

Seaduced Watercraft Adventures

Powerboat Training Guide

Basic chart reading

- Check the chart's scale to determine the ratio of inches to inches, feet to feet, or miles to miles. A scale of 1:20,000" means 1 inch on the chart equals 20,000 inches in reality for smaller scale water body. For larger bodies of water, a typical ratio is 1:80,000 mile scale indicates that 1 inch is equivalent to 80,000 inches, or 6,667 feet--a little over one nautical mile.
- Find the water's depth by locating the printed numbers on the chart for the areas being navigated. A number ten may indicate either ten feet, ten fathoms, or ten meters depending on the unit of measure used to generate the chart, which will be noted on the chart.
- If a coastal chart, look for bridges, towns, roads that can help you put the chart in perspective. Find the Intracoastal Waterway if it in your charts area.
- Check out the contour lines that indicate depth changes. These lines are similar to the lines on a topographical map indicating changes in geographical height. Look for lit and un-lit navigation markers.
- Locate the chart's "symbols and abbreviations" legend describing what natural and man made attributes are present in the waterway, including obstacles be avoided and aids that will help with navigation. Charts are useful for navigating anchorages and channels, where underwater obstacles and rip tides present challenges to navigation.
- The chart's compass rose indicates true north and magnetic north for the waterway it represents. The magnetic north indicator is marked in degrees--0 to 360 degrees--like the magnetic compass most navigators use.
- Plot a course with the pencil and parallel ruler, using it to draw straight lines around any obstacles or navigational aids. For each straight line, walk the ruler to the nearest star rose, place the edge through the center, and read the course direction in degrees and seconds. While traveling on the waters, compare what's on the chart to what is in the water to be sure the boat is staying on course.

Important tips:

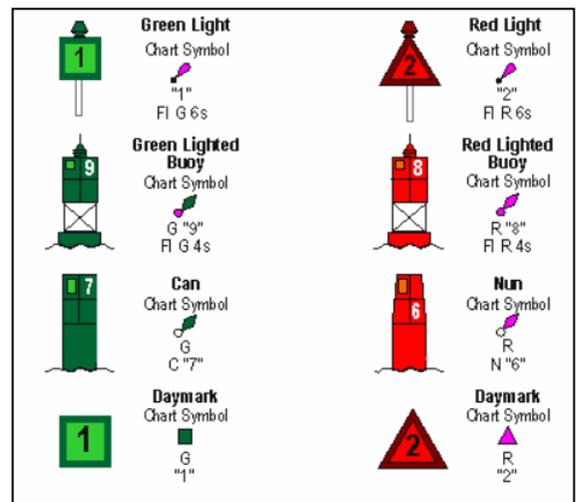
- Study your chart thoroughly.
- Red Markers are normally triangles and are odd numbered
- Green Markers are normally square/rectangles and are even numbered
- Marker numbers are in quotes.

