

# **BONGO RIGGING MANUAL**

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***Please let us know how we can improve this manual and what you would like to see included in future versions. You can contact us at [www.sailabongo.com](http://www.sailabongo.com), or phone us with your urgent questions: 401.481.3811. We hope you enjoy your new Bongo!***

**BONGO SAILORS HAVE FUN EVERY DAY.**



*This page provides a summary of the more detailed instructions that follow.  
For more details, read the rest of the Owner's Manual.*

## Install the Keel

1. Rig the vang, cunningham, and reef lines.

**Important** *The fit of the keel in the bottom bearing is very snug and installation must be done very slowly until the keel passes the top of the floor in the cockpit.*

2. Lift the boat and line up the top of the keel with the keel bearing in the bottom of the boat. Slowly lower the boat onto the keel, constantly checking that it doesn't bind.
3. Install the top bearing.

## Rigging

1. Attach standing rigging to the mast. Rig jib.
2. Install spreaders with the fat edge forward. Insert upper into the larger of the two slots in the outboard end of the spreader and tighten the screw to secure it. Set length at 19".
3. Make sure lines are clear and step mast, making sure you are clear of overhead wires.
4. Attach standing rigging to chainplates. Make sure there are at least ten turns of furling line on the drum before hooking up headstay.
5. Rig main and spinnaker halyards and shackle jib sheets to clew.
6. Tune mast. Adjust the rake to 23'-3 1/2" with 150 lbs on the uppers. Adjust the lowers so the rig moves at the partners but does not touch the other side.
7. Install boom and tie the main halyard around the aft end to support it temporarily. Rig the mainsheet and vang. Install the reef line hooks and rig the reef lines, making sure there are knots in the aft end.
8. Rig the mainsail and spinnaker.
9. Install the rudder.

**Make sure the transom plug and inspection port are in place before launching.**

## Hoist Launching

**Double check bridle hooks and the hoist before**

1. Keep the main rolled up. Hook up the bridle.
2. Make sure there is at least four feet of water depth and launch the boat.
3. Check to make sure that nothing is caught under the top bearing of the keel, and secure it by fastening the I-beams in place.
4. Lower the rudder and lock it in its down position.

## Ramp Launching

1. Place the keel lifting tube in the hole in the console and tension the purchase so the bulb will clear the trailer or dolly.
2. Hoist the mainsail to the second batten. Secure the sail and the boom.
3. Launch and move the boat to deep water.
4. Lower the keel and secure it by fastening the I-beams in place.
5. Lower the rudder and lock it in its down position.

**You are now ready to hoist the main and go for your first sail in your new Bongo!**

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## Tools needed to rig the Bongo

1. Philips head screw driver or multi tool.
2. Small flat head screw driver or multi tool.
3. Vise Grips, Pliers or multi tool.
4. Rigging tape or electrical tape.
5. Loos Gauge (optional)
6. Tape measure.
7. Hoist to lift boat if you need to install keel.
8. Time to enjoy putting you new Bongo together!

It is best if you have a clean dry lawn to first rig your Bongo. Take your time and enjoy rigging the boat for the first time. This will make the process fun and not put pressure on you to hurry into the water and leave out important steps.

## Installing the Keel

### **Putting the keel on the boat is much easier with two people.**

*It is easier to rig the vang, cunningham, and reef lines before you install the keel. You will only have to rig the cunningham, vang, and reef lines once.*

Locate the boat under a hoist with enough height that the keel will clear the bottom of the boat while on the trailer. Install the bridle by hooking the long ends to the eye straps on the back of the foot chocks. Hook one short end to the aft end of the starboard chainplate, and the other short end to the aft end of the port chainplate. The fourth hook on the forward part of the bridle will attach to the keel after it is installed.

You can install the keel with or without the mast in the boat. I recommend lifting the boat without the mast installed.

### **Make sure the boat is supported while on the hoist so that it will not fall on you when you are under the boat.**

**Important** *The fit of the keel in the bottom bearing is very snug and it is possible to damage the bottom bearing or keel when installing. Installation must be done very slowly until the keel passes the top of the floor in the cockpit. The keel can catch on the cockpit floor flange if not straight and plum.*

Lift the boat with the hoist until the keel will fit under the boat. Stand the keel on the keel bunk of the trailer and line up the top of the keel with the keel bearing in the bottom of the boat. Slowly lower the boat onto the keel, constantly checking that it doesn't bind. Continue to lower the boat until the boat is safely back on the dolly or trailer.

