



STRAITEDGE™ INFLATABLE KAYAK

OWNER'S MANUAL
MODEL AE1006

PATENTED



1 PERSON KAYAK

IMPORTANT!

PLEASE READ THIS MANUAL CAREFULLY BEFORE PROCEEDING. AFTER READING THIS MANUAL, SAVE THESE INSTRUCTIONS FOR FUTURE REFERENCE.



INFLATABLE KAYAKS WITH CUTTING
EDGE TECHNOLOGY

INTRODUCTION

Designed in California, our goal at Advanced Elements is to develop new and unique paddlesports products that enhance our customers' outdoor experience. Our focus is on designing and manufacturing "Inflatable kayaks with cutting edge technology" and providing excellent customer service. We are deep rooted in product development with patented technology, striving to develop inflatable kayaks, iSUPs, and paddlesports accessories that excel in performance, quality, and portability. All of our products have been designed to give paddlers the tools they need at the value that they deserve.

We feel that it is extremely important to make sure that our customers are having the best experience possible. One of the ways we do this is by a passionate focus on customer support. It is the feedback from our customers that has allowed us to excel and continue to grow over the years.

Our offices, near San Francisco California, are not only where we conceive of and design our innovative products, but also where you will find our excellent Customer Service team that is ready to answer any questions you might have about our products and offer premier product support.

We hope to see you someday soon, on the water!

Sincerely,
The Advanced Elements Team



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1. CAUTION - SAFETY WARNING

Users of this product agree by their use to accept the inherent risks involved in this paddlesports activity and agree to follow all instructions, cautions, and warnings carefully before using this Kayak.

(PLEASE READ CAUTION STATEMENT CAREFULLY)

! WARNING

Failure to follow these warnings could cause SEVERE INJURY or DEATH

- **CONSULT WITH A PHYSICIAN** prior to beginning paddlesport training. Paddlesports can be very dangerous and physically demanding.
- **OBTAIN PADDLESORT TRAINING** specific to this type of craft. Do not exceed your paddling ability – be honest with yourself.
- **WEAR U.S. COAST GUARD APPROVED LIFE JACKETS** and, where appropriate, wear a helmet.
- **NEVER PADDLE ALONE.**
- **CHECK WEATHER FORECAST BEFORE DEPARTING DOCK** and heed all weather advisories.
 - **DRESS APPROPRIATELY** for the weather conditions, as cold water and/or cold weather can cause hypothermia.
 - **DO NOT PADDLE IN FLOOD CONDITIONS.**
- **BE AWARE OF THE WATER CONDITIONS**, including appropriate water levels, tidal changes, dangerous currents and other water hazards. Always scout unfamiliar waters and portage where appropriate.
- **NEVER PADDLE WHILE UNDER THE INFLUENCE** of drugs or alcohol.
- **KEEP PROPER LOOKOUT AND SAFE DISTANCE** from other vessels and hazards at all times.
- **OBEY APPLICABLE BOATING LAWS.**
- **READ THE OWNER'S MANUAL** and follow all recommendations for the use of this product. Consult the manufacturer prior to adding aftermarket equipment and never obstruct entry or exit to the craft.



ADVANCED ELEMENTS, INC.

TOLL FREE 866-262-9076

- Not intended for Commercial Use.
- Never use a compressor or compressed air to inflate as it could result in damage or injury.
- Do not transport a fully inflated boat or leave it on the beach. Heat from the sun or an increase in elevation can lead to over-inflation and damage.
- Do not over-inflate, as it can damage the kayak or cause injury.

Please read this entire manual for additional safety information. Please pay close attention to items marked **DANGER, WARNING, CAUTION, IMPORTANT, NOTICE, NEVER, and ALWAYS.**

1.1 Boating Safety



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

! DANGER !	Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury or substantial property damage.
! WARNING	Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury or property damage.
! CAUTION	Indicates a potentially hazardous situation which, if not avoided, may result in property damage.
CAUTION	Used without the safety alert symbol indicates a potentially hazardous situation, which, if not avoided, may result in property damage.
NOTICE	Indicates installation, operation or maintenance information which is important but not hazard-related.

The precautions listed in this manual and on the craft are not all-inclusive. If a procedure, method, tool or part is not specifically recommended, you must satisfy yourself that it is safe for you and others, and that the craft will not be damaged or made unsafe as a result of your decision. REMEMBER - always use common sense when paddling YOUR KAYAK!

