



# MANUAL

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Congratulations on buying your  
**AIX<sup>2</sup>**  
harness and welcome the family  
of ICARO - pilots!

Before you get to know your system please read the manual, there is important information inside.

This manual gives you information on the entire specific and general characteristics of the harness.

All technical data and instructions in this manual were drawn up with great care. ICARO Paragliders cannot be made responsible for any possible errors in this manual.

Should you decide to sell this harness at a later date, please pass on this manual to the new owner.

No guarantee of any kind can be made against accidents, injury, equipment failure, and/or death. It is assumed that the pilot is in possession of the necessary qualifications and provisions of any relevant laws are observed.

The use of this harness is entirely at your own risk.

Every pilot bears the responsibility of his/her own safety. The manufacturer or distributor assumes no responsibility for accidents occurring while using it.

Do not fly unless you are personally willing to assume all risks inherent in the sport of paragliding and all responsibility for any property damage, injury, or death, which may result from use of this sport.

Your harness is made with great care and state of the art and tested according European Standards.

The harness is suitable for training, tandem flying and towing.

***It is strictly prohibited to fly the harness***

- ***with damaged carabines, belts, buckles or protector***
- ***outside the specified weight range***
- ***in aerobatics and with motor.***

All technical data and instructions in this manual were drawn up with great care. ICARO Paragliders cannot be made responsible for any possible errors in this manual.

Important information in this manual is written in ***fat cursive writing***.

Any important changes to this manual will be published in our homepage ([www.icaro-paragliders.de](http://www.icaro-paragliders.de)).

Should you decide to sell this harness at a later date, please pass on this manual to the new owner.

The manufacturer or distributor assumes no responsibility for accidents occurring while using it.

Every pilot must ensure that the harness is properly checked at regular intervals.

***Each alteration is dangerous and reactions are not predictable. Your harness will lose its pattern test result and guarantee.***

## **Environmental aspects:**

The materials of which a harness is made require a special waste disposal. So please send disused ICARO - harnesses back to us. We will care about a professional waste disposal without costing for you.

Please do our nature-near sport in a way which does not stress nature and environment!

Please do not walk beside the marked ways, do not leave your litter, do not make unnecessary loud noises and respect the sensitive balance in the mountains.

**Especially at the launch site consideration is needed!**

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## To get to know your AIX<sup>2</sup>

Allowed for training	yes
Allowed flying with passengers	yes
Allowed for towing	yes
Allowed /certified for aerobatics	no/ no
Allowed /certified for flying with motor drive	no / no

Technical data		S	M	L	XL
Pilot size	cm	150-170	160-185	175-200	190-215
Seat board width	cm	33	35	38	40
Seat board depth	cm	35	37	40	42
Carabiner suspension	cm	40	45	48	51
Wide chest strap	cm	38 - 43	40 - 46	43 - 49	46 - 52
Harness weight	kg	3,0	3,2	3,4	3,6
Foam protector thickness	cm	17			
Max. weight in flight	kg	120			
Min. Vol. Rescue Cont.	cm <sup>3</sup>	2,3			
Max. Vol. Rescue Cont.	cm <sup>3</sup>	7,6			
European standard	EN	1651:2017, 12491:2015, LTF NfL 91/09 i.g.F.			
Sample test numbers					

This harness is suitable

- for students and beginners
- for pilots who prefer a seated flying position
- for pilots who prefer a lightweight, uncomplicated and comfortable harness and
- as passenger harness (without built-in rescuer).

The suspension point is chosen so that it allows the pilot a maximum of screen feeling without giving a "tilty" impression.

Active flying is currently being supported by the "Body- Control- System", which means that dysfunctions of the canopy can be better recognized and prevented right from the start. It also offers maximum freedom of movement during take-off, ground handling and landing thanks to its specially designed leg strap guide.

The harness is made of high-quality materials. The straps, which are the carrying parts of the harness, are made of special plastics and continuous. These can be loaded with a multiple of the permissible suspension load without suffering permanent mechanical deformations. The carabiners are made of aluminum.

