# **HEALTHCARE** SOLUTION<sup>™</sup>

# Infrared Ear Thermometer 귀 적외선 체온계 RB600



제품의 색상은 실제와 다를 수 있습니다.



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OWNER'S MANUAL



# 구매해주셔서 감사합니다.

제품의 올바른 사용과 유지를 위해서 반드시 제품을 사용하기 앞서 본 사용설명서를 잘 읽어 주시기바랍니다.

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#### 체온의 범위

정상체온이란 건강한 사람의 체온을 의미하며, 정상적인 체온은 일정 범위가 있습니다. 체온은 새벽에 체온이 제일 낮고 오후에서 저녁 사이에 체온이 제일 높은 경향이 있습니다.

각 부위별 정상 체온		
겨드랑이	34.7℃ – 37.3℃	
구강	35.5℃ – 37.5℃	
항문	36.6℃ - 38.0℃	
귀	35.8℃ – 38.0℃	

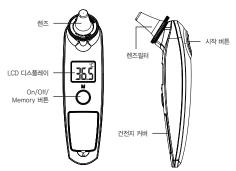
연령별 정상 체온		
0 - 2세	36.4℃ - 38.0℃	
3 - 10세	36.1°C − 37.8°C	
11 - 65세	35.9℃ - 37.6℃	
65세 이상	35.8℃ - 37.5℃	

<sup>※</sup> 체온범위는 각 개인에 따라 최소/최대 다를 수 있습니다.

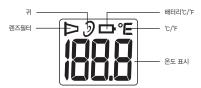
#### 제품소개

카스 체온계 "RB600"는 정확하고 안전하며 빠른 체온 측정을 위해 개발 된 제품입니다. 본 제품은 적외선 센서를 사용하여 성인과 어린이의 고막에서 발생하는 적외선의 발생량 으로부터 체온을 측정하는 귀 체온계입니다.

・본 적외선 귀 체온계의 품질은 EC directive 93/42/EEC(Medical Device Directive) Annex I 의 규격과 기준에 적용되며 유럽 의료기기 품질 시스템의 EN 12470-5: 2003 Clinical thermometers-Part 5 요구시항에 준수합니다.



#### LCD 디스플레이



▷ ૐ · 이 표시가 나타나면 체온 측정을 할 수 있으며 렌즈필터 장착 상태를 확인해 주십시오. □ · 배터리 아이콘이 표시되면 배터리를 교체해 주십시오

#### 사용방법



- 1. 정확한 체온 측정을 위해, 매 측정 시마다 깨끗한 새 렌즈필터로 교체하여 사용하십시오. a. 장착 시: 렌즈필터를 시계 방향으로 회전시켜 장착해 주십시오.
  - b. 제거 시: 렌즈필터를 시계 반대 방향으로 회전시켜 주십시오.
- "On/Off/Memory" 버튼을 누르면 귀 아이콘이 깜박이고 경고음이 2번 울리며 액정 화면에 준비 아이콘이 표시되면 측정준비가 완료됩니다.
- 3. 귀를 살짝 잡아당겨 귀속에 렌즈를 부드럽게 넣어준 후 정확한 체온측정을 위해서 렌즈가 고막을 향하도록 합니다.
  - a. 정확한 측정을 위해서 먼저 렌즈필터가 올바르게 장착되었는지를 확인해 주십시오.
  - b. 교차 오염을 방지하고 정확한 체온측정을 위해 항상 측정하기 전에 새 렌즈필터로 교체하여 주십시오.
  - c. 본 체온계는 카스 정품 렌즈필터와 함께 사용하여야 하며, 다른 필터 사용 시 부정확한 측정이 될 수 있습니다. 새로운 렌즈필터 구입은 구입처나 대리점에 문의 하시기 바랍니다.
- 4 온도 측정: 검지 손가락으로 "Start" 버튼을 누르면 긴 경고음이 울리면서 체온측정이 완료된니다.

