SPEAKING THERMOMETER MULTIFUNCTION
EAR / FOREHEAD INFRARED

Ref.: TS15

- INSTRUCTION MANUAL -

Thank you for purchasing our TS15 Multi-Functional Ear/Forehead Thermometer Infrared.
This innovative medical device leverages on advanced infrared technology to measure temperature instantly and accurate in 2 convenient ways: at the ear or the forehead. But rest it in its cradle and it transforms into an elegant clock displaying room temperature. For a desirable use of this product, be sure to read this User Manual before any operation.
For safe and proper use of this product, be sure to read and fully understand Safety Precautions contained in this User Manual.
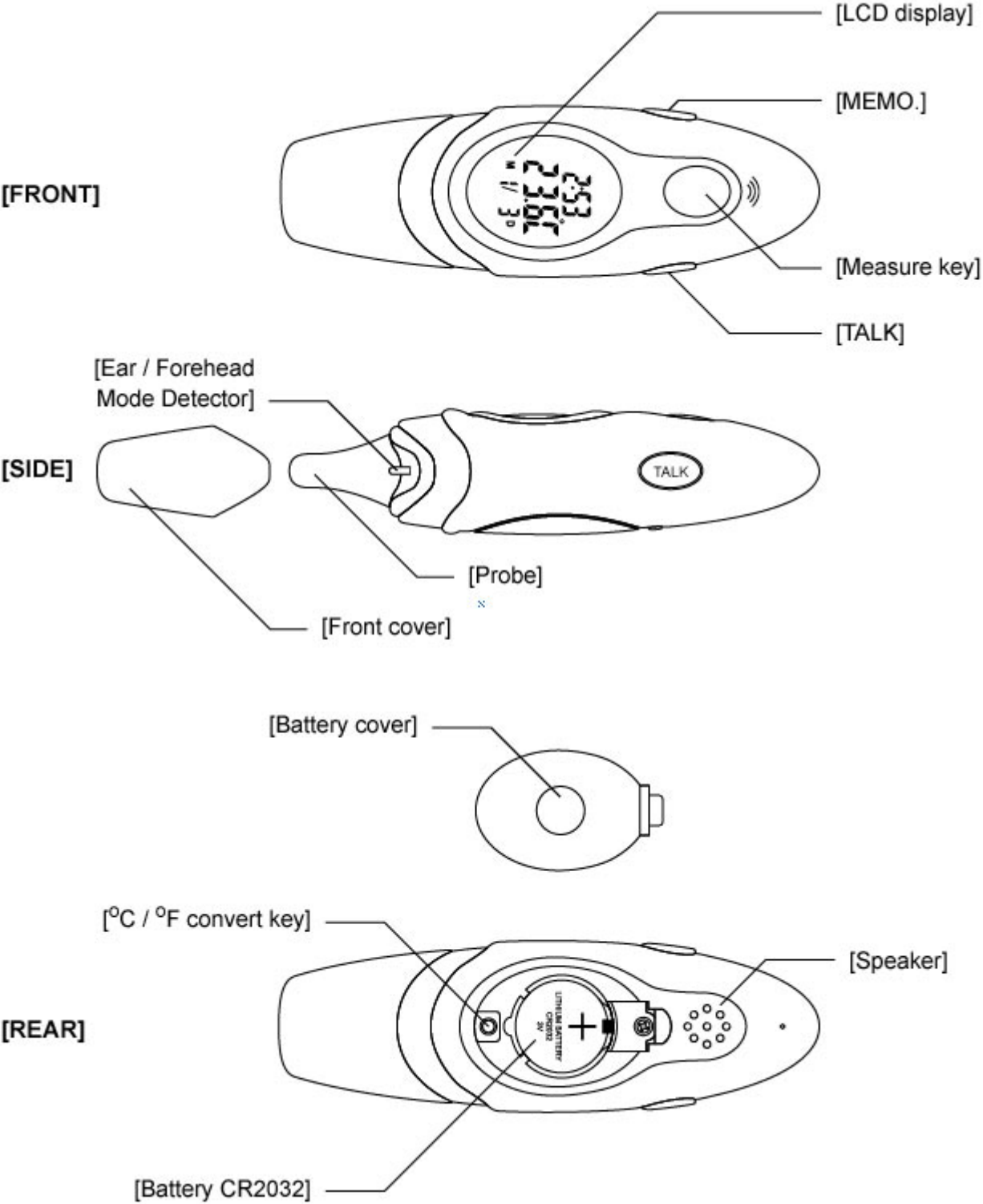Keep this Manual with you for a convenient reference.
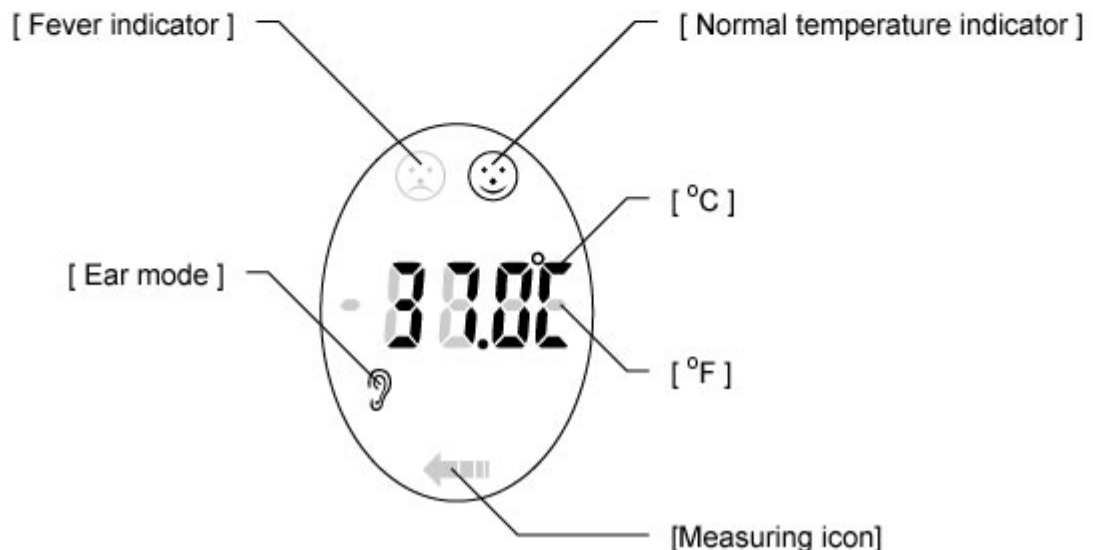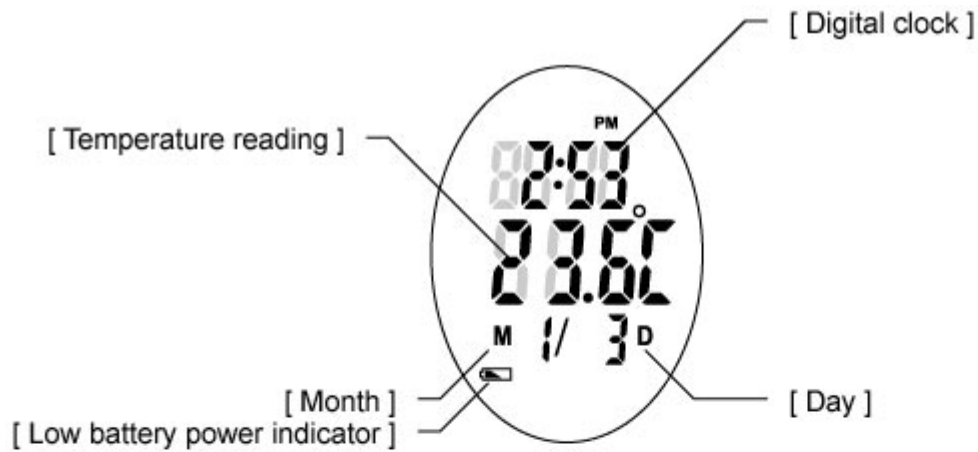Keep this Manual in a proper way and avoid any loss.

