

# 29er Owner's Rigging Manual

by Chad Turner

**Rigging the 29er is quite simple and can be completed in minutes.**

Beginning with the mast, you should carefully make sure that all halyards are untangled and ready to use. Inspect the mast for any fittings that may have loosened during delivery. These fittings include the spreader's tips and base, trapeze mountings and mainsail track. If you do not trust the quick pins supplied with the boat replace them with proportionally sized cotter pins and ring dings. Quick pins are great for the jib track stops, but bad for keeping the mast up if you do not make sure that they are fully inserted into the chainplates. Remember to

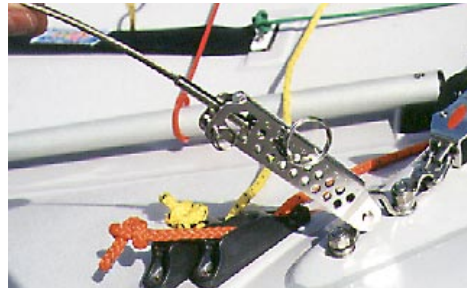


connect the forestay to the mast by first passing it underneath the small shock cord attached to the shrouds near the jib halyard sheave. The shock cord prevents the spinnaker halyard from getting caught in this area. The forestay should be taken off the mast while travelling as it sticks out beyond the mast step and has been known to fall out of the key slot. Undo the spinnaker halyard and **make sure there are stopper knots in both ends! Now!**

To step, place the mast horizontally on the boat with the bottom end near the step and the top towards the



stern. With one person holding the tip of the mast so that it is about a foot off the transom, (or resting it on a horse), attach the butt to the hole in the step. The mast step is reversible, so

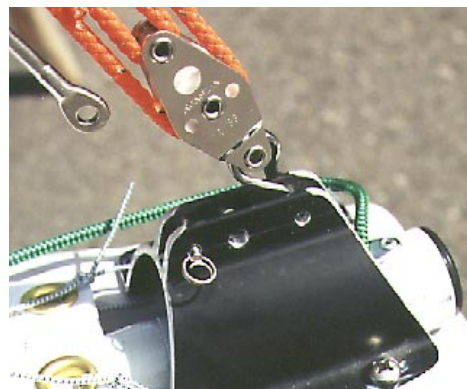


that if one end gets worn from use, it can be rotated instead of replaced. Remove the bottom pin from each chain plate, leaving the shrouds in place, and attach the end of the chain plate to the saddles mounted on the boat. The spinnaker sheet ratchet blocks are attached to the same saddles. With the mast butt and



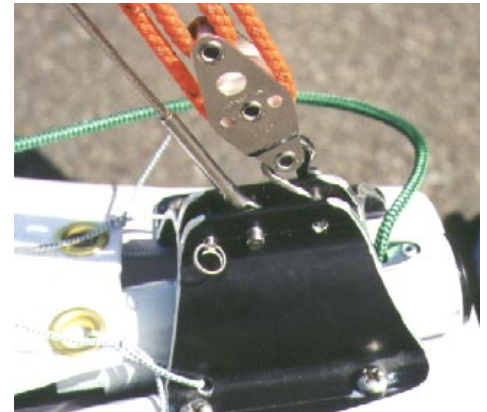
shrouds connected, make sure the trapeze wires are in an unobstructed position where they can help pull the mast upright as the person holding the tip walks it up beside the boat until out of reach.

With mast upright, attach the becket block of the boom vang partially



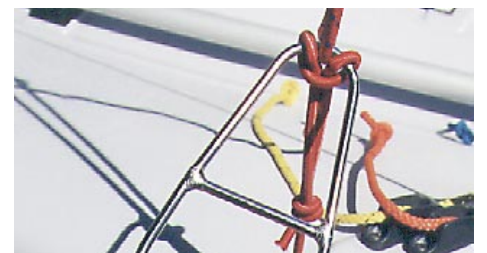
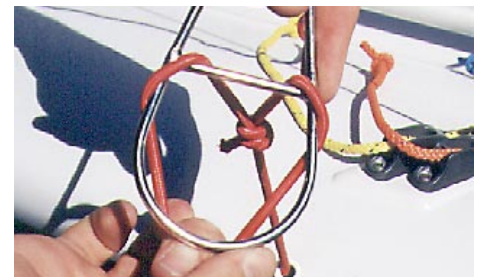
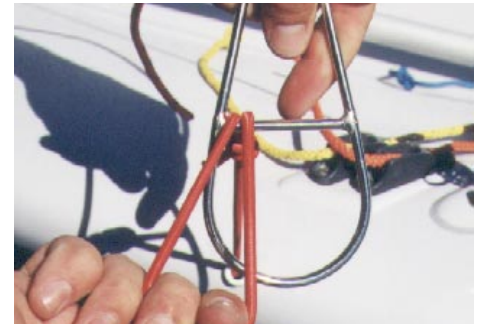
chase system supplied with the boat to the front hole of the bow plate.

