

# Backpack XS2



**Please read this manual before first use.**

Thanks for having chosen an Opale-Paramodels product. We truly believe this remote-controlled paramotor is going to give you hours of enjoyment and will enable you to go through new outstanding piloting experiences. This user's guide content includes all the information you need to get your wing in flight and to ensure you will take good care of it. A good knowledge of your equipment will allow you to safely obtain most of its performances for your greatest pleasure! Thanks for giving this manual to the new owner in case you decided to sell your radio-controlled paraglider.

Best regards,

The Opale-Paramodels Team

## Safety Information

You should be properly insured according to the country regulation you are using our equipment in.

You hereby accept the inherent risk of flying radio-controlled models.

Using our equipment in a bad way may increase risks. Neither Opale-Paramodels nor any other seller

will be liable for any damage caused by any accident whatever the circumstances are. The way our equipment is used is incumbent upon the final user, including towards the law.

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## Warranty

The frame is guaranteed against any manufacturing defect.

If, while using, the pilot cut or damage a bridle, tear any part of the wing, repair and replacement of damaged parts are not taken in account by the warranty and the user will be charged for it.

## Frame composition



## Specifications

Dimensions: 19x18x9,5cm / 7,5x7,1x3,7in

Minimum mass in order of flight : 0,8kg / 1,76lb

Maximum mass in order of flight : 2kg / 4,41lb

Matériaux: Steel/ Glassfiber with Epoxy resin/Carbon fiber 3K

Risers spacer: 14cm / 5,5in

Servomotors : 4kg.cm (22x12x30mm / 0,8x0,5x1,2in) to 10kg.cm(40x20x40mm / 1,6x0,9x1,6in)

Motorization: Recommended power from 380 to 965W

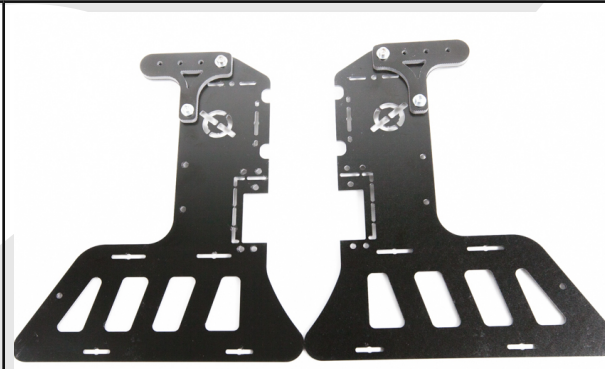
Propeller : 10 inches maximum

## Frame assembling

Mount the 4mm reinforcement part on the side with 2x CHC M3-12 screw, 4 M3 washers and 2x M3 locknuts.



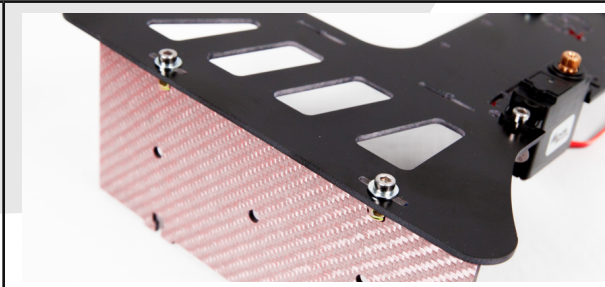
Do the same on the other side.



Mount the servo on the side with 2x CHC M3-8 screws and 2x M3 locknuts.  
Do the same mounting on the opposite side, be careful, it has to be symmetrical.



Mount the lower plate on the left side using 2x CHC M3-8 screws, 2x M3 washers and 2x M3 locknuts.

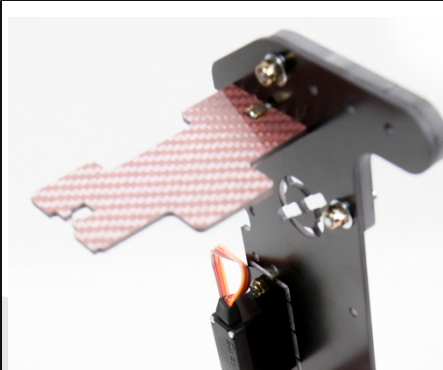


Then mount the middle plate using 2x CHC M3-8 screws, 2x M3 washers and 2x M3 locknuts.

