

Model UA-651Plus

Instruction Manual Original

## 1. Dear Customers

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

- s device conforms to the European Directive 93/42 EEC for fical Products. This is made evident by the CC0123 mark of formity. (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.

## 3. Precautions

- Precision components are used in the construction of this device. Extremes in temperature, humidity, direct sunlight, shock or dust should be avoided
- should be avoided. Clean the device and outfit with a dry, soft cloth or a cloth dampened with water and a neutral detergent. Never use alcohol, benzenet, thimere or other harsh chemicals to clean the device or cutfi. Avoid tightly folding the cutf or storing the hose tightly twisted for long periods, as such treatment may shorten the life of the components.

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- 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 soling the device and cuff. Measurements may be distorted if the device is used close to televisions, microwae overs, cellular telephones, X-ray or other devices, mobile phones, cordless phones and their base stations, walkie-tailkies can affect this blood pressure monitor n
- 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

- such devices. 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 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, numbress or a temporary red mark to the arm. This condition will appear especially when measurement is repeated successively. Any pain, numbress, or red marks will disappear with time. Measuring blood pressure to 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 newbom infants and pregnant woman. Do not use on newbom ifants or pregnant woman. Do not use the revice by themselves and do not use condents or infants. It may cause accidents or damage.
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- 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. Do not touch the batteries, the DC jack, and the patient at the same time. That may result in electrical shock. Unplug the AC adapter when not in use during the measurement. Use of accessions not deliad 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). Do not inflate without wrapping the cuff around the upper arm. "outprint fail cations." п

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#### Contraindications

- contraindications
  be 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 circulary 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 transition. It may cause injury or accidents.
  Do not use the device where flammable gases such as an ensethelic gases are present. It may cause a nexplosion. ۰ 0
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- 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



The AC adapter is an optional accessory.(sold separately)

Display	MEMORY
	<sup>16</sup> Diastolic Pressure
	E
	Heart Mark
	Battery Indicator
	Pressure Bar Indicator and WHO Classification Indicator

## 5. Symbols

Symbols that appear on the display			
Symbols	Function / Meaning	ning Recommended Action	
•	Appears while measurement is in progress. It blinks when the pulse is detected.	Measurement is in progress. Remain as still as possible.	
«©»	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.		
422	FULL BATTERY The battery power indicator during measurement.		
	LOW BATTERY The battery power is low when it blinks.	Replace all batteries with new ones when the mark blinks.	

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to m		able blood pressure due ovement during	Take another measurement. Remain still during	
		surement.	measurement.	
Err	value	systolic and diastolic es are within 10 mmHg of other.		
	The pressure value did not increase during the inflation.			
Ecc		cuff is not applied	Apply the cuff correctly, and take another measurement	
ĽÚF	Err The cuff is not app [UF correctly.			
ε	PUL DISPLAY ERROR The pulse is not detected correctly.			
Ere	Device internal error		Remove the batteries and press the 照始将了 button, and then install the batteries again.	
Errg		ce internal en ol	If the error still appears, contact the dealer.	
Symbols printed on the device case.				
Symbo	ls	Funct	ion / Meaning	
開始/終了 Standby and Turn the dev		Standby and Turn the dev	vice on.	
最高血圧 Systolic blood pressure in		Systolic blood pressure in	n mmHg	
最低血圧 Diastolic blood pressure i		Diastolic blood pressure i	in mmHg	
脈拍 Pulse per minute				
⊕ (R6(LR6.A	Re(LR6.AA)     Battery installation guide			
Direct current				
Ŕ		Type BF: Device, cuff and tubing are designed to provide special protection against electrical shocks.		
		Date of manufacture		
SN Serial number		Serial number		
-				

6. Using the Monitor	
6.1. Installing / Changing	The Batteries
<ol> <li>Remove the battery cover.</li> <li>Remove the used batteries from the battery compartment in case of changing them.</li> </ol>	Step 4 Step 1
<ol> <li>Insert new batteries into the battery compartment as shown, taking care that the polarities (+)</li> </ol>	
<ul> <li>and (-) are correct.</li> <li>4. Replace the battery cover. Use only R6P, LR6 or AA batteries.</li> </ul>	

Refer to instruction manual/booklet Polarity of DC jack

International protection symbol

leep dry

#### CAUTION

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- CAUTION Insert the batteries as shown in the battery compartment. If installed incorrectly, the device will not work. When <u>C</u> 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 marking the the batteries was seconds or more after the revice turns off, when the hatteries was seen drained

- after the device turns off. after the device turns off. The battery life varies with the ambient temperature and may be shorter at low temperatures. Generally, four new RRP 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 batteries may leak and cause a mailunction.

