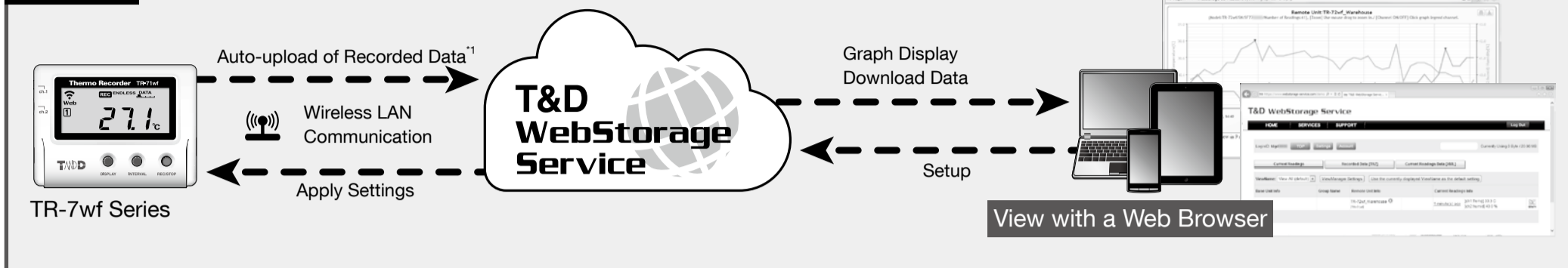
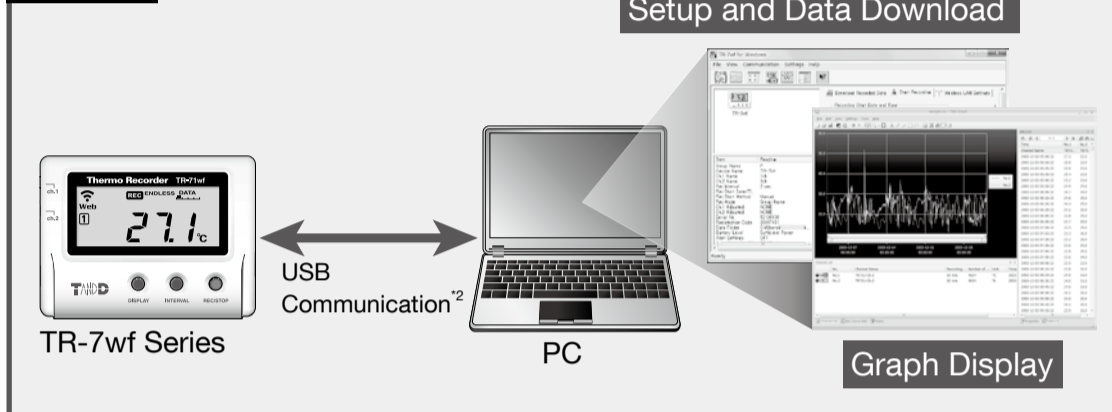