2. SPECIFICATION

Dimensions:

Length:	9'8"
Width:	35"
Weight:	34 lbs (15 kg)
Max. Person Capacity:	300 lbs (136 kg)
Max. Persons & Gear Capacity:	300 lbs (136 kg)
Recommended Pressure:	
Main chambers:	2.25 psi (0.16 bar)
Floor chamber:	1.0 psi (0.07 bar)
Bow/Stern air bag:	1.0 psi (0.07 bar)



2.1 Capacity

The person/load capacity is determined by the availability of proper seating on the kayak. Acceptable seating determines the number of passengers, not the overall load capacity.



StraitEdge Kayak Capacity Label

⚠ WARNING: Do not exceed the certified maximum capacities under any circumstances. Overloading will reduce freeboard and increase the likelihood of swamping, especially in heavy seas. Overloading causes handling to become sluggish, making it difficult to react quickly.

2.2 Features

SPECIAL FEATURES:

Hull Design: Built-in Aluminum ribs define the bow and stern and improve tracking.

Versatile: Set-up as Self-bailing in bigger waves, and close ports in calm or cold water.

Easy to Set Up: Pre-assembled at the factory. Simply unfold, inflate, and attach the seat.

Comfortable: High support, adjustable padded seat provides comfort for hours of paddling.

Durable: Heavy-duty PVC Tarpaulin material for extreme puncture resistance.



Bow and Stern Design

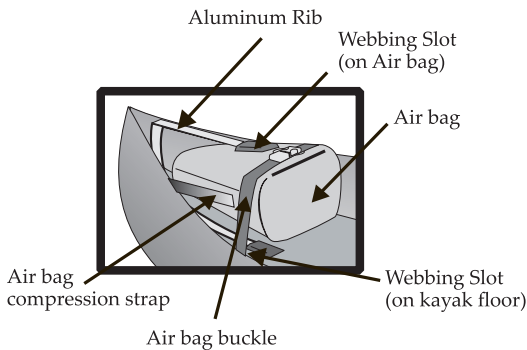
The bow and stern have removable ribs of high grade aluminum. When the chambers are inflated these ribs press against the outer cover and form a high performance bow and stern.

3. ASSEMBLY/INFLATING/DEFLATION INSTRUCTION

The StraitEdge™ Kayak has a rigid frame in the bow and stern that enhances its performance.

3.1 Assembly

1. Insert aluminum Bow rib and the Stern rib into the webbing slots on the StraitEdge™ air bags and webbing slots on the kayak floor, at the bow and stern.



2. Attach air bags to the outer cover by tightening the "air bag compression straps" and buckling the "air bag buckle". Do this while the air bag is deflated. These are preset at the factory and may not require any adjustment.
3. Attach adjustable seat to the StraitEdge™ side tubes by fastening buckles.

3.2 Understanding Your Valves

Advanced Elements StraitEdge™ kayak uses the following valves. The Advanced Elements spring valve has the function and durability of other military type valves and is compatible with most standard pumps. The lock nut holds the valve in place with the cover for easy inflation. The following figures will have details on how to operate the valves.

To Inflate: The valve's plunger stem should be in the up/outward position flush with the valve threading.

To Deflate: The valve's plunger stem should be set in the down/inward position recessed in the valve threading.

In order to switch the valve from inflate to deflate or vice-versa, simply use your finger to press the valve stem down/inward and rotate it a 1/4 turn to either lock it down for deflate, or unlock it (stem will spring up) for inflate.

How the Spring Valve Works:

When the valve is in the inflate (up/outward) position, the air being pumped in pushes the spring-loaded plunger open, allowing air to enter the air chamber, but not letting it escape. When the valve is in the deflate (down/inward) position, the spring loaded plunger is wide open allowing the air to come rushing out of the air chamber. If the valve is in the inflate position, the valve's plunger stem will be flush with the rim of the valve. If the valve is in the deflate position, the valve's plunger stem will be inside, or lower than, the rim of the valve. To change the valve from the inflate position to the deflate position, simply use your finger to press the valve plunger stem down/inward, and give it a 1/4 turn. This will lock the plunger open and allow the air to rush out. Use the same procedure in reverse to unlock the valve plunger, allowing it to spring up into the inflate position.