Once the keel is in place, install the top bearing. This is done with (4) 1/4-20 stainless steel machine screws and nylon lock nuts. Snug the nuts but do not over tighten them. At this point you are ready to use the keel.



**Install Rigging** Attach the five rigging wires (headstay, two uppers, and two lowers) to the mast. Keep tension on the wires so they do not twist or fall out again. Inspect the fittings, rig section, lines, and wires every time you step the rig, and never sail with damaged rigging.



The spreaders are installed with the fat edge forward. Line up the outer hole on the spreader bracket with the forward outboard hole on the spreader and secure it with the provided clevis pin. Then line up the second hole aft closest to the inboard end with the hole in the spreader bracket closest to the mast and insert a clevis pin to secure it.



Insert the wire into the larger of the two slots in the fitting at the outboard end of the spreader and tighten the screw to hold it securely. The spreader length should be set at 19" from the side of the rig to where the wire intersects the spreader.

***Be careful not to put your spreaders too far forward of this recommended setting. The aft raked spreaders prevent the mast from inverting under load.***

Tie the spinnaker and main halyards to the vang fitting temporarily. Always keep knots in the ends of the halyards to prevent halyard loss.

The spinnaker halyard messenger line, which runs from the starboard cockpit bag to the block forward at the bow, should be clear of the mast step on the starboard side. Also make sure the vang and cunningham lines are clear and aft of the step.

**Install jib** Lay out the jib next to the mast and run the long headstay wire through the luff sleeve of the jib from top to bottom. Be careful not to wrinkle the sail. Tie the head of the jib to the top swivel so that with tension on the headstay there is about 2-3" (5-7 cm) of wire sticking out at the bottom of the jib.

Before you go any further you need to wrap the furling line onto the drum. Make sure there is a knot in the aft end of the furling line where it goes through the cleat. Wind the drum so the line wraps around it in a clockwise direction until all of the line is on the drum and the knot is at the cleat. Make sure when wrapping the line that you keep tension on the line so it does not twist on the drum.

Now you are ready to step the mast and then you will be able to furl the jib. Since you will step the mast with the jib unfurled, pick a time with no wind to learn this process.

***Avoid any overhead power wires.***

***Electrocution can happen with carbon masts.***

***Always look up and use caution!***

**Step Mast** Stand up the rig and lower it through the partners until it seats on the mast step. Make sure that no lines or any part of the spinnaker tube are pinched between the butt and the step. Also double check that the mast butt is properly seated by pulling the mast fore and aft. The flats on either side of the butt should be resting solidly on the top of the step, and the pin in the step should fit into the notch on the mast butt.

Once the mast is up, attach the wires to the chain plates with the clevis pins. The uppers attach to the 4<sup>th</sup> hole from the aft end of the chain plate. The lowers attach to the 7<sup>th</sup> hole from the aft end of the chain plate. Run the adjustable headstay line through the pin on the furler drum and tie it to the eye on the headstay chainplate. You may have to release the other end of the line to have enough slack.

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**Rig Jib** Once the mast is secure in the boat, attach the bottom end of the headstay to the top of the furling drum. Locate the jib tack line (a short 12" (30 cm) line in the rigging kit that is the same type as the furling line) and use it to tie the bottom grommet of the jib to the top of the furling drum where the headstay is pinned.

Do not attempt to furl the jib until the tack of the jib is tied to the drum, the headstay is tensioned, and the jib sheet block is attached to the middle hole in the clew board. These steps are all necessary to prevent damage to the headstay.

Once you have performed these steps you can furl the jib. To unfurl, uncleat the furling line and pull on the jib sheet. The fairlead aft of the jib cleat makes it possible to cleat the jib from the opposite side of the boat while sailing; just pull the sheet and it will cleat under tension.

You can now adjust the tack line and jib lead for the conditions and enjoy the self-tacking roller furling jib.

**Rig Lines** Pass the main halyard tail down the aft side of the mast partner making sure it is centered between the four 29mm stand up blocks. Then lead it through the cleat in the center of the console top, through the Harken 29mm Carbo stand up block behind the cleat, and tie a stopper knot. Shackle the jib sheet to the clew of the jib. Make sure the sheet is uncleated and furl the jib; if it is difficult, pull on additional rig tension.