## What can TR-7wf Series devices do?

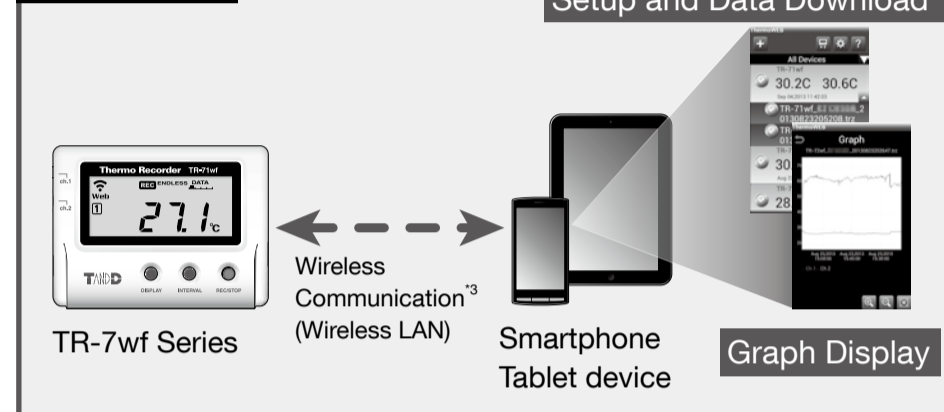
### Via Cloud



### Via USB



### Via Wireless

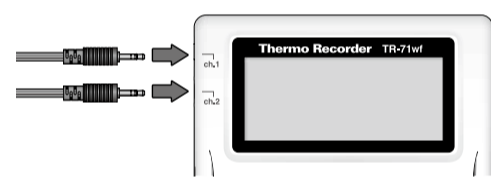


\*1: To auto upload recorded data to the T&D WebStorage Service, it is necessary to have Internet access via wireless LAN and a T&D WebStorage Service User ID.  
 \*2: A USB communication cable (sold separately) is required for connecting the TR-7wf series device to your computer.  
 \*3: A mobile device with wireless LAN capability is required for direct communication with the TR-7wf series device.

## Common Operations

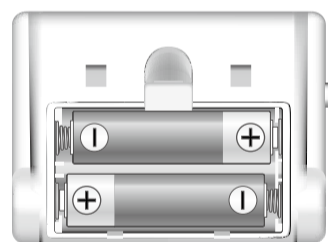
### STEP 1 Setting up the Device

1. Connect sensors to the device.



To ensure a proper connection, make sure that the sensor connector is completely inserted.

2. Remove the battery cover and insert batteries.



- \* Make sure not to mistake + / -.
- \* Always use new batteries.

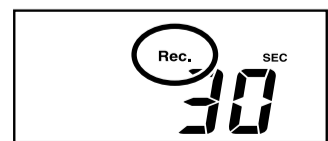
3. The measurement will be displayed on the LCD screen.

Under Normal Conditions: During Sensor Error (no sensor connected / improper connection / damaged):

### STEP 2 Starting Recording

- Upon the start of a new recording session all stored data will be deleted from the device.
- Recording Interval settings cannot be changed while a recording session is in progress. Stop recording first and then change settings.
- During recording, the power cannot be turned off.

1. Click the <INTERVAL> button to display the current recording interval.



2. Press-and-hold the <INTERVAL> button until the display flashes.

3. With each pressing of the <INTERVAL> button the recording interval time will change. When the desired interval appears, stop pressing the button.

4. Start recording by pressing and holding the <REC/STOP> button until the REC mark appears in the display.



Below are some examples of recording intervals and maximum recording times.

1 sec.	30 sec.	5 min.	15 min.	60 min.
About 2 hours	About 2 days	About 27 days	About 83 days	About 333 days

In order to stop a recording session, press and hold the <REC/STOP> button until the REC mark disappears from the display.

### Details about the LCD Display

Other than the measurement display, the following is displayed on the LCD monitor.

	Shows the status of wireless LAN connection. ON: Connected to the wireless network. (Signal strength: 1 to 3 bars) BLINKING: Unable to connect to the wireless network. OFF: Settings have not been made for the wireless LAN connection.
	Shows the status of the Internet connection. ON: Connected to the Internet BLINKING: Unable to connect to the Internet OFF: Auto-upload is set to "OFF".
	Shows the channel number of the measurement being displayed.
	This appears when direct communication with mobile devices is possible.
	This appears when the wireless LAN setup using WPS is possible.
	This appears when the device is in wireless LAN communication or USB communication.
	Shows the recording status. ON: Recording in progress BLINKING: Waiting for programmed start OFF: Recording stopped
	Shows the recording mode, which can be changed via TR-7wf for Windows or ThermoWEB. ENDLESS: Upon reaching the logging capacity of 8,000 readings, the oldest data will be overwritten and recording will continue. ONETIME: Upon reaching the logging capacity of 8,000 readings, [FULL] will appear on the LCD display and recording will automatically stop.
	The amount of recorded data in the device is shown here.
	This appears when the battery level is low. Please change the batteries as soon as you see this mark. If the batteries are not changed but remain in use, the device will enter sleep mode ([SLP] will appear on LCD) and stop all operations. If the batteries are further left unchanged, all previously recorded data will be lost.
	This appears while the auto-upload interval is displayed by using the <INTERVAL> button.
	This appears while the recording interval is displayed by using the <INTERVAL> button.

