

Snark Sailboat Sailing Manual

Millions have learned to Sail in a Snark Sailboat. You can Virtually Learn to Sail in One day. Just add water and go.

CastleCraft

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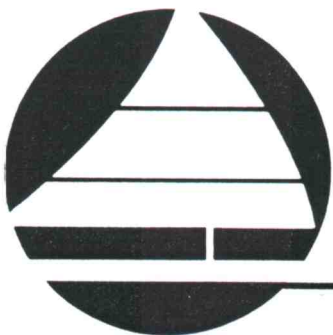
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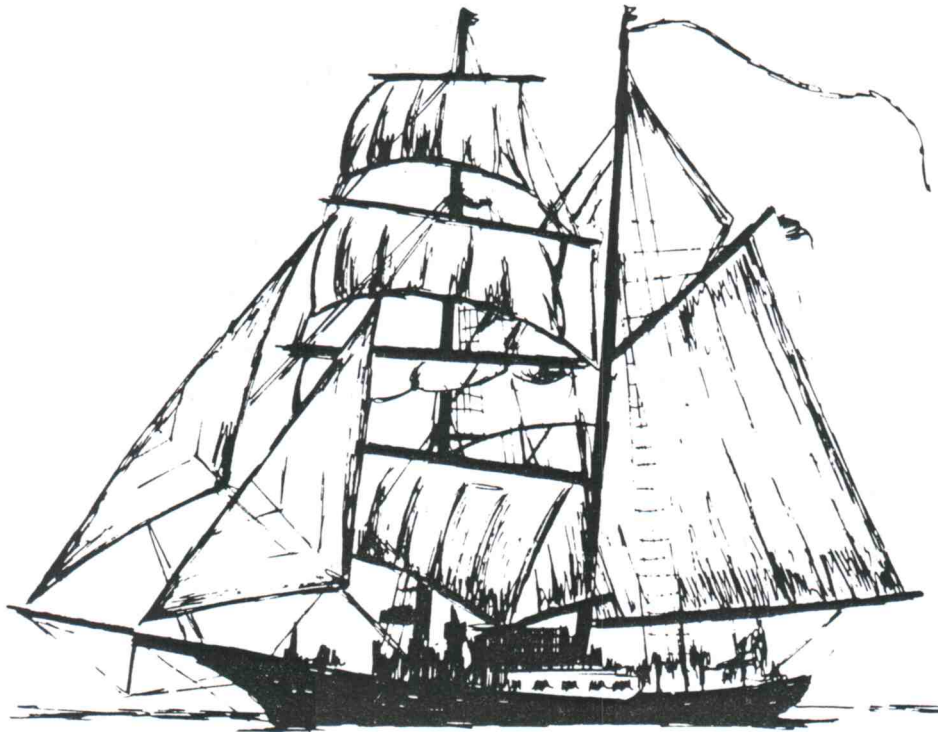


SNARK BOATS

This book is written especially for the person that has had no previous experience with the art of sailing. It is written as an introduction only to the art of sailing. The following instructions will get you safely out and back in, with only a few basic maneuvers in between.

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When you have completed this booklet, when you have been out on the water several times, you will be ready for larger and more detailed books. You will have joined the ranks.



No, you're not ready for this craft yet. You will be starting with the very smallest of boats. The boat shown above is quite interesting though, in that it wears just about every size and shape of sail ever conceived . . . the picturesque brigantine.

Powerboats must travel through two obstructing elements—water and air. While water provides the bouyancy, it is still an obstruction that needs to be “cut through” with a minimum of friction and disturbance. Air is also an obstruction. A strong wind blowing against the side of the boat will set it off course, and slow it down when headed directly into the wind.

A sailboat, on the other hand, has only one obstructing element, water. Air is not a hinderance, but rather a source of power. It's only source of power.

So now it is up to us to harness this power. We must acquire the skills necessary to use the wind to our best advantage.

You will gradually become acquainted with the many different types of sails and riggings, and what advantage one has over the other. But for now we will stick to the lateen rig, (one triangle sail), and sloop rig, (main-sail and jib). Both of these are represented in the **SNARK** lineup.

In fact, as you graduate from one boat to another, all of them slightly larger and faster, you may still be sailing the **SNARK** sloop or lateen rig you are now starting with. They are by far the most commonly seen sails on any lake.

You've made a wise purchase that will provide you and your family years of outdoor fun. We thank you for your confidence in us and encourage you to call us at 1-800-24**SNARK** if you have questions or need help on any facet of your new **SNARK** boat.

to **KNOTS** **KNOW**

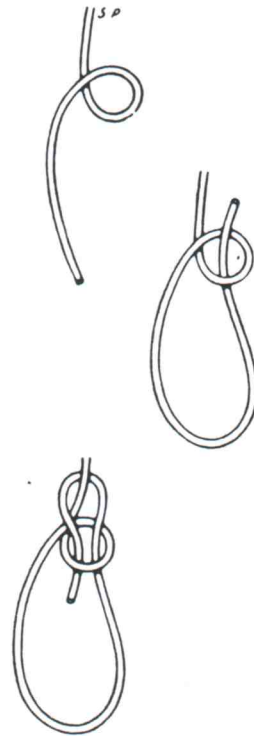
Before we go any further, let's take time to learn some of the basic knots. Among the hundreds of knots that can be tied only a few are really necessary at this point. Let me emphasize "necessary". Learn to tie them automatically, and learn to tie them fast. There will be many occasions where speed in tying and untying a knot could make the difference in staying dry or getting an unexpected dip.

First, the part of the rope that is attached to something (bow-eye, cleat, etc.) is called the standing part. The other end is called the free end or short end. A bight is the part between the ends.

The Bowline, Square Knot and Clove Hitch are your three most important knots and will suffice in most of your knot situations.

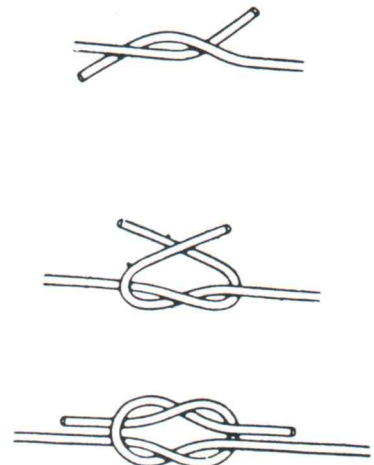
THE BOWLINE (bo-lin)

The great advantage of the bowline is that it can be easily untied no matter how much strain has been put on it. It can be used for tying up to a dock, for tying to the ring of a mouring bouy. First, throw a loop in the rope, free end over standing end, pass free end under the standing end and over and down through the loop. These instructions seem impossible even to me, but the drawings will clear it up. This knot is recommended for tying halyards to sails and main sheet to the tiller.



THE REEF/ OR SQUARE KNOT

This all purpose knot is probably known by almost everyone. But it is surprising how many people tie it wrong, and wind up with a "granny knot" which is almost worthless. Simply follow the drawing, noticing that the important part is that each line follows itself back through the loop, side by side, parallel to each other.