***There is no storage for ballast in the back pocket, no mounting option for a leg stretcher or leg sack. The harness is not intended for a front container or any other mounting of the rescue system. Only the integrated rescue container may be used. The protector is not replaceable. Only the original protector may be used.***

***As impact protection, the Aix<sup>2</sup> has a foam protector. This must be installed before installing the rescue system. Please note that the impact-absorbing properties of the foam protector deteriorate as a result of use and aging.***

***Therefore, regularly check the function and condition of the impact protection***

- visible damage
- damage to the seams of the foam sheathing
- damage to the valve (with the airbag)
- tightness of the airbag / foam sheathing
- damage to inserts / reinforcements / spring

### **Speed system**

The harness is designed for the use of a foot accelerator system, which automatically returns to its original position after being operated. The accelerator itself consists of a foot bar, two ropes and two Brummelhaken.

The accelerator line must not run through the handle of the reserve. The line must run on the inside of the harness. To achieve this, the Aix<sup>2</sup> has installed a special tube on the handle side.

Adjust the rope length so that in the maximum accelerated flight condition (both pulleys of the risers lie against each other) the legs are fully extended.

***Please pay attention that the glider will not be pre-accelerated, while the accelerator is loosened, when the acceleration ropes are set too short.***

Before starting the brummel hook (foot accelerator-glider-riser) are stuck together. When flying normal all risers have the same length.

When using the accelerator system the risers A, B are shortened by a constructive exactly defined length and therefore the angle of attack of the canopy is smaller. The length of the hindmost riser however is not changed.

This causes a reduction of the angle of attack of the whole glider and results to an increase of speed.

### **Adjustment of AIX<sup>2</sup>**

The harness can be adjusted in many ways to the individual needs and likings of each pilot. We advise each pilot to take time to get acquainted to the harness.

This will reward the pilot with an excellent sitting comfort. To carry out the adjustments we advise to hang the harness in a simulator.

***Conduct the adjustments with the rescue system installed.***

### **Adjustment of shoulder straps**

For optimum comfort during take-off and ease of achieving your preferred flying position the shoulder straps should not be excessively tight.

The straps may appear loose while in the seated position but some play is required to avoid excessive strap pressure in the standing position.

### **Adjustment of leg straps**

Pull the leg belts tight before starting, but make sure they do not cut in or squeeze. Due to a special design the leg belts will not hinder your running at the start.

Because they are tied tight, the front of the seat is lifted up and helps you getting into the harness. By slipping back in the gear, the leg belts loosen a bit after start.

### **Adjustment of chest straps**

The adjustment of the harness chest strap controls the distance between karabiners and affects the handling and stability of the glider.

Excessive tightening the chest strap increases stability but also the risk of twists following glider collapse, and it also increases the frequency of getting collapses due to poor feedback from the glider.

The risk of twisting is also strongly affected by the seating position of pilot. Flying in a laid back (reclined) position makes it much more difficult to react in time to prevent riser twisting.

With the chest strap in a more closed position the glider also has more tendency to maintain a stable spiral, lengthening of the chest strap gives more feedback from the glider but decreases stability.

### **Lumbar Adjustment**

An excessively reclined position reduces stability and increases the risk of risers twisting in the event of a spin.

***Each setting the harness must be done with mounted protector, rescue system and be symmetrical on both sides.***

### **Fitting the rescue system**

---

To install the rescue system a container is mounted under the seat. The opening is installed as standard on the right hand side. If desired, it can be positioned on the left hand side. The container of the AIX<sup>2</sup> contains a rescue handle. The handle has to be fixed with its loop to the inner container of your rescue system.

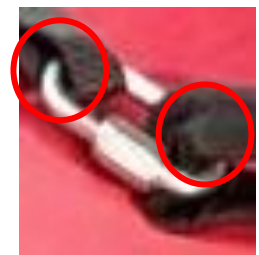
***If in your inner container there is no loop, get in contact with the producer of your rescue system.***

Most harnesses have a handle for the harness containers. This handle must be connected to the inner container. The inner container of ICARO rescue systems has two loops, in which the handle of the harness can be attached (center, side).



Handles for front and back containers are generally suspended in the central loop, container on side or under the seat, the side strap used.

