

microlife®



NC300

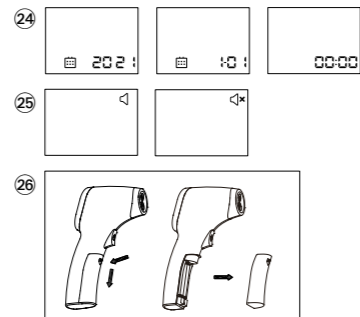
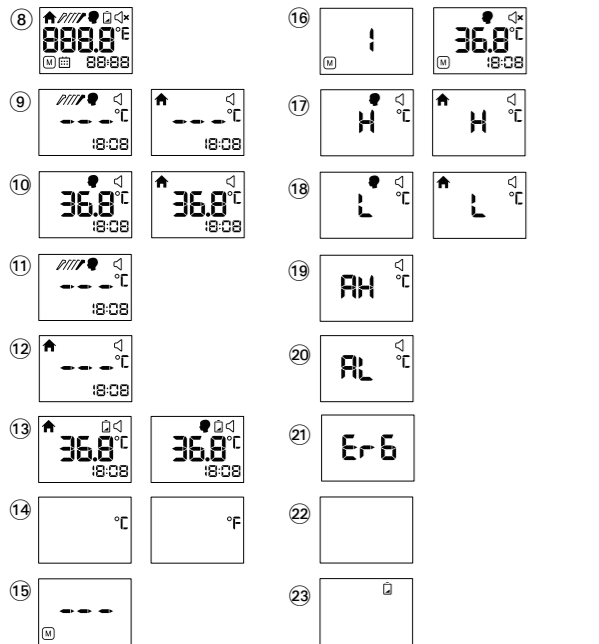
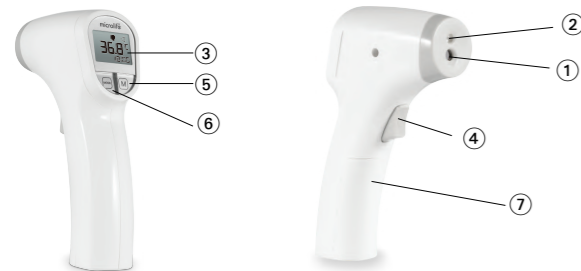
Non Contact Thermometer

Microlife NC 300



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CE0044



Name of Purchaser _____






Serial Number _____

Date of Purchase _____

Specialist Dealer _____

- ① Measuring sensor
- ② Tracking light
- ③ Display
- ④ START/IO button
- ⑤ M-button (memory)
- ⑥ MODE button
- ⑦ Battery compartment cover
- ⑧ All segments displayed
- ⑨ Ready for measuring
- ⑩ Measurement complete
- ⑪ Body mode
- ⑫ Object mode
- ⑬ Low battery indicator
- ⑭ Changing between Celsius and Fahrenheit
- ⑮ Recall mode
- ⑯ Recall the last 30 readings
- ⑰ Measured temperature too high
- ⑱ Measured temperature too low
- ⑲ Ambient temperature too high
- ⑳ Ambient temperature too low
- ㉑ Error function display
- ㉒ Blank display
- ㉓ Flat battery
- ㉔ Date/Time
- ㉕ Beeper function setting
- ㉖ Replacing the battery

Explanation of Symbols

	Follow Instructions for Use. This document provides important product operation and safety information regarding this thermometer. Please read this document thoroughly before using the device and keep for future reference.
	Type BF applied part
	Caution
	Recycling
	Batteries and electronic devices must be disposed of in accordance with the locally applicable regulations, not with domestic waste.

This Microlife thermometer is a high quality product incorporating the latest technology and tested in accordance with international standards. With its unique technology, this device can provide a stable, heat-interference-free reading with each measurement. The device performs a self-test every time it is switched on to always guarantee the specified accuracy of any measurement. This Microlife thermometer is intended for the periodic measurement and monitoring of human body temperature.

This thermometer has been clinically tested and proven to be safe and accurate when used in accordance to the operating instruction manual.

Please read through these instructions carefully in order for you to understand all functions and safety information.

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Guarantee Card (see Back Cover)

1. The Advantages of this Thermometer

1 second measurement

The innovative infrared technology allows the measurement without even touching the object. This guarantees safe and sanitary measurements.

