



T&D Recorder for Windows®

User's Manual

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

■ Notices about this User's Manual

Carefully read this manual so that you can properly use this product. T&D Corporation accepts no responsibility for any malfunction of and / or trouble with this product or with your computer that is caused by the improper handling of this product and will deem such trouble or malfunction as falling outside the conditions for free repair of the attached warranty.

- All rights of this user's manual belong to T&D Corporation. It is prohibited to use, duplicate and / or arrange a part or whole of this user's manual without the permission of T&D Corporation.
- Microsoft® and Windows® are registered trademarks of Microsoft Corporation USA and are binding in the USA and all other countries.
- Company names and product names are trademarks or registered trademarks of each company.
- Specifications, design and other contents are subject to change without notice.
- On screen messages in this manual may vary slightly from the actual messages.
- Please notify the shop where you purchased this product or T&D Corporation of any mistakes, errors or unclear explanations in this manual. T&D Corporation accepts no responsibility for any damage or loss of income caused by the use of our product.
- This product has been designed for private or industrial use only. It is not for use in situations where strict safety precautions are necessary such as in connection with medical equipment, whether directly or indirectly.
- We are not responsible for any malfunction or trouble caused by the use of our product or by any problem caused by the use of measurement results of our unit. Please be fully aware of this before using our product.
- Some of our products, which come under the category of strategic goods in foreign trade law, need the permission of the Japanese government to be exported outside of Japan.
- This user's manual cannot be reissued, so please keep it in a safe place.
- Please carefully read warranty and provisions for free repair.

Software User Agreement

■ Escape Clauses

- T&D Corporation does not guarantee the operation of T&D Recorder for Windows®.
- T&D Corporation shall not accept any responsibility for any damage, whether direct or indirect, that results from the usage of T&D Recorder for Windows.
- Specifications of T&D Recorder for Windows may be subject to change and service may be terminated without advance notice to the user. In such a case, T&D Corporation shall not be responsible for any damages, whether direct or indirect, from the inability to use T&D Recorder for Windows.
- T&D Corporation has no obligation to correct any defects found in T&D Recorder for Windows.

■ Copyright

- The Copyright for T&D Recorder for Windows, including the program and relevant documents, belongs solely to T&D Corporation.
- The reprinting or redistribution for commercial purposes whether in part or in whole, in magazines or as a part of any product is strictly forbidden without the expressed consent of T&D Corporation. Any inquiries concerning commercial redistribution should be directed to the Sales Department of T&D Corporation.
- Please do not attempt to make any changes or modifications to T&D Recorder for Windows.

Table of Contents

Introduction

- Software User's Agreement. ii
- What is T&D Recorder for Windows® ? 1
- Communication with Data Loggers 3

Getting Ready

- Installing the Software 5
- Operating the Software 6
- Computer Communication Settings
 - Connecting the Communication Cable 8
 - Setting Up the Serial Port 9
- Remote Unit Registration. 11
 - Other Remote Unit Registration Functions. 16

Basic Functions

- RTR-51/52
 - Start Recording 21
 - Downloading Recorded Data 23
- RTR-53
 - Start Recording 25
 - Downloading Recorded Data 28
- RVR-52
 - Start Recording 29
 - Downloading Recorded Data 32
- RTR-57C
 - Downloading Recorded Data 33
 - Set Clock 39
 - Set Upper and Lower Limits 40

Temperature and Humidity Graph

- Display Names and Functions 41
- Editing the Graph
 - Changing the Graph Display..... 45
 - Graph Operation 50

Multi-Scale Graph

- Display Names and Functions 51
- Editing the Graph
 - Changing the Graph Display..... 55
 - Graph Operation 62

Event Viewer

- Display Names and Functions 63
- File Information 65
- Printing Preview and Printing 66

Other Functions

- Saving Recorded Data..... 67
- Creating Text File 69
- Opening Data Files..... 71
- Re-installation 72

Other

- Troubleshooting..... 73
- Specifications..... 77

What is T&D Recorder for Windows® ?

■ Outline

By using T&D Recorder for Windows, you can easily display the data measured and recorded with the RTR-51/52/53, RVR-52 via our exclusive short-wave wireless technology in table or graph form and control printing with your computer.

Upon opening T&D Recorder for Windows, a launcher window in which icons are displayed will appear. By clicking an icon, the graph, settings, and /or communication screen for that type of unit will be displayed.

This software requires the following operating environment:

Compatible OS	Microsoft Windows 98 / Me / NT 4.0 Microsoft Windows 2000 / XP
PC / CPU	IBM compatible equipped with more than Pentium 90MHz or NEC 98 Series with serial communication (RS-232C D-Sub 9 pin).
Memory	More than 16MB memory capacity
Hard Disk	More than 4MB of empty hard disc space
Monitor	VGA (Above SVGA (800×600) is recommended) More than 256 colors can be displayed

■ Basic Functions

● Group and Remote Unit Registration

If you wish to carry out wireless communication between an RTR-57C unit and RTR-51/52/53, RVR-52 unit, it is necessary to first complete via computer the remote unit registration of the RTR-51/52/53, RVR-52 unit to the RTR-57C. Remote units can be operated and managed in Groups.

● Display of Data List Collected in RTR-57C

A list of all data collected at the time of downloading is displayed, from which all or part of the data can be used to create files or graphs.

● Mixed Use with Other Units is Possible

You can make graphs in which data from RTR-51/52/53 and RVR-52 units are mixed. If TR-5/TR-7 Series data have been read into the RTR-57C unit, management of such mixed data is also possible.

● Temperature and Humidity Graph / Multi-Scale Graph

In temperature and humidity graphs, the graph or list of temperature and humidity data is displayed. In multi-scale graphs, the graph or list of voltage, pulse, temperature and humidity data is displayed. You can also set the scale or units to match the type of downloaded data.

Can Display 8 Channels of Data in One Graph

Can simultaneously display up to 8 channels of recorded data downloaded from a main unit in one graph.

Printing Graphs and Data Lists

You can print graphs displayed on screen in full color. When printing a data list, the printing of every recording date is possible.

