Illuminance UV Recorder WL RTR-574 / RTR-574-S

Introduction Manual

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

Illuminance UV Recorder WL RTR-574 is a Data Logger, with built-in wireless communication capability, designed to measure and record Illuminance, UV Intensity, Temperature and Humidity at a set interval.

RTR-574 Package Contents

- Illuminance UV Recorder WL RTR-574
- Battery (AA Alkaline)
- Communication Cable (US-15C)
- Battery Cover
- USB Communication Cable
- Sensor Head Cover
- Operating Manual
- Introductory Manual
- Warranty Card
- Battery Terminals
- MIN and MAX Mark

RTR-574-S Package Contents

- Illuminance UV Recorder WL RTR-574
- Battery (AA Alkaline)
- Temperature Sensor (THA-3001/3151)
- Communication Cable (US-15C)
- Battery Cover
- Sensor Head Cover
- Operating Manual
- Introductory Manual
- Warranty Card
- Battery Terminals
- MIN and MAX Mark

As a Remote Unit, RTR-574 requires a Base Unit to carry out wireless communication. (Compatible Base Units: RTR-500, RTR-500NW, RTR-500AW, RTR-500DC, RTR-500MBS-A)

The RTR-574 can be operated with "RTR-500 for Windows" version 1.1 or later.

When you use "RTR-500 for Windows", please check the software version by selecting "Version Info" in the [Help] Menu. The latest version of the software can be downloaded from our T&D Web Site.

Before using an RTR-574, it is necessary to install the USB device driver that comes with the Base Unit.

Appearance Diagram and Part Names

Reading the LCD Display

- MIN Mark: The recording status is shown here.
- MAX Mark: The number of recorded readings is shown.
- LCD: The number of recorded readings is shown in a scale form.
- Clock: Upon reaching storage capacity of 8,000 readings, the oldest data is overwritten and recording continues.
- Temperature Sensor: The unit is connected to a PC with the USB cable.
- Recording Mode: Upon reaching storage capacity of 8,000 readings, recording will automatically stop.
- Battery Life: When it is time for the battery to be replaced, this mark will appear on the LCD.
- Sensor Head: The current readings are shown here. Depending on the unit, different colored messages may also be displayed.

Features

- BLINKING: The Unit is in Wireless/USB/Serial communication.
- ON: Time to change the battery.
- CAUTION: The Unit is out of range. Check the communication cable and try again.
- REC Mark: The recording status is shown here.
- Warning Mark: Do not connect the RTR-501 sensor to any data logger other than those specified by T&D Corporation.

Precautions and Instructions

- Do not touch the sensor itself. There may be a risk of electric shock.
- Do not cut or process the sensor cables. It may cause damage including malfunction.
- Do not use this sensor on a human body. Using the "Adjustment Function" in the software supplied with the Base Unit, it is possible to re-calibrate the sensor. The sensor is already calibrated into the sensor itself. Therefore, when a sensor is replaced, it is necessary to re-make any desired adjustment settings into the new sensor. This is not a feature of this Manual.
- Do not insert your fingers or any foreign objects into the sensor or USB connection port. This may cause damage including malfunction.
- Do not hold or move the Unit with a wet hand. This may cause damage including malfunction.
- Do not use this sensor on a humid environment. This may cause the inside of the Unit to become overheated and may cause fire, deformation, and/or electrocution, fire and/or other adverse effects to the device and/or your computer.
- If water or a foreign object enters into the Unit, immediately turn OFF the power, remove batteries, and stop using. If water or a foreign object enters into the Unit, turn OFF the power, remove batteries, and stop using. Continued use may cause electrocution, fire and/or other adverse effects to the device and/or your computer.

Switching to the Graph Mode

- Click the "Graph" button to switch to the graph mode.
- Click the "Graph" button again to return to the measurement mode.

Using the "Adjustment Function"

- Using the "Adjustment Function" in the software supplied with the Base Unit, it is possible to re-calibrate the sensor. The sensor is already calibrated into the sensor itself. Therefore, when a sensor is replaced, it is necessary to re-make any desired adjustment settings into the new sensor. This is not a feature of this Manual.

Sensitivity

- The sensitivity of the sensor can be adjusted from a minimum of 0 to a maximum of 100.
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Safety Precautions and Instructions

- Please carefully follow the necessary safety measures when using our product.

Explanation of Warning Symbols

- Warnings are actions that possibly cause minor inconvenience or discomfort, such as an increase in power consumption of the sensor.
- This symbol indicates an important action that may cause damage or injury.

