

# AND

## Digital Blood Pressure Monitor

### Model UA-1030T

***Instruction Manual***  
*Original*

ENGLISH

***Manuel d'instructions***

FRANÇAIS

***Manual de Instrucciones***

ESPAÑOL

***Manuale di Istruzioni***

ITALIANO

***使用手冊***

中文

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# Dear Customers

Congratulations on purchasing a state-of-the-art A&D blood pressure monitor, one of the most advanced monitors available today. Designed for ease of use and accuracy, this monitor will facilitate your daily blood pressure regimen.

**We recommend that you read through this manual carefully before using the device for the first time.**

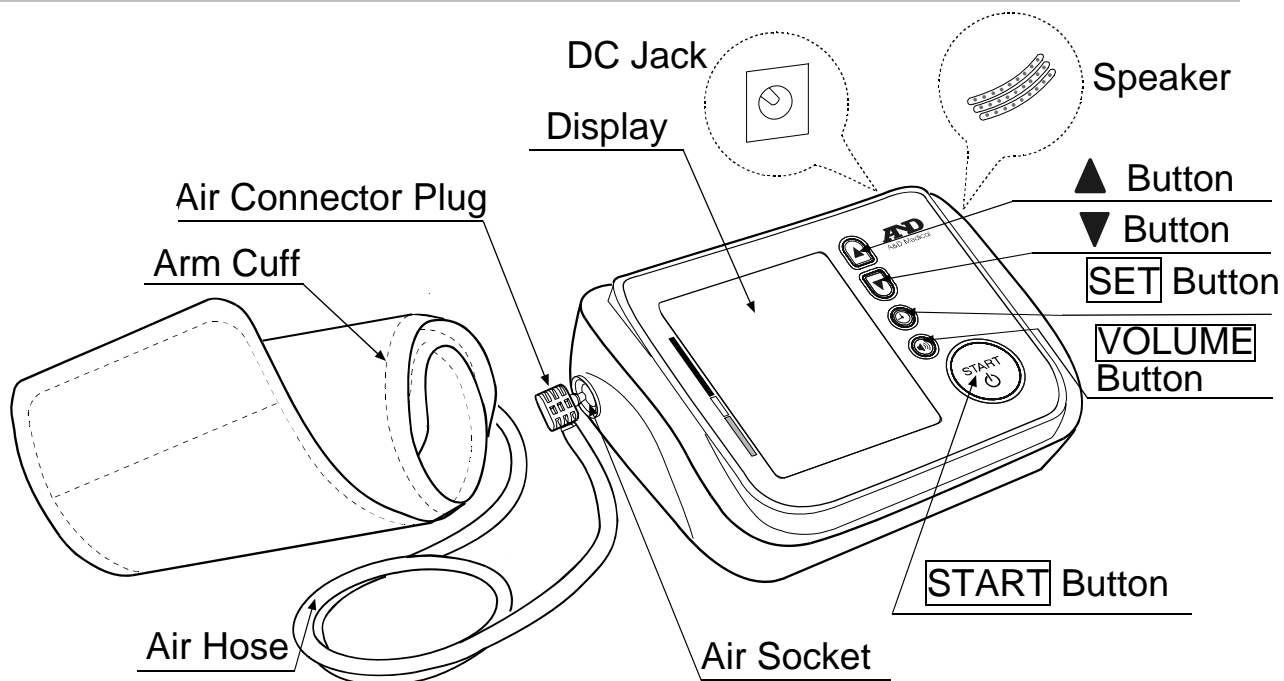
## Preliminary Remarks

- This device conforms to the European Directive 93/42 EEC for Medical Products. This is made evident by the **CE**<sup>0366</sup> mark of conformity. (0366: The reference number to the involved notified body)
- The device is designed for use on adults only, not newborns or infants.
- Environment for use  
The device is for use indoors.

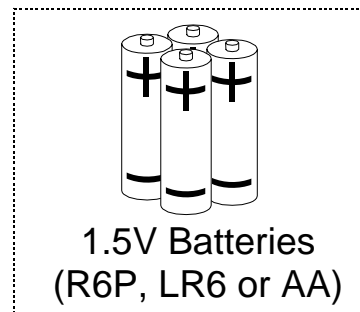
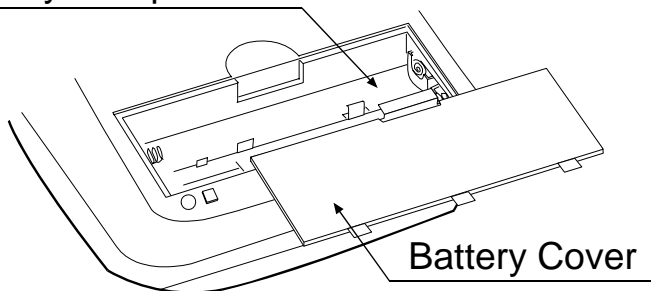
## Precautions

- Precision components are used in the construction of this device. Extremes in temperature, humidity, direct sunlight, shock or dust should be avoided.
- Clean the device and cuff with a dry, soft cloth or a cloth dampened with water and a neutral detergent. Never use alcohol, benzene, thinner or other harsh chemicals to clean the device or cuff.
- Avoid tightly folding the cuff or storing the hose tightly twisted for long periods, as such treatment may shorten the life of the components.
- The device and cuff are not water resistant. Prevent rain, sweat and water from soiling the device and cuff.
- Measurements may be distorted if the device is used close to televisions, microwave ovens, cellular telephones, X-ray or other devices with strong electrical fields.
- Used equipment, parts and batteries are not treated as ordinary household waste, and must be disposed of according to the applicable local regulations.