Measured Data List Display

In the measured data list display, the maximum, minimum, and average values are shown in different colors.

● **Event Viewer**

In the event viewer, a data list showing the time of events is displayed.

Print Preview and Print

Select the data to be printed and after checking it in the preview window you can proceed to print.

● **Creating Text File**

Recorded data can be saved in universal Text file format (such as CSV Format) to be read and manipulated by all common spreadsheet software such as Excel or Lotus.

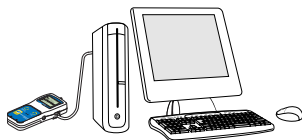
Communication with Data Loggers

There are two methods to communicate with RTR-51/52/53, RVR-52 data loggers; they are [Optical Communication] and [Wireless Communication].

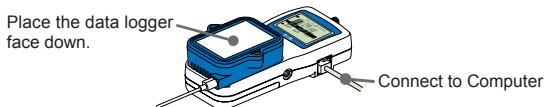
■ Optical Communication

By using the communication cable, you can carry out direct communication with a computer or with an RTR-57C unit.

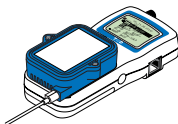
1. Using the supplied communication cable, connect the RTR-57C to your computer.



2. To carry out communication, place the data logger face down on the RTR-57C.



It is possible to carry out some operations such as recording start settings or changes, and downloading recorded data via communication with an RTR-57C unit without connecting to a computer. For details, please see the RTR-57C User's Manual.



■ Wireless Communication

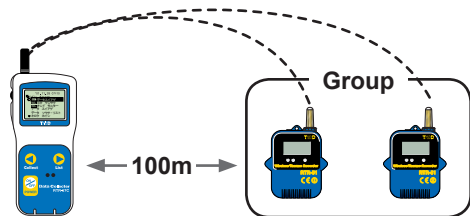
Downloading recorded data from a data logger in the field to an RTR-57C unit can be carried out via wireless communication (Special Short-wave Radio Data Communication).

1 . Register the Remote Unit.

Via the RTR-57C, connect a data logger to your computer and using the T&D Recorder for Windows software register that data logger as a Remote Unit.

2 . Place the Remote Unit in the actual place where you wish to make measurements.

If direct and unobstructed, the communication range is about 100 meters.



- If direct and unobstructed, the communication range is about 100 meters.

3 . Carry out the Wireless Communication Test.

There are instances when communication cannot occur within 100 meters. Please check to see if communication is possible by running a Search for Remote Units that have been registered via the RTR-57C.

Installing the Software

● Is Windows® working properly?

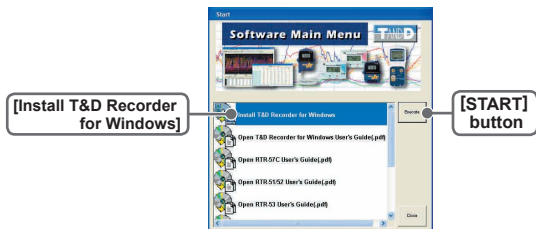
If Windows is not activated properly, it may be impossible to install and run T&D Recorder for Windows.

● Quit all applications.

If you are running other applications, make sure to quit them before installation. If you have any permanently active software, such as a virus check or scan program in your computer, make sure to also quit it.

■ Install the Software (T&D Recorder for Windows)

1. Start Windows.
 2. Place the CD-ROM in the appropriate drive, and the 「Install Program」 window will automatically open.
- If that window does not open automatically, open the 「My Computer」 window and double-click on the icon for the CD-ROM.



3. Select [Install T&D Recorder for Windows] and by clicking on the [START] button the installation will begin.
4. Confirming the contents as you go, install the software according to the directions.

After installation is completed, an icon for [T&D Recorder for Windows] will appear in the Start Menu.

Operating the Software

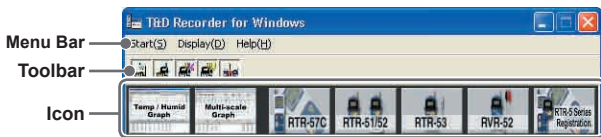
■ Opening the Software

Open the software by clicking on [T&D Recorder for Windows] from the list of programs in the Start Menu.



■ Main Window

Upon opening T&D Recorder for Windows, a launcher window in which icons are displayed will appear. By clicking an icon, the graph, settings, and / or communication screen for that type of unit will be displayed.



● Menu Bar

In the Menu Bar are Menus containing an array of commands. Click on the desired menu in the menu bar to set or display functions for each type of device.

By clicking [Display]-[Change Icon Layout] or [Change Icon Size], you can select how you wish the Main Window to appear.

● Toolbar

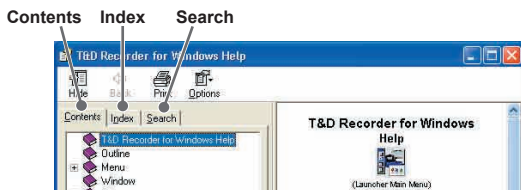
Can choose to view or hide icons. You can also make this setting from the Menu Bar by clicking [Start]-[Select Menu].

● Icons

By clicking on an icon, the graph or communication display will appear for that type of unit. The graph and communication displays for each type of unit can also be viewed by clicking on that unit's type name in [Start] of the Menu Bar.

■ See the Help Menu of the software for more detailed information about how to use the software.

- To search for unclear words or terms, click the [Help] Menu that appears in the Menu Bar and then click on one of the tabs [Contents], [Index] or [Search].



[Contents]

By clicking the mark of the classified topic, an explanation will be displayed.

[Index]

Select a key word from the key word list and by clicking the [Display] button, the explanation will be displayed.

[Search]

Enter the key word you wish to search for and click the [Start Search] button and the topic in which the key word is included will be displayed. Then select the topic and click the [Display] button to have the explanation displayed.

- Click on the [Help] button in any dialog box and explanations about the dialog box will be displayed.
- In the graph display window, after clicking on the  in the toolbar, you can click on any Menu, any Icon, or any part of the Main window and an explanation will be displayed.

