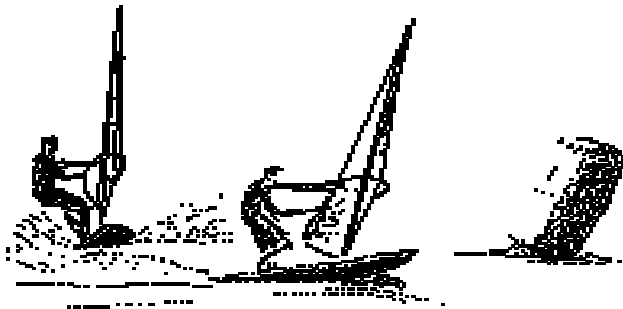


Introductory Handbook
for
Windsurfing



CAL SAILING CLUB

June 18, 1997

CONTENTS

Getting Started 1

The CSC Windsurfing Program 1

CSC Windsurfing Ratings 2

 Novice Rating 2

 Junior Rating 4

 Junior Plus (J+) Rating 5

 Senior Rating 7

Club Rules and Procedures 8

 Signing In / Out 8

 Sailing Hours 8

 Time Limits 8

 Damage Responsibility 8

Sail Rigging and Derigging Procedures 9

 Self-Rescue Procedure 11

 Safety 12

 Broken Equipment 12

General Sailing Information 13

 Port and Starboard Tacks 13

 Points of Sail 14

 Right-of-Way Rules 15

The 10 Step Guide to Windsurfing 16

Appendices 29

 A. Sailing Boundaries. 29

 B. Board Ratings. 29

 C. Knots. 30

 D. Glossary. 31

 E. Revision History 34

 F. Parts of the Rig. 35

Getting Started

Welcome to the **Cal Sailing Windsurfing Program!** You probably can't wait to get out on a windsurfer, so here are a few steps to help you on your way:

1. Read this handbook thoroughly.
2. Take a *rigging lesson*. Rigging lessons are scheduled for 9:30 Saturday mornings, or by arrangement with a Junior rated or higher windsurfer. Expect to spend *at least* an hour for this lesson.
3. Take the *rigging test*. The test is given by a Junior or higher windsurfer and is often the last part of the rigging lesson.
4. Take the *written test*. The test covers the information in this handbook and issues covered in the rigging lesson. The test is given by the Dayleader.
5. Sign-out your universal, board and sail and take the *self-rescue test*. This test is given by the Dayleader.
6. Begin sailing!
7. Reread this handbook, paying special attention to the section titled *The 10-Step Guide to Windsurfing*.

The CSC Windsurfing Program

As with all of the Cal Sailing Club's activities, the object of the windsurfing program is to provide minimum cost access, consistent with safety, to educational and recreational sailing facilities. The cost of participating is far below the cost of taking lessons or renting equipment from a commercial sailboard shop or school. We are able to operate at such a low cost level primarily because the instruction, maintenance, and administration is done by unpaid volunteers. We also replace our equipment at much longer time intervals than commercial operations, so it is unusual to have equipment available in perfect condition.

During the spring and summer months, formal lessons are usually available for novices on Saturdays and occasionally also on Sundays. However, new members interested in learning to windsurf will find that our otherwise unstructured program leaves them pretty much "on their own." After some initial basic instruction, members are encouraged to spend some time on the water getting a feel for the sport and come back with questions. Most advanced sailors are willing to share their knowledge with the beginner, who has only to ask. In general, learning to windsurf at CSC will require more individual initiative than the typical sailing school.

Another consequence of our low-cost program is that you are expected to contribute to the club through volunteer work. The minimum contribution is only two hours of work per quarter, but most active members find that they enjoy participating in various activities to the extent that they donate many hours of their time. The nature of your contribution is entirely up to you. We always need people to be instructors, to help with (and learn) maintenance, and to assist with some administrative jobs.

CSC Windsurfing Ratings

The club's operation is based on a rating system for both the windsurfing and sailing programs. Each program has its own set of ratings and a member's privileges and responsibilities for each is determined by the member's rating within that program. Only club members with appropriate ratings may take out club equipment. Each rating has one or more tests associated with it that a member must pass before being advanced to that rating. A member is eligible to take the test(s) for a particular level any time they feel that their knowledge and skills are adequate to pass the test(s). Members are only eligible to take the test(s) for the level immediately above their current level. (No level skipping is allowed.) All tests are given by club members with a sufficient rating or authorization (described below) or the Dayleader (when appropriate).

There are four ratings in the hierarchy of the windsurfing program: Novice, Junior, Junior Plus, and Senior. With advancement to each new rating, club members are allowed to take out equipment consistent with that rating. Also, the size of the sailing area that each member must stay within is determined by the member's rating.

Novice Rating

To obtain the Novice rating you must pass three tests: written, rigging and self-rescue. Although the tests may be taken in any order, it is suggested that members take the rigging test before the written test because several questions on the written test refer to procedures concerning the rigging of a sail. The Dayleader can give the written and self-rescue tests but only a person with at least a Junior boardsailing rating or special authorization can give the rigging test.

The *written test* is a comprehensive test based on this handbook and the handbook entitled "Cal Sailing Club Operating Rules". The written tests are normally given by the Dayleader. You should study both handbooks carefully before taking the closed-book test. If you don't pass, the test will **not** be returned to you and you must wait at least a day before taking the test again. Even if you pass the test easily, plan to study the handbooks a few weeks after you pass the test. The

handbooks contain a lot of useful information, and you will be surprised at how much you missed or forgot.

The *rigging test* is to assure that you know what equipment a Novice may use, where to find it, how it should be rigged and derigged, how to avoid damaging it, and how to put it away. (See **Sail Rigging and Derigging Procedures** below.) This time is also used to show beginning windsurfers the correct method for carrying the equipment to the dock and to explain proper “dock etiquette.” The rigging test is often the last part of the new member’s first Saturday rigging lesson.

A rigging lesson lasts about an hour and focuses on safety and proper care of our equipment. The rigging lesson will include:

1. What equipment you can use and where it is located.
2. How to sign out a universal, board and sail.
3. How to properly rig and derig the sail.
4. How to properly carry the sail to prevent damage to the equipment, and to prevent injury to yourself and others.
5. Proper dock techniques, including dock etiquette.
6. Repair procedures and where repair supplies are stored.

Note that even if you already know how to windsurf, you will need at least one lesson to familiarize yourself with our equipment and how it is rigged. Correctly rigging a windsurfing sail is a complex skill and even after you pass the test, you should feel free to ask other members to check your sail. Sails that are correctly rigged will last a long time and be a joy to sail. Sails that are incorrectly rigged can be easily damaged, dangerous, and not much fun to sail.

The *self-rescue test* consists of leaving the dock with a fully rigged sailboard, jumping into the water and getting the rig ready (See **Self-Rescue Procedure** below), then paddling the board and rig upwind about 150 meters and back. This is to familiarize you with the procedure for getting back to the dock if you are unable to sail and demonstrate how difficult it is to paddle the board so that you will be motivated to stay in close. There is no minimum wind speed for the self-rescue test.

When all three tests are complete you are a Novice boardsailor. This enables you to sail in the Inner Daysailing Area which is bounded on the east by a line running south from the third dock and on the south by a line running east from Hs. Lordships restaurant. (See Appendix A.) Novices are allowed to use the boards made of polyethylene (which includes the Bic Melodies and Calypsos, and Hifly Revos) and the sails and equipment designated for Novice use.

Novices are required to wear a life jacket at all times. Always make sure that it fits tightly or you will find it floating up around your ears. A warm wet-suit is also strongly recommended. The San Francisco Bay is cold enough to cause

hypothermia, which is dangerous and can impair your judgment. If you are shivering, return immediately and get warm. Novices are not allowed to use harnesses while sailing club equipment. As a beginner, the best progress can be made in steady, mild winds (under 10 MPH). During the summer in Berkeley, these are more typical in the mornings than in the afternoons. The spring and fall seasons are typically not as windy as the summer and are also excellent times for Novices to learn. To avoid being overpowered on windy days, a good idea is to carry or paddle the equipment to the beach on the shore just west of the club and start sailing from there.

The formal instruction offered on Saturdays is intended primarily for Novices. Anyone with a rating of Junior or higher can give windsurfing lessons for either lesson credit or work credit. The skills demonstrated depend on the skill levels of the people taking the lesson but generally include most or all of the following:

1. Carrying the rig
2. Uphauling the rig
3. Start-up sequence
4. Proper sailing stance
5. Steering up and down wind
6. Tacking
7. Sailing down wind
8. Nonplaning jibe
9. Sailing in higher winds (>10 MPH)

Novices should work to attain their Junior ratings as fast as possible by systematically mastering these skills.

