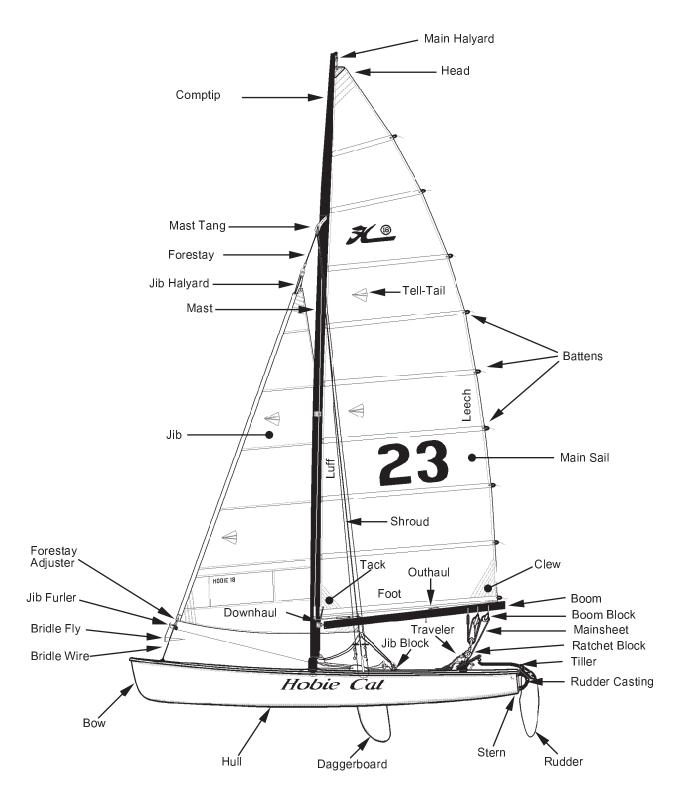
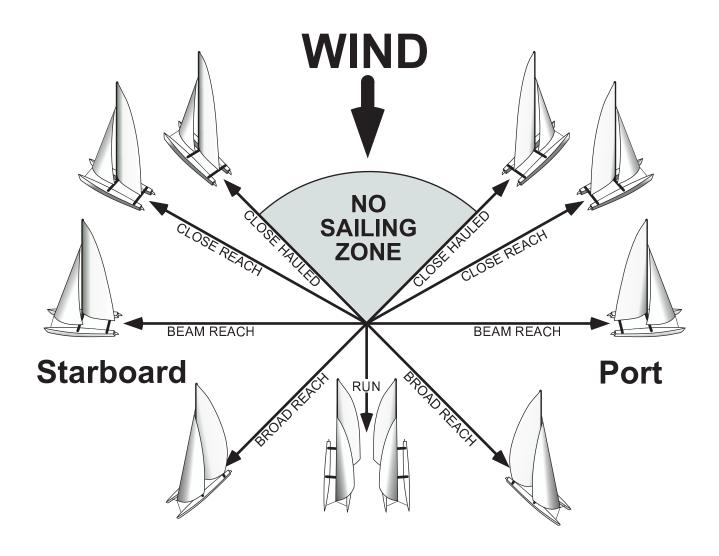
# Hobie Cat Anatomy

## The Hobie 18



### **Points of Sail**

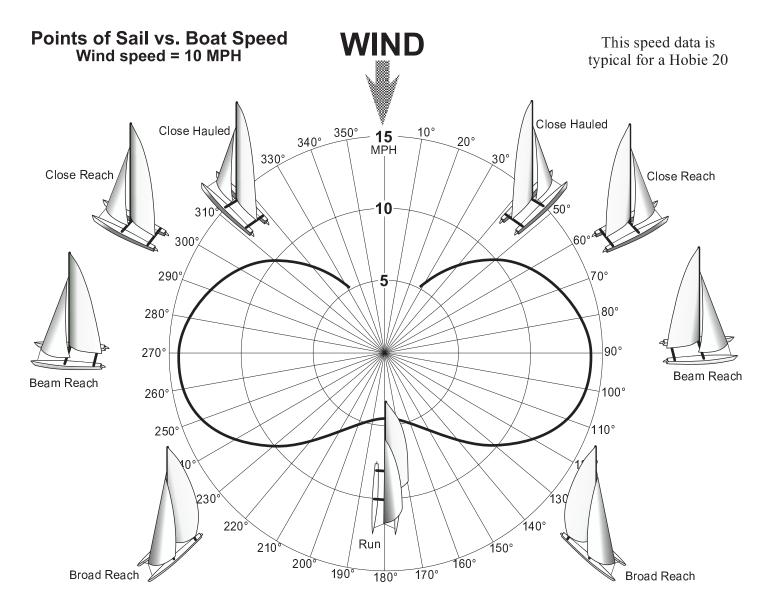


Other than sailing into the wind (no sailing zone), you can sail in any direction that you want. The different directions that you can sail in relation to the wind, are called points of sail. As a boat changes from one point of sail to another, the sails must be adjusted so that they maintain the same relationship or angle to the wind.