Special Note: If you are using a 12v inflator, like those that come with most inflatable mattresses or those that plug into car cigarette lighters, you may need to have the valve in the deflate (down/inward) position because these types of pumps typically do not provide enough air pressure to press the plunger open to allow air into the air chamber. Additionally, 12v inflators do not provide enough pressure to fully inflate the kayak, so you will need a secondary pump to finish the job.

Using the NEW "Screw-on" Spring Valve Adaptor:

The screw-on Spring Valve Adaptor was designed to enable the pump hose to securely connect to the Advanced Elements Spring Valve without falling off during inflation, making inflation easier. The valve adaptor also has a semi-circle protrusion that depresses the valve stem, opening the valve slightly to allow pumps with pressure gauges to take a constant reading. When inflating the kayak using the Spring Valve Adaptor, the valve should be in the inflate position.

Special Note: The Spring Valve Adaptor comes with all current Advanced Elements pumps, with the exception of the 12v inflator, and will attach to any Advanced Elements pump that does not have the adaptor already included, with the exception of the 12v inflator. The Spring Valve Adaptor will also attach to some other manufacturer's pumps, but you must check the attachment style at the end of the pump hose to be sure it will fit.

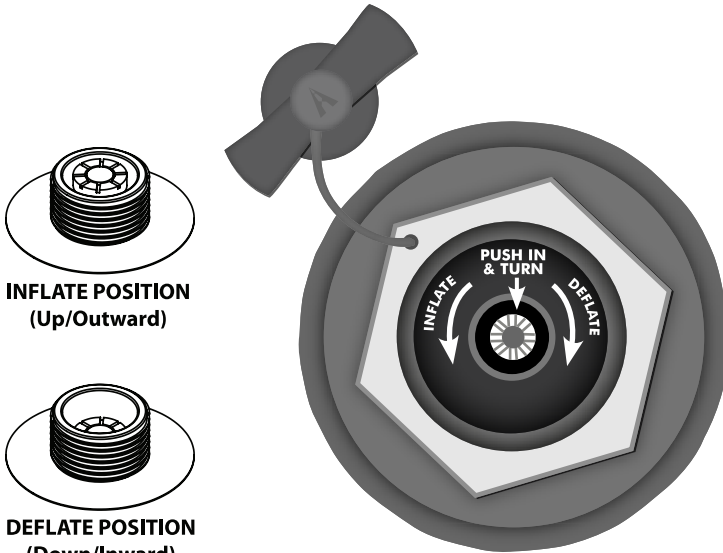


Figure 1. Inflate/Deflate Spring Valve

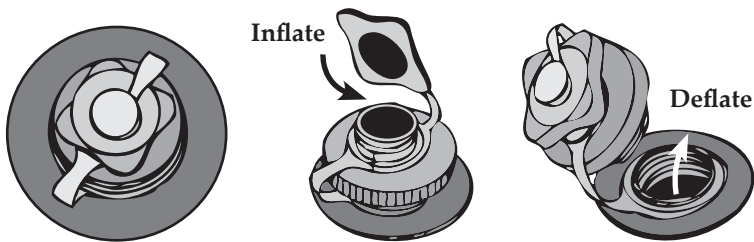


Figure 2. Inflate/Deflate Boston Valve

To begin inflating your kayak, you will need a **Bellows Foot Pump** or a **Double Action Hand Pump**. Never use compressors, CO2 or compressed air as they may damage you kayak.

STRAITEDGE™ 5-AIR CHAMBERS

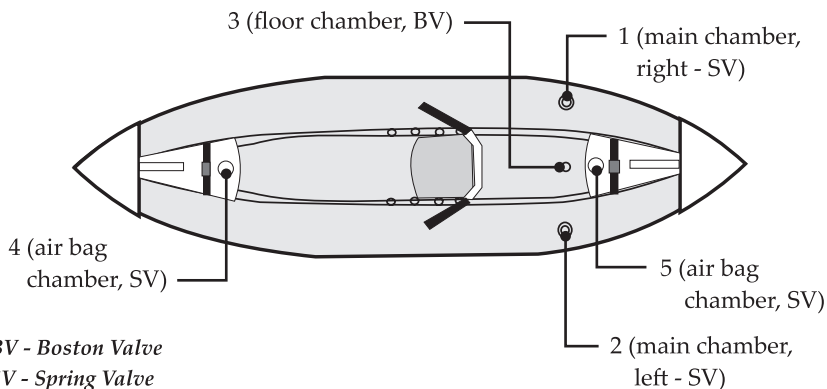


Diagram of Inflation Chambers

3.3 Inflating

IMPORTANT: Before inflating, check to be sure that the kayak is completely assembled. Inflate your kayak in the following order. **Failure to follow these instructions may cause damage to your kayak. Do not over inflate.**

