GIN

PEGASUS
Owner's Manual

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Gin Gliders reserves the right to alter or add to the contents of this manual at any time. News and the most up to date information will be posted on the Gin Gliders website:

www.gingliders.com

CAUTION

Be sure to read this manual before your first flight

Introduction

Thank you...

...for choosing Gin Gliders. We are confident you'll enjoy many rewarding experiences in the air with your GIN Pegasus.

This manual contains important safety, performance and maintenance information. Read it before your first flight, keep it for reference, and please pass it on to the new owner if you ever re-sell your paraglider.

Any updates to this manual, or relevant safety information, will be published on our website: www.gingliders.com.

You can also register for e-mail updates via our website.

Happy flying and safe landings,
GIN Team

Contents

Notes on this manual and maintenance

This manual has been written to provide comprehensive information to pilots and instructors for safer use of the Pegasus paramotor wing. Besides legal matters, this manual contains important operational information.

Before your first flight, you must be thoroughly familiar with all the features and operating instructions of your Pegasus wing. It is imperative to study this manual thoroughly.

The manual is in compliance with airworthiness requirements and is part of the certification.

Please ensure that the user manual is always available to all people who use the Pegasus wing, i.e. all people who might hire you, borrow or buy your paramotor wing.

The illustrations in this manual are intended to show general principles, and may differ in some details from your paramotor equipment.

At the beginning of this manual you will find a table of contents showing all the elements described in this book chronologically.

All directional references such as "left", "right", "forward" or "backward" are given in the direction of travel.

Your security

By buying our equipment, you must be a certified paramotor pilot and you accept all risks inherent with paragliding or paramotor activity, including injury or death. Misuse of GIN equipment may increase the risks inherent in these activities. Under no circumstances may GIN Gliders Inc or the seller of the equipment be held liable for the consequences of an accident. You,

the user remain in all circumstances be responsible for your use of the equipment.

Gin Gliders and the environment

Protection of the environment, safety and quality are the three basic values of Gin Gliders and these have implications on everything we do. We also believe that our customers share our environmental awareness.

Respect for nature and the environment

You can easily play a part in protection of the environment by practising our sport in such a way that there is no damage to nature and the areas in which we fly. Keep to marked trails, take your rubbish away with you, refrain from making unnecessary noise and respect the sensitive biological equilibrium of nature.

In particular, avoid flying at low altitude under motor over residential areas and nature reserves.

Paragliding is, of course, an outdoor sport – protect and preserve our planet's resources.

Environmentally-friendly recycling

Gin Gliders gives consideration to the entire life cycle of its paramotor gliders, the last stage of which is recycling in an environmentally-friendly manner. The synthetic materials used in a paramotor glider must be disposed of properly. If you are not able to arrange appropriate disposal, Gin Gliders will be happy to recycle the paramotor glider for you. Send the glider with a short note to this effect to the address given in the Appendix.

Gin Gliders

Dream

In forming Gin Gliders, designer and competition pilot Gin Seok Song had one simple dream:

to make the best possible paragliding equipment that pilots all over the world would love to fly— whatever their ambitions.

At Gin Gliders, we bring together consultant aerodynamists, world cup pilots, engineers and paragliding school instructors, all with one goal: creating better paramotor gliders.

Touch

We're a "hands-on" company that puts continuous innovation and development at the centre of everything we do.

At our purpose-built R&D workshop at head office in Korea, we are able to design, manufacture, test-fly and modify prototypes all in a matter of hours. Our international R&D team is on hand both in Korea and at locations worldwide. This guarantees that your equipment has been thoroughly tested to cope with the toughest flying conditions.

Our own production facilities in East Asia ensure the quality of the finished product and also the well-being of our production staff.

Believe

We believe that the product should speak for itself. Only by flying can the pilot understand the wing and develop trust and confidence in it. From this feeling comes safety, comfort, performance and fun. The grin when you land should say it all!

Introducing the Pegasus

The Pegasus is a wing for beginner and intermediate paramotor pilots. It is suitable for pilots from the earliest stages until their first flights and well beyond into Cross Country. The Pegasus allows pilots to comprehend the sensations of the paramotor flight and gradually develop gradually their instincts in a progressive manner.

A defining feature of the Pegasus is its EPT technology (Equalized Pressure Technology). This is our new method of precisely calculating the ideal aerodynamic parameters for any given type of profile. The result is that small deformations of the flying wing are reduced and the pressure of the air inside the wing is more constant. Although some pilots associate EPT with performance gains, this technology has several other key advantages. The wing inflates more easily, behaves better while searching for thermals, and is more stable and comfortable in active air. In addition,the wing has a wider brake range and the stall point is higher. The low stall speed brings a good safety margin for landings. The flare is positive and easy to feel.

Overall, we believe we have fulfilled the demanding characteristics expected of an entry-level paramotor wing.

WARNING

The Pegasus is suitable for paramotor students under the strict supervision of a qualified and competent instructor.

Before you fly

Delivery

Make sure your dealer has checked and test-flown the glider. Your glider will be delivered to you with the original trim settings which correspond to the tested configuration. Do not make any modifications, such as changing the risers or altering the line lengths. This would invalidate the certification and is potentially dangerous.

Brake lines

GIN test pilots have carefully tuned the brake line lengths during testing, and there should be no need to change them. We generally suggest flying with wraps (a turn of brake line around the hand).

If you do decide to make adjustments to suit your harness, body or flying style, make any adjustments in steps of 2cm. Be sure to test fly the glider after each adjustment. See the reference section of this manual for the recommended knot to use to re-attach the brake handles.

TIP

Your glider may have been delivered with some lines looped on the maillons, this is to allow the glider to be re-trimmed during a professional check at the recommended service interval.

WARNING

Any modifications or non-conforming repairs may invalidate the certification and warranty.

CAUTION

If you do shorten the brake lines, make sure there is enough free brake travel that the trailing edge is not braked (deformed) when the glider is fully accelerated. There should be at least 10cm of free brake travel when the glider is flown "hands-off".

Risers and line layout

A line plan and a diagram of the risers can be found in the reference section at the end of this manual. Familiarize yourself with the layout of the risers and the position of the "stabilo (STB)" line.

Speed system

The speed system accelerates thw wing by progressively shortening the risers towards the front. Make sure that the speed system lines are routed properly through your harness and attached with the supplied fastening system.

The length of the accelerator bar should be pre-adjusted on the ground by sitting in your harness. Adjust the speed system so that the maximum speed is attained ("pulley-to-pulley" on the riser) when your legs are fully extended. Ask a friend to hold the risers in the flying position while you are seated in your harness on the ground. If in doubt about this procedure, please consult your instructor or dealer .

Trims

In addition to the speed system, the Pegasus is equipped with trim risers. The trims must not be used if the wing is flown without an engine. In such a case, disable the trimmers via the carabiners.

Harness

It's important for your comfort and safety to fly with a suitable harness that is properly adjusted. When choosing a harness, remember that the height of the attachment points (i.e. distance from the carabiners to the seat plate) affects the sensitivity of the glider and the relative brake travel. The lower (shorter) the attachment points, the more sensitive the glider is to weightshift. GIN gliders are developed with GIN harnesses, which have an attachment point of

CAUTION

Make sure that the speed system is not too short. The front risers must not be pulled down in normal (unaccelerated) flight.

WARNING

The speed system and/or the trims should not be used close to the ground and/or in turbulent conditions due to the reduction of the angle of attack which increases the potential for aggressive behaviour of the wing.

CAUTION

Don't adjust your leg and shoulder straps too tightly. If you do, you may have difficulty sitting back into your harness after take-off.

approximately 40-48cm (depending on size and model).

Adjust your chest strap so that the distance between the carabiners is approximately 46cm. Lighter pilots may fly with a slightly narrower setting. A rule of thumb is to set the width of your chest strap to that of your shoulders.

Your dealer will be able to offer individual advice regarding harnesses.

Rucksack

GIN gliders are delivered with a rucksack, designed to carry all your equipment in comfort. If you have any particular requirements, a wide range of optional rucksacks and reversible harnesses are also available. Please see our website or ask your dealer for details.

Weight range

Be sure to fly your glider within the certified weight range given in the Technical Specification section. Due to EPT technology, the Pegasus flies well at any wing loading within this weight range. If you are choosing between 2 sizes, choose your optimum wing loading according to your personal preferences and the conditions you fly in.

If you prefer dynamic flight behaviour with fast reactions, you should fly at a high wing-loading, i.e. choose the smaller model. This may be an advantage in strong, tight thermals.

The dynamics are reduced in the middle and lower part of the weight range. Flight behaviour becomes more straightforward and many pilots fly with this wing loading because they find it easier to centre in thermals, especially weaker and wider thermals. If these features appeal to you, you should fly with a lower wing-loading and choose the larger model.

The Pegasus reacts to weight changes only by slightly increasing or reducing trim speed, with little noticeable effect on glide performance. You can therefore choose the size completely according to your own flying style.

TIP

Check your total flying weight by standing on weighing scales with all your equipment packed into your rucksack.

Remember that ballast can also be used to adjust wing loading to the conditions.

Overload

The EN 926-2:2013 describes the weight measurement with: “All weights are subject to an acceptable tolerance of ± 2kg”. Therefore a slight overload of the wing would be within EN tolerances. However, flying over the maximum weight further increases the dynamic flight behaviour. In small bubbles, the wing has more horizontal momentum and a reduced tendency towards lifting. A test flight is always recommended if in doubt.

Flying the Pegasus

Preparation for launch

Check the condition of your paraglider and other flying equipment before every flight.