Junior Rating

There are two requirements to advance to the Junior rating. First you must contribute two hours of work to the club, in addition to the normal two hours for the quarter. The work hours must be verified on your “rating and work credit card.” Once you have **completed** the work requirement you can take the *junior sailing test*.

The *junior sailing test* may be given by any Senior windsurfer, a rating committee member designated for windsurfing, or anyone else specifically authorized to give the test. As with all CSC exams, it is the responsibility of the person being tested to arrange the test with a qualified tester. The wind speed must be clearly over 10 knots and the tester will want to see you use a sail that is large for your size and the wind strength. **The tester wants to know if the wind suddenly increases by 10 knots while you are sailing whether you will be able to sail home despite being greatly overpowered.** Elegance is not required and you may fall in the water a lot, but you must demonstrate the basic skill to sail home under

most conditions. The content of the test necessary to demonstrate this ability is at the discretion of the tester but the typical test will include:

1. Sailing upwind and tacking in the swell
2. Sailing downwind
3. Nonplaning jibes
4. Doing 360 turns with the uphaul
5. Sailing in the waves
6. Demonstrating proper docking technique
7. Demonstrating proper care for the equipment

The last issue is of particular importance because the equipment available to the members above the junior rating is far more fragile than the relatively durable novice/junior equipment.

When you get your Junior rating, your “rating and work credit card” should be transferred to the appropriate Junior Skipper binder. As a Junior Windsurfer, you are allowed to use the Junior rated boards. The Junior boards are more fragile and more difficult to sail. Use extra caution when carrying and sailing these boards. Juniors continue to use the RAF (non-camber induced) sails used by Novices. The allowable sailing area is also greatly increased. Juniors are allowed to sail anywhere in the Junior Daysailing Area as long as they are wearing an adequate wet suit. This area is bounded on the west by a line running south from Hs. Lordships restaurant to the Emeryville Marina and on the south by a line running straight west from the Ashby Radio Tower. The eastern boundary extends to 100 yards from the shore by the freeway. Windsurfers should be careful not to get too close to the shore because if they have trouble uphauling or waterstarting, they may find themselves washed up on the rocks. Also there are submerged rocks near the shore which can do severe damage to a fin and board if they are hit.

Also, as a Junior, you are allowed (and encouraged) to wear a harness. The club has only a VERY limited supply of harnesses so you should expect to supply your own. As a Junior or Senior windsurfer, if you are wearing a harness and full wetsuit (with arms and legs) you are not required to wear a life jacket.

Junior Plus (J+) Rating

The Junior Plus Rating is intended as an introduction to “short board” sailing. To advance to the J+ Rating, you must complete 2 work hours in addition to the quarterly work and any work required for advancement to other levels. In other words, if you join the club during a particular quarter and advance all the way to J+ in the same quarter (it could happen!), a total of 6 work hours would be required. Once the work hours are verified on your “rating and work credit card,” you can take the *junior plus rigging/equipment test* and the *junior plus sailing test*. These

tests may be given by any Senior windsurfer, a rating committee member designated for windsurfing, or anyone else specifically authorized to give the test.

The *junior plus rigging/equipment test* is intended to make you aware of the ways in which the high performance J+ equipment (both boards and rigs) is vulnerable to damage and to ensure that you know how it should be rigged and sailed. The test includes rigging a J+ (camber-induced) sail with emphasis on where the sail is vulnerable to damage during the rigging/derigging process and how to shape the sail for optimal performance. Proper methods for attaching harness lines to the rig will also be demonstrated during the test.

The *junior plus sailing test* will be given in the unsheltered conditions beyond Hs. Lordship’s restaurant. The tester will expect you to be able to consistently “water start” in both directions. Other criteria that the tester will judge you on are your ability to control the board during a plane, being able to use the harness and harness lines effectively, and being able to get back on the board and into the footstraps. In addition, you must demonstrate a proper dock start and docking technique. The Junior Plus equipment is much more fragile than the Novice/Junior equipment, and you are responsible for damage caused by improper docking. Extra board skills (e.g. being able to carve turns) will also impress the tester and make your chances of passing more likely.

Becoming a Junior Plus does NOT increase the allowable sailing area for a member, but it does give them access to much higher performance equipment. The J+ rating allows you to use boards designated as Junior Plus, the carbon fiber masts, and the camber induced sails. The Junior Plus boards have less volume than the Novice/Junior boards and are difficult to uphaul so you should be confident of your sailing skills before taking them out into the stronger wind and waves.

As a tradeoff of higher performance, the **J+ equipment is much more fragile** than the Novice and Junior equipment. The majority of the damage that occurs to the J+ equipment is through mishandling. Common sense and extra care should always be used with this equipment if we expect to keep it in good operating form. **Indeed, the Junior Plus and Senior equipment is not fully paid for by the membership dues of people using it. In exchange for the privilege of using this equipment, the Junior Plus and Senior ratings carry with them a responsibility to help out above the normal quarterly work requirements if this part of the program is to work. You have a special responsibility to contribute extra time to the club including teaching Novices (both impromptu and on Saturday mornings) and Juniors, keeping the equipment fixed and tidy, or helping in other ways that suit your skills.**

The most common problem with the J+ boards are damaged noses caused by improper docking technique. **The proper docking technique is to get off the board 6 feet from the dock and swim in.** Junior boards are a lot more fragile than Novice boards, and a lot of damage has been done by trying to sail the board to the

dock. You are responsible for damage done to the boards by improper docking technique.

Senior Rating

The Senior rating is the highest of the ratings and is proportionately harder to achieve than any of the other windsurfer ratings. The stringency of this rating is due to the leadership responsibilities expected from the Seniors and the extra freedoms granted to them. This rating is achieved by contributing 10 hours of work (beyond that required for the Junior Plus tests and the quarterly membership), passing the more difficult *senior written test* and the very rigorous *senior sailing test*.

The *senior written test* is given by appointment and emphasizes safety and common sense. Although some of the questions are taken from the club's handbooks, the majority of the questions can be answered based on the knowledge and experience one gains through a season or two of windsurfing in the club.

The *senior sailing test* is given in heavy weather (at least 20 knots in big waves) by members of the rating committee or anyone else specifically authorized to give the test. Skills required include planing and nonplaning jibes on a short board, light and high wind waterstarts and sailing overpowered. The emphasis of the test is for the person being tested to demonstrate complete board control and the ability to get back to the dock safely if the conditions were to drastically change.

Once you achieve your Senior rating, your "rating and work credit card" in the clubhouse should be transferred to the Senior and Cruising Skipper binder. Senior windsurfers may sail anywhere in the Senior Daysailing Area. (See the CSC Operating Rules Handbook for the area definition.) Seniors may use any of the Senior-rated boards, but otherwise use the same sails and other equipment as the Junior Pluses. Several of the boards available to the Seniors are "sinkers" and can only be sailed in high winds. Since these boards are not uphaulable, awareness of the current and expected wind is important before taking out these boards.

Seniors are allowed to sail anytime during daylight hours, i.e. even when the skiff is not available or the club isn't open. (Seniors are eligible to obtain a "Senior Key" to allow them access to the club at any time.) However, members should be aware that in these cases, they are "on their own" to get back to the club if the wind suddenly decreases or a piece of their equipment breaks. As with the Junior Plus rating, the Senior rating carries with it an expectation of greater responsibility of service within the club.

Club Rules and Procedures

Signing In / Out

Before using the equipment you must separately sign out a universal, a board, and a sail. On the sign-out sheet, be sure to record the number of the universal, the number of the board, and the complete number of the sail. Be sure to sign out the time you leave and be prepared to show your membership card to the Dayleader. When you return, be sure to sign in, as this is the only way for the Dayleader to know that you have safely returned and you are not washed up on the rocks. You are responsible for all equipment that you sign out. If you take over a sail that someone else has already rigged, be sure to check for damage, and that it is rigged properly before taking it out.

Sailing Hours

Novices, Juniors and Junior Pluses are only allowed to sail during hours when the club is open and the rescue skiff is operational and available for rescue. During periods of strong winds or other hazardous conditions, the Dayleader has the authority to limit sailing to a smaller area or to cancel sailing altogether for any member. Use good judgment and know your own ability.

