



Thermo Recorder log-EZ RTR-322



Introductory Manual

Thank you for purchasing our product. Carefully read this Introductory Manual before using this product.

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Safety Precautions and Instructions

The following items should be strictly obeyed for the safe usage of this product, and for protecting yourself and other people from bodily harm and/or damage to property. Before using this product, please carefully read, understand and follow the safety rules and precautions outlined below.

Explanation of Warning Symbols

	Danger	These entries are actions that absolutely under no circumstance should be taken. The taking of such an action may cause serious personal physical damage or death.
	Caution	These entries are actions that if taken may lead to physical injury or damage to persons or things.

Explanation of Picture Symbols

	Denotes an important warning or caution.
	Denotes a forbidden action.
	Denotes an action that must be taken.

Cautions about using "log-EZ" (RTR-322)

- Danger**
- Do not take apart, repair or modify the Unit. It may cause electrocution or damage. Ask the shop where you purchased the products or T&D Corporation to carry out any repairs.
- If any smoke, strange smells or sounds are emitted from the Unit, immediate remove the battery and stop using. Continued use may cause fire, electrocution or damage.
- This unit is not water resistant. If water or a foreign object enters the case, immediately remove the battery and stop using it.
- Do not use any other batteries than those that are specified in this Manual. It may cause a fire or malfunction.
- Do not use and store the Unit in areas near fire or exposed to excessive heat.
- If water or a foreign object enters the case, immediately cease using it.
- Swallowing batteries is extremely dangerous. Store the Unit and batteries out of the reach of children.
- The "log-EZ" is a device to measure temperature and humidity. Do not use it for any other purpose than to measure temperature and humidity.

- Caution**
- This Unit has been designed for private or industrial use only. It is not for use in situations where strict precautions are necessary such as in connection with medical equipment, where directly or indirectly.
- Do not drop or expose the Unit to a strong impact. It may cause damage or malfunction.
- Battery terminals may provide insufficient contact due to age or vibration. This may lead to data loss.
- Battery life varies depending upon the type of battery, the measuring environment, the frequency of communication, the ambient temperature, and the battery performance.
- Please make sure to use the latest version of Software. The latest version can be downloaded free of charge from our T&D Website.
- Contact with oil may cause cracks to appear in the casing of the Unit. When using the Unit in environments where such oils are present, please insure that it is protected from contact through use of a polyethylene bag or other means.
- If the Unit is not to be used for a long period of time, for safety reasons please remove the battery. If left in the Unit, the battery may leak and lead to malfunctioning.

Cautions about using the "Dongle" (RTR-300)

- Danger**
- Do not take apart, repair, or modify. It may cause electrocution or damage. Ask the place of purchase or T&D Corporation to carry out any repairs.
- Do not store, leave, or use in any places subject to high temperatures such as direct sunlight or near heating equipment, or to extremely low temperatures.
- Make sure not to get it wet. If it does get wet, immediately stop using. Do not use or store in humid places such as a bathroom.
- Do not use in or near fire, nor directly put into cooking equipment such as a microwave oven or a high pressure cooker.
- Caution**
- This is a precision piece of equipment. Do not expose to strong impact or throw it.
- Before touching the "dongle" to install or remove, please first touch metal around you (steel desk, door knob) to clear static electricity.
- Set and store out of the reach of infants.
- If and when a child is to use the product, make sure they are given proper instructions on how to use it.
- Do not touch with wet hands.
- Do not connect to a PC using a USB hub.
- This product is not for saving data.

Important Notice

Wireless products cannot be used in countries other than where those products have been approved for use, according to that country's wireless regulations.

T&D Corporation shall in no manner whatsoever take responsibility for the usage of these products, nor be liable in any manner for legal consequences stemming from the usage of these wireless products in unapproved areas.

Compliance Information

CE Statement

This device complies with technical specifications required under EN 301 489 (with battery and AC Adaptor), EN 300-440, and EN 60950-1.

Compliance Information

FCC Statement

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

Caution: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note about Antenna Usage: This device has been designed to operate with the supplied antenna only. Use of any other antenna is strictly prohibited.

IC Statement

This device complies with RSS-210 of the Industry Canada (IC). Operation is subject to the following two conditions: (1) This device may not cause harmful interference; and (2) This device must accept any interference received, including interference that may cause undesired operation.

Ce dispositif est conforme à la norme RSS 210 d'Industrie Canada.

