The following is an edited collection of tips tricks and pointers on setting up your A-Class.

Credits for sources is given where known

Have fun - go there fast

Tips on Sailing the A Class Cat

Basic set up

Mast rake

Take trapeze wire and take to forestay, Set so that you can just touch top of deck at the forestay. Take to rear beam. It should touch about 100mm behind rear beam.

Rudders

There should be no slop in the system. The rudders when locked down should not be able to drag aft under pressure. Ensure they are parallel fore and aft and across the boat. Slight toe in is acceptable, how much depends on the boat. Initially set up parallel and then watch your windward rudder tip when going to windward. With slight weather helm you will see more wake coming off the leeward side of the windward rudder. This has the rudder contributing little to steering but mostly to drag. Slight toe in will balance the wake and minimise drag to windward.

Fore and aft rake of the rudders. I set the rudders so that when a line is sighted down the rudder pintles the tip of the rudder blade is about 20mm forward of that line.

Hulls

Set to be parallel when under rig tension.

The front beam dolphin striker should be set with about 10mm upward bend before any rig tension is applied. When sailing upwind the beam should be straight.

Bedding in the beams

Ensure that the front and rear beams are properly bogged to the hulls so that the beam to hull mating surface is maximised. This ensures that when the beams are bolted in place they have the minimum opportunity to twist. As a bog I use vinelester resin and micro balloons as a dry mix. (between 3:1 to 5:1 by volume micro balloons to resin). Ensure you thoroughly coat beam surface with mould release before you do this if you want to be able to dismantle in the future!

Trampoline

Tight trampolines make stiff boats. Tight as you can. I use a large screw driver between the

tensioning cord and the rear beam . Lever the cord away from the beam to pull on tension. Work from 1 side to the other. Tie off the slack generated and repeat. Use a piece of ply between the screwdriver shaft and the beam to avoid marking the beam.

The wing mast

Article courtesy of Australian High Performance Catamarans.

Welcome to the world of the wingmast rig.

This type of rig offers many performance advantages compared to a 'pear' section mast. Such as: better boat speed, better pointing ability and more sophisticated sail control. The end result is a faster boat which is easier to sail.

WARNING: The mast on a wingmasted boat is active sail area both when the sail is up and when it is lowered. For this reason the mast should never be left standing while the boat is unattended and unsecured. eg. overnight - lest it blow over in a wind squall and injure someone or damage itself or damage other boats.

This information sheet is primarily aimed at windward sailing but these principles can also be applied to reaching and running. I might also add that there are no hard and fast rules in boat tuning but this is the method that has worked well for me.

1. The Basic Concept.

The idea when trimming a wing mast rig is to effectively make the mast part of the sail. To do this the leeward side of the mast is faired into the shape of the sail.

2. Use of telltales.

You will notice that your sail has an extra set of telltales down the luff about a hand span from the mast. These are to indicate if you have the correct amount of mast rotation compared to the sail. A good starting point is with the leeward telltale streaming freely and the windward telltales stalling intermittently. All the other telltales on the sail should still flow freely.

3. Effect of Less Mast Rotation

Reducing the mast rotation has the effect of allowing the top of the mast to fall away, causing the leech of the sail to open up, reducing the power and hence heeling moment.

The reduction of rotation also lessens the effective draft of the sail, reducing both power and drag.

Note: More rotation above the optimum described above increases both heeling moment and drag so you need to be very mindful of increased drag in this situation.

4. Effect of Increased Luff Tension.

This prebends the mast flattening the sail while at the same time the tip of the mast moves back, shortening the distance between the clew and the head, hence loosening the leech and allowing the leech to fall away. The effect is less power and less drag.

5. Effect of Heavier Top Battens .

This flattens the top section of the sail slightly, reducing the heeling moment in the most critical part of the sail.(Many skippers change these 3 battens for very windy conditions.)

6. Effect of Sheet Tension.

The main effect of sheet tension is to control the twist of the sail. As on other boats the mainsheet is used for most of the fine adjustments when sailing.

