

Marine Compass— Essential Equipment On The Water

In the marine environment the compass is an essential piece of support equipment, even for the average weekend boater or angler.

A low-hanging fog can roll in; dusk can descend quickly on anglers intent on catching that last fish; a wrong turn in unfamiliar waterways can be disorienting, as shorelines begin to look the same.

If you boat or fish offshore on coastal waters, the situation can definitely be threatening, and a compass is an absolute necessity.

What To Look For

Critical characteristics of any compass are: degree of accuracy, dampening capability, built-in compensation, type of mounting and ability to adjust to pitch and roll.

Depending on its features, a marine compass can vary in price from under \$30 to several hundred dollars.

When selecting a compass, first determine how and where you will use it.

For fishing and boating on inland waters, experts recommend a basic compass. The boater or fisherman who frequents coastal waters will want accurate readings to two degrees and a large card for easier reading from the helm.

Degree Of Accuracy

Compass accuracy depends on a number of features that together achieve a high level of precision: the magnet, the pivot assembly, the dampening fluid, the compensating system and the manufacturer's quality control process.

Accuracy should be your first priority. Experts recommend a simple rule to follow: for small inland waterways, a compass that is accurate within five degrees is adequate. For coastal waters, accuracy within two degrees may mean the difference between finding, or not finding, a location.

Dampening Capability

Dampening capability is the compass's ability to resist oscillating when the boat is moving. The dial on some compasses tends to spin when exposed to vibration, which makes it very difficult to maintain accurate headings while moving.

Several features contribute to

dampening capability, including the pivot assembly and the fluid in the capsule. Some manufacturers use a proprietary clear oil in their capsule fluid, which will not expand in extreme temperatures, will not create bubbles or turn yellow over time, and which helps maintain a proper reading at all times.

In general, a well-dampened compass should come to rest in about three to five seconds after being moved.

Built-In Compensation

Because boats are made with at least some iron-bearing metals, and have radios or radar equipment on board that cause electromagnetic interference, compasses need to be adjusted, or compensated for a correct reading.

Once mounted, the compass can be compensated by a set of internal magnets that are adjusted from the outside.

Many boaters compensate their compasses once a year when they remove it from storage. No matter how good or expensive the compass is, periodic verification of proper heading and true reading is recommended.

Mounting

Mounting features are very important when buying a compass. The mounting relates to the ability of a compass to adjust to pitch and roll, or listing, and still maintain accurate readings.

Motorboats tend to pitch and roll continuously, when contributes to the compass vibrations. For these situations, experts recommend an internally gimballed mounting, because it allows the pivot assembly and the lubber lines (the compass sighting lines) inside the capsule to "float." This, in conjunction with the dampening fluid, provides for a much more efficient dampening system.

The majority of compasses are available with either a flush or bracket mount. A flush-mount compass is permanently mounted in the dashboard, and only the capsule and optional sunshade are exposed. With a bracket mount, the whole unit is exposed and can be removed to prevent theft.

When mounting the compass, it



CREWMEMBERS and anglers get ready to depart Holden Beach on a charter fishing trip. STAFF PHOTO BY ERIC CARLSON

is important that the lubber line on the compass is parallel to, or directly in line with, the keel, so when the compass points north, the boat is also pointing north.

Mount the compass away from iron or steel to avoid electromag-

netic interference, and in an area visible from the helm.

Compass Card

The ability to read the compass relates to the size of the card or dial. To a lesser degree, it is also affected by glare from the sun, or low light

conditions, which is corrected with optional sunshade or light features.

Whether you choose a direct-read or flat card, it is important that the dial be large enough to read accurately, and is visible from the helm.

Anchoring Techniques To Increase Holding Power

Few things on the water are as frustrating as when your anchor isn't holding and you begin drifting off your spot.

Most fishermen think the solution is a heavier anchor. While that may help to keep your place, a heavier anchor is harder to handle and stow, making it a poor choice.

Three other factors are far more important for holding power: (1) Having the right kind of anchor for your boat and the waterway bottom; (2) Having enough line for the water depth; and (3) Knowing how to deploy

the anchor so it holds fast in any wind or wave condition.

Design Counts

All anchors are designed to tip over, or "upset," and dig in to the bottom and hold. They are intended for soft bottoms made of sand, silt or gravel, have flukes which dig in and resist sideways movement. Common examples include the Danforth, the Navy, the Mushroom and the Crab Claw.

Let Out Line

Anchor anchor can hold more effectively if you let out enough line. With more line, the

pull on the anchor becomes more horizontal, and the anchor digs in and holds. When done correctly, any anchor's resistance will be many times its actual weight.

A general rule is to let out three to five feet of line for every foot of water depth. If you're anchoring in 20 feet of water, you should let out 60 to 100 feet of line to prevent drifting.

Don't Just Drop It

To anchor on a reef on a windy day, motor about 100 feet upwind of the reef, lower

the anchor to the bottom and play out the line until you drift back over the reef. Let the boat take a strain on the line, and you should feel the anchor dig in and hold. A second, smaller anchor off the back of the boat will keep the boat from swinging as the wind oscillates left and right.

To retrieve an anchor, motor slowly toward the anchor as you pull in line. Cut the power when you are directly over the anchor and then left it off the bottom. When done like this, retrieving the anchor involves a minimum of effort.