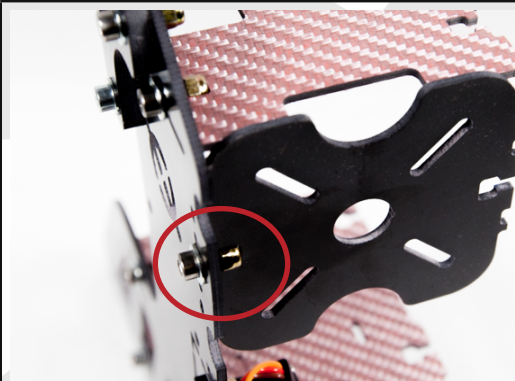




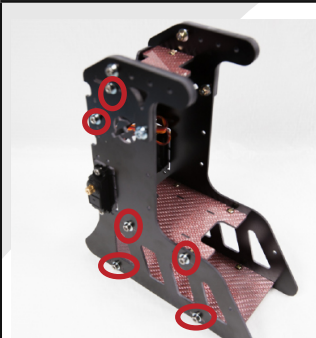
Mount the higher plate using 1 CHC M3-8 screw, 1 M3 washer and 1 M3 locknut.



Add the motor plate using 1 CHC M3-8 screw, 1 M3 washer and 1 M3 locknut.



Mount the opposit side, using 6x CHC M3-8 screws, 6xM3 washers and 6x M3 locknuts.



380W Opale Motor assembling(sold separately) :

- Assemble the propeller holder and fix it using 3x M2 Philips-head screws included with the motor.

# With a motor from another brand, the propeller holder and the hardware could be different.



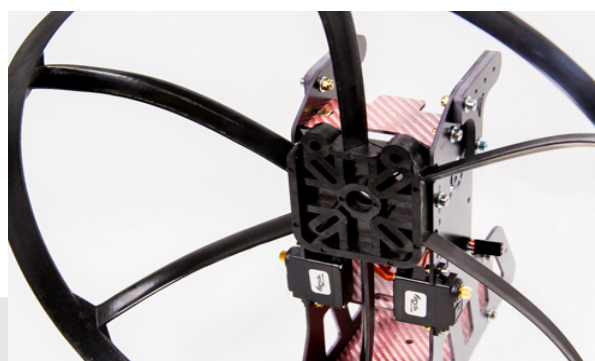
380W Opale Motor assembling(sold separately) :

- Assemble the motor holder with 4x M2 screws included with the motor.

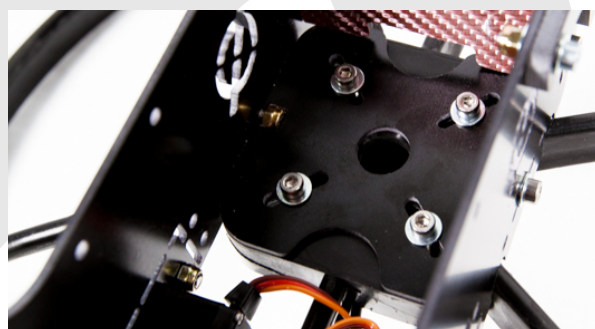
# With a motor from another brand, the propeller holder and the hardware could be different. However the XS2 backpack can carry a large range of motor references.



Place the prop ring at the back of the frame.



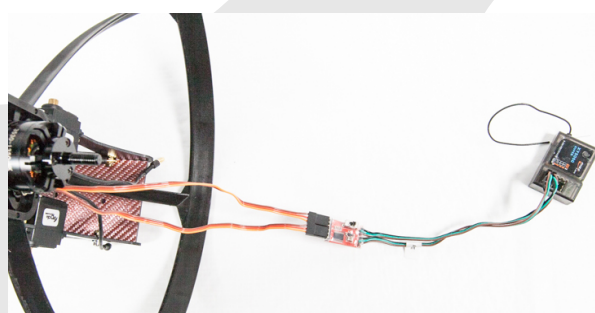
Then position the motor and settle it with 4x CHC M3-25 screws, 4x M3 washers, 4x M3 locknuts.