Even up the trapeze rings and attach the other end with the jamming block to the rings. Without starting to tension, the forestay will be about 2-3" away from the bowplate. See previous photo. Tension the rig and attach the



forestay to the CENTRE hole in the bowplate. Remove boom vang. If set correctly, the rig tension should measure around 28 on a Loos gauge.

Attach the trapeze rings to the shockcord loops on the gunwale just behind the chainplates. Pass the loop through the ring above the bar then pull it down over the bottom of the ring. Slide up to the top of the ring.

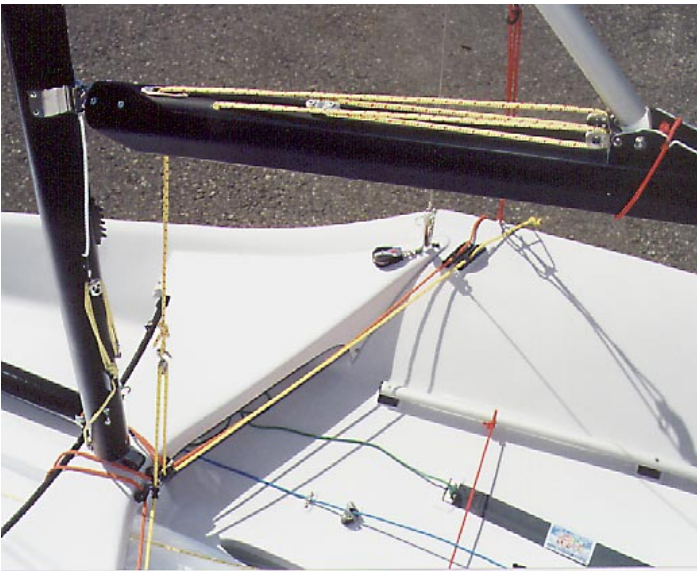




The boom attaches at the gooseneck with a quick pin. The boom vang attaches similarly to a second goose-

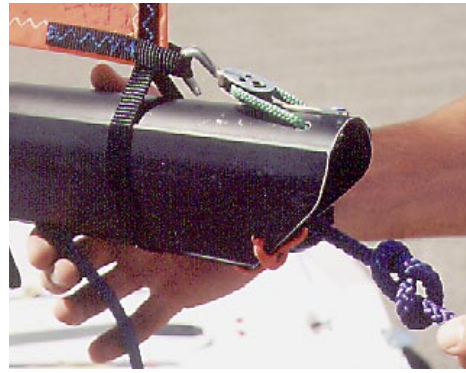


neck slightly below the beginning of the mainsail track, The lower end of the strut is attached to a "shoe" which should rest on the top of the boom and



be free to slide. (Spray a little McLube on the felt under the shoe). The picture above shows the complete setup of the vang without the mainsail hoisted. The purchases on the boom are already rigged when shipped. Tie a loop in the end of line. The deck led part of the vang control attaches to this loop with the hook block.

The mainsheet and jib sheet can be rigged as separate lines or tied together. If separate, the mainsheet would begin internally in the hole at



the end of the boom, just behind the hanging block. Pass the line up through the hole, out the back and put a figure eight in the end. (Note in the picture the arrangement of the clew loop and the outhaul hook block). The sheet then goes (photo above right) through the bridle traveler block, back up to the rear mainsheet hangar block on the boom, forward THROUGH THE RED VECTRA LINE LOOP and then down through the mainsheet ratchet block. Make sure



knot tied to the small saddle (deck strap). The final part passes through the block on the traveler and is tied off on the clew board (shown here being held by hand in the photo). The rules allow a shackle or quick release device for attachment to the clew.

Continuous sheets are nice because they enable you to always have a grasp of both sheets. If the



the ratchet block clicks when you sheet in. Ronstan ratchet blocks are pressure sensitive, so you might have to put a little back pressure on the block, to activate it.

crew does not have the sheet in hand, it is easily found by picking it up as it falls from the skipper's hand.

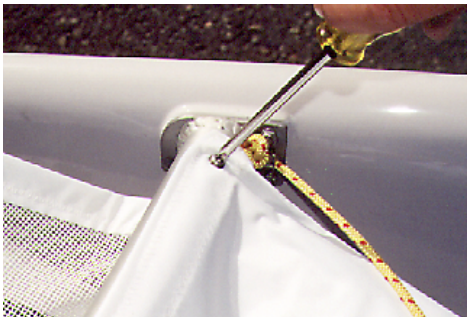
### Spinnaker setup

The spinnaker setup is a little more involved, but hopefully this will give you some tricks to make it easier.