Computer Communication Settings

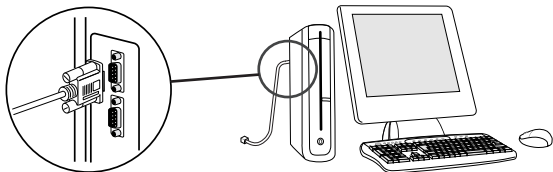
■ Connect the communication cable to your computer.

Connect the RS-232C communication cable (included in pack) to the serial port of your computer.

Serial Port Markings



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



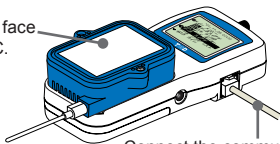
Note:

- If the cable is connected to the wrong port, communication cannot take place.
- Be sure to securely connect the cable to avoid any communication failure due to a loose connection.

■ Connect the Data Logger to your Computer.

If the data logger is an RTR-51/52/53, or RVR-52 unit, connect it to your computer via an RTR-57C unit.

Place the data logger face down on the RTR-57C.



Connect the communication cable from your computer to the RTR-57C unit.

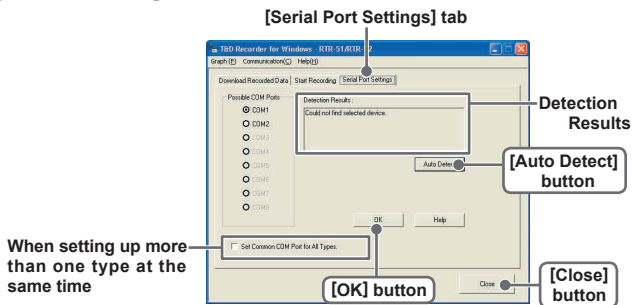
■ Setting Up the Serial Port

Set the serial port to be used for communication with the data logger. There are two ways to set up the serial port [Auto Detect] and [Select a Port].

- **When you wish to use the same COM port to carry out communication with different types of units.**

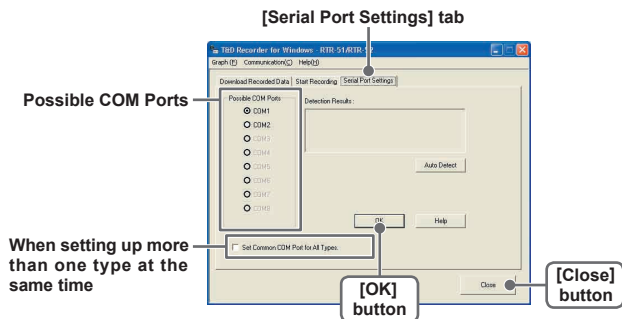
Check [Set Common COM Port for All Types] and click the [OK] button to complete at once the port setting for all types of units.

[Auto Detection]



1. In the main window, open the setting, communication display of the type of data logger connected to the computer and click the [Serial Port Settings] tab.
2. Click the [Auto Detect] button to start the detection process.
3. When the detection is completed, a message will be displayed in the [Detection Results] section.
4. By clicking the [OK] button, the setting process will be finished and the port to which the data logger is connected will be set.
5. By clicking the [Close] button, the setting will be completed.

[Selecting a Port]



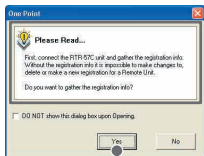
1. Click the [Serial Port Settings] tab in the settings / communication display of the data logger to be used.
2. From the [Possible COM Ports] list box choose and check the port to which the data logger is connected.
3. Click [OK] button to finish set-up and close the dialog box.
4. By clicking the [Close] button, the setting will be completed.

Remote Unit Registration

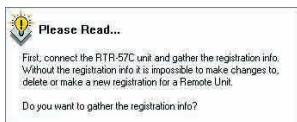
■ Registering a Remote Unit

1. By selecting the icon [Remote Unit Registration], a message will be displayed.

※ Remote unit registration can be carried out for each type of unit from the setting / communication menu for that unit [Communication]- [Remote Unit Registration].



[Yes] button



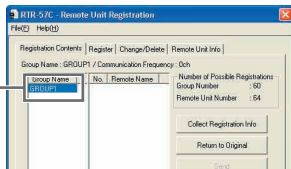
《Enlarged Message》

Collect Registration Info

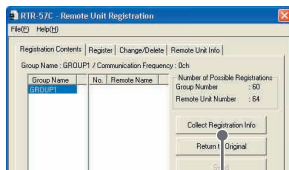
This function allows you to collect all remote unit registration info in the RTR-57C. That info (Group Name / Remote Unit Number / Remote Unit Name) will be displayed in a list. In order to delete, change or register any groups or remote units in an RTR-57C, it is necessary to connect that RTR-57C to your computer and carry out the [Collect Registration Info] before proceeding.

2. By clicking the [Yes] button, collection of the registration info will begin and a list will be displayed.

The default setting for the registered group name is [Group 1]. Remote unit registration into [Group 1] is possible.

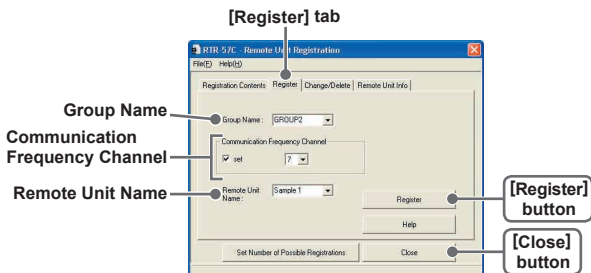


- If the registration info has not been collected or you wish to collect again, click [Collect Registration Info] button in the [Registration Contents] window to collect the registration info.



**[Collect Registration Info]
button**

3. Click the [Register] tab, and set the Group Name, Remote Name, and Communication Frequency Channel.



● Group Names

Group Names can be entered with up to 8 letters.

You can also select an already registered group name and make slight changes to make a new name.

● Communication Frequency Channel

By clicking the [Set] check box you can select a channel number.
One Frequency Channel (0-3) can be set for each Group.



