T&D Recorder VLD for Windows®

VLD-5EU

User's Manual

Thank you for purchasing our product.
Carefully read this instruction manual
before using this unit.

2009.04 16010004050 2nd Edition

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Table of Contents

■ Introduction

■ Getting Ready

■ Basic Functions

■ Temp/Humidity Graph

■ Other Functions

■ Other

What is T&D Recorder VLD for Windows®?

■ Outline

In order to comply with FDA 21 CFR Part 11, T&D Recorder VLD for Windows is complete with the following functions.

- Software Operation Password Protection
  To use these applications it is necessary to have a User ID and Password; only those people with authorization can operate this software. Also, these applications can only be run in Windows 2000 and Windows XP, so it is possible to further restrict access via the OS settings.

- Prevention of Data Manipulation via Password
  To use these applications it is necessary to have a User ID and Password; only those people with authorization can manage and manipulate downloaded data. Moreover, the downloaded data is encoded and if the data is manipulated, the file will not be able to be opened.

- Recording of Software Operations History
  An archive of operations (audit trail) is automatically recorded and kept.
  In addition, the easy-to-use software offers a variety of useful functions at your fingertips including: control of data logger recording settings, data downloading, graph display, table creation, printing, and file output.

Also, if you wish to use wireless communication between the Data Logger (Wireless Communication Type: RTR-51/52/53) and a Data Collector (Wireless Communication Type: RTR-57U/57C), it is possible to make the necessary Remote Unit Registrations.

Note

- In the Manual the phrase Data Collector refers to both types (Wireless Communication Types: RTR-57U/57C) and (Non-Wireless Types: TR-57U/57C).

■ Basic Functions

- User Registration

  T&D Recorder VLD for Windows can only be used by Users who have been registered to use the contained applications. Each user must Login using his or her registered User ID and Password. Even if Login is accomplished, it is possible to make settings to restrict the operations allowed for each user and to make settings so that if no operations are preformed for a set period of time the application will automatically timeout and it will be necessary to login again in order to perform any operations.

- Group/Remote Unit Registration

  If you would like to use wireless communication between the Data Collector (Wireless Types: RTR-57U/57C) and the Data Logger (Wireless Types: RTR-51/52/53) it is necessary to first register via computer the Data Logger as a Remote Unit into the Data Collector It is possible to carry out operations and manage the Remote Units in Groups.

- Recording Settings

  All types of Recording Settings can be made here: Channel Name(s), Recording Mode, Recording Interval and so on. By setting a date and time in the main unit you can easily program to start recording on that date at the set time.

- Data Collection

  Download recorded data to a computer and create files.
  When data is downloaded and viewed in a Graph an encoded data file will be created and saved that will require a User ID and Password to open. Using the Data Collector, it is possible to view the collected data in a list and specify which data files to download to the computer. Moreover, recorded data from various type of Data Loggers (RTR-51/52/53/TR-51A/52) can be processed at one time.

- Viewing the Temp/Humidity Graph

  Here, it is possible to view in Graph form, the temperature and humidity data recorded by the Data Logger.

  【View 8 channels of data in 1 display】
  Downloaded temperature and humidity data from both the Logger and the Collector can be viewed in a single Graph. Up to eight channels of data can be added to a single Graph.

  【Easy zoom in and out with mouse】
  By selecting a range with your mouse you can easily zoom in and out on data.

- Calculate and view the highest, lowest and average readings for a desired range.

  In the Graph, for each channel it is possible to designate a desired range from which the highest, lowest and average readings will be calculated and displayed.

- Creating Text File

  It is possible to convert the data for a specified range (time period) to common text file format (CSV type format), so that it can be exported to spreadsheet software such as Excel® or Lotus®.

- Printing the Temp/Humidity Graph

  It is possible to easily print in color the Graph as it is being displayed. It is also possible to save printing settings to enable the printing of a previously printed graph in exactly the same way.

- View and Print Measured Data List

  You can view the data displayed in the graph window as a list and then choose to print.

  【View in Easy to Distinguish Colors】
  In the data list, the highest value will appear in red, the lowest in blue, and the average in pink.
  【Printing the Data List】
  It is possible to print the entire list as displayed or to select pages for printing.

- View Operations History
  All operations within the application which require authorization to carry out will be recorded in the Operations History and saved in the History File in the same Folder into which T&D Recorder VLD for Windows was installed. It is also possible to save the archived information in text file.

■ Compatible Devices

The validation function of T&D Recorder VLD for Windows can be used with the following models.

- Data Logger
  RTR-51, RTR-52, RTR-53, TR-51A, TR-52
  RTR-51A, RTR-52A, RTR-53A,
- Data Collector
  RTR-57U, RTR-57C
- Communication Port
  TR-50C

Basic Procedures

■ Getting Ready

1: Installing the T&D Recorder VLD for Windows

Install T&D Recorder VLD for Windows to the computer in which you wish to use it.
By installing T&D Recorder VLD for Windows, all applications contained will be installed, including User Management Tools, Archive Viewer, Remote Unit Registration Tools, Data Logger Settings Tools, and Temp/Humidity Graph. ⇒ pp.7

Note

- It is only possible to install to Windows 2000/XP.
- Do not install both versions of the software T&D Recorder VLD for Windows and T&D Recorder for Windows (the provided software with each unit/collector) on the same computer.

2: User Registration (User Management Tools)

Set up and register all User ID's and Passwords that will be necessary for logging into the various T&D Recorder VLD for Windows applications, and register which operations will require operation authorization. ⇒ pp.11

3: Getting the Data Collector and Computer Ready for Communication

Install batteries, connect the communication cable and make communication port settings (USB communication or RS232C communication) so that the computer can carry out communication with the Data Collector. ⇒ pp.17

4: Getting the Data Logger(s) and Computer Ready for Communication

Place a Data Logger face down on a Data Collector connected to a computer to enable communication. ⇒ pp.25

5: Register the Remote Units (for wireless communication)

If you are using a data logger which has wireless capability and would like to use wireless communication between the Data Collector and the Data Logger, it is necessary to register the Data Logger as a Remote Unit. It is possible to carry out operations and manage the Remote Units in Groups. ⇒ pp.27

■ Basic Operations

1: Recording Settings

Set up the recording conditions for each Remote Unit via the Data Collector or other suitable means.

2: Downloading Recorded Data

Here it is possible to download recorded data from the Data Logger directly to the computer, or, download the collected data from the Data Collector to your computer.
Then you can edit, print and view the downloaded data in graph form using the Temp/Humidity Graph.

■ Temp/Humidity Graph

It is possible to view the recorded data downloaded to your computer in graph form, in table form, printed form or convert into text file data.
It is possible to simultaneously view 8 channels of data.
It is also possible to hide, re-order and delete channels, edit recording start times, and make changes to graph colors among other useful functions.

Installation

- Is Windows® operating properly ?

  If Windows is not operating properly, the applications within T&D Recorder VLD for Windows may not be installed correctly or it may not operate properly.

- Please quit all other applications.

  If other programs are open, please close and quit all of them, making sure to quit all Quick Start programs such as a virus checker.

- Please uninstall T&D Recorder for Windows.

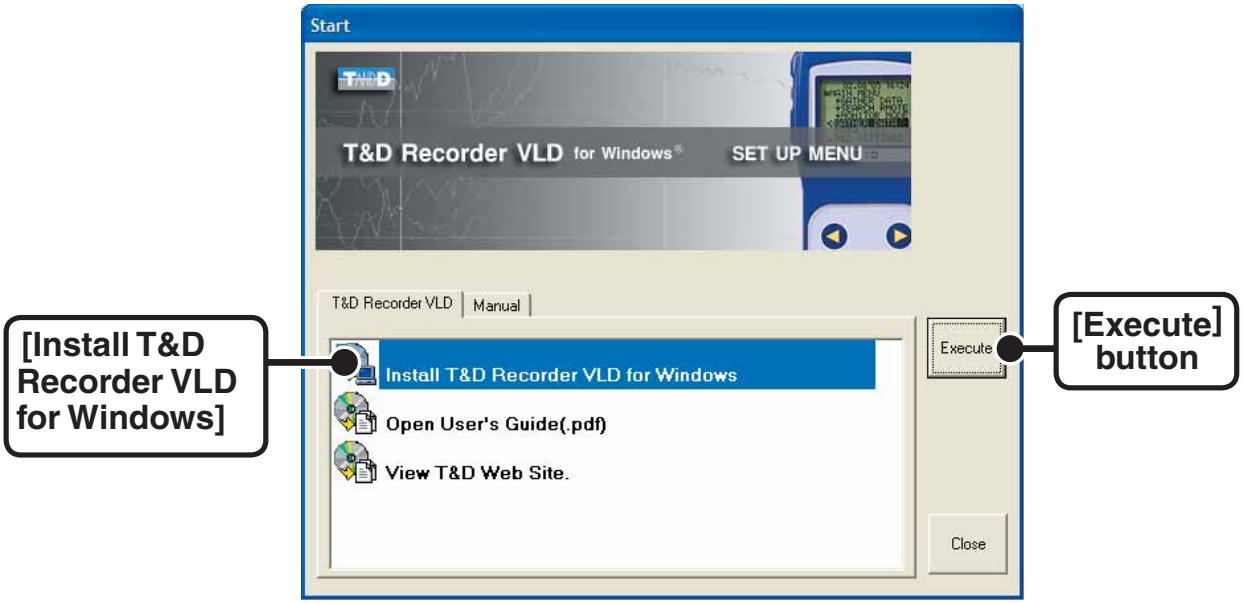
  Do not install both versions of the software T&D Recorder VLD for Windows and T&D Recorder for Windows (the provided software with each unit/collector) on the same computer. If T&D Recorder for Windows is already installed on your computer, please uninstall it before installing T&D Recorder VLD for Windows.

- It is only possible to install to Windows 2000/XP.

- To install T&D Recorder VLD for Windows, it is necessary to have Administrator rights (Windows Administrator) for the computer in which you wish to install it.

1. Open Windows®.

2. Place the accompanying CD-ROM into your CD-ROM drive. In a few seconds, the Install Program window will appear.



Note

- If that window does not automatically open, please open it by double clicking the CD-ROM icon in [My Computer] on your desktop. Or, if after double clicking the CR-ROM drive, the file appears in the CD-ROM folder, double click on the [start. exe] icon.

3. Select [Install T&D Recorder VLD for Windows] and click the [Execute] button to start the installation.

4. A screen will appear where you can enter the product serial number. The product serial number is printed on the sticker inside the software package. Make sure that it is properly entered and click the [Next] button.

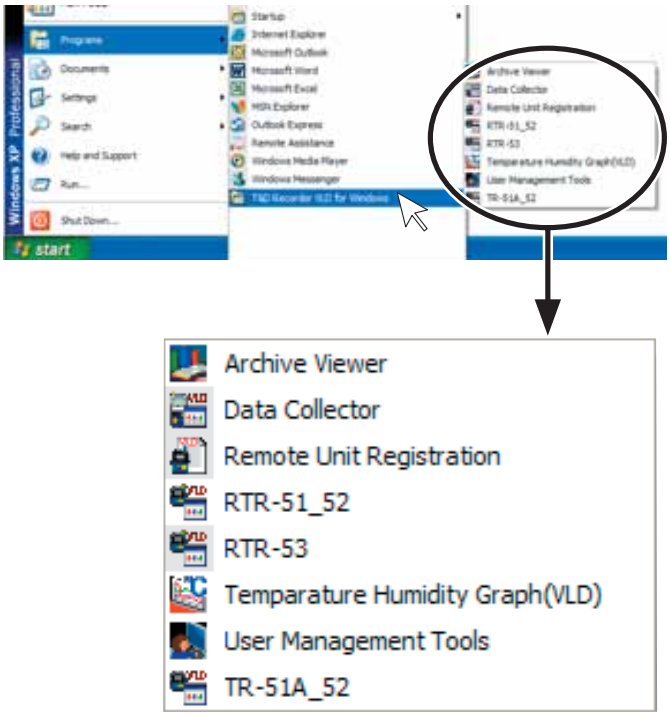
5. Continue the installation by following the directions as they appear.
   After installation has been completed, T&D Recorder VLD for Windows will be registered in the Window's [Start] Menu.

Operating the Various Applications

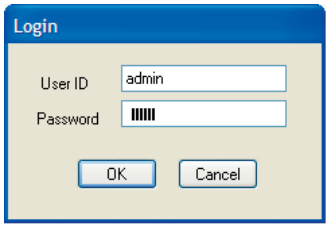
■ How to Open

To open any application in T&D Recorder VLD for Windows it is necessary to enter a "User ID" and "Password".

1. Open the application you wish to use by going to Windows [Startup Menu] - [Programs] - [T&D Recorder VLD for Windows] and clicking on it.



2. Upon opening the application, the Login Dialog will appear. To Login, enter a valid User ID and Password, and click [OK].



- User ID and Password (User Registration) settings can be made in [User Management Tools]. The default settings for User ID and Password are as follows: (User ID: admin/Password: passwd).
- Only the Administrator (User ID: admin) can enter and login to [User Management Tools].

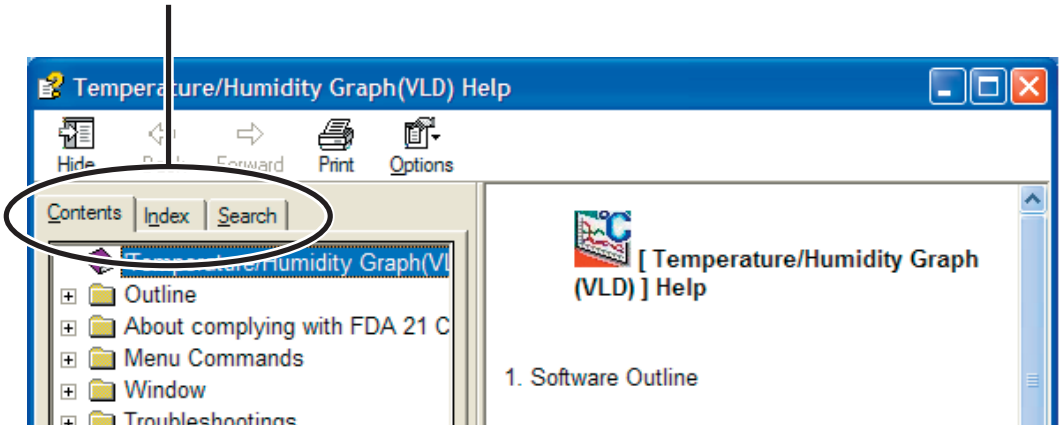
■ Using Help

For details about how to use an application, please see the explanations in that application's Help Menu.

Note

- In the Menu Bar, click [Help] - [Help] or [Help] - [Search by Topic], then click on one of the tabs [Contents], [Index], or [Search Text] to search for the topic or term you are unsure about or have questions about.

Tabs to search for the topic or term
(The type of tabs used may differ with each application.)



Contents :

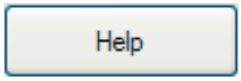
By clicking on one of the topics listed, you can find detailed information for that subject.

Index :

To get an explanation from a keyword, select a keyword from the Index list, and then click the [View] button.

Search :

Enter the keyword you wish to search for and click the [Start Search] button. All topics that contain the keyword will be displayed. By selecting a topic and clicking the [View] button at the bottom, a detailed explanation will appear.



By clicking the [help] button in a dialog box, an explanation for that dialog box will appear.

In the Graph Window, by clicking on the [Help Icon] in the toolbar, you can have short explanations appear the next time you click on a menu, an icon, or anything in the main window.

User Management Tools: User Registration

To carry out various operations in T&D Recorder VLD for Windows it is necessary to have a User ID, a Password and operation authorization. In [User Management Tools], User ID's, Password's and Operation Authorization Registration settings can be made for each user.

■ Logging into the [User Management Tools]

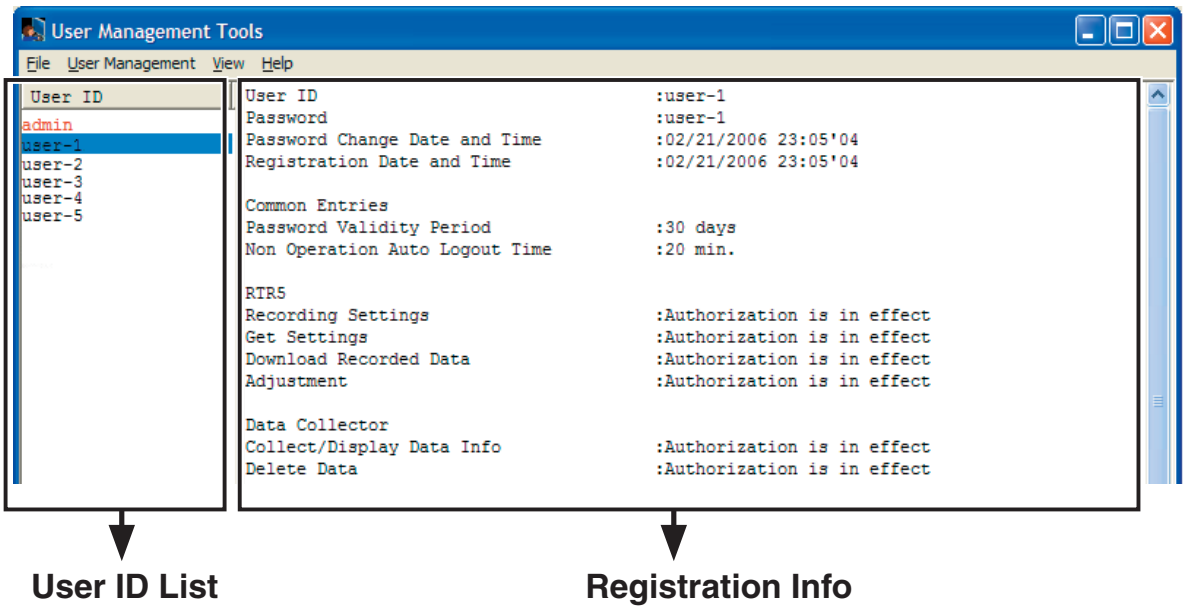
Only the Administrator can enter and login to [User Management Tools]. First, login using the default User ID: "admin" and Password: "passwd".

* Passwords can be changed using [Modify User Authorization].

■ User Management Tools Functions

The following operations can be carried out using the User Management Tools.

・User Registration.
・User Operation Authorization Settings
・Common Entry Settings (Only can be done by the Administrator "User ID: admin")
・Delete User ("Administrator" cannot be deleted.)



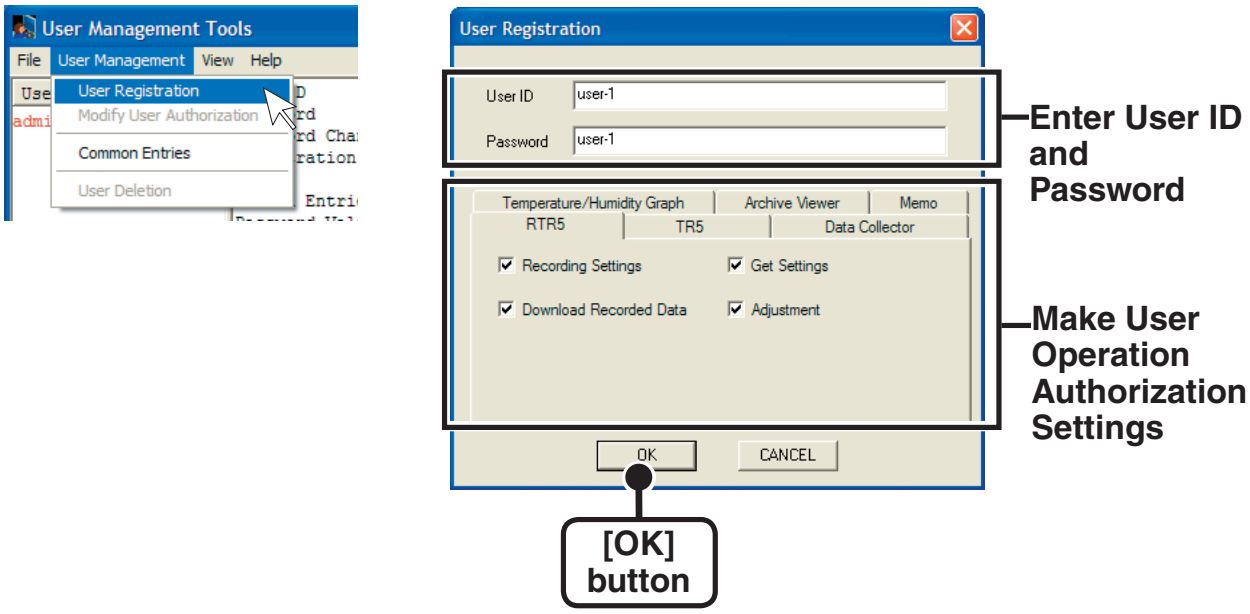
* In the User ID List, the Administrator will appear in red letters.

■ Making User Registrations

1. In the [User Management] menu, select [User Registration] to display the window in which you can make User ID and Password entries. Enter User ID and Password.

- The User ID and Password can be made up of between 5 and 16 characters using alphabet, numbers, " - " (hyphens) and " _ " (under bars).
- A distinction will be made between upper and lower case alphabet, so please be careful. Ex. abc123 and ABC123 will be treated as different.
- Any already registered and in use User ID cannot be used in any other registration.

[User Manegement] menu



2. Make User Operation Authorization Settings for the operation of each application.

- It is possible to make settings to restrict the carrying out of any operations considered critical. So, even if a user is able to login without the necessary authorization that user will be unable to carry out various operations.
- The memo area can contain up to 64 characters.
- A User without any authorizations cannot be registered.

3. Click the [OK] button to finish the registration.

User Management Tools: Other Functions

The following operations can also be carried out using the User Management Tools.

■ Modify User Authorization: [User Management] Menu

*The [Modify User Authorization] window can also be opened in the pop up menu that appears by right clicking on a User ID in the User ID List.

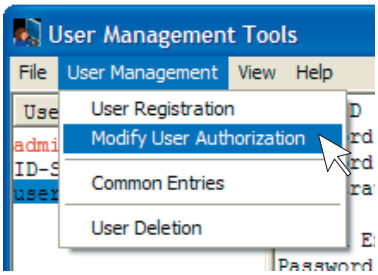
Here you can make modify authorizations for an already registered user.

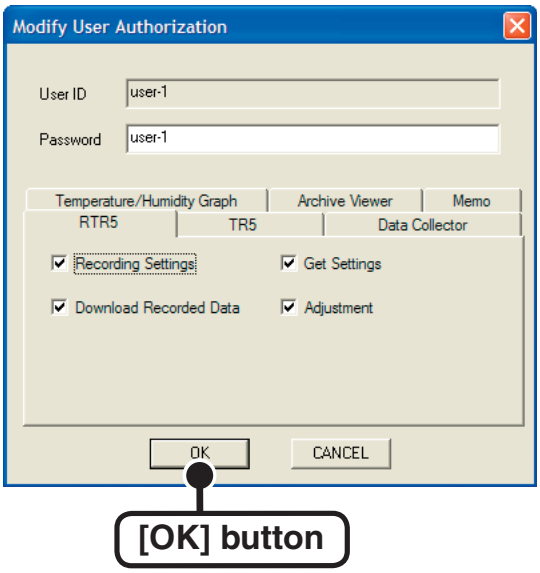
Note

- The only modifications that can be carried out for the Administrator (User ID: admin) are to make changes to the Password and the memo contents.
- The User ID cannot be modified.

1. From the [User Management] Menu, select [Modify User Authorization].
2. Click on the Password or other tab to make changes.
   - The User ID and Password can be made up of between 5 and 16 characters using alphabet, numbers, " - " (hyphens) and "_" (under bars).
   - A distinction will be made between upper and lower case alphabet, so please be careful. Ex. abc123 and ABC123 will be treated as different.
3. After having finished the desired modifications, click the [OK] button to finish.

[User Manegement] menu





■ Common Entry Settings: [User Management] Menu

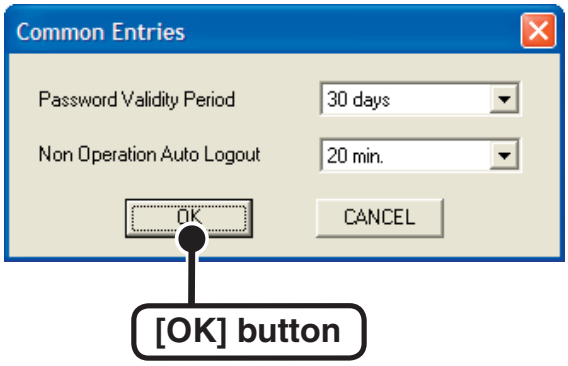
- The [Common Entry Settings] window can also be opened in the pop up menu that appears by right clicking on a User ID in the User ID List.
- Make Password Validity Period settings, as well as, make settings to allow for an automatic logout when no operations are performed for a set period of time.
- The Administrator (User ID:admin) has no password time-limit.
- Note that if an automatic logout occurs, whether or not you login again, the Title bar in the Window will remain operable. From [Quit] button in the Title bar it is possible to quit and close the application. No Windows common dialog windows, such as the "Specify File Name" dialog will be affected by a timeout.

1. From the [User Management] Menu, select [Common Entries].

2. If necessary, please make changes to the settings.

- Password Validity Period:
  30 days/90 days/120 days/Unlimited Period
- Non Operation Auto Logoff Time:
  5 minutes/10 minutes/20 minutes/Unlimited Period

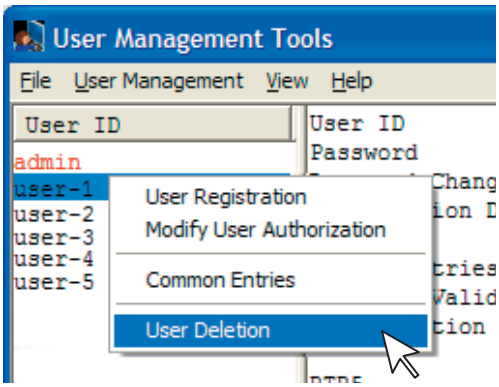
3. Click the [OK] button to finish the modifications.



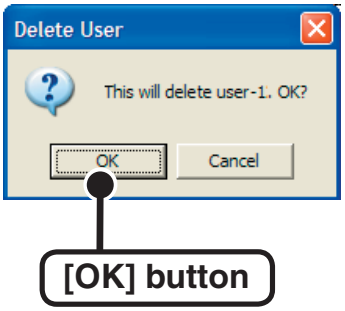
■ User Deletion: [User Management] Menu

The [User Deletion] window can also be opened in the pop up menu that appears by right clicking on a User ID in the User ID List. Here you can delete an already registered user.

