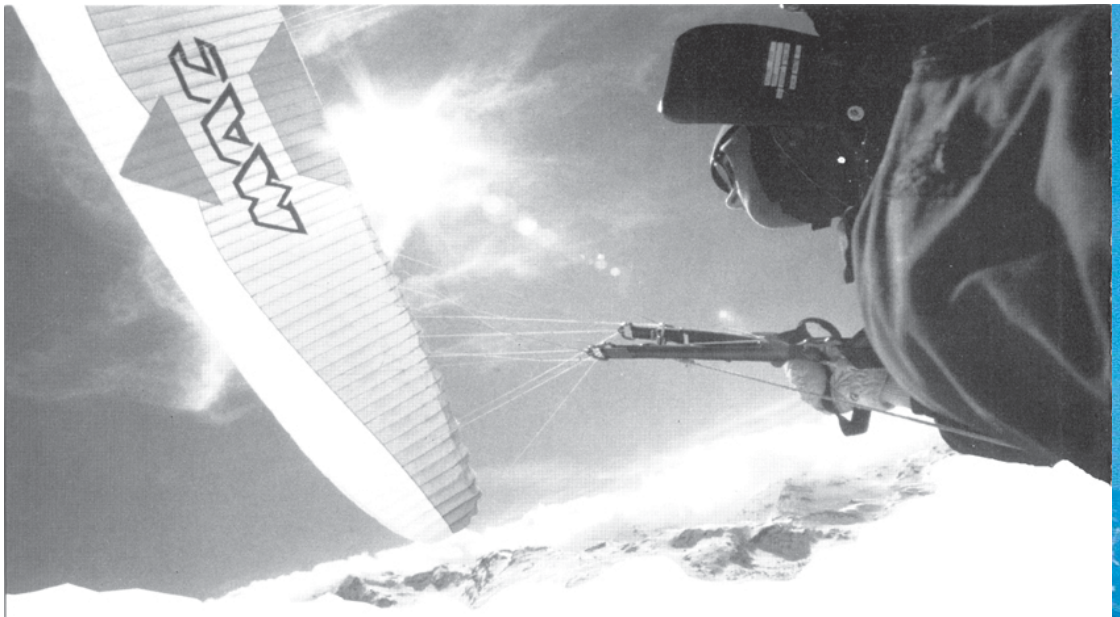

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USER MANUAL

PASHA

Contents

TEST FLIGHT CERTIFICATE

Paraglider type: **PASHA -**

Serial number: _____

Test flown on: _____

by: _____

Pilot's signature: _____

Confirmation by dealer: _____

TECHNICAL DATA

size	PASHA 40	PASHA 42	PASHA 43
Area flat [m²]	40,00	42,13	43,20
Area projected [m²]	35,45	37,35	38,45
Span flat [m]	14,70	15,33	15,65
Aspect ratio flat	5,40	5,58	5,67
Root cord [m]	3,38	3,38	3,38
Cells	48	50	51
Weight [kg]	8,70	9,20	9,40
Weight range [kg]	135-210	150-230	160-250
Min.speed [km/h]	24	24	24
Max.speed [km/h]	36	36	36
Top speed (accelerator) [km/h]	46	46	46
Glide ratio	7,9	7,9	7,9
Min. Sink rate [m/s]	1,20	1,20	1,20

Name	Company	Date	Signature & Stamp

Introduction

We congratulate you on your purchase of a MAC biplace glider *Pasha*.

Please read this manual carefully before you start, this way you will get the most out of your glider.

Extensive development work and numerous tests make the *Pasha* a tandem paraglider with maximum possible safety, excellent achievement and a lot of fun-potential.

The *Pasha is* constructed for tandem pilots expecting an easy take-off and landing, light and precise handling in thermals, stability and good performance from the paraglider.

A greater responsibility is put on the pilot by tandem flying, because another person is participating on the flight. Therefore, please, attend to following:

Paragliding is a sport, which demands, besides the optimum equipment, a high degree of attentiveness, good judgement, and theoretical knowledge. Paragliding can be a dangerous sport, which may lead to injury or death. Avoid flying in strong turbulence, strong winds and especially in thunderstorms and Foehn conditions. These could lead to uncontrollable flight conditions and result in a crash. If you have the slightest doubt about weather, wind or terrain, don't take off.

Before delivery, as well as during production, each paraglider goes through a strict visual inspection, and is test-flown by your dealer. Stamps on the placard, together with a completed test-flight certificate, confirm this. Check that the paraglider has been test-flown before your first take-off. If it has not, consult your dealer.

If, after carefully reading through this handbook, you still have questions, telephone your dealer; or us, and we will be glad to help.