No sailboat can sail directly into the wind, but a catamaran can sail effectively to within 45° of the wind. The top two boats in this diagram are both sailing close hauled, but one is on port tack and the other is on starboard tack. Sailing this close to the wind requires that the sails be pulled in tight.

As you head your boat further off the direction of the true wind, you must let your sails out so that the wind flows across the sail correctly (keep the leeward telltales flying).

If you sail too close to straight down wind, the sail can not work effectively and the boat slows down. Tacking down wind from broad reach to broad reach is much faster than going straight down wind.



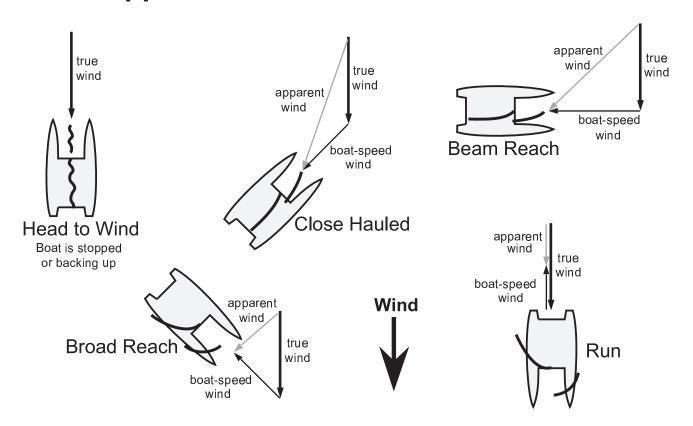
The heavy line on this graph shows the speeds that a catamaran can achieve when sailing on different points of sail, with the wind at 10 miles per hour. The heavy line shows that the highest speed is achieved on a beam reach, where a cat can do 14 MPH; that is faster than the speed of the wind.

The graph also shows that doing straight down wind is very slow, with boat speed of less than 5 miles per hour. If you sail 50° left or right of straight down wind, you can do 10 miles per hour. Sailing off on a broad reach and then jibing and sailing back to the center will cause you to travel farther, but by traveling twice as fast, you still come out way ahead. Again the point is to keep the sail generating forward lift (working like a wing) by keeping the leeward telltales flowing. Note: Telltale location is critical, also don't expect smooth airflow across the entire sail especially on a broad reach. Telltales all over the sail are not only worthless, but are very distracting.

Upwind is similar to down wind in that if you take the shortest route, you go very slow. If you foot off you have better speed, but will have to sail extra distance. If you foot off too much, you have great speed, but the increased distance becomes too great. So where is that magic point that gets you upwind the quickest? It is close to 45° from the true wind which is about 30° off the apparent wind. There is no easy answer to finding this point, if there were, sailboat racing would be as easy as pushing on the gas pedal. The fastest point of sail varies with boat type, wind speed, water condition, crew weight, etc.; but, IF IN DOUBT, FOOT!! The next chart "Upwind courses, What is optimum?" will show you why this is true. Sailing upwind with other boats will help you learn how to trim your sails and to find that magic point or "groove" on your boat.

Data Reference - "Aero-Hydrodynamics of Sailing" by C. A. Marchaj, page 87

## **Apparent Wind**



Apparent Wind is the wind that the sailors and the sails feel as the boat moves across the water. Apparent wind is the product of two forces, first is the True Wind that mother nature provides and second is the wind created by the forward motion of the boat (boat speed wind). To sail fast, or to sail at all in light air, you must set your sails in the correct relationship to the apparent wind. Any change in the apparent wind will require changes in sail trim or boat direction. A basic understanding of apparent wind is helpful in dealing with the varying conditions that you will encounter.

As I said, the *apparent wind* is the product of the *true wind* and the wind created by the motion of your boat. Because *apparent wind* is the product of these two forces, it is affected by changes in either force. If the *true wind* 's speed increases or decreases, the *apparent wind* will change in both velocity and direction. If the *true wind* 's direction changes, the *apparent wind* will again change. If your boat accelerates or decelerates, the wind speed your boat creates will change, causing a change in the *apparent wind*.

To graphically demonstrate how changes in *true wind* and *boat speed wind* effect the *apparent wind* we will use vectors (arrows) which show both the speed and direction of each wind. The direction of the vectors (arrows) show the direction each wind is blowing and the length of each vector indicates its strength or speed of the wind in MPH.

The *boat speed wind* always blows from the direction that the boat is traveling, as depicted in the diagrams above. The speed or strength of the *boat speed wind* is equal to the boats speed and thus I have shown the strongest *boat speed wind* when the boat is on a beam reach, which is the fastest point of sail. For simplicity, in the diagrams above, the *true wind* remains the same in each diagram.

