



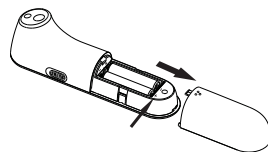
Non-Contact Forehead Thermometer Instruction Manual



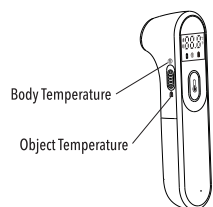
Model: HW-B05
Version: V1.0
Issued: 2020-12-16

QUICK START GUIDE

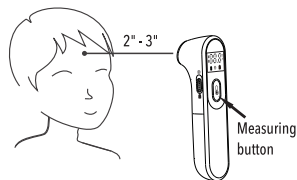
1. Install batteries
Insert two (2) AAA batteries aligned with the "+" and "-" polarity symbols.



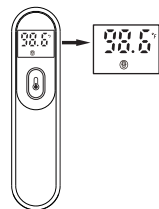
2. Select Body or Object temperature mode.
Use the toggle switch to select preferred mode.



3. Hold the thermometer 2-3" in (5cm to 8cm) from the middle of the forehead.
DO NOT contact the forehead (body mode).



4. Press the Measuring Button to begin taking temperature.
The reading will appear on the screen after successful measurement.



READ & SAVE THESE INSTRUCTIONS

INTRODUCTION & CLASSIFICATION

This is a Non-Contact Forehead Thermometer applicable to forehead measurement. The thermometer measures body temperature by collecting heat radiation emitting from the forehead. The new probe structure is adopted in this thermometer. The thermometer is simple to operate, hygienic, reliable and highly accurate. Users can get precise readings in less than one second.

Intended Use & Indication for use: The Non-Contact Forehead Thermometer is an infrared thermometer intended for the intermittent measurement of human body temperature in people of all ages.

This thermometer is classified as a Class IIa (for CE) / class II (for FDA) Medical Device, sorted as internally-powered equipment and type BF application device. It's prohibited to use this thermometer in flammable anesthetic gas or gas mixture of air and oxygen or nitrous oxide. This is a continuous operation equipment.

WORKING PRINCIPLE

Any object can generate certain proportion of infrared radiant energy as per its own temperature. The radiant energy and its wavelength distribution are subjected to its surface temperature. Based on this principle, this thermometer is designed to detect infrared radiation at 5-14um by highly precise infrared sensor. By adopting this high quality sensor plus special calculation and calibration, this thermometer is able to take accurate body temperature.

SAFETY PRECAUTIONS

⚠ WARNING

- Using this thermometer is not intended as a substitute for medical advice or consultation from a physician or medical professional.
- Measurement results are for reference only. Contact your physician if you have, or suspect you have, a medical problem.
- Keep the thermometer out of reach of children. Seek immediate medical attention if any batteries or Thermometer components are accidentally swallowed.
- DO NOT dispose of batteries in a fire.
- DO NOT use the Thermometer if it malfunctions or has been damaged in any manner.
- DO NOT mix old and new batteries. DO NOT mix alkaline, standard (carbon-zinc), or rechargeable (Ni-Cd, Ni-MH, etc.) batteries.

⚠ NOTICE

- This device is a precision instrument. DO NOT drop, disassemble or modify the Thermometer. Keep away from any vibrations as this may damage the Thermometer.
- DO NOT touch the sensor of the infrared probe with your fingers.
- The accuracy of the measurement may be affected if the forehead is covered by hair, perspiration, cosmetics, cap, or a scarf.

- Rest in a room at ambient temperature for at least 30 minutes after exercising, eating or bathing, and before measuring temperature.

- When the ambient temperature changes too much, such as moving the thermometer from one place of lower temperature, to another place of higher temperature, allow the Thermometer to remain in a room for 30 minutes where the ambient temperature is 59°F - 104°F (15°C - 40°C).

- Establish a baseline temperature on a regular day under normal conditions to use a future reference when checking for a fever.