Multiple uses (wide range of measurement)

This thermometer offers a wide range of measurement from 0.1 - 99.9 °C / 32.2 - 211.8 °F, meaning the unit can be used to measure body temperature or it also has a feature allowing it to be used to measure surface temperature of the following examples:

- Milk surface temperature in a baby's bottle
- Surface temperature of a baby's bath
- Ambient temperature

Accurate and reliable

The unique probe assembly construction incorporates an advanced infrared sensor, ensuring that each measurement is accurate and reliable.

Gentle and easy to use

- The ergonomic design enables simple and easy use of the thermometer.
- This thermometer can even be used on a sleeping child without causing any interruption.
- This thermometer is quick, therefore child-friendly.

30 readings recall

Users will be able to recall the last 30 readings with a record of both time and date when entering the recall mode, enabling efficient tracking of temperature variations.

Safe and hygienic

- No direct skin contact.
- No risk of broken glass or mercury ingestion.
- Completely safe for use on children.

Fever alarm

10 short beeps and a red LCD backlight alert the patient that he/she may have a temperature equal to or higher than 37.5 °C.

2. Intended purpose

Intended Use

Measuring of body temperature from the forehead to determine body temperature as an indicator for illness and for monitoring of therapies and recovery processes as well as surface temperature of objects such as milk bottle/bathwater or ambient temperature.

Indications

The device is intended to be used by patients (self-monitoring) or third person in healthcare institutions and home care for suspicion of abnormal body temperature (fever, hypothermia) and measuring and monitoring of temperature.

Intended user & patient population

A responsible person with reading ability can use the device to measure body temperature by forehead. The intended patients are for infants, children, adults of the general population.

Contra-indications

Any breached or compromised skin.

The device is not suitable for hypothermia patients.

Clinical benefits to be expected

Ensure accuracy of the temperature measurement.

3. Important Safety Instructions

- Follow instructions for use. This document provides important product operation and safety information regarding this device. Please read this document thoroughly before using the device and keep for future reference.
- This device may only be used for the purposes described in these instructions. The manufacturer cannot be held liable for damage caused by incorrect application.
- **Never immerse this device in water or other liquids. For cleaning or disinfection, please follow the instructions in the «Cleaning and Disinfecting» section.**
- Do not use this device if you think it is damaged or notice anything unusual.
- Do not attempt to repair, modify or open this device.
- A basic physiological effect called vasoconstriction can occur in the early stages of fever, resulting in a cool skin effect. The recorded temperature using this thermometer can, therefore, be unusually low.
- If the measurement result is not consistent with the patient's finding or unusually low, double check the result by another core body temperature measurement.
- This device comprises sensitive components and must be treated with caution. Observe the storage and operating conditions described in the «Technical Specifications» section.
- Ensure that children do not use this device unsupervised; some parts are small enough to be swallowed.
- Do not use this device close to strong electromagnetic fields such as mobile telephones or radio installations. Keep a minimum distance of 3.3 m from such devices when using this device.
- Protect it from:
 - Extreme temperatures
 - Impact and dropping
 - Contamination and dust
 - Direct sunlight
 - Heat and cold
 - Extreme Humidity
- If the device is not going to be used for a prolonged period the batteries should be removed.
- Do not attempt to take temperatures at other sites, such as wrist, shin, as it may result in false readings.
- Store and operate the device under suitable temperature and humidity as indicated in the «Technical Specifications» section.
- Please report any serious incident, injury or adverse event that has occurred in relation to the device to the manufacturer/ European authorized representative (EC REP), and to the competent authority.
- It's recommended that this product is inspected every two years, after mechanical impact, liquid ingress or if malfunction is assumed. Testing must be carried out by trained personnel following the manufacturer's instructions.
- Professional users must follow the country specific applicable medical devices ordinance.
- Do not touch or clean the sensor with a hard object.
- If the patient temperature is influenced (e.g. incubator, heating blanket) the measurement result provided by this device shall not be used to determine the presence/absence of fever.
- Regular cleaning and disinfection based on using environment is advised to avoid spreading of contact transmittable diseases.
- The residual risks and undesirable side effects that may be related to the use of this device can include but may not be limited to the following:
 - Deviation of measurement results
 - Treatment delay
 - Contamination

⚠ WARNING: This product is not intended to substitute advice from a physician, pharmacist, or other licensed health-care professional. You should not use this product for self-diagnosis or for treating a health problem. Seek advice from your healthcare provider immediately if you suspect that you or your child is not feeling well, has a fever, appears distressed or has a medical condition.