1. From the User ID list, select the User you wish to delete.
2. From the [User Management] Menu, select [User Deletion].
3. A message will appear, click the [OK] button to complete the deletion process.



[Pop up menu]

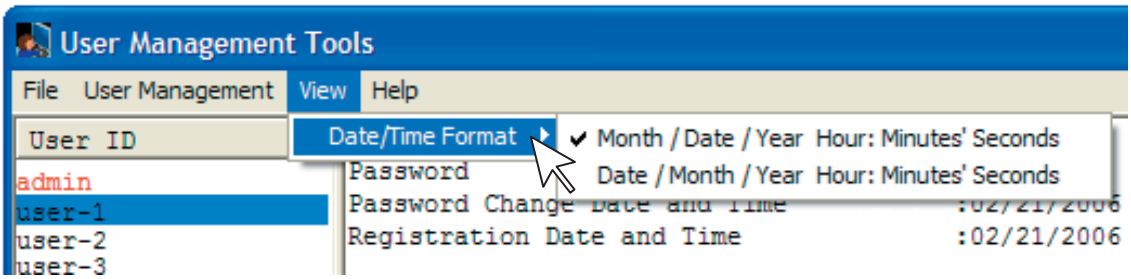


Note

・The Administrator (User ID: admin) cannot be deleted.

■ Clock Format: [View] Menu

Use this to change the format in which time is displayed.
The format settings made here will be put into effect in displays for all applications other than Archive Viewer.



1. In the [View] Menu, move the mouse to [Clock Format] and select the format in which you wish to display time.
2. By clicking the desired format, the setting will be completed.

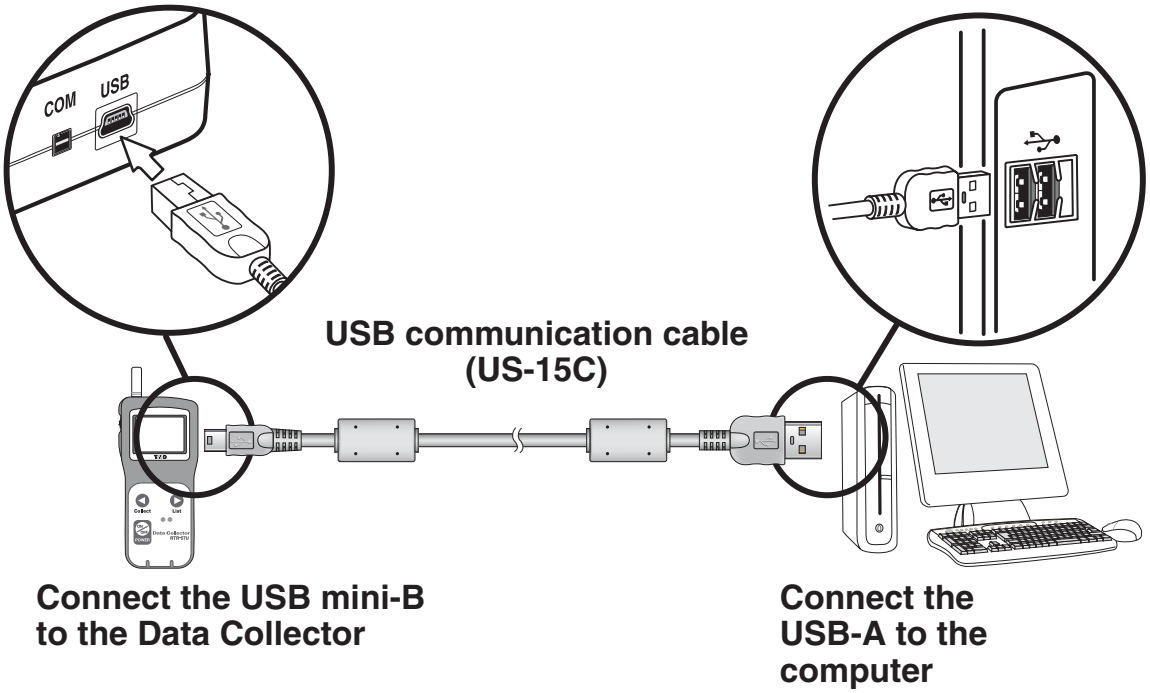
Connecting the Data Collector to the Computer

■ Connecting with the USB Cable

Connect the Data Collector with a USB communication cable (US-15C) to your computer.

USB Port Mark

The USB communication cable is a USB-A plug ⇔ USB mini-B plug. Connect to a place with this type of mark.



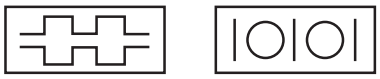
Note

- It is necessary to install the USB device driver. For details about the driver installation, see the User's Manual that came with the product.
- To ensure that the USB communication cable is properly connected make sure that the plugs are completely inserted.

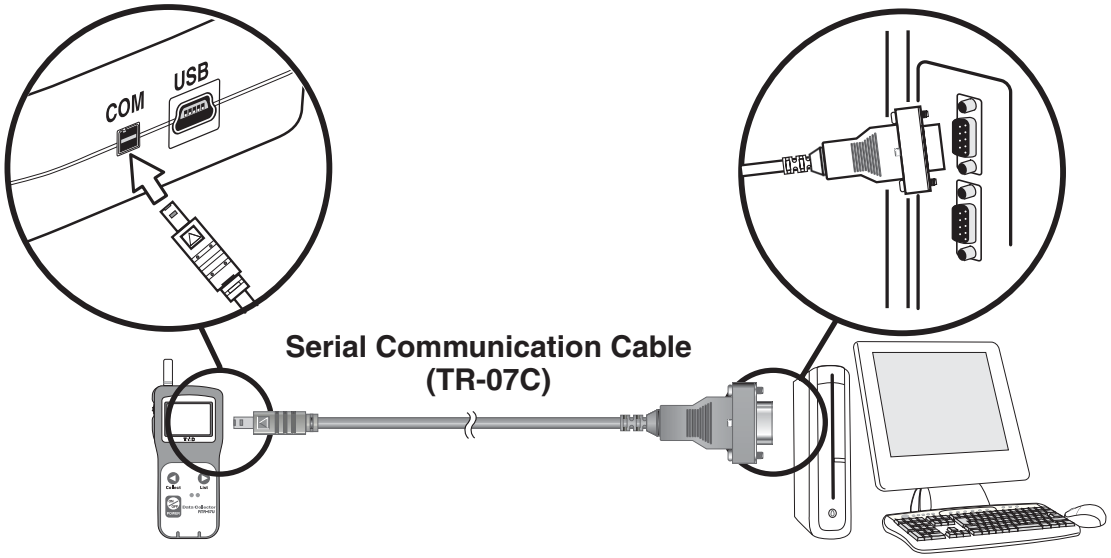
■ Connecting with RS232C (Serial) Communication Cable

Connect the Data Collector with an RS232C (Serial) communication cable to your computer.

Examples of serial port marks



The communication cable connection is a D-Sub 9 pin female. Please connect it to a port that has markings such as these.



Connect to the Data Collector

Connect the D-Sub 9 pin to the computer

Note

- Make sure to connect it to the correct place to ensure communication.
- To ensure that the communication cable is properly connected make sure that the plugs are completely inserted.
- When using the 57U Series Data Collector with RS232C (serial) communication, please use the optional serial communication cable TR-07C.
- When using the 57C Series Data Collector with RS232C (serial) communication, please use the serial communication cable that is included with the product.

Setting up the COM Port

Make communication port settings for the port you wish to use computer communication. There are two ways to make the port settings: [Auto-Detect] or [Specify Settings].

* Communication Port Settings can also be made using a different settings window for that type of device.

■ Communicate via USB

Connect the USB cable that is connected to the device to your computer, making sure to connect to the USB port which was used when installing the USB driver.

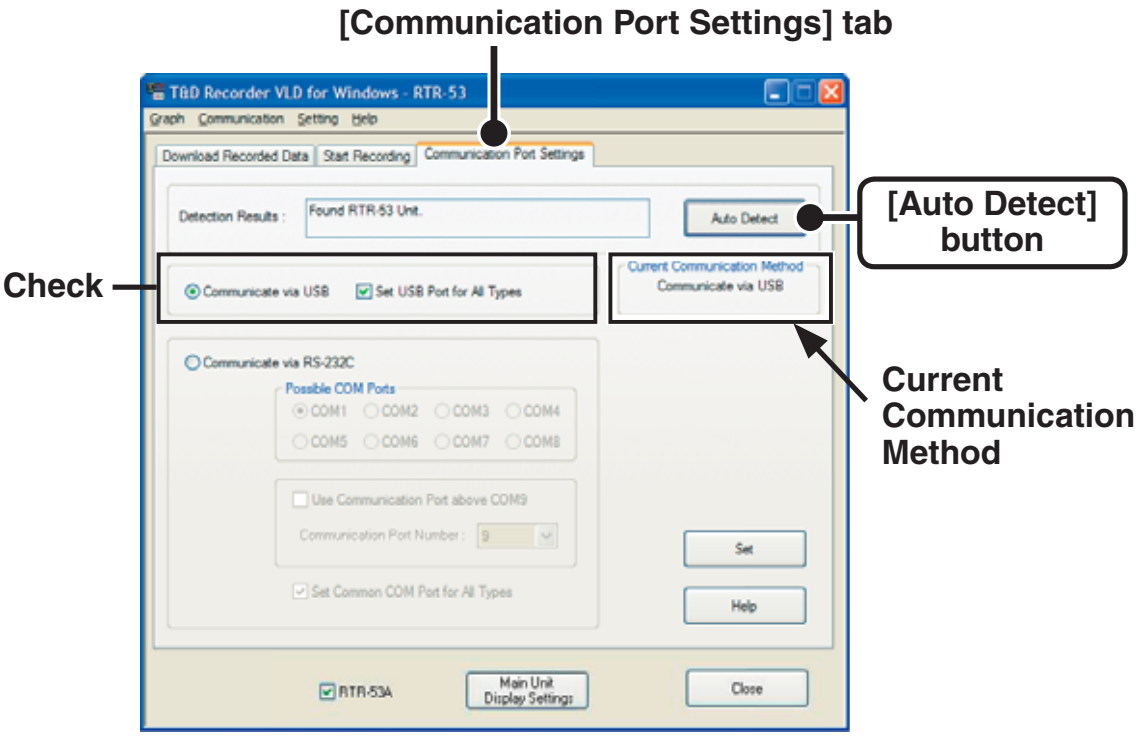
Note

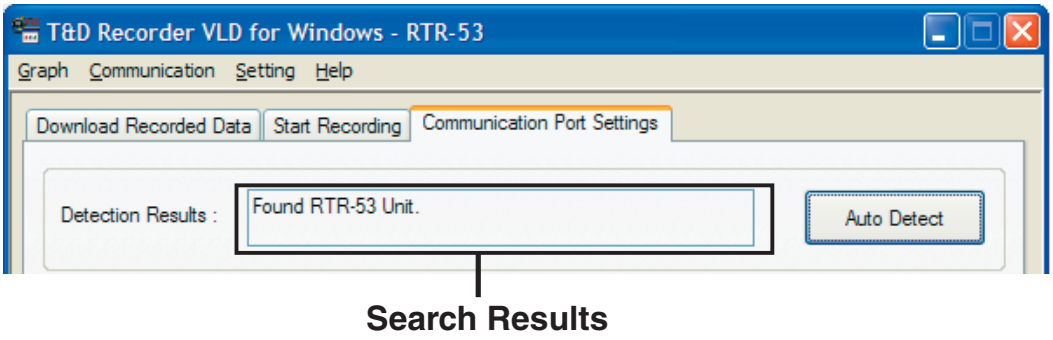
- If the USB driver has not been properly installed, USB communication will not be possible. For details about the driver installation, see the User's Manual that came with TR/RTR-57U.
- Make sure that the USB cable is inserted fully, so as not to cause an improper connection.

【Auto-Detect】

Use this to detect the currently connected communication method and have settings made automatically.

1. Open the [Communication Port Settings] window.
2. Place a check next to [Communicate via USB] and click the [Auto Detect] button to start the detection.
   * If you wish to use the same settings for a number of devices, put a check next to [Set USB Port for All Types] and all devices will be given the same USB Communication Settings.
   * When a number of devices are connected to a USB port, settings will be made to the device that is detected first.
3. After the search has been completed, a message will appear. Click the [OK] button to complete the setup.
   * If you have selected USB communication, it will not be possible to communicate via Serial (RS232C) communication. If you wish to use Serial (RS232C) Communication, it will be necessary to change the settings.

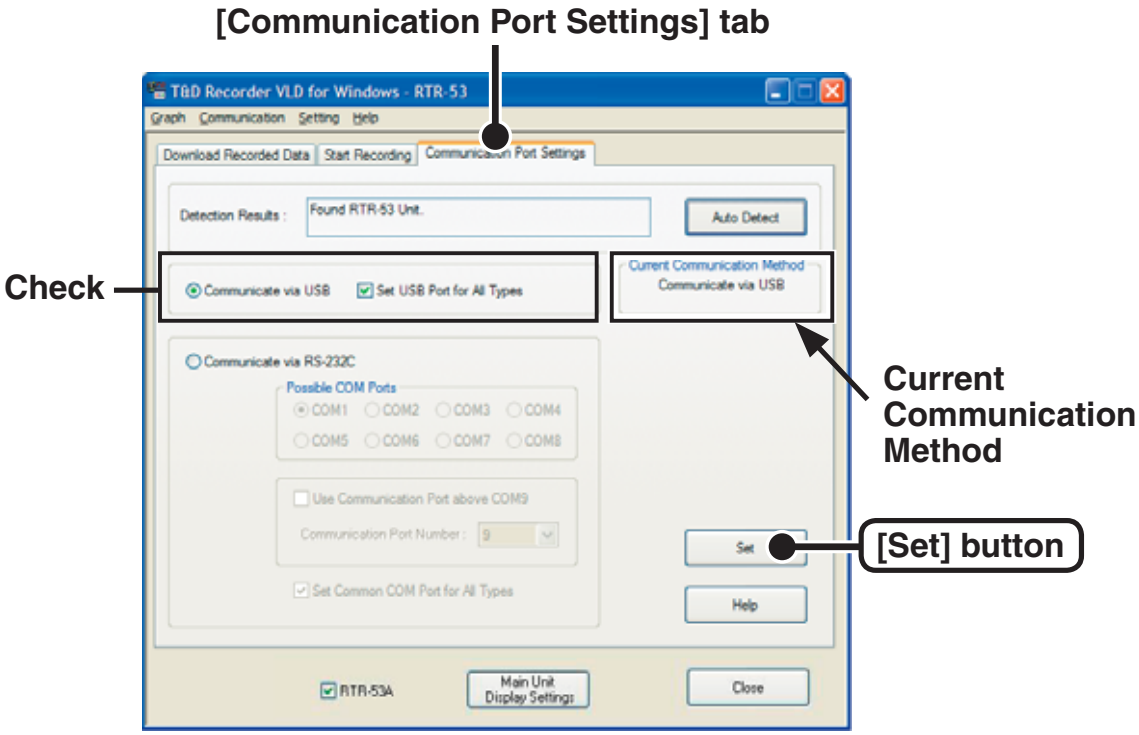

[Communication Port Settings] tab
T&D Recorder VLD for Windows - RTR-53
Graph Communication Setting Help
Download Recorded Data
Start Recording
Communication Port Settings
Detection Results :
Found RTR-53 Unit.
Auto Detect
[Auto Detect] button
Check
Communicate via USB
Set USB Port for All Types
Current Communication Method
Communicate via USB
Current Communication Method
Communicate via RS-232C
Possible COM Ports
COM1 COM2 COM3 COM4
COM5 COM6 COM7 COM8
Use Communication Port above COM9
Communication Port Number :
Set Common COM Port for All Types
Set
Help
RTR-53A
Main Unit Display Settings
Close


T&D Recorder VLD for Windows - RTR-53
Graph Communication Setting Help
Download Recorded Data
Start Recording
Communication Port Settings
Detection Results :
Found RTR-53 Unit.
Auto Detect
Search Results

【Specify Port Settings】

Specify the communication method and make necessary settings.

1. Open the [Communication Port Settings] window.
2. Place a check next to [Communicate via USB] and click the [Set] button.



* If you wish to use the same settings for a number of devices, put a check next to [Set USB Port for All Types] and all devices will be given the same USB Communication Settings.

3. A message will appear. Click the [OK] button to complete the settings.

■ Using Serial (RS232C) Communication

Connect the serial communication cable that is connected to the device to your computer serial port.

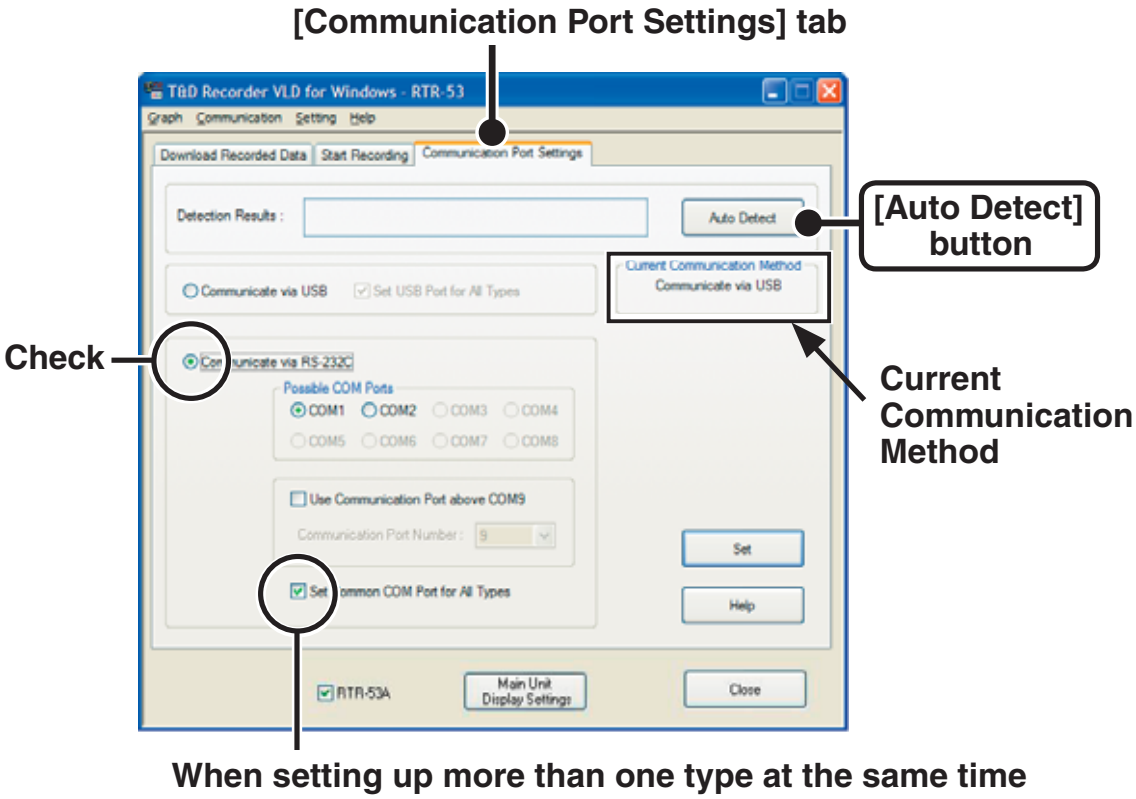
Note

- Make sure that the serial cable is inserted fully, so as not to cause an improper connection.

【Auto-Detect】

Use this to detect the currently connected communication method and have settings made automatically.

1. Open the [Communication Port Settings] window.
2. Place a check next to [Communicate via RS232C] and click the [Auto Detect] button to start the detection.
   * If you wish to use the same settings for a number of devices, put a check next to [Set Common COM Port for All Types] and all devices will be given the same COM port Settings.



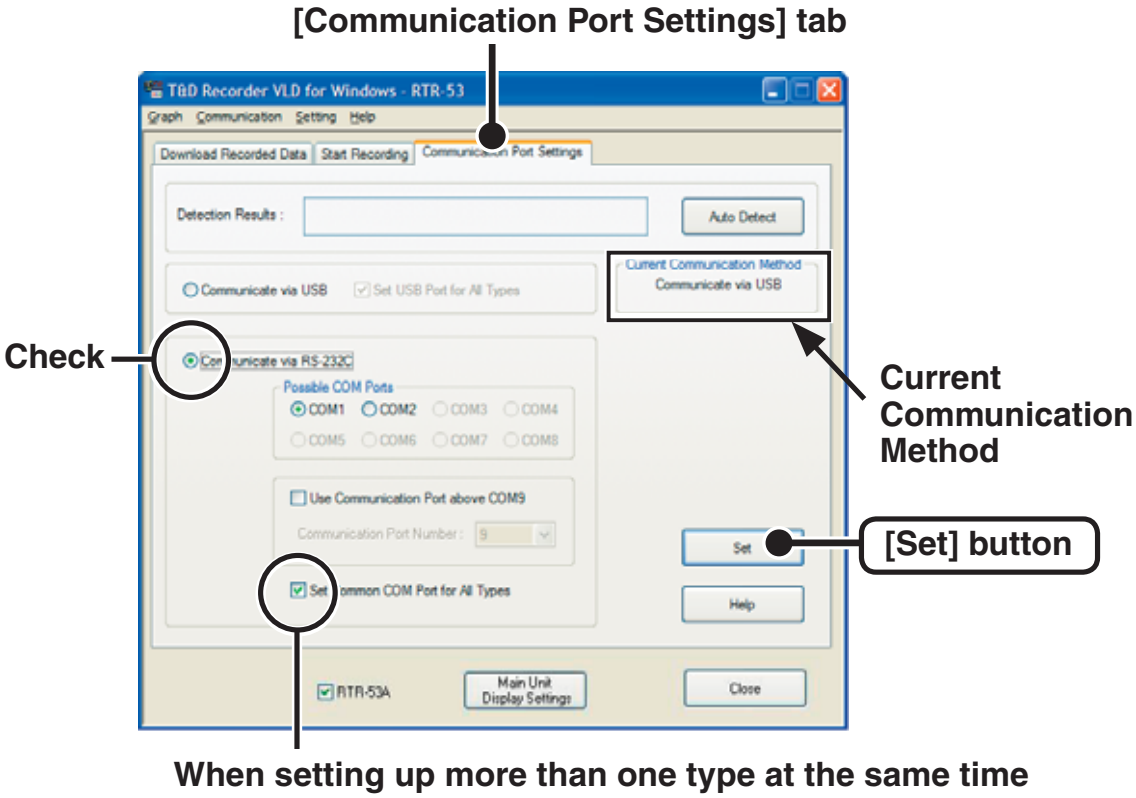
3. After the search has been completed, a message will appear. Click the [OK] button to complete the setup.

* If you have selected Serial (RS232C) communication, it will not be possible to communicate via USB communication. If you wish to use USB Communication, it will be necessary to change the settings.
* If no port is detected or communication does not occur, see "Troubleshooting" (from pp.93).

【Specify Port Settings】

Specify the communication method and make necessary settings.

1. Open the [Communication Port Settings] window.
2. Place a check next to [Communicate via RS232C] and click the [Set] button.



* If you wish to use the same settings for a number of devices, put a check next to [Set Common COM Port for All Types] and all devices will be given the same COM port Settings.

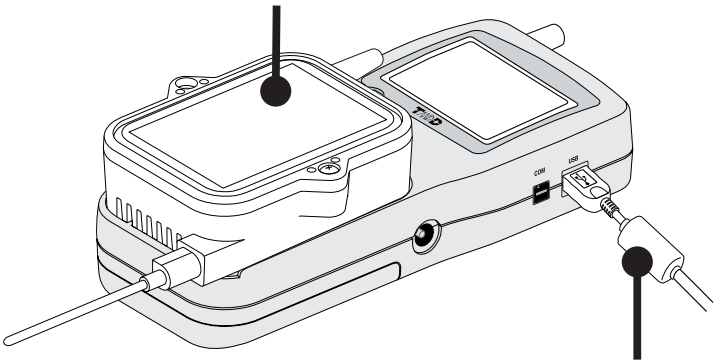
3. A message will appear. Click the [OK] button to complete the settings.

Connecting the Data Logger to the Computer

■ Communicate via the Data Collector

Connect the Data Logger to the Data Collector and communicate with the computer via optical communication. Carrying out Remote Unit Registration via optical communication.

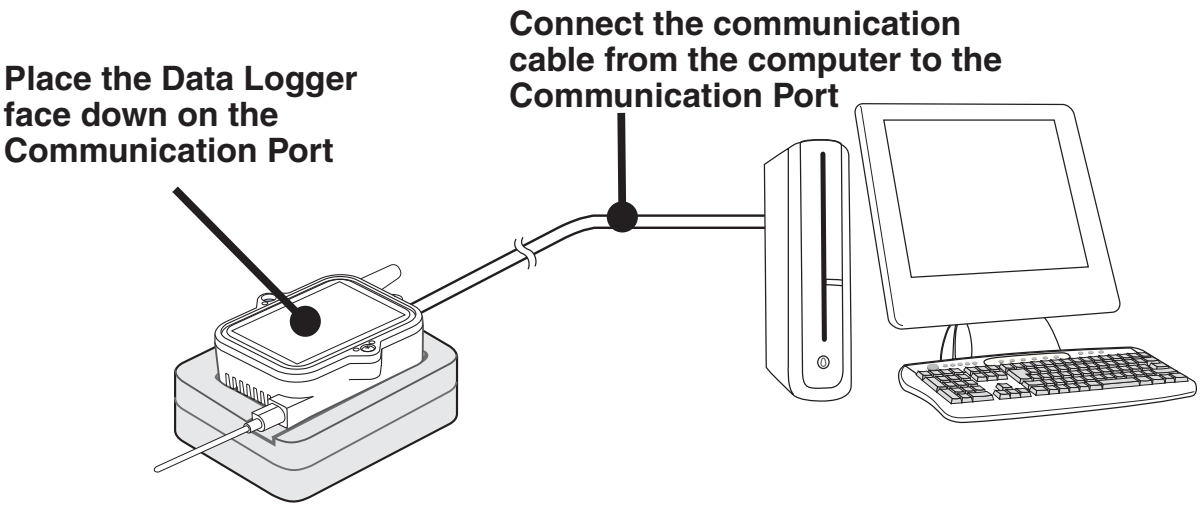
1. Connect the Data Collector to the Computer.
   * See pp.17-18 for more details about connecting the Data Collector and Computer.
2. Place the Data Logger face down on the Data Collector so that communication can occur.