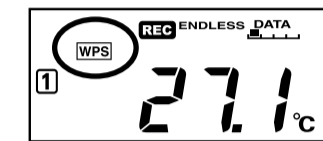
## Operations Via Cloud

### STEP 1 Making Settings

By making settings for auto-upload, it is possible to automatically upload recorded data to the online T&D WebStorage Service.

- In the auto-upload, the maximum number of readings which can be stored in T&D WebStorage Service is 80,000. When this limit is exceeded, the oldest data will be overwritten and deleted.
- Wireless LAN settings via operation of buttons on the logger can be made only when using a wireless LAN access point supporting WPS.
- If your access point does not support WPS, use the T&D application "TR-7wf for Windows" or "ThermoWEB" to make wireless LAN settings. Make sure you have your Wireless LAN SSID, Security Mode, and Security Key (Password) information.
- The time difference setting can be changed via TR-7wf for Windows or ThermoWEB. The default time difference is as follows:  
 Serial number "No.4XXXXXXX": GMT +1:00  
 Serial number "No.3XXXXXXX": GMT -8:00

1. Press-and-hold the <POWER> and <DISPLAY> buttons together until WPS appears on the LCD screen.



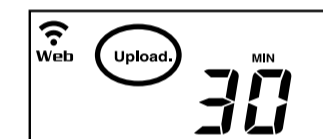
2. Set your wireless LAN access point to "WPS" mode.

For details on the wireless LAN access point, contact the manufacturer of your access point.

3. If the setup is successfully completed, the Wi-Fi mark on the LCD display will turn ON.

If Wi-Fi keeps blinking:  
 It means the device is unable to connect to the wireless network. After adjusting the distance between the device and the access point, start from step 1 again.

4. Click the <INTERVAL> button to display the current upload interval.



5. Press-and-hold the <INTERVAL> button until the display flashes.
6. With each pressing of the <INTERVAL> button the upload interval time will change. When the desired interval appears, stop pressing the button.

If you wish NOT to use the auto-upload feature, select "OFF".

Below are some examples of upload intervals and the corresponding estimated battery life.

Upload Interval	1 min.	10 min.	1 hr.	12 hrs.
Battery Life	About 10 days	About 2 months	About 1 year	About 1.5 years

\* All estimates are based on operations carried out with a new battery and are in no way a guarantee of actual battery life.  
 \* The auto-upload interval can also be changed during a recording session.

### STEP 2 Installing the Device

Install the device to the actual place it will be used.

To perform auto-upload, make sure to install the device at a place that has wireless LAN Internet access.



#### Checking Connection Status

By pressing the <REC/STOP> button, recorded data will be sent to T&D WebStorage Service. If the transmission is successful, Web will still be ON even after communication is complete and COM turns OFF.

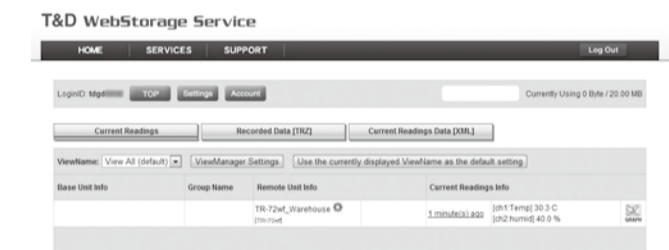
Wi-Fi is blinking: Wireless LAN connection failed. Try adjusting the position of the device or its distance from the access point.

Web is blinking: Internet connection failed. Confirm whether your access point can connect to the Internet.

### STEP 3 Checking Recorded Data

Check recorded data uploaded to the T&D WebStorage Service.