Lay out your wing on its top surface in an arc. Make sure that the centre of the wing is higher than the tips.

Prepare for launch by checking the following:

Is the glider fabric free from tears or other damage?

Are the lines free from knots, tangles or other damage?

Are the maillons connecting the lines and risers closed and secured?

Are your carabiners in good condition?

Are the risers in good condition?

Is your harness in good condition?

Is your speed system correctly connected?

Is your rescue correctly installed in your harness?

Is your rescue handle secure and rescue pin in?

Pre-flight check

Check the following before every take-off:

Is your personal equipment in order? (harness and helmet straps done up, reserve handle secure and pin in, carabiners done up)

Are you holding the 'A' risers and brake handles?

Is the wing arranged in an arc with the leading edge open and into wind?

Is the wind strength and direction suitable?

TIP

Always follow a consistent method of preparation and pre-flight checks each time you fly.

CAUTION

If there are obvious folds in the wing due to prolonged storage, be sure to inflate the wing and flatten out the trailing edge prior to take-off. This ensures that the airflow over the profile is correct during take-off and this is particularly important when temperatures are low.

Is the airspace and visibility clear?

Your first flight

Make your first flight in stable conditions in a familiar environment. Acclimatize yourself to the characteristic handling of your wing in a progressive manner by first groundhandling.

Make your first flight with the trims in the neutral position. In this configuration, the Pegasus acts as a classic paraglider. Apply normal brake pressure and try to find the point at which the pressure starts to increase. The point is about 25% of the total length of the brakes.

When you are used to your Pegasus, try to fly with faster or slower trim settings, use weight-shift during turns and experiment with the accelerator (at safe altitude!). Enjoy the speed and security of the Pegasus.

Motorized flight

Be sure to always perform a pre-flight inspection of your wing, harness and engine. For powered flight, you need to know the thrust and torque of your engine. Gin Gliders cannot be held responsible for a bad wing-engine combination. If in doubt, please contact us for further information.

Launching (nil to light winds)

Even when there appears to be nil wind, this is rarely the case. Assess conditions carefully, because in PPG flying, it is essential that the takeoff and the climb-out are conducted with a headwind. Pay special attention to trees, power lines and other obstacles, including other aircraft.

Preparation of the wing

Spread the glider behind the engine, making sure all suspension lines are taut and aligned towards the center of the paramotor. The risers must be spread on the floor. Set your trims for takeoff. In strong conditions, a faster trim setting may be advisable. Be sure to warm up the

CAUTION

Mitigate the risk of an accident! Never overestimate your level of piloting.

IMPORTANT

Make sure the trim loop is properly adjusted and stays locked in position when you pull the strap in the opposite direction.

As mentioned previously, re-check the length of the brake lines, if necessary with the help of an instructor or experienced pilot. Choose a day with a steady wind of 15-20km/h and check the length of the brake line to the motor at the rear.

engine while standing in the wind. Stop the engine before clipping in the risers. Connect the risers and perform take-off (see Takeoff section). From now on, you must inflate the glider while facing into the wind and without looking behind you. If you turn too soon as the wing is rising overhead, lines may be caught in the propeller – this must be avoided at all costs! During take off, when you feel that resistance is the same on both risers, step on the gas and lean back against the forward thrust of the engine, so that you are pushed forward rather than towards the ground. The best option is to not use the brakes and let the wing go up as it was laid out. If it deviates from its course, simply pull the opposite riser and run under the center of the wing maintaining good starting direction. If the wing tends to fall behind, increase the pressure on the front risers. If the wing is too far behind or too much to the side, stop the engine and abort your takeoff. Gradually, as the wing stabilizes itself above your head the drag resistance is reduced. Perform a visual check to make sure the wing is inflated. When you feel the resistance reduce, you can accelerate your run. If you gently pulling the brakes until you start to feel the brake pressure, you can take off faster by generating a little more lift.

TIP

*** If the structure of the cage your propeller is too rigid, the pressure of the lines during launch can deform it until the point of collision with the propeller.**

*** Before you apply full throttle, check that the cage does not catch the lines. Any operation with the brakes (to brake or to steer) must be flexible.**

*** Do not try to take off before your wing has reached a stable position above your head. If you do, it could cause dangerous oscillations.**

*** Do not sit in the harness until you are sure you are flying!**

*** The faster you set your trims, the more speed you will need to take off.**

Launching (stronger winds)

Due to its easy take-off characteristics, the Pegasus can be inflated facing the wing. Hold both risers and one brake in one hand and hold the other brake and throttle in the other hand. This is by far the best option in a strong wind. In lighter winds, it is better to prepare a classic launch, as running backwards with an engine your the back is not easy. After warming up your engine, turn it on, turn to face your wing, and clip your risers into your carabiners. Open the cells of your wing by gently pulling alternately on the front and rear risers. Then pull briefly to ensure that the lines are not tangled. Holding the risers, brakes and throttle as described above, pull the front risers and so that the wing is pulled over your head. In most cases, you will not need to brake, especially if the trimmers are set for fast flight (neutral and beyond). This may surprise you, but this is how it works with this profile. With trimmers fully off, the profile stabilizes the wing and prevents it from pitching forward. It can even stay back a little - in this case pull the brakes a little bit and the wing will return - paradoxically - forward. Once the wing is above your head, turn around, accelerate the engine and take off. As in a conventional take-off, you must find the combination of settings of the trims, brakes and engine power to optimize your climb rate.

The initial climb-out

After a successful launch, continue into wind using the brakes to regulate the rate of climb. Do not try to climb too steeply. A powered paraglider behaves more like an airplane than a paraglider. If there are no obstacles, it is much safer (and more impressive for the spectators as well) to fly level for a while after take-off and pick up speed before converting speed to height with a brief application of the brakes.

An additional reason not to climb too fast is related to the risk of low-level engine failure. Although the Pegasus does not hang back during a steep climb as much as some other wings, a stall is still more likely at low speed and high pitch angles. In addition, you should always be in a

TIP

*** This technique involves taking off with your hands crossed! You must first master this technique by initially practicing without a motor.**

*** Any operation with the brakes (to brake or steer) must be smooth and flexible.**

*** Do not try to take off before your wing has reached a stable position above your head. If you do, it could cause dangerous oscillations.**

*** Do not sit in the harness until you are sure you are flying!**

*** The faster you set your trims, the more speed you will need to take off.**

good position to land in case of engine trouble. Don't take unnecessary risks and fly with a wide margin of error.

Depending on the characteristics of your engine, once in the air you may be faced with a torque effect. This may cause the wing to turn, so be prepared to counteract this effect with suitable braking or anti-torque strap. If such a situation occurs during the climb-out with "slow" trims and maximum power, be pay attention to the risk of stalling. Safe operations and management of your engine depend on your knowledge and equipment.

Engine-induced oscillations

Certain configurations of weight, propeller diameter and engine power may cause serious oscillations. The pilot is lifted to one side by the torque effect, swings down due to his weight and is then lifted again and so on. To counter this effect:

* change the throttle setting and / or
* adjust the tail rotor strap (if fitted) to counter the effect and / or
* adjust the trimmers to dampen the oscillation

The most effective method is to fasten the anti-torque strap or to change the action of the weight. These oscillations typically occur at full power. The greater the engine power and propeller diameter, the greater will be the oscillations. In addition, late or inappropriate pilot reactions may worsen the problem instead of solving it. Most inexperienced pilots tend to overreact, leading to “pilot-induced” oscillations. In the majority of cases the best way to handle this is to release the throttle and release the brakes.

Cruising flight

Once you have reached a satisfactory altitude after take-off, you can turn in your chosen direction, fully open the trimmers if they were previously in the "slow" configuration and go

"hands-up" on the brakes. If conditions are strong, you will need to fly actively.

For each paramotor, you must make an adjustment of the length of your brakes to prevent them interfering with the propellers when you do release in flight.

If you have a vario or altimeter, keep an eye on it. In level flight, it is very easy to climb unintentionally. The instruments exist to help you maximize your speed and fuel economy. Naturally, the safety and success of each flight will depend on your piloting set-up, and thanks to its ability to fly safely without constant piloting adjustments, the Pegasus will leave you all the comfort to adjust everything properly. A good knowledge of weather conditions (including the wind at different altitudes) and a good use of thermal or other types of lift to gain altitude will help you reduce your fuel consumption and expand your flight range. The engine is there to help you find such advantageous situations, but you must have the knowledge and experience to make the most of such opportunities.

Do not hesitate to fly the Pegasus in tight thermals, you will be surprised at its effectiveness. By shortening the trims, the rate of climb will be even better.

Using the trims and speed system

Fully opened trims increase the speed of the wing, but make the profile more sensitive to turbulence. With a slower trim setting, the brake pressure and sink rate decreases and thermaling becomes easier. Adapt your piloting according to the positions of trimmers and accelerator. Turns can be much tighter and more effective with differential brake operation. A few cm of outer brake (with a deeper application of inside brake) will reduce the sink rate during the turn. Turns can be greatly enhanced by the additional use of the engine, throttle etc. When, with experience you have mastered these techniques, you will be able to execute fully coordinated and effective turns, comparable with those of other aircraft.

Landing the Pegasus

In paramotor flight, there are 2 possible landing modes: with or without motor.

*** Landing without motor**

At an altitude of 50 meters, turn off the engine and start to descend like a conventional paraglider. This reduces the chances of damaging the propeller on landing, but on the other hand there is only one possible attempt - so the landing must be done correctly! With or without the engine, the Pegasus reacts better with turbulence with open trimmers. Therefore, if the conditions are strong, it is better to make an approach with greater speed, and use plenty of space to bleed off the speed before touching the ground (like in hang gliding). The Pegasus has good energy retention, a long final approach should be used to store energy for the flare.