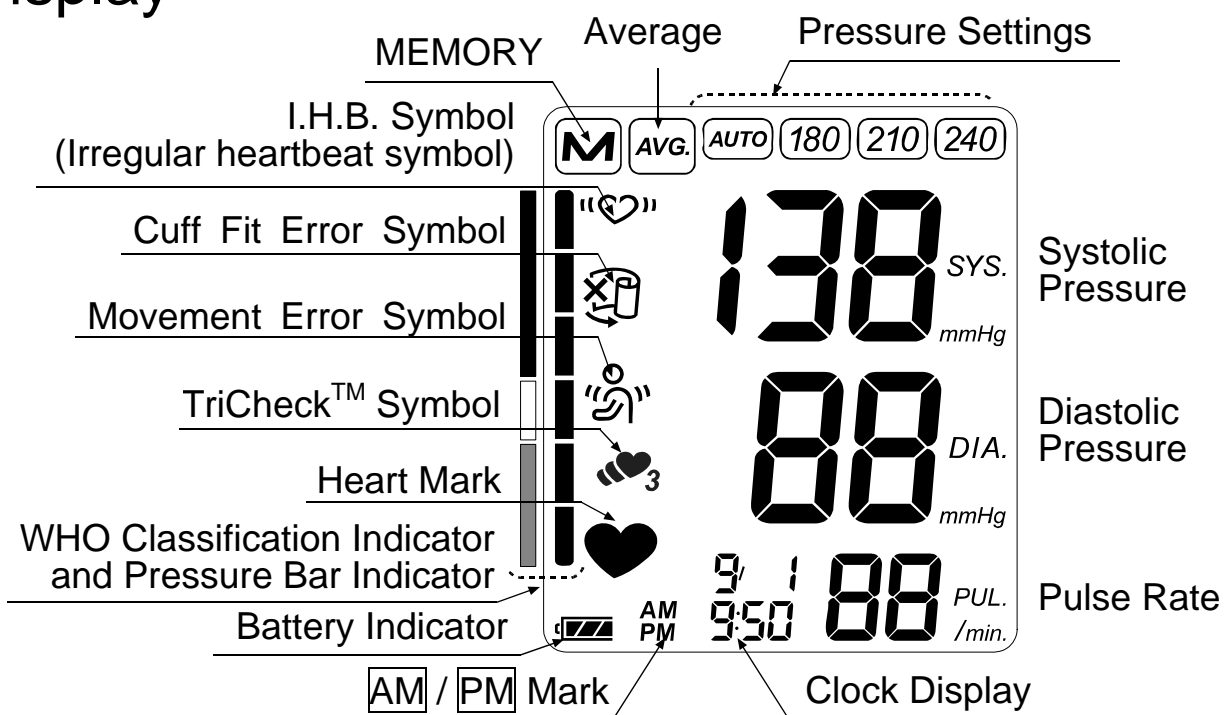
# Parts Identification



## Battery Compartment


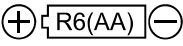









## Display












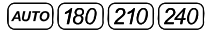
# Symbols

## Symbols that are printed on the device case

Symbols	Function / Meaning	Recommended Action
	Standby and Turn the device on.	_____
	Battery installation guide	_____
	Direct current	_____
SN	Serial number	_____
2010 	Date of manufacture	_____
	Type BF: Device, cuff and tubing are designed to provide special protection against electrical shocks.	_____
	EC directive medical device label	_____
	WEEE label	_____
	Manufacturer	_____
	EU-representative	_____

## Symbols that appear on the display

Symbols	Function / Meaning	Recommended Action
	Appears while measurement is in progress. It blinks when the pulse is detected.	Measurement is in progress. Remain as still as possible.
	<b>Irregular Heartbeat symbol (I.H.B.)</b> Appears when an irregular heartbeat is detected. It may light when a very slight vibration like shivering or shaking is detected.	_____
	TriCheck mode Takes three consecutive measurements automatically and displays the average values of the three measurements.	_____
	Appears when a body or arm movement is detected.	The reading may yield an incorrect value. Take another measurement. Remain still during measurement.

Symbols	Function / Meaning	Recommended Action
	Appears during measurement when the cuff is applied loosely.	The reading may yield an incorrect value. Apply the cuff correctly, and take another measurement.
	Previous measurements stored in memory.	_____
	Average data	_____
 Full Battery	The battery power indicator during measurement.	_____
 Low Battery	The battery is low when it blinks.	Replace all batteries with new ones when the mark blinks.
<i>Err</i>	Unstable blood pressure due to movement during measurement.	Take another measurement. Remain still during measurement.
	The systolic and diastolic values are within 10 mmHg of each other.	Apply the cuff correctly, and take another measurement.
	The pressure value did not increase during the inflation.	
<i>Err CUF</i>	The cuff is not applied correctly.	Apply the cuff correctly, and take another measurement.
<i>E</i> PUL. DISPLAY ERROR	The pulse is not detected correctly.	
<i>Err E</i>	Blood pressure monitor internal error	Remove the batteries and press the <b>START</b> button, and then install the batteries again. If the error still appears, contact the dealer.
<i>Err 9</i>		
SYS.	Systolic blood pressure in mmHg	_____
DIA.	Diastolic blood pressure in mmHg	_____
PUL./min.	Pulse per minute	_____
AM	Data taken between 4:00 and 9:59	_____
PM	Data taken between 18:00 and 1:59	_____
	Pressure settings Indicates the pressure value previously set by the user.	_____

# Operation Mode

## 1. Normal Measurement

Press the **START** button. Blood pressure is measured and the data is stored in memory. This device can store the last 90 measurements in memory.

## 2. Recalling the Data

Press the ▲ or ▼ button to recall the data in memory. The average of all measurements is displayed, as indicated in the figure at the right. The device announces the memory data values as they are displayed.

Then, each time the ▼ button is pressed, the memory data is displayed as follows.

Average of all AM (morning) measurements taken between 4:00 and 9:59.



Average of all PM (evening) measurements taken between 18:00 and 1:59.

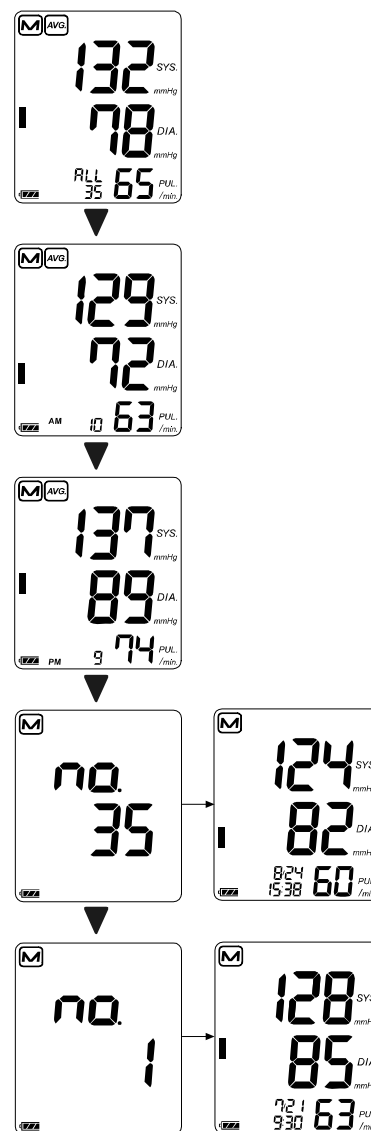


Most recent data (No.n, in the example, No.35)



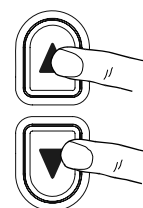
Last data (No.1)

For details on recalling the data, refer to “Recalling the Memory Data”.