7. Effect of Diamond Tension

Tight Diamonds = Less Power = Less Drag

This is due to:

1. The extra prebend flattens the sail

2. The middle of the mast stands up straight, which allows the top to fall away, taking the leech with it.

Loose Diamonds = More Power = More Drag

This is due to:

1. The sail becomes fuller because of the luff curve.

2. The middle of the mast bows away causing the top of the mast to stand up straight, bringing with it the leech.

We recommend that you sail for your first half season before attempting to adjust the diamond tension. This is because many apparent diamond tune problems are simply skipper inexperience problems. If you loose your factory settings learning to sail with the wing mast and learning to tune it at the same time is quite difficult. Before attempting any change to diamond tension mark and record your factory settings for future reference.

One way to check your diamond tension is to sail in conditions where you are comfortably on trapeze - if you sheet on harder the leech should stand up. If your diamonds are too tight then the sail will flatten before the leech stands up. A bit of fiddling in these conditions should produce a diamond setting you are happy with. This setting should work in all conditions and no further adjustment should be necessary. If you are still unsure, use the factory settings.

The diamond tension is very high on these rigs and must be released before adjustment can be effected. This is done by pulling the wires out of the cross arms. Note: Care must be

taken not to put a point load on the mast during this process.

8. Troubleshooting

1. Boat is overpowered and flighty in strong winds.

Try: More Luff tension Less Rotation, Point up and Sheet on.

(The sail is too full due to lack of luff tension - you are overpowered so you drop sheet. Because the leech is no longer controlled, and is tight as well it will not open at all in the gusts so you are blown over in the gusts and you fall in the water in the lulls.)

2. Boat heels instead of accelerating in medium conditions.

Try: More Luff tension.

(This will free the leech and reduce drag.)

3. Base diamond wire settings

Aluminium untapered masts and glass spreaders with 2 notches for the diamond wires

The starting settings appeared to be 38 on the LOOSE gauge for diamond wire tension, with the wires set the rear notch.

Carbon masts in Tasmania

These are of a few years vintage the starting settings appear to be

• Loose gauge 34

• Proctor spreaders extended out so that 2 holes appear at the tip extension. Extending the tips is like increasing the tension on the diamond wires without the addition of compression loading.

• Rake set at about 34mm behind the sail track (measuring by placing a straight edge across the diamond wires at the spreader tips, measure from the straight edge to the sail track

Reduce rake if more power required, increase rake if less power required up to 70mm

With our limited fleet size at Lauderdale the ideal way of tuning is boat on boat.

If you want to play around with different settings and can not do boat on boat tuning then find a good day to go sailing with a moderate breeze without too much chop.

Set one diamond wire tighter than the other by say 2 full turns on the diamond wire tension nut. Sail up wind on both tacks. Ensure all settings are otherwise identical for both tacks. If the tighter side feels faster without losing too much height then go back to shore and tighten the other side 2 turns tighter than the previous tight side and repeat the test.

If the looser side appears favourable then progressively loosen.

You can also do this exercise for spreader rake and extension.

Be careful you do not overly sacrifice height for speed. A good rig and sail combination should give you both.

Sailing the A Class – Sail settings

Adapted from an article by Australian High Performance Catamarans

"It doesn't matter where you are going as long as you are going there fast."

Go fast. Look for pressure then angles

(opposite priority compared to dinghies)

<u>Upwind</u> sail and rig settings.

Light Winds: 1 -3 knots

Luff Tension – firm downhaul open the leech.

Mast rotation - 45 deg.

Mainsheet - light, all telltales should be flowing. Twist the sail off

Foot - Tight.

Mainsheet traveller - centred.

Lie close to the mast and over the front beam, keep the transoms out and concentrate on keeping flow on the sail.

Light Winds: 4 -8 knots

Luff Tension – Just take the wrinkles.

Mast rotation - 45 deg.

Mainsheet – Moderate to firm as the wind builds

Foot – Freed about 30mm.

Mainsheet traveller – centred

Tell tales all leeward must flow and all windward (the ones close to the luff) flowing about

60% of the time

You should be hiking hard and be out on trapeze from about 6 knots.

