

Formula 18's are two-handed high-performance racing catama-

rans, that are equipped with asymmetric spinnakers, and built by vari-

ous manufacturers to a regulates the vital diweight, length, width, rials, to allow different facture very similar very similar perfor-

sailors can choose the builder of even competition where yardsticks The international Formula 18 rently holds ISAF international lishment of the class in Ausnational class gain full interwide, F18s are building changing the face of cata-*- Extracted from the UK Formula 18*

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for•mu•la (for'mye-le) n. 7. A mathematical statement, esp.an equation, of a rule, prinicple, answer, or other logical relation.

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their preference and sail in an are not required. catamaran Class currecognition. The estabtralia will assist the international status. World-

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Association Newsletter

maran racing.

What's Inside

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- chance. More options. More boats. Bigger starts. **More FUN.**

dling starts are the norm.

it only makes sense to

give formula racing a

builders to manuboats which have mance. At last,

Formula 18 racing

offers sailors more choices. Here is a list of just some of the Formula 18 boats available.

Alado 18 Cirrus 18 Dart Hawk Diam 18 Hobie Tiger Hunter 18 Mattia Flash Mattia Fortissimo Mystere Twister Nacra Inter 18 Nacra F18 Taipan 18

Fellow Sailors;

In 2002, a group of us that were sailing or wanted to sail catamarans built to the ISAF Formula 18 rule, put together the NAF-18 to promote racing of Formula 18 catamarans in North America. Formula 18 racing has flourished in Europe. Our goal was to achieve similar success here in North America. **Successes**

The 2003 sailing season will be our second year in existence. We are proud to report that it will include our 2nd North Americans. The 1st NA's were held in Traverse City, Michigan. Formula 18's manufactured by Hobie, Mystere and Performance Catamarans (PC) competed in that event. This year the NA's will be held in Pensacola. Florida. We expect it to be an even more successful event. We have also organized re-

gional Formula 18 events across much of the country. In an effort to control the cost and hassle of measuring and certifying boats, the NAF-18 class proposed a process of self-certification to the three major suppliers of Formula 18 catamarans in North America. Two of the manufacturers have agreed to work with us and the third is "on the fence". The ISAF Formula 18 class association has agreed with us that there should be some sort of self-certification by the major manufacturers. There has been a great deal of discussion as to what is the best method to control and monitor any self-certification process.

Formula 18 racing is taking off in the Midwest. The Formula 18 fleet at CRAM (my home sailing club the Catamaran Racing Association of Michigan) has more than doubled this year. A large number of our friends in CRAW (Catamaran Racing Association of Wisconsin) have also purchased Formula 18's. When the two fleets get together we will continue the traditional inter-club rivallry.

The first CRAM regatta had a Formula 18 fleet with a Hobie Tiger, a PC Inter 18 and two PC F-18s all of which won at least one of the six races and was last in at least one of the six races. One of the F-18's had a lightweight crew with the smaller jib & spinnaker while all the other boats met the heavy weight criteria and carried the larger sails. The rule works!

Challenges

The major challenge facing the class at this time is the establishment of a network of class measurers across North America. We have a larger number of people that are interested in becoming class measurers. Now we are focusing on establishing a central authority and a certification process to ensure that our measurers are qualified. This system should be in place soon.

> Tom Liston North American Formula 18 Commodore



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Sail Center Snuffer

Sailcenter made there own system with a chute and polyester ring. This is a cheep and good snuffer which is easy to install as well on different catamaran types. It's a light system which exists of a ring and a bag (like Proust snuffer). Only this ring is smaller and lighter. Aerodynamics are also good.

Price Polyester Ring: € 150,00 -174.00 USD Price Chute bag: € 150,00 - approx. 174.00 USD website: www.sailcenter.nl

Plas Snuffer

It's the same system as the sailcenter snuffer (or v.v.). The main difference is the ring.

Price: € 250,00 euro (Snuffer polyester + Bag) approx. - 290.00 USD

website: www.sailingteam.nl

Proust Snuffer

The Snuffer Kit developed by Proust Catamarans is easy to install and fits all kind of cats. It's tested on different boats such as Tornado Sport, Formula 18. It also provides technical specs for your sailmaker to install patches on your spinnaker.

