



## Instruction Manual

Incubating Shaker Rocking, ISRK04HDG

Incubating Shaker Waving, ISWV02HDG

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### PACKAGE CONTENTS

Incubating Rocker or Incubating Waver  
Power Cord  
Instruction Manual

### SERVICE INFORMATION

If the troubleshooting section does not resolve or describe your problem, contact your authorized OHAUS service agent. For service assistance or technical support in the United States call toll-free 1-800-672-7722 ext. 7852 between 8:00 AM and 5:00 PM EST. An OHAUS product service specialist will be available to provide assistance. Outside the USA, please visit our web site, [www.ohaus.com](http://www.ohaus.com) to locate the Ohaus office nearest you.

Serial Number: \_\_\_\_\_

Date of Purchase: \_\_\_\_\_

Supplier: \_\_\_\_\_

## INSTALLATION

Upon receiving your Ohaus Rocker/Waver, check to ensure that no damage has occurred in shipment. It is important that any damage that occurred in transport is detected at the time of unpacking. If you do find such damage the carrier must be notified immediately.

After unpacking, place the Rocker/Waver on a level bench or table, away from explosive vapors. Ensure that the surface on which the unit is placed will withstand typical heat produced by the unit and place the unit a minimum of six (6) inches from vertical surfaces. Always place the unit on a sturdy work surface.

The Rocker/Waver is supplied with a power cord that is inserted into the IEC connector on the back of the unit first, then it can be plugged into a properly grounded outlet. The 120V unit plugs into a 120 volt, 50/60 Hz source. The 230V unit plugs into a 230 volt, 50/60 Hz source.

## MAINTENANCE & SERVICING

The Rocker/Waver is built for long, trouble-free, dependable service. No lubrication or other technical user maintenance is required. However at least every three (3) months you should:

- Unplug the unit.
- Remove any accumulated dirt from the base and tray.
- Check all accessible items to make sure they are properly tightened.

The unit should be given the care normally required for any electrical appliance. Avoid wetting or unnecessary exposure to fumes. Spills should be removed promptly. **DO NOT** use a cleaning agent or solvent on the front panel or lid which is abrasive or harmful to plastics, nor one which is flammable. Always ensure the power is disconnected from the unit prior to any cleaning. If the unit ever requires service, contact your Ohaus representative.

## INTENDED USE

These Rockers and Wavers are intended for general laboratory use.

## ENVIRONMENTAL CONDITIONS - INCUBATING ROCKERS AND WAVERS

**Operating Conditions:** Indoor use only.

Temperature:	5 to 40°C (41 to 104°F)
Humidity:	80% relative humidity, non-condensing
Altitude:	0 to 6,562 ft (2000 M) above sea level

**Non-Operating Storage:**

Temperature:	-20 to 65°C (-4 to 149°F)
Humidity:	maximum 80% relative humidity, non-condensing

Installation Category II and Pollution Degree 2 in accordance with IEC 664.

## EQUIPMENT DISPOSAL



This equipment must not be disposed of with unsorted waste. It is your responsibility to correctly dispose of the equipment at life-cycle-end by handing it over to an authorized facility for separate collection and recycling. It is also your responsibility to decontaminate the equipment in case of biological, chemical and/or radiological contamination, so as to protect the persons involved in the disposal and recycling of the equipment from health hazards.

For more information about where you can drop off your waste of equipment, please contact your local dealer from whom you originally purchased this equipment. By doing so, you will help to conserve natural and environmental resources and you will ensure that your equipment is recycled in a manner that protects human health.

## SAFETY INSTRUCTIONS

Please read the entire instruction manual before operating the Ohaus Rockers/Wavers.



**WARNING! DO NOT** use the Ohaus Rockers/Wavers in a hazardous atmosphere or with hazardous materials for which the unit was not designed. Also, the user should be aware that the protection provided by the equipment may be impaired if used with accessories not provided or recommended by the manufacturer, or used in a manner not specified by the manufacturer.

