# BRAUN

iCheck® 7



BPW 4500US

# Braun iCheck® 7 BPW 4500US

Wrist blood pressure monitor

# **Product description**



### www.braunhealthcare.com

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### Intended use of the Braun iCheck® 7

Braun iCheck® 7 is a blood pressure monitor which has been developed for fast, accurate blood pressure measurements from the wrist. This blood pressure monitor operates as a stand-alone device and automatically records your most recent readings. The recorded readings can be downloaded later on your Smartphone for advanced trend interpretation.

# What you should know about blood pressure

Blood pressure constantly changes throughout the day. It rises sharply in the early morning and declines during the late morning. Blood pressure rises again in the afternoon and finally drops to a low level at night. It may also vary over a short period of time. Therefore readings from successive measurements can fluctuate.

This device will display your blood pressure reading referring to two values: the systolic and the diastolic values. The systolic blood pressure (the upper number) indicates how much pressure your blood is exerting against your artery walls when the heart beats. The diastolic blood pressure (the lower number) indicates how much pressure your blood is exerting against your artery walls while the heart is resting between beats. The pulse value is also displayed after each measurement.

The AHA (American Heart Association) have set up the following standard blood pressure values when measured with a resting pulse at home:

Blood pressure (mmHg)	Normal	Elevated	High Blood Pressure Stage 1	High Blood Pressure Stage 2	Hypertensive Crisis
SYS = systole (upper value)	Less than 120	120-129	30-139	140 or higher	higher than 180
DIA = diastole (lower value)	Less than 80	Less than 80	80-89	90 or higher	higher than 120

For every measurement displayed on the screen, the associated color (from green to red) will indicate the corresponding blood pressure level. You can use this classification daily to help you understand your blood pressure reading. If you are really concerned by the classification, you should consult your doctor.

SYS (mmHg)	DIA (mmHg)	
< 120	and	< 80
120-129	or	< 80
130 or higher	or	80 or higher
180+	or	110+
	< 120 120-129 130 or higher	120-129 or 130 or higher or

To ensure accurate measuring results, read the complete instructions for use carefully.

# !\ Safety information and important precautions

People suffering from cardiac arrhythmia, vascular constriction, arteriosclerosis in the extremities, diabetes or users of cardiac pacemakers should consult their doctor before measuring their blood pressure themselves. Deviations in blood pressure values may occur in such cases.

If you are under medical treatment or taking any medication, please consult your doctor first.

The use of this blood pressure monitor is not intended as a substitute for a consultation with your doctor.

# Key rules for accurate blood pressure measurement

Always take readings at the same time of day, under the same conditions.

Do not take a measurement within 30 minutes after smoking, drinking coffee or tea or any form of exertion. These factors will influence the measurement.

Always measure on the same wrist. We recommend using left wrist.

Take off your wrist watch and jewelry before placing the monitor on the measuring arm.

Remove tight clothing from your arm.

If you want to take multiple measurements, wait approximately 3 minutes before repeating a measurement.

# Product description (see Page 1)

- (A) On/Off button (also used for Bluetooth® pairing, see page 7)
- Graphic display for measurements and indications
- Instant read color indicator
- Battery compartment cover
- Cuff

### Inserting/replacing batteries

- Remove the battery compartment cover by sliding it downwards. Insert the two batteries supplied with this product, with polarity as indicated in the battery compartment. When replacing batteries, use alkaline batteries exclusively, type AAA/LR03, 1.5V.
- · New batteries will provide approximately 300 measurements.



The On/Off button is located to the right of the display. This is a round button with the power symbol. Simply tap on this touch-sensitive button to turn your iCheck 7 On and Off.

When turning On, you will see a welcome screen first. When this message disappears the device will be ready to use.

The graphic display shows numerical values for measurements, indications for user, guidance system and error notifications, if any.

At the conclusion of the measurement the device will show a colored heart. Use the color codes shown on Page 6 find out what the color means.