Safety precautions

As with any thermometer, proper technique is crucial to getting accurate temperature readings. So before using this thermometer, please read this manual thoroughly and carefully.

- Always store the thermometer in a cool and dry place. Do not expose the thermometer to extreme thermometer below –10°C (14°F) or above 55°C (131°F), or excessive humidity above 95%RH. Do not put the thermometer in a car that is under direct exposure to sunlight.

- Avoid letting the thermometer falls from a height or strongly hitting it with a hard object.

- Do not touch the thermometer sensor tip with fingers. Use a soft damp cloth to wipe it if necessary.

- Do not disassemble the thermometer.

- Basic safety precautions should always be observed, especially when the thermometer is used on or near children and disabled persons.

- The use of this thermometer is not intended to be a substitution to consulting your physician.

Product Structure

[FRONT]

[LCD display]

[MEMO.]

[Measure key]

[TALK]

[SIDE]

[Ear / Forehead Mode Detector]

[Probe]

[Front cover]

[Battery cover]

[°C / °F convert key]

[Speaker]

[REAR]

[Battery CR2032]

LCD Display :

[Digital clock]

[Temperature reading]

[Month]
[Low battery power indicator]

[Day]

[Fever indicator]

[Normal temperature indicator]

[Ear mode]

[°C]

[°F]

[Measuring icon]

How does it work?

The thermometer measures the infrared heat generated by either the eardrum and its surrounding tissue, or the center of forehead skin surface.

The measured value is mathematically adjusted to give a displayed temperature value that approximates the oral temperature. As with any type of infrared thermometer, the displayed temperature is not necessarily the same as the oral the temperature measured at the same time.

Highlighted Features

- Measures temperature in 2 convenient ways: at the ear or the forehead
- Fast and accurate
- Human voice reports of the temperature
- A real time clock and room temperature display when it is placed on the cradle.
- Washable sensor tip can be wipe using a clean cloth slightly damped with alcohol or water.
- It changes from measure mode to the clock mode automatically if the thermometer is left unused for 30 seconds.

Notice before measurement

As the clinical thermometer:

1. Use thermometer at a constant temperature between 15°C to 35°C (59°F to 95°F)
2. It is important that the thermometer is directed to the drum head along the ear canal OR put on the center of forehead. For a person who wears ear plug or hearing aid, remove the device and wait for 15 minutes before talking temperature.
3. Ensure that the subject has not recently been in a draughty place or one in which the temperature is significantly different from that in which you are using thermometer.
4. If the thermometer is taken from a room with a temperature different from that in which it is being used, wait for 20 to 30 minutes to acclimatize the device before using it, videlicet the temperature of thermometer should be almost the same with the environment.
5. Do not use the thermometer under air vent.
6. Avoid taking the subject's temperature in a draughty location and wait for several minutes before taking a measurement if the subject:

   - Has walked;
   - Has been in a draughty room or a place where the temperature is significantly different from that in which the thermometer is being used.
   - Has been exposed to any activity that may affect the normal temperature such as bathing, showering, shampooing, hair drying, etc.
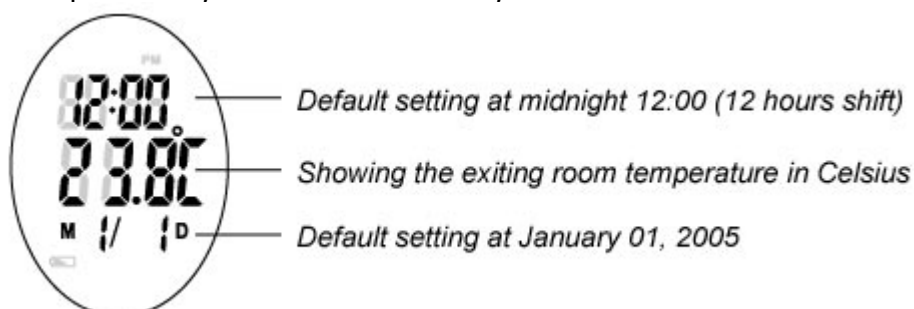
I/ PREPARATIONS