Always lift unit by the housing, **never** by the tray or lid. Always operate unit on a level surface for best performance and maximum safety.



**CAUTION!** To avoid electrical shock, completely cut off power to the unit by disconnecting the power cord from the unit or unplug from the wall outlet. Disconnect unit from the power supply prior to maintenance and servicing.

Spills should be removed promptly. **DO NOT** immerse the unit for cleaning. **DO NOT** operate the unit if it shows signs of electrical or mechanical damage.



**CAUTION! (Incubating Units Only)** The caution hot indicator light warns that the temperature of the top plate is above 40°C. The light will illuminate and remain lit when the temperature of the top plate reaches approximately 40°C. When the heat is turned off, the caution hot indicator light will stay lit until the temperature of the top plate is less than 40°C.







Earth Ground - Protective Conductor Terminal



Alternating Current

## STANDARDS & REGULATIONS

Compliance to the following standards and regulations is indicated by the corresponding mark on the product.

Mark	Standards and Regulations
	OHAUS Corporation declares that the SHRK, ISRK, ISWV series shakers comply with directives 2011/63/EU, 2014/30/EU, 2014/35/EU and standards EN 50581, EN 61010-1, EN 61010-2-051, EN 61326-1. The full text of the EU declaration of conformity is available at the following internet address: <a href="http://www.ohaus.com/ce">www.ohaus.com/ce</a> .
	This product complies with directive 2012/19/EU. Please dispose of this product in accordance with local regulations at the collecting point specified for electrical and electronic equipment. For disposal instructions in Europe, refer to <a href="http://www.ohaus.com/weee">www.ohaus.com/weee</a> .
	EN 61326-1
	CAN/CSA C22.2 61010-1, CAN/CSA C22.2 61010-2-051 UL 61010-1, UL 61010-2-051

### Global Notice

Warning: This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

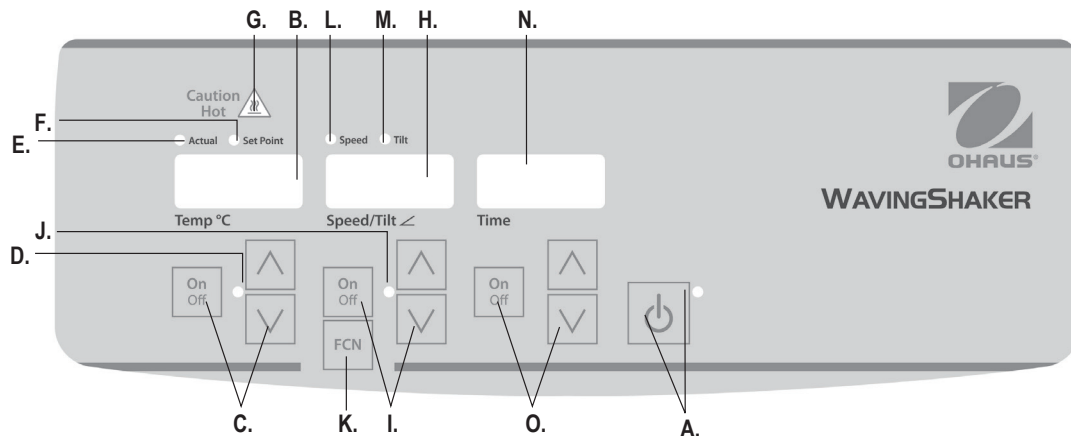
### Canada Notice

This Class A digital apparatus complies with Canadian ICES-003.

### FCC Notice

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Changes or modifications not expressly approved by Ohaus Corporation could void the user's authority to operate the equipment.



## INCUBATING ROCKER/WAVER CONTROL PANEL

The front panel of the Incubating Rocker/Waver contains all the controls and displays needed to operate the unit.

