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 \P 0123 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
- 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.
- 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
- Take care to avoid accidental strangulation of babies or infants with the hose and cable
- 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

- 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, 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 newborn infants and pregnant woman. Do not use on newborn infants or pregnant woman
- If you have had a mastectomy, please consult a doctor before 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.

 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 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). Do not inflate without wrapping the cuff around the upper arm.

Contraindications

oper fit range

Arm Cuff

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

Artery position mark

Air Hose

SYS mmHg

PUL

5. Symbols

(C)

м

77

Err

Erg

Symbols Function / Meaning

DIA mmHg Pulse Rate

Symbols that appear on the display

Appears while measurement is in progress. It blinks when the pulse is detected.

the pulse is detected.
I.H.B./AFib symbol appears
when an irregular heartbeat
is detected. It may light wher
a very slight vibration like
shivering or shaking is

Previous measurements

The battery power indicator during measurement.
LOW BATTERY

The battery power is low when it blinks.

Device internal error

stored in memory. FULL BATTERY

- 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

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

MEMORY

Systolic Pressure

I.H.B./AFib symbol

Battery Indicator

Pressure Bar Indicator and

Recommended Action

Measurement is in progress Remain as still as possible.

Replace all batteries with new ones when the mark plinks.

Remove the batteries and

press the START button,

again. If the error still

and then install the batterie

appears, contact the deale

Heart Mark

Model UA-651Plus only

DC jack

AC adapter plug

Display

START Button

Air Connector Plug

Battery Compartment

Air Socket

Battery Cover

Unstable blood pressure due to Remain still during movement during measurement The systolic and diastolic values The pressure value did not Apply the cuff correctly, and increase during the inflation take another measurement. The cuff is not applied correctly. PUL DISPLAY FRROR

Symbols printed on the device case. Function / Meaning Symbols **(**) Standby and Turn the device on 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**€012: EC directive medical device label EU-representative Manufacturer Date of manufacture WEEE label SN Serial numbe 0 Refer to instruction manual/booklet **⊝-c**-⊕ Polarity of DC jack International protection symbol Keep dry

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 shown taking care that the polarities (+) and (-) are correct. 4. Replace the battery cover. Use
- only R6P, LR6 or AA batteries. CAUTION

Step 4 Step 1 Step 3

- □ Insert the batteries as shown in the battery compartment. If installed incorrectly, the device will not work.

 When d____ 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.
- t 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
- batteries may leak and cause a malfunction.

6.2. Connecting The Air Hose

into the air socket firmly.



AC adapter Plug

DC jack

Recommended Action

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 out of the outlet.

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-D-LA-ISO

Arm Size	Recommended Cuff Size	Catalog Number	
31 cm to 45 cm	Large adult cuff	CUF-D-LA-ISO	
22 cm to 42 cm	Wide range cuff	CUF-I-ISO	
23 cm to 37 cm	Semi large cuff	CUF-D-MA-ISO	
22 cm to 32 cm	Adult cuff	CUF-D-A-ISO	
16 cm to 24 cm	Small adult cuff	CUF-D-SA-ISO	
Arm size: The circumference at the bicens			

Symbols printed on the cuff.

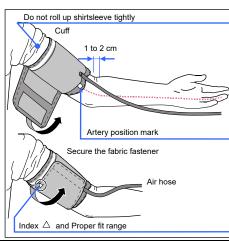
Symbols Function / Meaning

•	Artery Position Mark	artery of the upper arm or in line with the ring finger on the inside of the arm.
A	Index	
REF	Catalog number	
L	Proper fit range for the large adult cuff. It's printed on the large adult cuff.	
W	Proper fit range for the wide range cuff. It's printed on the wide range cuff.	
М	Proper fit range for the semi large cuff. It's printed on the semi large cuff.	
Α	Proper fit range for the adult cuff. It's printed on the adult cuff.	
S	Proper fit range for the small cuff. It's printed on the small cuff.	
	Over range printed on the adult cuff/semi large cuff/wide range cuff.	Use the large adult cuff instead of the adult cuff /semi large cuff /wide range cuff.
S	Under range printed on the adult cuff/semi large cuff/wide range cuff.	Use the small cuff instead of the adult cuff / semi large cuff / wide range cuff.
M/A	Over range printed on the small cuff.	Use the adult cuff/ semi large cuff instead of the small cuff.
M	Under range printed on the large adult cuff.	Use the semi large cuff instead of the large adult

Large adult cuff	Proper fit ranç	ge
M	L	
Wide range cuff		
S	W	
Semi large cuff		
S	M	
Adult cuff		
S	A	
Small adult cuff		
	S	M/A
	ng The Arm Cuff	

LOT Lot number

- 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 not be alarmed).



7. Measurements

7.1. Normal Measurement

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

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

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

3. When inflation is complete deflation starts automatically and the (heart mark) blinks indicating that the mean 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. 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.

Press the START button again to turn off the power. Note: Model UA-611Plus and UA-651Plus are provided with an automatic power shut-off function. Allow at least 3 minutes between easurements on the same person

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 procedure. 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

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 Normal Measurement".