MAC Para Technology
wish you many pleasant flights with your

PASHA

Warnings and precautions

The purchaser of this product takes responsibility for all risks, associated with the paraglider, including injury and death. Wrong usage will considerably increase these risks. The purchaser is aware that a completed course and a pilot licence for the relevant country is required for paragliding.
Every arbitrary change to the paraglider´s construction will evoke termination of the airworthiness.
The Pasha must not be flown:

- If it is out of the weight range
- In rain, snow-fall and in turbulent weather conditions
- In strong wind
- In cloud and fog
- By pilots with insufficient experience

The Pasha is a tandem paraglider.
Solo flight or flight with more than two persons are forbidden.

Operating limits

The *Pasha* has been developed for foot-launch, and for tandem flights.
The *Pasha 40* has been tested by SHV test pilots to AFNOR / biplace category.
Flight tests have shown that the glider remains stable and controllable over a wide range of normal and abnormal flight conditions. Nevertheless, turbulence and gusting winds can lead to a partial or complete collapse of the canopy. Therefore never fly in such conditions. It also has been load and shock-tested and passed with a load corresponding to 8G of the maximum weight in flight (210 kg).

Construction

The *PASHA* construction uses a system where every second cell is attached to the lines and V-Tapes. These V-Tapes doesn't lead to the upper surface, but they are stitched in ca 80% of the airfoil height.

The line construction is clear from the line plan.

Trim

The glider is delivered with five risers system with trims and tandem spreader bars. Its speed can reach 38 - 46 km/h depending on the weight of the pilots and trim position. The brake-lines should always be adjusted so that the first brake-lines just come under tension when the brake handles have been pulled 5 - 10 cm.
The test results relate to this brake-line adjustment. In extreme situations other settings may lead to the glider reacting differently. To be able at all times to react quickly enough to possible problems; you should not let go of the brake handles during the flight (it may be possible to hold both handles in one hand). Alter the line length to bring the handles to a suitable height when using your harness.

Line length measurement

Lines should be separated and each line measured under a tension of 5 kg.
Measurement is made from the line karabiner to the canopy according to the DHV method. Rib numbering begins in the middle of canopy and leads to the wing tip.
Measured full lengths should be documented in the inspection record and are compared with the DHV type protocol. Lengths should not differ by more than 20 mm. The opposite sides should be checked for symmetry.

Canopy line-attachment points check

Attachment points should be checked for damage and stretching. Defects, loops and flares should be repaired.

Canopy fabric check

Ribs, diagonal ribs, top and bottom surface should be checked. Any damage to sewing or tears to the fabric, which could influence flying characteristics must be repaired.

Lines

All lines should be checked for tears, breaks any damage to the sheath or signs of wear. Special attention should be paid to the sewing of the line loops. Damaged lines must be replaced.
The results should be documented in the inspection record.

Connector check

All line carabineers, trimmers (if used), speed systems and pulleys should be inspected for visible damage. Open or improperly secured connectors should be secured in accordance with the producers recommendations.

Risers

Both risers should be checked for tears, signs of wear or any damage and measured with a pull of 5 daN strength. Measured data should be documented in the inspection record. The difference must not be higher then 5 mm when compared to specified lengths.

Final check

The glider sticker and check sticker must be inspected for readability and correctness. The check must be documented with date, signature and stamp on the canopy and in the user manual.

Check-intervals

All paragliders used in flight must be checked at least every 24 months. For paragliders used by paragliding schools the period is 12 months.

Personnel authorised to carry out checks

A valid flying license and training course by National association are the basis for permission to carry out paraglider checks

Identification of glider

An identity sticker with details of certification and serial number is attached to the glider.

Components of the check

Porosity

The porosity should be checked with a porosity meter (JDC). Compare the resultant data with the producer's manual.
Porosity measures should be taken on at least three points of both the top and bottom surface. The first point should be placed 20-30 cm from leading edge in the middle of canopy. Second and third points are placed left and right from first measure point at 25% of the span. One additional measurement should be made on the top surface of the wing tip.
The identified time should be higher than 30 second (JDC). In the event of the result being less than 30 seconds, the result of the check is a fail.

Overall strength check

The check of canopy strength should be made with a Bettsometer (B.M.A.A approved Patent No. GB 2270768 Clive Betts Sales). On the top and bottom surfaces make small holes with a needle at the Aline attachment points. The exact verification should be made in accordance with the Bettsometer user manual.

Line strength check

Line strengths should be as specified in accordance with the DHV requirements. One main line should be taken from each array and have its strength checked with a tension-meter.
Required strengths should be higher than:

- A + B main lines x measured value > 8 x maximum take-off weight and higher then 800 kg for the A + B arrays.
- C + D mean lines x measured value > 6 x maximum take-off weight and higher then 600 kg for the A + B arrays.

