



GO BEYOND™



# TUNE YOUR SAILS FOR OUTRIGHT SPEED





## Sail Designs

### Z-MAX MAINSAIL

The Z-MAX has proven to be a fantastic all around sail for all sailors. Simple to set up, easy to use and trim. This new sail has won every major regatta on the very competitive MC regatta circuit. The Z-MAX is ideal for sailors weighing more than 190lbs. Or, if you sail your MC a lot with two people. The Z-MAX is the sail for you. The Z-MAX is a proven fast and durable design. An excellent sail to have in your inventory.

### ZAP MAINSAIL

Z for Zenda and AP for All-Purpose = ZAP. Another breakthrough sail from North that utilizes our National Winning AP design with high quality panel and cloth selections. The ZAP is an ideal sail for lighter skippers and teams. If you are in the weight range of 135-185 the ZAP is an ideal sail design for you.

If you are a bigger skipper and you are sailing your MC alone most of the time. The ZAP is an excellent sail for you as well. Truly all purpose for so many type of sailors.

You can be confident that this tuning guide will specifically help you with your MC performance. The North Sails Z-MAX and ZAP shapes are all winning shapes on the national circuit. Follow the guidelines provided and you will be going fast with your North Sail.

Take advantage of the Tuning Grids provided. Keep these on your MC for quick reference. A handy guideline for extra speed.

Thank you for your purchase of a new MC Scow Mainsail from North Sails.

## Boat Setup

### REVIEW YOUR EQUIPMENT

Take the time to check all of your pins and stays for wear. Clean your mast and spreaders with soap and water or Acetone. Also, please check your wire halyard. Most wire halyards fail near the shackle so please review. Clean and lubricate your sta-master turnbuckles. Tape your turnbuckles so that they stay in the set position.

### SETTING UP YOUR MAST

Please install your sidestay turnbuckles in the forward hole of your chainplates. Tighten the bolts with a 7/16" wrench. Have the bottom of the spar held down on the mast step plate while you walk the spar up. Hook up the forestay in the aft cut out of the bow plate.

Once your mast is stepped into position take a 50ft. steel tape measure and attach it to the shackle on the wire main halyard. Pull your rope halyard so that the tape goes all the way to the top of the spar. Be sure you latch the ball into the halyard latch at the top of the spar. Pull down on your halyard so that you know it is locked in place.

Measure down to the center portion of the deck at the stern. This measurement must be taken from the point where the hull and deck meet. The fast measurement for your Z MAX and or ZAP Mainsail is 28' 3". The base measurement for the Z-1 Radial is 28'3.5". Now you are ready to set your sidestays.

### SIDESTAY ADJUSTMENT

After you have set your mast rake at 28' 3" you will be ready to adjust your sidestay tension. You want your sidestays to be taught. You want to just

finger tighten your stays. If you use a wrench to further tighten them the rig is too tight.

## Racing with your new North Sails

Your new North Mainsail is going to excel upwind. By following the guidelines noted below you will optimize your chances for a distinct speed advantage over your competition. You can make the sail full and powerful or you can flatten the sail so that your MC is easy to handle in the breeze. Please practice the following techniques and watch your MC sailing improve!

One thing to mention is that the helmsman will want to always sit forward in the boat (right next to your mainsheet cleat) in all conditions, upwind or downwind. This is very important. The order in which to adjust your sail controls will be in the order described below. Please follow this sequence in order to achieve the ultimate speed with North MC Mainsail.





## FULL POWER (0-8 mph)

Your North Mainsail will be fast in this condition. Set up for extreme power. Please follow the set up described below.

### BOARDS

Be sure that your leeward board is all the way down so that the head of the board is flush with the deck. On the new style under deck board configuration the boards will come from the Melges Factory at the full down position

### HEEL

Never allow water to run over the edge of the leeward side rail. You are over-heeling then. You do not want to heel the boat to reduce wetted surface area. Use the leeward rail as your guideline in all wind conditions. Maximum 12 degrees of heel is what you are aiming towards.

### TECHNIQUE

In the light air most MC racers choose to trim and head up the moment they get new pressure. The exact opposite is the case if you want to go fast. When you get hit with a puff you want to ease a bit, head down and go for speed and then trim. After this you can head up and point the boat. The #1 goal is to achieve boat speed in this light air condition. The Z design mainsails will really respond to this type of technique.

