



KOLIBRI 2-12 SAILBOAT RIGGING INSTRUCTION MANUAL

Sailing terminology will be found on the diagrams following these instructions

STEPPING THE MAST

The job of installing the mast on your **KOLIBRI** is called "stepping the mast". When the mast is raised it is supported by three wires leading from the "tangs" near the top of the mast. One goes to the bow (front) and is called the forestay; the other two lead to each side and are known as the shrouds or sidestays. The shrouds are attached to the boat by multi-holed shroud adjusters and the forestay by a turnbuckle. Normally these three wires and attachment hardware come to you fastened to the three mast tangs. They are easily removed or attached to the mast by means of joining "shackle". Make sure the shackle is tightly screwed shut when in use.

If your boat is equipped with optional "extended Hiking Straps", the attachment rope at the forward bulkhead must be untied prior to stepping the mast. Do not forget to retie the hiking strap.

Now step the mast, following these suggestions:

1. Check there are not overhead powerlines where you are working and on your route to the launching site. Do not work on the water. The **KOLIBRI** may be on the ground or on the trailer. Lay the mast on top of the hull with the top towards the rear of the **KOLIBRI** and with the sail groove down.
2. Insert the wind indicator (red flag) into the clip at the top of the mast by depressing each end of the clip.
3. Untangle the forestay and shrouds and lay them on their appropriate sides. If the mast and shrouds have been shipped unattached, install each wire to appropriate tang as described above.
4. Fasten the shrouds to the loop (chainplate) on each side of the **KOLIBRI** by inserting the "clevis pin" into the 3rd or 4th hole from the top, and locking it in place with the ring. Keep some extra locking rings in your spare parts kit.
5. Screw open the forestay turnbuckle until about an inch of thread is visible on each side of the barrel.
6. Step into the **KOLIBRI** gently; non-skid sailing runners or similar footwear are recommended. Grab the mast, stand it upright, and set the base into the hole in the "mast step" casting on the **KOLIBRI** floor, just ahead of the centerboard box.
7. With the mast in this position, forward tension will hold it erect until the forestay turnbuckle is fastened to the CENTER hole in the bow plate at the front of the deck. Initially, have a second person aid you in fastening the forestay to the bow plate.
8. Tighten the turnbuckle until all three wires are snug. Exact tension is not important as long as the mast cannot move about excessively or jump out of the mast step. If after tightening the turnbuckle as far as it will go, the mast is still sloppy, loosen off the turnbuckle and move the side stays down a hole or two in the adjuster, and then re-adjust the turnbuckle. Tighten the two nuts towards the barrel of the turnbuckle.
9. Now the "boom" can be fastened to the mast at the "gooseneck". Slide the boom over the pin on the gooseneck. Earlier models will require the eye in the boom to be joined to the "flat D shackle" with the clevis pin and locking ring.
10. With the boom in position, next install the "boom vang" and "mainsheet" systems by threading the "lines" (ropes) as shown in the illustrations later in this manual. Make sure the mainsheet is not cleated in the mainsheet block.

HANGING THE RUDDER ASSEMBLY

The rudder assembly comprises the rudder blade, the rudder head, the tiller the tiller extension, the pintle rod and the retaining pin.

11. Your new **KOLIBRI** is equipped with a "kick-up" rudder meaning it is not necessary to remove the rudder when landing on a beach or sailing in shallow water. To raise the rudder, release the "downhaul" line from its V jam cleat, and pull up and cleat the "uphaul" line to the desired height. When under way the rudder should be down a full 90° and cleated tightly with the "downhaul" line
12. Remove the pin (pintle rod) from the rudder head (where it should always be stored when not in use). Work on land wherever feasible.
13. Position the tops of the rudder head holes between the "gudgeons" affixed to the outside "transom" and align the holes. Drop in the pintle pin from the top and SECURE with the retaining pin provided.

HOISTING THE SAILS

The **KOLIBRI** is "sloop rigged" meaning it has two sails; the larger rear one known as the "mainsail", and the smaller one up front called the "jib". Both sails are hoisted using their respective "halyards" which are ropes attached to the mast. To reduce sail wear and tear never let them flap in the breeze. Have the sails attached to the halyards, with the battens in, ready to be raised one right after the other, just prior to departure.

