WIRELESS TEMPERATURE MONITOR

ST313XX

Preface :

Mesure Technology Co., Ltd. is a professional designer and manufacturer of “medical treatment instruments.” This product combines medical treatment and the latest technology to bring you a product that can help you monitor your infant/toddler’s temperature throughout the night with more peace of mind.

Congratulations to you, for being the new owner of technology that will bring you closer to your child’s health and well-being.

I. INTRODUCTION TO YOUR WIRELESS TEMPERATURE MONITOR

A. Basic Knowledge of Human Body Temperature

Temperatures in the Body

Body temperature lowers as it nears the surface of the skin because it disperses easier. In general, we know that rectal temperature is 0.5℃ higher than oral temperature, and oral temperature is 0.5℃ higher than armpit temperature. The temperature measured on the surface of the skin can also be different than that measured orally or rectally.

Normal body temperature ranges (approximate)

For adults: 36.3℃ - 37.1℃ (oral measurement).

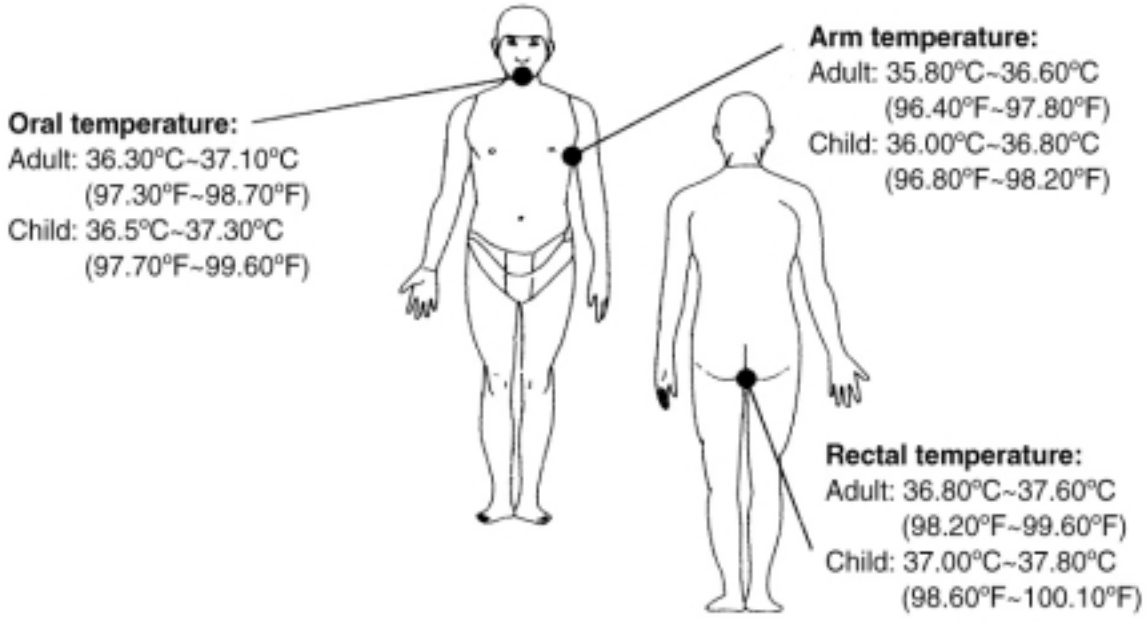
For children: 37.0℃ - 37.8℃ (rectal measurement).

Change of Human Body Temperature During Fever

Fever is a warning signal generated by the human immune system, indicating that the body is being attacked by pathogenic bacteria. Therefore, fever itself is not an illness, but a signal of illness. When the immune system transmits a fever signal, it means the temperature of the whole body has risen. When we check the body for fever, in fact we are checking to determine whether temperatures measured at fever have varied from normal conditions (no fever). This method is so called "Relative Comparison."

Temperature of Different Parts of Body

B.

