

Rigging + Sailing Guide.

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Rigging

All tackles, lines, strops and wires are supplied made up with the appropriate blocks, eyes, terminals and shackles, and are labelled. The rig should be assembled in the following sequence:-

1. Rig booms as shown in Fig. 1.

2. Place booms on deck over mast apertures. Ensure that they are the correct way up (outhaul tackles on starboard side). Attach mainsheets to deck eye plates and/or travellers.

Attach downhauls and snap shackle blocks to mast collars as shown in Fig. 2. Slide mast collars, mast rings and rubber boots (with jubilee clips) onto masts (see Fig.3)

4. Rig masts as shown in Fig. 3.

- 5. Attach lifting strop to mast by rolling hitches below boom halyard eye
- 6. Crane mast over boat, drop into mast aperture, and locate in foot casting.
- Align mast correctly. Main halyard, topping lift and boom halyard should 8. Grease mast ring with lanolin or water pump grease and push down into

mast gate until nearly at deck level. The taper on the ting may need to be trimmed slightly 9. Drop mast collar onto deck and align lugs correctly (see Fig.2).

10. Drill deck for mast collar bolts. Tighten bolts to pull mast collar and ring down to deck level, onto sealing compound

11. Secure rubber boot around mast collar with jubilee clip. Locate head lining trim ring over ends of mast collar bolts. (mizzen only)

12. Drill and tap through mast foot casting into wall of mast for retaining

13. Run mast and boom tackles, lines, halyards etc. through mast collar blocks and deck leads to stoppers on deck. (see Fig 4).

14. Unroll sail around mast and secure tail of outhaul line to clews with

15. Shackle boom halyard lower block to loop knot on yoke rope.

16. Pass tails of yoke rope through apertures in sail, and temporarily make fast to forward radius of wishbone boom.

17. Shackle topping lift lower block to tang at aft end of boom and hoist

18. Hoist boom to horizontal position, (using boom halyard). 19. Adjust yoke rope until forward radius of boom is approximately 6" from forward face of mast, and loop knot is central on aft face of mast. Secure tails of yoke rope to boom with round turn through stainless steel loops and two half hitches.

20. Attach halyard bridle rope to head cringles in sail with bowlines or

21. Knot all leech and foot ties (see Fig.5).

22. Detach tail of clew reef line from boom, pass through both reef clews, and attach by bowline around starboard wishbone, through stainless steel loop (see Fig.1).

23. Knot additional sail tie through small eye in centre of sail and attach reefing pennant as shown in Fig. 5.

24. Rig tack reef line as shown in Fig. 5, and lead through mast collar and deck lead to stopper.

25. Hoist boom to a position above normal sailing position (using red boom

26. Hoist sail until plice on halyard is just envering masthead block knots on bridle ar close to

27. Lower boom until yoke rope "floats" in centre of sail aperture. 28. Pass downhaul line (see Fig. 2) through sail tack ring, tension and secure to shackle with half hitches.

29: Check that yoke rope still emerges from centre of sail aperture. Adjust boom halyard if necessary.

30. Securely attach boom height limit strop (see Fig. 1) to mast collar to fix height of boom.

31. Adjust topping lift tackle and secure.

32. Cast off main halyard.

33. Lower boom to horizontal position.

34. Set up lower sail cradle by springing shock cord loops on starboard wishbone onto hooks on port wishbone.

35. Pull down remaining sail onto shock cord cradle. MSWrendoof said reaches boom balyard care place on masty to tate soid to avoid enauting. Spring upper shock cord loops over sail.

## To Hoist a Sail

- Ensure that outhaul and reef lines are free to run through stoppers
- Hoist the boom (using the red boom halyard) until the limit strop
- Hoist the sail (by the white main halyard) and tension the luff by winching until vertical creases are just appearing aft of the mast.
- Tension the blue outhaul line until the lee side of the sail is just clear of the wishbone when the sail is full.

### To Lower a Sail

- Cast off the blue outhaul line to relieve the pressure of sailcloth against the mast.
- 2. Proceed as for steps 32 35 of the rigging guide.