4. How this Thermometer measures Temperature

This thermometer measures infrared energy radiated from the forehead as well as objects. This energy is collected through the lens and converted to a temperature value.

5. Control Displays and Symbols

- **All segments displayed** (8): Press the START/IO button (4) to turn on the unit; all segments will be shown for 1 second.
- **Ready for measuring** (9): When the unit is ready for measuring, the «°C» or «°F» icon will keep flashing while the mode icon (body or object) will be displayed.
- **Measurement complete** (10): The reading will be shown on the display (3) with the «°C» or «°F» icon and the mode icon steady. Press the START/IO button (4) again to go back to the «ready for measuring» mode (9), or wait 5 sec when «°C» or «°F» icon is flashing again. The unit is ready for the next measurement.
- **Low battery indicator** (13): When the unit is turned on, the «battery» icon will keep flashing to remind the user to replace the batteries.

6. Setting Date, Time and Beeper Functions

Setting the date and time

1. After the new batteries are fitted, the year number flashes in the display (24). You can set the year by pressing the M-button (5). To confirm and then set the month, press the MODE button (6).
2. Press the M-button (5) to set the month. Press the MODE button (6) to confirm and then set the day.
3. Follow the previously mentioned instructions to set the day, 12 or 24 hour mode, hours and minutes.
4. Once you have set the minutes and pressed the START/IO button (4), the date and time are set and the time is displayed.

☞ If no button is pressed for 20 seconds, the device automatically switches to ready for measuring (9).

☞ **Cancel time setup:** Press the START/IO button (4) during time setup. The LCD will show Date/Time icons with «--:--». After that press the START/IO button (4) to start the measurement. If no further action is taken within 30 seconds, the device will automatically turn off.

☞ **Change current date and time:** Press and hold the MODE button (6) for approx. 8 seconds until the year number starts to flash (24). Now you can enter the new values as described above.

Setting the beeper

1. Press and hold the MODE button (6) for 3 seconds to set the beeper (25).
 2. Press the M-button (5) to either turn the beeper on or off. The beeper is activated when the beeper icon (25) is shown without a cross.
- ☞ When the beeper setting has been chosen, press the START/IO button (4) to enter the «ready for measuring» mode (9); otherwise the device automatically switches to ready for measuring after 10 seconds.

7. Changing between Body and Object Mode

1. Press the START/IO button (4). The display (3) is activated to show all segments for 1 second.
2. The default mode is body mode (11). Press the MODE button (6) to switch to object mode (12). For switching back to body mode, press the MODE button again.

8. Directions for Use

Measuring in body mode

1. Press the START/IO button (4). The display (3) is activated to show all segments for 1 second.
2. A flashing «°C»/«°F» icon, the blinking blue tracking light (2) and a beep indicate that the device is ready for measurement (9).
3. Remove any hair, sweat or dirt from the forehead before measuring to ensure the accuracy of the readings.
4. **Aim the thermometer at the center of the forehead with a distance of no more than 5 cm.**
5. Press the START button (4) and ensure that the activated blue tracking light is aimed at the center of the forehead. After 1 seconds a long beep will verify the completion of measurement.

6. Read the recorded temperature from the LCD display.
7. For the next measurement, press the START/IO button (4) again to go back to the «ready for measuring» mode (9), or wait 5 sec when «°C» or «°F» icon is flashing again and follow steps 4-5 above.
8. Press and hold the START/IO button (4) for 3 seconds to turn off the device; otherwise the device will automatically switch off after approx. 30seconds.

Measuring in object mode

1. Press the START/IO button (4). The display (3) is activated to show all segments for 1 second.
2. Press the MODE button (6) to switch to object mode(12).
3. A flashing «°C»/«°F» icon, the blinking blue tracking light (2) and a beep indicate that the device is ready for measurement (9).
4. Aim the thermometer at the center of the object you want to measure with a distance of no more than 5 cm. Press the START/IO button (4). After 1 seconds a long beep will verify the completion of measurement.
5. Read the recorded temperature from the LCD display.
6. For the next measurement, press the START/IO button (4) again to go back to the «ready for measuring» mode (9), or wait 5 sec when «°C» or «°F» icon is flashing again and follow steps 4-5 above.
7. Press and hold the START/IO button (4) for 3 seconds to turn off the device; otherwise the device will automatically switch off after approx. 30 seconds.

