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## **Signal Mate** Sound and light controller automates safety at sea.

ollision avoidance and the conduct of a vessel in restricted visibility isn't solely the concern of commercial mariners. Small-craft sailors must legally adhere to rules of the road, and one of the most neglected areas of compliance is signaling in restricted visibility. This is why we became interested in Signal Mate and its approach to automating sound and light signaling, a big plus for short-handed sailors. The company's consolemount controller and its portable emergency signaling kit offer great capability and quite a bit more.

The easy-to-operate push-button console actuates digital switching circuitry that controls light, and sound signals are pre-programmed to indicate anchoring and making way in low visibility, as well as designating emergency and distress situations. There's also a capacity to manually control the signaling process, and to select sound, light, or both as signaling options. The unit can connect to the boat horn or other audible device or can be wired to a mast-mounted maneuvering light.

The console comes with a stainless-steel bracket, and the unit's weather-proofing allows it to be mounted in a variety of locations. A self-contained kit version of the Signal Mate console includes, in addition to the above-mentioned controller, an orange nylon zip case that contains a sealed, rechargeable 12-volt DC AGM battery, a

106-decibel horn, and a bright LED maneuvering light connected to 16-foot cables. This mini setup can be temporarily affixed on deck in a number of locations, or the light and horn can be attached higher in the rigging.

During our testing, we found that the small LED maneuvering light was bright and exceeded the range for navigation lights on vessels under 65 feet. Its reflector concentrates light on the horizontal plane, so a conventional strobe likely will be more visible to search-and-rescue aircraft when overhead, something to keep in mind should you plan to use it as an emergency signal.

Retailing at \$299, the consoleonly version (without battery pack) can be wired into existing light and sound equipment providing automated signaling. The all-in-one portable device sells for \$499 and can be easily placed in the bow as an automatic sound-signaling device. When the light is used as a maneuvering signal, it's wise to elevate it well above the crew, because it kills night vision.

Not everyone will rank the Signal Mate as essential, but it does provide valuable functions that are required. By automating the process, a short-handed crew can continue to cope with other watchkeeping duties and vessel handling

Signal Mate portable kit tasks. If you just want an automatic foghorn, some of the high-end VHF radios offer more basic signaling for about the same price.

**CONTACT SIGNAL MATE,** 410/675-4901 www.kimberlitemanufacturing.com

#### **CHANDLERY**

*Technical editor Ralph Naranjo suits up in the Gill drysuit before plunging into the icy Chesapeake Bay.* 

of movement. It's made of multiple

thin layers, and

in some cases. a

breathable fab-

ric. The drvsuit

allows the user to dress like a

with wicking

close to the skin,

followed by lay-

ers of fleece.

hollow fill, or

other high-tech insulating lay-

ers. Hands are

uncovered, but

a wide range of

glove options

are available

undergarments (*PS*, January 2006)

mountaineer.

# Early Bird Needs the Warmth

# Gear for those sailors looking to jump-start the sailing season.

CONCH CRUISER

**S** pring arrives in the minds of many sailors as soon as the ice has been carried out to sea. It's often the time when the breeze is consistent and only the temperature stands in the way of great sailing. Hypothermia is a concern, but the latest wetsuits, semi-drysuits, and full drysuits can add both comfort and safety to an early start.

The new drysuit technology is a quantum leap forward in both comfort and thermal efficiency. Unlike a wetsuit, which traps and warms a thin layer of water next to the skin, the drysuit keeps all water out. The drysuit is not a survival suit. (See story, facing page.) It allows more freedom (see *PS*, September and November 2008), allowing a sailor to keep warm and still maintain dexterity. Many drysuits incorporate sealed booties that accommodate sock-covered feet. Deck boots or other footwear can be worn over the sealed socks, insuring that the toes stay toasty warm.

The semi-dry option is a high-tech wetsuit with some drysuit features. Neck and zipper seals and a unique top entry keep the chest and upper arm area of the neoprene suit dry. Legs and lower arms are warmed in wetsuit fashion by trapping a layer of water between the skin and the neoprene. Thicker material and hightech insulation like Neil Pryde's

Zirconium yarn liner add warmth, and the combined effect delivers a suit that's both warm and flexible to wear. Wetsuits and semi-drysuits are often designated with numerals separated by a back slash. The first refers to the millimeter thickness of the torso portion of the suit and the second designation is the material thickness covering the extremities.

#### **HOW WE TESTED**

*PS* looked at this technology from three perspectives: high-speed "wet boat" sailors with a passion for small, fast boats or boards; dinghy sailors who endure plenty of spray, but only occasionally end up swimming; and keel boat sailors who are looking for an alternative to foul-weather gear in cold and wet conditions.

