

## **INTRODUCTION**

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Congratulations on becoming a WaterRower owner.

Rowing is universally recognized as the perfect aerobic exercise – smooth, low impact, rhythmic and whole-body – unrivalled for its physiological benefits and aesthetic pleasures.

“Rowing, indoors or outdoors, at any exercise level of intensity, requires a greater exercise expenditure than any other aerobic activity. Calories are burned in relation to the number of muscles used and the intensity and duration of the exercise. Rowing with a sliding seat uses a very large muscle mass since the upper, lower and trunk muscles are used vigorously.”

**-Dr. C Everett Koop- Former US Surgeon General**

While most rowing machines imitate the action of rowing, they do so mechanically, and therefore lack the natural dynamics experienced when a boat and crew glide down a river.

At WaterRower, we have focused on replicating the physical dynamics of rowing, with the knowledge that this will achieve all of its physiological benefits, as well as much of the aesthetic pleasure.

To maximize the enjoyment from using your WaterRower we recommend that you follow our suggestions on rowing technique and training programs. We hope that some of the discussion points in this manual will improve your knowledge about exercise in general, so that you are better able to fulfill your specific exercise objectives.

Your WaterRower has been carefully hand-crafted to give you years of trouble-free use. We recommend that you closely follow the assembly details provided, particularly by assembling the machine in the correct sequence, and adhering to the suggested maintenance schedule.

We hope you enjoy using your WaterRower for many years to come.

## SAFETY

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We recommend consulting a physician before starting out with an exercise program. Please read all instructions before using the WaterRower. Additional information on getting started, rowing technique and rowing training advice can be found at [www.HowToRow.com](http://www.HowToRow.com).

**⚠ Warning:** Please keep hands away from moving parts when rowing machine is in use.

For further information on safety tips, please refer to [www.waterrower.com/safety](http://www.waterrower.com/safety).

## OPERATION

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The WaterRower is unique in using the effect of drag to provide an exercise which is entirely self paced. Because drag is linked to speed, a crew rowing down a river chooses its intensity of exercise simply by altering the pace at which they row: the faster the boat travels the greater the drag and the harder the crew must work. There is a similar effect in swimming.

By replicating these dynamics the WaterRower does not require adjustment to increase resistance: if a more intensive workout is required, simply row faster and harder, and the WaterRower will respond accordingly.

## WATER LEVEL

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The amount of water in the Tank simulates the weight of the Boat and Crew as it glides down the river. Changing the Water Level does not change the resistance, it simply changes the mass which the user is trying to move. Increasing the Water Level simulates a heavier boat and crew mass, similarly reducing the Water Level simulates a lighter boat and crew mass.

The Water Level is adjusted according to one's personal preference or user type; the intensity of course is altered simply by moving the chosen mass faster or slower. A level gauge is positioned under the tank.

Typical settings are:

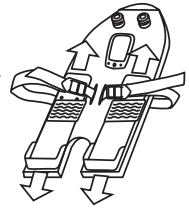
- Children                    12-14 levels
- Non-Athletes            14-16 levels
- Athletes                    16-18 levels

**NOTE** - Fill the Tank with ordinary Municipal Water. Municipal Water contains additives which will deter the growth of algae. Distilled or Purified Water has these additives removed, promoting algae growth and should therefore be avoided. (Refer to the section on Periodic Maintenance for advice on Water Treatment).

## FOOTPAD POSITION

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The Footpad has been designed to be adjusted for maximum comfort. The Footstrap is designed to cross the foot at the pivot point of the toes (the ball of the foot). This should enable the heel to be raised off the Footboard as the user comes forward with each stroke. The Footpad can be easily adjusted to accommodate different users, simply lift the top lip of the Footpad to unhook and slide up or down to reposition on another hole.



## START UP MAINTENANCE

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During the first weeks of use, the wood in your WaterRower will adjust to the temperature and humidity of the environment. During this period it is strongly advised that you GENTLY tighten all the Connecting Bolts with the Allen Key. Please be careful not to overtighten any of these bolts.

Additionally, as the Drive and Recoil Belts loosen up with use, it may be necessary to tighten the Recoil Belt. To do this, leave the Handle in the full forward position and adjust the Bungee/Recoil Belt Buckle to provide a little more tension. Please refer to 'Adjusting the Recoil' video at: [www.waterrowerservice.com/videos](http://www.waterrowerservice.com/videos).

## PREVENTATIVE MAINTENANCE

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Periodic maintenance is required to maintain the condition of the water in the tank. We strongly ADVISE USING MUNICIPAL TAP WATER which contains Chlorine and other Chemicals to keep it free from Bacteria and Algae, etc. The water must be refreshed periodically by adding a Water Purification Tablet provided. The purification tablet degrades by exposure to light: this may vary from 6 months in direct sunlight to 2 years in an artificially lit environment. On average, add one purification tablet every 6 months.

