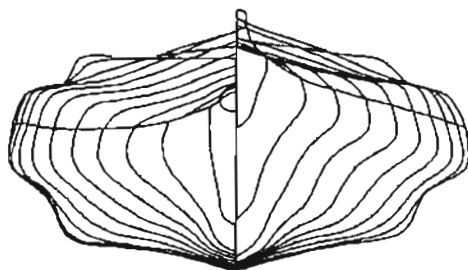


# K-1 Expedition by Feathercraft



Length overall	16' 4 1/2"
Beam	25 7/8"
Volume	15.8 cu. ft.
Cockpit size	16 1/8" x 31 1/4"
Cockpit coaming height	
Forward	12 1/2"
Aft	11 1/4"
Height of seat	3 1/2"
Weight	54 lbs.
Center of buoyancy*	48%

\*With 250-lb load

## Speed vs. Resistance

These figures are derived from mathematical models based on a limited number of towing tests on flat water.

### Kayak weight + 250-lb payload

Resistance in pounds, shown to hundredths to differentiate figures formerly rounded to tenths. A fit paddler can maintain a cruising speed at 3 pounds of drag. Only a few can work against 5 pounds of drag for long distances. See August '98 page 43 for more details.

Calculated by the KATER program by John Winters (factor added for soft plastic hulls when applicable).

2 knots	1.03
3 knots	2.21
4 knots	4.15
4.5 knots	5.76
5 knots	8.07
6 knots	13.71

Calculated by Matt Broze using Taylor Standard Series:

2 knots	1.06
3 knots	2.17
4 knots	4.20
4.5 knots	5.63
5 knots	8.37
6 knots	17.82

## Hydrostatics

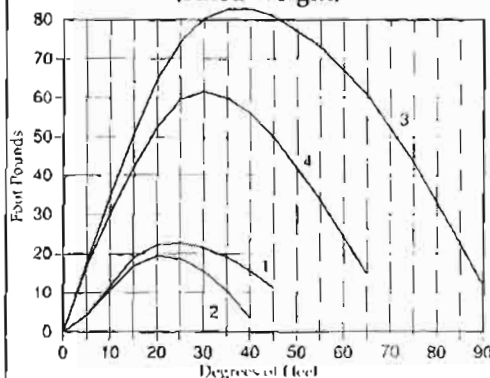
Paddler weight	150 lbs.	200 lbs.	150 lbs.	200 lbs.
Cargo weight*	none	none	100 lbs.	100 lbs.
Waterline length	14' 7.3"	14' 9"	14' 10.4"	14' 11.8"
Waterline beam	21"	22.1"	23.6"	25.0"
Draft	4"	4.6"	5.1"	5.5"
Prismatic coefficient	0.55	0.57	0.58	0.59
Block coefficient	0.37	0.38	0.38	0.38
Wetted surface in sq. ft.	20.13	21.93	23.85	25.65
Lbs./inch immersion	89.8	96.0	103.4	110.4

\*Fixed "paddler" weight has its center of gravity located 10" above the lowest part of the seat and 10" forward

of the seat at back. The "cargo's" center of gravity coincides with the kayak's approximated center of gravity.

Calculated by Nautilus System™ computer program

## Righting/Heeling Moments (Fixed-weight)



Note: The flexibility of the seat and hull fabric will allow the paddler to settle deeper in the kayak, reducing the listed seat height, and increasing the stability plotted here.

## Stability Curves

- 150 lb. paddler, no cargo
- 200 lb. paddler, no cargo
- 150 lb. paddler, 100 lb. cargo
- 200 lb. paddler, 100 lb. cargo

Calculated by Nautilus System™ computer program



Righting Moment      Heeling Moment

The same force that rights a kayak on flat water contributes to its rolling motion on the face of a wave.

## Reading the Stability Curves

The steeper the slope of the curve as it rises from 0°, the higher the initial stability. Beyond the maximum righting moment at the peak of the curve, the kayak enters an unstable region of decreasing stability which does little to slow the rolling of the kayak to the point of imminent capsize.

Note: Raising the center of gravity slightly will decrease the stability of a kayak while lowering it will increase it.