RAISING THE JIB

14. Locate the "tack" and attach the "luff" wire to the "aft" (back) hole on the deck bow plate with the "shackle" provided.
15. Using a "bowline" knot, tie the jib halyard to the "head" (top) of the jib
16. Attach the jib "hanks" onto the forestay by snapping them over the wire then rotating 90°.
17. Attach the jib sheet (about 21ft / 6.4m and the shorter of the two colored ropes) to the jib by passing the end of the jib sheet through the "clew grommet" hole. Divide this sheet into two equal lengths and tie a knot each side of the sail grommet. Lead each half round the outside of the sidestay and through (towards the boat center) and "fairlead" (loop) on the track positioned on the side of the deck. Then tie a "figure 8" knot in the end of each jib sheet (to prevent it slipping back through the fairlead). Do not raise the jib yet.

RAISING THE MAINSAIL

18. Locate the "clew" and slide the foot of the mainsail into the boom starting at the mast end. Line up the tack grommet with the boom end casting at the mast end; insert the cotter pin through the grommet being careful not to "splay" the cotter pin. Older models require the shackle on the gooseneck to be fastened through the tack grommet.
19. At the aft end of the boom, fasten the "outhaul block" to the "clew grommet" using the shackle provided.
20. Using the "bowline" knot tie the main halyard to the head of the mainsail.
21. If the battens are not sewn in permanently, they must now be inserted at the "leech" end of the batten pockets. They should be pushed all the way in. The top batten is tied in with a small cord which permits extra pressure to be exerted; the middle and lower batten, with some pressure, drop down behind the lock stitch at the "leech" end of the pocket.
22. Make sure the **KOLIBRI** is pointed into the wind (whether on land or water) at the time the sails are raised, and make sure the main and jib sheets are uncleated.
23. Before proceeding to sail take one more check around the boat for anything that might have been forgotten. All crew members should put on a PFD (personal flotation device), check for overhead power lines WHICH CAN BE FATAL, and don't forget your bailing device (which can be a cut javex container), and signaling device (which can be a whistle).
24. To get underway, hoist the mainsail and then the jib. Pull them up as high as they will go and eliminate any wrinkles. Lock the halyards by figure eighting each end onto its open cleat on each side of the mast groove. Neatly coil each halyard end so they can be lowered easily in the case of an emergency. As soon as there is water depth release the rudder and centerboard uphaul lines so both boards are fully down, and then cleat them down with the "downhaul" lines.

CONTROLS

This section is not intended to give in depth insight in the use of the various **KOLIBRI** control lines, merely to familiarize you with their use. The illustrations will help you to locate the control

25. *Uphaul and Downhaul* lines operate the raising and lowering of the centerboard and rudder, and do not need more explanation other than one raises and the other lowers and locks down when cleated, so there is no tendency for the boards to float up while sailing, or for the centerboard to slide up while capsized.
26. *Sheets*. The mainsheet and jibsheet are the ropes used to control the position of the respective sails, in relation to the centerline of the boat. Generally, the closer to the wind you are sailing the closer the sails will be to the centerline of the boat (see diagram). As you turn away (bear off) from the wind, ease the sheets to allow the sails out. Normally the mainsail will be trimmed first and then the jib trimmed to help the main. In heavy weather we suggest the sheets be uncleated so they can be released quickly during heavy gusts.

27. *Boom Vang*. As the mainsheet is let out, the boom not only swings outwards, but also tends to lift up. This action causes the "leech" of the mainsail to twist, which produces a lack of power. To maintain tension on the leech, pull the "boom vang" line tighter. As the wind gets strong more tension will be required to maintain a tight leech.
28. *Clew Outhaul*. This control applies tension to the "foot" of the mainsail and adjusts the fullness in the lower portion of the sail. Basically in light winds more fullness (or ballooning) is needed to give power, in which case the tension on the "outhaul" should be released. In stronger winds a flatter sail is more efficient, and the tension on the outhaul should be tightened.
29. *Halyards* (sometimes called Halliards). These lines do more than raise and lower the sails; the tension on the halyards can greatly affect sail shape. Normally one should exert enough tension when raising the sails to remove any horizontal wrinkles from the "luff" (front end of the sail). However, as the wind strengthens the shape of the sails change and more tension may be needed to the halyards to bring the shape back. Your **KOLIBRI** mainsail comes with a second grommet hole in the tack area around 8" / 20cm up from the foot. This is for use with a "Cunningham" control system (see diagram) and is another method of applying tension to the mainsail luff. This system is not standard except for the second grommet.
30. *Sliding Jib Fairleads*. These govern the position of the jib sheets. Generally the fairleads should be forward when sailing downwind and aft when sailing upwind.
31. *Top Mainsail Battens*. When inserting the top batten, apply just enough tension to remove any vertical wrinkles from the batten pocket by utilizing the tie-in cord at the rear of the batten. Remove all battens when packing away your sails to preserve the elastic tension in the batten pockets. The foregoing DOES NOT APPLY to permanently sewn in battens.

