

Basic Sailing Guidelines for Cats



Introduction to

Boat Terms

General Sailing Terms

Port Tack

Starboard Tack

The Points of Sailing

Manoeuvres

Basic Rules

Reference books

Cat Sailing Musts

Index of Sailing terms

Basic Sailing Guidelines for Cats

Introduction

This guideline has been produced to provide the basic terminologies used when sailing beach catamarans.

This guideline does not attempt to explain all the subtle differences between different models of boats or advanced techniques in sailing styles.

Listed under the general section of “Reference Books” you will find suitable books to expand your knowledge further at your own pace.

This guide is also intended to be used in parallel with on the beach rigging / sailing instruction.

The last section of this guideline includes the terms used in this document.

Enjoy, and Do it for Fun!

Happy Sailing

David Clark

Basic Sailing Guidelines for Cats

Boat Terms

Hull(s): The floatation pontoons

Trampoline (tramp): The sitting area

Toe straps: The canvas straps that run along the trampoline

Bow: The front of the boat

Stern: The back of the boat

Jib: The small sail

Main: The large sail

Tell Tales: The ribbon strings on the main and jib

Jib sheet: The rope that controls the jib in and out

Jib traveller sheet: The rope that allows the jib sail to slide inboard and outboard

Basic Sailing Guidelines for Cats

Car: The fitting that guides / positions the jib traveller sheet

Main sheet: The rope that controls the main sail in and out

Main Traveller sheet: The rope that allows the main sail to slide inboard and outboard

Main traveller: The fitting that guides / positions the main traveller sheet

Outhaul: The rope that adjusts the foot of the main

Blocks & Cleats: The rotating fittings that guide / control the sheets to the sails

Halyard: The rope that hoists / lowers sails

Boom: The aluminium tube at the bottom of the main sail

Gooseneck: The fitting at the front of the boom / mast connection

Downhaul sheet: The rope that tensions the main at the gooseneck fitting

Tiller: The stick that we use to steer the boat

Cross bar: The aluminium tube that the tiller is connected to

Basic Sailing Guidelines for Cats

Rudders: The steering blades that are attached to the stern

Shrouds: The metal wires that hold the mast up on each side of the boat

Jib Forestay: The metal wire at the front of the boat holding the mast

Trapezes: The wire ropes with handles next to the shrouds

“D” Ring: The ring attached at each end of the trapeze wire

Dolphin striker: The stainless steel bar that runs under the boat (at the front) connecting the port and starboard hull

Bungs: The sealing corks in each stern

Basic Sailing Guidelines for Cats

General Sailing Terms

Port (Colour code Red): Left as you look forward when sitting on the boat

Starboard (Colour code Green): Right as you look forward when sitting on the boat

Ahead: Looking towards the front

Fore: The front area of a boat

Astern: Looking behind

Aft: The rear area of a boat

Tacking: Turning the boat so that the bows travel completely through the wind and the sails fill on the opposite side

Gybing: Turning the boat so that the sterns travel completely through the wind and the sails fill on the opposite side

Going About: Turning the boat on to a new course

Windward: The side of the boat where the wind is *coming* from

Basic Sailing Guidelines for Cats

Leeward: The side of the boat where the wind is *leaving* the boat

Bear Away: To steer the boat *away* from the wind

Harden Up: To steer the boat *towards* the wind

Pinching: Sailing *too close* to the direction of the wind

Luffing: The *sails lift* towards you as though they are being patted

Helm to Lee: The command stated by the helm as a tack manoeuvre is executed

Bearing Away & Gybing: The command stated by the helm as a gybe manoeuvre is executed

Sheet: The command to *pull* in the main / jib sheet

Ease: The command to *let out* the main / jib sheet

Dump: The command to *immediately release* the main / jib sheet

Are you ready?: The advice given to the crew *when tacking / gybing*

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From: Wind *direction* is described as where it is coming from

Gust: A *sudden change* of wind strength (the surface of the water changes to a darker shade)

On the beat, twin wiring, boat flat



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The Start



On the trapeze, Power on and away

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Port Tack (Red Code colour)

