Instruction Manual Original

1. Dear Customers

The A&D blood pressure monitor is one of the most advanced monitors available and is 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

2. Preliminary Remarks

- □ This device conforms to the European Directive 93/42 EEC for Medical Products. This is made evident by the C €0123 mark of conformity. (0123: The reference number to the involved notified
- The device is designed for use on adults only, not newborns or
- 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

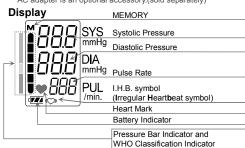
- Precision components are used in the construction of this device Extremes in temperature, humidity, direct sunlight, shock or dust should be avoided
- Clean the device and cuff with a dry, soft cloth or a cloth dampened with water and a neutral detergent. Never use alcohol, benzene, thinner or other 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
- 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, 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 11 feet should be kept from
- When reusing the device, confirm that the device is clean.
- Used equipment, parts and batteries are not treated as ordinary household waste, and must be disposed of according to the applicable local regulations.
- Do not modify the device. It may cause accidents or damage to
- $\hfill \Box$ 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.
- Clinical testing has not been conducted on pregnant women. Do not use the device on pregnant women.
- □ 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 leave the device within the reach of children. $\hfill \Box$ There are small parts that may cause a choking hazard if
- swallowed by mistake by infants. Do not touch the batteries, the patient and the DC jack at the

same time. That may result in electrical shock 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
- □ 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

4. Parts Identification Proper fit range Model UA-651 only Index 🔺 DC jack Artery position mark Air Hose AC adapter plug Display START Button Air Socket Arm Cuff Air Connector Plug Battery Compartment Battery Cover

Note: Model UA-611 doesn't have the DC jack for AC adapter. The DC jack is located on the rear of the model, UA-651 only. The AC adapter is an optional accessory.(sold separately)



5. Symbols

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.		
(((<u>)</u>))	I.H.B. appears when an irregular heartbeat is detected. It may light when a very slight vibration like shivering or shaking is detected.			
М	Previous measurements stored in memory.			
1	FULL BATTERY The battery power indicator during measurement.			
4_4	LOW BATTERY The battery power is low when	Replace all batteries with new ones when the mark blinks		

Err	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		
	The pressure value did not increase during the inflation.			
Err CUF	The cuff is not applied correctly.	take another measurement.		
Ε	PUL DISPLAY ERROR The pulse is not detected correctly.			
Err	Device internal error	Remove the batteries and press the START button, and then install the batteries again. If the error still appears, contact the dealer.		
Err	Device internal error			

Symbols pri	inted on the device case.		
Symbols	Symbols Function / Meaning		
Ф	Standby and Turn the device on.		
SYS	Systolic blood pressure in mmHg		
DIA	Diastolic blood pressure in mmHg		
PUL/min.	Pulse per minute		
R6(LR6,AA)	Battery installation guide		
	Direct current		
*	Type BF: Device, cuff and tubing are designed to provide special protection against electrical shocks.		
C € ₀₁₂₃	EC directive medical device label		
EC REP	EU-representative		
	Manufacturer		
2015 [Date of manufacture		
<u>Z</u>	WEEE label		
SN	Serial number		
⊗	Refer to instruction manual/booklet		
○ © •	Polarity of DC jack		
IP	International protection symbol		

6. Using the Monitor

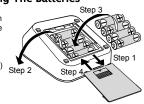
6.1. Installing / Changing The Batteries

 Remove the battery cover.
 Remove the used batteries from the battery compartment in case

of changing them.

3. Insert new batteries into the battery compartment as show taking care that the polarities (+) and (-) are correct

Replace the battery cover. Use only R6P, LR6 or AA batteries.



Model UA-651 only

AC adapter Plug
DC jack

CAUTION

- Insert the batteries as shown in the battery compartment. If installed incorrectly, the device will not work.
- When I butter of the device will not work.

 When I 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.
- does not appear when the batteries are drained
- □ The battery life varies with the ambient temperature and may be shorter at low temperatures.