L'utilisation de ce dispositif est autorisée seulement aux conditions suivantes : (1) il ne doit pas produire de brouillage et (2) l'utilisateur du dispositif doit être prêt à accepter tout brouillage radioélectrique reçu, même si ce brouillage est susceptible de compromettre le fonctionnement du dispositif.

Specifications

"log-EZ" RTR-322	
Number of Channels	2 ch (Temperature / Humidity)
Measurement Items	Temperature Humidity
Measurement Range	0 to 50°C 15 to 90%RH
Display Resolution	0.1°C 1%
Accuracy	±0.5°C (0 to 50°C) ±5%RH (At 25°C 50%RH)
LCD Refresh Interval	4 sec.
Recording Interval	10 min. (Fixed)
Logging Capacity *1	1,440 data sets (One data set consists of readings for temperature and humidity.)
Operation Mode	Registration Mode
	Recording Mode
After inserting battery: 5 min. (For First Remote Unit Registration) / 2 min. (For Battery Replacement)	
Overwrite the oldest data when capacity is full	
LCD Display Items	Measurement and Recording Status / Amount of Recorded Data / Communication Status / Recording Mode / Battery Life Warning / Measurements (Temperature and Humidity: alternating display) / Unit of Measurement
Communication Method	Wireless Communication (internal antenna) between "log-EZ" (RTR-322) and "Dongle" (RTR-300)
Dimensions	Tubular Shape: Dia 36mm x L 85mm
Weight	About 62g (including AA Alkaline Battery)
Power	AA Alkaline Battery x 1
Battery Life	About 6 months *2
Radio Standard Specifications	FCC Part15 Section247 / IC RSS-210 / ETSI EN 300 440-2 (Frequency Range: 2433 to 2482MHz) *3
Wireless Communication Range	About 50 meters [160ft] (if unobstructed and direct)
Operating Environment	Temperature: 0 to 50°C *4 / Humidity: 90%RH or less (without condensation)
log-EZ for Windows	
Compatible OS *5	Microsoft® Windows® 10 32bit / 64bit Microsoft® Windows® 8 32bit / 64bit Microsoft® Windows® 7 32bit / 64bit Microsoft® Windows Vista® (SP1 or later) 32bit
Display Languages *6	English
Other	The Microsoft .NET Framework 3.5 (SP1) is required.
Wireless Dongle RTR-300	
Dimensions	L79.5 x W19.5 x D9.4 (mm)
Weight	11g
Power	USB Bus Power (5V)
Wireless Specifications	FCC Part15 Section247 / IC RSS-210 / ETSI EN 300 440-2 (Frequency Range: 2433 to 2482MHz) *3
Wireless Communication Range	About 50 meters [160ft] (if unobstructed and direct)
Operating Environment	Temperature: 0 to 50°C / Humidity: 90%RH or less (without condensation)
Interface	USB

*1. Logging Capacity is the amount of data which can be logged in the unit; when the capacity is full, the oldest data is overwritten and recording continues. In order to store data continually, a PC is needed to receive data.

*2. Battery life varies depending upon measuring environment, frequency of communication, and battery performance. (Example: if used at an interval of 1 min. to collect current readings, battery life expectancy is about 1.5 months.)

*3. This Unit is not for use with a wireless LAN.

*4. In environments where the temperature exceeds or falls below this range, there may be occasions when the recorded data is lost.

*5. For installation, it is necessary to have Administrator (Computer Administrator) rights.

*6. We recommend using an operating system in the same language as the display language. Operation in different languages is not guaranteed.

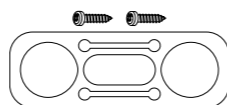
The specifications listed above are subject to change without notice.

Package Contents

The following items are included in the package:



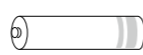
"log-EZ"
Remote Unit (RTR-322)



Stand x 1 / Screw x 2



Wireless Dongle
Base Unit (RTR-300)



AA Alkaline
Battery x 1



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- Software is not included in the package. Please visit our T&D Website and download the software from the Support Page.
- The Wireless Dongle is only supplied in the Wireless Dongle Set.
- From hereafter in this manual, the "Wireless Dongle" will be referred to as "Dongle".

How to Use the Stand

Slightly bend the stand into a curved shape, and insert the "log-EZ" unit through the round holes of the stand so that the stand holds the "log-EZ". It can then be placed on a flat surface such as a table or desk, or by using the supplied screws hung on a wall.