If you are attempting precision landings or landing in nil wind, it is recommended to use the trimmers to half or completely closed (maximum lift). Your performance in sink rate will be better. This choice is even more crucial at a high wing loading.

TIP

Be sure to check the trimmers and accelerator before each flight!

*** Landing with motor**

Make a flat approach with the engine idling, then stabilize and lose speed before the final approach. Immediately after touchdown, switch off the engine. The main advantage of this procedure is the possibility to abort the landing and repeat the approach in case of bad judgment. However, if you forget to turn off the engine before the wing deflates, there is a considerable risk of damaging your propeller, catching lines, or even injuring yourself by falling with your gear on.

In-flight characteristics

Minimum sink / maximum glide

The best sink rate is achieved by pulling approximately 30 cm of brake. The best theoretical glide in still air is when the hands are in the "neutral" position.

Accelerated flight

Once you are used to flying with your Pegasus, you can use the speed system to improve your glide into the wind. Apply the speed system by gradually pushing the speed bar with your feet. Be prepared to control the roll by weight shifting in your harness or by varying the pressure applied to each side of the speed bar. Maintain just enough brake pressure to be able to feel the wing, normally around the weight of your arms.

If you get a collapse while flying accelerated, you must release your speed bar. Stay centred in your harness and use of brakes gently to encourage the reopening of the wing. Allow the wing to turn, if you have enough space and altitude.

This is the best way to avoid a spin or a deep stall and recover the normal flight phase as soon as possible.

Active flying

The Pegasus has a high internal pressure, high resistance to tucking and a very high level of

passive safety. Developing an active flying style will help you avoid collapses in all but the most turbulent conditions. The key to active piloting is keeping the glider above your head. If the glider pitches in front of you, apply brake to slow it down. If the glider drops behind you, ease off the brakes to allow it to speed up. The objective is to reduce the pendulum effect by adjusting the speed of your glider so that glider and pilot are travelling at the same speed. If you feel a loss of pressure in one or both sides of the wing, quickly apply the appropriate brake(s) to re-gain pressure. Release the brake promptly as soon as normal pressure is resumed.

If you miss the above timing and get a collapse, be sure to first raise your hands and release the brakes before considering any other corrective actions.

Extreme manoeuvres

It is strongly advised to avoid strong or turbulent conditions, and to take specific professional training on the following manoeuvres. Also make sure to fly with a parachute.

Takeoff

On every take-off, ALWAYS ensure that your wing has enough airspeed before opening the gas or pulling on the brakes. If, despite these recommendations, you do take off without sufficient speed, DO NOT OPEN the gas and do not pull on the brakes. Gently let up the brakes to allow the wing to accelerate. If this does not occur, land! Also take into account the presence of wind shear during takeoff.

Knots and tangles

If you take off with a line knot or tangle, make sure you are clear of terrain and other traffic before attempting corrective action. Weightshift away from any turn and counterbrake the opposite side while pumping the brake on the side of the knot. Take care not to apply too much brake that would lead to a loss of speed and therefore increase the risk a stall or spin. If the knot

or tangle is too tight to pump out, immediately fly to the landing zone and land safely.

In turbulence

A collapse can occur in strong turbulence. The Pegasus will resume normal flight in almost all flight configurations, so if you have any doubt, let up the brakes and let the glider fly. On the other hand, if your wing dives violently in front of you, immediately and firmly apply the brakes until the dive is checked.

Asymmetric (side) collapse

Use active flying techniques to virtually eliminate collapses in normal flying conditions. Nevertheless, if you do get a collapse, stabilize your weight in your harness and do not allow yourself to fall to the collapsed side. Control your course with weightshift and a little outside brake. The deflation should re-inflate spontaneously.

If the deflation does not re-inflate spontaneously, apply brake on the closed side in a smooth, progressive pumping action. Be sure not to apply too much brake too slowly as this may risk a stall. Remember that a partly collapsed wing has a reduced surface area and thus a higher stall speed.

Symmetric (front) collapse

Symmetric (frontal) collapses will normally re-open without pilot input. Assist this process if necessary with a symmetric application of the brakes. Take care not to apply too much brake for too long as this may stall the wing.

Cravattes

A cravatte occurs when a wing tip becomes stuck between the glider lines, for example, following a bad take-off preparation. On the Pegasus a cravatte is unlikely to occur. If you do get a cravatte, first control your direction. Do this by using weightshift and enough counter-brake to

CAUTION

The stall is a phenomenon common to all aircraft that are trying to take off with too much power and insufficient speed. The thrust axis of a PPG lies far below the wing, so an increase in the engine thrust amplifies this phenomenon.

CAUTION

If you get a collapse while in accelerated flight, release the speed bar immediately. Then apply the normal procedure for unaccelerated asymmetric collapses.

WARNING

Do not hesitate to throw your reserve parachute if the rotation in a cravatte is increasing uncontrollably or if you are at low altitude.

stop the turn, but not too much to risk a stall of the opposite side. Then pull down the stabilo line (STB-see line plan) until it becomes tight. This normally frees the cravatte.

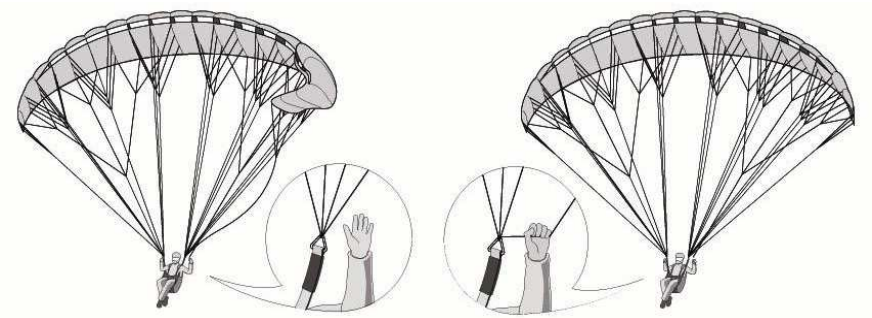


Fig. 1: Grabbing the stabilizer/winglet main line

Cascade of events

Many reserve deployments and accidents are a result of a cascade of over-corrections by the pilot. Please note that over-corrections are often worse than no input at all.

Deep stall (parachuting, stable stall)

The Pegasus has no tendency to get into in a deep stall. Should this nevertheless occur, make sure your brakes are fully released. The glider will then normally recover on its own immediately. If the glider still doesn't recover, either put your hands on the A risers and push forward or use the speed bar to accelerate the wing.

You can recognise a deep stall by the glider getting "mushy" and the airflow around your ears decreasing. The glider may also compress spanwise. Flying in strong turbulence or exiting a

deflation with too much brake applied can cause this situation. A wet glider also has a higher deep stall tendency, and you should do everything you can to avoid flying in the rain. If you do pass through some rain apply speed bar until you are confident that the wing has dried out. An out-of-trim glider, caused by changes in line lengths due to prolonged use, may also have a higher deep stall tendency.

Full stall (dynamic stall)

This is an extreme manoevre outside the normal flight envelope. You should never need to carry perform this manoevre.

During the stall, keep your hands close to your body and if necessary lock your hands under your harness seatplate. In a stable stall, the wing oscillates forward and backward. Before releasing the stall, raise your hands slightly and evenly to partly fill the canopy with air. If possible, let the brakes up when the wing is moving forwards in front of you to avoid excessive surge. The Pegasus will damp the dive by itself, but you may counter brake for comfort and release the brakes to regain speed. Be careful not to brake too much or for too long as this could cause another stall. Never attempt a stall and then change your mind and release the brakes, the wing will surge violently.

Rapid descent techniques

Learn and practice the techniques in this section under qualified supervision. Big ears and spiral dives are generally the most common methods of descent. Big ears can achieve a moderate rate of descent with the advantage of forward speed and manoeuvrability. Spiral dives attain higher rates of descent, but the G-forces can be significant and the manoeuvre is more technically demanding. 'B-stalls' have little or no advantages compared to the other methods of descent and therefore are not recommended in normal situations.

Big ears

To enter big ears, pull down firmly the outermost A lines on each side of the wing one-by-one until the wingtips fold under. The glider can then be steered by weightshift. Do not use the brakes unless you intend to exit big ears.

Once in big ears, you can increase your sink rate and forward speed by applying the speed bar. Always apply the speed bar AFTER entering big ears, never before.

To exit big ears, release both A lines at the same time. Apply brake progressively one side at a time to help re-inflation. Be careful not brake too deeply on both sides at the same time as this could cause a stall.

Spiral dives

Before entering a spiral, make sure you have adequate height for recovery. To enter the spiral dive, weight shift and progressively apply the inside brake until the glider enters the spiral. As the glider accelerates into the spiral, centre your weight and control your rate of descent with weightshift and outer brake.

To exit the spiral, check your weight is centred (or slightly towards the outside) and progressively release the inside brake. As the glider starts to exit the spiral, you may also choose

to reduce the pendulum moment by briefly re-applying the inside brake.

The Pegasus has no tendency to remain in a stable spiral dive under normal conditions. However, in certain cases, such as spirals with excessive sink rates or wrong harness settings, pilot action may be required. In such cases, exit the spiral by weightshifting to the outside and progressively applying the outside brake.

B-stall

Although it is not recommended for normal situations, the B-stall does not present particular difficulties.

To enter a B-stall, symmetrically pull down the B risers. This action may require considerable effort. To exit the manoeuvre, release the B-risers smoothly and symmetrically. Be sure to allow the glider to resume normal flight before making any other actions.

