microlife®

INSTRUCTION MANUAL

Automatic
Blood
Pressure
Monitor

Model # BP3NF1-2B

Professional Blood Pressure Monitor
Instruction Manual
Table of contents

1. Safety Information

IMPORTANT INFORMATION!
RETAIN FOR FUTURE USE!

Read the instruction manual carefully before using this device, especially the safety instructions, and keep the instruction manual for future use.

Should you give this device to another person, it is vital that you also pass on these instructions for use.

1.1. Explanation of symbols

This instruction manual belongs to this device.

It contains important information about starting up and operation. Read the instruction manual thoroughly.

Non-observance of these instructions can result in serious injury or damage to the device.

WARNING

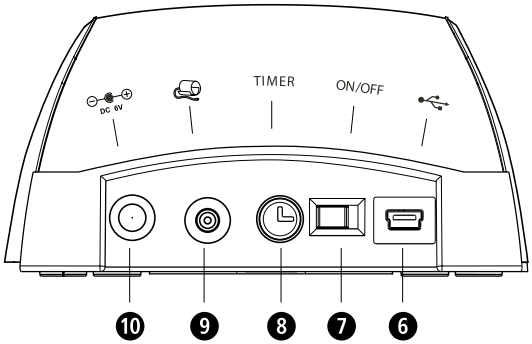
These warning notes must be observed to prevent any injury to the user.

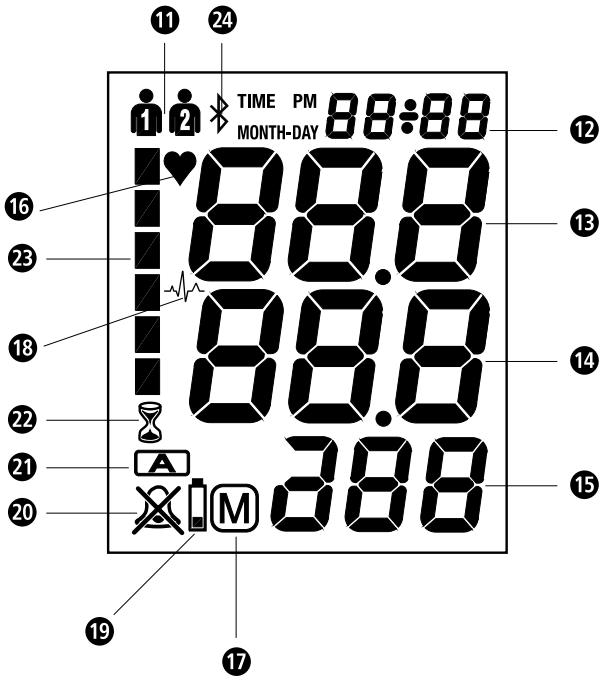
NOTE

These notes give you useful additional information on the installation or operation.

Type BF applied part

1.2. Know Your Unit


DC 6V
TIMER
ON/OFF
10
9
8
7
6


11
24
1
2
TIME
PM
MONTH-DAY
88:88
88.8
88.8
388
A
M
12
13
14
15
16
23
18
22
21
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19
17

[Product Description]

1. Upper arm cuff with hose
2. Display
3. START button
4. MEMO button
5. Blood pressure indicator
6. USB Interface
7. ON/OFF switch
8. TIMER button
9. Connector for the hose
10. Socket for mains adaptor
11. User memory 1 / 2
12. Time / Date
13. Display of systolic pressure
14. Display of diastolic pressure
15. Display of pulse rate
16. Pulse symbol
17. Memory symbol
18. Unit has detected an arrhythmia.
19. Batteries low (Please replace batteries).
20. Alarm symbol
21. Symbol for 3MAM mode
22. Countdown symbol
23. Blood pressure bar display
24. Bluetooth icon

⚠ WARNING

Do not take any therapeutic measures based on your own measurements! Never change the quantity of medication prescribed by your doctor!

- Irregularity of pulse or arrhythmia can lead to difficulties in recording a correct reading when measurements are taken using oscillometric blood pressure devices. This device is elec tronically equipped to detect over 20 of the most commonly occurring types of arrhythmia and movement artifacts and indicates this with a symbol ⓲ in the display.
- If you should suffer from conditions such as arterial occlusive disease, please consult your doctor before using the unit.
- The unit may not be used to check the heart rate of patients with a pacemaker.
- Pregnant patients should take their own personal state of health into consideration and take all necessary precautions before using the unit. If in doubt, consult your doctor.
- Should you experience discomfort or other complaints during measurement, for example pain in the upper arm, please take the following action: Press the **START** button ❸ to deflate the cuff immediately. Loosen the cuff and remove it from your arm. Please contact either your dealer or Microlife directly.
- Patients with a weak pulse wave should raise their arm and open and close their hand around 10 times before taking a reading. This exercise optimizes the pulse wave and the measuring process.
- The unit is only to be used for the specific purpose described in this instruction manual.
- Any misuse will void the warranty.
- On the rare occasion of a fault causing the cuff to remain fully inflated during measurement, open the cuff immediately.
- Do not use the unit near to equipment emitting a strong electric or magnetic field, such as radios. This may impair the correct functioning of the unit.
- This device is not designed to be used by persons (including children) with limited physical, sensory or mental abilities, or by persons with insufficient experience and/or knowledge, unless under observation by a person responsible for their safety, or unless they have been instructed in the use of the device.
- Children must be supervised to ensure that they do not play with the device.
- If a fault occurs, do not try to repair the unit yourself. Attempts to do so will void the

