

Digital Blood Pressure Monitor

Model UA-1020

Instruction ManualOriginal

Manuel d'instructions
Traduction

Manual de Instrucciones
Traducción

Manuale di Istruzioni
Traduzione

使用手册翻譯

ENGLISH

FRANÇAIS

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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 device 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

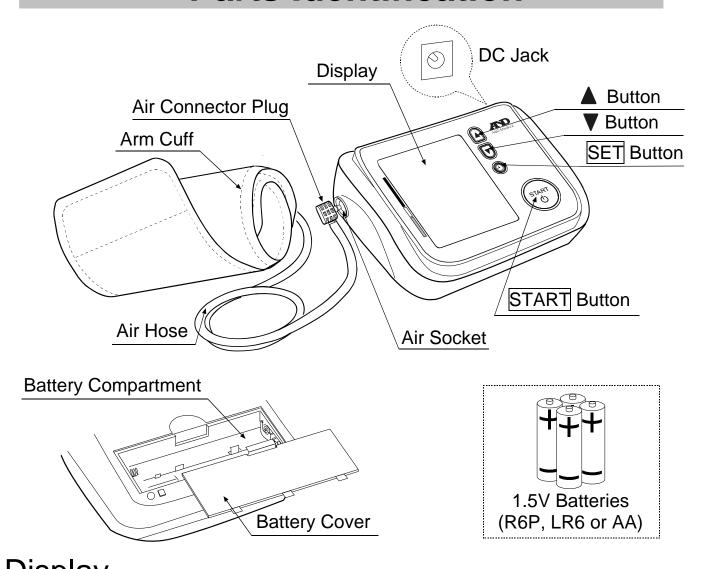
	This device conforms to the European Directive 93/42 EEC for Medical Products. This is made evident by the €€₀₁₂₃ mark of conformity. (0123: The reference number to the involved notified body) The device is designed for use on adults only, not newborns or infants. Environment for use: The device is for use in the home healthcare environment. This device is designed to measure blood pressure and pulse rate of people for diagnosis.
	Precautions
\neg	Precision components are used in the construction of this device. Extremes

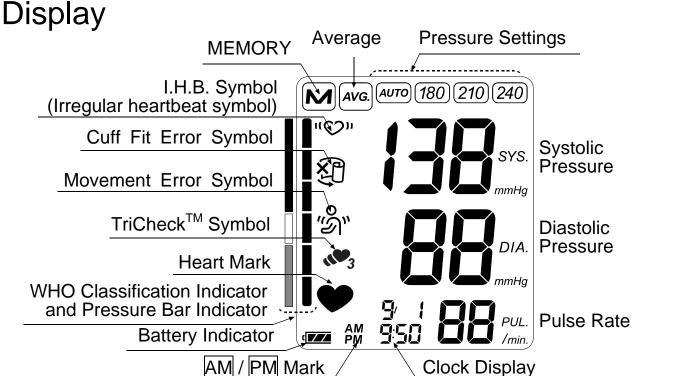
- Precision components are used in the construction of this device. Extremes in temperature, humidity, direct sunlight, shock or dust should be avoided.
- □ Clean the device and cuff with a dry, soft cloth or a cloth dampened with water and a neutral detergent. Never use alcohol, benzene, thinner or 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.
- □ When the AC adapter is used, make sure that the AC adapter can be readily removed from the electrical outlet when necessary.
- □ When reusing the device, confirm that the device is clean.
- Do not modify the device. It may cause accidents or damage to the device.
- □ To measure blood pressure, the arm must be squeezed by the cuff hard enough to temporarily stop blood flow through the artery. This may cause pain, numbness or a temporary red mark to the arm. This condition will appear especially when measurement is repeated successively.
 - Any pain, numbness, or red marks will disappear with time.

Contraindications

The	following are precautions for proper use of the device.
	Do not apply the cuff to an arm with another medical electrical equipment attached. The equipment may not function properly.
	People who have a severe circulatory deficit in the arm must consult a doctor before using the device, to avoid medical problems.
	Do not self-diagnose the measurement results and start treatment by yourself. Always consult your doctor for evaluation of the results and treatment.
	Do not apply the cuff on an arm with an unhealed wound.
	Do not apply the cuff on an arm receiving an intravenous drip or blood transfusion. It may cause injury or accidents.
	Do not use the device where flammable gases such as anesthetic gases are present. It may cause an explosion.
	Do not use the device in highly concentrated oxygen environments, such as a high-pressure oxygen chamber or an oxygen tent. It may cause a fire or explosion.

