

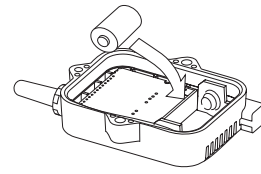
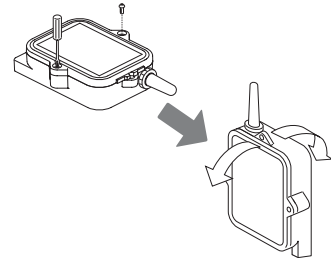
Before Using

◆ Insert the batteries

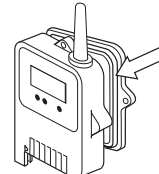
Note:

- When changing batteries make sure to carefully read [Changing Batteries].
- Make sure no water gets inside the case.

1. Remove the screws and take off the back case.
2. Insert the battery in its tube and place in unit as in diagram.
3. Check the rubber packing for any cuts or scratches and replace the cover as it was when opened.



- Make sure that + and - are correct.

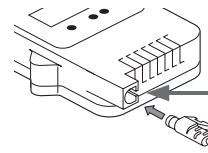


- If dirt or scratches are present on the rubber packing, water resistance will be reduced.
- Be sure to fasten the cover tightly.

※ If nothing appears on the LCD Display, please follow the above instructions again.

◆ Connect the Input Cable

Confirm that the sensor is properly connected by inserting it until you hear a clicking sound.



Insert cable into jack

◆ Upon insertion of the batteries, measuring and recording will automatically begin at the factory set default recording settings, or if replacing the batteries the settings will return to the most recent recording settings.

The default settings are: Recording Mode: Endless / Recording Interval: 1 minutes / Recording Start: Immediate Start (Measurement and recording will automatically begin in Voltage Measurement Mode.)

Changing the Battery

Note:

- Once the battery indicator [] appears, replace the old battery with a new one as soon as possible.
- After removing the old battery, all recorded data will be lost if a new battery is not inserted within 1 minute. Make sure to complete the battery change within 1 minute.
- If the battery direction is incorrect (+/-) and a short occurs, all recorded data saved in the main unit will be lost.
- Please store the LS14250 batteries in a temperature of less than 20°C.
- When using an LS14250 battery, the battery indicator [] on the main unit display may not soon disappear, even if you have used a new battery. This is due to the nature of the battery and the time it will take for the indicator to disappear will increase with the time that the battery has been in storage. If a battery has been in storage for about one year, it will take about 10 minutes for the indicator to disappear. During this time, if you try to collect Remote Unit Info via the RTR-57U it will respond that the battery level is too low.

1. When battery power becomes low, the battery indicator () will appear in the LCD display.

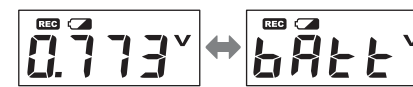
- If you change the battery at this time, recording will continue uninterrupted and the downloading of recorded data is possible.



If you do not change.
Recording: OK
Wireless Communication: OK
Data Download: OK

2. If you do not change the battery and continue using the unit, the temperature display will intermittently display [bAtt]. Please change the battery at once.

- If at this time a new battery is placed in the unit, recording will continue and downloading of saved data can be done.



If you do not change.
Recording: OK
Wireless Communication: NO
Data Download: NO

3. Check the rubber packing for any cuts or scratches and replace the cover as it was when opened.

- In order to save all recorded data during [SLP], all recording and other normal functions will be disabled. If you change the battery at this time all recorded data can still be downloaded.



If you do not change.
Recording: NO
Wireless Communication: NO
Data Download: NO

- If, after changing the battery, you wish to start recording again, please make new recording start settings via computer or via the RTR-57U unit.

Note:

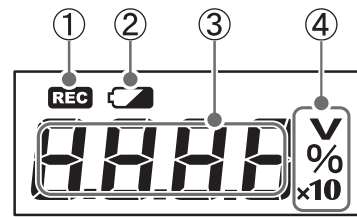
By starting a new recording session, all previously recorded data will be erased. Make sure to download any data you need before you start a new recording session.

4. If you do not change the battery even under conditions in 3 above, the display will go blank.

- All of the recorded data will be erased. If at this time a new battery is placed in the unit, [CHEC] will appear on the display after which recording will begin again using the previously set recording conditions.



About the LCD Display



- ① LIT UP: displayed during recording or when FULL of data.
BLINKING: displayed when waiting for a programmed recording to start

- ② Low Battery Life Warning Indicator: displayed when time to change the battery.

