



CASE STUDY

## **British Adventurers The Turner Twins Rely on Panasonic TOUGHBOOK Rugged Technology to set Tandem Electric Paramotor World Record**

*Panasonic's TOUGHBOOK 40 rugged notebook and TOUGHBOOK G2 rugged 2-in-1 tablet were pivotal in the planning and execution of the world record attempt in the French Alps, exceeding expectations every step of the way.*

**Client: The Turner Twins**

Location: Val d'Isere, France

Product(s) supplied:

TOUGHBOOK 40 mk2

TOUGHBOOK G2 mk3 standard

*"In every endeavour our goal is to re-discover the world through new technology, pushing the boundaries of what's possible. The Panasonic TOUGHBOOK rugged notebook and 2-in-1 tablet performed brilliantly. Whatever the conditions, we were able to use the technology with confidence. "*

---

**Hugo Turner**

Professional Adventurer  
The Turner Twins



**Challenge**

Push the boundaries of what's possible in emission-free aviation to set a new Tandem Electric Paramotor world record.

**Solution**

Utilise Panasonic's ultra-rugged TOUGHBOOK 40 notebook and TOUGHBOOK G2 2-in-1 detachable in the planning and execution of the record making paramotor flight, including accessing weather data, 3D modelling, and data capture.

## Pushing the boundaries of what's possible

Hugo and Ross Turner, otherwise known as The Turner Twins, are professional British adventurers helping people learn about the world and advances in electric aviation through new technology and expeditions.

Together they have rowed the Atlantic, climbed Mount Elbrus in Russia (Europe's highest peak), trekked across Greenland, and have reached several Poles of Inaccessibility while testing new technology. In October 2024, the Turner Twins embarked on an attempt to set a new world record in altitude in an electric tandem paramotor.

With sustainability at the heart of everything they do, they wanted to demonstrate the power of emission-free technology in their record attempt. With the current tandem altitude world record set using a petrol paramotor, Hugo and Ross were keen to push the boundaries of what's possible with a zero-emission battery powered engine.

Test flights took place in the UK followed by the world record attempt in Val D'Isere in the French Alps with Panasonic TOUGHBOOK rugged devices playing a critical role throughout. The Turner Twins used the Panasonic TOUGHBOOK 40 rugged notebook and G2 rugged 2-in-1 tablet to capture necessary data including accessing weather maps, heat maps and 3D geographic modelling in real time, ensuring precise planning and execution at every take-off site, both during the test flights and the actual world record attempt.

With the flight taking place at high altitude and in unpredictable conditions, rugged technology was pivotal to success. Both the TOUGHBOOK 40 and G2 are engineered from the ground up to be used in remote locations, providing limitless performance in the harshest of environments. Both can comfortably operate in temperatures between -29C and +63C, are independently tested to military standards for ruggedness, and can survive drops, knocks and vibrations without any compromise in performance. The 40 is the first TOUGHBOOK to be fully IP66-rated for water and dust ingress.

*"The challenge of modern adventuring is finding innovative technology that will work wherever we are and can support the data capture we need. Things like digital 3D imaging, photos, data handling and storage capabilities are foundational. We therefore need tough, rugged and reliable electronic equipment to support our expeditions. In the past we've been let down by mobile devices that failed to deliver in harsh environments. We're pleased to say the Panasonic TOUGHBOOK technology delivered on all counts, whatever we were doing, and wherever we were doing it. "*

---

**Hugo Turner**

Professional Adventurer

The Turner Twins

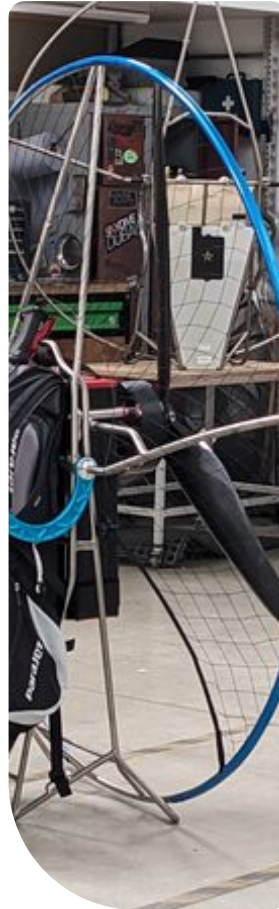
## Setting a new world record – thorough preparation pays off

While the twins had successfully completed test flights in the UK, when it came to the actual record attempt they faced multiple challenges in the rugged landscape of the French Alps. An experienced paragliding instructor, Gilles, who knew the local terrain and conditions was enlisted as an official observer to validate the record attempt.

