

# AZZZ MANUAL

# REV. 1



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## Congratulations!

Thank you for choosing the JAZZ2.

The JAZZ2 is an intermediate PPG glider that offers a new concept in agility and dynamic handling. Featuring a newly designed full-reflex profile, the JAZZ2 is designed to match the wide speed range, high lifting force, and fuel efficiency of the Davinci PPG model, delivering dynamic handling and agility for XC and leisure flying.

This manual will help you gain complete information about the glider. We strongly recommend that you read it carefully to familiarize yourself with general limitations, performance characteristics, takeoff and flight characteristics, landing procedures, emergency management, and general maintenance.

This manual provides information about the JAZZ2's design and provides advice on optimal use and care to ensure a long service life. We hope you enjoy your JAZZ2 flight.

#### -DAVINCI GLIDERS TEAM-

#### **WARNING!**

THIS IS NOT TRAINING MANUAL. ATTEMPTING TO FLY THIS OR ANY OTHER PARAGLIDER WITHOUT PROPER INSTRUCTION FROM A CERTIFIED PROFESSIONAL INSTRUCTOR IS EXTREMELY DANGEROUS TO YOURSELF AND BYSTANDERS.

DAVINCI GLIDERS are carefully manufactured and inspected at the factory. Please use the glider only as described in this manual.

Do not make any modifications to the glider.

As with any sport - without taking the necessary safety precautions, paragliding can be dangerous.



## 1. Technical DATA

JAZZ2		19	21	23	25	27	29	
	NUMBER		50					
CELLS	CLOSED		8					
FLAT	AREA	m <sup>2</sup>	19.0	21.0	23.0	25.0	27.0	29.0
	SPAN	m	10.0	10.6	11.0	11.5	12.0	12.4
	ASPECT RATIO		5.3					
PROJECTED	AREA	m <sup>2</sup>	16.0	17.7	19.4	21.1	22.8	24.5
	SPAN	m	7.89	8.29	8.68	9.05	9.40	9.75
	ASPECT RATIO		3.9					
FLATTENING		%	15.7					
CORD	MAX	m	2.30	2.42	2.54	2.64	2.75	2.85
CORD	AVER	m	1.89	7.99	2.08	2.17	2.26	2.34
LDURG	HEIGHT	m	6.02	6.33	6.62	6.90	7.18	7.44
LINES	MAIN		2+1/4/3/3					
	NUMBER	4	A+A'/B/C/D					
RISERS	TRIMS	mm	65					
	Accelerator	mm	140					
WEIGHT RANGE (PPG / DGAC)	MIN-MAX	KG	55-120	60-130	70-140	80-150	95-170	105-179
CERTIFICATION	EN		EN926-1					
Maximum engine power	MAX	KW	26.5					
GLIDER WEIGHT		KG	3.9	4.1	4.3	4.6	5.0	5.4



## 2. MATERIALS DATA

CAN	ОРҮ	FABRIC CODE SUPPLIER		
UPPER	Leading Edge	MJ40 MF	MYUNGJIN TEX	
SURFACE	Middle/Tailing	MJ32 MF	MYUNGJIN TEX	
BOTTOM SURFACE		MJ32 MF	MYUNGJIN TEX	
	Smart Nose+	МЈ38 НБ	MYUNGJIN TEX	
PROFILES	Loading	МЈ38 НБ	MYUNGJIN TEX	
	Unloading	МЈ32 НБ	MYUNGJIN TEX	
DIAGONALS		МЈЗ2 НБ	MYUNGJIN TEX	

SUSPENSION LINES	FABRIC CODE	SUPPLIER
UPPER CASCADES	8000U 90/70	EDELRID
MIDDLE CASCADES	8000U 130/90	EDELRID
MAIN	8000U 230/190/130	EDELRID
UPPER STABLE	8000U 70	EDELRID
MIDDLE STABLE	8000U 90	EDELRID
MAIN STABLE	TNL 180	DAVINCI
UPPER BRAKE	8000U 70	EDELRID
MIDDLE H/L BRAKE	8000U 90	EDELRID
MAIN BREAK	8000U-090 TNL 145	DAVINCI

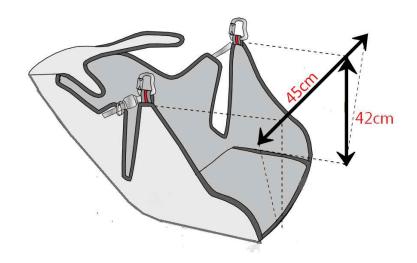
RISERS	FABRIC CODE	SUPPLIER
MATERIAL	WEBBING 20MM	GUTH&WOLF GMBH
THREAD	210D/3, 420D/3	COATS THREAD THAILAND
PULLEYS	S20BB / 20BB	Ronstan



#### 3. Introduction and Pilot Target

The JAZZ2 targets the advanced class of PPG wings, and provides a new concept of agility and dynamic handling. Equipped with this newly designed reflex profile, the JAZZ2 is designed for the wide speed range and high fuel efficiency of the Davinci PPG model, providing dynamic handling and agility for SLALOM competitions.

