LEVEL WINGS

FUZE

User’s manual

V1 2025

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Warning : read this user manual before first flight !

CAUTION !

Improper use of the equipment can cause serious and irreversible injuries, which may even lead to the death of pilot. Neither manufacturer nor dealer endorse or is responsible for the misuse of the equipment. It is the own pilot's responsibility to use his or her equipment properly.

This manual offers you all the information you need to get familiar with the characteristics of your new wing.

This manual is for information purposes only. It is by no means to be regarded as flight instructions.
Flight training can only be guaranteed and provided by a competent and authorised training structure.
Only regulatory authorities of the practice from the respective country can determine the pilot's competence.

Each country has its own regulations and laws regarding paragliding. It is your responsability to know and comply with the regulation of the region you are flying in.
Make sure your piloting and training level are in correlation with the classification of this equipment.

We reserve the right to modify the contents of this manual at any time.
We therefore invite you to regularly consult our website :
www.levelwings.com

Thank you for choosing our LEVEL WINGS glider.

We have made sure that its performance, its flying qualities and its construction give you complete satisfaction.

The **FUZE** is built for your soaring and speedflying experience. This wing giving you complete control on speed and glide ratio with only one input, your brake handles.

Its ease of use and the feeling of security it exudes will allow you to focus on the essentials. Its behavior is easy and intuitive.

Its meticulous design and the choice of materials make it a durable and high-performance wing.

This manual provides the information that will help you to know your wing better, to use it in complete safety and to keep it in good condition along with active piloting and building appropriate skills/experience.

WHO IS THE FUZE INTENDED FOR?

The **FUZE** is equipped with a reflex profile, so it behaves differently than a ‘normal’ glider. This requires new skills and a different piloting style. **FUZE** requires a pilot with regular flying experience, solid active flying experience with other mini wings or parakites, and experience dealing with canopy collapse.
Pilots who have received proper training on the wing itself are also qualified, as long as they understand its specific behavior and handling characteristics.
Please be honest with yourself, judge your skill-level correctly, ground-handle the wing prior to flying, and choose a bigger size when getting into parakites...

When first used

It is important to perform a thorough pre-flight check :
Check that the lines are correctly connected and that there are no knots.
Check that the riser straps are not twisted or rolled up.
Check the general appearance of the wing (attachment point, seam, fabric).
Finish with an inflation to control the general aspect of the wing once inflated.

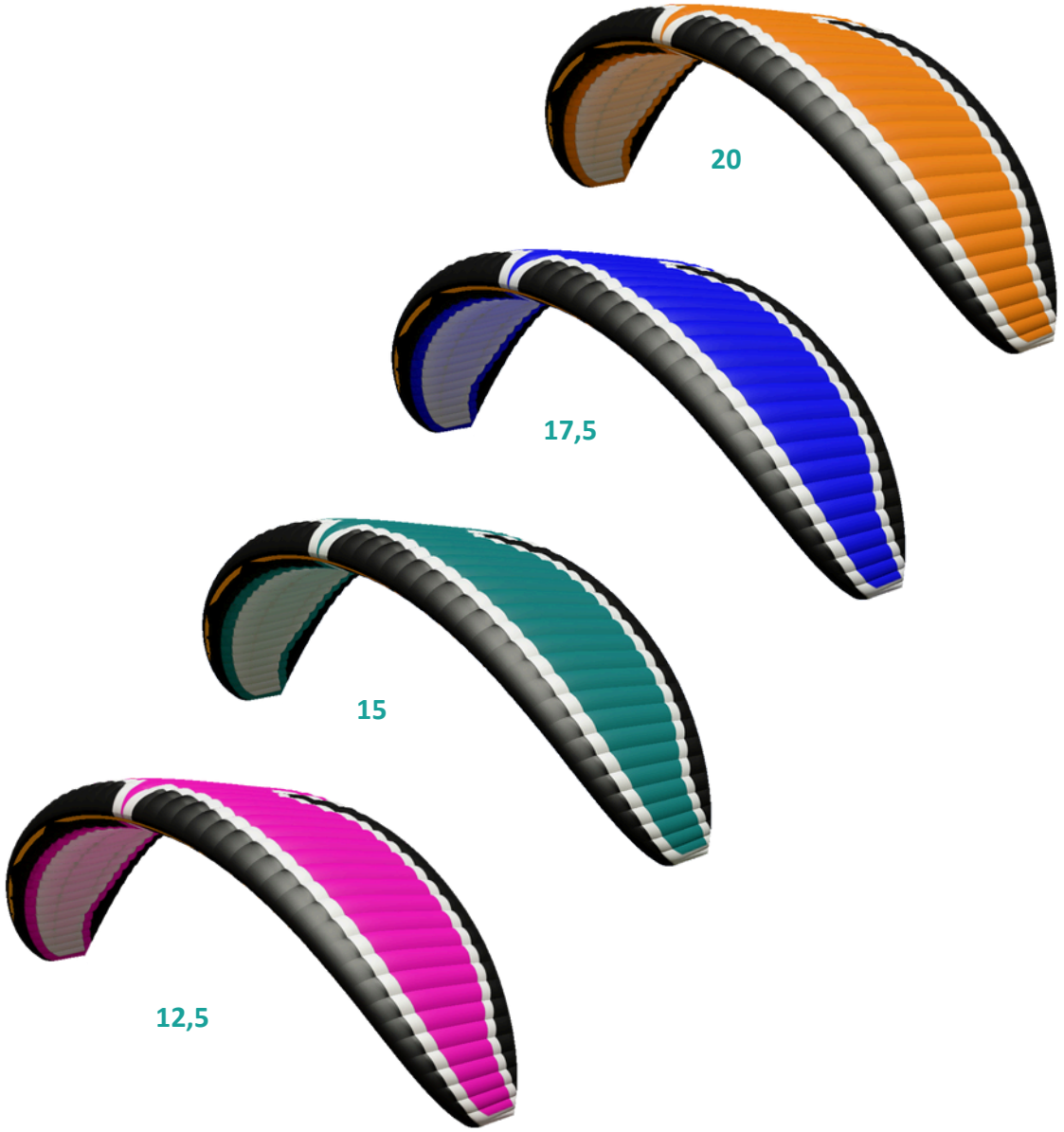
For each use :