- DO NOT measure areas on the forehead with scar tissue or tissue compromised by skin disorders as this can affect the measurement accuracy.

- DO NOT use if being treated with drug therapies that can increase body temperature.

- DO NOT immerse the device into water or any other liquid.
- DO NOT expose to direct sunlight.

- DO NOT use the thermometer while using a mobile or cordless phone, or when near a mobile or cordless phone in use.

- DO NOT use near strong electrostatic or magnetic fields to avoid impact on measurement accuracy.

- Store the thermometer according to the "Storage conditions" section of the "Technical Parameters".

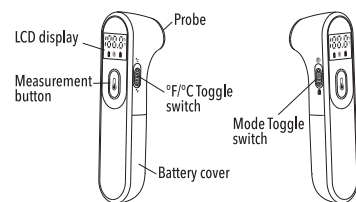
- Keep the sensor and probe cavity clean before use and after use according to the "Care, Cleaning, & Storage" section.

- The thermometer materials (ABS) have passed ISO 10993-5 and ISO 10993-10 standard test and have no known toxicities or allergens. This device is compliant with MDD requirements and based on current science and technology other potential allergic reactions are unknown.

⚠ RECOMMENDATIONS

- DO NOT use this thermometer for other purposes.
- DO NOT leave the thermometer exposed to any chemical solvents, direct sunshine or high temperature as this may damage the product or the batteries.

The Sunbeam Non-Contact Forehead Thermometer measures human BODY temperature by detecting heat emitting from the forehead. It also measures surface temperature of objects when in OBJECT mode.



FEATURES

- Body or Object measurement mode
- °F/°C readings
- Automatic shutoff (after 15 seconds of inactivity)
- High temperature alert

TECHNICAL PARAMETERS

Measurement distance	2-3" (5cm - 8cm)	
Measurement	Human body	93.2°F - 109.4°F (34.0°C - 43.0°C) <93.2°F / 34.0°C: "Lo" displays >109.4°F / 43.0°C: "Hi" displays
	Object	32.0°F - 199.4°F (0°C - 93°C) <32°F / 0°C: "Lo" displays >199.4°F / 93°C: "Hi" displays
Measuring accuracy (at laboratory conditions)	for forehead temperature: ±0.4°F / 0.2°F during 93.2°F - 107.6°F (34.0°C - 42.0°C); ±0.5°F / 0.3°F during 107.8°F - 109.4°F (42.1°C - 43.0°C).	
Clinical repeatability	0.1°F / 0.1°C	
Working conditions	59.0°F - 104°F (15°C - 40°C) Relative humidity ≤95% Non-condensing "ERR" displays when it's not used under working condition	
Storage conditions	-13°F - 131°F (-25°C - 55°C) Relative humidity ≤95% Non-condensing	
Power supply	DC 3V (2 x 1.5V AAA batteries)	
Display	LCD display	
Reading scale	Fahrenheit or Celsius	
Automatic shut off	to approximately 15 seconds	
Dimensions	5.9" x 1.42" x 1.77" (150mm x 36mm x 45mm)	
Net weight	approximately 2.3oz (66g)	
Shelf life	5 Years	

DISPLAY & ICONS



Function definition	Icon	Details
Battery level	⚡	When it is visible The batteries are exhausted and the Thermometer cannot function properly. Replace batteries before continuing to use.
		When it is not visible Battery power is sufficient to function properly.
Measurement mode	👤	Human Body mode
	🌡	Object mode
Reading scale	°C	Celsius reading
	°F	Fahrenheit reading
Reading display	🌡	Temperature value

FUNCTION DEFINITION OF BUTTONS

Buttons	Description
🌡	Temperature measurement button
°F / °C	Unit conversion toggle switch
👤 / 🌡	Mode conversion toggle switch

SELECTING MEASUREMENT MODES

When the thermometer is on, it displays the current measurement mode.