### Taking a blood pressure measurement

- 1. Sit down, relax, keep still, especially the arm being used for the measurement, do not move or speak. For greatest accuracy, we recommend using the left wrist for the measurement.
- Fit the monitor on your left wrist, roughly .4 inch below the palm line (see Fig. 1 for correct placement). DO NOT ATTACH LIKE A WRIST WATCH. The device should be on the inner side of your wrist. Secure the cuff with the Velcro fastener, so that it is tight but comfortable. There should not be a space between the cuff and the wrist.
- 3. Press the On/Off button (1) to start a measurement. The graphic display will show the welcome screen followed by the 'Easy Positioning System'. This is shown as a moving dot within a white circle.



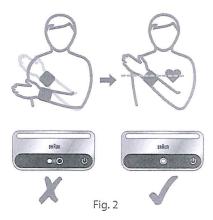
(0-15V SLLA+0)

THE VALLE

Fig. 1

- 4. The 'Easy Positioning System' helps to ensure the arm is in the correct position. Simply move your arm up and down until the white dot stays inside the circle (see Fig. 2). This means that the iCheck 7 is now level with your heart.
- The measurement starts automatically once the correct position has been obtained. Do not move or speak while the measurement is in progress.

Note: If it is necessary to interrupt a measurement, press the On/Off button (1) at any time. The device immediately cancels the measurement, lowers cuff pressure and turns itself off.



# Understanding your reading

Once the measurement is complete, the instant read 'heart' symbol will illuminate. The 'meaning' of the color can be found in the table on Page 6. The graphic display will show the numerical values of your blood pressure readings.

SYS: shows the systolic blood pressure in mmHg

DIA: shows the diastolic blood pressure in mmHg

PUL: shows the pulse - heart beats per minute

- This symbol at the right-hand side of pulse reading indicates a regular heartbeat.
- This symbol at the right-hand side of pulse reading indicates that pulse irregularities were detected during the measurement. This irregular heartbeat can be caused simply by talking, moving or shaking during a measurement. In this case, the result may deviate from your normal basal blood pressure repeat the measurement. Normally this is not cause for concern. However if the symbol appears frequently, and these guidelines are strictly followed, you should seek medical advice.



The instant read color indicator follows the AHA recommendations for interpreting readings and is described in the table below.

OPP.	<b>Green</b> : normal blood pressure	Your blood pressure reading is normal, and values are below 120 mmHg systolic and below 80 mmHg diastolic.	
90	<b>Yellow</b> : Elevated Blood Pressure	Your blood pressure reading is in the elevated blood pressure range with values between 120-129 mmHg systolic and/or less than 80 mmHg diastolic.	
99	<b>Orange</b> : High Blood Pressure Stage 1	Your blood pressure reading is in the hypertension range with values between 130-179 mmHg systolic and/or 80-119 mmHg diastolic.	
Stage 2 OR Hypertensive dia		Your blood pressure reading is in the severe hypertension range with values of 180 mmHg systolic and above and/or 120 mmHg diastolic and above. If you constently get readings in this range, consult your doctor.	

Blood pressure readings will be automatically saved in the device memory. Results are displayed for approx. 60 seconds, then device will automatically shut-off. You can also shut off your device with On/Off button.

Note: If your iCheck® 7 device is switched on within 60 seconds of powering off, the welcome screen is bypassed.

### Memory functions

Your iCheck® 7 will store up to 100 readings in the internal memory. Readings are stored automatically when the measurement is complete. When the 100 readings are reached, the new readings automatically replace the oldest ones. We suggest you regularly transfer your stored readings onto the Braun Healthy Heart app on your Smartphone in order to follow the evolution of your blood pressure easily over a long period of time.

The memory is non-volatile. Stored readings will not be lost when the batteries are replaced.

# Connection to Smartphone and Braun Healthy Heart app

Your iCheck® 7 can be connected by Bluetooth® to your Smartphone (iOS and Android) to download stored readings automatically. When readings are downloaded to your Smartphone, they are deleted from your iCheck® 7 memory.