Familiar with petrol paramotor flight, Gilles was initially sceptical. Would battery power be enough? Was the runway long enough to accommodate take-off? Would the weight dynamic in thin air at high altitude work? Despite the new terrain the twins were confident. Their research and test runs in the UK were solid. It was also in their nature to push the envelope and trust that their thorough preparation would enable them to reach the desired altitude.

At 1pm on October 30<sup>th</sup>, 2024, the conditions were perfect, and they set off from the very edge of the flattest land available in Val D'Isere – a rugby pitch 1,917 metres (6,289ft) above sea level. After successfully becoming airborne, Hugo and Ross flew for 35 minutes.

In flight, the battery life and efficiency of the tandem electric paramotor was their main concern. It was like playing a game of cat and mouse with the battery management system and throttle. Similar to if the batteries get too cold, the strenuous energy required to lift Hugo and Ross into the air and keep them there meant that the batteries would normally get too hot, but the cooler air at altitude meant that they continued without issue.



*"It was an incredible 'fly by the seat of your pants' take-off. As we were getting lift and working the thermals we had a lot of calculating to do. We were not only trying to monitor the battery temperature and the amount of energy we were using, but also the climb rate and the wind conditions; it was exciting and all-consuming"*

---

**Ross Turner**

Professional Adventurer  
The Turner Twins

The Turner Twins successfully reached a total altitude of 2,613 metres (8,572ft), verified by the FAI, the global world air sports federation, as a world record for a tandem electric paramotor.



*"We were thrilled to reach the record-making altitude, but we then had to shift focus to land back safely where we started. To our surprise the rugby pitch also had a number of sheep, goats and horses grazing the area. Our observer, Gilles, however kindly shooed them off and we were able to make a perfect spot landing"*

---

**Hugo Turner**

Professional Adventurer  
The Turner Twins

## Documenting and delivering crucial data

As soon as the pair touched ground, they immediately took all data from the recorders on board (in CVS format), including GPS data and footage, and transferred everything to the TOUGHBOOK devices so the record attempt could be checked and verified. The microSD card slots enabled quick and easy transfer from the GoPro 360 cameras into the devices.

Reflecting on the experience of using the Panasonic TOUGHBOOK devices, a number of features stood out.

Ross comments: *"The Panasonic TOUGHBOOK devices performed brilliantly. We could use the notebook and tablet in the same way whether in the office, in the car en route and at remote test sites, and at high altitude in the French Alps. Cold, damp, windy, dusty – whatever the conditions we were able to use the technology with confidence."*

Hugo comments: *"The flexibility of the G2 also stood out. As a 2-in-1 detachable device we could easily switch between using the notebook touchpad, touchscreen, and the screen pen. This was especially useful when multiple team members were all using the same device at the same time. We also appreciated the glove mode on both devices, which meant we could use them with our gloves on in the cold mountain air."*

Another feature that impressed was the adjustable red backlights on the G2. Ross comments: *"Usually it's white or blue lighting of keys and screens that tends to be too intense in certain conditions. This showed the kit was designed by someone who has been in a similar situation and knows what people working in remote and changeable conditions need from their devices."*

The twins also made use of the hot-swappable batteries enabling them to change one battery while using another. On location at the launch site the cold temperatures significantly affected battery longevity, causing them to deplete at a quicker-than-expected rate. The ability to swap them out was critical ensuring preparation went uninterrupted.

Hugo and Ross conclude: *"Together we pushed the boundaries of what's possible with emission-free technology to set our tandem paramotor world record just as we had set out to do. Panasonic TOUGHBOOK rugged technology was invaluable in supporting us every step of the way as we set a new world record."*