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WORLDWIDE PARAGLIDING AND PARAMOTORING MAGAZINE. FOR FREE.



Photo: Nivnik

#springtime2023



**The brand new Niviuk
Klimber 3P in a thermal,
preparing for the X-Alps...**
Site:
Fisher Towers, Utah, USA
Photo: Tim Rochas
Pilot: Tanguy Renaud-
Goud

Translations by Ruth Jessop

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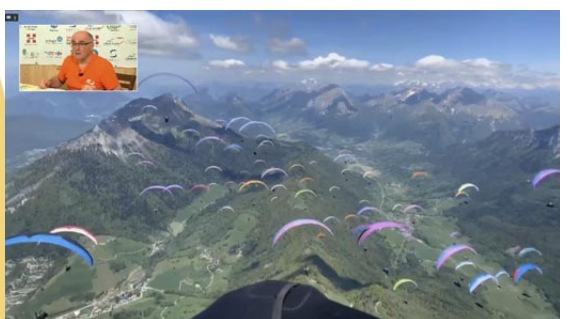
WORLD CHAMPIONSHIPS



The 18th Paragliding World Championships is taking place since May 20th to June 3rd, 2023, in Chamoux-sur-Gelon.

Throughout the duration of the competition, enjoy a WebTV service at the following address: www.paraglide.tv. It is co-hosted by Philippe Moreau and the great sportswoman, producer, host and columnist Frédérique Bangué.

The Chartreuse Massif will also be on the list of areas to fly over. Along with of course: Saint Hilaire and the Dent de Crolles!



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DISCOVER NEW PATHS

WITH ULTRA-LIGHT PARAGLIDERS





Walking at night during the X-Alps: Tom Cocone is visibly fighting fatigue. Photo Adi Geisegger

X-ALPS: SLEEP MORE

The Race Committee has announced a significant change to the mandatory rest period. In contrast to the previous fixed rest stop, there is now a Minimum Rest Period which can be taken between a more flexible time period.

The new rule (9.2) states that athletes must stop for a minimum of seven consecutive hours everyday between 9PM and 6AM. This means that the period between 11PM and 4AM are fixed non-moving hours.

Previously athletes had to stop between the hours of 10:30PM and 5AM.

Supporters also get an additional responsibility (rule 9.17). They must now confirm to the Race Organization every day before their athlete has taken their first flight or latest by 10AM, that their athlete has properly rested and has the physical and mental ability to continue to race safely – even when they have taken a Night Pass. 🏆

PHI-AIR.COM



MAESTRO 2 light

High B

SHOT VIPER XC

Ozone Power manager, Emilia Plak, captured this beautiful image with her ViperXC and the lightweight PAP cart with only an Atom80 as the engine.

Perfect, she says:

"This is by far my favorite wing! It has a bit of everything! The very high performance allows me to fly a small size 16 with the Atom 80, on a trike. It is agile for playing, stable, efficient and fast for long XC flights. Take-off and landing are quick but easy, thanks to a lot of energy and a good flare."





PAPESH GMBH, ALEX HÖLLWARTH : NEW BRAND "ZOOM", EN C 2 LINER


Benjamin Hörburger (the pilot above) is the main test pilot at Phi, and also tests for the new brand Zoom who is part of Papesh GmbH.



**Alex Höllwarth, head of the new brand "Zoom", a part of Papesh GmbH.
Photographer: Pascal Purin/Papesh GmbH**

Alex Höllwarth, former developer at Skywalk, is now setting up an own brand called "Zoom" within Hannes Papesh's company Papesh GmbH. He is working on this 2-line EN C, which doesn't have a name yet.

It will obviously be different from the Scala 2. It will be an EN C intended for another audience than the Scala 2, with a "different taste".

For that, according to test pilot Benjamin Hörburger, it is less elongated, more agile in the roll, and offers a more linear response to the controls. 



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Photo: Niviuk

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X-ALPS: KLIMBER 3P

At the end of March, Niviuk launched the Klimber 3P, a 2-line EN D which will represent the brand during the X-Alps. The smallest size weighs only 2.85 kg. It is based on the Peak 6, but with better performance and faster.

Compared to the Klimber 2, it is more damped in pitch and roll. With a 25% increase in brake travel, it should be easier and safer.

The whole assembly, wing, Arrow P Race harness and Expe Race bag weighs around only 4.5 kg. 

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A NEW PARADIGM

The Bonanza 3 offers a whole new world of flying. Performance and speed has never been so accessible.

The Bonanza 3 is our new 2 liner Sports Class wing for XC pilots featuring our Wave Leading Edge Technology, inspired by the tubercles of the humpback whale. The delaying of the separation point at high angles of attack increases aerodynamic efficiency — meaning you climb faster and with more control.

5 Sizes | 60-125 kg | EN C



Bonanza³

www.gingliders.com

Photo: Sascha Burkhardt



CARESS YOUR RISERS

It's been known for a long time, but often forgotten: the importance of the distance between your hands and the risers. The precision of the piloting and the stability of the wing's course depend on it!

The position of the pilot's hands in relation to the riser has a significant influence on the steering. There are some very good reasons for keeping your hands with the controls close to the straps that connect you to the wing. As a reminder:

1. AVOID BEGINNER'S REFLEX ACTIONS

During takeoff, but also in the air, it is important not to give in to "pedestrian reflexes" such as breaking a fall to one side or behind. Example: If at the start of a parachuting incident, the pilot, feeling himself falling backwards, puts his hands very low behind him to break his fall onto the (non-existent) ground. For a pedestrian, this is a good idea. In the air, this makes the situation worse by additional braking. If you keep your hands constantly near the risers, the risk is much lower.

A nice take-off with a quadruped passenger. On the other hand, if the pilot were even more destabilized by a roll to the left side, they could be tempted to "break" the "fall" to the left (pedestrian reflex), and so worsen the roll by an involuntary action on the left control... If the controls are always close to the risers, this risk hardly exists.



Photo: Jacques Paul-Stéfani

Photo: Jacques Paul-Stéfani



2. AVOID PENDULAR INSTABILITY

If the pilot's hands are far from the risers (top left photo), rolling or pitching movements by the pilot induce actions on the controls and thus increase pendular movements. Because it is as if the weight of the pilot were suspended at four points. If the pilot's hands stay close to the risers, the suspension lines are concentrated at two points. Try the difference during the next flight, the result may be surprising. Otherwise, the pilot must constantly compensate for his movements, thus losing efficiency.

3 INCREASE THE ACCURACY OF PILOTING

If your hands move along the risers, the exact proportion of braking is constantly visible and independent of the pressure on the brakes. Moreover, many pilots also do not hesitate to touch the risers by pinching them slightly between their fingers, especially when turning in thermals.

4 THE POSSIBILITY OF HOLDING YOUR-SELF BACK

It is debatable, but pilots sometimes hold on, to stabilize their position in their harness, by grabbing the whole riser-bundle. Michael Nesler advises that if you have a collapse, grab the riser bundle above the carabiner, just opposite to the collapse, in order to brake a little bit on the open side and avoid falling onto the collapsed side. The big disadvantage, especially with modern wings: this can cause a more brutal reopening. For many other specialists, it would be better to accept a slight amount of weight shift on the collapsed side, which would induce a more gradual reopening.

On the other hand, to avoid a twist, it can also be useful to hold on to the risers, at the very least by pressing an arm or a wrist against a riser, without gripping it. Also, for this last technique, it is better to keep your hands close to the risers.

Clinging on has the disadvantage that the pilot can no longer 'feel' the information as clearly as when the wing communicates via the controls.

In any case, only in a well-adjusted harness can the pilot act as he should do, with relaxed muscles: more on this subject in a future issue.

5 PILOTING ON THE REAR RISERS

Steering is more and more common with the Cs (for three liners). In accelerated flight it requires the pilots hands to be constantly present near the handles or bars at the rear. An extra reason to keep your hands constantly near the risers...

Taking off with your arms behind you is pleasant and encourages good speed take-up thanks to good load take-up of the pilot's weight. Due to this position with your hands behind you and high up, rather than at the side, and the body being forward, this position is not subjected too much to the pedestrian reflex, and thus constitutes an exception to the advice to keep your hands close to the risers.