Note, in the diagram, how the sails have been changed as the boat goes from close hauled to beam reach to broad reach. As the boat and the *apparent wind* change direction, the sails are changed to keep the sails leading edge cutting the *apparent wind* and the rest of the sail gently bending the wind.

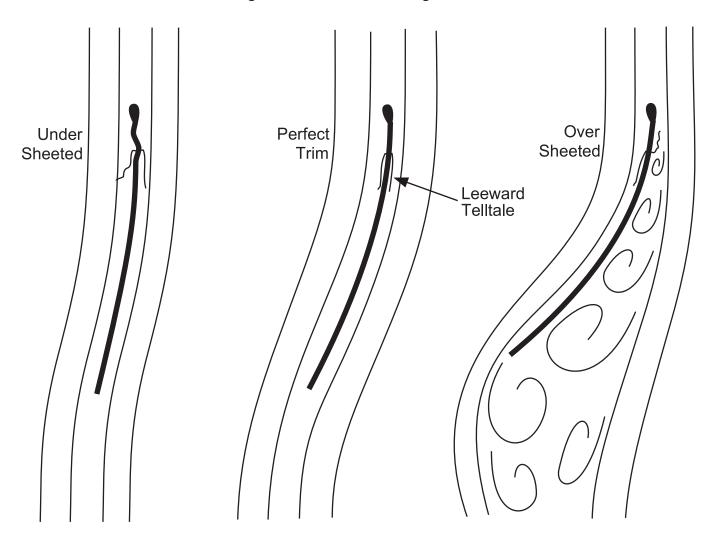
#### Sail Trim

Sail trim first requires that you use the main/jib sheet and traveler controls to adjusting the shape and position of the sails with respect to the wind. Secondly that you steer your boat so that the leading edge of the sails smoothly cut the wind while the rest of the sail gently bends the wind.

The left diagram, *under sheeted*, shows a sail that is soft just behind the leading edge or slightly luffing. This sail will generate very little power. To correct this situation, either bring in the trailing edge of the sail by sheeting in, or turn the boat off the wind slightly to fill the sail.

The center diagram, *perfect trim*, shows a sail that is smoothly cutting the wind and bending it to generate maximum power in the sail. Note that the tell-tails are smoothly flowing back on both sides of the of the sail. The most important tell-tails are the leeward tell-tails, usually the ones on the other side of the sail from the skipper. Keep these tell-tails flowing back at all times, the windward tell-tails may act up a little and in higher winds they will fly back and up at about a 45° angle.

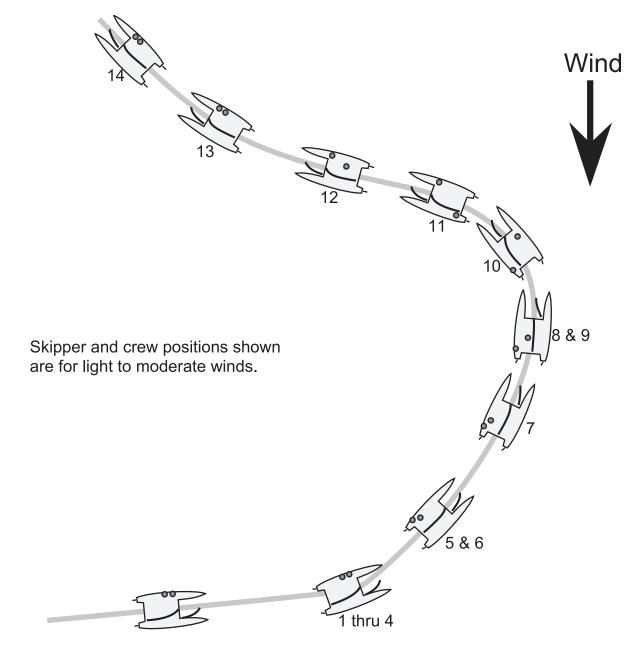
The right diagram, *over sheeted*, shows a sail which is trying to bend the air flow too much, the air flow breaks away from the sail on the leeward side and the air becomes turbulent causing the leeward tell-tails to dance forward and back. To correct this problem, either sheet out to reduce the bend of the sail, or turn the boat more into the wind allowing the air to better flow along the leeward side of the sail.



