

# Basic Blood Pressure Monitor Instruction Manual — Model UA-651CN ORIGINA 1WMPD4002688

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.

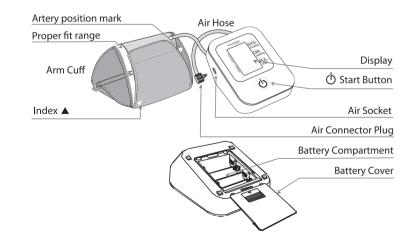
#### PRELIMINARY REMARKS

- The device is designed for use on adults only. Do not use on newborns or
- This device is intended for home healthcare environment.
- This device is designed to measure blood pressure and pulse rate of people for

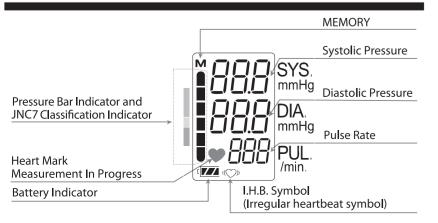
#### **PRECAUTIONS**

- 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
- 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.
- 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.
- 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 cuff on an arm with other medical equipment attached. Neither equipment may function properly
- 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.
- Do not use the device where flammable gases such as anesthetic gases are present. It
- Do not use the device in highly concentrated oxygen environments, such as a highpressure oxygen chamber or an oxygen tent. It may cause a fire or explosion.
- Do not excessively bend or squeeze the air hose.

# **MONITOR COMPONENTS**



# **DISPLAY**



#### SYMBOL IDENTIFICATION

Symbols printed on the device case:

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
TR6(LR6,AA)	Battery installation guide
===	Direct current
*	Type BF: Device, cuff and tubing are designed to provide special protection against electrical shocks
<b>I</b> P	International protection symbol
SN	Serial number
<b>③</b>	Refer to instruction manual/ booklet

#### **DISPLAY 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> ))	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.		
М	Previous measurements stored in memory.		
C // Full Battery	The battery power indicator during measurement.		
C 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	
Err CUF	The cuff is not applied correctly.	another measurement.	
E PUL. DISPLAY ERROR	The pulse is not detected correctly.		
Err	Device internal error	Remove the batteries and press the button, and then install the	
Err	Device internal error	batteries again. If the error still appears, contact the dealer.	

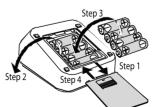
# **ABOUT BLOOD PRESSURE**

# 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).

# **INSTALLING BATTERIES**

- Remove the battery cover.
- 2. 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
- 4. Replace the battery cover Use only R6P, LR6 or AA batteries.



# **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 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.
- If LOW BATTERY mark) does not appear then the batteries are
- The battery life varies with the ambient temperature and may be shorter at
- Remove the batteries if the device is not to be used for a long time. The batteries may leak and cause a malfunction.
- Index ▲ Point: Cuff fit range indicator (printed on the cuff)

#### **CUFF SYMBOL IDENTIFICATION**

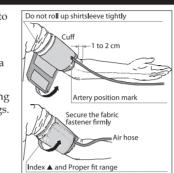
Symbols printed on the cuff:

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
<b>A</b>	Index	
REF	Catalogue number	
М	Proper fit range for the medium cuff.  It's printed on the medium cuff.	
	Range to use the large cuff. Over range printed on the medium cuff	Use the large cuff instead of the medium cuff
L	Proper fit range for the large cuff. It's printed on the large cuff.	
$\langle S \rangle$	Under range printed on the medium cuff.	
$\langle M \rangle$	Range to use the medium cuff. It's printed on the large cuff.	Use the medium cuff instead of the large cuff
LOT	Lot number	
	Proper fit rang	je
Large cuff		

#### APPLYING THE ARM CUFF

1. 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.

- 2. Constriction of the upper arm, caused by rolling up a shirtsleeve, may prevent accurate readings.
- 3. Confirm that the index  $\triangle$  points within the proper fit range.



At heart level

All of the display

segments

Zero display

Starts inflation

Pressurizing

Measurement

Systolic pressure

Diastolic pressure

JNC7 classification

Turn off with the

start button

in progress

Pulse rate

Exhausts remaining air

automatically

#### **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 several 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.

# **DURING MEASUREMENT**

During measurement, it is normal for the cuff to feel very tight. (Do not be alarmed).

# AFTER MEASUREMENT

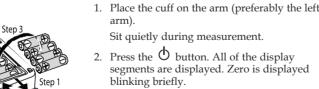
**Normal Measurement** 

- After measurement, press the START 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.

# **TAKING A MEASUREMENT**

Model UA-651CN is designed to detect the pulse and to inflate the cuff to a systolic pressure level automatically.

If your systolic pressure is expected to exceed 230 mmHg, read "Measurement With The Desired Press the start button ( Systolic Pressure" below.



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 inflation.

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

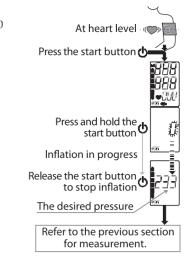
Note: If an appropriate pressure is not obtained, the device starts to inflate again automatically.

- 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.
- 5. Press the 🖰 button again to turn off the power Note: Model UA-651CN is provided with an automatic power shut-off function.