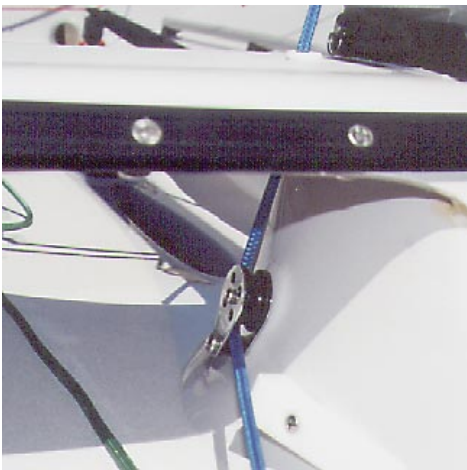
**Note:** Some boats may be shipped without the spinnaker sock installed to avoid mildew - particularly in winter. If your sock is not installed, lay it out in the cockpit under the port side of the thwart. Remove the small screws and washers in the aluminum throat and attach the sock to the Velcro tape on the throat. Line up the pre-drilled holes in the sock and reinstall the screws. Tie the back end of the sock to the deck strap holding the stand-up block immediately behind it using the supplied Vectran line.

If the main and jib sheet are continuous, the jib sheet will be either spliced into the end of the main or tied to it. The jib sheet would then continue through the jib sheet swivel cleat, forward under the partner to a bullet block mounted on the throat to which the spinnaker sock is attached. From there it comes back to a block on the end of the line which actually attaches to the jib clew, the "final part", then forward to the opposite side of the throat where it ends with a figure eight

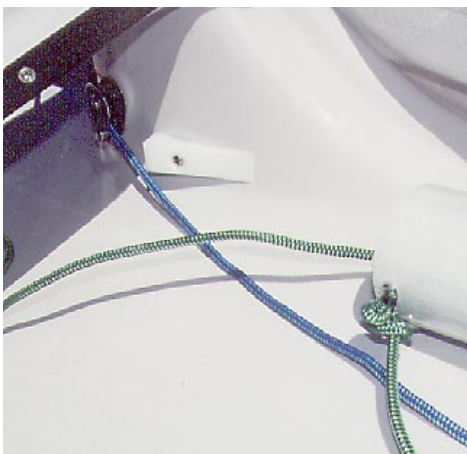




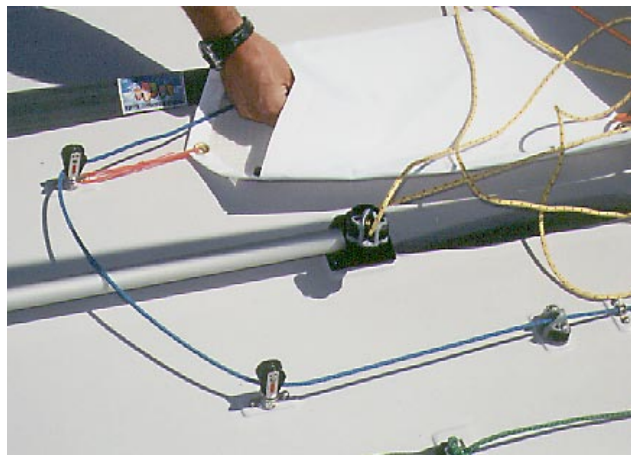
The first step is to lead the spinnaker halyard from where it exits the bottom of the mast straight down through an eye in the partner where it then passes forward through the cheek block mounted directly below on the side of the mast support. See below. It then goes towards the bow, **UNDER** both



the line inside the spin pole and the pole extension line. See photo below. From there, it continues forward and passes through the larger of the two



in-line blocks that are fixed together. (The line passing through the smaller block is attached to the pole and actually launches it during hoisting). See photo at top of next column. After that, it comes back towards to



cockpit, passing under everything including the partner, through a small eye leading to the spinnaker halyard cleat and through the cleat. It goes straight back through a stand-up block and then over to the port side of the boat where it passes forward through another stand-up block. After passing through this block, this same halyard turns into the retrieval line for the spinnaker! Feed the retrieval line



through the aft end on the spinnaker sock and out under the throat.

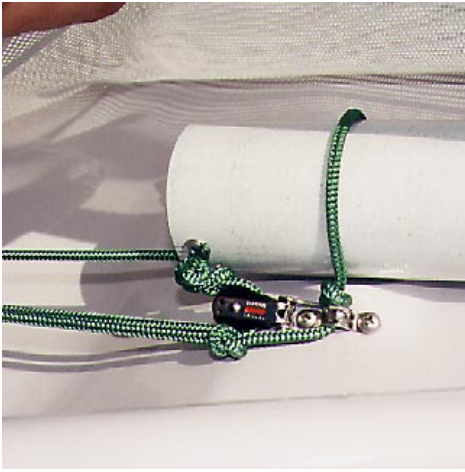
At this point, it's a good idea to tie the halyard onto the head of the spinnaker where the **green and red** tapes intersect. Attach the tack line, coming out of the end of the pole, to the end of the spinnaker where the **green and white** tapes meet. Check to make sure the halyard, tack line,

and retrieval line are all led to one side of the forestay and that the halyard does not do a wrap around the forestay. Port side (for a starboard tack set) would be the preferred side for racing. Pull the spinnaker halyard, now retrieval line, out of the throat and pass it **UNDER** and up the **OUTSIDE** of the spinnaker then through the lower grommet. Now lead the retrieval line up the **INSIDE** of the spinnaker through the upper grommet, and tie a figure eight knot. You don't want this knot to pull through the grommet, so make sure your knot is big or use a light stopper ball.