***If there is no handle of the harness or it does not fit with your inner container, please ask the dealer of your harness or your paragliding school.***

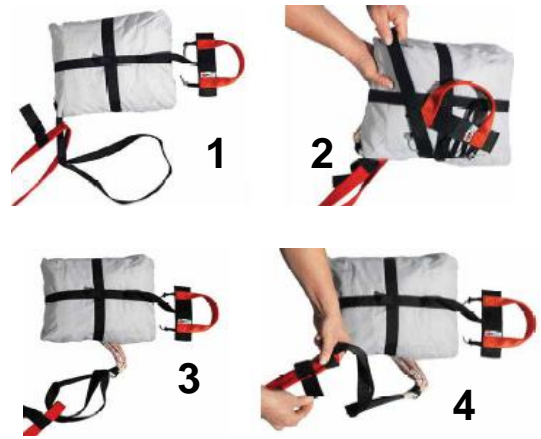


### **Attachment of the connection belt with the harness**

For connecting the two belts use a fixable 24 KN- snap hook with a diameter of 8 mm. It is very important that the snap hook cannot twist to prevent traverse stress of the snap hook.

Therefore, use cable fixer, adhesive tape or strong rubber bands and pull it **above and below the snap hook** around the belts.

Another fixing method is to put the belt of the rescue system through the connection belt of the harness and then the rescue system through the harness belt as shown in the photo.



It is just as very important that the knot is very tight fastened. Therefore use cable fixer, adhesive tape or strong rubber bands and pull it **above and below the knot** around the belts.

***Please pay attention to the symmetry of both lines. Neither side of the loop must be longer than the other.***

### Closing the container

When inserting the rescue system into the container, the loop to which the handle is attached, must point to the opening of the container, otherwise there is a risk of jamming in a trip!



Insert a thin cord into each elastic loop, which can be used to close the container and insert it into the eyelets of the tab with small eyelets.

Build the parachute with the handle loop up and the lines down.



Insert the split pins into the respective color-marked loops and pull the rubber ring into position over the split pin. Remove the packing lines!



Position the split pins and release handle below the neoprene cover. Secure the handle on the Velcro strip and push the remaining flap of the container into the pocket provided.





## ***Remember to remove the packing lines slowly!***

### **Compatibility check**

Each combination of rescue equipment and harness / outer container must be checked by the manufacturer of the harness or the rescue system or by a person authorized by the manufacturer (dealer, instructor) after the first installation of the rescue system (functional test and compatibility check).

The operation of the rescue equipment must be possible from the flight position properly and in accordance with the specifications of the building codes. This compatibility check must be noted in the packing instruction booklet of the rescue device.

***The tensile force for triggering may be max. amount to 70N. The throwing motion should be practiced with each repacking of the rescue system under realistic conditions***

## **.IMPORTANT POINTS TO LOOK OUT FOR:**

### **⇒ Check (steady)**

- connection of the rescue system to your harness
- connection of the harness and deployment handle
- the closing splint must be held with a special thread
- aluminum karabiners; aluminum might get micro cracks from impacts during use

### **⇒ line from the fixing loops is removed (after each packing)**

### **⇒ Check compatibility of rescue system and harness**

### **⇒ Before each start with your glider you have to check the container is closed!!!**

### **Correct handling of the rescue system**

Basically, the hand that triggers the rescuer is defined by the mounting side of the rescuer's grip (in the case of front containers, this is placed in the center). In almost all harnesses with integrated rescue system on the market, this handle is mounted on the right side. To prevent inadvertent triggering of the rescuer, additional safety devices are provided on most harness models with side rescuer (tube, side, back) to prevent unintentional release of the rescuer Handle used.

The ***release of the rescue system*** represents an essential factor to reduce the required release force.

When the handle is pulled upwards, the resistance caused by the protective cover is much higher when releasing it horizontally or diagonally upwards.

We recommend to train (before repacking the rescue system, during-force trainer) these methods.

***With the Aix<sup>2</sup>, the handle is pulled diagonally upwards.***



Another problem can arise when the handle is released with the other hand. After evaluation of different air accidents, however, it was found that such a situation only happens with multiple adverse conditions (for example wrong recovery of a Full stall, partly fallen into the cap, the throwing hand covered in lines and additionally spiral dive).

