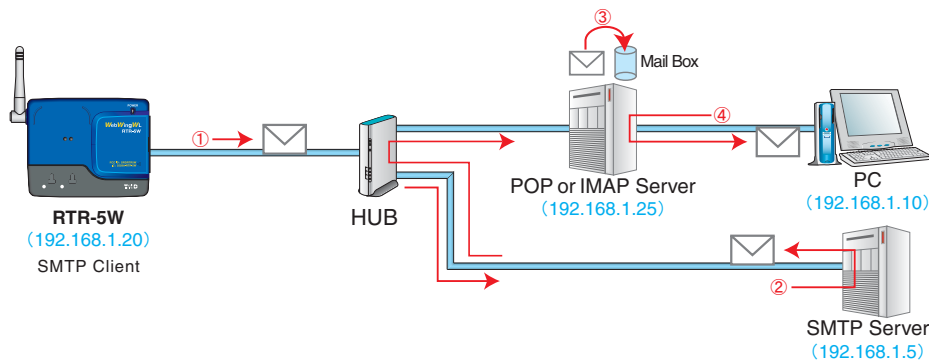


■ Using Mail via LAN

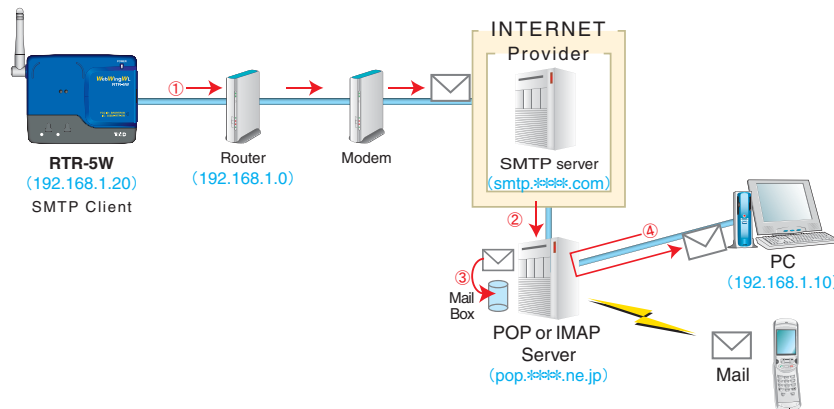


- ① The RTR-5W accesses the SMTP server and sends mail to the server.
- ② The SMTP server delivers the mail sent from the RTR-5W according to the address to a POP server.
- ③ The POP server receives the delivered mail from the SMTP server and stores it in the appropriate mailbox for that mail address.
- ④ Your computer accesses the POP server where the mail is stored and receives mail in the computer's mailbox.

NOTE:

Please take note that when you are using a LAN to send and get warning mail, it is necessary to have set up a SMTP server (for sending) and a POP or IMAP server (for receiving) in the network.

■ Sending Internet Mail



- ① The RTR-5W, via a router or provider, accesses an SMTP server that exists on the Internet and sends mail to the SMTP server.
- ② The SMTP server delivers the mail sent from the RTR-5W, according to the address, to a POP server.
- ③ The POP server receives the delivered mail from the SMTP server and stores it in the appropriate mailbox for that mail address.
- ④ Your computer accesses the POP server where the mail is stored and receives mail in the computer's mailbox.

NOTE:

In order to connect to the Internet, please make the necessary router (LAN) settings.

Installation

Install the provided software.

- Is Windows® operating properly?

If Windows® is not operating properly, 「RTR-5W 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.

**To install [RTR-5W for Windows], it is necessary to have Administrator rights (Computer 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.

*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.

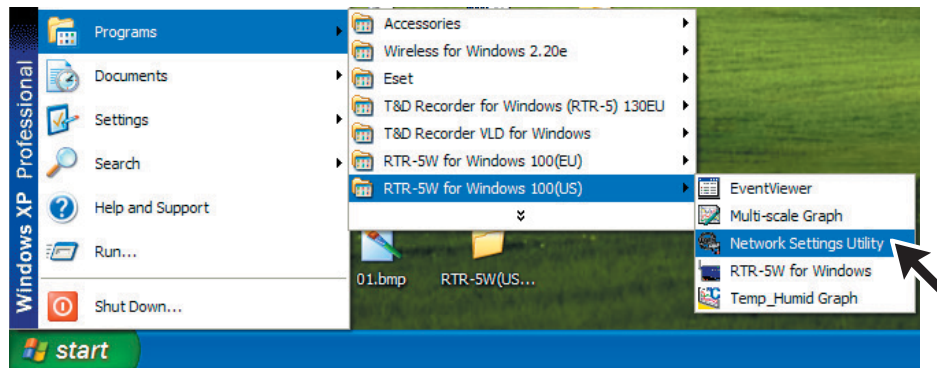


- 3.** Select 「RTR-5W for Windows」 and click the [Execute] button to start the installation.
- 4.** Continue the installation by following the directions as they appear.
- 5.** After installation has been completed, 「RTR-5W for Windows」 will be registered in the Window's [Start] Menu.

Using the Network Settings Utility

■ How to Open

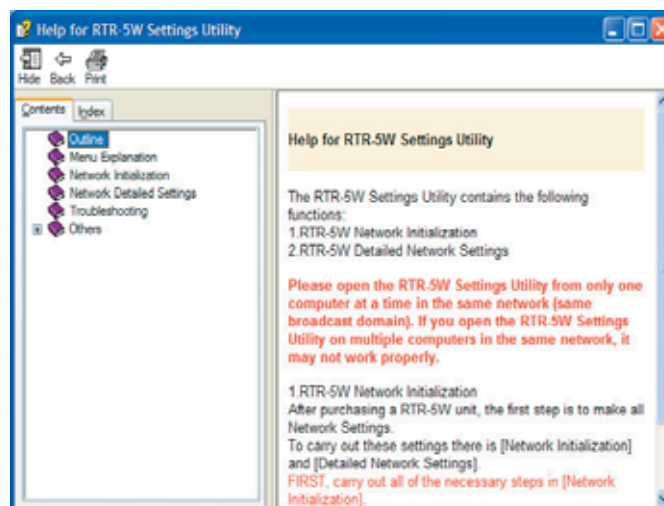
From the list of programs in the Window's Start Menu, click on "RTR-5W for Windows"-Network Settings Utility.



■ Using Help

For details about how to use the software, please see the explanations in the Software Help Menu.

By clicking on [Help] in the Menu Bar and then [How to Use Network Settings Utility] you can click on one of the tabs [Contents] or [Keyword] to search for the topic or term you are unsure about or have questions about.



[Contents]

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

[Keyword]

By selecting a Keyword in the Keyword list, and clicking the [Display] 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.*

■ Network Settings Utility Functions

The Network Settings Utility contains the following functions:

Network Initialization Settings

After purchasing a RTR-5W unit, the first step is to make all Network Initialization Settings including assigning an IP Address and a Subnet Mask.

Detailed Network Settings

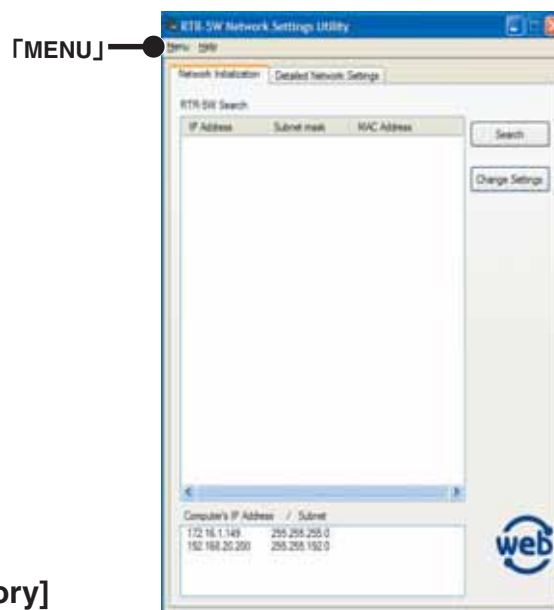
The reception of RTR-5W settings and more detailed network settings can be made here.

IN the SNTP settings, it is possible to make settings so that the RTR-5W clock settings can be automatically received from NTP server. Clock settings can be made directly using [RTR-5W for Windows] software, but if an RTR-5W is rebooted (restarted) the clock settings will be initialized. However, by making settings to enable the SNTP server it is possible to have the clock automatically reset to the current time upon rebooting.

NOTE:

Please open the Network Settings Utility from only one computer at a time in the same network (same broadcast domain).

If you open the Network Settings Utility on multiple computers in the same network, it may not work properly.



-[Menu] - [Login History]

If you wish to disable the History Function, select [Login History] → [OFF].

-[Menu] - [Clear Login History]

Use this to erase the entire login history.

-[Menu] - [Communication Time Settings]

It is possible to change the communication time for all types of communication depending on your network environment.

Network Initialization Settings

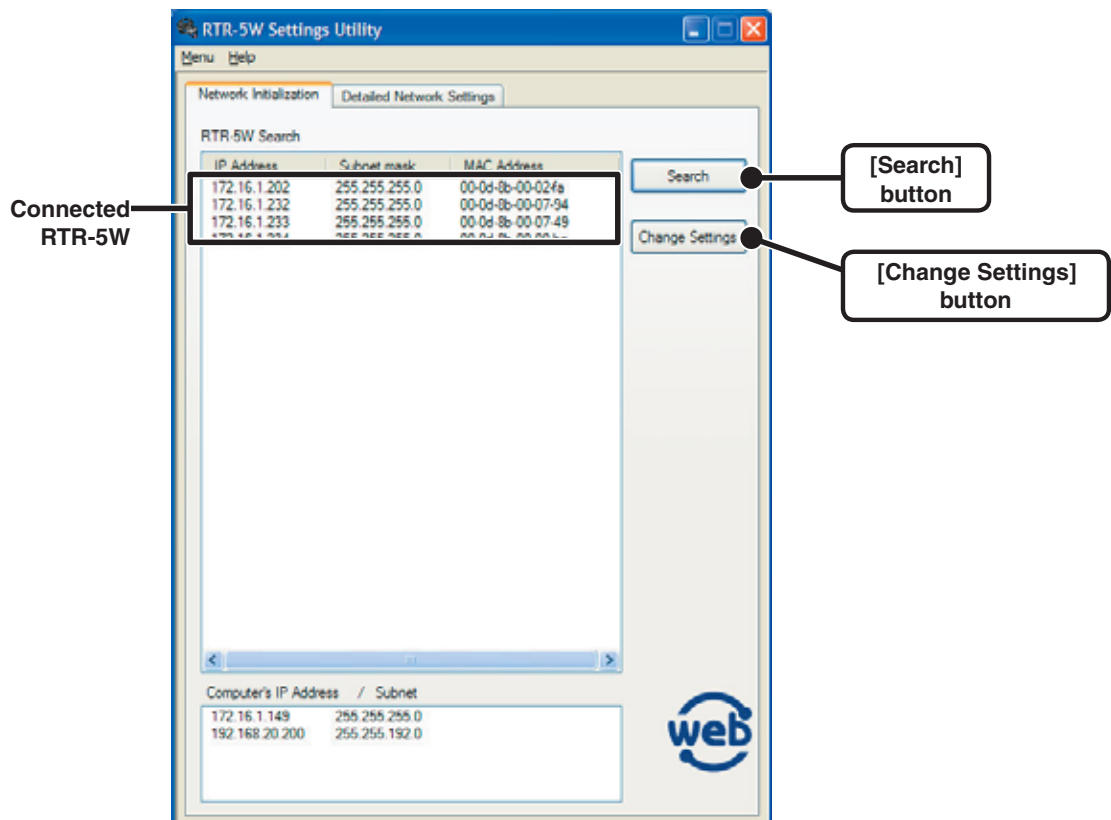
To connect an RTR-5W to a network, it is necessary to enter an IP Address and Subnet Mask that are appropriate for your network.

NOTE:

Please note, that upon purchase, all RTR-5W units are set with the same IP address. To make IP address changes, connect one unit at a time and carry out the changes. Do not connect more than one unit with the same address to the network at the same time.

1. Connect the RTR-5W to the same network as to which the computer you have opened [Network Settings Utility] is connected to.
2. Click on the 「Network Initialization」 Tab and then click on the [Search] button. After clicking, the search results will be shown in about 5 seconds.

**The factory default settings for RTR-5W are as follows: IP Address : "192.168.1.200", Subnet Mask : "255.255.0.0". The MAC address is written on a sticker on the back of the RTR-5W unit .*



3. From the displayed list, select the RTR-5W to which you wish to make settings by clicking on the IP address and click on the [Change Settings] button.

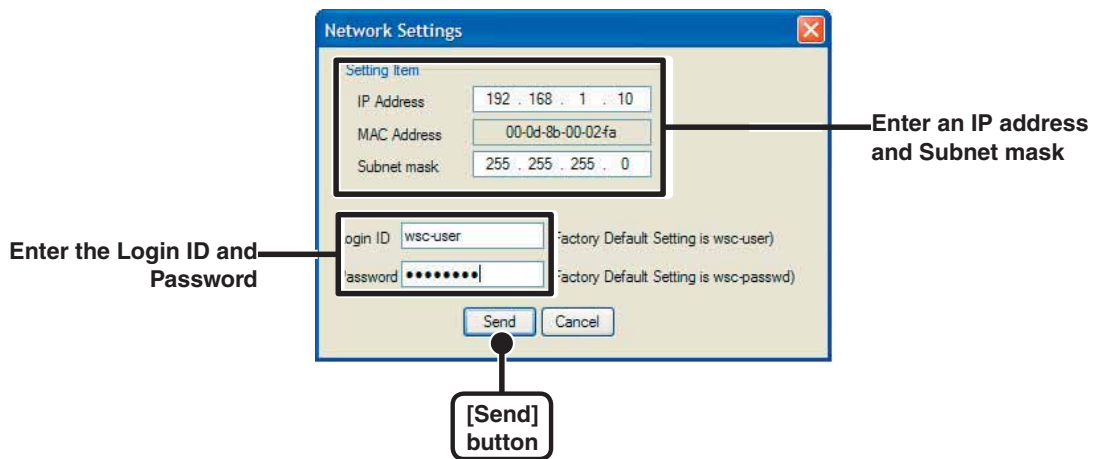
- Also, by double clicking on the IP address, the 「Network Settings」 window appear.

4. Enter an IP Address and Subnet Mask.

- Make sure to enter an IP Address and Subnet Mask that are appropriate for your network.

NOTE:

Do not use the same IP address for two different units. It may cause abnormalities to the entire network system.



5. After entering the above, next, enter the Login ID and Password.

The RTR-5W factory default Login ID is "wsc-user" and the Password is "wsc-passwd". Make any necessary changes to the Login ID and Password in the 「Detailed Network Settings」. See page 32 for details.

6. After checking for entry errors, click the [Send] button. After transmission has been completed a message will appear.

Click the [OK] button to finish.

** After settings are completed the RTR-5W will automatically restart. During the restarting process, a search cannot be performed, even if you click the [Search] button. Please try again after 30 seconds.*

【If no units are detected】

- Check the connection between the computer and the RTR-5W.
- Check the hub power switch and the network cable type.
- If some network environments, it may be necessary to make changes to the IP address and subnet mask at the computer side in order to carry out a search. For details, see page 98-100 [Checking and Making Changes to Computer Network Settings]
- Do not use a LAN card which has not been formatted.

Detailed Network Settings

After making the network initialization settings for the RTR-5W, the reception of RTR-5W settings and more detailed network settings can be made.

*Before making any of these settings, please make sure that the RTR-5W is set with the proper IP address.