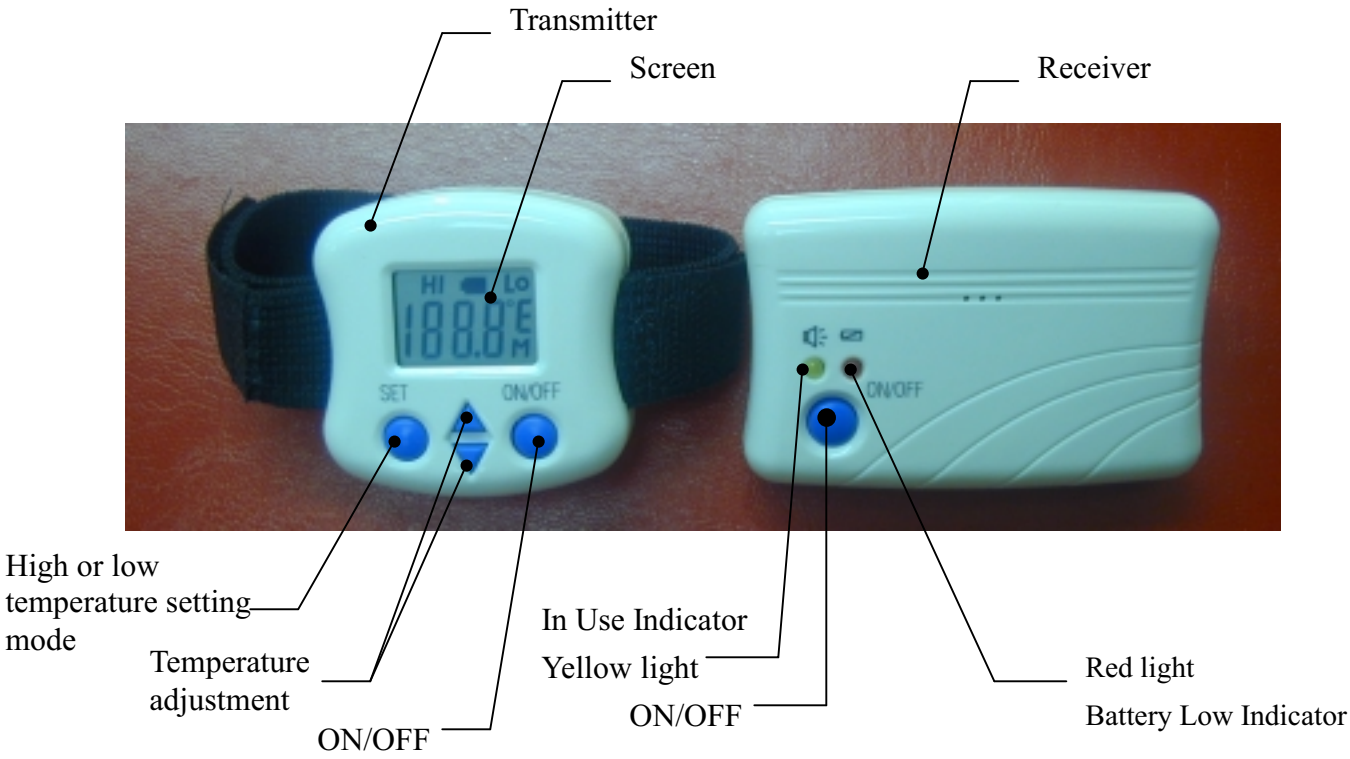


Technical Specifications of Product

- **Size**: Transmitter: 449×49×26.5 mm Receiver: 49×74×23 mm
- **Weight**: Transmitter: 29.0 g (batteries included) Receiver : 40.6 g (batteries included)
- **Product Material**: Transmitter: ABS Receiver: ABS
- **Type of Batteries**: Transmitter: 3V×1 (CR2032) Receiver: AAA / 1.5V×2
- **Life of Batteries**: Transmitter: Approx. 90 days Receiver: Approx. 45 days
- **Effective Distance for Transmission and Reception**:
  15 meters distance (approx.) in an open space. If there are objects in that space, the transmission distance will be shortened.
- **Range of Temperature Settings**: 25.0℃ ~ 43.0℃ (77.0°F ~ 109.4°F)
- **Temperature Accuracy** : ± 0.10℃
- **Temperature Measurement Interval**: Transmitter measures body temperature once every 5 seconds.
- **Transmitting Time**: When transmitter detects body temperatures exceeding the Hi-Lo range three (3) times in a row, it transmits a signal causing the receiver to sound an alarm.
- **Sound of Receiver Alarm**: Lo: Bi ------ BiBi (repeats 6 times)
  Hi: Bi ----------Bi (repeats 6 times)
- **Frequency of Transmission**: 433.92 MHZ
- **Sound of Receiver When Self-Testing (First Turned On)**: Bi------Bi-Bi-Bi (repeats 6 times)
- **Memory Function**: Automatically remembers and records the latest temperature transmitted.
- ℃ / **°F** : Can be selected for on the transmitter