***Also, in this case it is essential not to try to pull the parachute handle vertically but as far as possible horizontally or diagonally upwards.***

## Flying with the AIX<sup>2</sup>

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The Aix<sup>2</sup> will be in an upright to slightly recumbent sitting position flown and allows the pilot so the optimal overview in the air. The Aix<sup>2</sup> can be flown agile, but also heavily damped. The agility of the harness is adjusted by means of a chest strap. This adjustment can also be done easily in the air. For learners, or in turbulent air, is a rather subdued recommended setting.

### **Precheck and start**

It is important to perform a pre-flight check before taking off. Please give the following points your special attention.

- Check your harness and make sure that all connections to pilot are correctly closed. Check that all karabiners are closed and can not be opened accidentally in flight and that the risers are not twisted.
- Check all connections, buckles and carabiners on the harness, the closure of the rescue equipment container and the secure fit of the rescuer handle (cotter pins).
- Make sure your equipment provides optimal protection and comfort (helmet, shoes, gloves).
- When using a foot accelerator, the two hum hooks (paragliding harness) are additionally connected on both sides. The accelerator line must not run through the handle of the reserve
- Connect the paraglider to the harness; Without twisting the straps, connect the harness straps to the main carabiner of the harness (green on the right side, red on the left side). Check the straps that they are in the correct position and not twisted correctly. The A-risers must point forward in the direction of flight.
- Finally, make sure that the carabiners are completely closed and locked.

### **Flight**

The Aix<sup>2</sup> is great for flying with body control. When you fly a turn, first set your body weight by tilting your upper body to the side you want to fly the turn. Then support the turn with a deliberate brake application, so that you fly moderate curves, especially when thermals flies. If you want to end the curve, release the brake and return the upper body to neutral position.

The more you apply the brake, the tighter the curve, the more sink your glider has and the more it hits the nose, so that it can end in a spiral.

## **Landing**

- Always make sure you have enough altitude for a safe landing before you select the landing site.
- Never make aggressive maneuvers near the ground. Always land against the wind in an upright position and ready to run if necessary.
- Make the landing approach at maximum trim speed, if current weather conditions permit, then brake symmetrically and progressively to slow the glider to ground contact.
- Be careful not to brake the glider too much, not too early or too abruptly to prevent a possible stall and a hard landing. In the case of a landing with a persistent stronger wind, you will have to turn around, face to the screen, move forward to the screen, while braking down the screen symmetrically.
- Do not land sitting, this is dangerous.

## **Tandem flights and towing**

The harness is very well suited for tandem flights. It can be used both for the pilot and the passenger. Due to its special construction, it allows a maximum freedom of leg movement, which makes the start easier for the pilot and the passenger.

***The passenger should not have a rescue system in his harness to avoid unwanted activation of the rescue system.***

The harness is also very suitable for towing. For this you either need a towing attachment or two screw-in trapeze shackles. The towing attachment is available from specialized dealers and is mounted to the main karabiner with the straps. The trapeze shackles are available from flight schools and should be placed at the chest belt between the shoulder belt and main suspension. The towing link is attached to this.

## **Flying over water**

During SIV or flights over water, we recommend the use of a lifejacket equipped with a collar, which will keep the pilot's head above water in the event of loss of consciousness. If you land in water using a foam protector, its buoyancy behind the pilot creates a high risk of the pilot's head being pushed under the water. Also harnesses will fill with water and become heavy.

In the case of an involuntary water landing without lifejacket must be solved immediately the harness buckles and the Aix<sup>2</sup> are then removed. Otherwise there is the highest drowning risk. Also in a water landing with life jacket is recommended to release the harness buckles and take off the Aix<sup>2</sup> before boarding the boat. By soaking in water noticeably increases the weight of the harness and thus makes it difficult for the pilot to get on the boat.

## Care and repair Instructions

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### Care Instructions

- To avoid exposing the harness to unnecessary strain, be careful not to drag the harness over the ground or hit it with the carabiners
- If you want to clean your harness, use only warm water and a soft sponge.
- The zips and buckles on your harness can be sprayed with a non-greasy silicone spray to ensure smooth running.
- Store in a dry and well-protected place, away from chemicals, at a temperature ideally between 5 and 30 degrees Celsius and 55-65% humidity.
- Avoid storing your flight equipment in a closed car in hot sunshine on hot days!
- If you do not fly for a long time, take your harness out of the backpack so you can get some air.
- If the harness has become wet, set it up so that air can reach the material everywhere.
- Before the next flight, it is essential to dry the rescue equipment and repack it.
- Drying your harness and rescue equipment can take several days and is important to the material.
- Prolonged exposure to UV radiation damages the harness. For this reason, never leave it lying in the sun unnecessarily, but after flying, pack it back in its backpack.