Kit total weight: 450 gr Price: € 390,00 euro - approx. - 452.00 USD website: www.sailingteam.nl



Hobie Snuffer

This system is sold by HobieCat. The snuffer (rocket launcher) is made of fiberglass, 2m long and weighs about 2kg. This system works fine but pulling in and out your spinnaker is a little bit heavier than a bag solution. website: www.hobiecat.com

The above information was collected from various websites, Greg Thomas of the Hobie Cat Company and my ramblings. Please confirm currency conversions as they are approximate listings.

OH YEAH! WELL MY SNUFFERS BIGGER THAN YOURS!

Take a look around the race courses in North America and you'll find that nearly everyone's snuffing.

Below are some snuffers available on the market. There are a variety of them from the end-of-the-pole version to midpoles made of fiberglass and/or sail sock. These are just a few, there are many more out there, especially home made ones created by the ever tinkering cat sailor. Which one is best for you depends on the crew/ skipper. If you see a system on someone else's boat at an event that you think you may like, ask them if you can go out on the water with them to test it - see if it will work for you. Otherwise, pick a snuffer and develope it from there.

End of the pole Advantages

• Uses bag/sock so is lighter than fiberglass tube

• Spin tack is permanently attached to end of pole so no extra tack line to pull tack of spin out to end of pole

 Able to hold spinnaker longer at leeward mark and actually take down spin while rounding mark and heading upwind Disadvantages

• More windage having sock and spin all the way out to end of pole

 If something happens to spin it's difficult to fix on the water (can't reach end of pole from bow of boat)

Mid-Pole Advantages

- If something happens to spinnaker while on the water you can reach it to fix
- Does not absorb water

Disadvantages

- Heavy
- Must take down spin while sailing downwind

Need separate spin tack line or spin halyard attached to spin tack line to get spin tack to end of pole when launching
3 holes/patches needed in spin instead of 2 with end of pole snuffer

A fast and furious

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USA 914

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481

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There are several ways to clean sails. Some are more effective than others are. Unfortunately, the most thorough methods also cause the most serious cloth breakdown. This can weaken the sail, shorten its life, and lead to greater stretch, which compromises performance. All mechanical sail cleaning methods fall into this category. Even large agitating tubs designed just for sails with carefully regulated water temperature will have the same effect on the sail as several weeks of hard use. It is definitely not recommend using the machines at local Laundromats. They are never large enough and the water temperature is not carefully controlled.

It is recommend to frequently rinse with fresh water. If that is not sufficient, spread the sail on a smooth, clean surface and brush It lightly with a mild detergent solution (such as dilute Ivory) or with a specially prepared cleaner. Rinse thoroughly and dry completely before folding and storing the sail.

Stains and spots can be removed as follows:

Rust: Soak the affected area in a 5% solution of oxalic acid dissolved in hot water. Follow this with a 2% solution of hydrochloric acid in warm water and, finally, rinse the spot well with clear water.

Number adhesive: Soak the area in cleaner's benzene until the adhesive can be rubbed away with a rag.

Oil, tar, and varnish: Use trichloroethylene either by itself or in solution with a liquid detergent.

Mildew: Soak the affected area in a 1% solution of chlorine (household bleach will do) and cold water. Rinse thoroughly and dry.

When confronted with a serious stain, do not expect complete removal. Usually the best that can be expected is a moderation of the discoloration.

Some spinnaker cloth has a silicone finish which reduces friction in the launching chute and when gybing and with care you shall 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 silicone to reduce friction.
- "Pulled" threads can often be addressed by holding 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, unpicker 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/or methylated spirits (clear alcohol). Cut a patch that is 25mm larger that 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.

- Compiled from North Sails and the Spinnaker shop

The intention is to establish a reliable and simple

method of measuring the active surface of the entire sail plan, including the mast.

When followed correctly the formula allows a wide array of manufactured boats to compete against one another in on equal playing field. The most focus is on the sail plan and boat lenghts. The sail plan comprises of a mainsail, a jib and a spinnaker. The sails must be certified class legal by an appointed F18 measurer who will also certify the length of the boat. The sails will then be marked with a colored sticker near the clew on the starboard side. This marking shows that you're sails have been measured and certified and you are now ready to compete on the course against other certified F18's.