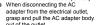
6.2. Connecting The Air Hose Insert the air connector plug Air Hose Air Hose



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## 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 bdv out of the outlet. 



When disconnecting the AC adapter plug from the blood pressumonitor, 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.

		printed on each cuff. I consumable. If it becomes	worn, purchase a new o
	Arm Size	Recommended Cuff Size	Catalog Number
···-;	22 cm to 32 cm	Adult cuff	AXP-AUFN4K2K103
1	31 cm to 45 cm	Large adult cuff	AXP-LADN4K2K103
	Arm size: The cire	cumference at the biceps.	

The circumference at the biceps. Models UA-651Plus is not designed for using a small cuff. Note Symbols printed on the cuff.

Symbols Function / Meaning

•	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	Cuff number	
LOT	Lot number	

## 6.5. Applying The Arm Cuff 1. Wrap the cuff around the upper arm, about 1 to 2 cm above the inside

Wrap the cut around the upper am, about 10 2 cm above the inside of the elbow, as shown.
 Place the cutf directly against the skin, as dothing 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.
 Note: During measurement, it is normal for the cutf to feel very tight. (Do not be alarmed).



## press the <u>marker</u>] folioin again. 3. 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 each pulse beat. Note: If an appropriate pressure is not obtained, the device starts to inflate again automatically. ment in progress Systolic pressure Diastolic pressure WHO classification Pulse rate 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. Exhausts remaining air automatically Turn off with the 開始/終了 button

# Press the 開始時代了 button again to turn off the power. ote:Model UA-651Plus is provided with an automatic power shut-off function. Allow at least 3 minutes between measurements on the

## 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 precedure Press the Marker button procedure Place the cuff on the arm at heart level (preferably the left arm).
- 2. Press the 開始終了 button.

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7. Measurements

2.

7.1. Normal Measurement 1. Place the cuff on the arm at heart

level (preferably the left arm). quietly during measurement.

query during measurement. Press the <u>answirth</u> button. All of the display segments are displayed. Zero is displayed binking 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 outfit to feal way light A measure

stars to inmate. It is normal for the cuff to fedu very tight. A pressure bar indicator is displayed, as in the figure at the right, during inflation. Note: If you wish to stop inflation at any tir press the HAMANT button again.

- During the zero blinks, press and hold the <u>网站/除了</u> button until a number about 30 to 40 mmHg higher than your expected systolic pressure s and hold the Inflation in progress Release the MH/RET U 4
- When the desired number is reached, release the maintenance of the number is the maintenance of the measurement. Then continue to measure your blood pressure as described on the section "7.1 Normal Measurement". The desired pressure Refer to the section
  "7.1 Normal Measurement"

- described on the section "7.1". Thermal Measurement:
  Thermal Measurement:
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  T. Mormal 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 plain facing your and the floor and straighten your back.
  Sit down in a comfortable position. Place your arm on a table with your plain facing your and the table with an a comfortable position. Place your arm on a table with your Palm facing will usually be faster than normal.
  Remain Siti and keep quiet during measurement.
  Do not measure immediately after physical exercise or a bath. Rest for twenty or thirty minutes before measurement.
  An individual's blood pressure varies constantly, depending on what you are doing and vapid effect on your blood pressure.
  This device bases its measurements on the heat/beal. If you have a very weak or irregular heatback, 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. Consult with your physician before using this device on a child. A child should not use this device unattended.
  Thy omeasure your blood pressure at the same time every day.

- 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 " $\sigma_0$  1". The  $\mathbf{M}$  symbol in the upper left corner of the display indicates that you are viewing previous data stored in memory.

- L are viewing previous out and the standard the standard data and hold the 8.1. Recalling Data 2
- 3. na IS The data number and stored data Data number are automatically displayed in order from the last measurement. -138 82

Stored Data

Turns off autor

clear data.

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- The display will turn off automatically after all data is displayed. 4.
- Note: If you press the 開始終了 button while recalling data, the device turns off.

## Press and hold the <sup></sup> 预始株了</sub> button 0 8.2. Clearing Data When turning off the device, press and hold the MHH被子 button until the "[[[roo ] is

#### Release the ⊕ button ⊕ ed. "[[r965" to clear Select Select "CL = 455" to 2. data. 3. Data is cleared when the M The M mark blinks mark blinks. The device turns off automatically. 4. Data is cleared.