Unfold the wing and place it in an arc on the upper surface, leading edge up.

Separate A, B, C risers and the brakes ; make sure risers and lines don’t have any knots and are free.

Check that :
- harnesses, straps and carabiners are not altered
- all attachments are correctly connected (risers, rescue parachute, harnesses, etc.)

Size	12,5	15	17,5	20
Number of risers		3		
Cells		51		
Flat area (m2)	12,5	15	17,5	20
Wing span (m)	8,2	9	9,7	10,4
Cord (m)	1,84	2	2,18	2,32
Flat aspect		5,4		
Projected area (m2)	10,4	12,5	14,56	16,64
Allongement projeté		4		



Riser

The “FUZE Riser System” is a matrix of pulleys around the B and C lines and combines the control handles with the accelerator in the brake handles. This allows controlling the FUZE with just your hands. The C-level moves with a ratio of 1/3 of the brake travel. The B-level moves with a ratio of 1/6 of the brake travel. That means you can fully adjust your glide ratio by completely changing the angle of attack of your wing. This combination is the key to success. Your brake handle is connected with an elastic ‘Free Brake Line,’ and has a ‘Magnetic Dive Blocker’ available.

DON’T release the brake handle while flying and always keep your hands in the loops.
DON’T adjust the setting on your brake main line.
NEVER steer the FUZE by ONLY pulling the main brake line.
Always steer in combination with the c-pulley line and the main brake line.

Minimum speed position
Never fly at minimum speed position close to the ground, as there is no speed left for a flare

Neutral position
This is your ‘best glide’ position

Full speed position
Your ‘full speed’ position is when you fully release the brakes until they are limited by the pulley

Take-off

The **FUZE** is easy to launch. It is very important to NOT hold the A-Risers in your hand while performing a forward launch.
Follow the black elastic connecting your brake handles with the riser, starting from your main riser connection loop. Slip into the loop and grab the brake handle. Make sure to have the risers lying on top of your arms.
Hold your arms slightly sideways and as far backwards as possible, making sure the break handles are fully released.
Before launching check the lines and canopy of the laid out parakite. Further check the wind direction and the airspace!
Start running with the pull of your parakite only in the harness, and when your wing is above your head, check the inflated canopy for any collapsed wingtips or line tangles. You can open any collapsed cells by pumping the affected side.
Don't make your final decision to accelerate or to takeoff until you are absolutely sure that the wing is properly and evenly inflated. Otherwise, stop the take-off procedure immediately!
Keep some tension on brake handles and run as fast as you can. If you have a knot in the lines and can´t stop the takeoff procedure and start to fly, do not fly fast!
Even a tiny knot in the brake lines or C-Lines can take out the Reflex and remove the stability of the **FUZE** and even lead to a collapse without turbulence when going in a 'full speed' position! The knots might also affect your stall speed, so don't try landing somewhere sketchy either. The best is to fly down slowly with break handles pulled and choose a big safe landing spot. DON'T PULL TOO MUCH ON THE BRAKES HANDLES, YOUR **FUZE** NEEDS A RATHER HIGH TAKEOFF-SPEED When reaching your maximum running speed, increase the tension on the brakes until you lift off.

