Table type blood pressure monitor intended use:

Measures human beings Systolic, Diastolic blood pressure and heart rate using the oscillometric method. All values can be read out in one LCD DISPLAY. Measurement position is at human being's upper arm.

Having one's blood pressure measured by a doctor in a hospital tends to stimulate nervousness in the person and may even create high blood pressure. Blood pressure in accordance with variety of conditions varies. So judgment is not possible on the basis of a single measurement. It is better to take measurement at home. Regular home monitoring will let you have a record of your measurements. This information may provide a better reference of what your blood pressure really is, and may help your doctor make important decisions about your diagnosis and treatment. If end-user has one of the diseases as heart troubles, kidney trouble, diabetes or frustration problem of blood vessel, please consult a doctor before using the device.

What is blood pressure ?

Blood pressure is a measurement of the force of blood flowing against the walls of the arteries. Arterial blood pressure is constantly changing during the course of the cardiac cycle. The highest pressure in the cycle is called the systolic blood pressure, the lowest is the diastolic blood pressure. Both pressure readings, the systolic and the diastolic are necessary to enable a physician to evaluate the status of a patient's blood pressure. Many factors such as physical activity, anxiety or the time of day can influence your blood pressure. Blood pressure is typically low in the morning and increases from the afternoon to the evening. It is lower in the summer and higher in the winter.

Why is it useful to measure blood pressure at home ?

Having one's blood pressure measured by a doctor in a hospital or a clinic, and a group health checks, tend to stimulate nervousness in the subject and may even create high blood pressure. Also varies blood pressure in accordance with a variety of conditions and so judgment is not possible on the basis of a single measurement. The blood pressure measured first thing in the morning after getting up, before taking any food and with the subject still, is known as the fundamental blood pressure. In practice it is rather difficult to record the fundamental blood pressure, but to come as near as possible to measuring the blood pressure in an environment that is close to this, is why it is useful to take the measurement at home.

New WHO blood pressure classifications

Standards for assessment of high or low blood pressure without regard to age, have been established by the World Health Organization (WHO), as shown in the chart (Figure 1).

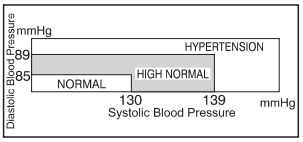
Variations in blood pressure

Individual blood pressures vary greatly both on a daily and a seasonal basis. These variations are even more pronounced in hypertension patients. Normally the blood pressure rises while at work and is at its lowest during sleeping period.

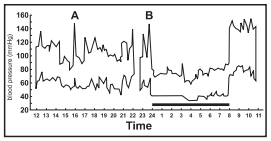
(Hypertension: means a person who has high blood pressure symptom.)

The graph (Figure 2) illustrated the variations in blood pressure over a whole day with measurement taken every five minutes.

(The thick line represents sleep. The rise in blood pressure at 4 PM (A in the graph) and 12 PM (B in the graph) correspond to an attack of pain.