## 3. Deleting all Data Stored in Memory

Press both the ▲ and ▼ buttons. The **M** mark and the battery indicator appear. Press and hold both the ▲ and ▼ buttons until the illuminated **M** mark starts blinking to delete all data stored in memory.



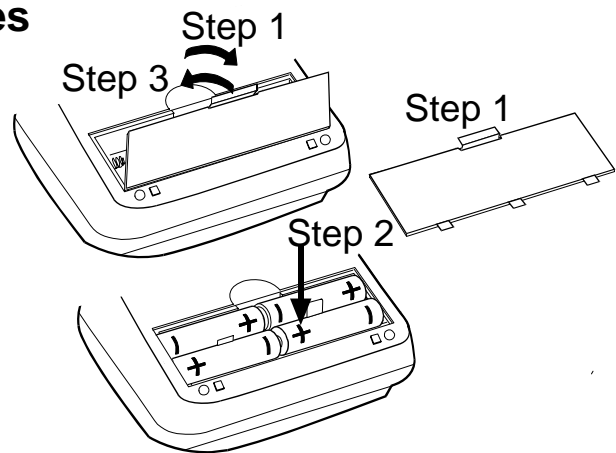
## 4. Measurement with the Desired Systolic Pressure

Refer to page 11 for measurement with the desired systolic pressure.




# Using the Monitor

## Installing / Changing the Batteries

1. Remove the battery cover.
2. Remove the used batteries and insert new batteries into the battery compartment as shown, taking care that the polarities (+ and -) are correct.  
Use only R6P, LR6 or AA batteries.
3. Attach the battery cover.

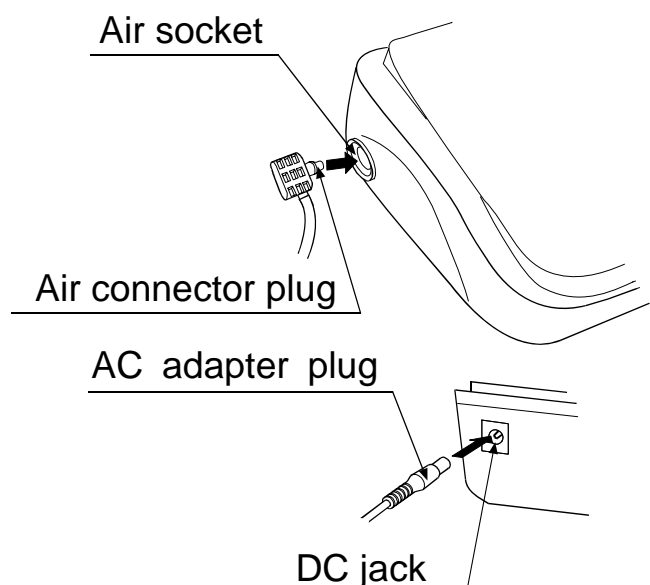


## CAUTION

- Insert the batteries as shown in the battery compartment. If installed incorrectly, the device will not work.
- When  (LOW BATTERY mark) blinks on the display and the device announces that the battery needs to be replaced, replace all batteries with new ones. Do not mix old and new batteries. It may shorten the battery life, or cause the device to malfunction.  
Replace the batteries two seconds or more after the device turns off.  
If  (LOW BATTERY mark) appears even after the batteries are replaced, make a blood pressure measurement. The device may then recognize the new batteries.
-  (LOW BATTERY mark) does not appear when the batteries are drained.
- The battery life varies with the ambient temperature and may be shorter at low temperatures.
- Use the specified batteries only.
- Remove the batteries if the device is not to be used for a long time.  
The batteries may leak and cause a malfunction.

## Connecting the Air Hose

Insert the air connector plug into the air socket firmly.



## Connecting the AC Adapter

Insert the AC adapter plug into the DC jack.

Next, connect the AC adapter to an electrical outlet.

- Use the specified AC adapter.  
(Refer to page 19.)



# Using the Monitor

## Adjusting the Built-in Clock

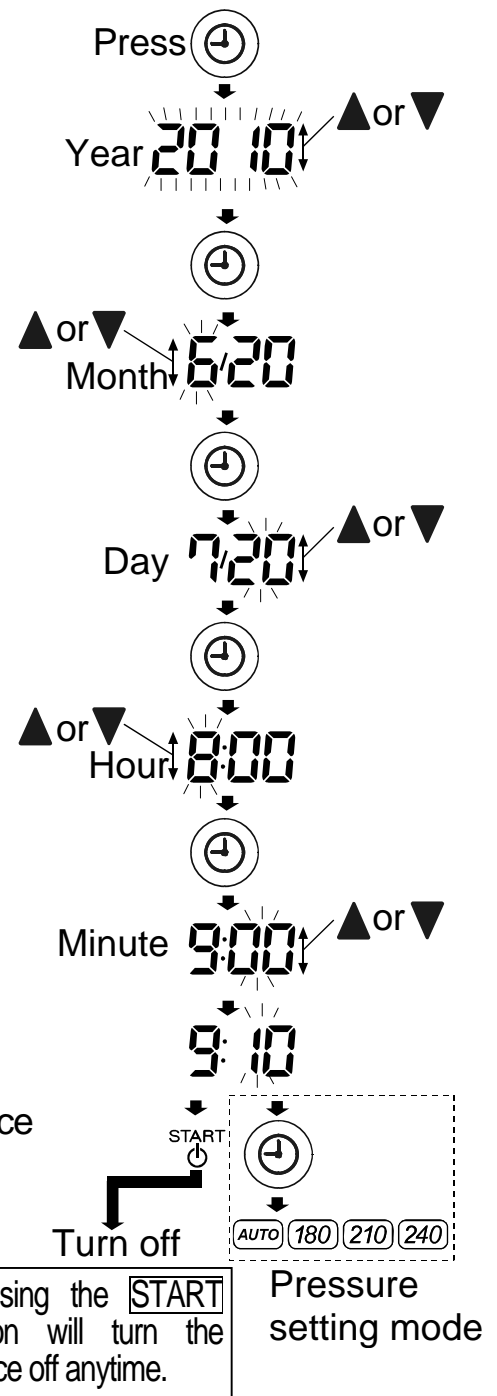
Adjust the clock prior to use.