Explanation of Picture Symbols

- These symbols are actions that possibly cause severe damage to the Unit or others. This symbol indicates actions that may cause severe personal injury or property damage.
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- This symbol indicates an action that might take physical injury or damage.

Gadgets

- This gadget is an action that may cause electrocution, fire and/or other adverse effects to the device and/or your computer.
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Important Notice

- This product complies with the following standards:

- FCC: The device complies with Part 15 of the Federal Communications Commission (FCC) rules. Operation is subject to the following conditions: (1) This device may not cause interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.

- IC: This device complies with Industry Canada regulations ICES-003. This device complies with RSS-102 of Industry Canada (IC) rules.

- CE: This device complies with the requirements of the European Union’s (EU’s) Electromagnetic Compatibility (EMC) directive (2014/30/EU).

Important Notice

- These products cannot be used in countries where these products have been approved for use, according to the regulations of T&D Corporation.

Cautions about using the Illuminance UV Sensors

- CAUTION: Use the Unit in an environment within the operational range.
- CAUTION: Do not connect the RTR-501 sensor to any data logger other than those specified by T&D Corporation.

Notices about this Manual

- Due to the accuracy of the product, the manufacturer cannot provide any guarantees for the recalibration of this product. With this product, the measurement error is automatically corrected.

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- Do not use the Unit in an environment subject to any brouillage radioélectrique reçu, even if the Unit is in range.

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- CAUTION: Use the Unit in an environment within the operational range.


Getting the RTR-574 (Remote Unit) Ready to Use

1. Install the Battery.
   - Remove the battery cover and insert the battery, making sure that the + and - are in the correct direction.
   - Be sure to completely close the cover.

2. Connect the included Sensors.
   - The sensor jacks are common for both sensors. The Temperature, Humidity Sensor and the Illuminance/UV Sensor can be connected to either jack.

3. Turn ON the Power.
   - Press the POWER button until the LCD display appears.

4. Register the Remote Unit by using the software supplied with the Base Unit.
   - When the direction appears in the software, connect the Unit to the computer. For details about the settings and functions of the software, please see the [Help] Menu in that software.

Battery Replacement Mark and Message

When it is time for the battery to be replaced, a battery life warning mark will appear. While this mark is on display, wireless communication may be necessary to follow directions to install the USB Device Driver.

If upon USB connection, the [New Hardware Detection Wizard] opens, it is necessary to follow directions to install the USB Device Driver.

If you have not installed the Software supplied with the Base Unit, please close the Wizard Window and disconnect the USB cable from your PC.

- For details see the Introductory Manual that came with your Base Unit.

- If the Unit is left without a battery for some time, all data may be lost, so please make sure to install a new battery.

- If you have not installed the Software supplied with the Base Unit, please close the Wizard Window and disconnect the USB cable from your PC.

- If there is ample battery power remaining in the Unit, even if the power has been turned off, the recorded data will be saved.

DISPLAY Button

Use this button to change the LCD Display Pattern.

When Recording Mode has been set to "ONETIME" or "SLP" will automatically shut off. All of the recorded data will stop in order to protect recorded data until this mark is on display.

Options

- **TR-1C30**: Sensor Extension Cable
  - Temperature: -25 to 60°C
  - Cable Length: 3 m
  - Up to 3 cables can be connected to one sensor

- **TR-6C10**: Serial Communication Cable
  - For communication between RTR-500DC and RTR-574
  - Cable Length: 1 m

Relative Spectral Response Characteristics Graph (Illuminance)

- Relative Photo Sensitivity
  - Units of: %T (%: Transmission)

- Relative Spectral Response Characteristics Graph (UV)
  - Units of: %

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**Specifications**

- **Product**: RTR-574
  - **Dimensions**: 72 x 42 x 24 mm
  - **Weight**: Approx. 45 g
  - **Power Source**: 3 x AA batteries (not included)

- **Communication**
  - **Frequency Range**: 902 to 928 MHz
  - **RF Power**: 7 mW
  - **Protocol**: FCC Part 15, Section 247 / IC RSS-210

- **Recording Interval**
  - Select from 15 choices: 1, 2, 5, 10, 15, 20, 30 sec. or 1, 2, 5, 10, 15, 20, 30, 60 min.

