

PHILIPS

DL8740



EN



CE 0344

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Philips Consumer Lifestyle BV

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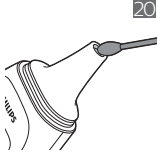
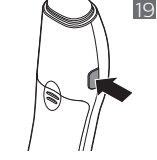
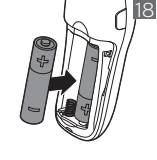
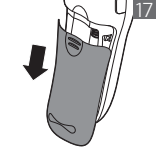
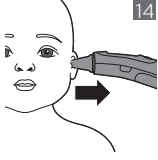
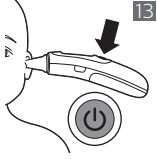
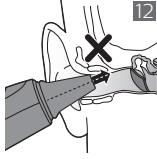
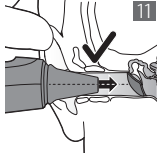
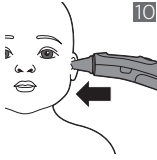
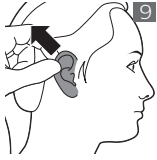
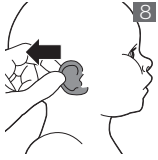
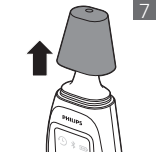
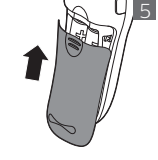
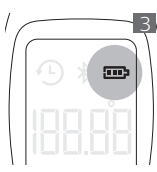
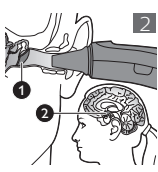
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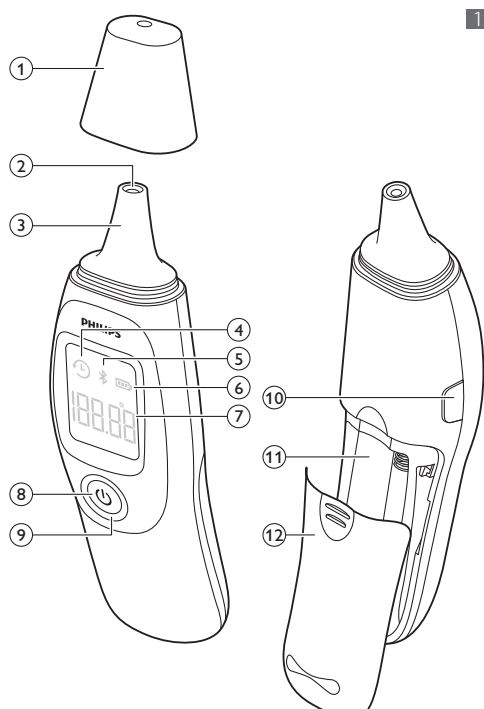
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English

Introduction

Congratulations on your purchase and welcome to Philips! To fully benefit from the support that Philips offers, register your product at www.philips.com/welcome.

Intended use

The product is intended for measuring the temperature of the human body via the ear canal by an infrared sensor. The device is intended for all ages in a home environment.

General

This Philips ear thermometer has been developed for accurate and fast human body temperature measurements in the ear in the adjusted mode. Research indicates that the ear is an ideal site for taking the body temperature. The body core temperature is regulated by the hypothalamus (Fig. 2). The hypothalamus (1) shares the same blood supply as the tympanic membrane (2). Measurement results can be transmitted via Bluetooth® to the Philips HealthSuite health app for charting and tracking purposes.

General description (Fig. 1)

- 1 Protection cap
- 2 Infrared sensor
- 3 Probe tip
- 4 History icon
- 5 Bluetooth® icon
- 6 Battery symbol
- 7 Temperature display
- 8 Power button
- 9 Temperature light ring
- 10 °C/°F selection button
- 11 Battery compartment
- 12 Battery cover

Important safety information

Read this important information carefully before you use the device and save it for future reference.