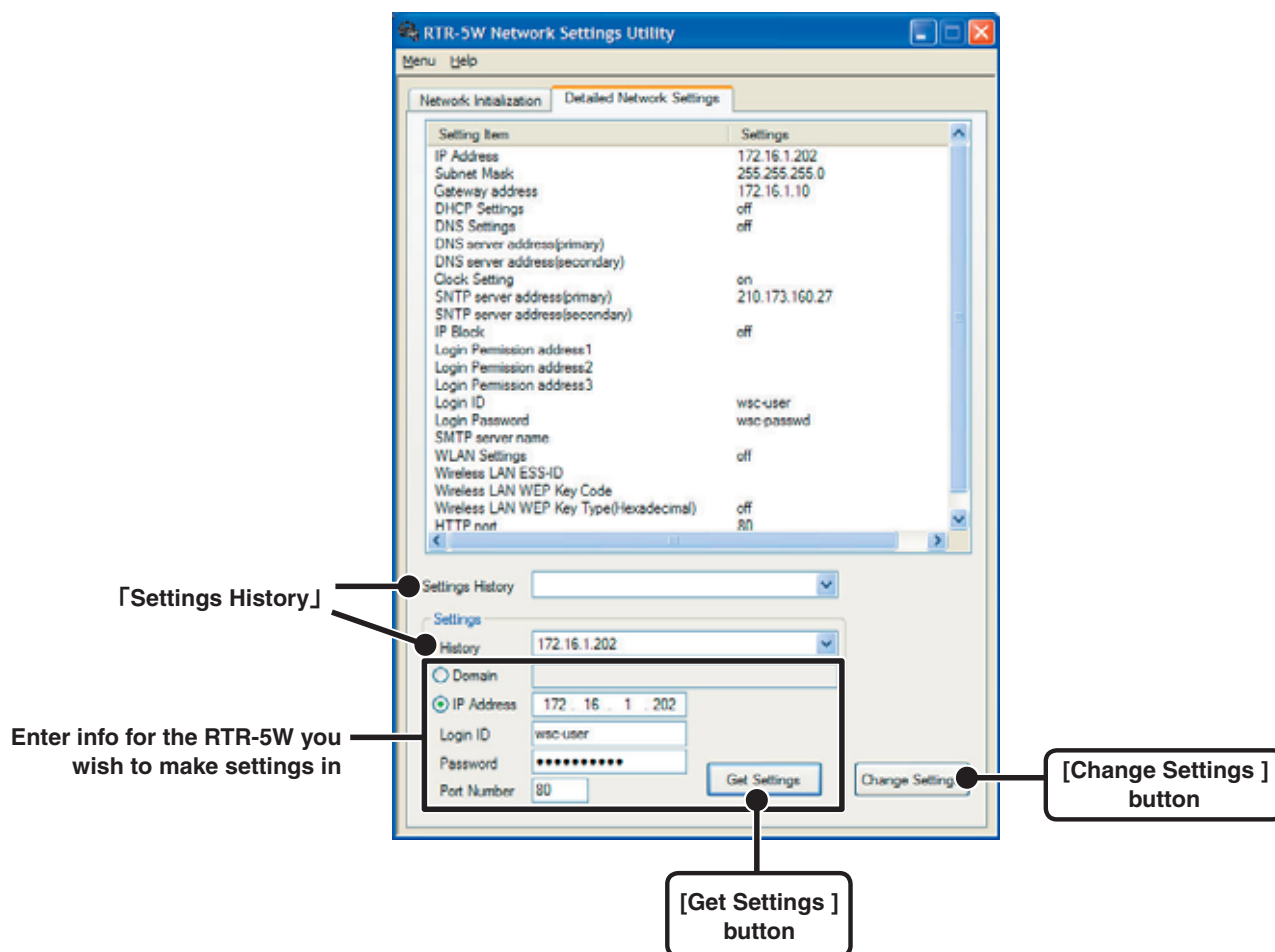
■ Receiving Settings

1. Click the [Detailed Network Settings] Tab.
2. In the [Receive Settings] Area, enter the information for the RTR-5W you wish to make settings for and click the [Receive Settings] button. The current settings will appear.

-A list that shows all of the IP addresses and domain names with which successful communication has occurred until now can be viewed in the [Settings History] pull down menu.

If you select an IP address or domain name here, the Login ID, Password and Port Number will be entered automatically.

* Note that if you have turned [OFF] the [Login History] in the [Menu], or if you have deleted the Login history by having clicked [Clear Login History] the Settings History will not appear.



■ Making Settings (Changes)

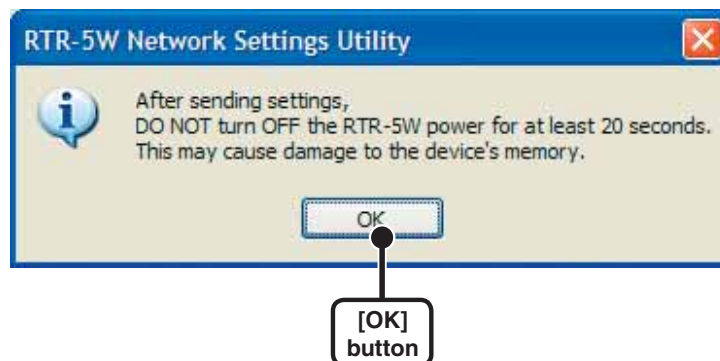
1. In the [Detailed Network Settings] window, click the [Change Settings] button and make any necessary changes.

The screenshot shows the 'Detailed Network Settings' window. It has several sections: IP Address (192.168.1.10), Subnet Mask (255.255.255.0), Gateway Address, Login ID (wsc-user), Login Password (wsc-passwd), DNS Settings (OFF), DNS server address (Primary/Secondary), SMTP Settings (ON), SMTP server address (Primary/Secondary), IP Block (OFF), Login permission address (1/2/3), Wireless LAN Settings (OFF), Wireless LAN ESS-ID, Wireless LAN WEP Key Type (None/Decimal), Wireless LAN WEP Key Code, Port Number (HTTP 80, FTP server 80, DTP server 20), Time Difference (GMT 00:00), and Recipient (Domain, IP Address, Login ID, Login Password, HTTP Port Number). A callout box points to the 'Send Settings' button, and another callout box points to the 'Recipient' section.

Enter info for the TR-7W you wish to make settings in.

2. After making the settings, enter the info for the recipient of the settings and click the [Send Settings] button.
3. A message will appear asking you if it is OK to restart the system. Click the [Yes] button to restart.

**The new settings will not become valid until the RTR-5W communication function is restarted.*



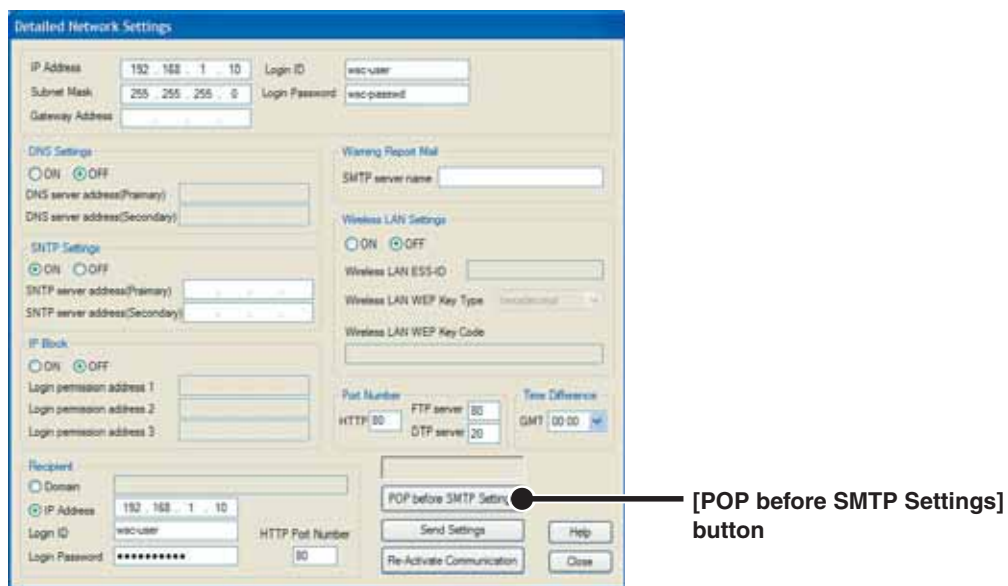
4. After restarting has finished, the settings will have been completed.

■ [Dial Settings] button

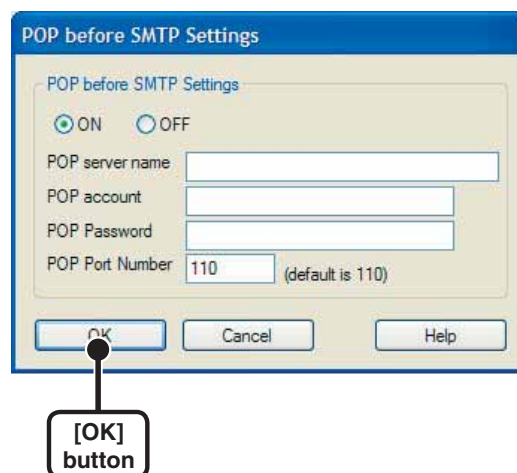
Use this to make settings for a POP before SMTP server, make settings for using a telephone line to connect your computer via a dialup connection, or make settings for connecting to a telephone line to send warning mails from the RTR-5W.

1. In the [Detailed Network Settings] window, click the [Dial Settings] button and make any necessary settings changes.

**For details about making settings changes, see the [Help] Menu in the [Network Settings Utility].*



2. After having made the desired settings, click the [OK] button.



3. In the [Detailed Network Settings] window, click the [Send Settings] button and reactivate communication in the RTR-5W.

**The new settings will not become valid until the RTR-5W communication function is restarted.*

■ [Re-Activate Communication] Button

If the browser does not open, wireless communication continually results in failure, or if any errors occur during communication, click the [Re-activate Communication] button.

Note that by restarting, the data transfer graph in the RTR-5W Web Viewer will also be reset.

Detailed Network Settings

IP Address: 192.168.1.10
Subnet Mask: 255.255.255.0
Gateway Address:
Login ID: wsc-user
Login Password: wsc-passwd

DNS Settings
☐ ON ☒ OFF
DNS server address(Primary):
DNS server address(Secondary):
SMTP Settings
☒ ON ☐ OFF
SMTP server address(Primary):
SMTP server address(Secondary):
IP Block
☐ ON ☒ OFF
Login permission address 1:
Login permission address 2:
Login permission address 3:
Wireless Report Mail
SMTP server name:
Wireless LAN Settings
☐ ON ☒ OFF
Wireless LAN ESS-ID:
Wireless LAN WEP Key Type:
Wireless LAN WEP Key Code:
Port Number
HTTP: 80 FTP server: 80
SMTP server: 25 Time Difference
GMT: 00:00
Recipient
☐ Domain
☒ IP Address: 192.168.1.10
Login ID: wsc-user
Login Password: *****
HTTP Port Number: 80
POP before SMTP Settings
Send Settings
Help
Re-Activate Communication
Close

[Re-Activate Communication]
button

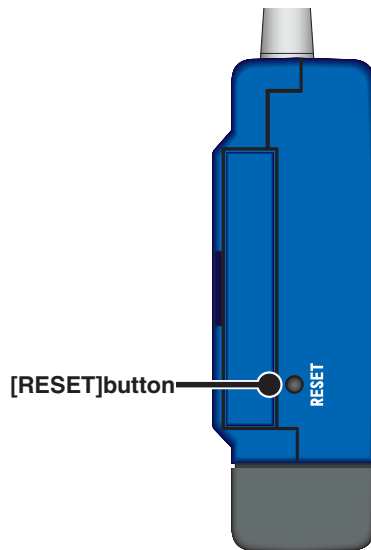
NOTE:

Note that by clicking the [Send Settings] button or the [Re-activate Communication] button over and over, communication may become impossible. Please try again after 20 seconds.

Returning the Network Settings to the Factory Default Settings

If you have forgotten the IP address or the password you can easily return the logger to the default factory settings.

- 1.** Pull out the AC adaptor plug from the RTR-5W logger.
- 2.** Press in the [RESET] button on the RTR-5W logger with a pointed object and reconnect the AC adaptor.



- 3.** When the [Power] lamp on the face of the RTR-5W logger starts blinking, release the [RESET] button and the unit will have been returned to the factory default settings.

RTR-5W Clock Settings

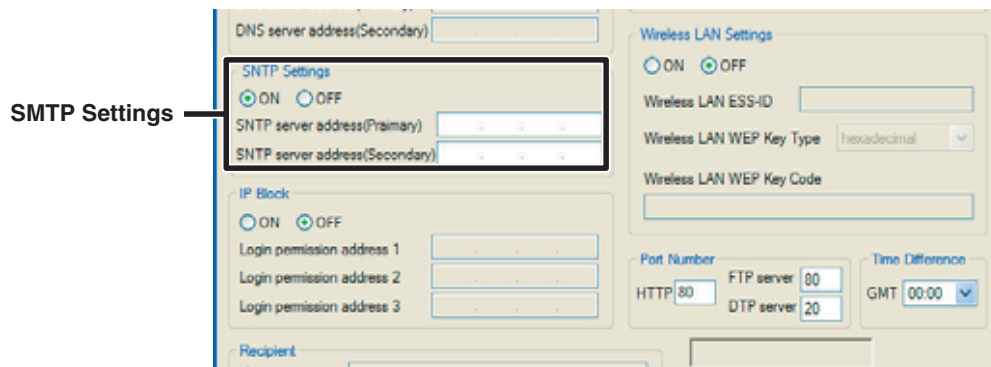
If the clock settings for the RTR-5W are not set correctly, the clock in the RTR-5W Web Viewer and the time of warnings will also be incorrect. Please make sure to set correctly before beginning to use.

■ Automatic Setting of the Clock

Normally, when an RTR-5W is rebooted the clock settings will be initialized. However, by making settings to enable the SNTP server it is possible to have the clock automatically reset to the current time upon rebooting.

*The SNTP (NTP) server is a server that automatically adjusts the clock settings of a terminal on a network.

1. Open the [Network Settings Utility], click on the [Detailed Network Settings] tab, and gather the settings for the RTR-5W that you wish to make settings for.
2. Click the [Change Settings] button and the window will appear where you can make changes to the settings.



3. Under [SNTP Settings], click “ON” to change the setting.

【How to find an NTP server】

-If you are connected to an intra company LAN, you may already have an NTP server for your network. Please ask your network administrator for details.

-If you are connected to the Internet, some providers will have an NTP server open to the public. Please ask your provider for details.

-If you wish to use an NTP server that is open to the general public on the Internet, it is possible to make a search for [NTP server] using Yahoo or Google. Many universities or scientific facilities will have an NTP server open to the public. Make sure to use the server which is closet to your location.

Please also make sure to check whether connection is free and without limitation.

It should also be noted that depending on your Internet connection and your firewall settings, the NTP packet may be prohibited from being accepted into your system.