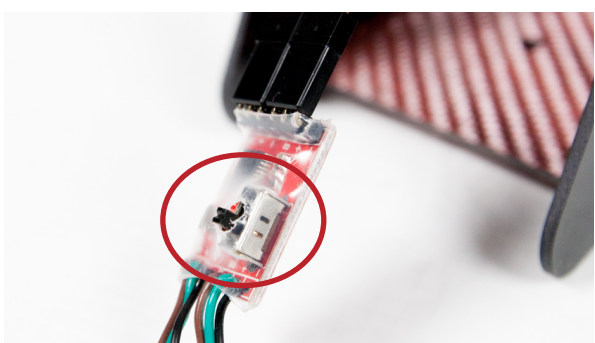
Plug the 2 servos on the mixer for Rc paramodels (sold separately) Make the mixer flat on the table, the left servo is plugged on the left and the right one on the right.

Caution with the polarity (S/+/-)  
(you can refer to this video for settling your servos to the mixer)

<https://youtu.be/P2njCNCTudU>

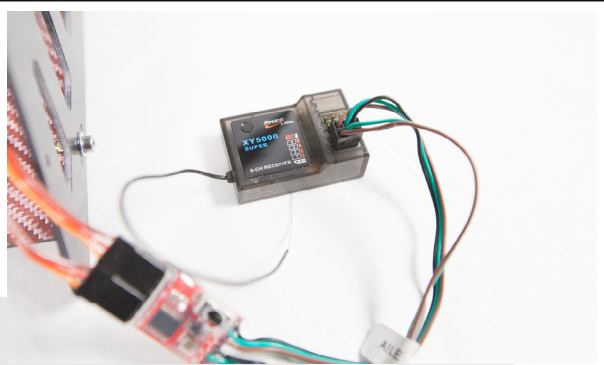


The switch on the mixer must be positioned on the RX side.



Plug your mixer on your RX.  
The 'Aile' wire on the aileron channel.  
The 'ELE' wire on the depth channel.

With the 4ch Radion from Opale paramodels:  
AILE on CH1  
ELE on CH2.



Mount the arm on the round servo rudder included with your servo, using the 2 screws included with your servo.  
Do the same with the second arm.



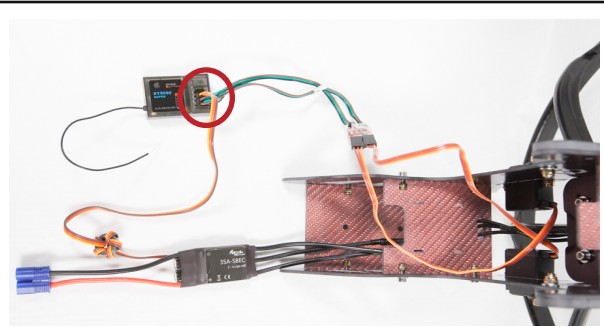
Cut the extra screw with a cutting pliers.



Connect your ESC and your motor. No matter the wires, you will just have to invert 2 of the 3 wires to change the motor rotation.



Then plug the 3 colored wires from your ESC on the RX throttle channel.

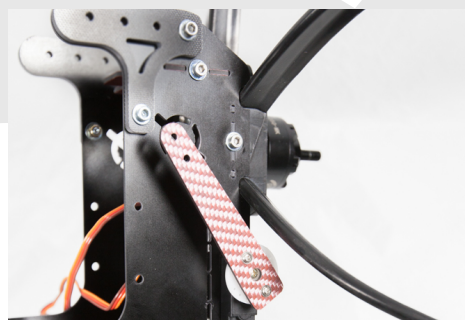




Switch on your Radio (with the throttle stick down), and plug your battery.



Place the arms between an angle of 45° up to 60° maximum.



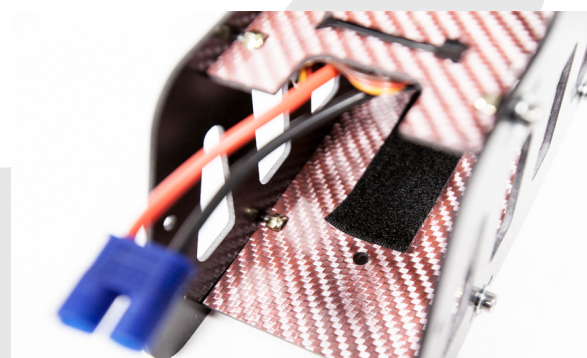
Lock the arm using the screw included with your servo.

