

QUEST II



JOJO WINGS, s.r.o.

Chvalinská 2109, 413 01 Roudnice nad Labem

tel./fax: +420 416 831 863, tel.: +420 602 424 785, e-mail: jojowings@jojowings.cz, www.jojowings.com

Dear Customer,

Thank you for choosing our tandem paraglider, the Quest II. We are certain that you will be pleased with your new paraglider. You will be pleasantly surprised with the level of performance and handling the Quest II delivers. We believe, with this paraglider soaring to new heights will be a wonderful experience for you and your companions while sharing the magic power of flight.

Please feel free to contact us with any questions or comments and we will gladly help you.

Sincerely
JOJOWINGS

Michaela Machartová

THE QUEST II

The QUEST is certified by AFNOR/CEN in category TANDEM with Swiss association SHV and must be flown only by certified tandem pilots.

The design of Quest is based on eight years of experience and application of diagonal construction technology. This technology is patented by JOJO WINGS and is constantly evolving to provide you, the pilot, with an ever increasingly superior product.

The use of diagonal rib technology provides for a reduction of the number of suspension lines while maintaining the stability of the gliders profile and flight characteristics. The combination of diagonal and structural ribs assures the stiffness of aerodynamic shape, thus providing less parasitic drag and resulting in very clean glider profile. All structural details were carefully designed for higher wing load. The shape and position of all segments and used technology assure that all characteristics are maintained though-out the life span of the glider.

The leading edge with triangle shape openings are based on design used on our performance gliders for many years. .The shape and profile of the openings was custom designed for this type of tandem glider.

This construction detail assures aerodynamic cleanliness and prevents fluttering and deformation of leading edge which would otherwise affect the performance and flying characteristics of the glider.

The design of leading edge openings also provides for fast inflation and make the tandem launching very simple and easy.

PRE-FLIGHT INSPECTION

Before launch, inspect your glider carefully. The best technique is a circular walk around the glider, starting at a leading edge of a wingtip. A suitable pre-flight checklist would entail:

- 1. Walk along the leading edge checking the connection points between lines and canopy, and check for any sail damage.**
- 2. Check the suspension lines for tangles and damage**
- 3. Check the risers, rapid links and carabines**
- 4. Check the brake lines and pulleys**
- 5. Check both harnesses, belts, links, speed system and reserve parachute**

PREPARATION FOR TAKE-OFF

After pre-flight inspection of glider and equipment of pilot and passenger, the optimum shape to layout the glider out is in a symmetrical horseshoe on its top surface. All suspension lines must be cleared of knots and tangles. There are also hook-in points for the passenger, allowing the pilot to choose the in-flight sitting configuration based on passenger's size and type of the harness. This smart design feature optimizes the launching process and also greatly increase comfort during flight.

TAKE-OFF

The QUEST has the normal inflation characteristics of any standard tandem paraglider without any unusual trick or secrets. The choice of launching technique should be determined by presenting launch and tandem flying conditions. The canopy does not have a tendency to overshoot, the inputs and correction during the inflation and take-off should be executed as part of pilot's adjustment to immediate launching conditions. The Quest Tandem glider was also tested for flying with paramotor units.

LANDING

To assure safe and proper landing the pilot must provide the pre-flight briefing and communicate with the passenger prior to the actual landing.

Landing should be executed from straight and level flight into the wind. Each landing must be executed with due respect to presenting conditions. When landing in zero wind conditions, final approach requires approximately 10-15% brakes with a FULL FLARE. In high wind conditions, little or no brake pressure

should be applied so as to increase the forward speed of the glider, and touch down should be at zero forward speed. After touch down be prepared to douse the glider completely by turning around and using the „C" risers instead of the brakes.

BRAKE LINE ADJUSTMENT

The brake toggles of the QUEST II are attached to the brake line by the manufacturer by a reef knot. Each brake line is clearly marked above the reef knot. This is the MINIMUM brake line length to be maintained. DO NOT ADJUST TOGGLE LENGTH ABOVE THIS MARK!!

STEERING AND HANDLING

The factory trim setting is designed to be proportional to the input from the pilot. As with all paragliders, an increase in brake pressure and weight shift will change the bank angle, diameter of turn, and the sink rate. The QUEST'S brake pressure will increase progressively in both symmetric and asymmetric steering until approaching stall speed, at which point brake pressure will obviously decrease. This characteristic is an early warning sign for pilots to correct input.