The wind is coming from the left

Your left shoulder is facing forward

Helm: The tiller is in your right hand

You are the give way boat



Basic Sailing Guidelines for Cats

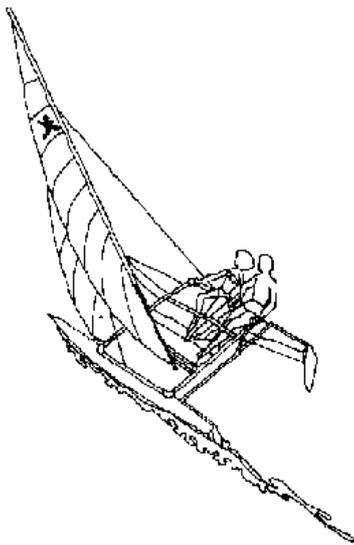
Starboard Tack (Green Code colour)

The wind is coming from the right

Your right shoulder is facing forward

Helm: The tiller is in your left hand

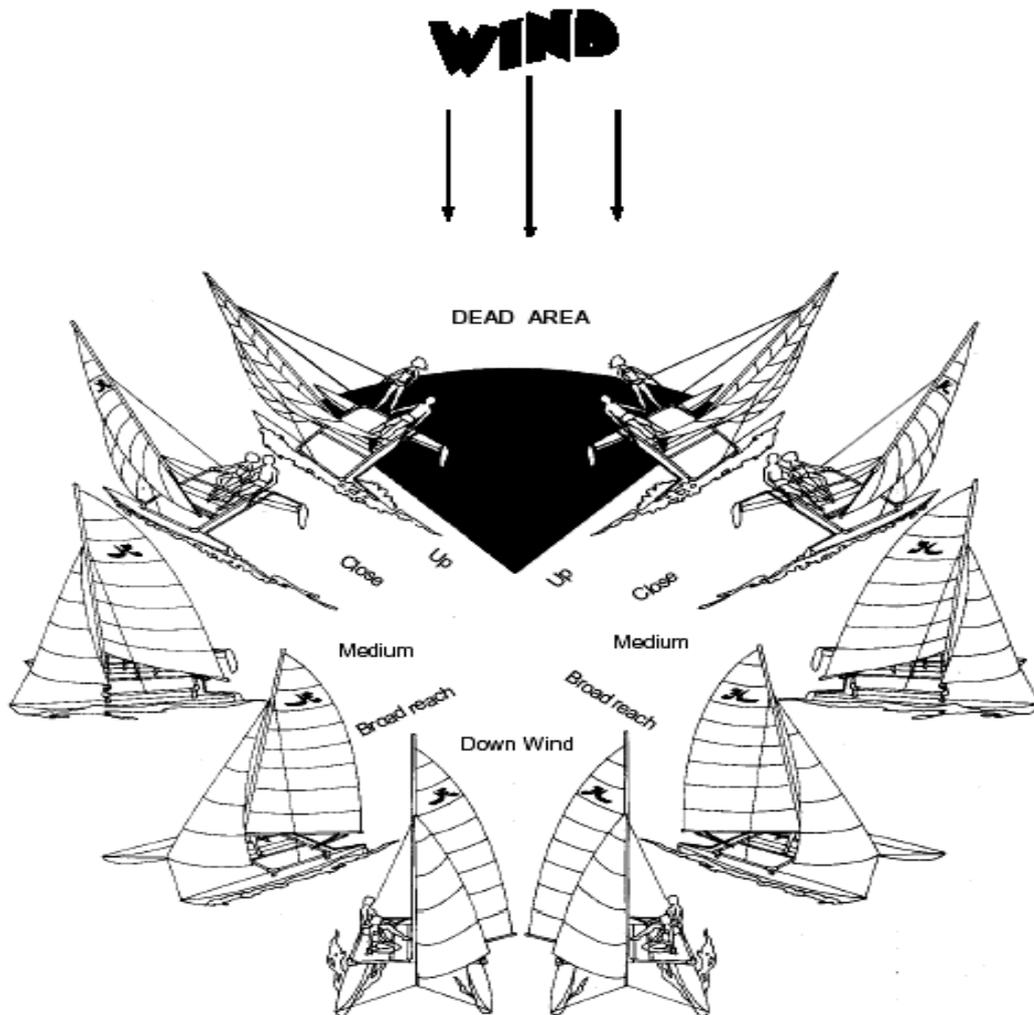
You are the right of way boat



Basic Sailing Guidelines for Cats

Points of Sail

SUMMARY OF ALL SPEEDS



Up = Beating

Close = Fetching

Medium = Reaching

Broad Reach = Running

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Basic Manoeuvres

Tacking

Gybing

Beating

Reaching

Running

Trapezing

Capsizing

Man overboard routine

Basic Sailing Guidelines for Cats

Tacking

The boat is sailing as close to the wind as possible, (on a beat) the helm pushes the tiller away positively, but no further than to create a 45 degree rudder angle. Straighten the rudders only when the boat is on the new close hauled course.