- **ON**: Transmitter: Press ON/OFF button 1 second
  Receiver: Press ON/OFF button to switch on ("In Use Indicator" blinks after switched on)
- **OFF**: Transmitter: Press ON/OFF button for 1 second
  Receiver: Press ON/OFF button for 3 seconds

Parts Nomenclature



II. USER'S GUIDE

A. Operating Procedure:

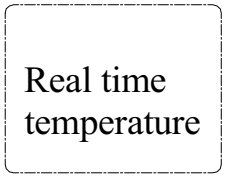
1. Put on transmitter:
   Recommended to wear on upper arm, near armpit. (**Caution:** Do not switch on yet).
2. Wait 5 minutes:
   The unit is searching for a steady temperature reading.
3. Turn on the receiver:
   Press ON/OFF button one time, hear the sound indicating that power is on. The "In Use Indicator" will blink indicating it is waiting to receive signals.
4. Switch on transmitter:
   Press and hold transmitter's ON/OFF button for three (3) seconds. The transmitter will automatically transmit signal after it has been switched on. The receiver will beep six (6) times meaning it is in proper working order.

5. Wait for auto-detection:
   After the units are switched on, the system will "self-detect" and the transmitter will show displays on its LCD screen in the following order:

Display 1

Display 2

Display 3



Display 4

   Note: When screen displays other signals, it describes improper operation or functioning. Please refer to details in section II.C to find out more.

6. Temperature monitor begins measurement:
   When the screen displays as in Display 4, it means the product is functioning properly. At the same time, the ℃ in the screen blinks, which shows that the unit has started to take measurements once every 5 seconds. Updated temperature measurements will be displayed on the screen once every 5 seconds.

7. Measured temperature:
   Once the temperature reading reaches a level where it does not change, it means that the user's temperature has reached a stable temperature status. This can be regarded as "MEASURED" temperature."

WARNING: Normally, the temperature measured inside the rectum and mouth is higher than the temperature measured on the skin. Therefore, to use this product, you must take a clinical thermometer reading and compare it with the reading of this temperature monitor.

8. Taking a thermometer reading:

Using a regular thermometer, take a temperature reading and record it on paper. Determine how much variation from this ACTUAL temperature reading you want to set for your HI and LO limits. At these limits, the monitor will sound an alarm.

Ex.
ACTUAL reading: 38.2 C
HI limit: 38.5 C (+0.3), LO limit 37.0 (-0.8)

9. Setting temperature HI/LO limits:

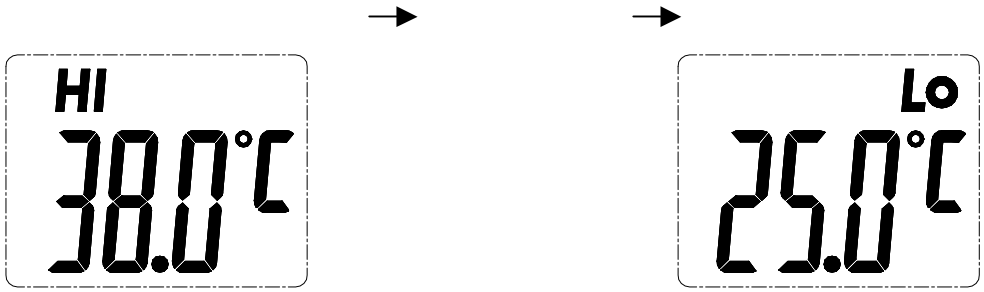
Determine HI and LO temperature settings based on the MONITOR MEASURED temperature reading (i.e. that displayed on transmitter) and the HI/LO variations determined in step 8 above.

Ex.
If MONITOR MEASURED reading is 35.1 C,
then HI limit should be set at 35.4 (+0.3), LO limit should be set at 34.3 (-0.8).

Press transmitter's "SET" button and use ▲/▼ buttons to set up HI and LO temperature settings. Temperature settings will change in increments of 0.1℃ (or 0.2 °F).

HI: Press "SET" button and screen will displays HI. Press ▲/▼ to select upper temperature.
LO: Press "SET" button again and screen will display LO. Press ▲/▼ to select low temperature.

Default settings for HI and LO:



B. Alarm

Transmission: The transmitter makes a STANDARD temperature reading once every 5 seconds. If the STANDARD temperature exceeds the pre-set HI and LO readings three (3) times consecutively, the transmitter will release a signal. As long as the temperature reading remains beyond the setting range, the transmitter will continue releasing signals every 15 seconds.