The spinnaker sheet is continuous, with both ends attached to the clew of the spinnaker. Lead one end through the port ratchet block, then through the grommet in the clew of the spinnaker where the **red and white** tapes meet. The other end goes behind the mast, through the starboard ratchet block, around the forestay, **above and inside the retrieval line**, and also through the clew grommet. **TIP:** Pass the port sheet through the clew grommet from starboard to port, (which is the opposite of what you would normally do!) and do the starboard sheet from port to starboard before tying figure eight knots. It doesn't look right but it will stop the clew hanging up on the forestay during a gybe! In the end, the sheets should be above everything in the cockpit so that you have full use of them downwind from the trapeze.

Take the time to examine the system used to extend and retract the pole. The act of extending the pole is brought about by the spinnaker halyard pulling the two-in-line block aft which then pulls the large end of the pole forward until the knot attaching the extender line to the deck strap on the pole hits the block as shown in the photo above. Notice that, at the other





end of the extension line, there is a knot on either side of the deck strap. When the pole is fully extended, photo above, the extension line is fully tensioned and the position of the knot on the line may need to be adjusted so that the rope over the pole is slightly slack and can not jam the pole end tight. If this happens, it may stop the pole from going out all the way. Once retraction starts there is no pressure on the extension line and the second knot moves up against the deck strap providing enough slack so that the pole can swing off centre as it goes down the starboard side of the cockpit.

You will also find that the line coming out the end of the pole and attached to the spinnaker tack has a knot in the line inside the pole. It is positioned so that, as the tack is withdrawn into the sock, the knot will pull the pole back to the bow fitting.

### Rigging the sails



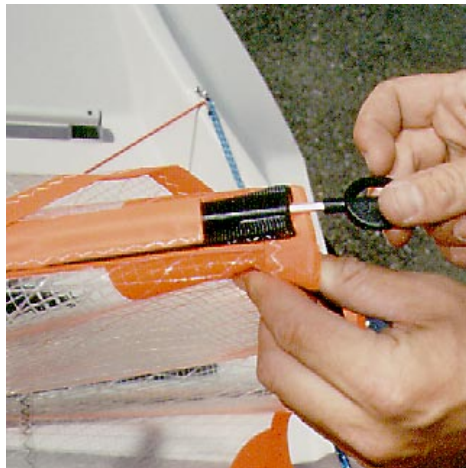
The jib clips directly onto the forestay, and the D ring in the tack is secured by a clevis pin and ring in the

aft hole, behind the forestay pin. Attach the halyard to the head of the jib being sure to screw down the fastener all the way. This is used instead of a shackle as it is less likely to snag the spinnaker. Raise, and hook



the wire loop to the adjustable rope purchase system. Don't over tension the jib halyard in light wind. If the leading edge of the jib looks stretched in light wind, it's too tight. Increase tension as the wind builds.

**Before raising the mainsail it is imperative that you check the tension on the battens. They are shipped un-tensioned and, if the sail is used this way, the battens are guaranteed to come out the front end of the batten pocket and you will have a repair on your hands that is not covered by warranty.**



There is a key in a small pocket at the tack of the mainsail. Tension the battens with this key (counter clockwise) until they are just starting to stretch the pocket but not so much so that the sail is being heavily curved.

To raise the mainsail, attach the main halyard to the top of the mainsail, make sure that the halyard is in line with the track, clear of any tangles, and hoist. When the sail reaches the top of the mast, hook the halyard's



wire loop on to the teeth on the rack mounted on the side of the mast. Typically you will be on the first or second hook. Loop the clew tie-down over the end of the boom and attach the outhaul hook. (See earlier picture on p.2) Set the vang ram on the boom, and tuck all the halyard ends neatly inside the mainsail pocket.



At this point you can attach the downhaul (Cunningham) hooks to the bottom of each side of the mainsail making sure that there are no twists in the purchase to allow for unencumbered adjustment. Also attach the vang adjustment hook to a bowline tied in the end of the vang shoe control line

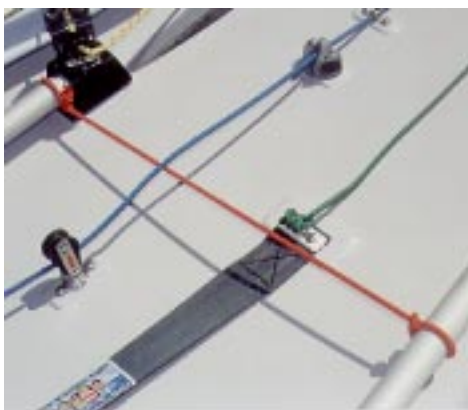


exiting from the bottom of the boom near the gooseneck. Zip up the main-sail sleeve.