Parts Identification





English 4

Symbols

Symbols that are printed on the device case and the AC adapter

Symbols	Function / Meaning	Recommended Action
ψ	Standby and Turn the device on.	
⊕ (R6(AA)	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.	
C€ 0123	EC directive medical device label	
Ž	WEEE label	
***	Manufacturer	
EC REP	EU-representative	
③	Refer to instruction manual/booklet	
	Class II device	
⊖ © ⊕	Polarity of DC jack	

Symbols that appear on the display

Symbols	Function / Meaning	Recommended Action
		Measurement is in progress. Remain as still as possible.
Irregular Heartbeat symbol (I.H.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
¥D	Appears during measurement when the cuff is applied loosely.	The reading may yield an incorrect value. Apply the cuff correctly, and take another measurement.
M	Previous measurements stored in memory.	
AVG.	Average data	
r // / Full Battery	The battery power indicator during measurement.	
t Low Battery	The battery power is low when it blinks.	Replace all batteries with new ones when the mark blinks.
	Unstable blood pressure due to movement during measurement.	Take another measurement. Remain still during measurement.
Err	The systolic and diastolic values are within 10 mmHg of each other.	
	The pressure value did not increase during the inflation.	Apply the cuff correctly, and take another
Err [UF	The cuff is not applied correctly.	measurement.
E PUL. DISPLAY ERROR	The pulse is not detected correctly.	
ErrE	Blood pressure monitor internal error	Remove the batteries and press the START button, and then install the batteries
Err 9		again. If the error still appears, contact the dealer.
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		
лито (180) (210) (240)	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.

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.

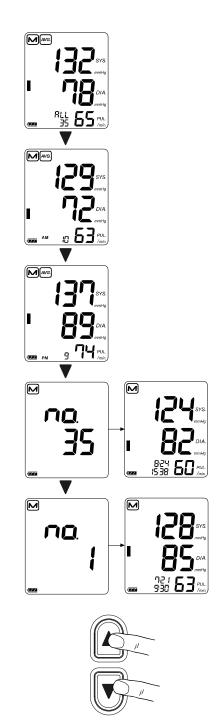
Most recent data (No.n, in the example, No.35)

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 12 for measurement with the desired systolic pressure.

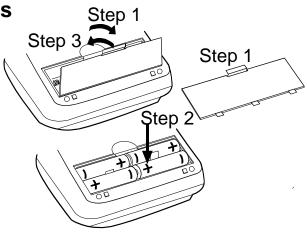
Using the Monitor

Installing / Changing the Batteries

- 1. Remove the battery cover.
- 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

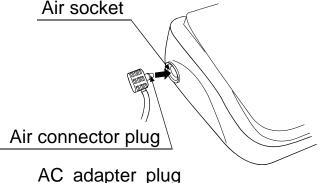
- ☐ Insert the batteries as shown in the battery compartment. If installed incorrectly, the device will not work.
- □ When □ (LOW BATTERY mark) blinks on the display, replace all batteries with new ones. Do not mix old and new batteries. It may shorten the battery life, or cause the device to malfunction.

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.
- ☐ 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.

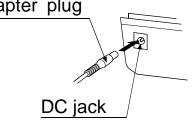


Connecting the AC Adapter

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 20.)



Using the Monitor

Adjusting the Built-in Clock

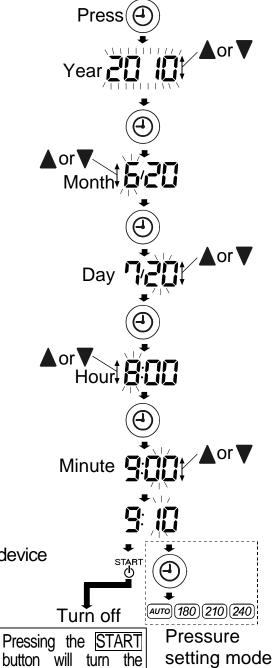
Adjust the clock prior to use.

- 1. Press the <u>SET</u> 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 12.) 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 A or V 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.

device off anytime.

☐ The arm size is printed on each cuff.

☐ The arm cuff is a consumable. If it becomes worn, purchase a new one.

