

Hobie Mirage i12s

A pedal boat even sailors could learn to like.

Aright, we know what you're thinking: A pedal boat in *Practical Sailor*? That's what we thought, too, when Hobie sent us the Mirage i12s in response to our search for an inflatable kayak that could serve as a secondary tender for a cruising sailboat.

Then we took it for a spin.

The 12-foot PVC hull has overlapping glued and welded seams and a slick, abrasion-resistant bottom. The chambers are inflated to a modest 3 to 5 psi (compared to the 6.5 psi for the Walker Bay Airex reviewed in July 2008), which limits stiffness. For the tropics, *PS* prefers Hypalon to PVC, but that would add weight and push the price up. The hull carries a two-year warranty, not enough for an \$1,800 boat (MSRP), in our opinion. Five years would be our minimum.

The stern of the boat has bungee cords and an area for lashing down a dry bag, tackle box, or snorkel gear, but potential for provisioning runs is limited. A compartment in the bow will hold small items. To our chagrin, the space was too small to easily stow the hand pump.

What sets this boat apart is the drive system. This is not your Camp Hiawatha paddle boat.

The Mirage Drive was developed by Hobie's Gregg Ketterman. In the late 1980s, Ketterman helped design Dennis Connor's *Stars and Stripes* catamaran. In the early '90s, he designed and built the foil-boat

Longshot, which went on to set a speed sailing record of 43.55 knots. (On March 30 this year, *Macquarie Innovation* exceeded 50 knots.) Next, Ketterman came up with the Hobie TriFoiler, capable of speeds of 25-plus knots. Hobie stopped making the boat, but it still has a loyal following.

"It has a very narrow wind range," explained Ketterman. "Too little wind, and it is no fun. Too much, and it's scary."

Videos on the Hobie website, www.hobiecat.com/kayaking/, explain the Mirage drive better than words and pictures convey. Essentially, it uses the driver's leg muscles to propel large, fin-shaped blades side-to-side across the bottom of the kayak. As the fins sweep, they flex, so that they repeatedly present positive camber to generate lift, just like a leeward side of a sail or the top of an airplane wing. The complex hydrodynamics and variables at work (degree of fin flex among them) make it nearly impossible to apply a velocity prediction program, according to Ketterman.

During our trial, about 3 knots in flat water seemed to be a leisurely cruising speed. The real advantages of the system over a conventional paddle kayak are many, particularly

for the novice: maintaining a decent clip requires less effort; thrust is impacted less by wave motion; the paddler presents less wind resistance; and your hands remain free for carrying out other tasks (like fishing, holding a drink, or applying sunscreen). Steering is simple: a small dial on the port chamber controls the rudder. In shallow water, the blades fold up against the hull by pushing one pedal all the way forward.

The major drawbacks? You can't pedal backward or in shallow water (a clip-on paddle is included to handle these chores), and the chain-driven blades require more care and maintenance than a paddle.

A sail is an option, although the rig our Hobie dealer provided lacked the essential stays for a proper test. When under sail, both drive foils can be put down to act like a centerboard. For more power, Hobie offers Turbo fins, which we recommend.

Size could be a problem. The boat is meant to pack into a rolling 36x24x15-inch bag (with wheels too small for wooden docks, but fine for airports) and weighs about 75 pounds including everything. A double hernia was the only real obstacle to stowing the boat beneath the cockpit of our 1974 Catalina 22, *Jelly*. (The pop-top paid off.) Hobie recently introduced a more compact 9-footer. For couples and families, there is also a 14-foot tandem boat available.

Bottom line: The Hobie Mirage i12s adds a new dimension to cruising, particularly for the avid fisherman. Some hull details could be better executed, and we would like a Hypalon option, but you can't have everything. If weight and price are chief concerns, Walker Bay's Airex line is still in the game. ▲



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Shore-power Protection

ShIP helps prevent onboard electrical fires.



With the increased demand to have all the electrically powered comforts of home onboard, it should come as no surprise to boaters that the majority of AC-related electrical fires involve overheated shore-power plugs and receptacles. Prime Technology, aims to change all that with the introduction of its Shore Power Inlet Protector (ShIP for short), a monitoring and alarm device that automatically disconnects AC shore power when excessive heat is detected at the power inlet connector. We reviewed the ShIP 110 designed for use with a 110-volt, 30-amp system. The company also offers a similar unit (the ShIP 220) for use with 220-volt, 50-amp service.

Charred plugs and receptacles are the result of resistance build-up (due to loose or corroded connections), which generates heat and the potential for fire, a problem especially prevalent among vessels that continually run high energy loads such as water heaters and air-conditioning units. In addition to monitoring the temperature of your vessel's shore-power inlet plug and its wiring, the ShIP system automatically disconnects AC shore power when an unsafe temperature is detected, providing visual and audible alarms. (The audible alarm shuts down after five minutes to avoid prolonged disturbance to surrounding boats.)

Other features include a reverse polarity indicator light, built-in self-tester, and a contact closure interface that can be used to trigger an external device, such as those programmed to initiate a phone call or send an e-mail in the event of a triggered alarm.

The weather-resistant enclosure is constructed of a non-corrosive composite material, measures 7.5x11x5.5 inches, and weighs approximately 5 pounds. It's designed to be bulkhead-mounted in the vertical position and inserted in the AC wiring at some



Once discoloration is visible at the plug face (left) or shoreside socket (right), you'll typically find more damage inside. If left uncorrected, this could create further damage to the system and even lead to a fire.

Keep an Eye On Your Connections

A basic inspection of AC shore-power cords, plugs, and connectors is well within the ability of any sailor, and it allows you to spot potential problems before they worsen. To check the shore-power setup:

- **Secure AC power to avoid accidental shock hazards.** Turn off your boat's main AC breaker, the shore pedestal breaker, unplug the shore-power cord, and shut down generators and all DC-to-AC inverters that may be onboard.
- **Inspect the shore-power cord.** Ensure that it's constructed of proper marine-grade components, uses appropriately sized wiring, and is the shortest cord that will get the job done (use of undersized wiring or excessively long cords can be causes of excessive resistance). Replace cords that show signs of chafe, cracks, split insulation, or those with electrical-tape repairs.
- **Plugs and connectors.** These should be checked each time you disconnect shore power or monthly, at a minimum. Look for discoloration or corrosion on or around pins and plug inlets.
- **Check the "feel" of the connection when plugging in.** Those that feel loose or don't seem to be making firm mechanical contact likely won't provide good electrical contact. Avoid using worn or damaged pedestal plugs and report them to marina personnel.
- **Good resources for more information:** The National Fire Prevention Association Standard 303 and the American Boat and Yacht Council's Standard E-11.

point between the shore-power inlet connector and main breaker panel. Other installation considerations would be its large size and the fact that the ShIP units are not ignition protected, meaning they can't be installed near flammable liquids (such as the engine compartment of a gasoline-powered boat). The ShIP 110 is not UL listed, though it claims compliance with all applicable American Boat and Yacht Council standards.

Bottom line. Our testers liked the concept of the ShIP 110 unit and found the construction quality to be excellent. However, the \$1,150 price is steep. We're keeping our eyes out for a smaller, less expensive solution geared toward the average sailor. ▲

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