■ Communicate via the Communication Port

Connect the Data Logger to the Communication Port and communicate with the computer via optical communication.

1. Connect the Communication Port to the Computer.
   * See the User's Manual that came with the Communication Port for more details about connecting the Communication Port and Computer.
2. Place the Data Logger face down on the Communication Port so that communication can occur.

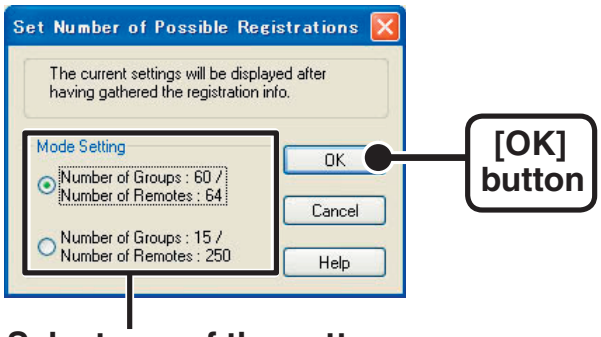


Remote Unit Registration

If you would like to use wireless communication between the Data Collector (Wireless Types: RTR-57U/57C) and the Data Logger (Wireless Types: RTR-51/52/53) it is necessary to first register via computer the Data Logger as a Remote Unit into the Data Collector that it will be using.

■ Registering a Remote Unit

1. Connect the Data Collector to the Computer and set up for communication.
2. Place the Data Logger to be registered face down on the Data Collector into which you wish to register it.
   * If the Data Logger is not placed onto the Data Collector, the Remote Info will be registered in the Data Collector only and not in the Logger.
3. Open [Remote Unit Registration].
   * The [Remote Unit Registration] window can also be accessed from the settings window for each device.
4. A message will appear, click the [Yes] button to start the collecting of Registration Info.
5. Click the [Set Number of Possible Registrations], to set the number of possible registrations for the Data Collector. This includes settings to choose the largest number of groups possible or within one group the largest number of remotes possible.



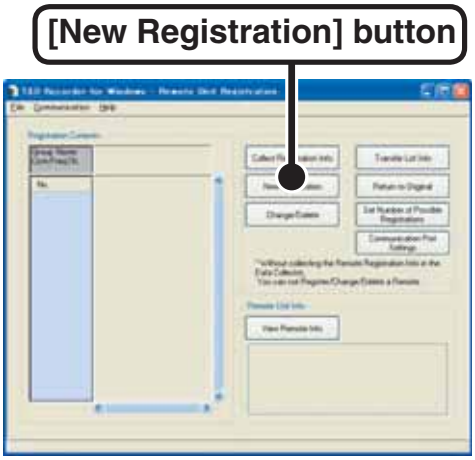
Select one of the patterns
Number of Groups: 60/Number of Remotes in 1 Group: 64
Number of Groups: 15/Number of Remotes in 1 Group: 250

6. Click the [OK] button to finish the setting for the number of possible registrations.

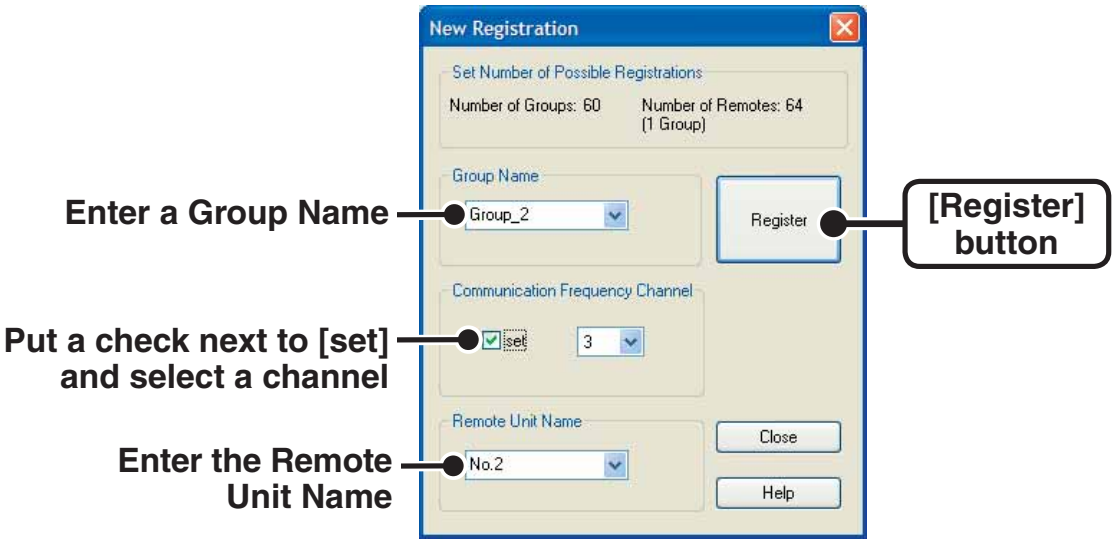
Note

・Making changes to the Number of Possible Registrations after completing Remote Unit Registration will cause the all of the Remote Unit Registration Info to be deleted.

7. Click the [New Registration] button and the registration window will appear.



Make settings for the Group Name, Remote Unit Name, and Communication Frequency Channel.



Group Name

- Up to 8 characters can be entered.
- GROUP1 is registered using the default settings. Select a name already in use, make a few changes to this name and register it as a different Group Name.

Note

- Once a Registration has been made, the Group Name cannot be changed.

Communication Frequency Channel

- Put a check next to [set] to select a channel number. It is possible to set one Communication Frequency Channel (channel 0-15) to each Group.
- The default setting of Channel 0 is used for GROUP1.
- If no setting is made, a channel will automatically be assigned and the settings made with that channel.

Note

- Settings can only be made when making a New Group Registration.
- Once a setting has been made it cannot be changed.
- The selected communication (frequency) channel is used for communication with Remote units in the same Group. Please note that if more than one Data Collector is trying to communicate at the same time on the same communication channel, communication may become jammed and unstable.

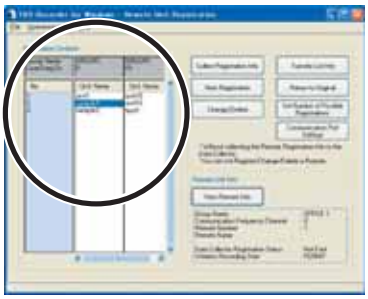
Remote Unit Name

- Up to 8 characters can be entered.
- Select a name already in use, make a few changes to this name and register it as a different Remote Name.

8. Click the [Register] button to finish the registration.

* If you wish to register a multiple number of Remote Units to the same Group, proceed by placing and replacing the Remote Units you wish to register on the Data Collector and carry out registration as in steps 7 to 8 for each one using a different Remote Name.

* If you wish to register to a different Group Name, proceed by placing and replacing the Remote Units you wish to register on the Data Collector and carry out registration as in step 7 for each one using a different Group Name.



When a registration has been completed, it will appear in the Registration Contents List.

■ Confirming Communication

The Data Collector searches for registered Remote Units and confirms that communication is possible.

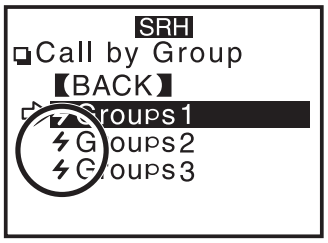
1. From the Data Collector Display Main Menu, start [WL Search Remotes].

2. Select the search range and click to start the search.

* If you choose [All Groups]: the search will be for Remote Units in all Registered Groups.
* If you choose [Specify Group]: the search will be for Remote Units in the Specified Group.

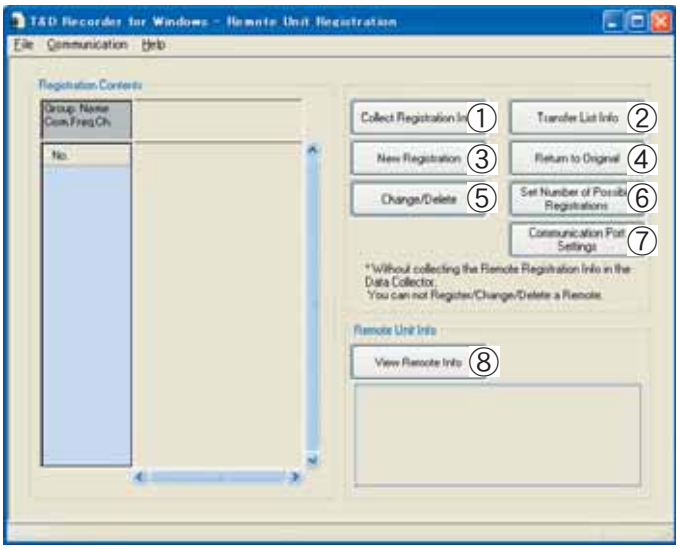
3. After the search had been completed, a list will appear showing only the names of the Remote Units with which communication was possible.

* A mark [⚡] will appear at the head of each name with which communication was possible.
* For details, see the User's Manual that accompanies the Data Collector.



Remote Unit Registration: Other Functions

In Remote Registration, the following operations can also be performed.
Before carrying out these operations, connect the Data Collector to your computer and gather the Data Collector Registration Info.



① [Collect Registration Info] button (see pp.33)
② [Transfer List Info] button (see pp.35)
③ [New Registration] button (see pp.28)
④ [Return to Original] button (see pp.35)
⑤ [Change/Delete] button (see pp.34)
⑥ [Set Number of Possible Registrations] button (see pp.27)
⑦ [Communication Port Settings] button (see pp.19-23)
⑧ [View Remote Info] button (see pp.36)

■ Open Registration File: from the [File] Menu

Open existing Remote Unit Registration Files.

1. In the [File] Menu, select [Open Registration File].
2. Specify the Remote Unit Registration Info File you wish to open, and click the [Open] button to view it.

■ Save Registration Contents to File: from the [File] Menu

Save the currently displayed Group and Remote Registration Contents to a Remote Registration File.

1. In the [File] Menu, select [Save Registration Contents to File]
2. Specify the [Location] and enter a [File Name].
3. Click the [Save] button to save.

Note

・Registration Info opened from a saved file cannot be edited or changed.

■ Save in Text File: from the [File] Menu

Save the currently displayed Group and Remote Registration Contents to a Text File.

1. In the [File] Menu, click [Save in Text File].
2. Specify the [Location] and enter a [File Name].
3. Click the [Save] button to save.

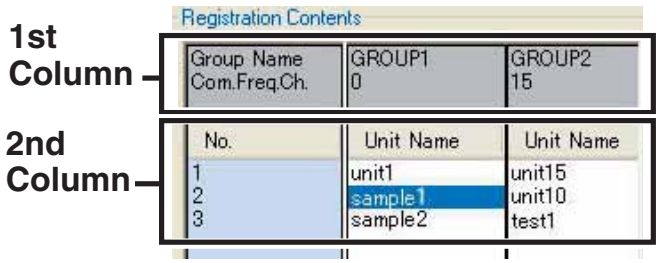
Note

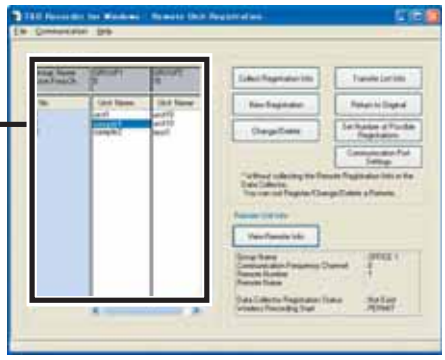
・Text File cannot be read.
・Registration Info opened from a saved file cannot be edited or changed.

■ Collecting Registration Info: from the [Communication] Menu or use [Collect Registration Info] button

Displays remote registration info for all units registered to that Data Collector.

Ex. of a [Registration Contents] display





- 1st Column (dark gray background)

  Group Name: View a List of currently registered Groups.

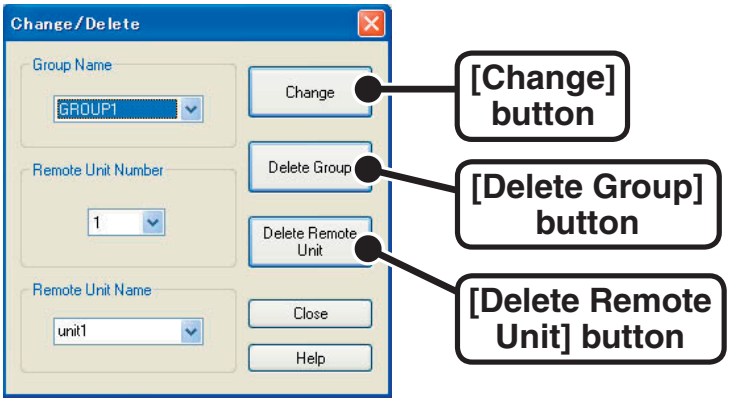
  Com. Freq. Ch: View the Communication Frequency Channel for the Groups being displayed.

- 2nd Column (light blue background)

  Number: View the Remote Unit Numbers
  The Remote unit info will appear under the Group into which it has been registered.
  If the empty remote number the info area will be left blank.

■ Change/Delete: from the [Communication] Menu or use [Change/Delete] button

Registered Remote Unit Names can be changed and Group or Remote Units deleted.



[Change] button: only the Remote Name can be changed.

1. Select the Group in which the Remote Unit you wish to change belongs.
2. Select the Remote Unit Number or Name and enter a new Remote Name for that unit.
3. Click the [Change] button to send the newly changed info.

[Delete Group] button

Note

- By deleting a Group, all Remote Unit Registrations in the Group will also be automatically deleted.

1. Select the name of the Group you wish to delete.
2. Click the [Delete Group] button to complete the deletion.

[Delete Remote Unit] button

1. Select the Group Name in which the Remote you wish to delete belongs.
2. Select the Remote Unit Number or Name.
3. Click the [Delete Remote Unit] button to complete the deletion.

■ Transfer List Info: from the [Communication] Menu or use [Transfer List Info] button

If the Registration Info is the same in a number of Data Collectors, communication can be carried out from a multiple numbers of Data Collectors with one Remote Unit.
The Registration Info in a single Data Collector can be easily transferred to a multiple number of Data Collectors.

Note

- After the transfer has been completed, the previous registration contents will be overwritten.
- If the number of Remote Units or Groups in the transferred file is larger than that of the setting for the Number of Possible Registrations, the transfer cannot be completed. Please make changes to the Number of Possible Registrations.

1. The Remote Unit Info you wish to transfer will be displayed in the Registration Contents List.
2. Connect the Data Collector you wish to transfer the info to, and click the [Transfer List Info] to start the transferring of the Registration Contents.

■ [Return to Original] button: In Communication Menu or Use button

Use this to initialize a Data Collector's Remote Unit Registration Contents.

Note

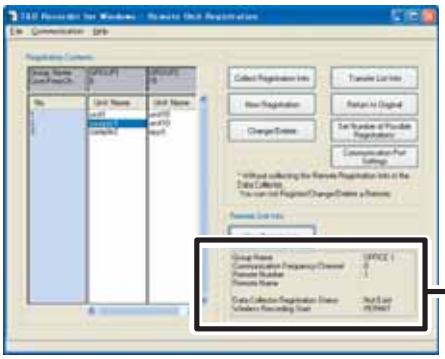
- By initializing all info saved in the Data Collector will be erased and will be returned to as it was when it left the factory:
- The Default Settings are
  Group Name: GROUP1/Remote Unit: NONE/Communication Frequency: 0

1. Connect the Data Collector you wish to initialize to the Computer.
2. Click the [Return to Origanl] button to complete initialization.

■ View Remote Info: from the [Communication] Menu or use [View Remote Info] button

View the registration info for the Remote Unit that is currently placed on the Data Collector.
It is possible to view the Remote Registration Info even if the unit is registered to a different Data Collector.

1. Place the Data Logger you wish to view the Registration Info from face down on the Data Collector.
2. Click the [View Remote Info] button and the registration info will appear.



Remote Unit Info

Group Name	The Group Name to which the Remote Unit belongs.
Communication Frequency Channel	Communication Frequency Channel of Group to which the Remote Unit belongs
Remote Number	The number of the Remote Unit
Remote Name	The name of the Remote Unit
Data Collector Registration Status	**Exist** : If remotes are registered in the presently connected RTR-57C/57U **Not exist** : If remotes are not registered in the presently connected RTR-57C/57U **– –** : If registration info has not been collected from presently connected RTR-57C/57U
Wireless Recording Start	Save wireless recording start settings If forbidden to start recording : **FORBID** If permission to start recording : **PERMIT**

RTR-51/52: Recording Settings

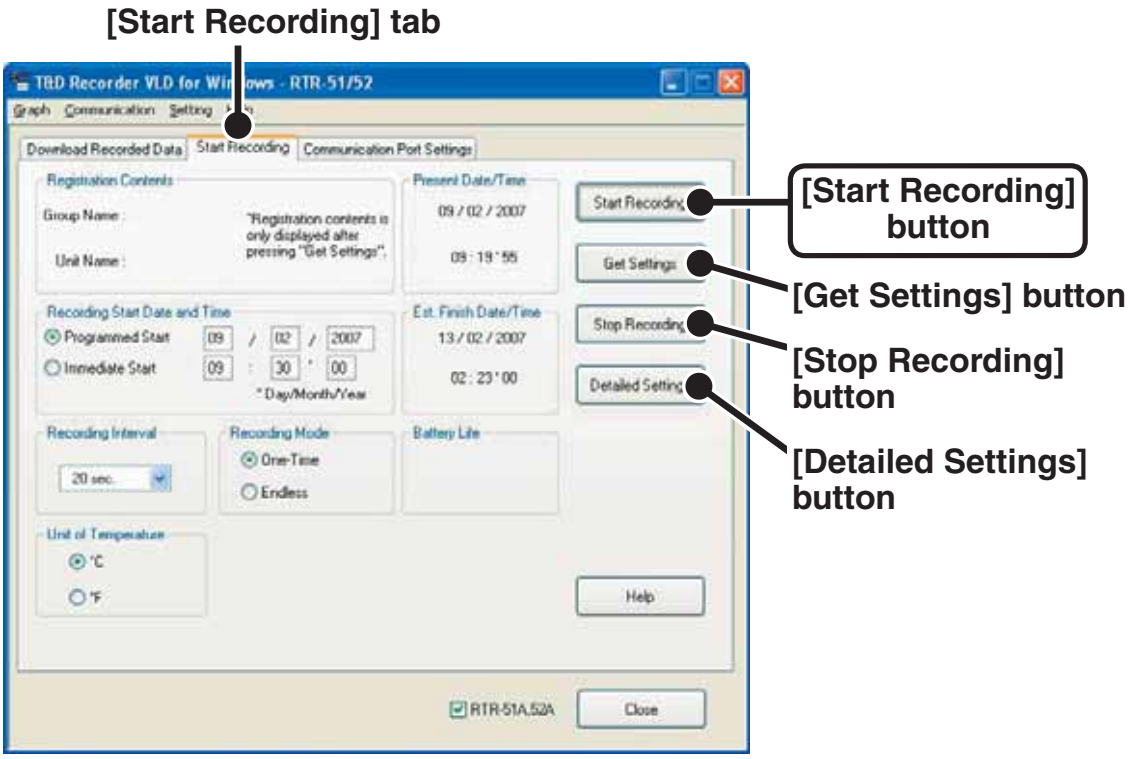
■ Connect the RTR-51/52 to the Computer and set up for communication.

See pp.25-26 for more details about how to connect.

■ Setting the Recording Conditions

1. Open [RTR-51/52].

2. Click the [Start Recording] tab, and make the necessary recording condition settings.



3. After making all of the necessary recording condition settings, click the [Start Recording] button and the settings will be transmitted.

4. Once the settings have been transmitted, a transmission result message will appear, click the [OK] button to complete the setting procedure.

● Recording Start Time

Select from: Immediate Start/Programmed Start

Programmed Start : Recording will begin on the set date and time.

Immediate Start : Recording will begin upon clicking the [Start Recording] button.

● Recording Interval

Select from: 1,2,5,10,15,20,30 seconds, or
1,2,5,10,15,20,30,60 minutes

Click the [▼] button to select an interval from the list.

● Recording Mode

Select from: Endless/One Time

One Time : Upon reaching capacity of 16000 readings, "FULL" will appear on the LCD display and recording will automatically stop.

Endless Loop : Upon reaching capacity of 16000 readings, the oldest data is overwritten and recording continues.

● Unit of Temperature for Display

Select Celsius (℃) or Fahrenheit (˚F)

Choose the temperature unit of measurement for use in the display.

* When settings have been received the registration contents and remaining battery life will be displayed.

Note

・The start date and time for a programmed recording start is based upon your computer system clock. If your computer calendar/clock are not set correctly, a programmed recording start may not start properly.

・The estimated finish date and time of recording in one time mode will be automatically calculated from the set recording interval and starting time.

● [Get Settings] button

The Remote Unit Recording Conditions, Registration Contents and the Remaining Battery Life will be displayed.

Registration Contents: The Group Name and Remote Unit Name will appear for the/Remote Unit from which the settings were received.

Remaining Battery Life: The remaining amount of battery power will be displayed for the Remote Unit from which the settings were received.

● [Recording Stop] button

During a recording session, it is possible to stop recording by pressing this button.

● [Detailed Settings] button

【Start by Wireless Communication Settings】

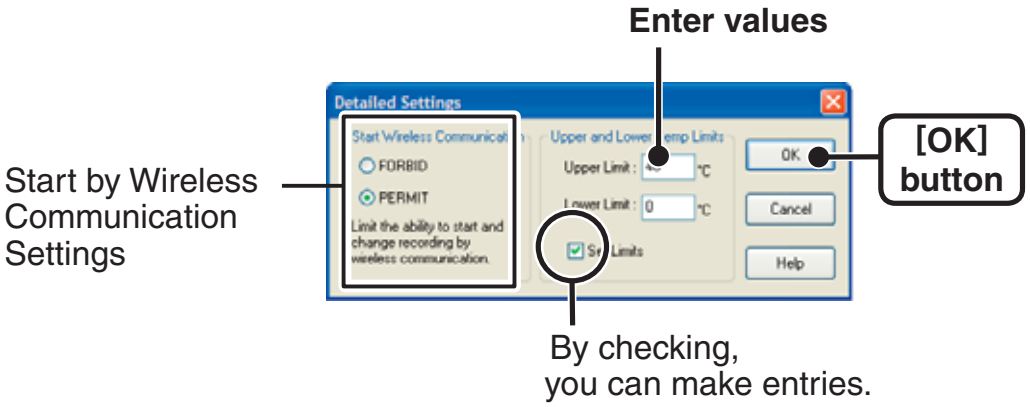
Here you can set restrictions on starting recording via wireless communication.

1. If you wish not to allow the starting of recording via wireless communication, select [Forbid] or if you wish to allow it, select [Permit].
2. Click the [OK] button to finish the setting process.

【Upper/Lower Limit Settings】

Make settings to have the Data Collector judge whether or not the recorded data that it has downloaded is within the set limits.

1. By putting a check next to [Set Limits], you will be able to enter upper and lower limits.
2. Click the [OK] button to finish the setting process.



RTR-51/52: Downloading Recorded Data

The downloaded data will be saved both as an encoded Original File (.trc) and as a Common Thermo Recorder Type File (.trx).

NOTE

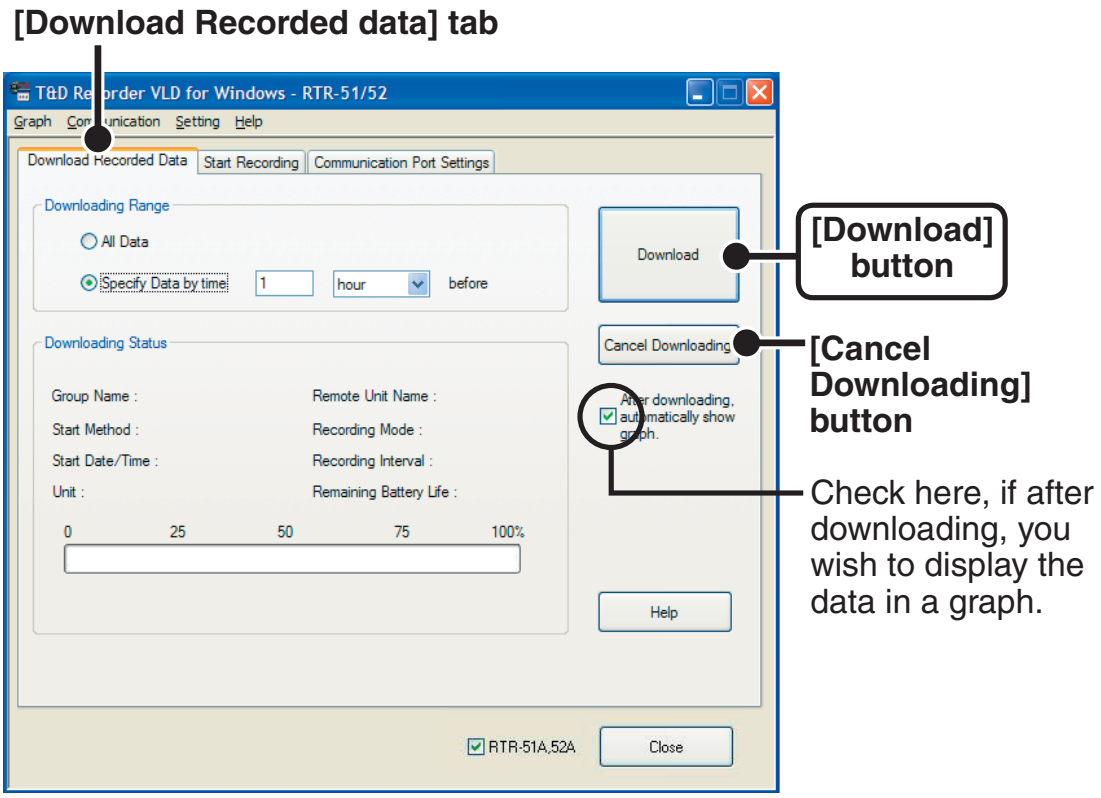
To open an encoded file, it is necessary to enter a valid User ID and Password. For this reason, it is necessary to make sure to keep on record the User ID and Password that were used when the encoded Original File was created. Without the User ID and Password it is impossible to open the Original File.

■ Connect the RTR-51/52 to the Computer and set up for communication.

See pp.25-26 for more details about how to connect.