## K-1 Expedition Design Statement

This is our premier, expedition touring single. The K-1 is fast, responsive, and very stable. It is a large-volume single, with a pronounced V-shaped hull for excellent tracking. The upswept bow

makes for a fine water entry. The length-to-beam ratio is well proportioned, enabling the kayak to travel swiftly and smoothly through the most challenging conditions. Hatches at bow and stern make for quick, easy loading. Internal air sponsons tension the skin and ensure

excellent stability.

Take a little, or a lot—plan for two weeks or two months—the choice is yours with the K-1 Expedition.

*Doug Simpson  
President/Designer*

## K-1 Expedition Review

### Reviewers:

**KC:** 5'7", 140-pound female. Day trips in winds to 12 knots, waves to under 1 foot.

**GL:** 5'11", 165-pound male. Day paddling in winds to 15 knots, waves to 2 feet. Empty and with 70-pound load.

**TE:** 6'1", 200-pound male. Day trips in winds to 10 miles per hour. Light chop, boat wakes.

The Feathercraft K-1 is "very good looking—bow to rudder, it's a well-crafted kayak. Welded seams look clean, strong and weathertight" (GL). "The kayak skin stretches tautly on the frame, giving the boat a sleek and seaworthy appearance. The clean looks are a tribute to good design; there are no loose tabs, flopping straps or sharp edges" (KC).

Assembly is "simple. Nothing requires force. Most of the tubes are shock-corded together—you really can't goof up" (GL).

"It is easy to shoulder carry the boat, although the coaming digs into my shoulder a bit. The carry toggles on the ends of the boat are webbing loops securely anchored to the hull" (KC).

The deck lines are "connected by plastic rings and webbing that is sewn into urethane [fabric tabs] that protrude from the seam, so nothing is directly sewn into the hull or deck" (GL). A grab line runs the perimeter of the deck, and there are bungies for gear on the foredeck and straps to hold a spare paddle on the aft deck. KC thought the grab line was stout and well secured, but the bungies aft of the cockpit aren't adequate to provide solid support for a paddle-float outrigger.

The cockpit opening is long and wide and easy to exit and enter (GL). The rim of the coaming is "deep enough to hold the rim of the sea sock and the spray skirt" (KC), both supplied with the boat. The length of the cockpit opening is "just shy of being long enough for me to get in seat first. Inside, there was good foot room for size-12 paddling shoes" (TE).

The fabric-covered padded seat and backrest are comfortable, and can be adjusted by means of the straps securing them to the framework. The inflatable hip supports are easy to adjust with a puff or two of air. While TE found the seat initially comfortable, after paddling for an hour, his legs began to go numb: "The seat is short, and doesn't extend far

enough forward to provide support under the thighs."

Thigh bracing was provided by the coaming. "With my knees tucked up under the coaming, I had a comfortable grip on the kayak and good control for edging the kayak, although not quite enough grip for rolling" (TE).

The rudder pedals are easy to adjust but they "had a fair amount of bounce in them" (TE). For KC, they "were secure and provided a good platform for paddling." The rudder was easy to deploy and retract, and was "without noticeable drag when in use" (GL). "The rudder performed well in holding the boat on course and for turning" (TE).

The K-1's initial and secondary stability are "excellent" (GL). "It is a comfortable boat to sit in. The secondary stability is solid, and provides security while setting the boat on edge" (TE). "I could feel the flexing of the frame following the contour of the water. A nice lively feel to it, and it seemed to keep pounding and slapping to negligible levels" (TE).

With the rudder retracted, the K-1 "responds well to leaning and sweep strokes. It is easy to make small adjustments to your course with a minimum of effort. The turning radius is average for a touring kayak. With the rudder, steering is easy and predictable" (KC). "The tracking was good. There wasn't much yaw to the bow while paddling, and I was not aware of having to keep the boat on course when not using the rudder" (TE).

In the wind, the K-1 was "reasonably well balanced. There was some weathercocking with the rudder up. Holding a beam course required some leaning and paddle correction, enough that I would drop the rudder for a long crossing" (GL). The kayak "tends to flex and ride over waves, rather than punch through them, which creates less splash and a drier ride" (GL).