NOTE:

- **Patients and thermometer should stay in similar room condition for at least 30 minutes.**
- Don't take a measurement while or immediately after nursing a baby.
- Don't use the thermometer in high humidity environments.
- Patients should not drink, eat or exercise before/while taking the measurement.
- Don't move the measurement device from the measuring area before hearing the termination beep.
- 10 short beeps and a red LCD backlight alert the patient that he/ she may have a temperature equal to or higher than 37.5 °C.
- Always take the temperature in the same location, since temperature readings may vary according to locations.

- Doctors recommend rectal measurement for newborn infants within the first 6 months, as all other measuring methods might lead to ambiguous results. If using a non contact thermometer on those infants, we always recommend verifying the readings with a rectal measurement.
- In the following situations it is recommended that three temperatures are taken with the highest one taken as the reading:
 1. Children under three years of age with a compromised immune system and for whom the presence or absence of fever is critical.
 2. When the user is learning how to use the thermometer for the first time until he/she has familiarized himself/herself with the device and obtains consistent readings.
 3. If the measurement is surprisingly low.

- **Readings from different measuring sites should not be compared as the normal body temperature varies by measuring site and time of day,** being highest in the evening and lowest about one hour before waking up.

Normal body temperature ranges:

- Axillar: 34.7°C - 37.3 °C / 94.5°F - 99.1 °F
- Oral: 35.5°C - 37.5 °C / 95.9°F - 99.5 °F
- Rectal: 36.6°C - 38.0 °C / 97.9°F - 100.4 °F
- Microlife NC 300: 35.4°C - 37.4 °C / 95.7°F - 99.3 °F

9. Changing between Celsius and Fahrenheit

This thermometer can display temperature readings in either Fahrenheit or Celsius. To switch the display between °C and °F, **press and hold** the MODE button (6) for 3 seconds; the beeper icon is shown on the display. Press the MODE button(6) again; the current measurement scale («°C» or «°F» icon) will be shown on the display (14). Change the measurement scale between °C and °F by pressing the M-button (5). When the measurement scale has been chosen, press the START/IO button (4) to enter the «ready for measuring» mode(9); otherwise the device automatically switches to «ready for measuring» mode (9) after 10 seconds.

10. How to recall 30 readings in Memory Mode

This thermometer can recall the last 30 readings with a record of both time and date.

- **Recall mode (15):** Press the M-button (5) to enter recall mode when the power is off. The memory icon «M» will display.

- **Reading 1 - the last reading** (16): Press and release the M-button (5) to recall the last reading. Number «1» and a «M» are displayed.

Pressing and releasing the M-button (5) after the last 30 readings have been recalled will resume the above sequence from reading 1.

11. Error Messages

- **Measured temperature too high** (17): Displays «H» when measured temperature is higher than 43 °C / 109.4 °F in body mode or 99.9 °C / 211.8 °F in object mode.
- **Measured temperature too low** (18): Displays «L» when measured temperature is lower than 34 °C / 93.2 °F in body mode or 0.1 °C / 32.2 °F in object mode.
- **Ambient temperature too high** (19): Displays «AH» when ambient temperature is higher than 40 °C / 104 °F.
- **Ambient temperature too low** (20): Displays «AL» when ambient temperature is lower than 15 °C / 59°F in body mode or lower than 5.0 °C / 41.0 °F in object mode.
- **Error function display** (21):
«Er 6»: The system has a malfunction.
- **Blank display** (22): Check if the batteries have been inserted correctly. Also check polarity (<+> and <->) of the batteries.
- **Flat battery indicator** (23): If only «battery» icon is shown on the display, the batteries should be replaced immediately.

12. Cleaning and Disinfecting

Use an alcohol swab or cotton tissue moistened with alcohol (70% Isopropyl) to wipe surface pollutions off the thermometer.

For cleaning the probe, always start wiping the surface around the measuring sensor clockwise once and then wipe the whole contact surface of probe from the inside out 3 times. Ensure that no liquid enters the interior of the device.

Never use abrasive cleaning agents, thinners or benzene for cleaning and never immerse the device in water or other cleaning liquids. Take care not to scratch the surface of the sensor lens and the display.

