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Toughbooks in Action

Panasonic Toughbooks 'IN THE LINE OF FIRE' with Howard and Sons Pyrotechnics Displays

Australian company Howard and Sons, a world leader in the field of pyrotechnics, is using Panasonic's Toughbooks to meet the extreme demands of live computer-controlled fireworks displays at outdoor events.

Howard and Sons has been established since 1922. The company designs and manufactures fireworks and provides dazzling fireworks and multimedia pyrotechnics displays for major events across Australia and around the world – in both outdoor and indoor environments – including national celebrations, rock concerts, festivals, corporate and private events.

Panasonic's ruggedised Toughbooks are specialised notebooks, with a design that can withstand the extreme field conditions experienced in pyrotechnic events.

The fully ruggedised Toughbook CF-18 convertible notebook/ Tablet PCs purchased by Howard and Sons provide protection against vibration and shock; are specially sealed to resist damage from liquid, dirt and dust; and are used tablet-style to provide touchscreen operation to drive the shows.

TOUGHBOOK®
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The Toughbook's features are vital to the success of outdoor fireworks events where the notebook is subject to extremes of temperature, powerful vibration, corrosive falling debris, moisture

from sea water or rain, or dirt in stadium or trackside environments. They also have the ruggedised durability needed to stand up to the constant transportation from show to show.

Andrew Howard, Director, Howard and Sons, said: "We could be holding an event anywhere, from the desert, to a ski resort in the snow, a rusty barge in the harbour, or a speedway environment. Our solution had to withstand heat, cold, dust and rain, all the elements we work in. Toughbook was the only product on the market that would handle this stuff."

Howard and Sons began using Toughbooks in January 2005 for setting up and live control of their fireworks displays. One of the first uses was the Australia Day fireworks. Each fireworks display is programmed using a program called 'FireOne' software, which precisely synchronises the detonation of the fireworks to live music.

The program is downloaded to the

Toughbook, which is connected to the 'FireOne' controller, which in turn fires the circuits for detonating the fireworks. The system is operated via radio link, with the Toughbook receiving signals to activate each section of the show.

During the set-up of each fireworks show, the Toughbook is used to test the detonation circuits. Before the event begins, the technicians re-test to ensure all the circuits are open and working, and that the Toughbook is receiving the transmission of music sync time codes.

Andrew Howard added: "Because the CF-18 converts into a tablet, we can fold the screen down so it covers the keyboard and is facing up. By using it in pen-only digitiser mode, there is no risk of accidentally stalling or stopping the live show if debris falls on the toughened screen."

The Toughbook can also be used to address any 'glitches' during the show.

"For example, if there was an unplanned explosion on one barge, we can hit that barge on the touchscreen, and isolate it from other areas. Once we've assessed the problem, we can bring it back online at the touch of a button."

Water and dirt resistance was a key purchasing consideration when selecting the Toughbook. Andrew Howard said: "The barges themselves are dirty and rusty, and we can get a lot of sea spray, as well as the spray when we include jet ski shows. Fireworks can look better in rain, due to the water droplets, so if the client is happy, we will go ahead. Also, it will often rain at some stage during the set-up period, so our equipment has to be reliable at all times."

The CF-18's design helps protect against this, water, dust and other damaging elements with features such as waterproof seals for LCD, keyboard and interface ports. In addition, keyboard circuitry is sealed and integrated with the keyboard and touchpad in a single panel, that is itself sealed from the PC's interior – so even if debris enters via gaps in the keyboard, it cannot reach internal circuits.

Vibration-resistance was another key factor that convinced Howard and Sons to go with the Toughbook, as fireworks displays cause massive concussions and vibrations which could stall a program, or dislodge internal components.



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