GENERAL

- A. Again we warn you to watch out for overhead wires when stepping the mast or launching your **KOLIBRI**. In addition to damaging your mast (and other areas of the boat) CONTACT CAN BY FATAL.
- B. In addition to tightening the locking nuts, use locking wire threaded in a figure 8 through the forestay turnbuckle to prevent it possibly unscrewing itself due to boat motion. When trailering remove the turnbuckle and the wind indicator from the mast to prevent loss (keep handy in your sailbag).
- C. When trailering, tie down the **KOLIBRI** sufficiently tight to prevent it bouncing up and down, and frequently check the tie downs to ensure they have not worked loose.
- D. Keep a spare parts kit in your sailbag comprising a few shackles, clevis pins and rings, drain plugs, small lengths of line etc.
- E. Read the Canadian Coast Guard "Safe Boating Guide" which contains helpful pertinent information as well as outlining your legal obligations. Be aware that for sailboats of the **KOLIBRI'S** length in smooth conditions, a crew of three or maximum weight load of 260kg / 573 lbs is recommended, and that in rough water conditions there should be at least one less person in the boat.

- F. To avoid condensation or moisture build up, open the interior drain plugs or hatches when the **KOLIBRI** is not in use. Always drain any interior moisture, particularly prior to winter storage or freezing weather. Hatches and plugs MUST be closed firmly when sailing.
- G. To maximize the life of the sails, make sure they are dry before storage and fold them in "concertina" style, then roll into a smaller size for bag insertion. Remove the battens before folding unless permanently sewn in. Keep sails clean by sponging with soapy water or sail cleaner. Never allow sails to flap at the dock, and remember mice love to eat sailcloth.
- H. Before winter storage wash off hull with warm soapy water and apply a coat of wax/cleaner. Storage can be inside or outside if protected by a cover. Your **KOLIBRI** can also be left outside stored upside down or perhaps sitting on two or three tires in an area protected from snow. Do not store her on her side, but there is nothing wrong with standing her upright on her transom. Do not let water and resultant ice accumulate in the **KOLIBRI** over winter.
- I. Your **KOLIBRI** mast is manufactured airtight for floatation purposes, but a loose rivet could cause loss of seal. Check your mast from time to time by submerging in water and watching for bubbles. Silicone any leakage points.
- J. Capsize practice will teach you a lot about the best righting method for your **KOLIBRI**. We recommend studying a sailing skills book or taking instruction. Briefly, check the crew is safe and wearing an approved PFD. **ALWAYS STAY WITH THE BOAT**. Make sure the centerboard is projecting out of the bottom of the boat at 90°, and that the main and jib sheets are uncleated.
If you are quick and alert you can simply climb out the high side of the boat onto the centerboard (always stand CLOSE to the hull); pull down on the side (gunwale) and as the boat comes up, scramble aboard.
In the alternative if you are in the water, make sure the boat is pointing into the wind, grab and pull down the centerboard while pushing out the underwater side of the hull with one foot. As the boat comes up, climb onto the centerboard (CLOSE to the hull), grab the gunwale and continue to pull down until the boat uprights. Scramble aboard, assist the crew to climb in and use the handbailer to vacate excess water. If your **KOLIBRI** has an optional automatic bailer this can be engaged once underway.
- K. *Optional Self Bailer.* If your boat is equipped with a self bailer, great care must be taken to ensure that it is not damaged while it is open. It is recommended to close the bailer immediately after all water is evacuated from the cockpit of the boat. Make sure bailer is closed while launching from a trailer or beach.

SPECIFICATIONS HULL / SAILS

Length	12'	3.66 m
Beam	4' 11"	1.5 m
L.W.L	11' 5"	3.48 m
Draft Max	3'	0.9 m
Draft Min	3"	7.62 cm
Load Capacity	570 lbs	258.5 kg
Hull Weight	±150lbs	±68 kg
Mainsail	58.5 ft ²	5.4 m ²
Jib sail	33.0 ft ²	3.1 m ²
Spinnaker	105.0 ft ²	9.8 m ²
Mast Length	17' 4"	5.28 m
Boom Length	7' 2"	2.18 m
Mast Weight	12 lbs	5.44 kg
Flotation		102 L

