

# BioShake Control

## *Operating Manual*



## Table of contents

1	Safety and Caution .....	3
2	General Information .....	5
3	Warranty .....	5
4	Delivery Parts .....	6
5	PC & Daisy chain configuration.....	6
6	Installation .....	7
7	Operation.....	8
8	Ordering Information.....	10
9	Support.....	10

# 1 Safety and Caution



1. Do not operate the device in rooms where work is being carried out with explosive substances.
2. Do not use this device to process any explosive, radioactive or highly reactive substances.
3. Do not use this device to process any substances, which could create an explosive atmosphere.
4. **Danger!** Electric shock from damage to device/power cable. **Danger!** Lethal voltages inside the device.
5. **Warning!** General hazard point.
6. **Warning!** Injury from rapidly rotating holder. Injury from rapidly rotating imbalance compensation. Injury from flying tubes and plates.
7. **Warning!** Injury from sample material being flung out. Injury from incorrect vortexing.
8. **Warning!** Damage due to incorrect power supply.
9. **Caution!** Damage to the display from mechanical pressure. Severe vibration.
10. **Caution!** Damage to electronic components caused by spilled liquids. Damage to electronic components from condensation.
11. **Caution!** Poor safety due to missing operating manual. Caution when using aggressive chemicals.
12. Please start even with minimal mixing frequencies to avoid overloading.
13. Only mix in sealed tubes and plates. Sample material can be flung out of open, inadequately sealed or unstable tubes and plates.
14. When working with hazardous, toxic and pathogenic samples, always comply with the nationally specified safety environment.
15. Please use the original power supply delivered by QUANTIFOIL Instruments.
16. Please use the original accessories recommended by QUANTIFOIL Instruments.

Pay particular attention to personal safety gear (gloves, clothing, glasses etc.), the extraction hood and the safety class of the laboratory.



Read this section carefully and follow the instructions before beginning installation and any procedure.  
The unit must be placed on a horizontal solid work space.  
The device must be saving from shocks and falling.  
The unit must be placed in sufficient distance to heat registers or radiators to ensure ambient temperature conditions in accordance with the technical specifications.



Use the normal care and precaution one would use with any electrical appliance. Be sure to use a power cord with the same rating and of the same type (three-wire with neutral conductor) as the one supplied with the instrument. Ensure that voltage and frequency of your power source match the input voltage and frequency inscribed on the electrical rating label of the power supply (AC/DC adaptor) and that the output voltage matches the rating of the equipment. The AC/DC adaptor is designed to work with a single-phase power system having a grounded neutral conductor. If you are not sure what type of power is supplied to your building contact your facilities manager.  
As BioShake is an electrical device do not spill large quantities of liquid onto the device. Do not use it in an explosive atmosphere.  
As parts of the device may generate electric, magnetic or electromagnetic fields, keep parts away that may be affected (e.g. data storage units).



BioShake is capable of heating the plate surface up to 100 °C.  
This temperature is high enough to cause serious burns if touched.  
Use extreme caution at all times.  
Never leave your unit accessible to others when it is hot.  
Never touch the plate surface unless you are sure it is cold.  
Use oven gloves if necessary.



Do not unscrew any part of BioShake except different blocks.  
Do not make any mechanical or electrical modifications to the equipment.  
Never do anything else with BioShake as intended in this manual.  
Noncompliance of the safety instructions may lead to device damage, loss of warranty and may cause serious personal injury as well as death.

## 2 General Information



**Warning!** Injury from sample material being flung out.

Sample material can be flung out of open, inadequately sealed or unstable wells, plates and tubes.

- Only mix in sealed tubes and plates
- When working with hazardous, toxic and pathogenic samples, always comply with nationally specified safety environment. Pay particular attention to personal safety gear (gloves, clothing, glasses etc.), the extraction hood and the safety class of the laboratory.

When setting mixing frequency, start from slower to faster speed settings.

## 3 Warranty

QUANTIFOIL Instruments warrants products manufactured by it to be free from defects in material or workmanship under normal use and service for a period of 2 years from date of shipment.

This warranty is specifically limited to the replacement or repair of any such warrantable defects, without charge, when the complete product is returned to QUANTIFOIL Instruments GmbH, freight prepaid, at the address shown above. Contact the factory at the address above for a Return Material Authorization (RMA) number before returning the product. QUANTIFOIL Instruments shall be the sole judge of the warrant ability of alleged product defects. Products that are returned for warranty examination and that are found to be non-warrantable are chargeable and are returned freight collect. A copy of a purchase order with the amount of the charge must be received by QUANTIFOIL Instruments, either by mail or by FAX, before any equipment is returned. Warrantable products are repaired or replaced at no charge and returned freight prepaid.

