

## **On Board the New *Equation*: The 2011 Mackinac Races**

**©By Ron Sherry**

*Equation* is a Farr designed Trans Pac 65 owned by Bill Alcott, Fast Eddie Palm, and Tom Anderson. We sail the boat with 16 crew including Stu Argo, project manager; Stu Thompson, boat captain; Mike Rehe, first mate; Chris Clark, navigator; and I steer the boat.

*Equation* is a very complex machine capable of doing amazing things as she does battle with the wind. In reaching conditions in light wind, *Equation* will sail 3.5 to 4 kts. faster than the wind speed. Sailing up wind, the *Equation's* target speed is 10.2 kts. and tacks inside of 65 degrees including leeway.

She has a 7 foot prod making her overall length 72 feet, a 112 foot mast, and a draft of 16.5 feet. The keel has hydraulic rams which allow it to be raised to 11.5 feet, for docking only. The keel has a 17,000 pound bulb and the whole boat weighs 28,000 pounds. *Equation* has hydraulic rams for the head stay, jib tack, deflectors, mast rams, jib leads up down in and out, Cunningham, reef, outhaul, and vang. The hydraulics have a rotary control which allow the rams to be adjusted from the three grinding pedestals. The boat is equipped with a bitch wench. When the bitch wench is engaged in over drive and connected to all three pedestals, it takes 6 seconds to raise or douse the spinnaker.

*Equation* has a prop which retracts inside the boat. The mast has 6 halyard locks which allow less weight aloft because the tails of the halyards only need to be strong enough to raise the sails.

The electronic read outs are too numerous to list but the most notable ones are heel angle as well as rudder angle. These readings allow us to attain definitive results as we adjust the sails to get the top performance out of the boat. There are 2 computers on the boat. One is dedicated to navigation while the other gathers performance data from all of the control positions, GPS, and wind instruments to review how we did verses the velocity prediction program.

It is a privilege to ride on *Equation*. Getting to steer this boat against the other premier big boats is the only thing I do that competes with ice boating.

### **Chicago to Mac**

The Chicago Mackinac race began in light winds. *Equation* and *Windquest* sailed through the fleet. *Windquest* stayed a little farther west then we did sailing up Wisconsin shore. The wind did not shift as was forecasted and *Windquest* took advantage of their position sailing a better angle into the Manitou Passage. We tried to make it over to the Michigan shore to take advantage of the thermals predicted on Sunday. The wind was light and shifty going through the Manitou passage and we got close enough to *Windquest* to watch them sail through

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Grey's Reef. The wind shut off completely as we sailed through Grey's reef. Even *Equation* stops when there is no wind and we sat in the Mackinac Straights for hours.

Finally the wind came up enough that we sailed under the bridge and finished around 7:00 pm. on Sunday evening. We easily saved our time on *Windquest* but the storm blew in most of the small boats which saved their time on us. We were in the Pink Pony for several hours before the heavy storm hit at 12:30 am. 40 boats dropped out of the race due to the storm. For us the race was pleasant, for others the race reinforced the importance of safety and safety equipment.

### **Port Huron to Mackinac**

The Port Huron to Mackinac race started in light wind as well. We had the code "1A" up and were cruising through the fleet going 4 kts. faster than the wind. As the wind shifted we did several jibes. We positioned ourselves well and were only 6 miles behind *Windquest* as we approached Cove Island Light. The wind shifted around to the north east and we were fetching Cove Island in 17 to 20 kts. of building breeze and sea. The call was made to reef the main sail so we could balance the boat and reduce weather helm. With the lock systems, reefing takes less than one minute. Much to my surprise the boat gained over a kt. of boat speed with the reef in. The boat was getting tossed around in the building sea. We could not wait to round the mark, lay off, and start the sleigh ride to the Island.

Before we got to the mark we shook out the reef and got the "3A" ready to go. We rounded Cove Island Light at 6:00 am. We put the "3A" up after the mark and were not disappointed. We kept the #3 Genoa up and sailed double slotted straight towards Mackinac Island.

This was the first time we got to sail the new boat down wind in breeze. It was awesome. The boat speed was steadily in the high teens. When you added in the waves we were seeing speeds over 20 kts. Our top speed was 22.4 kts. At this point our navigator was figuring the calculations on what could be a record setting race.

At 6:30 am, 10 miles after Cove Island, just as we were going down the next big wave hoping to set a new speed record, the rudder broke off at the hull and floated up behind the boat. The crew knew we had a problem and went into action. The conditions were tough with 20 to 25 kts. of breeze and 8 foot waves. *Equation* rounded up and lay on her side with the 3 sails luffing.

The first thing we had to do was get the "3A" down. We set up for a letter box drop (pulling the sail down between the foot of the main and the boom). This was really hard with the sail trying to blow behind the boat. At one point we considered cutting the sail away, but finally got it down.

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At this point we thought we had a little bit of rudder, and tried reefing the main. When we let the main down the jib caught the breeze and spun the boat down and around. We did 2 complete 360 degree turns as we tried to get the main and jib down. Amazingly we got the sails down with no damage. We did not even break a batten, and more importantly no one got hurt, not even a scratch.

We installed the emergency rudder, put up the staysail, and started towards the Island. Our emergency rudder is not strong enough to withstand the loads of normal sailing. We put the #4 Genoa up and sailed with the 2 sails. We were over 90 miles from the Island, and did not have enough fuel to make it there. We called our shore crew and Erik Vigrass hired a charter boat out of Rogers City to bring us fuel. Some of the crew got off on to the charter boat and I road *Equation* to Mackinac Island. We arrived at about 1:00 am and made last call at the Pink Pony. I don't remember much after that.

This was another great year of the adventures that are the Mackinac Island Races. The most important thing we learned again is that safety and safety equipment have to be the top priority. Don't forget to practice the man overboard drill and take it seriously.