1. Press the **SET** button until the year starts blinking.
2. Select the year using the ▲ or ▼ button. Press the **SET** button to set the current year and move to month/day selection. The date can be set anywhere between the years 2010 and 2059.
3. Select the month using the ▲ or ▼ button. Press the **SET** button to set the current month and move to day selection.
4. Select the day using the ▲ or ▼ button. Press the **SET** button to set the current day and move to hour/minute selection.
5. Select the hour using the ▲ or ▼ button. Press the **SET** button to set the current hour and move to minute selection.
6. Select the minute using the ▲ or ▼ button. (Press the **SET** button to go to the pressure setting mode. For details, refer to page 11.) Press the **START** button to turn the device off.

Note: After three minutes of non-operation, the device will turn off automatically.

When the clock has not been set, the clock display indicates dashes as shown to the right.

- Holding down the ▲ or ▼ button will change the value continuously.



## Selecting the Correct Cuff Size

Using the correct cuff size is important for an accurate reading. If the cuff is not the proper size, the reading may yield an incorrect blood pressure value.

- The arm size is printed on each cuff.
- The arm cuff is a consumable. If it becomes worn, purchase a new one.

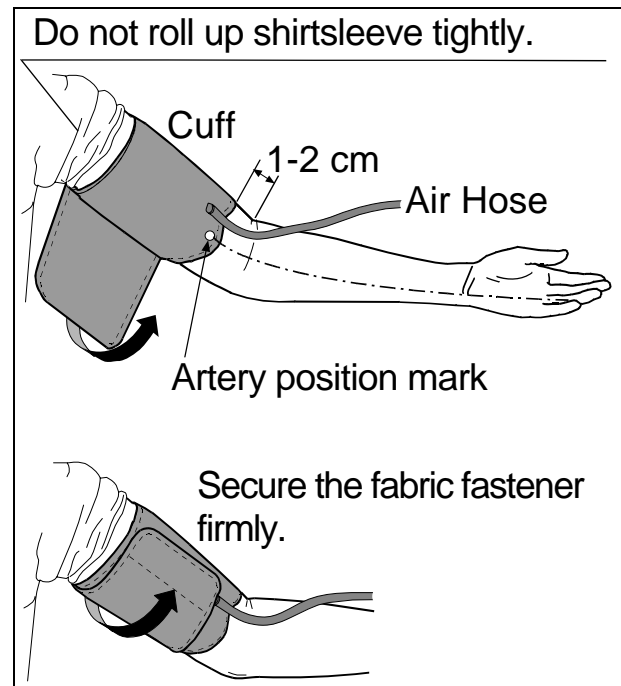
Arm Size	Recommended Cuff Size	Catalog Number
31 cm to 45 cm	Large adult cuff	UA-CUFFBKLA-EC
17 cm to 32 cm	Adult cuff	UA-CUFGKKAU-EC

Arm size: The circumference of the biceps.

# Using the Monitor

## Applying the Arm Cuff

1. Wrap the cuff around the upper arm, about 1-2 cm above the inside of the elbow, as shown. Place the cuff directly against the skin, as clothing may cause a faint pulse, and result in a measurement error.
2. Constriction of the upper arm, caused by tightly rolling up a shirtsleeve, may prevent accurate readings.



Symbols that are printed on the cuff

Symbols	Function/Meaning	Recommended Action
●	Artery Position Mark	Set the ● mark on the artery of the upper arm or in line with the ring finger on the inside of the arm.
REF	Catalog Number	_____
LOT	Lot Number	_____

## How to Take Accurate Measurements

For the most accurate blood pressure measurement:

- Sit comfortably at a table. Rest your arm on the table.
- Relax for about five to ten minutes before measurement.
- Place the center of the cuff at the same level as your heart.
- Remain still and keep quiet during measurement.
- Do not measure right after physical exercise or a bath. Rest for twenty or thirty minutes before taking the measurement.
- Try to measure your blood pressure at the same time every day.

## Measurement

During measurement, it is normal for the cuff to feel very tight. (Do not be alarmed).

## After Measurement

After measurement, press the **START** button to turn the device off. After one minute of non-operation, the device will turn off automatically. Remove the cuff and record your data.

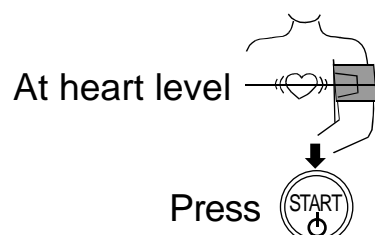
Note: Allow at least three minutes between measurements on the same person.

# Measurements

Before measurement, read “Notes for Accurate Measurement” on page 12.

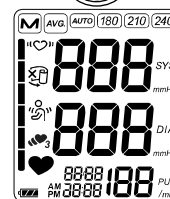
## Normal Measurement

1. Place the cuff on the arm (preferably the left arm).  
Sit quietly during measurement.



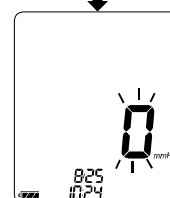
2. Press the **START** button.  
All of the display segments are displayed.  
Zero (0) is displayed blinking briefly.  
The display changes, as indicated in the figure at the right, as the measurement begins. The cuff starts to inflate. It is normal for the cuff to feel very tight. A pressure bar indicator is displayed, on the left edge of the display, during the inflation.

All of the display segments displayed



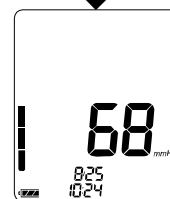
Note: If you wish to stop inflation at any time, press the **START** button again.

Zero display  
Starts inflation



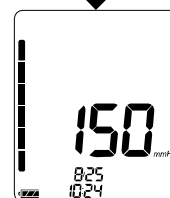
3. When inflation is complete, deflation starts automatically and ♥ (heart mark) blinks, indicating that the measurement is in progress. Once the pulse is detected, the mark blinks with each pulse beat.

Pressurizing



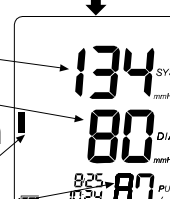
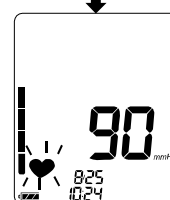
Note: If an appropriate pressure is not obtained, the device starts to inflate again automatically. To avoid re-inflation, see “Measurement with the SET Pressure” on the next page.

