

One-Arm Freedom Canoe Paddle

Product Manual

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Read this manual before using the One-Arm Freedom Canoe Paddle. Failure to follow the instructions and safety precautions in this manual can result in serious injury or death.

Keep this manual in a safe location for future reference.

Introduction and Welcome

Congratulations on being a new One-Arm Freedom Canoe Paddle owner. The unique design of this paddle allows people with the use of one arm to enjoy flatwater canoeing at beginner through advanced levels. The One-Arm Freedom is especially well suited for paddling on lakes and for Dragon boat canoeing. With this paddle, you can paddle in the bow or stern position in a tandem canoe and even paddle solo. Whether you are seeking the opportunity to take a weeklong trip in the Boundary Waters, catch a wily trout in your local lake, take a youngster paddling, compete in a Dragon Boat race, or paddle Freestyle, the One-Arm Freedom canoe paddle is here for you. We hope the One-Arm Freedom allows you to enjoy the sport of flatwater canoeing for years to come.

This manual provides important safety information unique to the design of this paddle and explains how to assemble and adjust your paddle. It is critical that you read and understand this information before using the paddle for the first time.

Videos are available on the One-Arm Freedom Canoe Paddle YouTube channel:

<https://www.youtube.com/channel/UC2EvoVI7jTxSzWcBeaPjy5Q>

- Introduction to the paddle and quick release
- Paddle Strokes with the One-Arm Freedom Canoe Paddle
- Advanced technique demo "A Water Dance"
- Beginning technique demo
- Introduction to canoe features

If you have questions, comments, difficulties or success with your One-Arm Freedom paddle, please contact us at **DillenschneiderDesigns@Outlook.com**. We look forward to hearing about your paddling adventures!

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Note: The One-Arm Freedom Canoe Paddle is sometimes referred to here or otherwise as "One-Arm Freedom", "Freedom", "Freedom Canoe Paddle", "paddle", or "product".

Acknowledgments

The One-Arm Freedom Canoe Paddle (US Patent 7311573B1) exists because of the support, encouragement, generosity and goodwill of numerous businesses, organizations, and individuals. We would like to recognize the following businesses, organizations, and individuals who have given generously to the development of this product.

Branches, LLC, Osceola, WI; Extreme Tool and Engineering, Wakefield, MI; PN Products, Scandia, MN; Northland College, Ashland, WI; Core Products, Osceola, WI; Evan Sasman, Videography Professionals, Ashland, WI; Andy Noyes, Ashland, WI; John LaGow; University of Wisconsin-Milwaukee, College of Health Sciences; University of Utah, School of Engineering; Orthotics and Prosthetics Department Shriners Hospital, Tampa, FL; and World Class Precision Products, Bayfield, WI; Jeff Bach, Quietwater Media; Kevin Carr, Creating Ability, Chatfield, MN; the American Canoe Association. Countless others have contributed to the development of this paddle and may not appear here. If you wish to have you or your organization's name added, please contact us at DillenschneiderDesigns@Outlook.com.

Product Safety and Warnings

Intended Use

The One-Arm Freedom Canoe Paddle is designed for flatwater canoeing in unobstructed waters. It is not suitable for whitewater or for water environments with unavoidable floating or stationary obstructions.

Unique Design provides paddle control using only one arm

The One-Arm Freedom Canoe Paddle, US Patent 7311573, is different from typical canoe paddles in that it attaches to the non-inflatable Personal Floatation Device (PFD) worn by the user. This attachment makes it possible for the user to control the paddle and execute a wide range of canoe strokes using only one arm.


Paddlers with reduced grip strength in one hand preventing use of a typical canoe paddle will also benefit from the One-Arm Freedom Canoe Paddle.

Unique Risks of the One-Arm Freedom Canoe Paddle

The unique risks associated with the One-Arm Freedom Canoe Paddle are the requirement that the user must take specific action to free oneself from the paddle and of the potential for paddle kickback from contacting obstructions while in motion. In addition, the One-Arm Freedom Canoe Paddle is not compatible with automatic or manually inflatable PFDs.

The unique risks associated with this paddle and preventative actions the user can take to reduce these risks are described below.


Paddle Kickback Warning

	WARNING
Paddle kickback may result in serious injury or death	
<ul style="list-style-type: none">• Use the One-Arm Freedom Canoe Paddle in unobstructed flatwater only.• This paddle is not for use by children under the age of 18 without adult supervision.	