■ Downloading Recorded Data

1. Open [RTR-51/52].
2. Click the [Download Recorded Data] tab.

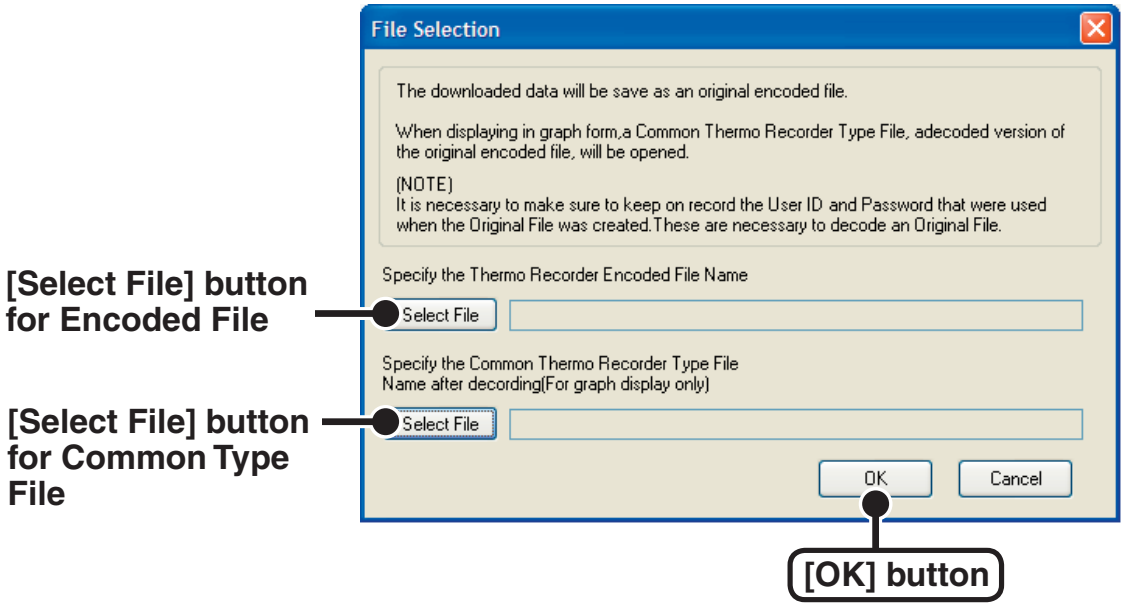


3. Select the range for downloading and click the [Download] button.

* The default setting is for a check to be placed at [After downloading, automatically show graph.] If you wish to only save the data, remove the check.

4. The [File Selection] window will appear. Specify a File Name and Location for both the encoded file and the common file.

* In the default setting, a check is placed at [After downloading, automatically show graph]. If you wish to only save the data, remove the check.



5. Click the [OK] button to complete the settings and start the downloading.

6. After downloading has been completed, a Temp/Humidity Graph will appear.

* The data file will be saved in the specified location with file extensions [.trc] for Encoded Files and [.trx] for Common Type Files.

● [Cancel Downloading] button
Can cancel anytime during downloading.

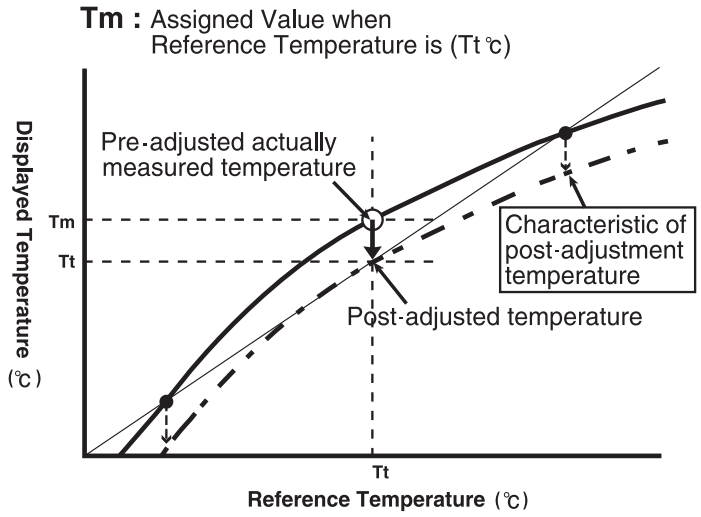
RTR-51A/52A: Value Adjustment Function

Currently the adjustment functions can be used only with the RTR-51A, 52A. This function enables the user to make adjustments to measured values to correct inaccuracies that may occur when compared to a standard or reference temperature measurement. By setting an adjustment equation beforehand, the adjustment function will automatically calculate to record and display the post-adjusted measurement. It is possible to select from two methods of adjustment: 1-point adjustment and 2-point adjustment.

Note

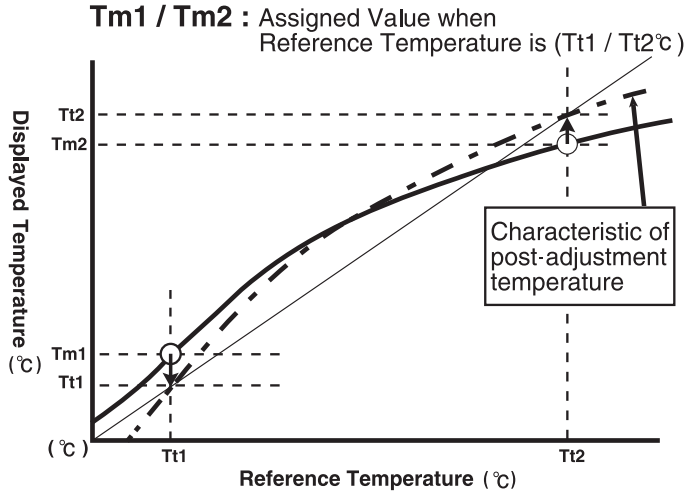
- When you are carrying out adjustments and formulating equations please take care with the settings and take personal responsibility for the process.

【Temperature: 1-point Adjustment】



Adjustment is carried out by entering the value of the difference between the displayed temperature measurement reading and the reference one to which it is being compared.
Please set so that the possible adjustment range is within ± 30℃ .

【Temperature: 2-point Adjustment】



Adjustment is carried out by entering values for the differences between two displayed temperature measurement readings and the reference ones to which they are being compared.
Please set so that the possible adjustment range is within ± 3℃ .

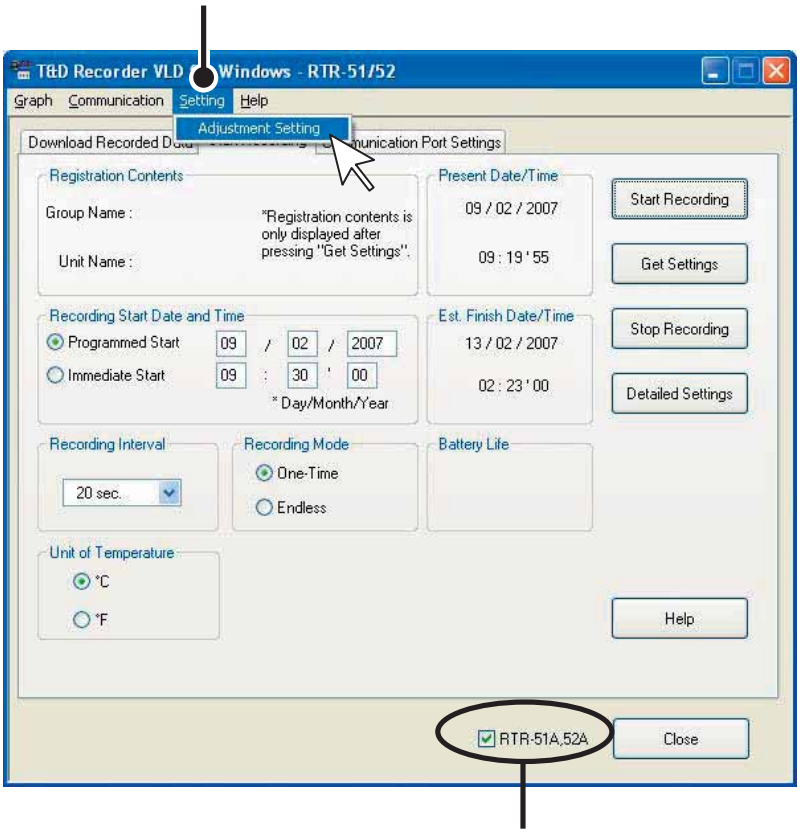
■ Connect the RTR-51A/52A to the Computer and set up for communication.

See pp.25-26 for more details about how to connect.

■ Adjustment Settings

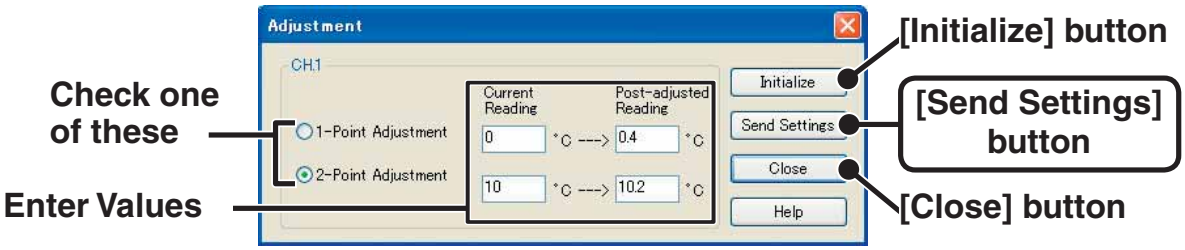
1. Open [RTR-51/52].
2. Place a check next to [RTR-51A, 52A] at the bottom of the window.
3. By Clicking on [Settings] in the Menu Bar and then selecting [Adjustment Settings] from the pull down menu, the [Adjustment Settings] dialog box will appear.

[Setting] menu



By clicking the checkbox, the [Adjustment Settings] dialog box appears where you can make adjustment settings

[Adjustment] Dialog Box



4. Select either [1-point Adjustment] or [2 Point Adjustment].

5. Please enter the actual pre-adjusted value(s) in the [Current Reading] column and the post-adjusted reference value(s) in the [Post-adjusted Reading] column.

6. Click on the [Send Settings] button to send the adjustment equation to the selected Data Logger.

- [Initialize] button:
  Clears any previous adjustment equation(s) from the Data Logger.

- [Send Settings] button:
  Transmits the adjustment equation to the Data Logger.

- [Close] button:
  Quits and closes the window.

Note

- We cannot guarantee that after carrying out adjustment the measuring accuracy will improve for all measuring ranges.
- By carrying out adjustment on an already adjusted device without first clicking the Initialize button, the new adjustment equation will be be used to further adjust the previously adjusted result. It is important to remember that if adjustment takes place without initializing the device, the adjustment will include the first equation as well as the second and an over adjustment will occur. This over adjustment will be especially large when making a 2-point adjustment and the measurement falls outside of the range of the two points entered.
  When you are carrying out adjustments and formulating equations please take care with the settings and take personal responsibility for the process.

RTR-53: Recording Settings

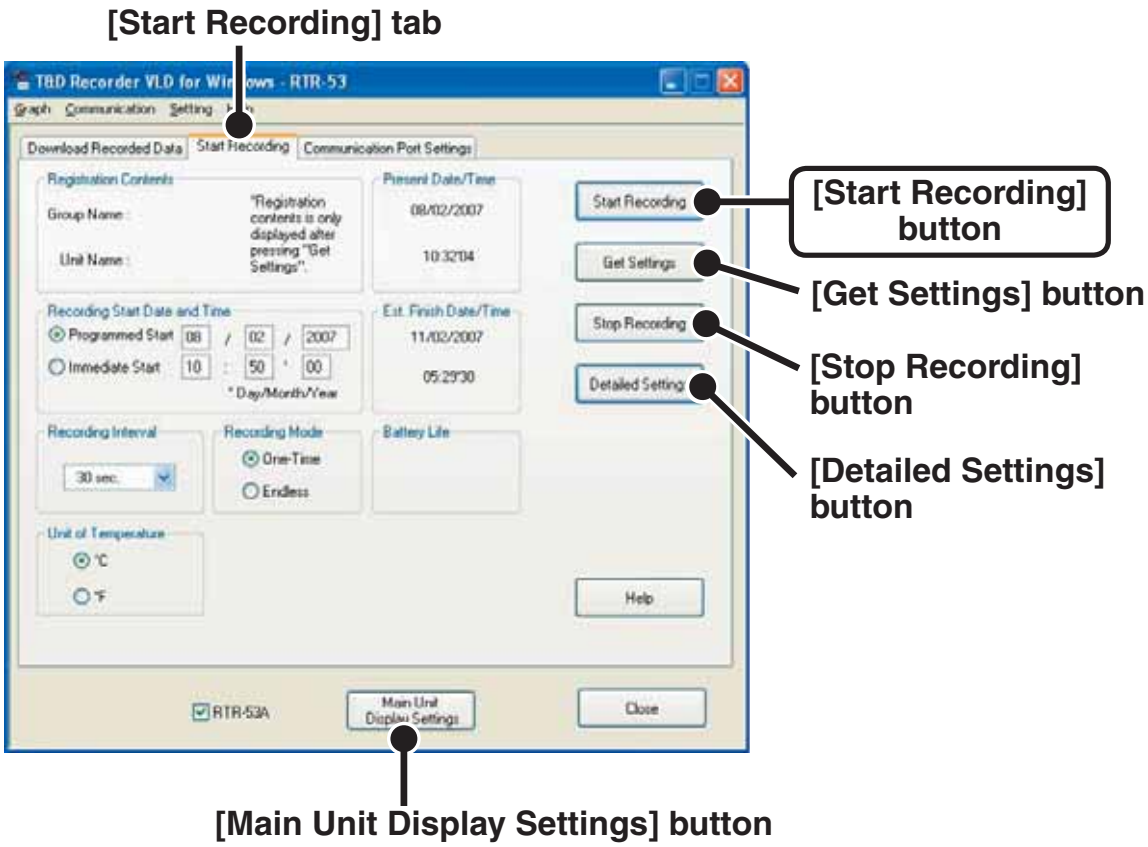
■ Connect the RTR-53 to the Computer and set up for communication.

See pp.25-26 for more details about how to connect.

■ Setting the Recording Conditions

1. Open [RTR-53].

2. Click the [Start Recording] tab, and make the necessary recording condition settings.



3. After making all of the necessary recording condition settings, click the [Start Recording] button and the settings will be transmitted.

4. Once the settings have been transmitted, a transmission result message will appear, click the [OK] button to complete the setting procedure.

● Recording Start Time

Select from: Immediate Start/Programmed Start

Programmed Start : Recording will begin on the set date and time.

Immediate Start : Recording will begin upon clicking the [Start Recording] button.

● Recording Interval

Select from: 1,2,5,10,15,20,30 seconds, or
1,2,5,10,15,20,30,60 minutes

Click the [▼] button to select an interval from the list.

● Recording Mode

Select from: One Time/Endless

One Time : Upon reaching capacity of 8000 readings, "FULL" will appear on the LCD display and recording will automatically stop.

Endless Loop : Upon reaching capacity of 8000 readings, the oldest data is overwritten and recording continues.

● Unit of Temperature for Display

Select Celsius (℃) or Fahrenheit (˚F)

Choose the temperature unit of measurement for use in the display.

* When settings have been received the registration contents and remaining battery life will be displayed.

Note

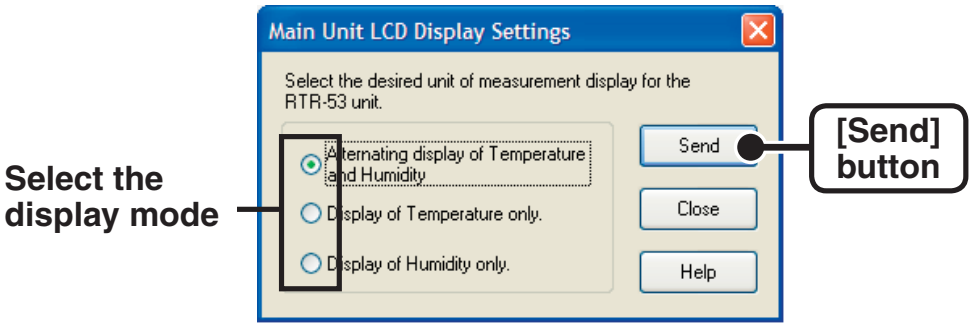
・The start date and time for a programmed recording start is based upon your computer system clock. If your computer calendar/clock are not set correctly, a programmed recording start may not start properly.

・The estimated finish date and time of recording in one time mode will be automatically calculated from the set recording interval and starting time.

● [Main Unit Display Settings] button

Use to make settings for the LCD Display Mode

1. Select the LCD display mode you wish to use.
2. Click the [Send] button to finish the setting process.



● [Get Settings] button

The Remote Unit Recording Conditions, Registration Contents and the Remaining Battery Life will be displayed.

* Registration Contents: The Group Name and Remote Unit Name will appear for the Remote Unit from which the settings were received.
* Remaining Battery Life: The remaining amount of battery power will be displayed for the Remote Unit from which the settings were received.

● [Recording Stop] button

During a recording session, it is possible to stop recording by clicking this button.

● [Detailed Settings] button

【Start by Wireless Communication Settings】

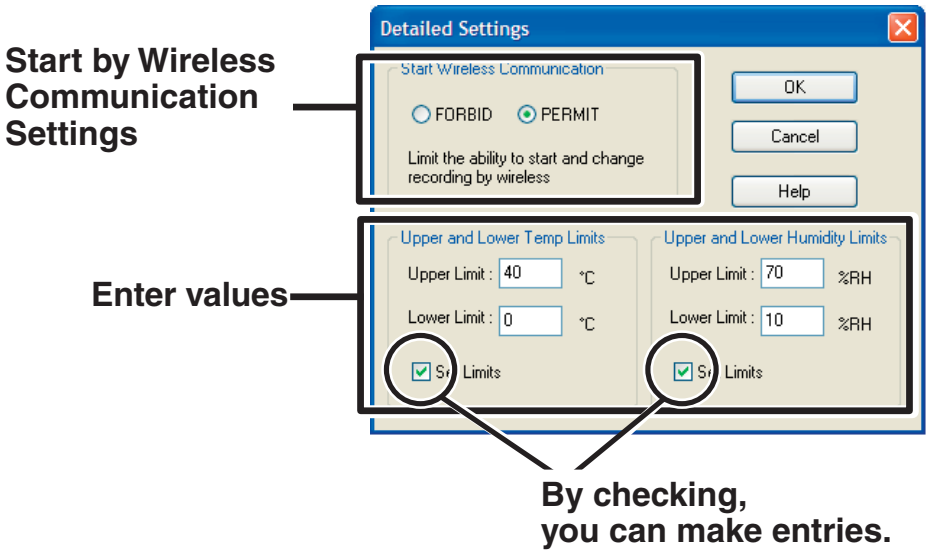
Here you can set restrictions on starting recording via wireless communication.

1. If you wish not to allow the starting of recording via wireless communication, select [Forbid] or if you wish to allow it, select [Permit].
2. Click the [OK] button to finish the setting process.

【Upper/Lower Limit Settings】

Make settings to have the Data Collector judge whether or not the recorded data that it has downloaded is within the set limits.

1. By putting a check next to [Set Limits], you will be able to enter upper and lower limits.
2. Click the [OK] button to finish the setting process.



RTR-53: Downloading Recorded Data

The downloaded data will be saved both as an encoded Original File(.trc) and as a Common Thermo Recorder Type File (.trx).

NOTE

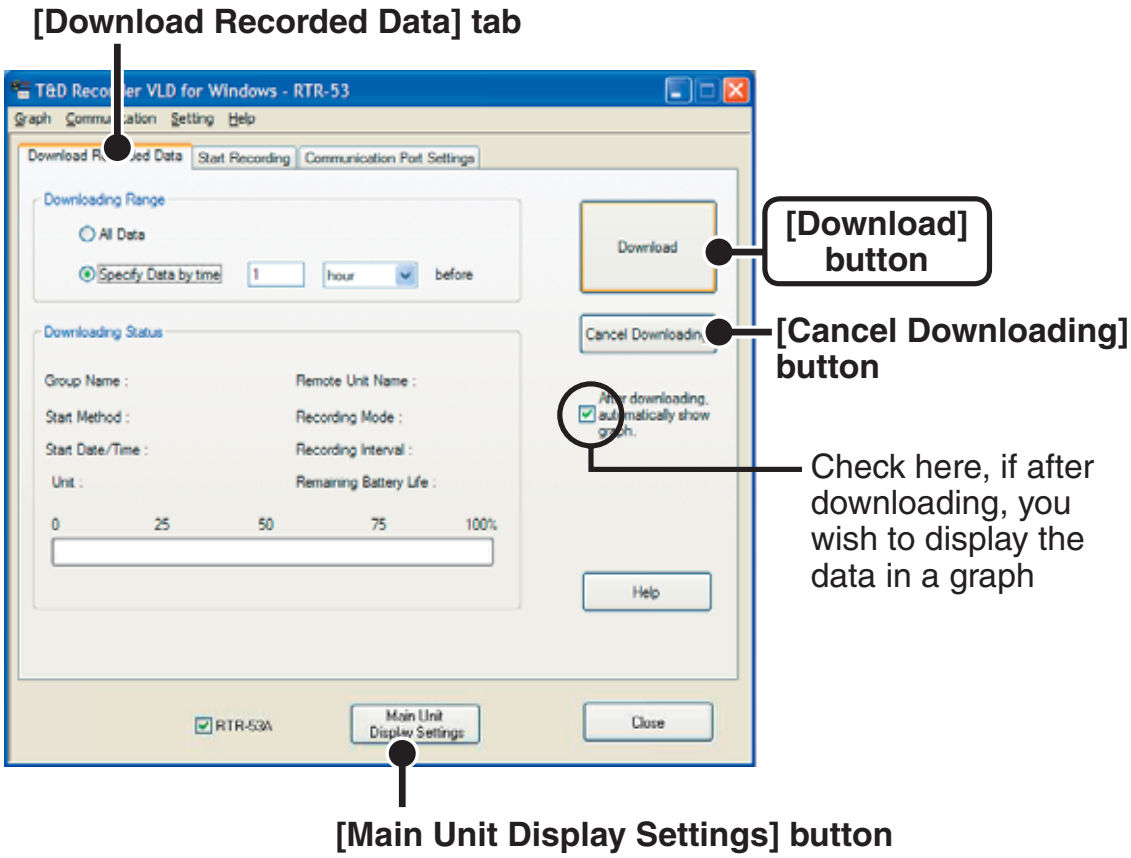
To open an encoded file, it is necessary to enter a valid User ID and Password. For this reason, it is necessary to make sure to keep on record the User ID and Password that were used when the encoded Original File was created. Without the User ID and Password it is impossible to open the Original File.

■ Connect the RTR-53 to the Computer and set up for communication.

See pp.25-26 for more details about how to connect.

■ Downloading Recorded Data

1. Open [RTR-53].
2. Click the [Download Recorded Data] tab.

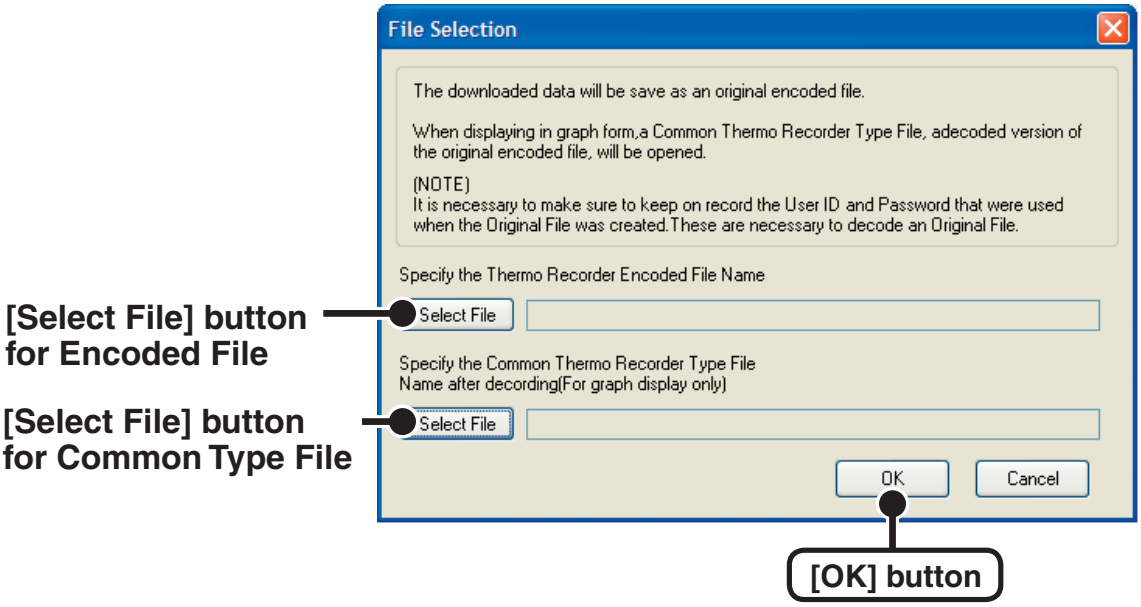


3. Select the range for downloading and click the [Download] button.

* In the default setting, a check is placed at [After downloading, automatically show graph]. If you wish to only save the data, remove the check.

4. The [File Selection] window will appear.
Specify a File Name and Location for both the encoded file and the common file.

* If the check has been removed from [After downloading, automatically show graph.], settings need to be made only for the encoded file.



5. Click the [OK] button to complete the settings and start the downloading.

6. After downloading has been completed, a Temp/Humidity Graph will appear.

* The data file will be saved in the specified location with file extensions [.trc] for Encoded Files and [.trx] for Common Type Files.

● [Cancel Downloading] button
Can cancel anytime during downloading.

RTR-53A: Value Adjustment Function

Currently the adjustment functions can be used only with the RTR-53A.
This function enables the user to make adjustments to measured values to correct inaccuracies that may occur when compared to a standard or reference temperature measurement. By setting an adjustment equation beforehand, the adjustment function will automatically calculate to record and display the post-adjusted measurement. It is possible to select from two methods of adjustment: 1-point adjustment and 2-point adjustment.

Note

- When you are carrying out adjustments and formulating equations please take care with the settings and take personal responsibility for the process.

■ Humidity: 1-point/2-point Adjustment

Before : Enter the actual measurement before adjustment.
After : Enter the desired measurement after adjustment.

- Entries are valid to one decimal point.
- The input value for [Post-adjusted Reading] must be less than ± 5% in comparison to the input value for [Current Reading].