- A. Standby button/standby indicator light:** The standby indicator light will illuminate when the unit is plugged in. The unit will be in standby mode. Press the standby button to activate the temperature, speed/tilt and time functions. The standby indicator light will shut off and the temperature, speed/tilt and time displays will illuminate. Press the standby button again and the unit will once again be in standby mode.
- B. Temperature display:** Displays the actual/set-point temperatures in conjunction with the actual/set-point indicator lights. **C.** Up/down arrows for set-point control. On/off button starts/stops the heat function. **D.** The heat indicator light will be illuminated when the unit is heating.
- E. Actual indicator light:** Illuminates when the temperature displayed is the actual temperature of the air in the chamber.
- F. Set-point indicator light:** Illuminates when the set-point temperature is displayed.

- G. Caution hot indicator light:** Illuminates when the air temperature of the chamber is above 40°C (104°F).
- H. Speed/tilt display:** Displays the speed and tilt of the unit. **I.** Up/down arrows for set-point control. On/off button starts/stops the rocking/waving function. **J.** The speed/tilt indicator light will be illuminated when the unit is rocking/waving.
- K. Function button:** Press to choose the function you are setting: speed or tilt.
- L. Speed indicator light:** Illuminates when the speed is displayed.
- M. Tilt indicator light:** Illuminates when the tilt angle is displayed.
- N. Time display:** Displays accumulated time (continuous mode) or how much time is remaining (timed mode). **O.** Up/down arrows for set-point control. On/off button starts/stops the time function. The display range is from 0 to 9999 minutes in one (1) second increments. The display will indicate minutes and seconds until the timer reaches 99 minutes and 59 seconds (99:59), then the display will automatically display minutes up to 9999.

## INCUBATING ROCKER SPECIFICATIONS

<b>Overall dimensions (L x W x H):</b>	16.5 x 10.1 x 10.8" (41.9 x 25.7 x 27.4cm)
<b>Interior dimensions (L x W x H):</b>	10.75 x 7.75 x 3.8" (27.3 x 19.7 x 9.7cm)
<b>Tray dimensions (L x W):</b>	10 x 7.5" (25.4 x 19.1cm)
<b>Electrical (50/60 Hz):</b>	120 volts AC, 3.74 amps, 420 watts 230 volts AC, 1.87 amps, 420 watts
<b>Fuses:</b>	5mm x 20mm, 5 amp quick acting
<b>Temperature range:</b>	ambient +5° to 65°C
<b>Temperature uniformity:</b>	+/-0,5°C at 37°C
<b>Speed range:</b>	1 to 50rpm*
<b>Speed accuracy:</b>	±1rpm
<b>Tilt angle:</b>	0 to 15°*
<b>Weight capacity:</b>	10 lb (4.5 kg)**
<b>Timer:</b>	digital, 1 second to 9999 minutes (increased in 1 second increments)
<b>Controls:</b>	see page 4
<b>Tray material:</b>	aluminum
<b>Ship weight:</b>	13.5lbs (6.1 kg)

\* Maximum speed/tilt angle may vary with heavy or unbalanced loads.

\*\* Centered on tray.

## INCUBATING WAVER SPECIFICATIONS

<b>Overall dimensions (L x W x H):</b>	16.5 x 10.1 x 10.8" (41.9 x 25.7 x 27.4cm)
<b>Interior dimensions (L x W x H):</b>	10.75 x 7.75 x 3.4" (27.3 x 19.7 x 8.6cm)
<b>Tray dimensions (L x W):</b>	9.25 x 7.25" (23.5 x 18.4cm)
<b>Electrical (50/60 Hz):</b>	120 volts AC, 3.74 amps, 420 watts 230 volts AC, 1.87 amps, 420 watts
<b>Fuses:</b>	5mm x 20mm, 5 amp quick acting
<b>Temperature range:</b>	ambient +5° to 65°C
<b>Temperature uniformity:</b>	+/-0,5°C at 37°C
<b>Speed range:</b>	1 to 30rpm*
<b>Speed accuracy:</b>	±1rpm
<b>Tilt angle:</b>	0 to 20°*
<b>Weight capacity:</b>	5 lb (2.3 kg)**
<b>Timer:</b>	digital, 1 second to 9999 minutes (increased in 1 second increments)
<b>Controls:</b>	see page 4
<b>Tray material:</b>	aluminum
<b>Ship weight:</b>	14.5lbs (6.6kg)

\* Maximum speed/tilt angle may vary with heavy or unbalanced loads.

