kitchen	2sec	4095	38	43	5	51	33	41.2	%RH
3	Office	2sec	4095	29.0	26.4	2.6	29.2	25.3	26.8	°C
4	Office	2sec	4095	34	37	3	51	33	41.2	%RH
5	Toilet	5sec	4095	28.2	25.4	2.8	29.2	25.3	26.8	°C
6	Toilet	5sec	4095	34	43	9	51	33	41.2	%RH

Data List Display Screen

Note: Some portions are modified for more effective explanation.
Information: For a detailed explanation of the operation method of software, see the Help screen.

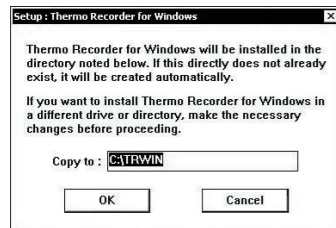
- The screen shown on the left is a sample of data list.
Color indication is as follows.
 - Maximum value = Red
 - Minimum value = Blue
 - Average value = Pink
- Drag the gauge bar up and down, and the gauge moves to the targeted point.

Date Time	Ch.1	Ch.2	Ch.3	Ch.4	Ch.5	Ch.6	Ch.7	Ch.8
7/18/1998 17:32:48	26.8	39	25.5	45				
7/18/1998 17:32:50	26.8	39	25.6	45				
7/18/1998 17:32:52	26.8	39	25.6	45	25.7	47		
7/18/1998 17:32:54	26.8	39	25.6	45				
7/18/1998 17:32:56	26.8	39	25.6	45	25.8	46		
7/18/1998 17:32:58	26.8	39	25.6	45				
7/18/1998 17:33:00	26.8	39	25.6	45				
7/18/1998 17:33:02	26.8	39	25.6	46	25.8	47		
7/18/1998 17:33:04	26.8	39	25.6	46				
7/18/1998 17:33:06	26.8	39	25.6	46				

Operation Method

1 Installation

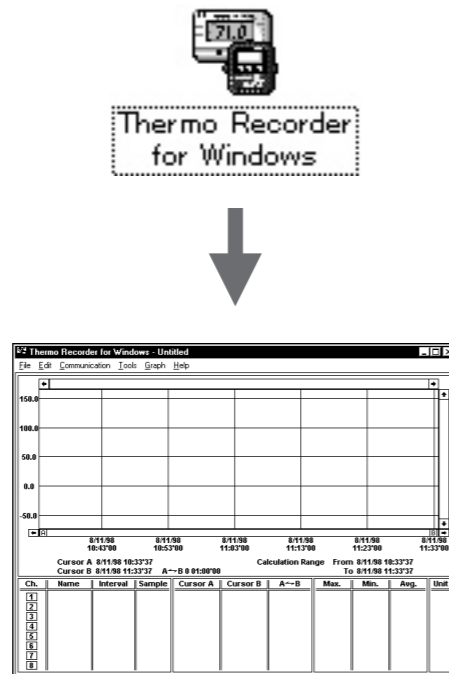
1. OPEN Windows
2. Place the attached CD-ROM in the CD-ROM drive. The [Install Program] window will soon appear. If for some reason the window does not automatically appear, please go to [My Computer] and double click on the CD-ROM icon.
3. Select [Set up "Thermo Recorder for Windows"] and click on [Go]
4. [Copy to:] please enter folder* you want to save program files.
If there are no changes to the default settings of [C:TRWIN], please click [OK].
(*Please install onto hard disk)



5. Upon installation a [Thermo Recorder for Windows] icon will be registered and a [Thermo Recorder for Windows] folder will be created in the Start Menu Program of your computer.

2 Actuation of Software

- Click on the icon of Thermo Recorder for Windows, and the software is actuated.

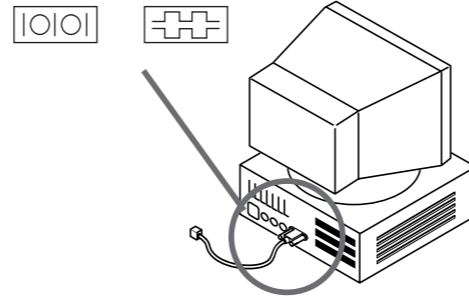


3 Connection of Communication Cable to Personal Computer

- Connect the standard communication cable to the serial port of the personal computer.

- The communication cable connector is a D-SUB female connector with 9 pins. Connect it to the port with the marks shown below

Sample of marks on serial port

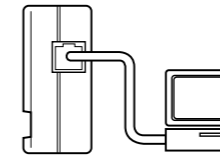


- Pay attention as communication is not possible if the cable is connected to a wrong serial port.
- Completely insert the connector to secure a perfect connection.

4 Before Communication

- The following procedures are necessary before communication with a personal computer.