The spinnaker halyard actually does three jobs. It pulls up the spinnaker, pulls out the retractable pole, and douses the spinnaker back into its launching tube. It is an easy system to use but requires careful attention to rig properly. Follow the steps below exactly for a trouble free setup.

1. Pass the spinnaker halyard tail down through the mast partner making sure it is to starboard of the four 29mm stand up blocks and not under the pole tack line tied on the front of the step. Grab the line from behind the house and remove any kinks before taping the end to the spinnaker halyard messenger line. Carefully pull the halyard through the purchase system that launches the pole and untape the messenger line; stow this in a safe place since you will need it to unstep the mast.
2. Run the spinnaker halyard tail under all other lines, through the cleat down low on the starboard side of the console, through the eye strap aft of the cleat, through the Harken 29mm stand-up on the forward starboard foot chock, and through the 29 mm stand up in the center of the transom brace near the floor. Then lead it forward and through the 29 mm stand up on the forward end of the port foot chock.
3. Next pass the tail through the spinnaker bag outer grommet to the opening at the front of the bag. An easy way to lead the line through the spinnaker launch tube: feed the line through the outer grommet, untie the shockcord holding the bag aft, and toss the whole bag forward under the house. You will then be able to reach into the bow tube and pull out the line. Tie off the end until you are ready to rig the spinnaker, and don't forget to reattach the shockcord that holds the launch tube aft.

Because the spinnaker halyard is also the takedown line, its length is very important. I have found the following length works best: with the end from the top of the mast tied off to the vang bail and the line rigged according to steps 1-3 above, the other end should just reach the headstay chain plate. This might seem short, but if the halyard is too long it will wrap around the end of the pole and cause problems.



**Tune Mast** Now that the rig is up and the halyards are run, you can test the adjustable headstay and set the rigging tension and rake. If you have a Loos gauge you can use it on the uppers to adjust the rake and tension.



Keep the lowers loose at this point.

Measure the rake by attaching a tape measure to the main halyard and hoisting it to the top of the mast. Measure to the bottom of the boat at the transom, just off centerline so the cross brace that holds the rudder does not deflect the tape too much. The rake you are looking for is 23'-3 1/2" with 150 lbs on the uppers. Also check to see if at 250-280 lbs on uppers the rake is 23'-5".

Once you have dialed in the uppers, adjust the lowers so they allow the rig to move at the partners but not to touch the other side. Lowers that are too tight will not allow you to prebend the mast.

***At this point the rig is ready to go sailing.  
Read "Sailing the Bongo" for more discussion on rig tuning.***



**Traveler** Tie a stopper knot in one end of the Spectron 12. Run the other end up through the hole in the starboard rolled rail just ahead of the transom cross brace. Pass the line through the 29mm side of the double block setup, and then feed it down through the hole in the port rolled rail just ahead of the transom cross brace. Tension the line until the blocks are one foot above the deck at centerline and tie a stopper knot as close to the underside of the rail as possible. Trim the tail if necessary. This tension will locate the boom on centerline when trimmed.

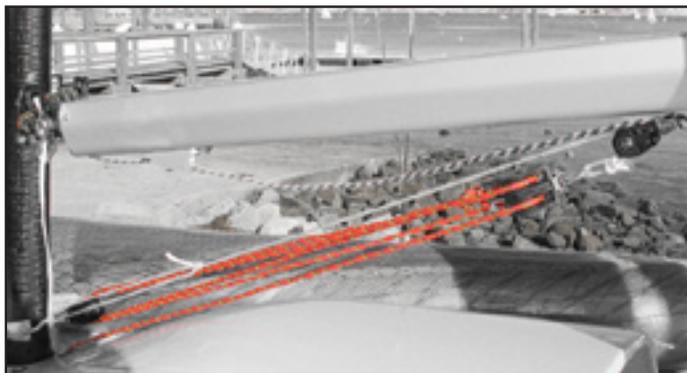
Check the line often for chafe, especially where it runs through the holes in the rail. If you have to replace the traveler you need about 7' of 1/8" Spectron 12 or a similar low stretch line. The two block set up consists of a 29mm hooked permanently to a 40mm block.