- 5. 절전기능: 측정 후 1분이 지나면 자동으로 꺼지게 되어 불필요한 전력소모를 방지합니다. 혹은 "On/Off/Memory" 버튼을 3초 이상 눌러 전원을 끌 수 있습니다.
- 6, 경고 알람기능: 체온이 37.5°C 이상인 경우 측정수치가 깜박이면서 백라이트가 켜지고 짧은 경고 알람이 4회 연속 울립니다.

체온이 42,2°C이상인 경우, 액정화면에 "Hi"표시가 나타나면서 백라이트가 켜지고 짧은 경고 알람이 4회 연속 울립니다.

- a. 정확한 측정을 위해 3회 반복 측정을 추천하며 연속으로 측정한 값이 다른 경우, 최고 값을 선택하십시오
- b. 교차 오염의 위험을 방지하기 위해 매번 사용한 후 "세척 및 보관방법" 에 의하여 세척해 주세요.

#### 스캔 모드

연속으로 측정한 체온이 다른 경우, 스캔 모드 사용을 권장합니다.

검지 손가락으로 "Start" 버튼을 3초 눌러 귀에서 체온을 측정합니다. 최고 값을 스캔하기 위해 "Start" 버튼을 누른 상태에서 체온계 렌즈 방향을 돌리면서 측정합니다. 긴 측정음이 울리면 "Start" 버튼에서 손을 뗀 후 측정이 완료됩니다.

#### 측정음 ON/OFF 기능

- 1. 체온계 전원을 끄십시오.
- 2, "Start" 버튼을 누른 상태로 "ON/OFF/Memory" 버튼을 눌러 LCD화면에 °C가 나타날 때까지 기다립니다.
- 3. "ON/OFF/Memory" 버튼만 눌러 측정음의 ON/OFF 기능을 선택한 후 "ON/OFF/Memory" 버튼에서 손을 떼어 냅니다.
- 4.6초이후 자동으로 측정모드 상태로 전환 되면서 측정음 ON/OFF 기능 세팅이 완료됩니다.

#### 메모리 기능

최대 9개의 측정 기록이 메모리 되어 지속적인 체온변화를 확인 할 수 있습니다. 체온계의 수치가 34 °C  $\sim$  42.2 °C의 정상 체온범위 내에 있는 경우, 측정이 완료되면 데이터는 메모리에 저장됩니다.

• "ON/OFF/Memory" 버튼을 반복 눌러 저장된 측정 기록을 볼 수 있습니다.

#### 청소 및 보관

- 1. 렌즈에 부착된 센서는 매우 민감한 부분입니다. 항상 깨끗하고 손상되지 않도록 유지 하여 주십시오.
- 2. 면봉으로 소독용 알콜을 묻힌 다음 조심스럽게 렌즈를 세척하십시오. (렌즈필터 안쪽부분)
- 3. 렌즈를 상온에서 최소 5분간 건조하십시오.
- 4.보관 환경: -25~+55°C(실내온도), RH<=95%
- 5.본 제품은 습기가 심한 곳이나 직사광선을 피하여 주십시오.
- 6.제품을 액체에 담그지 마십시오.
- 7. 본 제품을 떨어뜨려 손상이 되었거나 혹은 손상 원인을 확인할 수 없을 경우 가까운 카스 고객지원팀을 통해 수리를 의뢰하십시오.
- 8. 정확한 측정을 위하여 체온계를 너무 오래 쥐고 있거나 손으로 렌즈 부분을 접촉하지 마십시오.

#### 건전지 교환

- 1. 엄지 손가락으로 건전지 커버를 엽니다.
- 2. 건전지를 고정하고 있는 핀을 밀면서 건전지를 빼내어 주십시오.
- 3. 새로운 건전지를 극성에 맞게 넣어 주십시오.
- 4. 건전지 커버를 닫습니다.
- 5. 사용한 건전지는 아기의 손이 닿지 않는 수거함에 분리 수거하십시오.