Helm

The helm slides aft to the rear corner of the old windward side and draws in the last few cm of main sheet as the boat approaches head to wind, as soon as the boat reaches head to wind, the helm releases the main sheet by 50cm to 75cm, and assists the main to flip across by pulling the boom over their head, thereby flicking the battens over.

The helm passes the tiller around the back of the main sheet block, and changes tiller hands and moves up to the regular helming position before sheeting in the main sheet, whilst settling in on the new course, do not sheet the main on any faster than the crew can sheet in the jib.

Note the rudders are held over until the boat has completed the tack; the rudders are straightened and kept fixed in a straight sailing angle before the helm attempts to move to the new windward side.

Crew

As the boat is approaching a head to wind position, the crew moves on to their knees along side the helm on the toe rail as far aft as practically possible and picks up the jib sheets one in each hand and watches the jib reverse itself as the boat turns through the wind.

As soon as the new leeward tell tale starts to lift the crew should immediately cut loose the jib and move across the boat to the new windward side drawing the jib sheet to keep the jib tales flowing on both sides of the jib. Clip on and be ready to trapeze.

Helm Key Points

Only attempt a tack when you have: ***Boat Speed***

Turn the boat through the turn: ***Positively***

Wait until you are on the new tack: ***Before straightening the rudders***

Crew Key Points

The jib should be: ***Slow to cut, quick to pull***

Only sheet in the jib: ***As fast as the tell tales will allow you***

Basic Sailing Guidelines for Cats

Gybing

The boat is sailing with the wind indicator ribbon flying at 90 degrees to the boat, (on a run) the helm pulls the tiller positively, but no further than to create a 45 degree rudder angle. Straighten the rudders only when the boat is on the new downwind course.

Helm

At the point that the wind indicator ribbon is flying completely away (dead down wind) from the helm, the helm rolls on to their knees towards the leeward aft corner of the boat and then the helm passes the tiller around the back of the main sheet block into his new tiller hand. He then gathers in his non tiller hand the middle of the main sheet and assists the main over to the new side.

Crew

As the boat is approaching a dead down to wind position, the crew moves on to their knees in the centre of the boat as far aft as needed, keeping the bows level / up, and picks up the jib sheets, one in each hand and watches the jib reverse it self as the boat turns through the wind.

As soon as the jib reverses to the new side, the crew releases the traveller sheet and jib sheet, and slides across the boat and sets the new traveller sheet and jib sheet in conjunction with the tell tales.

Helm Key Points

Only attempt a gybe when you have: ***Boat Speed***

Turn the boat through the turn: ***Positively***

Wait until you are on the new gybe: ***Before straightening the rudders***

Crew Key Points

The jib should only be: ***Released when it has reversed***

Setting/ Resetting the jib: ***The tell tales must fly on both sides of the sail***

Basic Sailing Guidelines for Cats

Beating

The boat is sailing as close to the wind as possible.

To achieve an upwind course we have to sail either side of the apparent wind direction.

Typically a catamaran will sail 50 degrees either side of the direction of the apparent wind.

The beat requires a zig zag approach to achieve a passage to windward.

The apparent wind you create is significantly higher than the actual wind strength.

Use the wind indicator ribbon tied to the front of the boat to show you where the apparent wind direction is coming from.

Clip on and be ready to trapeze.

Helm Key Points

Keep the sails / travellers in as tight as the wind flow will allow you to:

Maintain flowing tell tales at all times

Keep full power on: ***No Luffing***

Crew Key Points

The jib should be set to: ***Maintain flowing tell tales at all times***

Use their weight to balance the boat fore and aft as well windward to leeward to:

Maintain a properly trimmed flat boat

Basic Sailing Guidelines for Cats

Reaching

The boat is sailing off the wind.

The reach is the fastest point of sail.

Twin trapezing is very common on the reach.

The apparent wind you create is significantly higher than the actual wind strength.

Use the wind indicator ribbon tied to the front of the boat to show you where the apparent wind direction is coming from.

Clip on and be ready to trapeze.