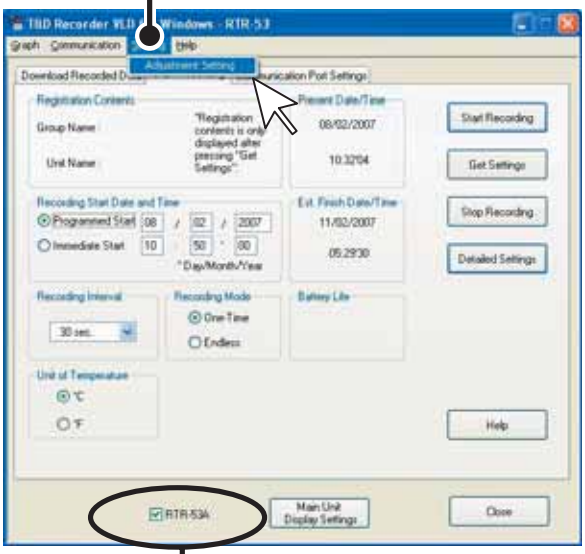
■ Connect the RTR-53A to the Computer and set up for communication.

See pp.25-26 for more details about how to connect.

■ Adjustment Settings

1. Open [RTR-53].
2. Place a check next to [RTR-53A] at the bottom of the window.
3. By Clicking on [Settings] in the Menu Bar and then selecting [Adjustment Settings] from the pull down menu, the [Adjustment Settings] dialog box will appear.

[Setting] menu

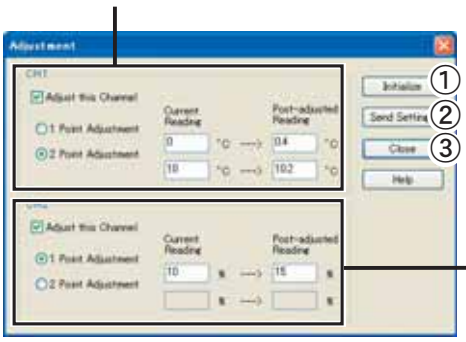


By clicking the checkbox, the [Adjustment Settings] dialog box appears where you can make adjustment settings

4. Check [Adjust this Channel], and select either [1-point Adjustment] or [2 Point Adjustment].

5. Please enter the actual pre-adjusted value(s) in the [Current Reading] column and the post-adjusted reference value(s) in the [Post-adjusted Reading] column.

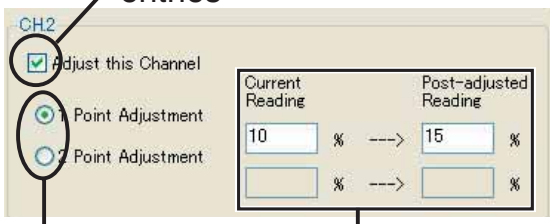
Temperature Adjustment



① [Initialize] button
② [Send Settings] button
③ [Close] button

Humidity Adjustment

By checking, you can make entries



Check one of these

Enter Values

6. Click on the [Send Settings] button to send the adjustment equation to the selected Data Logger.

- [Initialize] button:
  Clears any previous adjustment equation(s) from the Data Logger.

- [Send Settings] button:
  Transmits the adjustment equation to the Data Logger.

- [Close] button:
  Quits and closes the window.

Note

・We cannot guarantee that after carrying out adjustment the measuring accuracy will improve for all measuring ranges.
・By carrying out adjustment on an already adjusted device without first clicking the Initialize button, the new adjustment equation will be be used to further adjust the previously adjusted result. It is important to remember that if adjustment takes place without initializing the device, the adjustment will include the first equation as well as the second and an over adjustment will occur. This over adjustment will be especially large when making a 2-point adjustment and the measurement falls outside of the range of the two points entered.
When you are carrying out adjustments and formulating equations please take care with the settings and take personal responsibility for the process.
(For details about the RTR-51A/52A Temperature Adjustment Function. see pp.42)

Data Collector: Downloading Recorded Data

Here it is possible to download the collected data from the Data Collector to your computer.
The downloaded data will be saved both as an encoded Original File (.trc) and as a Common Thermo Recorder Type File (.trx).

NOTE

To open an encoded file, it is necessary to enter a valid User ID and Password. For this reason, it is necessary to make sure to keep on record the User ID and Password that were used when the encoded Original File was created. Without the User ID and Password it is impossible to open the Original File.

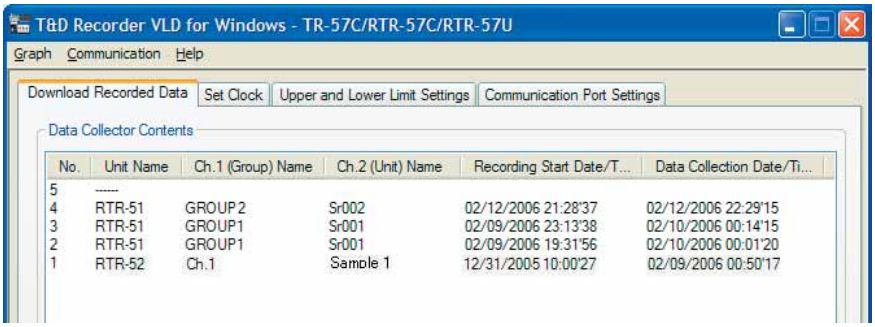
■ Connect the Data Collector to the Computer and set up for communication

See pp.17-18 for more details about how to connect.

■ Gathering Data Info from the Data Collector

1. Open [Data Collector].
2. Click the [Download Recorded Data] tab.
3. Click the [Collect Data Info] button to start communication and gather a Data Collector Contents of all downloaded data stored in the Data Collector

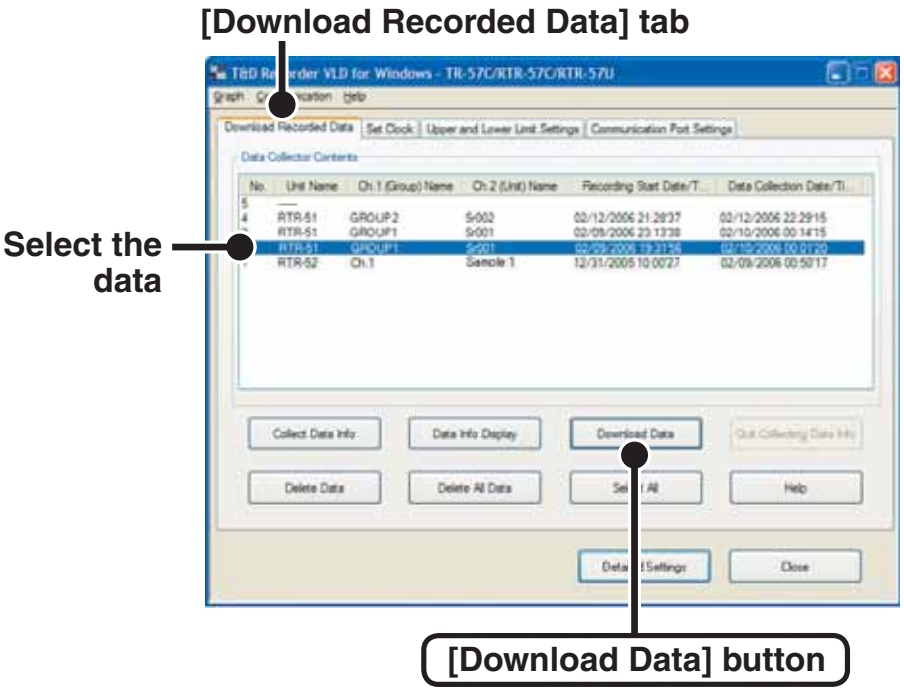
   * For devices other than RTR-51/52/53/TR-51A/52, [----] will be displayed. Data from devices whose Data Info display shows [----] cannot be downloaded.



■ Downloading Recorded Data

1. From the Data Collector Contents, select the data you wish to download.

* To simultaneously download several sets of data, use the <Ctrl> button or the <Shift> button to select several sets of data.
(Possible to select up to 8 channels of data)

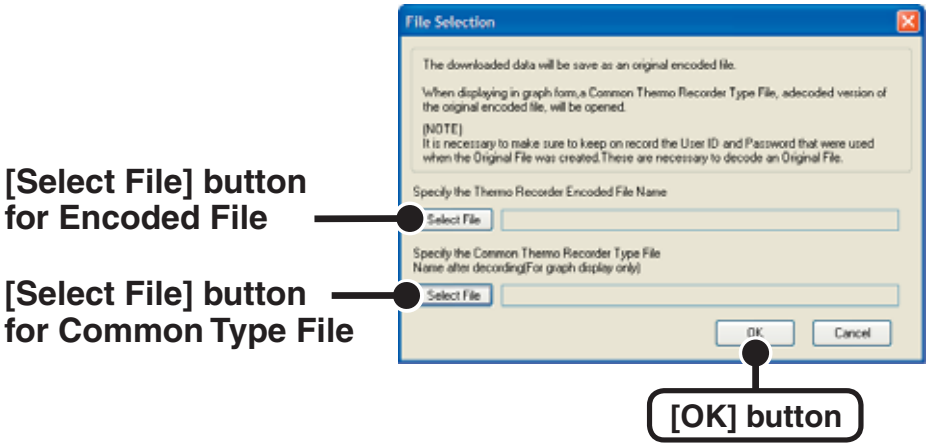


2. By clicking the [Download] button, the [File Selection] window will appear.

* The default setting in the detailed settings is for a check to be placed at [After downloading, automatically show graph.] If you wish just to save the data without viewing the Graph, check [After downloading, save data in file].
See pp.57 for details.

3. Specify a File Name and Location for both the encoded file and the common file.

* If you wish just to save the file, settings need to be made only for the encoded file.



4. Click the [OK] button to complete the settings and start the downloading.

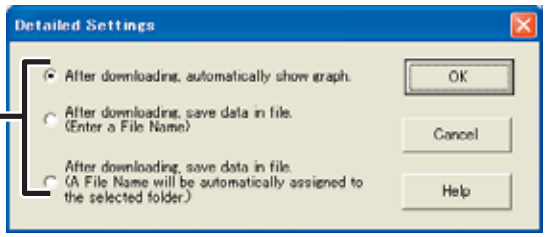
5. After downloading has been completed, a Temp/Humidity Graph will appear.

* The data file will be saved in the specified location with file extensions [.trc] for Encoded Files and [.trx] for Common Type Files.

* When simultaneously downloading multiple sets of data, the data will be saved with the 3-digit Data Collector Contents number at the end of the file name, such as (No.1 → 001, No.2 → 002).

● [Detailed Settings] button

Select one of the patterns



【After downloading, automatically show graph.】

After the data has been downloaded from the Data Collector, the Temperature/Humidity Graph will automatically open and a graph showing the downloaded data will appear.

・In this case, the downloaded data will be saved as both an Original File (.trc) and as a Common Thermo Recorder Type File (.trx).

・When simultaneously downloading multiple sets of data, all of the data will be joined and saved to a file.

【After downloading, save data in file. (Enter a File Name)】

After downloading data from a Data Collector, the data will be saved as an Original Encoded File (.trc).

・If more than one set of data has been selected it will be saved with the 3-digit data No. at the end of the file name.
(For example: When saving data numbers 1, 15 and 150 at the end of the file name will added [001], [015] and[150]).

【After downloading, save data in file.
(A File Name will be automatically assigned to the selected folder.)】

After downloading data from a Data Collector has been completed, a file name will be automatically assigned in the following format "Group Name_Remote Name_Data Collection Date/Time" or "Ch.1 Name_Data Collection Date/Time". This file will be saved as an original encoded file (.trc) in the specified folder according to the type of data.

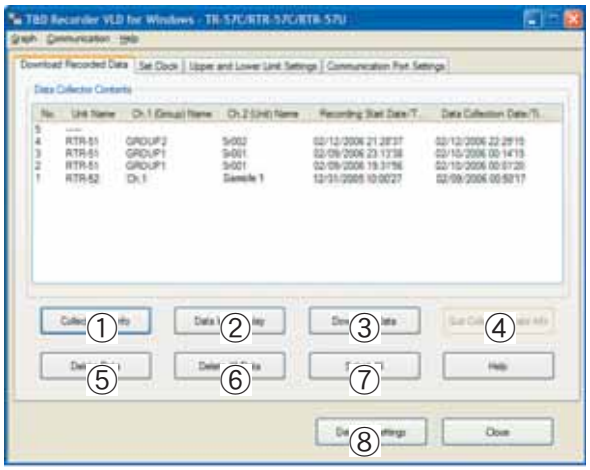
・The "Data Collection Date/Time" that is used in the file name is the same as that which can be found under [Download Recording Data] tab - [Data Collector Contents] - [Data Collection Date/Time].

Note

・If any of the following characters are included, a File Name cannot be assigned to create a File. If included, they will be automatically converted into a " - " (hyphens) and included in the File Name in order to create a file.
\ / : ; , * ? ” < > |

Data Collector: Other Functions

In the Data Collector Settings Window, the following operations can also be performed.
Before carrying out these operations, connect the Data Collector to your computer and gather the Data Collector Registration Info.

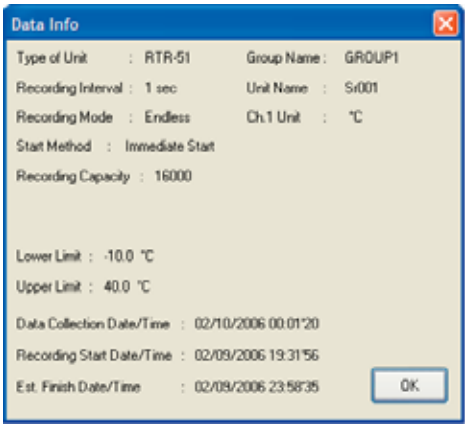


① [Collect Data Info] button
② [Data Info Display] button
③ [Download Data] button
④ [Quit Collecting Data Info] button
⑤ [Delete Data] button
⑥ [Delete All Data] button
⑦ [Select All] button
⑧ [Detailed Settings] button

● [Data Info Display] button

Detailed information will appear for the Remote Unit selected from the Data Collector Contents.

1. From the Data Collector Contents, select the Remote Unit whose Data Info you wish to view.
2. Click the [Data Info Display] button and the Info for the selected Remote will appear.



● [Quit Collecting Data Info] button

Anytime while collecting Data Info it is possible to click the [Quit Collecting Data Info] button to immediately stop the gathering of Data Info.

Note

・For data beyond that point, detailed information cannot be collected and therefore will not appear in the display. (However, the downloading of data is still possible.)

	No.	Unit Type	Ch.1 (Group) Name	Ch.2 (Unit) Name	Recording Start Date/Time	Data Collection Date/Time
①	5	TR-51A	ch1Data		06/10/2005 03:34'39	02/13/2006 01:34'44
	4	RTR-51	GROUP1	Sr001	02/13/2006 00:28'37	02/13/2006 01:29'15
②	3	RTR-51	GROUP1			
	2	RTR-51	GROUP1			
	1	TR-52	Ch.1			

When quitting a "Collect Data Info" session in progress.

① Collection of data info has been completed. All operations are possible.

② Data downloading and deletion can be done, but data info cannot be displayed.

● [Delete Data] button

Data selected from the Data Collector Contents will be deleted from the Data Collector.

Note

・Please be careful! Once data has been deleted it cannot be recovered!

1. In the Data Collector Contents, select the data you wish to delete.
2. After clicking the [Delete Data] button a confirmation message will appear, by clicking the [OK] button, the data will be deleted.

● [Delete All Data] button

Selects all of the data in the Data Collector Contents found in the Data Collector Contents.

Note

・Please be careful! Once data has been deleted it cannot be recovered!

● [Select All] button

Selects all of the data in the Data Collector Contents found in the Data Collector Contents.

Data Collector: Clock and Calendar Settings

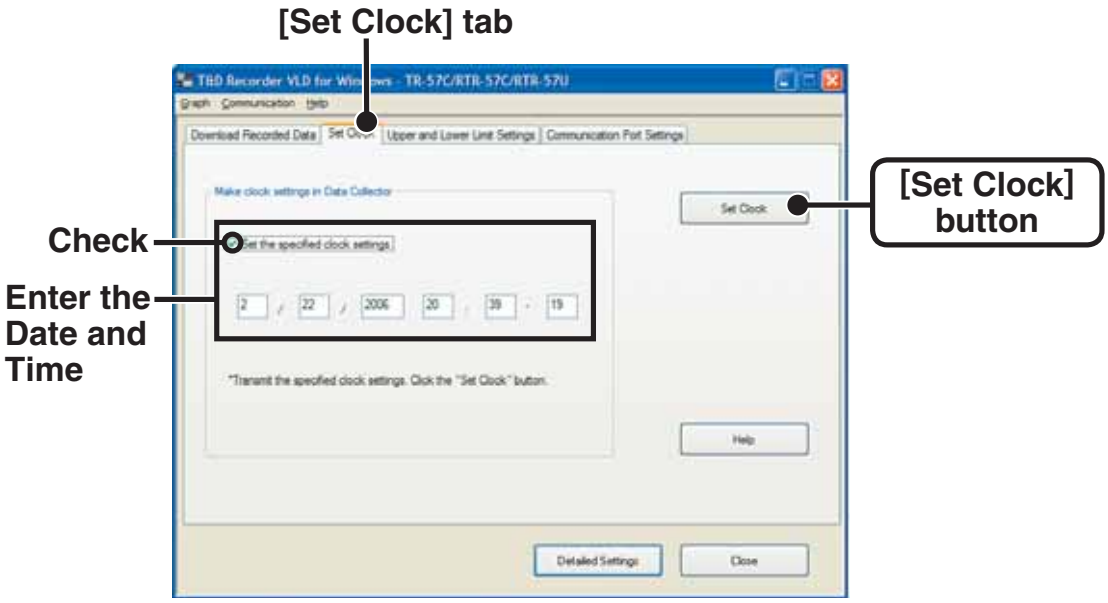
Please make sure that the Data Collector's date and time settings are correct, if they are not, the programmed start time and the recording time of downloaded data will be incorrect.
Please note that the date and time settings are adversely affected after the replacing of the battery. After replacing the battery, please check the time and date settings to make sure they are correct.

■ Connect so that your computer can communicate with the Data Collector

For details about how to connect, see pp.17-18.

■ Making Clock Settings

1. Open [Data Collector].
2. Click the [Set Clock] tab.
3. Make settings for the year, month, day and time.
   - Place a check next to [Set the specified clock settings].
     This sends the date and time you entered in the boxes to the Data Collector.



   - Remove the check next to [Set the specified clock settings].
     Will send the same clock settings as your computer's system to the Data Collector.

4. Click the [Set Clock] button and the clock settings will be sent to the Data Collector.

Data Collector: Upper and Lower Limit Settings

Note

・These settings can be made only if the Data Collector version is 2 or above. Please check the version information for your Data Collector by looking in the [Help] menu.

■ Connect so that your computer can communicate with the Data Collector

For details about how to connect, see pp.17-18.

■ Setting the Upper and Lower Limit Settings

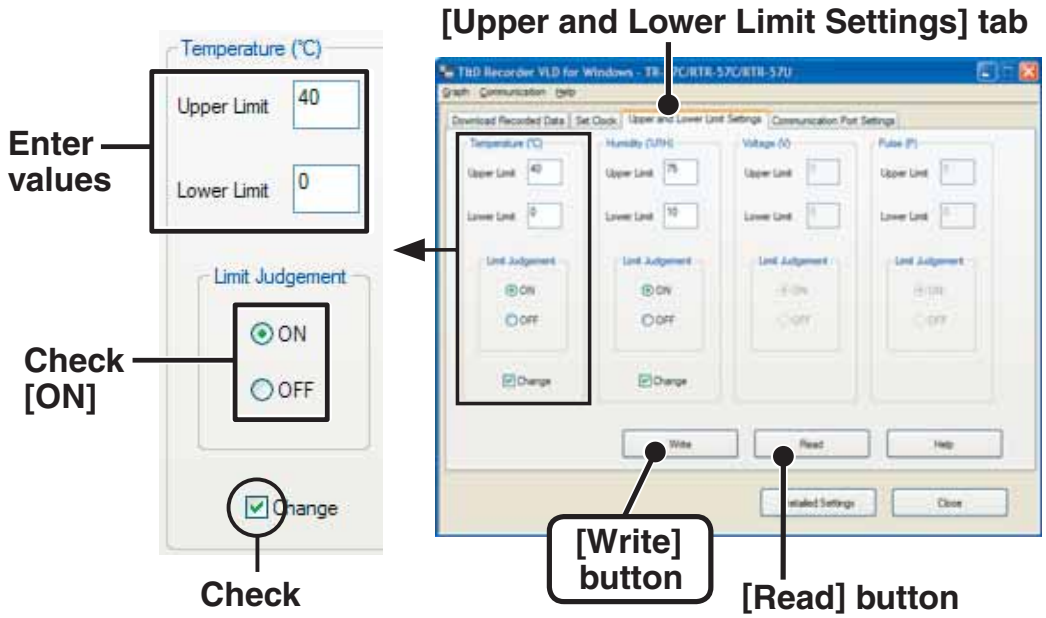
1. Open [Data Collector] and Click the [Upper and Lower Limit Settings] tab.

2. If [Change] is checked, it is possible to enter values for the upper and lower limits.

3. After entering the Upper and Lower Limit Settings, check the [ON] next to [Limit Judgment] and click the [Write] button to have the settings sent to the Data Collector.

If [ON] is checked: When downloading data, it will be judged as to whether or not it falls within the set limits.

If [OFF] is checked: No judgment will occur, even if limits have been set.



● [Read] button

Reads the upper and lower limit values currently set in the Data Collector.

TR-51A/52: Recording Settings

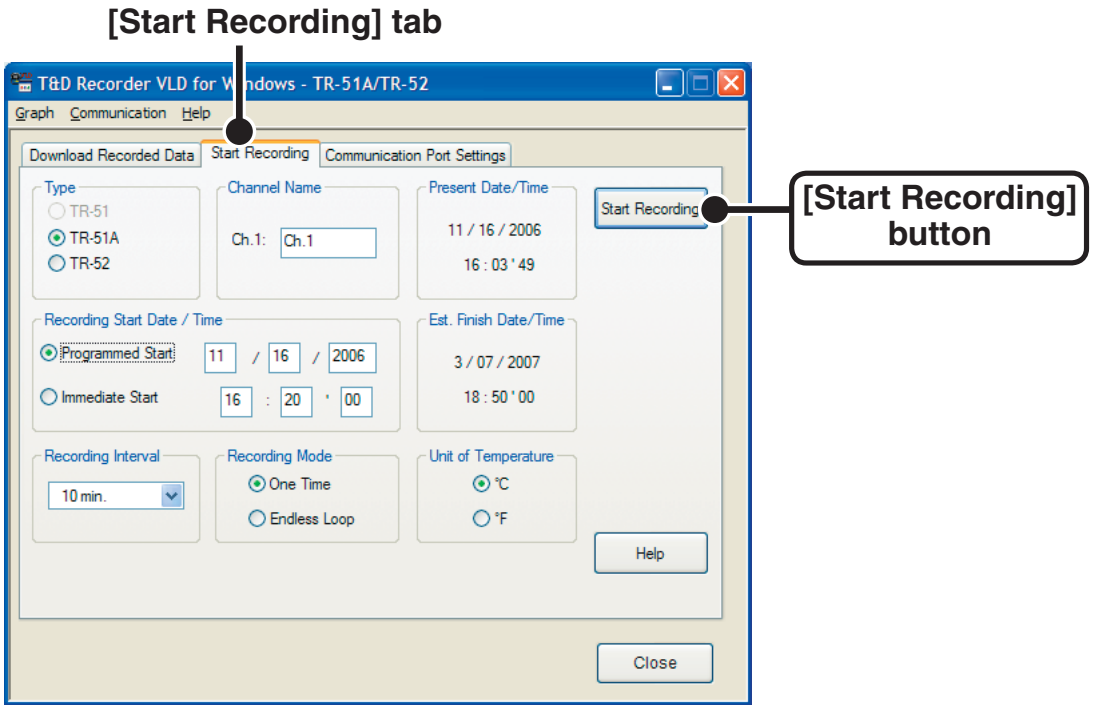
■ Connect the TR-51A/52 to the Computer and set up for communication.

See pp.25-26 for more details about how to connect.

■ Setting the Recording Conditions

1. Open [TR-51A/52].

2. Click the [Start Recording] tab, and make the necessary recording condition settings.



3. After making all of the necessary recording condition settings, click the [Start Recording] button and the settings will be transmitted.

4. Once the settings have been transmitted, a transmission result message will appear, click the [OK] button to complete the setting procedure.

- **Device Type**
  Select from: 51A/TR-52
- **Channel Name**
  Channel names can be entered with up to 8 letters.
- **Recording Start Time**
  Select from: Immediate Start/Programmed Start

  Programmed Start : Recording will begin on the set date and time.

  Immediate Start : Recording will begin upon clicking the [Start Recording] button.

- **Recording Interval**
  Select from: 1,2,5,10,15,20,30 seconds, or
  1,2,5,10,15,20,30,60 minutes
  Click the [▼] button to select an interval from the list.

  Note
  TR-51A cannot be set using seconds.

- **Recording Mode**
  Select from: Endless/One Time

  One Time : Upon reaching capacity of 16000 readings, "FULL" will appear on the LCD display and recording will automatically stop.

  Endless Loop : Upon reaching capacity of 16000 readings, the oldest data is overwritten and recording continues.

- **Unit of Temperature for Display**
  Select Celsius (℃) or Fahrenheit (˚F)
  Choose the temperature unit of measurement for use in the display.
  * When settings have been received the registration contents and remaining battery life will be displayed.

  Note
  - The start date and time for a programmed recording start is based upon your computer system clock. If your computer calendar/clock are not set correctly, a programmed recording start may not start properly.
  - The estimated finish date and time of recording in one time mode will be automatically calculated from the set recording interval and starting time.

TR-51A/52: Downloading Recorded Data

The downloaded data will be saved both as an encoded Original File (.trc) and as a Common Thermo Recorder Type File (.trx).