Photo: Sascha Burkhardt. Pilot: Arthur Burkhardt



Photo: Jacques Paul-Stefani



Left pilot: body tucked in, hands near the risers.
Right pilot: just after takeoff, the pilot still isn't sitting comfortably, so hands and legs are obviously not retracted yet. We can intuitively see that the steering on the left is more precise.



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VOICE ASSISTANT · Bluetooth®

NEW VARIO
BLUETOOTH

ORDER ONLINE AT STODEUS.COM

EN C

ARTIK RACE

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The knowledge gained in the development of the Artik 6 and all our 2-liners (such as our racing models Peak and Klimber) has culminated in the creation of the Artik Race, an EN C 2-liner.

An unparalleled experience that will offer you speed, aerodynamics and high performance; at the same time as accessibility, progressivity and the passive safety of an EN C wing. Be at the leading edge with the new Artik R.

Sizes

21 / 23 / 25 / 27

Colors



OPAK

DISKUS

WASP

EN/LTF D

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RAISE THE LEVEL

More performance with an amazingly pleasant and efficient turning. The Peak 6's maximum speed has been improved while staying easy to control. Our R+D Team has designed a new profile and refined a totally new internal load distribution to improve the surface and the in-flight gliding experience. All this, without losing the great comfort offered by this two-liner wing, as well as its safety, stability and accessibility. Experience your XC or competition flights like never before.

Sizes

21 / 22 / 24 / 26

Colors



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MINI-VARIO, MAXIMUM PERFORMANCE

A noteworthy new feature: the UltraBip connects to iOS and Android tablets or phones via Bluetooth.
Photos Stodeus

Since the beginning, the small varios from the brand Stodeus, with various names along the lines of "xyzBip", have made incredible progress. The UltraBip adds another dimension to this. Impressive!

Since the first BipBip 12 years ago, Stodeus instruments have amazed us. Initially it seemed relatively limited in terms of functions, however the solar charge and the clarity of the sounds were impressive.

A very big technological step was the release of the GpsBip in 2015. Already, to have integrated a GPS in an instrument of this size, powered by a solar panel, was remarkable. But also, the voice output was mind blowing. Such a natural voice, announcing flight parameters at regular intervals, was not just pleasant, but also very

useful in a mini-instrument which, by definition, can hardly offer a display.

Manufacturers such as Skytraxx tried to implement such a function, but finally abandoned it in a corner of the settings. It's quite a job to design natural voice messages, in lots of different languages, which comes out of a solar-powered mini-box! It's interesting to note that one of Timothée Manaud's other ways of making money is by designing sound cards for pinball machines. This experience was undoubtedly very useful...





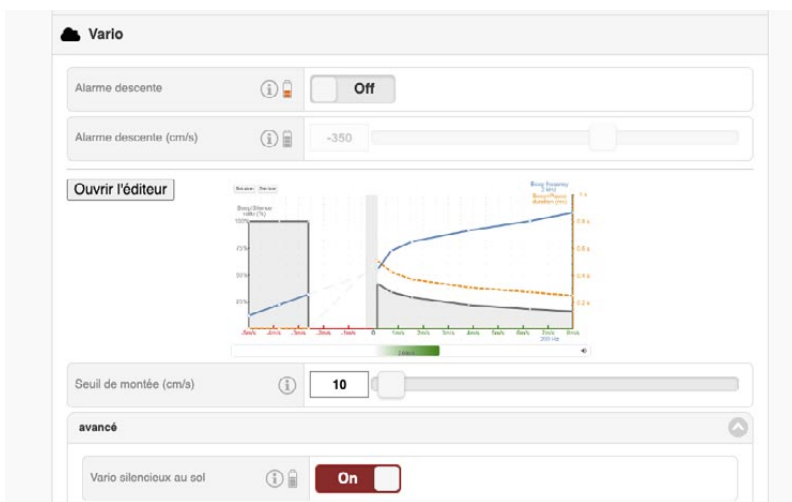
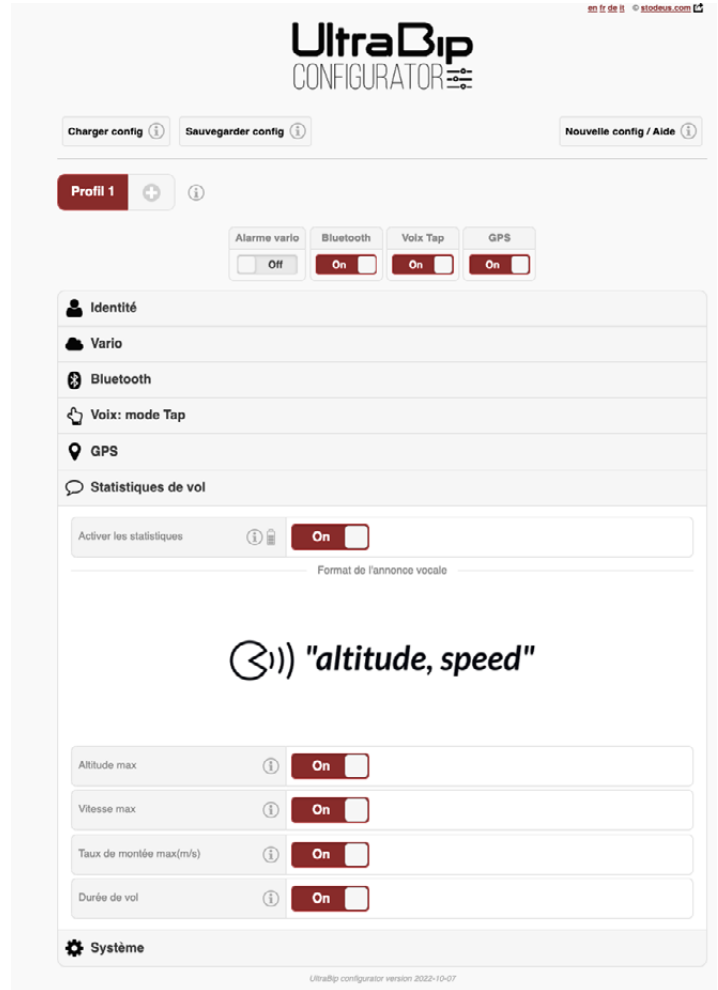
But Stodeus also addresses many other details, sometimes bordering on perfectionism. This is especially visible in the configuration of the instruments, whether by having just one button to press before the flight, or for the more detailed settings via a web interface, after connecting the instrument to a computer. The very user-friendly web app even fits into the instrument's memory and runs smoothly on any type of web browser. Updates are easy and, of course, all flights can be downloaded in IGC format (valid G-Record signature). A KML recording is also available to quickly display and relive the flight via Google Earth for example. The USB interface also allows the instrument to be recharged to 100% (rarely necessary), and to connect headphones.

Bluetooth, USB-C... Connectivity that always worked well during our tests.
Photo: Stodeus

The only downside: Bluetooth does not (yet) allow connection to a wireless headset. On the other hand, a USB-C adapter allows the connection of a wired headset to both the UltraBip (voice, beeps) and the BipBipPro 2 (beeps).
Photo: Sascha Burkhardt