Reverse launch :

Hold the A-Riser where the split to the B-Riser is located. This way the **FUZE** inflates in a nice and smooth way. If the wind is strong enough, only hold your brake handles and release them and pull with your hips. this way the **FUZE** inflates perfectly.
If your Parakite is overshooting, you have two options.
The first one is to let it overshoot and don't stop it at all with your brake handles. The reflex profile will stop it for you.
Second option is to stop it rapidly with a quick and far pull on the brake handles. The worst thing you can do when your **FUZE** overshoots while standing on the ground is slowly pulling your brake handles. DO NOT HESITATE TO STOP IT, OTHERWISE IT COULD COLLAPSE.

Turning

The **FUZE** has a unique behavior during turns. For flat turns, fly at about the ‘best glide’ position and use weight shifting. Only release the outside brake as much as needed. For steep turns, use weight shifting and release the outside brake (be prepared for a very steep turn and a high flying speed).

WHEN FLYING CLOSE TO THE STALL SPEED, ONLY RELEASE THE OUTSIDE BRAKE IN ORDER TO KEEP YOUR **FUZE** FROM SPINNING!
PULLING THE BRAKE LINES TOO FAR AND TOO FAST CAN CAUSE A STALL!
YOU CAN RECOGNIZE AN IMPENDING NEGATIVE SPIN BY THE HIGH CONTROL LINE PRESSURE AND SLIGHT BACKWARDS FOLDING OF THE WING TIP.
IF THIS HAPPENS, RELEASE THE INSIDE BRAKE IMMEDIATELY.

Landing

The **FUZE** can flare for a very long distance in flat terrain. Make sure to choose a big landing space if you have no headwind. We recommend doing the final approach slightly above the ‘best glide’ position; this way, you have enough flare left for a smooth flared landing. In no wind situations, be ready to run fast. **FUZE** has a much higher stall speed than a regular glider.

Active piloting

Active flying means flying in harmony with your Parakite. That means that instead of flying with the brakes always in the same position, you are aware of the slightest disturbances in the air and react accordingly, especially in turbulent conditions. Never let go of the brake handles, especially in turbulent conditions! Despite your parakite’s high stability, you should constantly use brakes and weight shift to correct the position of the canopy in turbulence. With a light tug on the brakes you can constantly keep in contact with the canopy and feel its internal pressure. That way you can recognize and react early to a pressure drop and impending collapse. Collapses, while flying in ‘full speed’ position, in general tend to be more sudden and require increased attention on the part of the pilot. As you gain experience, these reactions will become intuitive. However, maintaining an active flying style will greatly increase your margin of safety. The neutral position for active flying is slightly above the best glide position. To avoid large changes in the angle of attack, release the brakes when flying into strong updrafts and pull them when flying into downdrafts. When flying in turbulent air, if you feel a drop in pressure in parts of your parakite, pull the brake briefly and progressively until the pressure becomes normal again. If you brake the wing too quickly and too far, you risk stalling it! NEVER FLY IN FULL SPEED POSITION WITHOUT APPLYING LIGHT PRESSURE ON THE BRAKE HANDLES IN TURBULENT AIR! NEVER LET GO OF THE BRAKE HANDLES!