Measurement  
in progress



4. When the measurement is complete, the systolic and diastolic pressure readings and pulse rate are displayed. The device announces the measurement results. The cuff exhausts the remaining air and deflates completely.

Systolic pressure  
Diastolic pressure  
WHO classification  
Pulse rate



5. Press the **START** button to turn the device off. After one minute of non-operation, the device will turn off automatically.

Exhausts remaining  
air automatically

Note: Allow at least three minutes between measurements on the same person.

# Measurements

Model UA-1030T is designed to detect the pulse and to inflate the cuff to a systolic pressure level automatically.  
If re-inflation occurs repeatedly, use the following methods.

## Measurement with the SET Pressure

During the blood pressure measurement, re-inflation may occur.  
A fixed pressure value can be set to avoid re-inflation.

1. At step 6 of the clock adjustment procedure (see page 8), press the **SET** button to go to the pressure setting mode. The current setting blinks.

2. Press the ▲ or ▼ button to select a pressure value about 30 mmHg or more above your expected systolic pressure from the following.

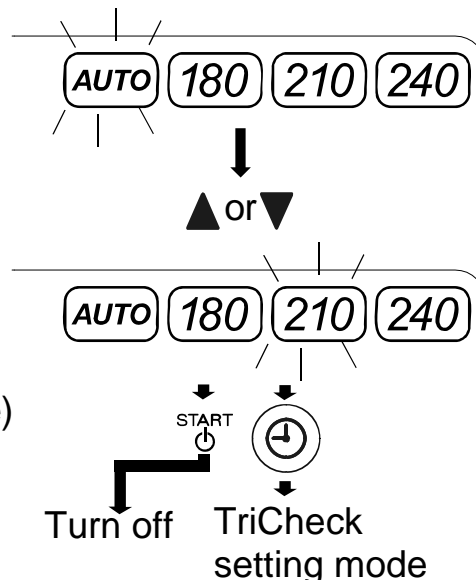
**AUTO** : Automatic pressurization (default value)

**180** : Pressure value of 180 mmHg (fixed)

**210** : Pressure value of 210 mmHg (fixed)

**240** : Pressure value of 240 mmHg (fixed)

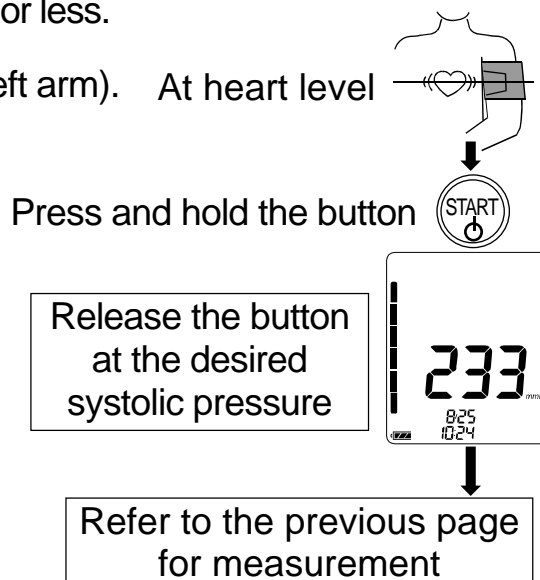
3. Press the **SET** button to go to the TriCheck setting mode. Press the **START** button to turn the device off. After three minutes of non-operation, the device will turn off automatically. The next measurement will be performed with the new pressure value.



## Measurement with the Desired Systolic Pressure

Use this method when re-inflation occurs repeatedly even if the pressure value is set to **240** in the procedure above or when the results are not displayed even if the pressure decreases to 20 mmHg or less.

1. Place the cuff on the arm (preferably the left arm). At heart level
2. Press and hold the **START** button until a number about 30 to 40 mmHg higher than your expected systolic pressure appears.
3. When the desired number is reached, release the **START** button to start measurement. Continue to measure your blood pressure as described on the previous page.



## Notes for Accurate Measurement

- ❑ Sit down in a comfortable position. Place your arm on a table with your palm facing upward and the cuff at the same level as your heart.
- ❑ Relax for about five to ten minutes before taking a measurement. If you are excited or depressed by emotional stress, the measurement will reflect this stress as a higher (or lower) than normal blood pressure reading and the pulse reading will usually be faster than normal.
- ❑ An individual's blood pressure varies constantly, depending on what you are doing and what you have eaten. What you drink can have a very strong and rapid effect on your blood pressure.
- ❑ This device bases its measurements on the heartbeat. If you have a very weak or irregular heartbeat, the device may have difficulty determining your blood pressure.
- ❑ Should the device detect a condition that is abnormal, it will stop the measurement and display an error symbol. Refer to page 5 for the description of symbols.
- ❑ This blood pressure monitor is intended for use by adults only. Consult with your physician before using this device on a child. A child should not use this device unattended.

## TriCheck Measurement

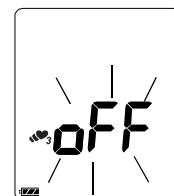
The TriCheck mode takes three consecutive measurements automatically and displays the average values of the three measurements.

### Selecting the TriCheck Mode

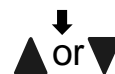
1. In the pressure setting mode, press the **SET** button to enter the TriCheck setting mode. The current setting blinks.
2. Press the **▲** or **▼** button to turn the TriCheck mode ON or OFF.  
ON: TriCheck mode  
OFF: Normal measurement mode (default value)
3. Press the **START** or **SET** button to turn the device off. After three minutes of non-operation, the device will turn off automatically.