Trapeze forward of the front beam to keep bows down but move back to opposite the side stay in the puffs. Bear off in the puffs and point in the lulls.

Light / Medium Winds : 8 - 12 knots.

Luff Tension - just remove the wrinkles down the luff. Pull on luff tension rather than easing mainsheet if you start to get over powered. At 12 knots you should have luff tension on hard

Mast rotation - 40 to 35 deg. Rotation lever should point to end of rear beam

Mainsheet - firm to hard, to stand up the leech for maximum power. All telltales should be flowing.

Foot - flat.

Mainsheet traveller - centred.

Strong Winds : 12- 20 knots.

Luff Tension - pull down the luff hard to flatten the sail as much as possible and then some.

Mast rotation - 35 deg. Bringing in to about 20degrees in high winds. In this case the mast tip is starting to fall off to leeward

Mainsheet - firm to hard, However ease out about 250mm in the stronger stuff and just go for speed.

Foot - pull foot out flat and tight.

Mainsheet traveller – centred although I drop this down 20 to 50mm in the stronger winds to keep the boat flat.

<u>Downwind</u> sail and rig settings.

Light Winds : 1 -5 knots.

Boat is sailed flat. Keep your weight forward to make sure the transoms are not dragging.

Luff Tension – In the really light stuff pull the luff on hard for shape and flow. As soon as there is some pressure it is eased off to just remove the major wrinkles down the luff.

Mast rotation - 90 to 100 deg. Lock in with over-rotator lock. (Remember to unlock before

jibing)

Mainsheet - light, allow sail to twist keep leeward telltales flowing.

Foot - ease foot to give 150mm camber in foot.

Traveller - out as far as it will go.

Weight as far forward as you can go and to centre.

Light / Medium Winds: 5 - 8 knots A Class. (10 knots Taipan)

Boat is sailed flat. Keep your weight forward to make sure the transom is not dragging.

Luff Tension - just remove the wrinkles down the luff.

Mast rotation - 90 deg.

Mainsheet - light to firm, to control leech twist for maximum power. All telltales should be flowing.

Foot - 150mm camber in foot.

Traveller - out as far as it will go.

When possible change into the "Wild Thing" mode.

Luff Tension - just remove the wrinkles down the luff.

Mast rotation - 80 deg.

Mainsheet - firm, to stand up the leech for maximum power.

Foot - 50mm camber in foot.

Traveller - pull traveller to 300mm. up from inner gunwale.

Move your weight to leeward and forward to help lift the windward hull.

Medium Winds: 8 to 15 knots A class, 10 - 15 knots.

Ideal "Wild Thing" wind range.

Luff Tension - just remove the wrinkles down the luff.

Mast rotation - 80deg.

Mainsheet - firm to hard, ease the mainsheet in the gusts to control the power in the sail.

Foot - 50mm camber in foot

Traveller - set traveller 100mm. up from inner gunwale.

Steer down in the gusts and up in the lulls.

Move your weight middle to back and to leeward to help lift the windward hull.

Strong Winds: 15- 18 knots.

"Wild Thing"

Luff Tension - pull down the luff slightly to induce twist in the top of the sail.

Mast rotation - 80 deg.

Mainsheet - firm to hard, ease the mainsheet in the gusts to control the power in the sail. Play lots of mainsheet. The harder you work the faster you go.

Steer down in the gusts and up in the lulls

Foot – 50mm camber in foot

Traveller - set traveller 100 up from inner gunwale.

Move your weight back .

When doing the Wild Thing - Smooth is Fast.

Strong Winds: 18 knots plus

Sail the boat flat; and deep as pointing higher will not increase your speed, you are already at maximum hull speed.

Luff Tension - pull down the luff firmly to induce twist in the top of the sail.

Mast rotation - 80 deg.

Mainsheet - as much as you are game, ease the mainsheet in the gusts to control the power in the sail. Play lots of mainsheet. The harder you work the faster you go.

Steer down in the gusts and up in the lulls

Foot - leave flat; the same as the upwind setting.

