PREOMICS | Setting the Standard for Protein Analysis

User Manual
BeatBox by PreOmics

Table of content

Warning and Information symbols

Before using the BeatBox, it is essential that you read this user manual carefully and pay attention to the safety information. The instructions and safety information in the user manual must be followed to ensure safe operation of the instrument and to maintain the instrument in a safe condition.

Standardized symbols are used in this manual to indicate danger, warning, caution and important information.

Warn signs	Indication	Explanation
	**DANGER**	Indicates a hazardous situation which, if not avoided, will result in serious injury or death
	**WARNING**	Indicates a hazardous situation which, if not avoided may result in serious injury or death
	CAUTION	Indicates a hazardous situation, if not avoided, may result in property damage and minor or moderate injury.

 Warning sign

 High voltage hazard sign

 Biohazard sign

1 Introduction

1.1 About this manual

This manual describes the features and safe operation of the BeatBox instrument. It is an integral part of the BeatBox delivery. Before using the BeatBox, it is essential that you read this user manual carefully and pay attention to the safety information. The instructions and safety information in the user manual must be followed to ensure safe operation of the instrument and to maintain the instrument in a safe condition.

The current version of this manual could be also found at: **www.preomics.com/beatbox-user-manual**

1.2 Intended use of the BeatBox

The BeatBox is designed to perform highly efficient tissue homogenization in molecular biological applications. The system is intended for use by professional users, such as technicians and physicians trained in molecular biological techniques. The BeatBox system is not intended for diagnostic use.

The BeatBox is intended for use only with reagent kits developed by PreOmics for the BeatBox. PreOmics accepts no responsibility for the use of the BeatBox with any other reagent kit or chemicals from other manufactures.

DANGER

Risk of personal injury and material damage **[D1]**

The instrument is intended to be used by qualified personnel and in laboratory environments only.

WARNING

Risk of personal injury and material damage **[W1]**

The safety of the product cannot be guaranteed if the instrument is used in a manner not specified by the manufacturer.

1.3 Requirements for BeatBox users

The table below covers the general level of competence and training necessary for transportation, installation, use, maintenance, and servicing of the BeatBox.

Task	Personnel	Training and experience
Transportation	No special requirements	No special requirements
Storage	No special requirements	No special requirements
Routine use and maintenance	Laboratory technicians or equivalent	Professional personnel, such as technicians and physicians, who are trained in molecular biological techniques.
Installation	Laboratory technicians or equivalent	Professional personnel, such as technicians and physicians, who are trained in molecular biological techniques.
Servicing	PreOmics Service Specialists only	Trained and authorized by PreOmics.

1.4 Copyright protection

	PreOmics GmbH, Am Klopferspitz 19, D-82152 Planegg/Martinsried GERMANY
BeatBox®	Is a registered trademark of PreOmics GmbH

2 General Safety Instructions

2.1 Proper use

WARNING

Risk of personal injury and material damage **[W2]**

Improper use of the BeatBox may cause personal injuries or damage to the instrument. The BeatBox must only be operated by professional personnel who have been appropriately trained.

Servicing of the BeatBox must only be performed by a PreOmics Service specialist.

Perform the maintenance and cleaning procedures only as described in this section bellow. PreOmics charges for repairs that are required due to incorrect maintenance or improper use

WARNING

Risk of personal injury and material damage **[W3]**

Do not attempt to move the BeatBox during operation.

CAUTION

Damage to the instrument **[C1]**

Avoid spilling water or chemicals onto the BeatBox. Damage caused by water or chemical spillage will void your warranty.

In case of emergency, power OFF the BeatBox at the power switch located at the back of the instrument and unplug the power cord from the power outlet.

CAUTION

Damage to the instrument **[C2]**

Only use the correct volume of liquids and follow the protocols of the BeatBox kits.

Exceeding the recommended volume of liquids may damage the instrument.

WARNING

Risk of fire or explosion **[W4]**

When using flammable liquids on the BeatBox (Acetonitrile, Isopropyl alcohol), handle such liquids carefully and in accordance with the required safety regulations. If liquid has been spilled, wipe it off and leave the BeatBox open to allow flammable vapors to disperse.

WARNING

Risk of fire or explosion **[W5]**

The BeatBox is intended for use with reagents and substances supplied with PreOmics kits only. Use of other reagents and substances may lead to fire or explosion.

If hazardous material is spilled on or inside the BeatBox, the user is responsible for carrying out appropriate decontamination according with the safety datasheets of the hazardous materials used.

All surfaces of the BeatBox and its adapters, except the display, are compatible with disinfectant wipe down using a damp cloth with the following substances: 70% ethanol, 70% isopropanol, 10% sodium hypochlorite, aldehyde-based disinfectants. The display can be decontaminated with 70% ethanol or 70% isopropanol.

Basic cleaning procedure for the instrument surfaces for non-hazardous materials consists of four steps:

1. Wipe the surfaces with clean cloth with water.
2. Wipe the surfaces with clean cloth with 70% Ethanol.
3. Wipe the surface dry with clean cloth.
4. Dispose the contaminated cleaning materials according with the local quality system requirements.

WARNING

Risk of contact with hazardous materials **[W6]**

Appropriate hand gloves should be used throughout the cleaning procedure!

CAUTION

Damage to the instrument **[C3]**

Avoid contact of the reagents with the instrument surfaces as this can damage instrument surfaces. Clean spillage on the surfaces of the BeatBox garage immediately.

Note: Do not place items on top of the BeatBox.

CAUTION

Damage to the instrument **[C4]**

Do not put metallic or other objects that could be attracted by magnetic fields into the garage or the plate adapter of the BeatBox. These objects can severely damage the BeatBox device when processing samples.

2.2 Electrical safety

Note: Disconnect the line power cord from the power outlet before servicing.

DANGER

Electrical hazard **[D2]**

Any interruption of the protective conductor (earth/ground lead) inside or outside the instrument power supply unit or disconnection of the protective conductor terminal is likely to make the instrument dangerous.