### To Reef a Sail

- Ease the main halyard a distance equal to the depth of the reef (this position should be marked on the halyard to avoid having to make further adjustments).
- Pull in the green tack reef line to restore luff tension.
- 3. Pull in orange clew reef line to restore outhaul tension. Grasp the reef pennant and pull the excess sailcloth down into the lower element of the sail.
- Shorten the reef pennant by sliding the slip knot along it.

# To Shake out a Reef

- 1. Lengthen the reef pennant by sliding the slip knot down.
- Release the stoppers to the clew and tack reef lines and the outhauls, and ensure that all these lines are free to run.
- Winch the sail to the top of the mast.
- Tension the outhaul.

#### Beating

The mainsail should be sheeted as a genoa, i.e. the clew should not be sheeted further inboard than a position over the edge of the coachroof. The mizzen should be sheeted in as hard as is necessary to give the appropriate weather helm or "feel" to the wheel.

The yacht should then be sailed at approximately 40° to the apparent wind, depending upon sea conditions. Only experience will enable the helmsman to find precisely the right "groove", but as a general rule, a Freedom yacht should always be sailed slightly more free than a conventionally rigged yacht.

To tack, turn the wheel briskly and start to reverse the helm as the bow passes through the eye of the wind. It is not necessary to trim either sheet.

### Close and Beam Reaching

Ease the sails out parallel to one another until they are just on the point of lifting on their weather sides. In strong winds it may be necessary to ease the mizzen further to eliminate any weather helm. It is best to avoid the temptation to oversheet, as the two-ply sails are most efficient when set at a small angle of attack to the apparent wind.

## Broad Reaching

It pays to goosewing the mainsail as soon as the wind is significantly aft of the beam. Before bearing away, ease off the mizzen completely and run off slightly by the lee to place the mainsail in the wind shadow of the main. It is then possible to grasp all the parts of the mainsheet and pull the mainsail bodily over to weather. As the sail fills on the weather side, ease out the sheet until the boom is well forward of athwartships, and return to a broad reaching course.

## Setting the Mizzen Staysail

This additional sail is usually set only when the wind is sufficiently far aft of the beam to goosewing the mainsail out to weather. Attach the tack of the staysail to the eye plate on the forward end of the coachroof, or the weather mooring cleat, or the weather toe rail. Set up the running backstay to the mooring cleat on the weather quarter. Hoist on the staysail halyard, and sheet to a snatch block from the leeward stern mooring cleat, or to the end of the mizzen boom.

### Running

With the mainsail goosewinged, ease both mainsail and mizzen well forward of athwartships. This technique results in three advantages:-

- 1. Airflow from luff to leech is set up, increasing the efficiency of the acrofoil sails.
  - 2. The possibility of an involuntary gybe is eliminated.
  - 3. Lateral pressure on the sails damps rolling.

### Gybing

To gybe the main, run by the lee and hand the mainsail over in the lee of the mizzen. To gybe the mizzen, sheet in in the normal way and gybe the sail over with only a small divergence from a downwand course.

### Reducing Sail

The normal sequence of sail reduction is as follows:

- 1. Reef the mizzen.
- 2. Stow the mizzen (or reef the main).
- 3. Reef the main (or stow the mizzen).
- 4. Stow the main and set storm jib.

#### Setting the Storm Jib

- Release the mainsail topping lift, lower the end of the mainboom onto the side deck, and lash in position.
- 2. Set up the running backstay to the weather quarter.
- 3. Attach the tack of the storm jib to the eyeplate on the forward coachroof. Hoist on the mizzen staysail halyard and sheet to the leeward quarter.

#### To Heave To

Sheet the storm jib to weather and put the helm down. The yacht should then settle approximately 60° off the wind.

The above techniques differ slightly from those employed on conventionally rigged yachts, but are easily mastered during the first few hours of sailing. When you are familiar with the system, we think that you will agree that it is the simplest and most efficient cruising rig available.

Good Sailing!