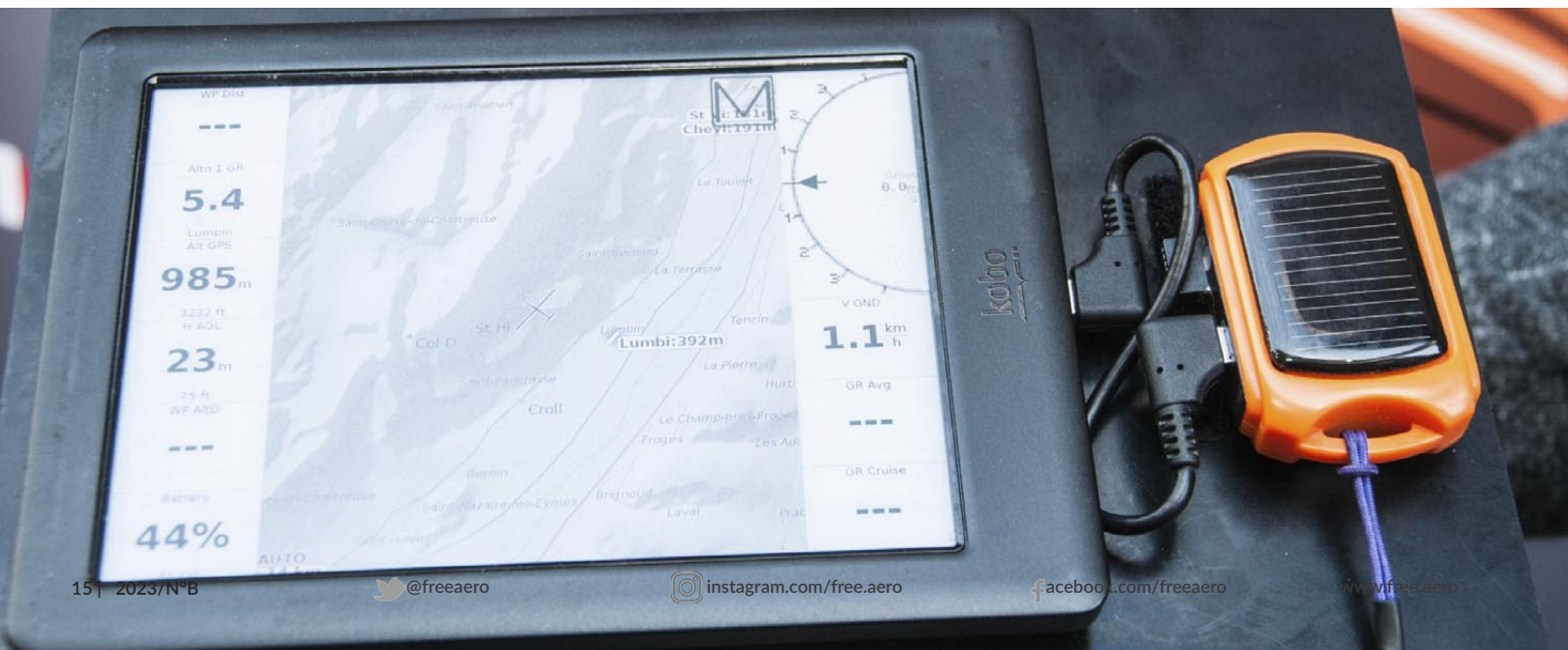

MAESTRO 2 light
High B



The web-application for the configuration of the instrument runs in an internet explorer window and can be launched locally from the memory card which is integrated in the instrument. It offers many settings and works with remarkable fluidity. For each function, a symbol indicates the electrical consumption and therefore the probable reduction in battery life.

The web interface also allows you to adjust the information transmitted vocally. We are "fans": everything is activated, as the information is useful. The possible decrease in battery life has never been a problem.

The GPS-Bip could already be connected to a tablet via a cable, as shown here five years ago. However, the Bluetooth connection is a big step forward and brings the UltraBip much closer to perfection.

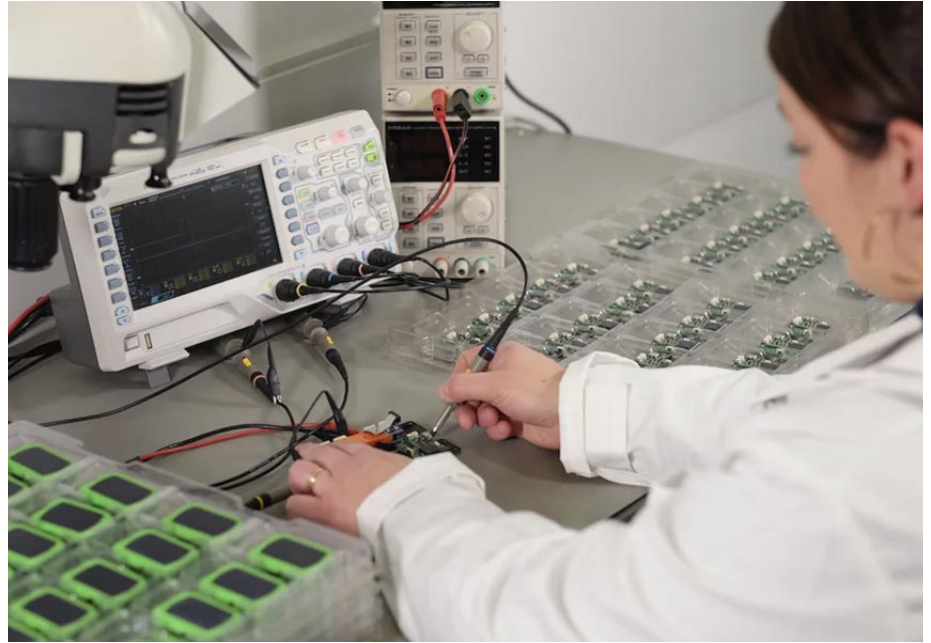




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**DISCOVER
NEW PATHS**

WITH ULTRA-LIGHT PARAGLIDERS



Stodeus instruments are manufactured in France, in the Grenoble technology park. This is in keeping with the times.
Photo: Stodeus

The UltraBip runs on solar energy, with a new high performance "SunPower" solar panel, capable of producing 193mW of power. It is thinner, more discreet and reinforced with a layer of PET/EVA, which gives it a lot of protection against shocks and scratches. The advertised battery life of 50 hours seems realistic to us. Photo: Sascha Burkhardt





Clarisse and Timothée, the surprisingly efficient little Stodeus team. Photo: Bruno Lavit

The sounds the vario makes are very loud and clearly audible, whether the instrument is attached to the instrument carrier, to the helmet or on the shoulder. Unlike other manufacturers, Stodeus has chosen the loudspeakers very carefully: in the UltraBip, there is even a piezoelectric loudspeaker for the beeps and a "hi-fi" loudspeaker for the voice output. All this in a case weighing less than 30 grams.

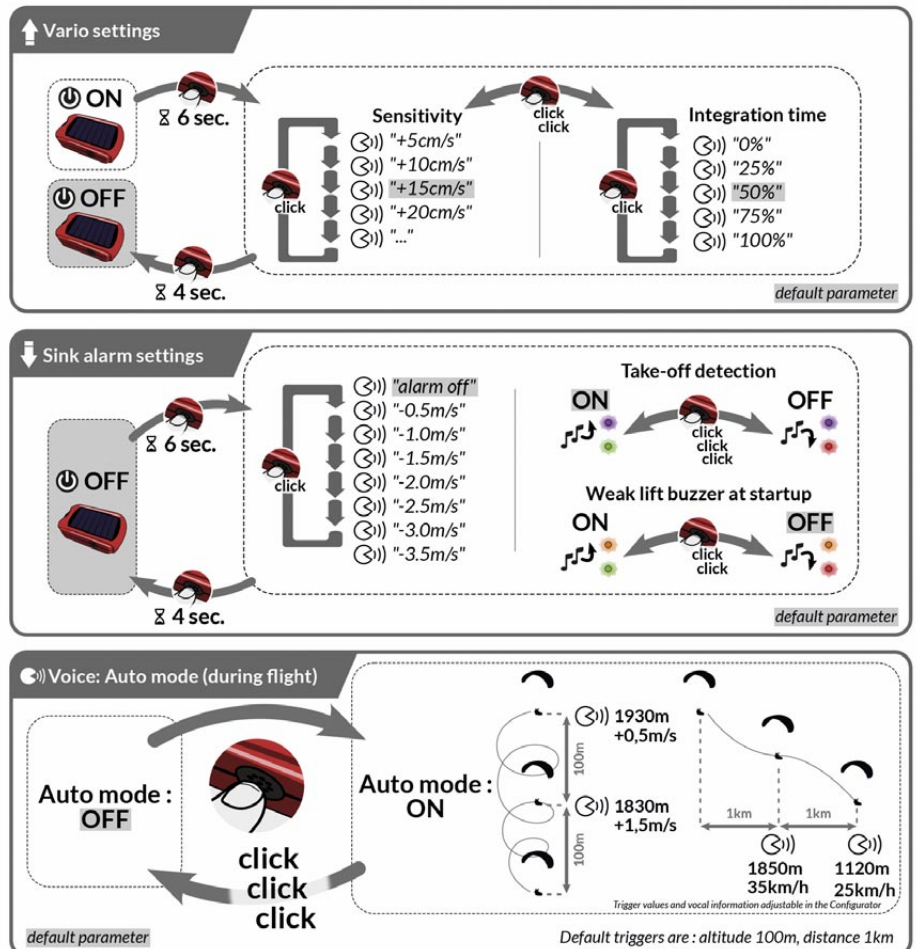
The reactivity of the sounds is very good and comparable to the best instruments currently on the market. Surprising: so far, and therefore also during our tests, this performance is obtained without the complete algorithm which will integrate, perhaps already at the time of the release of this article, the gyroscope and accelerometer sensors as well.