Piloting without brakes

If, for any reason, you are unable to use the brakes to steer the glider, you can also use the rear risers. Take care to use only small inputs. Pulling the rear risers too hard may cause a stall.

Golden rules

* Never place your engine downwind of your sail, to avoid trouble due to possible gusts.
* Check, check and check again that there is no fuel leakage.
* Do you have enough fuel? It is always better to have too much than too little!
* Make sure nothing is loose in the harness, which could come into contact with the propeller during flight.
* If you find any anomalies, IMMEDIATELY address the problem!
* Put on the helmet and fasten it systematically before you get into your harness.

WARNING

Do not perform big ears near the ground

CAUTION

The high G-forces experienced in steep or prolonged spirals may result in disorientation or even loss of consciousness. Spirals with descent rates above 10 m/s are not recommended.

* Make all your pre-flight checks before taking off.

* After landing, keep your wing facing in the direction of flight. If you don't, you risk the lines coming into contact with the propeller.

* Do not ask for trouble - do not fly over water, between trees or power lines or any other place where an engine failure would put you in an emergency situation.

* Do not neglect turbulence caused by other gliders or even yourself, especially when flying low.

* It is not reasonable to let go of the brakes below 100 meters, a possible malfunction of your paramotor may require an immediate steering response.

* Generally do not trust your engine, act as if it may fail at any time.

* Unless it is absolutely necessary (eg. to avoid a collision), do not make sharp turns in the opposite direction to the wind direction. Especially when climbing, you could easily cause a collapse.

* Do not fly at low altitude with the wind behind you, this greatly limits your options.

* Do not wait until a minor problem gets worse; any change in noise or vibration can indicate the presence of a potentially serious problem. Land and investigate.

* Be sure of your navigation.

* Remember that not everyone enjoys your engine noise. Do not scare the livestock and wildlife.

Security

Security notice

Safety notices are issued when faults occur when using a wing, which could also affect other wings of the same model. Safety notices include instructions on how to inspect wings for possible defects and the steps needed to address them.

Gin Gliders publishes such safety notices on its website.

The safety notices may also be issued by certification bodies and also published on the relevant websites. You should regularly check the safety records of certification bodies and keep yourself updated with all new safety regulations that cover all products related to paragliding/paramotoring.

Your responsibilities

The use of this wing is at your own risk. We disclaim all liability and we do not guarantee the equipment if any change or repair was made by a company other than GIN including replacement of brake lines. We do not guarantee the equipment if periodic inspections are not performed according to this manual (annual inspection and review of the wing every 2 years). The pilot is solely responsible for his safety and the safety of its passengers. Before each flight, the pilot must check the status and airworthiness of the wing and must not take off if it is not in perfect condition. The pilot must also ensure that the weather is suitable and is expected to remain so during the period of the flight.

The wing may only be used by pilots in who are in possession of a license valid in the jurisdiction of the flight or under the supervision of a qualified instructor. The safe use of the equipment is the full responsibility of the operator.

WARNING

As the owner of a Pegasus wing, you are responsible for the carrying out safe operations in accordance with the laws within your jurisdiction.

The hardware warranty does not apply in any of the following cases:

The inspection period is over and you have carried out an inspection yourself or inspection has been carried out by an unauthorized repairer.

The take-off weight is not within the limits prescribed by the manufacturer.

The wing is used to fly in the rain, in the clouds, in fog and snow.

The flying conditions are turbulent and the wind speed exceeds 20km/h.

The wing is used to perform acrobatic maneuvers or extreme angles exceeding 60° in pitch or roll.

The pilot is insufficiently experienced to make judgements on their own safety.

Any modifcations to the wing, rigging lines, or unapproved attachment system

Using the wing in free fall, it's not a parachute.

The wing is used with a winch.

For your security

The use of paragliders and paramotors is subject to several regulations. They may not be used in flight without valid certification. Attempting to fly without professional training is extremely dangerous.

This manual does not replace a training course in an approved school.

The use of this wing is at your own risk. The manufacturer and dealer are not responsible for damage or injury to others by using the Pegasus wing.

A specialist should have tested the glider before use, this must be reported and signed on the label sewn on the wing.

Never fly if your wing is wet or when there is rain or snow. This may cause the wing to stall.

Never alter the construction of your Pegasus. If you do, your certification will be invalid.

Make your first flights under the supervision of your instructor and in a flight environment you

know well and are comfortable with.

Only fly if the weather conditions are conducive to a safe flight.

Usage

The Pegasus can be used only for its intended purpose as a paramotor wing, do not use it as parachute.

Winching

The Pegasus is adapted for winching using standard winching procedures. You are responsible for ensuring that your winching operations are safe and in compliance with the applicable procedures. Make sure you have adequate training and suitable for winching, you have the correct attachment to the harness and the winching mechanism works. Always use an approved winch system and a thoroughly trained operator.

Acrobatics

Acrobatics are prohibited. The Pegasus is not designed for acrobatics (Acro). By practicing this activity, you voluntarily assume the risk of accident or death. Aerobatic manoeuvers involve risk of unpredictable flight configurations, which could cause structural damage. Acrobatics can also accelerate the aging of materials. In the worst case, the result could be structural failure.

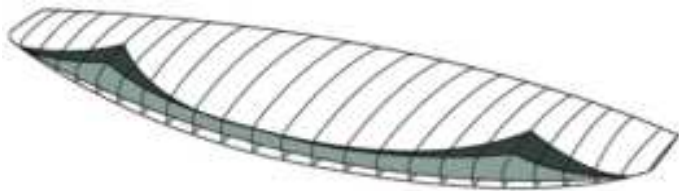
Care and maintenance

Storing your wing

Packing your wing

It is very important to pack the glider carefully in order to ensure the longevity of the leading edge reinforcements. Fold up the Pegasus as shown in the diagrams below. The leading edge reinforcements (Mylar and Rigid-System) on the front edge are placed on top of each other to avoid bending or misshaping them. This method of packing ensures that the leading edge is treated carefully. This will increase the glider's life, performance and launch behaviour.

If the reinforcements have been bent or misshapen, they distort more easily during flight, creating an altered air inflow, which can lead to a loss in performance and changes in flight behaviour. The leading edge reinforcements also perform an important function on launch. Therefore, the less they have been bent, the more easily the glider will inflate and launch.

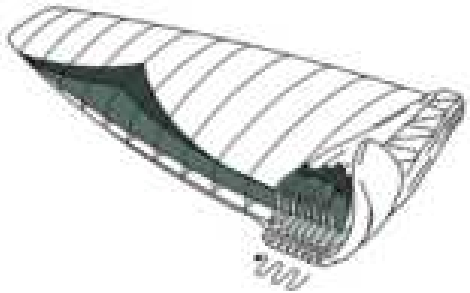


1. Spread out the paramotor glider completely on a smooth surface.

ATTENTION

Do not drag the glider across rough surfaces such as gravel or asphalt. This can damage the seams and/or the surface coating.

2. All the ribs on one side are placed one on top of one another, so that the leading edges are not bent



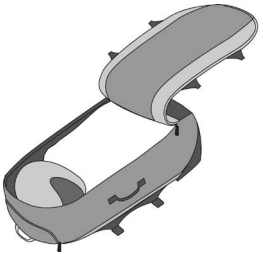
3: Then continue as in the second step, placing the leading edges of the other side on top of the next until you reach the tip of the glider. Place the concertina bag underneath the glider which has been folded together, so that the ribs are all lying along the length of the concertina bag.

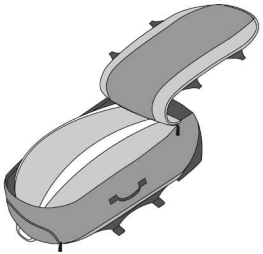
4. The glider is now folded up along its length, and the leading edges are on top of each other without having being bent. Fasten the straps near the leading edges, so that they do not slip, and the straps in the middle and at the end of the glider.

5. Do up the zip, making sure that none of the lines or fabric is caught in the zip

6. Fold up the glider along its length, if possible with the first fold below the leading edge reinforcements. Pay particular care not to bend any of the rigid reinforcements! Fold up the glider along its length, with the first fold below the leading edge reinforcements. Pay particular care not to bend any of the rigid reinforcements!

All GIN gliders are delivered with a durable ripstop Kodura® rucksack with 160L capacity. The rucksack should be packed carefully to achieve maximum comfort. First, place the glider inside the harness and then put the top of harness in the bottom of the rucksack with the glider side next to the back of the rucksack. Finally, tighten the internal and external compression straps and adjust the shoulder and waist straps to ensure the equipment stays firmly in place when walking.





Storage and transportation

Even if your paramotor glider was completely dry when it was packed up after the final flight of the season, for long-term storage you should if possible take it out of the back pack and spread out the canopy a little in a clean, dry place away from direct light. If you do not have the space to do this, then open the backpack, internal bag and belt as much as possible and avoid compressing it. It must be stored at a temperature between 10° and 25° C and in relative humidity between 50 and 75%. Make sure too that the paramotor glider is not stored in a place where animals such as mice or cats could use it as a place to sleep.

Do not store the paramotor glider near any chemicals. Petrol, for example, causes the material to disintegrate and can cause considerable damage to your paramotor glider. When your equipment is in the car boot, keep it as far away as possible from any spare petrol cans or oil containers.

The Pegasus should not be exposed to extreme heat (e.g. in the boot of the car during summer). The heat may cause any moisture present to be pressed through the fabric, thereby damaging the coating. High temperatures accelerate the process of hydrolysis, particularly when combined with moisture, which damages fibres and coating. Do not store your paramotor glider near radiators or other heat sources. Always transport your glider in the special concertina bag and use the backpack provided for the rest of the equipment.