4. After making the settings, enter the info for the recipient of the settings and click the [Send Settings] button.

IP Block
☐ ON ☒ OFF
Login permission address 1
Login permission address 2
Login permission address 3

Address Entry Method Key Code
Port Number
HTTP 80 FTP server 80 DTP server 20
Time Difference
GMT 00:00

Recipient
☐ Domain
☒ IP Address 192 . 168 . 1 . 10
Login ID wsc-user HTTP Port Number
Login Password 80

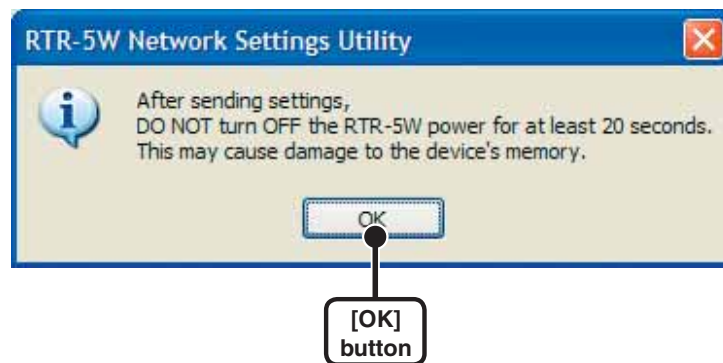
POP before SMTP Settings
Send Settings
Re-Activate Communication
Close

[Send Setting] button

Enter the information for the recipient

5. A message will appear asking you if it is OK to restart the system. Click the [OK] button to restart.

**The new settings will not become valid until the RTR-5W communication function is restarted.*



6. After restarting has finished, the settings will have been completed.

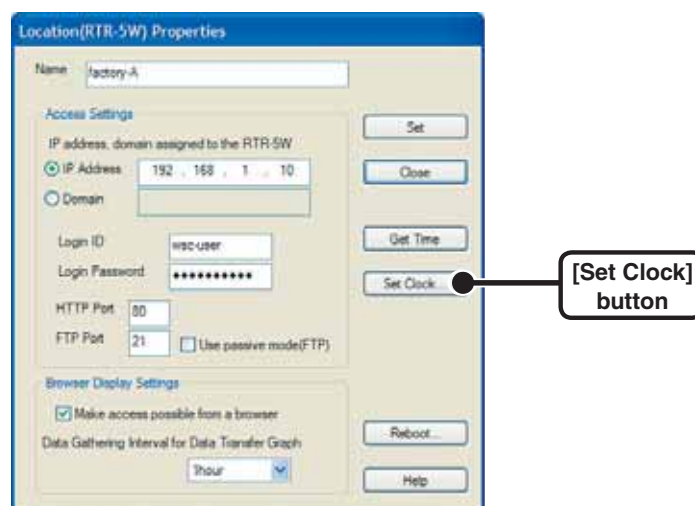
■ Making the Clock Settings Manually

*If you wish to manually set the clock, please carry out settings only after having created a Location.

NOTE:

If you make clock settings manually, the clock will lose its settings upon removal of the AC adaptor or after restarting the system. Hence, it is necessary to reset the clock after having restarted the system or having lost AC power.

1. Open [RTR-5W for Windows]
2. Open the Properties for the Location (RTR-5W) you wish to make settings for.
In the [Registration / Administration] Menu, select [Location (RTR-5W) Properties] or by right clicking on the Location icon, a popup menu will appear where you can select [Location (RTR-5W) Properties] to display the properties window.



3. Click the [Set Clock] button and set the current date and time.

- **If you wish to set to the same time as your computer clock, select “Set the Computer Clock” .**

**Make sure that the computer clock settings are correct before choosing this method.*

- **If you wish to directly enter a specified date and time, select “Set the specified clock” and enter the desired settings.**

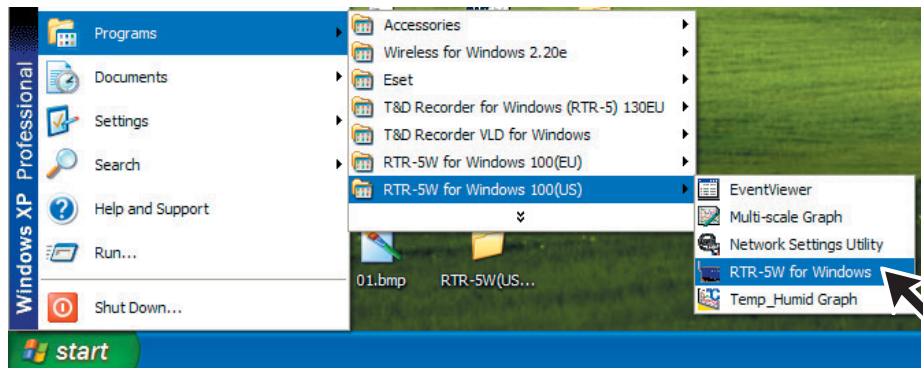


4. Click the [Set] button to send the settings to the RTR-5W and complete the settings.

How to Operate RTR-5W for Windows

■ How to Open

From the list of programs in the Window's Start Menu, click on [RTR-5W for Windows] - [RTR-5W for Windows] to open.



■ Using Help

For details about how to use the software, please see the explanations in the Software Help Menu.

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



[Contents]

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

[Index]

By selecting a Keyword in the Keyword list, and clicking the [Display] button at the bottom, a detailed explanation will appear.

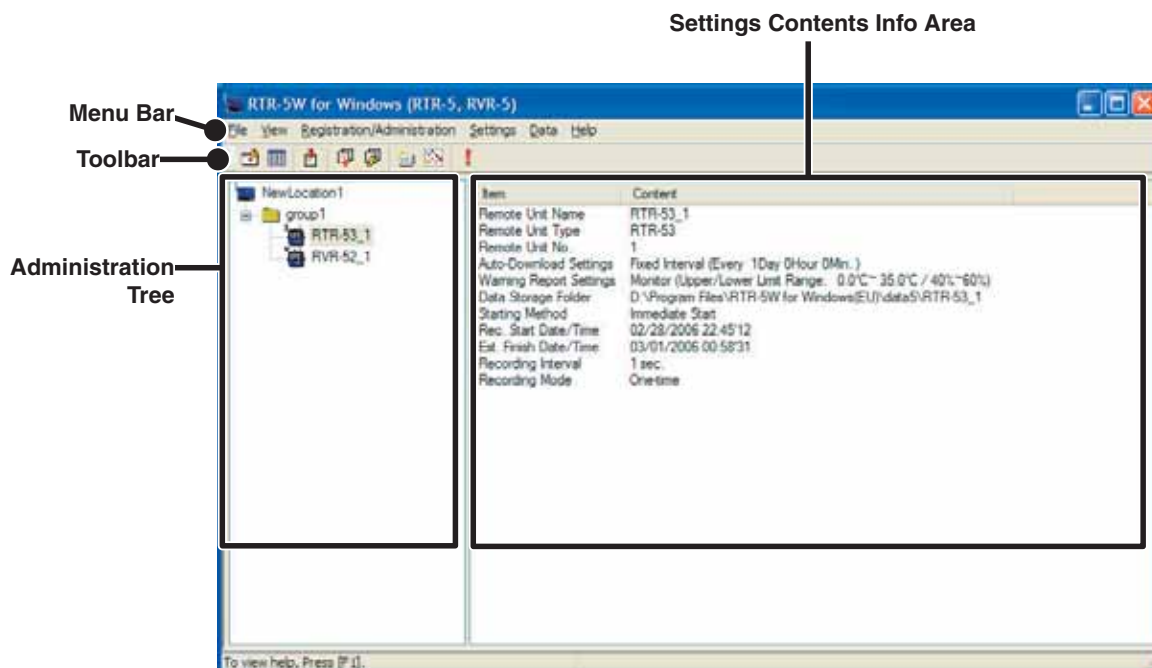
[Search]

Enter the keyword you wish to search for and click the [List Topics] button. All topics that contain the keyword will be displayed. By selecting a topic and clicking the [Display] 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.

■ RTR-5W for Windows Functions

RTR-5W for Windows is designed to allow the user to utilize RTR-51/52/53 and RVR-52A Data Loggers via the RTR-5W Base Station. Management of all devices is carried in the application main window out using a tree format with loggers being registered to Groups and Groups belonging to Locations (RTR-5W). From the main window it is possible to carry out the various tasks such as Registrations, Recording and Warning Monitoring Settings, as well as the Downloading of Data.



Menu Bar

The Menu Bar contains various menus which contain a variety of commands. The commands within the menus can be used to display or make settings for the various functions.

Toolbar

Icon buttons appear for the most frequently used commands.

Administration Tree

In the tree all registered Locations (item at the top of each tree list), Groups and Remote Units can be viewed and managed.

By right clicking on an icon, a menu will be appear with commands for that type of unit.

Settings Contents Info Area

By clicking on an icon (Location, Group, Remote Unit), the settings info for that item will be displayed.

Remote Registration

In order to carry out Wireless Communication between a Data Logger and an RTR-5W Base Station, it is first necessary to register the Data Logger as a Remote Unit of that RTR-5W.

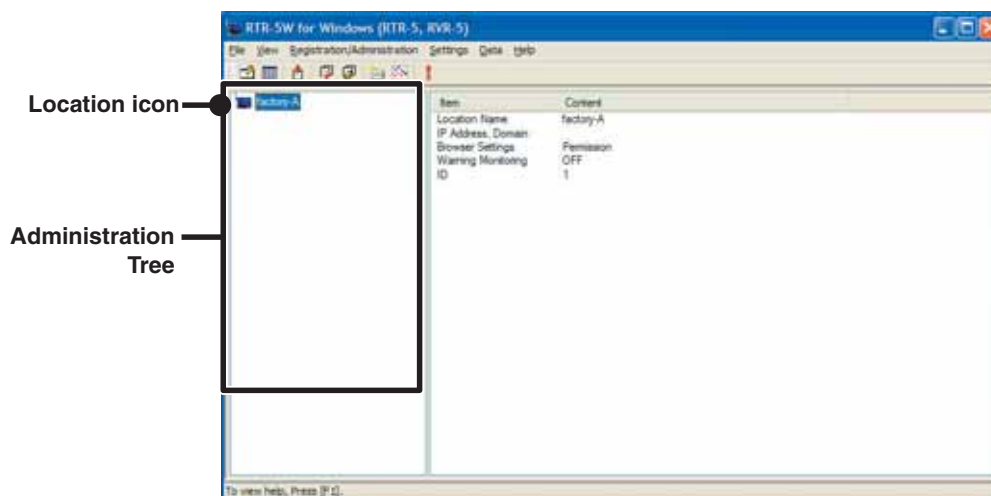
■ Create a Location

1. Open [RTR-5W for Windows]
2. In the [Registration / Administration] Menu, click on [Create Location (RTR-5W)] to display a window where you can enter a name for the new Location.

** In the Location name, you cannot use a space, or any of the following characters [V,;,*?"<>|&] .*

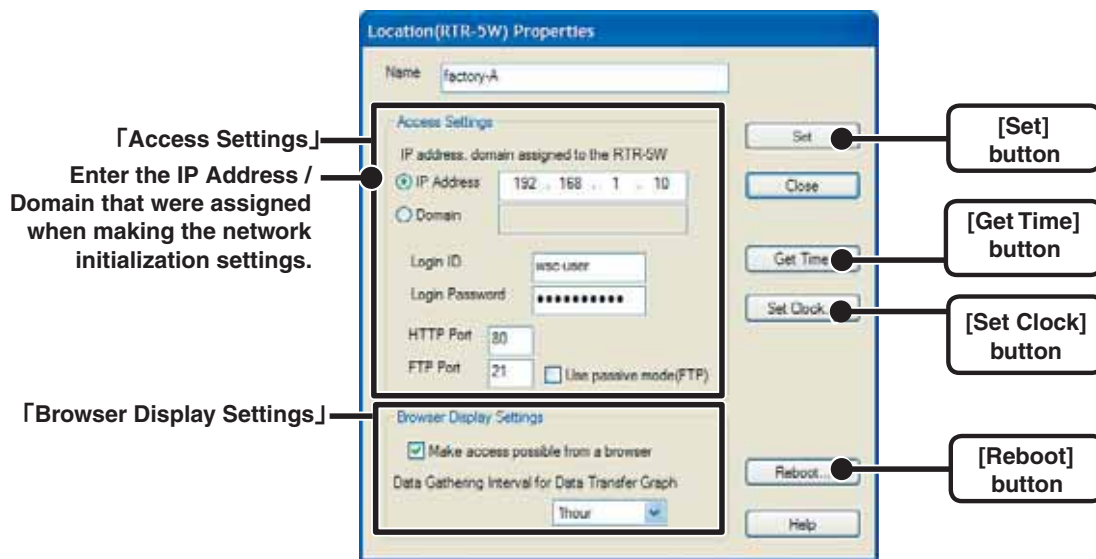


3. After entering the Location Name, by clicking the [OK] button, the Location will be created in the Administration Tree.



4. Click on the desired Location Icon. In the [Registration / Administration] Menu, select [Location (RTR-5W) Properties] and enter the same IP address that you previously entered when making settings in the Network Settings Utility.

**By right clicking on the Location icon, a popup menu will appear where you can select [Location(RTR-5W) Properties] to display the properties window.*



■ Access Settings

Enter the IP address (or Domain) for the RTR-5W that was entered in the [Network Settings Utility].

■ Browser Display Settings

If necessary, make settings in the [Browser Display Settings] Area.

-Select whether to permit or forbid access from a browser by clicking ON or OFF “Make access possible from a browser” .

-With Data Gathering Intervals for Data Transfer Graph <Selections: none, 15, 20, 30 minutes, 1, 2, 3, 6, 12, 24 hours> it is possible to make gathering data interval settings for monitoring the current readings via the browser and viewing in simple graph form.

5. After making entries click the [Set] button to send the settings to the RTR-5W that were entered into the [Access Settings] Bar and the settings for the Location will be completed.

[Get Time] Button

Clicking this button will start communication with the Location and will retrieve and display the time settings from the Location's internal clock. Due to network delays, this may be a few seconds off from the time you receive the settings.

[Set Clock] button

If settings have been made to use an SNTP server, upon opening, the clock will be automatically updated. It is also possible to make clock settings in the clock settings dialog. See pp. 34-36 for details.

NOTE:

If RTR-5W is rebooted the clock settings will be initialized.

[Reboot] button

This will reboot the RTR-5W. If you have updated the RTR-5W internal script or in some other cases it is necessary to reboot the system.

NOTE:

By rebooting the RTR-5W, all warning logs and data files for transfer will be erased.

■ Creating Groups

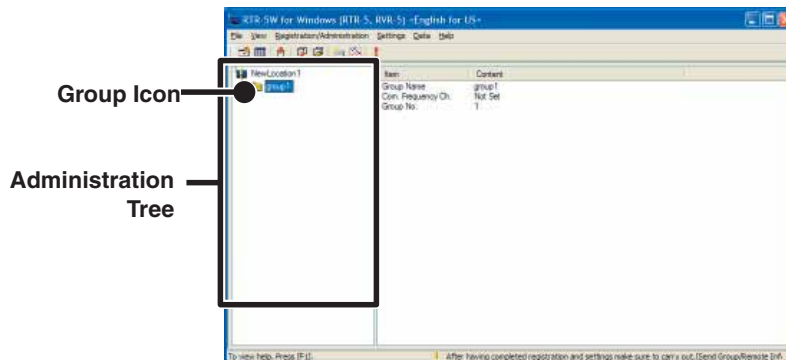
1. In the [Registration / Administration] Menu, click on [Create Group] to display a window where you can enter a name for the new Group.

**Up to 8 characters can be entered.*

**In the Location name, you cannot use a space, or any of the following characters [V:,*?"<>|&]*



2. After entering the Group Name, by clicking the [OK] button, the Group will be created in the Administration Tree.

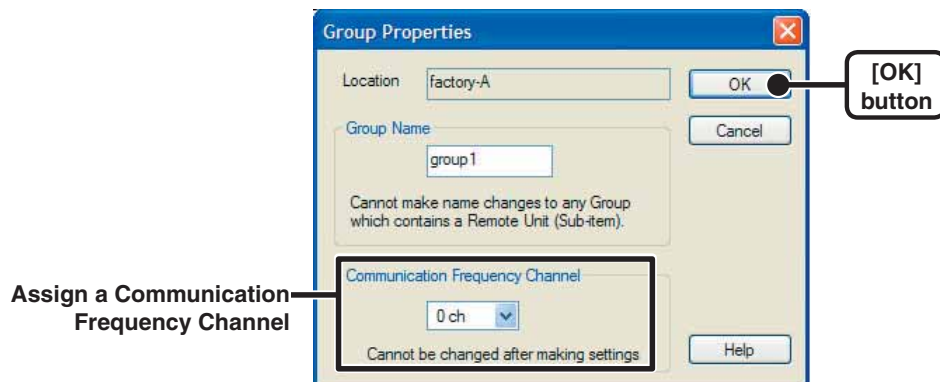


3. Click on the desired Group Icon. In the [Registration / Administration] Menu, select [Group Properties] and assign a Communication Frequency Channel for the selected Group.

**By right clicking on a Group icon, a popup menu will appear where you can select [Group Properties] to display the same window.*

-Once a Communication Frequency Channel setting has been made it cannot be changed.