# 이상 발생시 조치방법

에러메세지	상태	해결방법	
bi-bi-bi	적정 사용온도의 범위를 벗어난 상태입니다.	온도가 15℃와 40℃사이의 장소에서 30분간 보관 후 사용하십시오.	
<b>EE</b> bi-bi-bi	시스템이 정상적으로 작동하지 않는 경우	배터리를 분리한 후 1분 후에 다시 전원을 켜 주십시오. 같은 에러 메시지가 반복되는 경우 구입처에 문의해 주십시오.	
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		새로운 건전지를 교체해 주십시오.	
bi-bi-bi	측정값이 42.2°C 이상인 경우	렌즈필터 상태를 확인하신 후 다시 한번 측정해 주십시오.	
화:bi-bi-bi		렌즈필터 상태를 확인하신 후 다시 한번 측정해 주십시오.	
		새로운 건전지로 교체해 주십시오.	
		새로운 건전지로 교체해 주십시오.	

#### 제품 사양

측정범위	34.0~42.2°C
측정오차	±0.2°C (0.4°F) [35,0~42.2°C 범위 내에서] ±0.3°C [기타 범위]
사용환경	10 ~ 40°C, RH(=95%; 700~1060hPa
보관환경	-25~55°C, RH ≤ 95%; 700~1060hPa
메모리 기능	9회
최소눈금단위	0.1 °C
건전지	CR2032 x 1
백라이트 기능	측정 후 2~3초간 백라이트 자동 켜짐
무게	53g(배터리 포함)
사이즈	12,5cm(L) x 3,5cm(W) x 2,5cm(H)
렌즈필터 수량	1171
절전기능	측정결과 표시 후 1분 후 자동 종료
건전지 수명	3000회 혹은 1년(1~2회/일 측정시)
전기충격에 대한 보호	BF형 장착부

<sup>\*</sup> 체온계와 배터리는 각 지역의 규정에 따른 지정된 장소에 폐기하십시오.

#### 유의 사항

- 귀에서 측정 된 체온은 구강 외 다른 부위에서 측정 된 체온과 다를 수 있습니다. 체온에 대한 절대적 기준은 없습니다. 개인의 체온 기록을 보관하여 고열여부를 판단하는 참고자료로 활용하세요.
- 2. 본 체온계는 구속형이므로 다른 부위 측정용도로 사용하지 마십시오.
- 3. 본 제품은 직사광선을 피하고 온습도가 높은 곳에 방치하지 마시고 먼지나 오염 물질이 없는 곳에 보관하십시오.
- 4. 본 제품을 떨어뜨리거나 심한 충격을 주지 마십시오.
- 5. 본 제품을 구부리지 마십시오.
- 6. 본 제품을 수정, 변경할 수 없습니다.
- 7. 환경보호를 위해 사용하신 체온계와 배터리는 규정에 따른 지정된 장소에 폐기하세요.
- 8. 제품을 뜨거운 물에 넣지 마세요.
- 9. 본 제품 작동이 이상하거나 에러 메시지가 나타날 경우 사용하지 마십시오.
- 10, 신나 또는 벤젠을 사용하여 체온계를 세척하지 마십시오.
- 11, 사용한 후 본 제품을 깨끗하게 닦고 보관해 주세요.

- 12. 보관 환경이 10~40°C 범위 내에 있지 않을 경우, 사용하기 전 최소 30분 이상 본 제품을 10~ 40°C에서 있도록 하십시오
- 13. 본 제품을 장기간 사용하지 않을 경우 배터리를 빼주십시오
- 14. 본 제품을 사용 설명서에 따라 사용하면 주기적인 교정이 필요하지 않습니다. 제품에 이상이 있을 경우 대리점에 의뢰하십시오.
- 15. 본 제품은 홈 헬스케어 제품이며, 전문의료기기용으로 대체할 수 없음을 유의하시기 바람니다.
- 16. 어떠한 경우에도, 측정된 체온은 단지 참고용 입니다. 의학적인 조치를 취하기 전에 반드시 의사와 상의하세요.
- 17. 본 제품을 사용설명서에 명시한 보관환경 및 사용환경 범위 외에서 보관하셨거나 사용하셨다면 제품 성능이 제품 사양을 충족하지 않을 수 있습니다.
- 18, 건전지가 폭발할 수 있으니 건전지를 충전하거나 극단적인 환경에 방치하지 마십시오.
- 19. 본 제품을 유아의 손이 닿지 않는 곳에 보관해 주십시오. 배터리나 작은 부품을 실수로 삼켜 부상이나 사고를 일으킬 수 있습니다.
- 20. 정확한 체온측정을 위해서 렌즈필터를 장착한 후 귀를 살짝 잡아당겨 이도를 펴서 귀속에 렌즈를 부드럽게 넣어 렌즈가 고막을 향하도록 합니다.
- 21 건강상태가 좋지 않을 경우 전문의와 상담하십시오
- 22 발열 유무만으로 건강상태를 판단하지 마십시오