Traveler - out as far as possible.

Move your weight back as far aft as possible on the windward hull.

Sailing the A Class – Getting round the course

Courtesy Glen Ashby

They're fun to sail. I've sailed lots of boats and to jump back on the A Class in 15 knots of wind, you can't beat it. They go high and fast - they're super efficient. Downwind is hard to get used to when you're used to having a jib. I think of the jib on a cat as being like a supercharger in a car. It force feeds air around the engine - the mainsail. With the A-Class, you can't steer off the jib, and it's easy to stall the mainsail. I guess it's like the long, narrow wing of a sail-plane compared with the stubby wing of a hang glider. You go fast but if you stall you drop out of the sky. On the A-Class, if you don't keep the airflow up, the boat just stops.

Because the A-Class is so light, it will tell you straight away, it will stop. But it will also accelerate quickly, and it's easy to know when you're in the groove. Because the chord length of the sail is so short, you can attach flow very quickly, and lose it very quickly. They're very good fun to sail like that. You can snap them around a lot downwind, you can turn and surf waves. You've got a 30ft carbon mast, and the boat only weighs 75kg all up. Being smooth on the cat is the key to being fast while still being aggressive.

Preparation

Firstly, you need good kit to be able to compete at the front of the A-Class fleet. I've just got a new boat, a German Flyer, in preparation for the next Worlds in February. They're taking place at New Plymouth, on the north island of New Zealand. I've also got my two best masts to take, and I'm making my own sails, so my speed should be fine. My biggest issue is getting enough sailing time before then, and making sure I'm fit enough to push the boat hard. Weight is not too much of an issue because you can find a rig to suit your size. The boats can carry a weight range from 65kg to 90kg. I weigh 80kg.

You need to spend some time making sure your boat is not going to break. Boat maintenance is not my forte, but I've been lucky to have a minimum of boat breakage. I got back from one world championships, and the first three times I went sailing when I got back home, things broke, so I was closer to disaster than I realised at the time. Make sure your boat is in perfect racing order. You can't blame anyone else. If you have a big capsize you might break the mast, but all in all the boats are really strong and can take a big pounding.

The A-Class is actually a very simple boat. You've got mainsheet, traveller, cunningham - that's pretty much it - not too different to a Laser really. They're really easy to sail but like many boats, hard to sail fast.

Upwind leg

Sailing upwind

For upwind trim, keep the boat as flat as possible, with the windward hull only just in the air. A lot of people in all forms of catamaran sail with their windward hull too far out of the water. On the A-Class you're on the trapeze in 6 knots of breeze. We're trapezing and pulling on cunningham before the Tornado is even flying a hull. I sail depowered rather than too powered up. I pull a lot of cunningham on quite early. I prefer to go for speed rather than having any chance of staggering. I'll try to sail the boat high in the groove, but still maintaining as much pace as I can.

I trapeze very low compared with most people. In a wavy venue, my body will hit the water occasionally. But by keeping my body really low and hovering just above the water, I'm getting the most advantage out of being on trapeze. Keeping my body just out of the water is a good sign that I'm sailing at the right angle. I might hit the odd wave, but I figure I make up for that for the rest of the time. If you're high on the trapeze you're not having to concentrate as much on good steering.

Tactically, it's worth noting that on the A-Class you can afford to tack quite a lot. It will slow down quickly but accelerate just as quickly too. If you go in fast and get through the tack cleanly you'll be fine. You can sometimes do five or six tacks up the middle and make it pay. So if you practise your tacking it'll give you more options in the racing.

To sail a high line or a fast line that is the question?

Depends on the conditions and those around .The A seems to go a lot faster for only a small loss of height.

Tacking?

Three types of tacks.

The main issue is not to knock the power out of the rig in all three.

Best to start off letting out 700-800mm of sheet and slowly but surely reducing it as you get used to the boat. The windier it is increase the amount you let out and increase the speed with which you pull it back on when on the new tack (saves blowing a tack). I use more like 400-500mm of sheet through the blocks. I use a 7:1, so that's about 70mm of boom height.