- **Measurement Range**
  - Illuminance: 0 lx to 130 klx
  - Cumulative amount of UV Light: mW/cm², W/cm²

- **Resolution**
  - Illuminance: 0.01 lx
  - Cumulative amount of UV Light: 0.1 mW/cm²

- **Accuracy**
  - Illuminance: ±7 % at 25 °C, 50 %RH
  - Cumulative amount of UV Light: ±10 %

- **Specifications**
  - **Temperature Durability**: -25 to 60 °C
  - **Humidity**: 90 %RH or less (no condensation)
  - **USB Communication**: Frequency range: 902 to 928 MHz, RF Power: 7 mW, Communication protocol: FCC Part 15, Section 247, IC RSS-210
  - **TR-07K2**: Wall Attachment
  - **TR-1C30**: Sensor Extension Cable
  - **THA-3151**: Thermistor Polymer Resistance Thermistor (High-Precision Type)
  - **SHA-3151**: Thermistor Polymer Resistance Thermistor

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**Other Messages**

- **FULL (Storage Capacity FULL)**
  - When Recording Mode has been set to "ONE TIME" and the Unit reaches its storage capacity of 8000 readings, recording will automatically stop and in the LCD the current measurement and the word "FULL" will alternately appear.

- **Sensor Unconnected**
  - This will be displayed when a sensor has not been connected or the wire has been broken.
  - Measurement and recording will continue but battery power will be consumed.
  - If after re-connecting the sensor and measurements can still not be displayed, it is very possible that the sensor or the Unit are defective or have been damaged.

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**User Instructions**

- **Displaying the Current Measurement and Word "FULL"**
  - When Recording Mode has been set to "ONETIME" or "SLP" will automatically shut off. All of the recorded data will stop in order to protect recorded data until this mark is on display.

- **Changing the Recording Interval**
  - With each pressing of the button the measurement items will be shown alternately in the following order for a Fixed Display:
    - Illuminance, UV Intensity (mW/cm²), Temperature, Humidity (%), Cumulative Illuminance (lxh, mlxh), Cumulative amount of UV Light (mlxh, W/cm²)
  - The button will be displayed, stop pressing the button.

- **Alternate Display**
  - The LCD display shows all or selected multiple measurement items in turn.
  - Make settings for the measurement items to be displayed via the software supplied with your Base Unit.

- **Fixed Display**
  - The LCD display shows one measurement item specified by pressing the DISPLAY button.

- **Checking the Recording Interval**
  - By holding the INTERVAL button down, the currently set recording interval will appear on the LCD display.
  - If no operation is carried out after the recording interval has been displayed, the current measurement readings will return to the LCD display.

- **Changing the Recording Interval**
  - With each pressing of the button while the recording interval is on display, the interval time will change as follows:
    - 1, 2, 5, 10, 15, and 20 seconds / 1, 2, 5, 10, 15, 20, 30, and 60 minutes
      - Changes can only be made when recording has stopped.

- **REC/STOP Button**
  - Use this button to Start and Stop Recording.
  - By starting a new recording session, all data currently saved in the Unit will be erased.

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**Specifications**

- **Temperature Sensing Range**
  - RTR-574: -25 to 60 °C
  - RTR-574-S: -10 to 60 °C, 50 °C or less (no condensation)

- **Humidity Sensing Range**
  - RTR-574: 10 to 95 %RH
  - RTR-574-S: 30 to 95 %RH (≤ 90 °C)

- **Communication Range**
  - RTR-574: 10 m (Line of Sight)
  - RTR-574-S: 3 m (Line of Sight)

- **Transmission Rate**
  - RTR-574: 10 kbps
  - RTR-574-S: 2 kbps

- **Battery**
  - RTR-574: Approx. 6 months
  - RTR-574-S: Approx. 12 months

- **Dimensions**
  - RTR-574: 72 x 42 x 24 mm
  - RTR-574-S: 49 x 59 x 24 mm

- **Weight**
  - RTR-574: Approx. 45 g
  - RTR-574-S: Approx. 41 g

- **Operating Temperature**
  - RTR-574: -10 to 60 °C, Humidity: 90 %RH or less (no condensation)
  - RTR-574-S: -25 to 70 °C, 90 %RH or less (no condensation)

- **Humidity Sensor**
  - Sensitivity: ±0.1 %RH

- **Others**
  - The specifications listed above are subject to change without notice.

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**User Instructions**

- **Displaying the Current Measurement and Word "FULL"**
  - When Recording Mode has been set to "ONETIME" or "SLP" will automatically shut off. All of the recorded data will stop in order to protect recorded data until this mark is on display.

- **Changing the Recording Interval**
  - By holding the INTERVAL button down, the currently set recording interval will appear on the LCD display.
  - If no operation is carried out after the recording interval has been displayed, the current measurement readings will return to the LCD display.

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  - With each pressing of the button while the recording interval is on display, the interval time will change as follows:
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