Paddle kickback warning explained: The One-Arm Freedom paddle is different from two-hand use paddles in that it attaches to the shoulder area of the Personal Floatation Device (PFD) worn by the user. In the event the paddle blade contacts a stationary object or heavy floating object while the watercraft is in motion, the paddle may be forced toward the user's face or knock the user off balance possibly resulting in serious injury or death. This risk is increased when executing cross over or offside strokes such as, but not limited to, the cross-bow draw, cross-bow rudder, or cross-bow forward stroke. The paddle is unsuitable for use in whitewater or flatwater with unavoidable floating or stationary obstructions.


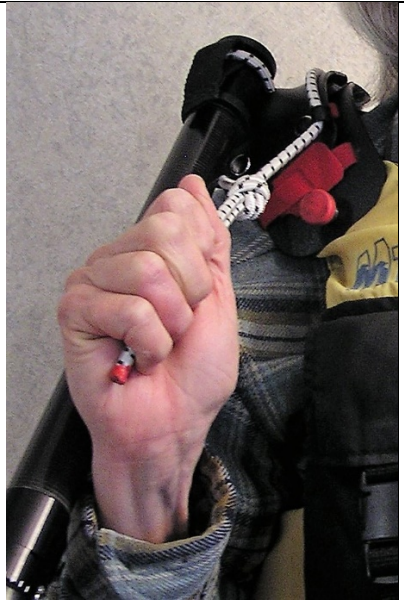

Paddle kickback can also occur on land if the blade contacts a stationary object while the user is in motion. When moving about on land, either detach the paddle from the PFD or make certain the blade points away from the direction of travel. Do not run while wearing the One-Arm Freedom Canoe Paddle.

Quick Release Warning

	WARNING
Inability to use the quick release mechanism may result in serious injury or death.	
<ul style="list-style-type: none">• Never cover, obscure, or wear anything over the shoulder saddle or quick release cord.• Practice and be able to perform the quick release on land and in shallow water prior to paddling with the One-Arm Freedom. Do not use the paddle if you are unable to perform a quick release.	

Quick release warning explained: The One-Arm Freedom paddle is different from two-hand use paddles in that the paddle attaches to the top of the shoulder area of the Personal Floatation Device (PFD) worn by the user. In the event of an emergency, the user must take the following actions to release the paddle from the PFD:

Quick Release Process

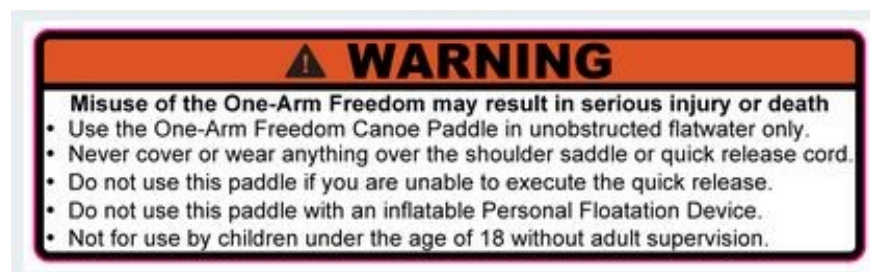
		
<p>Step 1: Grasp the Quick Release cord</p>	<p>Step 2: Stretch and free the cord from the knob</p>	<p>Step 3: Push the paddle to the side, away from your body, to clear the cord from the rear of the shoulder saddle bottom plate</p>

Covering or obscuring the shoulder saddle or quick release cord may prevent the user from releasing the paddle and may result in injury or death. All articles of clothing, including rainwear, must be worn underneath the PFD. To ensure access to the quick release mechanism, never obscure, cover, or wear anything over the shoulder saddle or quick release shock cord.

Do not use the One-Arm Freedom Canoe Paddle with any inflatable PFD. Wearing anything over either an inflatable PFD or the shoulder saddle of the One-Arm Freedom paddle will prevent proper function of these devices and may result in serious injury or death.

Do not use the One-Arm Freedom Canoe Paddle if you are unable to execute the quick release. Practice releasing the paddle from your PFD while on land and in shallow water prior to paddling with the One-Arm Freedom. Be confident in your ability to perform the quick release under all conditions and use this product only within your capabilities and training.