-If a different Group is located nearby and there is a possibility that communication could occur at the same time, please make sure to set the Communication Frequency Channels for each Group to a different setting. If two Groups use the same Communication Frequency Channel at the same time there is a great possibility that a communication failure will occur.



4. Click the [OK] button to finish the Group settings.

■ Registering a Remote Unit

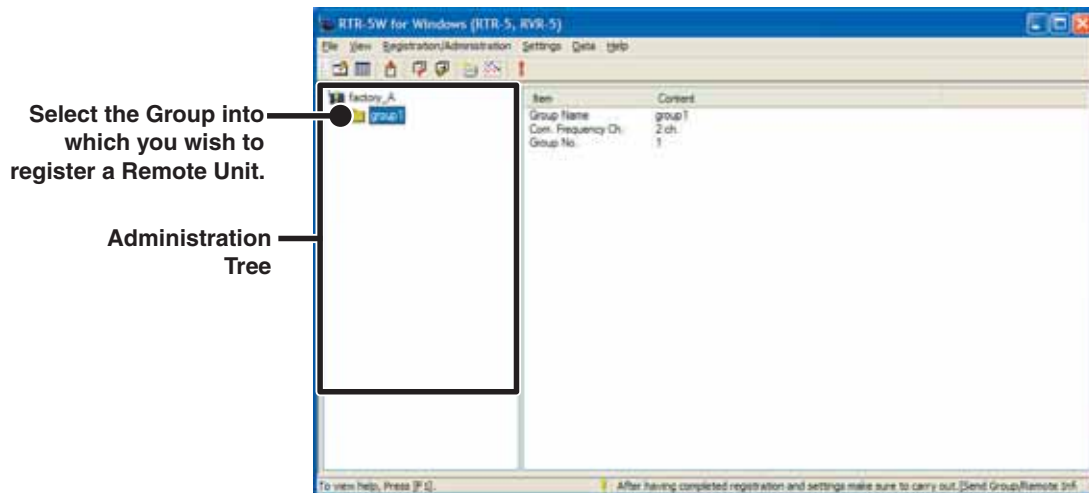
1. Place a Data Logger face down on the RTR-5W

-See page 16 for more details about how to connect.

2. Select the Group in which you wish to register Remote Units from the Registration Tree. In the [Registration / Administration] Menu, select [Remote Unit (RTR-5, RVR-5) Registration] to display the Remote Unit Registration window.

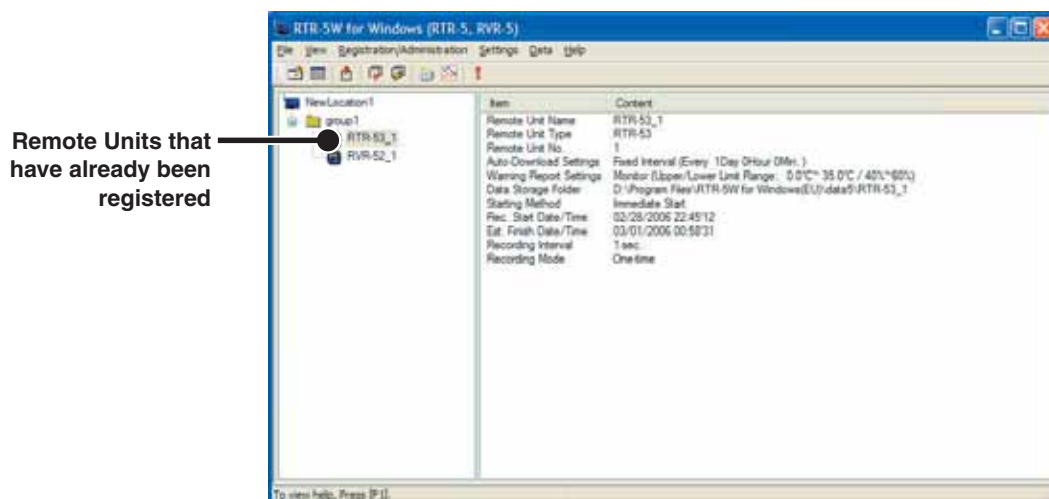
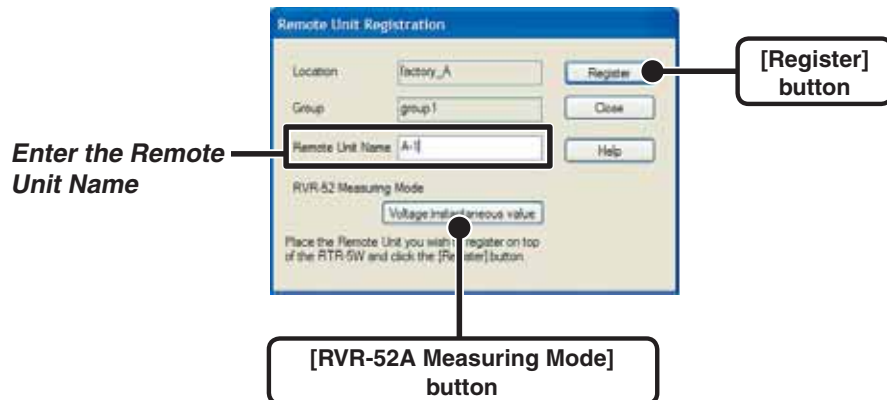
**By right clicking on a Group icon, a popup menu will appear where you can select [Remote Unit Registration] to display the Remote Registration window.*

**If an exclamation mark “!” is next to a Location Icon make sure to carry out [Send Group / Remote Info] after having made settings.*



- Enter a name for the Remote Unit and click the [Register] button to finish the registration.

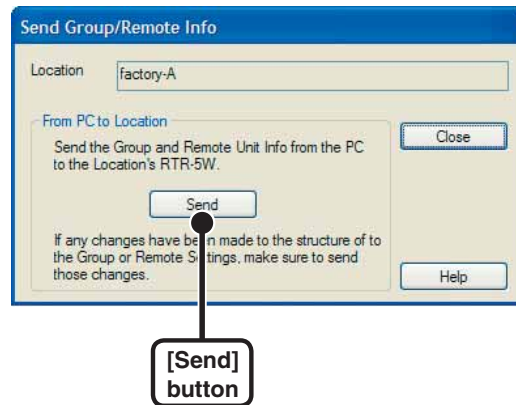
-If you are using an RVR-52A logger, click the [RVR-52A Measuring Mode] button and select the desired measuring mode.



**If you wish to register other Remote Units, repeat the process as in steps 1~3.*

■ Sending Registration Info to an RTR-5W

1. Select a Location from the Administration Tree, and in the [Settings] Menu, select [Send Group / Remote Info].



2. Click the [Send] button to send the registration info to the RTR-5W and complete the settings.

**Make sure to carry out this operation each time changes are made to settings.*

■ Wireless Communication Test

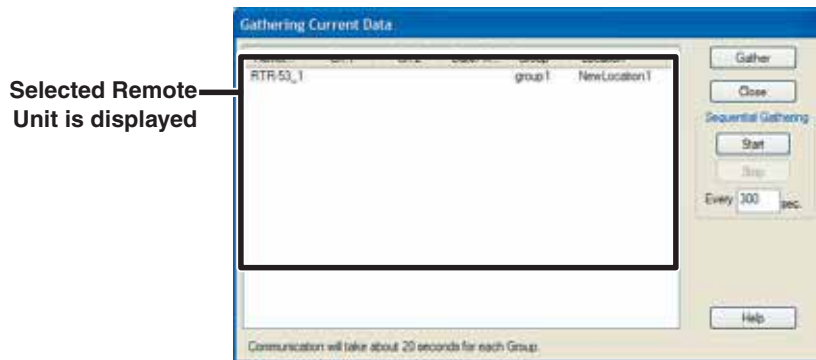
Gather the current data readings from each Remote Unit and check to make sure that wireless communication is possible between the Remote Units and the RTR-5W Station.

1. Place a Remote Unit in the actual place from which you wish to measure and record data.

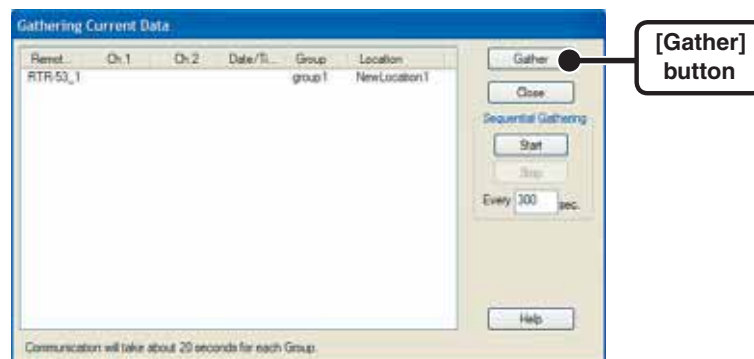
- The wireless communication range, if unobstructed and direct, is about 100 meters [330 ft].

2. Select the placed Remote Unit from the Administration Tree, and in the [Data] Menu, select [Gather Current Data].

**By right clicking on the Remote Unit icon, a popup menu will appear where you can select [Gather Current Data] to display the [Gathering Current Data] window.*



3. Click the [Gather] button to start communication with the Remote Unit and the current data readings will be displayed.



If the current readings are not displayed, move the Remote Unit to a different Location and try gathering the current data again.

Recording Settings

Note:

If the computer clock is set incorrectly the programmed start time will also be incorrect. Make sure the clock settings are correct before starting a recording session.

1. Open [RTR-5W for Windows].
2. From the Administration Tree, select the Remote Unit for which you wish to make recording settings, and in the [Settings] Menu, select [Start / Stop Recording].
3. Setting the Recording Conditions.



■ Communication Method :

<Select from: Wireless Communication / Optical Communication>

Select the communication method to be used between the Remote Unit and the Base Station (RTR-5W).

**If more than one Remote Unit have been selected, only wireless communication can be used.*

■ Recording Start Time: <Select from: Immediate Start / Programmed Start>

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

Immediate Start: Recording will start after the [Recording Start] button has been clicked.

When using RTR-51/52/53 units, by selecting the type of unit it is possible to view the estimated recording finish time.

■ 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>

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

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

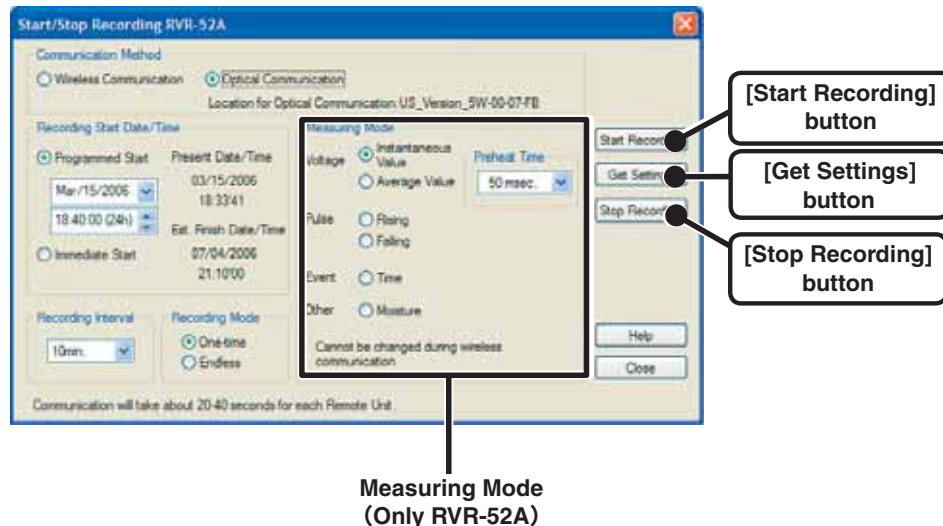
**For RTR-53, the unit will become full at 8,000 readings in each channel.*

■ Unit of Temperature for Display:

<Select from: Celsius or Fahrenheit > for RTR-51/52/53

Here you can shift the unit of display between Celsius (°C) and Fahrenheit (° F).

■ **Measuring Mode:** <Select from: Voltage (instantaneous value / average value) / Pulse (Rising / Falling) / Event (Time) / Moisture> for RVR-52A.



Voltage • Instantaneous value : Records the voltage at the instant of measurement.
(Unit of measurement in display: V)

Voltage / Average value : If the recording interval has been set for 15 seconds or lower, the average that is recorded will be from measurements every one second. If the recording interval has been set for 20 seconds or higher, the average that is recorded is from every two seconds. (Unit of measurement in display: V)

Pulse / Rising : Records the number of rising pulses during the set recording interval.
(Unit of measurement in display: P)

Pulse / Falling : Records the number of falling pulses during the set recording interval.
(Unit of measurement in display: P)

Event / Time : Events within an input voltage range of 0 ~ 30V are measured for every 1 second and the time and date are recorded if any change, rising (Lo → Hi) or falling (Hi → Lo), occurs and lasts for more than 1 second. (Unit of measurement in display: P) (There is no set recording interval)

Other / Moisture : Record Moisture by Percentage.
The unit of measurement on the display will show [P] for Percent.

*

Preheat Time

The choices for the preheat time setting are "deactivate", "50 msec", or from "1 to 200 seconds" in units of one second.

If the sensor you are using needs power (when recording voltage using the instantaneous value method, when recording moisture percentage), it is possible to make settings to allow for a specified preheat time.

The preheat time when recording moisture will be 50 msec.

By synchronizing the activation of sensor power to the logger's recording timing, it is possible to lengthen the battery life for the sensor.

If Preheat Mode has been selected, a control signal will be sent out at a specified time before recording is to start and once recording has finished, the output control signal will be stopped.

***To make changes to the measuring mode settings, it is necessary to use optical communication.**

4. Click the [Start Recording] button to send the recording condition settings via the RTR-5W Station to the Remote Unit and complete the set-up.

NOTE:

By starting a new recording session, all currently recorded data will be erased.

[Get Settings] Button

Gather current recording condition settings from the selected Remote Unit.

**The collecting of current recording settings cannot be carried out on a multiple number of Remote Units.*

[Stop Recording] button

Press to stop recording during a recording session.

Adjustment Function

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.

■ 1-point / 2-point Adjustment

Before : Enter the actual measurement before adjustment

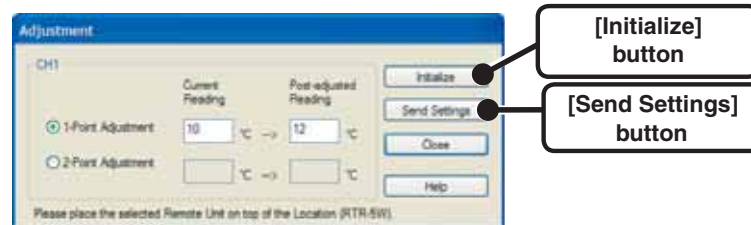
After : Enter the desired measurement after adjustment

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

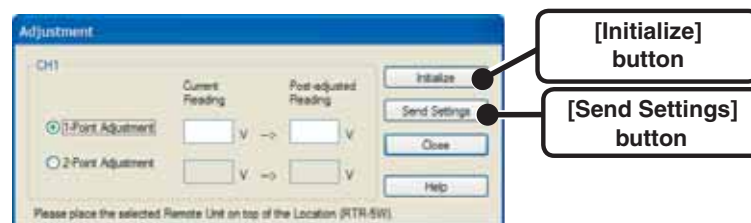
■ Adjustment Settings

1. Open [RTR-5W for Windows].
2. In the Main Window, click on the Data Logger icon. To open the [Adjustment] Window, click on [Settings] in the Menu Bar and then select [Adjustment Settings] from the pull down menu.

<RTR-51, 52, 53>



<RVR-52A>



*

3. Select either [1-point Adjustment] or [2-point Adjustment].
4. 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.
5. Click on the [Send Settings] button to send the adjustment equation to the selected Data Logger.