Intentional interruption is prohibited.

WARNING

Risk of electric shock **[W7]**

Do not open any panels on the BeatBox.

Risk of personal injury and material damage may occur.

CAUTION

Damage to electronics **[C5]**

Before powering ON the instrument, make sure that the correct supply voltage is used.

Use of incorrect supply voltage may damage the electronics.

To check the recommended supply voltage, refer to the specifications indicated in the type plate of the instrument.

To ensure satisfactory and safe operation of the BeatBox, follow these guidelines:

- Do not adjust or replace internal parts of the instrument.
- Do not operate the instrument with any covers or parts removed.

If the instrument becomes electrically unsafe, prevent other personnel from operating it, power OFF the instrument, disconnect it from the power outlet and contact PreOmics Technical Services.

The instrument may be electrically unsafe when:

- It or the line power cord appears to be damaged.
- It has been stored under unfavorable conditions (see chapter 9.3 Storage conditions) for a prolonged period.
- It has been subjected to severe transport stresses. Indications can be that the transportation crate is damaged, or the instrument housing is compromised.
- Liquids come in contact directly with electrical components of the BeatBox.

2.3 Environment

2.3.1 Operating conditions

DANGER

Explosive atmosphere **[D3]**

The BeatBox is not designed for use in an explosive atmosphere.

CAUTION

Damage to the instrument **[C6]**

Direct sunlight may bleach parts of the instrument and cause damage to plastic parts.

The BeatBox must be located out of direct sunlight.

2.4 Biological safety

Specimens and reagents containing materials from humans should be treated as potentially infectious. Use safe laboratory procedures as outlined in publications such as Biosafety in Microbiological and Biomedical Laboratories, HHS (**www.cdc.gov/labs/pdf/CDC-BiosafetyMicrobiologicalBiomedicalLaboratories-2009-P.PDF**).

In case of contamination with biologically hazardous substances, please follow cleaning procedures as outlined in 2.1.

2.4.1 Samples

Samples may contain infectious agents. You should be aware of the health hazard presented by such agents and should use, store, and dispose of such samples according to the required safety regulations.

DANGER

Samples containing infectious agents **[D4]**

Some samples used with this instrument may contain infectious agents. Handle such samples with the greatest of care and in accordance with the required safety regulations.

Always wear safety glasses, 2 pairs of gloves, and a lab coat.

The responsible body (e.g., laboratory manager) must take the necessary precautions to ensure that the surrounding workplace is safe, and that the instrument operators are suitably trained and not exposed to hazardous levels of infectious agents as defined in the applicable Safety Data Sheets (SDSs) or OSHA or ACGIH or documents.

Venting for fumes and disposal of wastes must be in accordance with all national, state, and local health and safety regulations and laws.

2.5 Chemicals

WARNING

Hazardous chemicals **[W8]**

Some chemicals used with this instrument may be hazardous or may become hazardous after completion of the protocol run.

Always wear safety glasses, gloves, and a lab coat.

The responsible body (e.g., laboratory manager) must take the necessary precautions to ensure that the surrounding workplace is safe and that the instrument operators are not exposed to hazardous levels of toxic substances (chemical or biological) as defined in the applicable Safety Data Sheets (SDSs) or OSHA or ACGIH documents.

Venting for fumes and disposal of wastes must be in accordance with all national, state, and local health and safety regulations and laws.

CAUTION

Damage to the instrument **[C7]**

Avoid contact of the reagents with the instrument surfaces as this can damage instrument surfaces. Clean spillage on the instrument surfaces immediately after the run.

2.5.1 Toxic fumes

If working with volatile solvents or toxic substances, you must provide an efficient laboratory ventilation system to remove vapors that may be produced.

WARNING

Vapors from volatile solvents **[W9]**

Some of the solvents used with the instrument are volatile. Use the instrument only with adequate ventilation according to the applicable Safety Data Sheets (SDSs) or OSHA or ACGIH† documents.

WARNING

Toxic fumes **[W10]**

Do not use bleach to clean or disinfect the BeatBox. Bleach in contact with salts from the buffers can produce toxic fumes.

WARNING

Toxic fumes **[W11]**

Do not use bleach to disinfect used labware. Bleach in contact with salts from the buffers used can produce toxic fumes.

2.6 Waste disposal

Used labware, such as sample plates, tubes, PreOmics Gyuto Beads, filter-tips, buffer bottle and enzyme tubes, adapters, may contain hazardous chemicals or infectious agents from the purification process. These hazardous wastes must be collected and disposed of properly according to local safety regulations.

For more information about how to dispose of the BeatBox instrument itself, see section 7.6 Waste Electrical and Electronic Equipment (WEEE).

DANGER

Hazardous chemicals and infectious agents **[D5]**

The waste may contain toxic material and must be disposed of properly. Refer to your local safety regulations for proper disposal procedures.

2.7 Mechanical hazards

The garage of the BeatBox must remain closed during operation of the instrument. Only lift the garage when instructed to do so by the instruction for use.

WARNING

Mechanical hazard when closing the garage **[W12]**

Lifting or closing the lid/garage, avoid putting the fingers between the lid and the edge of the BeatBox tray to avoid injury. When opening or closing the lid/garage, hold the garage using the provided handle only.

2.8 Magnetic Field

The functional principle of the BeadBox is to activate the functional particles of the reagent kits by magnetic fields.

WARNING

Magnetic Field **[W13]**

During operation the BeatBox is generating a magnetic field. Although this magnetic field is shielded by constructive elements it is highly recommended to be aware on the effect of magnetic fields on cardiac pacemakers or magnetic data media.

The magnetic field during a BeatBox run could cause irritations to a cardiac pacemaker if you get too close. Persons with cardiac pacemaker, implanted defibrillator, passive implants or dosing pump should keep a minimum distance 10 cm (4 inches) to the device. This applies also to pregnant women.

2.9 Maintenance safety

WARNING

Risk of personal injury and material damage **[W14]**

Only perform maintenance that is specifically described in this user manual.