If water discoloration occurs add a purification tablet immediately. If the water does not clear, we recommend emptying the Tank, flushing it out with clean water, refilling, and adding a purification tablet. NEVER USE POOL CHLORINE OR CHLORINE BLEACH in the Tank as this will irreparably damage the Polycarbonate Tank.

## MAINTAINING AND CLEANING

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To maintain the appearance and integrity of your WaterRower it is necessary to keep the machine clean. It is particularly important to ensure that there is no dust build up in the Clutch and Belt Mechanism between the Top and Bottom Decks. Dust can be removed by using a vacuum cleaner.

The surface and groove in the monorail must be kept clean to prevent dust fouling the Seat Wheels, and can be cleaned by wiping with a damp cloth.

The surface of the Tank can be cleaned, however, please ensure you read the Instructions for any Cleaning Fluids prior to use: do not use Methylated Chlorates or Ammonia based fluids.

## MAINTAINING THE WOOD

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The natural wood WaterRowers are finished with Danish Oil which gives a deep penetrating finish to the Hardwood Frame. Other than occasional dusting or polishing, the wood requires no maintenance.

## STORAGE OF YOUR WATERROWER

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Your WaterRower can be stored upright. Lift the Rear Leg end, pull the WaterRower towards you and use the momentum to stand it in an upright position. When storing the WaterRower, please ensure the seat is in the forward position (close to the footboard). When stored upright the WaterRower is stable and it only takes the space of a chair.

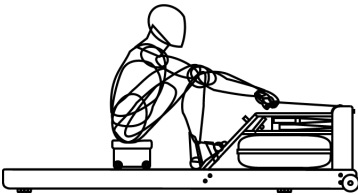
## STARTING OUT WITH ROWING

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Rowing is an endurance sport which requires a high level of skill. This skill is based on the co-ordination of the legs (which create the driving force of the rowing action), torso and arms in propelling the boat across the water.

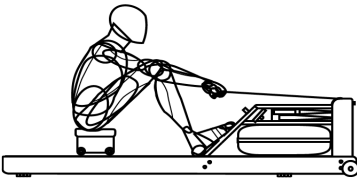
The rowing action is comprised of both fast (drive phase) and slow (recovery phase) movements. Skill is also required in combining these movements into a rhythm in order to create a smooth, flowing, unhurried rowing action.

The diagrams below show 3 basic movements of the rowing action.



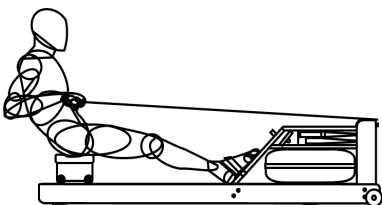
### CATCH POSITION

Sitting tall, arms straight reaching forward, shoulders relaxed, head up, eyes looking forward, legs compressed and shins vertical.



### DRIVE PHASE

Drive back with the legs, arms hang off the handle and only begin to bend once handle is above the knees, torso is strong with good posture and body angle opens up slowly as you drive the legs.



### RELEASE POSITION

Legs straight, handle drawn to chest, sitting back just past the vertical, torso firm, shoulders relaxed, head up and eyes looking forward.

Allow yourself the first few rowing sessions to practice the correct positions and phases as well as the correct ratio and rhythm of the rowing action. With regular rowing, the technique will become easier and you will soon experience the physiological benefits of rowing.

## **YOUR EXERCISE PROGRAM**

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Most of us recognize the benefit of exercise and the potential improvements to our general health and well being. However few of us fully understand the physiology of exercise and the best means of achieving our specific exercise objectives.

In order to get the most out of any exercise program, it is essential to have an understanding of what your exercise objectives are. These may include reducing or maintaining weight, improving general strength, developing bulging muscles, improving sporting competitiveness or simply avoiding the health consequences of a modern sedentary lifestyle.

It is important to set a few different types of objectives.

These are divided into:

- Immediate Objectives - weekly
- Short Term Objectives - monthly
- Long Term Objectives - yearly

Your long term objectives are your final objectives, to achieve these, you need stepping stones which are the short term objectives and immediate objectives.

Objectives need to be:

- Specific - i.e. set certain goals that you would like to achieve by certain dates
- Realistic - i.e. do not set a standard too high or motivation will be lost.
- Flexible - i.e. be prepared for set backs - injuries and illness.

Your personal exercise objectives will influence the intensity, duration, frequency and type of exercise you do. Below are a few examples of different exercise objectives:

## **WEIGHT MAINTENANCE**

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At lower intensities our body uses a mixture of fat and carbohydrate as its source of fuel. As the maximum aerobic output is approached, the percentage of fat consumed as fuel reduces to zero. Also, as the duration of exercise is increased the percentage of fat consumed tends to increase.