#### 품질 보증

본 제품은 구입 일로부터 1년간 품질을 보증합니다. (건전지 및 부품 제외) 본 제품은 판매점에서 구매일자를 기재한 품질보증서 혹은 구매영수증을 제시할 경우에만 품질 보증이 됩니다.

목적 외 사용, 사용의 오류, 또한 부당한 수리나 개조에 의해서 생긴 고장 및 손상은 보증기간 내에도 A/S가 되지 않습니다. 제품 고장이 의심 되시면 구입처로 연락 주시기 바랍니다.

## Thank you for your purchase.

For the proper using & maintaining the scale please read this instruction completely before operating.

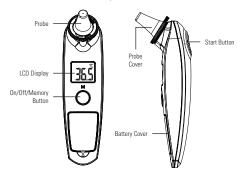
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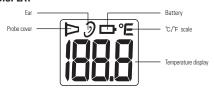
#### **RB600 INFRARED EAR THERMOMETER**

The Accumed Infrared Ear thermometer has been carefully developed for accurate, safe and fast temperature measurements in the ear. It is a non-invasive ear thermometer using an infrared detector to detect body temperature from the auditory canal for adult and child.

- The quality of the infrared ear thermometer has been verified and conforms to the provisions of the EC council directive 93/42/EC(Medical Device Directive) Annex I essential requirements and applied harmonized standards. EN 12470-5: 2003 Clinical thermometers-Part 5: Performance of infrared ear thermometers (with maximum device.)
- This thermometer converts the ear temperature to display its "oral equivalent." (according to the result of the clinical evaluation)



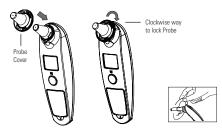
#### LCD DISPLAY



- ▶ 3 It means measurable and reminds to use a probe cover for measurement.
- •When battery icon always appears, please replace the battery.

#### HOW TO USE THE RB600 INFRARED EAR THERMOMETER

- To achieve accurate readings, make sure a new, clean probe cover is in place before each measurement and the ear canal is clean.
  - a. Install the probe cover by clockwise rotating then fix it.
  - b. Remove the probe cover by anti-clockwise rotating then releasing it.
- Press the "On/Off/Memory" button, the thermometer is ready for use after the ear icon is flashing, two beeps are sounded, and three dash segments are appeared.
- Gently pull the ear back to straighten the ear canal and snugly position the probe into the ear canal, aiming towards the membrane of the eardrum to obtain an accurate reading.
  - a. Before measurement, correct installation of the probe cover ensures accurate measurement.
  - Replace the probe cover after each use to ensure an accurate reading and avoid cross contamination.
  - c. This thermometer must only be used with Accumed probe covers, other covers can lead to inaccuracy. If running out of probe covers, please contact with the original seller or distributor for buying new probe covers.
- Measuring the ear temperature: Use the index finger to trigger, by pressing "Start" button, a long beep will be sounded when measurement is done.