STANDARD / RUNNING RIGGING

Boomvang	12'	3.66 m	5 mm
Jib Sheet	21'	6.4 m	9 mm
Mainsheet	26'	7.9 m	9 mm
Spinn Sheets	45'	13.7 m	5 mm
Main Halyard	35'	10.7 m	5 mm
Jib Halyard	26'	7.9 m	5 mm
Spinnaker	31'	9.5 m	5 mm
Outhaul	7'	2.13 m	5 mm
Rudder:			
Downhaul	3' 6"	1.07 m	5 mm
Uphaul	2' 6"	0.76 m	
Centerboard:			5 mm
Downhaul	3'	0.91 m	5 mm
Uphaul	6' 5"		
Forestay	149"	37.85 m	2.4 mm
Sidestay	149.5"	37.97 m	2.4 mm

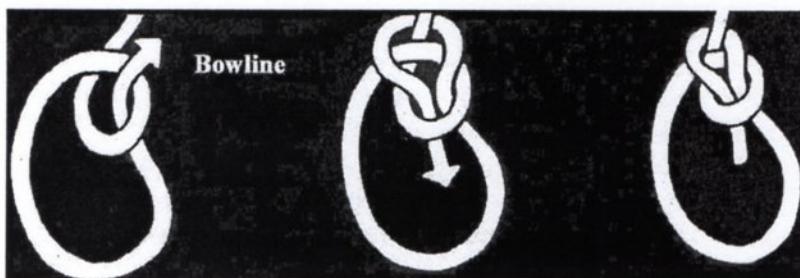
Specifications and features subject to change without notice.

IMPORTANT KNOTS



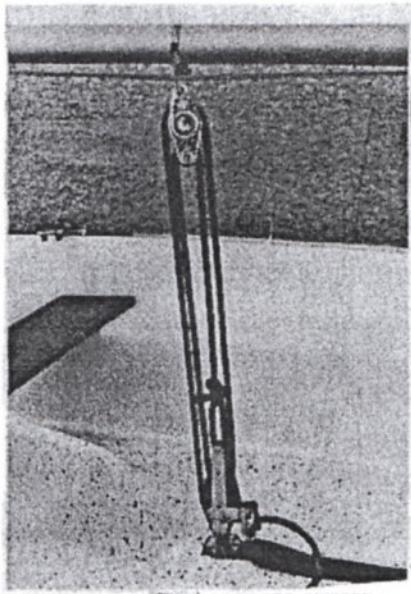
FIGURE EIGHT

Used as a stopper knot to prevent a rope from slipping through a block or fairlead, e.g., in the end of the jib sheet to stop it slipping through the fairlead.

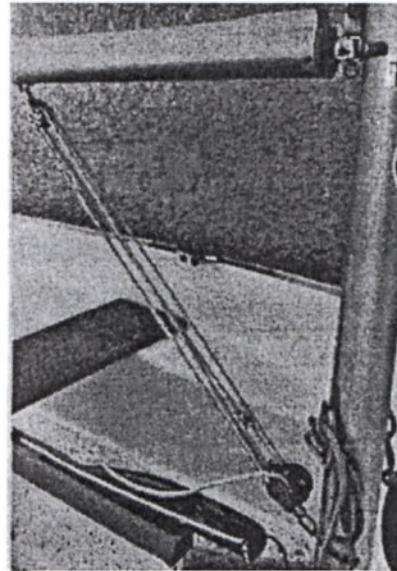


BOWLINE

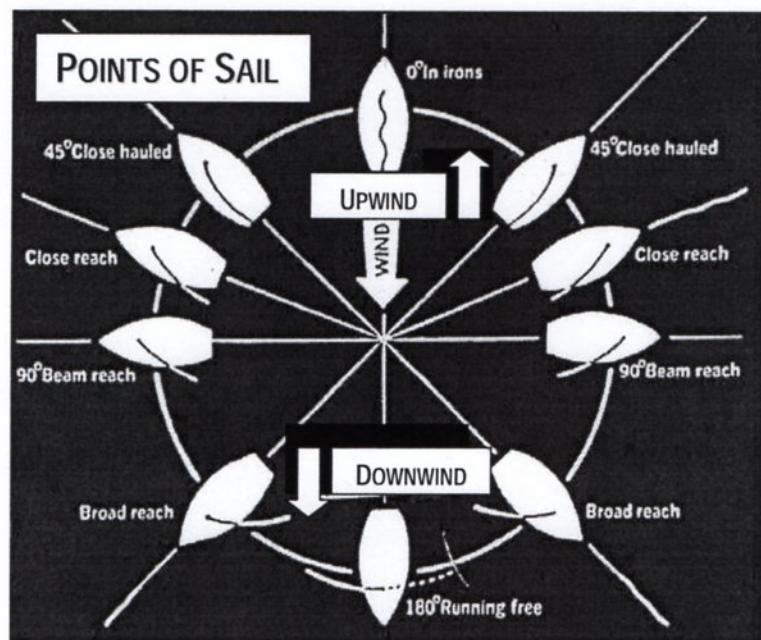
This knot produces a loop which will not slip. The loop will not get larger or smaller. The bowline is easy to untie after being under strain