Example: *F/R 2.5s 16ft 3M "56"*



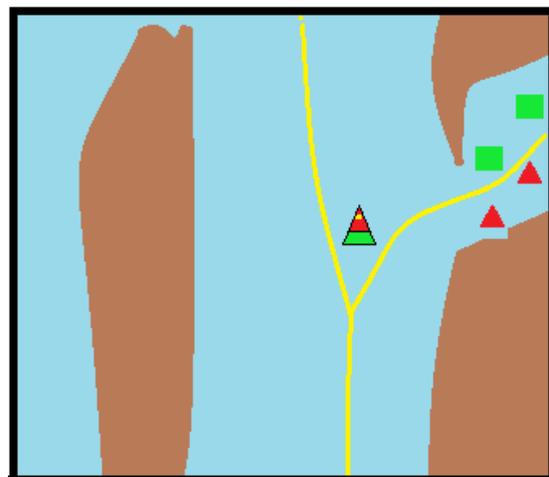
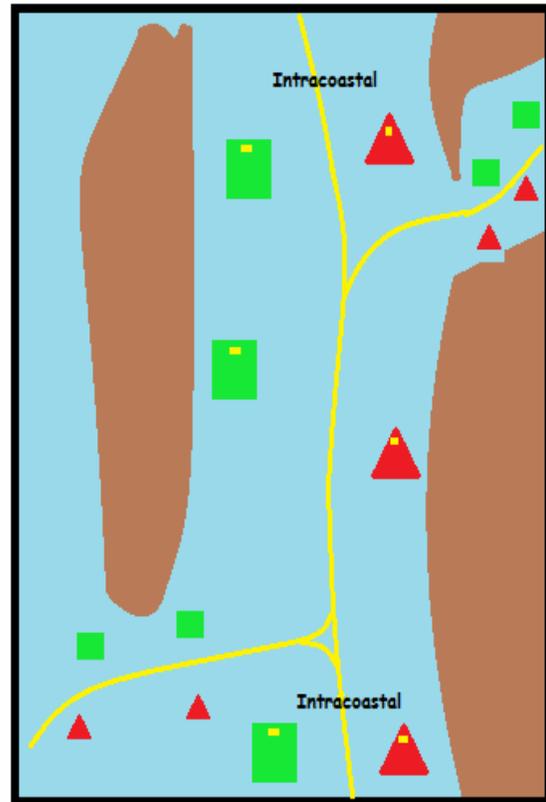
- Flashing Red Marker that flashes every 2.5 Seconds, sits 16 feet tall at average tide, is visible within 3 miles and has the number 58 printed on it.
- Example: "9" A unlit green marker with the number 9 printed on it. (odd number markers are green and square, even red and triangle)
- Markers are normally on pilings but can also be floating "cans"
- Look at the position from which you will start and visually follow along the course you wish to take.
- Look for "notes" - water depths, obstructions (especially under water), bridges, power lines or any other unusual items that may be a hazard to your progress.
- Make a note of each of these on a separate piece of paper.
- Make note of all buoys and markers you may pass in the order they will appear. This will give you a documented picture of your route and what you should expect to see without having to continually try to find a small marker on the chart.
- Look for visual objects featured on your chart that you should be able to observe and identify to confirm your position.
- NOT ALL MARKERS COME IN PAIRS!

Notes:



Three navigational marker rules

- On the intracoastal waterway
 - Red markers stay between the mainland and the channel
 - Intracoastal markers will have gold colored stickers on them in most conditions.
 - Green markers stay between deep water and the channel
 - On the Gulf side, green markers are on the Gulf side
 - On the Atlantic side, green markers are on the Atlantic side.
- In sub-channels, non-intracoastal channels there is a 2nd rule to follow.
 - Red markers are to your right as you return (from open water, to a marina, to a bay, to a river). Left as you leave (To open water, to a marina, to a bay, to a river)
- A marker that has both red and green is a preferred channel marker or split in the road.



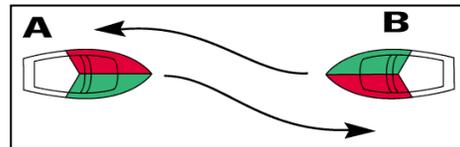
Notes

Right-of-way rules

1. Not under command - a vessel which, for whatever reason, cannot control where it goes.
2. Restricted in ability to maneuver - a vessel which, because of the tasks it is doing, cannot change direction or speed easily, or at all. Boat towing another boat.
3. Constrained by draft - a vessel which must stay away from shallower water to avoid running aground.
4. Vessel which is fishing or trawling (but not trolling).
5. Sailboat under sail or a boat being paddled or rowed - though as soon as the sailboat uses an engine for power it must follow the same rules as a power boat, whether or not it has sails up.
6. Power vessels not restricted in maneuverability.
7. Seaplanes

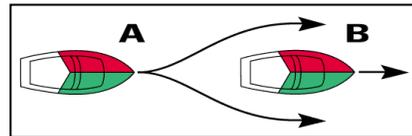
Meeting situations

- Vessels should generally meet and pass port to port.
- At least one of the vessels should signal its intentions
- The vessel with the right-of-way must maintain its course and speed until the other vessel is clear.