1. Replace any low-voltage battery to ensure a full power supply.
2. For proper measurement, condition the thermometer for 30 minutes in measurement site till room temperature.
3. An unexpected fluctuation of ambient temperature is likely to deteriorate a measuring accuracy. When a measurement site shows a different temperature with the area where a thermometer locates, or any attempt to perform a temperature measure in front of air conditioner, desirable results are impossible.
4. Be sure to have a clean sensor tip.
5. Be sure to keep ear clean since a ceriman-filled or feather-filled ear is possible to cause inaccuracy.
6. Measurement shall be done at a rest time to ensure an accurate result. Temperature is likely to increase immediately after exercise or bathing.

Getting start

Disclaimer: Open the door to the back of the thermometer; remove the battery to unprotect plastic insulating located below. Thus the contact will be possible. Return the stack respecting polarity and close the door.

1. Current date and time display: Range of date display falls within Gregorian calendar year 1901~2099, time display mode includes 12 hours shift or 24 hours shift (not user selected). The initial time for a powered system is set at January 01, 2009.

Default setting at midnight 12:00 (12 hours shift)

Showing the exiting room temperature in Celsius
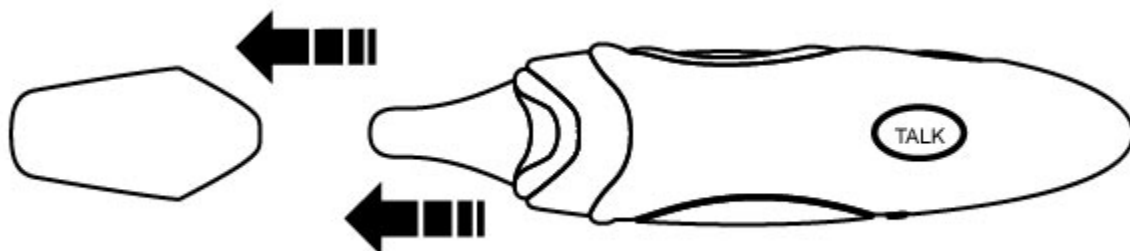
Default setting at January 01, 2005

2. Measurement and display of temperature: Measurement ranges from 32.0°C ~ 42.9°C (89.6°F ~ 109.3°F).
3. 30 sets of measurement records stored and searchable: Maximum 30 sets of temperature records stored. Each set has a maximum storage time of 30 days. Temperature is stored together with measuring date, time (morning or afternoon) and status (daytime or nighttime).
4. The voice announces measures temperature fever in degrees Celsius ° C (or °F)
5. Press **[°C / °F]** to select Celsius or Fahrenheit

II/ HOW TO TAKE MEASUREMENT
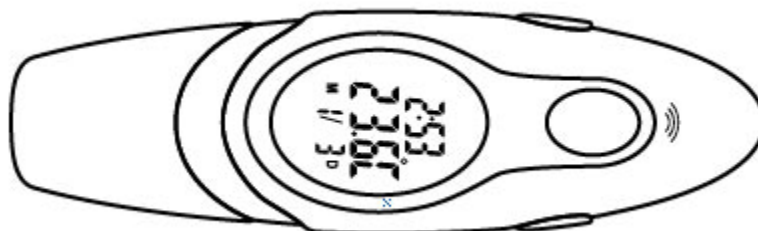
FOR EAR MEASUREMENT

1) Remove the front cover by pulling it away from the thermometer.

