

## RTC103U Radio Controlled Talking Indoor/Outdoor Thermometer Clock with wireless remote sensor

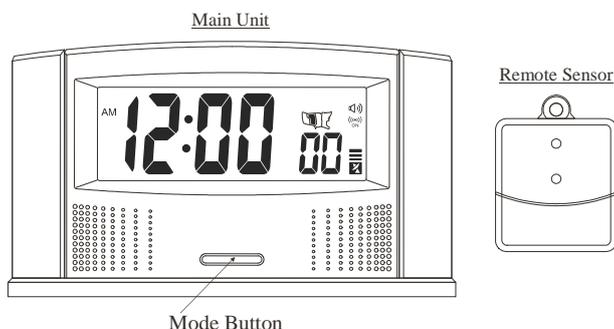
The complete unit consists of:

- One unit of radio controlled talking clock (the main unit)
- One unit of wireless temperature sensor (the remote sensor)

The radio controlled clock works on the principle of receiving time signals from the WWVB time signal broadcasting station. If time signal can be received, the clock will be synchronized with the time of the US Atomic Clock and change to standard time and daylight saving time automatically. To enhance good receiving condition, avoid placing the unit near television sets, metal surfaces, computers or electric devices as these equipment will interfere the reception of radio signals.

### Features:

- Radio controlled. Adjust time and date and change to standard time and daylight saving time automatically. Features digital map for easy time zone recognition and setting.
- Human voice time, date, room temperature, outside temperature and alarm time announcement, features a gentle lady voice.
- Big display (128x44mm) for easy reading.
- Display time, calendar, room temperature or outside temperature.
- Temperature range:  
Indoor temperature: 32° to 122°F (0° to 50°C)  
Outdoor temperature: -4° to 140°F (-20° to 60°C)
- Wireless remote sensor with splash proof design.
- Maximum reception range: 20 meter (by calculation).
- Voice feedback in every setting step during year/date/time zone/time/alarm time setting.
- Hourly time and temperature announcement during 8AM – 10PM (out of this range hourly announcement is automatically shut off).
- Alarm duration: 2 minutes. 5 minutes snooze function.
- Backlight.



## PART I – BATTERY INSTALLATION, REPLACEMENT AND SETTING UP OF THE UNIT

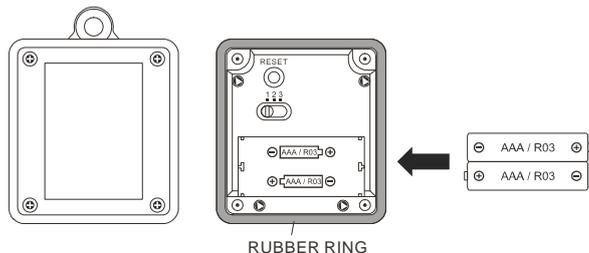
### Battery installation and replacement

The main unit uses 2 pieces of AA (or equivalent size) batteries and the remote sensor uses 2 pieces of AAA (or equivalent size) batteries. **Alkaline batteries are strongly recommended.** (Lithium batteries are recommended when the remote sensor is used in extreme temperature.)

Please follow the below procedures to initiate the unit and establish the link between the main unit and the remote sensor:

#### Step 1 - Installing batteries to the remote sensor:

Using a screwdriver of suitable size, unscrew and open the back cover. There is a SLIDE SWITCH with 1-3 selections. Always place the SLIDE SWITCH at position 1 (position 2 and 3 is reserved for future product enhancement and not used in this unit). Now install 2 pieces of AAA batteries by following the polarity marked and press the RESET BUTTON once to initiate the unit.



#### Step 2 – Installing batteries to the main unit

Open the battery compartment located at the back of the unit. Inside the battery compartment, there is a “RECEIVE ON OFF SWITCH”. When the switch is set to “ON” position, the unit will act as a radio controlled clock and will check and receive the WWVB time radio signal and adjust the time automatically.