**Mainsheet** Install the boom by pushing the gooseneck pin into the hole on the boom. It is easiest to rig the mainsheet if the boom is hanging in the air, so tie the main halyard around the aft end and tension it to lift the boom.

Locate the mainsheet, the 5/16" line in the rigging kit. Tie a stopper knot in one end and switch on the mainsheet ratchet block (located on the standup swivel just aft of the console). Run the other end of the mainsheet through the block against the ratchet, through the forward 40mm Carbo on the boom (from forward to aft), through the eye strap between the blocks, and through the aft 40mm Carbo.

Next, run the main sheet through the 40 mm side of the traveler double block, aft to forward, and tie the end to the becket on the aft block on the boom. Cleat the mainsheet to restrict the swing of the boom while you rig the vang.

**Vang** The vang should be rigged from the factory. To rerig the vang, follow steps 1-3 below. To rig the vang for sailing after rigging the mainsheet, go to step #4 on the next page.



You will need the following from your rigging kit:

- Harken 29mm Carbo single with strap
- Harken 29mm Carbo double
- Harken 29mm Carbo double w/ becket
- Long Red 3/16" line
- Short Red 3/16" line
- Blue 5/32 Spectron 12 line about 30"

1. Run one end of the short red line through the port Harken swivel cleat on the console, through a 29mm single, and through the starboard swivel cleat, making sure the line is led under the main halyard. Tie stopper knots in both ends.
2. Tie one end of the long 3/16" line to the stainless bail on the 29mm single. Lead the other end through the inboard 29mm block on the port side of the mast step and then through the center bullseye behind the mast.
3. Attach a double block to the vang bail on the mast with the sheaves facing up. Tie the Spectron 12 line to the shackle on a double block with becket. The red 3/16" line (rigged in step 2, above) is led through the double with becket from bottom to top, through the double from top to bottom, back up to the double with becket again, bottom to top, and back to the double on the mast again, top to bottom. Tie the end to the becket on the floating block.

*continued on next page*

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## Vang, continued from previous page

4. Tension the main halyard until the boom is about 10 degrees above parallel to the ground. Take most of the slack out of the main sheet. Then run the blue Spectron 12 through the 29mm vang block on the boom and tie it on the mast vang bail with very little slack. If necessary, retie the red vang line coming up through the bullseye so the floating 29mm under the deck is tight against the 29mm stand up at the mast step. This will maximize the range of the vang.

**Cunningham** The following instructions show you how to rig the cunningham for the first time. To rig for sailing, read “Rigging the mainsail.”

Needed from the rigging kit:

29mm single with becket	Blue 5/32” Spectron 12 about 5’
29mm single with stainless steel strap	Blue 5/32” Spectron 12 about 1’
	Blue line with tracer 1/8” about 8’

1. Tie a stopper knot in one end of the blue line with tracer. Run the other end through the cleat/ bullseye on the aft side of the console. Pull the line through the console, out the starboard forward lower bullseye, and through a single with becket from the rigging kit. Run it back through the single block next to the bullseye, and tie it off to the becket on the single block.
2. Tie the 5’ blue Spectron 12 line to the bail of the single with becket and pass the other end through the inboard 29mm stand up block on the starboard side of the mast step. Run the



line up through the inboard bullseye on the starboard side of the deck at the mast partners, through a single 29mm with stainless steel strap, and tie it off to the eye strap at the mast step.

3. Tie a stopper knot in one end of the short 1’ blue Spectron 12 line. Run the other end through the hole in the gooseneck, from starboard to port. Leave the line hanging; when the sail goes up you will finish rigging it.

**Reef lines** Make sure the aft end of the boom reef lines have stopper knots. Pull at least half



of the excess line out of the forward part of the boom, making sure it is led through the fairlead on top of the boom at the gooseneck.

Locate the two stainless steel reefing hooks and run each line from aft to forward through one of the hooks, then through the bullseye in the deck, through the stand up 29mm block at the step, through the cleat on the side of the console, and then through the stand up 29mm block aft of the cleats. The first reef should be led through the starboard set of fairleads.

If the boom lives in the boat the reefing lines only have to be rigged once, so I travel with the boom and sail tucked under the foredeck. To pad the boom for traveling I use two life jackets around the boom/sail to stop chafe and tie the boom in place. I also tighten and cleat the main sheet.