THIS EXPRESS WARRANTY EXCLUDES ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PURPOSE. QUANTIFOIL INSTRUMENTS GmbH SHALL NOT BE LIABLE FOR WARRANTY IN ANY AMOUNT EXCEEDING THE PURCHASE PRICE OF THE GOODS. QUANTIFOIL INSTRUMENTS GmbH SHALL NOT BE LIABLE FOR ANY SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, WHETHER IN CONTRACT, TORT, OR OTHERWISE.

The buyer acknowledges that he/she is not relying on the seller's skill or judgment to select or furnish goods suitable for any particular purpose and that there are no warranties that extend beyond the description on the face hereof.

This warranty extends only to the original purchaser, and shall not apply to any products or parts that have been subject to misuse, neglect, accident, or abnormal conditions or operations. Claims for damage in transit are directed to the freight carrier upon receipt.



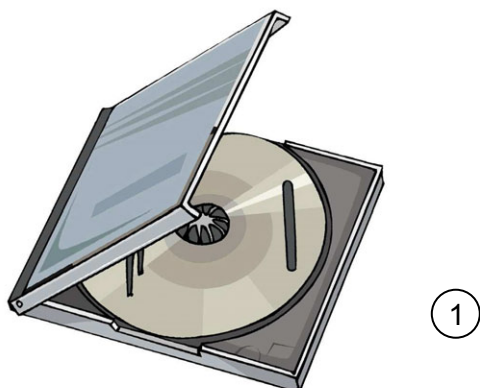
**Please use the online form for registration of your appliance and service:**

[www.qinstruments.com/service/](http://www.qinstruments.com/service/)

Your completed data will serve as registered certificate of guarantee for our extended guaranteeing and will assure optimal service.

Please keep your sales slip for a possible warranty case which must be presented then. Your personal data will not be given to third persons.

## 4 Delivery Parts



Part 1 | CD with BioShake Control test software

Part 2 | Operating manual (no picture)

## 5 PC and Daisy Chain connection



The Daisy Chain Box is a pre-wired box to allow 2 to n devices/modules to be connected to a single PC serial communication port.

The BioShake units can be configured for operating in a daisy-chained, individually addressable, single serial port mode. This mode allows many shakers to share a single serial port on your PC.

The configuration requires that the cable D-type connector modules at the end of each D-type connector shaker interconnect cables be connected together in a manner where the serial output from one shaker connects to the serial input of the next shaker, and on and on. Up to 48 BioShake units can be connected together in this configuration, and the mode will also work with only one shaker. Since there are only three wires used in the communications for these shakers, it is easy to assemble a cable or connector box for the daisy-chaining configuration.

Unused device ports have to be terminated with RS-232 terminators.

## 6 Installation

1. Copy the **BioShakeControl\_v103.exe** (1.1 MB) to your PC.
2. Plug in the RS232 cable from the single **BioShake** or **Daisy Chain Box** into a free port of your computer.
3. Plug the external power supply/supplies into the 24 V socket of **all used BioShake**. Plug the power cord into the power supply/supplies.
4. **Switch On** all BioShake devices **at the same time**.  
The instrument(s) will do a self test.
5. Now the instrument(s) and software are ready to work.