1. Locate chamber 1. Unscrew cap and check that plunger valve is in the inflate position. Inflate Chamber 1 until firm to the touch (2.25 psi **ONLY**).
2. Proceed to chamber 2. Inflate chamber 2 until StraitEdge™ tube is firm to touch (2.25 psi **ONLY**). Close caps on chambers 1 and 2 tightly.
3. Locate chamber 3 “floor.” Make sure valve body is screwed in tightly. Remove small cap (*See Figure 2*) and use appropriate pump nozzle. Inflate chambers until firm (1.0 psi **ONLY**). **Do not over inflate!**
4. Locate Chambers 4 and 5. Inflate Chambers 4 and 5 until firm (1.0 psi **ONLY**).
5. Make sure all valves are closed tightly and properly. Check to be sure the cap tether is not interfering with the valve seating chamber 3.

3.4 Over Inflation

⚠ CAUTION: Water temperature and weather will affect the air pressure of the kayak. In cold weather and water your kayak will lose some pressure. If this occurs, you may want to add a bit more air to the kayak to improve performance. In hot weather or prolonged sunlight, the air inside the kayak will expand. You must let some air out of the appropriate chambers to prevent the kayak from failing due to overpressure. You should avoid exposing your kayak to extreme temperatures (hot or cold).

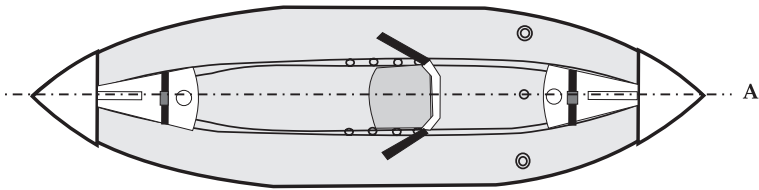
3.5 Deflation

1. Remove the caps from chamber 1, 2, 4 and 5.
2. Push valve stems inward and rotate to deflate position.
3. Unscrew valve body to chamber 3 (See Figure 2).
4. Once the chambers are deflated you can use your pump to vacuum out any additional air to improve folding

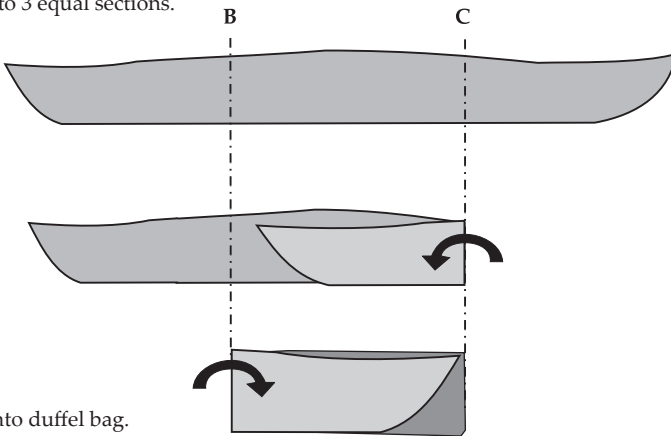
3.6 Folding

NOTICE: Reverse your pump to completely deflate all chambers.

1. Completely deflate all air chambers and thoroughly dry the kayak and remove the seat.
2. Fold in half, down the center, lengthwise.



3. Fold into 3 equal sections.



4. Place into duffel bag.

4. GUIDELINES FOR USAGE

Paddlesports can be very dangerous and physically demanding. The user of this product should understand that participation in paddlesports may involve serious injury or death. Observe the following safety standards whenever using this product. The user of this product acknowledges both an understanding and an assumption of the risk involved in paddlesports.