The factors *PS* ranked were relative warmth and comfort based upon the feedback from users who tried out each piece of gear. We also rated dexterity, based upon the wearer's ability to carry out the various sailing tasks. All of the suits inhibited movement to varying degrees, so testers also tried to quantify how easy it was to carry out onboard tasks while wearing the suit. Testers also tracked how long they could wear the suit before they became cold or uncomfortable.

#### **QUIKSILVER CELL 3/2**

This 3/2 conventional wetsuit is a big boost to human thermal efficiency, and it gives the active dinghy sailor added incentive to launch on breezier days, when capsize is anything but a welcome chance to cool off. The suit works well with a PFD and a trapeze harness, and affords the agility sailors welcome both in and out of the water. It's the least thermal efficient of the suits we tested, but it was easy to pull on and off.

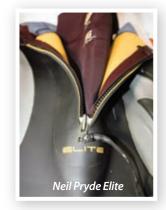
**Bottom line:** The suit is ideal for dinghy or board sailers to use dur-

The Quiksilver wetsuit will fit the needs of multi-sport waterbugs who aim for as much time on the water as possible.

ing the few weeks before the water and air warm up to shorts and Tshirt conditions, and likewise it will extend fall sailing conditions by a couple of weeks.

#### **NEIL PRYDE ELITE II**

This suit defines the cutting edge of neoprene technology, and its heavi-



er but supple 5/3 construction adds significant insulation without giving up any ease of movement. A favorite among windsurfers and kiteboarders, the Elite II was

well-received by dinghy sailors and even scored a surprising hit

among keel-boat sailors dissatisfied with conventional foul-weather gear in cold and wet conditions. The outer shell material sheds water extremely well, and the soft neck keeps it comfortable. It proved to be much more versatile than a conventional wet suit, and because the torso area remains dry, it can be worn longer in comfort.



Bottom line: Eventually, hours spent living in non-breathable garments takes its toll, but anyone who regularly endures blasts of wave, rain, or spray will find this suit to be a good investment.

#### **DOUGLAS GILL DRYSUIT**

To our dismay, we're seeing more frostbite sailing gear that is all style and no substance, leaving the spectator to wonder if this is a sport or a fashion show. Gill's front-zipper breathable drysuit turned out to be a pleasant surprise. Three layers of breathable material deliver comfort, flexibility, and excellent durability. The neoprene "glideskin" neck and wrists eliminate rash that was inevitable with old technology. From the tough outer skin and strategically placed patch reinforcements to the carefully taped seams, this suit is waterproof and winter-ready. The elastic waist and internal suspenders hold the suit in place, even when the wear is bending, ducking or twisting.

**Bottom line:** Targeted toward dinghy and sport boat sailors, the Gill drysuit also impressed the keelboaters, who liked the combination of improved breathability and extreme water protection.

#### CONCLUSION

Only after some time in the suits, did testers get a clear impression of their distinctions. The Quiksilver wetsuit prompted the "I need a shower" feeling sooner, that moment when you yearn for a fire and a big cup of hot cocoa. It nevertheless appealed to the super active board or small boat sailers, whose physical exertion kept them warmer. Dry suits, especially the breathable types, fared much better in this regard, as wearers remained more comfortable and content for longer periods.

While each suit has its niche, the Gill drysuit scored the highest marks overall for its warmth, comfort, and versatility. "Rugged and watertight" were unanimous tester comments, even after an immersion test in water just above freezing. It is well suited for a variety of sailors—not just college kids tacking around ice flows at the February start of their sailing season.

#### CONTACTS

GILL 678/730-5586, www.gillna.com NEIL PRYDE www.neilpryde.com QUIKSILVER 800/435-9917, www.quiksilver.com



The Mustang Ocean Commander offers a better seal at the hood.

### Dry Suits as Safety Items?

o see how a dry suit augmented with a neoprene hood, wetsuit gloves, and a PFD compared with the survival suits we reviewed in July 2007, PS testers plunged into the icy, 35-degree waters of Chesapeake Bay while wearing the Gill dry suit. Although by no means a direct substitute for a survival suit in extreme conditions, the ensemble can be very useful aboard a boat that cruises or races in higher latitudes. And because a drysuit can serve many other purposes, even cold-climate cruisers on tight budgets might consider it a cost-effective way to improve safety at sea.

The same logic that leads us to switch to storm sails when conditions deteriorate should apply to clothing as well. In many respects, a drysuit offers a better choice than foul-weather gear for extreme conditions. Cold and wet crew suffer fatigue sooner, and a well-made drysuit keeps the body drier and warmer than conventional foul weather gear.

In a capsize or crew overboard incident, a dry suit will improve the odds of survival by keeping the wearer warm and dry in the water. Like foulweather gear, it can be worn comfortably with a Type III or inflatable PFD over the suit.

**Bottom line:** If a survival suit doesn't fit into your priorities, those sailing in colder waters should take a serious look at the drysuit option.