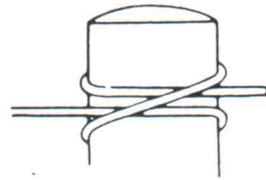
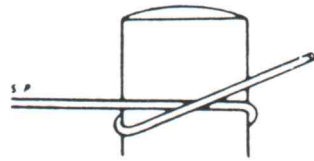


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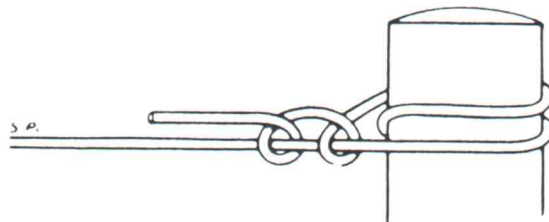
THE CLOVE HITCH

This is a very useful knot when tying up to a dock, temporarily. It is a very quick knot to form but needs a constant strain to be completely safe. Throw a loop over the post with the free end underneath. Repeat the same operation, again keeping the free end under the second loop. That's it. A third and fourth loop can be added for extra security. (Ensure the loops are stacked on top of each other, and not spread out vertically.)



ROUND TURN AND HALF HITCH

This is the knot to use when tying to a dock. Just two upward loops around the post, throw the free end over standing end and back under crossover. Repeat this as many times as you think necessary.

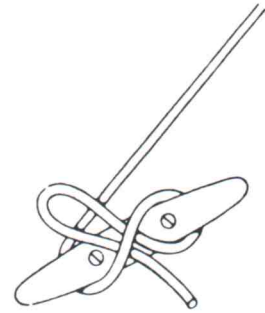


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THE SLIPPERY HITCH

This is a great one to know for handling your mainsheet. When everything is under control and you want to tie down the mainsail while adjusting the jib, throw this hitch around your cleat. It will hold as long as necessary, but if a sudden gust of wind comes up, a tug on the free end will have your mainsheet clear and running.



THE FIGURE EIGHT KNOT

This knot is nothing more than making a lump in rope to prevent it from running out through a cleat or pulley. It's easy to do and un-do. Put one of these knots at the end of your jib sheets and mainsheet.

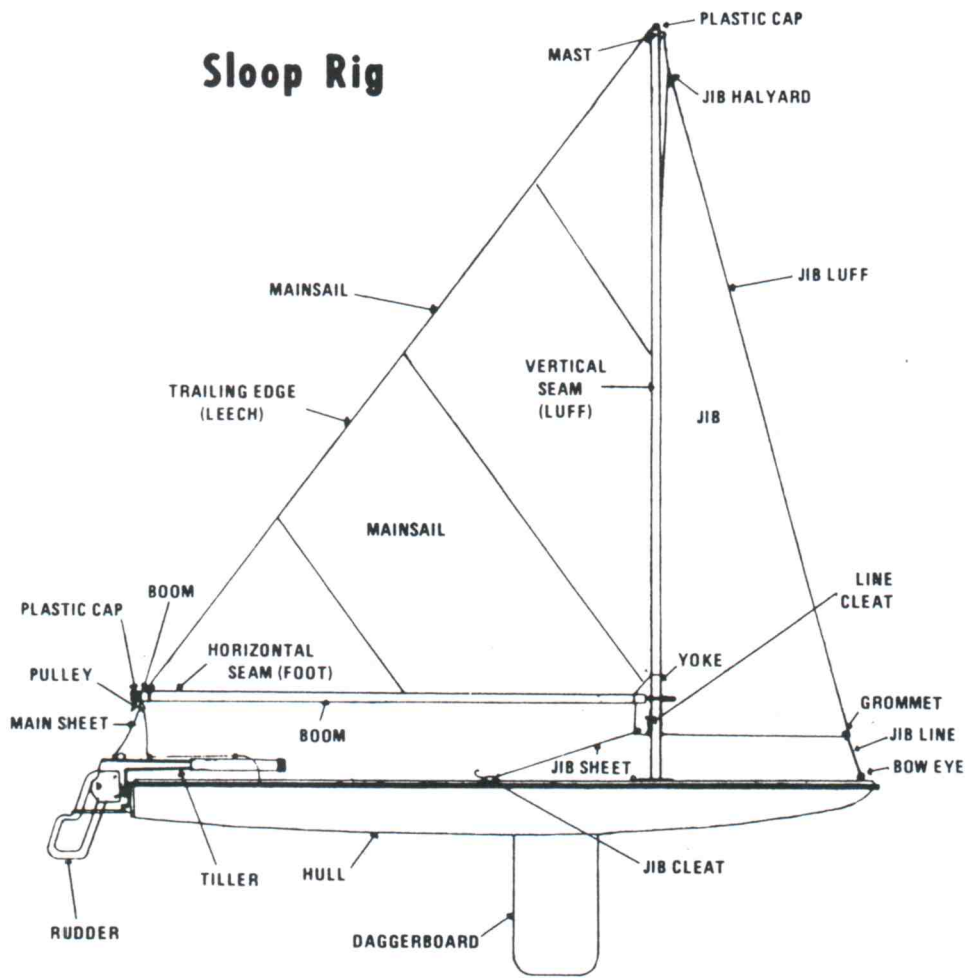


HANGING A COIL

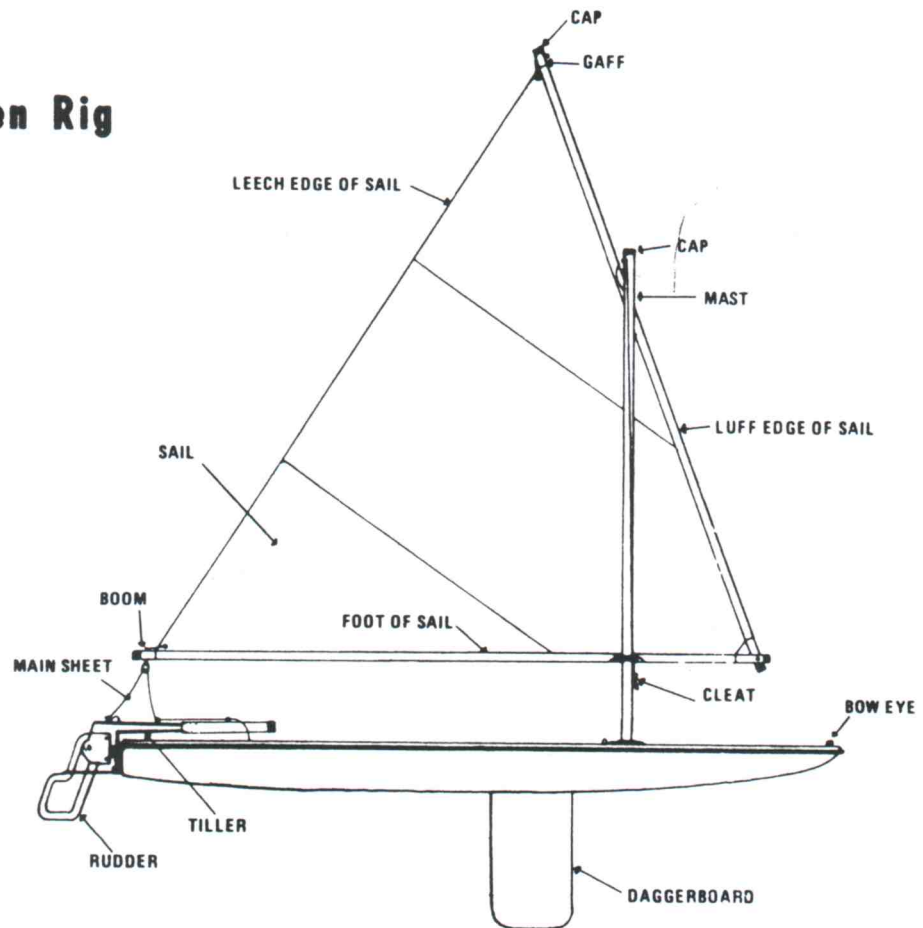
Once you have raised your mainsail or jib what happens to the excess halyard? Get it out of the way by simply coiling it up, pass the top of first coil through coil, give a single twist and hang this small loop on cleat horn. Not bad, huh!