warranty. Refer all servicing to authorized service personnel.

- Protect the unit from moisture. Should moisture enter the unit, remove the batteries and stop using it immediately. In this case, please contact either your dealer or **Microlife** directly. You can find details of how to contact us on the address page.

2. Useful Information

This blood pressure monitor is a fully automatic, digital blood pressure measuring device for use by adults on the upper arm.

This monitor enables very fast and reliable measurement of your systolic and diastolic blood pressure as well as pulse by way of the oscillometric method of measuring. This device offers clinically proven accuracy and has been designed to be user friendly.

Before using it, please read through this instruction manual carefully and keep it in a safe place. For further questions on the subject of blood pressure and its measurement, please contact your doctor.

To ensure the best results and long-term satisfaction with your **Microlife** 3NF1-2B blood pressure monitor, we recommend that you read the following operating and maintenance instructions carefully.

2.1. Items suppliedand packaging

Please check first of all that the device is complete and is not damaged in any way. In case of doubt, do not use it and contact your dealer or your service centre.

The following parts are included:

- 1 **Microlife** Blood pressure monitor **3NF1-2B**
- 1 Preformed sleeve with air pipe
- 4 Batteries (AA type, LR 6) 1,5V
- 1 AC power adapter
- 1 Storage bag
- 1 USB cable
- 1 Blood pressure certificate
- 1 Instruction manual

The packaging can be reused or recycled. Please dispose properly of any packaging material no longer required. If you notice any transport damage during unpacking, please contact your dealer without delay.

⚠ WARNING

Please ensure that the polythene packing is kept away from the reach of children! Risk of suffocation!

2.2. What is blood pressure?

Blood pressure is the pressure created in the blood vessels by each heart beat. When the heart contracts (= systole) and pumps blood into the arteries, it brings about a rise in pressure. The highest value is known as the systolic pressure and is the first value to be measured. When the cardiac muscle relaxes to take in fresh blood, the pressure in the arteries also falls. Once the arteries are relaxed, a second reading is taken – the diastolic pressure.

2.3. How is blood pressure measured?

The **3NF1-2B** is a blood pressure unit which is used to measure blood pressure at the upper arm. The measurement is carried out by a microprocessor, which, via a pressure sensor, measures the vibrations resulting from the inflation and deflation of the cuff over the artery.

2.4. Why should you take your blood pressure at home?

Microlife has had many years of experience in the field of blood pressure measurement. The high precision of Microlife devices has been confirmed by extensive clinical tests, carried out according to strict international standards. One strong argument in favour of taking blood pressure at home is the fact that the readings are taken in familiar surroundings under relaxed conditions. The most important reading is the socalled „baseline value", the one taken before breakfast, directly after getting up in the morning. As far as it is possible, you should always try to take your blood pressure at the same time and under the same conditions each day.

This ensures comparable results and helps in detecting the first signs of high blood pressure. If high blood pressure remains undetected, it increases the risk of further cardiovascular diseases.

i THEREFORE WE RECOMMEND:

Take a blood pressure reading daily and on a regular basis, even if you are experiencing no apparent complaints.

2.5. Blood pressure classification

The following standards for assessing high blood pressure (in adults) have been established by the National Institutes of Health JNC7, 2003.

Category	**Systolic** (mmHg)	**Diastolic** (mmHg)
Normal	<120	and <80
Pre-Hypertension	120-139	or 80-89
Hypertension		
Stage 1 Hypertension	140-159	or 90-99
Stage 2 Hypertension	≥160	or ≥100

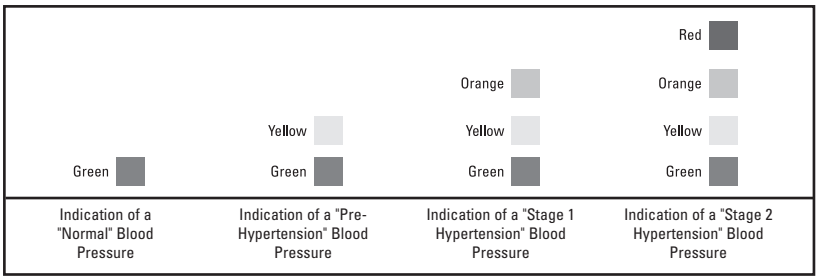
☞Further information

- If your values are mostly normal under resting conditions but exceptionally high under conditions of physical or psychological stress, it is possible that you are suffering from so-called "labile hypertension." Consult your doctor.
- Correctly measured diastolic blood pressure values above 120 mmHg require immediate medical treatment.