Once measured, it is not necessary to have your sails measured again, keep in mind though, many National, Championship and World events will require your boat and sails be measured again while at the event. In most cases a class approved measurer will be on site.

The North American Class Appointed Chief Measurer is Les Gallagher. He can be reached by email at lgallagh@visteon.com or by phone at 734-737-1031 during the day and 734-434-1660 evenings and weekends. If you are interested in becoming a class measurer please contact Les.





To the left you will see the North American Forumla 18 Class sticker. This sticker should be on the back of all F-18s. Performance

Catamarans, Inc. has purchased them for their boats. If your PC F-18 doesn't have one on the starboard stern, please contact your dealer to obtain one thru PC, Inc.

Hobie Tiger and Mystere Twister owners may obtain them by sending \$2.37 each to: NAF18 Po Box 634 Freeland, Mi 48623



There are many controls for adjustment in a modern catamaran, these notes will detail each one and the effect that it as on performance. They must be read as a general guide, as each sailor will have their own preferences. It is important that you measure your catamaran and know where your settings are, so that they can be reproduced in any given wind range.

The mast is the critical factor to achieve performance:

a. Rig tension.

Rig tension, slacker in lighter winds and tighter in heavier, slack is with, say 70 to 80 kgs pulling backwards to the stern of the catamaran. At this tension, the leeward shroud will appear slack when going up wind. This will also allow the forestay to "fall away" causing loss of pointing ability. Sailmakers now cut jibs allowing for this to happen, but don't let it happen too much. As wind increases then increase the rig tension, but remember with a rotating mast, it will always want to stay "in the middle", which means that the rig is going marginally tighter each time the mast turns hence wanting to return to central "neutral" position. Now if you are too tight in light winds, the mast will not rotate enough, so slacker rig in light winds.

Slack, as a general guide, is when you can hold the shroud and rotate your hand through 45 degrees.

If you go too tight, then the mast will not rotate freely due to excess pressure on the mast ball, and the catamaran just won't feel right.

b. Mast Rake.

Take the forward trapeze and add a short piece of line, then stretch tight down to bridle fastening to hull. Measure that distance, with trapeze wire taught, then take trapeze wire to stern and length ought to be in the middle of the hatch cover for lighter winds, to the "back end" of the hatch housing for heavier and finally half way from back of hatch housing to the transom for seriously heavy wind.

Moving the mast aft, decreases power and makes the catamaran easier to handle, hence further back in heavier winds. Also the lighter the crew, the further back the mast and visa-versa.

Also moving the mast aft, allows the center of effort on the sails to move further aft and so will allow the boat to point higher. BUT this might mean that you feel "weather helm" through the tiller, if so, "tuck" the rudders further underneath the catamaran by adjusting the screw thread on the rudder casting. When sailing upwind, with two on trapeze, you ought to be able to rest the extended tiller on the top of your index finger and the catamarans should slowly climb up into the wind. c. Spreader rake.

The third crucial factor in tuning masts. Broadly the rake is set for the weight of the crew, when they feel that they are single and double trapezing in the right conditions, so spreader rake varies. With the Nacra F18, the settings are further back that usual, with lighter crews going to 45 to 50mm, heavier from 35 to 45mm. Now, when the spreader rake is increased, it means that the tension of the spreader wires "bends" the mast aft, hence flattening off the sail therefore de-powering the boat. This adjustment is made on the land by turning the bottle screw at the base of the diamond spreaders. ALWAYS know this measurement!! Then as the wind increases you can increase a set number of turns, remember this setting and then the catamaran will reduce power in strong winds and increase power by reducing (slackening the spreader wires) the number of turns in light breezes.

(The medium (middle) setting is 36 on the Loos gauge.) continued on next page

d. Sail batten tension.

Do NOT try and over tighten, all you are doing in stretching sailcloth that doesn't want to stretch!

When you have put them in "snugly" just feel the tension in the batten cords when you have down hauled and sheeted in the main. There is wisdom in lighter breezes to increase sail shape by increasing the batten tension, but it is the natural curve of the batten that gives most sail shape, not tension.

You will find that the top two are very stiff and short, but they are high up, and it is windier up there!! So in lighter breezes, or with heavier crews, you may want more shape at the top of the sail.

e. Cunningham (Downhaul).