Sloop Rig



Lateen Rig



LET'S SOUND LIKE SAILORS

ABAFT: Toward the stern. The tiller is abaft the mast.

ABEAM: At right angles to the fore-and-aft centerline of the boat. Off the beam or on the side of the boat.

BACKSTAYS: Rope or wire cable leading aft from the mast for the purpose of supporting this spar.

BALLAST: Heavy material, lead or iron, placed in the bottom of some boats to give stability.

BEAM: The maximum width measurement of a vessel.

BEARING: The direction of one object from another.

BEAT: To sail to windward.

BEND: To secure or to make fast a sail to a spar. Also the knot by which one rope is made fast to another.

BILGE: Bottom part of the hull adjacent to the keel.

BROACH: A vessel running downwind swings broadside to the wind. Dangerous in high seas.

CHAIN PLATES: Metal plates bolted to the side of the boat to which the stays are attached.

CHOCK: A metal casting, usually at the bow, through which the mooring line is led.

CLEAT: A wood or metal fitting with horns to which lines are secured. Cam or jam cleats provide quick release.

CLEW: The lower, aft corner of a sail.

CLOSE HAULED: Sailing as close to the wind as possible without luffing. Sails pulled in tight.

COAMING: Raised framework or railing around the cockpit to keep out water.

COCKPIT: Open area behind the mast where crew and skipper sit. Some are self-draining. (self-bailing).

CRINGLE: A metal or rope eye sewn into the sail at clew, tack or head, to which sheet or halyard is attached by means of a shackle.

CUDDY: A decked shelter, smaller than the cabin, for protection of the crew aft of the mast.

DAGGERBOARD: A metal or wooden board extending through a boat's bottom; similar to a centerboard.

DOWNHAUL: Line attached to the boom which pulls down the mainsail to improve its shape when hoisted.

DRAFT: The depth of water a boat requires to float free of the bottom.

EASE: To let out or slack any line as in easing the sheet so as to relieve the pressure on the sail and perhaps spill some wind.

EBB: Ebb tide is falling from high to low. Ebb current is flowing out to sea. Opposite is flood.

FAIRLEAD: An eyelet fitting which changes the direction of a sheet or halyard led through it.

FETCH: A boat sailing to windward can fetch its objective without having to make an additional tack.

FID: A wood marlinespike, or a block at the heel of the mast holding it in place.

FOOT: Lower edge of a sail.

FRAMES: The ribs of the hull to which planking is attached. Ribs terminate at the keel and at the deck.

FREE: Sailing with the wind aft.

FREEBOARD: That part of the vessel above the water.

FURL: To roll a sail snugly on boom or yard.

GAFF: A spar used to support the head of the mainsail, hence gaff-rigged, an older type of rigging.

GARBOARD: (Or strake). Hull planks nearest the keel.

GENOA: A large, overlapping jib first introduced in an international 6-meter race at Genoa, Italy.

GOOSENECK: A metal fitting, usually a universal joint, securing the boom to the mast.

GUDGEON: An eye fitting into which the rudder's pintles are inserted. Located on the transom of small sailboats.

GUNWALE: The rail of the boat at deck level.

HALYARD: Line or wire used to hoist sails.

HARD-A-LEE: Final command sounded as a boat begins to come about. First command is "Ready about".

HATCH: An opening in the deck, with a cover, for access to the cabin below.

HEAD: The top corner of a sail. Also a toilet.

HEADSTAY: The forward stay supporting the mast. Also called jibstay or forestay. Some boats have both.

HEAD-TO-WIND: Bow headed into the wind, sails luffing.

HEADWAY: Forward motion of the boat.

HEEL: The tilt or tipping action caused by wind.

HELM: The rudder or tiller steering the boat.

HIKE: To climb or lean out to windward, counteracting excessive heeling of the hull.

IRONS: When tacking, a boat that will not come about but lays head-to-wind is said to be in irons.

JIBE: To change tacks by turning away from the wind.

JIBSTAY: Forward stay on which the jib is hoisted.

JIGGER: The shorter mast aft on a yawl or ketch.

KEDGE: A small anchor.

KEEL: The lowest part of the hull, the backbone of the ship, running its entire length.

LEEWARD: Away from the direction of the wind.

LEECH: The after edge of a sail.

LUFF: Forward edge of a sail. Also to sail the boat closer to the wind so air will spill from the sails and cause them to flap.

MARLINESPIKE: A pointed wooden or metal instrument used to open up strands of rope or wire. Used for splicing.

MIZZEN: The shorter mast aft on a yawl or ketch.

MOORING: The chain or rope, buoy and anchor to which a boat is secured when not sailing.

OFF THE WIND: Sailing any course except one to windward, which is called "on the wind".

OUTHHAUL: Line and fitting used to secure clew of a sail.

OVERSTAND: To sail beyond an object, such as a buoy.

PAINTER: Short line used to secure the bow to a landing.

PINCH: To sail a boat too close to the wind.

POINTING: Sailing close to the wind.

PORT: The left side of the boat looking forward.

PRAM: Rectangular dinghy with square bow.

QUARTER: Side of boat aft of the beam, forward of stern.

REEVE: To pass lines through block or fairlead.

ROACH: Outward curve of the leech of a sail.

RUNNING: Sailing before the wind.

SHACKLE: A U-shaped metal fitting with a pin or screw across the open end, used to join sheets to sails.

SHEAVE: The wheel inside a block.

SHEET: Line used to trim sails.

SHROUDS: Wires or ropes supporting the mast.

SPAR: Term for masts, booms, spinnaker poles, etc.

SPREADER: Horizontal strut on the mast for its support.

STARBOARD: The right side of the boat looking forward.

TACK: Lower, forward corner of a triangular sail. Also a boat tacks when it changes its direction and the angle at which the wind strikes its sails.

TENDER: A sailboat lacking stability, opposite of stiff.

TILLER: A wooden bar fitting to the rudder, for steering.

TRANSOM: The stern facing of the hull.

TRAVELER: Metal rod at stern for trimming mainsail.