- Connect the communication cable to the main unit. Confirm secured insertion.
- In the case of TR-71S/72S, directly connect the cable to the main unit.



- In the case of TR-51A/52, connect the communication cable to the communication port and mount it in the communication port with the back side up.



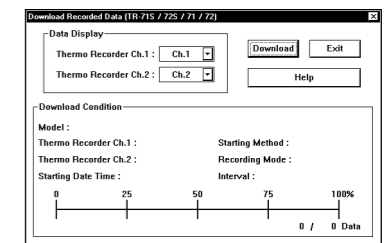
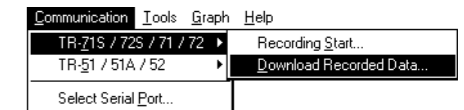
- Confirm that the personal computer clock is accurate. Pay attention as the computer will produce incorrect measurement data through communication with an inaccurate clock.

5 Communication Start

- For downloading the recorded data after the measurement, select from the menu of [COMMUNICATION].

※ For the method of measurement and recording, see instruction manuals for each model.

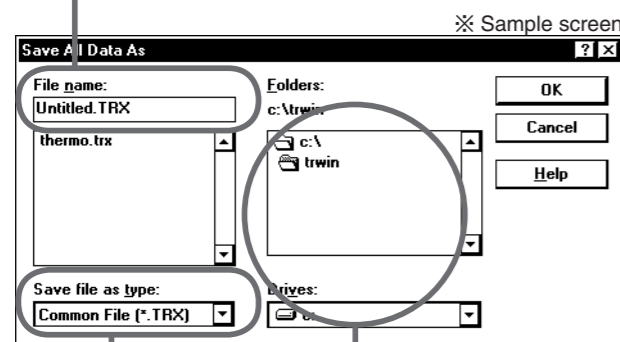
- Download Recorded data
- Select [Download Recorded data], and the dialog box is displayed. Confirm it and click on the [Download] button.



※ Save the data when necessary.

Save Data

Fill in "untitled" in "File Name" with the file name for saving.



Specify the location for saving

Change "TYPE OF FILE" when necessary.

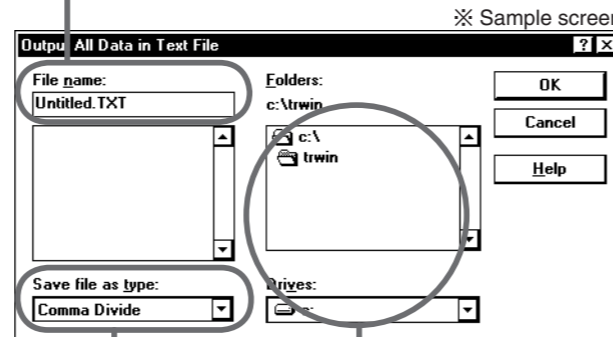
- For saving the data of TR-5 or TR-7: "Common in the series" (* .TRX)

※ TR7 type and TR5 type can be also loaded.

How to make a Text File

- Select either "Output All data in Text File" or "Output All Data for Display Range in Text File" in the "File" menu.

Fill in "untitled" in "File Name" with the file name for saving.
(※ Type of file is ".TXT")



Specify the location for saving

Change "TYPE OF FILE" when necessary.

- Text file (Comma)
- Text file (Tab)
- Text file (Semicolon)
- Text file (space)
- All files (*.*)

- Codes such as comma, tab and space are used for breaking points in the case of loading text files through calculation software such as Excel and Lotus.

※ Text data cannot be loaded in Thermo Recorder for Windows.

Confirm the Following Items when Communication is not Available

- Confirm that the personal computer and the Thermo Recorder are connected correctly.
 - Check if the cable is connected to ports other than serial port (printer port and others).
- Confirm that other communication is working through the software.
 - Downloading data, reservation setting, immediate start, etc.
- Try a communication specifying the serial port setting from COM1 to COM4 through the software regardless of the connector name of the serial port on the personal computer.
- Try communication test through another personal computer if you have one.
- Confirm if your personal computer provides a power-saving function with setting unavailable with the use of a serial port.
- In the case of a DOS/V machine, confirm if the serial port is unavailable for use.
- In the case of running on Windows 95, confirm if the serial port is unavailable for use.
 - One resource is often used for the modem and other functions in an all-in-one personal computer.
- Confirm if an extension communication cable is connected.
 - Communication may be unavailable if a switching unit for the RS-232C is used or an extension cable is connected.
- Confirm if other software is actuated.
- Use a straight type connector for the conversion connector (Gender-changer).
 - Communication is unavailable with a cross type connector.
- Usually, desk-top machines provide 2 ports. Insert the communication cable to the other serial port instead of the present one when communication is not working after confirming the above.