Helm Key Points

Keep the sails / travellers adjusted with the wind flow to allow you to:

Maintain flowing tell tales at all times

Keep full power on: ***No Luffing***

Keep the bows up: ***Nose Diving is very possible on this point of sail***

Crew Key Points

The jib should be set to: ***Maintain flowing tell tales at all times***

Watch the leeward bow at all times:

Nose Diving is very possible on this point of sail

Use their weight to balance the boat fore and aft as well windward to leeward to:

Maintain a properly trimmed flat boat

Basic Sailing Guidelines for Cats

Running

The boat is sailing off the wind with sails set as far out as practically possible, maintaining flowing tell tales.

You limit the setting by sailing no deeper than with the apparent wind direction setting at 90 degrees to the boat's heading.

The run is very tactical, like beating you have to zig zag down the course.

The helm / crew position is normally balanced on either side of the tramp, to maintain a flat boat and as far forward as possible without nose diving.

Use the wind indicator ribbon tied to the front of the boat to show you where the apparent wind direction is coming from.

Setting the main sail on one side and the jib on the other (Goose Winging) is only used in very light conditions or for a very short distance to sail.

Helm Key Points

Keep the sails / travellers adjusted with the wind flow to allow you to:

Maintain flowing tell tales at all times

Keep full power on: ***No Luffing***

Speed and direction is achieved by:

Riding the surf and bearing away with gusts

Crew Key Points

The jib should be set to: ***Maintain flowing tell tales at all times***

Use their weight to balance the boat fore and aft as well windward to leeward to:

Maintain a properly trimmed flat boat

Basic Sailing Guidelines for Cats

Trapezing

The helm should be the first to trapeze.

The crew trims the boat fore and aft, windward to leeward constantly, by trapezing as required.

Before trapezing ensure that the sheets are free and are in your control. Clip on.

Non Racing mode:

Rest your bottom over the edge of the boat, to *load* the hook on your harness on the “D” ring of the trapeze.

Place your rear foot under your bottom on the tramp rail.

Place your leading hand (which is holding the jib / main sheet) on the tramp rail by your side.

Push straight out with your rear leg and leading hand, and then quickly put your leading foot on the tramp rail as well.

Keep your feet about shoulder width apart, adjusting your leading leg to absorb the forward falling action when the boat pitches.

When returning to the tramp, lift your body weight up by pulling on the trapeze handle; to ensure that you keep your bottom clear of the rail as you swing in.

Aim to place at least one foot under the toe strap immediately.

Racing Mode:

Roll on to your knees with your feet below the ankle resting over the tramp rail, clip on and roll out placing your feet initially on the hull of the boat. Once fully extended move your feet quickly up on to the tramp rail.

Helm Key Points

Keep the boat flat and under control: *You trapeze first*

Keep full power on: *No Luffing*

Crew Key Points

Balance the boat by: *Constantly adjusting your position to trim the boat*

Basic Sailing Guidelines for Cats

Capsizing

The classic capsize is when the nose dives.



The boat rides into the back of a wave or the crew does not release the jib quick enough, or simply the trim is out of balance, whatever the reason is, a capsize is nothing to be fearful of, it happens to us all.

A boat can be righted in less than 30 seconds with the *right* technique.

Once you have that feeling that you have gone beyond the point of no return, hold on to the sheet in your hand, but unclip your harness as quickly as possible.

You will be thrown forward and clear of the boat.

But you are still in contact with the boat via the sheet in your hand.



Basic Sailing Guidelines for Cats

The helm and crew respectively immediately swim back to the boat to release the sheets and travellers from their cleats.

The crew then swims and sits on the bow which is in the water. This action depresses the hull into the water to create a rudder effect and the wind action on the tramp acts as a sail and the boat will then pivot around to achieve the desired position of the mast of approximately 45 degrees to the wind.

Whilst this rotation is happening the helm retrieves the righting rope and throws it over the upper hull and positions himself adjacent to the dolphin striker.

Do not stand on the middle section of the hull, always try and place your weight on the keel of the hull.

When the mast has been rotated around to approximately 45 degrees to the wind, the crew joins the helm and hauls himself up on the righting rope.

Approximately 100kg is required to right a Hobie 16; therefore a crewed boat normally has the ability to right the boat with ease.

The boat will initially be slow to rise as the water is slowly displaced from the main sail.

While you are waiting for this to occur decide *clearly* who will hold the port and who will *hold* the starboard side of the dolphin striker. *This is essential.*

As the boat begins to right the upper hull will begin to fall towards you as the speed increases and you realise that the boat is righting, move quickly to your preselected section of the dolphin striker.

As the upper hull lands in the water the lower hull lifts up, this is stopped by jointly holding on to the dolphin striker.

