

**Assume sailing upwind in moderate conditions****Safety Considerations:**

- ✓ Ensure Jib sheets are clear both in the cockpit and forward.
- ✓ Ensure new course is clear of other boats, shipping, and navigation hazards.
- ✓ Ensure crew members are in safe zones for the maneuver.

**Required Positions:**

- |              |                       |             |
|--------------|-----------------------|-------------|
|              | 3) Main               |             |
| 1) Tactician | 4) Trimmer (Headsail) | 6) Pit      |
| 2) Helm      | 5) Grinder            | 7) Foredeck |

**Sequence of Events:**

1. **Tactician** prepares crew for tack by succinctly stating intent of afterguard including points of sail and anticipated time of evolution.  
Example: "**Tacking beat to beat in 100 yards**"
2. **Crew** prepares to tack, even if only mentally, and immediately informs Tactician of any obstructions to intended tack. If obstructions exist, Tactician instructs crew to clear them or belays tack command.
3. When ready, **Tactician** calls "**Ready to Tack.**" Crew takes assigned positions.
4. **Main** depending on wind speed, if traveler is higher than amidships, prepares to raise traveler on new tack as speed builds. If traveler is lower than amidships, prepares to center traveler as bow goes through wind then lower traveler on new tack. Reports "Ready."
5. **Trimmer** clears working jib sheet tail, removes and stows winch handle, uncleats working sheet from self-tailer or cam cleat while cupping winch, removes excess turns from winch, crouches amidships in cockpit, calls out boat speed or states target speed, and Reports "Ready." Eases Jib per Helm.
6. **Grinder** in heavy air stays high as long as possible, takes up slack in lazy sheet and places two turns on the high side winch then Reports "Ready."
7. **Foredeck** clears both jib sheets forward of cockpit and reports "Ready."
8. **Helm** if needs to build speed announces "**Bow Down, ease jib an inch to build speed**" and puts bow down 2 or 3 degrees after receiving "Ready" reports.
9. **Tactician** counts down "**Tacking in 3, 2, 1**" and calls "**Tack the Boat.**"
10. **Pit** with Crew roll tacks. Weight in to start tack, out at irons, new high side at sails over (Chant **Up** at "1", **Down** before Break, **Out** at Boom Over). Tracks tack heading.
11. **Helm** turns the boat after crew starts roll tack with "**Up**" into and through wind to start and complete tack. Keeps in sync with Jib Trimmer.
12. **Trimmer** watches jib as boat comes into wind, when jib edge fully luffs (do not backwind) calls "**Break**" and casts off working jib sheet, removes all turns from winch, and then turns to new low side.
13. **Grinder** moves into companionway and makes sure old working sheet runs clear.
14. **Trimmer** grabs line off right side of winch and frantically takes in lazy (new) sheet hard and fast trimming to within 6" of mark.
15. **Helm** steers to jib tell tails while building speed.
16. **Foredeck** clears clew off mast if needed and Skirts Jib as needed.
17. **Grinder**, after working sheet is cleared and after slack is removed from lazy sheet, adds third wrap, and then inserts handle and grinds madly in high speed direction. Switches to low speed when needed to complete trim of jib.
18. **Main** watches main, moves traveler to correct position when main luffs, and clears main from backstay.
19. **Trimmer** only after Grinder switches to low speed and while trimmed 6" short of mark adds another wrap if needed. Trimmer directs Foredeck to skirt jib inside the lifeline as needed. Grinder, if not needed, gets up high.
20. **Trimmer** watches speed and announces speed as speed builds, trimming jib.
21. **Helm** follows trim of jib and comes up.
22. **Trimmer**, when boat is up to speed, trims jib for speed gear or pointing gear as communicated by Tactician, cleats off jib and hikes out.
23. **Helm** gets into speed gear or pointing gear as appropriate.

# T 10 Bear Away Set at Windward Mark

Ver 140328

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Assume moderate winds. Pre-Set sail controls for **Downwind Escape**.

## Safety Considerations:

- ✓ Ensure all jib and spin sheets and both halyards are clear to run and not tangled.
- ✓ DO NOT stand on any bights (loops of lines).
- ✓ Communication is the key to safe, smooth spinnaker flying.
- ✓ Remain inboard of any lines leading to the spinnaker.

