

SS&S Chapter 3 Instructor Guide

Basic Sailboat Maneuvering

Slide 1: Basic Sailboat Maneuvering No comment

Slide 2: Basic Sailboat Maneuvering No comment
Part 1 – Chapter 3

Slide 3: Lesson Objectives No comment

- What is being on a tack
- From one tack to another
- Switch tacks by jibing
- How to maneuver to destinations
- How to improve boat handling

Slide 4: Tack

- When wind is on the starboard side, the boat is on a starboard tack
 - When wind is on the port side, the boat is on a port tack
 - Starboard tack boats generally will maintain course and speed – also called the “stand-on boat”
 - Rules of the Nautical Road covered in Chapter 8
- No comment

Slide 5: Tacking

- Turning the bow through winds eye
 - Nearly all boat movement dependent on momentum
- Must execute quickly to avoid stalling

Slide 6: Tacking on a Reach

- Must continue to move forward
 - Mainsail can flip violently
 - Mainsail can be eased across
 - Avoid accidental jibe
- No comment

Slide 7: Tacking Procedure

- Skipper- announces intension to tack
Typically “prepare to tack” alerts crew to get ready
- Crew- uncleats jib--holds
- Skipper -announces ready to tack
Typically “ready to tack?”
- Skipper- commands tacking
Typically “hard alee” or “coming about”
- Skipper- steers through eye of wind
- Crew- releases jib and tightens opposite jib sheet
Crew delays release slightly to allow jib to backwind
- Simple tack requires no actions on mainsheet
- Question: Why be so formal?
Skippers have their own standards of perfection of a tack & how to manage a tack. Poor tack may cause going into irons

Slide 8: Tacking Precautions

- Turning rudder too fast-too slow
Can go into irons
- Moving jib too fast –too slow
Can go into irons

Slide 9: In Irons

- Being stuck in eye of wind
 - Catamarans more prone to irons
 - Tacking in light air difficult
 - Heavy boats can be more difficult
 - Must maintain momentum
- Small boats can “pump” the rudder
Often tack slowly
Execute fast before losing momentum

Slide 10: Getting Out of Irons

- Turn rudder –drift backwards
 - Hold jib opposite side from desired tack
- Boat may show you which way to turn
Sail “backwinds” causing boat to turn

Slide 11: Jibing

- Changing stern through the eye of the wind
 - Skipper commands similar to tacking
 - Mainsail eased across
 - Avoid accidental jibe
 - Slight broad reach avoids risk in high wind
- Opposite of tacking
Execution speed not critical
Light winds on stern not easy to detect

Slide 12: Accidental Jib

- Boom can whip across hitting crew
- Caused by shift in wind direction or careless helmsmanship by not staying down wind
Mainsheet can pull in main, and then allow a slow release of boom.

Slide 13: Course into the Wind

- Short tack versus long tacks
- GPS Assistance

Short tacks make shorter course, but loses time while tacking. Long tacks are visa-versa. --Skipper's choice.

GPS has "cross track error" feature showing how far off course compared with the intended "straight-line destination bearing"

Slide 14: Headers and Lifts

- Lifts –winds that allow shifting to a better course
- Headers-winds that require shifting away from the intended course

Wind can shift slowly or quickly or be erratic. The lift is simple – just change to the better course.

Small headers usually justify changing course to fill sails. Large headers justify tacking

Slide 15: Leeway & Centerboard

- Centerboard down
 - Adds drag
 - Minimal leeway
- Centerboard up
 - No drag
 - Allows leeway
- Sailing upwind
 - Greater side pressure
 - Needs centerboard down
- Sailing downwind
 - No side pressure
 - No need for centerboard
- Sailing a reach
 - Some side pressure
 - Need partial centerboard

Describe leeway first

Describe how centerboard reduces leeway

Describe how centerboard up reduces drag

Slide 16: Boat Heeling

- Heeling allows spilling wind
- Modern boats sail best with little or no heeling
- Is boat 29 heeling too much? No – Crew is heeling boat to keep sails full
- Why is boat 2530 heeling this much? Probably excessive a small amount. Sails may be too tight.

Slide 17: Boat Stability

- Initial stability and Ultimate stability No comment
- Stability characteristics of round bottom and flat bottom boats

Slide 18: Individual Boat Characteristics

- Feel of helm is valuable indicator Grasp tiller lightly to feel differences in feedback pressures
- Lee helm
 - Slight weather helm usually best
- Drop in helm pressure indicates a wind change
- Constant helm corrections usually mean over steering

Slide 19: Practice the Unexpected

- Practice adverse situations in a good controlled environment
- Practice going into irons
- Practice a simulated man-overboard
- Let crew practice skipper duties

Determine how much the boat can heel in heavy winds

Try to recover a person standing in water

Slide 20: Life Jacket & Tether

- Develop the habit of wearing life jackets
- Wear a tether when sailing alone in rough waters

Recommend wearing at all times when alone.