### Repairs

The seal of approval can only be preserved if original parts are used. If you discover any damaged parts to the harness which might impede deployment, please send it back to the manufacturer to be repaired.

Repairs can only be carried out by the manufacturer or from the manufacturer authorized persons.

***Any modifications to the harness other than those approved by the manufacturer will result in forfeiture of the sample test of the equipment.***

***Repairs to the protectors and load-bearing parts of the harness may only be carried out by ICARO paragliders or a person / company authorized by ICARO paragliders.***

### Inspection

**After 24 months**, it is important to have your harness inspected by a trained ICARO technician.

***Without regular certified inspections, your harness will lose its certification and guarantee.***

***The aluminum karabiners should be changed every two years at the latest as the aluminum might get micro cracks from impacts during use.***

## Terms of guarantee

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ICARO paragliders guarantees 24 month for the proper processing, an operation within the allowable limits of proper operation and the fulfillment of the eligibility criteria of harness equipment at the time of first delivery by ICARO paragliders.

*Guarantee is only valid for ICARO products with LTF/ EN certification.*

### **What is covered by the guarantee?**

Provided that ICARO paragliders accept the fault the guarantee contains all necessary spare parts related to the replacement or repair of defective parts and working time.

ICARO paragliders accept no freight costs (outbound and return transportation).

### **What are the conditions of the guarantee?**

Provided that ICARO paragliders accept the fault the guarantee contains all necessary spare parts related to the replacement or repair of defective parts and working time.

- ICARO paragliders needs to be informed immediately after the discovery of a defect and the defective product must be sent to us for testing.
- The harness was used in normal circumstances and maintained according to the instructions. This includes in particular the careful drying, cleaning and storage.
- The harness were used only within the applicable guidelines and all rules have been complied with all times.
- All flights must be accounted for within the flight book.
- There were only original spare parts used and checks, exchange and / or repairs were conducted by an authorized dealer or by ICARO paragliders company / person and properly documented.
- A fully and correctly completed guarantee card must be sent at least 6 weeks after buying the glider to ICARO paragliders commercial. Alternatively can this be sent via the appropriate online form on [www.icaro-paragliders.com](http://www.icaro-paragliders.com).

### **What is excluded from guarantee?**

- Harnesses
  - that are used for training purposes, Acro or other official competitions,
  - which were involved in an accident,
  - which have been changed by yourself,
  - that were not purchased from an authorized dealer / flight school,
  - where the required inspection intervals were not met and the verification of the harness was not conducted by a ICARO paragliders authorized operation / person
- Damage

- which has occurred due to improper treatment (i.e. storage in humidity, heat or direct sunlight)
- caused by solvents, salt water, insects, sun, sand, humidity or “debag-jumps”.
- caused by force majeure.
- caused by the paramotor (Oil, fuel, damage in cause of the prop)
- Parts that need to be replaced due to normal wear and tear,
- Discoloration of the cloth material used,