- ③ Current Reading or Operation Message displayed

- ④ Shows Unit of Current Reading being displayed

V : Voltage

% : Only displayed when measuring soil moisture.

x10 : when the number of pulse readings is above 10,000
When measuring pulse there is no unit

Note:

Use in cold environments may cause the display to be difficult to read; this is not a malfunction.



● Check

This is displayed under the following conditions: after purchasing and putting in the batteries for the first time, if the battery terminals +/- were mistaken and a short occurred, or if the batteries are replaced after having been taken out for a long period. If this is displayed all data that had been stored in the main unit has been erased.



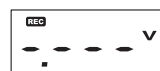
● Full Memory

If recording under the ONE TIME MODE, when the data readings reach the upper limit of 8,000 readings, recording will stop and this will be displayed intermittently with the current temperature.



● Wireless Transmission

This will be displayed when transmitting data to an RTR-57U unit via wireless communication.



● Over Measurement Range (only for Voltage Measurement)

Display will blink if measurement is below 0 or above 6.5 V



● Over 10,000 Pulse Count Readings Display

On tenth of readings will be displayed with a x10.

About the Pulse Measurement Display

The reading shown on the pulse measurement display shows the number of total pulse counts for the recording interval set at the recording start and changes every one sixtieth of the time of the set recording interval.

For example: If the recording interval is set at 30 minutes, the display will show the total number of pulse counts for the previous thirty minutes; changing at a rate of every thirty seconds. (If the interval is set at 1 minute or less, the measurement count and the display will change every second.)



● Signal Level at time of Event Recording

If the current signal level is high, HI will be displayed.



● Signal Level at time of Event Recording

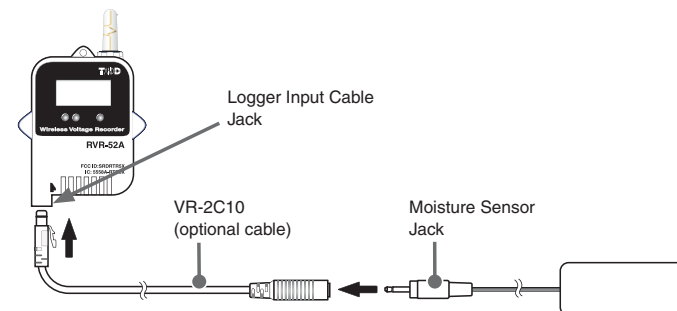
If the current signal level is low, Lo will be displayed.

Soil Moisture Measurement

It is possible to measure soil moisture using Decagon Devices Inc, Soil Moisture Sensor ECHO Probes (EC-10, EC-20). The RVR-52A has a built-in excitation voltage (2.5V) for the ECHO probe that allows for easy direct connection. The output from the ECHO probe is converted directly into moisture volume content by percentage (%) and displayed as such. Moreover, by using the adjustment function in the accompanying software [T&D Recorder for Windows (US)] you can achieve even more accurate readings.

Note:

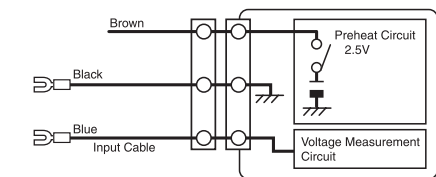
T&D Corporation does not handle or sell the Soil Moisture Sensors ECHO Probe (EC-10, EC-20). All inquiries and questions concerning sales of and the operational specifications of the sensors should be made to Decagon Devices Inc.



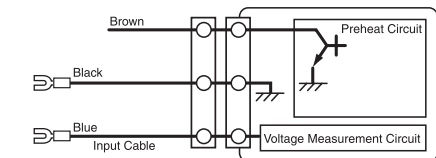
1. Connect the Input Cable (VR-2C10).
Connect the VR-2C10 (optional cable) to the logger's input cable jack, making sure to insert until you hear a clicking sound.
2. Connect the Moisture Sensor to the VR-2C10.
Connect the Moisture Sensor jack to the VR-2C10 terminal, making sure to insert until you hear a clicking sound
3. Make Necessary Mode Settings and Start Recording.
In the accompanying software [T&D Recorder for Windows(US)], under [Measuring Mode] set to [Moisture] and start recording.

Connection Specifications

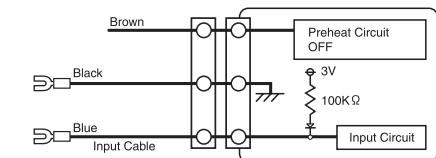
Soil Moisture Measurement Mode



Voltage Measurement Mode



Pulse / Event Measurement Mode



Pulse Signal (Max. 0~30Vp-p)