Light winds. Turn the rudder slowly, let the main sheet out about 400-500mm as you go through. Don't cross under the boom until the weather hull starts to rise/the sail flicks across to the new tack. Bear away on the new tack and pull your 400-500mm in as you move forward again.

Medium winds. Turn the rudder a little more quickly, come off trapeze as the hull drops and let the main out about 400-500mm again as you come in, concentrate hard on ensuring that you're going to make the other side when the main flicks. Get across the other side and jump out on trap while you're bearing away slightly to regain speed. Pull the 400-500mm back on after you're back out there and come back up to your normal height.

Heavy. Say a prayer and hope you're going to make it! Pick a smooth patch of water, if possible or whilst climbing a wave. Concentrate on smoothly gliding the boat through. Let out 500-600mm a little earlier and cleat the main if you have a cleat. Come in off of trap as the hull lowers to the water. Don't go across until the sail flicks. Be sure to let the main off a bit more if you happen to bear away too quickly. Jump out on trap as soon as you can and pull the main back into position as you come back up to position.

If you happen to blow the tack let your traveller and main out and backwind the main by pushing the boom aggressively and flicking your rudders the other way. Then pull the traveller back in and main on as soon as possible. This will happen when you're sailing cat.

It really pays to train yourself to look at the water behind your boat and see if you are starting to drift back. In heavy air with a sharp chop the boat is easily pushed back in a tack and you need to see this and reverse your rudders ASAP. In all conditions after completing the tack after hiking out get as far forward as possible till your speed is OK - the boat won't accelerate too well with the stern dragging.

Sail on one hull at all times going to weather, just skimming is sweet and fast.

Handling gusts

Steer first, mainsheet second and if it's still there apply more downhaul and then pull the main back on a tad. That's the lazy way.

Handling lulls

Crouch in initially, let the downhaul off, then the rotation if it's a long lull and then let the main out. Depends on the size and length of the lull. From the crouch to the main would have to be 7 knots over approx. 50-60 metres.

Rounding the Windward Mark

when the next leg is a reach

Ease the downhaul prior to the mark, (be careful as the boat will heel over with the extra power) crack the main 100-200mm, ease the rotation to 60-75 deg. Ease the traveller depending on angle. Ensure that the top telltales in the main flow as much as possible and try to dry the underside of the windward hull to the wing mark!!!!

when the next leg is a downwind leg

Same as above except that the rotation goes out to 80-90deg. Come in off trap, ease the traveller, ease outhaul and lift boards.

Ease the traveller before coming off wire and rounding plenty of boats dig in at the mark as easing the main combined with a change of angle can twist the sail and give it MORE power thus digging in the leeward bow, you lose steering and over you go.

Keep looking at the sail and keep your telltales flowing, especially the leeward ones. THERE IS NOTHING you can do with masts, outhauls, centreboards, whatever that increases your speed by 10% BUT if your sail stalls you'll loose 20% speed without even thinking about it.

Approaching the Mark?

Generally overlay the windward mark (refer comments above on A being faster for only a small height loss) by 20metres or so, concentrating on maintaining boatspeed, bearing away and reducing this amount when it's clear you're going to make it.

Come in wide and exit close

Attempt to stay on one hull during the mark rounding

Practice and know your boat. To start off the main and steering are the most effective tools. Concentrate on this and you'll be able to reduce the amount between your boat and the mark over time.

The Reaching Leg.

set up the boat for a reach

Depending on conditions. Raise the weather board if it's a long leg and I'm going to stay out on the wire. Ensure that the twist in the main and the traveller setting are producing a powerful yet low drag rig through concentrating on flowing telltales on both sides of the sail for the whole leg. Play between rotation, downhaul and sheet tension until the combo feels right. Refer to main settings for a rough guide with cracked main. It's largely feel in the end, and you will get the feel if you stick at it.

The reach

Don't worry about keeping the bow down (make sure a part of it's in the water), stand on the rear beam in a blow and sheet out to save your skin. Keep the hull out when it's light where possible. Always try to aim slightly lower at the mark when I have power so I can come up when I don't.

