Digital Blood Pressure Monitor

Model UA-704

Instruction Manual
Original

Manuel d'instructions
Traduction

Manual de Instrucciones
Traducción

Manuale di Istruzioni
Traduzione

使用手冊
翻譯

ENGLISH
FRANÇAIS
ESPAÑOL
ITALIANO
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 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 CE0123 mark of conformity.
  (0123: The reference number to the involved notified body)
- The device is designed for use on adults, not newborns or infants.
- Environment for use. The device is for use to operate by yourself in the home healthcare environment.
- This device is designed to measure blood pressure and pulse rate of people for diagnosis.

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.
- Take care to avoid accidental strangulation of babies or infants with the hose.
- Do not twist the air hose during measurement. This may cause injury due to continuous cuff pressure.
- 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.
- Wireless communication devices, such as home networking devices, mobile phones, cordless phones and their base stations, walkie-talkies can affect this blood pressure monitor. Therefore, a minimum distance of 30 cm should be kept from such devices.
- Used equipment, parts and battery are not treated as ordinary household waste, and must be disposed of according to the applicable local regulations.
- When reusing the device, confirm that the device is clean.

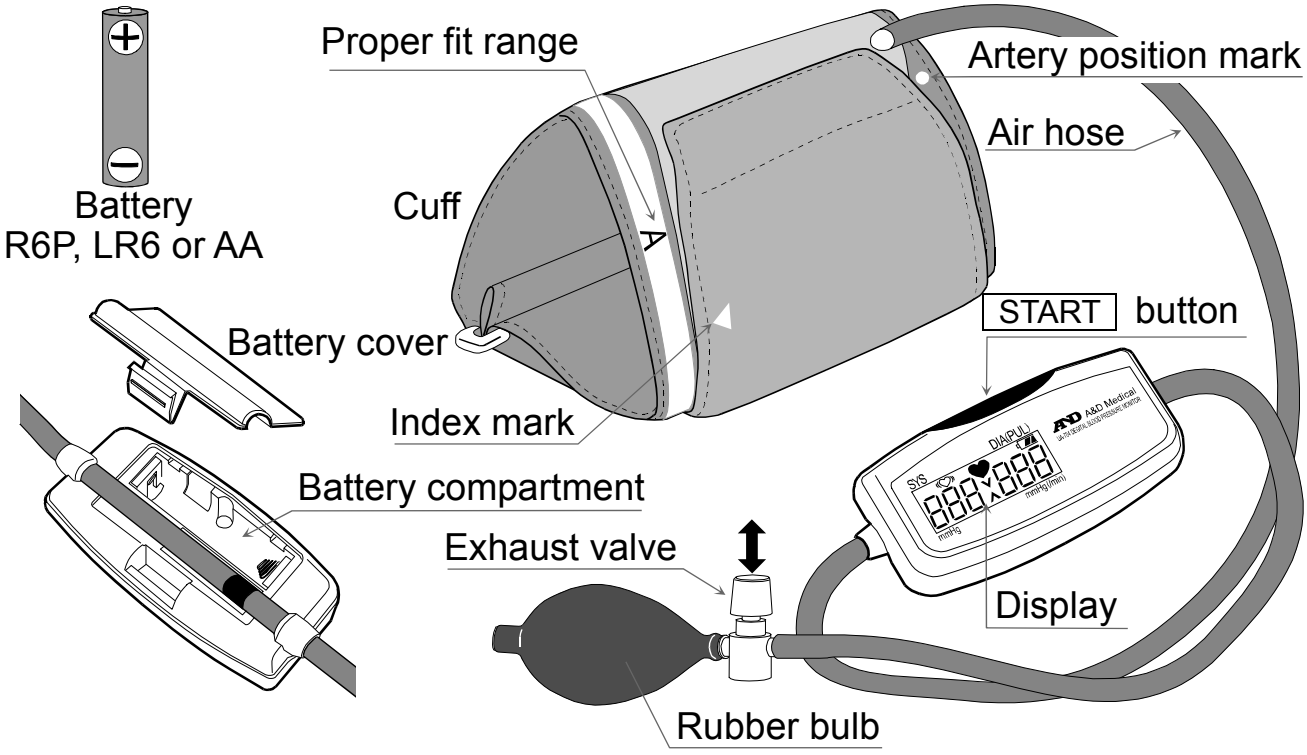
- Do not modify the device. It may cause accidents or damage to the device.
- To measure blood pressure, the arm must be squeezed by the cuff hard enough to temporarily stop blood flow through the artery. This may cause pain, numbness or a temporary red mark to the arm. This condition will appear especially when measurement is repeated successively. Any pain, numbness, or red marks will disappear with time.
- Measuring blood pressure too frequently may cause harm due to blood flow interference. Check that the operation of the device does not result in prolonged impairment of blood circulation, when using the device repeatedly.
- If you have had a mastectomy, please consult a doctor before using the device.
- Do not let children use the device by themselves and do not use the device in a place within the reach of infants. It may cause accidents or damage.
- There are small parts that may cause a choking hazard if swallowed by mistake by infants.
- Use of accessories not detailed in this manual may compromise safety.
- Should the battery short-circuit, it may become hot and potentially cause burns.
- Allow the device to adapt to the surrounding environment before use (about one hour).
- Clinical testing has not been conducted on newborn infants and pregnant woman. Do not use on newborn infants or pregnant woman.
- Do not touch the battery and the patient at the same time. That may result in electrical shock.
- Do not inflate without wrapping the cuff around the upper arm.