In the pressure setting mode,

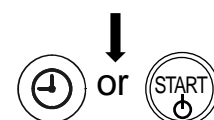
press 



The current setting blinks



Change the setting

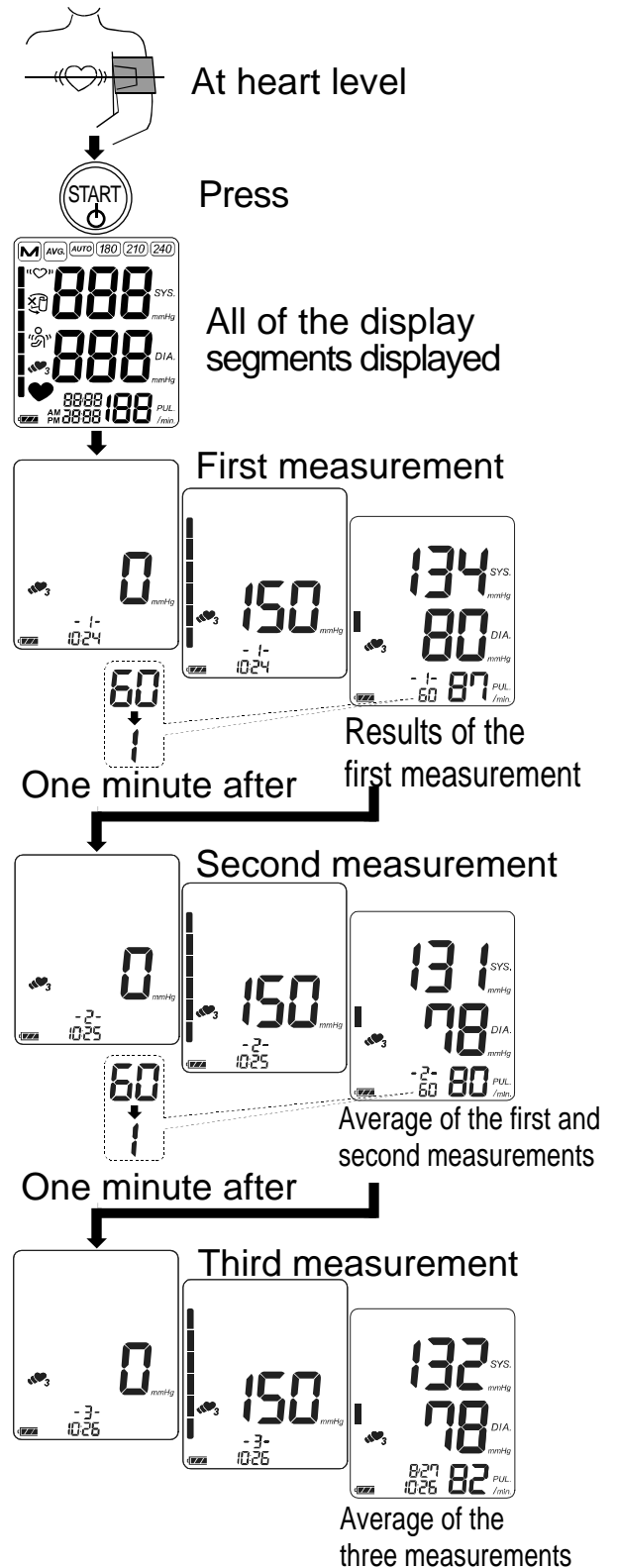


## Measurement Using the TriCheck Mode

1. Press the **START** button.  
All of the display segments are displayed.  
Zero (0) is displayed blinking briefly and the first measurement starts.
2. When the measurement is complete, the systolic and diastolic pressure readings and pulse rate are displayed, then a one-minute countdown starts for the second measurement.
3. After one minute, the second measurement starts.
4. When the measurement is complete, the average readings of the first and second measurements are displayed, then a one-minute countdown starts for the third measurement.
5. After one minute, the third measurement starts.
6. When the measurement is complete, the average readings of the three measurements are displayed and stored in memory.

### Notes:

- During the measurement, the TriCheck symbol is displayed.
- To cancel the measurement, press the **START** button. In this case, no data is stored in memory.
- When the cuff fit error symbol appears during the first measurement, cancel the measurement, reapply the cuff correctly and start a new measurement.
- After measurement, the average data of the three measurements is stored in memory.  
No data will be stored, when canceling the measurements, before completion of the third measurement.



# Recalling the Memory Data

Note: This device stores the last 90 measurements in memory.

The device announces the memory data values as they are displayed.

1. Press the ▲ or ▼ button.  
The average of all measurements and the number of data are displayed.  
(If no data, "0" is displayed. Press the ▲, ▼ or **START** button to turn the device off.)

2. Each time the ▼ button (or the ▲ button to display the data in the reverse order) is pressed, the memory data is displayed as follows.

Average of all AM (morning) measurements taken between 4:00 and 9:59.  
(In the example, 10 measurements. If no data, "--" is displayed.)

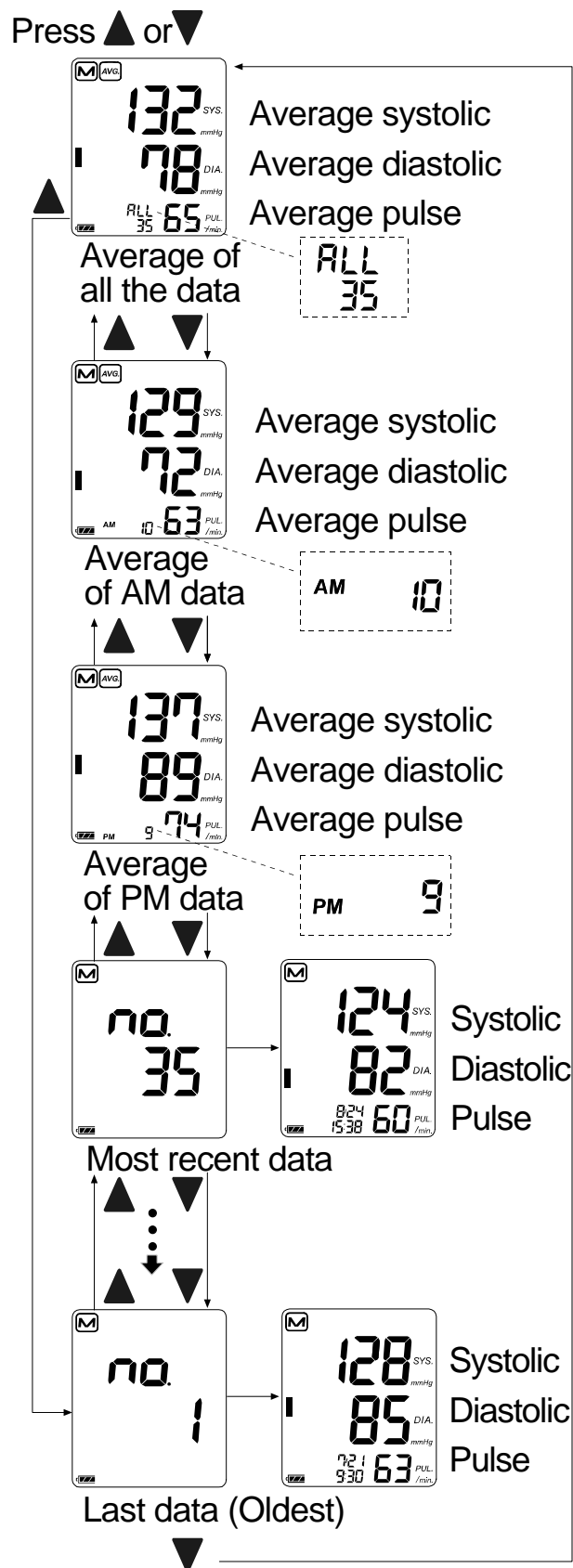
Average of all PM (evening) measurements taken between 18:00 and 1:59.  
(In the example, 9 measurements. If no data, "--" is displayed.)