## Anatomy of a Tack

Rick White's Roll Tack, Illustrated by Bob Mimlitch

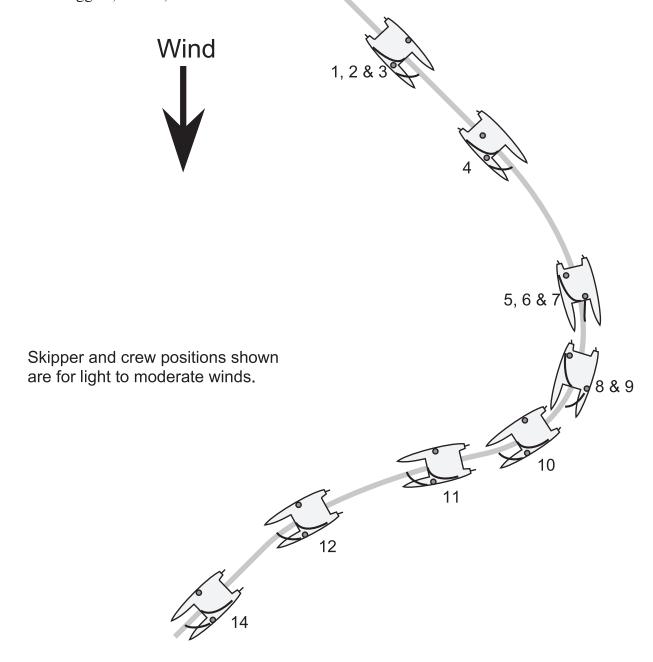
- 1. If not close hauled, come up to a close hauled course (traveler in and main sheeted hard).
- 2. Insure your speed is up prior to initiating a tack. Don't pinch.
- 3. Insure you are clear of traffic and will remain clear during your tack.
- 4. Alert the crew and await their response indicating that they are Ready to tack.
- 5. Push the tiller smoothly and move to the rear windward corner.
- 6. Crew moves to the rear, uncleats and holds the jib while removing slack from the lazy sheet.
- 7. As the jib starts to luff, feed out sheet and fly the jib across keeping it flowing as it goes.
- 8. At the same time the crew takes the lazy sheet and moves across and forward sheeting the jib.
- 9. As the boat comes head to wind the skipper releases 2 feet of main sheet (more for unirigs).
- 10. Continue increasing the rudder angle and turn beyond the desired new course.
- 11. Straighten the rudders, pass the tiller across, move across and forward taking excess sheet.
- 12. Foot to accelerate and trim the sails.
- 13. Shift gears (with sail shape) as you accelerate and come up to optimum course.
- 14. Balance the boat and take care of general housekeeping.



## Anatomy of a Gybe

by Bob Mimlitch

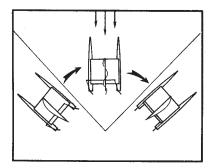
- 1. Insure your speed is up prior to initiating a gybe.
- 2. Insure you are and will remain clear of traffic during the gybe.
- 3. Alert the crew and insure that you get a response.
- 4. Move in and pull the tiller smoothly.
- 5. Skipper moves to the opposite side and grabs the tiller outside the main sheet.
- 6. Crew moves to the opposite side and catches jib on opposite side by sheet or clew.
- 7. The skipper grabs the main sheets below the boom and pulls against the sail.
- 8. The crew trims the jib by pulling on the leech which give the boat power.
- 9. As the pressure on the main sail gets light, alert the crew and swing the main sail across.
- 10. Continue the turn until above the optimum course.
- 11. Trim and match your sails.
- 12. Shift gears (with sail shape) as you accelerate and come down to optimum course.
- 13. Balance the boat per conditions.
- 14. Pull daggers, rudder, etc. as desired.



#### Tacking and Gybing by Hobie Cat USA

#### Turning into the Wind

Turning into the wind, or coming about, is the most common sailing maneuver: When coming about, the object is to pass the bows of the boat through the eye of wind and over to the other side. Let's refer to the clock example. Suppose you are sailing to the ten o'clock position, but wish to change course and sail to the two o'clock spot. You would first move the tiller toward the sail to move the bows through the wind coming from noon. Then you would straighten the tiller once the boat is heading on the desired course.



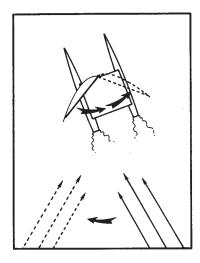
#### Here's the procedure step by step.

- 1. Before coming about, ask yourself what you are trying to achieve by doing so. Where do you want the boat to be when you have completed your turn? Ifs a good idea to pick a spot on land and aim the boat toward that spot for reference. Remember you must turn the boat at least 90 degrees or you may stall in the wind (put yourself in irons).
- **2.** Push the tiller smoothly but firmly about half the distance toward the sail while letting the mainsheet out about one foot.
- **3.** As the boom swings over duck and move to the other side, opposite the new sail position.
- **4.** Exchange the mainsheet and tiller extension in your hands. The mainsheet should always be in your forward hand, the tiller extension should always be in your aft hand.
- **5.** Straighten the tiller after you have completed your turn and the boat is moving toward your reference point.

**Notes:** Move the tiller firmly but avoid sudden, jerky moves. Try to carve a smooth arc in the water. Forcing the tiller all the way over will put on the brakes and put the boat in irons (or stall it). Don't let go of the tiller or the boat will straighten out before you want it to. When tacking a catamaran with a jib sail, keep the jib sheet cleated until the bows are fully through the eye of the wind. Then release the jib sheet and pull it in on the other side. This is called "backwinding."