**Screw in the bow and stern drain plugs! Now!** Note that the bow plug is provided solely to allow air to pass through the boat when stored to avoid collecting condensation in the hull.

## Rigging Tips

To restrict the spinnaker halyard from re-cleating during a spinnaker take down, tie a short piece of shock cord from the jib sheet cleat mount, under



the spinnaker halyard and onto the starboard foot-bar.

The following system can help manage excess spinnaker halyard in the sets and takedowns. First, attach a small bullet block to the end of a four-foot piece of shock cord. Attach a second small bullet block to the port, rear, hiking strap mount. Pass the shock cord through this bullet block and tie the end to the forward, port, hiking strap mount. Lastly, run the spinnaker halyard from the starboard stand-up block, through the block on the shock cord, and then to the port

stand-up block. If rigged correctly, the shock cord should tug any excess halyard back toward the transom instead of allowing it to bunch up by your feet. Downwind, the long shock cord will stretch enough to allow the retrieval line to go out, but also tug on the excess halyard enough to keep it organized during manoeuvres.

Friction is a killer! McLube, is a great idea for most friction-prone areas and a can is supplied with the boat as a courtesy from McLube. It's not a lubricant for bearings, it just makes things slippery with out attracting much dirt. Use plenty of it on your spinnaker pole, jib track and, particularly, the entrance to the spinnaker sock. Spray down into the sock while you're at it. It will even prevent your wet tell-tales from sticking to the sails.

**Tape anything and everything that looks like it could damage your spinnaker** or potentially come undone. This includes fittings or fastenings at deck level that could snag the spinnaker if you were retrieving it during a capsize (most likely time to damage the spinnaker). The forestay and jib tack rings should be taped, along with the fasteners of the aluminum throat. Tape all rings, including the ones holding the mast up. Heat shrink tubing has been placed over the Nicopresses on the trap wires. Check this area as well.

## Boat Care

It is best to store the *29er* on a form fitted trailer or yard dolly. Form fitted storage devices allow for the weight of the hull to be spread out over a greater area, decreasing hull stress from concentrated loads. Do not leave your boat on grass for extended periods or osmosis in the gelcoat could result.

It's beneficial to detach the forestay prior to storage, decreasing load on the mast and the hull. This can be achieved by substituting the vang-like purchase system attached to the trapeze rings and bow, for the forestay. In preparation for going on the road, check to make sure the boat is resting evenly on the trailer before tying down. Try to avoid leaving loose metallic objects such as pieces of the launching dolly, blades, or boom in the boat while

trailing. The constant vibration of objects placed in the cockpit can easily damage your hull. You may remove the spinnaker pole for trailering, although it's not necessary. Wrap a piece of padding around it and tie it up to the partner. When the trailer bounces, so does the spinnaker pole. Over time, constant bouncing could seriously damage the rear portion of the pole if its not sufficiently secured.

## Sail Care

The sails are very durable if treated correctly. Don't luff any sail more than needed. Over time, luffing will create small creases in the material that can lead to rips. This mostly applies to pre-start manoeuvres when luffing into the wind for extended lengths of time is common. Roll the sails for storage and try to minimize creasing and folds.

*49er* world champion Chris Nicholson explains *49er* sail care this way and it applies equally to the *29er* "The design and construction of the sails give excellent performance through a wide wind range. The *49er* offers thrills and, when not handled correctly, spills. It is important for all crews to respect that lightweight equipment is the key to performance and sails are no exception".

**Avoid landing on the mainsail or jib in a capsize.** In a capsize the sails can not be expected to withstand the load of crews free falling from the gunwale height and using the sails to break their fall. If unavoidable, spread the load on impact by landing on the whole length of your body, either face down or on your back, by somersaulting. Feet, head or arms first is most likely to cause damage to the sail. The best escape is aft diving beyond the mainsail leech and in this case if you do land towards the back of the sail there will be more give to absorb the shock load than landing around the luff area which is supported by the mast.

## Main and Jib care tips

- Spray the main luff tape and track regularly with McLube to reduce wear on the bolt rope, particularly around the batten ends.
- Minor repairs can be carried out with adhesive Dacron or ideally Mylar stickyback. Ensure the damaged area is dry and salt free,



by wiping it down with Methyl Hydrate (Rubbing Alcohol).

- Avoid handling the sails on hard surfaces such as concrete.
- Wash the mainsail zipper with fresh water regularly. Do not spray with any lubricants, other than McLube, as they attract grit.
- Tie a stopper knot in the jib sheet with the clew 900mm away from the traveler block. This helps to restrict the jib from wrapping around the forestay when capsized, reducing the principal cause of broken battens.