* Figure No.1



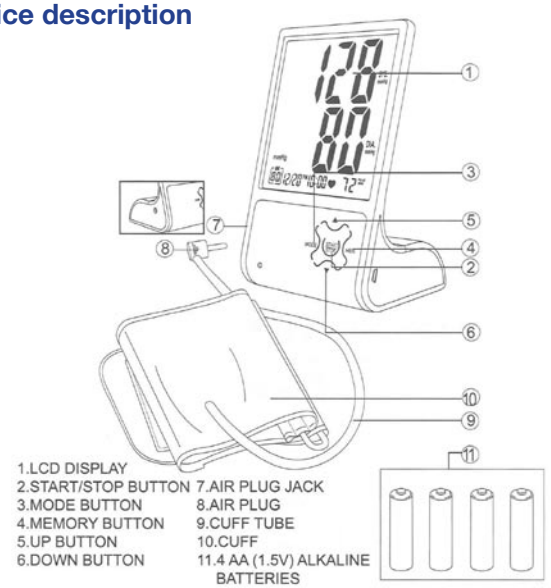
* Figure No.2

Important information before use of the unit

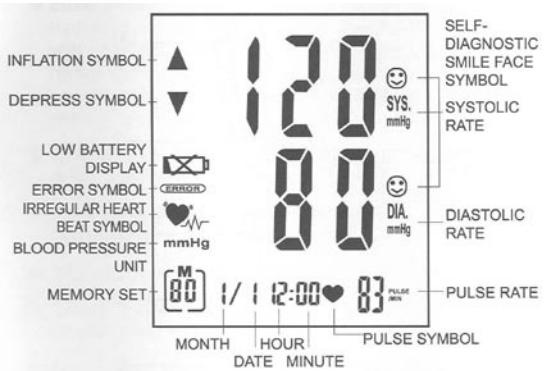
- Blood pressure measurements should be interpreted by a physician or trained health professional who is familiar with your medical history. By using the unit regularly and recording the results for your physician to interpret, you keep your physician informed of the continuing trends in your blood pressure.
- Wrap the cuff snugly around your arm and the cuff must be at the same level as your heart.
- Do not vibrate the unit during measurement, or the proper measurement will not be achieved.
- Perform measurement quietly in a relaxed position.
- Do not wrap the cuff over jacket or sweater sleeve, or measurement cannot be done.
- Keep in mind, that blood pressure naturally varies from time to time through out the day and also is affected by lots of different factors such as smoking, alcohol consumption, medicamentation and physical activity.
- Blood pressure measurement determine with the unit are equivalent to those obtained by a trained observer using the cuff / stethoscope auscultation method. Within the limits prescribed by the American National Standard for Electronic or Automated Sphygmomanometers.

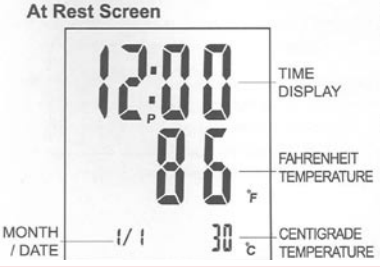
Device description

A. Name of the parts



B. Description of display symbols



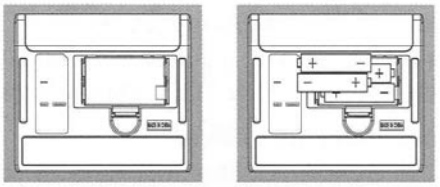


Note:

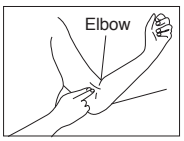
* Ambient temperature will respond to the change of environment slowly.
* The temperature value might be a little bit higher if multiple measurements are being taken continuously.

Changing batteries

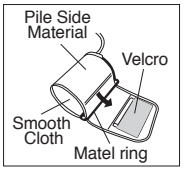
Remove the battery cover at the rear side of the unit and insert ALKALINE batteries into the battery compartment as shown, taking extreme care that the polarities + and - are observed.



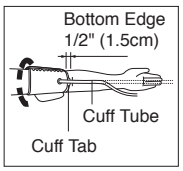
Attaching pressure cuff



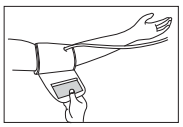
- Press your brachial artery by two fingers approximately 1 inch above the elbow on the inside of your left arm.



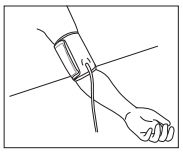
- Determine where your strongest pulse is. Slide the end of arm cuff furthest from the tube through the metal ring to a loop. The smooth cloth should be on the inside of the cuff.
- If the cuff is located correctly, the Velcro will be on the outside of the cuff and metal ring will not touch your skin.



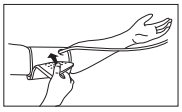
- Put left arm through the cuff loop. The bottom of the cuff should be approx. 0.5 inch above elbow. The cuff should lie over the brachial artery on the inside of the arm.



- Pull the cuff so that the top and bottom edges are tightened around your arm.
- When the cuff is positioned properly, press the Velcro firmly against the pile side of the cuff



- Sit on a chair and place your arm on the table so that the cuff is at the same level as your heart.
- Relax your arm and palm your arm upward.



- Assure there are no kinks in the air tube.

