

# Operator's Manual



## The Bullet Blender® 50 BB50-AU, BB50-DX

### **Congratulations!**

Congratulations on your purchase of a Bullet Blender® 50 by Next Advance, Inc., for mixing, lysing, disrupting, and homogenizing your samples.

Please read this operator's manual which explains proper operation of the instrument. This manual is also available on our website, [www.nextadvance.com](http://www.nextadvance.com). Click on SUPPORT in the left window and then on the appropriate link to the manual.

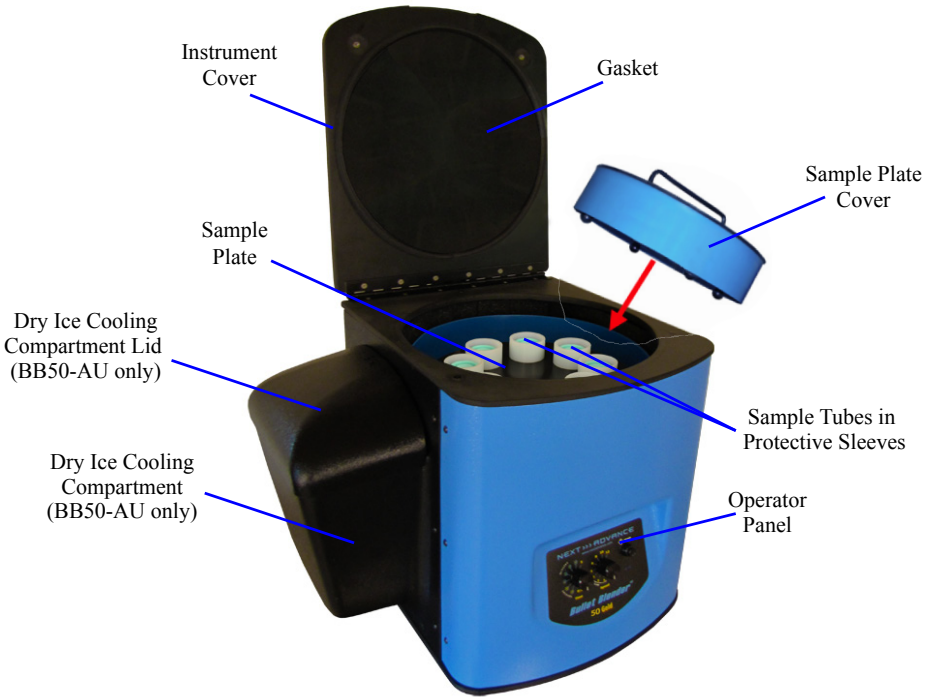
We're confident that your Bullet Blender® 50 will become an essential tool in your laboratory and we wish you success with your work.

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# Operator's Manual for the Bullet Blender® 50

## Parts of the Bullet Blender® 50



### SYMBOLS USED ON THE BULLET BLENDER 50



Start Operation



Caution: Follow the Instructions in the Operator's Manual



This product complies with European Low Voltage and EMC Directives (CE marking is optional)



Please dispose of the test tubes and the 50-DX or 50-AU Bullet Blender in accordance with local regulations

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## SETUP

Place the Bullet Blender® 50 on a stable, level lab bench. Carry it by grasping the bottom sides. Plug the AC power supply cord connector into the AC Input Receptacle on the right side of the Bullet Blender® and then insert the plug into a wall outlet. You should see lights on the time setting flash for several seconds, indicating that the unit is receiving power. It is now set up.

## OPERATION

To use your Bullet Blender® 50, lift open the instrument cover, twist the handle of the sample plate cover counter clock-wise until the white arrow is in the unlocked position (see figure below) and lift the sample plate cover out of the instrument.



The figure above shows labels that indicate if the sample plate cover is in the locked or unlocked position. Here, it is shown in the locked position.

Insert the 50 mL sample tubes in the protective sleeves and place the sleeves into the sample tube plate. **The threads**

**on the sample tubes must be dry and the caps must be screwed on very tightly.** Use a minimum of 2 sleeves, so that all the energy from the Bullet Blender is not concentrated on a single tube. For best results, the sleeves should be evenly spaced. Replace the cover and rotate it to lock it in place. Fold down the handle on the cover, and then close the lid.

Set the time and the speed to the desired value. Push the “START” button. At each three minute interval an LED will light up, indicating its progress. The air cooling will continue for 30 seconds after the motor times out.