《Remote Registration Display》

- The default frequency channel setting for Group 1 is '0'
- If no settings are chosen, an unused frequency channel will be automatically assigned.

NOTE:

- A frequency channel setting can only be made when registering a new group.
- Once a channel has been set for a group it cannot be changed.
- The specified frequency channel will be used for all communication with remote units in that group. If another RTR-57C is using the same channel in the same area, communication may become unstable.

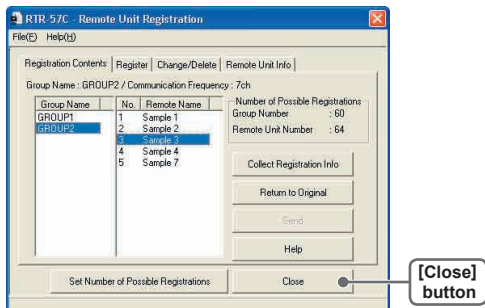
● Remote Names

Remote Names can be entered with up to 8 letters. You can also select an already registered remote name and make slight changes to create a new name.

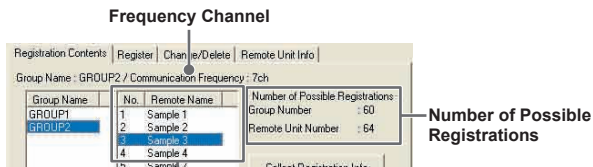
4. By clicking the [Register] button, registration will be completed.

- If you are registering a number of remote units to the same group, place each one on top of the RTR-57C and carry out the registration into the same group.
- If you are registering units to different group names, please follow the above steps over again.

5. Upon completion the [Registration Contents] will be displayed and by clicking [Close] the registration will be finished and the window closed.



- By clicking on a Group Name, the Frequency Channel for that group, as well as, the Remote Unit Names and Numbers for that group will be displayed.



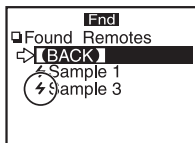
Remote Number and Name

«[Registration Contents] display enlargement»

■ Position the remote unit(s) in the place(s) where you want to measure and check if communication is possible.

From an RTR-57C unit, it is possible to find any registered Remote Unit and make sure communication can be carried out.

1. In the Main Window, activate [Find Remotes].
2. Choose the range in which to search and activate.
 - If you choose [All Groups], the search for remotes in all registered groups will begin immediately.
 - If you choose [Specify Group], select the desired group from the list to start the search.
3. After the search has been completed, a list of possible Remote Units for communication will appear in a list.
 - Remote Units for which communication is possible will be marked with an ⚡ before its name.



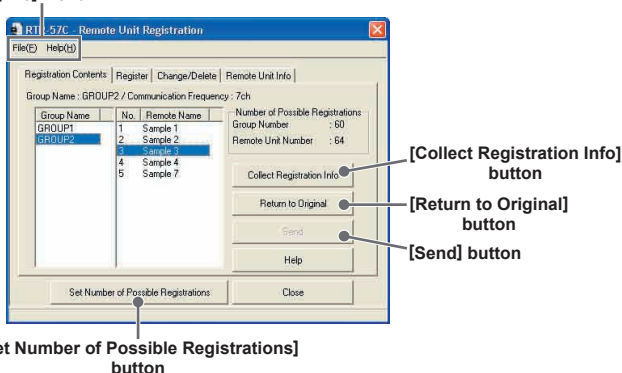
For details, see the RTR-57C User's Manual.

Other Remote Unit

Registration Functions

The following operations can be carried out in the Remote Registration Window. Be sure to connect the RTR-57C to your computer and collect the registration info of RTR-57C before carrying out these operations.

[File] Menu



■ 「File」Menu: [Save Registration Contents]

You can save the Group and Remote Unit Registration Info to a file.

NOTE:

- You cannot edit the contents of registration info from a saved file.
- You cannot send text file.

1. From the [File] Menu, choose [Save Registration Contents to File].
2. Designate the saving location and enter a file name.
3. Click the [Save] button to save the file.

■ [File] Menu: [Save as Text File]

You can save the Group and Remote Unit Registration Info as a text file.

NOTE:

You cannot edit the contents of registration info from a saved file.

1. From the [File] Menu, choose [Save as Text File].
2. Designate the saving location and enter a file name.
3. Click the [Save] button to save the file.

■ [Set Number of Possible Registrations] Button

There are two patterns for setting and registering the largest number of groups and remotes into one RTR-57C.

- Pattern 1: <Group Numbers: 60 / Remote Numbers in 1 Group: 64>
- Pattern 2: <Group Numbers: 15 / Remote Numbers in 1 Group: 250>

The Default Setting is: Pattern 1: <Group Numbers: 60 / Remote Numbers in 1 Group: 64>

NOTE:

If changes are made to the pattern, the Remote Unit Registration Contents saved in the RTR-57C will be automatically returned to the original default contents. Please be careful.

1. Select a pattern.
2. Click [OK] button to complete the change.



■ [Remote Registration Contents] – [Return to Original] Button

All info saved in the RTR-57C will be erased and will be returned to as it was when it left the factory: Group Name: Group 1 / Remote Unit: NONE / Communication Frequency: 0

1. Connect the RTR-57C unit you wish to return to the factory settings.
2. Click the [Return to Original] button, and the process will begin.

■ [Remote Registration Contents] – [Send] Button

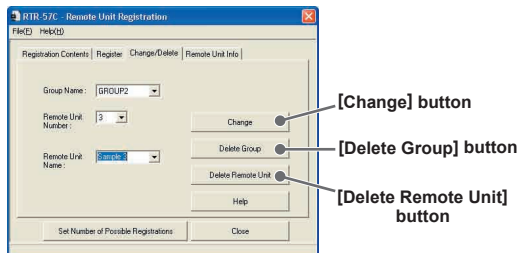
If the Registration Contents are the same in a number of RTR-57C Units, communication is possible between 1 Remote Unit and any number of RTR-57C Units. To make the contents the same, it is possible to transmit them to a number of RTR-57C Units.