Time Limits

There is a 60 minute time limit on sailing when other members are waiting and there is no comparable equipment available. Members should check back in at the dock if there is any doubt about people waiting and write the new time above their original departure time so people reading the sign-out sheet can see that they have checked. If no one wants the board or sail when you are finished, you are responsible for putting all equipment away properly. If you hand your equipment over to someone else, be sure that they sign it out.

Damage Responsibility

Members are responsible for any damage or loss that occurs or is discovered while the equipment is signed out to them. In the instance of damage, the member must repair the damage or do an equivalent amount of work as determined by the Second Vice Commodore. Until the repair is completed, you may not sail a Club boat or sailboard without the permission of the Dayleader or any Club Officer. All damage and repairs must be noted in the Dayleader log.

Specific instructions for repairing equipment can be found later in this handbook, and on printed sheets locate at the workbench in the windsurfing locker.

If damage or loss to equipment resulted through negligence or disregard for CSC rules (as determined by the Executive Committee), the member may be liable for up to \$100.

Sail Rigging and Derigging Procedures

The Club has a very nice area for rigging sails. The carpeted area inside the boat yard has enough room for three or four people to rig but if that is full, you can always carry the equipment to the other carpeted area behind the clubhouse. At no time should any part of the equipment be rigged or even laid on the asphalt because of its rough, abrasive texture. The **rigging** procedure is as follows:

1. Unroll the sail with the mast sleeve to windward. Be careful not to lose the bottom batten. Hang the sail bag in the Windsurfing Locker to prevent it from blowing away.
2. Slide the mast into the mast sleeve.
3. Place the mast base or mast extension on the mast and thread the downhaul line through grommet in the sail. (in general, only sails that are larger than 5.6 m² will require a mast *extension*; smaller sails can be adjusted at the mast cap.)
4. Tighten the downhaul moderately until the sail is stretched flat away from the mast in the area near the top batten.
5. Attach the boom to the mast.
6. Attach the outhaul to the sail and outhaul the sail until it is completely flat. (The boom should be lengthened as necessary.) This pretensions the mast, and aids batten adjustments.
7. Insert the bottom batten and tighten the battens until there are no wrinkles in the batten sleeves.
8. Finish tightening the downhaul. For the older (Pre-1992) sails, this means tightening the downhaul until the top batten pulls away from the mast. For the newer (1992 - present) sails, this means tightening the downhaul until the leech of the sail becomes loose down to the second batten. (Since this will require a good deal of effort, it may be necessary to tie a bowline in the downhaul rope and use a piece of pipe to get a good grip for pulling.)
9. Loosen the outhaul until there is no tension in the sail in that direction.
10. Shorten the boom until the end of the boom touches the clew of the sail. Clamp off the outhaul through the cleat and tie off any extra line using half hitches around the boom.
11. Adjust the downhaul, if necessary, to meet the conditions in step 8 above. Tie off the extra downhaul line using half hitches around the mast.

12. Attach the uphaul to the bottom of the mast.

The following procedure should be used for derigging the sail:

1. Rinse the sail, boom, and mast extension with fresh water to remove all salt and mud.
2. Loosen all batten straps. Do **NOT** pull the battens out (away from the mast) at all.
3. Loosen the outhaul and remove the boom from the rig completely.
4. Loosen the downhaul.
5. Remove the downhaul, extension, and mast.
6. Roll the sail from the top. Do not fold the sail - this weakens the sail in the area of the fold. On smaller sails remove the lowest batten and roll it into the sail.
7. Place the sail *luff first* in its proper bag and return it to the storage locker. Match all three numbers on the sail with the numbers on the sail bag.

Other rules and guidelines that should always be followed when rigging or handling the sails are:

- Always beware of sources of puncture wounds. Examples are sharp skegs, boat trailers, and the barbed wire on top of the fence.
- Never stand on the sail - always walk around it.
- Don't scrape the sail against the ground. The batten straps and mast caps chafe easily and this is one of the most common repairs we have to make.
- Never fold or crinkle a sail.
- Do not stand a rolled sail on its clew end.
- Never carry the sail between you and the wind and use extra caution on the dock.
- Always enter and leave the water on the **leeward** side of the dock.

Self-Rescue Procedure

As a beginning windsurfer you may find that you have trouble making your board move in the direction that you want it to. Indeed, at some point you will probably find yourself drifting out of the Inner Area (the area that Novices are restricted to). If you are getting blown downwind past the third dock, you should **paddle** to the third dock and carry your equipment back. Usually at this point

downwind, further attempts at sailing upwind will only exhaust you and make it more difficult to get back. Even if you can't make it to the third dock, you should paddle to the shore adjacent to the dock (or to the access road to the Marina). Do not let yourself get blown down to the rocks at the east end, by the frontage road near the freeway. It is very difficult to spot sailors in trouble in that area and the result can be dangerous.

Staying close to shore might not be the only time that you will need to know how to self-rescue (paddle) on a windsurfer. Even as a Junior or Senior with improved sailing skills, you may be forced to swim the equipment back if something breaks while you are on the water. For these reasons, it is good to know how to self rescue.

There is some debate on the *best* method to self-rescue. Obviously, the method you choose will depend on the distance to travel and the current conditions. In general, if you are on a board that has a centerboard, lowering it will help you stay on course and up wind.

Suggested Self-Rescue methods:

No Wind: Balance the boom on the back of the board so the sail is out of the water, lay on the sail and board, and paddle with your arms and hands.

Some wind, short distance to travel: Let the sail drag in the water at the side of the board, lay on the board, and paddle.

Some wind, long distance to travel (Method 1): Untie the extra downhaul line. Remove mast from universal and slide the sail onto the back of the board. The sail and half the boom should be above the board and the other half of the boom should be in the water below the board up against the fin. Tie the loose downhaul around the universal in order to keep the rig in position. Climb on top of the board lying face down and paddle.

Some wind, long distance to travel (Method 2): Derig sail (remove battens as necessary) roll it up and tie it to the boom. Lash the boom, mast and sail together (mast still attached to the board), lay on the board and paddle.

Extremely high wind, life and safety in danger: Jettison rig, lay on board and paddle.

Safety

It is a good idea to carry safety equipment with you while windsurfing. A good quality wetsuit will be well worth the investment as the bay can be very cold and hypothermia can set in a matter of minutes. Many windsurfers carry a length of rope to make on the water repairs, and as your rating advances, you may think it valuable to carry a small safety whistle or perhaps even a waterproof flare.

Broken Equipment

Members should never take out any equipment that is broken or damaged in any way. This includes things such as ripped sails, cracked boards, broken battens, etc. It is not only dangerous to use broken equipment but also, it is usually the case that more significant damage will result from further use. If you find a sail that has a problem or if some damage occurs while you are sailing, take the appropriate action according to the following guidelines:

Things You Can (and SHOULD) Repair:

Battens - If a sail is missing a batten or has a batten that is the wrong size, it should be replaced. If you can't find a batten that is the perfect length in the pile, pick one that is slightly longer (battens are expensive - don't use the longest one that you can find!). Use a hacksaw (in tool shed) to trim the batten to the correct length. Finally, glue an end cap to the batten with contact cement.

Buckles (batten tensioning) - Remove old buckle (if necessary) by clipping it off with a wire cutter, tin snips, etc. Replace with new buckle from the Windsurfing Locker.

Mast Caps - If a sail is missing or has a broken mast cap, remove the old one and replace it with a new one from the Windsurfing locker. Mast caps should be adjustable and not tied with permanent knots.

Small Rips in Batten Straps - If a batten strap has a rip such that the batten pokes through the strap, cover the hole in the batten strap with a batten strap bra (short length of hollow webbing) found in the Windsurfing Locker.

Small Tears (< 4") in the Main Body of the Sail - To repair small tears, cut two pieces of sail tape (from the scrap tape found in the workbench in the Windsurfing Locker) which are slightly larger than the rip (1" on each side should be sufficient). Cover the tear on each side of the sail with the sail tape. The sail has to be completely dry and clean for the tape to stick. Small tears in monofilm may be repaired using good-quality clear packing tape.

Things the Sail Repair Shop Must Fix:

1. Large tears (>4") in the main body of the sail.
2. Tears in the batten sleeves or mast sleeve.
3. Tears where the sail is under high pressure (e.g. at the head).
4. Batten straps ripped off.
5. Holes in batten caps (at the luff end of the batten sleeve).

