4fight owner's manual

We are happy that you have chosen a helmet by Icaro2000, designed to offer the greatest possible protection, comfort and style in your favourite sport.

This high-quality, certified product is accompanied by a manual that provides details on specifications, personalization, use and care. We recommend reading the manual to optimize the helmet's performance.

We have decided to help the environment by not printing the manual. You can find the latest version of this document online at the following link:

https://bit.ly/3qEenQw

You will also find a link to this document on our website **www.icaro2000.com**, at the page for the helmet you have just bought.

Or scan the QR code below using your mobile device:

Icaro 2000 congratulates you on your purchase of **4fight**, a true classic in the world of aerial sports helmets. First launched in 2004, this helmet with its distinctive long tail, designed by Ignazio Bernardi with technical consultancy from Italy's greatest helmet developer, won immediate acclaim, and it became the best-selling helmet ever made for the sport of hang gliding. Over the course of the years, some variants were introduced, such as the version with a truncated tail more suitable for paraglider pilots, named the **4fight cut**, and the **4fight MR**, in which the letters MR stand for Manfred Ruhmer, multiple world champion for hang gliders and rigid wings.

In 2020, 4 fight was withdrawn from production and replaced by **NeroHero**. However, after two years, constant requests from pilots for 4fight induced us to relaunch it.

Helmet technology has progressed considerably in comparison to 20 years ago, and likewise certification. 4fight's unique design characteristics can no longer be certified as EN 966 (airborne sports) and so we have opted for a new certification, **EN 1385** (white water sports) specifically tailored to lightweight helmets.

The principal purpose of our helmets, **safety**, has been achieved without sacrificing comfort or aerodynamic performance, by virtue of the innovative technology that we have applied. The test report shows that 4fight offers excellent head protection. Our classic helmet has safeguarded pilots for twenty years, and it will continue to provide efficient protection with its new certification.

Characteristics that hallmark all our helmets are the **Italian design**, the appealing **style**, and the **quality** of a helmet made exclusively in Italy. We are sure that you will love your 4fight helmet!

Icaro 2000 recommends the use of certified helmets only.

Our network of distributors worldwide ensures the availability of parts and service wherever you practice your sport.

For further information or service, please consult your nearest Icaro 2000 retailer, or contact the company direct at:

Icaro 2000 srl

via Molino 4
21014 Laveno Mombello - VA
ITALY
Phone: +39-0332-648-335
Fax: +39-0332-648-079
e-mail: **staff@icaro2000.com**
website: **http://www.icaro2000.com**

INDEX

GENERAL INFORMATION 4
CHOOSING AND PURCHASING A HELMET 4
STRUCTURE OF THE 4FIGHT HELMET 4
TECHNICAL SPECIFICATIONS 6
CERTIFICATION 6
USING THE HELMET 7
4 THINGS THAT YOU SHOULD NEVER FORGET 7
IN CASE OF ACCIDENT 7

HELMET MAINTENANCE 7
PERSONALIZATION 8
REMOVAL AND REASSEMBLY OF INTERNAL PADDING 8
VISOR REMOVAL AND ASSEMBLY 9
PERIODICAL CHECKS ON VISOR SCREWS 10

CLEANING 11
VISOR AND EXTERNAL SHELL 11
INTERNAL PARTS 11

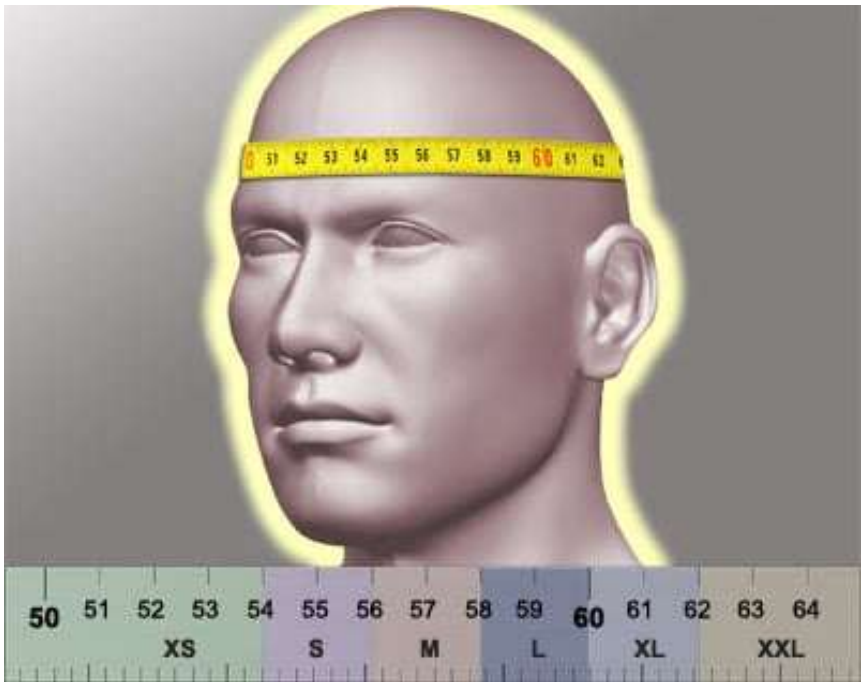
ACCESSORIES 11

IMPORTANT INFORMATION 12

General information

Choosing and purchasing a helmet

When you purchase a helmet, the most important moment is choosing the **right size**. If you have never purchased a helmet, you probably don't know your own size. The size of a helmet is specified by the **inner circumference** of the internal padding. The size number therefore corresponds to the head circumference in centimetres.



Take your time when choosing a helmet. Try several, and follow these criteria:

Put the helmet on and fasten the strap:

- The helmet should not be so loose that it moves around, but neither so tight that you can feel a continuous pressure on your head
- A helmet that is too large may slide down and obstruct your eyes
- Try to pull it off, moving it back and forth: if it tends to slip off or move around, it is too large
- Lean your head forwards, grip the helmet's rear edge, and try to pull the helmet off. If the helmet slides off, it is not suitable for the shape of your head.

If, while trying on the helmet, it does not perform satisfactorily for just one of these criteria, you should try another size or another model.

4fight is a jet, or **open-face**, helmet. Please bear in mind that a full-face helmet also guarantees protection for the chin area. Consider this carefully when you are choosing your helmet.

Never purchase a second-hand helmet, even it the price is good. There is no way of discerning its real conditions (whether it has been involved in an accident, etc.).

Structure of the 4fight helmet

- Outer shell:
  - 4fight is made with an outer shell in **high-modulus glass fibre** with carbon optic finish. Made using the same technology as in military applications, it guarantees the highest possible

standards of safety. Its **relatively low weight** reduces neck strain and whiplash potential and so also contributes to safety. The outer shell of 4fight is made in a single size.

- Crushable foam inner shell:
  - In 4fight, the inner shell is in **high-density expanded polystyrene**. It can be damaged even by a minimal blow, and in this case the helmet should be replaced. This is part of the helmet's intrinsic protective role. In fact, polystyrene is easily deformable, and in this context its function is to **absorb shock** by means of deformation and/or partial destruction. A more rigid material would not have the effect of dissipating impact energy, and so it would transmit all the shock energy to the head.

- Comfort lining:
  - 4fight has **internal padding** that can be replaced by thicker or thinner padding pieces, to vary helmet size and optimize comfort.

- Micrometric chin strap:
  - The chin strap has a rapid fastening system. To **release the strap**, you just have to pull the red tab. The buckle itself permits adjustment of chin strap length. The canvas part of the strap can also be adjusted in length, with millimetric precision. Just slide up the soft padding cover and adjust strap length using the buckle. The strap system is designed for controlled breakage in the case of impact.



- Visor:
  - 4fight is always sold with a visor. There are **3 visor colours** available: transparent, tinted brown and mirror. Please bear in mind that the mirror visor is particularly delicate.
    All our visors are **anti-fog**, **anti-scratch**, and have full **UV protection**.

    In a free flight helmet, a visor has been shown by wind tunnel tests to be necessary to obtain the best possible **aerodynamic efficiency**.
    Such studies demonstrate that a helmet with just an aerodynamic tail, without a visor, offers only a very small reduction in wind resistance.

The visor also not only increases the helmet's **passive safety** characteristics, but also its **active safety,** by increasing the width of the field of vision when compared to the use of any type of sunglasses.



- Visor fixing system:

  The visor's **damped closing system** is precise and effective, an exclusive Icaro 2000 feature. It enables continuous adjustment, without fixed intermediate positions.
  There is a rubber O-ring inside the aluminium disc which provides the **friction** necessary to adjust visor position continuously and smoothly.

Technical specifications

- **Weight**:
  - 4fight helmet, size X Large, including visor: 760 grams

- **Sizes:**
  - The 4fight helmet is available with **four sizes** of internal padding. If the helmet is not a perfect fit, we can send you new padding pieces of a different size.
    Another important benefit of this internal padding system is that it can be easily removed for washing.
    - Sizes:
      - Small = size 56 = 56 cm
      - Medium = size 58 = 58 cm
      - Large = size 60 = 60 cm
      - X Large = size 61 = 61 cm

Certification

- 4fight was tested by the Italian testing laboratory CSI, an Italian laboratory authorized by Italy's Ministry of Transport.
- 4fight was designed specifically for **free flight pilots**, and its certification is EN 1385, specially tailored for lightweight helmets. It is also ideal for land sports.

Using the helmet

Once you have **chosen** the most suitable helmet, make sure that you **wear it correctly.** For safety, it should always fit snugly, and the strap should be tightly fastened.
A helmet will never be able to guarantee total protection for the head when subject to the forces produced by whatever type of impact. However this is no excuse to forego wearing a helmet. You should **always wear your helmet,** in order to exploit the protection that it provides, whatever impact may occur.

4 things that you should never forget

1. **Before using the helmet,** read all the instructions, and follow the suggestions carefully to ensure a correct fit.
2. **Do not use the helmet without fastening the strap.** An unfastened helmet will fall off during the first impact, leaving the head defenceless for successive impacts. There is also the risk of it falling off during flight.
3. **Do not** fasten the helmet **using just the Velcro.** The Velcro that may be present on the strap serves purely to stop it flapping in the wind.
4. **To ensure maximum performance, never modify your helmet, whatever the circumstances.**

In case of accident

- If the accident happens to you:
  - The inner shell will be deformed – though the deformation may not be visible to the naked eye – because it has absorbed the impact.
  - **After an accident, even if the impact was minor, the helmet should be replaced, regardless of whether there is visible damage or not.**

- If you witness an accident:
  - Keep calm.
  - Report the accident immediately, if possible by phoning for an ambulance (dial 118 in Italy). Only medically-qualified personnel know exactly how to deal with injuries.
  - Never move an injured person, unless this is absolutely essential because of a situation of greater danger. If the spinal column is damaged, moving the injured person could damage the spinal cord, causing permanent paralysis.
  - If the victim is wearing a helmet, do not remove it, but open the visor to facilitate respiration.
  - Keep the victim calm, and, if possible, cover him or her. Shock provokes shivering and a sensation of cold.
  - Do not give the victim alcoholic drinks.
  - Stem the flow of blood from wounds, protecting your hands with gloves or similar, throwing them away later if they have been soiled with blood. Do not apply tourniquets: if you place a tourniquet in the wrong position, you could worsen the situation.
  - Never put the victim into a private car. Wait for the ambulance. If the victim is conscious, talk to him or her and try to calm him or her down.

Helmet maintenance

The helmet protects your head, and so it should be **treated with care.**
The **visor** should be **changed** when it has **scratches** preventing satisfactory vision.
The helmet can be **seriously damaged by:**

- Paints and varnish
- Petrol
- All types of chemical solvent
- Excessive heat (do not leave your helmet exposed to the sun)
- Inappropriate modifications

Scrupulously follow the instructions provided by the manufacturer.

If you think that the helmet that you have chosen is not right for the shape of your head, replace it… and this time choose more carefully!

A helmet does not have a fixed lifespan. However, it is a good rule to replace it after five years of correct use.

Important!

- **THE EXTERNAL SHELL OF THE HELMET SHOULD NEVER BE ALTERED IN ANY WAY.**
- **THE INTERNAL PARTS IN POLYSTYRENE SHOULD NEVER BE CHANGED, ADAPTED OR REMOVED.**
- **NEVER APPLY PETROL, DILUENTS, TOLUENE OR OTHER SOLVENTS OR CHEMICAL SUBSTANCES TO ANY PART OF THE HELMET.**

Personalization

Removal and reassembly of internal padding

Important: do not use sharp or pointed tools such as screwdrivers, etc., unless absolutely necessary, in order to prevent scratching or damaging the helmet and its structural components

It may be necessary to remove and reassemble internal padding in order to personalize the helmet's fit, or to wash the padding pieces.

4fight's 2.0 comfort lining is fixed to the polystyrene inner shell by means of a series of Velcro strips. Open the visor and slide out the posterior padding by gently pulling the plastic tab from its position between the outer and inner shells, then gently detach the padding from the inner shell by lifting the Velcro fastenings, working from back to front. Then lift out the front padding component with its plastic tab. It is easy to remove. Just ensure that you detach the Velcro strips carefully and progressively.



Reassembly

To reassemble the lining, reverse the removal sequence, ensuring that the padding is positioned centrally and symmetrically. Start from the front, inserting the plastic tab between the outer and inner shells,

When you are sure that the padding is in the correct position inside the helmet, press firmly over the Velcro fastening strips in order to fasten the lining. Then slide the posterior plastic tab between the outer and inner shell.



Visor removal and assembly

The visor can be removed if it has to be cleaned thoroughly or replaced.

Important: when fitting and removing the visor, be careful not to scratch the surface of the helmet or visor with the screwdriver or other sharp or abrasive objects.
Don't touch a mirror-finish visor with your hands, because it may become opaque as a result of the acidity of perspiration.

Removal

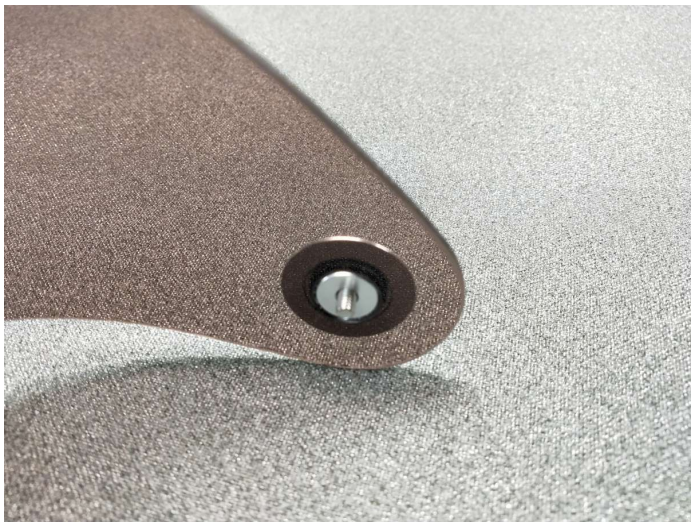
- Place the helmet onto a table, ensuring that it is entirely stable, and lower the visor into its position of normal use.
- Unscrew the two lateral fixing screws. When the first screw has almost been completely unscrewed, be careful not to lose the rubber O-ring, positioned inside the large aluminium washer. Remove the white Mylar washer between the visor and the outer shell.

Assembly

On each side of the outer shell, there is a single hole with a threaded bush.



- Place the white Mylar washer onto the outer shell, over the threaded bush.
- Place the rubber O-ring into the circular housing on the aluminium washer, slide in the screw, and place the assembled components into the circular hole on the visor.



- Ensuring that the white Mylar washer is in place between the visor and the outer shell, fasten the screw using the hex key provided with the helmet.



- Follow the same procedure for the other side of the helmet. Do not fasten with excessive torque.
- Adjust the visor closing friction by regulating the tightness of the screws.

Periodical checks on visor screws

The screws holding the visor should be periodically checked for **tightness**. In fact, over time they may loosen and risk falling out. Use the hex key supplied with the helmet.

It may be periodically necessary to replace the rubber **O-rings** in order to guarantee the correct damping of visor closure.

Cleaning

Visor and external shell

- Use **only a damp microfibre cloth** for cleaning. If the external shell is soiled with mud, insects etc., soak a microfibre cloth with warm water, wring out excess water, place on the helmet and leave for a few minutes. This will loosen the grime. Use damp microfibre cloths to gently clean the outer surface of the helmet. Dry with a dry microfibre cloth. **Do not use solvents, chemicals or petroleum-based products** which may cause damage to the helmet's structure.
- Do not rub the visor too hard.

Internal Parts

Interior polystyrene

- Use **only a damp cloth**.
- Leave to **dry** at room temperature, protected from direct sunlight.

Comfort lining

- Hand-wash carefully, using just water at maximum 30° C and **neutral soap.**
- Rinse in cold water.
- Leave to **dry** at room temperature, protected from direct sunlight.

Accessories

Visors are available in three different colours, transparent, tinted brown and mirror. All our visors are anti-fog, anti-scratch, and have full UV protection. They are easy to replace, enabling you to give the helmet optimum performance in differing light conditions.
In addition, the internal structure of the helmets enables the application of a range of **radio accessories**. More specifically, airphone components can be installed, with **speakers** inside the earpads and a **microphone** on its supporting stem. Please contact Icaro directly for the installation of this equipment.
For further information, see our website:

www.icaro2000.com

Important information

Pilots who are used to flying with just sunglasses or even with no eye protection at all **may take a few flights to get accustomed to the visor.** If you don't feel comfortable with the visor to start with, just lower and raise the visor during your first flights with the helmet until you get used to it.
A helmet with a visor produces a different air sound, and it makes it easier to hear your flight instrument.
If you rotate your head into a lateral position, the detachment of the airflow from the visor could give rise to anomalous sounds (the jet effect), which disappear immediately after the normal flight position has been resumed.

- Never fly without a helmet
  - Your life is too precious to risk losing it just because you have forgotten something

- Use only a helmet with EN certification
  - European EN certification was developed differently for all different activities to offer the best possible protection
  - All our helmets are constructed in accordance with the regulations contained in the EN standard
  - Never trust a helmet that has no label guaranteeing EN certification

- We recommend the use of a full-face helmet.
  - A full-face helmet offers improved protection in every situation.

- Never modify your helmet for whatever reason.
  - Modifications could reduce the level of protection, and could annul the helmet's certification.

- Never use headphones under the helmet.
  - Any rigid components placed inside the helmet, between polystyrene lining and the head, could become percussive and damaging elements.

- Always ensure that the chin strap is tightly fastened.
  - If you keep your helmet in the rucsac, don't sit on it.
  - Ensure that the helmet never falls to the ground or the floor.
  - Handle the helmet and visor with great care at all times.
  - After an accident, even when the impact is minimal, the helmet should be replaced, regardless of whether there is any visible damage or not.

- Helmets and action cameras
  Many pilots mount an action camera onto their helmets in order to record their adventures. It is important to remember that **any object projecting for more than 5 mm above the level of the outer shell annuls the helmet's certification**, just as for any other modification that is not specified in the user manual. The reason for this is that an object mounted onto the external shell could become a percussive element that concentrates an impact force onto a small area. Therefore, it is potentially dangerous and reduces the level of protection that the helmet can provide. Considering that even the most compact action camera projects at least 30/40 mm from the helmet's outer shell, there is no doubt that a helmet equipped with this sort of device can no longer be considered as compliant with its respective certification. For this reason, because we at **Icaro2000** wish to offer the highest possible level of protection for our customers, we recommend **not fitting action cameras** or other devices onto the outer shell of a helmet.

Icaro 2000 wishes you happy and safe flying.

Icaro 2000 is committed to the ongoing development of its technology, and therefore it reserves the right to modify the characteristics of its products at any time and in any way, without prior notice.