

# kügan

## Smart Bluetooth Blood Pressure Monitor

### KABPMBTAPPB

## USER MANUAL



Please read this user manual carefully and thoroughly to ensure the safe usage of the product. Keep a copy of this manual handy for future reference.

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# Introduction

Thank you for selecting the Kogan Smart Bluetooth Blood Pressure Monitor. The monitor features blood pressure measurements, pulse rate measurement and result storage.

## Features

85.5 x 24mm Blue LCD Display with white back light.

Measure-during-inflating technology.

Up to 60 results stored.

## Measurement Principle

This product uses the oscillometric measuring method to detect blood pressure. Before every measurement, the unit establishes a “zero point” equivalent to the atmospheric pressure, then it will start inflating the cuff.

Meanwhile, the unit will detect the pressure oscillation generated by your pulse, which is then used to determine the systolic pressure and diastolic pressure as well as pulse rate. The device also compares the longest and shortest intervals in the pulse waves and compares it to the average value, then calculates the standard deviation.

The monitor will light up a warning symbol when the calculated standard deviation is larger than or equal to 15.

## Safety Information

The symbols below may appear in the user manual, labelling or other components. Please follow all instructions.



Symbol for “Guide must be read”



Symbol for “Type BF applied parts”

**CE 0123**

Symbol for “Complies with MDD 93/42/EEC Requirements”



Symbol for “manufacturer”



Symbol for “Environment Protection - waste electrical products should not be disposed of with the household waste. Please recycle where facilities exist. Check with your local council or authorities for recycling advice.”

**SN**

Symbol for “serial number”



The Bluetooth compatible symbol



Symbol for “Direct Current”



Symbol for “manufacture date”

**F1**

T1A/250V 3.6 x 10CCC



Symbol for “Class II Equipment”



Symbol for “Indoor use only”



## Warnings

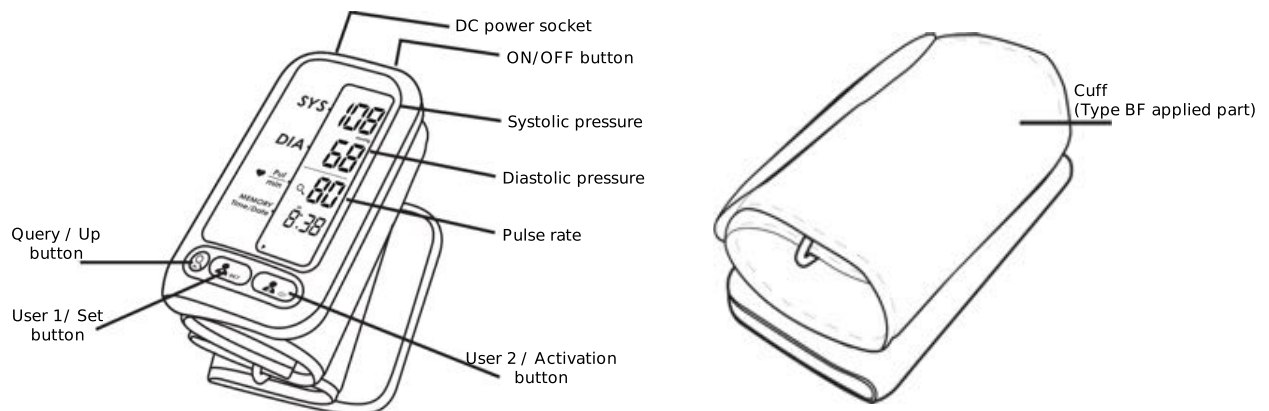
- Unit is intended for indoor use only. Sensitive people, including pregnant women, pre-eclamptic patients, patients who have implanted medical electronic instruments and have atrial fibrillation (AF), premature ventricular beats and peripheral arterial disease (PAD) should avoid using the unit whenever possible. If required, please consult with your doctor.
- This device is intended for non-invasive measuring and monitoring of arterial blood pressure. It is not intended for use on extremities other than the arm, or for functions other than obtaining a blood pressure measurement.
- Please use the device under the specified environments as explained in this user manual, otherwise the accuracy of results may be affected.
- Do not confuse self-monitoring with self-diagnosis. This unit allows you to monitor your blood pressure. Please start or end medical treatment based solely on your doctor's treatment advice.
- If you are taking medication, consult with your doctor to determine the most suitable time for taking measurements. Never change a prescribed medication without your doctor's consent.
- This unit is not suitable for continuous monitoring during medical emergencies or operations. Otherwise the patient's arm and fingers will become anaesthetised, swollen or possibly even purple due to lack of blood flow.
- If the pressure of the cuff exceeds 40 kPa (300 mmHg); the unit will automatically deflate. If the cuff doesn't deflate when pressure exceeds 40 kPa (300mmHg), detach the cuff from the arm and press the START/STOP button to stop inflation.
- Do not use the monitor under conditions where you are near strong electromagnetic fields (e.g. medical RF equipment), that radiates interference signals or fast transient burst signals.
- The device is not AP/APG equipment. It is not suitable for use in the presence of flammable anaesthetic mixed with air (or oxygen/nitrous oxide).
- Please keep unit out of reach of infants, children or pets, as the inhalation or swallowing of small parts is dangerous or even fatal.
- Please only use accessories recommended by Kogan.com. Use of non-authorized accessories may cause damage to the unit or the user/patient.
- The patient is the intended operator. The patient can measure, transmit data and charge the battery under normal circumstances and maintain the device and its accessories according to the user manual.
- The blood pressure monitor, the adaptor and the cuff are suitable for use within a patient environment. If you are allergic to Dacron or plastic, please do not use the device.
- The device is not intended for patient transport outside of a healthcare facility.
- This device cannot be used with HF surgical equipment at the same time.
- This device is not suitable for public use.
- The adaptor insulates the device from the mains power supply. Do not position the plug in a position where it is difficult to disconnect the plug from the mains supply.
- Be careful of strangulation due to cables and hoses, especially those of excessive length.