## Rigging the mainsail

It is best to rig the mainsail when there is little or no wind. First unroll the sail on a clean floor or grassy area and install the bottom three battens, which can live in their batten pockets. The soft end of each batten goes into the pocket first. Put moderate pressure on the batten and secure the outboard end. Wait to install the top two battens since they must be removed to roll up the sail.



Once the boat is rigged, unroll the sail on the side deck and flake it over the boom. Insert the clew slide into the outboard end of the boom and attach the outhaul to the grommet in the clew. (See picture left.) Then attach the main halyard to the head of the sail. (See picture right.)



Feed the sail into the track and hoist until the inner end of the first batten pocket is in the track. Insert the upper batten into the top pocket with the soft end in first. Put moderate pressure on the batten and secure the outboard end. Raise the sail to the second batten pocket and install the second batten.



**Reef Lines** Hoist to the second reef point and rig the second reef line, which is the one on the port side of the boom. Hook the reef line in to the grommet in the luff of the sail; then run the aft end of the line through the grommet in the leech. Tie a tight bowline around the boom through the eye strap holding the aft mainsheet block.

To rig the first reef line, hoist the sail to the first reef point and repeat the process with the reef line on the starboard side of the boom.

Once both reef lines are rigged, fully hoist the sail and close off the bottom of the track at the feeder with the supplied pin.

**Cunningham** To rig the cunningham, run it up through the grommet above the tack and then tie it to the top of the single block on deck.

**Test Reefing System** You now have the main hoisted and rigged. We recommend you try out the reefing system on land as follows:

Lower the main halyard and take up on the starboard reefing line until the reef hook is just above the boom. Cleat the main halyard and continue pulling on the reef line until the grommet in the leech of the sail is close to the boom. You may have to ease the sheet and vang to allow the boom to rise. Take up the slack in the second reef line and repeat the process to further reduce sail if necessary.

To pull out the reef, make sure the cunningham is eased and uncleat the reef line before pulling up the main halyard.



**Tack line** Use the 9" to 1' of 5/32" Spectron 12 line for a mainsail tack line, which ties the tack to the mast. This line needs to be tensioned to match the set back of the luff from the rig; if it is too loose the slugs could pull out of the track under high loads.



## **Rigging the spinnaker**

It is best to rig the spinnaker when there is little or no wind, so you can practice hoisting and dousing without damaging the sail.

**Rig Sheets** Attach the two auto ratchet blocks to the eye straps on the port and starboard forward edges of the wing.

The spinnaker sheet is the 1/4" line in the rigging kit. Place the coil of line in the cockpit aft of the mainsheet swivel and run one end through the port auto ratchet, against the ratchet, and then to the foredeck outside the shrouds. Tie off the tail temporarily to the headstay.

Run the other end of the sheet outboard through the starboard ratchet, against the ratchet, then forward outside the shrouds and around the headstay. Tie the two sheets together until you are ready to attach them to the spinnaker clew.

Unroll the spinnaker on the port side of the foredeck and tie the spinnaker tack line (which comes out of the forward end of the pole) to the tack of the sail, making sure it is to port of the headstay.

**Rig Douse Line** Next rig the douse line, which comes out of the launch tube on the foredeck. Pass it through the grommet on the foot of the spinnaker from starboard to port, through the second grommet up the sail from port to starboard, and through the top grommet from starboard to port. Tie a secure stopper knot in the end.

Tie both spinnaker sheets to the clew, making sure the starboard sheet is led inboard of the tack and douse lines.

Attach the halyard to the head grommet, and the spinnaker is ready to hoist and douse!

**Practice** Before sailing, practice a few hoists and douses to get a feel for the system. Make sure the pole has room to extend (about 4' is needed) and hoist the sail by pulling up the halyard. When fully hoisted the tack should be pulled all the way out to the end of the pole. If the tack is not all the way out, most likely you need to shorten the tack line.

To douse, grab the douse line behind the stand up block on the port foot chock, and pull it tight until the foot grommet is over the launch tube. Let go of the sheet. Uncleat the halyard and continue to pull the douse line. It is easy for the halyard to recleat so if you have problems that is the first thing to check. Keep pulling until the entire sail disappears into the sock; it will be a bit tight as the three grommets pass through the opening.