### Spinnaker care tips

Your spinnaker cloth has a silicone finish which reduces friction in the launching chute and when gybing and with care you can prolong the life of your sail.

- Avoid drying in direct sunlight or flapping in the wind.
- Check the mouth of your spinnaker chute for any sharp edges by running your fingers firmly over all surfaces. Sharp surfaces will not only cut the cloth, they will also “pull” seam threads.
- Spray your launching chute regularly with McLube to reduce friction.
- “Pulled” threads can often be addressed by laying the gathered area of the seam out on a flat surface and carefully adjusting the tension of the thread back into the form of the original stitch by re-tensioning the thread with a needle, un-picker or similar tool.
- Tears can be easily repaired with the use of silicone sealant / glue and some .75oz spinnaker cloth. Wash the damaged area with fresh water and Methyl Hydrate . Cut a patch that is 25mm larger than the damaged area, smear a thin layer of silicone around the edge of the patch, spread the damaged area out on a flat surface and apply the patch. When dry the damaged cloth may be cut away leaving the patch. Ordinary sticky back rip-stop will not stay adhered to the silicone finish on the spinnaker.

### Launching & Retrieving:

The drawback of having a tall mast and narrow waterline is that the boat has less stability when tied up to a dock. Don't put the boat into the water until you are ready to go sailing.

**Double check the bow and stern plugs!** When you do put the boat in the water, try to pull it up along side the dock to allow one wing to rest on the upper edge of the dock. This greatly stabilizes the boat and allows for the crew to easily slide in the centerboard and rudder. Don't be afraid to use the trapeze wires, shrouds, or spinnaker halyard to keep the boat upright if it tips when initially entering the water.

The crew should enter the boat first and stand just behind the centerboard box with feet well apart so that the boat can be easily balanced when the skipper comes aboard.

To retrieve from the water, have the dolly in a position such that the boat can be pulled directly from the water up onto the dolly. It's generally a good idea to have one person on each side of the boat, picking it up and walking it forward, rather than sliding it onto the dolly.

Hoist launching works well if set up correctly. The sling should be centered over the centerboard trunk. The forward portions of the sling can be attached to the hull shroud eyes on each side. The rear portion can go from the cockpit out through the rear foot strap, under the hull, back up through the opposite foot strap into the cockpit and back to the lifting loop over the centerboard trunk. **The foot straps should not take any load!** They are just to keep the sling under the hull from sliding forward. The rear portion of the sling should be made from rope to prevent damage to the hull.

### Problems?

*If you encounter problems rigging your boat you can do three things:*

1. Put up a message on the website at [www.29er.com](http://www.29er.com)
2. e-mail the factory at: [PS2000@qc.aira.com](mailto:PS2000@qc.aira.com)
3. Phone the factory at 514 363 5050

## Section 2 Sailing Tips

### Upwind Sailing:

There are few adjustments to be made on the *29er* while sailing that will greatly affect your boat speed. The most successful sailors will be the ones who sail the boat most often in a variety of conditions.

### Light Wind, Pre-trapeze

Light wind sailing can be frustrating in any boat. The *29er* is no exception. The boat is very sensitive to crew weight placement. The hull has a fine entry and a very flat run aft. In flat water, the goal is to reduce wetted surface in the stern by sitting forward. In light air the boat will sail fastest when it is heeled slightly (to lift the windward aft bottom out of the water and so reduce wetted area), and trimmed bow-down so that the leeward chine aft just skims the surface (to reduce drag). For this trim, both skipper and crew will need to be close together near the mast partner – in some cases both will be on the partner!. The coordination used by the fastest crews is for the helmsman to remain as steady as possible and concentrate on performance, and for the crew to move, smoothly, as necessary to maintain balance.

The decision on whether to sit on the windward or leeward side of the mast may depend on total crew weight and wind velocity. Weight distribution works well with the crew on, or in front of the partner and the skipper sitting inside the boat directly on top of the centerboard or closer to the windward rail. Keep weight close together. If there is chop, sitting too far forward may hurt boat speed. Occasional waves over the bow are OK, but constant waves over the bow require some weight movement aft.

Start with the jib sheet attached to the upper hole of the clew board and the track pins on the second hole in from the rail. Don't over sheet the jib. A good reference for sheeting the jib is the distance from the jib car to the clew. Four inches is a good starting point.

You can also trim the jib to the point where the bottom of the sail is just touching the rail of the boat. The jib sheet should be adjusted quite regularly depending on what you want the boat to do. If pointing is preferred, sheet the jib in half an inch and give the boat a **slight** leeward heel to help pointing. If you want speed for oncoming chop, ease the jib sheet an inch and keep the boat flat. Pull the mainsheet taut. Downhaul and boom vang should be snug. Slacken the outhaul to where the clew is about 3 inches from the end of the boom.