2) Gently fit the thermometer probe into ear canal, press **[📶]** once to start the measurement. Upon completion, you will hear a music sound. Now you will hear the human voice reporting the reading or see it from the LCD.

FOR FOREHEAD MEASUREMENT

1) Front cover should be attached on the thermometer

2) Place the probe at the center of the forehead, not at an angle. Press **[📶]** once to start the measurement. Upon completion, you will hear a music sound. Now you will hear the human voice reporting the reading or see it from the LCD.
*Reading is likely to be affected by sweat, oil and the surroundings.

FOR BOTH EAR & FOREHEAD MEASUREMENT

The result measuring either in **EAR** or **FOREHEAD** will be stored into memory automatically. If 30 sets of memory are stored already, the first set of data will be removed, and others decreased by 1 with the new one at the top.
Note: the recorded data will be removed automatically when it is recorded over 30 days
The maximum is 3 times in a consecutive way. It is possible that a proper body temperature measure is obstructed despite of a normal recovery. For continuous measurement up to 4 times or above, wait for 10 minutes before another measure.

III/ HOW TO TAKE MEASUREMENT

FEVER INDICATOR

A. Icon 😊 displays on the LCD when the normal temperature taken.

EAR		FOREHEAD	
Measuring (Ear)	Result	Measuring (Forehead)	Result

B. Icon 😟 displays on the LCD when fever temperature taken.

EAR		FOREHEAD	
Measuring (Ear)	Result	Measuring (Forehead)	Result

Display of measuring results:

 A. True value display for result falls between 32.0°C ~ 42.9°C ; 89.6°F ~ 109.3°F

 B. "HI" displayed for result above 42.9°C / 109.3°F

 C. "LO" displayed for result below 32.0°C / 89.6°F At completion of measurement, the unit automatically returns to time mode after 40 seconds. Or you can: A. Press [📶] to take another measure.

 B. Press **[MEMO.]** to return time mode

 C. Press **[TALK]** to report the temperature

The display will be turned off automatically in 3 minutes after last key pressed.

| Ear mode result | OR | Forehead mode result | After 40 seconds | Normal display |

IV/ ADVANCED OPERATION

- **For Time mode**

 System enters to Time mode when,

 1. Power on;

 2. No key is pressed for more than one minute.

- **For normal status**

 1. Display time in a sequence of month, date, room temperature, hour, minute with a flickering " : " stands for second; and instant room temperature.

 2. Press the [TALK] to display the temperature.

 3. Press and hold [TALK] for 2 seconds to activate or disable the talking function.

  - During measurement, you still hear " di di " no matter it is at talking or non-talking mode.

 4. Press **[MEMO.]** to retrieve the recorded temperature and Press Hold **[MEMO.]** for 2 seconds

to initiate set up mode.

5. Press **[°C/°F]** to select Celsius or Fahrenheit (the button is inside the battery cover)

- For setup mode:

    Press and hold **[MEMO.]** for 2 seconds to enter the setup mode, the digit will be flashed.

    1. Press **[TALK]** to shift between a setting of hour, minute, year, month and date.

    2. Press **[MEMO.]** to increase the digit.

    3. Press **[TALK]** subsequently to resume a normal status.

    * Unit returns to time mode automatically for 1 minute after last key pressed.