 Generally, four new R6P batteries will last approximately for three
- months when used twice for measurement each day.
- □ Use the specified batteries only. The batteries provided with the device are for testing the device performance and may have a limited life.
- Remove the batteries if the device is not to be used for a long time. The



6.3. Connecting The AC Adapter

Insert the AC adapter plug into the DC jack. Then, insert the AC adapter into an electrical outlet. The AC adapter, the model TB-233C is sold separately

When disconnecting the AC adapter from the electrical outlet, grasp and pull the AC adapter body

When disconnecting the AC adapter plug from the blood pressure monitor, grasp and pull the AC adapter plug out of the monitor.

6.4. Selecting The Correct Cuff

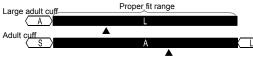
- Using the correct cuff size is important for an accurate reading. If the cuff is not the proper size, the reading may yield an incorrect blood
- pressure value. The arm size is printed on each cuff.
- The index ▲ and proper fit range, on the cuff, tell you if you are applying the correct cuff. Refer to "6.5 Applying The Arm Cuff".
- □ If the index ▲ points outside of the range, contact your local dealer to
- 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
22 cm to 32 cm	Adult cuff	CUF-F-A

Models UA-611 and UA-651 are not designed for using a small

Symbols printed on the cuff.

	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	
Α	Proper fit range for the adult cuff. It's printed on the adult cuff.	
	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.	
$\langle S \rangle$	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	



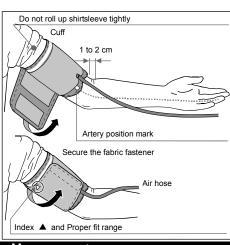
6.5. Applying The Arm Cuff

Wrap the cuff around the upper arm, about 1 to 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. Constriction of the upper arm, caused by rolling up a shirtsleeve, may prevent accurate readings.

Confirm that the index \triangle points within the proper fit range Note: During measurement, it is normal for the cuff to feel very tight. (Do





7. Measurements

7.1. Normal Measurement

 Place the cuff on the arm at heart level (preferably the left arm). Sit quietly during measurement.

2. Press the START button. All of the display segments are displayed. Zero is displayed All of the display segments blinking briefly. Then 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, as in the figure at the right, during lote: If you wish to stop inflation at any time,

press the START button again When inflation is complete deflation starts automatically and

the (heart mark) blinks, indicating that the measurement is in progress. Once the pulse is detected, the mark blinks with Measurement in progress each pulse beat. Note: If an appropriate pressure is not

obtained, the device starts to inflate again automatically

4. 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.

134 Pulse rate Exhausts remaining air automatically Turn off with the START button 5. Press the START button again to turn off the power.

Note: Model UA-611 and UA-651 are provided with an automatic power shut-off function. Allow at least 3 minutes between measurements on 7.2. Measurement with the Desired Systolic Pressure

If re-inflation occurs repeatedly

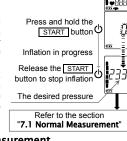
use the following methods. If your systolic pressure is expected to exceed 230 mmHg, use this 1. Place the cuff on the arm at heart

level (preferably the left arm).

2. Press the START button 3. During the zero blinks, press and hold the START button until a number about 30 to 40 mmHg higher

than your expected systolic pressure

appears. 4. When the desired number is reached, release the START button to start measurement. Then continue to measure your blood pressure as described on the section "7.1 Normal Measurement".



At heart level

Press the START button 👈=

Zero display

Starts inflation

Pressurizing

Systolic pressure

Diastolic pressure

WHO classification

58

150

90

Press the START button ()

7.3. Notes for Accurate 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.
- 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. Place the center of the cuff at the same level as your heart.
- Relax for about five to ten minutes before 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. 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.
- □ 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 the section "5 Symbols" for the description of the symbols. This device 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. Try to measure your blood pressure at the same time every day
- The automatic blood pressure monitor's performance may be affected by excessive temperature or humidity, or altitude.

8. Recalling the Memory Data

The device automatically stores up to thirty blood pressure and pulse measurements in memory. Data stored in memory are assigned a data number in the order of the newest to the oldest. The oldest data displays as " $abla_{oldsymbol{arOmega}}$ ". The $oldsymbol{\mathsf{M}}$ symbol in the upper left corner of the display indicates that you are viewing previous data stored in memory

8.1. Recalling Data When nothing is displayed, press and hold the START button to

2 Release the hutton when displaying the average data.

recall the stored data.