Description of display marks

Display mark	Condition/Cause	Corrective action
pulse mark	Flashes on the LCD screen when pulse is detected during measurement.	Measurements in progress. Do not move or talk.
replace batteries	Appears when the battery voltage is excessively low or the positions of batteries are incorrect.	Replace all four batteries with new ones. Insert the batteries in correct polarities.
ERROR measuring error	Appears when the accurate blood pressure could not be obtained.	Press "START/STOP" button again to re-measure. Or check cuff if wrapped properly around the arm and according to instructions.Check palm if exerting effort. Check if there is movement during measurement. Check if posture is correct.
IHB symbol	Appears for 1 minute when the user was talking, moving or shaking or an irregular heart beat was detected during measurement.	Repeat the measurement. Note that you be relaxed for at least 5 minutes and sit comfortably and quietly before you restart a measurement.

1. **Inserting 4 pieces "AA" Alkaline batteries in position:**
   a. Open battery cover
   b. Refer to the picture in positioning batteries
   c. All segments will appear on the display in 3 seconds.
   d. Display 1 month 1 date, 12 hour 0 minute.

2. **Setting Month, Date and Time :**
   a. Press "MODE" button ("month" starts flashing) Press "▲" and "▼" button to set and adjust the correct month (1, 2, 3 ....12).
   b. Press "MODE" button again ("date" starts flashing) Press "▲" and "▼" button to set and adjust the correct date.
   c. Press "MODE" button again ("hour" starts flashing) Press "▲" and "▼" button to set and adjust the correct hour in 12-hour format. A "PM" will appear for PM and disappear for AM.
   d. Press "MODE" button again ("minute" starts flashing) Press "▲" and "▼" button to set and adjust the correct minute (00, 01, 02 ...59).

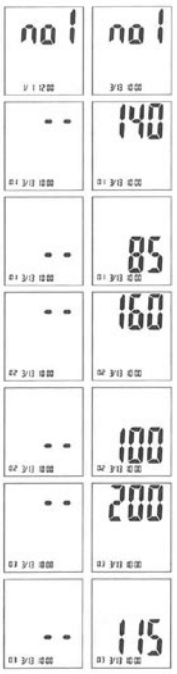
If the batteries have run down or are removed or the adapter has been unplugged, the time and date will have to be reset.

After setting the minute you will automatically be prompted to set the personalized level for Memory Zone 1. The storage of 240 memory readings is divided into 3 memory zones, each maintaining up to 80 memory readings. The following explains how to set your personalized level in each zone.

How to measure

Your personalized level should be decided between you and your healthcare provider.
Before setting your levels it is important to know:
**Your systolic rate is set between 70 and 250 mmHg.*
*Your diastolic rate is set is between 40 and 115 mmHg.

3. **Setting personalized levels**
   a. Press "MODE" button (" - - " will flash for 1st systolic self-management) Press "▲" or "▼" button to set/adjust the personalized systolic rate
   b. Press "MODE" button (" - - " will flash for 1st diastolic self-management) Press "▲" or "▼" button to set/adjust the personalized diastolic rate
   c. Press "MODE" button (" - - " will flash for 2nd systolic self-management) Press "▲" or "▼" button to set/adjust the personalized systolic rate
   d. Press "MODE" button (" - - " will flash for 2nd diastolic self-management) Press "▲" or "▼" button to set/adjust the personalized diastolic rate
   e. Press "MODE" button (" - - " will flash for 3rd systolic self-management) Press "▲" or "▼" button to set/adjust the personalized systolic rate
   f. Press "MODE" button (" - - " will flash for 3rd diastolic self-management) Press "▲" or "▼" button to set/adjust the personalized diastolic rate



The examples above illustrate setting personalized levels in all 3 zones. After setting your Personalized Alert Level, you will automatically be given the option to set a Multi-Measurement for that zone. If you choose not to set a Multi-Measurement, just enter 1. After entering these settings you will be returned to the Rest mode and can take a measurement by pressing START/STOP.

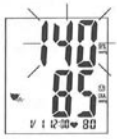
This material had been developed in interest of customer training program
by PROTON Healthcare Ltd. and downloaded from www.protonhealthcare.com

4. Steps to take blood pressure measurement :

- Wrap the cuff around the arm (refer to previous page)
- Sit upright in a chair with feet flat on the floor.
- Press "▲" or "▼" button to select a particular memory zone then press the "START/STOP" button to start the measurement. The monitor will automatically inflate to the level that is right for you.