Paddle Misuse Warning Label



Paddle Misuse Warning Label explained: The Paddle Misuse Warning Label is affixed to the paddle. The label provides a general misuse warning and specific direction to avoid hazards associated with the unique design of this paddle. This is an abbreviated version of the Quick Release and Paddle Kickback Warnings provided above. Read the Quick Release and Paddle Kickback Warnings and their explanations prior to using the One-Arm Freedom Canoe Paddle.

General Paddlesports Safety Statement: Engaging in paddlesports is enjoyable but has inherent and other risks. The user is responsible for obtaining appropriate training in paddlesports from a qualified instructor in a reputable, organized program or school before using this product, and to exercise prudence and good judgment at all times to reduce the risk of personal injury or death.

Information supplied with this product is provided as a service only and does not substitute for good judgment and proper on-water instruction in paddlesports.

Assumption of Risks and Disclaimer

No Modification or Misuse

This product is designed and intended for use in unobstructed flatwater canoeing and has not been tested for use in any other boating activities. Except as noted in this product manual, this product cannot be modified or altered by the user as it may interfere with the functionality of the product. A few examples of misuse or modification have been listed in the product manual and in other product materials, but it is impossible to list all potential misuse or modification. **The user assumes all risks and responsibilities associated with product misuse or modification, including any use for which the product is not designed or intended.**

Responsibility, Assumption of Risk and Disclaimer

Failure to heed any warnings in the product manual or other materials provided with the One-Arm Freedom Canoe Paddle, misuse of the One-Arm Freedom paddle, as well as inherent and other risks associated with this paddle can cause injury, damage, death or other loss. By choosing to use the One-Arm Freedom and engaging in paddlesports activities, you are assuming responsibility for those risks.

In voluntarily choosing to use this product, the user assumes and accepts the inherent and other risks of paddlesport activities and use of this product, and is responsible for any injury, damage, death or other loss resulting from those risks or resulting from the user's negligence or other misconduct (including product misuse or modification). To the extent allowed by applicable law and outside the scope of any product warranty, Dillenschneider Designs LLC, and Branches, LLC., their owners, members, officers, directors, employees, agents, representatives and all other entities or individuals in the chain of distribution of this product, disclaim all liability or responsibility to product users (including for negligence) for any injury, damage, death or other loss resulting from use of this product.

Parts of the One-Arm Freedom Canoe Paddle

The One-Arm Freedom Canoe Paddle consists of two main components—a shoulder saddle and the paddle.

The shoulder saddle consists of a bottom plate that attaches to the shoulder area of the user's PFD, and a top plate that attaches to the endcap of the paddle. The top and bottom plate join together with a shock cord that also acts as the quick release mechanism. **Note: The saddle components do not float. Keep the bottom plate attached to the PFD and the top plate attached to the paddle when on or near water.**

The paddle consists of a top shaft assembly with endcap, shaft, insert, and elbow, and a bottom shaft assembly with shaft, insert with snap button and blade. The endcap is the point of attachment for the top plate of the shoulder saddle. The top and bottom shafts are adjustable for right and left-handed users and accommodate different arm and torso lengths. The elbow joins the top and bottom shafts and positions the blade for vertical entry during stroke execution. The top and bottom shafts connect at the elbow by use of a snap button allowing the paddle to be "broken down" for travel and storage. **Note: The paddle contains floatation plugs and it will float when fully assembled as long as float plugs remain in place. However, some sections of the paddle will not float on their own. Do not disassemble the paddle when on or near the water. If floatation plugs become dislodged, contact Dillenschneider Designs for instructions on proper plug placement before regluing.**

Parts photos of the One-Arm Freedom Canoe Paddle



Assembly Instructions

Attach the Shoulder Saddle to your non-inflatable, Coast Guard approved PFD

1. If your strong hand is on your right side, attach the saddle to the right shoulder area of your PFD. If your strong hand is on your left side, attach the saddle to the left shoulder of your PFD.
2. Position the bottom plate of the saddle on the shoulder area of the PFD with the knob facing forward. The curve of the bottom plate sits directly on the shoulder area of the PFD.
3. Wrap the 3 hook and loop straps (on the underside of the bottom plate) tightly around the shoulder region of the PFD.
 - a) Tech Tip: You may extend the length of the hook and loop straps by adding a small section of loop material to the end of the strap.
 - b) Tech Tip: You may add a strip of loop material on the underside of each strap to protect the fabric of your PFD from any exposed hooks.
 - c) Tech Tip: For PFDs with 1.5" wide shoulder straps that are threaded through a buckle: Create a tighter connection between the saddle and the PFD by threading the PFD shoulder strap through the small gap between the bottom plate and the hook and loop straps.

