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HOW TO

# BUY BOATS IN A BULL MARKET

# BOATING

WORLD'S LARGEST POWERBOAT MAGAZINE

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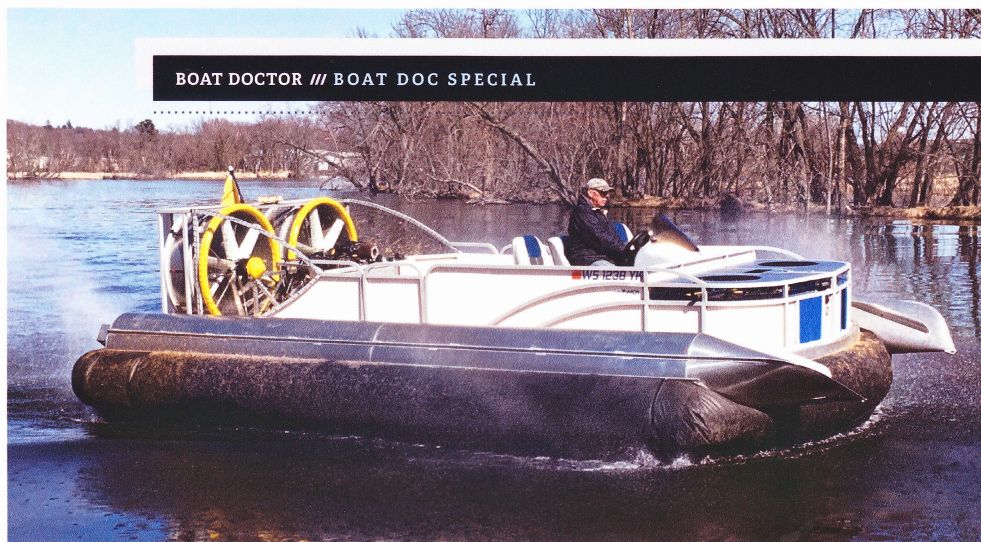
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## CERTIFIED BOAT TESTS

SEA RAY 370 SUNDANCER OB  
BENETEAU FLYER 9 SUNDECK / SCOUT 277 LXF  
COBALT R8 OUTBOARD / HEYDAY H22  
SEAVEE 450Z / CHECKMATE PULSARE 2400 CD





## A BETTER MOUSETRAP

And now for something completely different. The Hovertoont is a brainstorm brought to life by 70-year-old retired electrical engineer Dick Schramer of Berlin, Wisconsin, who thinks his creation solves a key shortcoming of hovercraft typically used in the Snowbelt for ice rescue.

**T**he fire-department hovercraft needs to fit on a flat trailer, but that makes them too small to carry more than a couple of people," Schramer says. "During a recent rescue of four ice fishermen from a floe on Green Bay, it took multiple trips to get them and their gear back to shore. The Hovertoont will fit on a pontoon boat trailer, and has a capacity of about 1,800 pounds and a lot of deck space."

As its name implies, the

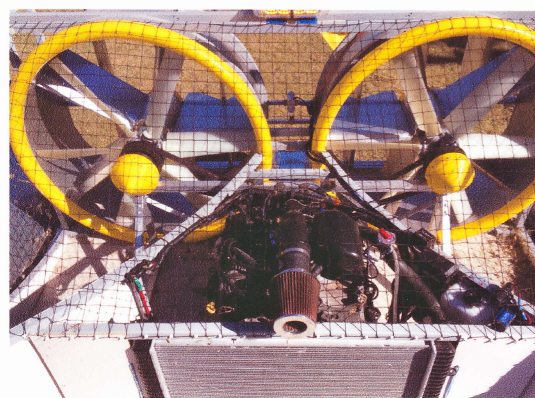
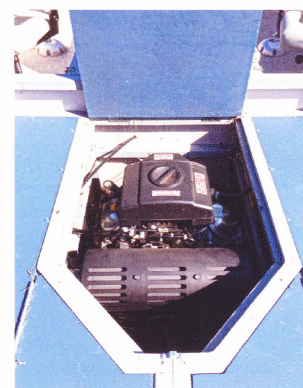
Hovertoont is a hybrid of hovercraft and pontoon. Schramer gave us a demo on his prototype, the product of 12 years and 7,000 hours mostly working alone in a shop behind his house on the banks of Wisconsin's Fox River. Schramer's initial calculations told him that to achieve his capacity goal, he'd need a footprint larger than that of a trailerable pontoon boat. By hinging the pontoons and swinging them up and out, he gained 50 percent more surface area and lowered the deck by about 25 inches, so less air would need to be compressed within the hovercraft's skirts. To test his idea,

Schramer first built a 1/42th scale model with four electric motors and a remote control. When that worked, he patented the design and forged ahead.