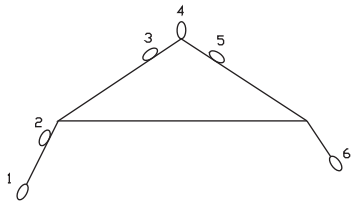
Replacements for damaged lines must be with new original lines. Line lengths are taken from the lines data page.

NOTE!! *If in doubt about the brake-line adjustment, it is preferable to leave them too long, as any necessary shortening can easily be achieved by wrapping them round your hand.*

Tandem spreader bar

The PASHA tandem spreader-bar allows varied attachment possibilities, allowing for the difference in heights and weights of pilot and passenger. Changing the main attachment (karabiner - min. strength 24 kN) position can allow for weight difference: the front position (3) for heavier passengers, the middle position (4) if their weights are the same and the back position (5) for lighter passengers. The passenger weight is always compared to the weight of the pilot!
Adjustment of the passenger's karabiner hang point can allow for height differences. The pilot's attachment is on hanging point (6) (see the picture below).
The rescue system bridle must be connected to main suspension point on the spreader-bar (3, 4 or 5). It is possible to use a separator karabiner (min. strength 24 kN) for the rescue system, clipped in to the same loop as the main karabiner. The rescue system bridle must not be connected only to the pilot's or passenger's harness or to the spreader-bar's hang points.

WARNING!! *The karabiners used in position 3, 4 or 5 must be karabiners designed for tandem flight, which means the minimum strength must be 24 kN. (Recommendation Austrialpin Powerfly, Austrialpin Delta). This holds also for the karabiner used for the attachment of the rescue system in Position 3, 4 or 5. (Recommendation: Maillon Rapide 6/7 mm)*



1) *Passenger´s hang point.*
2) *Trimm.*
3) *Main suspension and rescue system attachment point, when passenger is heavier than the pilot.*
4) *Main suspension and rescue system attachment point, when passenger is the same weight as the pilot.*
5) *Main suspension and rescue system attachment point, when passenger is lighter than the pilot.*
6) *Suspension point for the pilot.*

Safety equipment

An optimal outfit should be standard for every paraglider pilot. Always wear stout footwear, a helmet, and gloves. Clothing should be warm and allow sufficient freedom of movement. Check if you and your passenger are dressed properly.
An emergency rescue-system can be life-saving in case of mid air collision, irrecoverable collapses or material failure, and is therefore imperative.
All biplace harnesses with the approval are suitable for use on the PASHA.

New glider check and before every flight checks.

A tandem glider is often used by more than one pilot, ensure that all of them know the operating limits well and will observe these rules.
In addition to all the usual pre-flight checks, please pay particular attention to the items in the following checklist:

Checklist

1. Inspection of canopy for tears or damage, especially the seams which join the ribs to the upper and lower surfaces, also the area of the attachment tapes and brake-line connections.

2. Inspection of the lines for damage, including to the stitches on the connecting loops. It is also important to check the suspension lines and brake-lines for tangles. The line lengths must be checked after 50 hours flying time and whenever the flight behaviour of the glider changes.

3. Inspection of the risers and maillons for faultless condition. Pay special attention to maillons for traces of corrosion under the lines.

4. Inspection of the knotting of the steering handle to the brake-lines. The brake-lines must run freely.

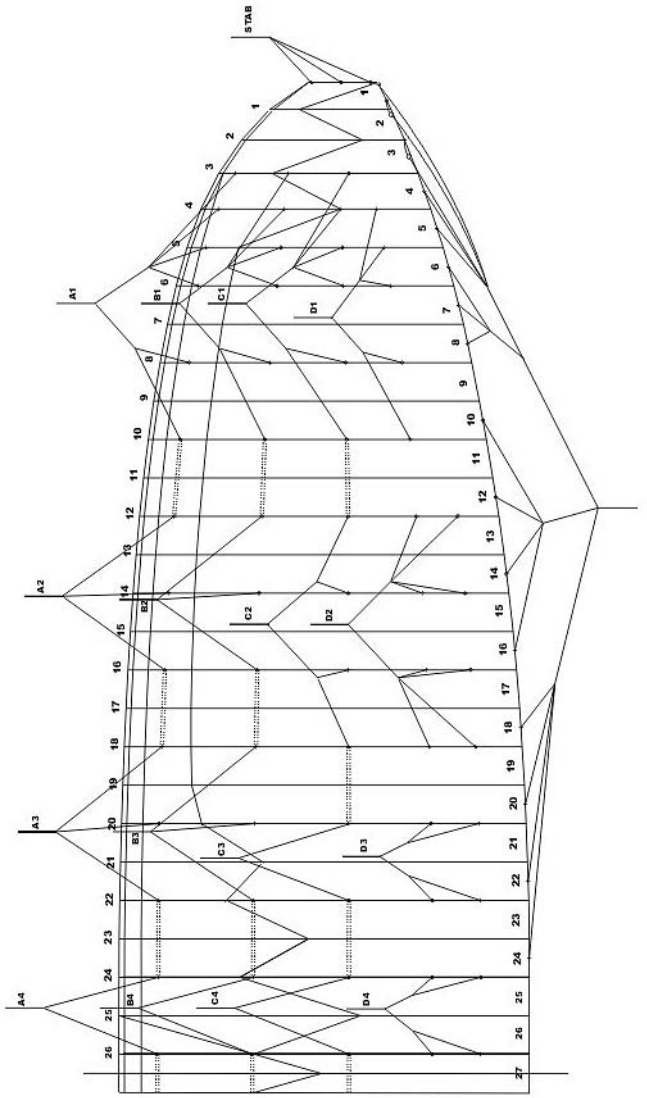
5. Inspection of the tandem spreader bar for damage.