Consider sailing low in clear air or up high to prevent someone sailing over the top of you. If one of these bigger boats takes you to weather (which they may if they have a kite) you get dumped on big time and spat out 100 meters or so.

Gusts?

Always bear away, never bear up, unless you like to swim. Sheet out if bearing away still has you looking down the barrel. If you are in the light stuff you'll have to pull the main on a touch as your leech will be starting to hang.

Lulls?

The opposite to gusts. Sheet out a tad as your sail will start to flatten/leech will tighten up.

Rounding the Reaching mark

Approaching the mark

Fast as you can, usually from a lower point. Try to round as closely as possible be careful not to pick up the marker ropes.

Rounding the mark

Let the main out as you start the turn. If the traveller is not already at the inside of the beam let it off as the sail passes through the centreline. Grab the main rope cluster and help it through to soften the blow. Make sure you pass the tiller from one hand to the other without letting it hit the water and make sure it doesn't hit the mark. Turn up and apply the 300mm or so of main to accelerate and then work on the right point of sail. If it's really windy you may stay low on the new tack and come up at a slower rate to regain speed. Ease main if it's windy, leave the outhaul and lift boards. If it's real windy, lift the weather board and the leeward only when possible. If it's light the priority will be to get to full speed with full power, ensuring your transoms are out of the water.

The downwind leg

Downwind sailing

The transition from two hulls in the water to going wild is around 8 to 9 knots, so it is this mid-range windspeed that is a real grey area of downwind technique in the A-Class. In these marginal conditions, you'll often find you can make it work on one gybe and not the other. If the waves are coming more across the boat, that's when it pays to go wild in lighter conditions, because you can work the waves more effectively. When you're going with the waves, just go two hulls and soak as low as you can, and make use of the waves coming from behind to help you surf as deep as possible.

Going from flat very quickly to going wild is particularly important in gusty conditions, because going wild is so much faster when it's the right time to do it. For this reason, I generally try to go wild earlier than later. You'll come out pretty much the same if it doesn't work, but if it does work you'll make a massive gain. I'll try it even when most people won't. But this is an area you have to practise a lot. Sometimes, you can go straight around someone downwind by flying the hull when he's not. You can get your boat facing almost dead downwind, with the traveller in the middle, by riding the waves and the apparent wind you've created. You can sail from 100m behind to 100m in front of somebody, in the space of just 300m.

Crew weight positioning is vital. A lot of people sit too far back a lot of the time, with the transom dragging. The trouble is, when you move forwards in the middle of the trampoline, it becomes really difficult to steer. I've adopted the Laser sailor's style of steering, with the tiller extension jammed under my armpit between my body and my elbow. It allows me to

sit that bit further forward in flat water, which makes a really big difference to speed.

Gybing without a spinnaker, the boat reacts a lot differently to most cats. Getting through the gybe and getting reattached flow is crucial. Coming out of the gybe some people will have the rig stalled for too long. They try to get back into wild mode too soon without reattaching flow first. On marginal days without too much wave action, I'll uncleat the traveller and allow it to go all the way out to the end of the track after the gybe, and then gradually pull it back again to the centre. Doing a big mainsheet ease as the boat goes through the gybe and not sheeting on too soon can give you a big gain too. Remember than when you're singlehanded you have the whole horsepower of the boat in your hand. There's no spinnaker to haul you along, so think about the effect you're having on the mainsail, and how you can maximise flow across the sail.

Set the boat up for the downwind leg

Daggerboards half up, Downhaul ensure no wrinkles in the sail and then just a tad. Outhaul off about 50mm, rotation about 80 degrees, both rudders down.

Wildthing.

Run the traveller between the inside of the leeward hull in a blow to about 300mm up from that in moderate breezes. If you have to go further to raise the hull you'll be beaten by dudes falling asleep sailing conventionally.

Sit to the middle of the boat. When a gust hits lean out flat, steer smoothly downwind (never up unless you like swimming), ease traveller, finally ease main. Work in that sequence to get a smooth response to the gust without dropping the hull

If you have to sit too far forward to stop the stern dragging, forget it. Similarily if you have to sit way back on the back beam to keep the bows out, forget it.

