



# Digital Upper Arm Blood Pressure Monitor BVDABPMTRKA User Manual

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

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## General Description

This blood pressure monitor features blood pressure measurement, pulse rate measurement and result storage. Readings taken using this device are the equivalent to those obtained by a trainer observer using the cuff and stethoscope auscultation method.

### Features

- 60mm x 40.5mm digital LCD display
- Memory function holds 60 measurements








The Blood Pressure Monitor is digital upper arm monitors intended for use in measuring blood pressure and heartbeat rate with upper arm circumference ranging from 22cm to 32 cm ( about 8<sup>3</sup>/<sub>4</sub>" -12<sup>1</sup>/<sub>2</sub>" ). It is intended for adult indoor use only.

Sold in Australia by Kogan Australia Pty Ltd,  
(GPO Box 2679 Melbourne VIC 3001)  
ARTG Number: ARTG 286504

Manufactured by: Guangdong Transtek Medical Electronics Co.,Ltd  
(Zone A, No.105 Dongli Road Torch Development District, Zhongshan, Guangdong 528437 China)

## Product Labels

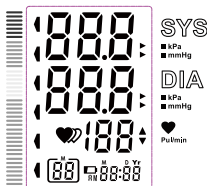
The labels below may appear in the labelling on the product.

	Symbol for "THE OPERATION GUIDE MUST BE READ"		Symbol for "TYPE BF APPLIED PARTS"
	Caution: These notes must be observed to prevent any damage to the device.		Symbol for "ENVIRONMENT PROTECTION - 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"
	Symbol for "MANUFACTURE DATE"		
	Symbol for "SERIAL NUMBER"		
	Symbol for "DIRECT CURRENT"		

## Caution

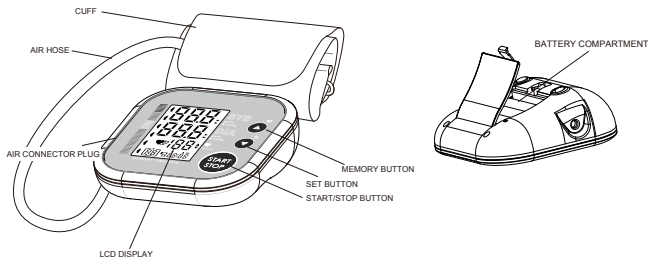
- This device is intended for adult use only.
- This device is intended for non-invasive measurement and monitoring of arterial blood pressure.
- It is not intended for use on extremities other than the arm, or for functions other than obtaining a blood pressure measurement.
- Do not confuse self-monitoring with self-diagnosis. This unit allows you to monitor your blood pressure. Do not begin or end medical treatment without asking a physician for treatment advice. If you are taking medication, consult with your physician to determine the most appropriate time to measure your blood pressure. Never change a prescribed medication without consulting with your physician.
- When this device is used to measure patients who have common arrhythmias such as atrial or ventricular premature beats or atrial fibrillation, accurate results from the device may still occur with deviations. Please consult with your physician about the results.
- If the cuff pressure exceeds 40kPa (300 mmHg), the unit will automatically deflate. Should the cuff not deflate when the pressure exceeds 40 kPa (300 mmHg), detach the cuff from your arm and press the START/STOP button to stop inflation.
- This equipment is not AP/APG equipment and not suitable for use in the presence of a flammable anaesthetic mixture of air with oxygen or nitrous oxide.
- The operator must not touch the battery output and the patient simultaneously.
- To avoid measurement errors, please avoid strong electromagnetic fields, radiating interference signals or electrical fast transient/burst signals.
- The user must check that the equipment is functioning safely, checking that the product is in working order before use.
- This device should not be used by pregnant women, or women who suspect they may be pregnant. It will provide inaccurate readings and the effects upon a fetus is untested.
- This device is not suitable for continuous monitoring during medical emergencies or operations. Prolonged use can cause the patients arm and fingers to become swollen and turn purple due to the lack of blood flow.
- During use, the patient will be in contact with the cuff. The materials of the cuff have been tested and found to comply with requirements of ISO 10993-5:2009 and ISO 10993-10:2010. It will not cause any irritation or hyper-sensitivity.
- Please do not use extra accessories that have not been supplied by Kogan.com.
- If you have any problems or questions regarding the use of the device, please contact the Kogan.com customer support team.
- Please use the soft cloth to clean the whole unit. Don't use any abrasive or volatile cleaners.