Contraindications

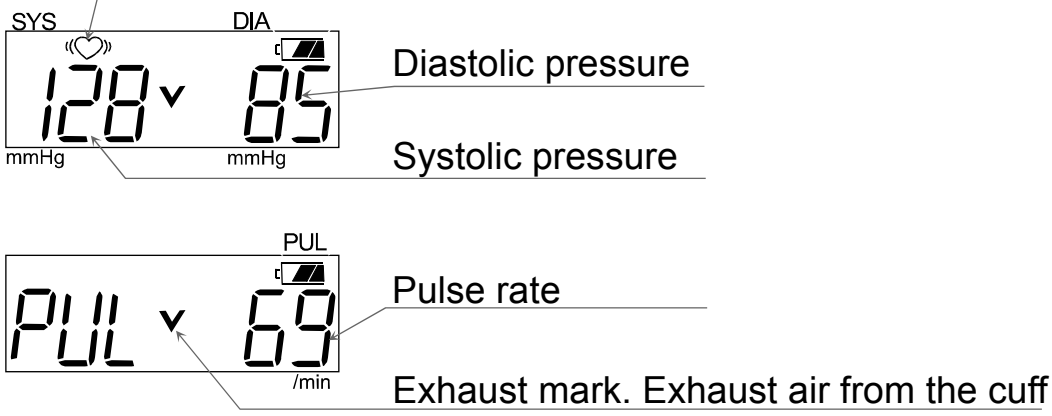
The following are precautions for proper use of the device.

- Do not apply the cuff on 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



Display



Symbols

Symbols	Function / Meaning	Recommended Action
⏻	Standby and Turn the device on.	———
⊕ ▭ ⊖	Battery installation guide	———
	Type BF: Device, cuff and tubing are designed to provide special protection against electrical shocks.	———
♥	Appears while measurement is in progress. It blinks when the pulse is detected.	Measurement is in progress. Remain as still as possible.
	IHB/AFib symbol Appears when an irregular heartbeat is detected. It may light when a very slight vibration like shivering or shaking is detected.	———
∨	Blinks when there is air remaining in the cuff at power up. Blinks at the completion of the measurement until exhaust is complete.	Press the exhaust valve button to exhaust air from the cuff.
∧	Blinks when the pressure is not enough for the measurement.	Pump air into the cuff with the rubber bulb.
	FULL BATTERY The battery power indicator during measurement.	———
	LOW BATTERY The battery is low when it blinks.	Replace the battery with a new one, when the indicator blinks.
Err	Unstable blood pressure due to movement during measurement.	Try the measuring again. Remain very still during measurement.
	The systolic and diastolic values are within 10 mmHg of each other.	Apply the cuff correctly, and try the measurement again.
	The pressure value did not increase during inflation.	
Err CUF	The cuff is not applied correctly.	
PUL Err	The pulse is not detected correctly.	
CE 0123	EC directive medical device label	———
EC REP	EU-representative	———
	Manufacturer	———
2014 	Date of manufacture	———
	WEEE label	———
	Refer to instruction manual/booklet	———
SN	Serial number	———
IP	International protection symbol	———
	Keep dry	———