SPIRAL DIVE

The **FUZE** tends towards a stable spiral dive and has above average sink rates.
You can enter a spiral dive starting from close to 'full speed brake setting' by carefully increasing the brake pressure on the inside of a turn while shifting your weight in the same direction.
Do not pull the inside brake too far, in order to not 'spin' and stall your glider asymmetrically,
The spiral begins when the glider banks sharply to the side and enters a sharp, steep turn. You can control the bank angle and descent rate by applying or releasing the inside brake.
We highly recommend having the outside brake at 'full speed' position' or close to it. This way you will get a higher sink rate with rather low G-forces.
The spiral dive can be used to lose altitude quickly, so please consider the following: High sink rates and the related high G-forces lead to a high physical strain on the body that may be too much for inexperienced pilots!
Approach spiral dives slowly! Tensing your stomach muscles during a spiral dive can be very helpful! If you feel dizzy or faint, exit the spiral dive immediately!
Due to the extreme altitude loss in a spiral dive, make sure you always have enough safe altitude in reserve.
To avoid strong surging when exiting the spiral dive, slowly release the inside brake while applying the outside brake.
The brake line pressure in a spiral dive is substantially higher than in normal flight!

BIG EARS

The big ears are not recommended for the Fuze.
The exit can be difficult and the risk of line over is high..

B-LINE STALL

This technique is not recommended for Fuze.
The B-line stall is not stable with the Fuze.

ROLLING DURING 'FULL SPEED POSITION'

The most effective way of descending with your **FUZE** without increased G-forces is to initiate an alternating rolling motion by shifting weight when in 'full speed' position with your brakes.
This will increase you sink rate from a rather high sink rate when in 'full speed' position.
'Full Speed' position will give you a lot of sink, therefore coming down on a parakite is easier than with regular paragliders.
We recommend flying circles or small wingovers (rolling) to lose altitude more quickly.
While soaring, we recommend flying out (upwind) of the updraft; this makes it easier for you to descend and land.
When soaring, be very careful doing full circles when you are too close to the terrain; it can be very dangerous

FULLSTALL

A full stall can be performed with the FUZE by pulling the brakes below ‘minimum speed’ position.

It is very important to initiate the full stall in a rather slow manner to avoid having the wing fall too far behind the pilot.

In case the glider is far behind the pilot, DO NOT release the brakes immediately, keep them below the ‘minimum speed’ position until the wing is above or in front of you.

This will prevent the wing from going into a fast surge forward.

DUE TO THE REFLEX CONSTRUCTION OF THE **FUZE**, IT IS VERY IMPORTANT TO STOP A SURGE FORWARD WITH A QUICK AND DEEP PULL ON THE BRAKE HANDLES, RATHER THAN A GENTLE PULL. BY TRYING TO STOP WITH A GENTLE PULL, YOU MOST LIKELY EVEN ACCELERATE THE SURGE AND A FRONTAL COLLAPSE IS INEVITABLE

WINGOVERS

Alternating left and right turns as the bank angle is gradually increased. If wingovers are flown high with a large bank angle, the outside wing tip may loose pressure and start to feel light. In this case, don’t increase the bank angle any more as the tip could collapse impulsively.

SOME COUNTRIES FORBID NEGATIVE SPINS, WINGOVERS OVER 90°, AND ACROBATIC MANEUVERS TO BE FLOWN UNDER NORMAL CONDITIONS, PLEASE CHECK YOUR COUNTRIES RULES. THE WRONG EXIT TECHNIQUE OR PILOT OVERREACTION CAN HAVE DANGEROUS CONSEQUENCES REGARDLESS THE GLIDER TYPE OR PARAKITE!

PARACHUTAL STALL

Deep stall can occur after heavy use due to porous material (UV radiation) and in the rain (absorption of moisture). The parakite does not accelerate and gets a high rate of descent.
The **FUZE** will recover from a parachutal stall by releasing the brakes to ‘full speed’ position immediately.

IF YOU APPLY THE BRAKES DURING A PARACHUTAL STALL, THE GLIDER WILL IMMEDIATELY ENTER A FULL STALL. NEAR THE GROUND, A STABLE PARACHUTAL STALL SHOULD NOT BE EXITED DUE TO THE RESULTING OSCILLATIONS. INSTEAD, THE PILOT SHOULD SIT UP IN HIS HARNESS AND PREPARE FOR A PARACHUTE LANDING FALL..

LINE OVER

This type of disturbance has never occurred during test flights with the **FUZE**. However, it is possible in highly turbulent air or due to a pilot error during launch or while flying that, part of the wing could get tangled in the lines. The pilot should first stabilize the glider by carefully braking the open side. Without a pilot reaction, a line over can cause a glider to enter a stable spiral dive!

To clear the line over, there are two possibilities:

Pumping the affected side until deflation of the wing occurs.

Full stall.