- Turns off automatically
- 9. What is an Irregular Heartbeat THE UA-651 PUES Provide a block pressure and pulse rate measurement even when an irregular heartbeat occurs. An irregular heartbeat is defined as heartbeat that varies by 15% from the average of all heartbeats during the blood pressure measurement. It is important that you are relaxed, remain still and on on talk during measurements. te: We recommend contacting your physician if you see this "(>> symbol frequent!)
- frequently

#### 10.Pressure Bar Indicator

hat is Blood Pressure? Blood pressure is the force exerted by blood against the walls of the arteries. Systolic pressure occurs when the heart contracts. Diadotic pressure occurs when the heart expands. Blood pressure is measured in millimeters of mercury (mmHg). One's natural blood pressure is regresented by the fundamental pressure, which is measured first thing in the morning while one is still at rest and here easting. 12.WHO Classification Indicator Each segment of the bar indicator corresponds to the WHO blood pressure classification. WHO Classification Indicator Severe hypertension The indicator displays a segment, based on the current data Moderate hypertension Mild hypertension High normal corresponding to the WHO classification. Normal Optimal 13. Troubleshooting oth. ppears he display, `n when `ver stall the batteries tive and positive ning those indical Battery terminals are not in the correct position. terminals ated on the egat 90 rned or mpartme Battery voltage too low. The cuff does not inflate. 134 Replace all batteries with new Apply the cuff correctly applied properl Make sure you remain still and quiet during measurement. The device does not measure. 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. does not measure. Readings are too hig or too low. he cuff position is f you have a very weak or rregular heartbeat, the device nay have difficulty in determini your blood pressure. At a clinic or doctor's office, an The value is different from that apprehension may cause an elevated reading. Home measurement reduces the effect of outside influences on blood pressure readings, supplements the deatric readings. measured at a clinic or doctor's office Othe he doctor's readings. Remove the batteries. Place the If the actions described above do not solve the problem, contain the dealer. Do not attempt to open or repair this product, as an attempt to do so will make your warranty invalid. product, as any Ű 14. Maintenance 4. Melintentente: Do introisen le device. Il uses delicate electrical components and Do into com le device. Il uses delicate electrical components and problem using the troublesholing instructions, contact the authorized dealer in your area or our customer service department. The ASD ustomer 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 ASD for maintenance. 15.Technical Data 
 Utics

 UA-651Plus
 0.5219 mmHg
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 Pressure:
 0.299 mmHg
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 Diastolic pressure:
 0.0.019 mmHg
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 Diastolic pressure:
 0.0.0180 beats / minute
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surement method surement range

Columb Academic (TE-23-0) (Nol Included) ents Approx. 200 times LFRG (akaline batteries) Approx. 200 times REP (magnases batteries) Approx. 201 times REP (magnases batteries) Approx. 201 times REP (magnases batteries) Approx. 201 S081060-2: 2013 IEC 60601-1-2: 2014 Last 30 measurements -10 to -40 °C/15 to 55 %H/ 1/00 to 1060 hPa -2010 to 00° 1010 956 fH/ 1/30 [D100n hPa -2010; B0° 010 10156 fH/ 1/30 [D100n hPa -2010; B0° 010 156 fH/ 1/30 [D100n hPa -2010; B0° 010 [H/ 1/30 [H/ 1/30 [H/ 1/30 [H/ 1/30 [H

Function / Meaning For indoor use only

Polarity of AC adapter plug

Class II device

ATP-LADN472K103 Large adult cuff 31 om b 45 om Arm Size
 ATP-AUTN4K2K103 Adult cuff 22 om b 32 om ATP-LADN472K103 Large adult cuff 31 om b 45 om Arm Size: The circumference at the biceps.
 Arm Size: The circmference at the biceps.
 Arm Size: The

Caracy runner Prug (Quilet type) AX-TB-233-30 Type A 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.

sahi, Kitamoto-shi, Saitama 364-8585 JAPAN Ine: [81] (48) 593-1111 Fax: [81] (48) 593-1119

Measurement accuracy

Number of measure

Power supply

Classification

Clinical test EMC Memory Operating conditions Transport/Storage condition Dimensions Weinht

Weight Ingress protection Applied part Useful life

Accessory AC adap

No dat

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Cuff

AND

A&D Company, Limited

Symbols that are printed on the AC adapter Symbols

11.About Blood Pressure

What is Blood Pressure?

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Press the 開始/終了 Butto

All of the display segments

Zero display

Starts inflation

Pressurizing