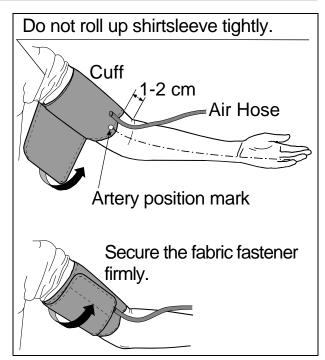
	,	
Arm Size	Recommended Cuff Size	Catalog Number
31 cm to 45 cm	Large adult cuff	CUF-F-LA
17 cm to 32 cm	Adult cuff	CUF-G-A

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.
	Catalog Number	
LOT	Lot Number	-

How to Take Accurate Measurements

For the most accurate blood pressure measurement:

- ☐ Sit comfortably on a chair. Rest your arm on the table. Do not cross your legs. Keep your feet on the floor and straighten your back.
- □ 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 immediately 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 <u>START</u> 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 13.

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.

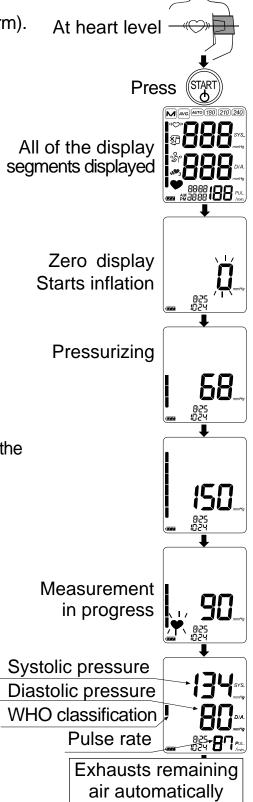
Note: If you wish to stop inflation at any time, press the START button again.

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.

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.

- When the measurement is complete, the systolic and diastolic pressure readings and pulse rate are displayed.
 The cuff exhausts the remaining air and deflates completely.
- 5. Press the START button to turn the device off. After one minute of non-operation, the device will turn off automatically.

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



Measurements

Model UA-1020 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 9), press the <u>SET</u> button to go to the pressure setting mode. The current setting blinks.

AUTO 180 210 |

↓

Aor ▼

240

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)

Turn off TriCheck setting mode

3. Press the SET button to go to the TriCheck setting mode.

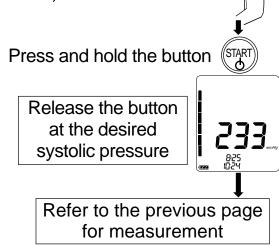
Press the START button to turn the device off. After three minutes of non-operation, the device will turn off automatically.

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
- 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 6 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

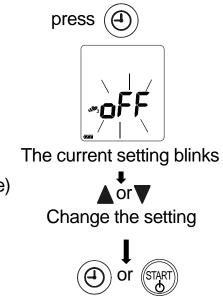
- 1. In the pressure setting mode, press the SET button to enter the TriCheck setting mode. The current setting blinks.
- 2. Press the ▲ or ▼ button to turn the TriCheck mode ON or OFF.

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,



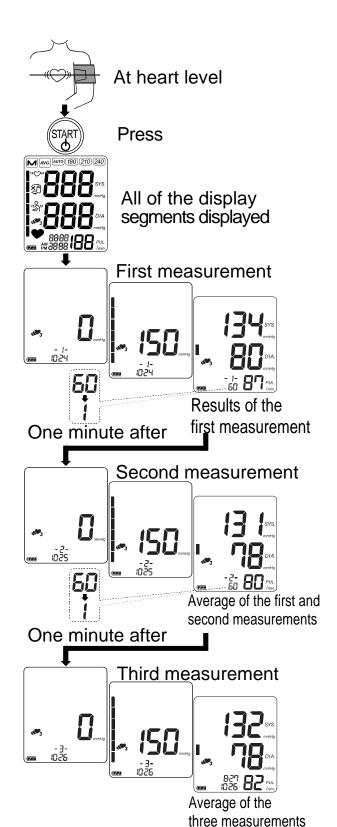
Measurement Using the TriCheck Mode

- 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.
- 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

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.

- 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.)
- 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.)