FLYING IN TURBULENCE AND THERMALLING

The QUEST is designed to be collapse resistant up to a certain degree of turbulence even when flying at top speeds. When flying through strong turbulence it is recommended that you stabilize the glider by equally applying about 25% brakes on both sides. An experienced pilot may also increase the overall stability of glider by „actively" flying the canopy. Active flying means using pilot input to keep the wing as stable and efficient as possible. This includes proper surge control through the use of brakes. Before flying in strong thermal conditions, you should be familiar with advanced canopy control techniques.

INCIDENTAL FLIGHT REGIMES

Deep/Constant Stall

The QUEST does not have a tendency to enter or stay in a deep/constant stall. It is important to know that due to weather condition or pilot input this maneuver is attainable. To exit this maneuver the recommended method is to insert your hand between the „A" and „B" risers and apply forward pressure on the „A" risers. This will help the glider attain forward speed to assist returning to normal flight.

*Note: Smooth and constant pressure must be applied on the „A" risers. Abrupt and jerky movement of „A" risers is NOT effective!

Spin / Negative Spin

Tandem paragliders are designed and must be flown only by experienced and certified pilots.

It is possible to stall only one side of the glider resulting in a spin. If you notice this occurring, immediately returning brakes to trim level is the most effective response. The glider will return to normal flight. The recovery and return to normal flight can result in an additional 180 degrees of turn and pilot must be prepared to brake the recovery surge and deal with a possible asymmetrical collapse.

Pilot's input into steering during the negative spin or attempts to interfere with glider's exit from this maneuver are not recommended as these can negatively affect the speed and results of glider's recovery.

Any attempts to execute or practice this maneuver without proper training, licence and extensive experience of tandem flying are very dangerous and can lead to serious accidents or fatalities.

Full Leading Edge Collapse

If a full leading edge collapse occurs with enough elevation the glider will immediately re-inflate and return to normal flight. The re-opening can be assisted by the energetic pulling of both brakes with immediate return to hands up position.

Asymmetrical Collapse

An asymmetrical collapse can occur in strong turbulence. Depending on the size of the collapse, the QUEST will start re-inflating and slowly turn up to 180 degrees. It is possible to slow down/stop the turn by weight shifting away from

the collapse and applying the brake on the open side of glider. To speed up the re-inflation the pilot can give a few deep pulls to the brake on the collapsed side.

DESCENT TECHNIQUES

B-Line Stall

The B-Stall is a fast descent maneuver for use in emergency situations only. B-Stall is performed by symmetrically pulling down on the B-risers. From normal straight flight grasp the „B" risers at the quick link and pull them down. Do not over pull, „A" risers must maintain trim position. The glider will shrink chord-wise, and you will feel your forward speed decrease as your decent rate increases. To exit the maneuver, release the risers in a quick and symmetrical motion. There will be a mild surge as the glider regains forward speed and returns to normal flight.

***NOTE - ALL INPUTS WHILE EXECUTING B-STALL MUST BE DONE QUICKLY AND SYMMETRICALLY.**

Spiral/Spiral Dive

The glider can enter a spiral dive by gradually increasing the bank angle on a 360 degree turn. Be aware that too much initial brake input could induce a spin. If you detect the beginning of a spin simply release the brake and start over. As the bank angle increases so will your descent rate and G forces on you. To exit the spiral dive you slowly decrease the amount of inside brake. You should exit a spiral dive at least 200m AGL. The spiral dive can produce a very high sink rate, however for rapid decent in turbulent conditions this is not recommended.

The spiral dive can cause the dissyness and airsickness of pilot and his padssenger and thus is not reccomended as an escape maneuver.

The QUEST does not stabilize in a spiral dive, but it is easy for pilot to become disoriented so we recommend that this maneuver should be executed only by experienced pilots who are already familiar with different flying characteristics between solo and tandem gliders.

Full Stall

Never full stall your glider without proper training and/or proper supervision. Full stall should only be performed over water with a reserve chute or in an emergency situations.

NEVER FULL STALL WITHOUT SUFFICIENT ALTITUDE!

TOWING

The QUEST is suitable and approved for towing, provided the pilot has the relevant license or towing endorsement. For any tow systems, it is a must to seek professional instructions.