For any of these problems, follow this procedure:

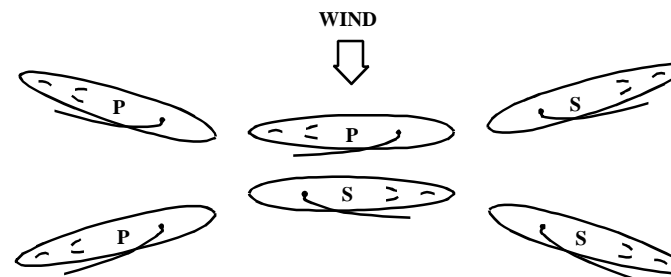
1. Rinse and dry the sail.
2. Carefully inspect the sail for other damage.
3. Roll up the sail and place the sail in its proper bag as normally done, matching all these numbers on the sail and sail bag.
4. Fill out a repair tag that includes a) the sail number, b) the damage and its precise location, c) your name and the current date. Attach the tag to the pull string at the end of the sail bag.
5. Place the sail in the rear of the Windsurfing locker under the "Sails for Repair Shop" sign.
6. Make a note of the damage in the Dayleader Logbook. The 2nd Vice Commodore relies on this book to keep track of the current status of the equipment and schedule and necessary repairs.

All other equipment should be repaired in a manner approved by the Second Vice Commodore. If you have any questions about a repair, feel free to ask any Senior windsurfer or the Second Vice Commodore for advice.

General Sailing Information

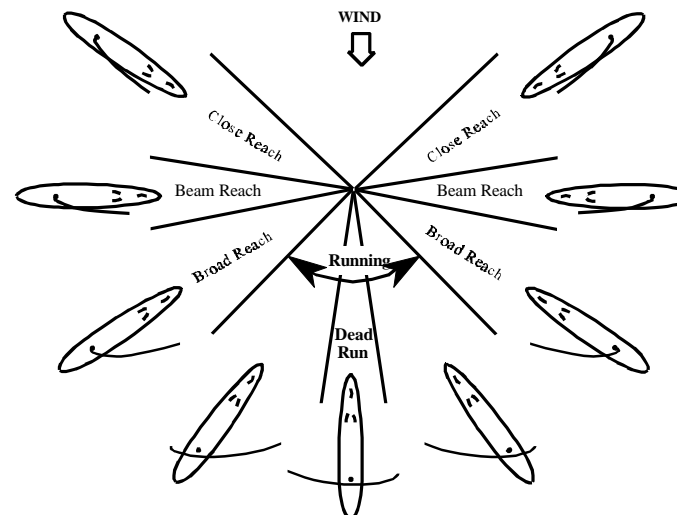
Port and Starboard Tacks

When a boat is sailing, the boom and sail will be blown to the side opposite the side of the boat that the wind is coming from. When the wind is from anywhere on the port side of the centerline of the boat (the left side of the boat, looking forward), and the sails are on the starboard (right) side, the boat is on a "port" tack. When the wind is from the starboard side of the centerline and the sails are on the port side, the boat is on a "starboard" tack. If the wind and sails happen to be on the same side (which is an unusual and sometimes dangerous condition and is called "sailing by the lee"), the tack is defined as corresponding to the side opposite the side that the mainsail is on.



Boards marked with a "P" are on port tack and those marked with an "S" are on starboard tack.

Points of Sail



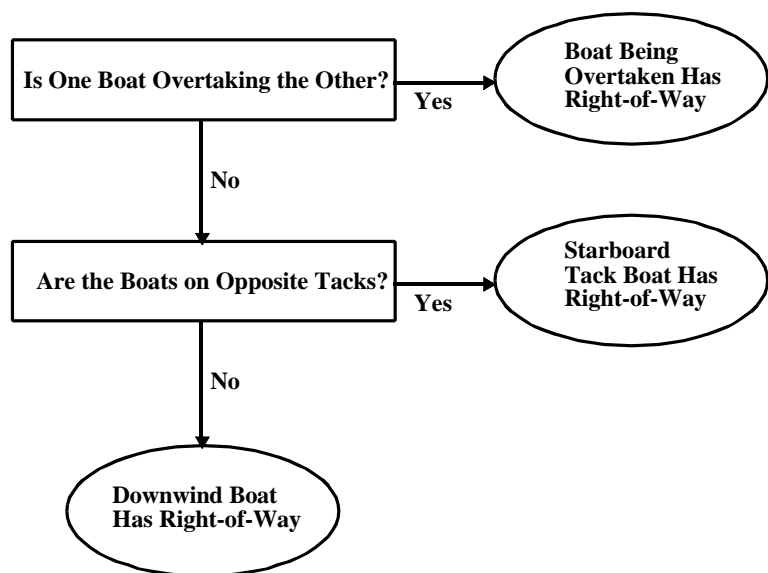
The direction of a boat's travel relative to the direction of the wind is called its *point of sail*. The closest angle to the wind that can be achieved when sailing is about 45 degrees. Sailing at this angle is called sailing *close hauled* or *beating*. Sailing between 45 and 135 degrees from the direction of the wind is called *reaching*. This angle is further subdivided into *close reaching* (45 to 80 degrees), *beam reaching* (80 to 100 degrees) and *broad reaching* (100 to 135 degrees). Sailing between 130 and 180 degrees off the wind is called *running* or sailing "on

a run.” In addition, sailing straight with the wind (170 to 180 degrees) is called sailing on a “dead run.”

Right-of-Way Rules

It is just as important to observe the universal right-of-way rules on the water as it is when driving. Right-of-way can always be determined by applying the following three rules:

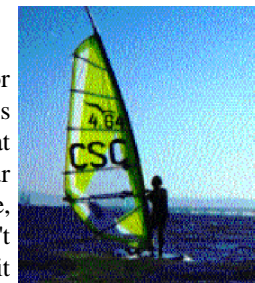
1. A boat overtaking another boat shall keep clear of the boat being overtaken.
2. A boat on port tack shall keep clear of a boat on starboard tack.
3. When two boats are on the same tack, the boat to windward shall keep clear of the boat to leeward.



Right of Way Rules Flow Chart

The 10 Step Guide to Windsurfing

By Bill Prinzmetal

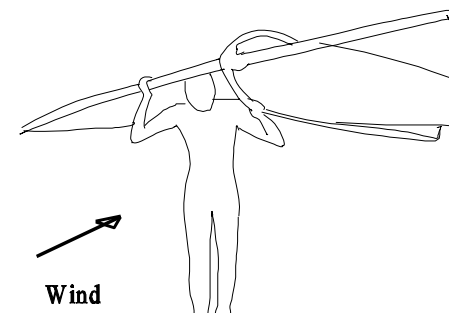


This guide was written to help you get your Junior Windsurfer rating at CSC. It's organized around 10 steps (including one for fun, for advanced windsurfers) that should help you learn to enjoy windsurfing and get your Junior rating. Some of the steps are difficult to describe, as you'll find out when you read this. If you haven't already tried to do the things described in this guide, it will probably seem even more incomprehensible than it actually is. So if you haven't gotten wet yet, perhaps now is a good time to put this down, put on a wet suit, and go windsurfing. But one last word of advice for those leaving now: relax, try not to get frustrated (you'll tire yourself out needlessly), and concentrate on enjoying the wind and water.

Still with me? OK, a few more introductory notes. This guide assumes you know some of the salty talk and windy concepts associated with sailing. If you don't know what a broad reach is, read the *General Sailing Information* section in this handbook. If you have trouble figuring out where the wind is coming from, you might find it instructive to take a Lido lesson and learn some of these basics in a situation where you don't have to also balance on a sailboard. Also, I've included some miscellaneous stuff that isn't strictly introductory, but may become useful as you get more advanced. There are also some safety hints that I hope you'll heed, since I learned some the hard way, and being safe on the water will make you more comfortable and increase your enjoyment. Finally, a caution: windsurfing is addictive. It can harm your social relationships, hinder your career, and keep you from ever making a useful contribution to society. In short, it's fun.

1. Carrying The Rig

Carry the board down to the dock first, and leave it with its skeg hanging over the windward side of the dock, so it doesn't get in the way of launching or landing on the leeward side of the dock. Take the sail down only when you're ready to sail, since it can



easily get airborne on its own in a gust. Do not leave your equipment on the dock for more than a few minutes.

Carry your rig (sail, boom, and mast) with the mast upwind of the sail, and try to keep the mast at a right angle (90 degrees) to the wind. If it's windy, or you have any doubt about your ability to handle the rig safely, get someone to help. They should hold the tip of the mast to keep it at a right angle to the wind, since the greatest danger is from the mast twirling around and hitting someone.