\*\* Centered on tray.

## INCUBATING ROCKER/WAVER OPERATING INSTRUCTIONS

The Ohaus Incubating Rocker/Wavers are used to prepare samples for testing. These units have been designed for the temperature, speed/tilt and time functions to work independently of one another. The temperature and speed/tilt can be re-set without re-setting the timer, and the timer can be stopped and started without interrupting the heating or rocking/waving functions.

### 1. Getting ready:

- a. Plug the power cord into a properly grounded outlet. The standby indicator light will illuminate, verifying power to the unit. Manually move the platform tray to a near horizontal "home" position before powering unit.
- b. Press the standby button to move the unit from standby mode. The standby indicator light will shut off and the temperature, speed/tilt and time displays will illuminate and display the previously used settings.



### 2. Set temperature:

- a. Press the up/down arrows below the temperature display until you reach the desired temperature. When you release the arrow button, the display will blink off and then on indicating the new set temperature has been accepted.
- b. Press the on/off button to start the heating function. The indicator light below the temperature display will illuminate to indicate the heating function is in use. You will hear five (5) audible beeps that indicate set temperature has been reached.
- c. Set-point temperature adjustments can be made without interrupting heating using the up/down arrows below the temperature display. After the change has been made and you release the button, the display will blink off and then on indicating the new set temperature has been accepted.
- d. To stop heating, press the on/off button below the temperature display, the heat indicator light will turn off.

### Caution Hot Indicator:

The caution hot indicator light warns that the temperature of the air in the chamber is above 40°C. The light will illuminate and remain on when the temperature of the air in the chamber reaches approximately 40°C. When the heat is turned off, the caution hot indicator light will stay illuminated until the temperature of the air in the chamber is less than 40°C.



3. **Setting tilt:** Electronic tilt enables the user to adjust the angle of tray movement while the unit is rocking/waving or while the unit is stopped.

- a. Press the function button below the speed/tilt display until the tilt indicator light illuminates. You are now ready to set the tilt angle.
- b. Press the up/down arrows below the speed/tilt display until you reach the desired angle. When you release the arrow button, the display will blink off and then on indicating the new set angle has been accepted. The unit will complete one rotation at the previously set angle, then smoothly change to the newly programmed angle. The tilt indicator light will flash until the transition to the new tilt angle is complete.

### 4. Setting speed:

- a. Press the function button below the speed/tilt display until the speed indicator light illuminates. You are now ready to set the speed.
- b. Press the up/down arrows below the speed/tilt display until you reach the desired speed. When you release the arrow button, the display will blink off and then on indicating the new set speed has been accepted.
- c. Press the on/off button to start the rocking/waving function. The indicator light below the speed/tilt display will flash until the transition to the set speed is complete, then the light will stay illuminated indicating the rocking/waving function is in use.

## INCUBATING ROCKER/WAVER OPERATING INSTRUCTIONS (CONT'D)

- d. To stop rocking/waving function, press the on/off button below the speed/tilt display. The unit will complete one full rotation then stop in the horizontal "home" position. The speed indicator light will flash until the rotation is complete. When the cycle is complete, the unit will automatically move to standby mode and the standby indicator light will illuminate.