After you have inflated your kayak and before you put it in the water, inspect your equipment for obvious signs of wear or failure. Review local rules and regulations and read again the "CAUTION" statement.

Most areas have local laws and regulations about the use and equipment of small boats. Usually a phone call to the local authorities will provide you with the needed information. Some areas may require that you register and display a registration number on the front of your kayak. Once you have been issued a number, it is best to affix it to the kayak by printing it on the material with a permanent ink marker. If you are required to display a sticker or vinyl letters, an inflatable boat ID kit can be purchased at most marine stores.

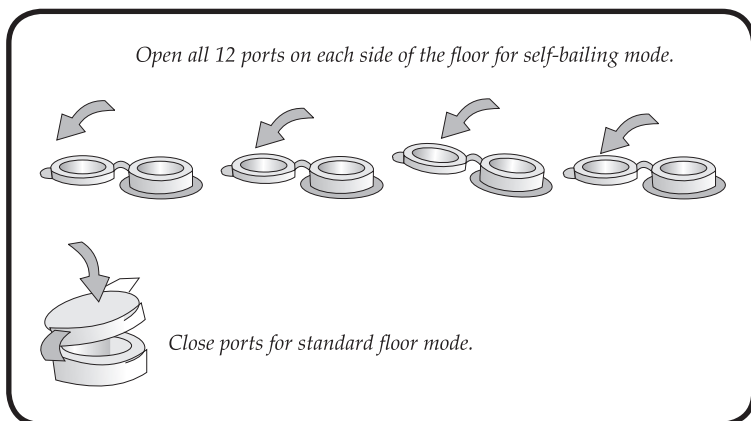
Your kayak is designed to be paddled with a double bladed kayak paddle. Paddle with short and even strokes. Keep the blade close to the kayak and the paddle almost vertical. Pull with your lower hand and push with your upper hand. To reduce the amount of swaying at the front of the kayak, ease off on the force of your stroke. Paddling with a backward stroke can sometimes offer quick maneuverability.

ALWAYS practice safety and take the time to learn about the area where you are paddling. Get official information about the local tides and currents before paddling there. Be careful that you do not over estimate your strength, your endurance or your skill. Be careful never to underestimate weather conditions. Be aware of the dangers before you begin. Be aware of your skill level. Be sure you understand and accept the risk of these dangers. There are many paddling clubs all over the world. These can be a great source of information on places to paddle, people to paddle with and most importantly, continued safety practices.

4.1 To Use As Self-Bailing

The StraitEdge™ can be used as both a self-bailing and non self-bailing kayak. Most self-bailing inflatable kayaks are designed for paddling white water only. They typically have quite a bit of rocker to allow quick turning and other maneuvers. By opening the drain ports you will allow water or waves that spills into the kayak to drain out through the bottom. In calm conditions or on cold days you may wish to close the drain ports to prevent water from entering the kayak at all. The StraitEdge™ incorporates the aluminum bow and stern frame to improve tracking in open water conditions.

To change to a self-bailing kayak, locate the self-bailing ports and remove the caps as shown below.



5. PROPER CARE AND STORAGE

Your inflatable kayak is made of very durable materials. However, like anything else, proper use and care will increase the life of your kayak. Before storing your kayak, make sure it is both **CLEAN** and **DRY**. You may clean your kayak with a mild soap and water. **NEVER** use strong solvents to clean your kayak as they will destroy the material.

NEVER unzip the chamber cover when the kayak is inflated.

Be sure to rinse your kayak with fresh water after every use in salt water and allow it to dry thoroughly before storing. Use a dry towel to wipe up all moisture. It should be deflated and kept out of direct sunlight when stored. Avoid exposure to extreme temperatures (hot or cold). If your boat is exposed to freezing temperatures while storing, allow it to warm up before unfolding.

Do not store your kayak for an extended period of time while wet.

Follow these steps for removing excess water.

1. Unzip the 2 zippers that run down the sides of the kayak.
2. Use a sponge or towel and wipe up any excess water in the outer cover.
3. Wipe off the floor (top and bottom)
4. If there is sand or gravel in the kayak, you can hose out the cover, and then wipe it down with a towel.
5. Most of the time you can wipe out the inside of the kayak absorbing most of the water, then pack it up.