Outline

The "log-EZ" is a handy Data Logger designed to measure and record temperature and humidity data, which can then be viewed via your computer. It is possible to manage a multiple number of "log-EZ" units with one computer. Convenient wireless communication makes data transmission easy and simple with no need for cables.



Usage Figure

Basic Functions

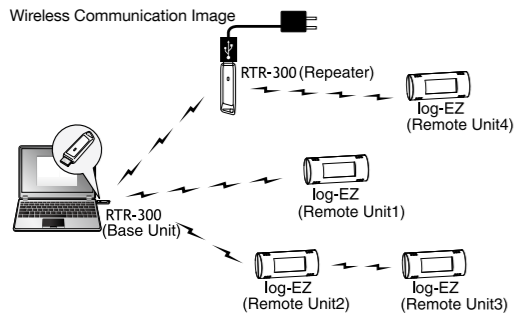
- The "log-EZ" measures and records temperature and humidity of the location where it is placed.
- Recorded data can then be downloaded via wireless communication to a PC, on which the dedicated software has been installed and the data viewed in graph form.
- Even when the PC is off, the measuring and recording of temperature and humidity are carried out by the "log-EZ" unit.
- It is possible to save the recorded data to a PC, view the data in a graph, print out, save as text file, and so on.
- By setting up an "log-EZ" unit as a Repeater, it is possible to extend the wireless communication range between other "log-EZ" units and a PC.
- It is possible to view data recorded by multiple "log-EZ" units via one computer.
Up to 16 "log-EZ" units (Remote Units and Repeaters) can be registered on one computer.

About the Wireless Dongle (RTR-300)

This is a USB device that allows for wireless communication between "log-EZ" units and a PC. Wireless communication is only possible when the "dongle" is inserted into the USB port of the PC. Please be careful not to lose or damage this important device. A "dongle" can also be connected to an AC adaptor (sold separately) and used as a Repeater.

About Base Units and Remote Units

In this Manual when explaining about wireless communication, the "log-EZ" (RTR-322) is referred to as a "Remote Unit" and the "dongle" (RTR-300) as a "Base Unit".



Getting Ready

This section provides instructions on getting the "log-EZ" ready for use including how to make communication settings.

This "Introductory Manual" covers all settings for getting a Base Unit and Remote Unit ready to carry out wireless communication. All settings and instructions for actual operation after that are covered by the "log-EZ for Windows Manual" which will be available from the start menu upon installation of the software. To make sure that proper operation can be carried out, it is necessary to follow the directions below.

1. Download the Software

Please access the download URL or our T&D Website to download the software, following the directions below.

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

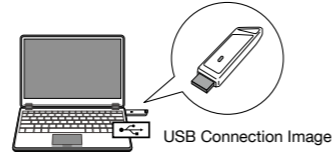
2. Install the Software

Double click the downloaded software to start installation.

- ❗ Do not insert the battery or connect a Base Unit to a PC until installation of the software has been completed.
- ❗ In some network environments, it may be necessary to restart the PC. After restart, the PC will automatically continue the installation process; follow the instructions as they appear on the screen to complete installation.

3. Connect the Dongle to the PC

If you are using the Dongle for the first time, by connecting the Dongle to a USB port on the PC, the USB driver installation will start automatically.



- ❗ Do not connect the Dongle to your computer until the software has been installed.
- ❗ If nothing happens after connecting the Dongle to the computer, click the Quick Start icon (see step 1 in "Register as a Remote Unit") and from the displayed menu, open [Help for Dongle Recognition Failure] to check the USB driver.

4. Install the Battery

Using "How to Install the Battery" shown at right as a guide, insert the attached battery into the "log-EZ" unit. Making sure that the unit is in [Registration Mode], move on to the next step "Register as a Remote Unit".



- When in [Registration Mode], the "COM" mark blinks in the LCD Display. (The "COM" mark will also blink during communication with the PC after registering a Remote Unit.)
- Upon installation of the battery, the unit will automatically enter [Registration Mode] and if after five minutes pass without any settings being made, [Registration Mode] will end.
- Make sure to only insert a battery into one unit at a time and to never try to register more than one unit at a time. Do not insert a battery into a multiple number of units at the same time.

5. Register as a Remote Unit

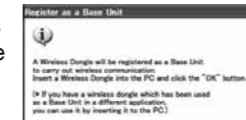
In order to carry out Wireless Communication, it is necessary to register the "log-EZ" as a Remote Unit.