- For memory search mode:

    1. A search mode can be activated by press **[MEMO.]** at normal time model;

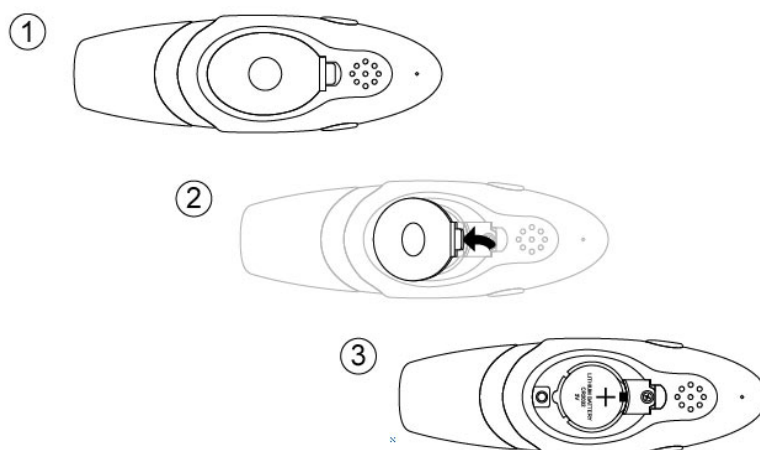   2. "--" is displayed if no data has been stored;

    3. Search number is shown for stored data available. Maximum storage is 30 sets of data;

    4. Press and hold **[MEMO.]** to increase the digits rapidly;

    5. Unit returns to time mode automatically for 5 seconds after last **[MEMO.]** key pressed.

V/ REPLACE A BATTERY

Remove the battery compartment cover as picture 1 & 2. Insert a battery with proper polarity (as picture 3). Place back the cover.

VI/ MAINTENANCE, STORAGE AND CALIBRATION

Maintenance:

1. Remove any stains on the body with a soft and dry cloth.
2. Don't wash with water or detergent containing abrasive or benzene.

Storage:

1. Clean the thermometer and put the cover to protect the lens after each use.
2. Don't leave the thermometer exposed to or at high risk of direct sunshine, high temperature, dampness, fire, flame, vibration or impact.
3. Remove the battery for long time of no use.

Calibration:

This thermometer is calibrated at the time of manufactured. If the thermometer is used according to the instruction, periodic re-calibration is not required. If at any time you question the accuracy of the measurement, please contact the retailer immediately.

Don't attempt to modify or reassemble the thermometer.

VII/ TROUBLES AND TROUBLESHOOTING

Troubles	Checklists	Countermeasures
No response	Battery used up?	Change new battery
	Battery in wrong polarity?	Adjust battery to proper polarity.
Battery symbol on LCD	Low battery	Change new battery
"Lo" on screen (result below 32°C, 89.6°F).	Thermometer rightly pointed at the eardrum?	Follow User's Manual for proper measurement.
"Hi" on screen (result above 42.9°C, 109.3°F).	Please check the operation method	Follow User's Manual for proper measurement.
"ErrU" on screen	Don't measure after pressing Measure.	Follow steps in User's Manual for proper measurement.
"ErrH" on screen	Errors detected during self-check.	Consult a repairman.

Specifications:

Product Name   : SPEAKING THERMOMETER MUTLIFUNCTION
                        EAR / FOREHEAD INFRARED
Model   : TS15
Power supply   : 1 X CR2032
Temperature sensing part: IR (infrared) sensor
Measuring range   : 32.0°C ~ 42.9°C (89.6°F ~ 109.3°F)
Measuring accuracy   : ±0.2°C (or +/- 0.4°F) from 35.5°C ~ 42.0°C (or 95.9°F to 107.6°F)
                        ±0.3°C (+/-0.5°F) from 32.0°C ~ 35.4°C (or 89.6°F to 95.8°F)
                        ±0.3°C (+/-0.5°F) from 42.1°C ~ 42.9°C (or 107.7°F to 109.3°F)
Memory :   : 3 x 30 memories for 3 users
Dimensions   : 115 (L) × 35 (W) ×26 (H) mm
Weight   : 40g (with battery)
Working environment   : Temperature   : 15 ~ 35°C (59.0°F to 95.0°F)
                        Relative humidity   : 20%RH ~ 80%RH
Storage environment   : Temperature   : -10 ~ 55°C (14°F to 131.0°F)
                        Relative storage humidity : 20%RH ~ 90%RH

Accessories:
User's Manual : 1 pc.
Display Stand : 1 pc

Notes:
1) Under the environment with electrostatic discharge, the unit may malfunction and may require user to reset the unit.
2) Dispose with care; please consult the retailer for details.