6. Inspection of both harnesses. The harness must show no signs of wear or other damage. You must also check the harness after a hard landing.

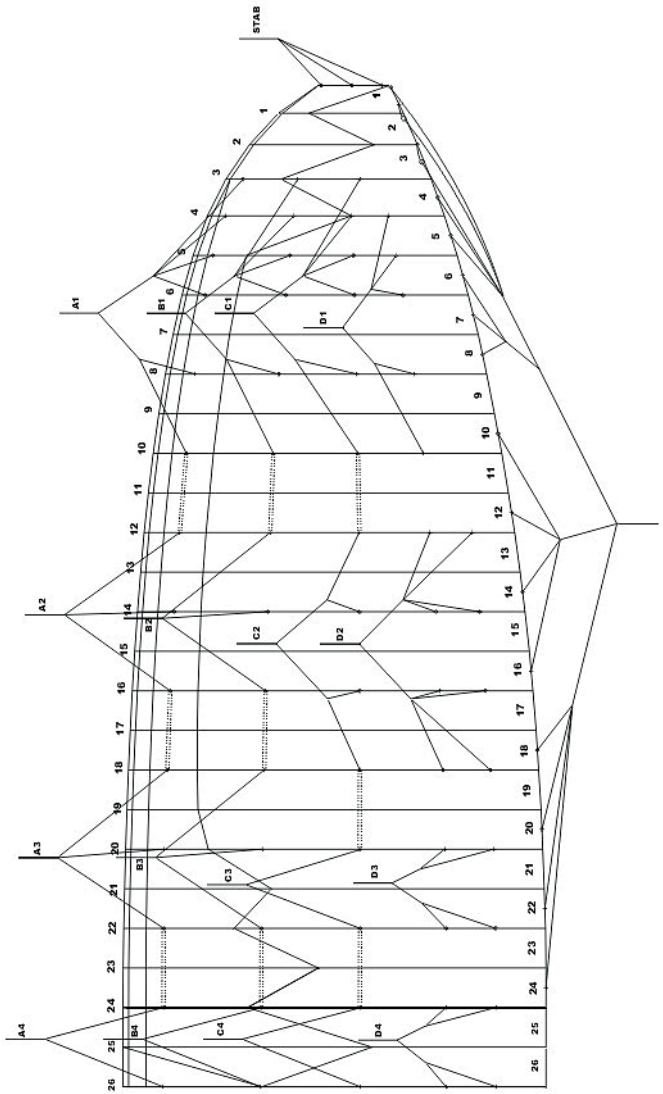
7. Check that the rescue-system is correctly installed and secured.

8. Inspection of the main karabiners. Inspection of attachment and security of the karabiners.

WARNING!! *Remember; don't take off with a wet glider. In such conditions it will be more difficult to launch and the glider's behaviour in extreme situations can be different from that of a dry glider.*



LINE PLAN PASHA 42



Pre launch check

1. Are openings open and the leading edge in form of a horseshoe?
2. Are lines and brake lines free?
3. Are the pilot's and passenger's karabiners correctly fastened?
4. Is the rescue system correctly fastened?
5. Is your helmet on and fastened?
6. Is the start direction set?
7. Are the start commands concerted?
8. Are the weather conditions, the wind strength and direction, safe for take off?
9. Is the air space in all directions clear?

Finally will be the start check done to the hanged passenger once more.

Take-off

Find a suitable take-off spot, from which you can abort the take-off at any point. After checking the glider, following the checklist, lay it out with the cell-openings upwards so that the canopy forms the shape of a horseshoe. In a strong wind don't spread the canopy too far, so that there is less resistance when pulling up.