Downloading Data

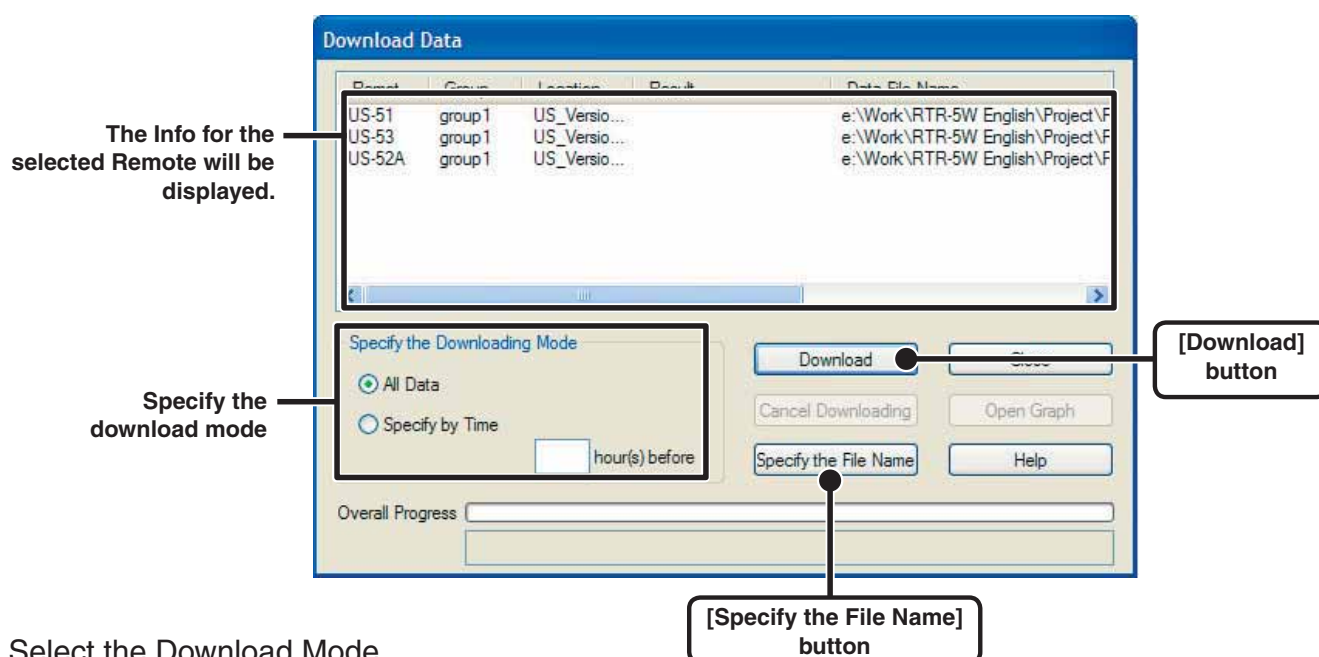
It is possible to download recorded data by two methods: [Wireless Communication] or [Optical Communication].

NOTE:

If the computer clock is set incorrectly the time of the downloaded data will also be incorrect. Make sure the clock settings are correct before starting a downloading session.

■ When using Wireless Communication

1. Open [RTR-5W for Windows]
2. From the Administration Tree, select the Remote Unit from which you wish to download data, and in the [Data] Menu, select [Download Data].



3. Select the Download Mode
4. If you wish to save the file by specifying the location, click the [Specify the File Name] button and make Saving Location Settings.
5. Click the [Download] button to start downloading.

Once downloading has been completed, select the name of the Remote Unit from the list and click [Open Graph] to view the data in graph form.

[Cancel Downloading] button

Use this to stop a downloading session in progress.

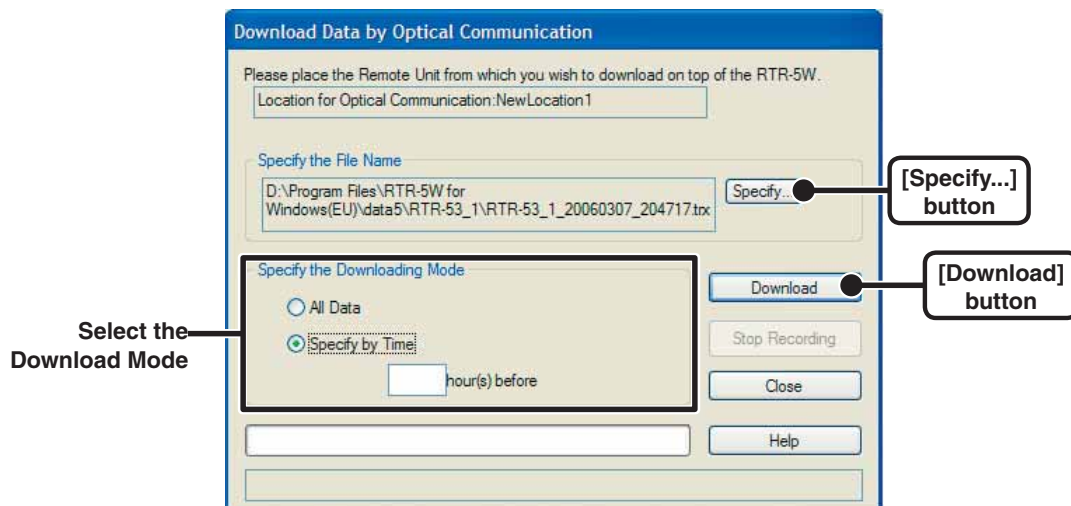
Note that if a downloading session is stopped while in progress, the results will NOT be saved to a file.

[Open Graph] Button

Once downloading has been completed, select the name of the Remote Unit from the list and click [Open Graph] to view the data in graph form.

■ When using Optical Communication

1. Open [RTR-5W for Windows]
2. Place the Remote Unit from which you wish to download data face down on top of the specified RTR-5W (Location).
3. From the Administration Tree, select the Location you will use for Optical Communication.
4. In the [Data] Menu, select [Download Data (Optical Communication)].



5. Click the [Specify] button to specify the file saving location.

**If only one Remote Unit has been selected, the default file name will appear when this window is opened.*

6. Make settings for [Specify the Downloading Mode]

7. Click the [Download] button to start downloading.

**If you wish to continue downloading from other units, repeat the process as in steps 2 to 7.*

[Cancel Downloading] button

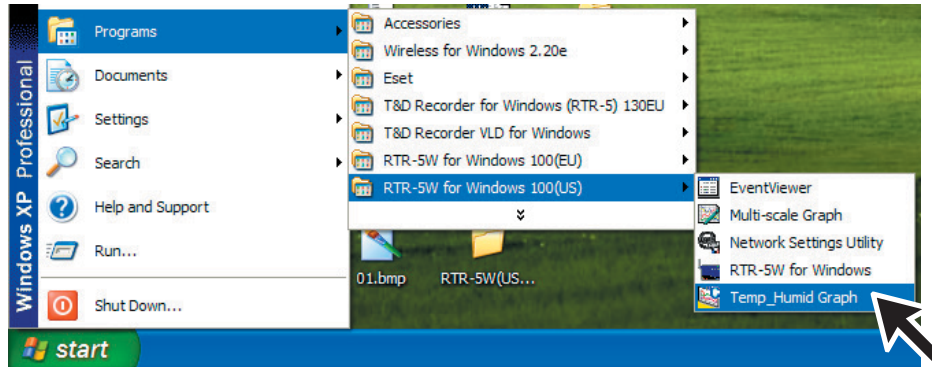
Use this to stop a downloading session in progress.

Note that if a downloading session is stopped while in progress, the results will NOT be saved to a file.

Operating the Temp / Humidity Graph

■ How to Open

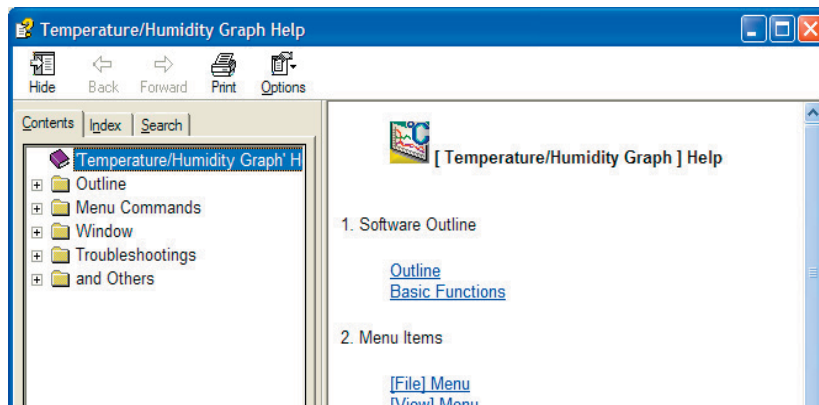
From the list of programs in the Window's Start Menu, click on "RTR-5W for Windows" - "Temp_Humid Graph".



■ Using Help

For details about how to use the software, please see the explanations in the Software Help Menu.

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



[Contents]

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


[Index]

By selecting a Keyword in the Keyword list, and clicking the [Display] button at the bottom, a detailed explanation will appear.

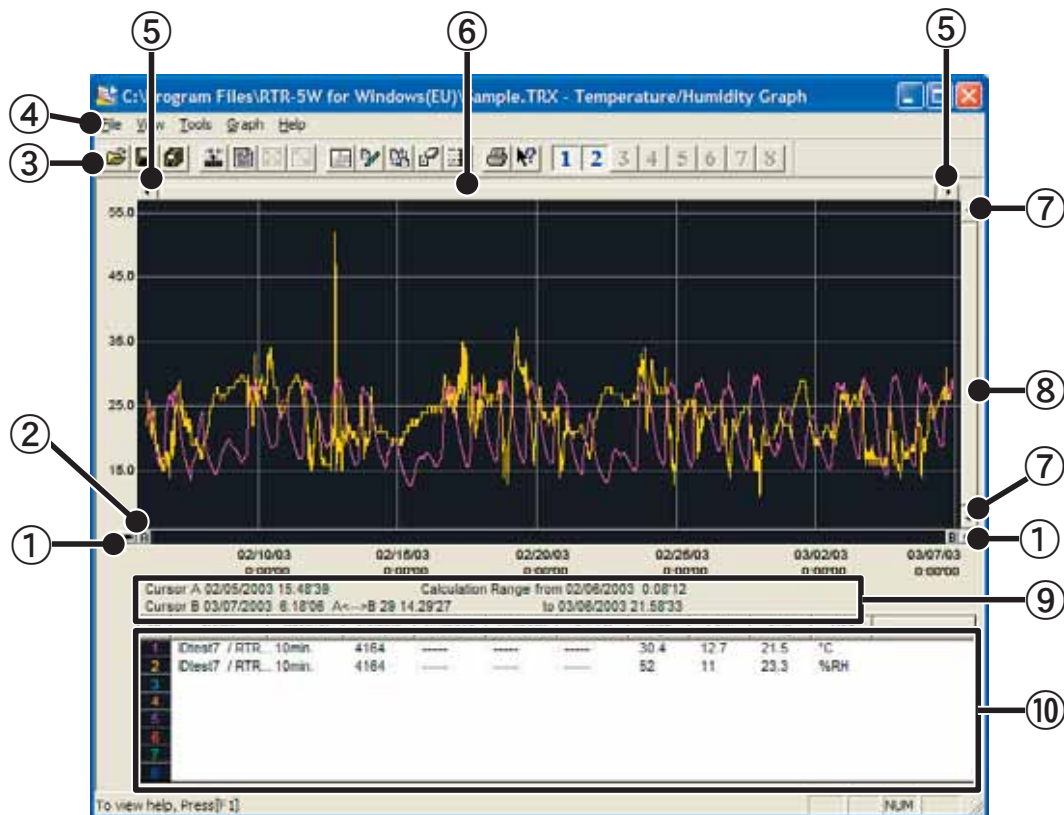
[Search]

Enter the keyword you wish to search for and click the [List Topics] button. All topics that contain the keyword will be displayed. By selecting a topic and clicking the [Display] 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  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.

■ Temperature / Humidity Graph Display Names and Functions



① A and B Cursor Movement Buttons

By clicking the arrow buttons, you can simultaneously move the A/B cursors.

② A and B Cursor Buttons

Click and drag the A or B button to move the cursor to the left or right.

③ Toolbar

Buttons appear for frequently used commands.

④ Menu Bar

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. They can be used to display or make settings for the various functions for each menu.

⑤ Button for Moving Horizontal Axis

The time axis moves by clicking these arrow buttons.

⑥ Horizontal Gauge Bar

By dragging the gauge you can move left and right to the data you want to be displayed.

⑦ Button for Moving Vertical Axis

The vertical axis moves up or down by clicking these arrow buttons.

⑧ Vertical Gauge Bar

By dragging the gauge you can move up and down to the data you want to be displayed.

⑨ A and B Cursor Position Information

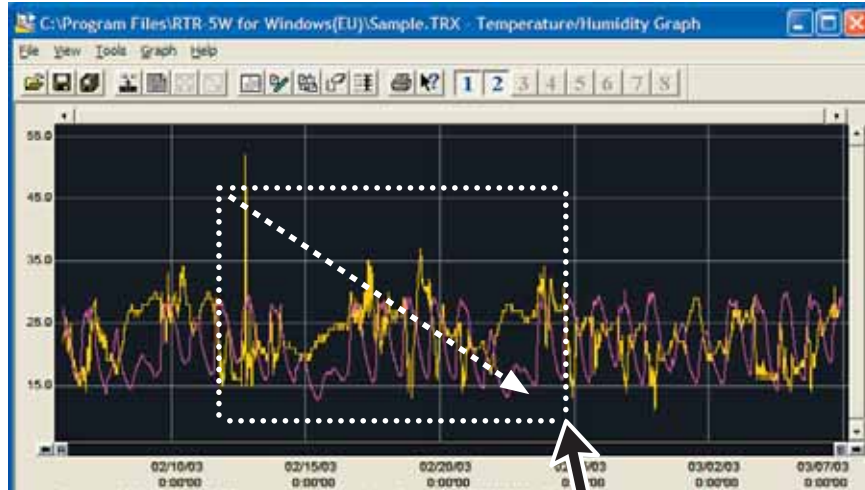
The approximate date and time for the A and B cursor positions and the time difference between the A cursor and the B cursor is displayed.

⑩ Channel Info List Display

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

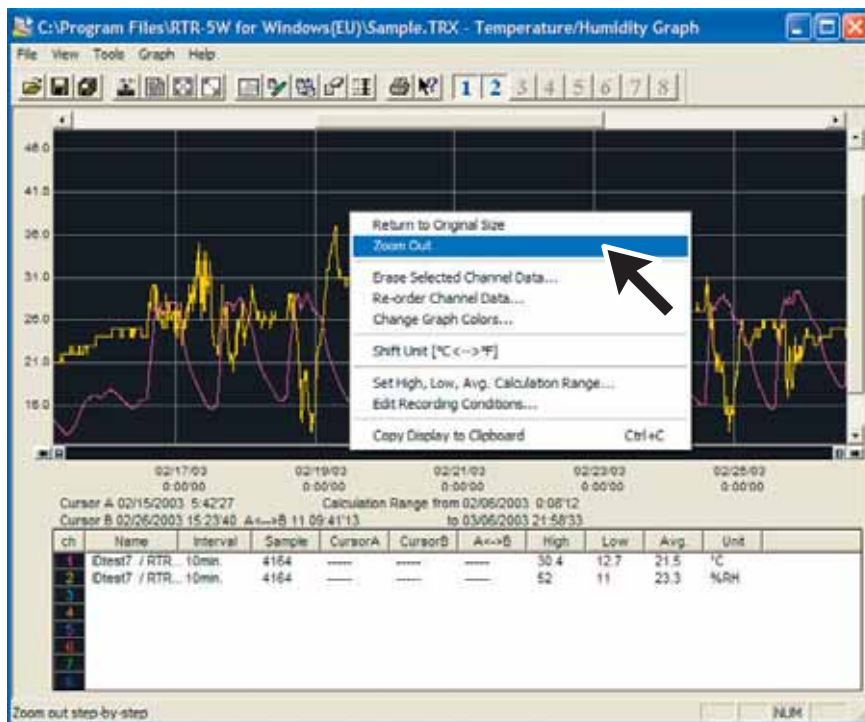
● Zoom in Using the Mouse

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.