Hypertension risk indicator

The bars on the left-hand edge of the display show you the range within which the indicated blood pressure value lies. Depending on the height of the bar, the readout value is either within the normal (green), borderline (yellow) or danger (orange, red) range.

The classification is based on standards established by the National Institutes of Health JNC7, 2003.



The traffic light bar illuminates according to your measurement.

- If your measurement has only the green bar, your measurement is "Normal," according to NIH standards.
- If your measurement shows the yellow bar, your measurement is "Pre-Hypertension."
- If your measurement shows the orange bar, it is "Stage 1 Hypertension."
- If your measurement shows the red bar, it is "Stage 2 Hypertension."

⚠ WARNING

Blood pressure that is too low represents just as great a health risk as blood pressure that is too high! Fits of dizziness may lead to dangerous situations arising (e.g. on stairs or in traffic)!

2.6. Fluctuations in blood pressure

There are many factors that can influence blood pressure. Readings can be affected seriously by stress, fear, heavy physical exertion or the time of day at which the measurements are taken. Your personal blood pressure values are subject to considerable fluctuation during the course of the day and the year. These fluctuations are particularly pronounced in the case of patients suffering from hypertension. Blood pressure is usually at its highest during physical exertion and at its lowest at night when you are asleep.

2.7. Influencing and evaluating readings

- Measure your blood pressure several times, then record and compare the results. Do not draw any conclusions from a single reading.
- Your blood pressure readings should always be evaluated by a doctor who is also familiar with your personal medical history. When using the unit regularly and recording the values for your doctor, you should visit the doctor from time to time to keep him updated.
- When taking readings, remember that the daily values are influenced by several factors. Smoking, consumption of alcohol, drugs and physical exertion influence the measured values in various ways.
- Measure your blood pressure before meals.
- Before taking readings, allow yourself at least five minutes rest.
- If the systolic and diastolic readings seem unusual (too high or too low) on several occasions, despite correct use of the unit, please inform your doctor. This also applies to the rare occasions when an irregular or very weak pulse prevents you from taking readings.

3. Getting Started

3.1. Inserting / removing batteries

Insertion: Open the battery compartment on the underside of the unit by exerting gentle pressure in the direction indicated by the arrow, and insert the four batteries included with the unit (alkaline batteries, AA type, LR 6). Remember to insert the batteries as indicated in the diagram in the battery compartment. Once the batteries are inserted correctly (or once the power unit is plugged in), you should hear 2 beeps.

When the **ON/OFF** switch is activated ⑦ , you will hear 2 beeps and all the symbols appear on the display for one second. Then the following appears: " - : - - ". Replace the lid, pressing it until it snaps into place.

Removal:

If the voltage in the batteries drops below 5 - 4.5 V, the display shows the battery symbol ⑲. Switch the device off using the **ON/OFF** switch ⑦ and insert new batteries. Should the used batteries be jammed in the compartment, use a pointed instrument, such as a ballpoint pen, to carefully prise them out.

As soon as the voltage in the batteries drops below 4.25 - 0.25 V, the display shows the battery symbol ⑲ . The device automatically switches off immediately after this symbol appears. The device will not function until new batteries are inserted.

Note that you have to reset the date and time each time you replace the batteries, unless this is set automatically via the radio clock when the device is switched on using the **ON/OFF** switch ⑦. The previous measuring results are saved.

⚠ WARNING

BATTERY SAFETY INFORMATION

- Do not disassemble batteries!
- Clean the battery and device contacts if necessary before putting in the batteries!
- Remove discharged batteries from the device immediately!
- Increased risk of leakage, avoid contact with skin, eyes and mucous membranes! If battery acid comes in contact with any of this parts, rinse the affected area with copious amounts of fresh water and seek medical attention immediately!
- If a battery has been swallowed seek medical attention immediately!
- Replace all of the batteries simultaneously!
- Only replace with batteries of the same type, never use different types of batteries together or used batteries with new ones!
- Insert the batteries correctly, observing the polarity!
- Keep the battery compartment well sealed!
- Remove the batteries from the device if it is not going to be used for an extended period!
- Keep batteries out of children's reach!
- Do not attempt to recharge these batteries! There is a danger of explosion!
- Do not short circuit! There is a danger of explosion!

