

Operator's Manual



The Bullet Blender™

Models: Bullet Blender™; Bullet Blender™ Blue;
and Bullet Blender™ Blue 50

Congratulations!

Congratulations on your purchase of a Bullet Blender™ by Next Advance, Inc., for mixing, lysing, disrupting, and homogenizing your samples. It comes with beads of several sizes and materials and a spatula.

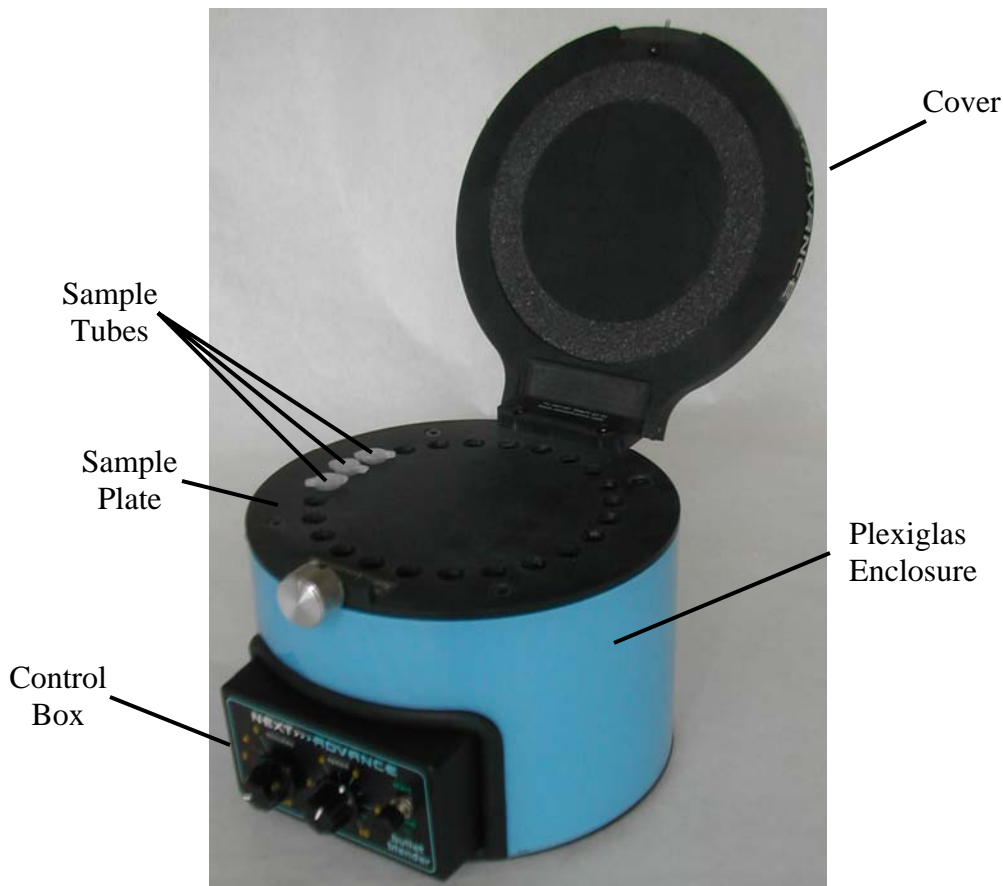
Please read this operator's manual which explains proper operation of the instrument. This manual is posted on our website, www.nextadvance.com. Click on SUPPORT in the left window and then on the appropriate link to the manual.

We're confident that your Bullet Blender™ will work out well for you and we wish you success with your work.

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Parts of the Bullet Blender™



SETUP

Place the Bullet Blender™ on a stable, level lab bench. Plug the power supply into the back of the Bullet Blender™ and then plug it into a wall outlet. It is now set up.

OPERATION

To use your Bullet Blender™, lift open the cover, place up to 24 of your 1.5 mL to 2.0 mL polypropylene high quality (e.g. Eppendorf® Safe-Lock® or Axygen) microcentrifuge tubes or up to 9 polypropylene conical bottom Falcon® or Krackelerbrand 50 mL tubes loaded with samples in the holes in the sample plate, and close the cover. Fifty mL tubes from other

manufacturers may not work properly due to differences in length or toughness. The snap caps on the microcentrifuge tubes must be on securely. **The threads on the 50 mL tubes must be dry and the caps must be screwed on very tightly.** The tubes do NOT need to be placed symmetrically. The tissue placed in each tube should usually be cut into several smaller pieces. Set the duration, in minutes and the speed to the desired value. Then push the start button. As each minute passes, another LED will light up. On the standard model, when the set time has passed, the green light below the word “DONE” will blink for a few seconds. On the BLUE models, the air cooling will continue for half

a minute.

Do not operate with the cover open. There will be excess noise and your samples will not be properly processed and the tubes might be knocked entirely out of the instrument and could cause injury.

Close the cover gently, with the lock knob aligned so that the pin in the cover fits through its slot. Then rotate the knob to lock the cover closed.