Forward launch

This is possible in almost all wind conditions except strong headwinds. It is essential to stand in line with the canopy, especially when the glider has longer lines. Before take-off, place yourself centrally at the gliders axis. Let the B C and D-risers fall into the crook of your arm and pull the canopy dynamically up by the A-risers. The stronger the headwind the less run-up you need to pull the canopy up. As soon as the glider is above you, stop pulling on the A-risers. Now do a visual check upwards, to see if the canopy is completely open. Otherwise, abort the take-off. Now accelerate continuously until you lift off. In a weak headwind it is easier to take-off if after reaching minimum flying speed you pull the brakes slightly. After the take-off, gently release the brakes again.

WARNING!! *Do not use the forward launch in very strong winds. Make sure you don't pull the risers too much towards yourself or downwards as this can result in a frontal collapse, or in an asymmetric take-off.*

Rear launch

To be used in moderate to strong headwinds. Please note that in a strong headwind you may need a helper, as you could easily lose control of the canopy. If the headwind is too strong, take some of the pressure out of the canopy by taking in one or both of the brake-lines (or the D-risers).

Flight

Always fly with sufficient clearance from the terrain. The *PASHA* glides best with open brakes and open trimms, descends best with lightly applied brakes with closed trimms. In turbulence fly with brakes lightly applied to avoid canopy collapse. If the canopy pendulums forward, this should be corrected by prompt braking. A pendulum movement of the canopy backwards is corrected by loosening the brakes in good time.

Steering

Turns can be initiated using the brakes in two different ways.

Turns with brakes

The pilot applies the brake on the side to which he wishes to turn. To minimise height loss, the brake on the outside of the turn is lightly applied.

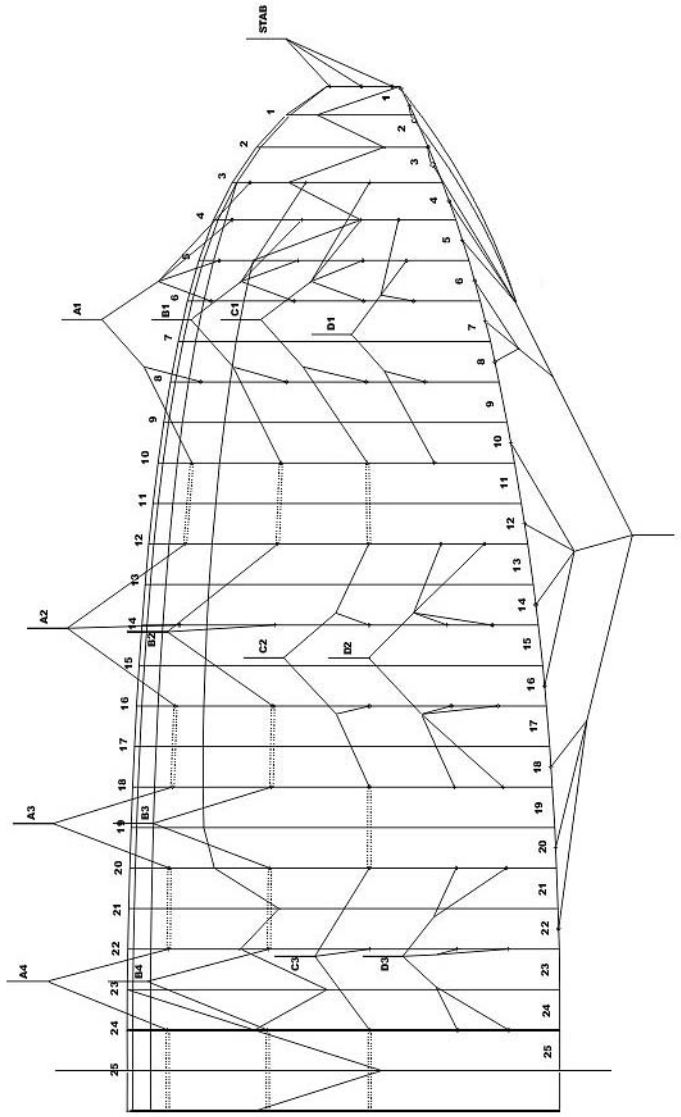
Turns with brakes and weight shifting

The pilot applies the brake on the side to which he wishes to turn and shifts his weight to the same side. Turns can also be made with the harness alone, by shifting the weight to the inside of the turn. This weight shift has a greater effect, the more loosely the chest-strap is fastened. An optimal steering technique is achieved by a combination of braking and weight shift. The combination of brakes and weight shift is the best technique to turn *PASHA*.
A further possibility for steering is best limited to emergencies (if the brake-lines break, for example). This entails either gently pulling the front riser (watch out for collapse of the canopy) or rear riser (beware asymmetrical stall). We recommend that you do not use this form of steering in normal flight.