Remember that such algorithms, comparable to the calculations of artificial horizons, make it possible to better differentiate between a climb in a thermal and a dynamic movement, such as a flare, for example. The complex implementation of this algorithm will be done by a simple software update via the web app. We can't wait to hear the acoustics, which are already very effective, improve further!

Another decisive step forward is the integration of a Bluetooth BLE interface into the UltraBip. It allows the wireless connection of the instrument to an Android or iOS tablet or phone.

Reliably and easily, the pilot can thus display all the flight parameters on apps such as XTrack, FlySkyHy, SeeYou, which also display the pilot's position on their maps. This position can come from the UltraBip's GPS, which saves the phone's battery.

The quick manual shows how easy it is to use the fairly user-friendly configuration, which, moreover, relies on just a single button!





PHOTON

2-LINER SPORT-PERFORMANCE CLASS

The Photon brings a new era for the **Sport class (EN C)**. All of Ozone's know-how in 2-liner designs has been applied to this wing to make it the missing link between conventional 3-liners and competition models.

True Performance was our focus during the extensive development phase to produce practical usability and comfort throughout the speed range in real XC conditions. The **handling, stability, and ease of use** are as important to us as the performance numbers, which are close to those of the Zeno 2. Nonetheless, collapse behaviour and passive safety are solidly within the EN C category. **Welcome to the future.**



This “remote screen” on the UltraBip makes it a full instrument, with one small restriction: telephone screens are generally not as bright as those of larger flying instruments, and it is debatable whether the use of a communication device such as the iPhone is really ideal: if it drains the battery, it’s not a good idea.

For this reason, some pilots use an old telephone or a tablet as a “remote screen”, and the telephone for communicating remains unused in their pocket. E-Reader tablets with perfectly readable eInk screens are also a good solution, but you should know that the Bluetooth must be according to the BLE standard, which consumes less energy, but it is not present in older models.

In short, the UltraBip is a very well thought out, designed and manufactured instrument, the perfectionism of Stodeus is visible in the many functions and details. All this for a price of less than 300€, amazing...



In terms of readability, an eInk tablet is optimal. Unfortunately, this March 2018 Likebook does not speak “BLE” and therefore does not communicate with a modern instrument like the UltraBip. Here, it was connected to an old XCTracer, but it is no longer compatible with the new XTracers either.

Photo: Sascha Burkhardt

Physically, all the instruments from this French manufacturer are similar since they are housed in a similar case. To understand all the differences, here are all the models on sale or discontinued...

STODEUS: THE COMPLETE RANGE



Model	leBipBip Original	leBipBip+	MiniBip	BipBip PRO V2	leGPSBip+	UltraBip
Price	74,95€	89,95€	59,95€	99,95€	219,95€	279,94€
Speaker	✔ piezo buzzer	✔ piezo buzzer	✔ piezo buzzer	✔ piezo buzzer	✔ hifi speaker	✔ Dual Audio (Hi-Fi speaker + piezo)
Vario audio	✔ Barometer MEMS	✔ Barometer MEMS	✔ Barometer digital	✔ Barometer MEMS	✔ Instantvario	Instantvario: ✔ Barometer MEMS + accelero + gyro
USB	✘	✘	✔ micro-USB	✔ USB-C (V1: microUSB)	✔ micro-USB	✔ USB-C
Reset button	✔	✔	✘	✔	✔	✔
Volume configurable	✔ (3 levels)	✔ (4 levels)	✔ (3 levels)	✔ (5 levels)	✔ (4 levels)	✔ (5 levels)
Sweep tone configurable	✘	✘	✘	✔	✔	✔
Solarpanel	✔ (monocrystallin)	✔ (monocrystallin)	✘	✔ (Sunpower)	✔ (monocrystalline)	✔ (Sunpower)
Type accu	✔ li-polymer	✔ li-polymer	✔ li-polymer 200 mAh	✔ li-polymer 400 mAh	✔ li-polymer 400 mAh	✔ li-polymer 500 mAh
Sinkalarm configurable	✔	✔	✘	✔	✔	✔
Detection weak climb	✔	✔	✘	✔	✔	✔
Climbdetection configurable	✔	✔	✘	✔	✔	✔
Integration configurable	✘	✘	✘	✔	✘	✔
LED vario up/down/zero	✘	✔	✘	✔	✔	✔
Auto power-off	✔	✔	✔ after 25 min without activity	✔ after 25 min without activity	✔ configurable	✔ configurable
Takeoff detection	✘	✘	✘	✔	✔	✔
Sound editor	✘	✘	✘	✘	✔	✔
Stodeus Instant Vario	✘	✘	✘	✘	✔	✔
Connection smartphone	✘	✘	✘	✘	✔ USB-OTG (Android)	✔ Bluetooth BLE (iPhone, Android)
GPS/tracks logger	✘	✘	✘	✘	✔	✔
Speed / Altitude	✘	✘	✘	✘	✔	✔
Voiceoutput	✘	✘	✘	✘	✔	✔
Jack earphones	✘	✘	✘	✔ (V2, USB-C)	✘	✔ (bips + voice)
Firmwareupdate	✘	✘	✘	✘	✔	✔
Precision	15cm/s (pressure only)	15cm/s (pressure only)	10cm/s (pressure only)	7cm/s (pressure only)	5cm/s (pressure + IMU)	4cm/s (pressure + IMU)
Weight	25g	25g	24g	25g	35g	29g
Autonomy	100h	100h	200h	400h	20h	50h
Selling period	2011 - 2017	2017 - 2020	2021 -	2020 -	2015 - 2022	2022 -
Status	discontinued	discontinued	available	available	discontinued	available

In this table, some interesting information is still missing, namely:

- The profiles of configurable varios:
The original BipBip: no, the BipBip+: no, miniBip: no (1 intuitive profile), BipBip PRO/BipBip PRO V2: 2 profiles (long beeps/short beeps), the GPSBip/theGPSBip+: 3 profiles with graphic vario editor, UltraBip: 3 profiles with graphic vario editor
- Setting the parameters:
The BipBip Original: yes, via 1 single button, the BipBip+: yes, via 1 single button, miniBip: no, BipBip PRO/BipBip PRO V2: yes, via 1 single button, the GPSBip/the GPSBip+: yes, via a web-app configuration, UltraBip: yes, via a web-app configuration.

PERFECT HIKE&FLY SET



Hike&Cruise (from 2.37 kg - 19, 22, 25 m²)

Techno 2023 (from 1.95 kg - S, M, L, XL)

DuraLight 2023 (from 0.45 kg - litres: 65, 75, 85)



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Photos: Laurie Genovese



CELESTIAL BATHTUB

Laurie Genovese prepares for the X-Alps 2023. She beautifully recounts an interesting story: how to relieve yourself in the air, then end the day watching your harness spinning round in a washing machine...



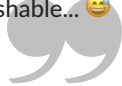
I am writing to you from beside my washing machine, slumped like a badly wrung out towel, I haven't really chosen the program yet. In the meantime, I could break open the chocolates I received before Easter, but I can't even do that, as I have chosen a size small wing...
My harness is in a net in the drum of the washing machine. I'll put my clothes in the second machine. Let's go, dials turned to 30 degrees, value of the contents, at least 1000 euros per spin. Just pressing the buttons wakes up the pain in my fingertips, the fingernail blew up my senses.