NOTE:

- By sending, you will delete all prior registration contents.
 - If the number of files to be sent is over the number of possible registrations, it will be impossible to transmit them. Please see p.17 for details about the possible number of registrations.
1. Save the registration contents you wish to send. (See p. 16 for details)
 2. Click [Open] from the [File] Menu and open those Remote Registration Files you wish to send.
 3. The contents of those files will be displayed in the Remote Registration Contents Window.
 4. Click the [Send] button to begin transmission.

■ 「Change / Delete」

You can make changes to a registered Remote Unit Name or delete a Group or Remote Unit.



[Change] Button...Only for Remote Names

1. Select the Group in which the Remote you wish to change is registered.
2. Select the Remote Number or Name and enter the new Remote Name for the unit.
3. Click the [Change] button to send the new information.

[Delete Group] Button

By deleting a Group, all Remote Units registered to that Group will be automatically deleted.

1. Select the Group Name you wish to delete.
2. Click [Delete Group] to begin the process.

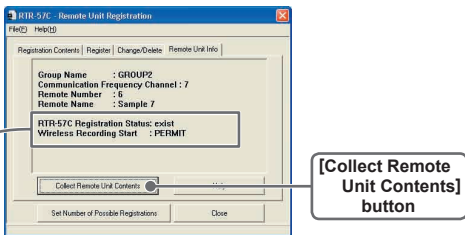
[Delete Remote] Button

1. Select the Group Name in which the remote you wish to delete is registered, then select the Remote Number(s) or Name(s).
2. Click [Delete Remote Unit] to begin the process.

■ 「Remote Unit Info」

This allows you to view the registration contents of any Remote Unit presently connected to the RTR-57C. The Registration Contents of units registered to a different RTR-57C can be viewed as well.

1. Place the Remote Unit from which you wish to collect remote info face down on the RTR-57C.
2. Click the [Collect Remote Unit Contents] button and the info will appear for that unit.



● RTR-57C Registration Status:

If remotes are registered in the presently connected RTR-57C

: exist

If remotes are not registered in the presently connected RTR-57C

: Not exist

If registration info has not been collected from presently connected RTR-57C

: —

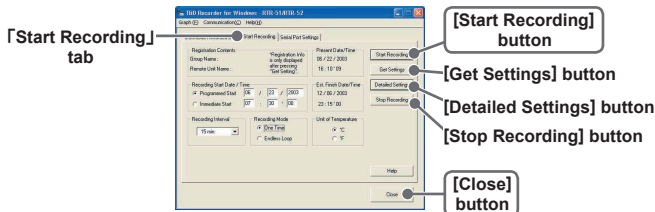
● Wireless Recording Start

If forbidden to start recording: FORBID

If permission to start recording: PERMIT

RTR-51/52: Start Recording

1. In the main display, click the icon [RTR-51/52].
2. Click the [Start Recording] tab and make recording settings.



● **Recording Start Date / Time:** <Select: Programmed Start / Immediate Start>

Select the Recording Start Method

- Programmed Start: Recording will begin on the day and time entered.
- Immediate Start: Recording will begin as soon as settings are completed.

● **Recording Interval:** <Select from: 1,2,5,10,15,20,30 seconds or 1,2,5,10,15,20,30,60 minutes>

By clicking ▼ you can select from the recording interval list.

● **Recording Mode:** <Select from: One-time / Endless>

One-time: When the number of readings has reached 16,000, the unit display will read FULL and recording will automatically stop.

Endless: When the number of readings reaches 16,000, the next one will overwrite the oldest or first reading.

● **Temperature Unit:** <Select from: Celsius [°C] or Fahrenheit [°F]>

Change the display of temperature on the Thermo Recorder between [°C] and [°F].

※ By clicking the [Get Settings] button, registration contents and remaining battery life will be displayed.

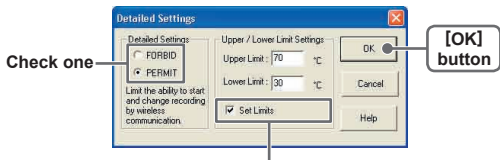
3. After making all the desired settings, click the [Start Recording] button to transmit them.
4. After transmission has been completed the communication result will appear. By clicking [OK], the set-up process will be finished. By clicking [Close], you can close the window.

■ [Get Settings] Button

The Remote Unit recording settings, registration contents, and remaining battery life are displayed.

- Registration contents: If a settings transmission was received it displays the Group and Remote Name(s).
- Remaining battery life: If a settings transmission was received it displays the remaining battery life.

■ [Detailed Settings] Button



By checking, you can make entries.

- **Start Wireless Communication:** Restrict the permission to start recording by wireless communication.
 1. If you wish to forbid the starting of recording by wireless communication, check [FORBID]; to allow, check [PERMIT].
 2. Click [OK] to complete and close.
- **Upper and Lower Limits:** To check whether or not the data downloaded into the RTR-57C falls within a certain set range.
 1. By checking the [Set Limits] box, you will be able to enter an upper and lower limit.
 2. Click [OK] to complete and close.

■ [Stop Recording] Button

Stop current recording of data logger.

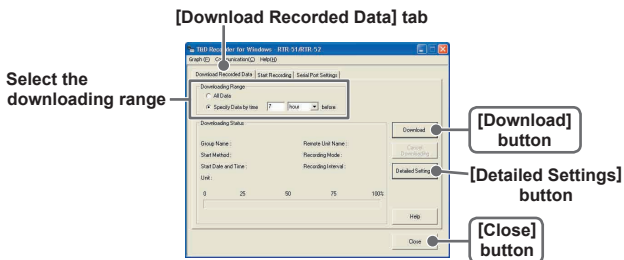
RTR-51/52: Downloading Recorded Data

■ Connect the RTR-51/52 unit for communication with your computer.

※ See P.3 or P.8 for about how to connect.

■ Download Recorded Data.

1. In the main window, click the icon [RTR-51/52].
2. Click the [Download Recorded Data] tab.

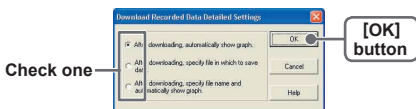


3. After selecting the downloading range, click the [Download] button to start downloading.
4. When downloading has been completed a graph will be displayed. If you have checked [After downloading, specify file in which to save data] in the Detailed Settings, please view the graph after specifying the file in which you wish to save the downloaded data.