Attach the Paddle to the Top Plate of the Shoulder Saddle

1. Orient the top plate of the saddle so the silver rivets and the quick release cord face the end cap on the top shaft of the paddle.
2. Insert the end cap through the small shock cord loop on the top plate of the saddle.
 - a) One hand tip: Insert a finger or thumb through the webbing tab to help you position the top plate and stretch the cord around the endcap.

Properly fit your Coast Guard approved PFD

Put on your PFD and tighten the straps to achieve a snug fit. The PFD should not ride up on your torso when someone tugs firmly upward on the shoulder area of the PFD.

Warning! Do not attach the shoulder saddle of the One-Arm Freedom Paddle to an automatic or manually inflatable PFD. Wearing anything over the shoulder saddle of the Freedom Paddle or over an inflatable PFD will prevent proper function of these devices.

Connect the Top and Bottom Plates of the Shoulder Saddle

1. Hook the vinyl covered shock cord on the top plate over the 'duck tail' on the rear of the bottom plate.
 - a) One-hand Tip: Place your thumb under the top plate and your fingers around the top shaft and grasp them together. Keeping your hand in this position, lift your hand just above your shoulder and reach back to hook the vinyl covered shock cord over the 'duck-tail' on the rear of the bottom plate.
 - b) One-hand Tip: Perform this step before joining the two sections of the paddle. This reduces the weight and the length of the paddle that you have to control with one hand.
2. Stretch the quick release shock cord over the knob on the front of the bottom plate.
 - a) One-hand Tip: Once the vinyl covered shock cord is hooked in place, release the top plate and shaft. Grasp the quick release shock cord on front of the top plate. Stretch the shock cord and hook the knot over the knob on the front of the bottom plate.
 - b) Tech Tip: Practice this step in front of a mirror where you can view the connection between the vinyl covered shock cord and the rear of the bottom plate until you develop a 'feel' for a good connection.

Join the two sections of the paddle

1. Align the snap button on the lower shaft with the hole in the elbow.
2. Depress the snap button and slide the shaft into the elbow until the snap button clicks into place.
 - a) One-hand Tip: From a standing or seated position, brace the lower shaft of the paddle with your feet or legs. Grasp the elbow and slide it over the top of the lower shaft until it touches the snap button. Depress the snap button with your thumb and continue to slide the elbow over the shaft until it stops. Once the shaft is inserted into the elbow all the way, rotate the bottom shaft to align the snap button with the hole until it snaps into the locked position. Align the paddle blade by releasing the lever lock mechanism and rotating the lower shaft until the blade is in position for paddling. Close the lever lock.

Adjusting the Paddle to the User

Set the paddle for left or right hand use

1. Sit in your canoe in about 3 feet of water
2. With the paddle attached to your PFD, grip the lower shaft with your strong-side hand and place the blade in the water next to your knee. Align the shaft perpendicular to the surface of the water.
3. Release the lever lock on the lower shaft.
4. Rotate the shaft until the tip of the blade angles forward and the edge of the blade is perpendicular to the keel line of the boat.
5. Re-engage the lock.

Adjust the Lower Shaft for torso length and seat height

1. Release the lock on the Lower Shaft.
2. Lengthen the shaft until the blade is inserted fully in the water.
3. Re-engage the lock.

Adjust the Top Shaft for arm length

1. Release the lever lock on the Top Shaft
2. Comfortably position your hand on the grip pad a few inches above the blade, extend the length of the Top Shaft until your arm has a slight bend at the elbow.
3. Engage the lever lock on the Top Shaft.

Detaching and Reattaching the Paddle

Detaching the Paddle from the PFD

It is convenient and easy to detach the paddle from the PFD so the user is unencumbered when moving about on land, in the canoe, or in water. The quick release process is the same for emergency release or for convenience. The user may remove the paddle by releasing the quick release shock cord from the knob on the bottom plate.