#### Measurement with the Desired Systolic Pressure

If your systolic pressure is expected to exceed 230 mmHg, use this procedure

- 1. Place the cuff on the arm (preferably the left
- 2. Press the 🖰 button.
- 3. During the zero blinks, press and hold the ① button until a number about 30 to 40 mmHg higher than your expected systolic pressure
- 4. When the desired number is reached, release the 🖰 button to start measurement. Then continue to measure your blood pressure as described on the previous page.



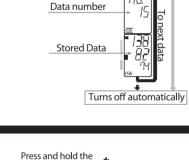
#### **TIPS FOR TAKING READINGS**

- Sit down in a comfortable position. Place the arm to be used for the measurement on a table or other support so that the center of the cuff will be at the same height as vour heart.
- Relax 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 the section titled Display 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.

#### **RECALLING THE MEMORY**

The device automatically stores up to fifteen 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 "  $\sqcap Q$ .  $\downarrow$  ". The M symbol in the upper left corner of the display indicates that you are viewing previous data stored in memory.

- 1. When nothing is displayed, press and hold the 🖰 button to recall the stored data. 2. Release the button when displaying the
- average data. 3. The data number and stored data are automatically displayed in order from the
- 4. The display will turn off automatically after all data is displayed.
  - **Note:** If you press the  $\circlearrowleft$  button while recalling data, the device turns off.



Press and hold the start button

M mark

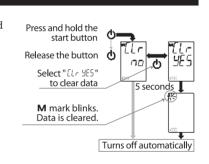
Average data

Release the start button (b)

# **DELETING THE MEMORY**

last measurement.

- 1. When turning off the device, press and hold the O button until the "[[r no" is displayed.
- 2. Select "[Lr YE5" to clear data.
- 3. Data is cleared when the **M** mark blinks.
- 4. The device turns off automatically



# **TROUBLESHOOTING**

Problem	Possible Reason	Recommended Action
	Batteries are drained.	Replace all batteries with new ones.
Nothing appears on the display, even when the power is turned on.	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.  ( 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 not	You moved your arm or body during measurement.	Make sure you remain still and quiet during measurement.
measure. Readings are too high or 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 heartbeat, the device may have diffculty in determining your blood pressure.
Other		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. A&D customer service will provide technical information, spare parts and units to authorized dealers. It is generally recommended to have the monitor inspected every 2 years to ensure proper functioning and accuracy.

#### **SPECIFICATIONS**

	MODEL	.UA-651CN
	MEASUREMENT METHOD	.Oscillometric measurement
<b>.</b>	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)
	NUMBER OF MEASUREMENTS	.Approx. 700 times LR6 (alkaline batteries) Approx. 200 times R6P (manganese batter With pressure value 180 mmHg, room temperature 23 °C
	CLASSIFICATION	.Internally powered ME equipment (Supplied by batteries). Continuous operation mode.
	CLINICAL TEST	.According to ANSI / AAMI SP-10 1992
	EMC	.IEC 60601-1-2: 2007
	MEMORY	.Last 30 measurements
	OPERATING CONDITIONS	.50 °F to 104 °F / 15 %RH to 85 %RH +10 °C to +40 °C / 15 %RH to 85 %RH 800 to 1060hPa
	TRANSPORT/STORAGE CONDITIONS	4 °F to 140 °F / 10 %RH to 95 %RH -20 °C to +60 °C / 10 %RH to 95 %RH
	DIMENSIONS.	.Approx. 3.8" (W) x 2.7" (H) x 5.1" (D) Approx. 96 (W) x 68 (H) x 130 (D) mm
	WEIGHT	.Approx. 8.1 oz., excluding the batteries Approx. 230 g, excluding the batteries
	INGRESS PROTECTION	.Device: IP21
	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)
	Note: Specifications are subject to change withou	ut prior notice

**Note:** Specifications are subject to change without prior notice. EMC table information is listed on our website:

Ι.				
	<b>Catalog Number</b>	Cuff Size	Arm Size	
	UA-290	Medium SlimFit™ cuff	9.0" - 14.6" (23 - 37 cm)	
	UA-291	Large SlimFit™ cuff	12.2" - 17.7" (31-45 cm)	

Arm size: The circumference at the bicep.

# Accessories sold separately

# WARRANTY

In Canada:

5 year warranty

1-800-461-0991

This blood pressure monitor and cuff carries different warranties in different countries In the United States of America: In Latin America: No warranty

5 year warranty Manufactured for A&D Engineering, Inc. 1756 Automation Parkway San Jose, CA 95131 U.S A www.andmedical.com 1-888-726-9966

Distributed in Canada by: Distribué au Canada par: Auto Control Medical, Inc 6695 Millcreek Drive, Unit 6 Mississauga, Ontario, L5N 5R8 Canada

Various warranties - see packaging All other countries: Various warranties - see packaging

In Europe:

Manufactured for:

San Jose, CA 95131

A division of A&D Engineering, Inc.

1756 Automation Parkway

Toll-Free: 1-888-726-9966

www.andmedical.com

A&D Medical

Three year warranty: blood pressure cuff.

# **CONTACT INFORMATION**

www.lifesourcecanada.com

Manufactured by: Manufactured for A&D Company, Limited 1-243 Asahi, Kitamoto-shi, Saitama, 364-8585 Japan Parkway www.aandd.ip [81] (48) 593-1119

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