Place one hand on the front cross beam or dolphin striker and the other on the hull in front of the hull post.

Lift yourself vertically up on your arms, like a pull up, rotate your bottom and sit on the hull facing your crew / helm.

The rotation and sitting is very important, firstly it enables you to catch your breath and be in sound contact with the boat but **equally important** you do not damage the hull with your **trapeze hook being compressed into the hull** under your body weight.

Once settled down, return to the boat, sort out sheets, check that the sails are okay, replace the righting rope and recommence sailing.

If the boat turns completely upside down (turtled) with the mast under the boat, then the helm should sit on the leeward hull at the stern.

Basic Sailing Guidelines for Cats

This action will rotate the opposite hull over and up after a few minutes, if additional weight is required, use your crew as well.

Normally the crew waits patiently at the bow.

Once the boat is up on its side you can proceed in the normal manner.

Helm Key Points

Immediate reaction at the point of no return: *Release the trapeze wire*

First part of the recovery: *Release all Sheets and cleats*

Righting position: *Decide clearly who holds which side of the dolphin striker*

Entry on to the boat: *Rotate and sit to communicate and avoid hull damage*

Crew Key Points

Immediate reaction at the point of no return: *Release the trapeze wire*

First part of the recovery: *Release all Sheets and cleats*

Righting position: *Decide clearly who holds which side of the dolphin striker*

Entry on to the boat: *Rotate and sit to communicate and avoid hull damage*

Basic Sailing Guidelines for Cats

Man overboard routine

Man overboard routines are a function of picking up your helm or crew as quickly as possible without capsizing the boat.

The fundamental protection in stopping this problem is to always hold on to a sheet, so if a trapeze wire breaks or a wave washes your feet off the side rail, or if you do not hook on properly when you go to roll out on the trapeze, you will maintain contact with boat and therefore will be able to climb back aboard.

However on the occasion that you lose contact with the boat, the first reaction to take place is the windward hull will rise quickly; you must react very quickly and release the main sheet to gain control of the boat. Once you have control, sail off for approx 50 to 75m on a close reach with the sails set so you have control, constantly looking back to check the position of your man overboard. Try to obtain a land transit to assist in this position fixing exercise.

Once you have sailed upwind of your man overboard then ease the sails out and gybe, immediately after the gybe sail up to and on to a close hauled course and check the position of your man overboard, control the boat speed so you are making headway in a controlled manner.

Steer the boat slightly upwind of your man overboard, in the closing 10m (more in stronger winds) ease off the speed and judge a round up to head to wind to pick up your man overboard adjacent to the shroud on your windward side.

You must be in a position to physically pull your man overboard up and on to the trampoline at this position. If your man overboard is not injured then they should swim around the bows and climb back aboard as described in the capsize section.

Key Points

Immediate reaction when loosing a crew / helm: *Release the main sheet*

First part of the recovery: *Sail upwind of your man overboard*

The turn: *Always gybe*

After the turn: *Sail slightly upwind of your man overboard*

Pick up: *On your windward side*

Basic Sailing Guidelines for Cats

Basic Rules

Fundamental rule, collisions shall be avoided

Preventive reaction is mandatory

*A **Starboard** boat has right of way over a **Port** boat*

A boat to windward shall keep clear of a boat to leeward

An overtaking boat shall keep clear

A boat clear astern shall keep clear of a boat clear ahead

Penalty exoneration for breaking a rule is achieved by executing as soon as possible two tacks and two gybes clear of the fleet and before rounding the next mark

Penalty exoneration for hitting a mark is achieved by executing as soon as possible one tack and one gybe clear of the fleet and before rounding the next mark

Basic Sailing Guidelines for Cats

Good reference books

The following books are recommended for further reference:

International Sailing Federation:

The Racing Rules of Sailing 2005 to 2008

Bryan Willis: Fernhurst:

2005 – 2008 The Rules in Practice

Rick White & Mary Wells:RAM Press:

Catamaran Racing for the 90's

Brian Phipps: Fernhurst:

The Catamaran Book

Jeremy Evans: RYA:

Catamaran Handbook (RYA Code G46)

Basic Sailing Guidelines for Cats

Basic Cat Sailing Musts

Keep the boat level from stern to bow

Keep the boat flat as possible, with the windward hull just kissing the water

Helm should trapeze first

Crew moves in and out of the trapeze continuously to trim the boat fore and aft as well as in the stern to bow plane

Keep the tell tales streaming, stalling of the tell tales slows the boat down considerably