**Do not force the sail in or out of the launch tube since that may damage it.**



## **Install the rudder**

Pull up on the bottom of the rudder until it is perpendicular to the rudder head and twist the lock so it will not drop under its own weight. Insert the rudder head onto the gudgeon and pintle. Make sure the lock pin is engaged on the bottom gudgeon. For added security, shock cord or line (see picture) can be rigged through the bottom pintle and run over the tiller to prevent the rudder from separating from the boat.



Pass the tiller under the traveler and into the rudder head, and insert the cotter pin into the top of the tiller at the aft end to lock it in place. Install the tiller extension onto the tiller, making sure the fitting snaps into place securely.

Tie a bow line to the eye above the pole on the bow of the boat to use as a dock line once the boat is in the water.

Recommended safety equipment:

1. Paddle minimum length 42"
2. Throw bag with 50' of polypropylene line to be used as a tow and anchor line.
3. 1½ lb grapple anchor.
4. Hand held VHF radio.

***Before you launch the Bongo make sure you insert and tighten the transom plug in the hull and double check that the inspection port is secure.***

## **Ramp Launching**

Place the keel lifting tube in the hole in the console, making sure it does not pinch any of the lines inside. Also be careful not to pinch your fingers when seating the tube in the fitting on the deck.

Hook the purchase onto the top of the keel and tension it enough to lift the keel off the bunk so the bulb will clear the back of the trailer.

I recommend having the mainsail started in the track to the second batten. The boom should be placed over the wing just enough aft so the aft block clears the wing. Cleat the mainsheet to lock the boom in this location. Also keep the luff of the mainsail between the shrouds and the mast so that the sail stays in the boat.

Roll the boat into the water enough so the boat can float off and be moved to the dock or float until you can put the trailer away. Once the boat is secured to a dock with at least four feet of water depth, lower the keel slowly making sure no lines get pinched under the top bearing.

Once the bearing is down in place, secure the keel by fastening the I-beams in place with the supplied thumb screws. Make them very tight. Double check all the lines are clear before tightening down the I-beams.

Lower the rudder and lock it in its down position.

***You are now ready to hoist the main and go for your first sail in your new Bongo!***

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## **Hoist Launching**

Keep the main rolled up and tuck the top two battens in under the house. The boom should be placed over the wing just enough aft so the aft block clears the wing. Cleat the main sheet to lock the boom in this location. You can also secure the main by passing the tail of the mainsheet over it to keep it from blowing off the boat.

To hook up the bridle, attach the two long sections to the eye straps on the aft side of the foot chocks. Make sure they are clear of the tiller and extensions. I tuck the tiller extension under the shock cord for the forward part of the hiking strap to keep it clear of the bridle.

Attach the forward part of the bridle onto the bent eye straps on the aft end of the chain plates. The final hook fastens onto the eyebolt on the top of the keel.

***Double check that all bridle hooks are secure and the hoist is securely attached to the bridle before lifting.***

Lift the boat with the hoist. The boat will lift first and the keel will stay on the bunk until it is about 3/4 of the way down, when the tension in the bridle raises it. Swing the boat over the water and lower the boat. Make sure there is at least four feet of water depth where you are launching.

The keel will drop all the way down as the weight comes off the bridle. Once the bridle is unloaded, disconnect it and secure the boat to a dock.

Check to make sure that no lines were caught by the top bearing of the keel as it lowered into place. Once the bearing is down in place, secure the keel by fastening the I-beams in place with the supplied thumb screws. Make them very tight. Double check all the lines are clear before tightening down the I-beams.

Lower the rudder and lock it in its down position.

***You are now ready to hoist the main and go for your first sail in your new Bongo!***



**Shroud tension** Greg Fisher of North Sails One Design taught me a tuning trick that seems to work over the whole range for the Bongo. Set the shroud tension so the leeward upper is just loose when sailing upwind. There should be about 1/16" of "dangle" in the leeward upper for all wind conditions.

Be careful not to sail with too little shroud tension; the uppers do a lot of work keep the mast from inverting. If you get overpowered and don't want to reef, add a little shroud tension to bend the rig. Do not ease shroud tension downwind once you are planing because the rig will become too unstable.

## Upwind settings

Make sure the main halyard is fully hoisted. Sheet the jib 1/2" out from being too blocked. Play the main for power and sail with only 2-3 degrees of heel.

**Outhaul** For light air, set the outhaul so the foot is about 2" off the boom at maximum depth. As the wind increases, tighten it until the foot of the sail is tight against the boom.