*Fahrenheit or °Celsius

Body or Object

Use the toggle switch on the right to select °F or °C.
Use the toggle switch on the left to select BODY or OBJECT MODE



BEFORE TAKING A TEMPERATURE

To help ensure accurate results

- Make sure the probe is clean according to the "Care, Cleaning, & Storage" section. DO NOT use it if it appears damaged.
- Choose a room or area with stable surrounding temperature 59.0°F - 104.0°F (15°C - 40°C), away from direct sunlight or strong air flow sources such as fans or air conditioners.
- Allow the thermometer at least 30 minutes to adjust to surrounding room temperature (if moving the device to or from a warmer or cooler location) before use. Unexpected fluctuations in ambient temperature may affect accuracy.
- Allow the body at least five minutes to adjust to surrounding room temperature.
- If a cool compress on the forehead or other measures were taken to reduce fever, the temperature reading may be low.
- Brush aside any hair and make sure the forehead is clean and free of perspiration, cosmetics, or any coverings (hats, caps, scarves) that may interfere with measuring.

MEASURING BODY TEMPERATURE

Note: Make sure you are in BODY mode before you take a forehead measurement. If the Thermometer is in Object mode, the results of a forehead measurement will not be accurate.

1. Select BODY mode with the toggle switch on the left side of the thermometer. The LCD display will show a face icon to confirm BODY mode.
2. Press the MEASURING BUTTON.
3. Aim the thermometer at the forehead from 2" - 3" (5cm - 8cm) away. The temperature reading will appear immediately.

When the measurement is lower than 93.2°F (34.0°C), the LCD will display "Lo" and beep four times. When the measurement is higher than 109.4°F (43.0°C), the LCD will display "Hi" and beep four times.

Display value range	LED display (Body mode)	Voice tips
<93.2°F / 34.0°C	Lo	"Beep Beep Beep Beep" four times
93.2 - 100.2°F (34.0 - 37.9°C)	Measuring Temp. value	"Beep" one time
100.4 - 109.4°F (38 - 43.0°C)	Measuring Temp. value	"Beep Beep Beep" three times
>109.4°F (43.0°C)	Hi	"Beep Beep Beep" four times

The thermometer will turn off automatically after 15 seconds of inactivity.

MEASURING OBJECT TEMPERATURE

1. Select OBJECT mode with the toggle switch on the left side of the thermometer.
2. Press the MEASURING BUTTON.
3. Aim the thermometer at the OBJECT from 2" - 3" (5cm - 8cm) away.
4. The blue light will appear when you press the button. It will disappear once the temperature is measured.

When the measurement is lower than 32°F (0°C), the LCD will display "Lo" and beep four times. When the measurement is higher than 199.4°F (93°C), the LCD will display "Hi" and beep four times.

Display value range	LED display (Object mode)	Voice tips
<32°F / 0°C	Lo	"Beep Beep Beep Beep" four times
>199.4°F (93°C)	Hi	"Beep Beep Beep Beep" four times

The thermometer will turn off automatically after 15 seconds of inactivity.

Warning:

OBJECT mode measures surface temperature, not core temperature.

- The default value of infrared emissivity is 0.95. The reading will deviate from real temperature because of different emissivity.
- For example, the reading on stainless steel is obviously lower than real temperature.

BE CAREFUL OF SCALDING

CARE, CLEANING, & STORAGE

1. Clean the thermometer before and after each use to avoid cross-contamination.
2. Gently wipe the probe and thermometer surface with a cotton swab or clean, soft cloth moistened with 75% sterilizing isopropyl alcohol.
- DO NOT immerse the product in water or other liquid. The thermometer is not waterproof.
- DO NOT use abrasive cleaners, solvents, or other disinfection methods.
- Air-dry only.
- DO NOT use the thermometer until the alcohol has evaporated.
3. Handle with care to avoid damage caused by dropping or other impact.
4. Periodically inspect the device and do not use if you notice visible damage.
- Do not dismantle. Contact our Customer Service for assistance.
5. Keep out of children's reach.
6. Store the thermometer in a clean, dry location free of humidity, temperature extremes, vibration, or impact.
7. Remove batteries before storage or if the device will not be used for a long period of time.