Do it again with the second arm.



Settle the ESC under the middle plate with 2 colsons.

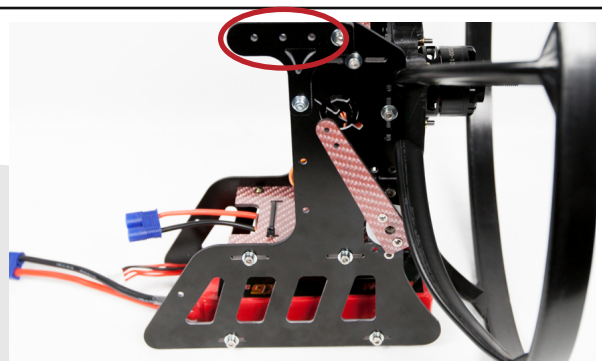
And add a velcro piece on the lower plate in order to hold your battery once the assembling is done.



## Adjusting the angle of attack

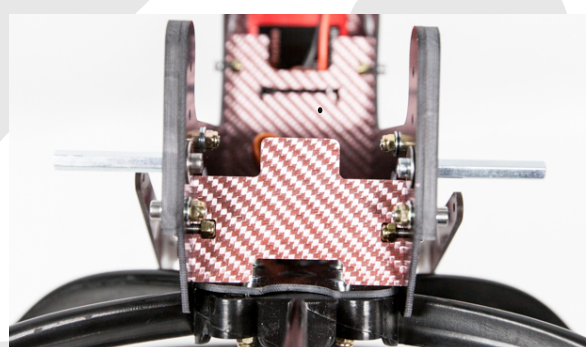
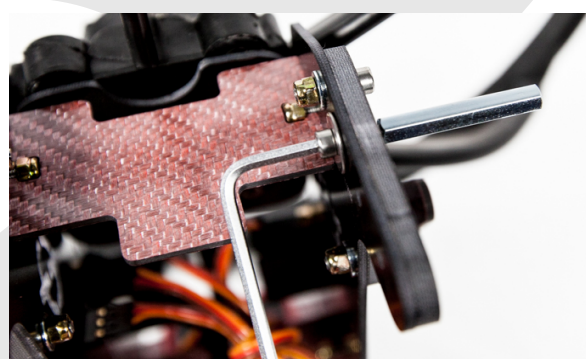
Install the battery on the lower frame.

Then using a bridle or a screwdriver, hang the frame by its anchor points.  
In order to have the best flight conditions, choose the anchor points that allows to have an angle of attack from 0° up to 5°C.



Mount the M3-30 brace, using the CHC M3-16 screws and a large M3 washer on the chosen hole. Firmly tighten the screw with the brace(it's advised to add thread lock on the screw thread).

Do the same with the other side.

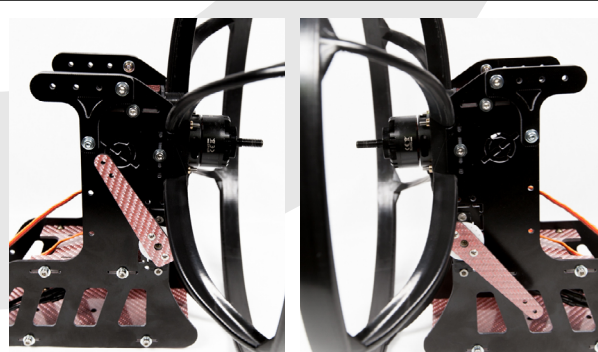




## Radio operation (4ch 2,4Ghz)

Find below the Radio operation 2,4Ghz 4ch from Opale paramodels. Equipped with the mixer for RC paramotors from Opale.

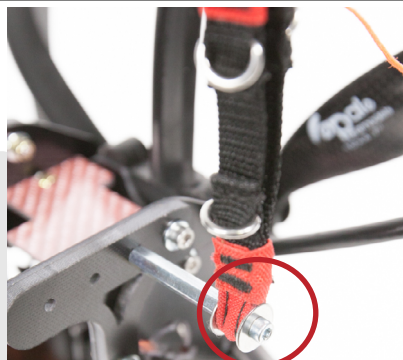
To obtain the full clearance, make sure that the top left switch is in HIGH position (on LOW position: only 50% of clearance).



