

# UT330A/B/C USB Datalogger Operation Manual

## Foreword

Dear users,

Thank you for purchasing the brand-new Uni-T recorder. In order to use this recorder correctly, please read this manual carefully especially "safety cautions" before use. If you have read this manual, please keep this manual properly and put this manual together with the recorder or in a place which can be reviewed at any time so as to consult in the future use process.

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## I. UT330 series USB data recorder

UT330 series USB data recorder (hereinafter referred to as "recorder") is a digital recorder taking high-precision digital temperature and humidity module and atmospheric pressure module as sensors and using ultra-low-power-consumption microprocessor. The product features IP67 water and dust resistance, high accuracy, great storage capacity, automatic storage, USB data transmission, image upper computer management and statistic and so on, can meet various high-precision measurement and long-time temperature and humidity and atmospheric pressure monitoring and recording requirements, and can be applied to medicine, transportation, warehousing and other occasions.

## II. Unpacking check

|                                                                         |   |
|-------------------------------------------------------------------------|---|
| Manual-----                                                             | 1 |
| Warranty card-----                                                      | 1 |
| Battery-----                                                            | 1 |
| Optical disk-----                                                       | 1 |
| UT330 recorder-----                                                     | 1 |
| holder (not include magnet, the magnet is an optional accessories)----- | 1 |
| screws-----                                                             | 2 |

## III. Safety cautions

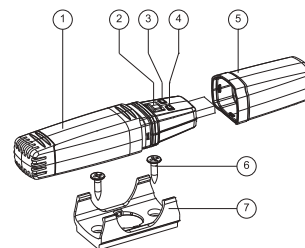
### ⚠ Warning

Warning presents conditions or actions which may endanger the user. In order to avoid electric shock or personal injury, please follow the following guide:

- Check the housing to see whether any broken or missing plastic pieces exist, particularly the insulating layer around the joint before recorder use, and don't use if the appearance has been damaged;
- Don't use if the housing or cover of the recorder is opened;
- If the recorder works abnormally, don't continue to use. It means that the protection facility may be damaged, and the recorder shall be sent to the specified station for repair if any question;
- Don't use the recorder near explosive gas, vapor, dust or volatile and corrosive gas;
- Replace the battery immediately if the battery has low voltage (the red "REC" indicator lamp flickers at an interval of 5s);
- Don't try to charge the battery;
- Suggest using qualified 3.6V 1/2AA lithium battery;

- During battery installation, pay attention to "+" and "-" polarities of the battery;
- Please take out the battery if the recorder is not used for a long time.

## IV. Knowledge about recorder



| No. | Description                                                                                                                                      |
|-----|--------------------------------------------------------------------------------------------------------------------------------------------------|
| 1   | Battery cover                                                                                                                                    |
| 2   | User key                                                                                                                                         |
| 3   | Red and green "REC" indicator lamps: The green lamp indicates the recorder state and the red lamp indicates the electric quantity of the battery |
| 4   | Red and yellow "ALM" indicator lamps: The yellow lamp indicates the full record and the red lamp indicates temperature and humidity alarm states |
| 5   | USB protective cover                                                                                                                             |
| 6   | Screws                                                                                                                                           |
| 7   | Holder                                                                                                                                           |

## V. Recorder setting

Refer to the upper computer management software help document.

## VI. Recorder use

- Startup and shutdown
  1. The recorder enters the shutdown state automatically after the battery is installed;
  2. The green "REC" indicator lamp is lit after the key is long pressed for about 2s in the shutdown state, and the green lamp is extinguished, the startup state is entered and data is recorded after the key is released;
  3. The green "REC" indicator lamp is blink after the key is long pressed for about 2s in the startup state, and the green lamp is extinguished, the shutdown state is entered and data recording is stopped after the key is released.
- Check startup and shutdown states of the recorder
 

When the key is shortly pressed and released, the green "REC" indicator lamp flickers once means the recording state now, the green "REC" indicator lamp flickers twice means the delay recording state now, and the

green "REC" indicator lamp does not flicker means the shutdown state. Whether the recorder has entered the recording state can be confirmed by this function after the startup key is long pressed.

### • Indicator lamp explanation

#### 1. Green "REC" indicator lamp:

This indicator lamp indicates the current state of the recorder. Flicker once at an interval of 5s means the recording state, flicker twice means the delay recording state, and no flicker means the shutdown state. This indicator lamp is long lit after PC is connected by USB.

#### 2. Red "REC" indicator lamp:

When the battery voltage is less than 3V, this indicator lamp flickers at an interval of 5s, and new data recording is stopped automatically at this time.

Please immediately replace new battery.

#### 3. Yellow "ALM" indicator lamp:

When the recording mode of the recorder is set to the mode which does not cover the old records (full record cannot be prompted in the mode covering the old records), if the maximum record number is reached, this indicator lamp flickers at an interval of 5s, and it indicates that the record is full and new data recording is stopped. The record can be deleted by the upper computer management software, or the full record alarm can be cancelled by changing the recording mode to the mode covering the old records.