SHOULD THESE MANEUVERS NOT SUCCEED, OR IF THE PILOT FEELING OVERWHELMED BY THE SITUATION, THE RESCUE PARACHUTE SHOULD BE DEPLOYED IMMEDIATELY!

NEGATIVE SPIN

A parakite enters a negative spin when one side of the wing is stalled. The canopy rotates around the vertical axis with the center of rotation located within the wingspan. The inside wing flies backwards.
There are two causes for the negative spin:
One brake is pulled too far and too hard (e.g. when entering a spiral dive). One brake is pulled too hard when flying slowly.
If an accidental negative spin is exited immediately, the **FUZE** will usually resume flight without much altitude loss. Just release the brake line pulled too far until the airflow is restored to the inside wing.
After a long negative spin, the canopy may surge forward on one side. This could result in an impulsive collapse.

ASSYMMETRICAL COLLAPSES

The **FUZE** is very stable, but it can collapse at any time in strong turbulence. A parakite tends to collapse in the “full speed position”, which can have serious consequences.
The inherent turn toward the collapsed side of the glider can be minimized by braking the open side.
With large collapses, brake the open side carefully to avoid stalling the wing. If the collapse doesn’t open despite braking and weight shifting on the open side, you can speed up the opening process by repeatedly pumping the brake on the collapsed side.

FRONTAL COLLAPSES

If a front collapse happens, there is a risk that the parakite will form into a horseshoe shape.
To avoid this, pull the brake handles quickly and forcefully. This is the quickest way to reopen your glider.

Cleaning

It is best not to clean your wing. However, if necessary, we advise you to use a damp cloth without soap nor detergent. Apply in small areas and be sure to let the wing dry thoroughly before using or packing it.

Storage and transportation

When you are not using your wing, store it in a dry, temperate place protected from UV rays.
Make sure the wing is totally dry before storing it.
For transportation : protect the wing from all external damage it could suffer, such as : tearing, cutting, crushing, extreme heat, UV rays.
Put it in a sturdy enough bag, preferably stacked one cell on top of the other in a concertina bag to prevent bending internal structure.

Maintenance

Your wing's maintenance must be done on a regular basis.
We recommend that you have your glider fully checked by a specialist workshop every 24 months or every 150 flying hours.
Between these checks, we recommend that you be mindful of :
- Lines condition : folds, damages or cuts.
- Wing condition : holes, tears, premature wear
- Risers condition : straps, seams, attachment points.

We also recommend changing the spreaders and carabiners at least every 5 years, or as soon as they show signs of wear.

Repair

Your wing may suffer damages due to external aggression. In this case, it must be checked and repaired in a specialized workshop.
Items such as risers, brake pulleys or control handles can be ordered from your LEVEL WINGS dealer.

Recycling

All our materials are selected for their excellent technical and environmental characteristics.
You can recycle most of the components, none of them are dangerous for the environment.
If you believe that your glider has reached the end of its life, you can separate all metal and plastic parts and apply the selective sorting rules that are enforced in your country.
Regarding the recovery and recycling of textile parts, we invite you to contact the organizations guaranteeing the management of fabrics.

Environmental friendliness

Paragliding is an outdoor activity. You are part of the environment for which you are responsible. So be sure :

* To respect the local flora and fauna
* Leave no trace by not throwing your waste on the ground
* Be respectful of the wildlife and not generating more noise than necessary

By doing so you actively participate in the preservation of the environment and sport.

Fabric

INTERNAL	SKYTEX 32
EXTERNAL	SKYTEX 38
Supported Profiles, ROD	SKYTEX 40 HARD
Unsupported Profiles, ROD, V.T-TAPES, diagonals	SKYTEX 32 HARD

Risers

Technora webbing 13mm Black	**13mm**	**Liros**	**Riser**
Webbing poly horizen 25mm Black	**25mm**	**Dandy Tapes**	
Magic D Pro 2.5mm grey	**2.5mm**	**Liros**	**Riser**
NGFEB Magnet		**Ningbo Zhaobao Magnet**	**Riser**
Square Ring With Fixed Diameter 6mm Roller	**13*7*3mm**	**B2**	**Riser**
Riley Pully		**L.W.Riley/SaintMarine**	**Riser**
Riser Carabinner 14mm Stainless		**Gin Glider -Korea**	**Riser**
PARAGLIDING BLOCK P18mm		**Saling Point**	**Riser**

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