## Wing mounting

Before to proceed, unpack the wing and make sure that no lines are entangled.

Set the wing risers at the edge of the brace with a CHC M3-16 screw and hold the buckle of the risers between 2x M3 washers. Do not hesitate to use thread lock to secure that part.



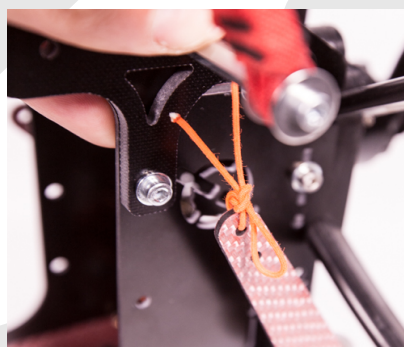
Untie the brake line of the wing risers.

The brake line has to freely slide in the back D-ring.

Hold the black mark at the level of the last ring located on the last line row.



Then tie the brake line in ther arm in order to secure the brake line.



## Propeller mounting

Place the propeller on the motor axis.  
The Opale logo on the propeller must be oriented on the frame front side.



Add the washer and then the nut.  
Firmly tighten with a 10mm allen wrench.  
Do not hesitate to add thread lock.



## Acro setting (optional)

By replacing the original motorization with the 965W Opale motor kit, it will be necessary to use 10kg.cm servos.

This modification allows to perform extrem aerobatics.

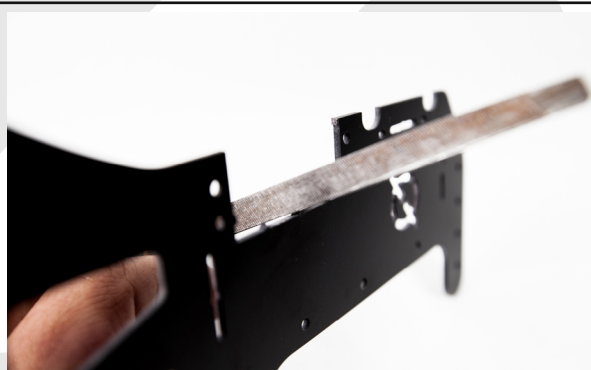
We warn you that this setting is extremely powerful and need strong piloting skills.



With a cutting pliers, cut the part on the side frames in order to mount the 10kg.cm servos (standard servos room: 40x20mm).

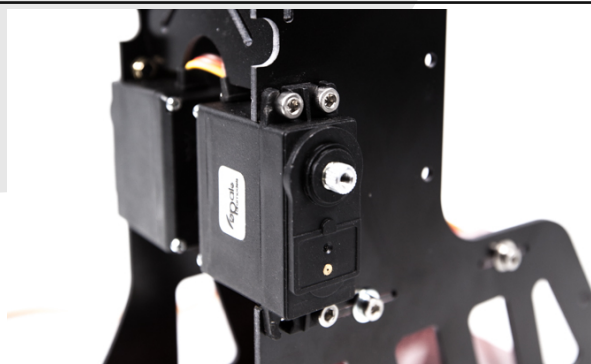


File the excess material.



Install the servos using 3x CGC M3-8 screws and 3x M3 locknuts.

Finally, you will have to mount the servo rudders equipped with the arms and tie the brake lines on it.





## F.A.Q. Questions / Answers

### **My RC paramotor seems not to move forward very fast. How to remedy this problem?**

If your model advance a little bit, or if it even stays on-the-spot, it is because your model is too light. In that case, you have to land and increase the weight with additional ballast or batteries until you obtain a 5 to 10 km/h with regard to the ground.

### **How do I know if the brakes bridle are adjusted correctly?**

Brakes bridle are perfectly adjusted when the trailing edge is completely loose while flying, with the depth stick pushed up. Also, as soon as you push laterally of some millimeters the aileron stick, the trailing edge must begin to fold immediately. Otherwise, you must shorten centimeter by centimeter until you obtain an immediate control. It is a matter of the RC paramotor stability. The "Two inflating" method let perform a correct adjustment in 80% of cases. Think of it!

### **How do I know if the wing is correctly connected to the backpack?**

When holding the model by the backpack/pilot, wing downwards, none of the bridle must cross, or turn around another bridle. Otherwise, you will have to untangle your wing. Before first flight, check the tightening of your inox buckles.