### OPERATING TIPS

When the unit is running at slow speeds or high angles, making large changes to the tilt angle or speed may take several minutes to complete. The quickest way to make large changes to the speed or tilt angle is to stop the unit, change the speed or tilt angle, then restart by pressing the on/off button below the speed/tilt display.

5. **Setting time to zero (0:00) and continuous mode:** Accumulated time.
  - a. Press and hold the on/off button below the time display. After three (3) seconds, the display will indicate the previous set time.
  - b. Simultaneously press both the up and down arrows, the display will indicate zero (0:00). The unit time is now set to zero (0:00) minutes. Alternately, you can use the up/down arrows to get to zero (0:00).
  - c. Press the on/off button below the time display. The display will indicate the accumulated time. The up/down arrows will become inactive. To stop timer, press the on/off button again. **IMPORTANT:** This will **NOT** interrupt the rocking/waving function. Press the on/off button below the speed/tilt display to interrupt the rocking/waving function.
  - d. To re-set, press and hold the on/off button below the time display. After three (3) seconds, the display will indicate the previous set time, which was zero (0:00).
6. **Setting timed mode:** Programmed time.
  - a. Press the up/down arrows below the time display until you reach the desired time.

- b. Start this function by pressing the on/off button below the time display. The unit will run for the selected time, the up/down arrows will become inactive while the timer is running. The unit will stop rocking/waving when time display reaches zero (0:00). Four (4) audible beeps will indicate the time down function is complete. The time display will default back to the set time. To repeat for the same time, simply depress the on/off button again.
- c. To interrupt an automatic timing cycle before it is completed, press the on/off button below the time display. The time display will flash off and on to indicate the time function is on "hold". **IMPORTANT:** This will **NOT** interrupt the rocking/waving function. Press the on/off button below the speed/tilt display to interrupt the rocking/waving function. Restart the timer by pressing the on/off button below the time display, unit will continue counting down to zero (0:00). When the display reaches zero (0:00), you will hear the four (4) audible beeps that indicate the time down function is complete and the rocking/waving function will cease.

### 7. Turning unit off:

- a. To turn unit off, press the standby button. The temperature, speed/tilt and time displays will be blank, the standby indicator light will illuminate. The Incubating Rocker/Waver should be kept in standby mode when not in use. To completely cut off power to the unit, disconnect the power cord from the unit or un-plug from the wall outlet.

### OPERATING TIPS

Built-in memory maintains the last used temperature, speed/tilt and time settings during a power interruption.

A built-in program will shut power off to the motor if the platform tray is prevented from rocking/waving, or the unit is overloaded beyond it's recommended weight capacity.



## TROUBLESHOOTING

During operation, any rattling or ticking sounds may indicate a loose screw on the platform tray, tray attachment or accessory. All accessories should be sufficiently tightened in place before starting the unit.

Error	Cause of Error	How to Fix
E1	RTD open or temperature over 100°C (212°F) for an Incubating Unit	This error cannot be fixed by the end user. Unplug the unit and please contact your Ohaus representative for repair.
E2	RTD shorted or temperature below 0°C (32°F) for an Incubating Unit	This error cannot be fixed by the end user. Unplug the unit and please contact your Ohaus representative for repair.
E3	Mechanical obstruction Ceased motor Drive belt broken	<p>Press the standby button to clear this error. If the E03 error persists, along with grinding, knocking or rubbing noises, un-plug the unit and contact your Ohaus representative for repairs.</p> <p>In the event of an errant E03 error, such as someone inadvertently touching the platform tray while the unit is running, the unit will automatically go to the horizontal "home" position and restart.</p> <p>In the event of an obstruction left under the tray, which would cause the unit to continually restart, the unit will attempt to auto home and restart four (4) times and then stop running, displaying an E03 error. This error can be cleared by the user by pressing the standby button.</p>
E4	Maximum load exceeded	Press the standby button to clear this error. Be sure the load is within the maximum load specification before restarting the unit. If problem persists, unplug the unit and please contact your Ohaus representative for repair.



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