

CUSTOMER STORY

BOATER SAILS THROUGH RACE WITH YUMA RUGGED TABLET



Amateur sailor Drew Wood relied on a Trimble Yuma rugged tablet computer to monitor weather patterns, sailing routes and his boat's instrumentation data as he raced a 20-foot yacht from Newport, Rhode Island to Bermuda and back.

PROJECT HIGHLIGHTS

- **Survivability:** Rugged Yuma tablet performed flawlessly over days of battering by saltwater
- **Communication:** Bluetooth functionality enabled sailor to connect to instrumentation
- **Long Battery Life:** Extended battery kept rugged computer running for days
- **Situation Awareness:** On-board access to weather and GPS location data improved sailor safety and confidence
- **Reliability:** performance over 635 nautical miles of open sea

"The Yuma performed perfectly for the entire race"

"I was even able to use the Yuma to charge my iPod"

SAILOR DREW WOOD'S PERSONAL INTEREST IN TECHNOLOGY PAID OFF WHEN HE READ ABOUT THE NEW TRIMBLE YUMA RUGGED TABLET COMPUTER. THE COMPACT, WATERPROOF TABLET PLAYED AN INTEGRAL ROLE KEEPING WOOD INFORMED AS HE NAVIGATED ROUGH SEAS BETWEEN RHODE ISLAND AND BERMUDA.

CUSTOMER: DREW WOOD

PROJECT: BERMUDA 1-2 RACE

For offshore sailors, the most difficult and dangerous parts of a voyage are generally the beginning and the end, when they are closest to land and are most likely to encounter shallow water, rocks, reefs and increased traffic from shipping and fishing fleets.

Of course, getting tossed around in a small boat on the ocean in the middle of the night with no real measure of your location can be worrisome, as well. Which is why offshore racer Drew Wood breathed a sigh of relief when a Trimble® Yuma™ Rugged Tablet computer arrived to help guide him just one week before he set sail in a race between Newport, Rhode Island and Bermuda.

ABOUT BERMUDA 1-2 RACE

The Bermuda 1-2 Race is a yacht race covering 635 nautical miles (1,175 km) across open sea. Competitors in the Bermuda 1-2 cover the same course as those in the acclaimed Bermuda Race, one of the most popular races in the world for amateur sailors. The difference, however, is that boats competing in the Bermuda 1-2 race in both directions – solo on the way to Bermuda, and double on the return to Newport.

"I've enjoyed sailing since I was a little boy, but I really started following offshore racing a few years ago," said Wood. "The Bermuda event is so well-known that there are always sailors who participate just for the experience. What made me different was the fact I was sailing in a Mini that I hand built in my garage."

MINI-TRANSAT YACHT

The Mini-Transat Class is a yachting category in which the length of the yacht is limited to 21 ft (6.5 m) long – less than half the size of most of the other boats in the race. Measuring nearly 10 ft wide at the stern and shaped like a slice of pizza, the Mini ocean racers are unlike any other kind of yacht.

Fast and powerful, Mini's can be both exhilarating and terrifying to sail, especially when one considers the risks associated with severe weather, shipping lanes and the impact an error in navigation could have. Fortunately,

the rules for the Mini Transat Class in the Bermuda 1-2 allowed for the use of advanced technology.

Wood's personal interest in technology paid off when, just 18 days before the race, he read about the new Trimble Yuma rugged tablet computer. Featuring a waterproof design, integrated wireless GPS and Bluetooth® capabilities, lightweight form factor and seven-inch sunlight-readable color touch screen display, he knew he had found the technology he needed and immediately contacted the company.

"Having navigation equipment onboard to show you where you are in relation to obstacles, shorelines and wind currents makes all the difference in the world, and I knew the Yuma rugged tablet would provide that information," said Wood.

PREPARATION

With just one week until race-day, Wood received his Trimble Yuma rugged tablet and began preparing his electronic equipment for the trek. He loaded a copy of MaxSea software, a marine charting program that displays a boat's current position on a nautical chart, onto the Yuma rugged computer.

Wood also downloaded a weather Gridded Binary Data File (GRIB) and loaded it into the MaxSea software. GRIB is the format used by meteorological institutes around the world to transport and manipulate weather data. The forecast data file enabled a week's worth of information about fronts, pressure gradients, wind velocities and more to be viewed on the Yuma rugged computer.

Before setting sail, Wood also obtained a MiniPlex-BT, which is a Bluetooth-enabled multiplexer that meets National Marine Electronics Association guidelines for collecting and sharing data among navigation instruments, such as speed, depth, wind, barometer and more. Wood was able to review all instruments and data from the Yuma rugged tablet by pairing the tablet with the MiniFlex BT.

EQUIPMENT USED:

- Trimble® Yuma™ Rugged Tablet
- MiniPlex-BT

CHARGING SOLUTION:

- 12 V adaptor to Marine Battery charged by 90 Watt Solar Panel

APPLICATIONS USED:

- MaxSea Marine Charting Program

INFORMATION:

- GRIB Meteorological File

"My race was a great experience and the technology was a lifesaver," he said. "The Yuma performed perfectly for the entire race and is the perfect tool for a small, wet boat like mine. I had a definite advantage over the other Mini racers. I predict that, in the future, we'll all be racing with Yuma rugged tablets."

ON THE OPEN SEA

As anticipated, Wood began reaping the benefits of having a rugged computer onboard almost immediately.

"Having the built-in Bluetooth transmitter sending all of my instrument data to the computer was amazing," said Wood. "MaxSea provided theoretical performance data for my boat under varying wind conditions, so being able to see where I was in relations to specific wind and weather conditions made it easy to determine my course along the way."

Aside from the hazards associated with harbor navigation, one of the first obstacles sailors have to worry about are the New York shipping lanes, which Wood had to cross almost immediately. "Fortunately, the shipping lanes are on the nautical chart, which I could clearly see on the Yuma tablet," said Wood. "It helped to know exactly when to watch for ships, and from which direction they should be coming."

The Yuma rugged tabled continued to payoff throughout the entire race, despite the fact that it was kept in a flimsy net hanging from the side of the boat, which was constantly battered by saltwater waves.

POWER MANAGEMENT

With just a little attention to suspending the power when the Yuma rugged tablet wasn't in use, the computer's extended life batteries lasted three full days without being charged. After the third day, Wood was able to use the boat's solar power to charge the computer's battery.

"I have one 90-watt solar panel on the stern that I adjust to keep pointed at the sun throughout the day. The solar panel charges two marine deep cycle batteries that keep the instruments, autopilot and navigation lights working," said Wood. "I was able to charge the Yuma computer with the 12 V adaptor, and was even able to use the Yuma to charge my iPod."

SUMMARY

The technology worked even better than Wood expected. "The GPS capabilities of the Yuma rugged computer gave me a clear understanding of my location at any given time and helped me plan my route along the way," said Wood. "I was also able to keep an eye on the weather and my instrumentation to better predict the currents as I progressed. The Yuma tablet was my information hub!"

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The Trimble Yuma rugged tablet performed perfectly for sailor Drew Wood, even after days of constant battering by saltwater waves. The Trimble Yuma's extended battery life and the boat's solar power kept the rugged computer running for days on end at sea, giving Wood added safety and confidence.

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