Do not operate without the cover locked in place or with the lid open. There will be excessive noise, your samples may not be properly processed, and the tubes might be knocked out of the instrument, potentially causing injury.

Turning the “minutes” knob to “0” will stop the instrument.

## Example:



The figure above shows the BB50-AU model Bullet Blender set to run for 12 minutes at a speed of 8 after running for 6

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minutes. To operate, press the “START” button. After 1 minute, the LED light on the number 1 will light up. After 2 minutes the second LED light by the number 2 will light up. And so on. At the setting shown above, after 12 minutes, the Bullet Blender® 50 will stop.

The BB50-AU model has a “4°C” light that comes on when the internal compartment of the instrument is refrigerated. On the BB50-DX model, the “Air Cooling™” light indicates that ambient air is circulating through the inside of the instrument during operation and for 30 seconds after the cycle is complete.

The BB50-AU unit contains a dry ice cooling compartment. To use, fill the dry ice cooling compartment with at least 2 lbs of dry ice. Always use cryogenic gloves when handling dry ice. Do not use the inner portion of the dry ice cooling compartment to transport the ice. Do not fill the dry ice cooling compartment with water ice. Make sure that the dry ice cooling compartment lid is properly sealed. To pre-cool the instrument, after filling the compartment with dry ice, run the instrument for 5 minutes.

To use Air cooling™, where ambient air is drawn into the instrument, operate the BB50-AU unit with the dry ice compartment open. Air Cooling™ is most effective when the instrument is operated in a 4°C environment.

## PROTOCOLS AND SAMPLE SETTINGS

The following ratio should be used as a guideline for determining the amount of beads and buffer to use given a certain sample size - 1 volume/mass of tissue : 1 volume of beads : 2 volumes of buffer. For more specific information regarding the use of various beads as well as specific protocol information, please refer to our website: [www.nextadvance.com](http://www.nextadvance.com).

For 50mL tubes, do not operate with more than 3.5g of sample, or a total of 20mL of buffer, tissue, and beads (per tube).

Cutting the tissue into smaller pieces will generally yield better results. Tissue with a high aspect ratio (long, thin strips) will homogenize better than tissue that is round or cubic.

Do not operate the Bullet Blender® 50 using the same tubes for more than 30 minutes.

Protocols for many types of samples are posted on our website, at [www.nextadvance.com/FAQs/protocols.htm](http://www.nextadvance.com/FAQs/protocols.htm).

### Notes:

Use Axygen® brand or Corning® brand polypropylene, plug seal cap, skirted (self-standing) 50 mL tubes. If there is a different brand of 50 mL tube you would like to use, please contact us at [support@nextadvance.com](mailto:support@nextadvance.com). There may be some discoloration of the sleeves and of the tubes after homogenization. This is normal and a by product of the workings of the Bullet Blender® 50, which is designed to impact the tubes with as much energy as possible.

## CLEANING

If you wish to clean your Bullet Blender,

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clean the outside of the unit only with mild detergent, water and a soft cloth. Under normal conditions, the Bullet Blender® 50 should never need to be disassembled for cleaning. In the case of a large spill, please contact Next Advance at [support@nextadvance.com](mailto:support@nextadvance.com). **Do not touch or tamper with the electronics.**

## TROUBLESHOOTING

In addition to the tips given below, a thorough list of troubleshooting tips is at [http://www.nextadvance.com/FAQs/FAQ\\_s-Bullet\\_Blender.htm](http://www.nextadvance.com/FAQs/FAQ_s-Bullet_Blender.htm).

**If the Bullet Blender doesn't start,** make sure the Power Switch is in the ON (I) position. Make sure that the sample plate lid is in the "locked" position. The plug of the power supply cord might not be in a live wall outlet or the power supply connector might not be fully inserted in the AC Input Receptacle of the Bullet Blender® 50.

**If the unit stops working,** turn the system off for 15 minutes to allow the electronics to reset. If the Bullet Blender® 50 does not turn on after this period, contact customer service.

**If the caps on the 50 mL tubes loosen,** make sure that the screw threads between the lids and the caps are dry when you close the caps or screw them on, so that there is enough friction for the caps to remain tight. Using recommended types of tubes will minimize cap failure.

For best results, the tubes and sleeves should be evenly spaced when placed in the Bullet Blender.