Warning



- Do not measure the body temperature at the ear site if the ear is inflamed or infected.
- Keep the device out of the reach of children and pets to avoid inhalation or swallowing of small parts. Children may not be able to use the device according to the instructions in this user manual. It is not a toy.
- Do not throw disposable batteries into fire. Batteries may explode.
- Do not put the device in a wet ear canal after swimming or bathing. This may cause injury to the ear canal.
- Do not use the device if it is broken or damaged. Using a broken or damaged device may cause injury.

Caution



- Only use the device as described in this user manual. Do not use it for any other purpose.
- The device is not intended as a substitute for consulting a doctor. Measurement results are for reference only.
- When the device is used to measure the temperature of a child, it has to be operated by an adult. Adults can measure their own temperature.
- If you clean the ear, wait 5-10 minutes before you use the device.
- Earwax in the ear canal may cause inaccurate measurements. Make sure the ear canal is clean before you use the device.
- Do not take apart, repair or change any part of the device at any time.
- Do not store the device in extreme temperature (below -20°C/-4°F or over 60°C/140°F) or in extreme levels of humidity (below 15%RH or over 85%RH). This may cause inaccurate measurements.
- Keep the infrared sensor dry, clean and undamaged to ensure accurate measurements.
- Do not touch or blow at the infrared sensor. A polluted infrared sensor may cause inaccurate measurements.
- Never clean the device with an abrasive cleaner, thinner, benzene or immerse the device in water or other liquids.

- When the temperature of the storage area differs from the temperature of the measuring area, wait at least 30 minutes before you use the device.
- If you do not intend to use the device for a long period of time, it is advised to remove the batteries before storing. This is to prevent possible damage due to leakage of the batteries. If the batteries leak, remove them carefully and replace with new batteries.




Compliance with standards

- The device meets the relevant standards for this type of Class IIa medical device for home use.
- This Philips device complies with all applicable standards and regulations regarding exposure to electromagnetic fields and complies with EN 60601-1-2
- Skin contact parts (ABS, TPU, metal) comply with ISO 10993-5 and ISO 10993-10. Cytotoxicity, sensitization and irritation meet the requirement.
- Based on the current science and technology, other potential allergic reactions are unknown.

Clinical accuracy validation results:

Subject age group	A1	A2	B	C
Operation mode	Adjusted mode			
Measuring site	Ear			
Reference body site	Ear			
Clinical bias (Δ_{cb})	-0.020	-0.033	-0.014	-0.016
Limits of agreement (LA)	0.203	0.195	0.198	0.199
Clinical repeatability (σ)	0.0770			

Display

Sym-bol	Description	Explanation
	History icon	Display shows last measurement result when switching on the device.
	Bluetooth® icon	The device uses Bluetooth® for communication.
	Battery symbol	Battery symbol indicating status of battery.

Battery status indications

Battery full

To indicate that the battery is fully charged the battery symbol shows a full battery (Fig. 3).

Battery low

To indicate that the battery is low, the battery symbol shows a nearly empty battery (Fig. 4). When using 2x 1.5V AAA, 700 mAh batteries, 500 measurements can be realized ($23 \pm 5^\circ\text{C}$, $50 \pm 20\%$ RH).

Preparing for use

The batteries (2x 1.5V AAA) are included with the device. Remove the battery strip from the battery compartment before first use.

Slide the battery cover back until it locks into place (Fig. 5).

Pairing the thermometer to your mobile device

Your Philips ear thermometer is equipped with Bluetooth®. Download the Philips HealthSuite health app from the App Store or Google Play. Use the search term: Philips HealthSuite health app. The Philips health app is available for iOS® 8.0+ and Android™ 4.4+.

- 1 Download the Philips HealthSuite health app on your mobile device, start the Setup wizard and follow the steps to create a user profile and add the thermometer.
- 2 **Make sure the Philips health app is active and Bluetooth on your mobile device is on when pairing is in progress.**
- 3 Press the power button once, to switch on the thermometer (Fig. 6).
 - The app identifies the thermometer and requests to pair.
 - The Bluetooth icon lights up when the thermometer is connected to your mobile device.
- 4 The thermometer switches off automatically after 30 seconds of no activity.
 - When the thermometer has paired successfully with your mobile device, your personal measurement results are automatically transmitted to your mobile device via Bluetooth.