In a blow, Consider rotating the mast to 45 degrees. This flattens the top and stops the boat driving the bows in. Seems to work OK. Only do it when its honking.

Get the wildthing happening.

Get the hull up by bearing up a little aggressively to raise it.

The angle of the apparent wind while doing the wildthing is about 75o it's a matter of feel

Jibing

See above on mark rounding, except when in a big sea, and you have a choice, pick a smooth patch. Generally go for speed by bearing up slightly, ease the main as you turn, help the main cluster across, bear up on the new tack, pulling the main back in and then finding the groove by sailing back down until you notice a small loss of speed. Constantly utilise main and sail just above this point. Look back to see the foam trail(sea water) occasionally

to monitor which angles your taking.

Jibe wildthing to wildthing

Try to fly a hull from tack to tack, staying on whichever is the leeward side for as long as possible. Always make sure the main is ready to be uncleated, you're in a position to jump to weather and you're able to bear up. Make sure that you analyse where the other boats are before you gybe 'cause your head spins while you're attempting this impressive manoeuvre that will see you go from hero to sharkbait in a flash.

Rounding the Leeward Mark

Pull the outhaul back and lower the boards, pull rotation in slightly and downhaul on reasonably. Ensure a fast line, if not then go lower when/where possible. Look past the mark to where you'll be upwind in a few seconds (funny that, visualising it assists the process). If your gibing and then rounding always leave 6 or so boatlengths to ensure a smooth rounding. enter wide and exit close. hook up, pull main in a tad more, traveller in as you turn and jump out with traveller in one hand and tiller in the other. Cleat traveller, pull main on. Apply more downhaul and rotation if necessary, adjust main and traveller again if required. Find the fast line and stick to it, adjusting traveller and main to ensure a fast, low drag rig.

Righting after a capsize

Should be easy particularly with the Carbon masts

A's are easy to right provided you keep the bow head to wind, or get it back to that spot by standing up the bows. If it is not bow to wind it can be worthwhile spending a couple of minutes in the water swimming the bow into the wind. If you get it into the wind you can sometimes pull the boat up without the righting rope.

If you are having trouble getting the sail to free from the drink there are 2 schools of thought.

1 release downhaul – stops boat trying to sail itself away from the bows pointing into the wind. When the boat comes up it will not try to sail away.

2 Crank on the downhaul, flick the rotation lever up and lean back. Its like water starting a sailboard. But when righted the boat will want to sail away so be quick.

Tips for Light Air Speed Downwind (The "Mild Thing")

Courtesy A Class USA Bob Hodges USA 230

Perhaps one of the toughest points of sail to master for sailors new to the A-class and uni-rig catamarans is downwind in light air up to the point where you start thinking about

making the transition to the “Wild Mode”. With no jib in front of the main, it is important to learn how to trim and steer the boat not too deep or too high for the best VMG.

I’ve had some excellent tuning partners, competitors, and teachers over the last couple of years including Ben Hall, Pete Melvin, Bob Webbon, and Charlie Ogeltree. Here is a summary of setup and technique I’ve learned and currently use:

• Downhaul – completely off (very important), slight wrinkles showing

• Outhaul – ease off to the point where you have at least 6” – 8” of maximum foot camber, sometimes more or less is better dependent upon the how light it is and how smooth or choppy the water is. Once you establish the maximum setting, it may be helpful to put in a stopper knot or ball on the outhaul control line so all you have to do is blow the control out of the cleat as you round the weather or offset mark.

• Mast Rotation – You should have a system that will allow at least 90 degrees of mast rotation since this is the approximate apparent wind angle you will be sailing downwind, more is better in this case.

• Traveller – The position of the traveler can vary between all the way out to 4”-6” pulled in. This can depend upon the water conditions. In flat water, it can work to let it out all the way. In choppy water, it can work to pull it in 4”-6” and ease the mainsheet tension to get more twist in the sail.