- 5. For the next measurement, remove the used probe cover and put on a new one.
- Power off: If left idle for more than 1 minute, device will automatically shut off for extending battery life. Or press "On/Off/Memory" button for at least 3 seconds to turn the device off.
- 7. Fever alarm: When the measuring temperature is higher than 37.5° C (39.5°F), the reading will flash, the backlight will be enabled, and 4 short beeps will be sounded. If measuring temperature is higher than 42.2°C (108°F), the display will show "Hi", the backlight will be enabled, and 4 short beeps will be sounded.
  - a. It is recommended that you measure 3 times with the same ear within a short period of time. If the 3 consecutive measurements are different, select the highest temperature.
  - b. To avoid the risk of cross contamination, please clean the probe according to "Clean and Storage" section after each use.

#### SCANNING MODE

If you continuously obtain different measurement results, it is recommended that you use Scanning Mode to measure.

Measuring the ear temperature: Use the index finger to trigger, press and hold the "Start" button for 3 seconds to take measurement.

During the measuring process, gently pivoting the probe side-to-side to view the entire ear canal or in order to find the highest temperature. Release the "Start" button until hearing a long beep sound and the measurement is completed.

#### ENABLING OR DISABLING THE BEEP SOUND

- 1. Turn off the device.
- Hold down the "Start" button, then press and hold the "ON/OFF/Memory" button until the LCD shows °C.
- 3. Press the "ON/OFF/Memory" change beep sound from on to off, then release the "ON/OFF/Memory" button.
- 4. After 6 seconds without changing, the beep On/Off setting will be completed, and the unit will be entered into the measurement mode.

#### SWITCHING BETWEEN TEMPERATURE SCALE FAHRENHEIT AND CELSIUS

To change the Unit from °C to °F:

- 1. Turn off the device.
- 2. Hold down the "Start" button, then press and hold The "ON/OFF/Memory" button until the LCD shows °C.
- 3. Press the "Start" to change the °C to °F, then release the "Start" button.
- 4. During the setting adjustment, each old or new temperature scale setting will be flashing for 6 seconds. After 6 seconds without changing, the temperature scale adjustment will be completed, and the unit will be entered into measurement mode.



#### MEMORY FUNCTION

There are total 9 set memories for measurement records. If the reading of the thermometers is within the normal temperature range of 34 °C to 42.2 °C (93.2 °F to 108°F), when the measurement is done, the measurement data is saved into memory.

• Press "ON/OFF/Memory" button to repeatedly to recall each temperature memory.

#### **CLEANING AND STORAGE**

The probe is the most delicate part of the thermometer. Use with care when cleaning the lens to avoid damage.

- Please use the cotton swab with the Alcohol to clean the lens (on the inside of the probe).
- 2. Allow the probe to fully dry for at least 5 minutes.
  - Please check the device if it falls and damages. If you can't make sure
     of it, please send the complete device to the nearest retailer for recalibration.
  - Keep the unit dry and away from any liquid and direct sunlight. The probe should not be submerging into liquids.

#### CHANGE THE BATTERY

- 1. This thermometer is equipped with one lithium cell (CR2032 x 1).
- 2. Turn off the thermometer before replacing the battery.
- Open the battery cover: Hold the device and flip the battery out by sticking the pen tip into the battery storage well as illustrated.
- 4. Insert a new battery and ensure the battery positive polarity is facing upward.
- 5. Place back the battery cover.
- \* The positive (+) side up and the negative (-) side pointed down.





## **TROUBLESHOOTING**

Error Message	Problem	Solution	
bi-bi-bi	The ambient temperature is not within the range between 10°C~40°C (50°F~104°F)	Allow the thermometer to keep in a room for at least 30 minutes at room temperature: 10°C to 40°C (50°F to 104°F)	
<b>EE</b> bi-bi-bi	The system is not functioning properly.	Unload the battery, wait for 1 minute and repower it. If the message reappears, contact the retailer for service.	
Device can not be powered		Change with a new battery. If the message reappears, contact the retailer for service.	
bi-bi-bi	Temperature taken is higher than 42.2°C (108.0°F)	Ensure no break or dirt of the probe cover and take a new temperature measurement and take a new temperature measurement.	
bi-bi-bi	Temperature taken is lower than 34°C (93.2°F)	Make sure the probe cover is clean and take a new temperature measurement.	
**************************************	Low battery: Battery icon is flashing, still can be measurable.	Suggest to replace the battery.	
	Dead battery: Battery icon always enabled, no more measurements are possible.	Replace the battery	