WARNING

Risk of explosion **[W15]**

When cleaning the BeatBox with alcohol-based disinfectant, leave the BeatBox hood open to allow flammable vapors to evaporate.

WARNING

Risk of fire **[W16]**

Do not allow cleaning fluid or decontamination agents to come into contact with the electrical parts of the BeatBox.

CAUTION

Damage to the instrument **[C8]**

Do not use bleach, solvents, or reagents containing acids, alkalis or abrasives to clean BeatBox.

CAUTION

Damage to the instrument **[C9]**

Avoid contact of the reagents with the instrument surfaces as this can damage the surfaces.

Clean spillage on the instrument surfaces immediately after the run.

CAUTION

Damage to the instrument **[C10]**

Do not use spray bottles containing alcohol or disinfectant to clean surfaces of the BeatBox. Spray bottles should be used only to clean items that have been removed from the instrument.

2.10 Symbols on the BeatBox

Symbol	Location	Description
	Type plate on the back of the instrument.	Device classified under FCC part 15 follows requirements specified by Federal Communications Commission.
	Type plate on the back of the instrument.	CE marking to indicate conformity with the applicable requirements of the European Community.
 **801625**	Type plate on the back of the instrument.	SGS and contract number marking to indicate compliance to applicable CSA and ANSI/UL Standards, for use in Canada and the U.S.
	Type plate on the back of the instrument.	Waste Electrical and Electronic Equipment (WEEE) marking for Europe to indicate that product must not be disposed of with other waste (cf. section 7.6).
	Type plate on the back of the instrument.	Date of manufacturing.
S/N	Type plate on the back of the instrument.	Serial number of the instrument.
	Type plate on the back of the instrument.	Warning esp. magnetic fields..
	Type plate on the back of the instrument.	Carefully read the manual and follow the safety instructions.
	Type plate on the back of the instrument.	Pregnant women or persons with active implants should keep a distance of at least 10 cm when operating the BeatBox.
	Type plate on the back of the instrument.	A magnetic field is generated during operation of the unit.

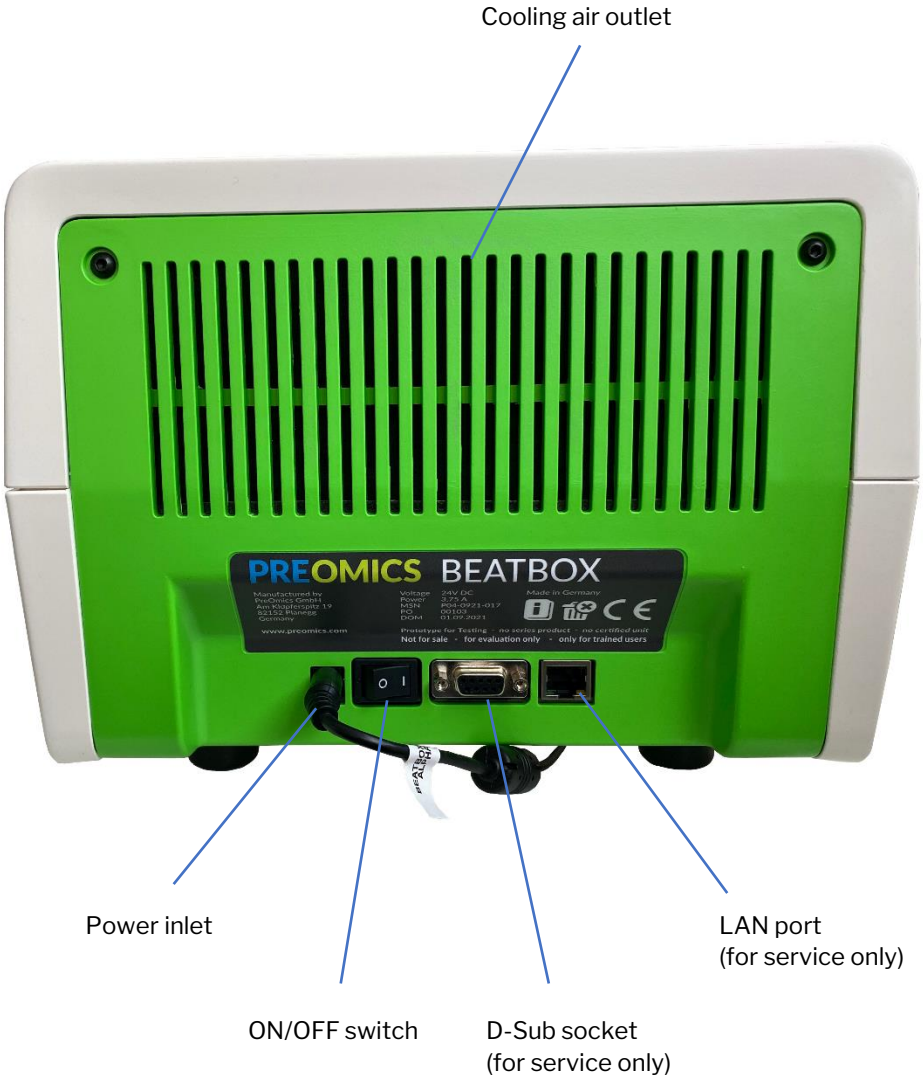
3 BeatBox Overview

The BeatBox is designed to perform highly efficient tissue homogenization in combination with specially developed reagent kits by PreOmics (BeatBox Tissue Kit **96x** or **24x** format).

The user selects a predefined setting on the touchscreen and loads labware, including samples and reagents, into the BeatBox garage. The user then closes the instrument by putting the garage into the BeatBox and starts the protocol, which provides all necessary commands for tissue homogenization. A BeatBox run could vary from 30 seconds to 10 minutes. For further information refer to the kit protocol.