# LCD Display Signal



SYMBOL	DESCRIPTION	EXPLANATION
<b>SYS</b>	Systolic Blood Pressure	High blood pressure
<b>DIA</b>	Diastolic Blood Pressure	Low blood pressure
<b>Pul/min</b>	Pulse	Beat/minute
	Low battery	Low battery - please recharge
<b>KPa mmHg</b>	Unit	Measurement unit of blood pressure
	IHB detector	Irregular heartbeat detector
	Data pending transmit	Measurement data stored in the device
	Data transmitting	Data transmission succeeds
	Memory query	Recall history records
	User ID	Start measurement for selected user
	Current time	Year/Month/Day(hour:min)
	Shock reminder	Shocking the unit will result in inaccurate results
	Heartbeat	Heartbeat detection during measurement

## Monitor Components



## Component list of pressure measuring system

1. PCBA
2. Air pipe
3. Pump
4. Valve
5. Cuff

## Box Contents

1 x Blood pressure monitor  
1 x AC adaptor (input: 100-240VAC 50/60Hz 0.5A max / output 5.9V 2000mA)  
1 x Cuff (22-32cm)

## Power Supply and Charge Power

1. The battery is a built-in, rechargeable Li-polymer battery with a current of 1000mAh.
2. Please only use the supplied adaptor to charge the battery.



Insert AC adaptor here

Charge the battery under following circumstances

displays on the LCD

The LCD display itself dims.

When powering on, the LCD doesn't light up.



### Caution

- The battery is a built-in rechargeable Li-polymer battery. Do not attempt to disassemble the battery unit.
- Under normal usage, the battery will function perfectly well for 300 charges. If the battery cannot charge or the unit cannot be used, please contact the Kogan customer service team. If measurements are taken three times a day from a fully charged battery, a single charge should last approximately 20 days.
- Store and use the blood pressure monitor in a cool, dry and well ventilated environment. Avoid using the unit near a fire or other heat source, as it can cause issues with the battery.
- Only use the correct, supplied AC adaptor to charge the monitor. You cannot use the blood pressure while charging.
- While charging, the blood pressure monitor will display a small icon depicting a charging battery. When charging is finished, please unplug the blood pressure monitor from the AC adaptor.
- When charging, do not touch the charging connector and the patient simultaneously.

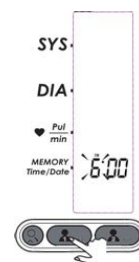
## Before you start

### Setting the Time, Date and Unit

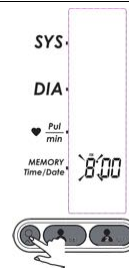
To ensure the stored measurement results have correct times recorded, please set the time before the device is used.