#### SPECIFICATION

Temperature measurement range	34.0~42.2°C(93.2~108.0°F)
Accuracy	±0.2°C (0.4°F) during 35.0~42.2°C (95~108.0°F) ±0.3°C (0.5°F) for other range
Operating temperature range	10 ~ 40°C (50~104°F), RH<=95%; 700~1060hPa
Storage and transportation temperature range	Temperature: -25~55°C (-13~131°F), RH ≤95%; 700~1060hPa
Memory	9 set
Display resolution	0.1
Battery	3V, lithium CR2032 x 1
Weight (with battery)	53g
Size	12.5cm(L) x 3.5cm(w) x 2.5cm(H)
Probe cover	11 pcs
Auto shutdown	60 sec.
Battery life	3000 consecutive measurements or 1 year with 1-2 measurements per day including stand-by mode.
Safety classification	Type BF equipment
Clinical repeatability	0.08°C (< 1 year old) 0.10°C (1-5 years old) 0.07°C (> 5 years old)
IP Classification	IP22, Protection against harmful ingress of water and particulate matter

<sup>\*</sup> Dispose of device and batteries according to local regulations.

#### CAUTION

- 1. Besides the oral temperature, the body temperature measured by ear may be different from measurements taken by rectal or axillary. Therefore, there is no any meaning to compare them. Take the temperature periodically to find out the normal ear temperature reading, then use that reading as the basis for comparison with any measurement taken when you suspect a fever.
- This thermometer is designed for ear temperature measurement. Do not use this thermometer for other body site measurement.
- Keep the unit dry and away from where it might be exposed to moisture, liquids, direct sunlight, high temperature, high humidity, or excessive dust.
- 4. This device is not shock-protected. Do not drop, heavily pressure the unit or fall from high place.

- 5. Do not bend the device.
- 6. Do not disassemble or make modifications on the device.
- Please do not dispose of the product in the household waste at the end of its useful life. Disposal can take place at your local retailer or at appropriate collection points provided in your country.
- 8. Do not boil the probe.
- 9. Do not use the device if it operates abnormally or error massage is showed.
- 10. Do not use thinner or benzene to clean the device.
- 11. Wipe the device clean before storing.
- 12. When taking the device from storage below or above  $10 \sim 40^{\circ}\text{C}(50 \sim 104^{\circ}\text{F})$ , place it in  $10 \sim 40^{\circ}\text{C}(50 \sim 104^{\circ}\text{F})$  temperature range for at least 30 minutes before use.
- 13. Remove the battery if this device is not used for a period of time.
- 14. If this device is used according to the operation instruction, periodic re-calibration is not required. If you still have questions, please send the complete device to dealers.
- 15. Please note that this is a home healthcare product only, and it is not intended to serve as a substitute for the advice of a physician or medical professional.
- 16. Do not use this device for diagnosis or treatment of any health problem on disease. Measurement results are for reference only. Contact your physician if you have or suspect any medical problems. Do not change your medications without the advice of your physician or healthcare professional.
- 17. This device may not meet its performance specification if stored or used outside temperature and humidity ranges specified in specifications.
- Battery should neither be charged nor placed into the extreme environment, or it may explode.
- 19. The thermometer contains small parts (ex: battery, etc.) that can be swallowed by children. Therefore never leave the thermometer unattended to children.
- 20. After wearing the probe cover, the ear thermometer probe must be vertically and snugly inserted into the ear channel so as to get the correct temperature reading.
- 21. Be sure to consult a doctor if you feel that your health is in poor condition.
- 22. Do not judge your health only on the presence or absence of a fever.