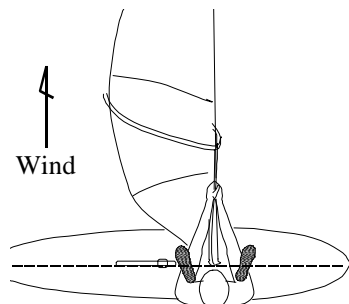
Lift the rig over your head, with one hand on the mast, about a foot from the boom towards the tip of the mast, to support most of the rig's weight. The other hand should grasp the boom about two or three feet away from the mast. This hand controls the angle of the sail to the wind, and pulling the boom down slightly will "fly" the sail like a kite.

You may rest the sail on your head but avoid the clear part of the sail--your head could permanently stretch the material. As you walk to the dock, keep the mast perpendicular to the wind. If you turn around, the sail should stay in the same orientation in relation to the wind.

2. Uphauling The Sail

At the dock, set the rig down with the mast base by the board's universal. Tip the board on its side and attach the rig, then slide the whole mess into the water on the downwind side of the dock. Angle the centerboard down, and get on the board and paddle it a few feet away from the dock before trying to uphaul (lift the sail). Get clear of the boats and dock before you try to stand up.

Begin with the board approximately at a right angle to the wind, and the sail on the downwind side of the board. Take the uphaul in your hands and stand up slowly, keeping your weight over the centerline of the board so it doesn't tip over. Foot placement is important. Your feet should straddle the mast base, about shoulder width apart, with the front foot (the one closest to the board's bow) right by the mast base and the rear foot about a foot from the mast base. Your feet must be on the centerline of the board, shown as a dashed line in the picture. Keep your knees slightly bent, and let your feet roll with the waves while your weight stays right above the centerline of the board.



Slowly, lift the sail with the uphaul. Don't pull hard until the water drains off the sail. As you lift the sail, keep the board at a right angle to the mast, which will be pointing downwind. To turn the board, swing the mast toward whichever end of the board is too far upwind. If the tail of the board gets upwind of the bow, swing

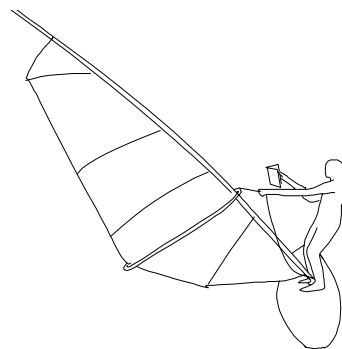
the mast toward the tail. The wind pressure on the sail, transmitted through your back foot, will push the tail downwind.

Expect to fall in the water as you learn to uphaul. To fall less often, concentrate on:

- keep your feet on the centerline (tip to tail) of the board
- keep the board at a right angle to the mast
- keep your knees bent and let your feet roll with the waves
- lift the sail slowly out of the water

When you do fall, it's better to have the sail fall downwind from the board, since it will be harder to uphaul if it falls upwind of the board. If it starts to fall upwind of the board, push it over to the downwind side as you fall in. But if it does fall upwind of the board, the easiest remedy is to swim the board around upwind of the sail before trying to uphaul.

When you succeed in getting the sail out of the water, rest for a second before proceeding. You should have arms straight, sail out of water, knees slightly bent, sail at right angle to the board. This position should be very stable. You could read *War and Peace*, or do your taxes in this position.



With the mast held at a right angle to the board, the board will stay at a right angle to the wind (beam reach). If the wind is very light and you can't tell exactly where the wind is coming from, hold the sail in this position and the board will swing around to a right angle to the wind (i.e., wind at your back - a beam reach).

If you are up wind of where you want to be and for some reason have trouble sailing downwind, hold the sail in this position and just stand there (knees bent, arms straight).

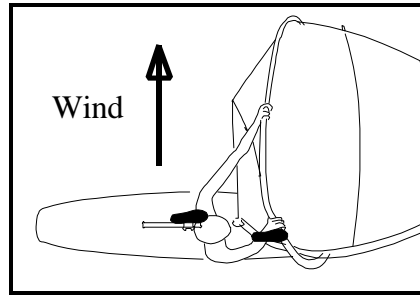
You will drift downwind slowly, and also sail forward to some extent.

3. Startup Sequence

OK, you've finished *War and Peace*, now is the time to get moving. You're holding the sail completely out of the water, holding onto it by the uphaul. Your feet are on the centerline of the board, straddling the mast base, and your knees are slightly bent.

Let go of the uphaul with your front hand (the hand closest to the front of the board), and use your front hand to gently grasp (don't pull yet!) the boom about 8 inches from the mast. Your front hand will cross over your back hand, which holds the sail up until the front hand grips the boom.

With your front hand, move the boom and sail forward (toward the front of the board) and upwind. Keep the sail parallel to the wind, so it has no force in it. Your body will swivel so you now face forward rather than downwind. As you swivel to face forward, move your back hand to the boom, about two to three feet behind the front hand.



Gently, and very, very slowly, pull in with your back hand and the wind will start to power the sail, causing you to start moving forward. When you get to Hawaii, send me a postcard.

Resist the temptation to panic and drop the sail. If you think that the wind is too strong, gently let out with your back hand, and return to the resting (or heaved to) position shown above. As you feel more comfortable, pull in harder with your back hand. You will have to lean back to counter the pull of the sail.

Sheeting Out in Gusts

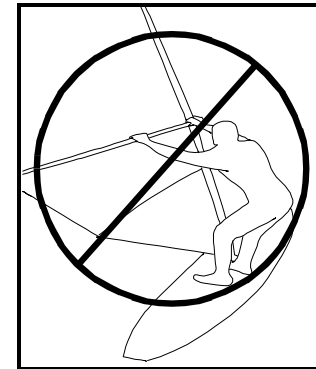
To effectively sheet out and spill the wind from the sail, you must let out with your back hand, and simultaneously pull in with your front hand. The sail will now be parallel with the wind and the wind will safely spill from the sail.

4. Sailing Stance

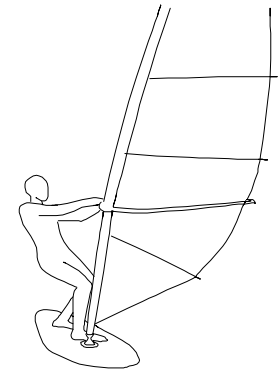
Keep the mast more or less vertical. Do not let the rig lean over to leeward. If it does, you will have to contend with the rig's weight as well as the force of the wind on the sail. If the rig leans to leeward, sheet out and lean back until the mast comes up.

Choosing the right size of sail
The wrong sail size, whether too big or too small, will make sailing difficult. Only two factors matter for the correct sail size: (1) your weight; (2) the wind strength. The wind strength will change from day to day. If the wind is 10 knots and you are having fun on a 5.0, then next time out when the wind is 10 knots, use the same size sail if you can. However, if the wind is lighter next time (5 kts) use a bigger sail; if it is stronger (15 kts) use a smaller sail.

When the wind is light, to keep the mast vertical, your elbows (particularly your front arm elbow) should be bent and pointing down. When the wind is strong, you will need to lean way back to counteract the wind in the sail and therefore your arms will be straight.



Your back should be straight, knees bent, and derriere discretely tucked in, as if you were sitting down in a straight backed chair. Don't let your butt stick out, it not only looks silly but it will cause you to



fall.

Sometime after you start sailing, move your front foot behind the mast. Your feet should be slightly wider than shoulder width apart. Exactly where you stand depends on conditions. If you are a light weight person, you can stand anywhere on the board. If you are a heavier person and you notice the tail of the board sinking, move forward. If the bow is sinking, move backward. As the wind gets stronger, you will have to move back on the board to keep the bow from purling under the waves. For now, it is important that your knees are slightly bent and your feet on the center line.

As you get into high winds, you will move your feet into the footstraps on the windward side of the board. To counteract the force of the sail, your body will be "hiked" way out to windward and your legs will be straight.

Centerboard Position

For now, your centerboard should always be down. You only need to raise it when you reach high speeds at which point the centerboard causes instability. You can sail upwind without a centerboard if you dig in (partially sink) one of the edges of the board to keep it from slipping sideways. You do this by placing your feet slightly off the centerline and pointing your toes to aggressively push down with the balls of your feet. Dig the downwind edge into the water as you sail.