Note: Only when the Philips HealthSuite health app is active, your personal health data can be transmitted.

Cleaning the infrared sensor

To achieve accurate measurements, it is important to check if the infrared sensor is clean. Use a cotton swab to clean the infrared sensor.

See chapter Cleaning and storage for instructions.

After cleaning, wait approximately 5-10 minutes before you use the device.

Cleaning the ear

Earwax in the ear canal may cause inaccurate measurements. Make sure the ear canal is clean before you use the device.

Carefully clean your ear canal. If you clean your ear, wait for 5-10 minutes before you use the device.

Resetting the thermometer

If you press the °C/°F selection button on the side of the thermometer for longer than 10 seconds, all measurements are deleted from the device and all settings return to the factory values.

Measuring temperature

Tips for proper measurement

External factors can influence your body temperature. In the following cases, wait at least 30 minutes before taking your temperature:

- When you have been lying on your ear
- When you had your ears covered
- When you have been exposed to very low or very high temperatures
- When you have been swimming or bathing
- If you wear earplugs or hearing aids, remove them first

We do not advise you to use the device in the following circumstances as this may cause inaccurate measurements:

- When the temperature of the storage area differs from the temperature of the measuring area. In this case, wait at least 30 minutes before you use the device.
- If you are using ear drops or other ear medication. In this case, measure the temperature in the untreated ear (if any).

Body temperature

Normal body temperature is a range. A person's normal temperature range tends to decrease with age. The following table shows normal temperature ranges by age.

The range of normal body temperature varies from person to person and can be influenced by many factors such as time of day, level of activity and emotions.

Age	Temperature in °Celsius	Temperature in °Fahrenheit
0-2 years	36.4 - 38.0 °C	97.5 - 100.4 °F
3-10 years	36.1 - 37.8 °C	97.0 - 100.0 °F
11-65 years	35.9 - 37.6 °C	96.6 - 99.7 °F
> 65 years	35.8 - 37.5 °C	96.4 - 99.5 °F

Source: Chamberlain, J.M., et al., Determination of Normal Ear Temperature with an Infrared Emission Detection Thermometer, *Annals of Emergency Medicine*, January 1995, Vol. 25, pp. 15-20.

Performing a measurement

Note: Before measuring, make sure that the probe tip of the device is clean.

- 1 Remove the protection cap before you use the device (Fig. 7).
- 2 Press the power button to switch on the device.
 - The display shows the last measurement result as well as the history icon.
- 3 Hold the outer ear and gently pull it towards the rear of the head to straighten the ear canal.
 - Children under the age of 1: hold the outer ear and gently pull it straight back. (Fig. 8)
 - Children aged 1 year or older: hold the outer ear and gently pull the ear up and back (Fig. 9).
- 4 Insert the probe tip very gently and slowly into the ear canal (Fig. 10).
 - Make sure the probe tip points straight towards the eardrum when you hold it (Fig. 11).
 - Always insert the probe tip into the same ear, in the same direction and at the same depth.

Note: When you do not point the probe tip towards the eardrum (Fig. 12), the measurement result will be inaccurate.

Note: A temperature measurement taken in the right ear may differ from a measurement taken in the left ear.

- 5 Press the power button to start the measurement. (Fig. 13)
 - When the measurement is done, you hear 2 beeps.
- 6 Remove the probe tip from the ear canal (Fig. 14).
 - The display shows the measured temperature. The temperature light ring around the power button may light up red, depending on the measurement result.

Note: The temperature display on the device shows the measurement result for 30 seconds or until you perform a new measurement.

Note: The thermometer is equipped with a thermal sensor located in the tip of the device. Immediately after a measurement the device needs a short time (approx. 6 seconds) to stabilize the thermal sensor to ensure the accuracy of the next measurement.