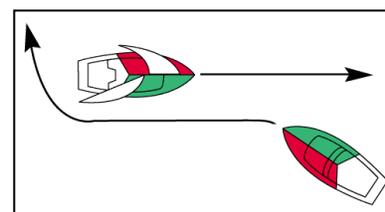
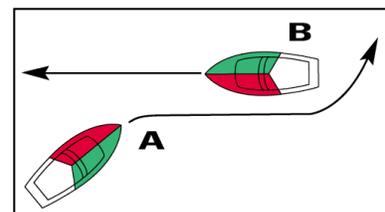
Overtaking situations

- The vessel being passed has the right-of-way.
- The vessel being passed must hold its course and speed.
- Passing vessels should signal their intentions (see below).
- The vessel with the right-of-way must maintain its course and speed until the other vessel is clear.



Crossing situations

- Generally, the boat approaching from your right has the right-of-way. However, vessels restricted in maneuverability have the right-of-way over sailing vessels, and sailing vessels have the right-of-way over power vessels that are not restricted in maneuverability.



U.S. COAST GUARD MINIMUM REQUIREMENTS FOR RECREATIONAL BOATS

EQUIPMENT	Boats less than 16ft/4.9m	16 to less than 26 ft/7.9m	26 to less than 40 ft/12.2m	40 to not more than 65 ft/19.8m
Personal Flotation Devices (PFDs)	One approved Type I, II, III or V.	One approved Type I, II or III PFD for each person on board or being towed on water skis, etc.; and one throwable Type IV device		
Bell, Whistle	Every vessel less than 65.6 ft. (20 meters) in length must carry an efficient sound producing device.	On Federally controlled waters, every vessel 65.6 ft. (20 meters) or larger in length must carry a whistle and a bell. They must be audible for 1 nautical mile.		
Visual Distress Signals	Required to carry approved visual distress signals for night-time use.	Must carry approved visual distress signals for both daytime and night-time use.		
Fire Extinguisher (Must be Coast Guard approved)	One B-I type approved hand portable fire extinguisher	Two B-I type OR one B-II type approved portable fire extinguishers.	Three B-I type OR one B-I type PLUS one B-II type approved portable fire extinguishers.	
Ventilation (Boats built on or after 8/1/80)	At least two ventilation ducts capable of efficiently ventilating every closed compartment that contains a gasoline engine and/or tank, except those having permanently installed tanks that vent outside of the boat and which contain no unprotected electrical devices. Engine compartments containing a gasoline engine with a cranking motor are additionally required to contain power operated exhaust blowers that can be controlled from the instrument panel.			
Ventilation (Boats built before 8/1/80)	At least two ventilation ducts fitted with cowls (or their equivalent) for the purpose of efficiently and properly ventilating the bilges of every closed engine and fuel tank compartment using gasoline as fuel or other fuels having a flashpoint of 110 degrees or less. Applies to boats constructed or decked over after April 25, 1940.			

State Law: Any vessel that has population must have state vessel numbers on the port side.
Keep a copy of your boat registration on-board.

PFDs must be in good condition with no torn seams and straps in good shape

Teach your kids by example, wear type V at all times

Have all people put PFDs on in rough water or weather

79% of drowned victims were not wearing PFDs in 2011

The real scoop on PFDs



Type I - Offshore Lifejacket

This PFD is designed for extended survival in rough, open water. It usually will turn an unconscious person face up and has over 22 pounds of buoyancy. This is the best PFD to keep you afloat in remote regions where rescue may be slow in coming.



Type II - Near Shore Buoyant Vest

This "classic" PFD comes in several sizes for adults and children and is for calm inland water where there is chance of fast rescue. It is less bulky and less expensive than a Type I, and many will turn an unconscious person face-up in the water.



Type III - Flotation Aid

These life jackets are generally considered the most comfortable, with styles for different boating activities and sports. They are for use in calm water where there is good chance of fast rescue since they will generally not turn an unconscious person face-up.



Type IV - Throwable Device

These are designed to be thrown to a person in the water. Throwable devices include boat cushions, ring buoys, and horseshoe buoys. They are not designed to be worn and must be supplemented by wearable PFD. It is important to keep these devices immediately available for emergencies. Required on boats 16' or longer.



Type V - Special Use Device

Special use PFDs include work vests, deck suits, and hybrids for restricted use. Hybrid vests contain some internal buoyancy and are inflatable to provide additional flotation.



Inflatable life jackets rely on inflatable chambers that provide buoyancy when inflated. Uninflated, inflatable life jackets are less bulky than inherently buoyant life jackets.