• Mainsheet tension – Most sailors set the mainsheet tension and cleat it and then focus on steering the boat. A good indicator is the set of telltales placed in the top third of the sail. You probably want enough mainsheet tension to firm up the leech and not stall the top leeward telltale.

• Weight Distribution – For the Boyer boats (Mk. IV, Mk. V, and Flyer), I believe it is very important to sit right on the weather front beam or even better right in front of it. This is probably also the case with the new Bim XJ. You can typically sit just behind the front beam on the Marstrom and A2 boats. What you are looking for is to be sure the transoms are not dragging (the transom wake should be clean and quiet, no gurgling). Moving 12” forwards or backwar ds can make a significant difference. It does not seem to work at all to sit forward on the leeward side of the boat. This only creates more wetted surface area and drag.

• Daggerboards – both boards max up (but make sure some amount of board is filling the bottom of the daggerboard case)

• Rudders – Most sailors will sail with both rudders down but several of the best sailors in the class feel there is a slight speed advantage to sail with one rudder kicked up. Practice this because if you are sloppy or jerky getting the rudder up or down, you could lose more than if you did not do it.

As you round the weather mark, follow this list to transition the boat from upwind to

downwind modes:

1. Steer to your downwind course as you ease the mainsheet and traveller, settle the boat down for 5 seconds.

2. Release any downhaul tension and rotate the mast to 90 degrees or more.

3. Pull up the weather board.

4. Pull up the leeward board.

5. Raise the windward rudder.

Once you get the boat setup and on course, you need to get into a fast steering groove. You will probably not be consistent if you try to steer the boat by just the telltales in the mainsail. Most sailors have telltales on the forestays and or a telltale or Windex on the front of the mast. Either way, you want to create a consistent reference that you can steer up or down to and maintain a consistent "groove". On my boat, I put a telltale on each forestay at the height of the spreaders. I use the angle between the weather telltale and the rotated leeward spreader as my steering reference. I like the reference this high as it indicates the true wind more accurately. I glance up at it about every five seconds and check the sail trim also. I try to combine this reference with the feel of the wind blowing across my face or the back of my head. Looking forward, if I feel the wind starting to blow on to the front of my face, I can probably steer down. If I feel the wind starting to blow more on the side or back of my head, I will start to steer up.

Steering technique is very important. The less you move the rudders, the faster you will be. The steering technique I like is to have the tiller extension across the front of my body with it propped on my leg or knee. This creates a hinge point where I can simply flex the tiller extension back and forth with my wrist to steer very smoothly up or down.

A new tool I have been using since the 2004 North Americans is a "JC" strap. The name comes from the shock cord system used by the Finn class to hold their booms out as they sail downwind in light air. If your boat has the standard downwind rotator like that supplied by Boyer and also on the A2, sailing in sloppy water allows the mast to pump back and forth which is not good for maintaining flow across the sail. In very light air, you frequently have to put your foot against the mast or boom to keep it at max rotation and quiet. The "JC" strap system is extremely simple. I tie a bullet block to each forestay tang. I next attach a line with two small loops in it right behind the outhaul cleat on the boom. I install a plastic clip on one end of the shock cord, attach to one loop on the boom and then run the shock cord forward through the bullet blocks on the tangs and back to the other loop on the boom. Pull the shock cord relatively tight and attach another plastic clip to attach to the remaining loop on the boom. Without the mainsheet attached, you will find that the shock cord at tension actually pulls out and up on the boom. I have found the tension of the shock cord effectively holds the rotation in place and does not allow it to pump back and forth if the boat rocks. An additional benefit is realized when you gybe as the shock cord speeds the

rotation of the rig. The system in no way gets in my way or affects the sailing of the boat. I don't think the system creates any significant drag or windage. Since I have been using it, I feel I have been consistently faster on downwind legs. Winning the light air race at the 2004 North Americans was proof to me that this system has some merit. It only costs about $20 to install on the boat which is a much cheaper alternative than going to another system to lock the rotation.

I hope these tips help you find more downwind speed. Now get out on the water and start practicing!