Emergency/Quick Release Process for the One-Arm Freedom Canoe Paddle

1. Grasp the quick release shock cord located at the front of your chest.
2. Pull the quick release shock cord down and away from your body to release it from the knob on the bottom plate.
3. Push the paddle to the side, away from your body, to clear the cord from the rear of the shoulder saddle bottom plate

Warning! The shoulder saddle must be exposed and visible at all times to release the paddle in an emergency. Never cover, obscure, or wear anything over the Shoulder Saddle or Quick Release cord.

Warning! Do not use the One-Arm Freedom Canoe Paddle if you are unable to execute the quick release. Practice releasing the paddle from your PFD while on land and in shallow water prior to paddling with the One-Arm Freedom. Be confident in your ability to perform the quick release under all conditions and use this product only within your capabilities and training.

Reattaching the paddle to the PFD

Reattaching the paddle to the PFD can take place in the canoe or on land. To reattach the paddle, follow the instructions for Connecting the Top and Bottom Plates of the Shoulder Saddle as described in the Assembly section of this product manual.

Paddle technique with the One-Arm Freedom

The One-Arm Freedom Canoe Paddle may look a little different from a typical two-hand canoe paddle, but it functions very similarly. Since you are using one arm to maneuver your paddle, and you may do hundreds if not thousands of strokes a day, it is important that you save your arm and hand muscles to control the angle of the blade, not to power your stroke. The large muscles of your torso, not the muscles of the arm, should generate the power for your canoe strokes. The Following information will help you get started with your new paddle. Additional paddle stroke information is provided in the Paddle Stroke videos accompanying the One-Arm Freedom Canoe Paddle.

Basic Paddling Position:

The One-Arm Freedom connects to the PFD on the strong side of the body and the blade is placed in the water on the same side. The paddle does not cross in front of your body during any basic paddle strokes.

Warning! Cross-over or off-side strokes increase the risk of injury from paddle kickback. Beginner paddlers should limit paddle strokes to the strong side of the body.

This paddle is designed to be very efficient using strokes on the strong side of the user's body. It is not designed to accommodate switching paddling sides using basic technique. This is different from two-hand use paddles where the user can switch sides by changing hand position on the paddle. Cross-over strokes require advanced technique and increase the risk of injury from paddle kickback. Beginner paddlers should limit paddle strokes to the strong side of the body.

Hand Position:

To hold your paddle in the basic paddling position, grasp the lower shaft a few inches above the blade. Your hand should be in a comfortable position with the pad underneath your knuckles. The upper shaft rests on the shoulder area of your PFD on the same side of your body as the hand you will use to paddle.

Tech Tip: If the pad is under the palm of your hand, release the lever lock and rotate the lower shaft until the blade points forward and the pad is under your knuckles.

Basic Forward Stroke:

The basic Forward Stroke consists of four steps or phases. Twist, Plant, Un-twist/Power phase, and Recovery.

1. **Twist:** To execute a forward stroke, twist your torso so the shoulder of your strong side points forward towards the bow of your canoe.
2. **Plant:** Reach the paddle forward and Plant the blade in the water just forward of your knee, submerging the entire blade. When you have planted the blade, the lower shaft of the paddle should be nearly perpendicular to the surface of the water and your arm should be comfortably extended with a small bend at the elbow.
3. **Un-twist/Power phase:** During this phase of the stroke, your arm acts like a strut and the bend in your elbow does not change. Keeping the lower shaft of the paddle nearly perpendicular to the surface of the water, use your back, side, and stomach muscles to un-twist your torso until the paddle is even with your hip.
4. **Recovery:** Using your arm, slice the edge of the blade away from the canoe until it is out of the water. Using the Twist, Bring the blade forward for your next stroke by rotating your torso until your shoulder again points forward.