■ [Detailed Settings] Button

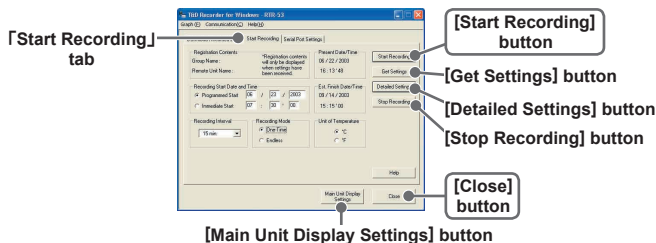
You can make settings for the processing of the downloaded recorded data.

1. Select the desired processing method.
2. Click [OK] button to complete the setting.



RTR-53: Start Recording

1. In the main window, click the icon [RTR-53].
2. Click the [Start Recording] tab and set the recording conditions.



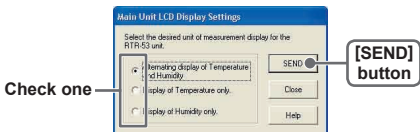
- **Recording Start Date / Time:** <Select: Programmed Start / Immediate Start>
Select the Recording Start Method
 - Programmed Start: Recording will begin on the day and time entered.
 - Immediate Start: Recording will begin as soon as settings are completed.
 - **Recording Interval:** <Select from: 1,2,5,10,15,20,30 seconds or 1,2,5,10,15,20,30,60 minutes>
By clicking ▼ you can select from the recording interval list.
 - **Recording Mode:** <Select from: One-time / Endless>
One-time: When the number of readings has reached 8000, the unit display will read FULL and recording will automatically stop.
Endless: When the number of readings reaches 8000, the next one will overwrite the oldest or first reading.
 - **Temperature Unit:** <Select from: Celsius [°C] or Fahrenheit [°F]>
Change the display of temperature on the Thermo Recorder between [°C] and [°F].
※ By clicking the [Get Settings] button, registration contents and remaining battery life will be displayed.
3. After making all the desired settings, click the [Start Recording] button to transmit them.

4. After transmission has been completed the communication result will appear. By clicking [OK], the set-up process will be finished. By clicking [Close], you can close the window.

■ [Main Unit Display Settings] Button

Set the desired unit of measurement display for the RTR-53 unit LCD display.

1. Select the unit of display you wish to set.
2. Click the [Send] button to complete the setting.

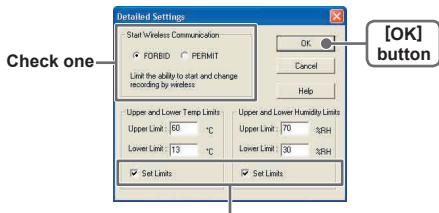


■ [Get Settings] Button

The Remote Unit recording settings, registration contents, and remaining battery life are displayed.

- Registration contents: If a settings transmission was received it displays the Group and Remote Name(s).
- Remaining battery life: If a settings transmission was received it displays the remaining battery life.

■ [Detailed Settings] Button



By checking, you can make entries.

- **Start Wireless Communication:** Restrict the permission to start recording by wireless communication.
 1. If you wish to forbid the starting of recording by wireless communication, check [FORBID]; to allow, check [PERMIT].
 2. Click [OK] to complete and close.
- **Upper and Lower Limits:** To check whether or not the data downloaded into the RTR-57C falls within a certain set range.
 1. By checking the [Set Limits] box, you will be able to enter an upper and lower limit.
 2. Click [OK] to complete and close.

■ [Stop Recording] Button

Stop current recording of data logger.

RTR-53: Downloading Recorded Data

■ Connect the RTR-53 unit for communication with your computer.

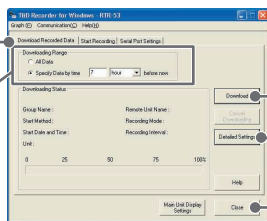
※ See P.3 or P.8 for about how to connect.

■ Download Recorded Data.

1. In the main window, click the icon [RTR-53].
2. Click the [Download Recorded Data] tab.

[Download Recorded Data] tab

Select the downloading range



[Download] button

[Detailed Settings] button

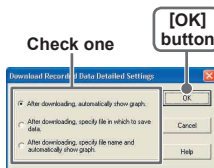
[Close] button

3. After selecting the downloading range, click the [Download] button to start downloading.
4. When downloading has been completed a graph will be displayed.
If you have checked [After downloading, specify file in which to save data] in the Detailed Settings, please view the graph after specifying the file in which you wish to save the downloaded data.

■ [Detailed Settings] Button

You can make settings for the processing of the downloaded recorded data.

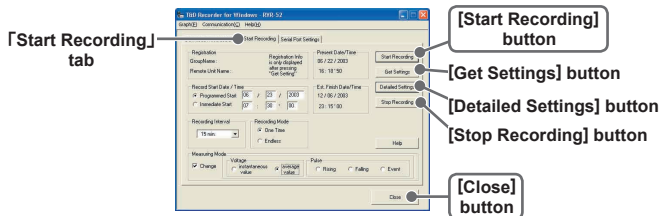
1. Select the desired processing method.
2. Click [OK] button to complete the setting.



[OK] button

RVR-52: Start Recording

1. In the main display, click the icon [RVR-52].
2. Click the [Start Recording] tab and make recording settings.



● **Recording Start Date / Time:** <Select: Programmed Start / Immediate Start>

Select the Recording Start Method

- Programmed Start: Recording will begin on the day and time entered.
- Immediate Start: Recording will begin as soon as settings are completed.

● **Recording Interval:** <Select from: 1,2,5,10,15,20,30 seconds or 1,2,5,10,15,20,30,60 minutes>

By clicking ▼ you can select from the recording interval list.

※ In event recording, the interval is always 1 second.

● **Recording Mode:** <Select from: One-time / Endless>

One-time: When the number of readings has reached 16,000, the unit display will read FULL and recording will automatically stop.