Using the Monitor

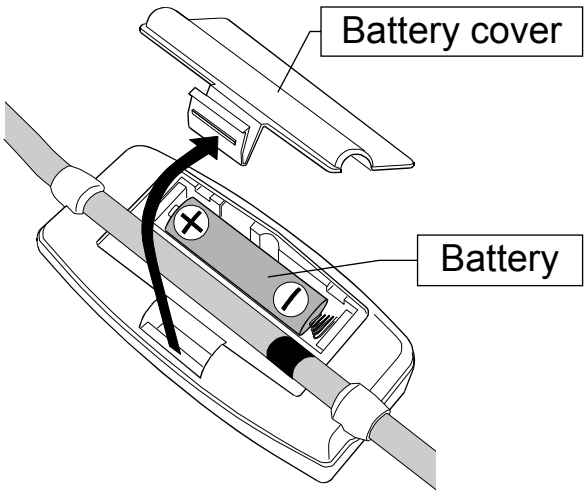
Installing / Changing the Battery

1. Remove the battery cover.

2. Insert a new battery into the battery compartment as shown, taking care that the polarities (+) and (−) are correct.

   Use only R6P, LR6, AA or equivalent battery.

3. Close the battery cover.



CAUTION

- Insert the battery as shown in the battery compartment. If installed incorrectly, the device will not work.
- When (LOW BATTERY mark) blinks in the display, replace with a new battery.
- (LOW BATTERY mark) does not appear when the battery is drained.
- The battery life varies with the ambient temperature and may be shorter at low temperatures. Generally, a new LR6 battery will last approximately for 21 months when used six times for measurement each day.
- Use the specified batteries only. The battery provided with the device is for testing monitor performance and may have a limited life.
- Remove the battery if the device is not to be used for a long time. The battery may leak and cause a malfunction.
- The data stored in memory are cleared when the battery is removed.

Using the Monitor

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 index ▲ and proper fit range, on the cuff, tell you if you are applying the correct cuff. (Refer to "**Applying the Arm Cuff**" on the next page.)
- If the index ▲ points outside of the range, contact your local dealer to purchase a replacement cuff.
- The arm cuff is a consumable. If it becomes worn, purchase a new one.

Arm Size	Recommended Cuff Size	Catalog Number
32 cm to 45 cm	Large adult cuff	CUF-D-LA
22 cm to 32 cm	Adult cuff	CUF-D-A

Arm size: The circumference of the biceps.
Note: The UA-704 is not designed for using a small cuff.

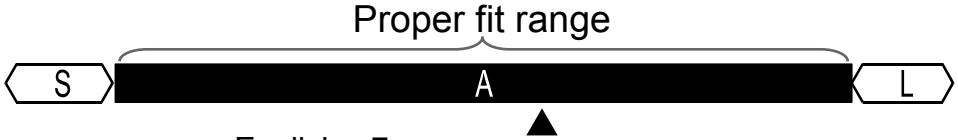
Symbols that are printed on the cuff

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.
▲	Index	———
REF	Catalog number	———
A	Proper fit range for the adult cuff. It's printed on the adult cuff.	———
〈L〉	Over range printed on the adult cuff.	Use the large adult cuff instead of the adult cuff.
L	Proper fit range for the large adult cuff. It's printed on the Large adult cuff.	———
〈S〉	Under range printed on the adult cuff.	———
〈A〉	Under range printed on the large adult cuff.	Use the adult cuff instead of the large adult cuff.
LOT	Lot number	———

Large adult cuff



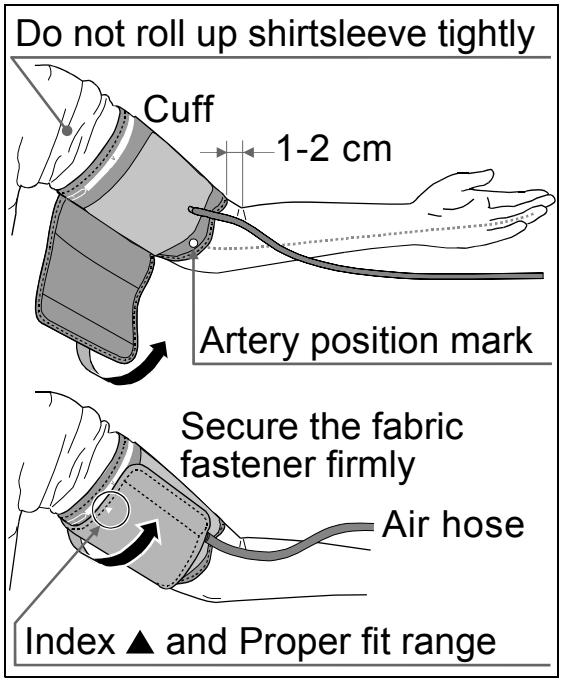
Adult cuff



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.
3. Confirm that the index ▲ points within the proper fit range.