Troubleshooting

Problem	Solution(s)
The top plate of the shoulder saddle slides off the side of the bottom plate.	<ul style="list-style-type: none"> • Tighten the shock cord connecting the top and bottom plates by moving the upper knot closer to the shock cord guides on the front of the top plate. • Lengthen the upper shaft of the paddle
The paddle flutters as it is drawn through the water especially on the forward stroke.	<ul style="list-style-type: none"> • Change technique to generate stroke power with torso rotation instead of the arm. See paddle technique instructions for the Basic Forward Stroke. Watch the Paddle Stroke section of the instructional video.
The arm of the paddler fatigues quickly.	<ul style="list-style-type: none"> • Shorten the lower shaft. • Change technique to generate power with torso rotation.
The end cap of the paddle pulls out of the shock cord loop under normal paddling conditions.	<ul style="list-style-type: none"> • Lengthen the top shaft. • Tighten the shock cord loop by retying the overhand knot recessed on the underside of the top plate of the shoulder saddle.
The hook and loop straps are not long enough	<ul style="list-style-type: none"> • Add a short section of loop material to extend the strap. Use enough material to overlap the hook material by approximately 1" on each end.
<p>The hook and loop straps are worn or damaged</p> <p>Contact us for a return authorization number and approximate repair and shipping costs or follow the replacement steps listed here.</p>	<ul style="list-style-type: none"> • Unscrew the binding post screws on the bottom plate of the shoulder saddle. • Replace the hook and loop straps with new cable wrap straps purchased at your local hardware store. Use a hole punch to create holes in the new hook and loop straps. • Use a drop of medium thread lock to secure the binding post screws when you re-attach them to the bottom plate.
<p>The shock cord is worn or damaged</p> <p>Contact us for a return authorization number and approximate repair and shipping costs or follow the replacement steps listed here.</p>	<ul style="list-style-type: none"> • Before removing worn shock cord, take a photo of the top and bottom sides of the top plate making certain to have clear images of all knots and knot placement. • Replace the shock cord with new 1/4" diameter UV protected shock cord. • Retie the shock cord using overhand knots. Tighten all knots to prevent them from working loose while paddling.
<p>The lever locks are too tight or too loose</p> <p>Contact us for a return authorization number and approximate repair and shipping costs or follow the steps listed here.</p>	<ul style="list-style-type: none"> • Gently loosen the two outer screws until you can turn the center nut. To tighten the lock, turn the nut clockwise (to the right) one notch. To loosen the lock, turn the nut counter clockwise (to the left) on notch. Gently tighten the two outer screws.

Product Care and Warranty

Product Care and Storage

Sunlight, heat, and contaminants can degrade and reduce the life of this product. After each use, the product should be disassembled; rinsed with clean water to remove grit, mud, silt, or salt; and allowed to dry. Store your paddle out of the sun and in a cool, dry storage area to prolong the life of the product.

Damage and breakage can occur when subjecting your paddle to forces it was not designed to handle. Care should be taken when transporting and storing your paddle to prevent damage. Never transport or store your paddle under heavy items.

Inspection and Repair

We recommend that the user inspect the One-Arm Freedom Canoe Paddle and shoulder saddle, including checking for proper assembly and functionality, before and after each use for any damage or wear and tear. If you believe the product is damaged, do not continue to use it or attempt to repair it yourself. See Paddle Warranty Information below.

Product lifetime, replacement or retirement

The components of the One-Arm Freedom Canoe Paddle should be retired or replaced when they show significant wear or if the product shows any indication of being unsuitable for use. If the shoulder saddle or paddle must be replaced independent of each other, you may contact us regarding purchase of replacement components.

Paddle Warranty Information

We guarantee Dillenschneider Designs LLC and Bending Branches® paddle components against manufacturing defects for one year from date of purchase. Product damage from defect must have occurred during normal use, as we recommend for that model. To return a defective paddle, you must contact us at DillenschneiderDesigns@outlook.com for a return authorization number. With this RA number and a copy of the sales invoice- paid in full, you may send the paddle back to us for evaluation. If we determine the paddle is defective, we may repair or replace it. This is the extent of our liability under the warranty, and, to the extent allowed by applicable law, we shall not be liable for incidental or consequential damages or injury arising from the use of this product. This warranty does not cover any paddle used for white water, normal wear, or damage caused by apparent misuse or abuse. **TO THE EXTENT ALLOWED BY APPLICABLE LAW, DILLENSCHNEIDER DESIGNS LLC, BRANCHES, LLC, AND THEIR OWNERS, MEMBERS, OFFICERS, DIRECTORS, EMPLOYEES, AGENTS, REPRESENTATIVES AND ALL OTHER ENTITIES OR INDIVIDUALS IN THE CHAIN OF DISTRIBUTION OF THIS PRODUCT DISCLAIM ALL OTHER WARRANTIES, EXPRESS OR IMPLIED (INCLUDING ANY CONDITIONS OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE) WITH REGARD TO THE PRODUCT.**

Happy Paddling!