#### **Turning Away From the Wind**

Turning away from the wind, or gybing (sometimes spelled jibing), is changing course while sailing downwind. Just think of gybing as the opposite of coming about. When coming about bows cross the wind. The **sterns** cross the wind when gybing. When gybing in light air you will probably have to give the boom some help in swinging across to the other side of the boat.

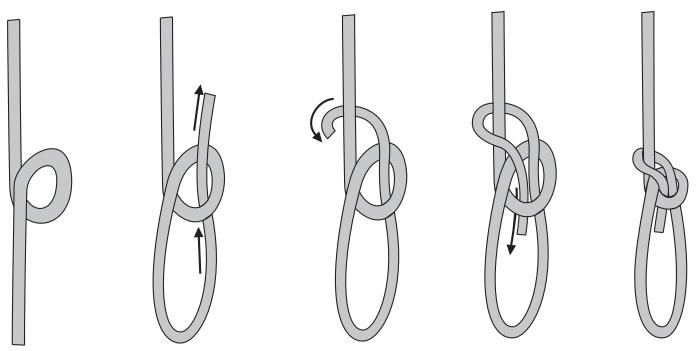


To gybe, just pull the tiller extension toward your body with the same smooth motion as when coming about, grab the mainsheet just below the boom, and, when the sterns cross the wind, warn the crew and swing the boom across. As soon as the sail begins to fill with wind, move to the other side of the boat and off you go.

Gybing in heavy air can be more difficult since everything will have to be speeded up correspondingly. In heavy air, the boom can snap across with a lot of force. For this reason, ifs best to come about in heavier winds until you have had a chance to practice gybing to the point where you feel confident that you can handle heavy air with dexterity. You should be especially aware of wind shifts in heavy air. If the wind should suddenly change direction as it blows across the stern of the boat, it could grab the sail and swing it far out to the other side very quickly. This is an unplanned gybe and could damage the boat if the wind is strong enough, or it could cause injury to unaware crewmembers.

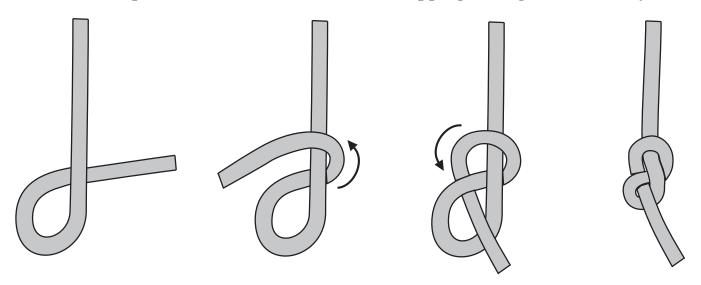
## **Knots**

**Bowline** - Makes a loop which can be easily untied, even after carrying heavy loads for long periods.



## Figure Eight or Stopper Knot

Used to keep the end of a sheet or line from slipping through a block or eye.



## **Start Sailing Right**

by Alan Egusa Reprinted with permission of NAHCA News

Most of this Addendum is now APPENDIX X in the new *US Sailing Level I Small Boat Instructor's Manual*. NACHA is currently trying to get this material into the upcoming revision of *Start Sailing Right*, the manual for *US Sailing's beginning sailing* courses.

#### **SAFETY POSITION** (Parking the boat on the water)

- 1. Release the jib and main sheets, thereby leaving the sails loose.
- 2. Push the tiller to turn the boat up into the wind. Continue to hold the tiller hard over for as long as you wish to keep the boat in the Safety Position.

In more breeze the mast may rotate violently from side to side. Slack the downhaul to calm things down.

#### **DIME TACK** (Performed when the boat is stationary or moving very slowly.)

- 1. Push the tiller hard over as if to turn the boat up into the wind.
- 2. Grasp the boom or main sheet blocks and pull it to weather until the boat is tacked.
- 3. Reverse the rudders when the boat moves backwards.
- 4. Release the sheets leaving the sails loose. You are now in the Safety Position on the other tack.

#### GETTING OUT OF IRONS

- 1. Rudders hard over in the Safety Position. (Push the tiller in the direction that you want to sail)
- 2. Slack the main sheet and traveler, and push the boom out. (Push in the direction that you want to sail)
- 3. Backwind the jib.
- 4. When the bows are pointed onto your new course (a minimum of 50 degrees off of the true wind), straighten the rudders. (A common mistake is not to back around far enough and sail into irons again)
- 5. Sheet in the jib, then the main sail. (Sheeting in the main too quickly will put you into irons again) Note: For single-handed catamarans with a main sail, only, ignore references to the jib.