- When taking repeat measurements, make sure to select the same memory zone before pressing "START/STOP", so the measurement is registered to the appropriate memory.
- If the result of your Systolic or Diastolic rate of your reading result is greater than (not equal to) your set personalized level the DIGIT will flash. In addition the measurement that is out of range, either Systolic or Diastolic, will flash. If both are out of range both will flash.

If the result of your Systolic or Diastolic rate of your reading result is equal or less than your set personalized level a SMILING symbol will show out and flash on screen.



The appearance of this symbol, , signifies that a certain pulse irregularity was detected during the measurement. Talking, moving, shaking or an irregular pulse during the measurement can result in the appearance of this icon. Usually this is not a cause for concern, however if the symbol appears often, we recommend you seek medical advice. The device does not replace a cardiac examination, but serves to detect pulse irregularities at an early stage.

- To stop a reading in process, press the "START/STOP" button.
- Press and hold "Mode" button to check the pre-set personalized level.

5. Storing, recalling, and erasing measurement data :

- **Storing data**

*After each measurement, the systolic and diastolic rates, pulse rate and the time & date will be automatically stored. The memory holds data for the latest 80 measurements in each of 3 memory zones. If more than 80 measurements are entered, the memory will automatically clear out the oldest data.

- **Recalling data**

*Press the "▲" or "▼" button to select the memory zone.

*Press the "MEM" button to get your stored memory data. If there is no data in the memory nothing will appear.

*If there is data in the memory, the first reading will be an average of the last three recorded set of measurements (systolic and diastolic pressure and pulse rate).

*Press the "MEM" button again and the latest recorded set of measurements will appear along with the recording time and date.

*Press the "▼" button to read the next set of stored data. The data displayed starts with the most recent reading and continues backwards to the oldest.

*If your memory readings are out of range of your preset personal Alert levels. They will flash or show SMILING FACE symbol as explained on the previous page.

*No Irregular Heartbeat Detector Record will be stored in memory.

- **Erasing data**

*Press "MEM" into Memory mode.

*Press and hold on "MODE" button and then press "▲" button, the pre-set Personal Alert Level and all measurement data will be erased.

*To confirm the data has been erased, press the "MEM" button and no data should appear.

Note: 3 Zones of 80 Memory

When you take a measurement, the monitor automatically stores it in memory space number one. As you continue to take measurements, the monitor will push the previous measurement back one space. In other words, the value in space one will always be the most recent blood pressure measurement taken.

Your monitor features a 3 party memory capability or 3 "zones" - each zone stores 80 measurements each for a total capacity of 240 measurements. This feature is useful for a user to track their blood pressure throughout the various periods of the day: morning, afternoon, and night. Press the "▲" button to toggle between memory zone No.1, 2, and 3. Once you select a zone that you want to view the measurements in, press the "MEM" button once to view the most recent measurement along with the time and date that it was taken.

Press the "MEM" button again in succession and you will see all of the measurements registered to that zone. You can then press the "▲" button to switch to the next zone to view measurements. The monitor will automatically power off after about one minute of inactivity.

***When taking measurements, be sure and select the correct zone number using the SET button so that the measurement is registered to the appropriate zone.**

6. Multi-Measurement Options

Setting Multi-Measurement

a. Press the MODE button repeatedly until the figure below shows on the screen.

b. Press "▲" to select 1, 3 or 5 measurements. When set to 1 the reading is a typical single measurement.

c. Press "MODE" button ("60" starts flashing).

d. Press "▲" to set/adjust the time between readings; 60, 120 or 180 seconds.

e. Press the START/STOP button to start measurements.

f. The monitor will show 2 bars (--) on the Systolic and Diastolic display when each measurement ends.

g. After all measurements have been taken, the middle reading of each Systolic, Diastolic and Pulse reading will be displayed on the screen.

7. Personal Computer Link

Use this software to transfer your blood pressure monitor readings to your personal computer. Separate instructions are included with your monitor.

***PC program compatible with Microsoft Windows ME, 2000, Vista, XP Home Edition and XP Professional edition in English version only.**

8. To change batteries:

When " " show up on the display, the battery is weak. Take out all four batteries and put in 4 pcs of new Alkaline batteries.