- Do not throw into a fire! There is a danger of explosion!
- Keep unused batteries in their packaging away from metal objects in order to prevent short circuiting!
- Do not throw used batteries into the household refuse; put them in a hazardous waste container or take them to a battery collection point, at the shop where they were purchased!

3.2. Using a mains adaptor

Alternatively, you can also run the device using a special power supply unit. Connect it to ⑩ on the back ofthe device. In this case the batteries remain in the unit.

Inserting the connector into the back of the blood pressure monitor switches the batteries off mechanically. It is necessary, therefore, to plug the mains adaptor into the mains socket first of all and then to connect it to the blood pressure monitor. If the blood pressure monitor is no longer being used, first remove the connector from the blood pressure monitor and then pull the mains adaptor out of the mains socket. Doing this means that the date and time will not have to be reset each time.

3.3. Setting time and date

Switch the device to standby mode. If you do not press any buttons for 1 minute during the time setting, the time setting mode switches off and " - : - - " appears in the clock display.

1. You can set the date and time by pressing down the **TIMER** button ⑧ for several seconds until OFF appears on the display.
2. Press the **TIMER** button ⑧ again. After you release the button, 61 appears on the display and On appears below this.
3. Press the **TIMER** button ⑧ again. On and appear in the display. You can switch the radio clock on or off by pressing the **MEMO** button ④. If the radio clock is switched off, you can press the **TIMER** button ⑧ to set the time manually.
4. The selected user memory appears on the display together with the flashing year.
   - Press the **TIMER** button ⑧ again to display the date; the month starts to flash.
   - Press the **TIMER** button ⑧ again and the day starts to flash.
   - Press the **TIMER** button ⑧ again to display the time. The hour starts to flash.
   - Press the **TIMER** button ⑧ again and the minutes start to flash.
   - You can set the current date and time (year, month, day, hours and minutes) by pressing the **MEMO** button and confirm the date and time with the **TIMER** button ⑧. Then the date and time you set are shown twice each in succession before the

device returns to standby mode. In standby mode, the time is displayed permanently.

NOTE

If, during manual time setting, you press the **START** button ❸, you exit the time setting mode.

The date and time values you have entered so far are kept. " - : - - " is displayed if you did not set the time previously.

3.4. Setting the alarm

Your **Microlife 3NF1-2B** blood pressure meter is equipped with an alarm function, with which the two users can set three alarm times each, in order to take medication are regular intervals, for example.

Make sure that the device is in standby mode and your own user memory ⓫ has been selected.

1. Press the **TIMER** button ❽ followed by the **MEMO** button ❹. Hold down both buttons until the alarm symbol ⓴ appears on the display.
2. Release both buttons. " ***1*** " flashes at the bottom right of the display for Alarm 1. You can use the MEMO button ❹ to select Alarm 1, Alarm 2 or Alarm 3.
3. Press the **TIMER** button ❽. The display for entering the alarm time flashes. Use the **MEMO** button ❹ to enter the alarm time: first the hours and then the minutes.
4. Press the **TIMER** button ❽ and the alarm symbol flashes. Use the **MEMO** button ❹ to switch between alarm on (🔔) and alarm off (🔕).

   To confirm your entries, press the **TIMER** button ❽ or the **START** button ❸. Once the alarm has been set, an acoustic signal sounds at the time you set.

NOTE

If you have correctly entered an alarm time and the alarm is active, the alarm symbol 🔔 appears in standby mode. If no alarm is active for either of the user memories, no symbol appears in standby mode.

3.5. Setting up the user memory

The **3NF1-2B** gives you the opportunity to assign readings to one of two user memories, each of which provides 99 memory slots. Switch the device to standby mode. Press the **TIMER** button ❽ to select either user memory 1 or user memory 2 ⓫.

3.6. Selecting the 3MAM measuring method

With the **3NF1-2B,** you can choose between two measuring modes.

- Single reading

• 3 consecutive readings (Measurement Average Mode = 3/MAM-mode)

In the case of a single reading, just one blood pressure reading is taken and stored.

The 3/MAM-mode is to be recommended if you suffer from severely fluctuating blood pressure. 3 successive readings are taken at 15 second intervals, thus eliminating widely varying readings. In the case of serious deviations, a 4th reading may be taken.

From these three measurements, a weighted average value is calculated, displayed and stored in the selected memory. A reading taken in this way is indicated in the memory by an 21 .

The 3/MAM procedure greatly minimizes the risk of an incorrect reading.

1. To switch between single measurement and 3 consecutive measurements (3MAM procedure), press and hold the **TIMER** button 8 until the symbol for 3MAM mode and " OFF " appear flashing in the display.
2. Press the **MEMO** button 4 to select either " On " or " OFF "; " On " for the 3MAM measuring method and " OFF " for single measurement.