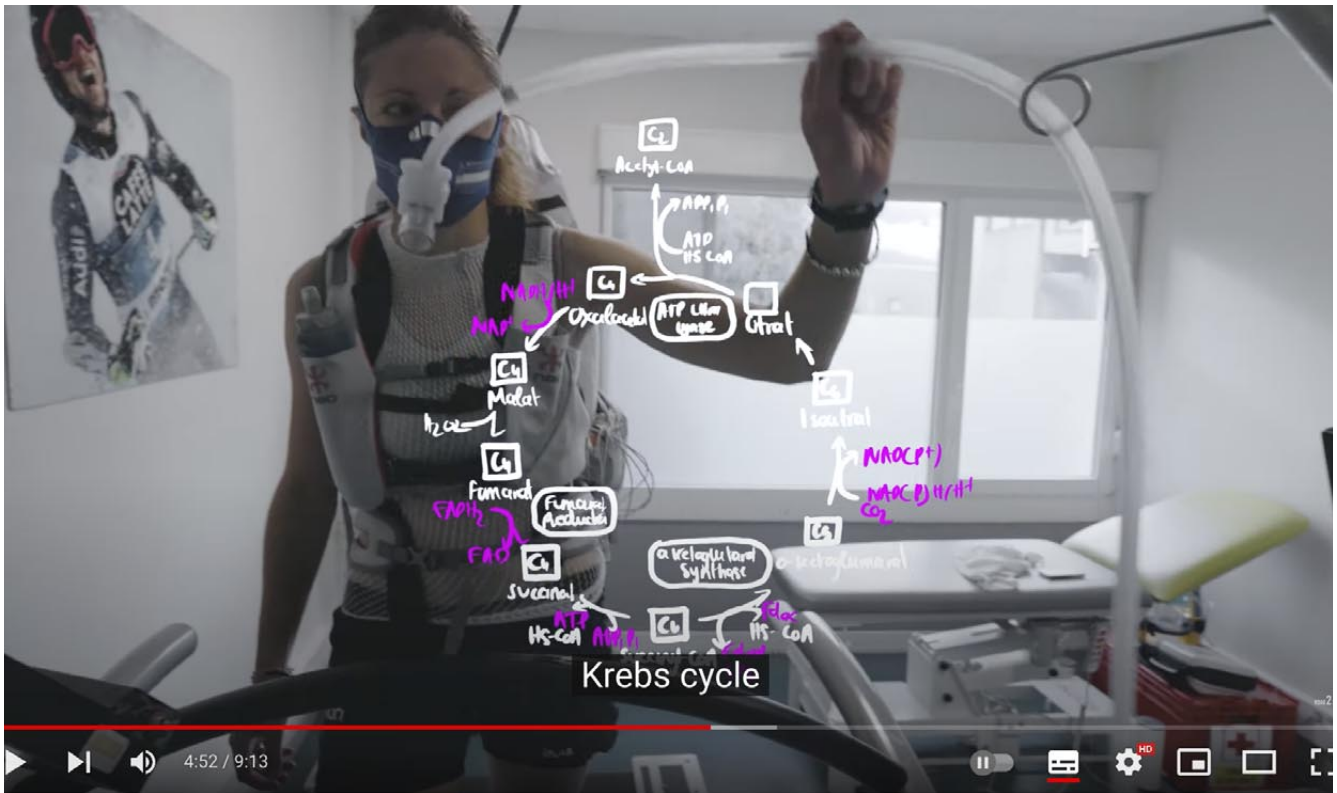
This is a question that I am often asked: but how do you pee in the air? OK, sometimes I guess people are greedy or shy, they ask me how I manage to eat... Because in real life, eating a fruit compote is much simpler than filling a nappy correctly. I wanted to know why, without hydrating myself, after suffering from the cold, despite having equipment worthy of a Himalayan climber, I needed to pee out about 5 kg of urine. But to do that, you need to relax when the mass of air is really lively and you are completely frozen, so that you can finally let the pee flow between your legs. And then control the flow to allow time for the fabric to absorb it.

Apparently, it's like cycling, you never forget how to do it, you spend the first years of your life wetting yourself and you're pretty happy about it. However, there, my problem was the maximum absorption capacity. Not long after the start of my transition I ended up in a bathtub, hot water, almost burning, all that was missing was the bubble bath.

The only thing I wanted to do was get out of this bathtub. As a test, I asked myself: was this dangerous? No Is it uncomfortable? Yes Discomfort has never killed anyone, imagine a bathtub 2900m above the Bauges, no Airbnb can boast of offering that, and I'm living it. The problem is that liquid at 2900 m at the beginning of April, does not stay hot for long...

Cryotherapy is the order of the day... and with a view! Mission: get back to the toilets at Planfait to change into warm clean clothes (@robinissartel ♥)
In short, all that to tell you that the StayUp 2@neotelier.fr is machine washable... 😊





Laurie suggests you follow her preparations in a series on her YouTube channel <https://www.youtube.com/@road2xalps>. Here is episode 2...



World of XC paragliding

NIVIUK



EN/LTF A

KODE P

YOUR MOUNTAIN PARTNER

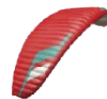
From **1.55 kg**

The Kode P is an accessible and ultralight mountain wing that will accompany you on your hike & fly adventures. Perfect combination of materials and internal structure to guarantee the optimum balance between lightness and durability.

Sizes

12 / 14 / 16 / 18 / 20 / 22 / 24 / 26

Colors



SPICY



ACID



BITTER

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PARAGLIDING NEEDS

Photo: Jérôme Maupoint

Laurie's story clearly shows the hard reality for those who fly more than 4-6 hours.

We asked several competitors and distance pilots how they deal with "the problem". Number 1 in the FAI ranking, Méryl Delferrière, confirmed to us that she prefers not to drink rather than having to use nappies or other celestial "toilets".

The Pôle Espoir coach at Font Romeu, Estéban Bourroufiès, subscribes to the same method.

By depriving themselves of fluid, their bladder can obviously wait longer. Given her results, this clearly works well for top ranked pilot, Méryl. Normally, one would fear a decrease in cognitive and psychomotor abilities due to dehydration.

The review "[Cognitive Performance and Dehydration](#)" explains that already moderate dehydration, with a loss of 2% of body fluids, causes a loss of 20% of physical abilities. It also affects performance in tasks that require one's capacity for attention, psychomotricity and immediate memory skills, as well as subjective state assessment.

Not good in the air.

This is also why most harnesses, especially cocoon ones, come equipped with a passage for a tube to the CamelPak with the drinks bag in the back. The pilot just needs to take the mouthpiece and drink, this works pretty much anywhere.

This uninterrupted hydration poses the problem of pressing needs. There are some solutions on the next page...



On a machine that can fly distance, like this Boomerang 12, with a comfortable and efficient harness like this Genie Race 4, everything has been designed to allow the pilot to fly for hours. This can bring the pilot to several physiological limits. In a comfortable harness, with plenty of space like this one, a male pilot, in particular, can easily carry solutions. Moreover, many harnesses of this type have an opening at the bottom allowing a penilex tube to pass through.

GROUNDHANDLE
VEST: MARTINI



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WITH HOODY
OVER HELMET**

**CREATE
YOUR OWN
FABRIC MIX**



WINTER-
VERSION



STREET-
VERSION



**XC-SLIP
DORNHÖSCHEN
EASY FOR URINAL CONDOMS**



Solutions for the problem of peeing, other than holding back:

1 URINATE STANDING UP (MEN ONLY)

We always see pilots standing up in their cocoon. Our collaborator Pascal Kreyder confirms: "For my part, I use it about twice per flight, in a long transition. To prepare myself, I tighten the chest strap of my harness and the ABS to ensure that I continue flying in a straight and stable line." Obviously, this only works during fairly mellow transitions.

2. RETENTION PANTS

These nappies are mainly used by geriatrics, with a high absorption rate, up to more than 2 l for some. (approx. 10-20 € per 10 depending on the size) It works for both boys and girls, comfort is obviously not optimal, but some female competitors we interviewed had reverted to this solution after having tried the other 3 solutions in the list.



Photo: bildiro.epicture/pixabay



3 EAZY PEEZEE AND OTHER FUNNELS FOR LADIES

These are funnels for ladies, allowing the liquid to flow into a short tube, connected to a pipe which drains out into the open air under the harness. This allows girls to urinate standing up like men. In the air, fixing it in place for the entire flight seems rather complicated, but some pilots use it, sometimes even sticking it on to make it more waterproof. About €10, reusable;



4. POCKET TOILETS

These are bags with very absorbent crystals and a large enough entrance, even for boys. Designed as emergency toilets for traveling, putting them in place for the duration of the flight seemed impossible to us, but we would be delighted to learn from our readers if they find a way of making it work. Right: the Ladybag, about 3 €



ROCK THE OUTDOOR increases your safety, refines you handling or improves your comfort in flight



rolls of PLA yarn (biodegradable plastic)



thanks to designers skilled in 3D printing

5. PENIS SHEATHS

A surprising number of male pilots equip themselves with urinary “condoms”. they adapt to the penis before the flight, some are glued to guarantee a perfect seal and prevent it from slipping.