Avoid stalling the sails by luffing

If in doubt, “let the sheets out” and pull back in to accelerate

Enjoy the thrill of cat sailing

Basic Sailing Guidelines for Cats

Terms in the order that they appear in this guideline

Term	Descriptions or Action	Sailing Term
1	The floatation pontoons	<i>Hull (s)</i>
2	The sitting area	<i>Trampoline (tramp)</i>
3	The canvas straps that run along the trampoline	<i>Toe straps</i>
4	The front of the boat	<i>Bow</i>
5	The back of the boat	<i>Stern</i>
6	The small sail	<i>Jib</i>
7	The large sail	<i>Main</i>
8	The ribbon strings on the main and jib	<i>Tell Tales</i>
9	The rope that controls the jib in and out	<i>Jib sheet</i>
10	The rope that allows the jib sail to slide inboard and outboard	<i>Jib traveller sheet</i>
11	The fitting that guides / positions the jib traveller sheet	<i>Car</i>
12	The rope that controls the main sail in and out	<i>Main sheet</i>

Basic Sailing Guidelines for Cats

13	The rope that allows the main sail to slide inboard and outboard	<i>Main traveller sheet</i>
14	The fitting that guides / positions the main traveller sheet	<i>Main traveller</i>
15	The rope that adjusts the foot of the main	<i>Outhaul</i>
16	The rotating fittings that guide / control the sheets to the sails	<i>Blocks & Cleats</i>
17	The rope that hoists / lowers sails	<i>Halyard</i>
18	The aluminium tube at the bottom of the main sail	<i>Boom</i>
19	The fitting at the front of the boom / mast connection	<i>Gooseneck</i>
20	The rope that tensions the main at the gooseneck fitting	<i>Downhaul sheet</i>
21	The stick that we use to steer the boat	<i>Tiller</i>
22	The aluminium tube that the tiller is connected to	<i>Cross bar</i>
23	The steering blades that are attached to the stern	<i>Rudders</i>
24	The metal wires that hold the mast up on each side of the boat	<i>Shrouds</i>
25	The metal wire at the front of the boat holding the mast	<i>Jib Forestay</i>

Basic Sailing Guidelines for Cats

26	The wire ropes with handles next to the shrouds	<i>Trapezes</i>
27	The ring attached at each end of the trapeze wire	<i>"D" Ring</i>
28	The stainless steel bar that runs under the boat (at the front) connecting the port and starboard hull	<i>Dolphin striker</i>
29	The sealing corks in each stern	<i>Bungs</i>
30	Left as you look forward when sitting on the boat	<i>Port (Colour code Red)</i>
31	Right as you look forward when sitting on the boat	<i>Starboard (Colour code Green)</i>
32	Looking towards the front	<i>Ahead</i>
33	The front area of a boat	<i>Fore</i>
34	Looking behind	<i>Astern</i>
35	The rear area of a boat	<i>Aft</i>
36	Turning the boat so that the bows travel completely through the wind and the sails fill on the opposite side	<i>Tacking</i>
37	Turning the boat so that the sterns travel completely through the wind and the sails fill on the opposite side	<i>Gybing</i>
38	Turning the boat on to a new course	<i>Going About</i>

Basic Sailing Guidelines for Cats

39	The side of the boat where the wind is coming from	<i>Windward</i>
40	The side of the boat where the wind is leaving the boat	<i>Leeward</i>
41	To steer the boat away from the wind	<i>Bear Away</i>
42	To steer the boat towards the wind	<i>Harden Up</i>
43	Sailing too close to the direction of the wind	<i>Pinching</i>
44	The sails flutter towards you as though they are patted from the opposite side	<i>Luffing</i>
45	The command stated by the helm as a tack manoeuvre is executed	<i>Helm to Lee</i>
46	The command stated by the helm as a gybe manoeuvre is executed	<i>Bearing Away & Gybing</i>
47	The command to pull in the main / jib sheet	<i>Sheet</i>
48	The command to let out the main / jib sheet	<i>Ease</i>
49	The command to immediately release the main / jib sheet	<i>Dump</i>
50	The advice given to the crew when tacking / gybing	<i>Are you ready?</i>
51	Wind <i>direction</i> is described as where it is coming from	<i>From</i>

Basic Sailing Guidelines for Cats

52	A sudden change of wind strength (the surface of the water changes to a darker shade)		<i>Gust</i>
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Basic Sailing Guidelines for Cats

Notes