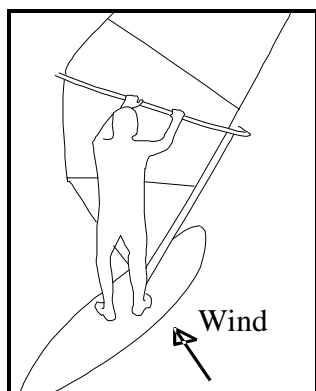
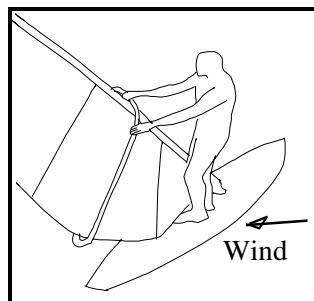
If you can't sail upwind

When you first start to windsurf it is common to get blown downwind. If you find yourself in this predicament, and get carried down to the third dock (the edge of the Inner Area for Novice Windsurfers), you should try to get to that dock and land, so you can carry your rig and board back up to CSC.

It is easier to carry your board home on land than swim your board back to the dock against the wind in the water. Also, if the tide is low, it's usually easier to walk your board home in the water than swim it home. If all else fails, and you need a rescue from the skiff, sit on the board and wave your hands in the air to signal for help. However, if you get a rescue, you can't sail any more that day.

5. Steering

Steering up wind is easier than getting the board to turn downwind. To get the board to turn upwind, move the sail back and over the rear of the board. The foot of the sail may actually touch the deck of the board. Hold this position until the board changes direction, then move the sail back to the neutral position (see sailing stance). If you are having trouble making the board head up wind, you are not moving the sail far enough back and far enough over the board. The lighter the wind, the more you have to exaggerate this move. Be careful that you do not head up into the wind too much and get caught "in irons."



Many sailors have more trouble turning downwind (away from the wind). Move the sail forward and across the front of the board. If the wind is light, it may be necessary to move your hands back on the boom. In stronger wind, be sure to step back first so you can lean against the sail's force, and point your forward foot toward the front of the board to resist the sail launching you forward.

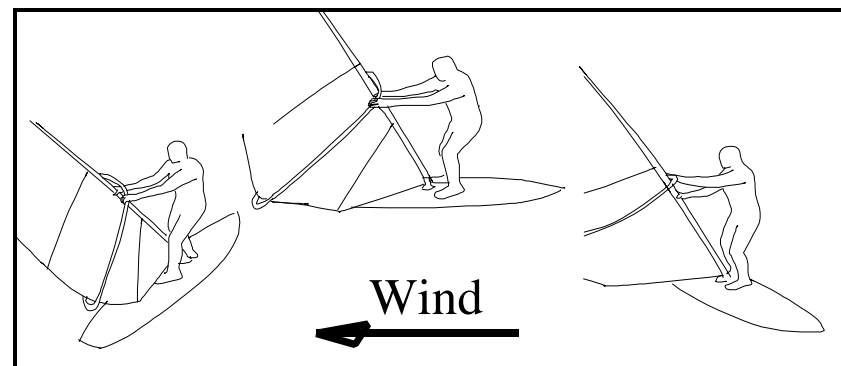
If you have trouble getting the board to turn downwind, you may be doing one of two things wrong: (1) You do not have the sail leaning far enough forward and across the front of the board, and/or (2) You are not sheeting in and therefore do not have power in the sail.

If your trouble is that you fall in every time you try to turn downwind, you probably need to step back further before beginning the turn, but also move your hands further back on the boom.

6. Coming About

Coming about means changing tack (shifting the sail from one side to the other) by turning into the wind. Begin your turn on a reach. Before starting to tack, drop your front hand to the mast just below the boom and move your front foot to just in front of the mast.

Now begin to turn into the wind by moving the sail to the back of the board and across the board, just as in the "Steering Step" above. You actually will push the board around with your rear foot as you pull the sail against the wind (the wind force is actually pushing the board backward, not forward) with your rear hand. As the board points into the wind, swing your body in front of the mast. Move your rear foot up to straddle the mast base when the sail hits that foot, but keep pushing the board around with your feet, and keep pulling on the sail with your rear hand.



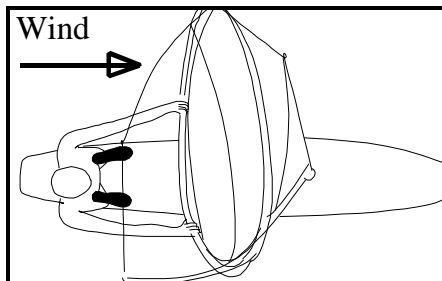
When the board is turned onto the new tack, stop pulling the sail against the wind, and move your hands to the new sailing position.

The important principle in the tack described above is that you keep pulling the sail against the wind for as much of the turn as possible. This gives you something to lean against, and will help you avoid falling in. One thing that you can do to speed the tack: Before beginning the tack, when you move your front foot just before the mast, also move your back foot a few inches back on the board (so that you have a wider stance). Having a wider stance will give your back foot a bit more pushing power.

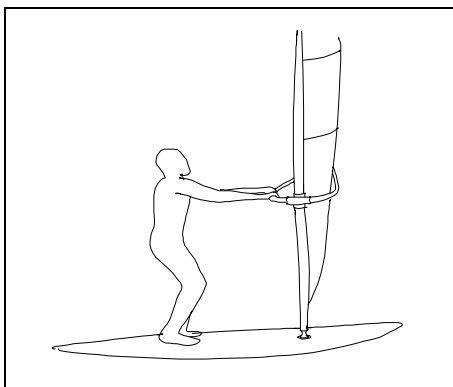
7. Sailing Downwind

By downwind sailing, I mean sailing on a "dead run." Sailing on a run requires having the sail in a different position than in normal sailing and it takes some concentration. On the plus side, it looks cool, it will get you home, and after mastering sailing on a run, a nonplaning jibe will be literally "a snap." Of course, before sailing downwind, you must be able to steer and tack so that you can get up wind.

Before taking the downwind sail position, you must be on a broad reach. Now is a good time to reread the Steering step. Do not attempt to turn on to a run directly from a beam reach or higher, it will not work. To go into the run position, first move your hands back on the boom, and swing the sail across the front of your board as you did when you turned downwind (see Steering). Tilting the sail across the front of the board will turn the board downwind to a beam reach. To turn further downwind to a broad reach and beyond to a run, tilt the sail more across the board and less forward. As you turn to the broad reach, move your front foot back so that it is even with your back foot, heels together. If you were successful in turning the board, you will be in the position shown at right. If you did not turn the board downwind you (1) did not move your hands far enough back on the boom; (2) you did not lean the sail far enough across the front of the board.



In the downwind position (1) the sail is square in front of you at a 90 degree angle to the board, (2) your knees should be bent, (3) you should be pressing down on the boom.



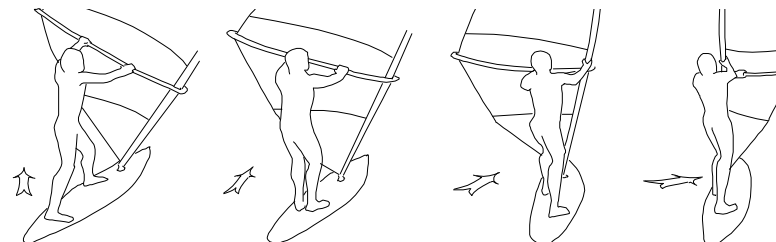
In the downwind position, the board will seem very "tippy," one rail will want to sink and the board then will want to turn in the opposite direction. To avoid sinking one rail or the other, you must be light on your feet. Bend your knees and aggressively press down on the boom. Pressing down on the boom will transfer your weight from your feet to the boom and mast.

To steer while sailing in the downwind position, move the sail to one side of the board, and the board will steer in the direction opposite the side to which the sail is tilted. Tilt the sail to the right, and the board will steer to the left. Try to steer directly downwind by making side-to-side steering corrections with the sail. When you are finished sailing downwind, steer back up to a broad reach, and move one foot forward to resume the normal sailing position.

Before trying to tackle the next step, a nonplaning jibe, practice sailing downwind and moving your feet further and further back of the board each time. To get further back, you'll have to bend your knees and aggressively press down on boom. At the end of this exercise, you should be so far back on your board that if you were to let up on the boom, the tail of the board would sink (you would do a "wheelie").

8. Nonplaning Jibe

Prepare for jibing just as you did for sailing downwind: (1) head off on a broad reach; (2) move your hands back on the boom. The lighter the wind, the further back on the boom you will need to move your hands. In addition, prepare to jibe by moving your back foot further back on the board. The further back on the board you are, the snappier your jibes will be. Keep those knees bent! Finally, look before you initiate the turn so that you do not turn into the path of an oncoming sailor.