### MAINSHEET TRIM

The mainsheet is your accelerator. Never cleat your mainsail. Always have the mainsheet in your hand so that you can trim in the pressure and ease in the light spots. Constant mainsheet trim / working is key to ultimate boat speed. In the very light air (when sitting on

the low side) a great reference for mainsheet trim is to have the back of the boom over the back leeward corner of the boat. As you get more wind trim from there and feel the sail and boat respond. If the boat does not respond then ease your sail back out. You will see a response in the boat from the angle of heel.

### OUTHAUL

Your outhaul should be tight along the boom. Yes, you should have a shelf in the sail even in these light conditions. Pull the sail to the inboard edge of the white band on your boom end. This creates a small wrinkle free shelf foot and is very fast. This will help you with speed and pointing.

The Z-1 Radial Design features a shelf foot and has more allowance for adjustment. When in need of power, ease the outhaul ½" in and feel the sail respond. Of course pull on hard as the wind builds.

### VANG

Do not have any vang tension on at all. In fact, be sure your vang is un-cleated so that when you ease your mainsail your vang does not tension up. This is very important while working your mainsail upwind. Vang should never be applied in such light conditions.

### CUNNINGHAM

Be sure this sail control is off so that there are horizontal wrinkles in the luff of the sail. You want these wrinkles in this type of wind condition.

### TRAVELER

Keep your traveler on centerline at all times. The only time you drop the traveler down is when you are fully



hiked out and you cannot hold the boat down. you cannot hold the boat down.

### DOWNWIND SAILING

The Z design mainsails will outperform other shapes due to its fullness downwind. The sail is full away from the mast (more draft aft) so this translates into exceptional speed downwind. This is by far our fastest sail ever downwind. Practice the following tips so that you can achieve ultimate speed.

Once you have rounded your weather mark be sure to pull your leeward board up 75% of the way up. Begin to look for wind behind you. Speed is king downwind and the only way to have speed is to be in the breeze. Set yourself up so that you have clear air and that you are in line for more breeze moving down the lake. This is very important.

### TECHNIQUE

You must heel your boat to leeward in order to reduce the wetted surface area in these conditions. The end of the boom should be kissing the water.



If this is not happening you are not maximizing your speed.

Your mainsheet trim is critical as well. Just like upwind, you absolutely must work your mainsheet downwind. Grab your mainsheet directly from the aft block on the boom. This eliminates the ratchet and it gives you quick and direct pull.

In the very light air you must reach the boat more so that the boat picks up speed. Heel and head up to generate speed while trimming in your main. As the boat builds speed begin to head down, continue to heel the boat and begin to ease your main back out. The second the boat feels like it is going to slow down repeat the process. In order to go fast downwind in the MC you must work just as hard downwind as you do upwind. Stay prepared to keep the boat moving and always be looking for fresh wind.

Traveler is centered, vang off, Cunningham off for maximum power.

Outhaul must be eased so that the shelf is gone. Do not ease to the point that the foot of the sail has vertical wrinkles.

Powerboat waves: Always trim in and build up speed so that you can blast through waves. If they are very large you can pull on some boom vang so that the rig stays snug and so that the boom stays in place. Be sure to uncleat the vang after the waves have passed.

## ULTIMATE SPEED (8-15 mph)

The Z design mainsails are very versatile in these conditions. As you know once you get over 10mph. the MC can be overpowering (difficult to hold down upwind) for some sailors. By following the set up described below you will begin to see major speed improvements in your MC sailing. Practice these things so that you are smooth and prepared for the change in velocity.

### BOARDS

Please be sure that the head of your boards are flush with your deck or 1" up as the wind increases. Putting them higher is not needed.

### HEEL

Again, the benchmark is your leeward rail. Never allow this to get wet while sailing upwind. As the wind begins to build, you must hike harder, use your sail controls to flatten the main and then feather the boat lightly into the wind with your steering technique.

### TECHNIQUE

For maximum speed you need to really work the boat. Hike in the puffs in order to hold the boat down. However, always keep your back vertical to the water or just aft of vertical so that you can see your horizon line. The horizon tells you just how much heel is indeed on your MC. Also, by being vertical you can trim and ease your mainsheet helping you to balance your boat.