Care

Fabric

Care is essential to ensure that the fabric and glider remain durable and retain their qualities. The glider should therefore be protected from unnecessary UV light. Do not unpack your glider until immediately before flight and pack it up straight after landing. Modern paramotor glider

fabrics have better protection against the sun, but UV rays in particular are still one of the decisive factors in how the fabric ages. The colours will fade first and then the coating and fibres will begin to age.

When choosing a place to launch, try to find somewhere thatis smooth and free of stones and sharp objects. Do not stand on the glider. This weakens the fabric, especially if it is on a hard or stony surface. Pay attention to the behaviour of spectators at the launch site, especially children: do not hesitate to draw their attention to the sensitive nature of the fabric.

When you are packing up your glider, make sure that there are no insects trapped inside. Many insects produce acids when they decompose, which can cause holes in the fabric. Grasshoppers make holes by biting through the fabric and also excrete a dark liquid that stains. Keep animals away when you are packing up. Insects are not attracted by any particular colours, contrary to what is commonly believed.

If the glider gets wet or damp, it should be dried as soon as possible in a well-ventilated room (but out of the sun). It may take several days before the canopy has dried completely because the fibres absorb water. Mould may form if the paramotor glider is stored wet and the fibres may rot, particularly when it is warm. This can make the paramotor glider unsuitable for flying within a short time.

A brand-new glider will often be compressed when delivered. This is solely for the initial delivery and the glider should not be compressed in such a way again. Do not pack your glider too tightly after use and, even though it is very comfortable, never sit on the backpack with the glider inside.

If salt water gets on the glider, it should be rinsed immediately in fresh water (refer to the section “Cleaning”).

Lines

The Pegasus has various different high-quality and accurately manufactured lines which have been selected according to the load and area of use. You should also protect the lines from unnecessary UV light because, as with the fabric, UV light in particular will weaken the lines.

Dyneema lines for example, are very temperature-sensitive and can be permanently damaged at temperatures above 75° C. Therefore your glider should never be stored in a hot car especially during summer.

Be careful that there is no abrasion caused to the coating on the lines by rubbing, particularly when ground-training with crossed risers.

Do not walk on the lines after the glider has been spread out and watch out for spectators or skiers who may inadvertently go over the lines.

When you are packing up the glider, be careful to avoid putting any unnecessary kinks in the lines and use only the overhand knot or bowline knots described for the brake lines.

Cleaning

If you do have to clean the glider, use only lukewarm fresh water and a soft sponge. Use a weak soap solution for stubborn stains, and then rinse it out carefully and thoroughly. Leave the glider to dry in a place which is well-ventilated and in the shade.

Do not under any circumstances put the glider in the washing machine. Even if washing powder is not used, the glider would be badly damaged by the mechanical action of the machine. Do not put the canopy into a swimming pool - chlorine will damage the fabric. If you have no choice but to rinse the glider, e.g. following a landing in the sea, gently wash it down inside and out with fresh water. Frequent rinsing accelerates the aging process.

CAUTION

Do not under any circumstances use chemicals, brushes, rough cloths, high-pressure cleaners or steamers to clean the glider, as these can damage the fabric coating and weaken it. The glider becomes porous and loses braking strength.

Maintenance

Type designation

GIN gliders have an exact identification on the underside of the wingtip or on the centre rib, which is obligatory for all paramotor gliders. The information required is set out in the airworthiness requirements.

It is helpful to provide the type designation of the paramotor glider if you are contacting your Gin Gliders dealer with any queries or ordering replacement parts or accessories, to ensure accurate identification.

Inspection periods

Failure to observe the inspection periods shall render invalid the certification and warranty. A properly completed logbook with details of all flying and training will help you to comply with these periods.

A qualified professional should perform a formal maintenance inspection no later than 36 months after the first flight or after 150 hours, whichever is sooner. Subsequent inspections should be carried out every 24 months or 150 hours, whichever is sooner. Inspection should consist of measurements of the fabric porosity, tear resistance, line strengths, line lengths and a full visual check. The full protocol is available on our website.

If you groundhandle frequently or fly in harsh conditions, we recommend an annual check. It is your responsibility as a pilot to ensure that your wing is airworthy at all times.

A full inspection will give you peace of mind and extend the lifetime of your glider. Additional inspections should be performed by a qualified person following a crash or violent landing on the leading edge, or if you note a deterioration of performance or behaviour.

You should also check for any damage to your lines, sail, risers and connectors before each flight.

Validity of inspection

It is very important that your glider is serviced at the required intervals throughout its entire life. In order to benefit from Gin Gliders warranty:

- you must have your paramotor glider inspected by Gin Gliders or an inspection agent authorised by Gin Gliders
- the documentation and the result of the inspection must be clearly identifiable (date and place / name of the inspector) and be entered near the glider information/certification sticker.

Material stress

Uncontrolled flight positions—such as may be encountered during safety training, extreme manoeuvres or after massive collapses or cascades—are outside the manufacturer limits of the paramotor glider. This may cause a general deterioration in flight characteristics, premature ageing, or even structural failure.

Repairs

Gin Gliders workshops

All repairs and servicing should be carried out by a Gin Gliders authorised workshop or directly by Gin Gliders. Gin Gliders workshops have trained staff, original Gin Gliders parts and the necessary know-how, all of which will ensure top quality.

Major repairs at the Pegasus, such as replacing panels, should only be carried out by the distributor or manufacturer.

Small repairs to the glider

Very small holes in the sail can be repaired with the sticky back tape provided with your glider.

Damaged lines should be replaced by your GIN dealer. Before fitting a replacement line, check it for length against its counterpart on the other side of the wing. When a line has been replaced, always inflate the glider on flat ground to check that everything is in order before flying.

Gin Gliders lifetime guarantee

Gin Gliders are proud to guarantee the quality, craftsmanship and performance of all our products. Equipment with defects in materials or manufacturing will be repaired or replaced at the discretion of Gin Gliders for the practical lifetime of the product. Equipment damaged through wear and tear, misuse or neglect may be repaired at a nominal charge.

If you have any problems with your equipment, please contact your GIN dealer in the first instance, or Gin Gliders directly via our website.

Register your Pegasus

Register your Pegasus to receive safety updates, and improved guarantee and repair service.
http://www.gingliders.com/register

Maintenance record

In addition to this manual, the service record includes the maintenance schedule for your Pegasus wing. We recommend that you keep the service history.

Glider details

Size:	Colour:	Serial number:
Date of test flight: _____		
Name and signature: _____		

Pilot details

1. Owner	
Name:	
Address:	
Tel:	
Email:	
2. Owner	
Name:	
Address:	
Tel:	
Email:	

Pegasus – Inspections and maintenance summary

Date	Details of work carried out	General condition	Work performed by	Signature

Appendix

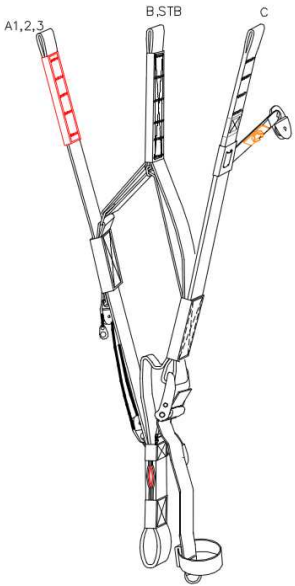
Technical specifications

Size	22	24	26	28	30	34
Flat area [m²]	22.22	24.12	26.26	28.50	30.83	33.24
Flat span [m]	10.30	10.76	11.23	11.70	12.16	12.63
Flat aspect ratio	4.8	4.8	4.8	4.8	4.8	4.8
Projected area [m²]	19.29	20.94	22.80	24.74	26.76	28.25
Projected span [m]	8.33	8.67	9.05	9.43	9.80	10.18
Projected aspect ratio	3.6	3.6	3.6	3.6	3.6	3.6
Cell number	36	36	36	36	36	36
Glider weight [kg]	5.0	5.3	5.5	5.8	6.2	6.8
Weight in flight (solo) [kg]	55-75	65-85	75-95	85-105	95-115	105-130
Weight in flight (paramotor)[kg]	65-110	75-120	85-130	95-140	99-160	115-240
Certification (SOLO)	EN/LTF A	EN/LTF A	EN/LTF A	EN/LTF A	EN/LTF A	EN/LTF A
Certification (PARAMOTOR)	DGAC	DGAC	DGAC	DGAC	DGAC	DGAC

Risers

The 20mm wide risers specially developed for the Pegasus are grouped into three riser and allow a variety of uses for the Pegasus. Only for free flight, it is fitted with a speed system which is activated using a speed bar.

The riser has a trimmer which allows the pilot to increase the cruising speed in motorised flight and to counter the torque effect.



There is also a choice of two riser hangpoints to allow the best set-up for the Pegasus for the particular motor system used.

The brake pulley can be moved so it can also be adjusted to the ideal position for this.

Pegasus risers

Hangpoints

The Pegasus riser has the option of two hangpoints; it depends on the equipment you use as to which hangpoint is more suitable. To use the upper hangpoint insert the Carabiner inbetween the red riser webbing as shown in the picture.

WARNING: ensure that the Carabiner has a single piece of red webbing on each side of it. Incorrectly installed Carabiners could damage the riser resulting in failure.

Depending on which hangpoint the pilot uses they may want to adjust the brake length and the height of the brake pulley on the riser. For more information see chapter Brake line adjustment.