Before use, switch the button to "ON" on the monitor.

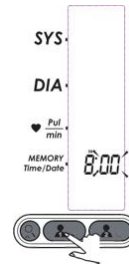
- 1 - When the monitor is off, press and hold "User 1" button for three seconds to enter Time Setting Mode.



2 - As pictured to right, the blinking numeral represents the [HOUR]. Press the "Query" button to change the numeral. Each press will increase the numeral by one.



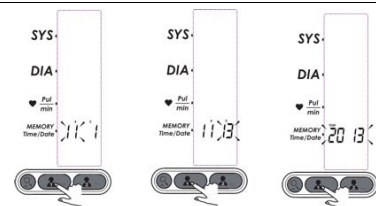
3 - Press "User 1" button again to confirm the [HOUR]. The next numeral representing [MINUTE] will now blink.



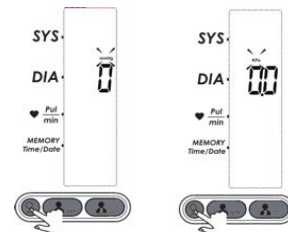
4 - Repeat steps 2 and 3 to confirm the [MINUTE] setting.



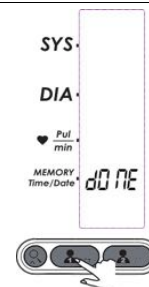
5 - Repeat steps 2 and 3 to confirm the [MONTH], [DAY] and [YEAR].



6 - Repeat steps 2 and 3 to confirm measurement units.



7 - After confirming the measurement units, the LCD screen will display "dOnE" and the monitor will shut off.



## Installing the Application

Install the MedM application on your smartphone from the relevant app store.

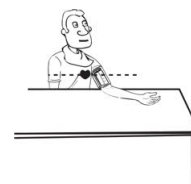
- Android: <https://play.google.com/store/apps/details?id=com.medm.app.health>
- iOS: <https://itunes.apple.com/us/app/medm-health/id929581952?mt=8>

## Pairing the Blood Pressure Monitor with your Device

1. Turn on the Bluetooth function on your phone, then open the app. Make sure the app is running while the pairing is being performed.
2. When the monitor is off, press and hold the “User 2” button to start pairing. Your phone will identify the blood pressure monitor as “Smart BP Monitor 808A0”. A symbol of two small circles spinning around each other will show to indicate that pairing is proceeding.
  - If successful, a linked square icon will show on the LCD.
  - If the pairing fails, an E1 error symbol will show on the LCD.
3. The monitor will shut off automatically after the pairing process is complete.

## Tying the Cuff

1. Remove all accessories (bracelets, watches, wristbands) from your left arm. If your doctor has diagnosed you with poor circulation in your left arm, use your right arm.
  2. If required, roll or push up your sleeve to expose your upper arm.
  3. Apply the cuff to your left arm with your palm facing up.
  4. Position the edge of the cuff about 2-3cm up from your elbow.
  5. Fasten the cuff around your arm, leaving no extra room between the cuff and your skin. If the cuff is too loose, the measurements will not be accurate.
  6. Sit comfortably with your legs uncrossed, feet flat on the floor and your back and arm supported. The center of the cuff should be maintained at the same level as your heart.
- Rest for 5 minutes before measuring.
  - Wait for at least 3 minutes between measurements. This allows your blood circulation to recover.
  - For a meaningful comparison, try to take the measurements under similar conditions. For example, take daily measurements at approximately the same time on the same arm.





# Measurement

## Starting the measurement

When the monitor is off, press “User 1” button to turn the monitor on and it will finish the whole measurement, then it will save the measurement data for User 1. The same functionality is available for User 2.

1 - When the monitor is off, press the User 1 button to turn the monitor on.



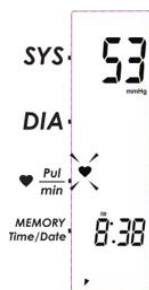
LCD display



Adjust to zero



Inflating and measuring



Display and save results.  
Data transmission will proceed.





2 - Press the User 1 button to power off, otherwise unit will turn off after one minute.



**Note:** when the measurement is finished, you can press the other User button to make the monitor take a measurement again.