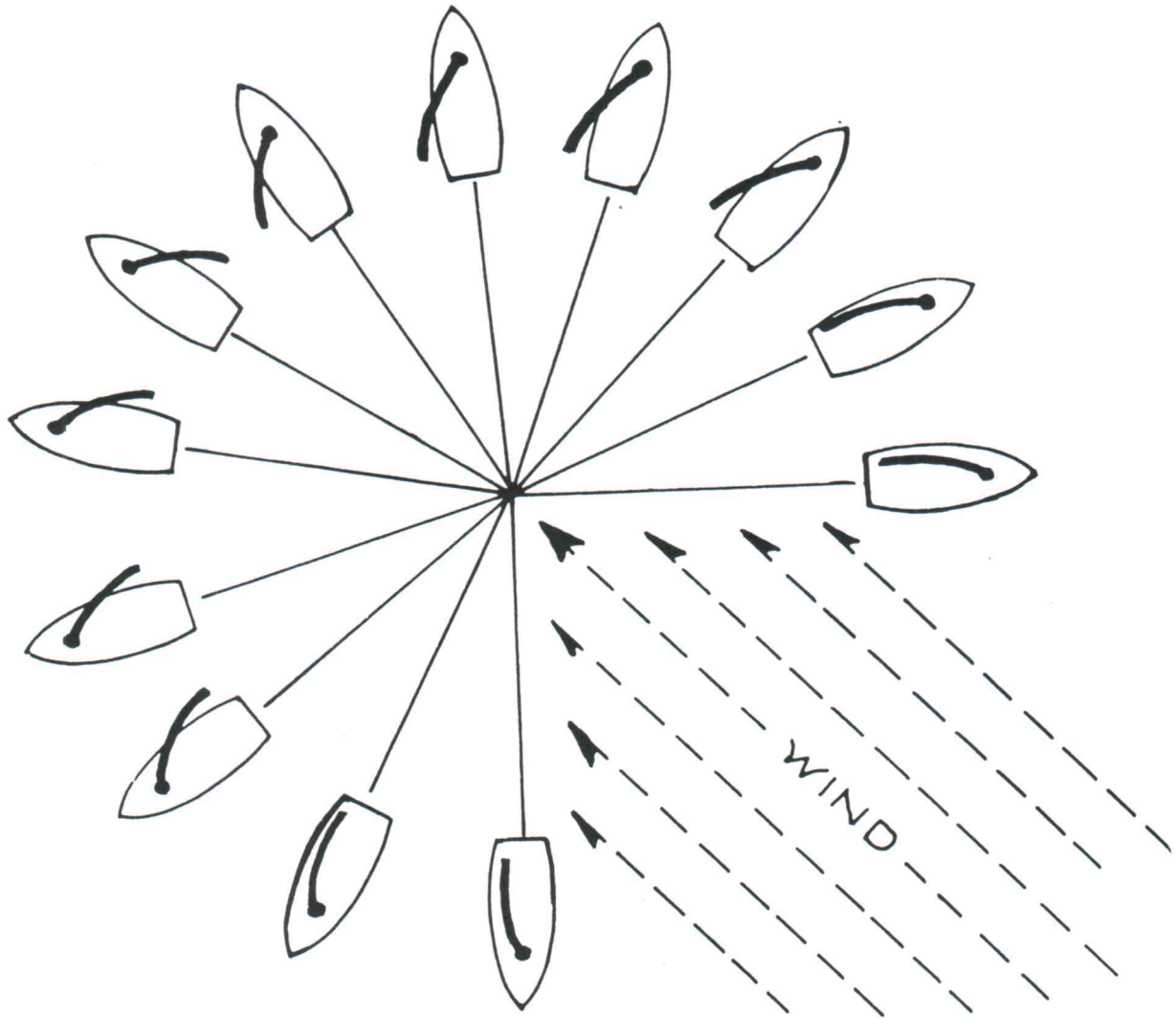
TRIM: To set the sails at the correct angle to the wind.

VANG: A line to steady the boom when off the wind.

WHISKER-POLE: A light pole or stick extending from the mast and used to hold the jib out when off the wind.

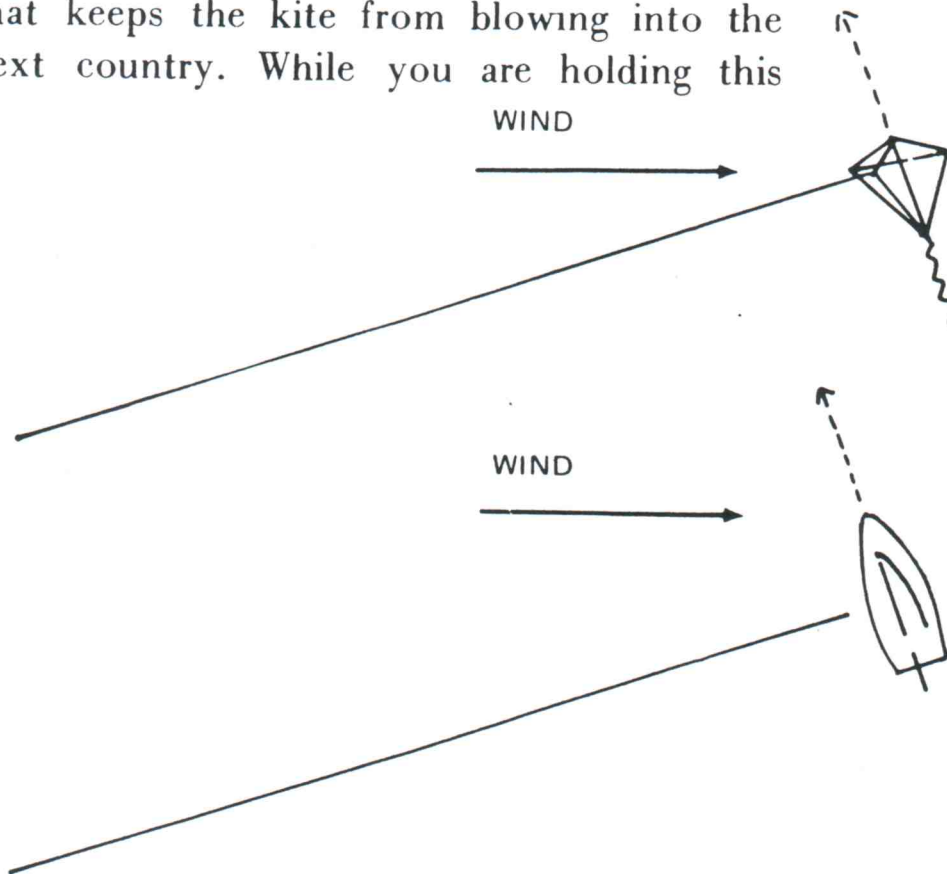
WINDWARD: Toward the wind, opposed to leeward.

HERE'S HOW IT WORKS



If you don't already know how a boat can sail into the wind, don't be discouraged. It is, by far, the most asked question when speaking with non-sailing people. Turn the page very, very quickly.

There! If you were close enough you have already felt the wind in your face. Soon it will get more exciting though. The many times you have flown a kite you have held the string that keeps the kite from blowing into the next country. While you are holding this