Warning!! *We do not recommend this method of turning while in standard flight, because the danger of a stall is high.*

Approach and landing

To avoid stressful situations in the approach to landing, it is important to initiate the process at an adequate altitude. This leaves you enough time to observe and appropriately deal with wind direction and any other aircraft in your vicinity.
The final approach should generally be made into the wind and with fully released brakes, in order to maintain maximum energy in the glider. If the air is turbulent, it is better to land lightly braked to minimise the possibility of the canopy collapsing. In order to land on your feet, rather than lying on your back, you will need to lean forward in the harness not lower than 5 m above the ground. At an adequate height (about 1 m above the ground), pull both brakes fully down until the glider is sufficiently slowed.
In a light headwind pulling the brakes only lightly is enough to give a soft landing. In calm conditions, or even tailwind, you must pull the brakes as abruptly as possible. This dynamically increases the angle of attack and gives you the maximum braking effect.



MATERIAL DESCRIPTION

NCV - PORCHER MARINE, France

Extrados - SKYTEX S 09017/E77A, E38A - 100% nylon 6.6 , 33 Dtex, 40 g/m^2
Intrados - SKYTEX S 09017/E38A - 100% nylon 6.6 , 33 Dtex, 40 g/m^2
Main ribs, diagonal ribs - SKYTEX S 09017/E29A - 100% nylon 6.6 , 33 Dtex, 40 g/m^2
Reinforcement main ribs W 0420 Grille Polyester 200 g/m^2
Reinforcement minor ribs W 0382 Polyester 180 g/m^2

LINES

EDELMAN+RIDDER+CO., Germany

Upper lines - Aramid/Polyester A-6843-080, A-6843-120
Middle lines - Aramid/Polyester A-6843-120
Brake lines - Dynema/Polyester A-7850-100
Main lines C1, D1,D2,D3 - Aramid/Polyester A-6843-160
Main lines C2, C3 - Aramid/Polyester A-6843-200
Main lines A1, A2, A3, B1, B2, B3, B4 - Aramid/Polyester A-6843-240
Stabilo line - Aramid/Polyester A-6843-120
Main brake line - Dynema/Polyester A-7850-340

BRIDLE (ATTACHMENT LINES)

STAP a.s., Czech Republic

STAP-POLYESTER 13 mm

RISER

MOUKA TISNOV ltd., Czech Republic

Polyester 367 040 025 912 25 x 1,5 mm

THREAD

AMANN SPONIT ltd., Czech Republic

Thread lines - SYNTON 60, Thread -mean lines - SERABOND 60
Thread glider - SYNTON 40, Thread - riser - SYNTON 30

MAILLONS

ELAIR SERVIS, Czech Republic

NIRO TRIANGLE 4/200

Towed flight and paramotoring

The *PASHA* is suitable for towed flight and paramotoring.
Make sure you use proper equipment, experienced personnel and all relevant safety precautions for towing.

WARNING!! *Please always ensure that the brake lines are adjusted to the lengths recommended here. Setting them shorter could lead to a tendency to stall during towed flight. Apart from this, there are no special procedures.*

WARNING!! *The PASHA II is not suitable for jumps from aircraft.*

EXTREME AND CRITICAL FLIGHT MANOEUVRES

This section describes flying conditions which can be deliberately induced, or which can develop unintentionally due to turbulence or pilot error. Any pilot who flies through turbulence is sure to be faced with these special flight conditions at some point. So take a good look at these flight manoeuvres or prepare for them by SIV (safety training over water). Mastering these flying conditions significantly improves your active flight safety. Sufficient height, as well as the carrying of a reserve parachute, is imperative.

WARNING!! *All the critical flight conditions described here require thorough knowledge; otherwise carrying them out may be very dangerous. Sufficient height above the ground is imperative. Bear in mind that all disturbances of the canopy can increase the sink rate by 2 - 10 m/sec, depending on the degree of disturbance. Carrying out these manoeuvres wrongly may lead to a crash.*

Collapse of the canopy

Remember this is a glider with unspectacular reactions to disturbances in the air. Whenever in doubt, let up the brakes and let the glider fly. The glider has a high internal pressure, resistance to tucking and very high degree of passive safety. It is recommended that at this stage you already start to practising an active flying style. The key to active piloting is keeping the glider above your head at all times. We recommend in principle that you hold the brake handle in your hand whenever possible, or fly with your hands through the brake handles, to allow you to react immediately to any possible disturbances.

WARNING!! *If you fly with your hands through the brake handles, you may lose valuable time for activating the rescue system.*

Asymmetric collapse

This form of collapse is usually caused by turbulence.

Initiation

On one side of the glider, pull the outermost A-riser slowly down, until the edge of the canopy folds in. The canopy collapses furthest if you pull both A-risers violently down. This causes up to 50 % of the leading edge to close up, and results in the canopy going into a spiral towards the collapsed side. If the harness is too loosely adjusted, in a more extreme collapse you will fall in the direction of the folded-in side, thus unintentionally magnifying the canopy's tendency to turn.