NOTE

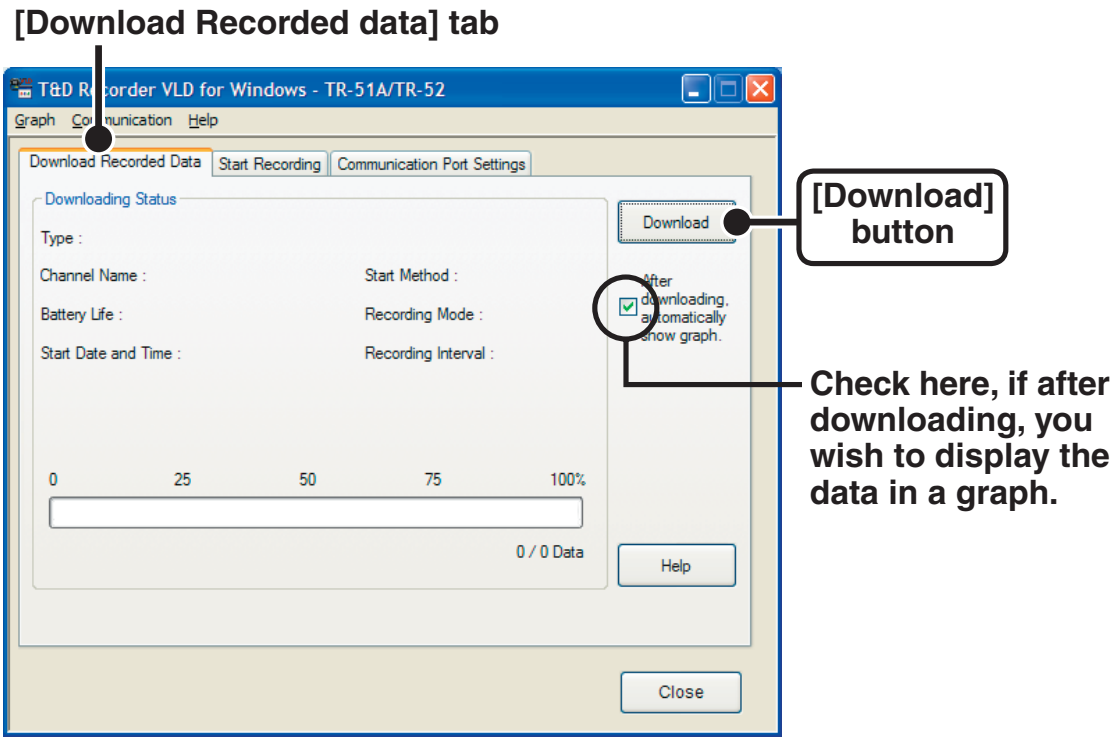
To open an encoded file, it is necessary to enter a valid User ID and Password. For this reason, it is necessary to make sure to keep on record the User ID and Password that were used when the encoded Original File was created. Without the User ID and Password it is impossible to open the Original File.

■ Connect the TR-51A/52 to the Computer and set up for communication.

See pp.25-26 for more details about how to connect.

■ Downloading Recorded Data

1. Open [TR-51A/52].
2. Click the [Download Recorded Data] tab.

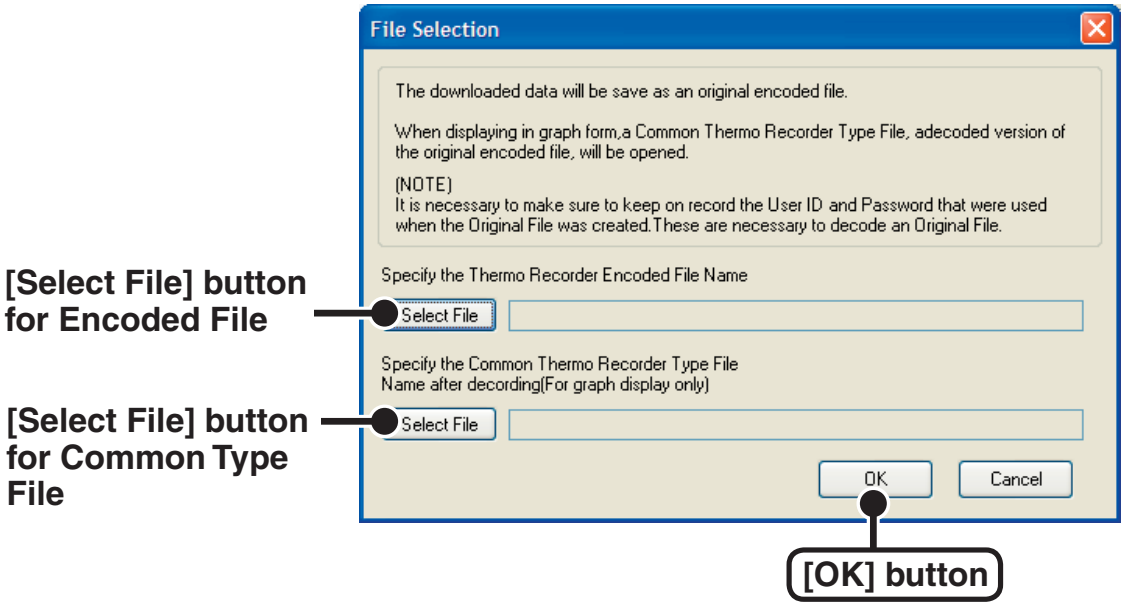


3. Click the [Download] button.

* The default setting is for a check to be placed at [After downloading, automatically show graph.] If you wish to only save the data, remove the check.

4. The [File Selection] window will appear. Specify a File Name and Location for both the encoded file and the common file.

* In the default setting, a check is placed at [After downloading, automatically show graph]. If you wish to only save the data, remove the check.



5. Click the [OK] button to complete the settings and start the downloading.

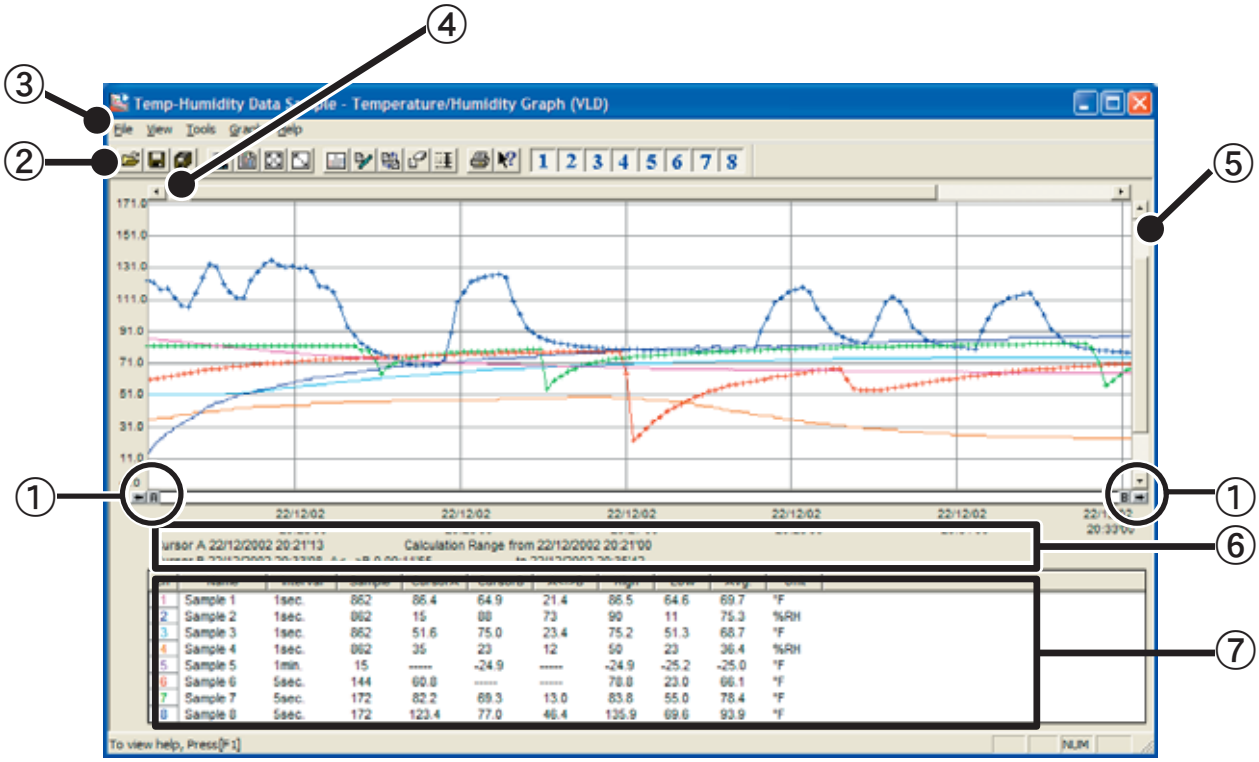
6. After downloading has been completed, a Temp/Humidity Graph will appear.

* The data file will be saved in the specified location with file extensions [.trc] for Encoded Files and [.trx] for Common Type Files.

Operating the Temp/Humidity Graph

■ Temperature/Humidity Graph Display Names and Functions

The horizontal axis shows time and the vertical axis shows temperature/humidity data.



① A and B Cursor Movement Buttons and A/B Cursor Buttons (⬅ A B ➡)

By clicking the arrow buttons, you can simultaneously move the A/B cursors. Click and drag the A or B button to move the cursor to the left or right.

② Toolbar (1 2 3 4 5 6 7 8)

Buttons appear for frequently used commands.

③ Menu Bar (File View Tools Graph Help)

Click on the desired menu in the Menu Bar to set or display each function from which you can choose from an array of commands.

④ Button (◂ ▸)for Moving Horizontal Axis and Horizontal Gauge Bar

By dragging the gauge you can move left and right to the data you want to be displayed. The horizontal axis moves by clicking these arrow buttons.

⑤ Button (▴ ▾) for Moving Vertical Axis and Vertical Gauge Bar

By dragging the gauge you can move up and down to the data you want to be displayed. The vertical axis moves up or down by clicking these arrow buttons.

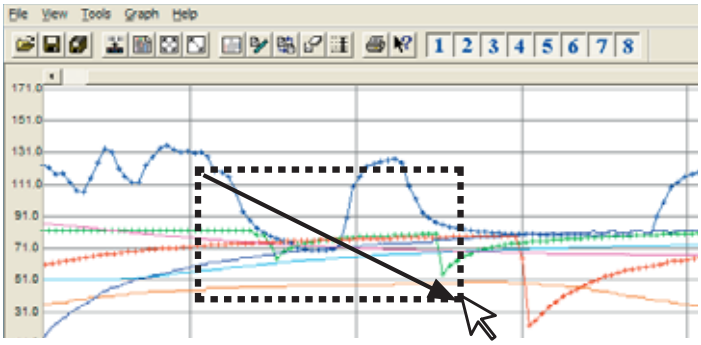
⑥ A and B Cursor Position Information

The approximate date and time for the A and B cursor positions and the time difference between the A cursor and the B cursor is displayed.

⑦ Channel Info List Display

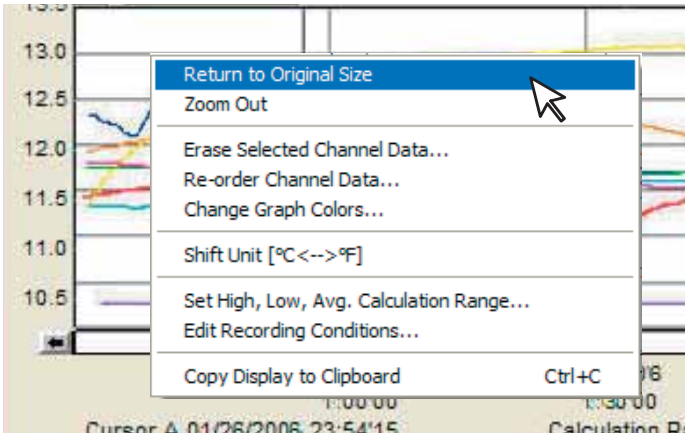
The detailed data info for each channel 1 to 8 is displayed below the Graph Display.

【Zoom in Using the Mouse】



With the left button drag the mouse to outline the area you want to zoom in on.

【Menu Display Using the Mouse】



By right clicking on the graph, the Menu will be displayed.

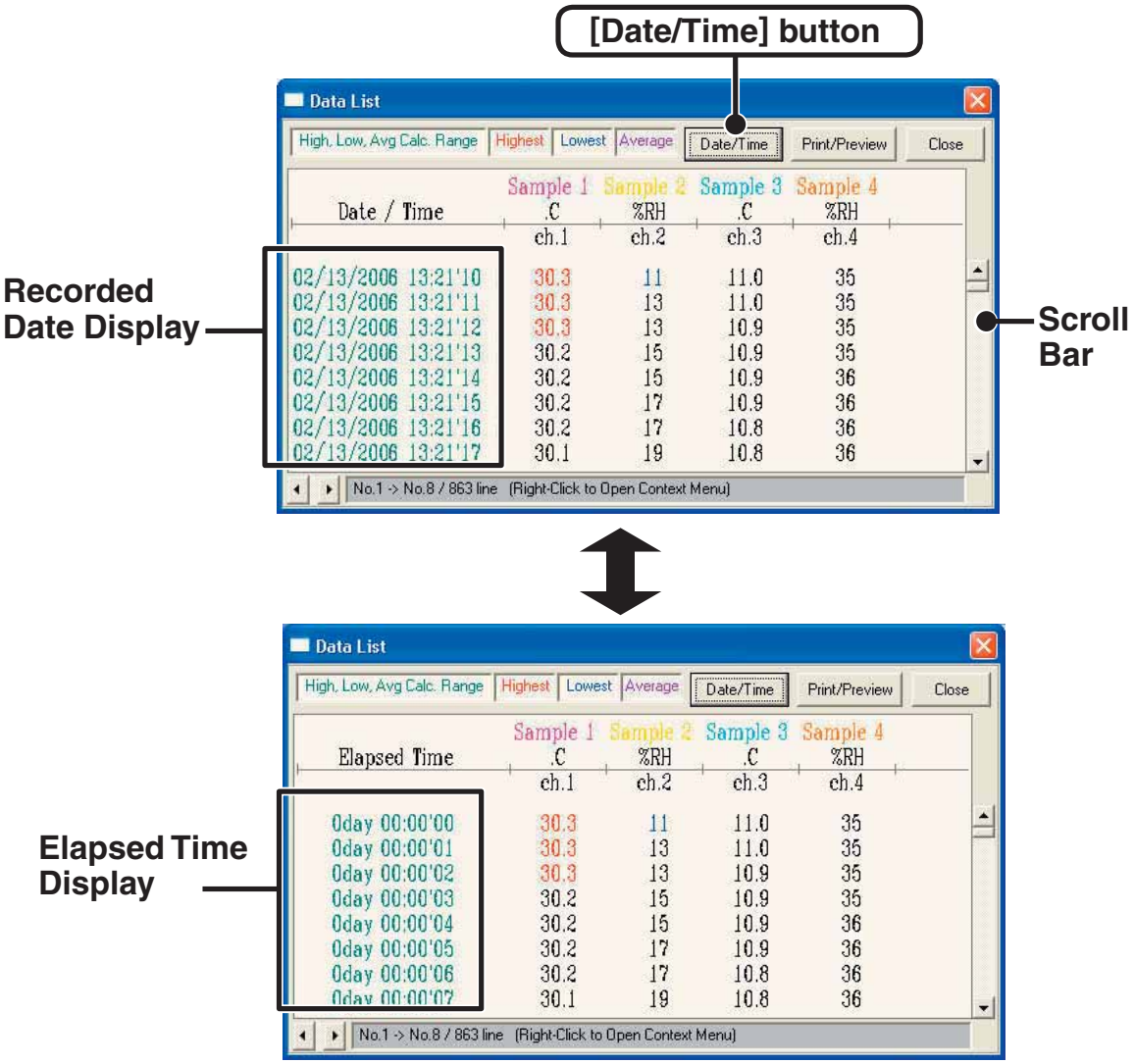
■ Data List Display: from the [View] Menu

This is a list of the data that was displayed in graph form.

● [Date/Time] button

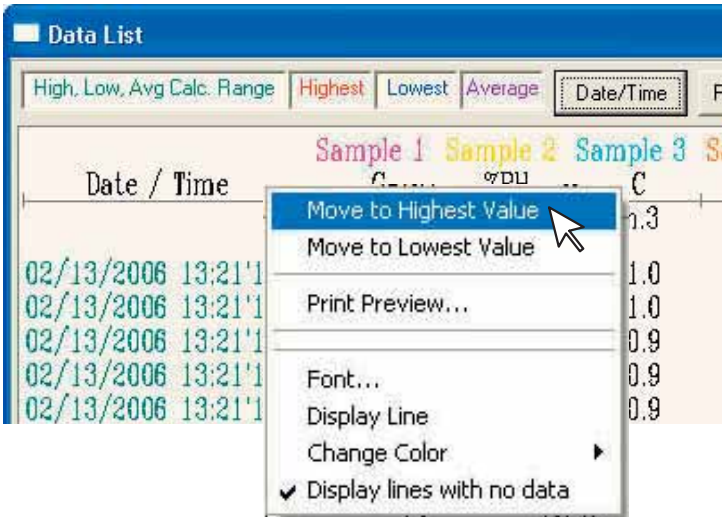
By clicking this button, you can shift the display between the recorded date and the amount of elapsed time since recording started.

・The highest value is in RED, lowest is in BLUE, and the average is in PINK.
・Scroll Bar: By dragging it up and down you can move to the data you want.



● Menu Display Using the Mouse

By right clicking on the graph, the Menu will be displayed.

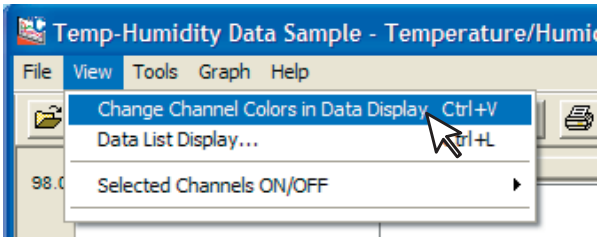


Making Changes to the Graph Display

■ Changing Colors of Data Display Area: from the [View] Menu

You can change the letters used in the data list display for each channel between monochrome and channel color.

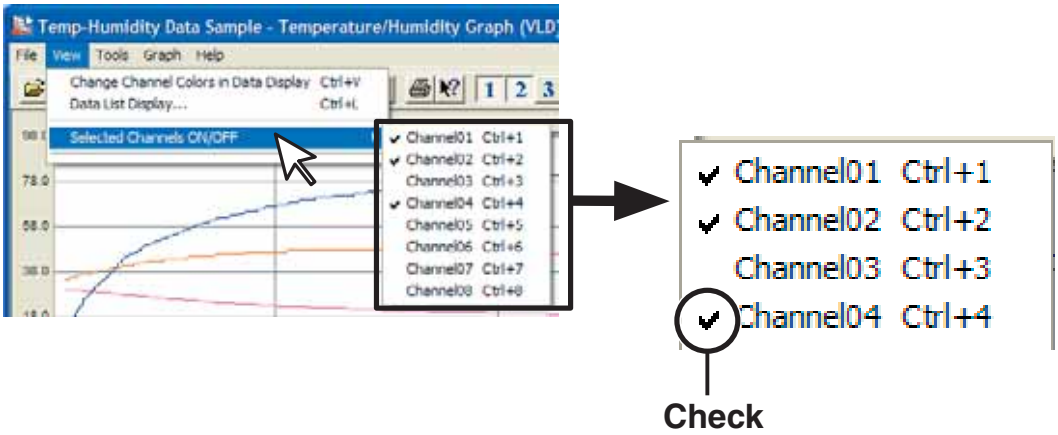
[View] Menu



■ Viewing and Hiding Channels in Graph: from the [View] Menu

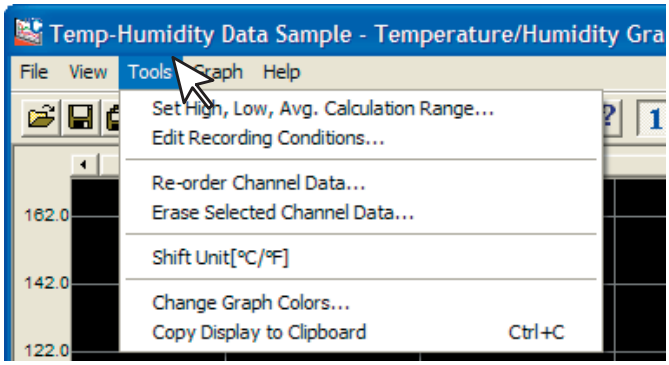
You can choose to view only the selected channels in the Graph.

1. By moving the mouse to [Selected Channels ON/OFF], the channel numbers are displayed.
2. Click the channel number to remove or place a check mark. Only those channels with a check mark next to the number will be displayed in the Graph.
   * The same operation can be done by clicking on the channel number icons in the Toolbar.



■ Setting the Max. Min. Avg. Calculation Range: from the [Tools] Menu

[Tools] Menu

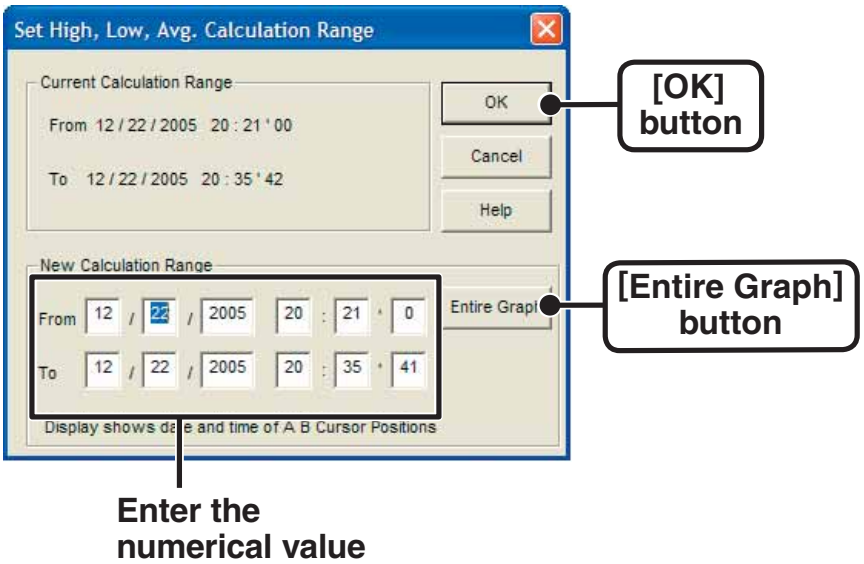


1. Set the calculation range in the [Set High, Low, Avg. Calculation].

* By clicking the [Entire Graph] button, the dates and times for the entire graph will be displayed.

* If in the graph display, place the A cursor at the position for the beginning of the calculation range and the B cursor at the end of the range, and those dates and times will appear as the new range in the [Set High, Low, Average Calculation Range] Display when it is opened.

2. Click the [OK] button to finish.

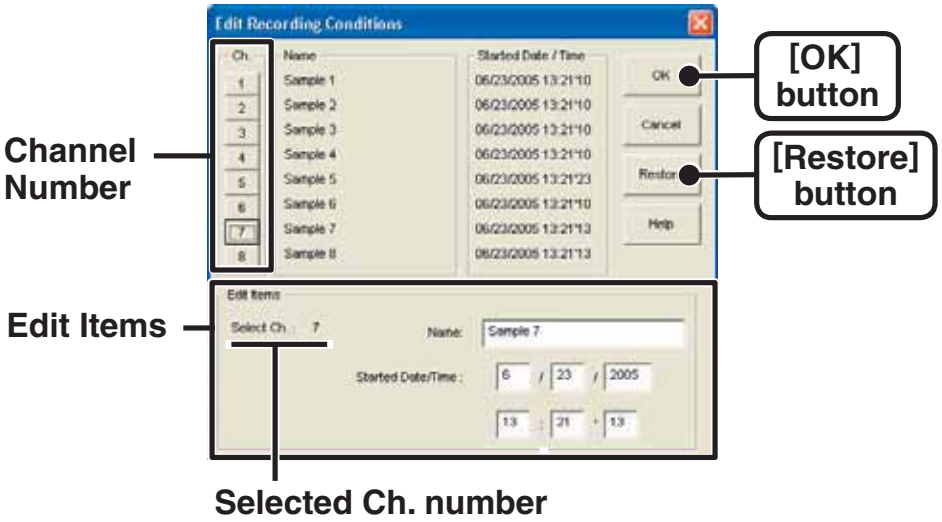


■ Editing Recording Conditions: from the [Tools] Menu

It is possible to make corrections to channel names and to recording start date and times.

1. By clicking the [Channel. No.] button of the channel you wish to edit, the [Name] and [Started Date/Time] in the [Edit Items] display will show info for that channel number.

* Name: Up to 32 letters can be entered.
* Starting Date/Time: The month, day, year, hour, minute and second can be changed.



2. After making changes, click the [OK] button to finish, a window will appear asking you to [Enter the reason for the editing of data.]

* Please see pp.75 for "Enter the reason for the editing of data".

3. After entering the reason, click the [OK] button to finish the editing.
If you wish to continue to change other channels, repeat the process as in 1.

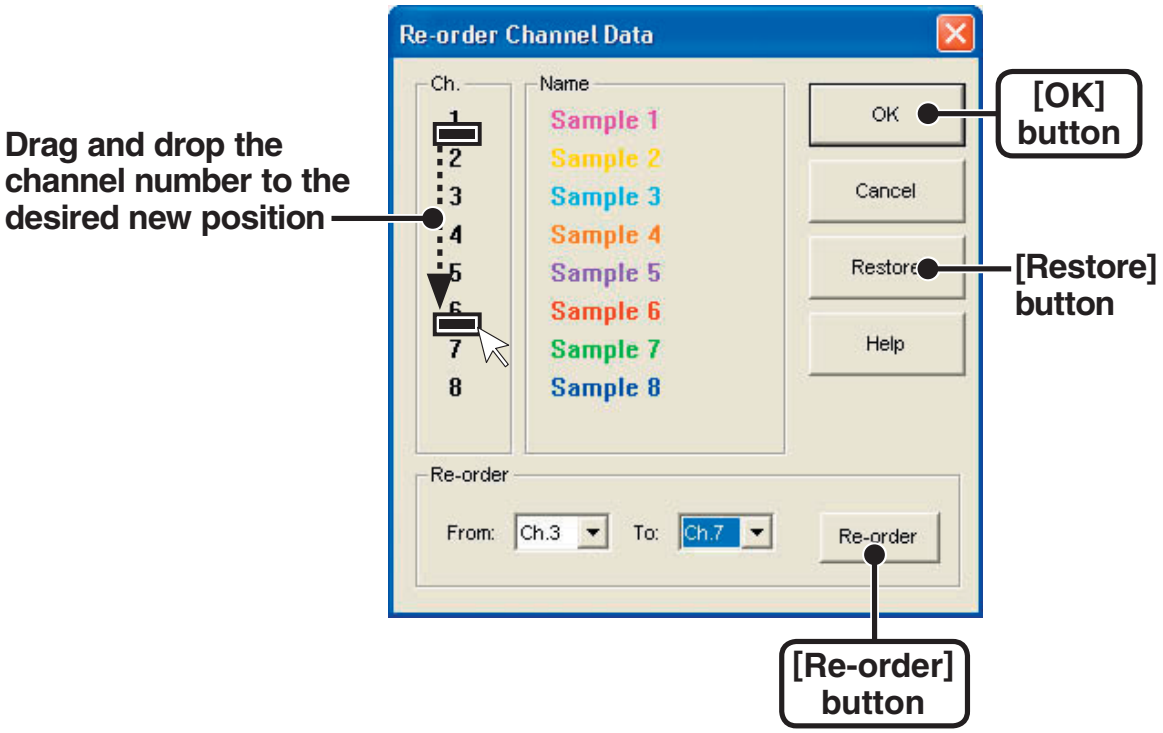
* The [Restore] button is only effective while making changes. After clicking the [OK] button the settings cannot be restored to the original settings.