PARAMOTORING

The QUEST is suitable and tested by manufacturer for tandem flying with paramotor, based on proper selection of power unit as well as the harnesses, hook-in system and optional protection features.

Before using this tandem paraglider for paramotoring contact the manufacturer for consultation and advise.

Paramotoring, especially in tandem require special pilot's training and licence.

STORAGE AND MAINTENANCE

With proper care and maintenance your glider will give you many hours of excellent service. Never pack your glider in damp or wet conditions. Avoid leaving the unpacked glider in direct sunlight and do not expose your glider to high temperatures. Always store your paraglider in dry, ventilated storage away from the daylight. Do not store the paraglider with dyes, paints, chemicals or gasoline. If glider needs cleaning only use a soft sponge and clean warm water. As a rule - leave it dirty. No paraglider lost performance from being dirty. NEVER USE ABRASIVE CLEANERS, SOLVENTS, OR SOLVENT-LIKE CLEANERS.

REPAIRS

If your glider is damaged in any way, you should contact the manufacturer or an authorized dealer. Very small holes and cuts in the sail can be repaired using sticky-back Ripstop Skytex repair tape as long as the tear is not on the stitching of the sail. Ensure a large overlap (on both sides) when using repair tape. Any major damage of the canopy, lines and risers should be repaired only by the manufacturer or an authorized dealer. Any damage to the line (even if it is only the outer sheath) means a new line should be ordered immediately.

INSPECTIONS

The first thorough inspection by the manufacturer is recommended after first 2 years/100 hours of flying and yearly inspections thereafter.

HARNESS

The firm JOJO WINGS does not produce harness for paragliding. The tandem paraglider QUEST was tested with the harness f. SUP-AIR, with ABS stabilization system.

JOJO WING also tested the Quest with harnesses with cross triangulation. The distance between harness carabiners was tested and is recommended by manufacturer to be 45 cm.

LIST OF MATERIALS USED ON THE QUEST

PART OF GLIDER / PRODUCT / SPECIFICATION / MANUFACTURED

Top canopy - SKYTEX E77 A-Polyamid 41g/m2 f. Porcher Sports
 Bottom canopy - SKYTEX E38 A-Polyamid 41g/m2 f. Porcher Sports
 Diagonals and ribs-SKYTEX E29 A-Polyamid 41g/m2 f. Porcher Sports
 Leading edge/ribs reinforcement - Gitter-Polyester + folie-Mylar 210g/m2 f. Polyant
 Leading edge/bottom hem,upper hem - Polyamid 13 mm f. STAP
 Leading edge/flow edge - Polyamid 25 mm f.POLYANT
 Line attachment loop - Polyamid 15 mm f. STAP a.s.
 Brake line attachment loop - Polyamid 13 mm f. Güth&Wolf
 Hems & line ends - Thread -BN60 Polyamid f. Barbour Threads Ltd.
 Sail seams - Thread -Synton 30/50 Polyester f. AMANN Sponit
 Risers - Threads BN10 Polyamid f. Barbour Threads Ltd.
 Lines: top - kevlar D 1,3 mm f. EDELRID
 Lines: main - Kevlar D3,4 D2,1; D1,8; D1,5 mm f. EDELRID
 Lines: brakes - Dyneema D 2,0 mm f. EDELRID
 Risers - Polyamid 25 mm f. MOUKA
 Brake toggles - Polyamid 28 mm f. STAP a.s.
 Riser Quick Links – Delta Inox,f.Mailon Rapid
 Pulley brake line - RN302 Nylon / Alu f. Riley

TECHNICAL DATA

<i>TYP</i>		QUEST
<i>AREA FLAT</i>	m ²	42
<i>AREA PROJECTED</i>	m ²	37,3
<i>SPAN FLAT</i>	m	14,5
<i>SPAN PROJECTED</i>	m	11,8
<i>ASPECT RATIO FLAT</i>		5
<i>ASPECT RATIO PROJ.</i>		3,7
<i>MAX CHORD</i>		3,66
<i>CELL NUMBERS</i>		52
<i>WEIGHT IN FLIGHT</i>	kg	155-220
<i>WEIGHT OF CANOPY</i>	kg	10
<i>AFNOR (CEN)</i>		TANDEM