If your objective is weight maintenance, then it is necessary to burn as much fat (as opposed to carbohydrate) as the source of fuel as possible. This is best achieved at lower intensities and over longer durations. As soon as the intensity is increased the aerobic process starts to burn more carbohydrate and less fat. A low intensity (60 - 70% of the maximum heart rate) is typically that at which you can hold a conversation: it is by no means strenuous and is about that achieved by a brisk walk.

## **AEROBIC TRAINING**

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A sustained exercise program will improve the efficiency with which the respiratory and cardiovascular system can supply oxygen. This improves lung function, heart function, vascular efficiency and capillary growth, leading to improved well being and endurance. At about 70 - 80% of the maximum heart rate, lactate begins to accumulate in the blood supply at a greater rate than it can be extracted by the liver, kidneys and other organs. Exercising above this intensity will cause progressive accumulation of lactate in the blood, increased heart and breathing rates and cause muscle fatigue.

Prolonged exercise at or below this intensity will maintain lactate at non-fatiguing levels and exercise duration will be limited solely to the depletion of available fuel stores.

If your exercise objective is aerobic (cardio-vascular/endurance) training then it is necessary to exercise at an intensity which will avoid fatigue due to lactate build up. This is best achieved at moderate levels of intensity over medium/long durations.

A moderate exercise intensity (70-80% of the maximum heart rate) is about that achieved by a steady jog, avoiding the onset of muscle soreness.

## **ANAEROBIC TRAINING**

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Anaerobic training causes the build-up of lactate (as rapidly as one minute after exercise is commenced). Lactate saturation will necessitate either a rapid reduction in exercise intensity or complete cessation.

The accumulation of lactate limits the contribution of the anaerobic process to total energy production. Though energy may be generated rapidly, total work capacity and total output is limited.

The level of intensity at which lactate begins to accumulate can be altered by training. This is best done by improving the efficiency of the aerobic process and is achieved by training at moderate levels of intensity.

Training anaerobically is done at high intensities (80-100% of the maximum heart rate) over a short period of time (10 seconds to a few minutes). Interval training is a form of anaerobic training.

## TRAINING GUIDELINES

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To ensure you get the maximum benefit from training on your WaterRower and to avoid unnecessary problems or injuries here are a few guidelines:

- A health check before starting an exercise program.
- Use heart rate to monitor your intensity.
- Always warm up and cool down.
- Always stretch, especially at the end of your workout.
- Keep a record of your workouts.
- Keep well hydrated.
- Gradually increase the intensity, duration and frequency of your workouts.
- Ensure you include recovery time in your training program.
- Add variety to your workouts (refer to [www.HowToRow.com/workouts](http://www.HowToRow.com/workouts)).

## TRAINING RESOURCES

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For further information on your exercise objectives and rowing training types please visit [www.HowToRow.com](http://www.HowToRow.com) or contact one of our trainers at: [advice@watercoach.com](mailto:advice@watercoach.com).

## **WARRANTY**

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**PRIVATE AND COMMERCIAL USE** - WaterRower will replace or repair at its factory or nominated service center any WaterRower or WaterRower component found to be defective in material or workmanship for a period of ONE (1) YEAR from the date of initial shipment by WaterRower. The Warranty is Upgradeable to a THREE (3) Year on all Components and Five (5) Year on all Wooden Components by registering your WaterRower within the first year of purchase.

This warranty will be invalid if, in the opinion of WaterRower, the claim has been caused by: (a) accident, abuse, misuse, misapplication or as a result of any modification (other than by WaterRower); (b) deterioration due to normal wear and tear (c) improper preventive maintenance steps as described in the WaterRower manual.

Return of the WaterRower or WaterRower component to WaterRower's factory or nominated service centre will be the responsibility of the claimant.

The WaterRower or component should be packed to protect it from damage, WaterRower will not be responsible for any damage which may occur during shipment. Postage should be prepaid and the package should contain the claimant's name, address and telephone number, a description of the problem, and proof of purchase.

WaterRower will return the WaterRower or WaterRower component to the claimant at its (WaterRower's) expense except in the case where the warranty has been deemed invalid. In the event that the warranty is found to have been invalidated, then the costs of such investigation, repair and any associated shipping costs shall be borne by the claimant.

This warranty is not transferable. WaterRower warrants against any defective WaterRower spare part received from WaterRower or any authorized dealer for a period of NINETY (90) DAYS after the date of shipment.

WaterRower shall not be liable for any direct, consequential, incidental indirect or special damages under this warranty, or any implied warranty.

The warranty described in this paragraph shall be in lieu of any other warranty, express or implied, including but not limited to, any implied warranty of merchantability or fitness for a particular purpose. The term of this warranty does not affect or prejudice the statutory rights of a consumer, neither does it limit or exclude any liability for death or personal injury caused by WaterRower's negligence.