Endless: When the number of readings reaches 16,000, the next one will overwrite the oldest or first reading.

※ In event recording, the number of readings is 8,000.

● **Measurement Mode:** <Select: Voltage / Pulse>

Voltage/Instantaneous Value: Record the voltage measurement as the instantaneous value for each recording interval span.

Voltage/Average Value: Record as the average value for each recording interval span. The average value for recording intervals under 15 seconds will be calculated as the average of the measurements from every 1 second. The average for intervals over 20 seconds will be calculated as the average of the measurements from every 2 seconds.

Pulse/ Lo→Hi: Record the number of signals rising within the recording interval you have set.

Pulse/ Hi→Lo: Record the number of signals falling within the recording interval you have set.

Pulse/ Event: Record the time of any event; a rising (Lo to Hi) or falling (Hi to Lo) waveform that occurs for more than 1 second at an input voltage range of between 0-30V.

※ By clicking the [Get Settings] button, registration contents and remaining battery life will be displayed.

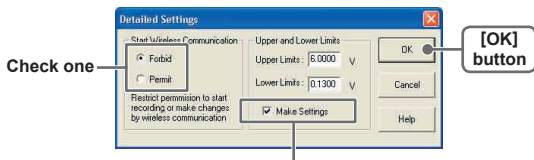
3. After making all the desired settings, click the [Start Recording] button to transmit them.
4. After transmission has been completed the communication result will appear. By clicking [OK], the set-up process will be finished. By clicking [Close], you can close the window.

■ [Get Settings] Button

The Remote Unit recording settings, registration contents, and remaining battery life are displayed.

- Registration contents: If a settings transmission was received it displays the Group and Remote Name(s).
- Remaining battery life: If a settings transmission was received it displays the remaining battery life.

■ [Detailed Settings] Button



By checking, you can make entries.

- **Start Wireless Communication:** Restrict the permission to start recording by wireless communication.
 1. If you wish to forbid the starting of recording by wireless communication, check [FORBID]; to allow, check [PERMIT].
 2. Click [OK] to complete and close.
- **Upper and Lower Limits:** To check whether or not the data downloaded into the RTR-57C falls within a certain set range.
 1. By checking the [Set Limits] box, you will be able to enter an upper and lower limit.
 2. Click [OK] to complete and close.

■ [Stop Recording] Button

Stop current recording of data logger.

RVR-52: Downloading Recorded Data

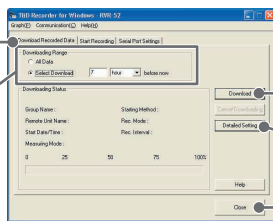
■ Connect the RVR-52 unit for communication with your computer.

※ See P.3 or P.8 for about how to connect.

■ Download Recorded Data.

1. In the main window, click the icon [RVR-52].
2. Click the [Download Recorded Data] tab.

[Download Recorded Data] tab
Select the downloading range



[Download] button

[Detailed Settings] button

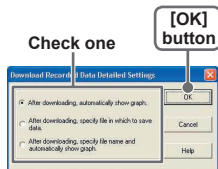
[Close] button

3. After selecting the downloading range, click the [Download] button to start downloading.
4. When downloading has been completed, a Graph or Event Viewer will be displayed.
If you have checked [After downloading, specify file in which to save data] in the Detailed Settings, please view the graph or Event Viewer after specifying the file in which you wish to save the downloaded data.

■ [Detailed Settings] Button

You can make settings for the processing of the downloaded recorded data.

1. Select the desired processing method.
2. Click [OK] button to complete the setting.



RTR-57C: Downloading Recorded Data

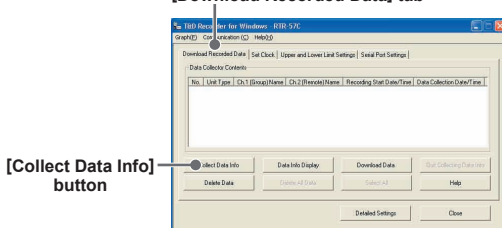
■ Connect RTR-57C to your computer to carry out communication.

※ For details about how to connect, see the user's manual for RTR-57C.

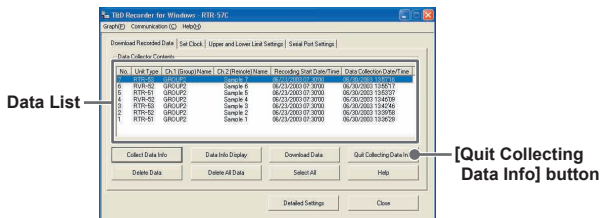
■ Collect RTR-57C Data Info.

1. In the main window, click the icon [RTR-57C].
2. Click the [Download Recorded Data] tab.

[Download Recorded Data] tab

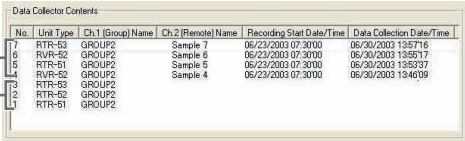


3. By clicking the [Collect Data Info] button, communication will be started and the data list saved in RTR-57C will be displayed.



[Quit collecting data info while in progress]

By clicking [Quit Collecting Data Info], the collection will be stopped.



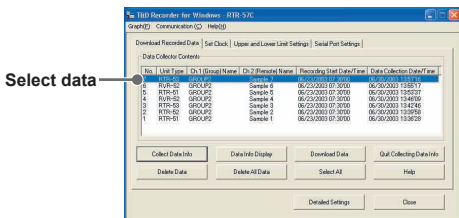
No.	Unit Type	Ch.1 (Group) Name	Ch.2 (Remote) Name	Recording Start Date/Time	Data Collection Date/Time
7	RTR-53	GROUP2	Sample 7	06/23/2003 07:3000	06/30/2003 13:5716
6	RVR-52	GROUP2	Sample 6	06/23/2003 07:3000	06/30/2003 13:5617
5	RTR-51	GROUP2	Sample 5	06/23/2003 07:3000	06/30/2003 13:5337
4	RVR-52	GROUP2	Sample 4	06/23/2003 07:3000	06/30/2003 13:4609
3	RTR-53	GROUP2			
2	RTR-52	GROUP2			
1	RTR-51	GROUP2			

- 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.