**Note:** The unit can hold a maximum of 60 records for both User 1 and User 2.

1. With the blood pressure monitor paired up to your smartphone via Bluetooth 4.0 technology, measurement data will be automatically transferred to your smartphone via Bluetooth.
2. The  symbol will disappear after successful data transmission, and you may check your personal health data stored in your smartphone.
3. If the data transmission fails, the  symbol will remain. The pending measurement data will be transmitted to your smartphone when the next measurement is complete.

# Data Management

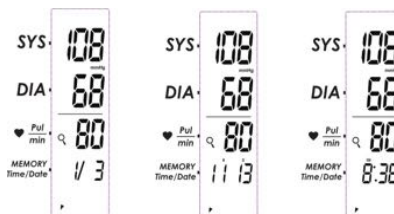
## Recalling records

1 - When the monitor is off, press the “Query” button to access the memory.

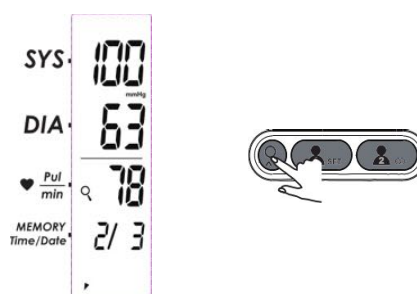


2 - The LCD will display the latest measurement results of the user ID who completed the last measurement.

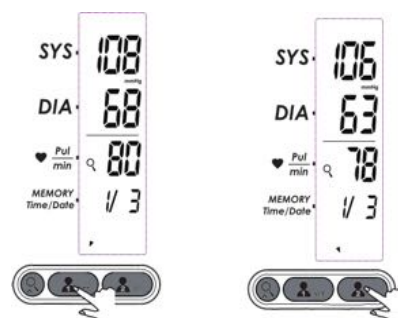
(Record number, measurement date and measurement time will be displayed alternately.)



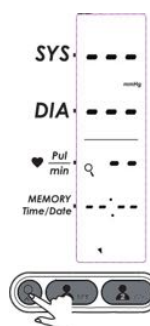
3 - Press the “Query” button to rotate the history records.



4 - When in memory mode, press the User 1 button to recall the measurement history of User 1, or press User 2 to recall the measurement history of User 2.



5 - When no history is stored for the specific user in the monitor, press “Query” button and the LCD will display as pictured to the right.



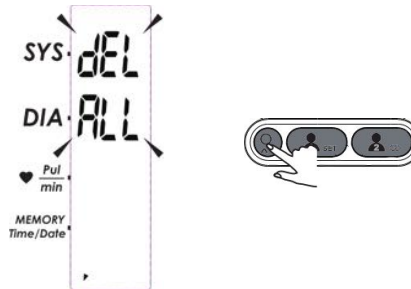
**Note:** the most recent record (1) is shown first. Each new measurement is assigned to the first (1) record. All other records are then pushed back on digit (e.g. 2 becomes 3, 3 becomes 4 and so on), and the last record (60) is dropped from the list.

## Deleting records

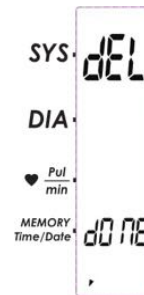
1 - When under query mode, press and hold the "Query" button for 3 seconds to clear the memory.



2 - When the LCD displays "DeL ALL", press the "Query" button to confirm.



3 - The LCD will display "dEL dOnE", then shut off.



4 - If you wish to stop clearing the memory, you may press any button other than "Query" to turn off the monitor, or you can wait until it turns off automatically.

## User Information

### Tips for Measurement

There may be inaccuracies if measurements are taken in the following circumstances.



## Maintenance

To obtain the best performance, please follow these instructions.



Store in a dry place and avoid direct sunshine.



Avoid immersing in the water.  
Clean with a dry cloth.



Avoiding shaking, dropping or knocking the monitor.



Avoid dusty environments and unstable temperatures.



Use a slightly damp cloth to remove any dirt.



Avoid washing the cuff if possible.