1. Access T&D WebStorage Service from the web browser on your PC or mobile device.  
 T&D WebStorage Service: <http://www.webstorage-service.com/>
2. Follow the directions as they appear to get a User ID.  
 If you already have your User ID, go to 3 below.
3. Login by entering the registered User ID and Password.
4. Clicking the [Account] button will take you to the Account Management page.
5. Select [Device Registration], and enter the serial number and registration code for the target TR-7wf Series and then click the [Register this device] button.  
 The registration code can be found on the supplied Registration Code Label.
6. At first, only the added TR-7wf Series device will appear in the [Current Readings] tab page.  
 Measurements will appear after clicking the <REC/STOP> button on the device or when data is auto-uploaded from the device.



#### If measurements are not displayed:

- \* Check the device screen to make sure REC is ON. Recorded data will not be uploaded when recording is not in progress.
- \* See "Checking Connection Status" in ④, and check if the device has a wireless LAN connection.

#### If the display of measurements is not refreshed:

We recommend making the recording interval shorter than the auto-upload interval. If the recording interval is set to longer than the upload interval, the same measurement is displayed until the next recording occurs and the new data is uploaded.

### View Data from other than a Web Browser

Recorded data which was sent to the T&D WebStorage Service can also be viewed with ThermoWEB and/or T&D Graph.

### Saving Auto-Uploaded Data

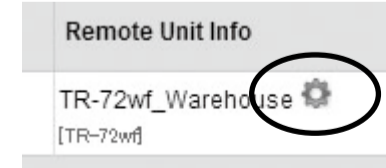
Recorded data which has been uploaded to the T&D WebStorage Service can be saved in the PC by using T&D Graph and accessing T&D WebStorage Service.

For details, please see **Tips** printed on the back of this paper.

### STEP 4 Changing the Settings

By using the T&D WebStorage Service, it is possible to change the following settings:

- Auto-upload Interval
- Warning Settings



The changes in settings will be applied when the device communicates with the T&D WebStorage Service. To apply the changes immediately, press the <REC/STOP> button on the device after settings are completed.

## Operations Via USB

It is possible to make device settings and download recorded data via our software "TR-7wf for Windows". Data downloaded can then be viewed in a graph for analysis by using our software "T&D Graph".

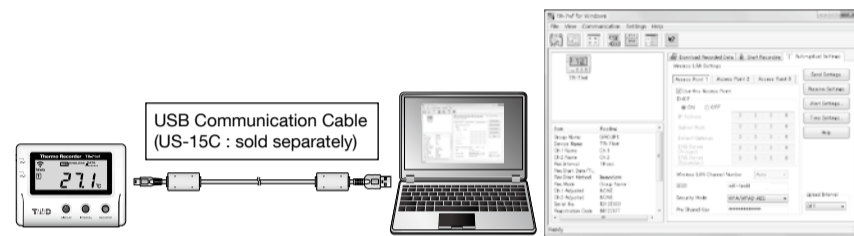
⚠ Please prepare a USB communication cable (sold separately) to connect the device to your computer.

Primary features of "TR-7wf for Windows" include :

- Start / Stop Recording Settings
- Auto-upload Interval
- Wireless LAN Settings
- Device Name and Channel Name Settings
- Downloading and Saving Recorded Data
- Warning Settings

### STEP 1 Setting Up

1. Download and install the software "TR-7wf for Windows" from <http://www.tandd.com/support/download/software/>
2. Open "TR-7wf for Windows" and connect your device via USB to the computer.



For details about operations please see the "Help" menu in the software.

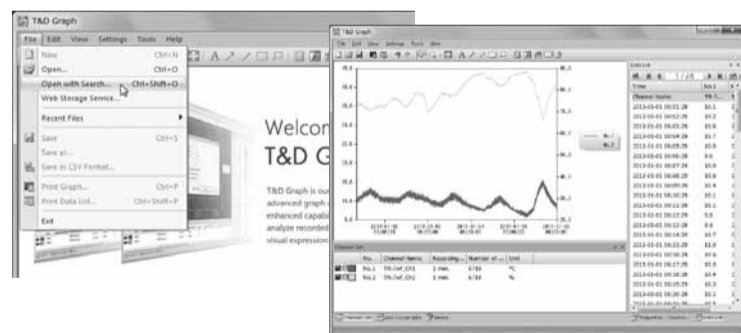
3. After the setup is complete, place the device to the desired measurement location.