Pegasus hang-points

Speed system

The speed system increases the maximum speed by lowering the angle of attack with a pulley-guided, foot-operated system. It is important to have your accelerator system correctly routed through your harness and attached to the risers with the supplied Brummel hooks. The length of

the speed bar should be initially adjusted while on the ground, sitting in the harness so that the legs are fully extended at the point of full accelerator travel. It is helpful to have an assistant hold the risers taut while making this adjustment.

Subsequent fine-tuning can be done on the ground following the first flight with the speed system. If in doubt about this procedure, consult your instructor or dealer.

Trimmer

The trimmer allows the pilot to increase cruising speed in motorised flight and to counter the torque effect. We recommend that you always have the trimmers closed when launching or landing.

Use the trimmer only in motorised flight. We generally recommend that you do not use the trimmer to increase speed in turbulent areas or near the ground because of the increased risk of collapse. Do not brake the glider symmetrically in accelerated flight. Pulling both brakes down firmly can deform the profile and, in an extreme case, cause a frontal collapse.

The trimmer must be locked off using the metal loop in non-motorised flight. It is possible to loop the metal loop attached to the end of the trimmer tab through the Carabiner before takeoff. This locks the trimmer in the neutral position and makes it impossible for the trimmer to be released in flight.

WARNING Under no circumstances should the grip loop for the trimmer lock be put into the main hangpoint.

This shortens the D-riser considerably, and this effect is increased by opening the trimmer when it is like this.

Overview picture of the riser with the trimmer locked into the Carabiner and lower brake pulley

Line plan

Please refer to this line plan when ordering replacement lines

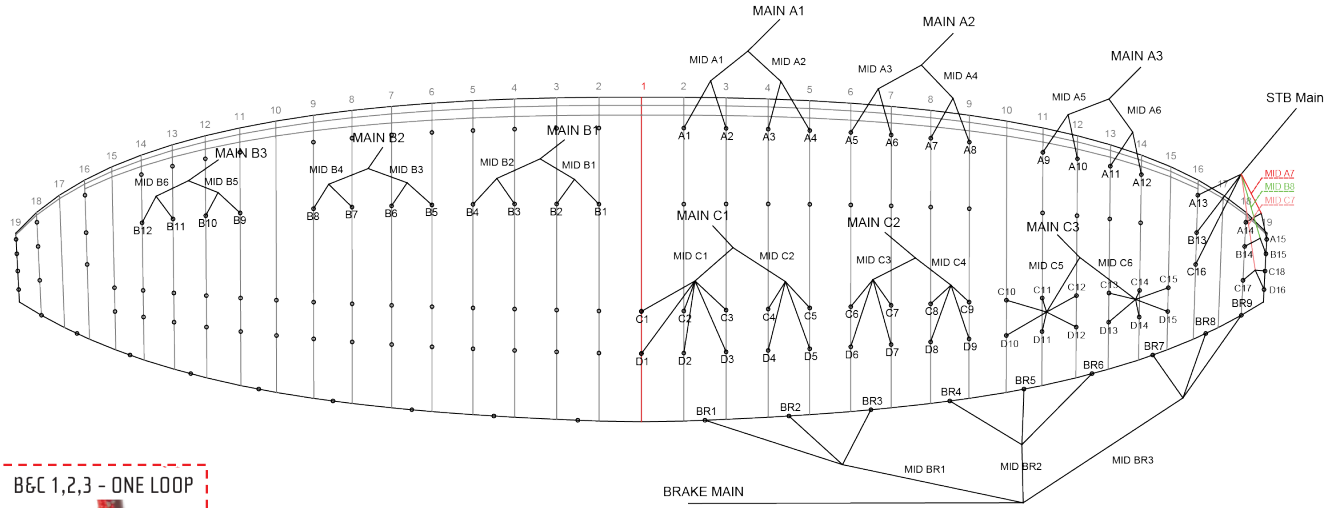
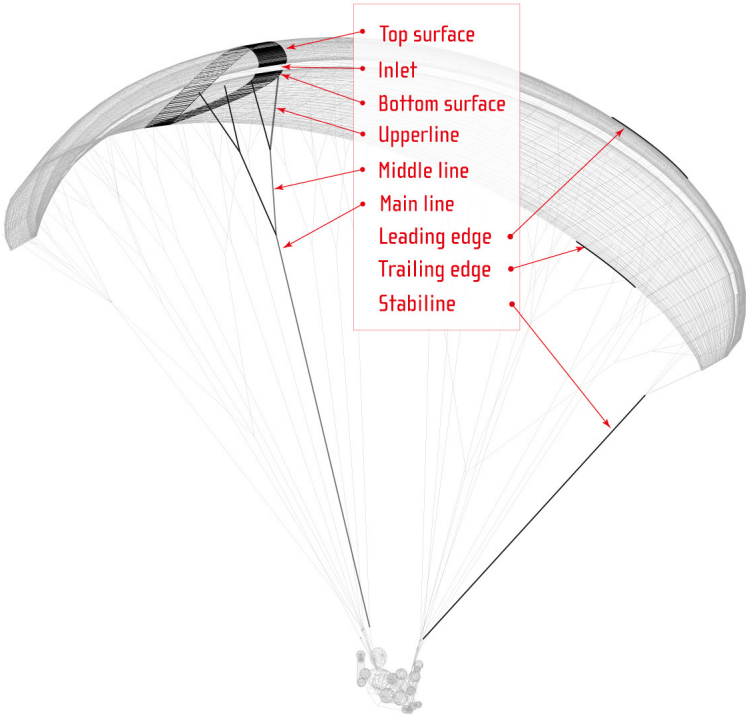
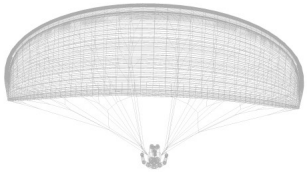


Diagram of parts





Top view

Front view

Side view

Materials

Canopy fabric	
Upper surface	Dominico Dokdo 30D 42g/m² water repellent
Lower surface	Dominico Dokdo 30D 42g/m² water repellent
Ribs	Dominico Dokdo N30 DFM 42g/m²

Lines	
Upper	Liros DSL 70 Dyneema / GIN TGL 80 Aramid
Middle	Liros DSL 70, PPSL 120, 160 Dyneema
Lower	Liros PPSL 120,160,200 Dyneema / GIN TGL 280 Aramid

Riser	
	Güth & Wolf M20030 20mm

Maillons	
	Stainless steel Ø 3.85m

Thread	
	Amann & Söhne - Mill Faden150D/3 Polyester bonded

Brake line adjustment

Factory setting

Correctly installed brake lines should have a slightly slack in the brake lines when the glider is in fully accelerated flight. Normally this is about 10cm in trim flight. This is how far you must pull down the brakes before the trailing edge of the paraglider starts to move downwards and begins to brake. Note that the brake cascades already cause drag by their aerodynamic resistance.

If you do need to make adjustments to suit your harness / motor combination, body and flying style, we strongly recommend that you test fly the glider after every 2cm of adjustment. There should be a minimum of 10cm of free brake travel when the glider is flown hands-off. This prevents the brakes being applied unintentionally when the speed system is fully engaged. We recommend a double sheepshank or a bowline knot for the brake handle attachment as shown in the diagram.

Bowline knot

WARNING: loose, unsuitable or incorrectly tied brakeline knots can cause the main brake line to loosen and then lead to loss of control of the glider.

Variable brake pulley

The height of the brake pulley can be adjusted to suit the needs of the pilot (see also the section “Riser” and “Trimmer”). If doing this, make sure that the brake line length is aligned to the top position. If the brake line pulley is pushed down, the main brake lines should be lengthened by the same distance.

The Pegasus riser has a lower brake pulley which is appropriate for very high attachments, e.g. when the glider is used with a trike. If you choose to use the lower brake pulley in this way, be sure to check that the brake lines are the right length. You may have to lengthen the brake lines to avoid the trailing edge being inadvertently pulled down when the glider is fully accelerated with the trimmers open.

Incorrect adjustment

If the brake lines are too long, the paramotor glider reacts slowly and is difficult to land. The brake lines can be adjusted during flight by wrapping them around your hands which will improve the flight characteristics. Adjust the brake lines to the correct length after you have landed.

If the brakes are shortened, care must be taken that the paramotor glider is not slowed down in trim and accelerated flight. If the brake lines are too short, the following issues could arise:

- there could be an early stall
- the paramotor glider does not launch well and there is a risk of deep stall
- the paramotor glider exhibits dangerous behaviour in extreme flying
- the trailing edge of the paramotor glider is braked in accelerated flight which, in an extreme case, could cause a frontal collapse
- other safety issues may arise and performance may deteriorate

Variable brake pulley arm

Environmental conditions can also cause the brake lines to shorten. Brake line length should therefore be checked regularly, particularly if there is any change in launch or flight characteristics.