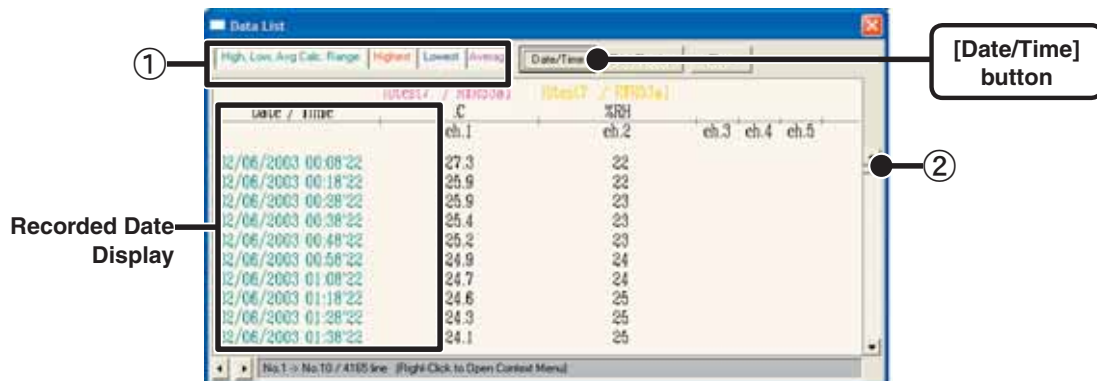


■ Data List Display Part Names and Functions

This is a list of the data that was displayed in graph form. From the [View] Menu.

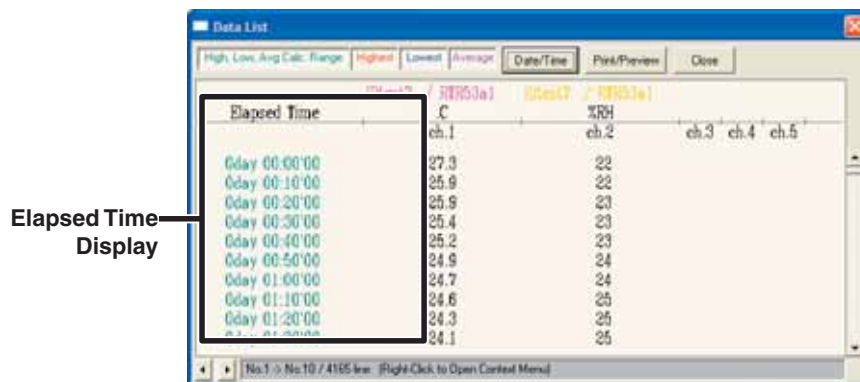
[Date/Time]Button

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



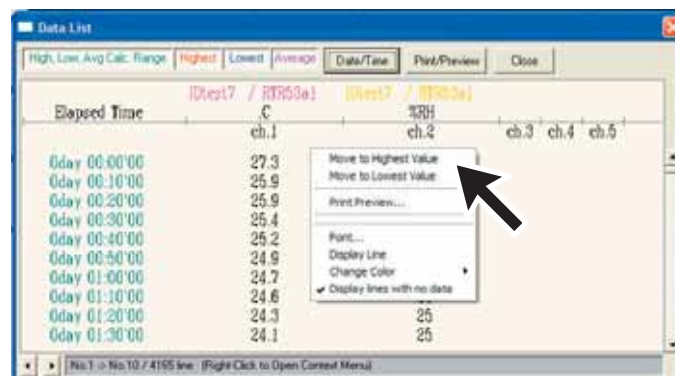
① The highest value is in RED, lowest is in BLUE, and the average is in PINK

② 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

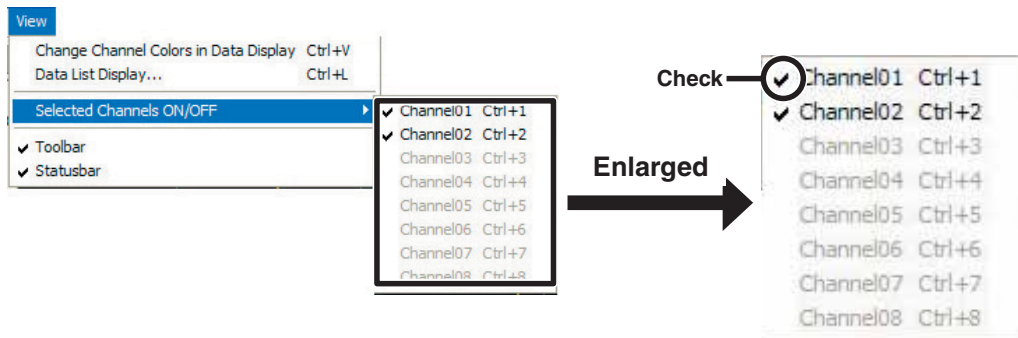
You can change the letters used in the data list display for each channel between monochrome and channel color.

■ Selected Channels ON / OFF : 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.*

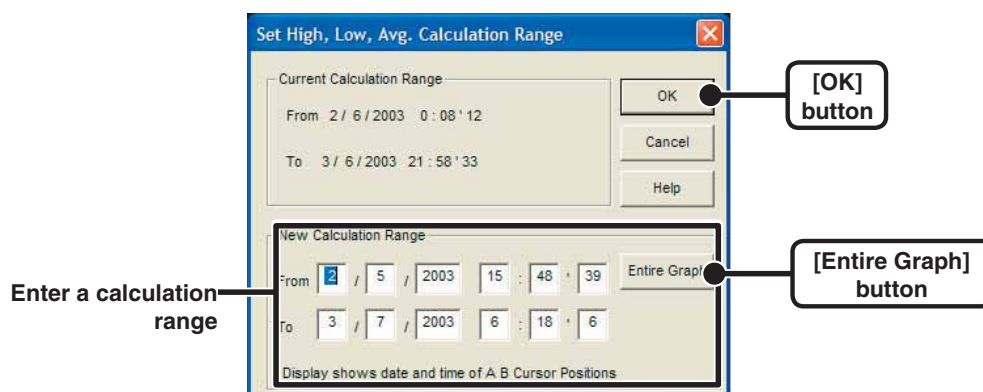


■ Set High, Low, Average Calculation Range: From the [Tools] Menu

1. Enter a calculation range in the [New Calculation Range]

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

-If in the graph display, you place the A cursor at the position for the beginning of the calculation range and the B cursor at the end of the range, 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 the setting process.

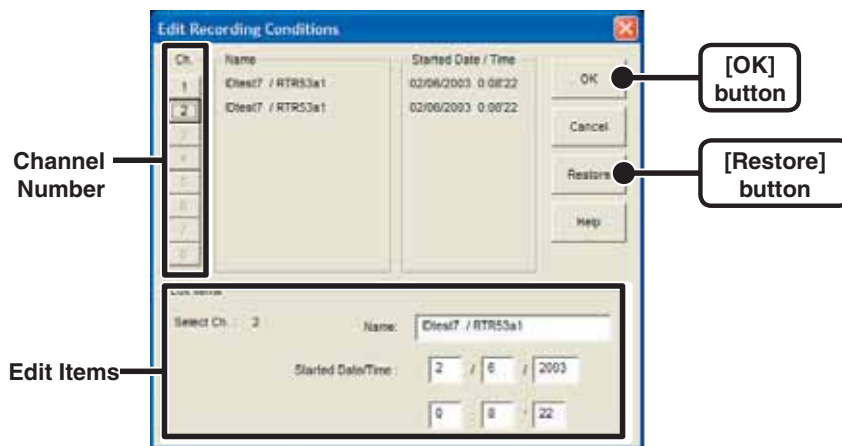
■ Editing Recording Conditions: From the [Tools] Menu

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.

-Started Date/Time: The month, day, year, hour, minute and second can be changed.



2. After making changes, click the [OK] button to finish.

**If you wish to continue to make changes to other channels, repeat the process as in step 1.*

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

■ Re-order Channel Data: From the [Tools] Menu

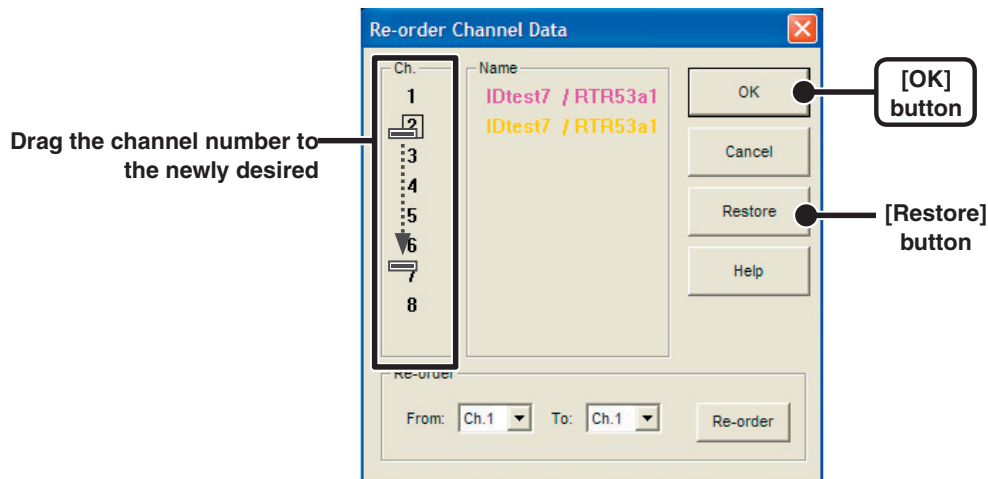
You can re-order the data during graph display.

There are two methods to use when re-ordering channels:[Re-order by Dragging a Channel Number] and [Specify the Channel Numbers to be Moved].

【Re-order by Dragging a Channel Number】

Drag the channel number you wish to move to the newly desired channel number position and drop it.

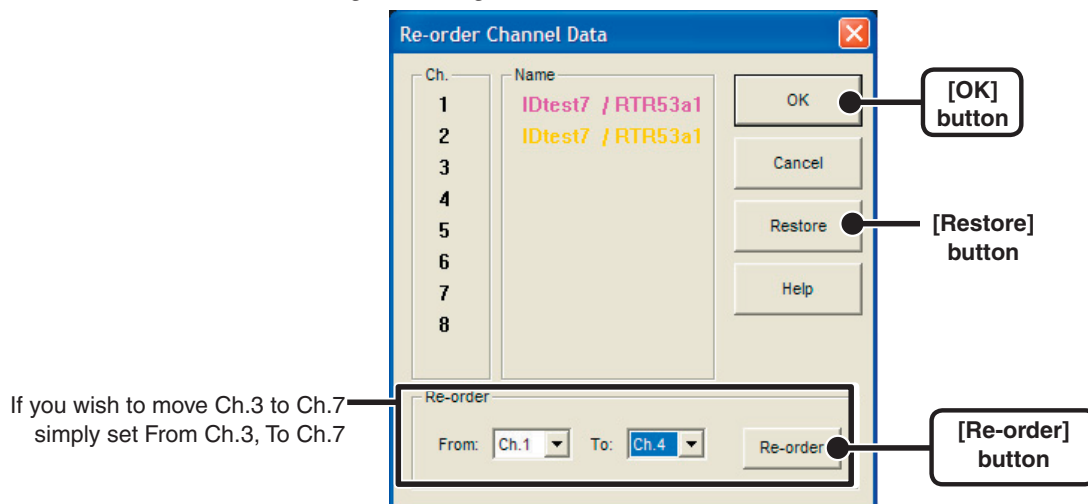
**The [Restore] button is only effective while making changes. After clicking the [OK] button the settings cannot be restored to the original settings.*



【Specify the Channel Numbers to be Moved】

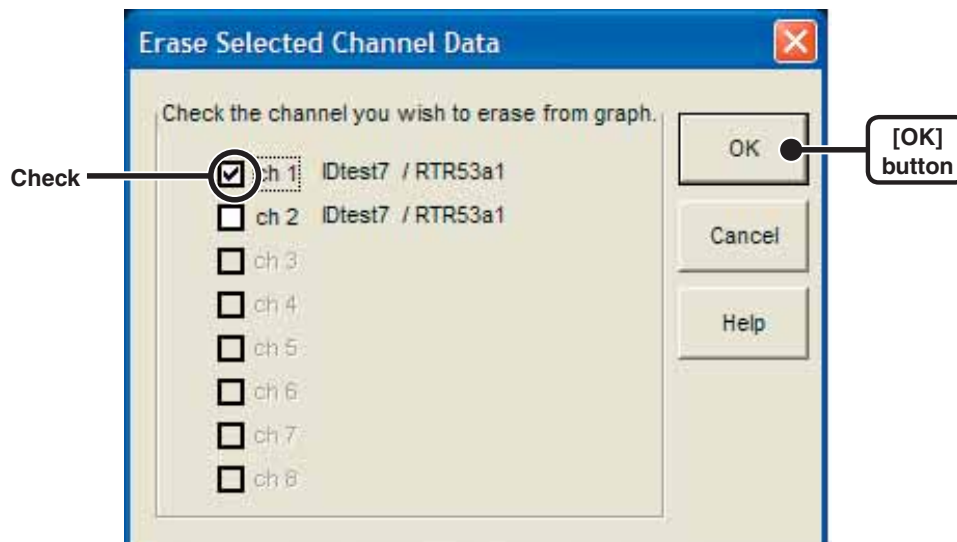
1. Specify the channels to be moved From: (original position) To: (desired position).
2. Click [Re-order] button to complete the re-ordering process.

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



■ Erase Selected Channel Data : From the [Tools] Menu

1. Put a check on the channel number you wish to erase.
2. By clicking on the [OK] button, the deletion will be completed.



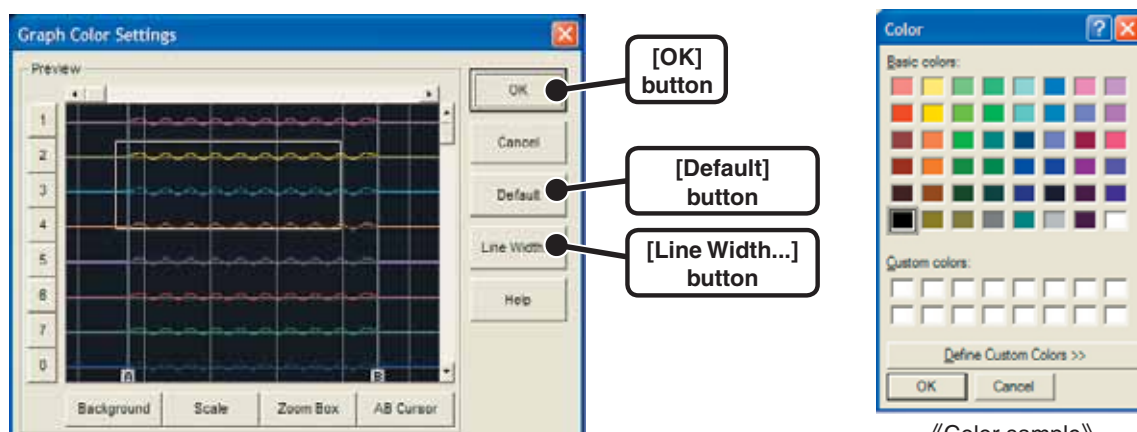
■ Shift Unit (°C / ° F) : From the [Tools] Menu

By clicking on [Shift Unit(°C / ° 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.