### MAINSHEET TRIM

You can trim harder in these conditions so long as you can hold your boat



down. Once you become overpowered in this wind range you must begin to ease your mainsheet in the puffs. You never want the boat to overheel. When the boat does heel up you must have boom vang on so that the sail remains flat as you ease the sail. In this condition you should sail off the angle of heel. Meaning, if you have to ease your mainsheet a foot in order to help hold the boat down then do this. The worst thing you can do is trim hard, overheel and then stuff the boat into the wind. By easing the mainsail you are able to sail at a 'fast angle' –not stuffed into the breeze. The boat will accelerate and begin to build speed. Never cleat your mainsail. Constant angle of heel translates into constant fast speed.

### OUTHHAUL

The foot of your sail should have a shelf in it. Even in the lighter air. So, in this medium condition you should pull your outhaul maximum outboard. This helps to flatten the bottom portion of the main, which is quite full. Make sure



you pull on this hard taking the sail to the inboard edge of the black band on your boom end. Do this before your leeward buoy rounding too.

### VANG

Due to different weight ranges we will all become overpowered at different times. Overpowered again meaning that it is difficult to hold the boat down. So, someone weighing 150 pounds will become overpowered in 10 m.p.h. of wind where someone weighing 200 pounds will become overpowered in 15 m.p.h. of wind.

As soon as you become overpowered you need to apply your vang so that the mast will bend and the sail will flatten. Also, now you can ease your mainsheet so that you can keep the boat from over-healing in the puffs. The more wind the more vang you will need to apply going upwind.

### CUNNINGHAM

With the new Z design mainsails you can apply much more Cunningham in order to flatten the sail. By applying the Cunningham you will move the draft of the sail forward and the sail will become much flatter along the mast. This too will bend the mast when pulled on hard – helping you to point. When it becomes very windy you must crank this on hard.

### TRAVELER

As the wind builds you can drop your mainsheet traveler as much as 6" with the new Z design mainsails. Mark your traveler track so that you know the distance. Once you have dropped the traveler, pulled on your vang and Cunningham then you need to work your mainsheet in the puffs, easing when the boat wants to heal too much.

### DOWNWIND SAILING

With the breeze up now it is time to sit on the high side going downwind. This is also called reverse heeling the boat. You do this to eliminate helm on the rudder. When sailing downwind in these conditions you want the weather board to be down ¼ of the way. The leeward board is all the way up.

Upon rounding your weather mark or offset you will want to adjust the board first and then ease your outhaul so that the shelf in the foot is gone. When sailing straight downwind be sure to ease your mainsail so that it is all the way out. Your boom will actually rub against the sidestay.

As the wind builds apply more and more vang. Downwind this becomes the stabilizer for the boat. When the boat feels very jumpy or tippy apply more vang in order to stabilize your boat. Vang is crucial to downwind speed and acceleration. Please work your vang in the puffs. Applying more as the wind hits and the boat speeds up. In the lulls, ease the vang. Working the boat like this is very fast.

Always keep your weight forward and outboard. Lean out as much as possible so that the boat rocks up downwind. This helps to reduce the wetted surface area and it prevents you from ever nose-diving in large waves or chop. Even lean out when adjusting your boards after a gybe. The board lines are tied together so that you can sit on the high side, lean out and pull the leeward board up. Doing these types of things make a big difference over a long race.

Most important, always look behind you for the next available wind. Staying in the wind makes all the difference. With the new Z design mainsails you will go fast downwind for sure. However, being in the

breeze will help even more. Be aware of the new wind coming down the lake.

### CONTROL & DE-POWER (15-25 mph)

The Z Max, Z-1 and ZAP mainsails are truly the best all around sails because they can be flattened in these conditions. You can bend your mast and flatten your sail for great upwind speed and control. With the custom material we have chosen for the body of this sail you really can have 2 sails in one. You can flatten this sail to be just like a heavy air sail. Follow along and see what you can do to reach better performance and have more control in this type of wind condition. One of the very best things that you can do of course is go out and practice in this wind range so that you feel comfortable in the boat. Your boat handling will improve for all conditions as well.