1. Turn Downwind from Broad Reach
2. Steer on Run (feet back, heels together)
3. Steer Past Dead Run, move hand to mast
4. Flip Sail, Grab Boom on New Side)

Initiate the turn just like you turned downwind: swing the sail to windward across the front of the board (just like you did to turn downwind). Just as before, move your front foot back to be even with your back foot. Keep this position until you turn past a dead run (i.e. until the wind is blowing from the side your sail clew, not your mast, is on), and you are on a broad reach on the other tack. In the figure above, the wind (arrow) is on the same side as the sail before the sail is flipped over to the other side.

To flip the sail, first slide your front hand forward on the boom all the way to the mast (3 in the figure above). Then let go with your back hand and the sail will flip itself. Grasp the boom on the new side (4 in the figure), step forward to a normal

sailing position, and sail off. You might have to move the sail to the back of the board to head up higher.

Note that to get the board to turn downwind, you have to move both of your hands back on the boom. But just before you flip the sail for the jibe, you must slide your front hand forward all the way to the boom.

In the sequence above, you flip the sail after you are well onto the new tack (a broad reach or higher). The only exception to this method is if the wind is very light, your turn will stop when you are pointed directly down wind. If this happens, flip the sail and muscle it onto the correct side and to the back of the board to finish the turn.

You can do several things to make your jibe snappier. First, after you move both feet to the back of the board, put more weight on the windward rail than the leeward rail (note: this works only if the centerboard is down). Second, step further back on the board. Finally, these two strategies can be combined in the following way. Instead of moving your front foot back to be even with your back foot, move your front foot even further back and put most of your weight on it. I find that most boards have a "sweet spot" way in the back of the board. If I move my old front foot way back to that spot and put my weight on it, I can turn on a dime.

9. High Wind Sailing

There are a few tricks to sailing in higher winds. The first and most important trick is to do everything you been taught so far, but more so. Follow the instructions for up hauling, startup procedure, and stance exactly. Do not skip any steps. For example, on flat water, it doesn't matter too much if your knees are bent, but in bumpy water if your knees aren't bent when you are starting, you will surely fall. The word in higher wind is think, think, think.

Second, when you do the startup procedure in higher wind, there is a natural tendency for the board to round up and end up pointing upwind. If the board rounds up head-to-wind you will fall. To avoid rounding up, when you do your startup, be sure that you are bringing the mast across the front of the board. This action will help keep the nose of the board from turning upwind. If you are still rounding up when you startup, try the following. Have the front of the board pointing slightly downwind (broad reach) before you start. To point the front of the board slightly downwind from the heave-to position, hold the mast forward (not at right angles to the board).

When you first sheet in, you will feel a strong pull in your arms. When you first feel the pull, resist the temptation to let go of the rig. Lean back and hold on. The force will dissipate as you board starts moving forward.

Lean back with your arms straight. You do not have to hold the force of the sail with the strength of your arms. Rather, your arms should be straight and you should hang your body weight from the boom. If your arms are getting tired, it might be

because you are trying to hold the sail with your arms bent at the elbow. Straighten your arms and hang from the boom.

The pull on your arms should be equal. If your front arm is getting tired, but your back arm is not, then move both your hands forward on the boom. If your back arm is getting tired, but your front arm is not, move both hands back on the boom.

As you move faster through the water, you will have to move further back on the board to keep the board level. More of the front of the board will be out of the water.

As you gain speed, the centerboard will generate so much lift that you will feel the board rock from side to side. It is as if the centerboard wants to pop out of the water. Now is the time to raise the centerboard. You can move it part way up. If the centerboard still wants to pop out of the water, you can move it all of the way up. On a board with round rails like the Melody or Calypso, you want to keep the centerboard down longer than a board with sharp rails like the Ultra Cat.

It is important to watch the water in front of you to be prepared for gusts and lulls. In particular, when you see a gust of wind approaching, prepare to put your weight on your back foot and lean back.

If you have done all of the above, and the wind is still too strong, there are several additional things you can do. First, get a smaller sail. Second, you can rig your sail flatter by giving it considerably more downhaul and a little more outhaul. Third, heel the sail to windward (lean against it while sheeting out a little) to reduce the area of the sail exposed to the wind, and to use your weight more effectively against the sail force.

Get used to higher winds in stages. Don't go from an 8 knot day to a 25 knot day. If you get used to higher winds in stages, you will feel more comfortable on the water. Remember however, higher wind requires the tricks that I have listed above. Soon, you too will be hit by the high wind bug: When you hear that the wind is blowing 25 knots, your heart will race.

Wetsuits

Windsurfing wetsuits are designed so that you can comfortably hold your arms out straight and hang on to the boom. Windsurfing wetsuits will be made with the outside mostly shiny neoprene, not cloth. Water will run off the shiny neoprene and not cool you in the wind. Water will stick to cloth and cool as it evaporates in the wind. Wetsuits come in various thicknesses, indicated by two numbers. A "2-3" wetsuit will be 2 mm thick in the arms and legs, but 3 mm thick in the chest and body. A 2-3 wetsuit is adequate for the bay if you just sail in the summer and do not tend to get cold. A 3-4 wetsuit is a good bet if you like to sail in the spring and autumn or sail in the summer but tend to get cold. The wetsuit should be snug everywhere without cutting off circulation.

10. Free Style

You might ask why you should anyone spend time learning free style tricks. There are three reasons: (1) Free style tricks help you get a better feel for your board and rig; (2) Some free style maneuvers become important in later sailing (e.g., water start, sailing clew first, duck jibe); (3) It's fun. Here are some easy tricks to get started.

Sail Clew First. The easiest way to get into this position is to not flip the sail after jibing. A more interesting way is as follows: While sailing on a reach, first move both hands back on the boom. Reach your front hand back across your back hand to the end of the boom. Flip the back of the boom forward and reach over on the other side of the boom. This maneuver will help you learn how to duck jibe.

Sail Downwind Tail First. Come head to wind as if you are tacking. Move in front of the mast and pull the sail perpendicular to the board (in the downwind position). Move out to the bow of the board in the sailing downwind position. The trick is to move far out on the bow of the board so that the skeg is out of the water. This maneuver is great practice that will help you do nonplaning jibes going the other way.

Pirouette. (you spin, the board and sail don't) Sail on a beam reach in light wind. Move the sail across the board in front of the mast base (the same position as when you started up, step 2). There is a position where the sail will almost balance on itself. After you find that position, let go of the boom, pivot on the balls of your feet (spin around 360 degrees), and quickly grab the boom.

Sail 360's. (you and the sail spin, the board doesn't) Begin as in the pirouette by finding the balance point of the sail and then do the following: Swing tip of the mast toward the wind. Step forward of the mast on the leeward side of the mast, pushing the clew in front of you. Continue pushing the clew around and follow it until you have circled the mast. You must be quick!

Helitack. (you spin the sail while the board turns through a come about) Start out as you are doing a normal tack. When the board is pointing directly into the wind, instead of moving in front of the mast, push the clew forward and through the eye of the wind. In other words, you tack, but you stay behind the mast and the sail goes in front of it.

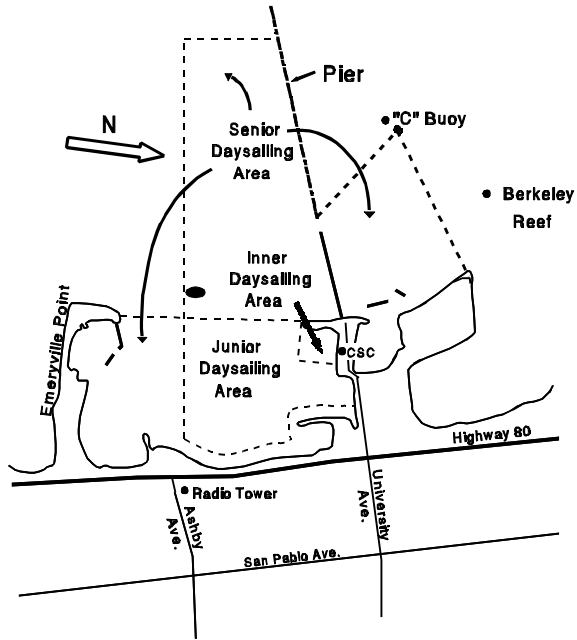
Head Dip. On a beam reach in strong wind, lean way back with your arms straight. Bend your knees as when you do the limbo and dip your head in the water.

Splits. This trick is one even Robby couldn't do. Stretch out on shore. It helps to have your booms rigged lower than usual. Sail on a beam reach in a light wind and go for it. Rhonda Smith won the world championship many years ago by doing the splits while sailing on a rail.