Connected to a tube, they allow the evacuation of urine throughout the flight. The French store, Rock the Outdoor, has designed a version specifically for pilots, with an improved connection between the case and the tube, which does not reduce the internal diameter and increases the flow.

The sheaths are chosen according to the material and the size. Surprising: according to the retailers, male pilots do not necessarily exaggerate their size and the vast majority order “M”...



Photo: Urinalkondom

Kit étui en silicone, self-adhesive, single use. about 13 €.
On the right, the CrossCool de Rock the Outdoor, self-adhesive options in silicone or latex, non-adhesive in latex, the latter being washable and reusable. Approx. €25, new sheaths approx. €15.

Stoffrausch offers underwear with a passage for the tube (see below), and moreover it is for “everyday use”. There is also a nice brief with the same clouds, but without the “elephant trunk” (to the right)



Photos: Valentin Burkhardt



Photo: Rock the outdoor

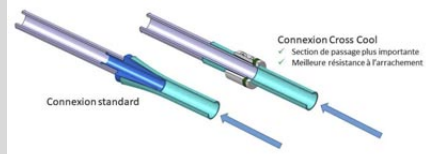


Photo: Rock the outdoor

The ankle strap is included in the kit CrossCool Rock the Outdoor. .

Below, and this is not a joke: a guide to download from the Rock the Outdoor site to objectively choose the right size of sheath...



FORZA 2 HIGH PERFORMANCE GREAT COMFORT

The **Forza 2** is a complex and feature rich harness that is **comfortable and easy to fly** in real XC conditions. We spent over **three years of development** on this project and the many prototypes have undergone **hundreds of hours of test flying** by some of the world's best XC pilots.

Our mission for the **Forza 2** was to create an aerodynamic, durable, and **highly comfortable tool for serious XC missions**. This new design is the **highest performance** traditional-fairing harness we have flown.

- Designed for long and demanding XC missions
- Anatomically sculpted seat and backrest
- Wind-tunnel tested aerodynamic fairing
- Two reserve compartments
- High comfort, stability, and passive safety for demanding XC conditions



THE FULL VIDEO: HOME SWEET HOME



In our last issue, we presented the trailer for this magnificent film by Anthony Komarnicki, which has won many awards. From now on, it is available free. A good opportunity to show some images of this amazing journey with exotic scenes and yet, very close to home, with explanations from its film maker...



On my bicycle, I took as many tracks and paths as possible to ride as close as possible to the mountains.

In the background, the Bure plateau, an enormous area of minerals.





An ideal evening for a bivouac: setting up the tent, followed by a good hour playing in the air.

An evening flight, in the Ubaye valley with heavenly lighting.





Contemplation shortly before reaching the summit, for a morning fly down to Briançon. It's great to retrace below our feet, the path we climbed in the dark!

An explosion of joy in mid flight!





Aerial runways in the Oisans. Even if I'm not flying, the feeling of gliding is present.

Flying above the fire-coloured larches is magical!



ARROW

AIM HIGH, AIM FAR

A rear fairing harness designed for pilots who want to make the most of their XC adventures and start competing. Optimised aerodynamics for drag reduction and performance. A comfortable, stable, light and durable harness designed to help you achieve all your goals.

Sizes

S / M / L / XL



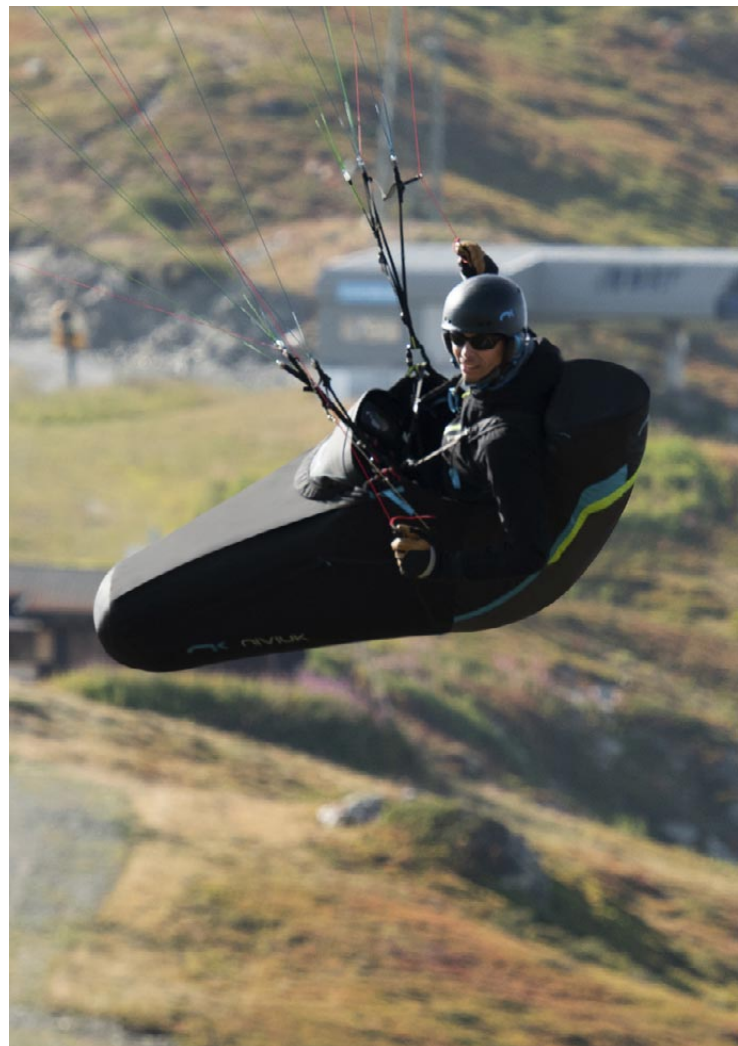
HAWK

MILE HUNTER

An accessible pod harness. The ideal pod harness for those pilots who want to start venturing into the world of cross-country. A stable, comfortable and light harness especially designed for everyday long flights.

Sizes

S / M / L / XL





Satisfaction, finally flying: we had to wait before having favourable weather conditions. Clearly visible here: the unusual braking system on the Dudek Run&Fly, comparable to that on some acro wings: the "handle" is above the pulley, allowing a differentiated pull on the brake line: more towards the stabilo, or more towards the middle of the wing. This lets the pilot adapt the type of braking to the turn.

My landing precision is: tent = target :-)



#SPRINGTIME2023

free



Flying over the Ubaye: under my feet, the river threads its way through an impressive narrow canyon...

Mid-autumn, the nights were long... and the mornings frosty!