### Notes

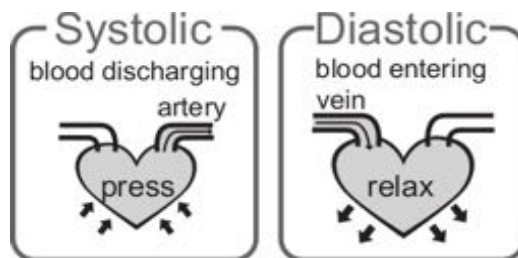
- Please make sure the unit is functioning correctly before use. Do not service or do any maintenance while the device is in use.
- If you have any problems such as setting up, maintaining or using the device, please contact the Kogan customer support team. Do not open or attempt to repair the device by yourself.
- Please contact the Kogan customer support team if any unexpected operations or events occur.
- A dusty environment may affect the performance of the unit. Please use the soft cloth to remove the dirt on the device and cuff before and after use.
- The unit is calibrated at the factory and does not require any further calibration or adjustment.
- Degraded sensors may result in inaccurate measurement while loose electrodes may cause the monitor power to fail.

## About Blood Pressure

### What is systolic and diastolic pressure?

When ventricles contract and pump blood out of the heart, the blood pressure reaches its maximum value in the cycle, which is called systolic pressure.

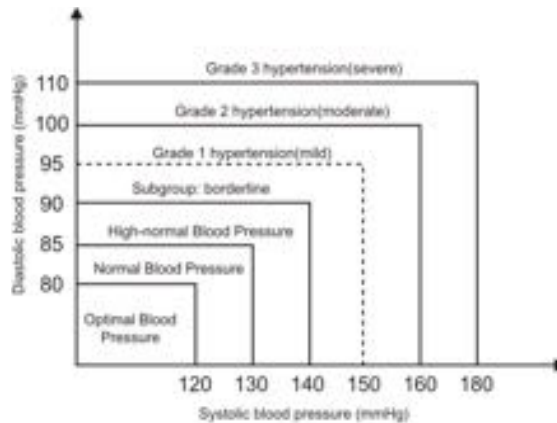
When the ventricles relax, the blood pressure reaches its minimum value in the cycle, which is called diastolic pressure.



## What is the standard blood pressure classification?

The blood pressure classification published by the World Health Organisation (WHO) and International Society of Hypertension (ISH) in 1999 is shown at right.

Note: only your doctor can tell your normal BP range. Please contact your doctor if your measurement result falls outside of this range.



Blood Pressure (mm Hg) \ Level	Optimal	Normal	High-normal	Mild	Moderate	Severe
SYS	<120	120-129	130-139	140-159	160-179	≥180
DIA	<80	80-84	85-89	90-99	100-109	≥110

## Irregular Heartbeat Detector

This Blood Pressure Monitor is equipped with an intelligent function of the Irregular Heartbeat (IHB) Detector. During each measurement, this equipment records the heartbeat intervals and works out the standard deviation. If the calculated value is larger than, or equal to 15, then the equipment will light up the IHB symbol on the screen when displaying the measurement result.

**Note:** the appearance of the IHB icon indicates that a pulse irregularity is consistent with an irregular heartbeat was detected during measurement. Usually this is NOT a cause for concern. If the symbol appears often, then we recommend that you seek medical advice. Please note that this device does not replace a cardiac examination, but serves to detect pulse irregularities at an early stage.

## Why does my blood pressure fluctuate throughout the day?

1. Individual blood pressure varies throughout the day due to activity, weather and well-being. It is also affected by the way you tie your cuff and your measurement position, so please take the measurement in the same conditions when possible.
2. The pressure varies if the patient is on medication.
3. Ensure you wait at least 3 minutes after taking a reading before taking another.



## Why is my result at hospital different to my result at home?

Blood pressure can differ within 24 hours due to weather, emotion, exercise etc.. The presence and stress of being in a hospital can often cause higher results than the ones measured in the relaxed confines of your own home.

When measuring at home, pay attention to the following points:

- Check the cuff is tied properly.
- Check if the cuff is too tight or too loose.
- Check that the cuff is applied to the upper arm.
- If feeling anxious or pressured, take 2 or 3 deep breaths before beginning.

## Is the result the same if measured on the right arm?

Blood pressure can be taken on either arm, however by swapping between arms you will get differing results. It is suggested that you measure the same arm every time.

## Troubleshooting

This section includes a list of error messages and frequently asked questions for problems you may encounter with your blood pressure monitor. If the product is not operating as you think it should, check here before contacting the Kogan customer support team.