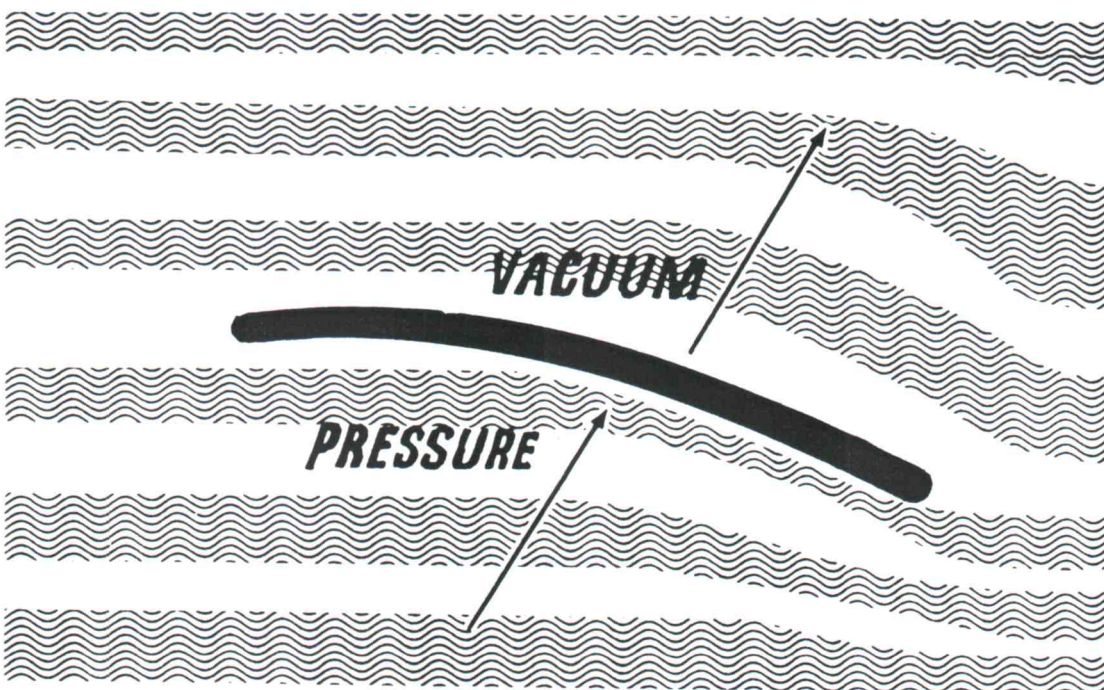


string the wind can only force the kite in two directions. Down at first, then with increasing skill, it starts going up.

It's primarily the same with sailing. In lieu of the string you have the keel of your boat, the center board and the rudder. These keep you and your boat from slipping sideways in the water. So here, too, there are only two directions to go. No, don't even think of going down. Your two directions are forward or backward. As difficult as it is, you may get

started backward once or twice. The pointed bow of your boat was designed to slice through the water, forward. The slant of your sail against the direction of the winds determines the speed and list of your boat. You and the rudder set the course. You and your sail set the speed. The wind does all the rest while you just go for the ride.

You are being pushed along by the wind. True enough, but there's even more. The same law of aerodynamics that acts on an airplane wing, is also acting on your sail. As the wind passes your sail, its' lee side is being pulled just as an airplane wing is being pulled up. This is happening most of the time. The only exception is when you are sailing directly with the wind with your sail at right angle to the wind direction. Then you are getting the more obvious pushing action only.



DRY RUN

No, I'm not trying to keep you away from the water. But from the time your boat is delivered until you can get to the water, you can get a lot of good practice. Better actually, than on the water.

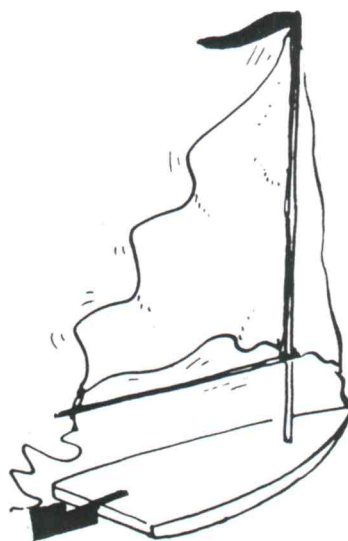
Rig your boat except the center board and take it to the back yard. Place it on a blanket to prevent grass stains as you move it about.

First, what direction is the wind coming from? Smoke, blowing leaves, even a short length of yarn tied to the top of the mast will give you ample clues. Face your boat into the



For purposes of simple diagrams, the jib sail is not always shown.

In general, the jib parallels the mainsail.



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wind, raise the mainsail and jib sail. The sail will now flap in the wind (luff), even with the mainsheet pulled taut.

Loosen the mainsheet and lift the stern of your boat to angle the wind at about 45°. With no tension on the mainsheet the sail will continue to luff in the direction of the wind. Pulling in the mainsheet will bring the first tug of wind as it billows out your sail. If you were on water you would already be underway.

Continue to move your boat at different angles until you are broadside to the wind. Experiment at each step with the mainsheet.

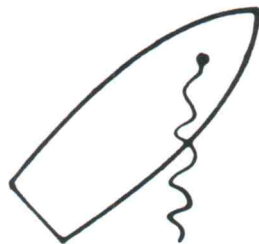
WIND



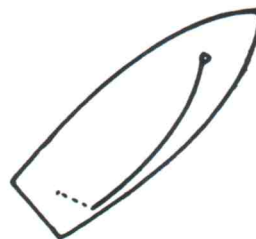
45° angle to wind



*mainsheet loose
and sail flapping*



sail flapping

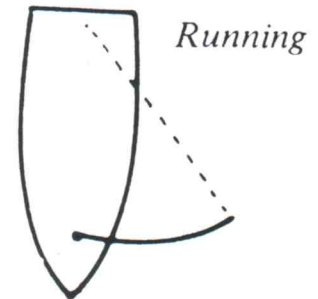


*mainsheet pulled in
and sail filled*

Get the feel of what the wind can do. Feel the different pressures as you slacken and tighten the mainsheet. See what I mean? With your boat resting solidly on the ground you are getting the feel of the winds force even more than if you were slipping around on the water.

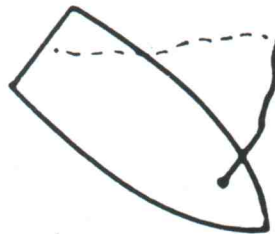
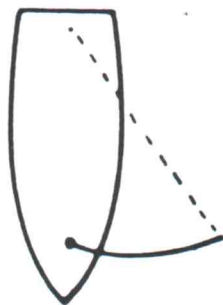
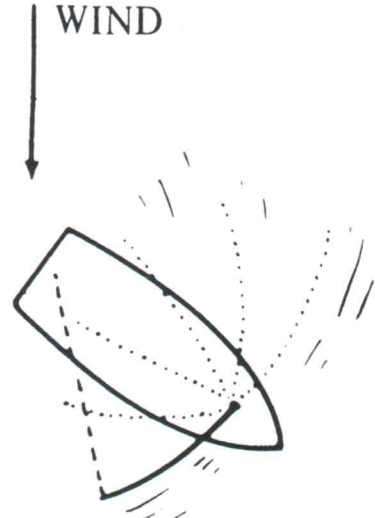
The positions you have just tried have taken you through the toughest, (into the wind) to the easiest (reaching) sailing at right angles to the wind. Now let's try what would seem the easiest, but is often tricky, sailing (running) with the wind. With the wind at your stern you can sail with boom on either the port or starboard side and keep right on going . . . and going . . . and going. At some point you must turn, however. And, as you

WIND

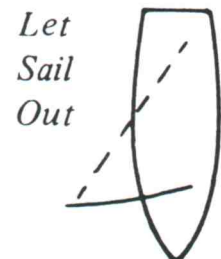
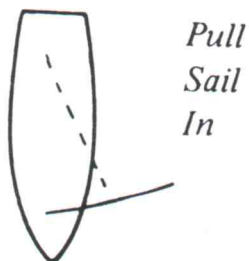