# LCD Display



SYMBOL	DESCRIPTION	EXPLANATION
<b>SYS</b>	Systolic pressure	High blood pressure
<b>DIA</b>	Diastolic pressure	Low blood pressure
<b>Pul/min</b>	Pulse display	Pulse in beats per minute
▼	Deflation symbol	The cuff is deflating.
M 88	Memory	Indicate it is in the memory mode and which group of memory it is.
kPa	kPa	Measurement Unit of the blood pressure
mmHg	mmHg	Measurement Unit of the blood pressure
0 +	Low battery	Batteries are low and need to be replaced
♥	Irregular heartbeat	Blood pressure monitor is detecting an <u>irregular heartbeat during measurement.</u>
♥	Heartbeat	Blood pressure monitor is detecting a <u>heartbeat during measurement.</u>
▮	Blood pressure level indicator	Indicate the blood pressure level
M D Yr 88:88	Current Time	Year/Month/Day, Hour/Minute

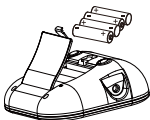
# Product Layout



# Before Use

## Installing/Replacing Batteries

1. Open the battery cover.
2. Install the batteries as indicated in the battery compartment, taking care to match the polarities as shown. (The unit uses four x AAA batteries)
3. Replace the battery cover.



The batteries should be replaced whenever any of the following occurs:

- The 'LO + B' symbol shows.
- The display is dim.
- The display does not light up.

### CAUTION

Do not use new and used batteries together.

Do not use different types of batteries together.

Do not dispose of the batteries in a fire. Batteries may explode or leak.

Remove batteries if the device is not likely to be used for some time.

Worn batteries are harmful for the environment. Do not dispose with the household garbage.

## Measurement Principle

This product uses the oscillometric measurement method to detect blood pressure.

Before each measurement, the unit will establish a "zero pressure" equivalent to the air pressure.

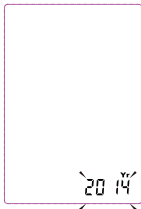
Then it will start inflating the arm cuff, while the unit will detect pressure oscillations generated by the beat-to-beat pulsatile. This will determine the systolic and diastolic pressure, and also your pulse rate.

The device also compares the longest and shortest time intervals for detected pulse waves, to calculate the mean time interval, and then calculates your standard deviation. The unit will display a warning signal with the reading to indicate the detection of an irregular heartbeat if the difference in the time intervals is over 25%.

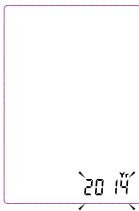
## Setting Date, Time and Measurement Units

It is important to set the clock before using the blood pressure monitor, so that a time stamp can be assigned to each record that is stored in the memory. (The setting range for years is 2014 - 2054, and time format is 12H).

1. When the monitor is off, hold the SET button for 3 seconds to enter the year setting mode. Alternately, when the monitor is off press the SET button once to display the time, then hold the SET button to enter the year setting mode.



2. Press MEM to change the [YEAR]. Each press will increase the numeral by one. The numbers will cycle back if you accidentally pass the current year.



3. When you get the right year, press the SET button to select the year, then go to the next step.



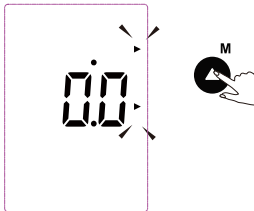
4. Repeat steps 2 and 3 to set the [MONTH] and [DAY].



5. Repeat steps 2 and 3 to set the [HOUR] and [MINUTE].



- Repeat steps 2 and 3 to set the [UNIT]



- Once the display is set, the LCD will display "DONE" firstly, then it will display all of the settings you set before turning off.

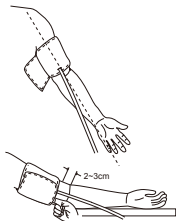


## Tying the Cuff

- Tie the cuff onto your upper arm, then position the tube off-center towards the inner side of your arm, in line with your little finger. You can position the artery mark over the main artery (on the inside of your arm).

Note: you can locate the main artery by pressing with 2 fingers approximately 2cm above the bend of your elbow on the inside of your left arm. Identify where the pulse can be felt the strongest. This is your main artery.