The K-1's speed was described as "good" (GL) and "fair" (KC). TE could maintain a pace of 4 1/2 knots and sprint for short bursts to 5 knots: "The top end isn't high, but it's fast enough to catch rides on waves. I did catch a few wakes—the K-1 came up to speed nicely and was easy to keep a straight line down the face of the wave."

All of the reviewers were able to roll the K-1. It is "doable, but not easy. It takes extra power to flip the boat over its

beamy sponsons" (GL). "The connection to the boat felt secure enough while upright but, when rolling, I had to concentrate on hip-flicking the boat over on its hull. It felt heavy on top of me, and I had a hard time getting it to fall away from me on the hip snap. On one occasion, the connection between the deck and the coaming parted in the area of my knee. I had to slip the deck back into the coaming slot" (TE).

For reentry, the deck rigging does not provide a solid anchor for a paddle float outrigger, but "the boat's stability makes climbing in easier than expected" (KC), even though the rear deck is rather high. With the sea sock in place, "very little water entered the kayak during the rolling session. A few drops at most" (GL).

"Stowage volume is excellent" (GL), and the boat is "surprisingly easy to pack. I could get fairly big items through the centers of the cross ribs" (KC). There is a small access hatch on the foredeck to help pull items in and out of the bow. The hatch on the aft deck has its opening bisected by one of the frames, so only small bags can be easily packed in the end of the stern (KC). Under the hatch cover, a sleeve attached to the deck rolls down and closes like a dry bag.

With 70 pounds of gear aboard, KC noted that the K-1 sat noticeably lower in the water and had a wetter ride. She felt that the K-1 was overloaded, in spite of the manufacturer's claim of a 385-pound capacity. With the load aboard, turning ability was not affected. GL, with 80 pounds of cargo aboard, noted: "[It's] very stable, it tracks well, and it turns easily, responding well to a lean and a sweep stroke."

"The K-1 is an attractive, beautifully made folding kayak. Its high cruising speed and carrying capacity would make it a top choice for a capable cruising boat that can pack up in a bag for flying to far-flung cruising destinations. The price is steep, but the value is reflected in the high standards of workmanship" (TE). "This is a beautiful boat in a bag. The K-1 is responsive and stable, and it holds a lot of gear. Its portability brings worldwide adventure within reach" (KC). "An expedition boat that carries a lot of stuff and has exceptional features like light weight and a great rudder system" (GL).



## Design Response

Thank you for testing our Feathercraft K-1. We are pleased that your test paddlers enjoyed it. Our welded "sealskin" technology was introduced at the beginning of this year. For over three years we worked on the fabrics, and on the machinery and welding techniques to make a watertight folding skin possible. Response from customers has been fantastic.

For paddle-float rescues, we recommend the following: Slide the paddle blade under the perimeter cord and then

up and under the webbing strap that is attached between the cockpit and the rear hatch. The paddle will be held firmly in place to aid in reentry. However, because the K-1 has ample sponson chambers, we recommend the "cow-boy" self-rescue of straddling the stern and hauling yourself forward. It's fast, and most people find this quite easy, even in rough weather.

We have improved our sea sock. The lip that folds over the coaming is now neoprene, instead of nylon. We have found this to be even drier than our all-

nylon sea sock.

The K-1 has been the kayak of choice of people doing long expeditions all over this wet world. Perhaps the longest one that I know of was a 90-day unsupported solo trip in the Canadian Arctic. The guy lived on fish, instant mashed potatoes and chocolate bars. We've received some wonderful stories about this kayak, and look forward to many more.

*Doug Simpson  
President/Designer*

## Options and Pricing

Redesigned: 2000

**Standard Construction:** Deck: Poly-Tech (420-denier nylon with 4.5-oz. urethane coating). Hull: Duratek (840-denier nylon impregnated and coated with polyurethane) with solid urethane reinforcement strips. Frame: 6061-T6 aluminum/magnesium alloy with high-density polyethylene cross ribs