The JAZZ2 has been tested by EN 926-1 During type-testing the JAZZ2 was tested with a 'GH' type harness. The setup is shown in the below picture.

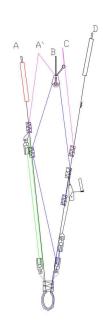




#### 4. Risers

JAZZ2 has 4 risers. The A riser has a red cover for easy identification. There is another line with red mailon. There is A' and is for the big ears.

The tolerance should not be more than  $\pm 5 \text{mm}$  from the standard riser length.



	Standard	Trim opened	Accelerated	Trim+Acc
	[mm]	[mm]	[mm]	[mm]
A	500	500	500	500
В	500	545	425	470
С	500	590	500	590
D	500	668	608	743



#### 5. Lines

They come in different diameters of Dyneema and sheathed cover on the connection loop. They must be inspected every 100 hours maximum.

In the case of Brake lines, it was cut a little longer, so every pilot can adjust it according to his personal taste. But you must always leave 10cm before the brake line starts acting in order to avoid trailing edge deformation when the wing is fully trim opened. In case the brake handle comes loose during flight or any brake line is cut you can use the D riser softly for directional control instead of the brake line.

If you feel it is necessary to adjust the brake-line length to suit physical build, we recommend you ground handling the glider before you test-fly it and carry out this process after every 20mm of adjustment.

## 6. Trimmers (Accelerator)

The JAZZ2 is supplied with a trim riser set. The 'neutral' or standard position is when the trimmers are pulled all the way down and A/B/C/D riser lengths are equal. We recommend performing landing and take-off with the trimmers closed. With the trimmers closed, the JAZZ2 will reliably inflate without any overshooting.

As a result, the take-off characteristics are very smooth, straightforward, easy, forgiving, and require no special skills.



You can be accelerated in flight using the trimmers which make a low angle of attack and increase the flying speed. JAZZ2 trimmers provide you with a more satisfying flight on windy days.

We advise you to use these trimmers carefully and do not use them in turbulent and strong thermal conditions. During full trim, conditions should be meet the dynamic reaction flight of the wing in case of collapse.

The JAZZ2 doesn't have an accelerator system.

#### 7. Pre-flight check

To know yourself with the glider it is a good idea to perform practice inflations and ground handling in advance.

You should have no difficulties flying the JAZZ2 for the first time in suitable conditions, but as with all new equipment.

When you have the new glider, the below points should be inspected.

- Check the lines are clear and not twisted.
- Connection points between the glider and harness.
- All harness buckles are closed.
- The Karabiners are fully closed and not damaged.
- The sewing, condition of the lines, and connection of the lines are right
- Internal damage to ribs and diagonal ribs.



- Damage to the top and bottom panels and seams between panels.

#### 8. Take-0ff

JAZZ2 has easy inflation behavior at the forward/reverse launch because of its super light glider weight. To get the right-wing shape for the take-off, pull the brake until the canopy shows the perfect banana shape on the flat ground. While inflating the JAZZ2, you should hold both of the A risers in your hands. Smoothly and gradually inflate the wing. It does not need excessive energy and you feel the lift force very fast.

We recommend to take off with closed trimmers.

## 9. In flight characteristics

JAZZ2 has the best glide performance in a normal trim position with no any brakes.

In strong thermals and turbulence, we recommend gently pull both brakes to increase stability without trim released.

To familiarize yourself with the JAZZ2 your first turns should be gradual and progressive.

To make efficient and coordinated turns with the JAZZ2 first look in the direction you want to go and check that the airspace is clear. Your first input for directional change should be weight-shift, followed by



the smooth application of the brake until the desired bank angle is achieved. To regulate the speed and radius of the turn, coordinate your weight shift and use the outer brake.

In the unlikely event that a brake line releases from the brake handle or breaks, the glider is maneuverable using the D-risers. By pulling gently on the D-risers it is possible to steer the glider and land safely.

#### Alternative Steering:

In the unlikely event, that a brake line releases from the brake handle, or breaks, or the brake lines are tangled up, the glider is maneuverable using the rear-risers. By pulling gently on the rear-risers, it is possible to steer the glider and land safely. Don't pull the rear-risers too much, to avoid a deep stall!

#### 10. Deflations

In spite of the JAZZ2 has great stability of the flight, strong turbulence or piloting error may cause a portion of the wing suddenly to be deflation.

## 10.1 Asymmetric collapse

The asymmetric collapse usually happens when the pilot has not foreseen this possible reaction of the wing.