@freeadventure

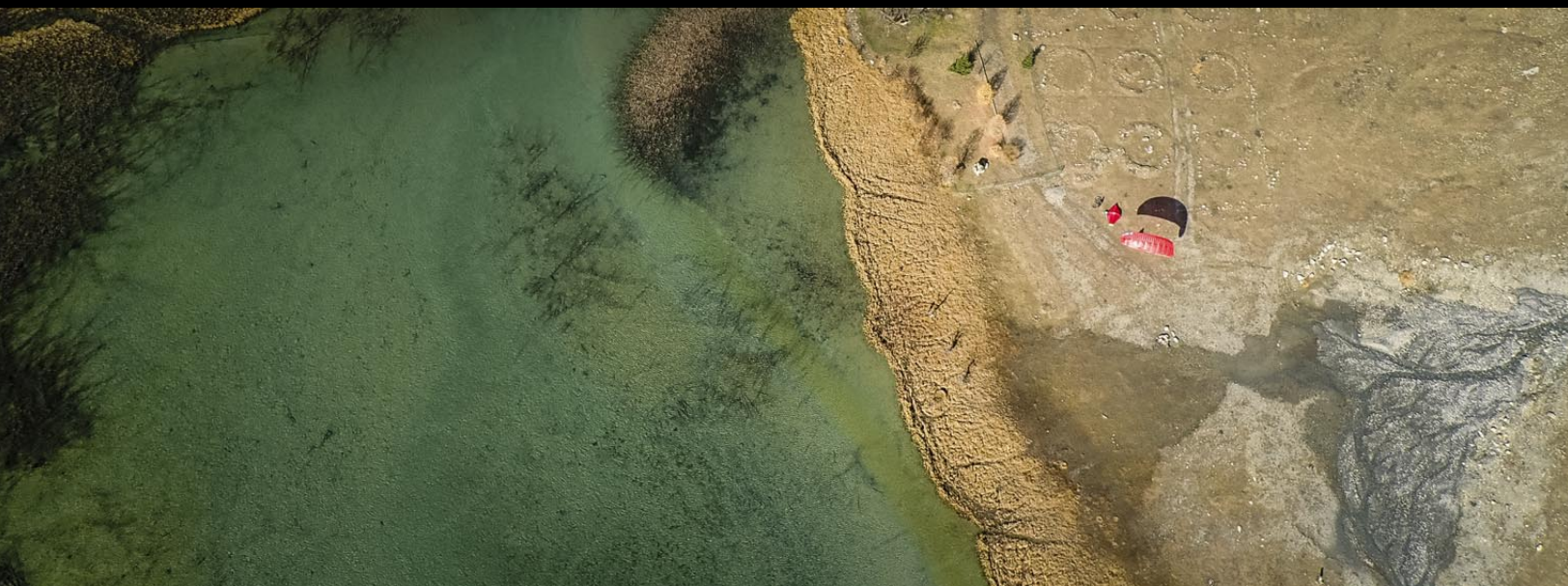
instagram.com/freeadventure

freeadventure.com



The track at Parpaillon: the highest point on my itinerary. Bad luck, it had snowed shortly beforehand... Time to push the bike!

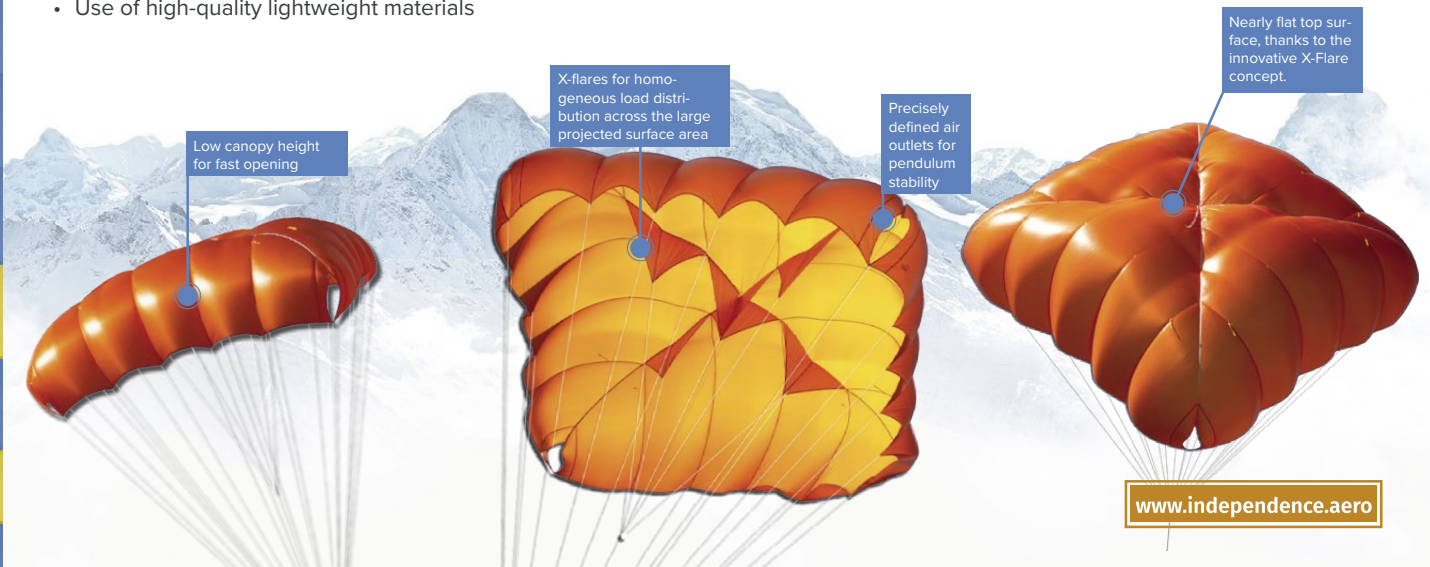
Flying over an azure blue mountain lake.
I almost wanted to swim in it... if the water hadn't been below 10°C!



Quick facts about the NG series:

- Available in 3 sizes, in both the NG and the NG Light version. Certified according to EN12491
- New, innovative X-Flare concept for high efficiency
- Excellent sink rates, each just over 5 m/s, equivalent to a jump from a height of about 1.3 m
- Very reliable opening and extremely good pendulum stability
- Intelligent, lightweight construction for fast openings, even at low speeds
- Use of high-quality lightweight materials

	Max load (kg)	Surface (m ²)	NG weight (kg)	NG light weight (kg)
NG 100 Serie	100	25	1,45	1,18
NG 120 Serie	120	29	1,6	1,3
NG 140 Serie	140	33	1,85	1,49



INDEPENDENCE STANDS FOR INNOVATIVE, HIGH-QUALITY RESCUE SYSTEMS.

Since the launch of our **first cross rescue system, the Evo Cross** and the **unbeatable lightweight Ultra Cross**, we have developed an optimised cross design with our **Next Generation (NG) series rescue systems:**

	Sink rate at max load NG	Sink rate at max load NG light	Price NG	Price NG light
NG 100 Serie	5,28 m/s	5,1 m/s	850 €	990 €
NG 120 Serie	5,14 m/s	5,16 m/s	890 €	1.040 €
NG 140 Serie	5,37 m/s	5,45 m/s	960 €	1.090 €

• Very well-balanced load distribution

The **brand-new X-Flare concept** of the NG series is based on precisely calculated triangular flares. The X-flares ensure an even load distribution and, combined with individually graduated line lengths, give a **very low canopy height** and **very little curvature** on the top surface.

• Quick opening

As a positive side effect, the canopy volume is significantly smaller and the peripheral hem, which plays an important part in its opening behaviour, is shorter. This reduces the **filling time** and thus the opening time.

• Excellent sink rate

The projected area has been increased to a maximum. This improves the efficiency and reduces the sink rate. The result is an excellent sink rate of **just over 5 m/s, at maximum payload**, for all sizes of the NG series. This corresponds to a **jump from a height of about 1.30 m.**

• Extreme pendulum stability

Defined outlet openings at all four corners, as well as individually graduated line lengths, ensure extremely low oscillation.

• High opening reliability

This is achieved by the different line lengths. Each size offers plenty of surface for reliable opening, even when packed.

• Low weight at a decisive point

Due to the low canopy height and the X-flares, which take up a disproportionate amount of the load, it was possible to make the peripheral hem without any reinforcements. This ensures a low mass, which also contributes to fast opening at slow speeds.

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info@independence.aero



TECHNOLOGY FOR ALL PILOTS

CROSSOVER
by ADVENTURE



AN UNUSUAL SHOT

Nik Thor Rasheta is an American paramotor instructor. He was lucky enough to fly over Nellis Air Force Base during the Aviation Nation 2022 event. A very special perspective!
<https://www.facebook.com/nrasheta>



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Ergonomic gas throttles

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V2 et V3

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Karen Skinner and Jason Whitehead sent us these beautiful spring photos, flying at very low altitude, authorized in their country of adoption, Spain.

SPRING PHOTO SHOOTS



STUBAI HARNESSES

We had initially planned to publish news about the harnesses that we saw at the Stubai-Cup in this issue. However, as we have been able to test a good number of them, we prefer to summarize our experiences in full in the next issue. Due out in May!



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Ethic and awesome

Reversible Jackets,
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Yéti, Mosleeve, Everest.

- Paragliding
Down Jackets

Fill Power 700 cuin

- Flight Muffles



BECOME
A DEALER



PROGRESS IN THE

Markus Gründhammer, developer at Skyman and the origin of these beautiful images, is working on a new single skin prototype.

While many manufacturers are working on classic mountain wings, reducing their weight as much as possible, Markus continues to improve the single skin principle.

Work on the tensions in the profile allows him to gain additional speed and performance with each generation of single-skin model.





Yes, that too can be a step forward: going back to two risers instead of three. Of course, it is not a 2 liner, there is a significant pyramidal branch high up. But this simplification makes life easier for the pilot, especially in high mountains, where taking off is complicated.