3.1 BeatBox Front View

3.2 Beat Box Rear View



CAUTION **Damage to the instrument** **[C11]**

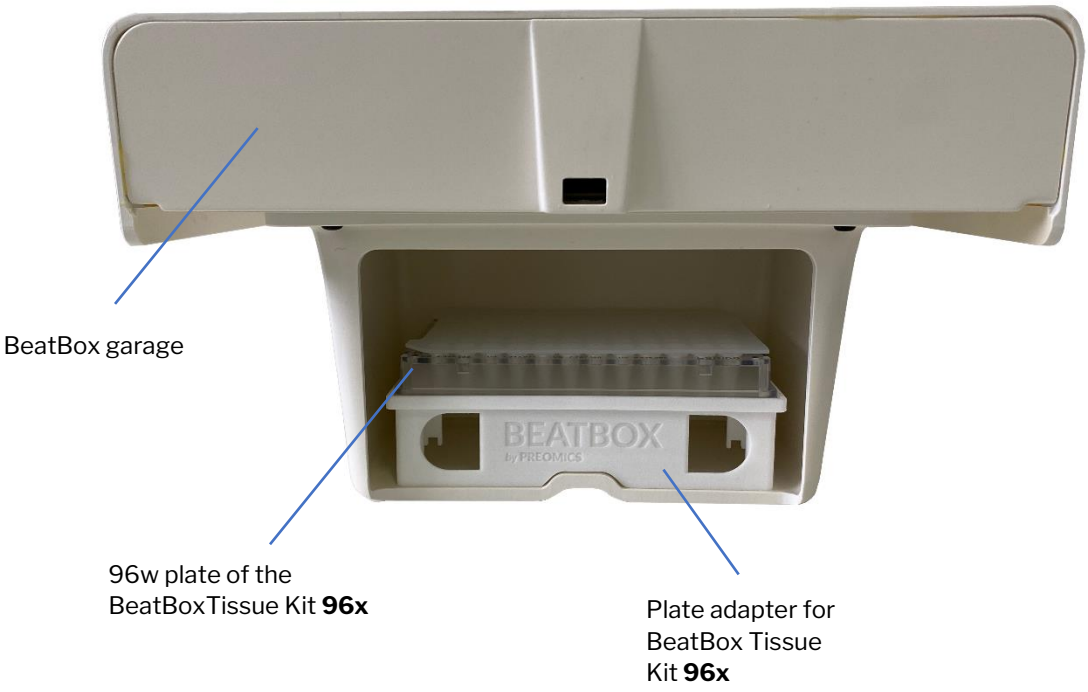
Do not close the cooling air inlet or outlet with an obstacle as it will distort the instrument heat management. It can cause the device overheating and a process termination.

3.3 BeatBox garage

The BeatBox garage houses the sample plate and the corresponding adapter. For further details please refer to the corresponding kit manual and the BeatBox Quick Start manual.

Note: The garage must be inserted into the BeatBox before a BeatBox run can be started.

CAUTION	**Damage to the instrument** Do not put metallic or magnetic objects into the garage. This could damage the instrument.	**[C12]**



3.4 BeatBox Tube and Plate Adapter

The BeatBox comes with two versions of adapters, the Tube and the Plate Adapter (Both adapters are included in the BeatBox Accessory Box).

The Tube Adapter is required for the BeatBox Tissue Kit **24x** and the Plate Adapter for the Beat Box Tissue Kit **96x**. For more details, please refer to the corresponding protocols and quick-start manuals of the kits.

BeatBox Tube Adapter for the BeatBox Tissue Kit **24x**

BeatBox Plate Adapter for the BeatBox Tissue Kit **96x**

3.5 Safety opening tool

The garage can be opened with the pair of unlock tools. This security feature is for taking samples out of the garage in case the garage could not be opened via the touch screen.

First insert the two safety opening tools into the notches up to the stop. As illustrated below, the tool towards the back of the BeatBox will be further out. Then pull up the garage.

Note: If the tools are used to open the garage during a processing run the BeatBox stops immediately.

Safety opening tool

Safety opening tools inserted into the notches

Notches for safety opening tool

3.6 Site requirements

The BeatBox must be located out of direct sunlight, away from heat sources and away from sources of vibration and electrical interference. Refer to Appendix A – Technical data on page 31 for the operating conditions (temperature and humidity). The site of installation should be free of excessive drafts, excessive moisture and excessive dust and should not be subject to large temperature fluctuations.

Use a level workbench that is large enough to accommodate the BeatBox. Refer to Appendix A – Technical data for the weight and dimensions of the BeatBox.

Ensure that the workbench is dry, clean and vibration-proof and has additional space for accessories.

Ensure that the BeatBox is positioned so that it is easy to access the power connector and the power switch at the back of the instrument at all times, and that it is easy to power the instrument OFF and disconnect it.

Note: Do not place the BeatBox on a vibrating surface or near vibrating objects.

3.7 Power requirements

The BeatBox operates at: 100–240 V AC, 50/60 Hz.

Ensure that the voltage rating of the BeatBox is compatible with the AC voltage available at the installation site.

The unit may only be operated with the power supply unit supplied with the BeatBox.

WARNING

External Power supply unit **[W17]**

Before powering ON the instrument, make sure that the correct power supply unit, supplied with the BeatBox is used.

Use of incorrect power supply may damage the electronics.

Type of the external Power Supply Unit:
MEAN WELL GST90A24-P1M

3.8 Unpacking the BeatBox

1. Before unpacking the BeatBox, move the package to the site of installation and check that the arrows on the package point upward. In addition, check whether the package is damaged. In case of damage, contact PreOmics Technical Service.
2. Open the transportation box. It contains two boxes: The utilities box and the BeatBox box.
3. When lifting the BeatBox out of the box, slide your fingers under both sides of the unit and keep your back straight.

CAUTION

Damage to the instrument **[C13]**

Please take care not to press on the touchscreen display while unpacking or lifting the BeatBox. This might damage the instrument.