### STEP 2 Downloading Recorded Data

1. Open "TR-7wf for Windows" and connect your device via USB to the computer.
2. Click on the [Download Recorded Data] tab to start the download.

### STEP 3 Viewing Recorded Data in Graph

1. Download and install the software "T&D Graph" from <http://www.tandd.com/support/download/software/>
2. Open "T&D Graph" and then access the data you wish to view.



For details about operations please see the "Help" menu in the software.

## Operations Via Wireless

It is possible to make device settings, download recorded data, and view recorded data directly from your mobile device.

To carry out direct communication with a TR-7wf series device, it is necessary to download and use our application "ThermoWEB".

⚠ Operation of buttons on the logger is required during communication.

Primary features of "ThermoWEB" include :

- Start / Stop Recording Settings
- Auto-upload Interval
- Wireless LAN Settings
- Recorded Data Graph Display
- Device Name and Channel Name Settings
- Downloading and Saving Recorded Data
- Uploading Downloaded Data
- Warning Settings

### STEP 1 Setting Up

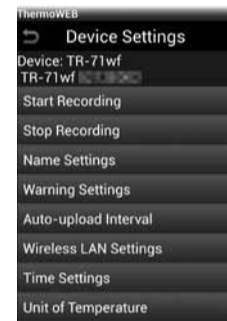
1. Install ThermoWEB in your mobile device.

From Android devices: Search for "ThermoWEB" in the Google Play Store  
From iOS devices: Search for "ThermoWEB" in the App Store



2. Open the application, and click the [Device Settings] icon and go into [Device Settings].

3. Follow the directions to communicate with the TR-7wf series device and make settings.



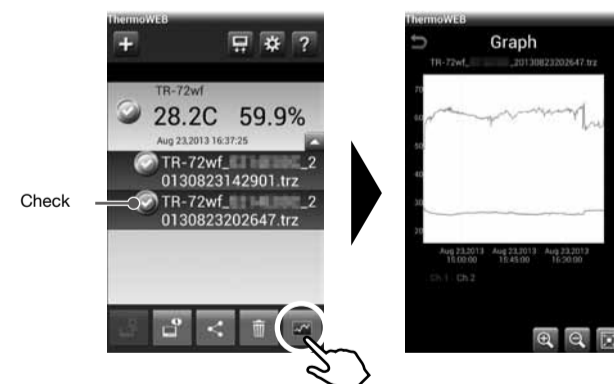
4. Place the device to the desired measurement location.

### STEP 2 Downloading Recorded Data

1. Open the application, and click the [Download Recorded Data] icon and go into [Download Recorded Data].
2. Follow the directions to communicate with the TR-7wf series device and download data.

### STEP 3 Viewing Recorded Data in Graph

1. Open the application, and place a check mark next to the data you wish to view.
2. Select [Graph] from the menu being displayed at the bottom of the screen.



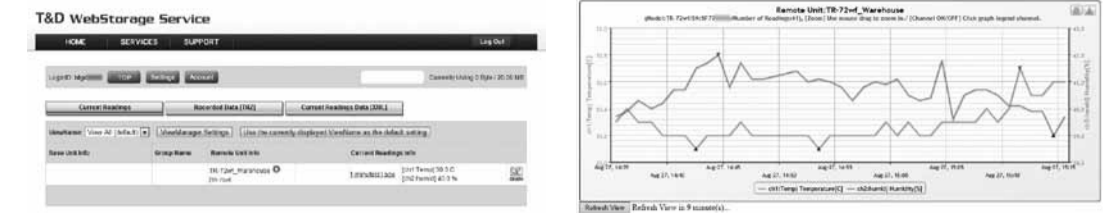
### STEP 4 Uploading Recorded Data

It is possible to send downloaded data to the T&D WebStorage Service or to a designated e-mail address.