Make sure the 'Braun Healthy Heart' app has been downloaded onto your Smartphone and the app is open.







Switch on the Bluetooth function on your Smartphone. If you are using the app for the first time, it will guide you in pairing your iCheck® 7. If you have already used the app before, go to the "Connect device" function available in the app menu and follow the instructions.

During Bluetooth pairing, iCheck® 7 will show a flashing Bluetooth icon ★ on the display. Once pairing is complete, iCheck® 7 will show your name on the display.

### **Battery life indicator**

### Batteries are low

When the batteries are approximately 80% discharged, the low battery symbol will show at power-up for about 6 seconds. The iCheck® 7 device will continue to measure reliably. but new batteries should be obtained.

### Batteries are empty —replacements required

When the batteries are fully discharged, the empty battery symbol will show at power-up for about 6 seconds and then device will automatically shut off. You cannot take any readings and must replace the batteries.

### Storage and cleaning

- · Do not place/leave the item in direct sunlight, at high temperatures or in damp and dusty
- Do not store at extremely low (less than -4 °F) or high (more than 131 °F) temperatures.
- Use a wet cloth or one impregnated with a mild cleansing agent to clean the case and then use a dry cloth to wipe it dry.
- · Do not use any strong cleansers to clean it.

- When the unit is not going to be used for a long time, remove the batteries. (Batteries may leak or cause damage).
- Do not modify the device. NEVER open the device! This will void the manufacturer's guarantee.

### Calibration

This device was calibrated at the time of manufacture. If used according to the instructions for use, periodic recalibration is not required.

### Guarantee

Please read all instructions before attempting to use this device. Please retain the receipt as proof/date of purchase.

The receipt must be presented when making any claim within the relevant guarantee period. Any claim under the guarantee will not be valid without a proof of purchase.

Your device is guaranteed for Two Years (2 Years) from date of purchase.

This guarantee covers defects in materials or workmanship that occur under normal use, defective devices meeting these criteria will be replaced free of charge.

The guarantee DOES NOT cover defects or damage resulting from abuse or failure to follow the user instructions.

The guarantee becomes void if the device is opened, tampered with, or used with non Braun branded parts or accessories, or if repairs are undertaken by unauthorized persons.

Accessories and consumables are excluded from any warranty.

For support requests, please visit www.braunhealthcare.com or find service contact information at the end of this owner manual.

This guarantee is applicable to US only.

The LOT and SN of your device are printed on the rating label located inside the battery compartment.

# **Troubleshooting**

Problem	Reason	Solution	
	Low battery warning	Be ready to replace batteries with new ones soon.	
	Empty battery warning	Insert new batteries or check that batteries are correctly inserted.	
Device does not turn on, creen is black	Problem with batteries	Change batteries for new ones and make sure to insert them correctly. If problem persists, contact consumer support	
"ERROR 孝 "	Cannot connect to Smartphone	Stay away from radio interference such as microwave ovens, WiFi routers, laptop computers, etc. Make sure Bluetooth is enabled on your Smartphone before starting the pairing sequence.  Follow the instructions for Bluetooth pairing in the Braun	
		APP and re-initiate the Bluetooth pairing sequence using the Braun APP.	
	Measuring error	보기 (1717) 시민 사이를 다가 다꾸다니다	
ERROR O"	The pulse signals on the cuff are too weak.	Reposition the cuff and repeat the measurement.	
"ERROR 1"	Pumping error The cuff is not fastened properly.	Reposition the cuff, close it tighter then repeat the measurement.	
"ERROR 2"	Out of Range Results Error	Relax for a while and repeat the measurement. Make sure the cuff is correctly positioned on your arm.	
Pump time error "ERROR 3" The cuff is not fastened properly.		Re-fit the cuff, and take a measurement again.	
"ERROR 4" User could not find the correct wrist position (angle in less than 60 seconds		Position the wrist at heart level as indicated by the 'Easy Positioning System'.	
ERROR 254" Device internal error		Remove and then reinsert the batteries. If the problem persists, contact consumer support.	
"ERROR 255" Calibration error		Remove and then reinsert the batteries. If the problem persists, contact consumer support.	
"ERROR 256"	An error occurred during the Bluetooth Firmware update	Device will automatically restart using the original Bluetooth firmware. Re-initiate the firmware download process or follow the on-screen instruction from Braun APP.	