#### STOP THE BOAT

- 1. Push the tiller to head up into the wind.
- 2. Slack the sheets.
- 3. Push the boom forward to backwind the main sail. Also, backwind the jib.
- 4. When the boat stops moving, go into the Safety Position.

#### **BACKING UP**

- 1. Stop the boat.
- 2. If the bows are not pointed into the wind, perform the first two steps of the Dime Tack until they are.
- 3. Straighten the rudders.
- 4. Backwind the main sail by pushing the boom forward.
- 5. Steer with the rudders to keep the boat moving straight downwind.

Note: Backing up puts a lot of pressure on the rudders, so hold on tight and make small corrections

#### **LAUNCHING OFF A WEATHER SHORE** (wind blowing from the shore onto the water)

- 1. In most situations and conditions you will be able to simply point the boat in the desired direction and sail off. When this is not feasible, try the following.
- 2. Rudders kicked up, all sheets uncleated and slack, nothing dragging in the water.
- 3. Boat pointed into the wind.
- 4. Skipper and crew, one on each bow, push off from shore. The depressed bows will allow the boat to track straight backwards as the wind pushes it away from the shore. A foot gently dragging in the water from the appropriate bow can steer the boat if you get slightly off course.
- 5. The jib can be held out perpendicular to the wind to push you backward faster.
- 6. When the depth of the water allows you to lower the rudders (carefully) without touching the bottom, turn the rudders to point the bows in the desired direction and sail away. If you go into irons, refer to Getting Out Of Irons.

#### **LAUNCHING OFF A LEE SHORE** (wind blowing from the water onto the shore)

- 1. Determine which tack (port or starboard) will take you more directly off the shore.
- 2. Point the boat in the direction of that tack and push it off the shore with the jib sheeted in and the rudders dragging behind you.
- 3. With the traveler out a foot or two, sheet the main in slowly until the boat maintains a constant direction approximately 10 to 15 degrees below what would be your close hauled course.

You are steering (balancing) the boat with the sails.

- Note that with the rudders not being locked down and very little or no dagger board down, you will have horrendous weather helm. If you over sheet the main you will weather vane into irons. The importance of a trimmed jib cannot be overemphasized as it helps to counteract the weather helm.
- 4. Lower your rudders as the depth allows, weather rudder first, until they are both locked down. The rudders will steer more effectively the more they are lowered. You will also be able to sheet in the main sail more without going into irons as the rudders are lowered.
- 5. Lower your dagger boards (carefully) as the depth allows, weather board first.
- 6. If you are launching off of a beach with surf, see LAUNCHING THROUGH THE SURF, below.

#### **TACKING**

#### Skipper

- 1. Look over your rear shoulder and pick a geographical point to indicate your new course.
- 2. Push the tiller. Steer progressively into the tack. Do not jam the tiller over too quickly; this will act as a brake, slow you too much, and blow your tack. Maintain a constant pressure on the tiller through step 4.
- 3. Ease the main sheet at head to wind. The main sheet blocks should come apart 1 to 2 feet, or more. In light air, pull the boom toward you while staying on the leeward side until almost on your new course. The light air will not have enough energy to force your main sheet blocks apart, and the main sail will weather vane you into irons.
- 4. Change tiller hands while switching sides. Reach around and behind the main sheet blocks to grasp the tiller with your new hand, pivoting on your knees.
- 5. Once pointed onto your new course, straighten the rudders and sheet in the jib, then the main sail. If the main sail is sheeted in before the jib, the boat may weather vane into irons.
- Crew (crew actions and where they fit into the sequence)
- 2. Move to the other side of boat head first, taking the new jib sheet with you.
- 5. When pointed onto your new course, tack the jib by releasing the old sheet and pulling in the new sheet

#### MAN OVERBOARD (MOB) (For Beach Catamarans)

- 1. Stop the boat, immediately.
- 2. Perform the Dime Tack.
- 3. Assume the Safety Position, and the boat will drift toward the sailor in the water.

Alterations of the direction of your "drift" can be made by sailing to weather or by sailing backwards.



#### **CAPSIZE**

- 1. Uncleat the jib and main sheets.
- 2. Point the bows into the wind (not the mast). By standing on and submerging the bow you can get the hulls to rotate around into the wind. Hanging on to the righting line during this process will help your balance, and it will help to prevent the boat from turtling
- 3. Stand on the lower hull, grab the righting line, and lean back over the water to right the boat. This must be done quickly or the hulls will rotate around pointing the mast into the wind, and the boat will be harder to right. If you have difficulty gripping the righting line when applying a lot of leverage, try wrapping it around the hook of your trapeze harness.
- 4. Grab the dolphin striker or the lower hull as the boat is righted to prevent it from continuing on and capsizing to the other side.

Warning: Be sure to position yourself so that the hull does not land on top of you when it is righted.