Certification

Pegasus #24

Liberté • Égalité • Fraternité
RÉPUBLIQUE FRANÇAISE
MINISTÈRE DE L'ÉCOLOGIE, DU DÉVELOPPEMENT DURABLE ET DE L'ENERGIE

dgac
DSAC

FICHE D'IDENTIFICATION ULM DE CLASSE 1

(à joindre à la carte d'identification)

a	b	c		d		e				f	Rév n°
B	1	0	1	S	F	0	2	8	7	6	E	-

a) Construction en série : B - autres cas : A
b) Monoplace : 1 - Biplace : 2
c) Paramoteur : 01 - Pendulaire : 02 - Multiaxe : 03 - Autogire : 04 - Aérostat : 05 - ULM à motorisation auxiliaire : 1A - 2A - 3A - Hélicoptère : 06
d) Code de l'autorité aéronautique
e) Numéro d'ordre
f) Utilisation : Loisir : L - Activité particulière : T - Loisir et activité particulière : E

Appellation ou type d'ULM	GIN PEGASUS 24
Constructeur	GIN GLIDERS INC.
Adresse	285-1 GalDam-Ri Mohyun-Myun Yongin City 449-851 KYUNGGI-DO - COREE

DESCRIPTION DE L'ULM

Activités particulières prévues	n/a				
Options prévues	n/a				
Masse minimale	Masse maximale	Voilure			
		Fabricant	Modèle/Référence		
75 kg	120 kg	GIN GLIDERS	PEGASUS 24		
Référence manuel d'utilisation		Référence manuel d'entretien		Surface à plat	Résistance minimale d'ancrage
PEGASUS MANUAL FR 1.0		PEGASUS MANUAL FR 1.0		24,12 m²	588 daN
Limitations du constructeur de la voile vis-à-vis des GMP	< ou égale à 27 KW.				

Pour le Ministre chargé de l'Aviation Civile
Document établi le :28 Mai 2015
Benoit PINOT
Chef du pôle certification aviation générale
Service de la navigation aérienne
Visa de l'autorité

A remplir par le constructeur d'ULM en série ou par son représentant pour toute copie conforme remise à l'acheteur.

à ..... le : .....

Je soussigné ....., certifie que l'ULM, numéro de série : ....., est conforme au dossier technique ayant fait l'objet de la présente fiche d'identification.

signature et cachet de l'entreprise

Pegasus #26

Epreuve sen vol pout la classe 1 (paramoteurs)

Test flight report (PPG) | Prüfprotokoll Testflug für Motorschirme

Dénomination du constructeur *Company* *Hersteller*	**Gin Gliders Inc.**		
Adresse *Adress* *Adresse*	**2318-32, Baegok-daero, Mohyeon-myeon, Cheoin-Gu, Yongin-si, Gyeonggi-Do 449-851 Korea**		
N° tél. fixe *Office phone no.* *Telefon Büro*	**+82 31 333 1241**	Courriel *Email* *E-Mail*	**ginsong@gingliders.com**
Date & place de rapport *Place and report date* *Ort und Datum*	**Wedemark / Germany 09.03.2015**	Numéro de rapport *Report number* *Protokoll Nummer*	**Peg-26_MAR_15**
Modèle de parapente *Paraglider model* *Gleitschirm Modell*	**Pegasus 26**	Poids de décollage *Take-off weight* *Startgewicht*	**130 kg**
Conditiones de test *Test conditions* *Testbedingungen*	Altitude / *Altitude* / *Höhe*	**65 m**	
	Conditiones météorologiques *Meteorological conditions* *Meteorologische Daten*	Temperature *Air temperature / Lufttemperatur*	**7 °C**
		Vitesse du vent *Wind speed /* *Windgeschwindigkeit*	**9 km/h**
		Pression athmosphérique *Pressure / Luftdruck*	**995 hPa**
		Degré d'humidité *Humidity / Luftfeuchtigkeit*	**70 %**

Note: des mesures effectuées en d'autres conditions météorologiques peuvant être différentes
Note: measurements in different weather conditions may be different
Hinweis: Messungen bei anderen Wetterbedingungen können abweichend ausfallen

Test en vol pour classe 1 – paramoteurs
Le paramoteur doit être évalué selon les critères suivants à la masse maximum
Test flight for class 1 – powered paragliders
Powered paraglider was tested at maximum take-off weight for following aspects
Testflug für Klasse 1 – Motorschirm
Testflug wurde mit maximaler Abflugmasse durchgeführt

1. Comportement au gonflage / *Canopy inflation* / *Verhalten in der Aufziehphase*			
Simplement et régulier ***Simple and regular*** ***Einfach und regelmäßig***			
2. Comportement au décollage / *Launch characteristics / Abflugverhalten* (Technique de décollage special requise / *Special launch techniques required / Spezielle Abflugtechniken erforderlich*)			
Non ***No*** ***Nein***			
3. Exploitabilité en vitesse en vol droit / *Speed at level flight / Geschwindigkeiten*			
Vitesse de décrochage (ou vitesse minimale si la voile ne décroche pas) *Stall speed (or minimum speed if the wing does not stall)* *Stall-Geschwindigkeit (oder Minimalgeschwindigkeit, wenn Schirm nicht stallt)*			**18 km/h**
Vitesse bras haut *Trim speed* *Trimm-Geschwindigkeit*	**42 km/h**	Vitesse accélérée* *Max speed* *Maximal-Geschwindigkeit*	**47 km/h**

* (le cas échéant, trim et/ou accélérateur)

4. Comportement lors d'une mise en virage engagé *Conduct after entering the spiral / Verhalten nach Einleitung der Steilspirale*	
a) Tendance au retour en vol droit (spontanéité) *a) Tendency to level flight recovery (spontaneous)* *a) Tendenz des Wiederaufrichtens*	**Oui – spontanè** ***Yes – spontaneous*** ***Ja – leitet sofort selbstständig aus***
b) Nature des oscillations (amortissement) *b) Oscillations (reducing or not)* *b) Oszillation (Reduzierung ja oder nein)*	**Retour au vol normal – amortissement** ***Reducing*** ***Reduzierung - Ja***
c) Commandes de pilotage alternatives* *c) Alternative steering methods* *c) Alternative Steuermöglichkeiten*	**Les commandes de pilotages alternatives sont avec les C de l'élévateur** ***Alternative steering methods over C-riser*** ***Alternative Steuermöglichkeiten über C-Tragegurte***

* les identifier et préciser leurs positions

5. Comportement lors de atterrissage / *Landing characteristics / Landeverhalten*	
a) Comportement particular *a) Special behaviours* *a) Spezielle Eigenschaften*	**Non** ***No*** ***Nein***
b) Technique de atterrissage special requise *b) Special landing techniques required* *b) Spezielle Landetechniken erforderlich*	**Non** ***No*** ***Nein***

6. Commandes de pilotage alternatives *a) Alternative flying methodes* *a) Alternative Flugpraktiken*	**Les identifier et préciser, dans le manuel d'utilisation, leurs positions et les précautions à respecter en virage et à l'atterrissage** ***Appropriate descriptions with safety measures to be found in the user manual*** ***Genau Beschreibungen mit Sicherheitsmaßnahmen befinden sich im Benutzerhandbuch***

7. Stabilité en tangage lors d'une action aux commandes en vol accéléré *Pitch stability while steering an acceleretad flight* *Nickstabilität nach Eingriff im beschleunigten Flug*	***OK***

8. Stabilité en tangage en sortie de vol accéléré *Pitch stability while exiting an acceleretad flight* *Nickstabilität beim Verlassen des beschleunigten Flugs*	***OK***

9. Essais sol-vol *Special preparation before flying* *Besonderheiten vor dem Start*	**Non** ***No*** ***Nein***

Pendant ces essais, les commandes de vol doivent rester manœuvrables pour permettre le contrôle de la voile.
During these tests, the flight controls must remain in working order to allow control of the paraglider.
Bei diesen Prüfungen muss die Flugsteuerung funktionstüchtig sein, damit Kontrolle des Gleitschirms gewährleistet ist.

GIN GLIDERS INC. Gmbh. S.
GIN SEOK, SONG/PRESIDENT

Yongin-city, le 20 avril 2015
Gin Seok Song

Signature et cachet de constructeur

Pegasus #28

Epreuve sen vol pout la classe 1 (paramoteurs)

Test flight report (PPG) | Prüfprotokoll Testflug für Motorschirme

Dénomination du constructeur *Company* *Hersteller*	**Gin Gliders Inc.**		
Adresse *Adress* *Adresse*	**2318-32, Baegok-daero, Mohyeon-myeon, Cheoin-Gu, Yongin-si, Gyeonggi-Do 449-851 Korea**		
N° tél. fixe *Office phone no.* *Telefon Büro*	**+82 31 333 1241**	Courriel *Email* *E-Mail*	**ginsong@gingliders.com**
Date & place de rapport *Place and report date* *Ort und Datum*	**Wedemark / Germany 09.03.2015**	Numéro de rapport *Report number* *Protokoll Nummer*	**Peg-28_MAR_15**
Modéle de parapente *Paraglider model* *Gleitschirm Modell*	**Pegasus 28**	Poids de décollage *Take-off weight* *Startgewicht*	**140 kg**
Conditiones de test *Test conditions* *Testbedingungen*	Altitude / *Altitude* / *Höhe*	**65 m**	
	Conditiones météorologiques *Meteorlogical conditions* *Meteoroligische Daten*	Temperature *Air temperature / Lufttemperatur*	**7 °C**
		Vitesse du vent *Wind speed /* *Windgeschwindigkeit*	**9 km/h**
		Pression athmosphérique *Pressure / Luftdruck*	**995 hPa**
		Degré d'humidité *Humidity / Luftfeuchtigkeit*	**70 %**

Note: des mesures effectuées en d'autres conditions météorologiques peuvant être différentes
Note: measurements in different weather conditions may be different
Hinweis: Messungen bei anderen Wetterbedingungen können abweichend ausfallen

Test en vol pour classe 1 – paramoteurs
Le paramoteur doit être évalué selon les critères suivants à la masse maximum
Test flight for class 1 – powered paragliders
Powered paraglider was tested at maximum take-off weight for following aspects
Testflug für Klasse 1 – Motorschirm
Testflug wurde mit maximaler Abflugmasse durchgeführt