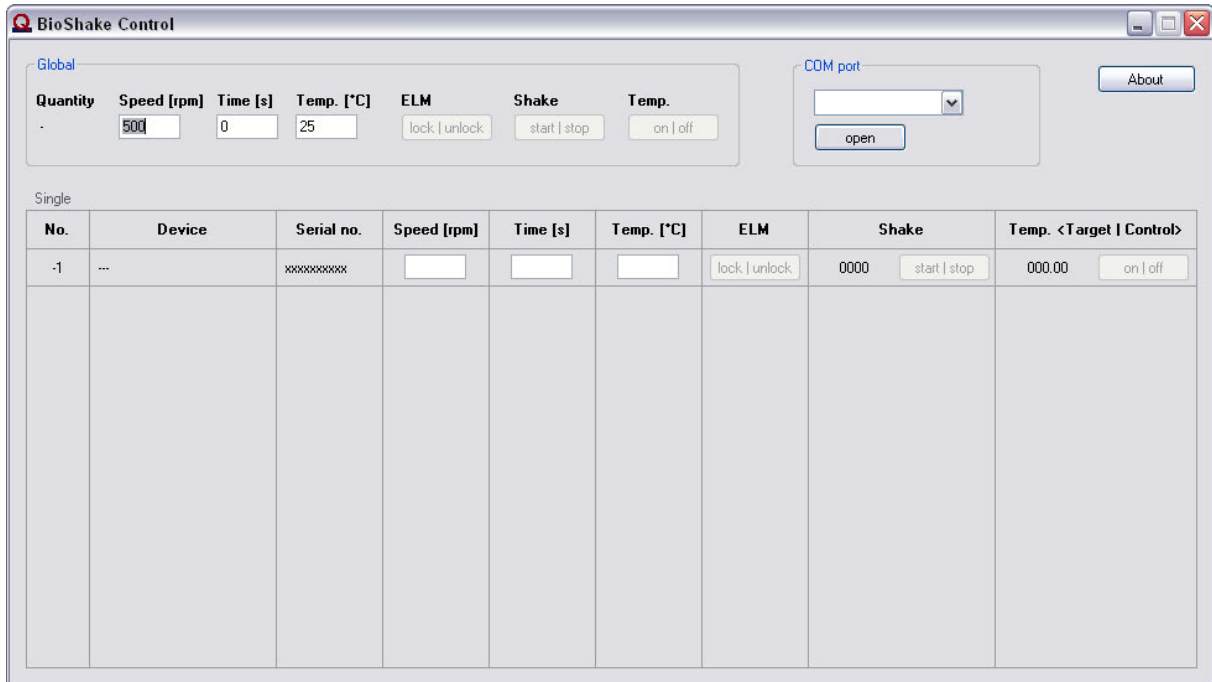


To test the instrument onto a lab bench, please refer also the instructions and command description in the document “**Integration Manual – Integration of BioShake instruments in lab automation systems**”.

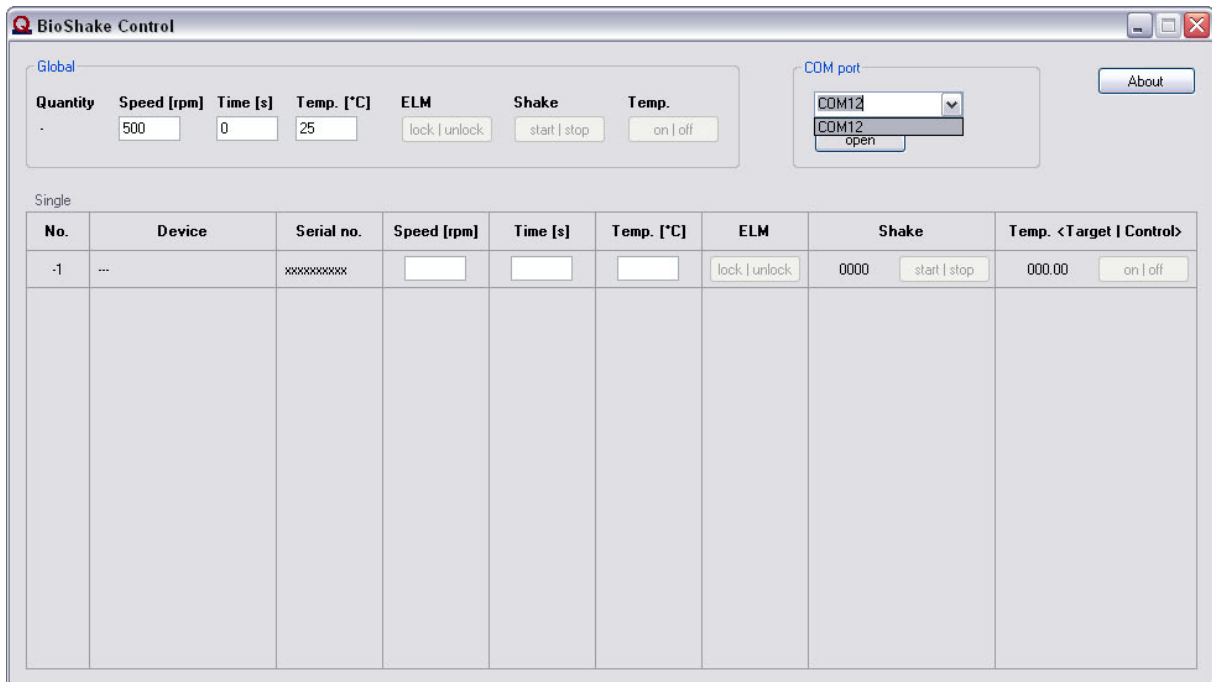
It is advisable to carry out a test run at maximum speed to ensure that the device does not move while mixing.