Most recent data (No.n, in the example, No.35)  
Three seconds after the data number display, the measurement data is displayed.

Last data (No.1)  
Three seconds after the data number display, the measurement data is displayed.

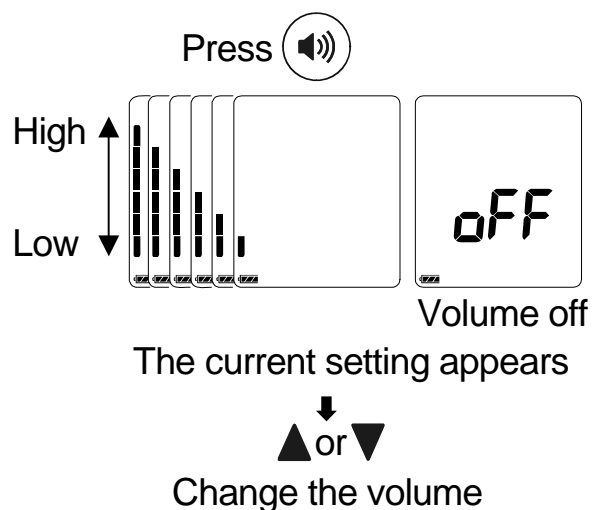
3. After the last data is displayed, press the ▼ button to return the average display of all measurements.

4. Press the **START** button to turn the device off. After one minute of non-operation, the device will turn off automatically.



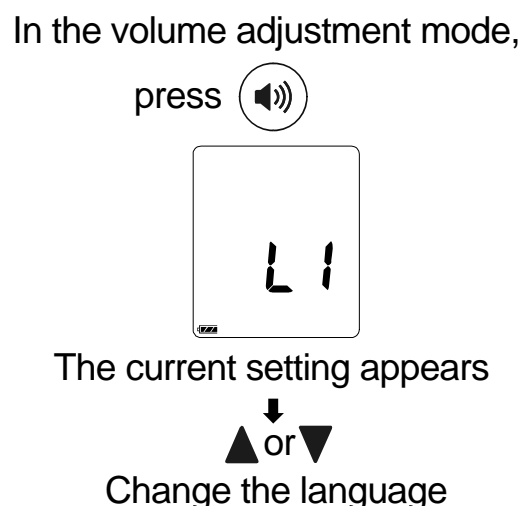
# Adjusting the Speaker Volume

1. Press the **VOLUME** button to enter the volume adjustment mode. Six stages of volume, which are represented by bars, and OFF are available.
2. Press the ▲ button to increase the volume, or press the ▼ button to decrease the volume.
3. Press the **START** button to turn the device off. After three minutes of non-operation, the device will turn off automatically.



# Selecting the Language

1. In the volume adjustment mode, press the **VOLUME** button to enter the language selection mode. The current setting appears.
2. Press the ▲ or ▼ button to select a language from the following.
  - L1: English (default value)
  - L2: French
  - L3: Spanish
  - L4: Italian
  - L5: Chinese
3. Press the **START** or **VOLUME** button to turn the device off. After three minutes of non-operation, the device will turn off automatically.





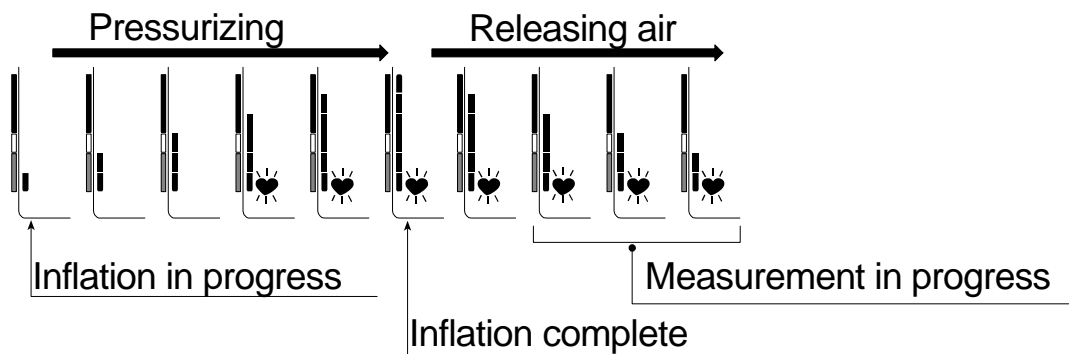
# What is an Irregular Heartbeat

The UA-1030T blood pressure monitor provides a blood pressure and pulse rate measurement even when an irregular heartbeat occurs. An irregular heartbeat is defined as a heartbeat that varies by 25% from the average of all heartbeats during the blood pressure measurement. It is important that you are relaxed, remain still and do not talk during measurements.

Note: We recommend contacting your physician if you see this «♥» symbol frequently.

## Pressure Bar Indicator

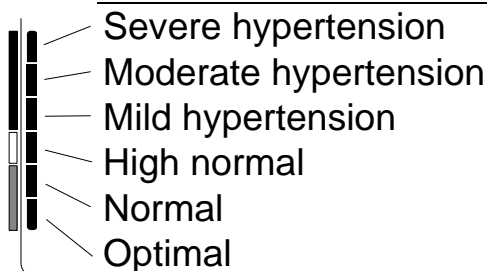
The indicator monitors the progress of pressure during measurement.



## WHO Classification Indicator

Each segment of the bar indicator corresponds to the WHO blood pressure classification described on the next page.

### WHO Classification Indicator



■ : The indicator displays a segment, based on the current data, corresponding to the WHO classification.