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 flat 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.
Measure your blood pressure according to the section "Measurement".

After Measurement

Press the exhaust valve to exhaust air from the cuff.
Press the START button to turn off the power.
Remove the cuff and record your data.

Note: The device has an automatic power shut-off function, which turns off the power automatically one minute after measurement.
Allow at least three minutes between measurements on the same person.

Measurement

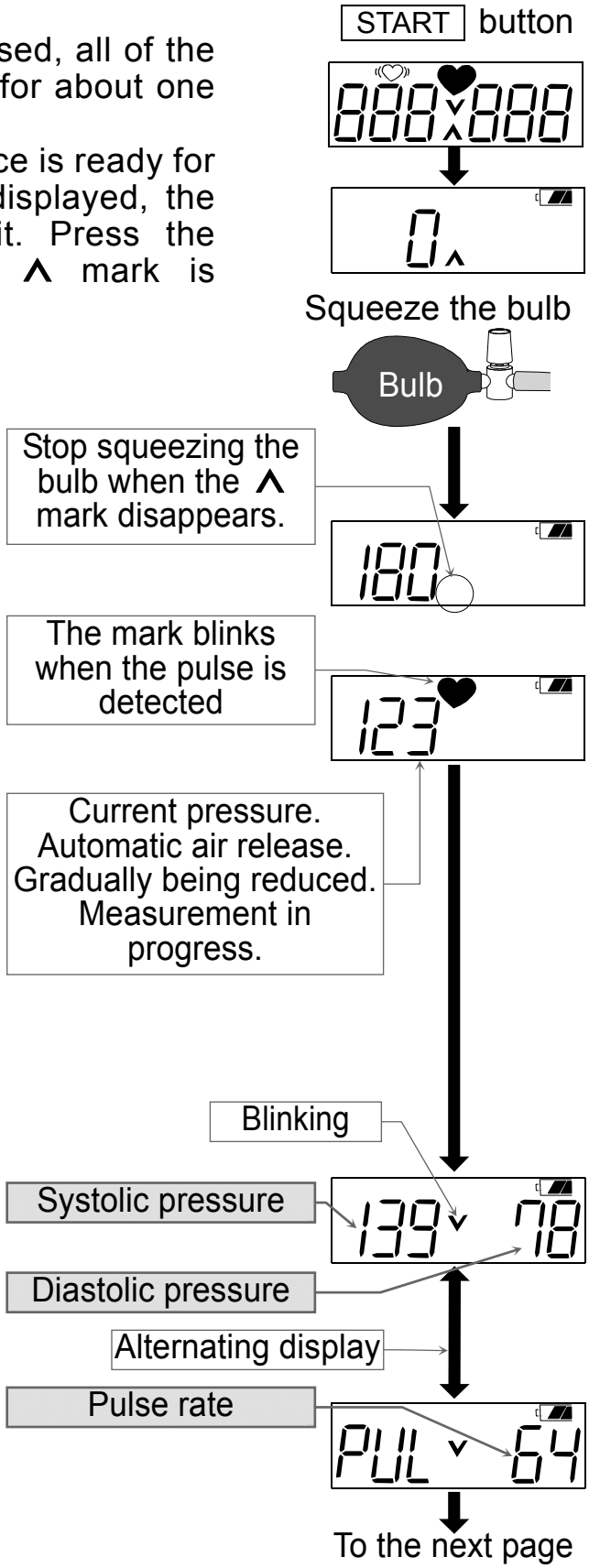
1. Place the cuff on the arm (preferably the left arm).

2. Press the START button.
   - When the START button is pressed, all of the display symbols will be displayed for about one second.
   - When the " 0 " is blinking, the device is ready for measurement. If the ∨ mark is displayed, the cuff has some air trapped in it. Press the exhaust valve button until the ∧ mark is displayed.