At heart level Press the START button 0= Press and hold the START button Inflation in progress Release the START U button to stop inflation The desired pressure Refer to the section "7.1 Normal Measurement"

At heart level w

Zero display

Starts inflation

Pressurizing

Measurement in progress

Systolic pressure

Diastolic pressure

WHO classification

Exhausts remaining air

automatically

Turn off with the

Pulse rate

68

150

90

134

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. 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.

The device automatically stores up to sixty 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 " \cap \square \mid ". The old M symbol in the upper left corner of the display indicates that you are viewing previous data stored in memory. No data

8.1. Recalling Data When nothing is displayed, press and hold the START button to recall the stored data 2 Release the button when

displaying the average data. 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.

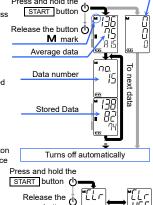
Note: If you press the START button while recalling data, the device turns off.

8.2. Clearing Data When turning off the device,

press and hold the START_ button until the "[[r no displayed.
2. Select "["[Lr YE5" to clear

data Data is cleared when the M mark blinks. The device

automatically



Release the YE 5 button no d Select "CL - YES" to clear data. The M mark blinks Data is cleared. Turns off automatically

9. What is the I.H.B./AFib

When the monitor detects an irregular rhythm during the measurements, the I.H.B./AFib indicator will appea

display with the measurement values Note: We recommend contacting your physician if you see this (C) I.H.B./AFib symbol frequently.

10.What is AFib

he 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 11.Pressure Bar Indicator

The indicator monitors the progress of pressure during measurement. Releasing air Pressurizing

Measurement in progress Inflation complete

12. 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.

13.WHO Classification Indicator

Each segment of the bar indicator corresponds to the WHO blood pressure classification.

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

14 Troubleshoot

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

14. 110u	blesnooting	
Problem	Possible Reason	Recommended Action
Nothing appears on the display, even when the power is turned on.	Batteries are drained.	Replace all batteries with new ones.
	Battery terminals are not in the correct position.	Reinstall the batteries with negative and positive terminals matching those indicated on the battery compartment.
The cuff does not inflate.	Battery voltage is too low. dblinks. If the batteries are drained completely, the mark does not appear.	Replace all batteries with new ones.
The device does not measure. Readings are too high or too low.	The cuff is not applied properly.	Apply the cuff correctly.
	You moved your arm or body during measurement.	Make sure you remain still and quiet during measurement.
	The cuff position is not correct.	Sit comfortably and still. Place your arm on a table with your palm facing upward and the cuff at the same level as your heart.
		If you have a very weak or irregular 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.	At a clinic or doctor's office, an apprehension may cause an elevated reading. Home measurement reduces the effect of outside influences on blood pressure readings, supplements the doctor's readings.
		Remove the batteries. Place ther 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.

15. 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.

16.Technical Data

Clinical test

UA-611Plus, UA-651Plus Oscillometric measuremen Type Measurement method Systolic pressure: 0 - 299 mmHg
Systolic pressure: 60 - 279 mmHg
Diastolic pressure: 40 - 200 mmHg
Pulse: 40 - 180 beats / minute Measurement accuracy Pressure: Pulse: Power supply

4 x 1.5V batteries (R6P, LR6 or AA)
Optional AC adapter (TB-233C) (Not included) Number of measure

nents
Approx. 700 times
Approx. 200 times
R6P (manganese batteries)
With pressure value 180 mmHg, room
temperature 23 °C.
Internally powered ME equipment(Supplied
by batteries) / Class II (Supplied by adapter)
Continuous operation mode
According to ISO81060-2 : 2013
In the clinical validation study, K5 was used
on 85 subjects for determination of diastolic
blood pressure.
IEC 60601-1-2: 2014
Last 60 measurements
+10 to +40 °C / 15 to 85 %RH / 800 to 1060 hPa Classification

EMD Last 80 measurements +10 to +40 °C / 15 to 85 %RH / 800 to 1060 hPa -20 to +60 °C / 10 to 95 %RH / 700 to 1060 hPa Approx. 96 [W] x 68 [H] x 130 [D] mm Approx. 240 g, excluding the batteries Device: IP20 Operating conditions Transport/Storage conditions Dimensions

Approx. Approx. Device: Cuff Weight Ingress protection Applied part Useful life

Accessory AC adapter/TB233C
The adapter is to connect the device to a power source at home. Please contact local A&D dealer for purchasing. The adapter is required to be inspected or replaced periodically.

Symbols that are printed on the AC adapte

-	Symbols	Function / Meaning
	合	For indoor use only
		Class II device
	4	Thermal fuse
	\Box	Fuse
	C€	EC directive device label
	EAC	EAC certification device label
	⊕ ©⊕	Polarity of AC adapter plug
Accesso	ries sold separatel	у

	9	1 dianty of 7to adaptor p	iug
ccessories sold separately			
Cuff	Catalog Number	Cuff Size	Arm Size
	CUF-D-LA-ISO	Large adult cuff	31 cm to 45 cm
	CUF-I-ISO	Wide range cuff	22 cm to 42 cm
	CUF-D-MA-ISO	Semi large cuff	23 cm to 37 cm
	CUF-D-A-ISO	Adult cuff	22 cm to 32 cm
	CUF-D-SA-ISO	Small adult cuff	16 cm to 24 cm

Arm size: The circumference at the biceps.

Plug (Outlet type)

TB-233C Type C Note: Specifications are subject to change without prior notice

Catalog Number

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.