Reception: If the receiver detects a “high temperature” signal, it will sound one long ”Bi” and one short “bi” 6 times in a row. If the receiver detects a “low temperature” signal, it will sound one long ”Bi” and two short “Bi” 6 times in a row.

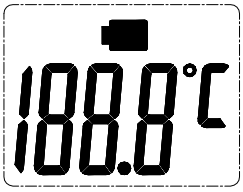
C. Responding to Temperature Alarm

After the receiver sounds the alarm, it will continue ringing unless the receiver is switched off (alarm can be temporarily turned off by pressing ON/OFF on receiver once, but the alarm will start again after 15 seconds).

Caution: It is dangerous to automatically switch off the receiver alarm without first finding out why it sounded in the first place and taking any necessary action. Doing so makes the caretaker forget the importance of taking immediate action for the ill patient. The correct procedure is:

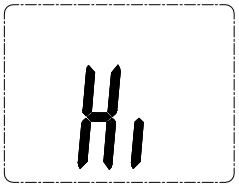
1. Hear the receiver alarm sounding.
2. Go to the patient immediately.
3. Switch off the receiver.
4. Provide proper care to the patient.

Display Screen Messages

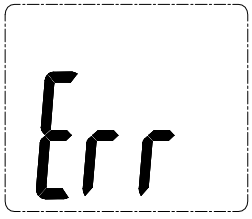


Whenever the LCD displays a battery sign, it means that the batteries need to be replaced; otherwise the temperature readings measured may become inaccurate.

Lowest possible temperature setting reached. The unit does not function at temperatures below 25℃ (77°F)



Highest possible temperature setting reached. The unit does not function at temperature above 43℃ (109.4°F)



Internal electronic circuit becomes short circuited/disconnected (out of order).

E. Setting Centigrade or Fahrenheit

Units are displayed in Centigrade or Fahrenheit depending on area of distribution. If unit of measurement needs to be changed, please proceed as below:

Press and hold the SET and ON/OFF button at the same time for approximately one second. Release ON/OFF as soon as the LCD first flashes on. Release SET button when you see the displayed temperature begin to blink. Press UP ( ) to set up ℃ and press DOWN (to set up °F. Press ON/OFF button to turn the unit off after the units of temperature have been set. Turn the unit on again to display temperature.

Note: Whenever the battery is changed, the unit of measurement will return to the factory pre-set mode.

III. REPLACING BATTERY AND CONSERVING BATTERY LIFE

A. Replacing Batteries

Transmitter:

When a battery sign appears in the transmitter LCD display, it means the battery is low and should be replaced as described below:

Remove the battery compartment cover from the bottom of the transmitter.

Take out the battery.

Insert new battery securely in place, with words facing up.

Replace the battery compartment cover.

Important Note: ℃/°F temperature unit and temperature ranges need to be re-set after batteries replaced.

Receiver:

When Battery Low Indicator Light of receiver blinks, it indicates low battery condition. To replace batteries, follow the procedures described below in order to avoid causing damage.

Remove the battery compartment cover. Take out the batteries.

Insert new batteries. Replace the battery compartment cover.

Switch on to check if yellow light is blinking (indicating batteries are correctly inserted). If the light is not blinking, repeat above procedure.

B. Routine Maintenance and Precautions:

Environment of Use:

When used in an environment with obstacles in it, the effective distance of transmission will be reduced. The effective distance of reception will also be reduced when the power is low.

Storage Condition:

When the receiver is not in use, the product should be stored inside the house. Do not expose it to sunlight or place next to high temperature stove. Heat can affect the proper functioning of the batteries and electric circuit.

Removing batteries:

If the receiver is not in use, the batteries should be removed in order to conserve battery life.

IV. WARNING

1. Before you start using this unit, please read this operation manual thoroughly for the correct methods of usage.
2. Please remove the batteries if the product will not be used for a long period of time so as to prevent any damage.
3. Do not drop or disassemble the unit.
4. Avoid exposing the thermometer to direct sunlight, high temperature, moisture or dirt.
5. If the unit will not be used for a long time, it is advisable that the battery be removed and stored from the reach of children.
6. If the unit becomes contaminated, clean it with a damp cloth.

- **Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user authority to operate the equipment.**

This device complies with Part 15 of the 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.

The users manual or instruction manual for an intentional or unintentional radiator shall caution the user that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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