ACCIDENTAL "JIBE" – DANGEROUS

WIND

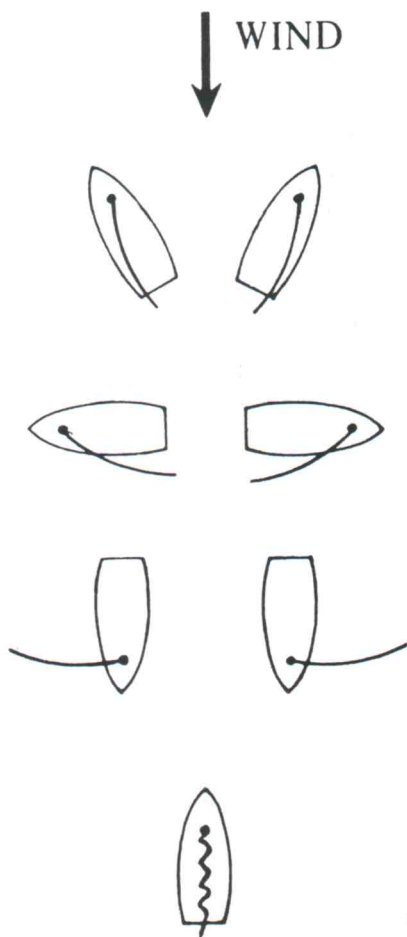


CORRECT "JIBE" PROCEDURE



turn, you will eventually reach a point where the wind will be hitting practically both sides of the sail. When the wind does reach the back edge (leech) of the sail, it will bring the boom about in a sudden sweeping action that could easily clear the deck of . . . YOU. This is called a jibe, when it is done purposely, it is a neat maneuver. But when it sneaks up on you accidentally, it is a very real hazard. Practice the jibe by bringing the boom in with the main sheet till its over the corner of the boat. Make your turn and again release boom to the opposite side. Well, by now you should be ready for the water . . . after you practice these dry runs a few more times.

THESE ARE YOUR BASIC SAILING POSITIONS.



BEATING - Sail in over the corner of the boat. You're sailing toward the wind at about a 45° angle.

REACHING - Sail halfway out. You're sailing across the wind.

RUNNING - Sail all the way out. You're sailing with the wind.

LUFFING - Boat pointed into the wind. You can also luff while Beating or Reaching by letting the main sail out.

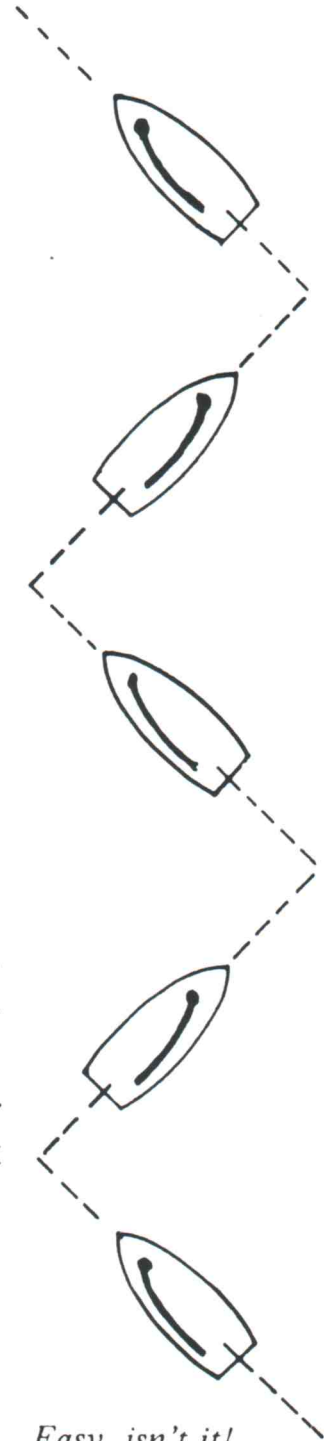


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Tacking, as you know by now, is just a series of turns, coming about with your destination off either your port or starboard quarter. Like the zig-zag stitch on a sewing machine.

Most new sailors have some problems in learning to tack. Usually they do one of two things. 1) Head too close to the wind causing the sails to luff and the boat to slow down or stop and 2) Head too far away from the wind and actually sail on a reach back and forth across the wind. In this case, they don't reach their upwind objective. Simple Solution – when tacking up wind sail as close to the wind as you can without the sails luffing. Don't be afraid to head up into the wind till the sail starts to luff then head away till your sails are full of wind again. It doesn't hurt a bit and you'll know you're at the right angle of sailing. Do this every couple minutes till you get the feel for it.



Easy, isn't it!

Occasionally, during the process of tacking too slowly, a condition will arise when your boat will become completely motionless. You have drifted to a stop just as you came into the wind and your sail luffed. This can be frustrating to say the least. To get out of this situation, quickly kick the tiller to one side or the other, bringing the bow around so that you are again angling into the wind. Pull in your mainsheet and you are again on course. When this situation happens your boat is said to be "in irons." When in irons you may find yourself drifting backwards. In this case simply put your tiller over to one side. You'll back around a turn. When you've backed around so the wind is at an angle, again straighten your tiller, pull in the mainsheet and you're off again.

By now you should be a confirmed sailor and well on your way to mastering the art of sailing.

There are many fine books available from your marine dealer or book shop on our sport.

Who knows, in a few years you may be racing for the olympic sailing team or defending the America's Cup.

For the time being though, sit back, relax and enjoy. That's what sailings all about. Thanks for listening and oh yes. CONGRATULATIONS CAPTAIN.

WIND



*In Irons
Boat Drifting
Backwards*



*Slack Main Sheet
Steer Backwards*



*Straighten Rudder
Pull in Sail
and away you go.*

Before you venture on the water, may I ask you to absolutely obey these 4 simple rules.

1

Don't shove off unless there is someone around to keep an eye on you and get help if you need it.

2

Even if you're an excellent swimmer, WEAR THAT LIFE PRESERVER! It's good common sense and is also the law!

3

Don't go out for the first time if there is an off shore breeze. As you go sailing off into the briny deep your inexperience may find you without a way back. If possible always sail up wind first. Then you can run back with ease.

4

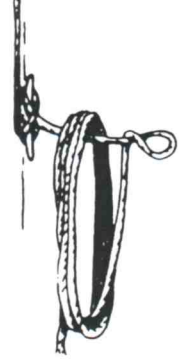
Always stay with your boat no matter what happens. Even capsized boats float . . . people don't.



o. k.
SHOVE
OFF

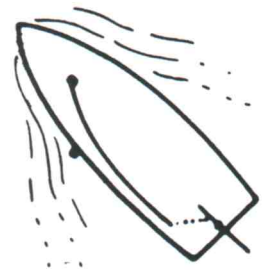
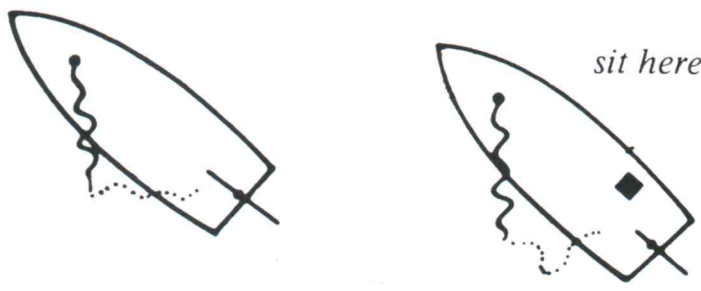
You have shown outstanding patience. I want to thank you for ignoring that impulse to go out . . . and get wet.