**Cunningham** The cunningham should be rigged so the floating block is close to the grommet on the sail. This will maximize its range for varying wind speeds.

In light wind take on just enough cunningham to remove half of the wrinkles in the luff. Once you start hiking remove all the wrinkles but be careful not to depower the sail too much; this is a very powerful control.

When I sail in 14-16 kts of wind I play the cunningham a lot to keep the boat going fast. The tip of the mast starts bending and the upper leech opens up and twists the main off.

*Tip: Toss the cunningham line to the new tack before tacking or jibing so you do not have to reach in for the line.*

**Main sheet** It is very important not to oversheet the Bongo at any wind velocity. The upper batten should always be open a few degrees. When sailing downwind, make sure you do not ease the mainsheet too much; this is a common mistake for sailors coming from displacement boats.

When jibing in winds above 10-12 kts make sure to ease 1-2' of mainsheet before the jibe. This will make the boat much more forgiving on the new jibe, since the leech of the main will not round the boat up.

**Vang** When you are trimmed all the way in on the mainsheet upwind, the vang should be just loose in light wind. Do not over vang as it is very slow.

As the wind increases, start tensioning the vang. The main will drop down the traveler as the vang takes load off the sheet. Again be careful not to over vang.

Ease the vang off before turning to go downwind. This will keep the boat in control, reduce the stress on the boom, and allow the leech of the main to be slightly twisted for downwind sailing.



**Steering** The Bongo likes to foot to keep the foils working. If you have a puff and think you should point, DON'T just take clicks on the mainsheet as you would on a displacement boat; sit further out and let the boat accelerate. This is even more important as the breeze increases and the boat is just starting to plane. Putting the bow down allows the speed to build and the foils do their work.

It is hard to trim the spinnaker quickly enough to adjust for the rapid apparent wind changes while planing, so the best way to adjust is by steering. Practice only trimming the spinnaker 1' and steer to make larger changes; you will be much happier and faster.

**Weight placement** In 0-2 kts I sit on the console ahead of the mainsheet to reduce the wetted surface area and keep the boat going. In 3 kts I sit on the floor behind the console, which is very comfortable since I can lean against the windward tank. Once the wind increases I slide up the tank and sit down. This will happen at about 4 kts depending on your weight.

It is important to use the knuckle (where the stem meets the bottom of the boat) as a visual key to the best fore and aft trim. When the wind is under 3 kts you want the knuckle just under water to reduce the wetted surface aft and gain some lift off the hull forward. When you are sitting on the wing and starting to slide out, the knuckle should be just kissing the water. This will give you the longest possible waterline and reduce the drag on the hull.

Once the boat is fully powered up upwind, you will need to move back to keep the knuckle just kissing the water.

Downwind when not planing, the knuckle should also be just kissing, but once you start to plane (especially in waves) you will want to keep the knuckle out of the water. Put your back foot in the foot strap and hook your forward foot in the hiking strap for a nice locked in feeling with the boat, and enjoy the ride!

**Tacking** You can roll tack the Bongo in light wind, but don't overdo it since the hard chine will stall and the wing will drag if you over roll. Turn slowly until head to wind and then turn quickly until you are on the new tack.

When the breeze gets up the key is to not stall in the tack. I ease the main coming out on the new tack to get the boat right back up to speed.

**Jibing** In light winds it is important to roll the boat enough to help the turn. Ease the old sheet until the clew is even with the head stay as you begin your turn. This will allow the spinnaker to pass the headstay and make trimming the new sheet easy.

Grab the new sheet at the block before you cross the boat. This way as you cross the boat you will trim the sheet about halfway.

If you wipe out (and everyone will wipe out) DON'T WORRY. Ease the mainsheet and the boat will unload and bear off again; then you can trim the spinnaker and get going again.

If easing the mainsheet does not bring the boat back to normal, douse the spinnaker and keep the mainsheet eased. The boat should quickly regain control.

*Tip: In any breeze above 5 knots, jibe the spinnaker ahead of the main. This will help maintain speed and control through the jibe.*

**Go sailing** I hope this tuning manual helps you enjoy your Bongo. I can be reached by e-mail and I am always willing to answer your questions.

**BONGO SAILORS HAVE FUN EVERY DAY.**

for more information, email us at [info@sailabongo.com](mailto:info@sailabongo.com)