#### 4. Red "ALM" indicator lamp:

This indicator lamp indicates temperature and humidity alarm. When the temperature or humidity super-threshold appears, this indicator lamp flickers at an interval of 5s. Alarm will exist all the time unless removed manually (eliminated after battery unplugging and power-off), the key can be double clicked quickly (at an interval of 0.2s~0.5s) at this time, and this indicator lamp flickers once to remove the alarm state. Record removal can be performed in startup and shutdown states.

Note: After the alarm state is removed, if next sampled temperature and humidity data exceeds the alarm threshold, this indicator lamp will indicate alarm again. If both temperature and humidity superthreshold alarm and full record alarm appear, the red lamp flickers and then the yellow lamp flickers.

- Recorder system parameter setting and recorded data acquisition

The recorder is inserted into the computer's USB, and then management and data analysis processing can be performed on the recorder through the upper computer management software after the green "REC" lamp is lit long.

Note:

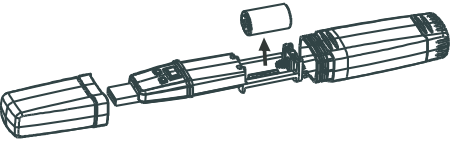
The recorder automatically stops recording after the USB

is inserted, and automatically enters the shutdown state after the USB is disconnected. Please operate "startup and shutdown" to record again.

VII. Recorder maintenance

- Battery replacement is as shown in the following figure.  
The battery can be replaced by pulling the battery cover open, and attention shall be paid to positive and negative polarities of the battery during battery replacement. After

battery replacement, the recorder clock is lost, and the upper computer management software synchronous clock shall be used before next recording.



- Surface cleaning  
If the recorder surface is relatively dirty and needs to be cleaned, lightly wipe with soft cloth or sponge dipped with a small amount of clear water (don't use liquid with volatility and corrosivity such as alcohol and rosin water so as to avoid influencing recorder performance), and don't directly clean with water so as to prevent recorder damage caused by circuit board water intake.

VIII. Technical indexes

|                           |                                                                                                         |                                                                                                                                                                                          |                                                                                                                                                                                                                                   |
|---------------------------|---------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Function                  | UT330A                                                                                                  | UT330B                                                                                                                                                                                   | UT330C                                                                                                                                                                                                                            |
| Water and dust resistance | IP67                                                                                                    | IP67                                                                                                                                                                                     | IP67                                                                                                                                                                                                                              |
| Measurement range         | Temperature: -40℃ ~80℃                                                                                  | Temperature: -40℃ ~80℃                                                                                                                                                                   | Temperature: -40℃ ~80℃                                                                                                                                                                                                            |
|                           |                                                                                                         | Humidity: 0%RH~100%RH, non-condensation                                                                                                                                                  | Humidity: 0%RH~100%RH, non-condensation<br>Atmospheric pressure: 750hpa~1100hpa                                                                                                                                                   |
| Resolution                | Temperature 0.1℃                                                                                        | Temperature 0.1℃                                                                                                                                                                         | Temperature 0.1℃                                                                                                                                                                                                                  |
|                           |                                                                                                         | Humidity: 0.1%RH                                                                                                                                                                         | Humidity: 0.1%RH<br>Atmospheric pressure: 0.1hPa                                                                                                                                                                                  |
| Measurement accuracy      | Temperature:<br>-40℃~-30℃: ±2.0℃<br>-30℃~0℃: ±1.0℃<br>0℃~40℃: ±0.5℃<br>40℃~70℃: ±1.0℃<br>70℃~80℃: ±2.0℃ | Temperature:<br>-40℃~-30℃: ±2.0℃<br>-30℃~0℃: ±1.0℃<br>0℃~40℃: ±0.5℃<br>40℃~70℃: ±1.0℃<br>70℃~80℃: ±2.0℃<br><br>Humidity (@25℃):<br>±3.0% RH (20% RH~80%RH)<br>±5.0%RH (<20%RH or >80%RH) | Temperature:<br>-40℃~-30℃: ±2.0℃<br>-30℃~0℃: ±1.0℃<br>0℃~40℃: ±0.5℃<br>40℃~70℃: ±1.0℃<br>70℃~80℃: ±2.0℃<br><br>Humidity (@25℃):<br>±3.0% RH (20% RH~80%RH)<br>±5.0%RH (<20%RH or >80%RH)<br>Atmospheric pressure (@25):<br>±3 hPa |
|                           |                                                                                                         |                                                                                                                                                                                          |                                                                                                                                                                                                                                   |
| Data storage              | 0 ~ 60000                                                                                               | 0 ~ 60000                                                                                                                                                                                | 0 ~ 60000                                                                                                                                                                                                                         |

**UNI-T®**  
**UNI-TREND TECHNOLOGY (CHINA) CO., LTD.**  
No6, Gong Ye Bei 1st Road,  
Songshan Lake National High-Tech Industrial  
Development Zone, Dongguan City,  
Guangdong Province, China  
Tel: (86-769) 8572 3888  
<http://www.uni-trend.com>