- ❗ Remote Unit registration can only be carried out when the unit is in [Registration Mode]. If the unit is no longer in [Registration Mode], remove and re-insert the battery. After making sure that the unit has entered [Registration Mode] again, carry out the registration process.

1. Click the Quick Start icon in the lower right of the screen (Task Tray).



2. In the displayed menu, select [Register] to open the [Register as a Base Unit] window. Making sure that a Base Unit (dongle) is connected to the PC, click the [OK] button.



3. When the [Register] window appears, click on the [Add a Remote Unit] button.



4. Enter the desired Remote Unit Name and click on the [Assign Name] button.



- When the "Communication Failed" error message appears, see the detailed info written in red in the window or see [Troubleshooting] in the Software User's Manual for details about checking the Base Unit, Remote Unit, and network environments and retrying communication.

5. The registered Remote Unit Name will be displayed in the Remote Unit List. Also, the name will appear in the communication route.

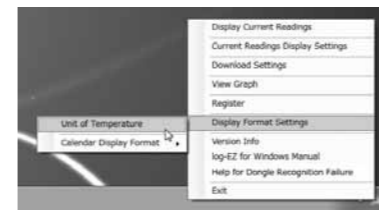


- After Remote Unit Registration has been completed, it is possible to communicate between a Base Unit and a Remote Unit.

The "log-EZ" is now ready to be used.

Before using the "log-EZ", make settings for the display format of the temperature and calendar from [Display Format Settings] in the Quick Start.

The unit of temperature settings can be made in either Celsius or Fahrenheit. The format of the calendar display can be set in either "Month/Day/Year" or "Day/Month/Year".



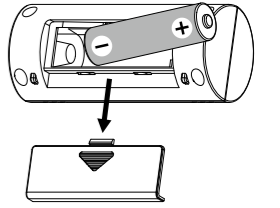
For instructions about how to use the "log-EZ" unit after this, see the User's Manual that comes with the software.

How to Open the User's Manual

Click the Quick Start icon. The User's Manual can be opened in PDF format from the displayed menu.

How to Install the Battery

1. Remove the battery cover from the back of the unit. Pressing the area, slide the cover as shown above.
2. Check to make sure plus and minus are correct and insert the AA Alkaline battery.
3. Replace and close the battery cover. Be sure to securely close the cover until you hear a clicking sound.



Remove the cover to insert the battery

- Please make sure that + and - are in the correct direction.
- Do not insert or replace batteries with wet hands.
- Once a battery has been installed, the unit will enter [Registration Mode] for five minutes for the first Remote Unit registration, and two minutes for battery replacement.
- Make sure to always use a new battery within that has not expired.

Changing a Battery

An Estimation of Battery Life

The battery life expectancy is about six months. However, it varies depending on the frequency of wireless communication, measuring environment and quality of the battery being used, and in no way do we guarantee a battery's life.

Time for Battery Replacement



Battery Warning Mark

When it is time for the battery to be replaced, a battery life warning mark will appear. Once this mark starts blinking, it is not possible to carry out communication with a PC; therefore please change the battery as soon as the mark appears.

After Battery Replacement

The unit will start measuring temperature and humidity when a battery has been replaced, and will enter [Registration Mode] for two minutes. If an old battery is inserted and the battery mark blinks, that battery cannot be used to communicate with a PC. Change the battery to a new one.

Notices about Wireless Communication

Note that after actual start of use, due to changes in environmental conditions, wireless communication errors may occur. If errors occur often, please check to see if any of the following apply: If, after having made sure all precautions have been followed, wireless communication errors still occur, it is recommended to add a Repeater to improve communication. If wireless communication errors occur quiet often, battery life will also be shortened.

Please place units more than 20 cm away from metals.

If units are placed near such things as metal walls, floors, and stairs, the possible wireless communication range will be shortened, and more communication errors may occur.

Situations where concrete walls are present will adversely affect wireless communication.

Concrete acts as a block to radio waves, and wireless communication errors may occur more frequently in situations where such walls are present.

Keep the units as far as possible away from other wireless communication devices.

If multiple wireless communication devices (such as wireless LAN's and cordless phones) are being used, please be careful to maintain enough space between them and do not use them at the same time.

Keep the units as far as possible away from noise-emitting sources.

Equipment, such as some industrial instruments, electronic devices or fluorescent lamps generates noise. Please place the units more than 1 meter away from such devices.