DISPOSAL OF THERMOMETER & BATTERIES

At the end of its useful product life, dispose of/recycle this device and used batteries following local regulations to avoid environmental pollution.

- DO NOT discard in household trash.
- NEVER dispose of batteries in fire.

LIMITED 3-YEAR WARRANTY

This product has a limited warranty of 3 years from the original date of purchase against workmanship and defects in material. If under normal use, your product fails to operate, please contact our customer service department at info@stareliteinc.com. A refund or replacement will be provided to you with proof of purchase. Star Elite Inc. may deny claims of damage caused by misuse or modifications of this product.

TROUBLE SHOOTING

Description	Solution
LCD display "LO" or "HI"	<ol style="list-style-type: none"> Choose a room or area with stable surrounding temperature 59.0°F - 104.0°F (15°C - 40°C), away from direct sunlight or strong airflow sources such as fans or air conditioners. Allow the thermometer at least 30 minutes to adjust to surrounding room temperature (if moving the device to or from a warmer or cooler location) before use. Allow the body at least five minutes to adjust to surrounding room temperature. <ul style="list-style-type: none"> If a cool compress on the forehead or other measures were taken to reduce fever, the temperature reading may be low. Brush aside any hair and make sure the forehead is clean and free of perspiration, cosmetics, or head coverings (hats, caps, scarves) that may affect measurement accuracy. Ensure measurement distance is 2" - 3" (5cm to 8cm).
No response when pressing measurement button	Remove and re-install the batteries.
No display or improper display	Remove and re-install the batteries. Install 2 new AAA batteries.
The thermometer shuts off immediately after turning on	Remove and re-install the batteries. Install 2 new AAA batteries.

STANDARD LIST

IEC 15223-1	Symbols for use in the labeling of medical devices
EN 1041	Information supplied by the manufacturer with medical devices
IEC 60601-1	Medical electrical equipment Part 1: General requirements for basic safety and essential performance
IEC 60601-1-2	Medical electrical equipment – Part 1-2: General requirements for basic safety and essential performance - Collateral standard: Electromagnetic compatibility - Requirements and tests
IEC 60601-1-6	Medical electrical equipment – Part1-6: General requirements for basic safety and essential performance - Collateral standard: Usability
IEC 60601-1-11	Medical electrical equipment – Part 1-11: General requirements for basic safety and essential performance - Collateral standard: Requirements for medical electrical equipment and medical electrical systems used in home healthcare environment
ASTM E1965-98	Clinical thermometers – Part 5: Performance of infra-red ear thermometers (with maximum device)
ISO 80601-2-56	Medical electrical equipment part 2-56: particular requirements for basic safety and essential performance of clinical thermometers for body temperature measurement
EN 62304	Medical device software - Software life - cycle processes
EN 62366	Medical devices – Application of usability engineering to medical devices
ISO 10993-1	Biological evaluation of medical devices - Part 1: Evaluation and testing within a risk management process

NORMALIZED SYMBOLS

Note: not all symbols may appear in this instruction manual

	Read instruction manual before use
	Type BF applied part
	Batch
	Serial number
	Manufacturer information
	Complies with RoHS directive 2011/65/EU of the European Parliament and of the council of 8 June 2011
	Disposal in accordance with Directive 2012/19/EU (WEEE)
	Follow operating instructions
	IP code of the device: this device's grade of ingress of solid foreign objects -- ≧ 12.5mm diameter (and the against access to hazardous parts with finger); the grade of waterproof is dripping (15° tilted)

EMC DECLARATION

- Use of this equipment adjacent to or stacked with other equipment should be avoided because it could result in improper operation. If such use is necessary, this equipment and the other equipment should be observed to verify that they are operating normally.
- Use of accessories, transducers and cables other than those specified or provided by the manufacturer of this the Infrared Thermometer could result in increased electromagnetic emissions or decreased electromagnetic immunity of this equipment and result in improper operation.
- Portable RF communications equipment (including peripherals such as antenna cables and external antennas) should be used no closer than 30 cm (12 inches) to any part of the Infrared Thermometer, including cables specified by the manufacturer. Otherwise, degradation of the performance of this equipment could result.