#### TURTLED (Boat Upside-Down)

- 1. Do not allow your boat to turtle. It will be much more difficult to right. Pulling on the righting line (step #3 under Capsize) will help to prevent your boat from being turtled. Do this as soon as possible.
- 2. Once your boat is turtled, move to the leeward stern and pull on the righting line.
- The combination of your weight, the pull on the righting line, the wave action, and the wind will hopefully be enough to lift your weather bow higher and higher out of the water.
- 3. Once the weather bow is well out of the water, move to the center of the hull while maintaining a constant pull on the righting line. The boat will settle on it's side. Continue pulling on the righting line until the mast is at the surface of the water.
- 4. Right the boat by following the procedure under Capsize.
- 5. If you are unable to right your turtled boat, signal for help. In calm weather conditions, it may be impossible for you to right a turtled boat without outside assistance.

#### LAUNCHING THROUGH THE SURF

- 1. This is an advanced maneuver depending on the wave, water, current (rip), and wind conditions. It is included here as a future reference and should not be attempted until you become a proficient and experienced sailor.
- 2. With light winds and heavy surf it will probably be impossible to get out through the surf. You will need a minimum amount of power to punch through the waves. The conditions will dictate what you are able to do, and experience and good judgment are invaluable. When in doubt do not attempt to launch. What follows are tips and suggestions.
- 3. Waves come in sets. You want to time your departure from the beach so that you will sail through the worst section of surf during the lull between these sets.
- 4. The rudders should be dragging behind you as you leave the beach. They should not be locked down until you are out of the surf line, which is relatively shallow water. When a wave hits your boat it will drive the bows up, the stern down, and the boat backwards onto its rudders. A large wave can drive your rudders into the bottom in five feet of water and snap them off.
- 5. Keep the boat moving forward as fast as possible under the conditions rudders dragging behind, dagger boards down only a foot or less, disturbed water, rip tide.... You will obviously want to get past the surf line as quickly as possible.
- **Note:** It is extremely important to trim the jib throughout the launching. A trimmed jib will help to counteract weather helm and the tendency to round up into irons. In simple terms, it pushes the bow down.
- 6. Steer the bows up into the waves but off of perpendicular. You want the wave to knock the bow down onto a reach so that you can accelerate forward and tackle the next wave with speed, not to push the bow up into irons.
- 7. Keep your body weight forward on the boat when going through the surf. Standing up is also a good idea so that the white water coming over the trampoline hits only your legs and not your body, which could push you to the back of the boat and thus promote capsize. Throw your weight forward against the mast or front crossbar or pull on the shrouds to drive (ooch) the boat forward as a wave hits your bow. This also helps to keep the bow down and the stern from being driven under too far which could cause the boat to flip over backwards.
- 8. Never let a wave hit you broadside. It won't take much to flip the boat and destroy the mast (or the entire boat) in the surf. And do not let smaller surf lull you into over confidence. Smaller surf can ruin your day, not to mention your boat!
- 9. When you find yourself in a bad position, turn the boat the best you can and head back to the beach. Your course must be perpendicular to the wave, not to the beach, or you may be broached. Keep your weight as far back as possible when a wave catches your stern to prevent the boat from pitchpoling in the surf. He who turns and runs today lives to sail another day!

#### Summary of the Rules that Apply when Boats Meet by US Sailing

**US SAILING** 

## SUMMARY OF THE RULES THAT APPLY WHEN BOATS MEET

Simplified, Condensed, Unofficial

Below is a summary of the sailing rules that apply most often on the race course. This summary is intended as an aid to sailors and not as a substitute for the *Racing Rules of Sailing*, a copy of which all racing sailors should own. See reverse side for more information about the *Racing Rules of Sailing*.

#### **RIGHT-OF-WAY RULES**

PORT-STARBOARD. Port-tack boats must keep clear of starboard-tack boats. (Rule 10) Note: You are "keeping clear" of another boat when she doesn't have to avoid you.

WINDWARD-LEEWARD. When boats are overlapped on the same tack, the windward boat must keep clear. (Rule 11)

ON SAME TACK, ASTERN-AHEAD. When boats are on the same tack and not overlapped, the boat clear astern must keep clear. (Rule 12) Note: One boat is "clear astern" if she's entirely behind a line through the other boat's aft-most point. perpendicular to the other boat. The other boat is "clear ahead: Two boats are "overlapped" if neither is clear ahead of the other.