Asymmetric collapses should be controlled by weight shifting away from the collapse and applying enough brake to control your direction. And you should use the brake to re-inflate the glider.

#### 10.2 Frontal collapse

JAZZ2 does not come out the symmetrical front collapse by itself. It has high internal pressure with its well designed profile. However symmetric collapse may occur in strong turbulent conditions, but It could be fast recovered if you apply the brake down to 15 to 20cm. Release the brake lines, you may recover to the normal flight.

#### 10.3 Full stall

The full stall can occur when you fully pull both brakes enough a long time. To recover to the normal flight you must release both brakes. After this usually comes a front dive with a possible front deflation. An asymmetric recovery (one control released faster than the other) from a full stall can cause a big dynamic collapse. The full-stall is a hazardous maneuver and not recommended as it requires very high forces.

The available brake travel before stalling the wing depends on the size and the lightweight. The JAZZ2 has a minimum of 65cm(Max. 70cm) travel length at maximum total load. Those numbers are just a rough



indication.

It would be dangerous to use the brake travel according those numbers. because it to practicable to measure the brake travel during flight, and in turbulence, the stall might occur with less brake travel. If you want to use the whole brake travel of your glider safely, it is necessary to do many intended spins and full stalls to get a feeling for the stall behavior

#### 10.4 Deep stall

It is possible for gliders to enter a state of the deep stall. This can be caused by several situations including; a very slow release from a B-line stall; flying the glider when wet; or after a front/symmetric deflation.

When you meet this situation you should fully raise up both brakes and push the A-risers forwards or release the trims symmetrically to regain normal flight.

## 10.5 Asymmetrical stall

It can take place when you pull one of the brakes too hard, or while spiraling at a small speed in turbulence you increase the angle of attack. Rotation in the asymmetrical stall is called a negative spiral. This is one of the most dangerous flying situations. In order to get out of the asymmetrical stall, just release the brakes. There may follow side thrust forward with the



following wing collapse.

#### 10.6 B stall

We do not recommend a B stall with the JAZZ2. This technique is generally very hard to use with JAZZ2 by the high force needed to pull down the B lines.

#### 10.7 Cravat

In case a cravat should occur from an asymmetric collapse or other maneuvers, it is important to keep your flying direction by applying some brake on the opposite side and weight shift.

You can also use strong deep pumps on the brake to the cravatted side. If a pull of the brake line is unsuccessful, pulling the stable line which is the outermost line on the B-riser may work.

If you can not do it and the rotation is increasing, you must use the parachute.



#### 11. Descent Techniques

#### 11.1 Big ears

The sink rate can be decreased in a controlled way by folding both wingtips. While holding the brakes you should symmetrically pull the outermost A-risers.

In order to return to the normal flight, you should release the A-risers and pull the brake short times until wing tips regain pressure.

Spiraling is not permitted with big ears, because of the increased load on the remaining lines so that they can be physically deformed.

#### 11.2 Spiral dive

When you hold the one-sided brake down for a long time, the glider goes into a fast sharp turn and loses a lot of height. The sink rate could be more than 15 m/sec. To get out of the spiral dive you must release the inner brake and use the outside brake to manage your sink rate. Mind that JAZZ2 may take one more turn after releasing the brake.

## 12. Special Flying

## 12.1 Accelerated flight

The profile of the JAZZ2 is designed for stable flight in flight always.

Full speed range. The speed bar has a more sensitive profile when accelerating the wing, critical sinks, or



strong winds.

Closer to turbulence and possible frontal collapse. In case of internal loss

When wing pressure is felt, it is recommended to pull the brake line minimally and slightly to increase the tension on the speed bar.

The angle of incidence of the wing. Don't forget to reset the air speed afterwards. Modify the angle of attack.

It is not recommended to accelerate near obstacles or in turbulence conditions. You need adjust the trimmer and release the speed bar in a timely manner.

'Active pilot action is required.

#### 12.2 Acrobatic flight

The JAZZ2 HAS NOT been designed for acrobatic flight and we DO NOT recommend continued use in this type of flight. We consider an acrobatic flight to be any form of piloting that is different from a normal flight.

If the wings experience 4-5 G of centrifugal force during flight, the materials will wear more quickly than in normal flights. If you do practice extreme maneuvers we recommend that you submit your wing to a line revision every six months.



## 13. Landing

We recommend landing with trimmers to the normal slow position. Don't use sharp turns or radical maneuvers.

When you are 1-2m over the ground, you should face into wind and pilot and passenger standing upright and ready to run if necessary. Finally, you may pull the brakes smoothly to minimize vertical speed.

Don't hit the ground by your overtake the glider.

If you in windy condition, as soon as you touch the ground you have to turn around with your passenger to face the glider and move towards it during full pulling break symmetrically.