GUIDANCE AND MANUFACTURER'S DECLARATION – ELECTROMAGNETIC EMISSION – FOR ALL EQUIPMENT AND SYSTEMS

Guidance and manufacturer's declaration – electromagnetic emission
The infrared thermometer is intended for use in the electromagnetic environment specified below. The customer or the user of infrared thermometer should assure that it is used in such an environment.

GUIDANCE AND MANUFACTURER'S DECLARATION – ELECTROMAGNETIC IMMUNITY – FOR ALL EQUIPMENT AND SYSTEMS

Emissions test	Emissions test	Electromagnetic environment - guidance
RF emissions CISPR 11	Group 1	The Infrared Thermometer uses RF energy only for its internal function. There for, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.
RF emissions CISPR 11	Class B	The Infrared Thermometer suitable for use in all establishments, including domestic establishments and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes.
Harmonic emissions IEC 61000-3-2	N/A	
Voltage fluctuations flicker emissions IEC 61000-3-3	N/A	

GUIDANCE AND MANUFACTURER'S DECLARATION – ELECTROMAGNETIC IMMUNITY – FOR ALL EQUIPMENT AND SYSTEMS

Guidance and manufacturer's declaration – electromagnetic emission
The infrared thermometer is intended for use in the electromagnetic environment specified below. The customer or the user of infrared thermometer should assure that it is used in such an environment.

Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment-guidance
Electrostatic discharge (ESD) IEC 61000-4-2	± 8 kV contact ± 2 kV ± 4 kV, ± 8 kV, ± 15 kV air	± 8 kV contact ± 2 kV ± 4 kV, ± 8 kV, ± 15 kV air	Floors should be wood, concrete or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30 %.
Electrostatic transient / burst IEC 61000-4-4	± 2 kV for power supply lines ± 1 kV for input/output lines	N/A	Mains power quality should be that of a typical commercial or hospital environment.
Surge IEC 61000-4-5	± 1 kV differential mode ± 2 kV common mode	N/A	Mains power quality should be that of a typical commercial or hospital environment.

Voltage dips, short interruptions and voltage variations on power supply input lines IEC 61000-4-11	0 % UT; 0.5 cycle g) At 0°, 45°, 90°, 135°, 180°, 225°, 270° and 315° 0 % UT; 1 cycle and 70 % UT; 25/30 cycles Single phase: at 0°	N/A	Mains power quality should be that of a typical commercial or hospital environment. If the user of the Infrared thermometer requires continued operation during power mains interruptions, it is recommended that the Infrared thermometer be powered from an uninterruptible power supply or a battery.
Power frequency (50/60 Hz) magnetic field IEC 61000-4-8	30 A/m	30 A/m	Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.
NOTE UT is the a. c. mains voltage prior to application of the test level.			

GUIDANCE AND MANUFACTURER'S DECLARATION – ELECTROMAGNETIC EMISSION – FOR ALL EQUIPMENT AND SYSTEMS

Guidance and manufacturer's declaration – electromagnetic immunity The infrared thermometer is intended for use in the electromagnetic environment specified below. The customer or the user of infrared thermometer should assure that it is used in such an environment.			
Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment guidance
Conducted RF IEC 61000-4-6	3 Vrms 150 kHz to 80 MHz	N/A	Portable and mobile RF communications equipment should be used no closer to any part of the Infrared thermometer, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter.
Radiated RF IEC 61000-4-3	6 V in ISM and amateur radio bands between 0,15 MHz and 80 MHz	10 V/m 80 MHz to 2.7 GHz	