3. Confirm your selection by pressing the **START** button 3 (or press the **TIMER** button 8 to make the next setting: " *Switch beep on/off* ").

3.7. Switching beeps on/off

Beeps sound when you take a measurement using the **3NF1-2B** blood pressure meter. You can switch off the beeps by making the following setting.

1. To switch between "beep on" and "beep off", press and hold the **TIMER** button 8 until and " OFF " appear flashing in the display.
2. Press the **TIMER** button 8 again. " bI " appears in the display, followed by " On ".
3. Press the **MEMO** button 4 to switch between " On " and " OFF ".
4. Confirm your selection by pressing the **START** button 3 (or press the **TIMER** button 8 to make the next setting: " Switch radio clock on/off ", see section 3, subsection 3.3, point 4).

   If you select " OFF ", the beep function remains switched off when you take measurements.

4. Operation

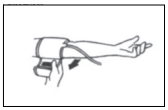
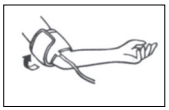
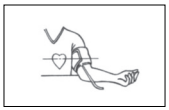
4.1. Fitting the cuff

First attach the free end of the cuff's 1 air tube to the designated connector 9 on the unit. Open up the preformed cuff and slip it over the bare left upper arm just above the

elbow region. If wearing tight clothing, ensure that the circulation in the arm is not impaired when rolling up the sleeve.

The tube should run along the centre of the inner arm towards the palm of the hand. Ensure that the cuff itself is not twisted in any way.

Fasten the pressure cuff in such a way that it fits tightly but does not constrict the arm.


4.2. Correct position for taking readings

- Take readings while in a seated position.
- Relax your arm and rest it lightly on a surface such as a table. Relax during the measuring process: do not move or talk, as this can affect the results.

4.3. Taking blood pressure readings

Single reading

To take a single measurement, you have to switch on the device using the **ON/OFF** switch 7 and be in standby mode. You first have to complete any settings you require as per section 3, subsections 3.3, 3.5, 3.6 and 3.7.

1. Press the START button . The device carries out a self test. Once this is complete, " " appears on the display. 5 short beeps sound during the procedure.
2. Next, the sleeve 1 automatically inflates until the pressure required for a measurement has been reached. Alternatively, you can create this pressure manually by pressing and holding the **START** button 3 after the device has automatically reached a pressure of at least 30 mmHg. When you think that the device has reached the ideal starting pressure for a measurement, release the **START** button 3. The increasing pressure is displayed numerically.
3. The measuring process begins automatically when inflation is complete by releasing the pressure built up in the cuff. The display shows the current pressure in the cuff.

NOTE

If you press the **START** button 3 when the device is inflating, the inflation process stops. The device switches off and the air escapes from the sleeve.

4. Initially, deflation occurs at a constant speed. The pulse symbol ♥ 16 appears on the display. As soon as the pulse can be determined, deflation is synchronised with the beating of the heart until the measurement ends. The device beeps for each

heartbeat during this procedure, if you did not switch off the beep function beforehand. At the same time, the pulse symbol ♥ 16 flashes.

5. Once the measurement has been taken, the sleeve suddenly deflates and a longer beep sounds.
6. The measured values 13 , 14 and 15 are shown on the display, together with the JNC7 blood pressure bar display 23 . At the same time, a longer beep sounds.
7. If the unit detects an arrhythmia during the measuring process, the arrhythmia symbol 18 will flash eight times while the reading is displayed. You may also hear 8 short beeps; these warn the user of an irregular heartbeat.
8. If you do not press any buttons for approx. 1 minute, the device automatically switches to standby mode.

3MAM measuring method

(3 consecutive measurements to calculate an average value)

To take a single measurement, you have to switch on the device using the **ON/OFF** switch 7 and be in standby mode. You have selected the 3MAM measuring method (see section 3, subsection 3.6). You first have to complete any settings you require as per section 3, subsections 3.3, 3.5 and 3.7.

1. Press the **START** button 3. The device carries out a self test. Once this is complete, " 0 " appears on the display. 5 short beeps sound during the procedure.On the display, you can see 21 (average) and " ***1*** " for the first measurement.

2. Next, the sleeve 1 automatically inflates until the pressure required for a measurement has been reached. Alternatively, you can create this pressure manually by pressing and holding the **START** button 3 after the device has automatically reached a pressure of at least 30 mmHg. When you think that the device has reached the ideal starting pressure for a measurement, release the **START** button 3. The increasing pressure is displayed numerically.

3. The measuring process begins automatically when inflation is complete by releasing the pressure built up in the cuff. The display shows the currentpressure in the cuff.