4. Check the contents of the boxes against the delivery note. If anything is missing, contact PreOmics Technical Services.
5. Check that the BeatBox is not damaged and that there are no loose parts. If anything is damaged, contact PreOmics Technical Services. Make sure that the BeatBox has equilibrated to ambient temperature before operating it.
6. Retain the package in case you need to transport the BeatBox in the future.

3.9 Installing the BeatBox

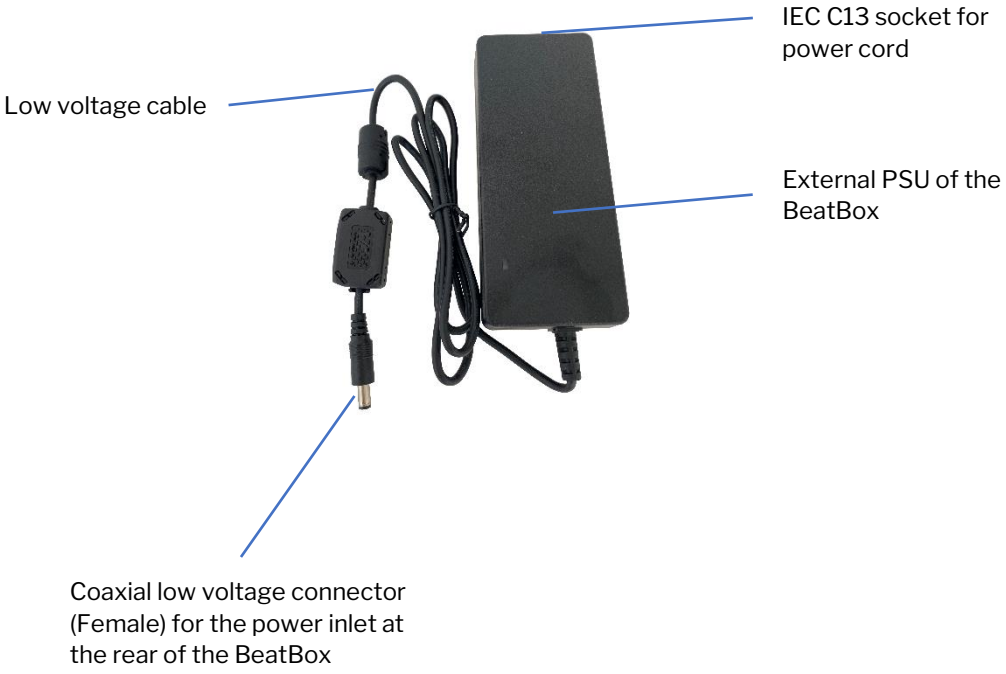
WARNING

Damage to electronic components due to condensation **[W17A]**

After transporting the unit from a cool to a warmer environment, condensation may form in the unit.

Wait at least 3 hours after setting up the unit. Only then connect the unit to the mains.

Connect the external power supply unit (PSU) of the BeatBox in the order given:



1. Connect the IEC C14 plug of the power cable to the IEC C13 socket of the external power supply unit

IEC C14 plug of the power cord

IEC C13 socket for the power cord

The power cord has a country specific plug for the mains supply. Please check that the delivered plug meets the requirements of your country

2. Make sure that the BeatBox switch is in OFF position

ON/OFF – switch: OFF

3. Connect the coaxial low voltage connector to the BeatBox DC power inlet

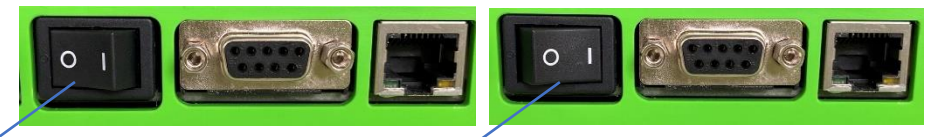
DC power inlet (Male) BeatBox

ON/OFF – switch: OFF

4. Connect the country specific mains AC power plug to the power socket

Country specific power plug

5. Switch the BeatBox ON



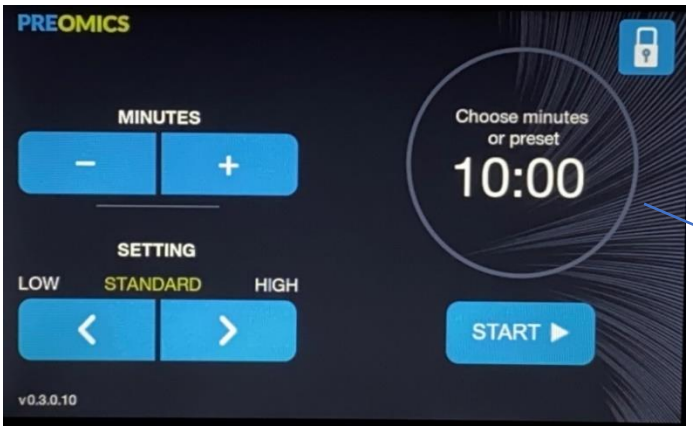
ON/OFF – switch: OFF

ON/OFF – switch: ON

After the BeatBox has been switched on the following boot screen is displayed for about 20 seconds:

Boot screen after switching the BeatBox on

After the boot process is finished the GUI of the BeatBox appears:



BeatBox graphical user interface (GUI)

4 Operating Procedures

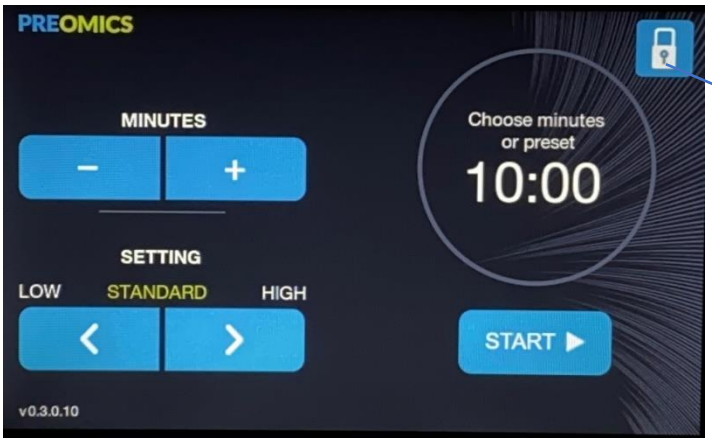
This section describes how to operate the BeatBox.