Within these 6 seconds a measurement cannot be taken. The backlight of the device will switch off as soon as the thermometer is ready to do a new measurement. If you try to measure multiple times within 6 seconds, the thermometer will give audible feedback in the form of three short sequential beeps, indicating no measurement was done. In this case you should wait a few moments and try again.

Temperature light ring

This device is equipped with a temperature light ring around the power button (Fig. 15).

After the measurement, the ring may light up red, depending on the measured temperature.

- When the temperature light ring lights up red, the measured temperature is between 38.0°C (100.4°F) and 42.9°C (109.2°F)

Transmit and display personal measurement results in the app

Note: Your personal measurement data is only stored and displayed in the Philips HealthSuite health app.

- 1 Start up the Philips HealthSuite health app and switch on Bluetooth on your mobile device.

- The Bluetooth symbol will light up on the display of the thermometer to indicate it is connected to your mobile device.
 - Once successfully connected, the measurement results will be automatically transmitted to your mobile device via Bluetooth.
 - If the data transmission is successful, the measurement results are displayed in the Philips health app.
 - The time and date of each measurement is shown in the Philips health app.

Removing/inserting batteries

When the batteries are almost empty, the display shows a flashing battery symbol and the text "bAtt" (Fig. 16).

When the battery low symbol appears on the display (Fig. 4) or if the device does not function at all, replace the batteries as soon as possible. The device works on 2x 1.5V AAA batteries.

Data will be lost when the batteries are completely empty or are taken out of the thermometer.

- Slide the battery cover downwards to open the battery compartment and remove the empty batteries (Fig. 17).
- Insert two new batteries in the battery compartment according to the polarity indications marked inside the compartment. Press down the batteries until they click into place (Fig. 18).
- Slide the battery cover back until it locks into place (Fig. 5).

Setting the measurement unit

You can select either Celsius (°C) or Fahrenheit (°F) for measuring temperature.

- Switch on the device.
- Press and hold the °C/°F selection button for 3 seconds to change the measurement unit (Fig. 19).

Cleaning and storage

⚠ Caution: Do not expose the device to extreme temperatures (below -20°C/-4°F or over 60°C/140°F), extreme levels of humidity (below 15%RH or over 85%RH), direct sunlight or shock. This may result in malfunctions.

Use a cotton swab to clean the infrared sensor.

- Moisten the cotton swab with a few drops of alcohol and wipe the surface of the infrared sensor gently with the swab (Fig. 20).
- Immediately wipe the surface dry with a clean cotton swab.
- Use a soft dry cloth to clean the body of the device (Fig. 21).
- Store the device in a clean, dry place at room temperature.

Calibration

The device has been calibrated when it was manufactured. If the device is used according to the instructions, periodic recalibration is not required. If you question the accuracy of the measurement at any time, contact the Consumer Care Center in your country.

Do not attempt to modify or reassemble the device.

The expected service life of the thermometer is 2 years.

Specifications

Power supply	2 x AAA non-rechargeable batteries
Temperature measuring range	32.4°C - 42.9°C /90.3°F -109.2°F
In-ear measurement accuracy	±0.2°C (±0.4°F) within the range of 32.4°C - 42.9°C (90.3°F - 109.2°F)
Dimensions	134 (L) x 37 (W) x 27 (D) mm
Weight	About 54.6g (without batteries)
Operating conditions	10.0°C - 40.0°C (50.0°F - 104.0°F) with a relative humidity of 15% - 85%, 86 kPa to 106 kPa
Storage and transport conditions	-20°C - 60°C (-4°F - 131°F) with a relative humidity of 15% - 85%, 86 kPa to 106 kPa
Frequency band	2402-2480 MHz
Modulation	GFSK
Effective radiated power	Max. +5dBm

Ordering accessories

To buy accessories or spare parts, visit www.shop.philips.com/service or go to your Philips dealer. You can also contact the Philips Consumer Care Centre in your country (see the worldwide warranty leaflet for contact details).