The working prototype is 23 feet, 6 inches in length overall, with a beam of 8 feet, 6 inches with the pontoons under the craft, and 13 feet, 6 inches with them folded up. Four linear actuators (electric screw devices) move the pontoons. Four other actuators drop down below the deck to support the craft on a hard surface so the pontoons can be rotated back under the craft. A local canvas shop created the skirts.

**FAN BOY** Inventor Dick Schramer pilots the Hovertoont over Wisconsin's Fox River. Top speed is about 45 mph.

A sheet-metal shop made two 12,000 cfm squirrel-cage fans, belt-driven by a 22 hp Harbor Freight utility motor below the forward deck, to pressurize the skirt and lift the craft. A pair of 42-inch propulsion fans, driven by a 195 hp V-6 engine liberated from a junkyard pickup, make 526 pounds of thrust to push the Hovertoont to about 40 mph. Schramer bought the pontoons but assembled



**A FAN OF TOONS** A utility motor below the foredeck powers lift fans (top), while a junkyard GM V-6 drives twin propulsion fans (bottom).

PHOTOS: CHARLES PLUEDDEMAN





**MODEL CITIZEN** Schramer, the former mayor of Berlin, Wisconsin, used this scale model to prove his Hovertoona idea would work.

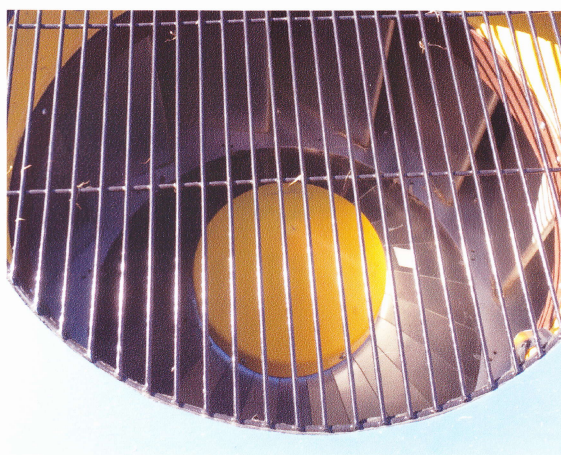
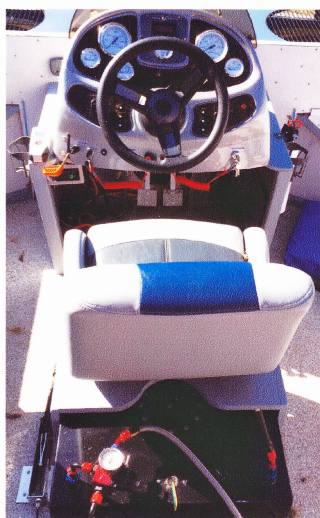
the rest of the boat chassis himself, sometimes from found parts. The inlet vents over the squirrel-cage fans look familiar. "Those are

grates from a Charmglow grill," Schramer says.

"When it was finished, I was a little apprehensive because I'd never

## BUILD YOUR OWN!

So, if you don't count yourself as inventive enough to design and build your own from scratch, Renegade Hovercraft builds and sells a variety of hovercraft at different price and performance levels. For instance, this carbon-fiber Renegade IQ sells for \$32,000. It comes with a gauge package, a USB port, navigation lights and more. It's also available as a kit that requires "basic mechanical knowledge," according to Renegade. Starting at \$17,995; [renegadehovercraft.com](http://renegadehovercraft.com) —Kevin Falvey



**PARTS ARE PARTS** A surplus boat helm and seat sit over a fuel cell (left), and a barbecue gridiron covers the squirrel-cage fan inlet (right).

him glide from land to water and back again. Piloting a hovercraft seems like an exercise in very approximate "point and shoot" navigation, but Schramer drove the Hovertoona right back into his shop after our demo. He's got it figured out.

The prototype weighs about 3,200 pounds, but Schramer thinks a production version could weigh hundreds of pounds less and then carry even more weight. After investing about \$40,000 in materials and the patent process, he's taken the Hovertoona about as far as he can. He'd like to see an investor or boat manufacturer turn it into a finished product. We guess he has another brainstorm to work on. —Charles Plueddeman

PHOTOS: CHARLES PLUEDDEMAN