1. Comportement au gonflage */ Canopy inflation / Verhalten in der Aufziehphase*			
Simplement et régulier ***Simple and regular*** ***Einfach und regelmäßig***			
2. Comportement au décollage / *Launch characteristics / Abflugverhalten* (Technique de décollage special requise */ Special launch techniques required / Spezielle Abflugtechniken erforderlich*)			
Non ***No*** ***Nein***			
3. Exploitabilité en vitesse en vol droit */ Speed at level flight / Geschwindigkeiten*			
Vitesse de décrochage (ou vitesse minimale si la voile ne décroche pas) *Stall speed (or minimum speed if the wing does not stall)* *Stall-Geschwindigkeit (oder Minimalgeschwindigkeit, wenn Schirm nicht stallt)*			**22 km/h**
Vitesse bras haut *Trim speed* *Trimm-Geschwindigkeit*	**46 km/h**	Vitesse accélérée* *Max speed* *Maximal-Geschwindigkeit*	**51 km/h**

* (le cas échéant, trim et/ou accélérateur)

4. Comportement lors d'une mise en virage engagé *Conduct after entering the spiral / Verhalten nach Einleitung der Steilspirale*	
a) Tendance au retour en vol droit (spontanéité) *a) Tendency to level flight recovery (spontaneous)* *a) Tendenz des Wiederaufrichtens*	**Oui – spontané** ***Yes – spontaneous*** ***Ja – leitet sofort selbstständig aus***
b) Nature des oscillations (amortissement) *b) Oscillations (reducing or not)* *b) Oszillation (Reduzierung ja oder nein)*	**Retour au vol normal – amortissement** ***Reducing*** ***Reduzierung - Ja***
c) Commandes de pilotage alternatives* *c) Alternative steering methods* *c) Alternative Steuermöglichkeiten*	**Les commandes de pilotages alternatives sont avec les C de l'élévateur** ***Alternative steering methods over C-riser*** ***Alternative Steuermöglichkeiten über C-Tragegurte***

* les identifier et préciser leurs positions

5. Comportement lors de atterrissage / *Landing characteristics / Landeverhalten*	
a) Comportement particular *a) Special behaviours* *a) Spezielle Eigenschaften*	**Non** ***No*** ***Nein***
b) Technique de atterrissage special requise *b) Special landing techniques required* *b) Spezielle Landetechniken erforderlich*	**Non** ***No*** ***Nein***

6. Commandes de pilotage alternatives *a) Alternative flying methodes* *a) Alternative Flugpraktiken*	**Les identifier et préciser, dans le manuel d'utilisation, leurs positions et les précautions à respecter en virage et à l'atterrissage** ***Appropriate descriptions with safety measures to be found in the user manual*** ***Genau Beschreibungen mit Sicherheitsmaßnahmen befinden sich im Benutzerhandbuch***

7. Stabilité en tangage lors d'une action aux commandes en vol accéléré *Pitch stability while steering an acceleretad flight* *Nickstabilität nach Eingriff im beschleunigten Flug*	***OK***

8. Stabilité en tangage en sortie de vol accéléré *Pitch stability while exiting an acceleretad flight* *Nickstabilität beim Verlassen des beschleunigten Flugs*	***OK***

9. Essais sol-vol *Special preparation before flying* *Besonderheiten vor dem Start*	**Non** ***No*** ***Nein***

Pendant ces essais, les commandes de vol doivent rester manœuvrables pour permettre le contrôle de la voile.
During these tests, the flight controls must remain in working order to allow control of the paraglider.
Bei diesen Prüfungen muss die Flugsteuerung funktionstüchtig sein, damit Kontrolle des Gleitschirms gewährleistet ist.

Yongin-city, le 20 avril 2015
Gin Seok Song

GIN GLIDERS INC.
Gen. S.
GIN SEOK, SONG/PRESIDENT

Signature et cachet de constructeur

Pegasus #30

Epreuve sen vol pout la classe 1 (paramoteurs)

Test flight report (PPG) | Prüfprotokoll Testflug für Motorschirme

Dénomination du constructeur *Company* *Hersteller*	**Gin Gliders Inc.**		
Adresse *Adress* *Adresse*	**2318-32, Baegok-daero, Mohyeon-myeon, Cheoin-Gu, Yongin-si, Gyeonggi-Do 449-851 Korea**		
N° tél. fixe *Office phone no.* *Telefon Büro*	**+82 31 333 1241**	Courriel *Email* *E-Mail*	**ginsong@gingliders.com**
Date & place de rapport *Place and report date* *Ort und Datum*	**Wedemark / Germany 14.04.2015**	Numéro de rapport *Report number* *Protokoll Nummer*	**Peg-30_APR_15**
Modèle de parapente *Paraglider model* *Gleitschirm Modell*	**Pegasus 30**	Poids de décollage *Take-off weight* *Startgewicht*	**160 kg**
Conditiones de test *Test conditions* *Testbedingungen*	Altitude / *Altitude* / *Höhe*	**65 m**	
	Conditiones météorologiques *Meteorlogical conditions* *Meteorologische Daten*	Temperature *Air temperature / Lufttemperatur*	**6 °C**
		Vitesse du vent *Wind speed /* *Windgeschwindigkeit*	**12 km/h**
		Pression athmosphérique *Pressure / Luftdruck*	**1018 hPa**
		Degré d'humidité *Humidity / Luftfeuchtigkeit*	**66 %**

Note: des mesures effectuées en d'autres conditions météorologiques peuvant être différentes
Note: measurements in different weather conditions may be different
Hinweis: Messungen bei anderen Wetterbedingungen können abweichend ausfallen

Test en vol pour classe 1 – paramoteurs
Le paramoteur doit être évalué selon les critères suivants à la masse maximum
Test flight for class 1 – powered paragliders
Powered paraglider was tested at maximum take-off weight for following aspects
Testflug für Klasse 1 – Motorschirm
Testflug wurde mit maximaler Abflugmasse durchgeführt

1. Comportement au gonflage / *Canopy inflation* / *Verhalten in der Aufziehphase*			
Simplement et régulier ***Simple and regular*** ***Einfach und regelmäßig***			
2. Comportement au décollage / *Launch characteristics / Abflugverhalten* (Technique de décollage special requise / *Special launch techniques required / Spezielle Abflugtechniken erforderlich*)			
Non ***No*** ***Nein***			
3. Exploitabilité en vitesse en vol droit / *Speed at level flight / Geschwindigkeiten*			
Vitesse de décrochage (ou vitesse minimale si la voile ne décroche pas) *Stall speed (or minimum speed if the wing does not stall)* *Stall-Geschwindigkeit (oder Minimalgeschwindigkeit, wenn Schirm nicht stallt)*			**21 km/h**
Vitesse bras haut *Trim speed* *Trimm-Geschwindigkeit*	**45 km/h**	Vitesse accélérée* *Max speed* *Maximal-Geschwindigkeit*	**50 km/h**

* (le cas échéant, trim et/ou accélérateur)

4. Comportement lors d'une mise en virage engagé *Conduct after entering the spiral / Verhalten nach Einleitung der Steilspirale*	
a) Tendance au retour en vol droit (spontanéité) *a) Tendency to level flight recovery (spontaneous)* *a) Tendenz des Wiederaufrichtens*	**Oui – spontanè** ***Yes – spontaneous*** ***Ja – leitet sofort selbstständig aus***
b) Nature des oscillations (amortissement) *b) Oscillations (reducing or not)* *b) Oszillation (Reduzierung ja oder nein)*	**Retour au vol normal – amortissement** ***Reducing*** ***Reduzierung - Ja***
c) Commandes de pilotage alternatives* *c) Alternative steering methods* *c) Alternative Steuermöglichkeiten*	**Les commandes de pilotages alternatives sont avec les C de l'élévateur** ***Alternative steering methods over C-riser*** ***Alternative Steuermöglichkeiten über C-Tragegurte***

* les identifier et préciser leurs positions

5. Comportement lors de atterrissage / *Landing characteristics / Landeverhalten*	
a) Comportement particular *a) Special behaviours* *a) Spezielle Eigenschaften*	**Non** ***No*** ***Nein***
b) Technique de atterrissage special requise *b) Special landing techniques required* *b) Spezielle Landetechniken erforderlich*	**Non** ***No*** ***Nein***

6. Commandes de pilotage alternatives *a) Alternative flying methodes* *a) Alternative Flugpraktiken*	**Les identifier et préciser, dans le manuel d'utilisation, leurs positions et les précautions à respecter en virage et à l'atterrissage** ***Appropriate descriptions with safety measures to be found in the user manual*** ***Genau Beschreibungen mit Sicherheitsmaßnahmen befinden sich im Benutzerhandbuch***

7. Stabilité en tangage lors d'une action aux commandes en vol accéléré *Pitch stability while steering an acceleretad flight* *Nickstabilität nach Eingriff im beschleunigten Flug*	***OK***

8. Stabilité en tangage en sortie de vol accéléré *Pitch stability while exiting an acceleretad flight* *Nickstabilität beim Verlassen des beschleunigten Flugs*	***OK***

9. Essais sol-vol *Special preparation before flying* *Besonderheiten vor dem Start*	**Non** ***No*** ***Nein***

Pendant ces essais, les commandes de vol doivent rester manœuvrables pour permettre le contrôle de la voile.
During these tests, the flight controls must remain in working order to allow control of the paraglider.
Bei diesen Prüfungen muss die Flugsteuerung funktionstüchtig sein, damit Kontrolle des Gleitschirms gewährleistet ist.

GIN GLIDERS INC.
GIN SEOK, SONG/PRESIDENT

Yongin-city, le 20 avril 2015
Gin Seok Song

Signature et cachet de constructeur

::: Gin Gliders Inc. :::
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