Increasing downhaul "flattens" the mainsail and decreases power, as the mast is "bent backwards" the bolt rope takes up that mast curve, flattening the main, but critically "opening" the top of the sail and so reduces power as the head of the sail "falls away" from the wind.

f. Mast rotation control.

To achieve maximum power, the mast rotation control yoke wants to be pointing at the shrouds, (or in light winds marginally infront). In stronger breezes, by moving the yoke further aft, that perfect air low will be interrupted, leading to a reduction in power. So maximum power with yoke pointing at shrouds and pointing at "red traveller stop" on back beam for reduced power. The Nacra F18 is equipped with two lines that hold mast rotation on downwind legs when spinnaker is raised.

g. Out haul controls.

The Nacra F18 is fitted with a "limiter" line to stop sailors over out hauling the mainsail, as there is a risk that if the mainsail is out hauled severely, then 8:1 down hauled, the bolt rope might be pulled out of the mast track. If it is done in the reverse order then all is well.

i. Dagger boards.

As a "Golden rule" dagger boards are down going upwind and 50 to75% up when going downwind. However, they can serve as a very useful de-powering adjustment when over powered going upwind. Raising the boards will allow the catamaran to "slip" to leeward and this will give the feeling of less power coming from the mainsail.

j. The jib.

If stronger breezes, then increase downhaul tension on the luff, and visa versa, so in light winds it is acceptable to have slight "creases" around the luff, that will mean that the high aspect sail stay fuller. The positioning of the jib is critical to give the "slot effect", the jib is very high aspect and not very large in its own right, but "deflects" airs over the main, and so massively increases the speed of those airs. There are three standard settings, but try with the jib traveller car at about 38 to 40 cms. from the center of the mast.In lighter breezes bring the jib carriage in and out when wind picks up. If it is too tight then the air can't flow "through" the catamaran, causing her to heel and not drive.

k. The rudders.

Run the rudders parallel. Some used to think of marginal toe-in, but it is easier to have them parallel. With the boat on the land, a simple devise that does work is point the rudders direct down the boat so that they are in line with the hulls. Then fasten in the grub screws into the flexible rubber joints and the job is done ensuring that the tiller cross bar is equi-distant from the rudder arms. Ie there is equal rubber jointing showing at both sides.

Summary of the 12 commandments: For more power and opposite for less power:

- 1. Mast more upright.
- 2 Spreaders with less rake.
- 3. Diamond wires less taught.
- 4. Less downhaul tension.
- 5. More sail shape from battens.
- 6. Dagger boards down going upwind.
- 7. Mast rotation yoke pointing at shrouds or just in front.(light breezes)
- 8. Outhaul controls allowing shape in foot of mainsail.
- 9. Mainsheet tension firm but not excessive.
- 10. Traveller in central position.
- 11. "Jib slot" allowing airs to flow "through" the catamaran.
- 12. Catamaran balanced port/starboard and bow to stern.





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Sailing upwind

Steer straight, head up in strong puffs, sheet out in small puffs. Tack slow, or as fast as crew/skipper can get things done and get to the other side of the boat. Mast Rotation, in most conditions we have the mast rotation pointing at the back of the dagger board well. Jib Traveler, sailing upwind in light conditions the jib is traveled out to the hiking strap and sheeted in so the jib is around 2" off the spreader. As it gets windier we sheet in the jib a little at a time so that in say 10 - 15 knots the jib may be 1" off the spreader and over 15 the jib may be right up against the spreader. In light wind steer off the bottom set of tell tales and keep them both flowing straight back. As it gets windier and you start flying a hull try to steer all by feel, just keeping the windward hull skimming the water, always steering straight and doing very little turning of the rudder. Rudder turn = brakes.

Sailing Downwind w/spin

Spinnaker Hoist: Most of the time as we're rounding the mark is when I'm calling for the hoist. When hoisting in light to medium conditions you can sail at your normal downwind angle or higher, but when it's windy, over 15, it's easiest on the crew if you head below your normal downwind angle so that the main helps blanket the spin which allows the spin to go up easier. Once the spin is all the way up you can quickly steer to your normal downwind angle. When racing, in all conditions we get the spinnaker up ASAP, the quicker the better, and at the leeward mark we wait as long to take it down as possible. I think of it as with a spinnaker you're basically doubling your sail area and your speed so you want to have it up as quickly and as long as possible on the downwind legs.