6. REPAIRS

All kayaks come with a repair kit that includes a glueless peel-and-stick patch. For more significant repairs, we include a selection of material patches that can be glued on. Simply acquire a PVC glue at your local marine or outdoor store or contact our Customer Service for assistance via email at info@advancedelements.com or 1-866-262-9076.

6.1 Repairing Small Punctures and Cuts Using the Peel-And-Stick Patch

1. Cut a patch to size (approx. 1/2" larger than the hole or damaged area).
2. Carefully clean the area where patch will be placed with water and/or mild soap.
3. Make sure all surfaces are completely dry before proceeding.
4. Carefully peel back the paper liner on the glueless patch and carefully apply the patch over the hole-taking care to avoid any bubbles in the patch. Rub all edges to seal.
5. As a rule of thumb, the patch will start to cure immediately with approx. immediate adhesion of 50% with full 100% adhesion 24 hours after application.

6.2 Repairing Pinholes

1. Inflate the PVC tube. Locate the pinhole by sponging soapy water over the tube until you see air bubbles. Mark the location of the pinhole.
2. Deflate the tube and dry the affected area. Apply a drop of glue to the pinhole
3. Allow glue to dry completely.
4. Do not inflate the kayak for at least twelve hours.

7. TROUBLESHOOTING

PROBLEM

SOLUTION

Does not hold air while inflating.

The spring valve uses a plunger system. The only time the plunger should be in the open position is when you are deflating. Make sure that the plunger is closed to inflate. Push the plunger in and rotate counter-clockwise.

The kayak is sagging or under inflated.

Be sure that the right pump is being used. You need a bellows foot pump or a double action hand pump. A 12-V electric does not supply enough pressure to fully inflate the kayak. The 12-V can be used to partially inflate the kayak but one of the other pumps is needed to top it off.

The kayak will not hold full pressure for more than a couple of hours.

Make sure that the plunger is in the closed position. It should only be open when deflating. If it is open, the only seal is the black rubber gasket inside the cap. Even then, a little air may still leak out.

Kayak still loses air.

If you have checked all the previous possible reasons for the kayak losing air, then there may be a pinhole or hole somewhere on the tube. Pull tube from outer covers. Inflate. If you cannot see or hear where a leak may be, take a clean rag with soapy water and begin rubbing the tube. If a hole is present, bubbles will continually form. Repair using repair kit. If it is a very small pinhole, a dab of the glue may be sufficient.

The floor bladders are losing air.

Check valve gaskets and make sure that the cap thether (ring that holds the cap to the valve so as not to lose it) is not interfering with the seal. The valves must be closed tightly.

Tube is kinked or bent.

The tube just needs to be adjusted. When kayak is fully deflated try adjusting the position of the tube inside of the outer shell.

The kayak is not self bailing.

The kayak is a self bailing kayak. There are four port holes under each side of the kayak. The port holes have caps so it can be used as a self bailing or a dry kayak. Make sure the caps are off.

There is water in the kayak.

There will almost always be a little water in the kayak. One reason is the water drips off of the paddle and into the kayak. The kayak is a self bailing kayak. There are four port holes under each side of the kayak. The port holes have caps so it can be used as a self bailing or a dry kayak. Make sure the caps are on.

The kayak drifts to one side.

A kayak will always head in the direction of your last stroke. Make sure to check that the air bags in the bow and stern are properly inflated and that the straps are pulled tight. If one of the floor bladders is not completely inflated, this will also cause the kayak to drift.

The kayak does not track well.

Try moving your seat forward a little more. This will allow for better weight distribution and better tracking.

PADDLING NOTES:

It is always a good idea to keep notes of your paddling experiences. Your notes can serve as a reminder of what to look out for, as well as what gear to bring along, and what conditions are like.

DATE	TIME	LOCATION	NOTES

NOTES:

Note: If your state requires the licensing of this boat, please use the form below. If you need any assistance filling out this form, please contact Advanced Elements Customer Service Department.