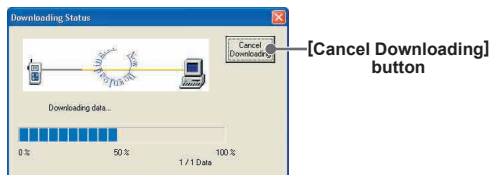
■ Download Recorded Data.

1. Select the data to be downloaded from the data list.

※ To download several sets of data at one time, see p.36-37 for details.



2. By clicking the [Download] button, downloading will be started.

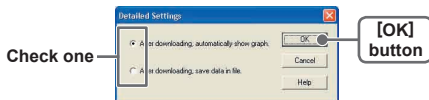


- By clicking the [Cancel Downloading] button, you can stop downloading at any time.
3. When downloading has been completed, the graph will be displayed.
- ※ If you have checked [After downloading, specify file in which to save data] in the Detailed Settings, please view the graph after specifying the file in which you wish to save the downloaded data.

■ [Detailed Settings] Button

You can make settings for the processing of the downloaded recorded data.

1. Select the desired processing method.
2. Click [OK] button to complete the setting.



■ Downloading Several Sets of Data at One Time

You can make settings for the processing of the downloaded recorded data.

1. While holding down the [Shift] key or [Ctrl] key, click on those sets of data you wish to download.

(For Example)

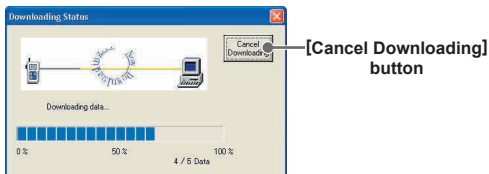
- If you wish to download files not in a row, such as No.1 and No.3, hold down the [Ctrl] key and click on files for No.1 and No.3.
- If you wish to download files in a row, such as No.1, No.2 and No.3, hold down the [Shift] key and click on the files for No.1 to No.3.

Use the [Shift]
key to select

Use the [Ctrl]
key to select

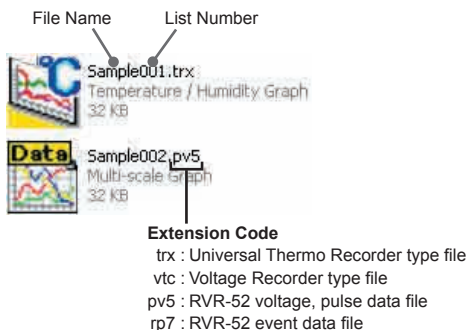
Data Collector Contents						
No.	Device	Group	Sample	Start Date	End Date	Time
1	RTR-63	GROUP2	Sample 7	06/23/2003 07:30:00	06/30/2003	135716
2	RVR-62	GROUP2	Sample 6	06/23/2003 07:30:00	06/30/2003	135517
3	RTR-61	GROUP2	Sample 5	06/23/2003 07:30:00	06/30/2003	135327
4	RTR-63	GROUP2	Sample 4	06/23/2003 07:30:00	06/30/2003	134246
5	RTR-62	GROUP2	Sample 3	06/23/2003 07:30:00	06/30/2003	133958
6	RTR-61	GROUP2	Sample 2	06/23/2003 07:30:00	06/30/2003	133728

2. Click on the [Download] button, and downloading will be started.



3. When downloading has been completed, a graph will be displayed.
※ If you have checked [After downloading, specify file in which to save data] in the Detailed Settings, please view the graph after specifying the file in which you wish to save the downloaded data.

- If you have checked [After downloading, specify file in which to save data] and you have selected several sets of data, at the end of the specified file name of every recorded data will appear the list number (No.1→001, No.2→002, No.3→003...)



- If you have checked [After downloading, automatically show graph] and have selected several sets of data, it is possible to display the selected data in the same graph. Moreover, in the graph display by entering which file you wish the data to be saved, it is possible to save several sets of data into one file.

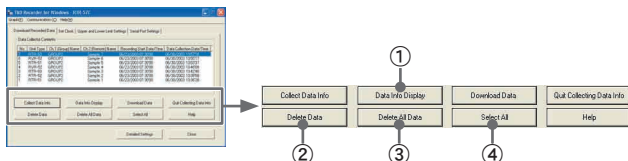
※ Each kind of data is displayed in the following graphs:

Temperature/Humidity data: Temperature/Humidity Graph

Voltage/Pulse data: Multi-scale Graph

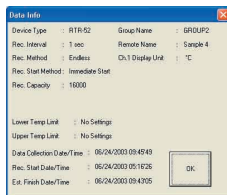
Event data: Event Viewer

[Other Button Functions]



① [Data Info Display] Button

Displays info about data for all selected data from the list.



② [Delete Data] Button

Deletes selected data saved in the RTR-57C from the software.

③ [Delete All Data] Button

Deletes all data saved in the RTR-57C from the software.

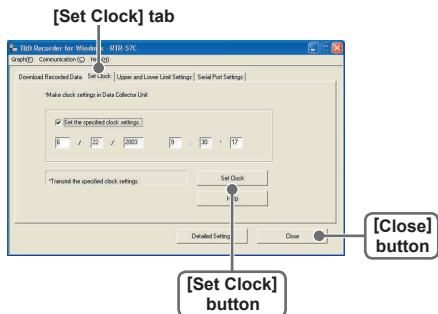
④ [Select All] Button

Selects all data in list to be downloaded at the same time.

Setting the RTR-57C Clock

Set the RTR-57C clock from your computer.

1. In the main window, click the icon [RTR-57C].
2. Click the [Set Clock] tab



● Set specified time

If checked: The date/time you enter will be set as the date/time in the RTR-57C.

If not checked: The current date/time of your computer will be set as the date/time in the RTR-57C.

3. Select setting method and by clicking the [Set Clock] button, the setting will be transmitted.
4. Click [Close] button to complete the setting.