- 3. The data number and stored data are automatically displayed in order from the last measurement
- 4. The display will turn off automatically after all data is displayed.

Note: If you press the START button while recalling data, the device turns off.

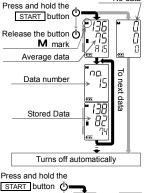
8.2. Clearing Data

1. When turning off the device, press and hold the START button until the "[[r no " is displayed.

3. Data is cleared when the M mark blinks.

2. Select "[Lr 9E5" to clear

4. The device turns off automatically



Press and hold the START button 🗘 Release the button Select "ELr YES" to The M mark blinks Data is cleared. Turns off automatically

9. What is an Irregular Heartbeat

The UA-611 and UA-651 provide a blood pressure and pulse rat 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 <

The indicator monitors the progress of pressure during

symbol frequently 10. Pressure Bar Indicator

measurement. Pressurizing Releasing air surement in progress Inflation complete Inflation in progress

11.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

12.WHO Classification Indicator

Each segment of the bar indicator corresponds to the WHO blood

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

WHO Classification Indicator Severe hypertension Moderate hypertension Mild hypertension High normal Normal Optimal

bleshooting	
Possible Reason	Recommended Action
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.
Battery voltage is too low. I blinks. If the batteries are drained completely, the mark does not appear.	Replace all batteries with new ones.
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 heartbeat, the device may have difficulty in determining your blood pressure.
The value is different from that measured at a clinic or doctor's office.	At a clinic or doctor's office, an apprehension may cause an elevated reading. Home measurement reduces the effects of outside influences on blood pressure readings, supplements the doctor's readings.
	Remove the batteries. Place them back properly and take another measurement.
	Possible Reason Batteries are drained. Battery terminals are not in the correct position. Battery voltage is too low. Bottery voltage is bolinks. If the batteries are drained completely, the mark does not appear. The cuff is not applied properly. You moved your arm or body during measurement. The cuff position is not correct. The value is different from that measured at a clinic or doctor's

the dealer. Do not attempt to open or repair this product, as any attempt to do so will make your warranty invalid

14. 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

15.Technical Data

Clinical tes

Transport / Storage conditions

UA-611, UA-651 Measurement method Oscillometric measurement Measurement range 0 - 299 mmHg 60 - 279 mmHg Pressure Systolic pressure: Diastolic pressure: 40 - 200 mmHc 40 - 180 beats / minute Pulse: Measurement accuracy Pressure: ±3 mmHg Pulse: ±5 %

4 x 1.5V batteries (R6P, LR6 or AA) Power supply Optional AC adapter (TB-233C) (Not included) Number of measurements Approx. 700 times LR6 (alkaline batteries) R6P (manganese batteries) Approx. 200 times

With pressure value 180 mmHg, room temperature 23 °C.
Internally powered ME equipment Classification Continuous operation mo

According to ANSI / AAMI SP-10 1992 IEC 60601-1-2: 2007 EMC Memory Last 30 measurements +10°C to +40 °C / 15 %RH to 85 %RH / 800 hPa to 1060 hPa -20 °C to +60 °C / 10 %RH to 95 %RH

96 [W] x 68 [H] x 130 [D] mm Dimensions Approx. 230 g, excluding the batteries Weight Approx. Cuff Type BF 1 5 years (when used six times a day) Applied part Useful life Device: 2 years (when used six times a day)

AC adapter:5 years (when used six times a day The adapter is to connect the device to a

power source at home. Please contact your local A&D dealer for purchasing. The AC adapter is required to be inspected or replaced periodically. Symbols that are printed on the AC adapter.

Function / Meaning For indoor use only Class II device Thermal fuse Fuse EC directive device label

)	<u> </u>	Polarity of AC	lug	
Accessor	ries sold :	separatel	y		
Cuff	f Catalog Number		Cuff Size		Arm Size
	CUF-F-L	Α.	Large adult cuff		31 cm to 45 cm
	CUF-F-A	4	Adult cuff		22 cm to 32 cm
Arm size: The circumference at the biceps.					
AC Adapter Cata		log Number	Plug	(Outlet type)	

TB-2330 Note: Specifications are subject to change without prior notice

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