### Example:



Moderate hypertension



Mild hypertension



High normal

# About Blood Pressure

## What is Blood Pressure?

Blood pressure is the force exerted by blood against the walls of the arteries. Systolic pressure occurs when the heart contracts. Diastolic pressure occurs when the heart expands. Blood pressure is measured in millimeters of mercury (mmHg). One's natural blood pressure is represented by the fundamental pressure, which is measured first thing in the morning while one is still at rest and before eating.

## What is Hypertension and How is it Controlled?

Hypertension, an abnormally high arterial blood pressure, if left unattended, can cause many health problems including stroke and heart attack. Hypertension can be controlled by altering lifestyle, avoiding stress, and with medication under a doctor's supervision.

To prevent hypertension or keep it under control:

- Do not smoke
- Reduce salt and fat intake
- Maintain proper weight
- Exercise regularly
- Have regular physical checkups

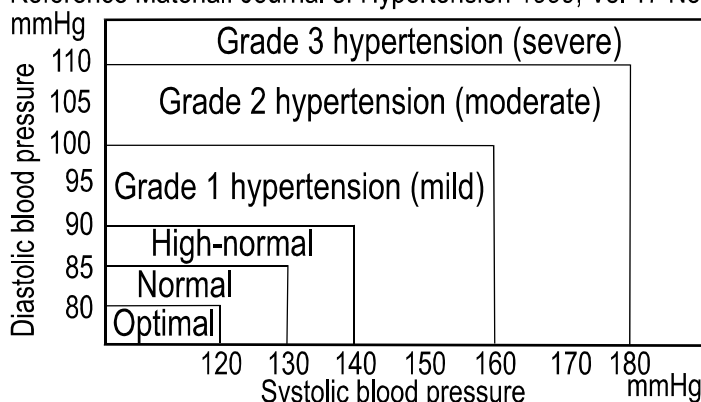
## Why Measure Blood Pressure at Home?

Blood pressure measured at a clinic or doctor's office may cause apprehension and can produce an elevated reading, 25 to 30 mmHg higher than that measured at home. Home measurement reduces the effects of outside influences on blood pressure readings, supplements the doctor's readings and provides a more accurate, complete blood pressure history.

## WHO Blood Pressure Classification

Standards to assess high blood pressure, without regard to age, have been established by the World Health Organization (WHO), as shown in the chart.

Reference Material: Journal of Hypertension 1999, Vol 17 No.2

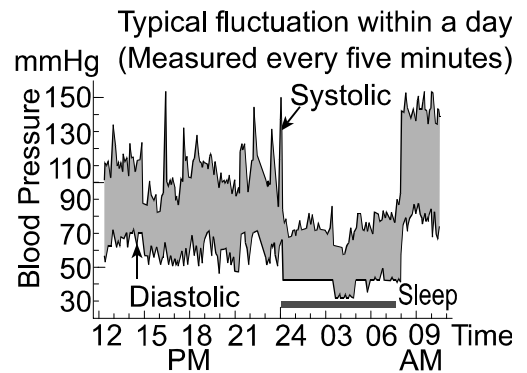


## Blood Pressure Variations


An individual's blood pressure varies greatly on a daily and seasonal basis. It may vary by 30 to 50 mmHg due to various conditions during the day. In hypertensive individuals, variations are even more pronounced. Normally, the blood pressure rises while at work or play and falls to its lowest levels during sleep. So, do not be overly concerned by the results of one measurement.

Take measurements at the same time every day using the procedure

described in this manual to get to know your normal blood pressure. Regular readings give a more comprehensive blood pressure history. Be sure to note the date and time when recording your blood pressure. Consult your doctor to interpret your blood pressure data.



## Troubleshooting

Problem	Possible Reason	Recommended Action
Nothing appears on the display, even when the power is turned on.	Batteries are drained.	Replace all batteries with new ones.
	Battery terminals are not in the correct position.	Reinstall the batteries with negative and positive terminals matching those indicated on the battery compartment.
The cuff does not inflate.	Battery voltage is too low.  (LOW BATTERY mark) blinks. If the batteries are drained completely, the mark does not appear.	Replace all batteries with new ones.
The device does not measure. Readings are too high or too low.	The cuff is not applied properly.	Apply the cuff correctly.
	You moved your arm or body during measurement.	Make sure you remain still and quiet during measurement.
	The cuff position is not correct.	Sit comfortably and still. Place your arm on a table with your palm facing upward and the cuff at the same level as your heart.
	_____	If you have a very weak or irregular heart beat, the device may have difficulty in determining your blood pressure.
Other	The value is different from that measured at a clinic or doctor's office.	Refer to "Why Measure Blood Pressure at Home?".
	_____	Remove the batteries. Place them back properly and take another measurement.



Note: If the actions described above do not solve the problem, contact the dealer. Do not attempt to open or repair this product, as any attempt to do so will make your warranty invalid.

# Maintenance

Do not open the device. It uses delicate electrical components and an intricate air unit that could be damaged. If you cannot fix the problem using the troubleshooting instructions, contact the authorized dealer in your area or our customer service department. The A&D customer service will provide technical information, spare parts and units to authorized dealers.

The device was designed and manufactured for a long service life. However it is generally recommended to have the device inspected every 2 years, to ensure proper functioning and accuracy. Please contact the authorized dealer in your area or A&D for maintenance.

# Technical Data

Type	UA-1030T
Measurement method	Oscillometric measurement
Measurement range	Pressure: 0 - 299 mmHg Systolic pressure: 60 - 279 mmHg Diastolic pressure: 40 - 200 mmHg Pulse: 40 - 180 beats / minute
Measurement accuracy	Pressure: $\pm 3$ mmHg Pulse: $\pm 5\%$
Power supply	4 x 1.5V batteries (R6P, LR6 or AA) or AC adapter (TB-233) (Not included)
Classification	Type BF 
Clinical test	According to ANSI / AAMI SP-10 1992
EMC	IEC 60601-1-2: 2007
Memory	Last 90 measurements
Operating condition	+10°C to +40°C / 30%RH to 85%RH
Storage condition	-20°C to +60°C / 10%RH to 95%RH
Dimensions	Approx. 140 [W] x 60 [H] x 105 [D] mm
Weight	Approx. 300 g, excluding the batteries
	 0366
Accessory AC adapter	The adapter is to connect the blood pressure monitor to a power source at home.
TB-233	Please contact your local A&D dealer for purchasing.

Note: Specifications are subject to change without prior notice.

EMC table information is listed on our website:

[http://www.aandd.jp/products/manual/medical/emc\\_acadapter\\_en.pdf](http://www.aandd.jp/products/manual/medical/emc_acadapter_en.pdf)



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