## 7 Operation

Start the program **BioShakeControl.exe** through a double click.

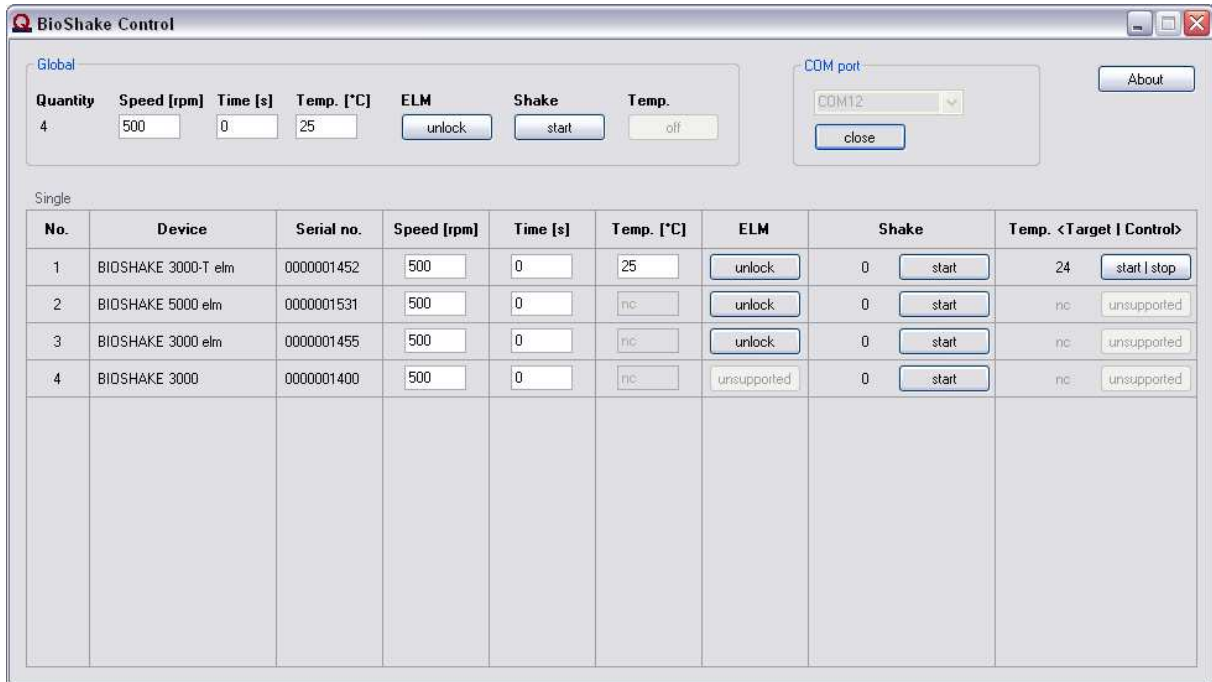


Select the right COM port and click the button “open”.





The software starts the initialization routine for determining all connected devices.



Now the user can set parameters, start and stop for a single device.

In global section the user can control all devices with global commands.



## 8 Ordering Information

Item-Nr.	Description
<b>1811-0100</b>	<b>BioShake Control</b> <i>Description:</i> BioShake test software for single and Daisy Chain mode <i>Scope of delivery:</i> 1x CD with software 1x Manual
<b>1810-0061</b>	<b>Daisy Chain Box 4</b> <i>Description:</i> for connection of 2-4 BioShake units <i>Scope of delivery:</i> 1x Daisy Chain Box 4 1x R232 connecting cable 1.8 m 1x USB/RS232 Converter – Digitus DA-70156 USB serial adapter USB 2.0
<b>1810-0065</b>	<b>Daisy Chain Box 8</b> <i>Description:</i> for connection of 2-8 BioShake units <i>Scope of delivery:</i> 1x Daisy Chain Box 8 1x R232 connecting cable 1.8 m 1x USB/RS232 Converter – Digitus DA-70156 USB serial adapter USB 2.0
<b>1808-9120</b>	<b>USB/RS232 Converter – Digitus DA-70156 USB serial adapter USB 2.0</b>

## 9 Support

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