Important: The BeatBox is designated for use with PreOmics Kits developed for the BeatBox only. Use of other types of kits or chemistries will void your warranty.

CAUTION	**Damage to the instrument** Only use kits and consumables developed by PreOmics for the BeatBox. Damage caused by use of other types of kits or chemistries will void your warranty.	**[C14]**

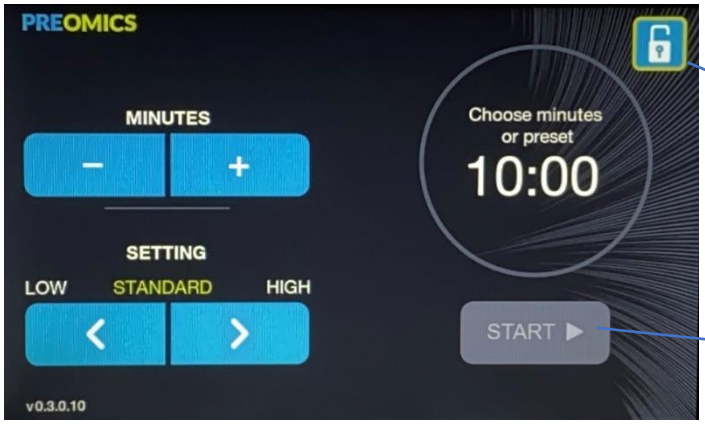
The BeatBox setting is controlled completely via GUI.

To unlock the BeatBox garage click on the lock icon:



Click on the lock icon to open the garage locks

The lock icon shows an open lock and is framed green for about 30s.
After the 30s the garage locks close again automatically.



The icon shows an open lock and is framed green for about 30s.

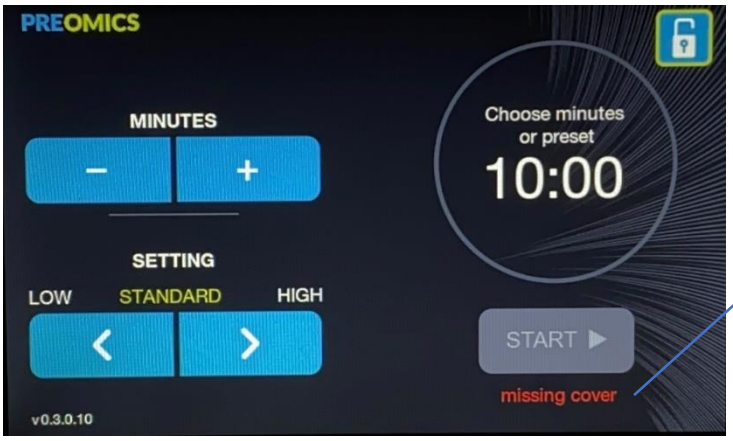
If the garage locks are open, the BeatBox cannot be started

When the garage locks are open the garage can be taken out of the BeatBox and the plate adapter and sample plate can be placed into the garage.

For further information on how to prepare the sample plate or tubes, please refer to the manual of your PreOmics kit (BeatBox Tissue Kit **96x** or **24x** format).

The garage can be inserted into the BeatBox regardless of whether the locks are open or closed.

If the garage locks are open the BeatBox cannot be started and the START icon is greyed out. The START icon is also greyed out if the garage has not been inserted into the BeatBox.



"Missing cover" indicates that the garage is not inserted.

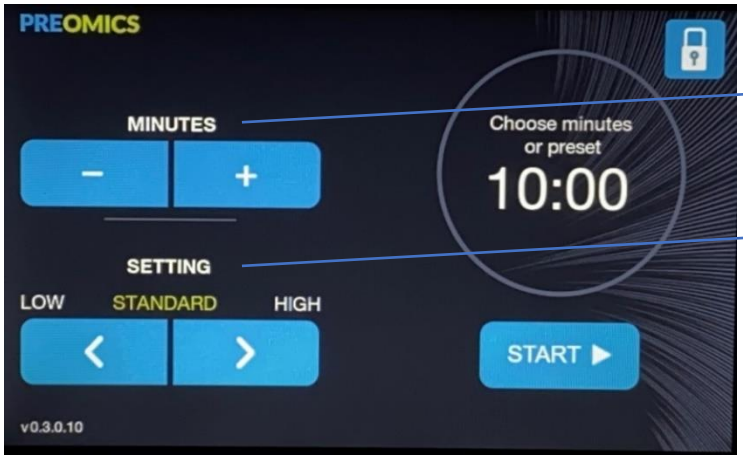
Starting a BeatBox run:

After the plate on the plate adapter assembly is inserted into the garage a BeatBox run ca be started.

Use default configurations (SETTING: STANDARD; MINUTES: 10 minutes) or conditions that vary from STANDARD, e.g. LOW or HIGH.

Standard processing time is set to 10 minutes but can be adjusted. You can choose between 30 seconds and 10 minutes (30 seconds increments).

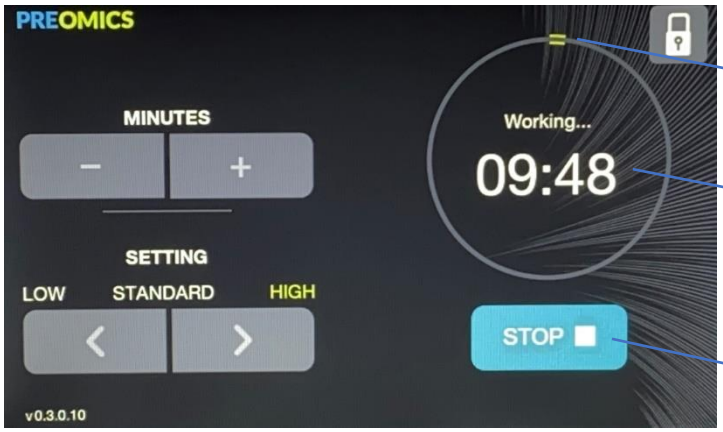
Insert the garage and press START.