#### 14. Packing your JAZZ2

The JAZZ2 needs to be folded cell to cell to keep the plastic reinforcement at the leading edge lie flat on each other and don't get bent. Try to pack your JAZZ2 as loosely as the packing bag allows because every fold weakens the fabric.

Avoid packing the glider where it is wet or abrasive conditions(sand, asphalt pavement, concrete)

## 15. Maintenance and cleaning

Cleaning should be carried out with only pure water. If the glider comes in contact with salt water, clean thoroughly with fresh water. Do not use solvents of



any kind, as this may remove the protective coatings and destroy the fabric.

#### 16. Caring tips

- Do not expose your glider to the sun any longer than necessary
- Keep it away from water and other liquids
- Do not let the front edge hit the ground
- Keep your glider away from fire
- Do not put anything heavy on your glider, do not pack it in a rucksack too tightly.
- Regularly inspect the canopy, lines, risers and harness. If you find any defects, contact your dealer or the manufacturer. Do not attempt to repair the paraglider by yourselves.
- If you detect a damaged line, inform the dealer or manufacturer about the line number according to the line plan
- Keep your JAZZ2 in a bag in a dry well-ventilated place under neutral temperature and humidity conditions
- If you do not use the glider, then once a month you should unpack it, ventilate it well, and then pack it back in the bag

#### 17. Warrantee

The producer guarantees the correctness of the declared characteristics and the paraglider's normal performance for two years after the purchase date. The producer conducts special, and after warranty



repairs and maintenance at the owners' request for an extra price. The warranty does not cover misuse or abnormal use of the materials.

We recommend inspecting your paraglider (including checking suspension line strength, line geometry, riser geometry, and permeability of the canopy material) one time at one year, or every 100 hours of flying time (whichever comes first); Those inspections must be made by the manufacturer, importer, distributor, dealer or other authorized persons. The checking must be proven by a stamp on the certification sticker on the glider as well in the manual book. Also, they will offer you spare materials like magnetic, trimmer webbing, and so on.

The Nylon fabric-reinforced on the leading edge of JAZZ2 is specially designed to extend the life of the glider in tough and somewhat harsh environments by applying additional reinforcement in consideration of the Davinci Gliders. Even if the fabric and nylon reinforcement layer are separated by abrasion, there are no major problems with the strength and glide safety of the product itself, except for aesthetic issues.

## 18. Respecting nature and environment

Finally, we would ask each pilot to take care of nature and our environment. Respect nature and the environment at all times but most particularly at



take-off and landing places. Respect others and paraglider in harmony with nature.

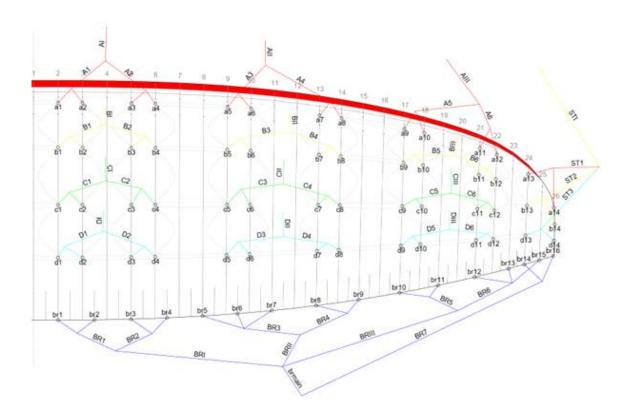
Do not leave marked tracks and do not leave rubbish behind. Do not make unnecessary noise and respect sensitive biological areas.

The materials used on a paraglider should be recycled. Please send old Davinci gliders back to us Davinci Gliders offices. We will undertake to recycle the glider.



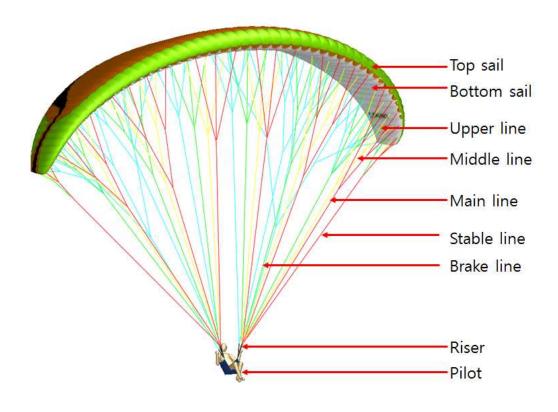
## Checked line sheet(with riser)

The measured values at the lower surface of the tailing edge, cll depth and spacing of the articulation points were determined under tensile load of 50N. The tolerance should not be more than  $\pm 10$ mm between the below length and reality.





## Overview





# JAZZ2

Serial Number	
Date of Production	
Dealer	
Date of sales	
Check and rep	air information