### BOARDS

Raising the board in this breeze can be advantageous. Especially if you are sailing alone. Please try moving the head of the board 2" above the board box. Or on the new boats watch the line move 2 inches forward as you pull up. We feel that you will experience less helm and more maneuverability. This is a good thing to try and to practice.

### HEEL

Over-heeling is the biggest mistake made when it is very windy. When you have all your sail controls on hard you must "feather" the boat into the wind. Do not stuff the boat – you must keep the boat moving fast through the water. Easing your mainsheet as much as 2 feet may be



needed in order to keep your boat on the proper angle of heel. Do not be afraid to ease the sail this much when it is windy.

## TECHNIQUE

The mainsheet is your accelerator in light air and the controller of your angle of heel in the heavy air. Practice not cleating your mainsheet. Have the mainsheet in your hand and be able to ease the sail in the puffs and trim back in as the puff leaves. This will de-power your boat. The Z designed mainsails are a flat sail when all of your sail controls are pulled on so now it is up to your mainsheet tension and steering to keep the boat on its lines. Hiking out is important as well. If you have a crew in these conditions make sure to call out the puffs early so that the crew is fully hiked before the breeze is on.

## MAINSHEET TRIM

There is no set trim guideline in this much breeze. You do not need to trim hard that is for sure. With a lot of vang on you can ease the sail as much as 2 feet and not lose any speed at all. The mainsheet just controls your heel in this much wind. So, if you are over-heeling then ease until the boat settles down. While easing keep the boat on its lines – a normal course. Do not stuff the boat into the wind because then you will stop. Sail the boat fast by easing the main. Always feather the boat into the wind.

## OUTHHAUL

Pull hard out to the black band on the boom. Never ease in from this point with this much velocity.

## VANG

When you are trimmed in going upwind you need to pull the vang hard. This will bend the mast, flatten your Z design mainsail and then open the leech. The

boat will become very controllable. You may need to ease this a bit on the tacks and always be sure to ease the vang at least an arms length before rounding the weather mark. Otherwise you could bend your mast.

Vang tension is very critical in heavy conditions like this. Apply plenty when racing upwind. At the start it does hurt your pointing ability so, you may want it eased a bit, but not completely eased off.

## CUNNINGHAM

Pull this as hard as you can. The sail will flatten right out, especially along the front of the spar. You could never pull too hard on this control in this much wind.

## TRAVELER

You can drop this up to 9" if it is this windy and you do not have the weight on the boat to hold it down. If you have a crew I still would not drop the traveler more than 6". When sailing alone you could go 3" further. Set this control, leave it, and then work your mainsheet.

## DOWNWIND SAILING

Certainly, in this much wind you must reverse heel the boat. Your board should be dropped just ¼ of the way down. Do not sail downwind with both boards down. It is slow and it could cause you to tip over upon maneuvering.

Apply vang downwind so that the boat is more stable. However, be sure to not over-steer on your gybes. The boom could catch the water and take you for a swim. To be safe, ease the vang a bit before a gybe in big air. Leaving the outhaul on when it is windy will not hurt your downwind speed. So, do not worry about this control. Worry about being in the wind, sailing safe and going fast.

When you are sailing in waves keep your weight in your normal position. To avoid nose-diving just lean out so the boat is heeled. This will help to prevent nose-diving. If you see a big set of waves do not be afraid to trim in and head up 10-15 degrees to reach around them. Trim your sail, accelerate and then head down with your extra speed after the set of waves.

Please enjoy your new North Z Design Mainsail. It is the fastest sail in all conditions you can be assured of this. If you have questions please call or e-mail us here at North Sails Zenda.

## Contact North

For additional information, visit [northsails.com](http://northsails.com) or contact our class experts:

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# North Sails One Design Quality Control Check

## MC Scow

| MAINSAIL             |  |
|----------------------|--|
| Corners              |  |
| Cunningham           |  |
| Lake Code            |  |
| Numbers              |  |
| Battens              |  |
| Flutter Battens      |  |
| Leech Telltale       |  |
| Telltails            |  |
| Leech Cord with Tail |  |
| Spreader Patch       |  |
| Vision Window        |  |
| Royalty              |  |
| Insignia             |  |
| North Logo           |  |
| Serial Number        |  |
| Bag                  |  |

Checked by: \_\_\_\_\_

Date: \_\_\_\_/\_\_\_\_/\_\_\_\_\_