TACKING TOO CLOSE. Before you tack, make sure your tack will keep you clear of all other boats. (Rule 13)

#### LIMITATIONS ON RIGHT OF WAY

If the other boat must keep clear, you have "right of way". Even if you have right of way, there are limitations on what you can do:

AVOID CONTACT. You must avoid contact with other boats, but a right-of-way boat will not be penalized under this rule unless the contact causes damage. (Rule 14)

ACQUIRING RIGHT OF WAY. When you do something to become the right-of-way boat. you must give the other boat a chance to get away from you. (Rule 15)

CHANGING COURSE. When you change course, you must give the other boat a chance to keep clear. (Rule 16) ON THE SAME TACK; PROPER COURSE. If you are overlapped to leeward of a boat on the same tack, and if just before the overlap began you were clear astern of her, you cannot sail above your proper course (i.e., the course that will take you to the next mark the fastest) while you remain overlapped. (Rule 17.1)

PASSING MARKS AND OBSTRUCTIONS

There is a set of special rules for boats that are about to pass a mark or obstruction. However, these special rules don't apply between boats on opposite tacks on a beat to windward. (Rule 18.1)

Except at a starting mark, you must give boats overlapped inside you room to pass a mark or obstruction, and boats clear astern must keep clear of you.

There's a two-length zone around marks and obstructions, and a boat's rights and obligations with respect to another boat are "frozen" when the first of them enters that zone. If you are clear astern of another boat when she enters the zone, you must keep clear of her until both boats are past the mark or obstruction, even if you later become overlapped inside her. (Rule 18.2)

TACKING NEAR A MARK. Don't tack within the twolength zone at a windward mark if you will cause a boat that is fetching the mark to sail above close-hauled to avoid you, or if you will prevent her from passing the mark. (Rule 18.3)

ROOM TO TACK AT AN OBSTRUCTION. When boats are on the same tack on a beat and come to an obstruction, the leeward boat gets to decide which way they are going to pass it. If the leeward boat hails for room to tack, the other boat must give it to her; but the leeward boat must give the other boat time to respond before she tacks. (Rule 19)

#### OTHER RULES

Before your Preparatory Signal, and after you finish, don't interfere with boats that are about to start or are racing. (Rule 22.1)

If you break a rule while racing, get away from other boats and do two 360-degree turns; if you hit a mark, do one turn. (Rules 20 and 44) Note: Sometimes the Sailing Instructions require you to fly a flag acknowledging that you broke a rule, instead of doing turns. (Rule 44)

If you start too soon, keep clear of others until you get behind the line again. (Rules 20 and 29)



#### UNITED STATES SAILING ASSOCIATION Box 1260, Portsmouth, RI 02871

To order the 2001-2004 Racing Rules of Sailing, call 1 800 US-SAIL-1 or order online: www.ussailing.org Copyright @ 2001 United States Sailing Association

#### Safety by Hobie Cat USA

Although sailing is generally one of the safest outdoor sports, carelessness can result in injury, or, in some cases, death. It only takes a few common sense precautionary measures to ensure safe boating. Read through the recommended steps before you venture out on your own.

#### Watch For Overhead Wires!

Contact of the mast with a powerline could result in injury or death. Beware of powerlines whenever sailing, rigging, launching or beaching your boat, Despite oft repeated warnings issued by Hobie Cat and other boat manufacturers, over ten fatalities are recorded every year in the United States as a result of mast/powerline contact. Heed the warnings and remember to watch for wires!

Never wheel your boat or trailer your boat with the mast up. Do not raise the mast of your boat in your yard, for example, unless you are positive there are no electrical wires present. Never rig your boat in a parking lot and raise the mast before trailering down to a launch ramp unless the facility is specially built for parking lot rigging such as at a marina.

#### Lifevests

According to Coast Guard regulations, every boater must sail with enough lifevests on board for every person in the boat. This is probably the single most basic safety precaution. The lifevests should be Coast Guard approved and should be worn at all times. These vests are designed to keep an unconscious person afloat so that his head remains out of the water:

#### **Do Not Sail Offshore**

Weather conditions can change very rapidly and when they do, the least desirable place to be is away from land, Although there are some offshore races for Hobie Cats, these are tightly controlled events with extraordinary safety precautions, Also beware of electrical storms. If the weather looks like it may change for the worse, go directly to shore even if you are far from where you launched. Lightning can kill.

#### **Equipment**

Just like any other pursuit, sailing requires the proper equipment. Always be sure to check seals, connections, shock cords, lines, sails, in short, every part of your boat, to guarantee you will not be caught unaware. To be sure, carefully read the owner's manual supplied with your boat before sailing. Hobie Cat hulls are vented to allow for expansion and contraction according to temperature changes. This allows a small amount of water to enter the hulls, so remember to remove the stern plugs before and then after sailing to allow any water to drain. But, be sure to replace the plugs before placing the boat in the water! Carry a paddle in case you find yourself unable to return to shore by sailing. When trailering, be sure that all parts of the boat are strapped down tightly Check the straps for wear and replace them if needed. Preventative maintenance, especially of moving parts, is always the best cure.

#### **Check Out The Boat**

Before each sailing, examine your boat carefully for any trouble spots that may turn into large problems out on the water: Just as the pilot of his airplane needs to check out his plane before flying, the safety conscious skipper should check out his boat. For complete information on checking your boat, see the Hobie owner's manual.