- The cuff should be snug but not too tight. You should be able to insert one finger between the cuff and your arm.
- Sit comfortably, with the arm you are measuring resting comfortably on a flat surface.
- Patients with hypertension: the middle of the cuff should be at the level of the right atrium of your heart; before starting measurement, please sit comfortably with your legs uncrossed, your feet flat on the floor and you back and arm both supported.

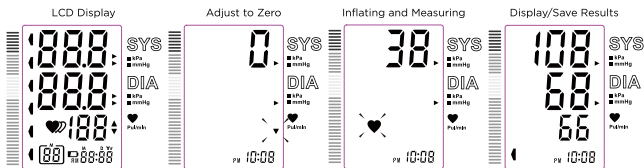


# Measurement

- Rest for at least 5 minutes before taking your measurements.
- Wait for at least 3 minutes between measurements. This will allow for your blood circulation to recover.
- For a meaningful comparison, try to measure under similar conditions each time. For example, take your daily measurements are approximately the same time, in the same location and position, or otherwise as directed by your physician.

## Starting the Measurement

**Step One:** When the monitor is off, press START/STOP to turn the monitor on, and it will then complete the whole measurement process.

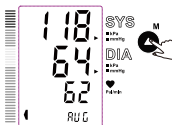


**Step Two:** Press START/STOP to power off, otherwise the unit will automatically turn off after one minute of inactivity.



## Recalling Records

**Step One:** When the monitor is off, press MEM to show the average value of the most recent three records.



**Step Two:** Press MEM or SET to access the specific record you want.



The most recent record (1) is shown first. Each new measurement will take the (1) position, with older records shuffled back. (2) will become (3) and so on. The last record (60) will be dropped from the list.

Date and time will display alternately.

The corresponding date is January 1st.

The corresponding time is P.M. 10:08

## Deleting Records

If you are not satisfied with your measurement, you can delete all saved records by following these steps.

1. Hold the MEM button down for 3 seconds when the monitor is in memory recall mode. The unit will flash, showing the display to the right.



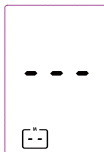
2. Press SET to confirm deletion. The monitor will then turn off.



Note: to exit out of the deletion mode without deleting any records, press START/STOP before pressing SET to confirm the delete instruction.



3. If there are no records to delete, the following screen will display.



## Measurement Tips

Measurements may be inaccurate if taken under the following conditions.



Within 1 hour of eating/drinking



After drinking tea, coffee or smoking



Within 20 minutes of bathing



When talking or moving fingers



In a cold environment



When you need to go to the toilet



# Maintenance

In order to get the best performance, please follow these instructions.



Place in a dry location out of sunshine



Avoid contact with water



Avoid intense shaking/knocks/drops



Avoid dusty, hot locations



Use a soft, dry cloth to remove dirt

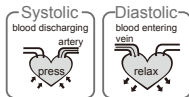


Do not clean cuff or unit with water

# Information

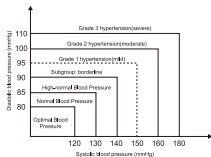
## What are systolic pressure and diastolic pressure?

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 press classification published by the World Health Organisation (WHO) and the International Society of Hypertension (ISH) in 1999 is as follows:



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

**CAUTION:** Only your doctor can tell you your normal BP range. Please contact your doctor if your measuring results fall outside of this range. Please note that only your doctor can tell you if your blood pressure value has reached a dangerous level.

## Irregular Heartbeat Detector

An irregular heartbeat (IHB) is detected when a heartbeat rhythm varies while the unit is measuring the systolic and diastolic blood pressure. During each measurement, the monitor records the heartbeat intervals and calculates the average. If any average is larger than or equal to 25%, the irregular heartbeat symbol will appear on the display when the measurement results appear.

**⚠ CAUTION:** The appearance of the IHB icon indicates that a pulse irregularity consistent with irregular heartbeat was detected during the measurement. Usually this is NOT a cause for concern. However, if the symbol appears often, we recommend 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 through the day?

1. Individual blood pressure varies multiple times every day. It is also affected by the way you tie your cuff and your measurement position, so please take the measurement under the same conditions.
2. If the person is taking medication, the measurements may vary.
3. Wait at least 3 minutes and then take another measurement.