10 V/m 80 MHz to 2.7 GHz	385MHz-57 85MHz Test specifications for ENCLOSURE PORT IMMUNITY to RF wireless communication equipment (Refer to table 9 of IEC 60601-1-2: 2014)	Recommended separation distance $d = \left[\frac{3.5}{V_1} \right] \sqrt{P}$ $d = \left[\frac{12}{V_2} \right] \sqrt{P}$ $d = \left[\frac{3.5}{E_1} \right] \sqrt{P}$ 80 MHz to 800 MHz $d = \left[\frac{7}{E_1} \right] \sqrt{P}$ 800 MHz to 2.7 GHz	where p is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and d is the recommended separation distance in metres (m).b Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey, a should be less than the compliance level in each frequency range.b Interference may occur in the vicinity of equipment marked with the following symbol:
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NOTE 1 At 80 MHz and 800 MHz, the higher frequency range applies.
NOTE 2 These guidelines may not apply in all situations. Electromagnetic is affected by absorption and reflection from structures, objects and people.

^a The ISM (industrial, scientific and medical) bands between 150 kHz and 80 MHz are 6,765 MHz to 6,795 MHz; 13,553 MHz to 13,567 MHz; 26,957 MHz to 27,283 MHz; and 40,66 MHz to 40,70 MHz. The amateur radio bands between 0,15 MHz and 80 MHz are 1,8 MHz to 2,0 MHz, 3,5 MHz to 4,0 MHz, 5,3 MHz to 5,4 MHz, 7 MHz to 7,3 MHz, 10,1 MHz to 10,15 MHz, 14 MHz to 14,2 MHz, 18,07 MHz to 18,17 MHz, 21,0 MHz to 21,4 MHz, 24,89 MHz to 24,99 MHz, 28,0 MHz to 29,7 MHz and 50,0 MHz to 54,0 MHz.
^b Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radiobroadcast and TV broadcast cannot be predicted theoretically with accuracy.

To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the Infrared thermometer is used exceeds the applicable RF compliance level above, the Infrared thermometer should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as reorienting or relocating the Infrared thermometer.
c. Over the frequency range 150 kHz to 80 MHz, field strengths should be less than 3V/m.

RECOMMENDED SEPARATION DISTANCES BETWEEN PORTABLE AND MOBILE RF COMMUNICATIONS EQUIPMENT AND THE EQUIPMENT OR SYSTEM - FOR EQUIPMENT AND SYSTEMS

Recommended separation distances between portable and mobile RF communications equipment and the Infrared thermometer
The Infrared thermometer is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the Infrared thermometer can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the Infrared thermometer as recommended below, according to the maximum output power of the communications equipment

Rated maximum output of transmitter W	Separation distance according to frequency of transmitter			
	150 kHz to 80 MHz outside ISM and amateur radio bands $d = \left[\frac{3.5}{V_1} \right] \sqrt{P}$	150 kHz to 80 MHz in ISM and amateur radio bands $d = \left[\frac{12}{V_2} \right] \sqrt{P}$	180 MHz to 800 MHz	800 MHz to 2.7 GHz
0.01	0.12	0.20	0.035	0.07
0.1	0.38	0.63	0.11	0.22
1	1.2	2.00	0.35	0.70
10	3.8	6.32	1.10	2.21
100	12	20.00	35	70

For transmitters rated at a maximum output power not listed above the recommended separation distance d in metres (m) can be estimated using the equation applicable to the frequency of the transmitter, where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.
NOTE 1: At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.
NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.



If you have any problems, please do not contact the store. Contact our customer service at 1-877-383-6399 (8:30 am - 5:00 pm EST) Monday - Friday or contact us at info@stareliteinc.com Our customer service will be happy to assist you.

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