Recovery

The *PASHA* will re-open by itself after a turn of about 40° (depending on the weight in flight) with a loss of height of about 5-7 m. This depends on the adjustment of your harness. The time this takes, and the associated loss of height, can however be noticeably reduced by appropriate action by the pilot (especially in turbulence). By applying opposite brakes on the still inflated side, the outside of the turn, it is possible to stop any turning movement of the canopy. If you react immediately, 30% brake on the open side should suffice to hold the canopy on a straight course.
If the canopy remains in a turn after a collapse it can begin to stabilize in a spiral dive. It is necessary to react to prevent this. Try to stop the spiral dive by using prompt opposite braking and weight shifting to the outside of the turn.

WARNING!! *Especially in turbulence, you* ***must*** *first stop the canopy from turning, before you pump out the collapsed side. When the canopy is stable again, open it by pulling the brake lines on the closed side. If it is tangled, pumping the brake line should help.*

WARNING!! *In the case of a cravat which pumping of the brakes fails to release - apply 50% -70% brake on the open side of the canopy to stop rotation. Then pull the caught line carefully to release it then pump out the affected side. Take care to avoid applying too much brake when pumping out the deflation, as this may disrupt the airflow over the canopy and lead to a stall.*

MAINTENANCE AND REPAIR

The PASHA is produced from the best materials (see Material Description). The glider must be checked as a minimum, every second year or after 100 flying hours. Do not step on the lines. Although the lines were tested with the “DHV-bend test” they can be damaged if stepped on whilst on a hard surface, or if they come into contact with sharp objects.
If this happens contact your dealer for replacement lines. The lines must be checked after every 50 hours flying time and whenever the flight behaviour changes. Consult your dealer or MAC ltd. Tears in the canopy must be professionally sewn. Adhesive patches are only adequate for very minor damage. The glider must always be kept cool and dry. If possible it should be stored lightly folded in a well-ventilated place. Protect the glider from dampness and sunlight. Exposure to UV degrades the fabric. A damp or wet canopy must be air-dried in a shady place. Do not expose the glider to temperatures of greater than 50 degrees C, as this can cause softening and shrinking of the lines. Clean the canopy only with warm water or a dilute soap solution. Do not use solvents. Never put your glider into the washing machine. Only with correct care can the lifetime of the glider be extended.

Only MAC Para can make big repairs. Tears have to be professionally sewn. Only minor damage can be repaired with adhesive patches.

If you follow all the steps described in this manual, we are sure that you will enjoy your MAC Paraglider.

Happy landings

Peter Recek - Constructor
MAC PARA TECHNOLOGY

Spiral dive

The *PASHA* has very effective spiral dive. This allows rapid descent without stalling.
The *PASHA* has no tendency to stabilise in a spiral dive.

Initiation

Weight-shift and pull the brake on one side gradually. Let the glider accelerate for two turns and enjoy the growing speed and high G-force. You can achieve sink rates up to 17m/s.
Once you have entered the spiral you can control your descent rate and bank angle with weight shift and brakes. We recommend lightly applying the outer brake to avoid asymmetrical collapse on outer side of canopy.

Recovery

Weight-shift to a normal flying position and release both brakes. The glider stops spiral diving by itself in 360 degrees.
If you apply inner brake and decelerate the glider for two or three turns, big pendulum effects can be avoided.

WARNING!! *If you stay on the curve side while recovering, it can be prolonged more to one turn. Therefore you must pay attention to your seat position. Practise spiralling with caution and lesser sink rates to get a feel for the gliders behaviour.*

Remember: The steeper the turn, the greater the G-force. By tandem flight is the G-force greater than by solo flight.

DESCENT RATES

First fly as far as possible from any areas of lift, to give yourself space to lose height.

Symmetrical collapse - "big ears"
Sink rate approximately 3-5 m/sec

Spiral dive
This allows rapid descent without stalling. Sink rate, depending on pilot, 5 - 17 m/sec

B-line stall
Sink rate approximately 5 - 8 m/sec
Important! - End the stall with sufficient time for the airflow to re-establish itself.

In principle, always fly in such a way that you do not need to lose height in a hurry.

Symmetric collapse "Big-Ears"

Initiation

Whilst maintaining contact with the brakes, grip the outermost A-risers. Pull both A-risers down simultaneously. The further you pull the A-risers, the greater the area of canopy that will collapse (and the greater will be the sink rate).

Recovery

As soon as you release the outer A-risers, the *PASHA* opens independently. You can speed up its opening by light braking. If in extreme cases the lines get tangled, pumping (pulling repeatedly) the brake lines should help.

Frontal deflation

If you anticipate strong turbulence, sometimes you may have to apply both brakes to avoid a deflation.