1. Open the application, and place a check mark next to the data you wish to send.
2. Select [Email] or [WebStorage] from the menu being displayed at the bottom of the screen.
3. Select the destination for the data.

## Tips T&D WebStorage Service

T&D WebStorage Service is a free web-based storage service provided by T&D Corporation. By uploading recorded data to "T&D WebStorage Service", it is possible to access your important data from anywhere in the world at any time you wish.



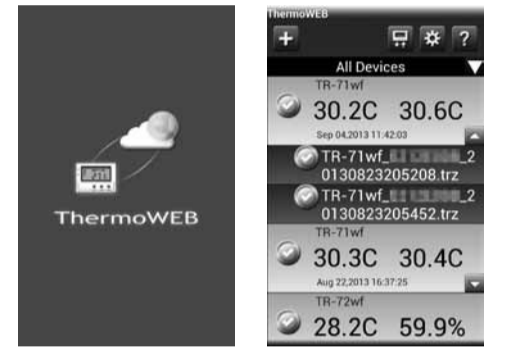
T&D WebStorage Service : <http://www.webstorage-service.com/>

## Tips ThermoWEB

ThermoWEB enables the use of mobile devices for making device settings to and viewing data recorded from TR-7wf Series data loggers.

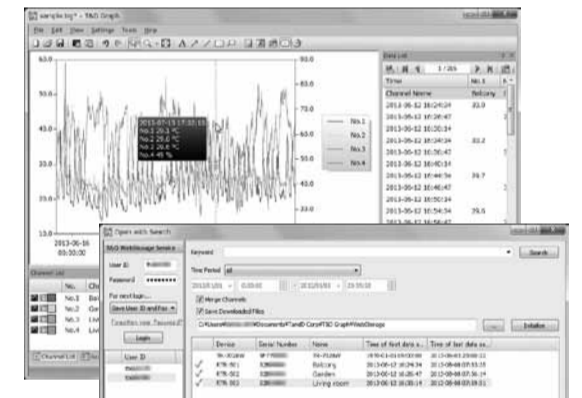
When used in conjunction with T&D WebStorage Service, convenient functions can be carried out via the Internet such as changing settings in the TR-7wf Series and viewing data uploaded to the T&D WebStorage Service.

The "ThermoWEB" app is available for download and install from the Google Play Store or App Store.



## Tips T&D Graph

T&D Graph is a software program which enables the viewing of recorded data in graph form, no matter whether the data is stored on a local computer or at T&D WebStorage Service. Even if the data you wish to view is divided into multiple files, it is possible to merge them into one graph by specifying the device name and/or time period. It is also possible to save the graph and data info as displayed in T&D Graph.



Download from : <http://www.tandd.com/support/download/software/>

## Tips Device Button Operations

For all operations, to "press-and-hold" means to hold the button down for about two seconds.

Power ON/OFF	Press-and-hold the <POWER> button.
Start/Stop Recording	Press-and-hold the <REC/STOP> button.
Recording Interval (Rec.) / Upload Interval (Upload)	Pressing the <INTERVAL> button will cycle the interval selection between the recording interval (Rec.) and the upload interval (Upload). To change the interval time, press-and-hold the <INTERVAL> button for two seconds or more while the selected interval (Rec. or Upload) is displayed. Note, however, that it is not possible to make any changes to the recording interval settings during recording (while REC appears).
Communication with T&D WebStorage Service	Press the <REC/STOP> button to send data to or apply settings in T&D WebStorage Service.
Channel on Display	Press the <DISPLAY> button to switch the display.
Wireless LAN Settings using WPS	Press-and-hold the <POWER> button and the <DISPLAY> button together.
Communication with Mobile Devices	Press-and-hold the <INTERVAL> button and the <DISPLAY> button together.

## Troubleshooting and Detailed Info

Support information is available on the T&D Website. Please access the following URL:

<http://www.tandd.com/support/>