Recycling

- This symbol means that this product shall not be disposed of with normal household waste (2012/19/EU) (Fig. 22).
- This symbol means that this product contains disposable batteries which shall not be disposed of with normal household waste (2006/66/EC) (Fig. 23).
- Follow your country's rules for the separate collection of electrical and electronic products and batteries. Correct disposal helps prevent negative consequences for the environment and human health.

Removing disposable batteries

To remove disposable batteries, see the instructions for placing and/or removing batteries in the user manual.

Warranty and support

If you need information or support, please visit www.philips.com/support or read the international warranty leaflet.

If you need more information about the app, please visit www.philips.com/healthprograms

Troubleshooting

This chapter summarizes the most common problems you could encounter with the appliance. If you are unable to solve the problem with the information below, visit www.philips.com/support for a list of frequently asked questions or contact the Consumer Care Center in your country.

Problem	Possible cause and solution
The device does not respond or resets automatically when I pull out the battery strip.	The batteries are empty. Replace the batteries. The poles of the batteries point in the wrong direction. Remove the batteries and reinsert them properly.
	The batteries are not making proper contact. Remove the batteries and reinsert them properly.
	The measured temperature is lower than 32.4°C/90.3°F or higher than 42.9°C/109.2°F. Follow the instructions in the user manual for proper measurement.
	The device is malfunctioning. Contact the Philips Consumer Care Center in your country.
	Temperature is out of temperature measuring range. Use the thermometer in the range of operating conditions (see 'Specifications').
The thermometer seems to be inaccurate or the measurement results seem questionable.	The infrared sensor is not clean enough. Clean the infrared sensor with a cotton swab according to user manual. Ensure that the thermometer is pointed correctly towards the eardrum (Fig. 11). An incorrect measurement position (Fig. 12) might lead to incorrect measurement results. Make sure that you have read the user manual and know how to use the device properly (see 'Measuring temperature').
	Your room temperature is too low or too high. Use your thermometer at room temperatures between 10.0°C and 40.0°C (50.0°F and 104.0°F).
	You are using the device outdoors. The device is only intended for indoor use.
	You have held the device in your hand too long. Put the device on the table in the room where the measurement is taking place and let it cool down first.
The battery symbol flashes on the display.	The batteries are empty. Replace the empty batteries with new ones.
The display shows Err0	Self-test error. Remove and replace the batteries. If the error persists, contact Philips Consumer Care Center in your country.
The display shows Err2	Stabilization error. Wait 30 minutes and measure again.
The display shows Err3	Battery level low. Replace the empty batteries with new ones.

Explanation of symbols

The warning signs and symbols are essential to ensure that you use this product safely and correctly and to protect you and others from injury. Below you find the meaning of the warning signs and symbols on the label and in the user manual.



Symbol for 'follow instructions for use'.



This symbol means that the part of the device that comes into physical contact with the user (also known as the applied part, probe tip) is of type BF (Body Floating) according to IEC 60601-1.



Symbol for 'the device complies with European Medical Device Directive 93/42/EEC requirements'. 0344 refers to the notified body.



Symbol for WEEE, waste electrical and electronic equipment. Electrical waste products should not be disposed of with household waste. Please recycle where facilities exist. Check with your local authority or retailer for recycling advice and see chapter 'Battery recycling'.



This symbol means that this product contains batteries which shall not be disposed of with normal household waste (2006/66/EC).



Indicates the manufacturer, as defined in EU Directives 93/42/EEC.



Symbol for the 'Bluetooth Combination mark'. The device uses Bluetooth for communication.



Indicates the manufacturer's serial number so that a specific medical device can be identified.



Symbol for indoor use only.



Indicates caution. The user should consult the instructions for use for important cautionary information such as warnings and precautions that cannot, for a variety of reasons, be presented on the medical device itself.

IP22

IP22: The first number 2: Protected against solid foreign objects of 12,5 mm Φ and greater. The second number: Protected against vertically falling water drops when enclosure is tilted up to 15°. Vertically falling drops shall have no harmful effects when the enclosure is tilted at any angle up to 15° on either side of the vertical.