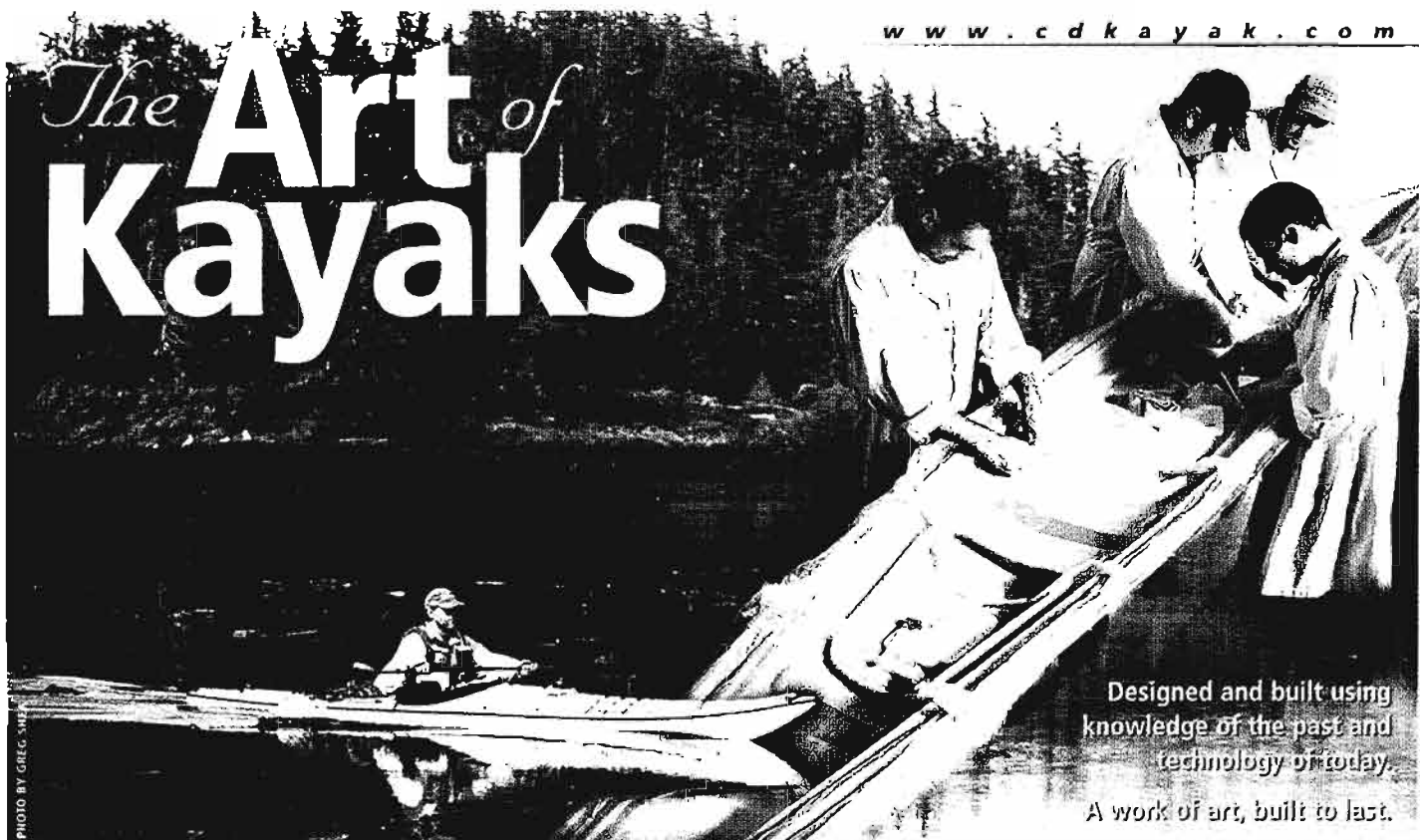
**Standard Features:** Travel-style backpack, spray skirt, sea sock, perimeter deck lines and cross-deck rigging, flip-up surf rudder, repair kit, assembly video and written instructions

**Approximate Weight:** 51 pounds

**Price:** US \$4,125

**Availability:** Call or see the Web site for a list of dealers.

**Manufacturer's Address:** Feathercraft Folding Kayaks Ltd., 4-1244 Cartwright St, Granville Island, Vancouver, B.C. Canada V6H 3R8  
Phone: (604) 681-8437. Fax: (604) 681-7282. Web site: [www.feathercraft.com](http://www.feathercraft.com) E-mail: [info@feathercraft.com](mailto:info@feathercraft.com)



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