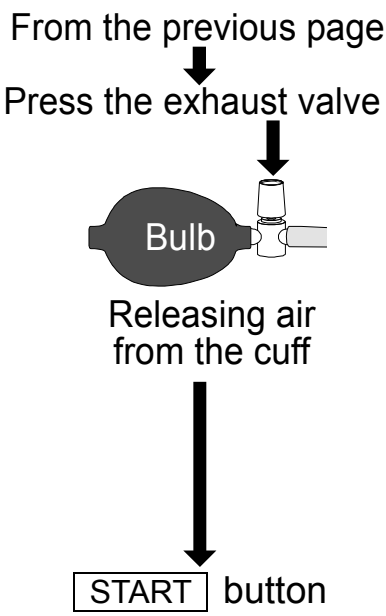
3. Pressurize the cuff by squeezing the rubber bulb.
   - The figure on the left of the display shows the current pressure as you inflate the cuff.
   - Stop squeezing the rubber bulb when the ∧ mark disappears.

4. When pressurization is complete, the automatic exhaust mechanism will gradually reduce the pressure in the cuff and the ❤ mark will be displayed along with the current pressure reading on the left.
   - Remain still during measurement. When a pulse is detected, the ❤ mark will blink with each pulse beat.

5. When the measurement is complete, the ∨ mark is displayed. The systolic pressure is displayed on the left. The diastolic is displayed on the right. The pulse rate alternates with the systolic and diastolic displays.



Measurement



6. Press the exhaust valve button to completely release air from the cuff.
   - When a measurement is made with insufficient pressure, the ∧ mark will be displayed. Re-pressurize the cuff to a pressure. Stop squeezing the rubber bulb when the ∧ mark disappears.
   - When a measurement is made with an erratic pulse or in a very noisy environment, Err will be displayed.

7. Turning the power off
   Press the START button to turn the power off.
   The device will be in standby mode.

8. Subsequent measurements
   If a subsequent measurement is required, turn off the power and turn it on again. When "0 " is displayed, the device is ready for another measurement.
   Note: Allow at least three minutes between measurements on the same person.

9. Automatic power shut-off function
   If the device is left on after a measurement, it will turn off automatically after about one minute.
   It may be turned off at any time by pressing the START button.

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 or 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.
- Your 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.

Measurement

- 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 descriptions of the symbols.
- This device is intended for use by adults. Consult with your physician before using this device on a child. A child should not use this device unattended.
- The automatic blood pressure monitor's performance may be affected by excessive temperature or humidity, or altitude.

What Is The IHB/AFib Indicator?

When the monitor detects an irregular rhythm during the measurements, the IHB/AFib indicator will appear on the display with the measurement values.

Note: We recommend contacting your physician if you see this IHB/AFib indicator frequently.

What Is The AFib?

The heart contracts due to electrical signals occurring in heart and sends blood through the body. Atrial fibrillation (AFib) occurs when the electrical signal in the atrium becomes confused and leads to disturbances in the pulse interval. AFib can cause blood to stagnate in the heart, which can easily create clots of blood, a cause of stroke and heart attack.

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 to keep it under control:

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

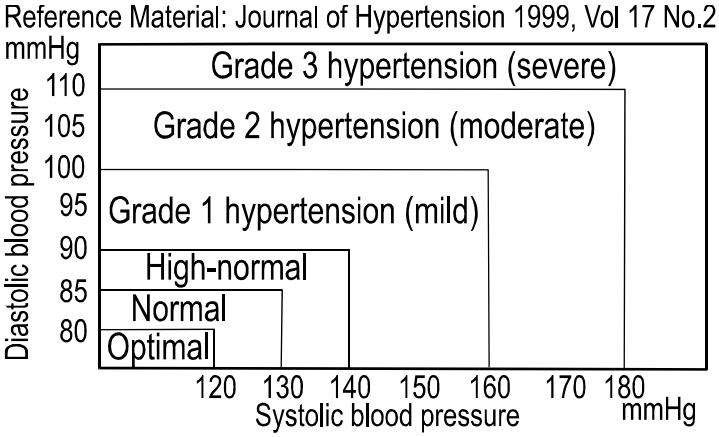
About Blood Pressure

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

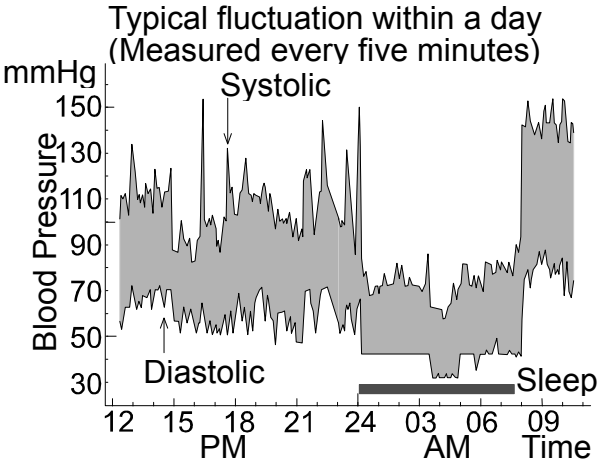
Standards to assess high blood pressure, without regard to age, have been established by the World Health Organization (WHO), as shown in the chart at the right.