Photo: Adi Geisegger

Tobias Fasan was able to take advantage of the Stubai-Cup infrastructure to try seven EN C 2 liners, practically in a row:

- GIN Bonanza 3
- SWING Libra RS
- NIVIUK Artik R
- AIRDESIGN Volt 4
- OZONE Photon
- SKYWALK Mint
- DRIFT Merlin

Our reader and experienced pilot, Tobias Fasan, tried most of the EN C 2 liners on the market at the Stubai-Cup.

Obviously, given the short length of each flight and heterogeneous weather conditions, his report does not constitute a real comparative test, but has the merit of transmitting some interesting information concerning his first impressions of handling these wings. All that was missing was the Sol LT2 and the Phi Scala 2, whose launch as EN Cs (instead of Ds), hadn't happened yet.

The video that Tobias posted on social media, which was an hour and a half long (you can watch it at the end of this article) received some very positive feedback because it contains interviews with each brand.

GETTING STARTED SEVEN EN C 2 LINERS

Tobias Fasan:

"Following the video, I had many requests for a summary. I happily gave one to Voler Info and Free Aero Magazine, but it's important to point out:

These are my subjective feelings, whilst trying to remain neutral. The conditions during the test flights were heterogeneous (sometimes no thermals, sometimes the flights were short, sometimes there were strong thermals, sometimes it was very turbulent), and the manoeuvres were not identical for each wing. And obviously, what is missing and yet would be interesting, would be a comparison of each one's behaviour in extreme situations.

GIN Genie Light 3 harness, all up weight 100 kg, choice of wing size to allow the pilot to be close to the maximum all up weight. "





GIN BONANZA 3

Size, all up weight	S (85 - 100 kg)
Weight of the wing	4.75 kg
Number of cells	65
Flat aspect ratio	6,30
Projected aspect ratio	4,81
Features	Wave leading edge (WLE)
Conditions during the flight	A calm morning
Behaviour during take-off	Nil wind, inflation via A1&A2, wing comes up well after a brief pull, easy to stop above the pilot.
Feedback from the wing	Compact, homogeneous, transmits a lot even when accelerated. Direct feedback, but it isn't a twitchy wing.
Roll	Very dynamic, homogeneous roll going to a high amplitude via weight shift.
Personal opinion	The advantages of the WLE could not be tested during this type of flight. A very pleasant wing. It feels very safe. GIN does not recommend pulling in big ears, but rather a 360° descent with anti-G. This is also the case with other wings of this type.



SWING LIBRA RS

Size, all up weight	SM (85-100kg)
Weight of the wing	4 kg
Number of cells	65
Flat aspect ratio	6,90
Projected aspect ratio	5,10
Features	The greatest aspect ratio of the seven wings (comparable to a Zeno). The RAST system (partitions)
Conditions during the flight	Calm
Behaviour during take-off	Taking off in nil wind. A1&A2. The aspect ratio requires the centre of the wing to be inflated first. The wing comes up well and stops easily above the pilot.
Feedback from the wing	The wing flies more on its own compared to the others. Small tucks along the leading edge without any consequence. Direct feedback whilst accelerated. However, the wing has more shock absorption and is calmer than some of the others.
Roll	Dynamic, high, homogeneous. In a deep turn, it has a tendency to try and recover itself. Requires more "persuasion" to go into a 360°.
Personal opinion	A convincing concept. Relatively light construction. Nice shock absorption. Big ears possible via the A3s.



NIVIUK ARTIK R

Size, all up weight	25 (90-105)
Weight of the wing	4.77 kg
Number of cells	64
Flat aspect ratio	6,50
Projected aspect ratio	4,97
Features	
Conditions during the flight	Thermals just starting, valley breeze, turbulence in the lee.
Behaviour during take off	Inflation of A1&A2 in nil wind. Comes up well and stops easily above the pilot.
Feedback from the wing	Very direct feedback, and a little less damped. This allows very efficient piloting, and therefore it requires a little more input from the pilot. Compact, homogeneous wing. Good feedback also when accelerated.
Roll	Very dynamic, very high and homogeneous wingovers thanks to its weight. It doesn't have any tendency to oppose the direction the pilot wants it to fly, which makes it very efficient.
Personal opinion	A wing which gives very direct feedback, pleasantly sporty.



AIR DESIGN VOLT 4

Size, all up weight	M (88 -103 kg)
Weight of the wing	3.91 kg
Number of cells	57
Flat aspect ratio	6,50
Projected aspect ratio	5,04
Features	First EN C2 liner in 2022
Conditions during the flight	Strong thermals in the early afternoon. Pronounced breeze and turbulence.
Behaviour during take off	Nil wind, A1&A2, climbs well, stops when you want it to.
Feedback from the wing	Directs. Light shock absorbtion Compact, but with a bit of movement at the wing-tips. Good balance between being sporty and damping.
Roll	Very dynamic, high, homogeneous. Slight tendency to straighten up in turns, but allows good directional adjustment.
Personal opinion	Despite the turbulence, it feels very safe. It is a very promising, uncomplicated wing. Big ears are possible using the A3s.



OZONE PHOTON

Size, all up weight	ML (90-105 kg)
Weight of the wing	5 kg
Number of cells	71
Flat aspect ratio	6,5
Projected aspect ratio	4,7
Features	Winglets on the upper surface
Conditions during the flight	Moderate thermals Valley breeze, turbulence in the lee.
Behaviour during take off	Light headwind, via A1&A2, take-off facing the wing. Comes up easily, stops intuitively. The brakes seem long, low "pressure feedback".
Feedback from the wing	Direct feedback. Light damping, good wing tension, compact. Good acceleration speed, feedback remains direct.
Roll	Dynamic, high, homogeneous. No tendency to resist turning, easy to adjust the direction.
Personal opinion	It feels as if it enjoys flying fast. The "slack" in the controls seems intentional. I felt that this wing needs to be flown with one wrap of the brakes. And yet, the brake travel does not seem greater than for other wings.



SKYWALK MINT

Size, all up weight	105 (85-105 kg)
Weight of the wing	4.80 kg
Number of cells	68
Flat aspect ratio	6,40
Projected aspect ratio	4,92
Features	
Conditions during the flight	Light thermals, valley wind, a slight amount of turbulence in the lee.
Behaviour during take off	In nil wind, A1&A2, comes up well, stops easily.
Feedback from the wing	Direct, slightly damped, compact, not twitchy, even at high speed. Once accelerated, it transmits a lot of information, a good balance between being sporty and being damped.
Roll	Very dynamic, high, homogeneous. Very slight tendency to resist to deep turns. After a certain point, it "bites" the turn and spirals.
Personal opinion	Uncomplicated and seemed quite unfazed. Be careful when folding, the rods are not made of Nitinol.



DRIFT MERLIN

Size, all up weight	M (88 - 104 kg)
Weight of the wing	4.82 kg
Number of cells	67
Flat aspect ratio	6,30
Projected aspect ratio	4,75
Features	
Conditions during the flight	Moderate thermals Moderate valley breeze Turbulence in the lee.
Behaviour during takeoff	Nil wind, A1&A2, comes up fast and stops cleanly. On the other hand, when it is coming up, the pilot has to watch that the ears do not overfly the centre.
Feedback from the wing	Light damping with direct feedback. A compact wing which communicates a lot but stabilizes at mid-throttle. The speed bar is particularly easy to use. Requires more pressure on the Bs than the others. Steady course. Good balance between damping and being sporty.
Roll	Dynamic, high, homogeneous. Slight tendency to oppose going into the turn.
Personal opinion	A pleasant and intuitive wing. It filters very little despite the damping. Accelerated, it glides as if on rails.



The video can be found on Tobias' YouTube channel: <https://www.youtube.com/@Quastobi/featured>

PERSONAL SUMMARY:

Launching is easy with all these wings, even in nil wind. The improvement in acceleration is enormous, steering via the Bs (remember, these are the rear ones on this type of wing) was easy for all models (it's obvious). Although they are surprisingly uncomplicated wings in terms of how to fly them, they are models which require a lot of experience and responsiveness in very turbulent conditions or in the event of a problem or incident.

A thought: we could probably have built this type of wing with such (relative) passive safety, a few years ago, in the EN D category.

But the market probably wasn't ready for low EN Ds. 🙄

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