#### Important Note:

If the “RECEIVE ON OFF SWITCH” is set to “OFF” position, the unit will not check the WWVB time radio signal and will not adjust the time automatically.

Set the “RECEIVE ON OFF SWITCH” to the desired position. Now install 2 pieces of AA batteries by following the polarity marked and press the RESET BUTTON once to initiate the unit.

#### Step 3 - Checking the link between the main unit and the remote sensor

Press the MODE BUTTON at the front of the main unit three times to change to OUTDOOR TEMPERATURE DISPLAY.

When the remote sensor is emitting signal, the front LED indicator will flash. If the main unit received the signal, the display will show the outside temperature detected by the remote sensor and the link between the main unit and the remote sensor is established.

After the link is successfully established, close the battery door and the back cover of remote sensor. Make sure the rubber ring is placed properly and fasten the screws. The unit is ready for use now.

#### Important Notes:

The OUTDOOR TEMPERATURE DISPLAY will show --- to indicate that the link between the main unit and the remote sensor is not established. If this is the case, please try the below procedures:

- Reset the main unit by pressing the RESET BUTTON once.
- Repeat Step 3 of the above section.

#### Battery replacement

##### 1. The main unit.

Please replace the batteries of the main unit when the display becomes dim or faded out; or when the voice quality drops or there is no voice. Replace both batteries with new ones. After batteries replacement, repeat from Step 2 of the previous section to re-establish the link between the main unit and the remote sensor.

##### 2. the remote sensor

Please replace the batteries of the remote sensor when the LED indicator of the remote sensor is dim or not flashing. Replace both batteries with new ones. After battery replacement, please RESET the main unit (press the RESET BUTTON of the main unit once). After reset, repeat from Step 3 of the previous section to re-establish the link between the main unit and the remote sensor.

#### Important Notes on installing the unit

- Most of the batteries have a working temperature of above 32°F (0°C). When using this kind of batteries and locating the remote sensor to a place under 32°F (0°C), the remote sensor may not be working under full power or may work improperly. Under such case, the reception range may be affected or even caused the remote sensor stop working.
- Avoid placing the remote sensor at locations with directly sunlight, rain or snow.
- The reception range may be affected by the construction of the building.
- The reception range may be affected, if there are obstacles (e.g. walls, metal cabinets) between the main unit and the sensor.

## PART II – USING THE MAIN UNIT

### Receive the time radio signal

The unit will search for time radio signals automatically when it is powered on. (Note: If the “RECEIVE ON OFF SWITCH” is set to “OFF” position during battery installation, the unit will not check the WWVB time radio signal and will not adjust the time automatically.) The radio signal mark on the right of the display (  ) will start pulsing to indicate that reception is under progress. If time signal is received, synchronization will take 3-15 minutes and the unit will update the time and date automatically. The radio signal mark will show three solid curves (pulsing stopped) to indicate that reception is successful.

### IMPORTANT NOTES

1. During radio signal reception, do not set the time or date manually. Otherwise the reception will be terminated.
2. You can start the signal reception manually by pressing the SET BUTTON once. When the SET BUTTON is pressed, there will be a beep sound and the radio signal mark will start pulsing to indicate reception is started.
3. If the unit failed to update the time automatically, after several trials, please set the time and date manually because:

**During daytime, there may be too much external interference that makes reception failed. Under such situation, please set the time manually because:**

**The unit has an automatic process to start reception, when the clock is showing time between 2-6AM. At midnight, interference dropped to a minimum level and makes it a perfect environment for time radio signal reception. If the time of the clock is not set manually when it failed reception at daytime at the first time initiation, then the automatic process may start in the daytime everyday (not during midnight) and eventually keep the unit not receiving the signal.**

Please refer to “PART III – MANUAL SETTING THE TIME AND CALENDAR” on how to set the time and date manually.

### Selecting the appropriate time zone

Please select the appropriate time zone before reception started or after radio signal reception is completed. Otherwise the unit may display incorrect time if the time zone was not set.