## Required Positions:

	3) Main	
1) Tactician	4) Trimmer (Headsails)	6) Pit
2) Helm	5) Grinder	7) Foredeck

## Sequence of Events:

1. **Tactician** prepares crew for set by succinctly stating intent of afterguard including points of sail and anticipated time of evolution. Example: "**Prepare for port side spinnaker set at mark bearing away to broad reach.**"
2. **Crew** hikes out hard to keep boat flat and give lee helm at mark.
3. **Foredeck** attaches guy to pole while on rail.
4. **Crew** prepares for spinnaker hoist and jib drop, even if only mentally, and immediately informs Tactician of any obstructions to evolution. If obstructions exist, Tactician orders crew to clear them or belays hoist command.
5. At evolution, **Tactician** calls "**Standby spinnaker.**" Crew takes assigned positions.
6. **Foredeck** ensures spin is ready to hoist, jib is ready to drop, sheets forward of cockpit and halyards are clear. Attaches pole to mast, raises pole manually, takes position at Mast to Jump Spinnaker, reports "Ready."
7. **Pit** in companionway sets pole with purple topping lift, clears jib halyard, places spinnaker halyard on winch with two turns, and reports "Ready."
8. **Main** clears mainsheet and traveler lines, **releases Cunningham, sets vang, eases outhaul, releases backstay, eases main fine tune**, and reports "Ready."
9. **Grinder** in cockpit clears spin sheet and guy, pre-feeds tack to pole & cleats, puts working spin sheet on deck winch, pre-feeds spin clew, sets Tweakers - guy on and spin sheet off, sets downhaul, and reports "Ready."
10. **Trimmer** clears jib sheet, removes extra turns on winch, and reports "Ready."
11. **Main** must anticipate helm's next command (see 12 below) to give big ease in main at mark allowing boat to turn.
12. **Helm** calls "**Bearing away**" at mark to sync trimmers, especially main, see 11 above, with coarse changes.
13. **Trimmer** eases Jib hopefully after Main, removes and stows winch handle.
14. **Tactician** calls "**Hoist spinnaker**" after rounding mark and receiving "Ready" reports from crew.
15. **Foredeck** jumps and reports "High" when spin fully up using mark on spin halyard.
16. **Pit** tails spin halyard then grinds in if necessary. Locks spin halyard ensuring it does not slip, and removes winch handle from spin halyard winch and inserts it into working spin sheet winch.
17. **Trimmer** after receiving "High" overhauls spin sheet (but does not 'strap it in') until spin fills then gives big ease to accelerate out of turn.
18. **Tactician** after spin is drawing calls "**Drop Jib.**"
19. **Pit** releases jib halyard with control but ahead of foredeck, dropping jib on deck.
20. **Foredeck** gathers and secures jib on deck.
21. **Grinder** casts off jib sheet taking all turns off winch.
22. **Helm** communicates with Trimmers to determine course and exact trim.
23. **Foredeck** rigs the preventer if apparent wind is abaft 120 degrees.

**Assume sailing downwind in moderate conditions with single set of Spinnaker Sheets.****Safety Considerations:**

- ✓ Ensure Spinnaker sheets, Mainsheet and Traveler lines are clear.
- ✓ Ensure intended course is clear of other boats, shipping, and navigation hazards.
- ✓ Ensure crew members are in safe zones and mindful of the mainsheet parts as the gybe is executed. Spin Trimmer is usually in most precarious spot during gybe.
- ✓ DO NOT allow boom to gybe without trimming to centerline, even in light wind!
- ✓ Emphasize the Helm is in control of the evolution. Helm must be cognizant of the respective jobs and chronology. If something is not going correctly, Helm should slow or stop the turn (Gybe) until everyone is in sync.

**Required Positions:**

- |              |            |             |
|--------------|------------|-------------|
|              | 3) Main    |             |
| 1) Tactician | 4) Trimmer | 6) Pit      |
| 2) Helm      | 5) Grinder | 7) Foredeck |