## Why do I get different results at home compared to hospital?

Blood pressure can be different throughout the day due to weather, emotional state, exercise etc. Also, there is what is known as the "white coat" effect, which means blood pressure normally increases in clinical settings.

If taking your measurement at home, pay attention to the following:

- Check the cuff is tied properly
- Check if the cuff is too tight or too loose
- Check that the cuff is positioned correctly
- If feeling anxious, take 2-3 deep breaths and relax and take your measurement later

## Will the result differ if taken on the other arm?

Both arms will be fairly accurate to your current situation, however to ensure that the results are as accurate as possible, please always measure the same arm.

## List

1. Digital Upper Arm Blood Pressure Monitor BVDABPMTRKA



2. Cuff (Type BF applied part) (22cm~32cm)



(Please use authorized cuff. The size of the actual cuff please refer to the label on the attached cuff.)


3. 4×AAA batteries



4. User manual

## Troubleshooting

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

Problem	Symptom	Possible Cause	Possible Solution
No Power	Display will not light up	Batteries are exhausted	Replace batteries
		Batteries inserted incorrectly	Insert batteries correctly
Low Battery	Display is dim or shows 	Batteries are low	Replace with new batteries
Error Message	E1	Cuff is not secure	Refasten the cuff
	E2	Cuff is too tight	Readjust the cuff
	E3	Excess pressure on cuff	Relax and take measurement again
	E10 or E11	Monitor was unable to take measurement due to excess movement or positioning	Relax, get comfortable and take measurement again
	E20	Pulse cannot be detected	Loosen clothing around your arm and take measurement again
	E21	Measurement failed	Relax and take measurement again
	EExx	Calibration error has occurred	Retake the measurement. If this problem persists, contact the Kogan.com customer support team for further assistance.

## Product Specifications

Power supply	6VDC 4 x AAA batteries
Display mode	Digital LCD V.A 60mm x 40.5mm
Measurement mode	Oscillographic testing mode
Measurement range	Cuff pressure: 0kPa - 40kPa (0mmHg - 300mmHg) Measurement pressure: 5.3kPa - 30.7kPa (40mmHg - 230mmHg) Pulse value: 40-199 beat/minute
Accuracy	Pressure: within $\pm 0.4$ kPa (3mmHg) Pulse: $\pm 5\%$
Normal working condition	Temperature: 5°C to 40°C Relative humidity: $\leq 85\%$ RH Atmospheric pressure: 86kPa to 106kPa
Storage/transport condition	Temperature: -20°C to 60°C Relative humidity: 10%RH - 93%RH Atmospheric pressure: 50kPa to 106kPa
Measurement perimeter of upper arm	Approx 22cm - 32cm
Net weight	Approx 282g (not including batteries)
External dimensions	Approx 110mm x 110mm x 41mm
Mode of operation	Continuous operation
Degree of protection	Type BF applied part
Protection against water	IP21
Software version	V01
Device Classification	Battery Powered Mode: Internally Powered ME Equipment

## Complied European Standards List

Risk management	EN ISO 14971:2012 Medical devices - Application of risk management to medical devices
Labeling	EN 980:2008 Symbols for use in the labelling of medical devices
User manual	EN 1041:2008 Information supplied by the manufacturer of medical devices
General Requirements for Safety	EN 60601-1:2006 Medical electrical equipment - Part 1: General requirements for basic safety and essential performance 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 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	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 ISO 81060-1:2012 Non-invasive sphygmomanometers - Part 1: Requirements and test methods for non-automated measurement type EN 1060-3:1997+A2:2009 Non-invasive sphygmomanometers - Part 3: Supplementary requirements for electro-mechanical blood pressure measuring systems
Clinical investigation	EN 1060-4:2004 Non-invasive sphygmomanometers - Part 4: Test procedures to determine the overall system accuracy of automated non-invasive sphygmomanometers
Usability	EN 60601-1-6: 2010 Medical electrical equipment -- Part 1-6: General requirements for basic safety and essential performance - Collateral Standard: Usability EN 62366: 2008 Medical devices - Application of usability engineering to medical devices
Software life-cycle processes	EN 62304:2006/AC: 2008 Medical device software - Software life cycle processes

### EMC Guidance

1. This equipment needs to be installed and used in accordance to the information provided in this user manual.
2. 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  $d=3,3m$  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 2W yields  $d=3,3m$  at an IMMUNITY LEVEL of 3V/m)