To set the time zone, change to TIME DISPLAY first. The right side of the display shows a digital map representing the four time zones in US. Now press and hold the SET BUTTON until the digital map is flashing (“*setting time zone*”) and the current time zone, e.g. “*mountain standard time*” will be announced). The unit is now in setting mode. Press the + or - BUTTON and set to appropriate time zone (PACIFIC, MOUNTAIN, CENTRAL or EASTERN TIME). After setting, press and hold the SET BUTTON until the display stopped flashing (“*setting complete*”) will be announced) to end the setting mode.

#### **Changing the display modes**

Press the MODE BUTTON and the display will be changed, and the corresponding information will be announced once (e.g. when changed to TIME DISPLAY the time will be announced; when changed to OUTDOOR TEMPERATURE DISPLAY the outdoor temperature will be announced). The display mode is changed according to the below sequence:

TIME DISPLAY – CALENDAR DISPLAY – INDOOR TEMPERATURE DISPLAY – OUTDOOR TEMPERATURE DISPLAY (press the MODE BUTTON again will go back to TIME DISPLAY)

Note:

- The indoor temperature will show --.- (the temperature is not displayed) if the measured indoor temperature is outside the measurable range.
- The outdoor temperature will show --.- (the temperature is not display) if:
  - the measured indoor temperature is outside the measurable range or,
  - the link between the main unit and the remote sensor is not established successfully.

#### **Hearing to the different announcements**

Press the VOICE / LIGHT BUTTON at any time (except in setting mode and when alarm is sounding) and the unit will announce the time, date, indoor temperature or outdoor temperature. The announcement will depend on the current display mode of the unit.

When the unit is in TIME DISPLAY, press the VOICE / LIGHT BUTTON will announce the current time (e.g. “*The time is now seven minute to one AM*”) will be announced). If the ALARM SWITCH is placed to “ON” position, press the VOICE / LIGHT BUTTON will announce the current time and the alarm time (e.g. “*The time is now seven minute to one AM*” “*The alarm time is set to six AM*”) will be announced);

When the unit is in CALENDAR DISPLAY, press the VOICE / LIGHT BUTTON will announce the current date. (e.g. “*Today is Monday, January second*”) will be announced) If the ALARM SWITCH is placed to “ON” position, press the VOICE / LIGHT BUTTON will announce the current time and the alarm time (e.g. “*Today is Monday, January second. The alarm time is set to six AM*”) will be announced);

When the unit is in INDOOR TEMPERATURE DISPLAY, press the VOICE / LIGHT BUTTON will announce the indoor temperature (e.g. “*the room temperature is seventy-one degrees Fahrenheit*”) will be announced);

When the unit is in OUTDOOR TEMPERATURE DISPLAY, press the VOICE / LIGHT BUTTON will announce the outdoor temperature. (e.g. “*the outside temperature is seventy-one degrees Fahrenheit*”) will be announced)

#### **Using the hourly announcement function**

When the hourly announcement function is engaged, at every hour during 8AM to 10PM, the unit will announce the current time, followed by 4 beep sounds (the 4<sup>th</sup> beep sound represent the 00 second is reached), and the indoor temperature and outdoor temperature.

To activate the hourly announcement function, place the ANNOUNCE SWITCH to “ON” position (“*announcement on*”) will be announced).

Example:

The unit will announce “*The time is now eight AM. Beep Beep Beep Beep. The room temperature is seventy-one degrees Fahrenheit and the outside temperature forty degrees*” if the outside temperature is displayed.

The unit will announce “*The time is now eight AM. Beep Beep Beep Beep. The room temperature is seventy-one degrees Fahrenheit*” if the outside temperature is not displayed (i.e. the outside temperature display --.-).

To disable the hourly announcement function, place the ANNOUNCE SWITCH to “OFF” position (“*announcement off*”) will be announced).

#### **Changing to standard time / daylight saving time**

when the time radio signal is received, the unit will change to standard time and daylight saving time automatically. When time is change to daylight saving time, the “D.S.T” mark will be shown and time is adjusted automatically.