**Sequence of Events:**

1. **Tactician** prepares crew for gybe by succinctly stating intent of afterguard including points of sail and anticipated time of evolution.  
Example: "**Gybing broad reach to reach in 20 Seconds.**"
2. **Crew** prepares for gybe, even if only mentally, and immediately informs afterguard of any obstructions to intended gybe. If obstructions exist, **Tactician** orders crew to clear them or belays gybe command.
3. At start of evolution, **Tactician** calls "**Ready to gybe.**" Crew takes positions.
4. **Foredeck** goes to mast, removes preventer if on, lowers inboard end of pole to convenient height as necessary and reports "Ready".
5. **Main** clears mainsheet and traveler lines, and reports "Ready."
6. **Trimmer** trims spin, clears working spin sheet tail, and reports "Ready."
7. **Pit** in companionway removes excess turns on spin winch, eases topping lift, goes to mast if needed, and reports "Ready."
8. When ready, **Tactician** counts down "**Gybing in 3, 2, 1**" and calls "**Gybe the pole**".
9. **Helm**, if not on a run, starts to bear away turning stern towards the wind.
10. **Trimmer** eases old spinnaker sheet to maintain trim.
11. **Main** ease main sheet if necessary to maintain trim.
12. **Grinder** eases downhaul and squares pole way back; pulling spin to new side - Paramount on fractional rigged boats to allow spin to fill on new side, hands old guy to Trimmer, sets Tweakers - New Guy On to force pole forward, New Spin Sheet Off in light to moderate air and On in heavy air.
13. **Foredeck** trips pole at mast first and gybes pole to the other side.
14. **Trimmer** does not let either clew go forward of forestay while rotating spin by easing new guy to forestay and hardening new spin sheet, very important.
15. **Tactician** calls "**Gybe the boat**".
16. **Main Trimmer** hardens mainsheet when wind is 150-160 degrees apparent, and times execution so main is amidships before the boat is dead down wind.
17. **Helm** gybes boom by sharply bearing away, turning boat only to 170° downwind on new tack (gybe), no higher into wind, until spin fills and pole is attached.
18. **Main** reports "**Gybe ho**" as boom comes across, immediately releases mainsheet and sets main for new point of sail. Clears backstay.
19. **Trimmer** gives new spin sheet big ease if **Foredeck** has difficulty attaching pole.
20. **Grinder** can release guy twaker if **Foredeck** has difficulty attaching pole. Some say no to this!
21. **Foredeck** attaches spin pole to mast and reports "**Made**".
22. **Grinder** takes guy from Trimmer at Made, trims guy and sets downhaul.
23. **Trimmer** at Made, overhauls new spin sheet until spin fills then quickly eases new spin sheet to course trim to accelerate out of turn.
24. **Tactician** communicates with **Helm** and **Trimmers** to determine exact course and trim.
25. **Foredeck** raises or lowers pole as needed and attaches preventer if apparent wind at course is 120 degrees or abaft.

**Assume while Racing downwind that a Port Side Drop is always desirable.****Safety Considerations:**

- ✓ Ensure all jib and spin sheets and both halyards are clear to run and not tangled.
- ✓ DO NOT stand on any bights (loops of lines).
- ✓ Communication is the key to safe, smooth spinnaker flying and take down.
- ✓ Always keep a turn or two on the spinnaker halyard winch while dousing.

**Required Positions:**

	3) Main	
1) Tactician	4) Trimmer	6) Pit
2) Helm	5) Grinder	7) Foredeck

**Sequence of Events:**

24. **Tactician** prepares crew for drop by succinctly stating intent of afterguard including points of sail and anticipated time of evolution.  
Ex: "**Starboard Jib set with windward spin drop at mark then come up to a beat.**"
25. **Crew** prepares for jip set and spin drop, even if only mentally, and immediately informs Tactician of any obstructions to evolution. If obstructions exist, Tactician orders crew to clear them or belays (probably NOT!) drop command.
26. At evolution, **Tactician** calls "**Standby Jib.**" Crew takes positions.
27. **Foredeck** removes preventer and reports "Preventer Clear," ensures jib is ready to raise with lazy jib sheet under pole, ensures all sheets and halyards are clear, takes position at mast to raise jib, pre-feeds jibhalyard and reports "Ready."
28. **Pit** clears spin halyard tail & spin sheet tail, puts spin halyard on winch with two wraps, and reports "Ready."
29. **Main** clears main sheet and traveler lines, sets boat for upwind: **releases vang, sets outhaul, sets backstay, sets Cunningham;** and reports "Ready."
30. **Trimmer** clears working sheet tail, trims spin and reports "Ready."
31. **Grinder** places jib sheet with two turns on winch, inserts winch handle, takes the slack out of the jib sheet, and stands in the cockpit. Reports "Ready."
32. **Tactician** calls "**Raise Jib**" after receiving "Ready" reports from crew.
33. **Foredeck** jumps jib halyard and reports "Jib Made" when halyard is at pre-set mark.
34. **Grinder** takes up slack, puts third wrap on winch, and sets Jib for Broad Reach.
35. **Tactician** calls "**Trip Pole**"
36. **Pit** locks jib halyard, eases topping lift and downhaul.
37. **Foredeck** stores pole on boom or deck, removes spin halyard from mast cam cleat, takes position on foredeck (may be sitting) with middle of spinnaker foot in hand, and reports "Ready to drop spinnaker."
38. **Trimmer** takes in on Guy at Trip Pole to take up slack and rotate spin to windward. Blows spin sheet at "Drop the spinnaker" below.
39. **Tactician** after jib is drawing and after receiving "Ready to drop" report calls "**Drop the spinnaker.**"
40. **Helm** blankets spin behind main driving down wind if possible.
41. **Main** trims main sheet and then traveler in sync with course changes.
42. **Grinder** goes below into sewer, opens hatch.
43. **Trimmer** blows guy when Foredeck has middle of spin in hand and ensures that both sheets runs clear.
44. **Foredeck** gathers foot and middle of spin; when completed, reports Drop Halyard.
45. **Pit** watches Crew & lowers spinnaker in 6' bursts as quickly as it can be brought onboard keeping it out of the water and always keeping at least one turn on winch.
46. **Foredeck** stuffs spin down hatch fast, once doused, closes hatch and ensures all lines are onboard, stores all lines and halyards as needed especially ensuring jib is ready (checks lazy jib sheet re-feeds if pole on deck) for a tack.
47. **Grinder** in sewer, runs two spin tapes, or repacks spin if any line was removed.
48. **Trimmer** places extra wrap on winch if needed, engages self tailer, sits on cockpit seat facing forward, and prepares to trim for higher course.
49. **Pit** tails jib sheet if needed.
50. **Helm** calls "**Coming up to beat,**" comes up to coarse communicating with Trimmers to determine exact trim, and whether Helm will point (set trim, minimal adjustment) or drive (constantly adjust trim to course).