Let the disinfectant dry off for 10 minute before next use.

Avoid immersing or wiping the display to protect it from fading.

Check the device appearance. Do not use this device if you think it is damaged or notice anything unusual. Start to use the device following the «Directions for Use» section, and if there is any error messages displayed, please take actions following the « Error messages » section.

13. Battery Replacement

This device is supplied with 2 new, long-life 1.5V, size AAA batteries. Batteries need replacing when this icon «battery» (23) is the only symbol shown on the display.

Remove the battery cover (26) by sliding it in the direction shown. Replace the batteries – ensure correct polarity as shown by the symbols in the compartment.

14. Guarantee

This device is covered by a 2 year guarantee from the date of purchase. The guarantee is valid only on presentation of the guarantee card completed by the dealer confirming date of purchase or the receipt.

- The guarantee covers the device. Batteries and packaging are not included.
 - Opening or altering the device invalidates the guarantee.
 - The guarantee does not cover damage caused by improper handling, discharged batteries, accidents or non-compliance with the operating instructions.
- Please contact Microlife-service.

15. Technical Specifications

Type:	Forehead Thermometer NC300
Mode Type:	Adjust mode
Measuring site:	Forehead
Reference body site:	Sublingual
Measurement range:	Body mode: 34.0°C - 43 °C / 93.2°F - 109.4 °F Object mode: 0.1°C - 99.9 °C / 32.2°F - 211.8 °F
Resolution:	0.1 °C / °F
Measurement accuracy (Laboratory):	Body mode: ±0.2 °C, 35.0°C ~ 42.0°C / ±0.4 °F, 95.0°F ~ 107.6°F ±0.3 °C, 34.0°C ~ 34.9 °C and 42.1°C ~ 43.0 °C / ±0.5 °F, 93.2°F ~ 94.8 °F and 107.8°F ~ 109.4 °F Object mode: ±1.0 °C, 0.1°C ~ 99.9 °C / ±2 °F, 32.2°F ~ 211.8 °F
Clinical results:	Repeatability: 0.24°C Bias: 0.07°C Limits of agreement: 0.90°C
Display:	Liquid Crystal Display, 4 digits plus special icons

Acoustic: The unit is turned ON and ready for the measurement: 1 short beep.
Complete the measurement: 1 long beep (1 sec.) if the reading is less than 37.5 °C / 99.5 °F, 10 short «beep» sounds, if the reading is equal to or greater than 37.5 °C / 99.5 °F.
System error or malfunction: 3 short «bi» sounds.
30 readings recall in the memory mode with a record of both time and date.

Memory:

Backlight: The display light will be GREEN for 1 second, when the unit is turned ON.
The display light will be GREEN for 5 seconds, when a measurement is completed with a reading less than 37.5 °C / 99.5 °F.
The display light will be RED for 5 seconds, when a measurement is completed with a reading equal to or higher than 37.5 °C / 99.5 °F.

Operating conditions: Body mode: 15°C - 40.0 °C / 59°F - 104.0 °F
Object mode: 5°C - 40.0 °C / 41°F - 104.0 °F
15 - 95 % relative maximum humidity

Storage conditions: -25°C - +55 °C / -13°F - +131 °F
15% - 95 % relative maximum humidity

Automatic Switch-off: Approx. 30sec after last measurement has been taken.

Battery: 2 x 1.5 V alkaline batteries; size AAA

Battery lifetime: approx. 1500 measurements
(using new batteries)

Dimensions: 175 x 44x 84 mm

Weight: 129g (with batteries), 107g (w/o batteries)

IP Class: IP22
Protected against solid foreign objects of 12.5mm Ø and greater. Protected against vertically falling water drops when enclosure tilted up to 15°.

Reference to standards: ISO 80601-2-56,
IEC 60601-1, IEC 60601-1-2 (EMC),
IEC 60601-1-11

Expected service life: 5 years or 12000 measurements

This device complies with the requirements of the Medical Device Directive 93/42/EEC.

Technical alterations reserved.

According to the Medical Product User Act a biennial technical inspection is recommended for professional users. Please observe the applicable disposal regulations.

16. www.microlife-asiapacific.com

Detailed user information about our thermometers and blood pressure monitors as well as services can be found at www.microlife-asiapacific.com.