Initiation

Hold the brake handles in your hands and grip all A-risers at the level of the maillons. Now pull down far enough to make the whole leading edge roll in (the further you pull the more area folds in).

Recovery

As soon as you release the A-risers, the *PASHA* opens by itself and the glider will recover with a small surge. You can speed up this process by light braking.

Stalls

Turbulence or rapid braking can lead to a pendulum effect, and thus to changes in the angle of attack. In extreme cases this can make the airflow break away from the upper surface of the canopy even without the brakes being activated.

WARNING!! *All canopies need some time after a stall (in extreme cases a couple of seconds) before the airflow builds up again. You should therefore carry out all manoeuvres involving stalls at an adequate height, as it will take a certain amount of time before the glider flies with its normal sink rate.*

Parachutal stall with steering lines

Initiation

Pull the brakes slowly down until you have no more forward speed. The canopy now loses internal pressure and the lower surface pushes further and further up between the suspension points. The loss of internal pressure is greater the longer the glider is held in this situation. During the parachutal stall the canopy always remains open.
You will probably have to feel for the right brake position at first. If you apply too much brake, the canopy falls away backwards and the glider finds itself on the brink of a full stall. To solve such a situation, please look at "Full Stall."

Recovery

As soon as you release both brakes symmetrically, the glider will independently recover from the parachutal stall. If it will not, you can help; pull the A-risers until the canopy goes forward again. Another possibility is to pull the brake lines until the canopy falls backwards and then immediately release them. Consequently the canopy will move forward and recover.

WARNING!! *In a parachutal stall, asymmetrical application of the brakes can lead to a spin. If you must land from a parachutal stall, on no account apply the brakes very close to the ground, as a reduction in area increases the descent rate.*

B-line stall

WARNING!! *We do not recommend the use of B-line stalls to increase sink rate. They can apply heavy loads to the canopy and too quick an initiation or recovery, with a maximum suspended weight, can lead to damage.*

Initiation

Put your hands through the brake handles and grip the B-risers at the height of the maillons. Now pull the B-risers slowly down, until the canopy folds (parallel to its long axis). The glider will now stabilise itself and sink rapidly, with virtually no forward speed. Keep hold of the B-risers throughout the manoeuvre.

Recovery

Release the risers at first rapidly but then gently. After the B-line stall on no account just let go of the B-risers, as this can cause overloading. As soon as the risers have been released, the *PASHA* will usually fly normally of its own accord. Otherwise you have two possibilities:

1. Open the trimms.
2. Pull the A-risers, until the canopy regains forward speed. WARNING! Don't pull too far, or a frontal tuck will develop.

So begin with option 1, and only rely on option 2 when you have enough experience with the manoeuvre.

WARNING!! *In parachutal stalls asymmetric use of the brakes can cause a spin! If you have to land during a parachutal stall, when near the ground do not use the brakes, because reducing the surface area increases the sink rate. If the glider shows a propensity for deep stalls it is necessary to send it for a check.*

Spin (negative spirals)

If you find yourself in an unintentional spin and you are high enough, you should:

1) Release the brakes immediately. The glider will stop rotating, if it does not apply sufficient outside brake to stop rotation.
2) Gently apply the brakes to avoid a collapse of the canopy and the possibility of a cravat (one of the tips becoming entangled in the lines)

NOTE!! *In the case of a cravat which pumping of the brakes fails to release - apply 50% - 70% brake on the open side of the canopy to stop rotation. Then pull the caught line carefully to release it then pump out the affected side.*

WARNING!! *If the brakes on the un-collapsed side, the outside of any turn, are too much pulled, it can lead to a stall and then on to a new spin.*

WARNING!! *If you are LOW and are in an unintentional spin, or if the canopy is caught in a cravat USE YOUR RESERVE.*

Full stall

This is included only to expand your knowledge of how the canopies performance. Not recommended to do this with a biplace paraglider!

The Full Stall can happen:

1) When flying directly into a thermal whilst already flying with deep brake
2) When flying with deep brake, (more then 100%)

Initiation

Take wraps until the glider is lightly braked (when the hands are right up). Now gently pull both brake lines, until the canopy falls away behind - at this point, dynamically pull the brakes fully down. Press your hands against your body. The glider is now over you, with the wing tips flapping. If you release brakes too soon, the glider can jump extremely forward, while you stay still back. As a result you sink rapidly with no forward movement.

Recovery

Progressively ease off on both brakes. Once 90% of the leading edge has reopened the brakes can be fully released. Ensure that the release is even on both sides. The glider exits the full stall on its own with no tendency to surge forward.

WARNING!! *If the brakes are released rapidly and asymmetrically, the glider may turn through almost 90 degrees and suffer an extensive asymmetric collapse.*