4. Initially, deflation occurs at a constant speed. The pulse symbol ♥ 16 appears on the display. As soon as the pulse can be determined, deflation is synchronised with the beating of the heart until the measurement ends. The device beeps for each heartbeat during this procedure, if you did not switch off the beep function beforehand. At the same time, the pulse symbol ♥ 16 flashes.

5. The first measurement ends when the pressure has been completely discharged from the sleeve during a 15 second countdown. The countdown symbol ㉒ flashes during this process. Beeps sound during the last 5 seconds.
6. Instead of " ***1*** ", the display now shows " ***2*** " for the second measurement. The second measurement proceeds in the same way as the first (see points 2 - 5).
7. Instead of " ***2*** ", the display now shows " ***3*** " for the third measurement. The third measurement proceeds in the same way as the first (see points 2 - 4).
8. Once the 3MAM measurement has been taken, the sleeve suddenly deflates and a longer beep sounds.
9. The measured values ⑬ , ⑭ and ⑮ are shown on the display, together with the WHO blood pressure bar display ㉓ . At the same time, a longer beep sounds.
10. If the unit detects an arrhythmia during the measuring process, the arrhythmia symbol ⑱ will flash eight times while the reading is displayed. You may also hear 8 short beeps; these warn the user of an irregular heartbeat.
11. If you do not press any buttons for approx. 1 minute, the device automatically switches to standby mode.

NOTE

When the device is used, the errors *Err 1, 2, 3, 5, 6* can occur in the integrated circuit. Err 6 can only occur in 3MAM mode. In 3MAM mode, errors *Err 1, 2, 3, 5* do not cause the measurement to be cancelled, unless they occur twice in succession. The error display is always accompanied by 3 short beeps.

4.4. Troubleshooting

Error messages

Possible causes and solutions

Err 1

Measurement of the systolic blood pressure was completed.

Either the connection with the hose has been interrupted or no pulse could be determined.

Check the connections between the cuff and the main unit.

Err 2

Non-physiological pressure has been detected.

Cause: the arm was moved during the measurement.

Repeat the measurement, keeping your arm still.

Err 3

If the cuff takes too long to inflate, it is possible that the cuff is incorrectly positioned or that the connection with the hose is not airtight.
Check the connections and repeat the measurement.

Err 5

An average value could not be calculated due to unstable conditions while the readings were being taken.
Repeat the measuring process, keeping your arm still and not speaking.

Err 6

There were too many errors during the measurement in MAM mode, making it impossible to obtain a final result.
Read through the checklist for performing reliable measurements and then repeat the measurement.

HI

The pressure in the cuff is too high (over 300 mmHg) or the pulse is too high (over 200 beats per minute).
Relax for 5 minutes and repeat the measurement.

LO

The pulse is too low (less than 40 beats per minute).
Repeat the measurement.

4.5. Switching off the unit

If no buttons are pressed for approx. 1 minute, the device automatically switches to standby mode. You can also switch to standby mode by pressing the **START** button ❸. The blood pressure meter functions are now switched off. The time and the selected user memory are continuously shown on the display.

The alarm function remains active. If you do not want to use the time display and the alarm function, you can also completely switch off the device by sliding the **ON/OFF** switch ❼ on the back of the device into the " ***OFF*** " position.

4.6. IOS & Android BT APPs instruction

Compatibility:

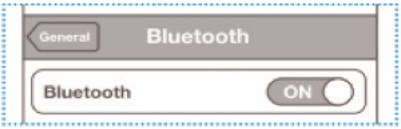
- Paring your device running iOS 6.0 or better:
  iPhone, iPad, and iPod touch.
- Paring your device running Android 2.3.3 and Later:
  Android Phone, Android Tablets

Step 1 – Pairing [3NF1-2B] connect with Mobile Phones & Tablets for the first time (before measurement). [3NF1-2B] connect only needs to be paired with a given Mobile Phone or Tablet once.

1.1.Download the VitaDock app in the App Store or Google Play Store for free.

Available on the App Store GET IT ON Google play

Activate Bluetooth on your iOS or Android device



1.2.Switch BT "on/off button" to "On" at back-side of [3NF1-2B] to activate the Bluetooth (BT Module is Off).

1.3.-User press & hold "Start" button for 5 Sec, then 3NF1-2B enters "Pairing" mode

- 3NF1-2B LCD: Show User, Time, & BT Icon (BT icon flashing)

-BT module is on and broadcasting for 60 seconds

1.4.- Activate the BT function on Smartphone

- "MTX-BT" should show up on list of devices available for BT connection
- Select "MTX-BT" to Pair Up
- Press "0000" to pair the devices

1.5.-3NF1-2B Completes pairing with Smartphone

- 3NF1-2B Date & Time Setting synchronized w/ Smartphone.
- BT module remains On & Broadcasting

1.6.-User press "Start" button once or Wait for 60 Sec, then 3NF1-2B turns Off

Step 2 – connect MTX with VitaDock App and do measurement. MTX is switched of (BT ON /Off button is switched on)!