### Trapeze Conditions

This is where the *29er* will start to take off upwind. The crew should be on the trapeze, either all the way out or standing on the outside foot rails just aft of the shrouds. In big chop, moving a foot aft from the shrouds will help to keep the bow out of the waves. Don't move too far aft too early. The skipper will be progressing from the inboard position onto the rail, ending up next to the crew's feet.

Pointing shouldn't be a priority and speed should be your number one concern. Keep the jib trimmed in no less than 4 inches, with the track pins on the second hole in from the rail. Tighten the jib halyard as needed to remove any scallops between the hanks attaching it to the forestay. The outhaul should be all the way on. Tighten the vang and downhaul as the wind progresses. Be generous with your control lines and don't over do it.

When going for speed, keep both jib tell-tales flowing back and keep the boat as flat as possible. The mainsheet should be tight except when you need to de-power. It can be difficult, but easing the jib and the main together as a puff hits can really help your boat speed. Some people like to have the crew trim the mainsheet from the trapeze while the skipper trims the jib. It takes some communication and practice, but it can be done very effectively.

**TIP:** In really heavy air, it is more important that the jib be cracked even before the main. This is the principal reason that a skipper and crew reverse the sheets as the skipper is the first to

feel the boat "loading up" and will react faster with the jib than the crew. Nothing, repeat nothing, slows down a *29er* faster than an over trimmed jib!

**If in doubt - let it out!**

### Tacking

In light wind, make your turn into the wind slowly in an attempt to maintain momentum. When headed straight into the wind, increase the speed of the turn to minimize time headed directly into the wind. When your tack is nearly complete, allow a slight bit of leeward heel and flatten the boat smoothly with sails sheeted in.

In trapeze conditions, start your turn slowly but as soon as the jib luffs, turn the boat onto the new tack. Try to minimize the time making the manoeuvre and maximize the time at which you are traveling full speed.

### Downwind Sailing

Sailing a *29er* off the wind is one of the most exhilarating feelings in our sport. It is extremely fast and will always get your heart pumping when the breeze is on. It is important for the crew to concentrate 100% on the spinnaker, the major driving force of the boat.

### Spinnaker sets and takedowns

Before setting or taking down the spinnaker, head the boat onto a broad reach, nearly downwind.

To set, pull upward on the spinnaker halyard from behind the starboard side stand-up block. The crew should pull the halyard while skipper looks up occasionally to tell the crew how much further they need to pull. When all the way up, the crew should immediately reach for the leeward spinnaker sheet to begin trimming.

To take down, uncleat the spinnaker halyard, pull the tail of the halyard, now the retrieval line, from behind the port side stand-up block until the spinnaker is sufficiently in the sock.

### Light Wind, Pre-trapeze

The same upwind concepts work going downwind too. Sit forward, keep weight together and move gently in the boat.

There is a small range of headings and trim appropriate for flying the

spinnaker in lighter wind. When headed too close to the wind, the spinnaker will have to be sheeted hard to remain full, slowing boat speed. If sailing too far off the wind, the boat will stall and the mainsail will block the wind from the spinnaker. To sail fast, the boat must be sailed between these two extremes.

When the spinnaker luffs, pull in the spinnaker sheet. If the spinnaker needs constant sheeting to remain full, steer the boat slightly away from the wind. If the spinnaker looks like it's just hanging in front of the boat and not staying full, try heading towards the wind. If the spinnaker is full but you are going really slow, try easing the spinnaker sheet or head towards the wind a little. Always try to ease the spinnaker sheet, inches at a time, until the luff begins to curl.

### Trapeze Conditions

The same concepts for light wind spinnaker trim apply to all wind conditions. If the wind is barely strong enough for the crew to flat out trapeze, use the metal foot-bars inside the cockpit to trapeze from. Don't feel like you have to sail really high angles to keep your crew all the way out on the trapeze. If the wind doesn't allow flat out planing, try to sail lower angles in an attempt to surf existing wind chop or swell. Head towards the wind to gain speed and then carry your newly acquired speed down to surf the waves.

As the wind increases, the crew can get out on the trapeze generally in the same place they were standing upwind, moving further back as the wind increases, to allow the boat to plane on the aft portion of the hull. It's important to not over sheet the spinnaker if you are trying to go fast. For speed, ease the spinnaker to where it is just on the verge of luffing. When there is enough breeze to trapeze upwind, there is plenty of wind to trapeze and plane downwind. If you're not planing, head up a bit or ease the spinnaker sheet, or both. If you become overpowered sailing with the spinnaker and the mainsheet is already eased, head the boat away from the wind.

When the wind gets up above 18 knots, wind chop becomes larger. Big waves get a little scary downwind when the *29er* has the potential to travel at

greater than wind speed. These conditions require special attention:

- The crew can use the foot strap at the transom of the boat to stabilize themselves when there are significant changes in boat speed.
- The crew should lower the trapeze so that they are in a more reclined position and not “standing up” on the rail. This greatly improves stability when standing further from the mast.
- The skipper can smoothly steer the boat and talk to the crew about upcoming waves or puffs of wind.
- When you are going fast and encounter a large motor boat wake or wave, try sheeting in the spinnaker before crossing the waves to slow the boat down gradually, rather than suffering an abrupt decrease in speed as you fall off the back side of the wave. This helps to keep your crew from flying around the forestay.