Indicates the storage and transportation temperature limits to which the medical device can be safely exposed: -20°C to 60°C.



Indicates the storage and transportation relative humidity limits to which the medical device can be safely exposed: 15% - 85%



Symbol for the 2 year Philips guarantee.



The Green Dot ('Der Grüne Punkt' in German) is the license symbol of a European network of industry-funded systems for recycling the packaging materials of consumer goods.

Electromagnetic emissions and immunity

The device is approved according to EMC safety standard EN 60601-1-2. It is designed to be used in typical domestic environments.

Hereby, Philips Consumer Lifestyle BV declares that the radio equipment type Bluetooth LE is in compliance with Directive 2014/53/EU.

The full text of the EU declaration of conformity is available at the following internet address: www.philips.com/support

EMC Guidance

- The ear thermometer needs special precautions regarding EMC and needs to be installed and put into service according to the EMC information provided in this document.
- Wireless communications equipment such as wireless home network devices, mobile phones, cordless telephones and their base stations, walkie-talkies can affect this equipment and should be kept at least a distance $d = 3.3$ m away from the equipment.

Note: As indicated in IEC 60601-1-2:2007 for ME equipment, a typical cell phone with a maximum output power of 2 W yields $d = 3.3$ m at an immunity level of 3V/m.

Table 1 Guidance and manufacturer's declaration – electromagnetic emissions – for all ME equipment and ME systems

Guidance and manufacturer's declaration – electromagnetic emissions

The device is intended for use in the electromagnetic environment specified below. The customer or the user of the device should assure that it is used in such an environment.

Emissions test	Compliance	Electromagnetic environment - guidance
RF emissions CISPR 11	Group 1	The DL8740 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	
Harmonic emissions IEC 61000-3-2	Not applicable	
Voltage fluctuations/flicker emissions IEC 61000-3-3	Not applicable	

Table 4 Guidance and manufacturer's declaration – electromagnetic immunity –for ME equipment and ME systems that are not life supporting

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

IMMUNITY test	IEC 60601 TEST LEVEL	Compliance level
Conducted RF IEC 61000-4-6	3 Vrms 150 kHz to 80 MHz	3 Vrms
Radiated RF IEC 61000-4-3	3 V/m 80 MHz to 2.5 GHz	3 V/m

Electromagnetic environment - guidance

Portable and mobile RF communications equipment should be used no closer to any part of the device, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter.

Recommended separation distance:

$$d = 1.2 \sqrt{P}$$

$$d = 1.2 \sqrt{P} \text{ 80 MHz to 800MHz}$$

$$d = 2.3 \sqrt{P} \text{ 800 MHz to 2.5 GHz}$$

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).

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:



NOTE 1 At 80 MHz and 800 MHz, 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.

(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 site survey should be considered. If the measured field strength in the location in which the device is used exceeds the applicable RF compliance level above, the device should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as re-orienting or relocating the device.

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

Guidance and manufacturer's declaration – electromagnetic immunity – for all ME equipment and ME systems

Guidance and manufacturer's declaration – electromagnetic immunity

The device is intended for use in the electromagnetic environment specified below. The customer or the user of the device should assure that it is used in such an environment.

Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment - guidance
Electro-static 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%.
Power frequency magnetic field IEC 61000-4-8	3A/m	3A/m	Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.

Table 6 Recommended separation distances between portable and mobile RF communications equipment and the ME equipment or ME system – for ME equipment and ME systems that are not life supporting

Recommended separation distances between portable and mobile RF communications equipment and the device.

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

Rated maximum output power of transmitter (W)	Separation distance according to frequency of transmitter (m)		
	150 kHz to 80 MHz $d = 1.2 \sqrt{P}$	80 MHz to 800 MHz $d = 1.2 \sqrt{P}$	800 MHz to 2.5 GHz $d = 2.3$
0.01	0.12	0.12	0.2
0.1	0.37	0.37	0.74
1	1.2	1.2	2.3
10	3.7	3.7	7.4
100	12	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 80MHz and 800MHz, 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.