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 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 in the display, even when the power is turned on.	Battery is drained.	Replace with a new battery.
	Battery terminals are not in the correct position.	Reinstall the battery with negative and positive terminals matching those indicated on the battery compartment.
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 very 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 heartbeat, 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 battery. Place it back properly and try the measurement again.

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-704
Measurement method	Oscillometric measurement
Measurement range	Pressure:0 - 299 mmHg Systolic pressure: 60 - 279 mmHg Diastolic pressure: 40 - 200 mmHg Pulse: 40 – 200 beats / minute
Measurement accuracy	Pressure: ±3 mmHg Pulse : ±5%
Power supply	1 x 1.5V battery (R6P, LR6, or AA)
Number of measurements	Approximately 4000 measurements, when AA Alkaline batteries are used, with pressure value of 180 mmHg at room temperature of 23 °C.
Classification	Internally powered EM equipment Continuous operation mode
Clinical test	According to ISO81060-2 : 2013
EMD	IEC 60601-1-2: 2014
Operating conditions	+10 to +40 °C / 15 to 85 %RH / 800 to 1060 hPa
Transport / Storage conditions	-20 to +60 °C / 10 to 95 %RH / 700 to 1060 hPa
Dimensions	Approx. 100 [W] x 31 [H] x 51 [D] mm
Weight	Approx. 73 g, excluding battery
Ingress protection	Device: IP20
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)

Accessories sold separately

Cuff

Catalog Number	Cuff Size	Arm Size
CUF-D-LA	Large adult cuff	32 cm to 45 cm
CUF-D-A	Adult cuff	22 cm to 32 cm

Arm size: The circumference of the biceps.

Note: Specifications are subject to change without prior notice.

IP classification is the degrees of protection provided by enclosures in accordance with IEC 60529. This device is protected against solid foreign objects of 12 mm diameter and greater such as a finger. This device is not protected against water.

A&D Company, Ltd.
1-243 Asahi , Kitamoto-shi, Saitama 364-8585, JAPAN
Telephone: [81] (48) 593-1111 Fax: [81] (48) 593-1119

EC REP **Emergo Europe B.V.**
Westervoortsedijk 60, 6827 AT Arnhem, The Netherlands

A&D INSTRUMENTS LIMITED
Unit 24/26 Blacklands Way, Abingdon Business Park, Abingdon, Oxfordshire OX14 1DY United Kingdom
Telephone: [44] (1235) 550420 Fax: [44] (1235) 550485

A&D ENGINEERING, INC.
1756 Automation Parkway, San Jose, California 95131, U.S.A.
Telephone: [1] (408) 263-5333 Fax: [1] (408)263-0119

A&D AUSTRALASIA PTY LTD
32 Dew Street, Thebarton, South Australia 5031, AUSTRALIA
Telephone: [61] (8) 8301-8100 Fax: [61] (8) 8352-7409

OOO A&D RUS ООО "ЭЙ энд ДИ РУС"
121357, Российская Федерация, г.Москва, ул. Верейская, дом 17
(Business-Center "Vereyskaya Plaza-2" 121357, Russian Federation, Moscow, Vereyskaya Street 17)
тел.: [7] (495) 937-33-44 факс: [7] (495) 937-55-66

A&D Technology Trading(Shanghai) Co. Ltd 爱安德技研贸易（上海）有限公司
中国 上海市自由贸易试验区浦东南路855号世界广场32楼C,D室 邮编200120
(32CD, World Plaza, No.855 South Pudong Road,China (Shanghai) Pilot Free Trade Zone, 200120, China)
电话: [86] (21) 3393-2340 传真: [86] (21) 3393-2347

A&D INSTRUMENTS INDIA PRIVATE LIMITED ऐ&डी इन्स्ट्रूमेन्ट्स इण्डिया प्रा0 लिमिटेड
509, उद्योग विहार , फेस -5, गुड़गांव - 122016, हरियाणा , भारत
(509, Udyog Vihar, Phase-V, Gurgaon - 122 016, Haryana, India)
फोन : 91-124-4715555 फैक्स : 91-124-4715599

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