PFDs MUST be the right size and for the right age for the wearer. Florida requires all passengers 6 and under to wear a PFD under way

Other Equipment you may want on-board

Anchor and Rode

There are many types of anchors for various types of boats and conditions. The most common used in sand and mud here in Florida is the Danforth type and we will focus on that type.



Bruce/Claw



CQR/Plow



Delta/Wing



Danforth/Fluke



New Generation

The Fluke anchor performs quite well in mud and sand. When set correctly, the flukes can penetrate the bottom with a lot of force, resulting in excellent holding power. The downside is that outside of mud and sand, the Fluke has very limited holding ability in bottoms such as kelp, rock, coral, etc.. When being set in mud or sand, these anchors do have a reputation for occasionally dragging along the bottom.

Pros: Performs well in mud and sand. Arguably the most popular general purpose anchor. Stows easily on most bow rollers. Cons: Does not perform well outside of mud/sand.

We typically do not endorse one manufacturer over another... but, in the case of danforth anchors there is one that has proven to us to be significantly better than the others for 3 reasons: usability, quickness to take hold and holding power. Be sure to not skimp on the anchor rode, the chain and line.



The Fortress Anchor weighs about 50% of similar size anchors making them very usable, they dig in much quicker and once set, rarely drag.

First Aid Kit

Having a good first aid kit is important. If you have kids it can be the difference between staying out on the water or coming in early. The longer the trip, the bigger the kit. On the sailboat we keep a full first aid kit, a hemorrhage kit and pain killers.

VHF Marina Radio vs Cell Phones

VHF traffic has decreased greatly with the growing number of cell phones in service. Cell phones do provide the convenience of simple, easy-to-use, inexpensive and generally reliable telephone service to home, office, automobile or other locations. Placing a shore-to-vessel call to someone with a cell telephone can be especially convenient, when it works.

VHF marine radios were designed with safety in mind. If you are in distress, calls can be received not only by the Coast Guard but by vessels which may be in position to give immediate assistance. A VHF marine radio also helps ensure that storm warnings and other urgent marine information broadcasts are received. The Coast Guard announces these broadcasts on VHF channel 16. Timely receipt of such information may save your life. Additionally, your VHF marine radio can be used anywhere in the United States or around the world. If you broadcast an SOS on the VHF all boats in your range will hear your transmission. Not so with a cell phone. On VHF radios, conversations are not private and individual boats cannot be assigned a personal phone number,

GPS / Charts

GPS's are great tools on boats. But like any tool, you need to know how to use your tool. If you have a GPS now, do you know how to's:

- Do you know how to mark a man overboard spot on your GPS?
- Do you know how to find your longitude / latitude in case of emergency?
- Do you know how to set a point and set a course to it?
- Do you know how to search for a location or marker?



Always have paper backup of any waters you boat in. GPSs and electric will fail. A compass is always helpful, if you know how to use it.

Knife, extra line and extra water

You are scooting along and miss a crab trap marker. The rope get tied up in your prop tight, Good luck if you don't have a knife. Extra line in case of a tow or other need. We always keep extra water on-board for emergency.

Seaduced 6 Golden Rules for Captains

Slow is your friend in unfamiliar waters!

Running aground at slow speeds is much less dangerous than higher speeds. Greater time to react and easier to unground.

Safety 1st and passenger comfort right after that.

If your passengers are not enjoying the trip due to rough water or going too fast, then adapt and adjust.

Practice.

Docking, taking wakes, leaving dock, using the GPS, getting on a plain, reading the water, anchoring and bring the anchor up.

Know your boat better than your spouse

Know the battery and electric systems. Know how to check the bilge and what to do if you are taking on water. Know every nook and cranny.

Know the weather

More people died boat in 2011 due to not knowing the weather or underestimating it. Know what the weather man says, know you can get latest weather on your VHS and keep an eye out for yourself at all times.

Booz

So you know weather conditions killed more boaters than any other reason, can you guess the 2nd? Alcohol related accidents were the 2nd most reason for deaths and 1st for injuries. Sun, heat, fun all add to the effect alcohol has on us. Drivers are urged NOT to drink or drink a bare minimum.