

Professional Sailor, Kojiro Shiraishi Data analysis during yachting races

TOUGHBOOK

During harsh ocean yachting races, information can truly decide one's fate. TOUGHBOOK, which can be continuously used under such tough conditions, offers tremendous support.



Accomplishing a circumnavigation of the globe on a continuous solo journey in a yacht without any assistance or supplies at the young age of 26 in 1994, Kojiro Shiraishi, a professional sailor and marine adventurer is a former record holder as the youngest-ever sailor in the world. In addition to three successful solo circumnavigations of the globe, he has also been involved in many ocean yachting races. In harsh ocean yacht races during which sailors are exposed on their own to the natural elements, it is critical to avoid risk by taking full advantage of all available information. A 12.0-inch rugged, detachable* and convertible PC, TOUGHBOOK CF-33, is the answer. In a steering house (a cabin where many instruments and monitors are installed) on Shiraishi's yacht called the Spirit of Yukoh, there is a TOUGHBOOK that is essential for navigational purposes. "I likely subject it to harsher conditions than anybody else." We interviewed an adventurer continually aiming to be No. 1 about how he utilizes TOUGHBOOK in a race that involves constantly dealing with the dangers of nature. *A detachable PC has a keyboard that can be detached from the screen, allowing the device to be used as a tablet or laptop.

Background to introduction

Durability and convenience for continual use in the harshest ocean yacht races

Do you know of the ocean yacht race that is said to be the harshest in the world? Shiraishi addresses the challenge of Vendée Globe. This is a solo yacht race that takes place every four years, and with only the wind as a driving force, the sailors strive to circumnavigate the globe without a port call for 80 to 120 days, with the race considered to be the highest class in the world. After leaving Les Sables d'Olonne in Vendée on the Atlantic coast in France, participants must continue to sail without calling on a port or receiving supplies while on the ocean. Owing to such extremely harsh conditions, the capabilities for sophisticated information processing and best judgments are literally "lifelines" for survival.

Such harsh conditions apply not only to the sailors but also to PCs, which are subject to severe vibrations, abnormally high humidity, and extreme temperature changes. A durable PC that can withstand such an environment is thus required. The rugged 12.0-inch detachable and convertible PC TOUGHBOOK CF-33 offers high drop-shock resistance and shockproof performance, a vibration-resistant design that is compliant with MIL-STD-810G, a dustproof and water-resistant design compliant with IP65, and resistance to temperature variations, making it essential for adventurers competing in ultimate races. In addition, as this PC is detachable, it can be carried off-board and touch-operated even while wearing gloves, which were essential when selecting a device.

In addition to durability and convenience, a long battery life is also critical in a yachting environment where securing power is not that easy. TOUGHBOOK CF-33 was evaluated to satisfy these very conditions.



Kojiro Shiraishi, Professional Sailor



Ocean races are accompanied by severe pitching, rolling and splashing

Introduction benefits

TOUGHBOOK can withstand extremely harsh conditions, such as severe pitching, rolling, temperature variations and splashing

- Operates under extreme variations of temperature, from below 0°C (32°F) to over 40°C (104°F)

As yachts sail with their hulls tilted, they are rarely level. Furthermore, as they sail through raging waves, they are always susceptible to shocks. The harsh conditions include not only pitching and rolling, but also considerable splashing, as the sea surface is so close, along with abnormally high humidity in the cabin.

Variations in temperature are also problematic. While sailing close to the equator, the temperature can rise to above 40° C (104° F), but the Antarctic Ocean region can see temperatures below 0° C (32° F). Shiraishi chose the rugged 12.0-inch laptop PC, TOUGHBOOK CF-33, as a device that can continually be used in such harsh conditions. "Withstands harsh vibrations and humidity and variable temperatures. I think of TOUGHBOOK as the only device of its kind. Many other sailors also use TOUGHBOOK."

- Detachable design plays an active role when placing the yacht against a pier

If a laptop PC is fixed in the steering house, it is disadvantageous, as it cannot be used in other places. However, with the detachable TOUGHBOOK CF-33, the tablet can be detached and carried by hand, if necessary. "When I situate the yacht against a pier, I operate the yacht while checking the surrounding conditions with my eyes and also GPS information on the monitor. Detachable types are useful in such cases. Also, I can touch-operate it even while wearing gloves."

In addition to TOUGHBOOK CF-33, he often uses the rugged 5.0-inch handheld TOUGHPAD FZ-X1, outside the cabin, as it excels in terms of mobility. "Being light in weight is more important than you would expect. If a PC is heavy, you will not bother to carry it. In this sense, I often feel very lucky that a light model that can be carried by hand without any stress is available."

- Long operating time even in conditions where recharging is difficult

As it is difficult to secure sufficient power supply on a yacht, long hours of operation are one of the most attractive points of TOUGHBOOK.

In order to continually make the best decisions so that the yacht can get closer to the goal as fast as possible, Shiraishi takes full advantage of sailing software for navigational purposes by analyzing information about the weather and his yacht. "Two meteorological companies in the US and Europe update weather charts twice a day. I download them via satellite communications, and check information on both charts together with the direction, speed and conditions of the yacht on the PC to determine the best routes."

If the battery runs out during this important downloading process, it would be a total disaster. TOUGHBOOK CF-33 tablet has two detachable batteries, realizing about 12.5 hours of operations. If batteries are replaced one by one, hot swapping is also possible.

Recognizing this value, he says that a long operating time is one of the reasons that he continues to use TOUGHBOOK.

*Battery operating time based on a JEITA battery run time measurement method (Version 2.0). The battery run time varies, depending on operational environment, LCD brightness and system settings. By controlling the full charging capacity step by step, the life of a battery pack can be extended.

Why TOUGHBOOK CF-33 was chosen

Point 1	Point 2	Point 3
Drop-, shock- and water-resistant design to endure severe pitching, rolling and splashing	Detachable type that can detach as a tablet and useful for off-board activities	Long battery life for use onboard with a limited supply of power provides a sense of safety



Shiraishi working on the deck with detached tablet



Operating TOUGHBOOK with gloves on



As a light-weight device that is easy to carry, the rugged handheld TOUGHPAD FZ-X1 is also often used.



"I likely subject it to harsher conditions than anybody else," says Shiraishi.

For inquiries, please contact: