

A close-up photograph of a dark blue fabric with a white grid pattern. Embroidered on the fabric is the word "FAM" in a large, red, stylized font, followed by the number "3" in a yellow, stylized font. The embroidery is raised and has a textured appearance. A red fabric edge is visible in the top left corner.

FAM 3

Version 2/2023

MANUAL

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Congratulations on buying your
AIX 3
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 Warranty 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 to European Standards.

The harness is suitable for training and tandem flying.

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).

Should you decide to sell this harness later, 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 warranty.

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 3

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

Technical data			
Designated use	GH		
Certification number	PH_360-2022		
Fastener system	ABS		
Size	S, M, L		
Pilot body height	S: 152-172, M: 162-184, L: 178-205 This information is for reference only. The right size depends on leg and back length as well as buttocks width. It is possible that due to these three factors a different size of harness will fit you here.		
Suspension highs (cm)	46 (S), 48 (M), 50 (L)		
Maximum loading (daN)	120		
Distance of karabiners (cm)	42 - 54		
Total weight (without rescue system) with protector, karabiners, and speed	3,4 (S), 3,7 (M), 4,1 (L)		
Type of protection	foamed rubber protector; 14 cm		
Reserve parachute	Integrated container attached under the seat; handle at the right side		
Volume of the rescue container (ccm)	6000		
Check interval	24 months		
Extent of the seat (cm)	size	Breadth (f,r)	length
	S	36	40
	M	38	43
	L	40	46

Materials

Cloth	Honeycomb- texture
Main suspension	25 mm Polyester
Breast clasp	AustroAlpin
Leg clasp	Edelrid
Snap hook/ Main suspension	AustroAlpin
Seat	Plastics-Honeycomb construction

This harness is designed especially for pilots who want a functional, safety and compact Harness. Maximum freedom of movement during ground handling, start and landing is ensured, due to a special concept of leg strap guidance. The suspension point was chosen so the pilot has a maximum feeling for the glider.

Active flying is especially supported by the body-control-system. Disturbance of the canopy can be detected earlier and avoided. The protector is attached by zipper in the back pocket.

The protector must be attached before installing the rescue system.

The harness is provided with a big rear bag and two side pockets. All flight equipment not needed during flight can be placed in the rear bag. One pocket is open, the other pocket is closed with a zip so that nothing can fall out during flight. Both can be reached while flying.

Speed system

All necessary deflection pulleys to install the speed system are mounted. The rope guide was chosen to provide easy and comfortable use of the speed system also for longer periods of time.

Put the ropes which are attached at the foot bar through the rings at the front right and left of the harness from the outside and then through the eyelets on the side.

Afterwards put the ropes which are now running inside the harness through the pulley which can be found at the left and right of the sitting board.

The ropes which have been put through the eyelets and the pulley need to be bypassed on the outside along the harness bands and fastened with the brummel hook.



Adjust the length of the rope in this way that both legs are straightened completely when flying maximum speed (both pulley of the risers are laying on top of each other).

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

The description refers to the rope characteristics of an ICARO harness. When using a different harness, the application can be different.

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 3

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.

Adjustment of shoulder straps

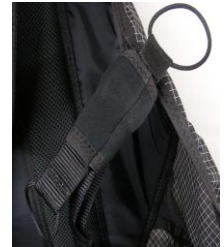
The shoulder straps are adjusted while standing. They are pulled in so far that you can just stand up straight.

Fine corrections should be made during the first 2-3 flights. To lengthen the straps, push the black buckle up and pull on the strap.



Adjustment of back straps

When you prefer sitting in the harness you must pull the sideward straps (they are on breast height), if you like more lying during flight open the straps.



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 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.

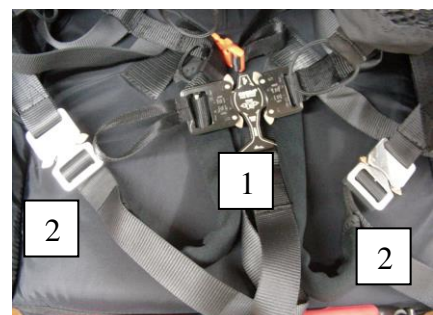
Excessive tightening the chest strap increases stability but also the risk of twists following glider collapse, and it also increases the frequency of getting collapses due to poor feedback from the glider.

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.

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

For security reasons always close first the middle strap (1) with the T-Lock and then the leg straps (2)!



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.

The container of the AIX 3 contains a rescue handle. The handle must 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.

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.

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 trough 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

The rescue equipment container has an inner locking flap (1) and an outer lid (2). This is provided with a front and a rear flap, which must be inserted into the openings provided after installation (opening protection).



When installing the rescue system in the rescue container of the harness, the line of the rescue handle, which is connected to the inner container, must point to the opening of the rescue container, otherwise there is a risk of tilting if triggered!



Insert a thin cord (packing cord) into each of the two elastic loops with which the container can be closed.



Fold up the inner locking flap and push in the packing cord through its eyelets.



Now fold up the outer lid, put the packing cord through its eyelets and insert the front flap of the outer lid into the opening provided on the front of the harness.



As the next step, take the rescue handle, push in the plastic sticks on the rescue handle through the elastic loops (1), so that you can pull out the packing loops without the lid opens again.



Close the flap and feed the longest rod through the fabric flap (2), then through the white closure flap (3) and insert it into the channel provided (4).



Make sure that the white tab on the reserve handle points forwards (to the white tab on the harness). These are used to secure the reserve handle with a breaking thread. Push in the plastic sticks all the way through the elastic loops and stow the reserve handle in the provided pockets. Velcro tight the handle.



Now stow the V-line (1) in the hose, close the zip (2) up to the back part (3) and close the top flap of the V-line (4).



Insert the rear flap of the outer lid into the opening. Now pull the upper protective flap over the outer cover, that's it.



The rescue handle is secured with a break thread by pulling it through the two white tabs (one on the rescue handle, the second on the harness). This must have a breaking load of 50 N to prevent the rescue system from being triggered unintentionally.

A higher breaking force could otherwise endanger the release of the rescue system! After installing the first rescue system it is essential to conduct test activation (in flight position, sitting in the harness).

Compatibility check

A control of every new combination of rescue system and harness/outer container must be carried out by either the producer of the harness or the rescue system or an authorized person (dealer or flight instructor).

The activation of the rescue system in flight position must be correct and in conformity to the construction guidelines. The check must be recorded in the documentation of the rescue system.

The pulling force for triggering may not exceed 70N. The throwing movement should be practiced under realistic conditions every time the rescue system is repacked.

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

In nearly all commercial harnesses with integrated rescue system the handle of the rescue system is mounted on the right-hand side (optionally it can be mounted on the left).

To prevent unintentional operating of the rescue system most harness models with a handle mounted on the side (Tube-, side-, back containers) offer additional safeguards.

Depending on the model ICARO harnesses one or two cover plates attached to the rescue handle are used to be stuck into two flaps and are secured with an additional Velcro. This ensures that lines cannot interlock with the handle pad and the rescue system opens unintentionally (e.g. during ground handling). This fallback system for rescue handles is very effective and therefore used in many other harnesses.

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.

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

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.

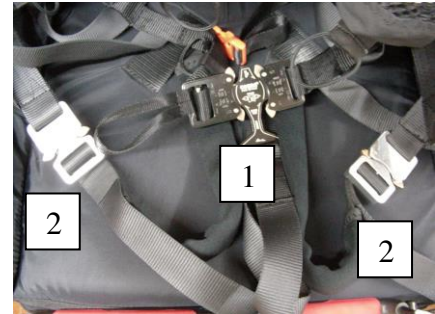
Flying with the AIX 3

It is important to perform a preflight 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.

Always close the middle strap with the T-Lock first and then both thigh straps.

This can prevent falling out, even when the thigh straps are open.



- Without twisting the risers, connect them to the harness attachment loops using the self-locking carabines.
- Check for the risers to be properly positioned and untwisted. The «A» risers must be located at the front and facing the flight direction (see diagram).
- Lastly, check for the main self-locking carabines to be fully closed and locked in place
- Always be certain to have enough altitude to make a landing approach corresponding to the weather conditions of the moment and terrain. During the landing approach, never make hasty maneuvers.
- Always land upwind in a standing posture and be ready to run upon touchdown if necessary. During your final approach, use as much airspeed as possible based on the weather conditions of the moment, then gradually reduce the glider air speed by pushing the toggles all the way down until contact with the ground is made. Beware not to brake too soon and too rapidly and too deep which could lead to a stall and a dangerous landing.
- During high wind speed landings, turnaround and face the wing as soon as ground contact is made and move toward the wing while braking symmetrically to deflate it. Do not land in a seated position as it is dangerous.
- 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.

Care and repair Instructions

Care Instructions

To maintain your harness in good condition, please ensure that the harness does not get dragged along the ground, the karabiner does not get hit against rocks and avoid over exposure to sunlight, heat or humidity.

If you wish to clean your harness it is best to use warm water and a soft sponge.

Store your harness in a dry and dark place, ideally between 5° and 30° Celsius. Do not store it near chemicals or petrol.

If you will not fly for longer period, take it out of its pack.

Avoid storing your harness for days at a time in a hot car.

If the harness has become wet, lay it out so that air can get to all areas of the fabric, also your second chance.

It may take several days for your harness and your rescue system to dry out completely especially the lines of the rescue system, which take longer than the fabric. Do not fold and store your rescue system prematurely if it not completely dry. Mildew may damage your harness and your rescue system.

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 end it back to the manufacturer to be repaired.

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

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

Inspection

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

Without regular certified inspections, your harness will loose its certification and warranty.

Only an authorized technician who has been trained by ICARO paragliders is authorized to sign and date the harness certification label and sign the manual.

Terms of Warranty

ICARO paragliders warranties 24 months 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.

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

What is covered by the warranty?

Provided that ICARO paragliders accept the fault, the warranty 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 warranty?

Provided that ICARO paragliders accept the fault, the warranty 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 the careful drying, cleaning and storage.
- The harness was 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 warranty 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.

What is excluded from warranty?

- 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 warranty carries on. The period of Warranty 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.

In conclusion

The satisfaction of our customers is our top priority.

That is why we are open to all suggestions for improvement and constructive criticism from you, because only then can we incorporate them into our new products. We also want to be able to inform you about the latest technical innovations and information about your harness at any time.

However, we can only do this if you register with ICARO paragliders using a warranty registration. You can find this on our homepage at www.icaro-paragliders.com.

**The ICARO team wishes you a lot of fun with your
new harness as well as
many great and memorable flights.**

ICARO paragliders

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Annex

Please fill in the Warranty card which you find on our homepage www.icaro-paragliders.com and send it to us.

Check sheet for harnesses					
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) Function, ok?				
Protectors	Visible damages?				
	Seams, ok?				
Airbag -/ Foamed material	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? Container properly closed?				
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?					
Overall result					
As new		Next inspection:			
Very good		Next inspection when using the harness commercial:			
Used					
Much used					
certification only for one year					
not airworthy		Date, name and signature of the checker			



Left side, pocket with zipper



Right side with rescue pocket



Large stowage on the back



Additional pocket in the stowage



Detachable and washable cover



T- Lock for the breast strap



Lock for the leg strap



Adjusting strap for the back



Net for radio set



Contrasting colored main suspension