MANUFACTURER’S STATEMENT OF ORIGIN
FOR A VESSEL SOLD IN THE STATE OF _____

The undersigned manufacturer hereby certifies that the new boat described below, the property of said manufacturer, has been transferred this _____ day of _____, 20____ on

Invoice# _____ to:
Owner’s/Dealer’s Name _____
Address _____
City, State, Zip _____

Model Name _____ Model Year _____ Manufacturer’s Hull Identification# _____
☐ StraitEdge™ Kayak (AE1006) _____ HIN# _____

Type: Kayak _____ Hull Material: PVC/Polyester _____
Length Overall: 9’8” _____ Beam: 35” _____

U. S. Coast Guard Capacity Plate Information (where applicable):
Maximum persons capacity in whole persons: 300 lbs (136 kg)
Maximum weight capacity (persons & gear): 300 lbs (136 kg)

The manufacturer further certifies that this was the first transfer of such new boat and that all information given herein is true and accurate to the best of their knowledge



Signature _____

FIRST ASSIGNMENT

FOR VALUE RECEIVED, in the amount of \$ _____,
the undersigned hereby transfers the Certificate of Origin and the boat described therein
to _____

Address _____
and certifies that the boat is new and has not been registered in this or any other state; Advanced Elements, Inc. also warrants the title of said boat at time of delivery, subject only to the liens and encumbrances as set out below:

Amount of Lien	Date	To whom Due	Address
----------------	------	-------------	---------

_____	_____	_____	_____
Dates _____	20 _____	at _____	_____

By: _____

Transferrer (Firm name) Sign Here _____

Before me personally appeared _____ who by me being duty sworn under oath says the statements set forth above are true and correct. Subscribed and sworn to me before this _____ day of _____, 20_____.

_____, Notary Public _____ Date commission expires _____

(SEAL)

Declaration of Conformity

(according to ISO/IEC Guide 22 and EN 45014)

Manufacturer's Name: Advanced Elements, Inc.

Manufacturer's Address: P.O. Box 5128
Concord, CA 94524

declares, that the product:

Product Name: StraitEdge™ Kayak

Model Number (s): AE1006

to which this declaration relates, **meets the essential health and safety requirements** and is in conformity with the relevant EU Directives listed below:

General Product Safety Directive

using the relevant section of the following EU standards and other normative documents:

EN ISO 6185-1 : 2001

ABYC H-29: 2019

Date: January 1, 2016

A handwritten signature in black ink, appearing to read "gth", followed by a period.

Clay Haller, President

This product complies with European directives for recreational vessels as published by the International Organization for Standardization (ISO).

If you need help or have an issue please call us immediately Toll Free at 866-262-9076.

Please use the Warranty Registration Form at: www.advancedelements.com/warranty to register your Advanced Elements Product.

LIMITED WARRANTY

Advanced Elements, Inc. warrants this product to be free from defects in material or workmanship for a period of one year from the date of purchase. Products that prove to be defective under conditions of normal and proper use during the warranty period because of defective workmanship or faulty material will be replaced or repaired without charge. For warranty service, contact Advanced Elements, Inc.

Advanced Elements, Inc shall inspect all warranty claims and in the event of a defect, repair or replace the defective part or entire item, at its option. The purchaser must, before return of a defective product, obtain from Advanced Elements, Inc, a return authorization number and return center address. Please write or call as listed below. Once an authorization number is obtained, the purchaser must ship the product, POSTAGE PREPAID, to Advanced Elements, Inc for repair. Do not ship to P.O. Box address as it may be sent back.

This warranty does NOT cover:

Products used for rental, for hire or in professionally guided tours and other uses not considered normal recreational purposes; and punctures, cuts and abrasions sustained in normal use; and items involved in accidents; and items damaged in white water mishaps, and other unreasonable uses or improper storage.

Advanced Elements, Inc shall within (30) days from receipt of an authorized return from purchaser, perform its responsibilities in conformance with this warranty.

THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION OF THE FACE HEREOF.
ADVANCED ELEMENTS SHALL NOT BE HELD LIABLE FOR INCIDENTAL AND CONSEQUENTIAL DAMAGES.

THIS WARRANTY IS INCLUSIVE IN LIEU OF ALL OTHER WARRANTIES.

This warranty gives you specific legal rights, and you may also have other rights that vary from state to state.

Advanced Elements, Inc.

P.O. Box 5128, Concord, CA 94524

Toll Free - 866-262-9076 - email info@advancedelements.com - www.advancedelements.com

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**If you would like a catalog of our latest products please
visit our website at
www.advancedelements.com
or call Toll Free 866-262-9076**