## **Mainsail**

A sail is powered up when it has a full shape (lots of curve) and a closed leech (top batten parallel to the boom). A depowered sail is flat, with an open leech (angled to leeward).

A tight **halyard** pulls the draft forward and opens (slackens) the leech. A loose halyard closes (tightens) the leech and moves the draft aft. ... In most conditions, you should tighten the halyard to remove horizontal wrinkles in the mainsail, but do not pull so hard that you induce vertical stress wrinkles along the luff.

The **outhaul** pulls the foot of the sail along the boom, affecting the fullness of the lower part of the sail. ... In almost all conditions, except light to moderate air with choppy seas, keep the outhaul tight enough to maintain a horizontal stress wrinkle that is on the verge of showing along the foot.

The **backstay** directly affects the fullness, draft position, and leech tension of the mainsail. Tightening the backstay depowers the sail by pulling the top of the mast aft and bowing the middle of the mast forward. The bowed mast pulls sailcloth out of the front of the main, thereby flattening the shape, moving the draft aft, and opening the leech.

The **cunningham** usually is adjusted to keep the draft in the middle of the sail. If you depower the main by tightening the backstay, remember to counteract the aft movement of the draft by pulling on the cunningham; the cunningham and backstay are always tightened and loosened together.

In winds under 12 knots, set the mainsheet so that the top batten is parallel to the boom and then pull the **traveler** to windward until the boom is on the centerline of the boat. ... In stronger winds, when the boat is overpowered and becomes difficult to keep at a steady angle of heel, drop the traveler. In puffy conditions, combine dropping the traveler with steering the boat a few degrees closer to the wind.

In a 15-knot breeze, ... tensioning the **boom vang** while at the same time angling the leech to leeward by dropping the traveler. The firm leech gives the sail power and pointing ability, while angling it to leeward keeps the boat balanced. In winds under 12 knots, keep the boom vang slack and use the mainsheet to control leech tension.

## **Jib**

A tight **halyard** stretches the luff and pulls the draft forward, while a slack halyard moves the draft aft.

For most conditions, tension the halyard so that horizontal wrinkles at the luff are on the verge of showing. In a well-designed sail, this sets the draft at approximately one-third aft. In windy conditions with big waves, pull the halyard tight. This action will move the draft forward, creating a more rounded sail entry that in turn enables the helmsman to steer through a wider course range without stalling the sail.

The **jib-lead** position is the fore-and-aft and inboard/outboard angle at which the jibsheet is trimmed ... If the jib luffs low first, then the lead is too far forward. For winds up to 12 knots, set the lead blocks so that the jib luffs evenly from bottom to top. As the breeze increases, slide the blocks aft so that the bottom of the sail can be pulled flat while the top of the sail spills wind. ... Outboard sheeting is most effective in lots of wind and big seas, when you want to widen the slot between the main and jib and let the wind escape.

Jeff Johnstone, "The New Book of Sail Trim."