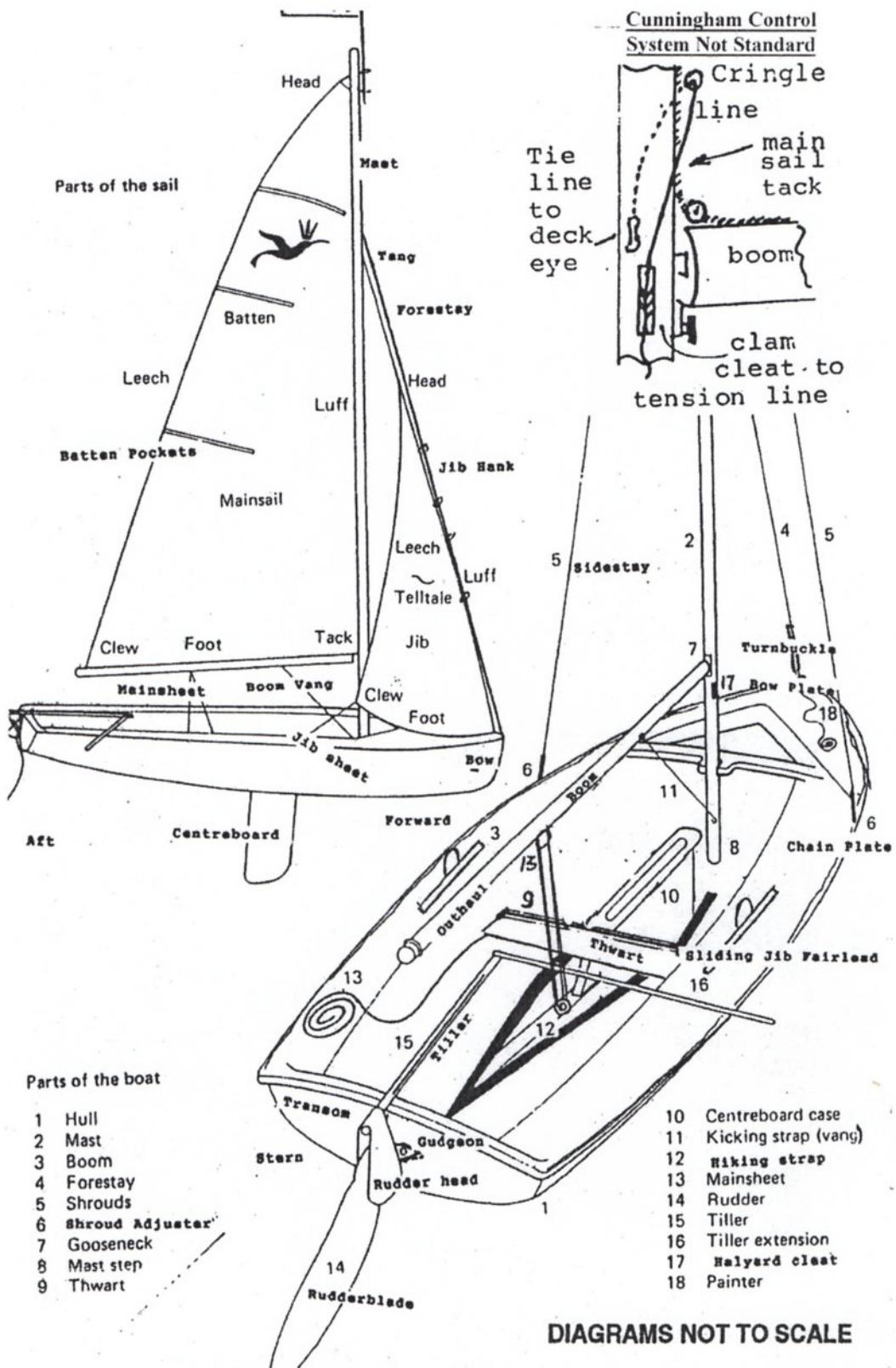


MAINSHEET ARRANGEMENT



BOOM VANG ARRANGEMENT





DIAGRAMS NOT TO SCALE