#### **Using the alarm function**

To start alarm time setting, press any one of the + or - BUTTON once. The alarm time digits will flash (“*alarm set*”) and the current alarm time (e.g. “*twelve midnight*”) will be announced). Another push of the UP or DOWN BUTTON will set the alarm minute, while the hour will be changed when “00” minute is run through. During alarm time setting, when the alarm time is changed (by pressing the + or - BUTTON), the corresponding digits will be announced. e.g. setting alarm time to AM 6:00: “*six AM*” will be announced. Press and hold the UP or

DOWN BUTTON and the digit will fast advance. To end the alarm setting mode, just leave the unit (buttons) untouched for about 5 seconds.

To activate the alarm function, place the ALARM SWITCH to “ON” position and the alarm time (e.g. AM 6:05) will be announced (e.g. “*the alarm time is set to five minutes past six AM*”). The alarm mark is shown on the display to indicate alarm function is engaged. When current time reaches the alarm time, the unit will announce the current time with a beep tone (e.g. “*beep beep, the time is now five minutes past six AM*”) continuously for 2 minutes. To activate the snooze function, press the VOICE / LIGHT BUTTON and the alarm will be stopped and resume after about 5 minutes. To stop the alarm sound, place the ALARM SWITCH to “OFF” position (“*alarm off*”) will be announced).

### **PART III – MANUAL SETTING THE TIME AND CALENDAR**

#### **Set the time and date manually**

Since the unit works on receiving the time radio signal, there may be locations that the signal is weak and cannot be properly received. Under such circumstance, the radio signal mark will disappear to indicate reception is failed. Try to rotate the unit or place it in other location to achieve better reception and re-start reception again (by pressing the SET BUTTON once). If finally, radio signal cannot be received, please set the time and date manually.

To set time. Change to TIME DISPLAY first. Now press and hold the SET BUTTON until the digital map is flashing (“*setting time zone*”) and the current time zone (e.g. “*mountain standard time*”) will be announced). The unit is now in setting mode. Press the + or - BUTTON and set to the appropriate time zone (PACIFIC, MOUNTAIN, CENTRAL or EASTERN TIME).

Press the SET BUTTON once. The time digits will be flashing (“*setting time*”) and the current time (e.g. “*sixteen minutes past eleven PM*”) will be announced). Press the + or - BUTTON to set the minute. Each push of the + or - BUTTON will change the time by one minute and the hour will be changed when 00 minute is run through.

Press the SET BUTTON once. The setting mode will be ended (“*setting complete*”) will be announced).

To set date. Change to CALENDAR DISPLAY first. Now press and hold the SET BUTTON until the year digits are flashing (“*setting year*”) and the current year (e.g. “*year two thousand and six*”) will be announced). The unit is now in setting mode. Press the + or - BUTTON to set the year.

Press the SET BUTTON once. The month and date digits will be flashing (“*setting date*”) and the current date (e.g. “*Sunday December thirty-first*”) will be announced). Each push of the + or - BUTTON will change the day by one and the month will be changed when start or end of the month is run through.

Press the SET BUTTON once. The setting mode will be ended (“*setting complete*”) will be announced).

Notes:

1. During setting, press and hold the + or - BUTTON and the corresponding digits will fast advance.
2. During setting, the setting mode can be ended at any time by press and hold the SET BUTTON until the display stopped flashing (“*setting complete*”) will be announced).
3. During setting, if the main unit is unattended for about 30 seconds, the setting mode will be ended automatically (without announcement of “*setting complete*”).
4. During setting, when the time zone, time, year or month-date is changed (by pressing the + or - BUTTON), the corresponding digits will be announced.
  - e.g. setting time zone to PACIFIC TIME: “*pacific standard time*” or “*pacific daylight saving time*” will be announced.
  - setting time to 2:30PM: “*half past two PM*” will be announced.
  - setting year to 2006: “*year two thousand and six*” will be announced.
  - setting date to January 10<sup>th</sup> (Saturday): “*Saturday, January tenth*” will be announced.

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