Problem	Symptom	Check	Remedy
No Power	Display will not light up	Power is exhausted	Charge the power
Low Batteries	Display is dim or low battery icon showing	Power is low	Charge the power
Error Message	E1	Communication error	Check if the App is on. Try data transmission again
	E3	Cuff is not secure	Refasten the cuff and relax, then measure again
	E10 or E11	Monitor detected motion, talking or pulse is too poor while measuring	Relax for moment, then measure again
	E20	The measurement process is not detecting pulse signal	Loosen clothing on the arm, then measure again
	E21	Measurement failed	Relax for a moment, then measure again
	EExx shows on display	Calibration error has occurred	Try to retake the measurement again. If problem persists, contact the Kogan customer support team for information.

# Specifications

Power supply	3.7 1000mAh built-in rechargeable Li-polymer battery, 5.9V $\overline{\text{---}}$ 2000mA AC adaptor
AC adaptor	Input: 100-240VAC 50/60Hz 0.5A Max Output: 5.9V $\overline{\text{---}}$ 2000mA
Measurement mode	Oscillographic testing mode
Measurement range	<b>Rated cuff pressure: 0kpa-40kpa (0-300mmHg)</b> <b>Measurement pressure: 5.3kPa-30.7kPa (40-230mmHg)</b> <b>Pulse value: 40-199 beats per minute</b>
Accuracy	Pressure: 5°C - 40°C within $\pm 0.4\text{kpa}(3\text{mmHg})$ <b>Pulse value: <math>\pm 5\%</math></b>
Normal working condition	Temperature: -20°C - 60°C. Relative humidity < 85% Atmospheric pressure: 50kPa to 106kPa
Measurement perimeter of upper arm	Approximately 22cm - 32cm
Net weight	Approx 265g
External dimensions	Approx 130 x 72.2 x 29.4mm
Attachment	AC adaptor
Mode of operation	Continuous operation
Degree of protection	Type BF applied parts
Ingress of Water Protection	IP22 - Device protected against solids of 12.5mm and greater, and vertical falling water when enclosure tilted up to 15°
Software version	V01
Device classification	Battery powered mode: Internally powered ME Equipment AC adaptor charged mode: Class II ME Equipment

**WARNING:** No modifications of this equipment is allowed.

# Complied European Standards List

Risk Management	ISO/EN 14971:2012 Medical devices - Application of risk management to medical devices.
Labeling	ISO/EN 15223-1:2012 Medical devices. Symbols to be used with medical device labels, labelling and information to be supplied. General requirements.
User Manual	EN 1041: 2008 Medical equipment manufacturers to provide information.
General Requirements for Safety	EN 60601-1: 2006 Medical electrical equipment - Part 1: General requirements for basic safety and essential performance. IEC/EN 60601-1-11: 2010 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 the home healthcare environment. IEC/EN 80601-2-30:2009 Medical electrical equipment - Part 2-30: Particular requirements for the basic safety and essential performance of automated noninvasive sphygmomanometers.
Electromagnetic compatibility	IEC/EN 60601-1-2:2007 Medical electrical equipment - Part 1-2: General requirements for basic safety and essential performance - Collateral standard: Electromagnetic compatibility - Requirements and tests.
Performance requirements	EN 1060-1: 1995+A2:2009 Non-invasive blood pressure Part 1: General requirements. EN 1060-3:1997+A2:2009 Non-invasive blood pressure Part 3: Supplementary requirements for electromechanical blood pressure measuring systems.
Clinical investigation	EN 1060-4: 2004 Automatic blood pressure monitor overall system Interventional accuracy of the testing process.
Usability	IEC/EN 60601-1-6: 2010 Medical electrical equipment - Part 1-6: General requirements for basic safety and essential performance - Collateral Standard: usability.

	IEC/EN 62366: 2007 Medical devices - application of usability engineering to medical devices.
Software life-cycle processes	IEC/EN 62304:2006+AC: 2008 Medical device software - Software life cycle processes.

## EMC Guidance

1. The blood pressure monitor needs special precautions regarding EMC and needs to be installed and put into service according to the EMC information provided.
2. Wireless communications equipment such as wireless home network devices, mobile phones, cordless telephones and their base stations and walkie-talkies can affect this equipment and should be kept at least a distance of 3m away from the equipment.  
 (Note: As indicated in table 6 of IEC 60601-1-2:2007 for ME EQUIPMENT, a typical mobile phone with a maximum output power of 2 W yields  $d = 3,3\text{m}$  at an IMMUNITY LEVEL of 3 V/m)