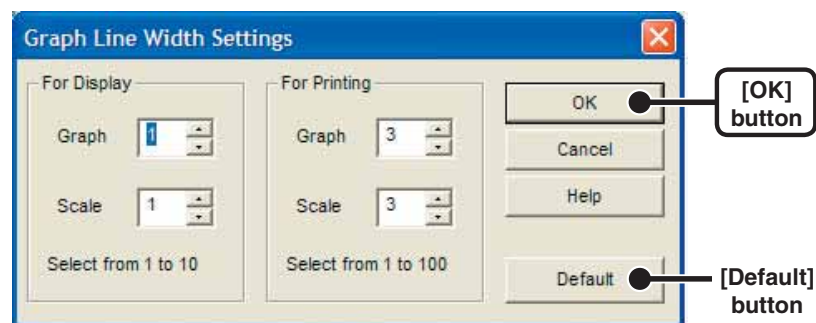
2. Choose the color you want and click the [OK] button.

3. After confirming the color, by clicking the [OK] button the change will be completed.

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

【Graph Line Width Settings】

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.

-Every time you click on ▼ , the numerical value gets smaller.

2. Click the [OK] button to complete the changes.

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

■ Copy Display to Clipboard : 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 Display

■ Returning to Original Size

Clicking here will return the graph to its original size.

■ Zooming In and Out

Zooms in or out one step at a time

■ Moving the A/B Cursors Right and Left

Simultaneously move the AB Cursors to the right or left.

■ Moving Right and Left on the Graph

Move the Graph Display to the right or left.

■ Moving Up and Down on the Graph

Move the Graph Display up or down.

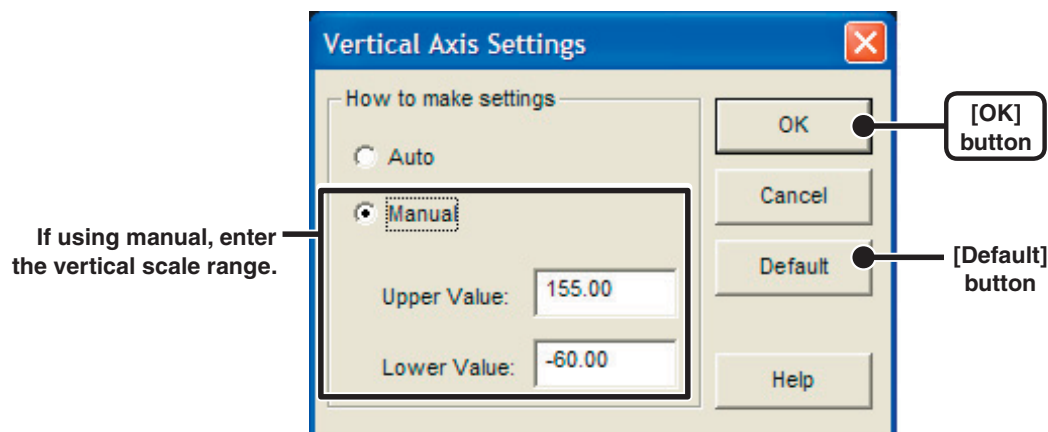
■ Vertical Axis Settings

Set the vertical axis scale range

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.



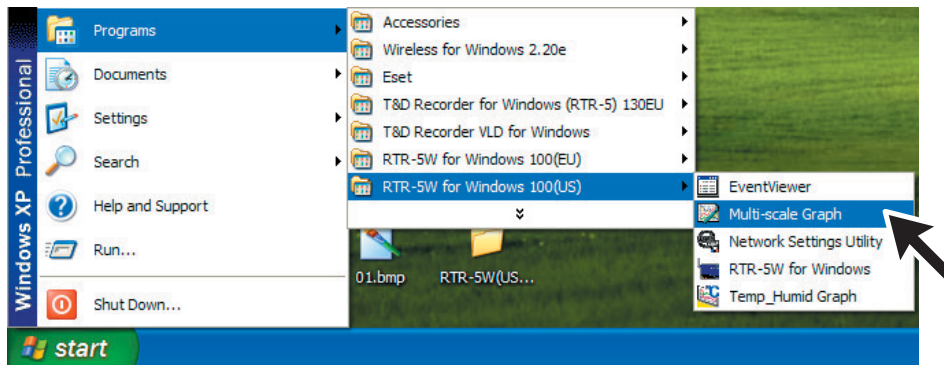
2. Click the [OK] button to finish.

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

How to operate the Multi-scale Graph

■ How to Open

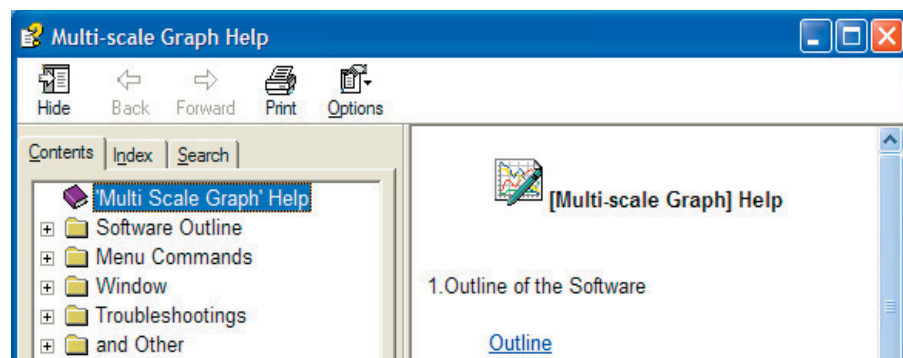
From the list of programs in the Window's Start Menu, click on "RTR-5W for Windows"- "Multi-scale Graph".



■ Using Help

For details about how to use the software, please see the explanations in the Software Help Menu.

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



[Contents]

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


[Index]

By selecting a Keyword in the Keyword list, and clicking the [Display] button at the bottom, a detailed explanation will appear.

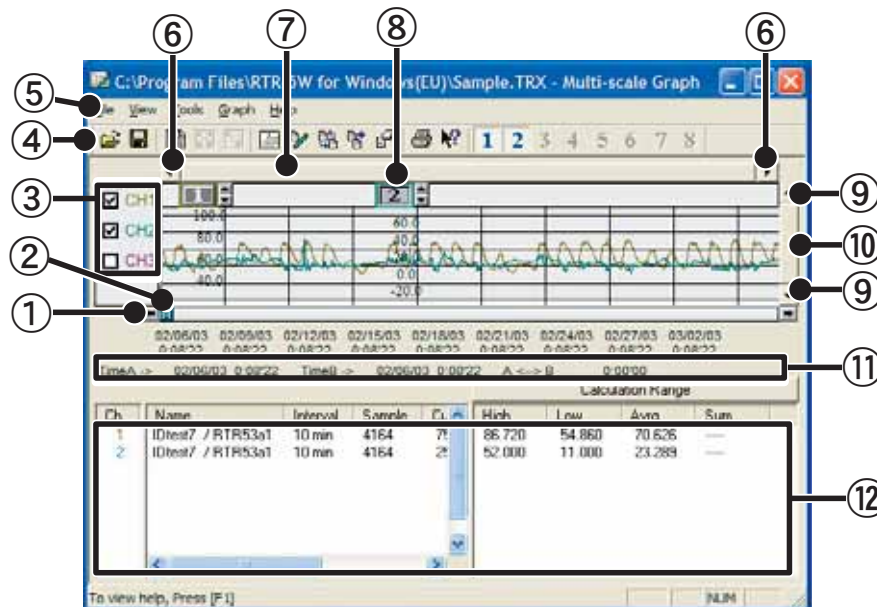
[Search]

Enter the keyword you wish to search for and click the [List Topics] button. All topics that contain the keyword will be displayed. By selecting a topic and clicking the [Display] 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  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.

■ Multi-scale Graph Display Names and Functions



① A and B Cursor Movement Buttons

By clicking the arrow buttons, you can simultaneously move the A/B cursors.

② A and B Cursor Buttons

Click and drag the A or B button to move the cursor to the left or right.

③ It is possible to hide or view the vertical scale for each channel

It is possible to hide or view the scale on the graph for each channel.

④ Toolbar

Buttons appear for frequently used commands.

⑤ Menu Bar

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. They can be used to display or make settings for the various functions for each menu.

⑥ Button for Moving Horizontal Axis

The time axis moves by clicking these arrow buttons.

⑦ Horizontal Gauge Bar

By dragging the gauge you can move left and right to the data you want to be displayed.

⑧ Vertical Axis Scale for each Channel

In the graph, the scale for each channel will be shown. By clicking the arrow at the corners of the gauge bar you can scroll up or down on the current display while maintaining the present zoom.

⑨ Button for Moving Vertical Axis

The vertical axis moves up or down by clicking these arrow buttons.

⑩ Vertical Gauge Bar

By dragging the gauge you can move up and down to the data you want to be displayed.

⑪ A and B Cursor Position Information

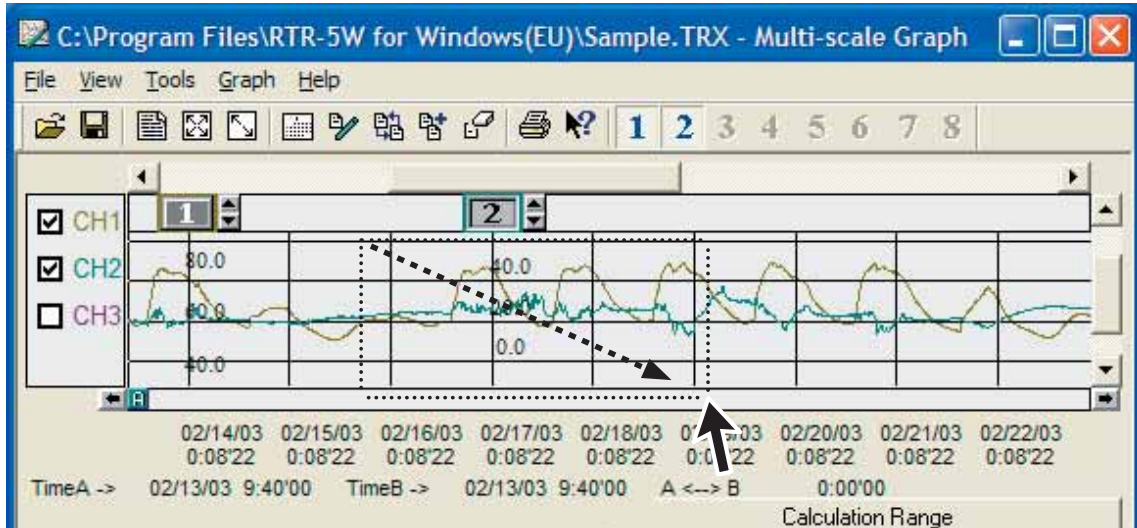
The approximate date and time for the A and B cursor positions and the time difference between the A cursor and the B cursor is displayed.

⑫ Channel Info List Display

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

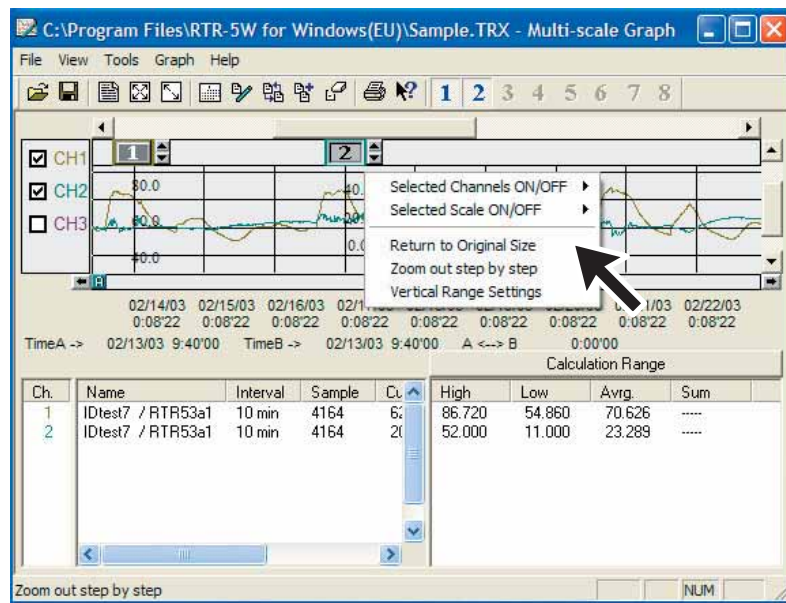
Zoom in Using the Mouse

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.

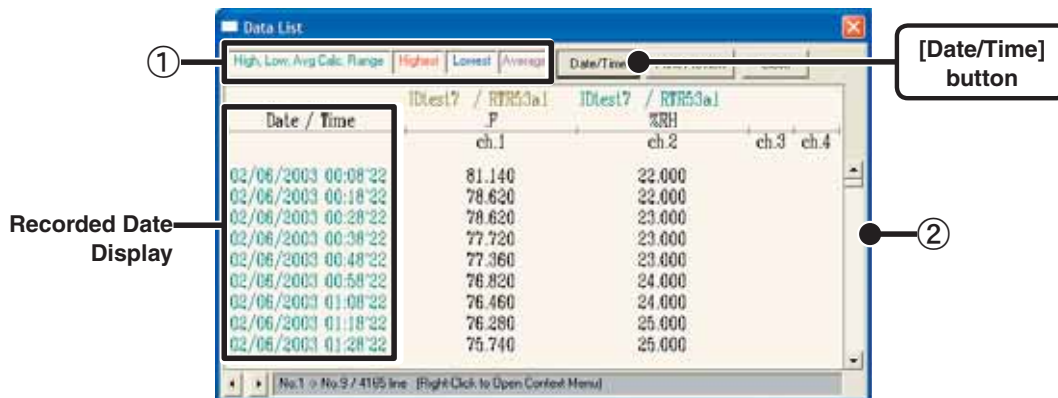


■ Data List Display Part Names and Functions

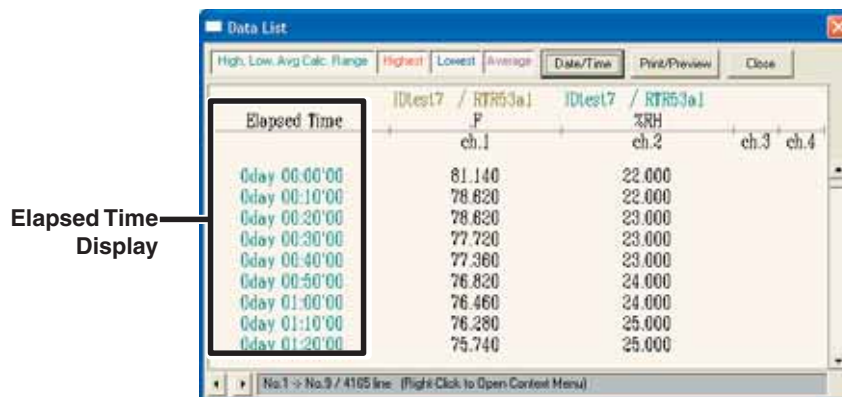
This is a list of the data that was displayed in graph form. From the [View] Menu

[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.

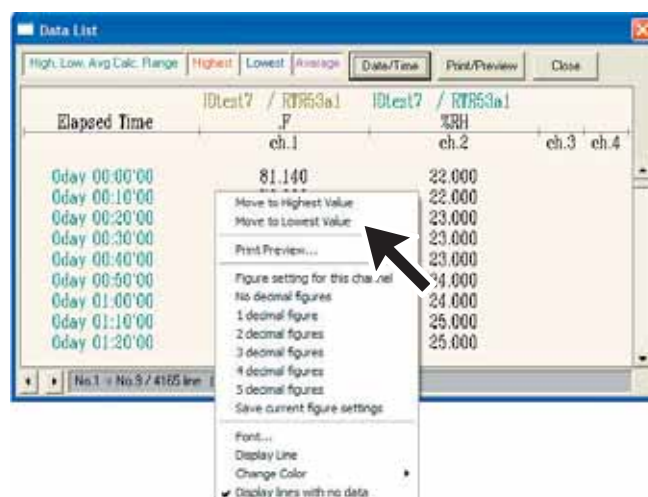


- ① The highest value is in RED, lowest is in BLUE, and the average is in PINK.
- ② Scroll Bar : By dragging it up and down you can move to the data you want.