Put your boat into the water at a beach or some place where it is shallow – no more than two or three feet deep. Lower the center-board. Attach the rudder and tiller. After making sure the mainsheet is loose, raise the mainsail and jib, securing halyard to mast cleat, coil excess line and hang on cleat horn as shown in margin. Secure the halyard to mast cleat, coil and hang extra halyard line as shown in margin.



hook this loop on cleat

WIND

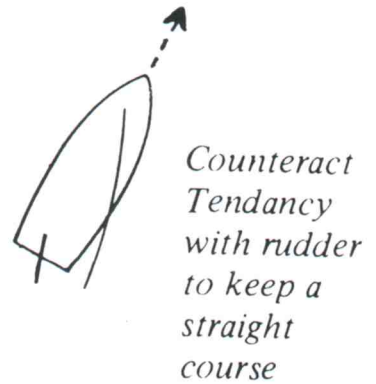
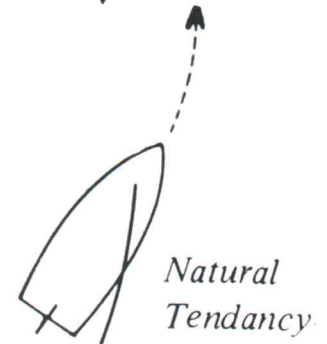


WIND



Make a final check that all lines are where they are supposed to be.

As you hop on, push the bow to one side or the other so that the wind is coming from the side. Remember, if you're headed directly into the wind you won't go anywhere. Now pull the main sheet until the sail fills, grab the tiller, and skipper, you're underway. The natural tendency of the boat is to come up into the wind (luff). You counteract this with the rudder to keep your boat at an angle to the wind and your sails full of wind. Remember the sails are your motor and they must be full of wind to move your boat. If your sails are luffing - you're in neutral and won't go.



Your first discovery will be that you must sit on the high side or windward side of the boat. Not only because the boom is on the other side, but your weight is needed to help balance the boat. You may also have to adjust your weight forward or aft, to fit your particular craft. In any event, be ready to adjust FAST. With mainsail under control, you can now adjust the jib. Pull jibsheet to same side of boat the boom is riding on, trim sail so that billowing jib is at approximately the same angle as mainsail. If the jib is drawn too tight, it will stop an even flow of air between jib and mainsail, and backwind the mainsail. It will feel as though you're dragging a sea anchor. Well, almost anyway.

If wind is directly behind you - you can "wing" the jib out on the opposite side from the main as shown by the dotted line.

WIND



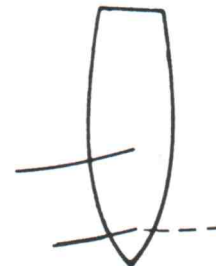
PROPER SAIL TRIM



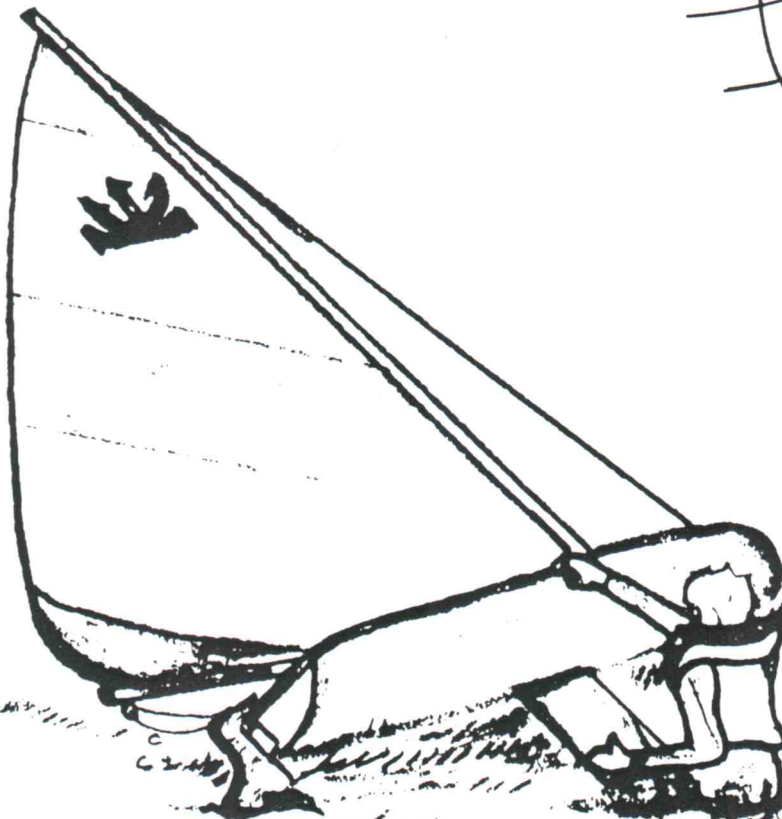
Beating



Reaching



Running

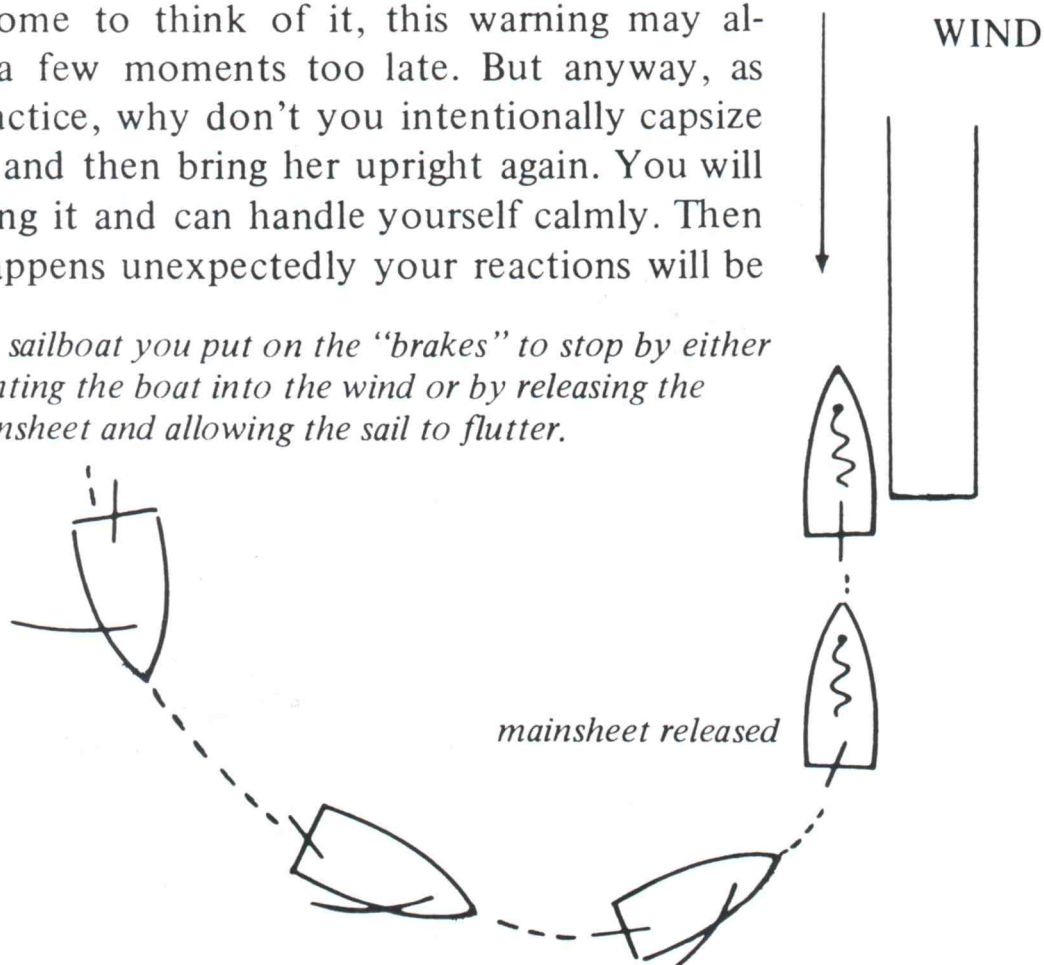


As the rapture leaves and you again discover where you are, gently experiment with the tiller. Push it away from you and pull it toward you. Notice each reaction. Next, ease off on the mainsheet, then bring it in again. Remember each of these reactions and store them for immediate reference. If you feel the boat listing dangerously, push the tiller away from you—steering into the wind, or ease off on the mainsheet. Either one will spill some wind from the sail and will bring the boat back up.