Details and precautions on the use of batteries
- Discard a used battery in nature or garbage pollutes and prevents the recovery of recyclable materials.
It is therefore important **to limit consumption of batteries** and follow these guidelines:
- focus on alkaline batteries (that last longer than the saline batteries) and when possible, rechargeable batteries
- deposit batteries and accumulators in specific containers arranged among traders.
 For example, metals will be valued and polluted the environment because they contain heavy metals hazardous to health and the environment primarily (cadmium and nickel)

- The piles must installation by respecting the polarity indicated on the apparatus and the pile.

An incorrect positioning can is to damage the apparatus, is to cause escapes on the level of the pile, is to the extreme to cause a fire or the explosion of the pile.

- To ensure proper operation, the batteries must be in good condition. In case of abnormality in the functioning of the device, put fresh batteries

- Never attempt to recharge non-rechargeable batteries. They could run, warm up, causing a fire or explosion.

- Replace all batteries at the same time. Never mix zinc batteries with alkaline batteries or rechargeable batteries

- The batteries must be removed from the device

- Also, remove the batteries from your device if you do not use it for a long time, if the batteries may leak and cause damage.

- Never try to short-circuit the battery terminals

- Never dispose of batteries in fire, they might explode

- Charging of batteries is to be performed by an adult.

- Remove batteries from the device before reloading.

- We recommend an adult to supervise children when they change the batteries so that these instructions are complied with or to make himself the replacement of batteries.

- If a battery is swallowed, immediately consult a doctor or poison control center nearest you.

Do not forget to carry the product with you

The symbol opposite indicates that the electric and electronic components are the subject of a selective collection, it represents a dustbin on wheels barred of a cross. The electric and electronic products can contain substances having negative effects on the environment and health.   Worn, they should not be thrown with domestic waste but to be imperatively recovered in the selective collections: dump, associations of social economy and interdependent.
The selection of waste decreases the potential effects on the environment and human health due to the substances dangerous which can compose certain components electric and electronic.
Take an active part: to remove you not from the apparatuses with domestic waste!

$C\epsilon$0123

EN 60601-1-2 :2001+A1 :2006 ; EN 12470-5.

This device complies with the requirements of the Medical Device Directive 93/42/CE and it undergone a quality assurance system quality (in accordance with annex V, section 3 of directive 93/42/EEC) periodically monitored by the TUV SUD (body notified, identified under N°0123)

Warranty: 2 years except battery

Importer: INOVALLEY – 9, rue du Rapporteur – 95310 Saint-Ouen l'Aumône – France

Shenzhen Dong di xin Technology Co – Shenzhen - CHINE

Déclaration de Conformité (DoC)

Nous, Société Inovalley, 9 rue Rapporteur, 95310 Saint-Ouen l'Aumone, déclarons sous notre seule responsabilité que le produit:

Marque : Inovalley
Nom commercial : Thermomètre médical infrarouge multifonction parlant
Type: TS15 - Modèle: DX6637
auquel se réfère cette déclaration est conforme aux exigences essentielles et aux autres dispositions de la directive 93/42/CE (matériel médicaux) qui lui sont applicables.

Le produit est en conformité avec la norme EN12470-5 (2003)

Il fait l'objet d'un système d'assurance qualité (conformément à l'Annexe V, section 3 de la directive 93/42 CE) périodiquement surveillé par le TUV SUD (organisme notifié, identifié sous le N° 0123).

Lieu et date d'édition
St Ouen l'Aumône, le 18 Mai 2009

Le fabricant
INOVALLEY

J.L THIRY (PDG)