### EMC guidance and manufacturer's declaration

Guidance and manufacturer's declaration-electromagnetic emissions  The RB600 is intended for use in the electromagnetic environment specified below.  The customer or the user of the RB600 should assure that it is used in such an environment.			
RF emissions CISPR 11	Group 1	The RB600 uses RF energy only for its internal function. Therefore, 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 RB600 is suitable for use in all establishments,	
Harmonic emissions IEC 61000-3-2	Not applicable	including domestic establishments and those directly connected to the public low-voltage power	
Voltage fluctuations/flicker emissions IEC 61000-3-3	Not applicable	supply network that supplies buildings used for domestic purposes.	

Guidance and manufacturer's declaration-electromagnetic immunity

The RB600 is intended for use in the electromagnetic environment specified below.

The customer or the user of the RB600 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 Radiated RF IEC 61000-4-3	3 Vrms 150 KHz to 90 MHz 3 V/m 80MHz to 2,5 GHz	Not applicable 3 V/m	Portable and mobile RF communications equipment should be used no closer to any part of the RB600 series, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. Recommended separation distance:  d = 1.2 vP  Moment Separation distance: d = 1.2 vP  Moment Separation distance and the distance of the transmitter and the maximum output power rating of the transmitter in watts (W) according to the transmitter annual caturer and d is the recommended separation distance in metres (m). 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. Interference may occur in the vicinity of equipment marked with the following symbol: \( \)

NOTE1: At 80 MHz and 800 MHz, the higher frequency range applies.

NOTE2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

a. Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic is survey should be considered. If the measured field strength in the location in which the RB600 series is used exceeds the applicable RF compliance level above, the RB600 series should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as reconeiting or relocating the RB600 series.

b. Over the frequency range 150 kHz to 80 MHz, field strengths should be less than 3 V/m.

#### Guidance and manufacturer's declaration-electromagnetic immunity

The RB600 is intended for use in the electromagnetic environment specified below.

The customer of the user of the RB600 should assure that it is used in such an environment

The custo	The customer or the user of the RB600 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	± 6 kV contact ± 8 kV air	± 6 kV contact ± 8 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%	
Electrical fast transient/burst IEC 61000-4-4	± 2kV for power supply lines ± 1kV for input/output lines	Not applicable Not applicable	Mains power quality should be that of a typical commercial or hospital environment.	
Surge IEC 61000- 4-5	± 1kV differential mode ± 2kV common mode	Not applicable Not applicable	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	<5% UT(>95% dip in UT) for 0,5 cycle 40% UT(60% dip in UT) for 5 cycles 70% UT(30% dip in UT) for 25 cycles <5% UT(>95% dip in UT) for 5 s	Not applicable Not applicable Not applicable Not applicable	Mains power quality should be that of a typical commercial or hospital environment. If the user of the RB600 series requires continued operation during power mains interruptions, it is recommended that the RB600 series be powered from an uninterruptible power supply or a battery.	
Power frequency (50/60 Hz) magnetic field IEC 61000-4-8	3 A/m	3 A/m	The RB600 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.

Recommended separation distance between portable and mobile RF communications equipment and the RB600

The R8600 is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the R8600 can help prevent electromagnetic interference by maintaining an ininimum distance between portable and mobile RF communications equipment (transmitters) and the R8600 as recommended below, according to the maximum output power of the communications

	dubinone				
Ì	Rated maximum output power of transmitter / W	Separation distance according to frequency of transmitter / m			
		150 kHz to 80 MHz / d=1,2√P	80 MHz to 800 MHz / d=1,2√P	800 MHz to 2,5 GHz / d=2,3√P	
	0,01	N/A	0,12	0,23	
	0,1	N/A	0,38	0,73	
	1	N/A	1,2	2,3	
	10	N/A	3,8	7,3	
	100	N/A	12	23	

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.

#### WARRANTY

This instrument is covered by a 1 year guarantee from the date of purchase, batteries and accessories are not included. The guarantee is valid only on presentation of the guarantee card completed by the dealer confirming date of purchase or the receipt. Opening or altering the instrument invalidates the guarantee. The guarantee does not cover damage, accidents or non-compliance with the instruction manual. Please contact your distributor.

# **MEMO**



# Infrared Ear Thermometer 귀 적외선 체온계 RB600



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