2.1.Open [VitaDock App] & Press button [New]

2.2.Press Button [Connect Bluetooth Device]àVitaDopck App on Stand-by &Wait for 3NF1-2B to Link-up.

2.3.User press "Start" Button (<5 Sec) on 3NF1-2B (BT Switch on device is On) 3NF1-2B takes User BP measurement & Completes Link-up w/ Smartphone.

2.4.3NF1-2B Completes User BP Measurement , it then Automatically Transfer BP Data to Smartphone (Current BP measurement Only)

2.5.3NF1-2B completes uploading Current BP Measurement to VitaDock App over Bluetooth

Step 3 – Transfer stored values from 3NF1-2B to Smartphone / Tablets without measurement (BT On /Off button is switched on)!

3.1.-Open [VitaDock App] & Press Button [Transfer BP Data]

-User select Either [Transfer Data Only] or [Trasnfer Data & Delet all Device BP Data]

3.2.Press Button [Connect Bluetooth Device]àVitaDopck App on Standby and Wait for 3NF1-2B to Link-up.

3.3.User press "Start" & "Memo" buttons on 3NF1-2B for >5 seconds, then 3NF1-2B enters "Data Transfer" mode. 3NF1-2B LCD: Show User & Time & BT icon (Flashing) , BT module is on

3.4.3NF1-2B Links-up w/ Smartphone, it then Begins transfer all BP data on 3NF1-2B.

3.5.3NF1-2B LCD: Show User & Time & BT icon (Continuously) & Data Transfer Arrow (Flashing)

3.6.3NF1-2B Completes all BP Data Transfer.

4.7. PC Link Software Functions

This unit can be used in connection with your computer (PC / MAC) running the PC Link blood pressure analyzer software. Your computer will allow a capacity of monitoring 80 patients, each with 1000 data (note: overuse will lower system efficiency). The memory data can be transferred to the computer by connecting the monitor via the included USB cable. Users can download the BPA (Blood Pressure Analyzer) on Microlife web site: http://www.microlife.com/support/software/

System Requirements for Windows Blood Pressure Analyzer Software:

- Windows XP, Vista, 7 & 8
- CD-ROM Drive
- Minimum 256 MB RAM
- 500 MB Available Hard Disk Space
- USB Port Version 1.0 or Higher
- Compatible Blood Pressure Monitor with USB Port

System Requirements for Mac Blood Pressure Analyzer Software:

- Mac (intel processor), with OSX 10.6.8 or later
- Internet Connectivity
- Minimum 512 MB RAM
- 10 MB Available Hard Disk Space (HFS+)
- USB Port (Version 1.1/2.0)
- Compatible Blood Pressure Monitor with USB Port

5. Memory

5.1. Recording the results

This unit features 2 separate memories, each with a capacity of 99 memory slots. Results are automatically stored in the memory selected by the user. When the memory is full, the oldest reading is always the first to be deleted.

5.2. Displaying stored results

Press the **MEMORY** button ❹ to display the stored readings. After all the segments in the display have been shown, an average value of all the measurements in the selected memory is displayed. This average is indicated by " A ".

When the **MEMORY** button ❹ is pressed again, the individual readings (switching between systolic, diastolic, pulse and date/time) of the last measurement stored are displayed. If this measurement was taken in the 3MAM procedure, A ❷❶ is displayed. If an arrhythmia was detected during the measuring process, the arrhythmia symbol will be displayed, but not flashing.

Press the **MEMORY** button ❹ again to move backwards through the stored readings.

If you do not press any buttons for approx. 1 minute, the device automatically switches back to standby mode.

5.3. Deleting a measurement

Select the entry for the measurement you want to delete. Press and hold the **START** button ❸ for approx. 10 seconds until the memory symbol ⓱ flashes. Confirm your deletion request by pressing the **MEMO** button ❹. " CL " appears briefly on the display and 2 short beeps sound. The entry you selected has been deleted. The display returns to standby mode.

5.4. Deleting memory

The data can be deleted from the memory selected by pressing and holding the **MEMORY** button ❹ for about 7 seconds. After 7 seconds, the display ❷ shows " CL " (CLEAR) which indicates that all data will be deleted.

Confirm your deletion request by pressing the **MEMO** button ❹ again. Three short beeps sound during the procedure.

6. Miscellaneous

6.1. Care and maintenance

- Remove the batteries before cleaning the unit.
- Never use strong detergents or hard brushes.
- Clean the unit with a soft cloth, moistened with mild soapy water. Do not let water enter the unit. After cleaning, only use the unit when completely dry.
- Remove the batteries from the unit if you do not wish to use it for an extended period of time, otherwise there is a risk of battery leakage.
- Do not expose the unit to direct sunlight, and protect it from dust and moisture.
- Only inflate the cuff when it is in position around the upper arm.