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### Specifications

Measurement method

Display

Blood pressure measurement range

Pulse measurement range

Calibration accuracy

Inflation/Deflation

Sets of memory

Cuff size

Operating temperature

Storage temperature

Unit weight Power source

Auto power off

Service life

Wireless communication

Effective radiated power: <20dBm

BPW4500US

Oscillometric

OLED display

Automatic

5 years

40 ~ 255 mmHg

40 ~ 199 beats/minute

Up to 100 readings

Approx. 60 seconds

Bluetooth® Smart

Modulation: GFSK

Blood pressure: +/- 3 mmHg

Pulse rate: +/- 4% of reading

**Important** 



Read the operating instructions.

If the device is not used within the specified temperature, humidity and atmospheric pressure ranges, the technical accuracy of the measurement cannot be guaranteed.

Fits wrist circumference: 12.5 - 21 cm (4.9 - 8.3 inch) min/max  $+50 \, ^{\circ}\text{F} \sim + \, 104 \, ^{\circ}\text{F}$ , less than 85 % R.H. non-condensing

-4 °F ~ +131 °F, less than 85 % R.H. non-condensing

Frequency Range: 2.4GHz ISM Band (2400 - 2483.5 MHz)

Approximately 125g (exluding batteries)

Alkaline battery: 2 x AAA (LR3) 1.5V

### Classification:



Internally powered equipment

Type BF applied parts

Protected against solid foreign objects of .49 in diameter and larger. Protected against water drops falling vertically when the device is tilted up to 15°.

Not suitable for use in the presence of flammable anaesthetic mixtures with air, oxygen or nitrous oxide. Continuous operation with short-time loading.



Operating temperature

Storage temperature



Storage humidity

Subject to change without notice.

This device conforms to the following standards:

EN 60601-1:2006/A1:2013 - General requirements for basic safety and essential performance.

EN 60601-1-2:2015 - Medical Electrical Equipment - Electromagnetic compatibility - Requirements and tests.

EN 60601-1-11:2010 - Medical Electrical Equipment - Requirements for medical electrical equipment and medical electrical systems used in the home healthcare environment.

EN 1060-3:1997 + A2:2009 - Non-invasive sphygmomanometers - Supplementary requirements for electromechanical blood pressure measuring systems.

EN 1060-4:2004 - Non-invasive sphygmomanometers - Test procedures to determine the overall system accuracy of automated non-invasive sphygmomanometers.



This product conforms to the provisions of the EC Directive 93/42/EEC (Medical Device Directive and superseding regulations).

This product carries the CE mark and is manufactured in conformity with the RoHS Directive 2011/65/EU.

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MEDICAL ELECTRICAL EQUIPMENT needs special precautions regarding EMC.

For a detailed description of EMC requirements please contact an authorized local Service Center (see guarantee) or visit www.braunhealthcare.com

Portable and mobile RF communications equipment can affect medical electrical equipment.



This product contains batteries and recyclable electronic waste. To protect the environment, do not dispose of it in household waste, but take it to an appropriate local collection center.



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### **FCC** statement

THIS DEVICE COMPLIES WITH PART 15 OF THE FCC RULES. OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS: (1) THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE, AND (2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED, INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRED OPERATION.

### **FCC Caution**

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

### Note:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- · Reorient or relocate the receiving antenna.
- · Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. End users must follow the specific operating instructions for satisfying RF exposure compliance. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

This equipment has very low levels of RF energy that are deemed to comply without testing of specific absorption ratio (SAR).

### **Support contact numbers**

### USA

3 +1 xxx xxx xx xx xx