Try coming about. Push the tiller away from you and head into the wind. The sail will luff for a moment then shift to the opposite side of the boat. Remember to be polite, shift sides with the boom or both of you may take a sudden dip. As soon as the sail has filled with wind on the other side, straighten the rudder on your new course.

Eventually, with any small boat, you are going to capsize. Come to think of it, this warning may already be a few moments too late. But anyway, as further practice, why don't you intentionally capsize your boat and then bring her upright again. You will be expecting it and can handle yourself calmly. Then when it happens unexpectedly your reactions will be

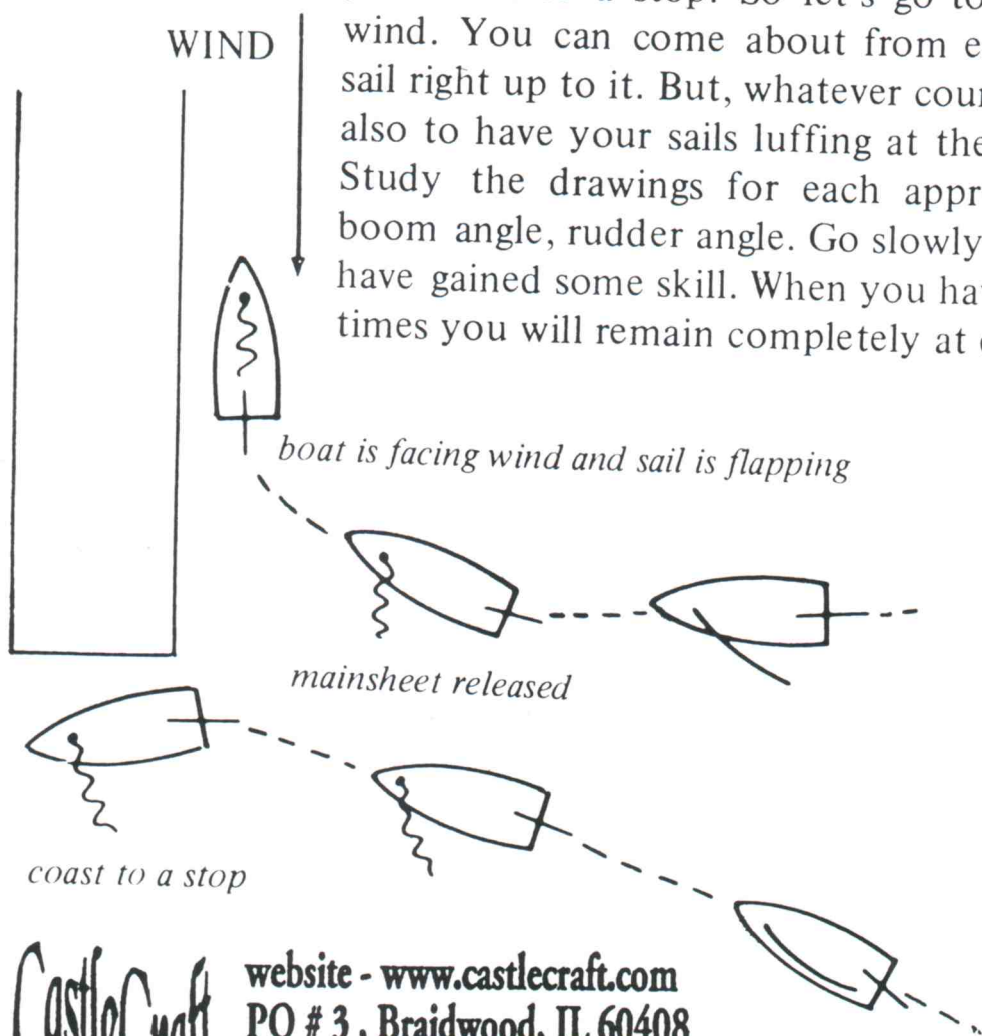
In a sailboat you put on the "brakes" to stop by either pointing the boat into the wind or by releasing the mainsheet and allowing the sail to flutter.



somewhat instinctive. Once capsized, swing the bow into the wind, make sure the mainsheet is loose, place one hand on the centerboard, grasp the upper gunwale with the other hand and lean back. You will be pleasantly surprised and relieved when you discover how easy it is to right your boat, climb aboard and start all over again.

Well, you've been out quite awhile now. Time to be getting back. Now, now . . . that's not the attitude. You have already made the maneuvers in your backyard, remember?

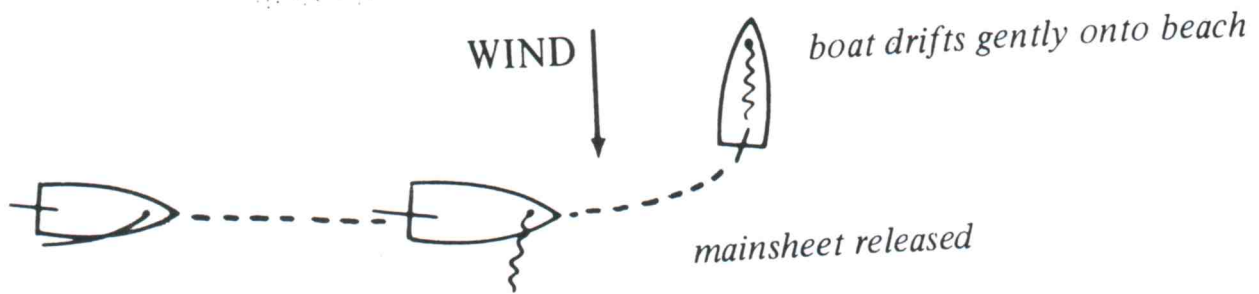
You have been practicing coming about and that's all there is to it. Except that you put on your brakes when you want to stop. The brake on your sailboat is right there in your hand. Let go of the mainsheet and you coast to a stop. So let's go to a dock, into the wind. You can come about from either direction or sail right up to it. But, whatever course you plan, plan also to have your sails luffing at the time you arrive. Study the drawings for each approach, notice the boom angle, rudder angle. Go slowly at first until you have gained some skill. When you have docked several times you will remain completely at ease.



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In the diagram below, the boat just turns to the left, facing into the wind just before touching the beach causing the sail to luff and "brake."



Landing on the windward side of a dock is always more difficult. Notice which way the waves are rolling, proceed as before, but plan to let the sail luff some distance from the dock and quietly drift in to the landing. Of course, if the wind dies out completely, you can lie down in your boat, paddle with your arms and kick with your feet. It will be slow, but it will get you back to shore.