### **In what sense is it necessary to mount the propeller?**

To obtain a maximal thrust, the propeller leading edge must be directed forward the backpack. It is easy to recognize the leading edge, because it is the bulged portion and non cutting side of the propeller. The trailing edge must be directed backwards. It is the cutting part of the propeller.

Generally, propellers have a logo or a marking. It is most of the time put on the leading edge.

### **How to inflate correctly his RC paramotor wing?**

To inflate correctly his wing, it is essential to face it to the wind, at a sufficient distance from any obstacle. (generally 300m). Maintain your backpack at the basis and give a dry horizontal pulse while accompanying the rise of the wing. Throw smoothly the backpack straight away with a 50% engine speed.

### **I broke a bridle. How can I replace it?**

The bridle can be replaced easily by following the splice method described in this manual.

### **My wife is fed up with looking at me sleeping with my RC paraglider. What can I do?**

This is a very complicated situation at first sight. Nevertheless, two solutions can solve this problem. At first, you can lend her your credit card during sales period, or, in a second time, ask her for a friendly divorce. (But prefer the first solution, your RC paraglider's custody is in the game!).

### **There is a hole in my wing. How can I fix it?**

A hole can be fixed in a few minutes thanks to the adhesive tissue provided with your wing. Follow the instructions described in this manual at the previous chapter.

### **Why my wing doesn't inflate, even when facing to wind?**

If the wing doesn't inflate even when facing to the wind, the brakes bridle adjustment is too short. In that case, extend them centimeter by centimeter then perform again the "two inflating" method, to ensure the control at first take off.

### **Is it possible to replace the risers ?**

A riser can be replaced easily. Contact your Opale Paramodels dealer to obtain the correct reference.



## F.A.Q. Questions / Answers

### **Is it possible for the RC paramotor wing to take away some material for shooting/FPV? Until which mass?**

Each wing has a maximal takeaway capacity. Check the model total weight and compare it with the wing's takeaway capacity. You will obtain the payload value, compatible or not with your equipment. Be careful, if you make your paramotor strongly heavy, think of a more powerful motorization, by keeping a 150 W motor ratio / Kg of complete model.

### **Can I fly anywhere with my wing? Is it a danger for the goods and the people?**

You can't fly anywhere with your wing. To practice aeromodelling, you must own a third-party insurance and practice on a ground with the owner's agreement. Ideally, contact your aeromodelling federation. It is forbidden to fly in an urban zone and close to the houses. This type of model is not light, it can cause heavy physical and material damages. Use it carefully and without going above your limits.

### **Until which height can I fly the wing?**

In order to not disturb aerial traffic, maximum authorized height is about 150m from the ground. Contact your federation and the organism of aerial traffic management of your country to have reliable information about it.

### **Is it possible for my hamster to fly my RC paramotor? Which precautions to take?**

Check if your hamster is solidly attached to the backpack. The wear of a helmet and flysuit is advised. If you perform several 360° and wingovers, think of install under the batteries, a little plastig bag near its paws with few menthol candies.

### **Can I do another use of the paramotor wing?**

This wing can be used for slope soaring without backpack. In that case, you will have to attach a pilot as real paraglider discipline.

### **Is it possible that the wing deflates while flying? Which behavior to adopt in that case?**

If your wing deflates while flying and begin to reverse, it is because you have too much requested the brakes. To remedy this phenomenon, slacken gradually the radio sticks and think of cutting the throttle.

### **Is it important to untangle correctly the bridle before flying? How can I do? I am lost with all those strings!**

It is essential to untangle well the bridle. If not, you can strongly distort the flight characteristics of the wing. To untangle all the bridle fastly, drop the wing out of the backpack. Hold the riser by the endpoint and seize one by one the bridle around the principal bridle package. Always take first the most distant bridle.

### **My wing is caught in a thermal and gets altitude. What can I do to regain control?**

This scenario is usual when convection conditions are present. In that case, no panic. Relax and maintain a trajectory as rectilinear as possible to fastly go out of the thermal.

### **How can I maintain and clean my wing?**

If you made your wing dirty, you can clean it with a wet cloth. You can rinse it with clear water as well. Never use chemical products! The tissue could be hardly damaged. Think of tidy your wing in a dry place, shielded from UV and humidity.