## Gybing Techniques

Gybing techniques can vary depending on wind strength and skipper/crew boat handling skills.

In moderate conditions, trimming the spinnaker to the new side as the skipper slowly turns through the wind onto the new gybe, nearly or completely filling the spinnaker before actually gybing the boom seems to be very fast. In most cases, if the turn is smooth and gradual, the 29er will only drop off a plane for a second or two, if at all. It can also be done on a wave where speed losses are very small. This method also avoids the common twisting (hourglass) that can occur when the spinnaker is blanketed against the windward side of the jib.

STEPS:

- 1) Slow turn away from wind.
- 2) Crew in from trapeze at same time releasing spinnaker sheet and grabbing new sheet - Boat is dead down wind at this point.
- 3) Pull in new sheet.
- 4) At the same time, continue turning the boat and gybe the boom, gradually heading up as the crew jumps out onto the trapeze.

The greater your boat speed, the easier it is. Don't try to force the boat around. Make a nice smooth turn. This gybe allows for minimal lag time, enabling the boat to begin accelerating as soon as the boom is across, using the

wind to help the spinnaker around the forestay rather than ripping it around with the sheet after the gybe.

In heavy wind (20+ knots), it is advantageous to be planing when going into a gybe. To keep the boat under control, sustain your speed by gybing the boom first. After this is achieved, then gybe the spinnaker. It is important for the skipper to decisively turn the boat slightly toward the wind soon after the gybe to gain stability. Keep in mind, these are very challenging conditions and time in the boat will pay off.

## Capsize Recovery

Capsizing is inevitable and happens to the best sailors. Try not to panic and instead think about how to solve your particular situation. There will be some races where the team who rights their boat the fastest might actually do the best. It's a good idea to discuss this subject with your crew and work out the steps you are going to take to solve it.

The fail-safe method requires both sailors to fall in the water and swim around to the centerboard. Make sure that the jib sheet is uncleated and get to the centerboard as fast as possible to avoid turtling. If the boat does turtle, use the weight of both skipper and crew to bring the boat onto its side with the mast parallel to the water. Do this by holding the tip of the centerboard while standing on the rail and leaning out.

To prevent another capsize immediately after righting the boat, have one person swim the bow of the boat toward the wind, with the hull bottom facing the wind direction. When in position, attempt to right the boat with both the skipper and crew on the centerboard. Don't try to jump into the boat too soon. First, stabilize the boat while you are still in the water on the windward side and keep the bow from crossing the wind. Righting the boat in a position such that the sails will fill slightly upon recovery will help to counterbalance the boat as you climb back in on the windward side. Climb in one at a time with the first person in getting hold of the mainsheet **AND THE TILLER** and sheeting in enough to put some force in the main. The principal reason for turning over again, after a capsize, is the fact that the **main is loose no one is on the tiller** and the boat does a

windward roll, scooting out from under the crew and turning back over.

If the boat turtles in shallow water and the mast gets stuck, go to the bow and swim the boat so that the cockpit is facing the wind. In this case, the wind will be pushing the mast out of the mud rather than into it. Then, have both skipper and crew get onto the centerboard. Be patient, it may take awhile to get the mast unstuck. Once unstuck, have one person stay on the centerboard while the other swims the boat into the capsize recovery position described above.

If the capsize occurred while traveling downwind with the spinnaker hoisted, douse the spinnaker by uncleating the halyard and pulling on the retrieval line while capsized. Don't fret about getting the spinnaker pulled completely into the sock. Pull enough in so that the spinnaker is not going to flap around in the wind or get dragged in the water when you right the boat. Finish dousing the spinnaker when you get settled.

## Acknowledgement

*I should very much like to thank Chad Turner for all his hard work in getting this rigging manual together. Chad understands the importance of doing things the correct way and it shows in the narrative. It was undertaken entirely of his own volition and it was his own motivation made this manual happen. He says he did it because he hated to see sailors not enjoying their sailing experience in the 29er to the fullest. Our sincere thanks. Ian Bruce, Ed.*

## Note from the Author

*The 29er is an exceptional boat. Its simplicity still amazes me and its speed makes everything else seem slow. I truly believe that this modern design will contribute greatly to the sport of sailing, allowing sailors of all ages to keep learning at a fast pace while remaining captivated by its performance. This manual was written with the intent to help new owners gain a basic understanding of the boat's rigging and to introduce basic skiff sailing concepts. I would like to officially welcome you to one of the newest and most exciting dingy classes in the world. I hope you enjoy the 29er as much as I have. See you on the water.*

*Chad Turner*