■ Reordering Channel Data: from the [Tools] Menu

You can re-order the data during graph display.
There are two methods to use when re-ordering channels.

【Re-order by Dragging a Channel Number】

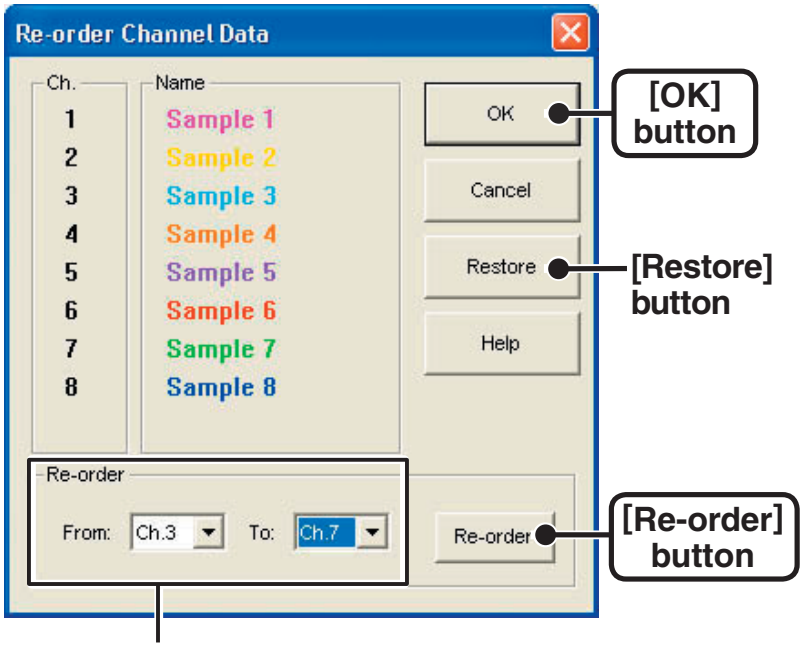
1. Click the channel number you wish to move.
2. While holding down the mouse button, drag the channel number you wish to move.



3. After clicking the [OK] button, a window will appear asking you to [Enter the reason for the editing of data.]
   * Please see pp.75 for "Enter the reason for the editing of data".
4. After entering the reason, click the [OK] button to finish the re-ordering.
   * The [Restore] button is only effective while making changes. After clicking the [OK] button the settings cannot be restored to the original settings.

【Specify the Channel Numbers to be Moved】

1. Specify the channels to be moved.
From: (original position) To: (desired position)



If you wish to move Ch3. to Ch7, simply set From Ch3, To Ch7.

2. After clicking the [Re-order] button and the [OK] button, a window will appear asking you to [Enter the reason for the editing of data.]

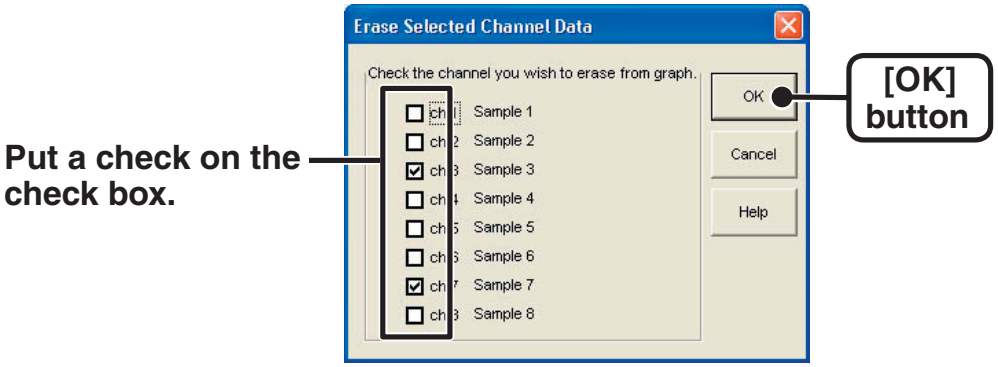
* Please see pp.75 for "Enter the reason for the editing of data".

3. After entering the reason, click the [OK] button to finish the re-ordering.

* The [Restore] button is only effective while making changes. After clicking the [OK] button the settings cannot be restored to the original settings.

■ Erasing Selected Channel Data: from the [Tools] Menu

1. Put a check on the channel number you wish to erase.

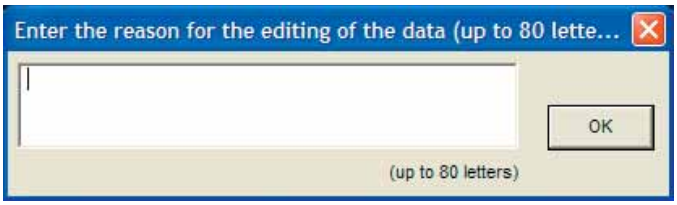


2. After clicking the [OK] button, a window will appear asking you to [Enter the reason for the deleting of data.]

3. After entering the reason, click the [OK] button to finish the deleting.

【Enter the reason for the editing of data】

The entered reason (up to 80 letters) wi ll be saved in the Operations History File and can be viewed in the Archive Viewer message column.

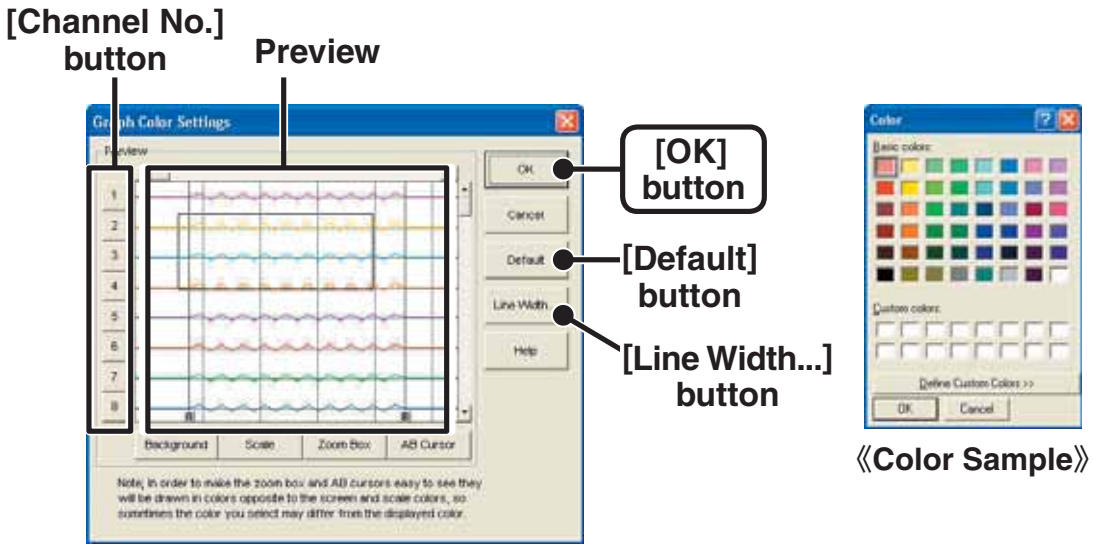


■ Shift Unit (℃⇔°F): from the [Tools] Menu

By clicking on [Shift Unit (℃⇔°F)], you can automatically change the temperature unit scale in the graph display and in the channel info list.

■ Change Graph Colors: From the [Tools] Menu

1. Click the channel number of which you wish to change the color. You can change the colors of the channel name, graph background, the scale lines, the enlarged box area, and the AB cursors.

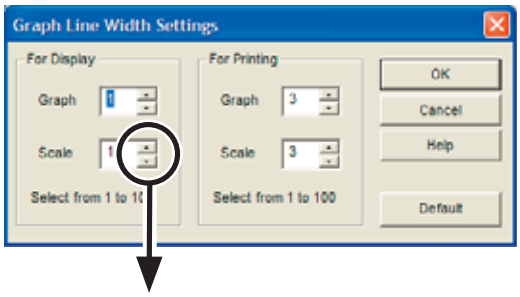


2. Choose the color you want and click the [OK] button.
3. After confirming the color, by clicking the [OK] button the change will be completed.
   * By clicking the [Default] button, you will return to the color settings when the software was opened.

● [Line Width...] button

Change the width of the data lines and the scale lines.

1. Click on the [▼][▲] button to change the width of the graph/scale lines.



Every time you click on

▲··· the numerical value gets larger,

▼··· the numerical value gets smaller.

2. Click the [OK] button to finish the setting process.

   * By clicking the [Default] button, you will return to the line width settings when the software was opened.

■ Copy Display to Clipboad: from the [Tools] Menu

By Clicking [Copy Display to Clipboard], you can copy the currently displayed window to the clipboard and make use of the graph by pasting to other software.

Operating the Graph

● Returning to Original Size: from the [Graph] Menu
Clicking here will return the graph to its original size.

● Zooming In and Out: from the [Graph] Menu
Zooms in or out one step at a time.

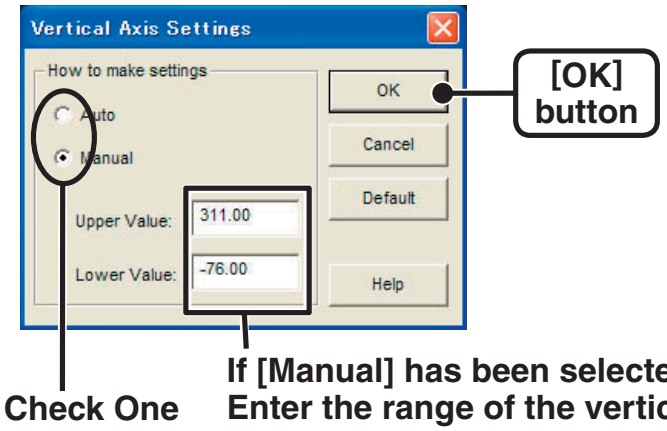
● Moving the A/B Cursors Right and Left: from the [Graph] Menu
Simultaneously move the AB Cursors to the right or left.

● Moving Right and Left on the Graph: from the [Graph] Menu
Move the Graph Display to the right or left.

● Moving Up and Down on the Graph: from the [Graph] Menu
Move the Graph Display up or down.

● Vertical Axis Settings: from the [Graph] Menu
Set the vertical axis scale (temperature).

1. Check either [Auto] or [Manual].



AUTO: The vertical axis will automatically be changed according to the values of the data.

MANUAL: You can set the upper and lower values of the vertical axis scale.

2. Click the [OK] button to finish.

* By clicking the [Default] button, you will return to the settings when the software was opened.

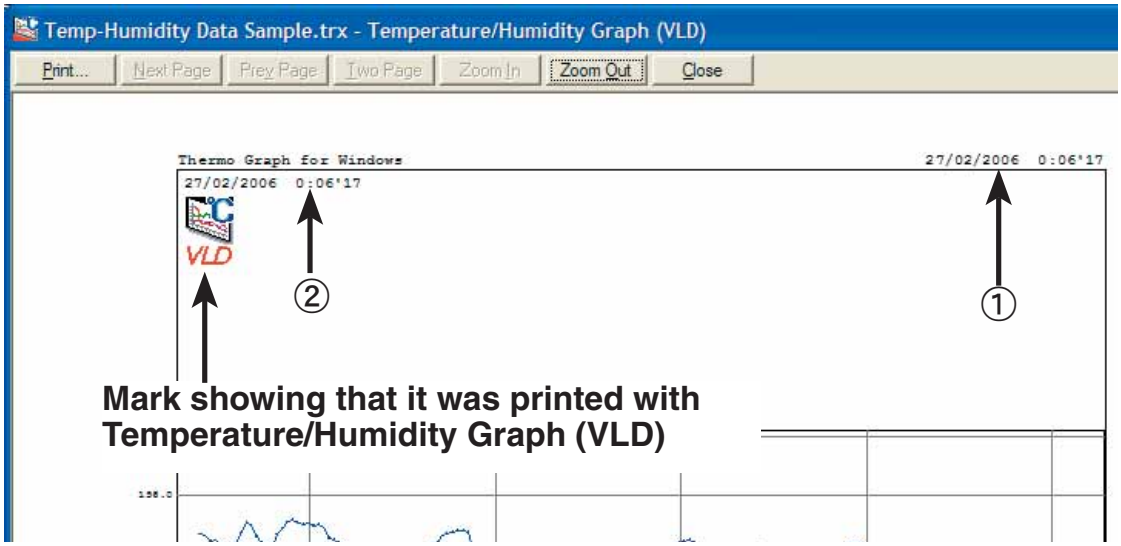
Printing the Graph

Print the graph in the current display. If you wish to change the size of the Graph, change the size of the window before printing.

■ Print Graph: from the [File] Menu

At the top right and left of the graph of the printed Graph, two dates and times will be printed.

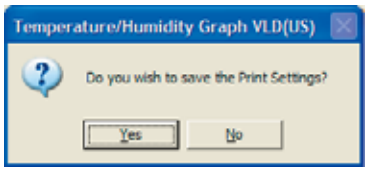
《Print Preview》



① Normally, the current date and time (at printing) will appear. When you upload saved print settings to print a graph, the date and time when the printing settings were saved will appear.
② The date and time that the Graph was first printed will appear.

【Saving of Printing Settings】

Upon printing a Graph, a message will appear asking [Do you wish to save the Print Settings?]



When you use [Upload Saved Print Settings] you can print a graph of recorded data with the same scale and positioning info as when it was saved. (File will have extension [*.trp]).

■ Upload Saved Print Settings: from the [File] Menu

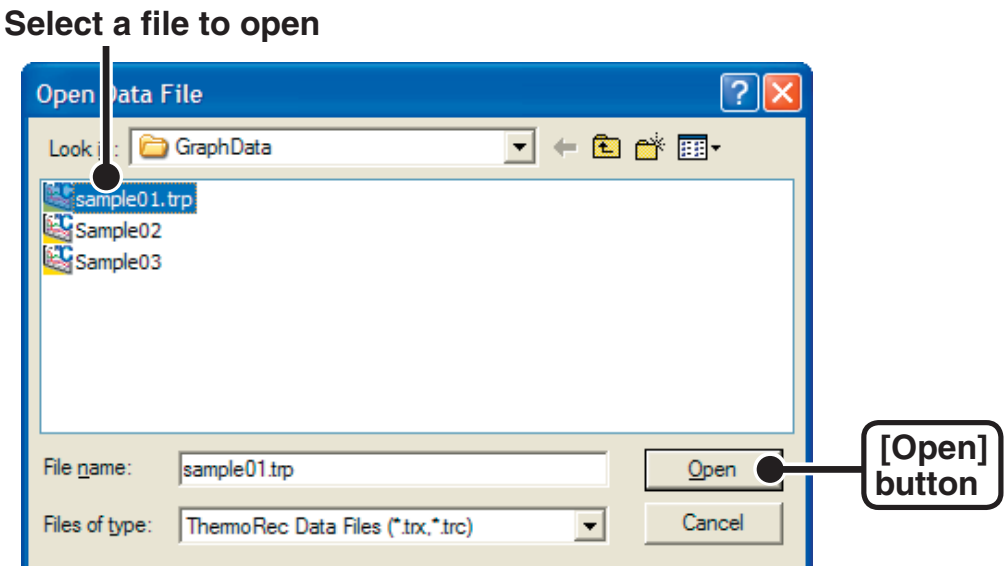
A graph that has already been printed will appear as it was saved and can be reprinted with exactly the same printing settings.

Note

- If a Graph is already currently being viewed, it will be deleted and a new Graph will be created.
- When using [Upload Saved Print Settings] to view a Graph, functions other than the actual printing operation, and the Help Menu will become unusable.

1. In the [File] Menu, select [Upload Saved Print Settings].

2. Select the File you wish to upload, and click the [Open] button to view it in the Graph display.



Saving Recorded Data

If you have edited any data after viewing it the Graph display, we suggest that you save it as you see necessary.

■ 3 Ways to Save Files: from the [File] Menu

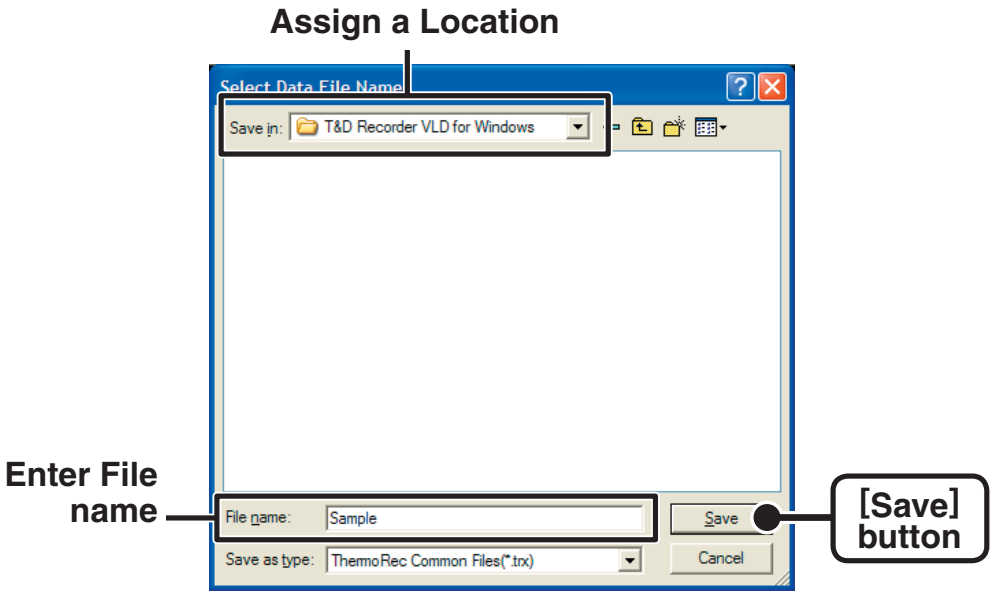
【Overwrite All Data】
Will save any changes to file without changing File Name and Saving Location.
The same operation can be carried out from [Save] in the Toolbar.

【Save All Data as...】
Save with a new File Name.

【Save Display Data as...】
Save only that data in the current display.
This is handy when you wish to save only the desired data.

● EX: 【Save All Data as...】

1. Click [Save All Data as...] in the [File] Menu.
2. Specify the [Location] and enter a [File Name].



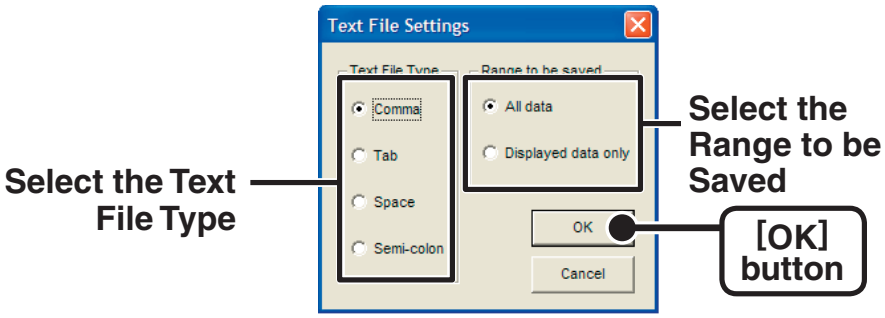
3. Click [Save] to complete the saving process.

Creating Text File

By saving the recorded data as text file, you can create a file type that can be read by common spreadsheet software.

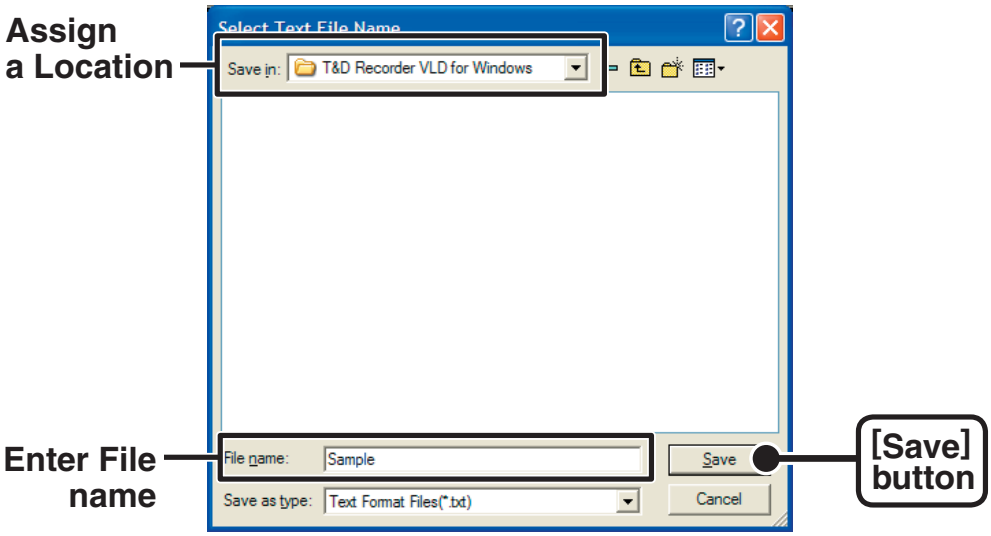
1. Click [Save Data in Text File] in the [File] Menu.
2. Select the [Text File Type] and [Range to be Saved], and click [OK].

   * Comma, Tab, Space, and Semi-colon are codes used by common spreadsheet software, such as Excel and Lotus, when reading Text File to divide cells.



3. Designate the location to which the file should be saved and click [Save] to create and save the data as a Text File document.

   * The extension for the created file will be [.txt].



Note

- Text File cannot be read into the [Temp/Humidity Graph].

Opening a Saved File

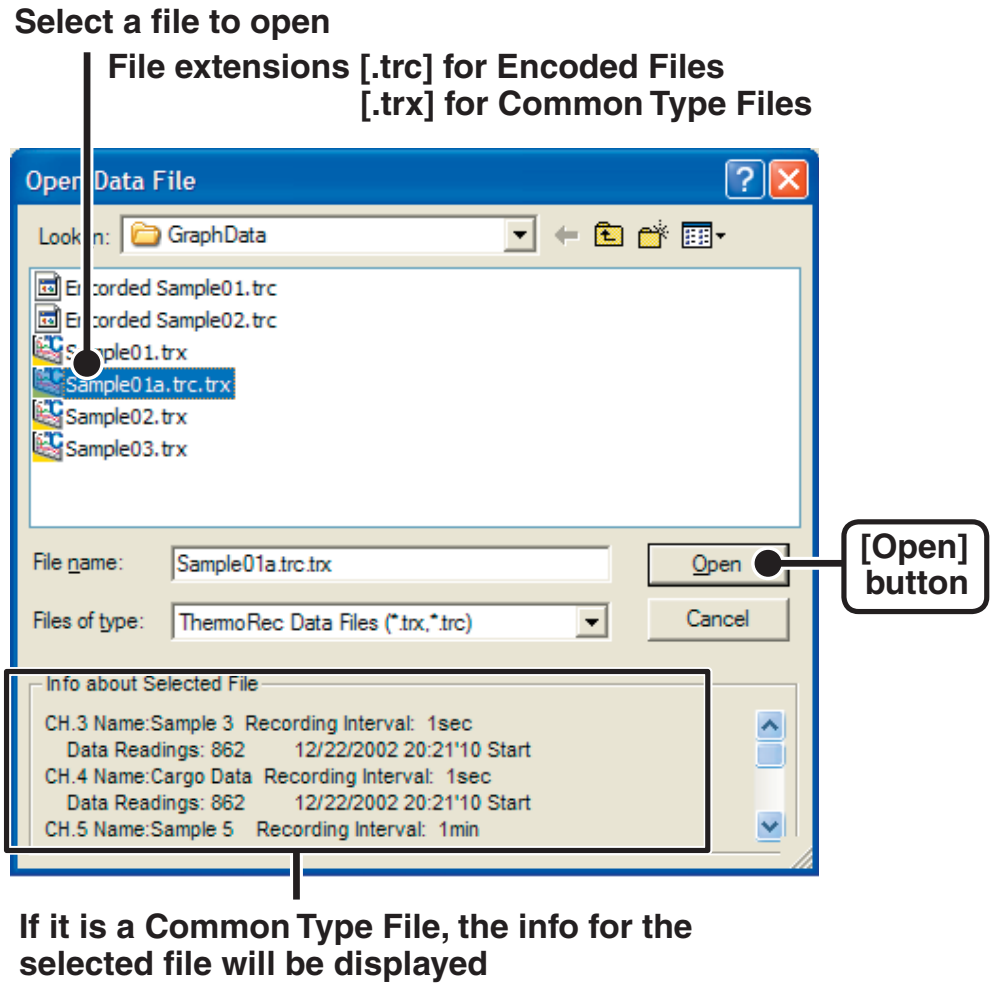
To display a previously saved file in Graph form, specify the file name to open it. If you wish to open an Encoded File, first decode the Encoded File into a Common Type File and open the Common Type File.

NOTE

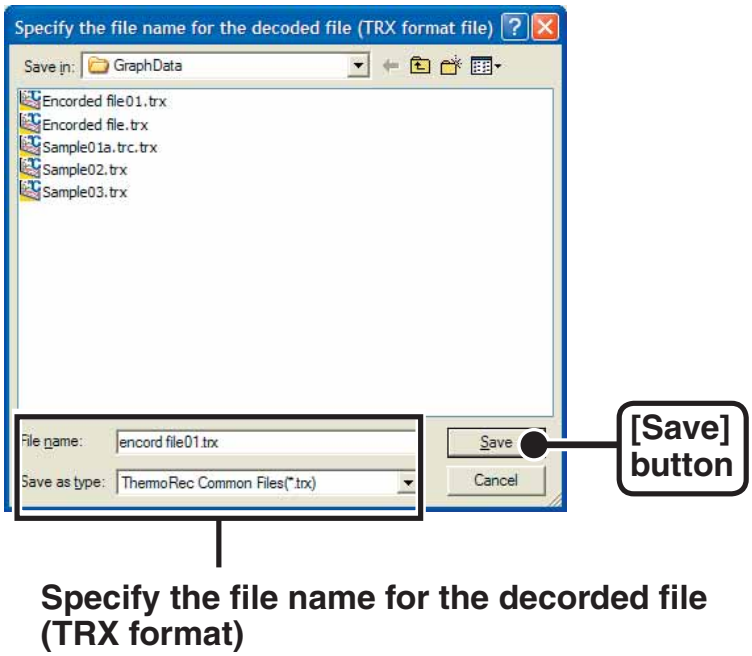
To open an encoded file, it is necessary to enter a valid User ID and Password. Enter the User ID and Password that were used when the encoded Original File was created. Without the original User ID and Password it is impossible to open the Original File.