Menu Display Using the Mouse

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



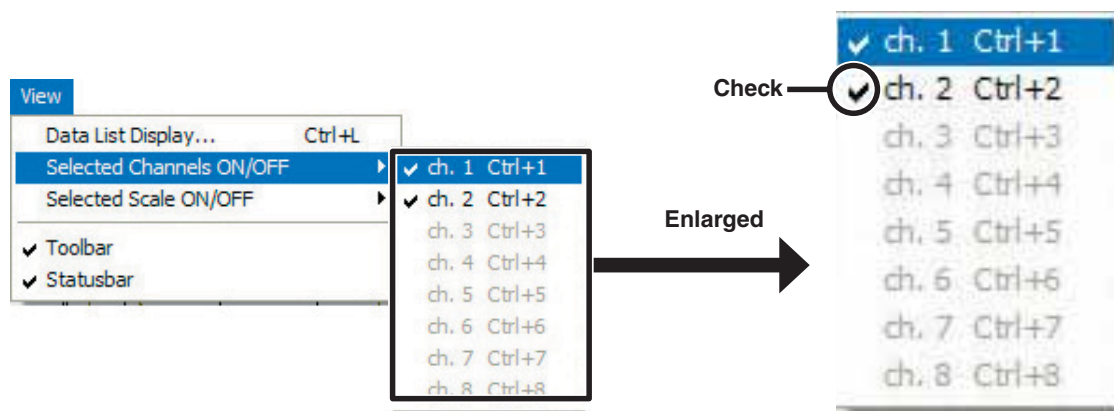
Making Changes to the Graph Display

■ Selected Channels ON / OFF : 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.*

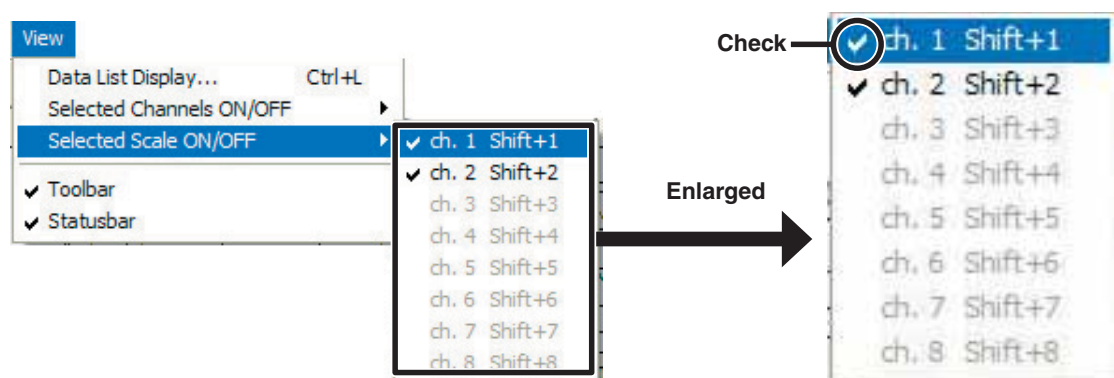


■ Scale Channels ON / OFF : From the [View] Menu

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

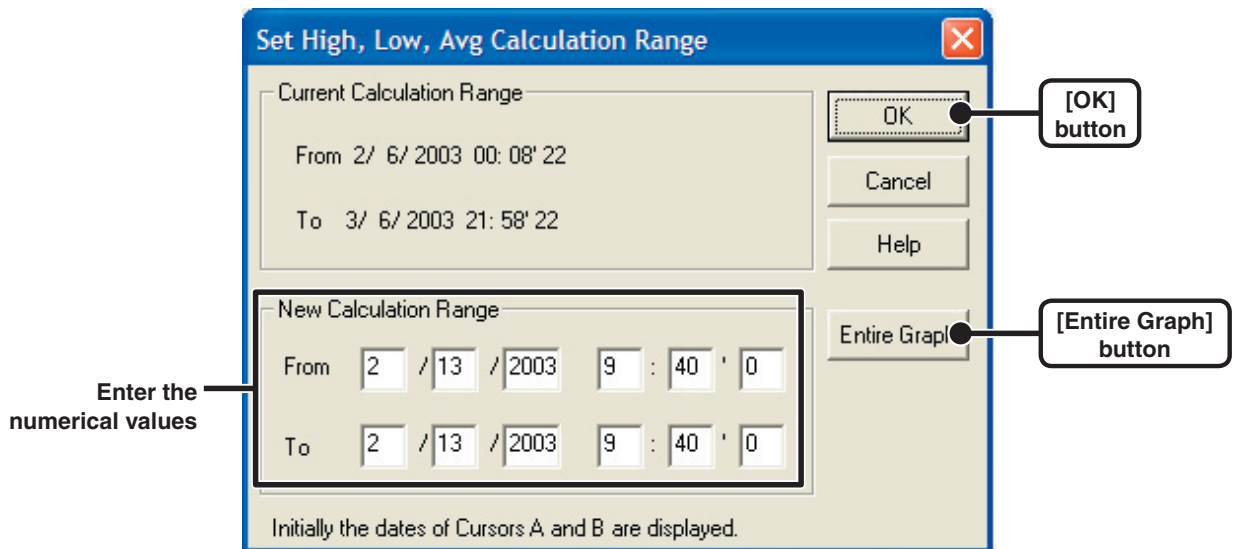
1. By moving the mouse to [Scale Channels ON / OFF], the channel numbers are displayed.
2. Click the channel number to remove or place a check mark. Only those channels with a check mark next to the number will be displayed in the Graph.

**The same operation can be done by clicking on the channel number icons in the Toolbar.*



■ Set High, Low, Average Calculation Range: From the [Tools] Menu

1. Enter a calculation range in the [New Calculation Range]



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

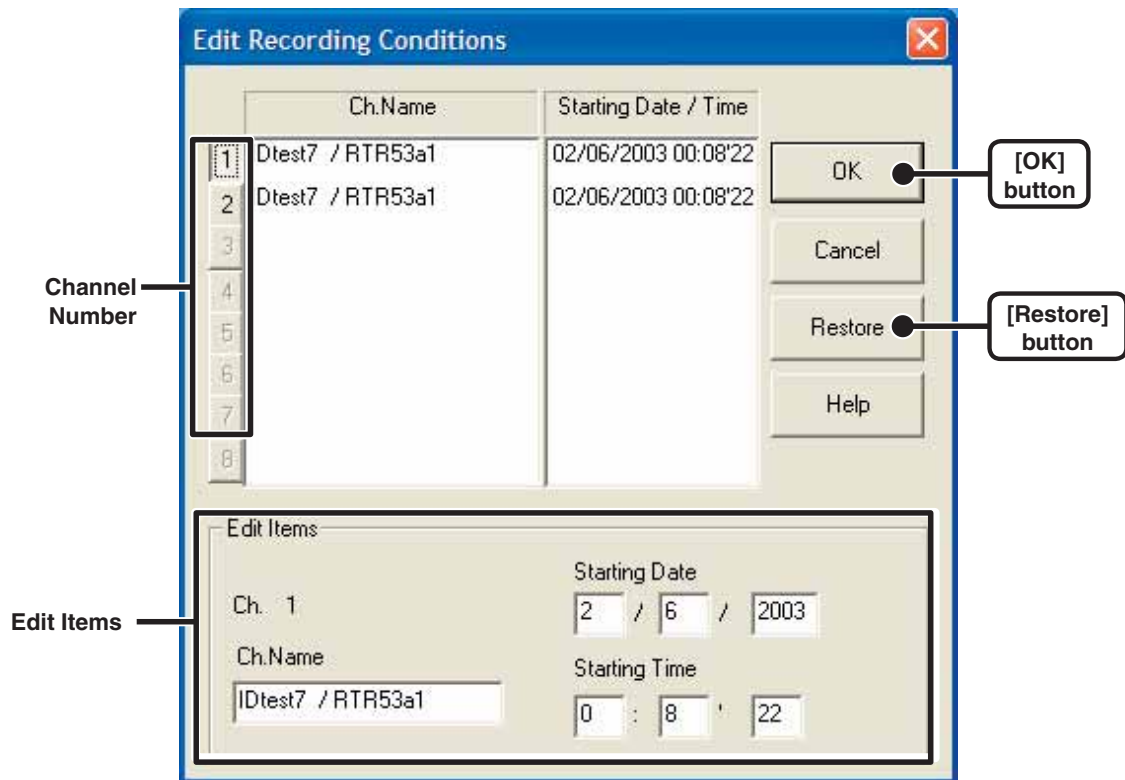
-If in the graph display, you place the A cursor at the position for the beginning of the calculation range and the B cursor at the end of the range, those dates and times will appear as the new range in the [Set High, Low, Average Calculation Range] Display when it is opened.

2. By clicking the [OK] button, the High, Low and Average will change for each channel's data list and the graph will change to display that data contained in the new range setting.

■ 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.
- Started Date/Time: The month, day, year, hour, minute and second can be changed.

2. After making changes, click the [OK] button to finish.

If you wish to continue to make changes to other channels, repeat the process as in step 1.

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

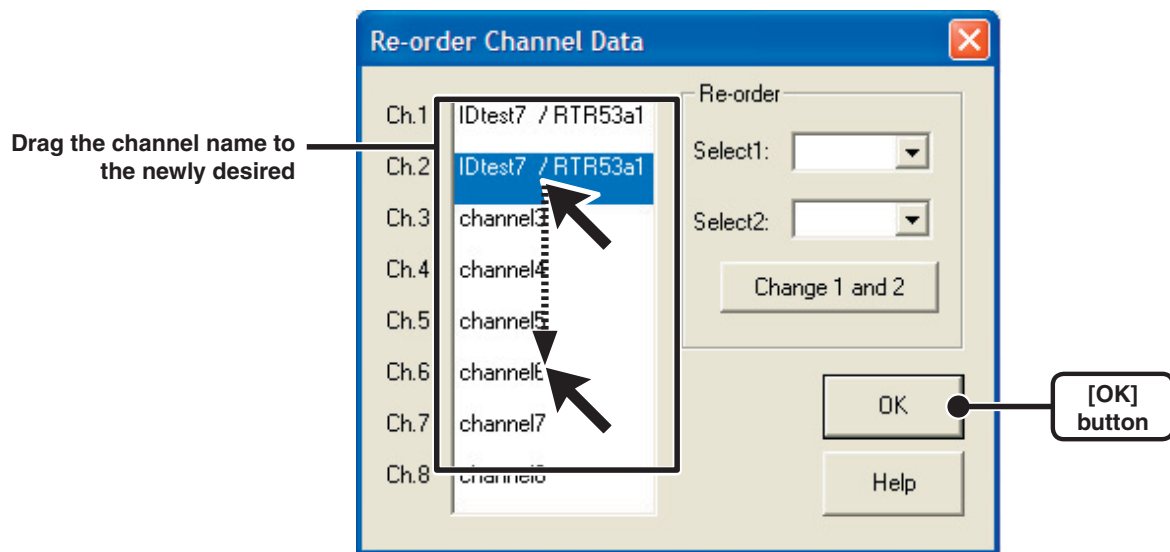
■ Re-order Channel Data: From the [Tools] Menu

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] and [Specify the Channel Numbers to be Moved].

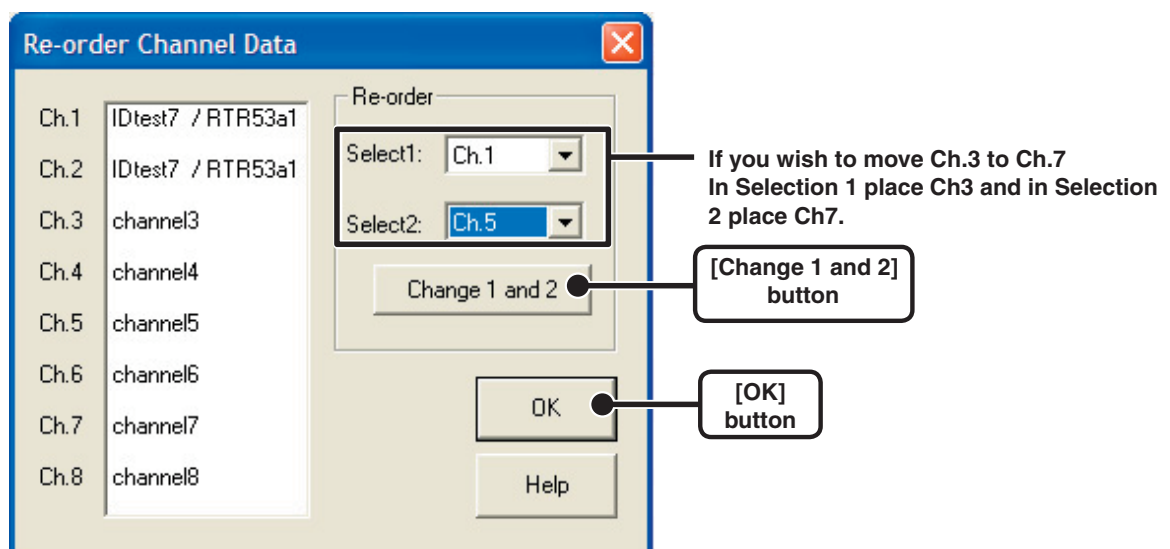
【Re-order by Dragging a Channel Number】

Drag the channel name / number you wish to move to the newly desired channel name / number position and drop it.



【Specify the Channel Numbers to be Moved】

1. Specify the channels to be moved From: (original position) To : (desired position).
2. Click the [Change 1 and 2] button to complete the re-ordering of channels.



■ Merge Channel Data: From [Tools] Menu

It is possible to merge two different pieces of data in to one piece of data.

NOTE:

The following data cannot be merged

If the total number of readings after merging exceeds 16,000 data readings.

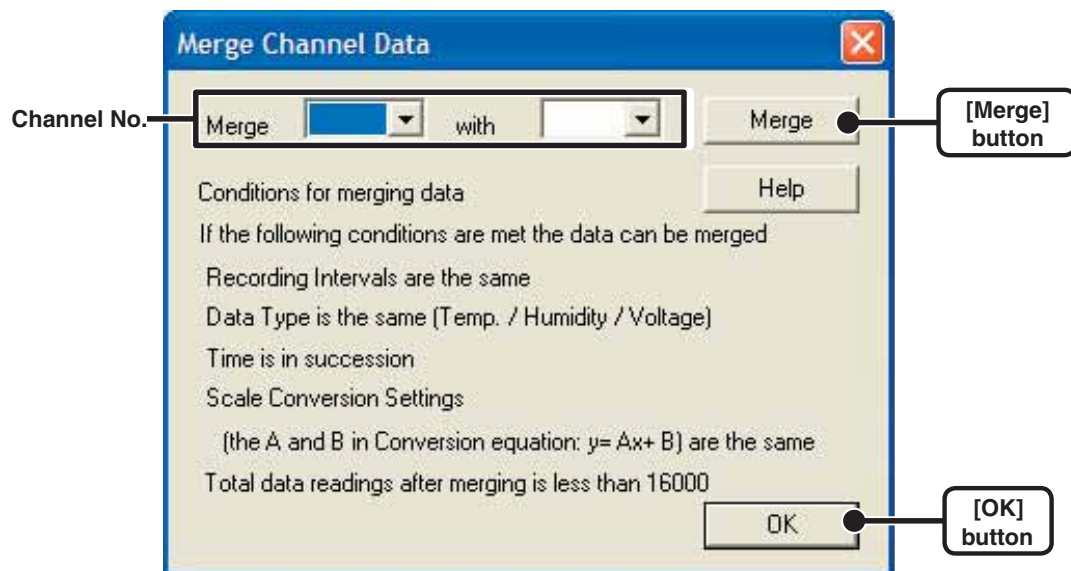
If the recording intervals are different

If the data is of different types

If the conversion equation for the scale settings are different

If the measuring times overlap (This can be adjusted by using the [Edit Recording Conditions])

1. Click the ▼ buttons to select the channels you wish to merge.



2. Click the [Merge] button to complete the merging process.

**The channel number and other conditions for the merged data will be those of the channel that was selected first.*