Rail Ride (Robby's trick). Ask Pierre (he works at Cal Adventures) to show you.

Appendices

A. Sailing Boundaries.



B. Board Ratings.

Boards will be rated by the Second Vice Commodore with the approval of the Executive Committee. The following are intended to be guidelines for the equipment.

Novice Boards: Polyethylene (the soft plastic) boards with a volume of at least 160 liters (the Hifly Revo is 240 l; the Melody is 204 l; the Calypso is 174 l).

Junior Boards: Junior boards are higher performance *transition* boards that are more fragile than novice boards and more difficult to sail. Example of these boards are the Hifly 330, and the Fanatic Ultra Cats (200 l).

Junior Plus Boards: Generally, boards from 110 l to 160 l. This includes the Fanatic Bees, the Bic Astro Rocks (129 l), and the Bic Presto (120 l). These Junior

Plus boards are difficult to uphaul. The Fanatic Ultra Cats (approximately 200 l) are also categorized as J+ boards due to their fragile nature.

Senior Boards: Any board under 110 l. Some of these boards are "sinkers," meaning that they will not float under the weight of the average sailor.

C. Knots.

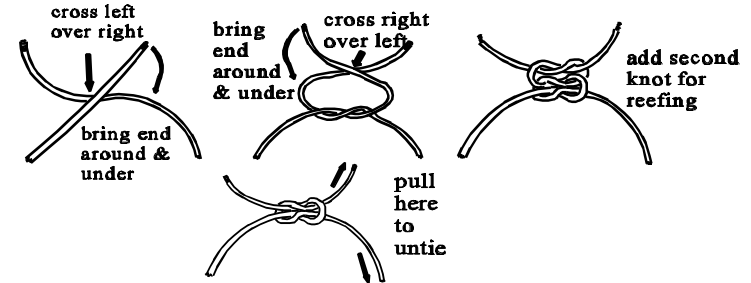
Some of the more useful knots for windsurfing are as follows:

Square (Reef) Knot.

The square (reef) knot is often used for fastening the mast cap to the sail. To tie it, cross the ends over and under each other to form an overhand type of knot. Add a second overhand on top of the first. In tying the second overhand, be sure the ends cross on the same side from which they emerged from the first overhand. The unreliable and easy to jam granny knot will result if the ends are crossed incorrectly.

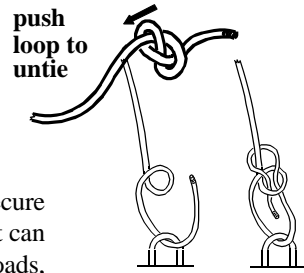
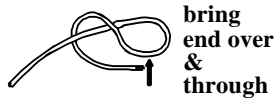
Figure Eight.

The figure eight knot makes a good stopper to keep the end of a line from



running through a small hole. Attaching the uphaul line to the boom is a good example. Tie this knot by bringing the end from an underhand loop over the standing part and back through the loop from beneath. Draw the end up snugly.

B



This knot is useful for forming a very secure loop that will not slip closed or jam. Since it can be easily untied, even after being under high loads, it is useful for towlines and for making a loop in the downhaul rope in order to obtain a more secure point to pull from. To tie this knot, first make an overhand loop. Bring the loose end up through the loop, go around the standing part and then back down through the loop. Note that when the knot is properly tied, the short, free end emerges from the knot inside of the loop.

Half Hitch.

The half hitch is a simple knot which is useful for tying off the loose ends of the downhaul and outhaul lines. This knot is generally tied around something, e.g. the mast or the boom. To tie it around the mast, for example, simply make a loop and hold it on one side of the mast. Bring the free end of the rope around the mast from the other side and pull it tightly through the loop. Repeat this process until all of the loose line has been tied off.

D. Glossary.

Windsurfing is full of terminology. Knowing the terms makes learning to sail easier. For example, if someone frantically yells to you, “fall-off,” they do not mean to gracelessly dismount your board. The following terms are used frequently and all windsurfers should know them.

Apparent wind. The wind that the sailor feels which is the combination of the true wind and the wind caused by the rig’s motion.

Battens. Flexible strips or tubes placed in pockets in the sail to help maintain the sail’s rigid shape.

Beam. Widest part of a boat. The point half way between the bow (front) and stern (rear) of a sailboard.

Beam reach. Sailing with the wind coming directly over the beam. Sailing between 80 and 100 degrees from the direction of the wind.

Bear off. Same as fall off.

Beat. To sail to windward.

o

Bow. The front of the board; nose.

Broad Reach. Sailing with the wind just aft of the beam. Sailing between 100 and 135 degrees from the direction of the wind.

Camber. The curved part or pocket of a properly rigged sail. In general, sails rigged with more camber will have more power but less speed than those with less camber.

Camber induced sail. A sail with one or more camber inducers.

Camber inducers. Plastic devices that hold the sail away from the mast so that there is a smooth flow of air across the mast to the sail on both the windward and leeward sides of the sail. Our Junior Plus / Senior sails have camber inducers.

Centerboard. A retractable device in the center of the board that, when down, changes the center of resistance in order to make it easier to sail upwind. The Club’s Novice boards and Ultra Cats have centerboards. The centerboard also steadies the board and makes balancing easier.

Center of Effort (CE). Point at which all of the force of the wind can be thought to be concentrated.

Center of Resistance (CR). Point at which all of the force of the water on the board may be thought to be concentrated. On the novice boards, the CR is approximately at the centerboard.

Close-hauled. Sailing as close to the direction that the wind is coming from as possible (approximately 45 degrees from the wind’s direction).

Close reach. Sailing with the wind just forward of the beam. Sailing between 45 and 80 degrees from the direction of the wind.

Come about. Same as tack (2).

Downhaul. 1. Line that is used to put tension on the sail in the direction parallel to the mast. 2. To tighten the downhaul.

Draft. The deepest part of the sail.

Eye of the wind. Direction from which the wind is blowing.

Fall off. To change direction so as to point further away from where the wind is coming from. To turn downwind. (This does **not** mean to jump off your board.)

Fin. A small fluke or appendage in the water at the stern of the board that provides the lateral force required to keep the board going straight.

Gybe. Same as jibe.

Head up. To change direction so as to point closer to where the wind is coming from.

Jibe. To change tack (so that the sail is flown on the opposite side of the board) by turning away from the wind.

Leeward. Direction opposite from which the wind is coming.

Outhaul. 1. Line that is used to attach the sail to the end of the boom. Used to put tension on the sail in the direction perpendicular to the mast during the rigging process. 2. To tighten the outhaul.

Port. The left side of the board as you are facing forward.

Port Tack. Sailing a course such that the wind is coming from the port side of the board. In the normal sailing stance, the left hand will be in front on a port tack.

Rig. 1. The process of mounting the sail on the mast and boom and preparing it to sail. 2. A fully rigged sail, mast and boom combination.

Rotating Asymmetrical Foil (RAF) sails. Sails without camber inducers. On these sails the batten tucks part way behind the mast so that there is a smooth airflow on the leeward side of the sail. Our Novice / Junior sails are RAF sails.

Running. Sailing directly downwind.

Sheet in. Rotate the back of the sail towards the wind by pulling in with the back hand.

Sheet out. Rotate the back of the sail away from the wind. The opposite of sheet in.

Sinker. A sailboard that doesn't have the buoyancy to support a sailor of average weight. Some of the Club's Senior boards are sinkers.

Skeg. Same as fin.

Starboard. The right side of the board as you are facing forward.

Starboard Tack. Sailing a course such that the wind is coming from the starboard side of the board. In the normal sailing stance, the right hand will be in front on a starboard tack.

Stern. The back of the board; tail.

Tack. 1. Direction with which you are sailing relative to the wind (either port or starboard). 2. To change tack (so that the sail is flown in the opposite side of the board) by turning toward the wind.

Universal. The joint that connects the mast to the board.

Uphaul. 1. Pull the sail out of the water using the uphaul. 2. The line that is used to pull the sail out of the water.

Water-Start. An advanced method of getting the sail and your body out of the water by using the wind to pull the sail up.

Windsurfing Trailer (Locker). Metal container in which most of the windsurfing sails, masts, booms, and some of the boards are kept. It is located on the southeast corner of the CSC yard.

Windward. Direction from which the wind is coming.

E. Revision History

(Partial list)

November 1982: Paul Kamen and Gordon Stout

Spring 1994: Bill Prinzmetal and Tony Phillips

Spring 1997: Bill Moseley, Bill Prinzmetal.

F. Parts of the Rig.