■ Ex: Opening an Archive File: from the [File] Menu

1. Click [Open] in the [File] Menu.
2. Select the Encoded File you wish to view, and click the [Open] button to view it.

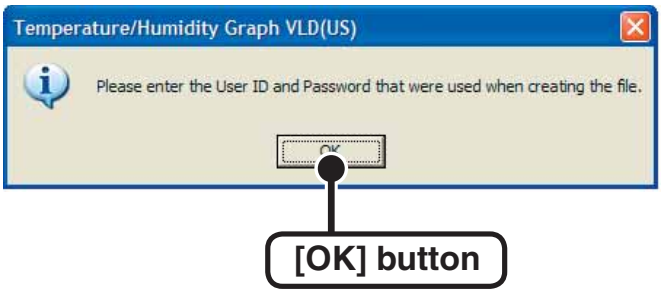


3. To view the file in the Graph display, enter a File Name for the decoded file (after having changed the Encoded Type File to a Common Type File) and click [Save].



■ If another User opens an Encoded File

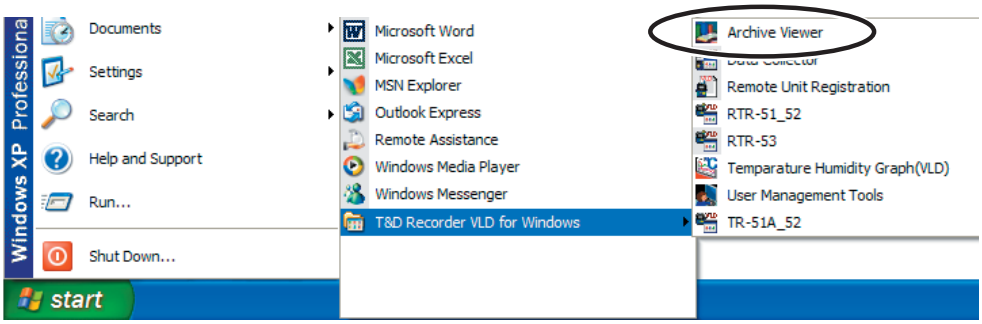
1. Entering a File Name for the decoded file (after having changed the Encoded Type File to a Common Type File) and clicking [Save], a message will appear.



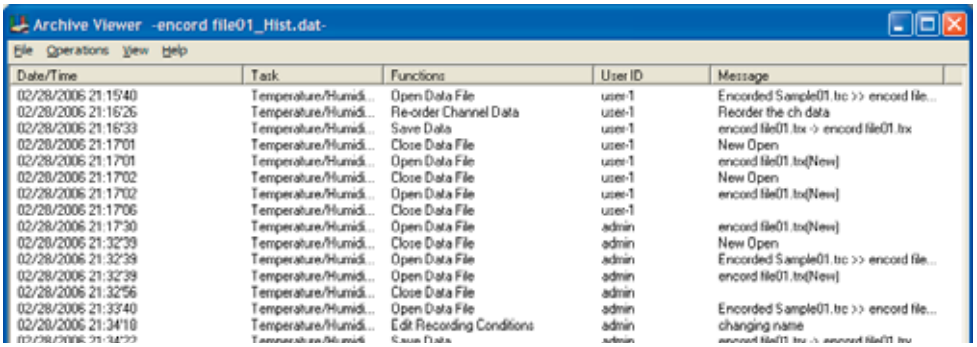
2. By clicking the [OK] button, a window will appear asking you to enter the same "User ID" and "Password" as the original Login when the file was created.
3. After entering these, by clicking the [OK] button, the Graph will be displayed.

Archive Viewer

All operations within each application which require authorization to carry out will be automatically recorded in the Operations History and saved in a History File in the same Folder into which T&D Recorder VLD for Windows was installed.



Archive Viewer



- Temperature/Humidity Graph Operations History File
  "File Name (without extension) " _Hist.dat
- [Upload Saved Print Settings] Operations History File
  "File Name (without extension) " _pri_Hist.dat
- Operations History Files other than for Temperature/Humidity Graph
  "File Name (without extension) " Logger_Hist.dat

If the Archive exceeds 10,000 records,
new records will be saved in ****_Hist_0001.dat.
If Archive folders exceed another 10,000 records,
new records will be saved in ****_Hist_0002.dat,
then ****_Hist_0003.dat, etc...

* This will be saved if an archive file is damaged, or if an error occurs while writing to an archive file.

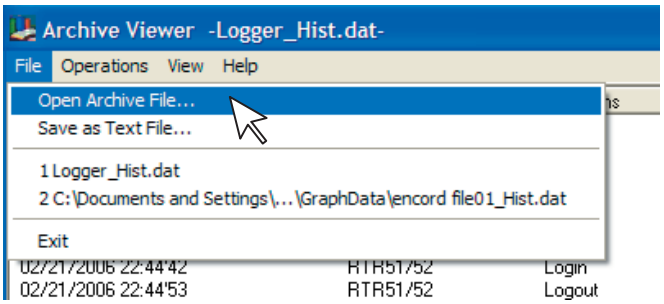
* A damaged Archive File cannot be viewed.

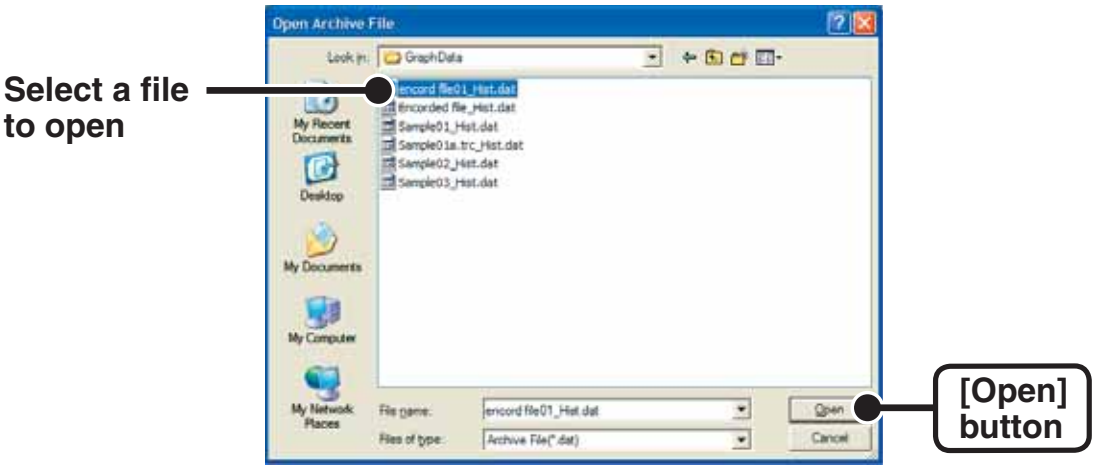
With the Archive Viewer it is possible to filter through various archival records by Task, User ID, and Operation Date/Time, view those records and save the archived information on display in text file format. It is also possible to sort through the archived records by clicking on the Title for each Filter Column such as Date/Time or Task.

■ Opening the Archive File: from the [File] Menu

Open existing Archive Files.

1. In the [File] Menu, select [Open Archive File].



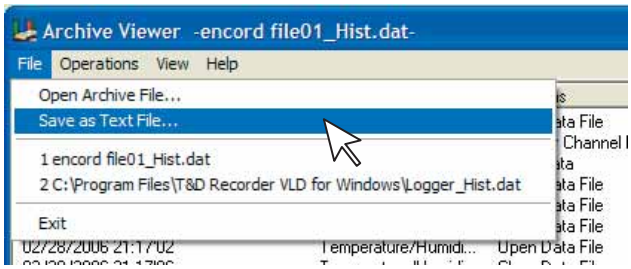


2. Select the archive file that wish to open and click [Open] to view in the Archive Viewer.

■ Save as Text File: from the [File] Menu

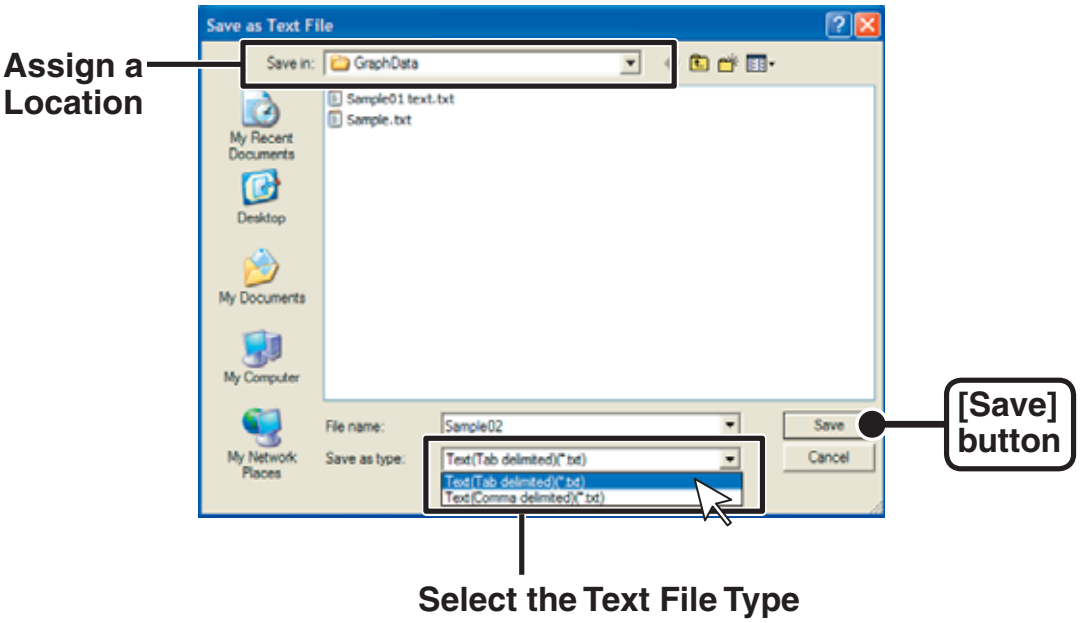
Save the archived information that is being displayed in the Archive Viewer in text file format.

1. In the [File] Menu, click [Save as Text File].



2. Specify the [Location] and enter a [File Name].

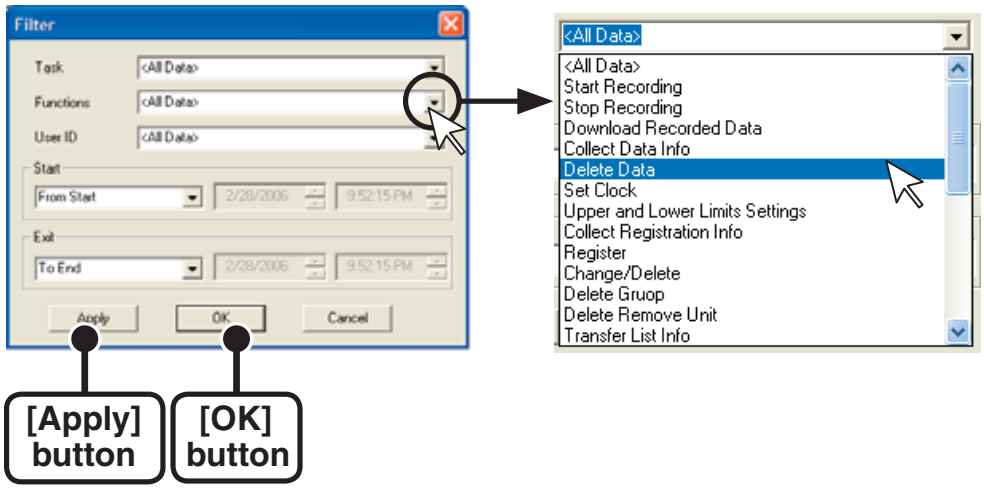
3. Designate the File type and save by clicking the [Save] button.



■ Filter: from the [Operations] Menu

Here it is possible to make settings for the conditions of the recorded info you wish to view in the Archive Viewer.

1. In the [Operations] Menu, click on [Filters].



【Task/Function/User ID】

By clicking the [▼] button, a list of applications will appear from which you can select which application you wish to view.

【Start/Exit】

Click the [▼] button and make desired settings for the range.

2. After selecting the desired conditions, click the [Apply] button or the [OK] button and the Archive Viewer will use the selected conditions to display the records.

● [Apply] button

After applying the filter settings, the dialog window will remain open.

● [OK] button

After clicking [OK], the dialog window will close.

■ Clock Format: from the [View] Menu

Use this to change the format in which time is displayed in the Archive Viewer.

1. In the [View] Menu, move the mouse to [Open Archive File] and various time display formats will appear.

2. By clicking the desired format, the setting will be completed.

■ Status Bar: from the [View] Menu

Use this to Hide/View in the Status Bar in the Archive Viewer.

■ Revise: from the [View] Menu

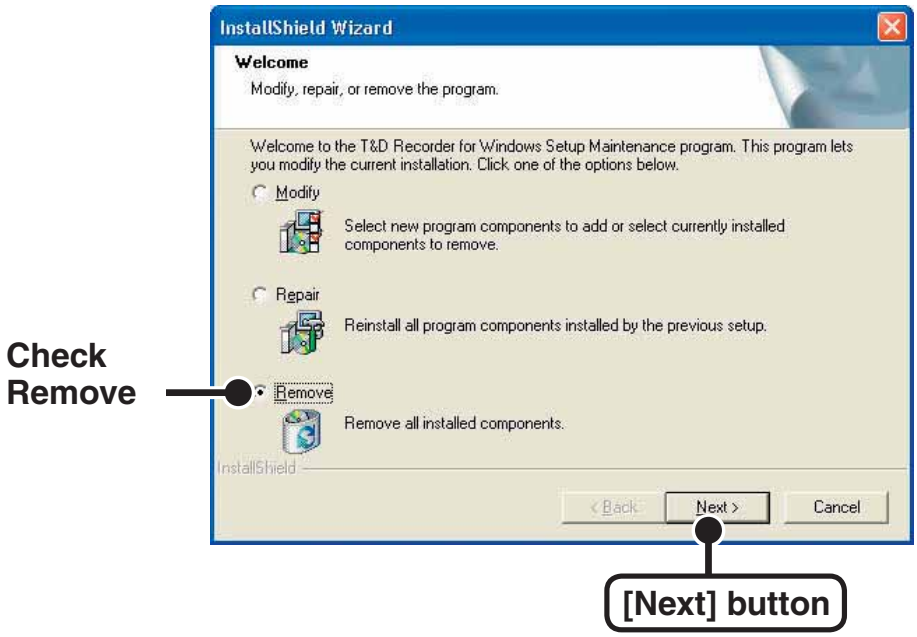
Revises the Archive Viewer display.

Re-installing

Before reinstalling the T&D Recorder VLD for Windows software, make sure to carry out the uninstall program first. Also, before uninstalling, make sure to quit all T&D Recorder VLD for Windows applications.

* To install the T&D Recorder VLD for Windows, it may be necessary to have Administrator Rights for the computer into which it will be installed.

1. In the Windows Control Panel, click on [Add/Remove Programs].
2. From the list of currently installed programs, select [T&D Recorder VLD for Windows] and click the [Remove] button.
3. The [InstallShield Wizard] will appear. Check [Remove], and click [Next].



4. Follow the directions to Uninstall.
5. After the uninstall process is completed, reinstall by following the directions to [Install].

   * Even after uninstalling, saved data files and archive files will still remain in the folders where they were first installed.

About Transferring the System

If you wish to transfer the T&D Recorder VLD for Windows system that you have been using on one computer to a different computer, it can be done by easily by copying a number of files to the new computer.

1. Find and check the following files in the folder into which the T&D Recorder VLD for Windows you have been using was installed.

・TdUserManager.dat
・Logger_Hist.dat

2. Install T&D Recorder VLD for Windows into the new computer.

3. Copy the two files that you checked for in step 1 above to the folder in which T&D Recorder VLD for Windows was installed into the new computer.

4. Find and check the following files in the folder into which the T&D Recorder VLD for Windows you have been using was installed.

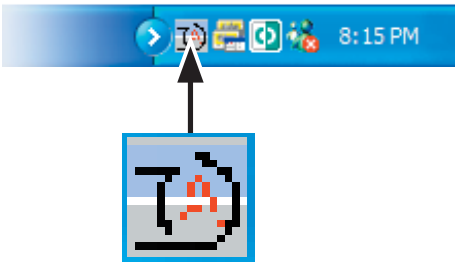
・Logger_Hist_****.dat (past archive files)
・Data Archive Files that were used for Temperature/Humidity Graph
・Archive Files that were used when Uploading Saved Print Settings

* The above files may have been saved to data folders that a User created, so we suggest searching for files names which contain "_Hist".

5. As in Step **3.** above, copy all necessary files from Step **4.** to the new computer.

About T&D Recorder Access Control

Upon opening a T&D Recorder VLD for Windows application, the Control Program (T&D Recorder Access Control), which controls Login and Operations Authorization, will also be simultaneously opened.
When this control program is open, the following icon will appear in the task tray.



When all T&D Recorder VLD for Windows applications have been quit and closed, the control program will also automatically be closed.
Under normal conditions, the User will not have any need to perform any operations with the control program. But, if after closing all T&D Recorder VLD for Windows applications, the icon does not disappear, the User can right click on the icon and select [Exit] to quit and close the Control Program.

Also, by holding down the <Ctrl> button and right clicking the icon, the name of the currently logged in user will be displayed at the top of the Menu.

Troubleshooting

Q1 The computer won't communicate via the Serial Port. What should I do?

A Try two or three times to find the port connection by using the Auto-Detect function.

A Check to make sure that the power of the device is ON.

A Check the connection between the computer and the device. Communication will take place only through the serial port (RS-232C) and will not work through the printer port or any other port.

A Check to make sure that you can control the device via the software.

A If you have access to another computer, try seeing if communication works with the other computer.

A If you have a computer with energy saving function settings, make sure that the serial port has not been turned off.

A Check to make sure that the serial port has not been rendered unusable by the BIOS setting.
Make sure that the serial port setting has not been made to render the port unusable. With some computers, especially all-in-one computers the serial port serves as the modem jack.

【How to Check】

① Open the Device Manager

1. In the [Start] Menu, right click on [My Computer] and click on [Properties].
2. In the [System Properties] Window, click on the [Hardware] tab, and then click on the [Device Manager] button to view the Device Manager Window.

② In the [Device Manager], click on [Port (COM&LPT)] and check to see if under that appears [Com Port (COM1)] or [Com Port (COM2)]. If a port appears, it should be usable.

- If a mark [!] or [×] appears next to the port, this communication port is unusable. If you cannot use a communication port please contact your computer company.
- To find out more details about a communication port: Select the port with a [!] mark, and then click on [Properties] to view the details about that port.

A If your computer has an internal modem, make sure that the communication port is not being used by it. When the communication port is being used as the modem port, that port cannot be used. Either quit using the modem or use another port.

A If your computer has no serial port, use a Serial-USB conversion cable and carry out communication via USB connection.

We recommend I.O DATA USB-RSAQ2 and ELECOM UC-SGT Serial-USB conversion cables.
If you are using an NEC Lavie J Notebook Computer (NEC LJ-500), please use I.O DATA USB-RSAQ2.

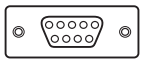
A Sometimes communication will not work if a switch has been added to the serial port (RS-232C) or an extension cable has been added to the communication cable.

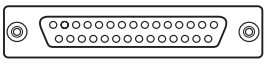
A Check to see if some other communication software is in use.

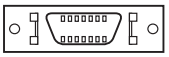
A If your desktop computer has two serial ports, try connecting the communication cable to the other port and try communicating again.

Q2 I can't get the communication cable connected to the computer. What should I do?

A Please connect the communication cable provided with the Voltage Logger into the serial port of your computer (D-SUB 9 pin male connector). If for some reason you cannot connect directly, please use an appropriate adapter (gender changer plug) as explained below.


《D-SUB 9 pin male》


《D-SUB 25 pin female》


《Half pitch 14 pin female》

- If the connector on your computer is a D-SUB 9 pin male then there is no need for an adapter.
- If the connector on your computer is a D-SUB 25 pin female then use an adapter (D-SUB 25 pin male to a D-SUB 9 pin male).
- If the connector on your computer is a Half pitch 14 pin female then use the adapter (Half pitch 14 pin male to a D-SUB 9 pin male) or a combination (Half pitch 14 pin male to D-SUB 25 pin male) and (D-SUB 25 pin female to a D-SUB 9 pin male).

Note

- Please use only straight conversion adapters.

Q3 The date and the time of the recorded data are different from the actual date and time. Why?

A The Logger has no internal clock. When you set up a programmed recording start or when you download data, the date and time that are shown are taken form your computer's clock. If your computer's clock is not correct, it will affect the recorded data.

Q4 I forgot or lost the User ID and/or Password used to open an Encoded File. Is there anyway I can open the Encoded File?

A No, it is impossible to open an Encoded File without the User ID and Password.

Q5 In the File Save window, the timeout does not occur when no operations are performed, why not?

A All Windows common dialog windows (File dialogs, Print dialogs, Color dialogs, etc...) and Print Preview are designed so as not to be affected by the timeout function.

Q6 Is it possible to save an Encoded File with a new name and open it?

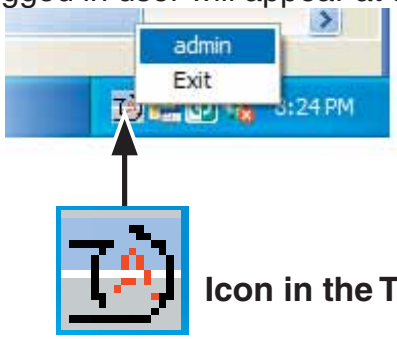
A Yes, that is possible.

Q7 I uploaded file using the Upload saved Printing Settings into a Temp/Humidity Graph, but now I can't carry out any operations in the Graph, why not?

A The only reason to upload data using Upload Saved Printing Settings is to reprint the exact same Graph as it was printed before. Hence, it has been designed so that no changes can be made to the Graph. If you wish to carry out any operations or make changes, go to the [File] Menu and click [Open] to open the temperature/humidity data in a new Graph. Also, by reopening the Temperature/Humidity Graph application the restriction against carrying out any operations will be lifted.

Q8 I would like to know the User Name that is currently logged in, how can I do that?

A You can find the currently logged in User name by going to the icon in the Task tray; while holding down the <Ctrl> key, right click with the mouse in the icon and the currently logged in user will appear at the top of the pop-up box.



Icon in the Task tray

Q9 The Operations History has disappeared, what happened?

A If the number of records exceeds 10,000, if an archive file is damaged, or if an error occurs when trying to save an archive file, create a backup file and create a new Archive File. As long as an Archive File is not damaged, past history records can still be viewed.
See pp.85 for details.

Specifications

■ User Management Tools

Functions	User Registration, Modify User Authorization, User Deletion, Date/Time Format

■ Remote Registration

Compatible Devices	RTR-51/52/53, RTR-57U, RTR-57C
Functions	Collect Registration Info, New Registration, Change and Delete Registration, Transfer List Info, Return to Original, Set Number of Possible Number of Registrations, View Remote Info, Communication Port Settings
File Output	Registration Contents Original File Output, Registration Contents Text File Output

■ RTR-51/52

Communication Functions	Recording Start (Programmed Start/Immediate Start), Stop Recording, Receive Main Unit Settings (Recording Interval, Recording Mode, Upper and Lower Limits, Wireless Recording Start Settings/Saving), Download Recorded Data, Cancel Downloading, Remote Registration,
Other Functions	Communication Port Settings Adjustment Function (1-point or 2-point method)*1

*1：Only for RTR-51A/52A

■ RTR-53

Communication Functions	Recording Start (Programmed Start/Immediate Start), Stop Recording, Receive Main Unit Settings (Recording Interval, Recording Mode, Upper and Lower Limits, Wireless Recording Start Settings/Saving), Download Recorded Data, Cancel Downloading, Remote Registration
Other Functions	Communication Port Settings Adjustment Function (1-point or 2-point method)*2

*2：Only for RTR-53A

■ Data Collector

Communication Functions	Collect Data Info, Data Info Display, Delete Data, Download Data, Set Clock, Upper/Lower Limit Settings, Remote Registration
Other Functions	Communication Port Settings

■ TR-51A/52

Communication Functions	Recording Start (Programmed Start/Immediate Start), Download Recorded Data, Remote Registration
Other Functions	Communication Port Settings

■ Temperature/Humidity Graph (VLD)

Compatible Devices	RTR-5, TR-5 series
Number of Channels	8 Channels Simultaneous Display/Processing
[Screen Display] Graph	Temperature/Humidity Graphs for each Channel (Zoom in/out and scroll with mouse or keyboard), Change Display Colors for Each Channel, View/Hide for Each Channel
[Screen Display] Data	Channel Name, Recording Interval, Number of Data Readings, Highest/Lowest/Average Readings, Unit AB Cursor Dates/Times and Temp/Humidity Readings, Calculated Temp/Humidity Difference between Cursor A and B
[Screen Display] Other Functions	Data List Display, Uploading Printing Settings, Calculation Range (Time Period) Settings, Data Maintenance, Delete Data for Each Channel, Re-order for Each Channel Vertical Axis Settings
File Output	Original Data File Output, Text File (CSV, etc...) Output, Printing Settings Output
Print	Print Graph, Print Data List

■ Archive Viewer

Functions	Upload Archive Files, Display, Sort, Filter Archive Records, Clock Format, Text File (CSV, etc...) Output

■ PC Operating Environment

OS	Microsoft Windows® 2000/XP (English) * 1
PC/CPU	A Stable Windows Operating Environment LAN, TCP/IP Communication Possible
Memory Capacity	Enough memory to stably operate Windows
Disc Space	More than 10MB free space (More free space is necessary for data)
Monitor	SVGA (higher than 800 × 600 recommended), more than 256 colors

* 1 : To install the [Settings Utility], it may be necessary to have Administrator Rights for the computer into which it will be installed.

■ Accessories included in package

T&D Recorder VLD for Windows Software CD-ROM × 1 User's Manual × 1 Software License Agreement × 1

■ For product information or questions contact us at:

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T&D Recorder VLD for Windows® VLD-5EU
User's Manual

Published by T&D CORPORATION

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