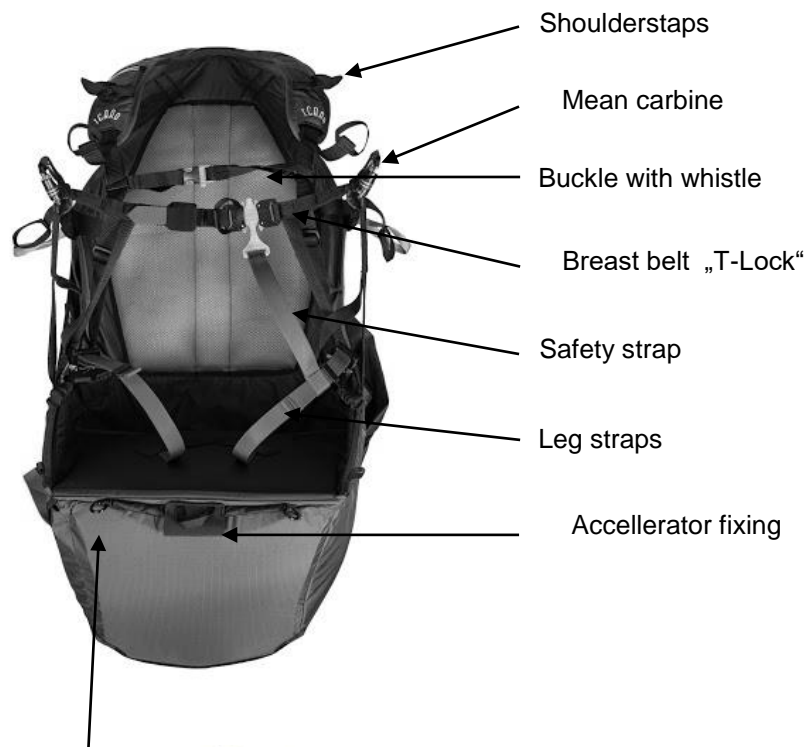
In case of a concluded claim the period of guarantee carries on. The period of guarantee and the connected claim are not prolonged and are only valid until the original date of expiry. The freight costs (transport to and from) are not paid by ICARO paragliders.

## Annex

Please fill in the guarantee card which you find on our homepage [www.icaro-paragliders.com](http://www.icaro-paragliders.com) and send it to us.

<b>Check sheet for harnesses</b>					
Client (Name, Address):					
Type / size / year of construction :			Serial number:		
Certification number:			Date of last inspection:		
			Memos	yes	no
Seat strap system	Visible damages?				
	Areas of abrasion?				
Seat board	Visible damages?				
	Positioning of the straps ok?				
Straps	Visible damages?				
	Course of the straps?				
	Seams ok?				
Buckles and carabines	Visible damages?				
	Condition (closing properties, operation) ok?				
	main carabines (condition, age)				
	Operativeness ok?				
Protectors  Airbag -/ Foamed material	Visible damages?				
	Seams ok?				
	Valve ok?				
	Tightness airbag/ foam protector sheeting?				
	Conditions of any reinforcements ok?				
Speed bar	Visible damages?				
	Fixing rubber ok??				
	Return pulleys ok?				
	Lines ok?				
Rescue system	Visible damages?				
	Identification plate ok?				
	V-lines				
	Handle fitted and connected?				
Backpack (reversible harnesses)	Visible damages?				
	Zip ok?				
	Buckles ok?				
	Seams ok?				
Compatibility check effected?		Additional repairs carried out? Which?			
Type label affixed?					
Inspection stamp affixed?					
<b>Overall result</b>			Next inspection:		
As new					
Very good		Next inspection when using the harness commercial:			
Used					
Much used		Date, name and signature of the checker			
certification only for one year					
not airworthy					

## Description harness



Accelerator return elastics



Color



## Partlist

Rivertex	Rivertex 600 PES, šířka 150cm, černá	fabric
Sinfo_pěna	C 9005 N	foam
Airwill	Nylon fabric 210D ripstop PU 800, colour black	fabric
Airwill	Nylon fabric colour blue	fabric
Caratti_softshell	softshell 100% PES	fabric
MAB softshell	7003 Softshell, 2187 black	fabric
AustriAlpin	FC 56 B - Cobra compact; black buckles; 1 part fix; 1 part adjustable	buckles
AustriAlpin	FC 25 KVF - Cobra buckle; black; 1 part fix; 1 part adjustable	buckles
AustriAlpin	25 mm, FC05A + FC06A Frame bucle + 2-slot-buckle	buckles
Mouka	366 028 043 962/01	webbing
Mouka	366 028 025 962/01	webbing
Mouka	366 045 025 960/01	webbing
Mouka	366 049 020 960/01	webbing
Mouka	326 018 025 962/01	webbing
Mouka	326 018 020 962/01	webbing
Mouka	326 021 014 962/01	webbing
Mouka	327 008 012 970/16	webbing
Lanex	Hammer 3,0 mm	line
Cousin	Line for rescue 2411, diam 2mm - pre-stretched	line