All batteries used must be the same type. Do not mix alkaline, standard (carbon-zinc) or rechargeable (cadmium) batteries.

Do not mix old and new batteries.

This material had been developed in interest of customer training program
by PROTON Healthcare Ltd. and downloaded from www.protonhealthcare.com

Maintenance

- Use a piece of cloth with water or mild cleansing agent to clean the case and then use a piece of dry cloth to wipe it dry. Use a piece of dry cloth to wipe the cuff when it is dirty.
- Do not use gas or any strong cleansers in cleaning.
- When the unit is not to be used for a long time, remove the batteries. (Leaking of battery liquid can cause trouble.)

Safe-keeping

- Always keep the unit in the carrying case after its use.
- Do not put the item directly under the sunlight, in high temperature, or humid and dusty places.
- Do not store in extremely low (less than -20 C) or high (more than 60 C) temperature.

To Prevent Malfunction

- Do not in any way twist the arm cuff
- Do not inflate the monitor's cuff when it is not wrapped around the arm.
- Do not attempt to disassemble or change any parts of the monitor including the cuff
- Do not drop the product or put it through strong impact.

Warning

- The cuff size is suitable for 23-33 cm / 9-13 inches adult only.
- The device is not supposed to be used if your arm has any wound or injury.
- In case the cuff is pumping up and non stop, please open the cuff at once.
- We do not recommend user to unpack device by himself/herself due to substitution of a component different from that supplied might result in measurement error. If any suggestion or service is requested please consult your service station.

Model number	:	PHC 868BF
Range of measurement	:	Pressure 0-300mmHg, pulse 40-199 beats/minute
Accuracy	:	Pressure +/- 3mmHg, Pulse +/- 5% Max.
Inflation	:	Automatic
Exhaust	:	Automatic exhaust valve
Display	:	Systolic, Diastolic, Pulse rate
Sets of memory	:	3 database of 80 memory each = total 240 memory
Cuff size	:	Arm circumference approx. 23-33 cm / 9-13 inches
Operating Temperature	:	+10˚C to + 40˚C, < 85%R.H.
Storage Temperature	:	- 20˚C to + 70˚C, < 85%R.H.
Unit weight	:	Approx. 265g with battery
Power Supply	:	6VDC, 4 x "AA" (1.5V), Alkaline Batteries
Battery life	:	300 times measurement (twice a day measurement)
Auto power off	:	Whenever not used for 1 minute
Accessories	:	4 batteries, arm cuff with tube, instruction manual, pouch, gift box

Note

CE 0197 This Blood Pressure Monitor complies with the EC Directive and bears the CE mark "CE 0197".

The quality of the device has been verified and is in line with the provisions of the EC council directive 93/42/EEC (EN IEC60601-1 General requirements for safety, EN IEC60601-1-2:2001 Electromagnetic compatibility-Requirements and tests,) dated 14 June 1993 concerning medical devices and the EN performance standards as following:

EN 1060-1 Non-invasive sphygmomanometers - General requirements
EN 1060-3 Non-invasive sphygmomanometers - Supplementary requirements for electromechanical blood pressure measuring systems.
EN 1060-4 Non-invasive sphygmomanometers - Test procedures to determine the overall system accuracy of automated non-invasive sphygmomanometers.

Important!/Caution/Note!
Read the operating instructions.

Consult instructions thoroughly before use.

BF

Classification:
- Internally powered equipment
- BF type applied part
- IPX0
- Not suitable for use in presense of flammable anaesthetic mixture with air or with Oxygen or nitrous oxide
- Continuous operation with short-time loading

To avoid inaccurate results caused by electromagnetic interference between electrical and electronic equipments, do not use the device near a cell phone or microwave oven.

Discard the used product to the recycling collection point according to local regulations.

Manufacturer:
Health & Life Co., Ltd.
9F. No. 186 Jian Yi Road, Chung Ho City, Taipei, Taiwan

EC REP PROTON HEALTHCARE (Europe) Ltd.
36 Randolph Road, Langley, Slough, Berkshire, SL3 7QG, UK

This material had been developed in interest of customer training program
by PROTON Healthcare Ltd. and downloaded from www.protonhealthcare.com