MINUTES: Adjustable between 30 seconds to 10 minutes (30 seconds increment)

SETTINGS: Choose between LOW, STANDARD and HIGH; power level increases from LOW to HIGH

While the BeatBox is running the remaining time is displayed in a countdown fashion. All icons are greyed out and are not active.



The progress is displayed graphically

Processing still takes 9 minutes 48 seconds

Stops the processing. Time is reset to standard value 10 minutes

You can interrupt a BeatBox run by pressing the STOP icon. The processing time is reset to the default value of 10 minutes. There is no option to just pause the run.

Once the BeatBox run is finished remove the garage and follow the kit protocol accordingly (BeatBox Tissue Kit **96x** or **24x** format). The BeatBox run is finished at this point.

WARNING 	**Risk of personal injury and material damage** Do not attempt to open the BeatBox garage during operation.	**[W18]**

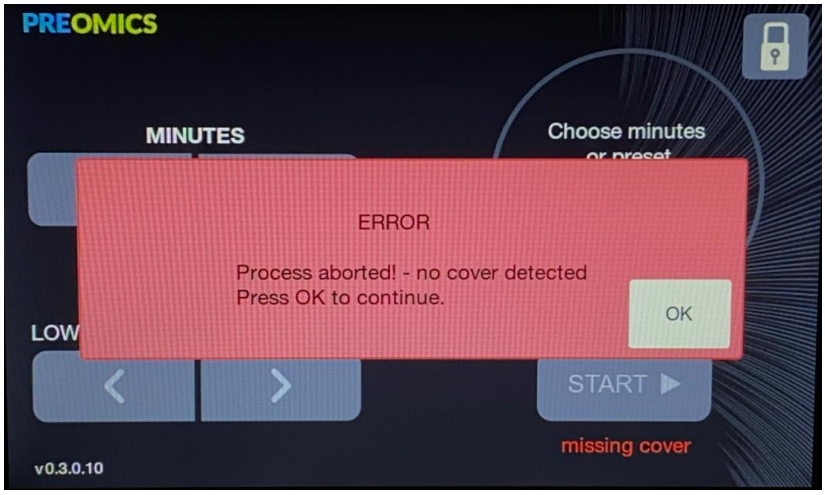
WARNING

Risk of personal injury and material damage **[W19]**

Improper use of the BeatBox may cause personal injuries or damage to the instrument. The BeatBox must only be operated by qualified personnel.

Servicing of the BeatBox must only be performed by a PreOmics Service specialist.

If the garage is opened with the unlock tool or any other tool while the BeatBox is running, the BeatBox stops immediately with the following warning screen:



Press the OK button to acknowledge the error message. You can now reinsert the garage and start a new BeatBox run.

If the error message appears without an attempt to open the BeatBox garage during a run, please contact a PreOmics service technician.

WARNING

Samples containing infectious agents **[W20]**

Some samples used with this instrument may contain infectious agents. Handle such samples with the greatest of care and in accordance with the required safety regulations.

Always wear safety glasses, 2 pairs of gloves, and a lab coat.

The responsible body (e.g., laboratory manager) must take the necessary precautions to ensure that the surrounding workplace is safe, and that the instrument operators are suitably trained and not exposed to hazardous levels of infectious agents as defined in the applicable Safety Data Sheets (SDSs), OSHA or ACGIH documents.

Venting for fumes and disposal of wastes must be in accordance with all national, state, and local health and safety regulations and laws.

WARNING

Hazardous chemicals **[W21]**

Some chemicals used with this instrument may be hazardous or may become hazardous after completion of the protocol run.

Always wear safety glasses, gloves, and a lab coat.

The responsible body (e.g., laboratory manager) must take the necessary precautions to ensure that the surrounding workplace is safe and that the instrument operators are not exposed to hazardous levels of toxic substances (chemical or biological) as defined in the applicable Safety Data Sheets (SDSs), OSHA or ACGIH† documents.

Venting for fumes and disposal of wastes must be in accordance with all national, state, and local health and safety regulations and laws.

WARNING

Vapors from volatile solvents **[W22]**

Some of the solvents used with the instrument are volatile. Use the instrument only with adequate ventilation according to the applicable Safety Data Sheets (SDS), OSHA or ACGIH† documents.

4.1 BeatBox software

The BeatBox software uses open-source software. The corresponding licenses can be found at **https://www.preomics.com/beatbox-software-license-files**.

5 Troubleshooting

5.1 PreOmics Technical Services

Please do not hesitate to contact PreOmics support in case unexpected errors occur.

Phone: +49-89-2314163-0

E-Mail: beatboxsupport@preomics.com

6 Glossary

Term	Description
Garage	Houses the sample plate and plate adapter.
Gyuto Bead	Beads, part of the BeatBox Tissue Kit **96x** or **24x**, for tissue homogenization.
Gyuto Beads Collection Rack	Tool to easily transfer samples to new reaction vessels, while Gyuto Beads stay in the plate or tube.
Plate Adapter	Specific adapter for the plate of the BeatBox Tissue Kit **96x**. The adapter is part of the BeatBox accessory kit.
Power Switch	A button located at the back of the BeatBox in the bottom-left corner. It allows the user to switch the BeatBox on and off; inner position (I) pressed is ON and outer position (O) pressed is OFF.
PSU	External Power Supply Unit.
Protocol	A set of instructions for the BeatBox that allows the instrument to automate protein purification procedure. Protocols are run using the commands on the touchscreen.
Touchscreen	The user interface that allows the user to operate the BeatBox.
Tube Adapter	Specific adapter for the tubes of the BeatBox Tissue Kit **24x**. The adapter is part of the BeatBox accessory kit.