- *Servicing and calibration*

  The unit has been calibrated by the manufacturer for a period of two years' use. In the case of commercial use, the unit must be serviced and recalibrated at least once every two years. This calibration will be charged for and can be carried out by an appropriate authority or an authorised service centre - in accordance with the regulations for users of medical equipment.

6.2. Disposal

This product must not be disposed of together with domestic waste.

All users are obliged to hand in all electrical or electronic devices, regardless of whether or not they contain toxic substances, at a municipal or commercial collection point so that they can be disposed of in an environmentally acceptable manner.

Please remove the batteries before disposing of the device / unit. Do not dispose of old batteries with your household waste, but at a battery collection station at a recycling site or in a shop.

Consult your municipal authority or your dealer for information about disposal.

6.3. Guidelines / Standards

Device standard: Device corresponds to the requirements of the standard for non-invasive blood pressure monitors:

AAMI/ ANSI/ IEC 80601-2-30

IEC 60601-1

IEC 60601-1-2

- Bluetooth system to V3.0
- FCC Part 15C

Electromagnetic compatibility: Device fulfills the stipulations of the International standard IEC 60601-1-2

Clinical trial results:

Clinical trials for this unit were carried out in the USA according to ANSI/AAMI standard.

The B.H.S. (British Hypertension Society) clinical protocol was used to measure the accuracy of this product. Blood pressure units using the same measurement technology are graded "AA" for systolic/diastolic accuracy by independent investigators using the BHS protocol (Use the same algorithm as B.H.S. grade"AA" model number 3BT0-1). This is the highest grading available for blood pressure monitors. Please see bhsoc.org for more information.

Electromagnetic compatibility:

The device complies with the IEC 60601-1-2 standard for electromagnetic compatibility. Inquire at **Microlife** for details on this measurement data.

Intended use:

This unit is suitable for non-invasive blood pressure measurement in adults (i.e., suitable for external use).

6.4. Technical specifications

Name and model	:Microlife blood pressure monitor 3NF1-2B
Display system	:Digital display
Memory slots	:2 x 99
Measuring technique	:Oscillometric
Power supply	: a) 4 AA batteries, 1.5 V b) AC adapter 6 V DC 600 mA (voltage 4.5 V DC to 6 V DC)
Blood pressure measuring range	: 30 – 280 mmHg
Pulse measuring range	: 40 – 200 beats / Min.
Maximum error tolerance for static pressure	: ± 3 mmHg
Maximum error tolerance for pulse rate	: ± 5 % of the reading
Pressure generation	: Automatic, using micro pump
Deflation	: Automatic
Operating conditions	: After approx. 1 minute
Operating conditions	: +10 °C to + 40 °C, 15 – 85 % humidity
Storage conditions	: - 5 °C to + 50 °C
Dimensions	: approx. 125 mm x 163 mm x 65 mm
Cuff size	: Wide range easy-fit cuff for arm circumference 22-42 cm (8.7"-16.5")
Weight	: approx. 535 g incl. batteries
Accessories	: Mains adapter Cuff, large 22 - 42 cm for adults with an upper arm of large circumference

7. Warranty

Warranty and repair terms

Please contact your dealer or the service centre in case of a claim under the warranty.

If you have to return the unit, please enclose a copy of your receipt and state what the defect is.

The following warranty terms apply:

1. The warranty period for Microlife products is three years from date of purchase. In case of a warranty claim, the date of purchase has to be proven by means of the sales receipt or invoice.
2. Defects in material or workmanship will be removed free of charge within the warranty period.
3. Repairs under warranty do not extend the warranty period either for the unit or for the replacement parts.
4. The following is excluded under the warranty:

   a. All damage which has arisen due to improper treatment, e.g. nonobservance of the user instructions.

   b. All damage which is due to repairs or tampering by the customer or unauthorised third parties.

   c. Damage which has arisen during transport from the manufacturer to the consumer or during transport to the service centre.

   d. Accessories which are subject to normal wear and tear (cuff, batteries etc.).
5. Liability for direct or indirect consequential losses caused by the unit are excluded even if the damage to the unit is accepted as a warranty claim.

For Customer Service
Microlife USA, Inc.
1617 Gulf to Bay Blvd 2nd Floor
Clearwater, FL 33755
Toll Free Help Line: 1-800-568-4147
Email: custserv@microlifeusa.com
Fax: (727) 451-0492
www.microlifeusa.com
Made in China

Federal Communications Commission (FCC) Statement

15.21

You are cautioned that changes or modifications not expressly approved by the part responsible for compliance could void the user's authority to operate the equipment.

15.105(b)

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 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 of the device.

FCC RF Radiation Exposure Statement:

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.