Sheet out jib 4" - 6" from upwind setting. Our first 2 years on the Tiger we never touched any other controls, we just left them in their upwind setting which I would recommend for beginners while they're learning the boat. At the point the crew feels comfortable sailing with spin and sailing the boat you can start making all the same adjustments as you would sailing any other boat downwind. *continued on next page*





In light wind, steer the boat in a straight line keeping the JIB telltales flowing. Crew should adjust spinnaker to where skipper is steering, let out spin till it curls and sheet in till it stops. In puffy or windy conditions, skipper heads down (opposite of upwind) when hull starts to fly or feel overpowered. Keep mainsail sheeted medium tight and hold the main traveler line all the time, let out the traveler when feel overpowered. Never touch the mainsheet to sheet out since it is acting as your backstay. In all wind conditions, light and heavy, sailing downwind I steer very little. Like I said before, turning the rudders is like putting on the brakes. When I do steer it is very gently to come up and gain speed which pushes my apparent wind forward which I can then use to steer low, but not too low to lose too much speed and have my apparent wind disappear. It takes a lot to learn how much to come up and then bleed off while keeping your speed going. If you come up too much you'll over power yourself and have to sheet out on the spin or main, but if you don't come up enough you won't increase your speed and get the apparent wind to shift forward and you'll be stuck in slow gear. When

you get the apparent working you can't come down too much because you'll bleed off all your speed and then have to come up way too much to get your speed back up. But if you don't come down enough you'll again be overpowered and have to sheet out your sails which is slow, it's a fine line. A great way to think of sailing downwind is to think of it like you're sailing upwind. Most people can sail upwind great, keeping the hull just skimming the water by steering little and playing the sheet little. Imagine sailing downwind the same way except to keep the hull skimming you steer down instead of up and play the spinnaker a little instead of the main.

-Greg Thomas Hobie Cat Company

Women crewing on Spinnaker boats

It can be done and is being done all over the world. I race regularly with four women on Tigers. If you look at race results around North America you'll see there are many women crewing on what some people call big boy boats. Catfight has 11 women crewing on various F18 boats.

My experiences are with the Hobie Tiger, so keep this in mind while reading. The HTiger; believe it or not ladies; is more docile than you think. The tramp is clean; the downwind ride is fairly dry and the boat doesn't seem to jerk or get angry when reaching due to the smaller jib. Add a self tacker and you'll never be blamed for blowing a tack again!



If you're worried about not being able to handle the spinnaker here are some simple rigging tips your skipper can set up for you. Ratchet blocks can help reduce fatigue when trimming the spinnaker. (see images) We use Yale Light with a diameter of 5/16" for the spin sheets helps the hands grip the line better. Skippers should use a line that does not absorb water and is no bigger than 3/8" diameter. Anything bigger will create more friction and windage. Spin-Lock cleats for the spin halyard work great. Nothing is worse than hoisting the chute and almost having it to the top when you

fumble the line and the chute goes down. Everything you've done is lost; and boats have surely gone by. With the spin lock the crew can leave it locked but still hoist the spinnaker. So if for some reason you let go of the line; the sail will stay where it is. Priceless.

Ratchet Blocks One highlight of adding the extra ratchet block is it almost doubles

Another point about the spinnaker halyard is the diameter of the line. Anything under 3/16" is just too small to grab hold of. Try 3/

16" to 1/4"; your crew will thank you for it. The same rule applies as the spin sheets - too big means more friction (harder to get that chute up) and more windage.

Gloves - protect those hands. Personally; I found that Kontrol Angles sailing gloves work great. They have extra padding that wraps around the palm and the textured padded palm is super grippy when wet. I'm not a fan of hand/finger/palm tapping. It just doesn't work for me but for many women it really helps reduce friction and prevents blisters. I wish I had more room to write! I guess my biggest point is women - don't be afraid to give crewing a try on a spinnaker boat. There are ways around obstacles.

If you are interested in learning more crew friendly rigging tips contact me @ tracievh@hobiefleet32.org - Tracie Van Houten



Congratulations to the New North American Formula 18 Class!

Join the Formula 18 class and enjoy multihull racing at it's best.

Performance Catamarans, Inc.

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