If you turn the “minutes” knob to “0”, the instrument will stop.

Example:



Control panel set for a 4 minute duration at a speed of 8. The Bullet Blender has been running for 2 minutes.

The figure above shows the Bullet Blender™ set to run for 4 minutes at a speed of 8, after running for 2 minutes. To operate, press the “START” button. After the first minute, the red light by the number 1 will light up. After the second minute, the second red light by the number 2 will light up. And so on. After 4 minutes, the Bullet Blender™ will stop. In the standard version, the green word “DONE” will light up for half a minute. In the Blue versions, the blue words

“Air Cooling™” word will light up during operation and for about one half minute as the fan continues to operate. The model that accommodates 50 mL tubes has time settings up to 15 minutes in 3 minute increments.

PROTOCOLS AND SAMPLE SETTINGS

General Guideline: 1 volume/mass of tissue: 1 volume or 2 mass of grinding media: 2 volumes of buffer.

As the tissue amount becomes smaller, that ratio will differ due to the limitations of handling of the small volumes. Cutting the tissue into smaller pieces will generally yield better results.

With microtubes, we recommend less than 300mg (that is 0.3g of tissue) per microtube in the Bullet Blender™. When the tissue is overloaded, there is not enough airspace in the tube to allow for efficient mixing of the sample with the grinding agent. The movement of the liquid around the walls of the tube is important and without an airspace, you will not get effective homogenization. You must leave at least 500 microliters of airspace in a microcentrifuge tube to get effective homogenization. For similar reasons, do not fill the 50 mL tubes with more than a total of 15 mL of buffer, tissue, and beads.

Protocols for many types of samples are posted on the www.nextadvance.com website, and click on “Support”.

Notes:

At speed settings of 9 and 10 there may be some flaking of the microcentrifuge tubes. This is normal and intentional. The higher speed enables homogenization of tougher tissue.

Use high quality polypropylene tubes, such as Axygen microtubes and Falcon® or Krackelerbrand 50 mL tubes.

When you first plug in the standard Bullet Blender™, the green light may blink for a few seconds. This is normal. In Bullet Blender™ Blue models, the fan will run for about a minute and the blue “Air Cooling” indicator will light up.

The cover may rattle while the Bullet Blender™ is operating. This is normal and inherent in the design in which all tubes are allowed to oscillate independently.

CLEANING

The light blue cylindrical Plexiglas enclosure is sensitive to many alcohols and solvents. Clean the outside of the unit only with mild soap water and a soft cloth. If liquid enters the instrument, remove the sample tube plate with a hex wrench (4 screws), wipe out the spill using standard laboratory safety precautions, and replace the sample tube plate.

TROUBLESHOOTING

In addition to the tips given below, a thorough list of troubleshooting tips is at http://www.nextadvance.com/FAQs/FAQs-Bullet_Blender.htm.

If nothing happens, the power supply plug might not be in a live wall outlet or the power supply connector plug might not be fully in the jack on the back of the Bullet Blender™.

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

If the caps on the microcentrifuge tubes pop open or the caps on 50 mL tubes loosen up, make sure that the interface regions or screw threads between the lids and the caps is dry when you close the caps or screw them on, so that there is enough friction for the caps to remain tight.

SUPPORT

A thorough list of FAQs and protocols are available on our website, <http://www.nextadvance.com>. Click on support and then on the appropriate link.

If you cannot find an answer there, please contact customer service by email at techsupport@nextadvance.com or by telephone 1.518.674.3510.

SPECIFICATIONS

Size: 8 in (20 cm) diameter by 6.0 in (15 cm) or 9 in. (23 cm) high, depending upon model.

Weight: 2.6 to 3.4 kg (5.7 to 7.5 lbs.) depending upon model.

Power Requirement: 24 VDC, 0.75 Amp

Capacity: 24 of 1.5 - 2.0 mL poly-propylene high quality (e.g. Eppendorf) sample tubes or 9 of 50 mL polypropylene Krackelerbrand or Falcon® sample tubes, depending upon model.

Relative Humidity: 5 - 90% non-condensing

Operating Temperature: 4 - 50 C

Storage Temperature: -40 to 50 C

Meets **CE** requirements.

WARRANTY

The Bullet Blender™ comes with a 30 day money back guarantee (less shipping charges) and a two year warranty. There is a 3 year warranty on the motor. Next Advance will replace, free of charge, any part which is defective due to workmanship or materials.

For further information, go to http://www.nextadvance.com/legal_terms.htm.

Warranty is void if

Product has defect or damage due to product accident, alteration, connection to an improper electrical supply, fire, flood, lightning, or other conditions beyond the control of Next Advance.

Product is improperly installed or used.

Operator's Responsibility

Provide proof of purchase and provide normal care and maintenance.

WARNINGS AND CAUTIONS

Read the user's manual.

No user serviceable parts are inside.

For indoor use only.

Pollution Degree 2 per EN 61010-1.

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™, discharge static by touching ground.

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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