The RoboRocker™ Operator's Manual

Congratulations!

Congratulations on your purchase of a RoboRocker™ by Next Advance.

Please read this operator's manual which explains proper operation.

To download a copy of this manual, visit www.nextadvance.com/support, and select RoboRocker.

We are confident that your RoboRocker will become an essential tool in your laboratory and we wish you success with your work.

SYMBOLOGY

Caution: Follow the Instructions in the Operator's Manual

Indicates European Conformity (Conformité Européene) with health, safety, and environmental protection standards

Please dispose of the RoboRocker in accordance with local regulations.

SCREEN ICONS

Home

Information

Diagnostics

Edit

Start / Resume

Stop

Pause

OVERVIEW

The RoboRocker is a programmable tilt table. You can program it to travel at a specified rate to a specified angle, and at a second specified rate to a second angle, and optionally to one or two more angular positions at specified rates, and even have the platform hold, i.e. wait, at those tilt angles for seconds or even hours. This lab instrument is designed for very accurate angular position and speed control. You can program it to travel very slowly to offset the changing liquid levels in the inlet and outlet reservoirs of microfluidic systems, thereby providing a constant flow rate of medium.

IQ/OQ/PQ

Regarding IQ/OQ/PQ (Installation, Operation and Performance Qualifications), the Installation Qualification consists of plugging in the rocker, turning on the power, and checking if the display lights. The Operation Qualification consists of going to the Diagnostics screen and running the test program. Performance Qualification can be checked by running the RoboRocker in actual use.

SETUP

For models with a rack, mount the rack on the mounting plate, oriented to the desired rocking direction using the screws included in the plastic bag. If you are using a stacking tray (a second platform), screw the 4 standoffs into the lower platform, then mount the upper platform to the 4 standoffs using the 4 screws.

Add the 4 adhesive-backed rubber feet if you are using the RoboRocker on a continuous surface in standard conditions. However, if you are using it on a wire rack or under a temperature-controlled setup (≥ 30°C), do not use the rubber feet.

Place the RoboRocker on a stable, level lab bench or shelf in an incubator. Carry it by grasping the bottom; do not hold carry the rocker by the platform. Plug the AC/DC power adapter's small round plug into the 24V socket on the back of the RoboRocker and then insert the power cord into the power adapter and plug the other end into a wall outlet. Turn on the power switch. The display will light up, initially with a splash screen, then with the Home screen. It is now ready to be used.

INFORMATION

The Information screen displays the model and software revision, as well as instructions for some of the functions

PROGRAMMING

You can program the RoboRocker from the Home screen. If you are not in the Home screen, click on the Home screen icon. On models above basic level, you can select the program you want to edit, (A, B, etc.). Next, select Edit Program.

Editing

To edit a program, on the left side of the screen select the field you want to edit. Then use the keypad on the right to enter the value. Continue with the other fields you want to edit. Note that each step in a program corresponds to a row on the left side. For each step, you can set the speed of travel, the angle that the platform will travel to, and then the hold time.

Once the values are entered, click on Save. Or click on Revert if you made a mistake. Click on Return to return to the Home screen. Note that once you edit a value, you must click on Save or Revert to be able to return to the Home screen.

Speed and Pace

In some models, when programming speed, click Fast or Slow to select the rate at which the RoboRocker will travel to the specified angles. For most applications, use the Fast setting to program the rate in degrees per second. This is the normal speed mode. Note that the rate of travel for the Slow option is extremely slow travel for special applications measured as pace in minutes per degree. Therefore, the higher the number, the slower the platform will move. Using pace for travel rate makes it easy to program very slow rates of change in tilt angle to provide for constant flow of culture medium in microfluidic applications.

Angle

Set the angle that you want the platform to travel to. Note that this is in tenths of a degree.

Hold Time

Once the platform travels to the intended angle, it can hold or remain at that angle for seconds or

minutes. The hold time can be set from 0 seconds (i.e. no hold) up to 90 minutes.

Pulsing

In some advanced models, the platform can pulse to a steeper angle while it is holding. The pulsing causes culture medium to pulse at a higher flow rate, thereby quasi-mimicking pulsatile flow from a beating heart. Once a hold duration is set, select Pulse (button with the heartbeat icon) and set the change in angle and the rate of pulsing. Note that the control panel will limit how rapid the pulsing can be based upon the angle change, and vice versa.

Scheduling

In some advanced models, you can schedule the program to change to another program. To do this, from the Home screen, click on the Schedule button. Set the amount of time for the currently selected program to run, and select the next program.

DIAGNOSTICS

On the Diagnostics screen you can run the test program and manually adjust the platform angle, possibly to replicate a test condition. To set the level position, use the arrows to tilt the platform to the desired position. Note that as you press and hold the arrow, the rate of travel increases. Use the double arrow to travel more quickly, the single arrow to travel more slowly.

Click on the Test Program button to run the test program. You can use this to check if the rocker is working including for Operation Qualification. This program is set in the factory and cannot be edited.

OPERATION

Depending upon model, you can select up to 6 programs. If you want to change a program's settings, select Edit Program, change the settings, and save the program. To begin rocking, press START. Once the rocker is running, you can PAUSE, and then RESUME or STOP.

CLEANING

If you wish to clean your RoboRocker, clean the outside of the unit only with mild soap, water and a soft cloth. Under normal conditions, the RoboRocker should never need to be disassembled for cleaning.

TROUBLESHOOTING

A list of troubleshooting tips is at nextadvance.com.

SUPPORT

FAQs and other helpful information are on our website, at www.nextadvance.com/support. If you have questions, contact your local distributor or email us at support@nextadvance.com or call us at +1 (518) 674-3510.

SPECIFICATIONS

Power Requirement: 24 VDC, 2.5 Amp

Relative Humidity: 5 – 90% non-condensing

Operating Temperature: 4 - 40°C

Altitude: <2000m

Storage Temperature: -40 to 50°C

Meets CE requirements

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. The RoboRocker warranty is one year for all models. The warranty is void if the Product is defective due to product accident, product modification, exposure to radiation, 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.

Operator is responsible for: providing proof of purchase and providing normal care and maintenance.

WARNINGS AND CAUTIONS

Read the user's manual before operating.

Do not put excessive weight on the platform.

Do not insert fingers or objects under the platform.

When working with hazardous or pathogenic samples, operate the RoboRocker in a biosafety cabinet or other standard laboratory safety enclosure.

No user serviceable parts are inside of the instrument.

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.

Do not immerse in liquid.

Before touching the RoboRocker, touch a bare metal surface to discharge static electricity.

DISCLAIMER

Next Advance makes no other warranty, expressed or implied, with respect to its Products. NEXT ADVANCE MAKES NO WARRANTY REGARDING THE MERCHANTABILITY OF THE PRODUCTS OR THEIR SUITABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE OR USE.

In no event shall Next Advance be liable for indirect, special, incidental or consequential damages of any nature. 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. Any recovery for any claim shall be limited to the original purchase price for the product.

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.

CONTACT INFO

Next Advance, Inc., Troy, NY, USA

+1 (518) 674-3510

www.nextadvance.com

support@nextadvance.com