7 Appendix A – Technical data

7.1 Operating conditions

External Power supply	Input 100–240 V AC, 50/60 Hz. Output: 24VDC
BeatBox	24VDC; Power: 50W;
Overvoltage category	2
Max. current	1.3 A at 100 VAC
Operating temperature	18 to 28°C (64.4 to 82.4°F)
Operating humidity	15–75% (noncondensing)
Altitude	Up to 2000 m (6500 ft.)
Operating environment	Indoor use only
Pollution level	2
Environmental class	3K2 (IEC 60721-3-3)

7.2 Transport conditions

Transport temperature	–25°C to 60°C (–13°F to 140°F) in manufacturer's package
Transport rel. humidity	Max. 75% (noncondensing)
Environmental class	2K2 & 2M2 (IEC 60721-3-2)

7.3 Storage conditions

Storage temperature	15°C to 30°C (59°F to 86°F) in manufacturer's package
Storage rel. humidity	Max. 75% (noncondensing)
Environmental class	1K2 (IEC 60721-3-1)

7.4 Mechanical data and hardware features

Dimensions	Width: 40 cm (15,75 in.) Height: 23 cm (9,06 in.) Depth: 27 cm (10,63 in.)
Mass	BeatBox: 6 kg (13,23 lb.) Accessories: 2 kg (4,41 lb.)
Capacity	Up to 96 samples per run, dependent on kit format
Touchscreen	7 in TFT Touchscreen, active area 152,4 mm x 91,44 mm, resolution 800*480
Software	PreOmics BeatBox software is preinstalled on the BeatBox.

7.5 Declaration of Conformity

Name and address of the legal manufacturer:

PreOmics GmbH
Am Klopferspitz 19
D-82152 Planegg/Martinsried

Phone: +49-89-2314163-0
Fax: +49-89-2314163-99
E-mail: info@preomics.com

An up-to-date declaration of conformity can be requested from PreOmics.

7.6 Waste Electrical and Electronic Equipment (WEEE)

This section provides information about disposal of waste electrical and electronic equipment by users.

The crossed-out wheeled bin symbol (see below) indicates that this product must not be disposed of with other waste; it must be taken to an approved treatment facility or to a designated collection point for recycling, according to local laws and regulations.

The separate collection and recycling of waste electronic equipment at the time of disposal helps to conserve natural resources and ensures that the product is recycled in a manner that protects human health and the environment.

This equipment contains Lithium-Ion battery inside. Lithium-ion batteries should be taken to separate recycling or hazardous waste collection according to local laws and regulations.

WARNING

Risk of fire **[W23]**

To prevent fires, tape battery terminals and/or place lithium-ion batteries in separate plastic bags.

Recycling can be provided by PreOmics upon request at additional cost. In the European Union, in accordance with the specific WEEE recycling requirements and where a replacement product is being supplied by PreOmics, free recycling of its WEEE-marked electronic equipment is provided.

To recycle electronic equipment, contact PreOmics Technical Support for the required return form. Once the form is submitted, you will be contacted by PreOmics either to request follow-up information for scheduling collection of the electronic waste or to provide you with an individual quote.

7.7 FCC Declaration

The ”United States Federal Communications Commission” (USFCC) (in 47 CRF 15. 105) declared that the users of this product must be informed of the following facts and circumstances.

This device complies with part 15 of the FCC:

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.”

“This Class B digital apparatus complies with Canadian ICES-003.”

The following statement applies to the products covered in this manual, unless otherwise specified herein. The statement for other products will appear in the accompanying documentation.

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 and meets all requirements of the Canadian Interference-Causing Equipment Standard ICES-003 for digital apparatus. 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 the interference will not occur in an 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.

PreOmics is not responsible for any radio television interference caused by unauthorized modifications of this equipment or the substitution or attachment of connection cables and equipment other than those specified by PreOmics. The correction of interference caused by such unauthorized modification, substitution or attachment will be the responsibility of the user.

7.8 Liability Clause

PreOmics shall be released from all obligations under its warranty in the event repairs or modifications are made by persons other than its own personnel, except in cases where the Company has given its written consent to perform such repairs or modifications.

All materials replaced under this warranty will be warranted only for the duration of the original warranty period, and in no case beyond the original expiration date of original warranty unless authorized in writing by an officer of the Company. Read-out devices, interfacing devices, and associated software will be warranted only for the period offered by the original manufacturer of these products. Representations and warranties made by any person, including representatives of PreOmics, which are inconsistent or in conflict with the conditions in this warranty shall not be binding upon the Company unless produced in writing and approved by an officer of PreOmics.

8 Appendix B – BeatBox Instrument - Scope of delivery

Product	Content	Quantity
BeatBox		
	BeatBox Instrument (1-year warranty on parts and labor)	1
Accessory Box BeatBox		
	Roller	1
	Rod Magnet	1
	Gyuto Bead Collection Rack	1
	Plate Adapter for BeatBox Tissue Kit **96x**	1
	Tube Adapter for BeatBox Tissue Kit **24x**	1
	BeatBox Quick Start Manual **96x**	1
	BeatBox Quick Start Manual **24x**	1
	Unlock Tool	2
	External Power Supply	1
	Country Specific Power Cord	1

For more information and an up-to-date list on available kits, please visit **https://www.preomics.com/beatbox** or contact the PreOmics sales representatives.

9 Version history

Document	Revision	Date	Description of changes
BeatBox User Manual	01	2022-03-01	First release
BeatBox User Manual	02	2022-03-04	PSU (Power Supply Unit) Type Operating conditions
BeatBox User Manual	03	2022-07-19	Information added for BeatBox Tissue Kit **24x**; URL of BeatBox user manual added;
BeatBox User Manual	04	2022-08-04	URL of BeatBox user manual added;
BeatBox User Manual	05	2023-07-21	Cleaning instructions have been extended. Warning about condensation added.
BeatBox User Manual	06	2024-02-16	Safety opening tool instructions extended.