**If the 4°C light is not coming on,** frost from condensation may be blocking the air passage. Remove the inner dry ice compartment and gently agitate it or replace the ice. If mist coming out of the dry ice cooling container seems excessive, make sure that the lid of the dry ice container is closed securely

## SUPPORT

FAQs, protocols, and other helpful information are available on our website, <http://www.nextadvance.com>. Click on the Bullet Blender, then on the appropriate link. If you cannot find an answer there, please contact customer service by email at [techsupport@nextadvance.com](mailto:techsupport@nextadvance.com) or by telephone at (518) 674-3510 or (800) 738-1681.

## SPECIFICATIONS

Size: BB50-DX is 35 cm (14 in.) deep x 38 cm (15 in.) wide x 38 cm (15 in.) high. BB5050-AU is 35 cm (14 in.) deep x 46 cm (18 in.) wide x 38 cm (15 in.) high.

Weight: 33lbs (15 kg)

Power Requirement: 100-240 V, 50-60 Hz, 2.5-4.5 A

Capacity: 8 of 50 mL skirted (self-standing) polypropylene tubes.

Relative Humidity: 5 - 90% non-condensing

Operating Temperature: 4 - 40°C

Altitude: <2000m

Storage Temperature: -40 to 50°C

Meets **CE** requirements (-CE models only)

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## WARRANTY

Next Advance warrants its Products against defects in materials and workmanship for time periods which vary according to the Product. Within these time periods, Next Advance will replace or repair, without charge to the original purchaser, any part which is defective.

Bullet Blender            Two years

The warranty is void if the Product is defective due to product accident, product modification, exposure to radiation other than for sterilization, connection to an improper electrical supply, lack of proper maintenance, contamination, improper installation or misuse. If the product is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired. The warranty shall also not apply to defects arising from fire, flood, lightning or other conditions unrelated to correct operation of the Product.

Next Advance's liability is limited, at the company's election, to (1) refund of the original purchaser's purchase price for the Product (2) repair of the Product, or (3) replacement of the Product or defective parts. Evidence of purchase by the original purchaser is required. Next Advance may also request documentation of proper maintenance, if applicable.

Next Advance makes no other warranty, express or implied, with respect to its Products. NEXT ADVANCE MAKES NO WARRANTY RESPECTING THE MERCHANTABILITY OF THE PRODUCTS OR THEIR SUITABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE OR USE. Next Advance shall not be liable for, indirect, special, incidental or consequential damages of any nature. Any recovery for any claim shall be limited to the original purchase price for the product.

## Operator's Responsibility

Provide proof of purchase and provide normal care and maintenance.

## WARNINGS AND CAUTIONS

- Read the user's manual before operating.
- Do not carry the instrument by the dry ice compartment. Instead, lift from the bottom sides of the instrument.
- Do not operate Bullet Blender® 50 instruments with fewer than 2 sleeves in place.
- Do not open lid or cover when the Bullet Blender® is in use.
- Wear cryogenic gloves when handling dry ice.
- Do not use the inner container of the dry ice cooling compartment to transport ice.
- Do not use regular water ice in the dry ice cooling compartment.
- Do not insert fingers or objects other than recommended tubes into sample tube holes.

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Use caution when closing Bullet Blender® lid- do not close on fingers.

Use recommended tubes only.

No user serviceable parts are inside.

For indoor use only.

Pollution Degree 2 per EN 61010-1.

Overvoltage Category II per EN 61010-1.

Enclosure Protection: Not Protected Against the ingress of Moisture.

Sound Pressure Level: Up to 90dBA. Use hearing protective devices that reduce exposure to below 85 dBA during prolonged exposure.

Do not immerse in liquid.

Before touching the Bullet Blender®, touch a bare metal surface to discharge static electricity.

## **DISCLAIMER**

Next Advance, Inc. makes no representations or warranties, expressed, statutory or implied, regarding the fitness or merchantability of this product for any particular purpose. In no event shall Next Advance be liable for incidental or consequential damages. Next Advance, Inc. is not liable for any damages, including but not limited to, lost profits, lost savings, or other incidental or consequential damages arising from ownership or use of this product, or for any delay in the performance of its obligations under the warranty due to causes beyond its control.

Next Advance, Inc. also reserves the

right to make any improvements or modifications to the product described in this manual at any time, without notice of these changes. Next Advance, Inc. products are not designed, intended, or authorized for use in applications or as system components intended to support or sustain human life, as a clinical medical device for humans, or for any application in which the failure of the product could create a situation where personal injury or death may occur.

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## **CONTACT INFO**

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