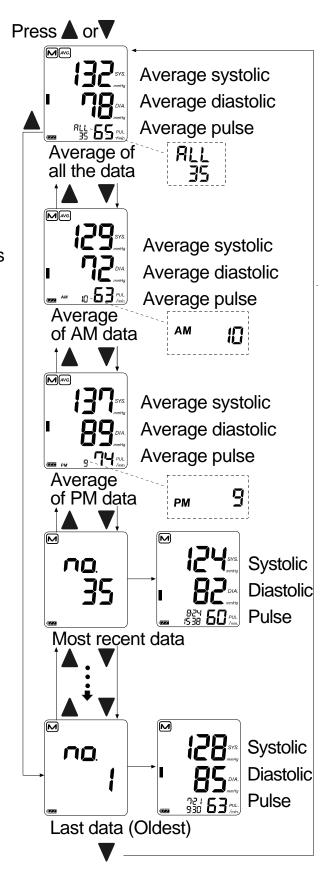
Most recent data (No.n, in the example, No.35)

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.

- 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.



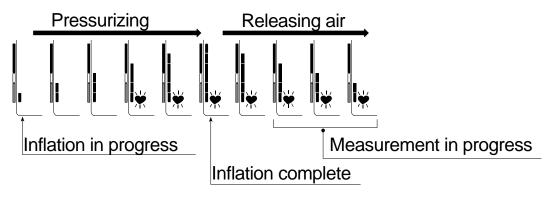
What is an Irregular Heartbeat

The UA-1020 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 (S) 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

Severe hypertension

Moderate hypertension

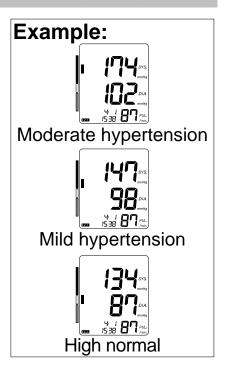
Mild hypertension

High normal

Normal

Optimal

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



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	□ Exercise regularly
----------------	----------------------

	☐ Reduce salt and fat intake	Have regular physical checkups
--	------------------------------	--------------------------------

□ Maintain proper weight

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 Reference Material: Journal of Hypertension 1999, Vol 17 No.2 poeen world and pool of the chart.

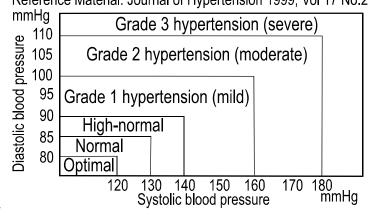
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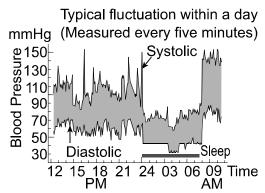
Blood Pressure Variations



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	Batteries are drained.	Replace all batteries with new ones.
appears on the		Reinstall the batteries with
display, even	Battery terminals are not	negative and positive terminals
when the power	in the correct position.	matching those indicated on the
is turned on.		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 cuff is not applied properly.	Apply the cuff correctly.
The device does	You moved your arm or body during measurement.	Make sure you remain still and quiet during measurement.
not measure. Readings are too high or too low.	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 heat 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?".
Otriei		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-1020

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: ±3 mmHg

Pulse: ±5%

Power supply 4 x 1.5V batteries (R6P, LR6 or AA) or

AC adapter (TB-233) (Not included)

Number of measurements Approx. 1000 measurements, when AA alkaline

batteries are used, with pressure value of 180

mmHg at room temperature of 23°C

Classification Internally powered ME equipment (Supplied by

batteries) /

Class II (Supplied by adapter)
Continuous operation mode

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 / 15%RH to 85%RH

800 hPa to 1060 hPa

Transport / Storage conditions -20°C to +60°C / 10%RH to 95%RH

Dimensions Approx. 140 [W] x 60 [H] x 105 [D] mm

Weight Approx. 285 g, excluding the batteries

Applied part Cuff Type BF 🕏

Useful life Device: 5 years (when used six times a day)

Cuff: 2 years (when used six times a day)

Accessory AC adapter The adapter is to connect the blood pressure

monitor to a power source at home.

Please contact your local A&D dealer for TB-233

purchasing.

The AC adapter is required to be inspected or

replaced periodically.

Input: 100-240V TB-233C

TB-233BF Input: 240V

Output: 6V === 500mA

○€⊕ □ 🖒 🖶 →

Accessories sold separately

Cuff

Catalog Number	Cuff Size	Arm Size
CUF-F-LA	Large adult cuff	31 cm to 45 cm
CUF-G-A	Adult cuff	17 cm to 32 cm

AC adapter

Catalog Number	Plug
TB-233C	Type C
TB-233BF	Type BF

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



Asahi 1-243, Kitamoto-shi, Saitama 364-8585, JAPAN

Telephone: [81] (48) 593-1111 Fax: [81] (48) 593-1119

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