INSTRUCTION AND MAINTENANCE HANDBOOK

Wing Type

iFUN 13

I) Drawings

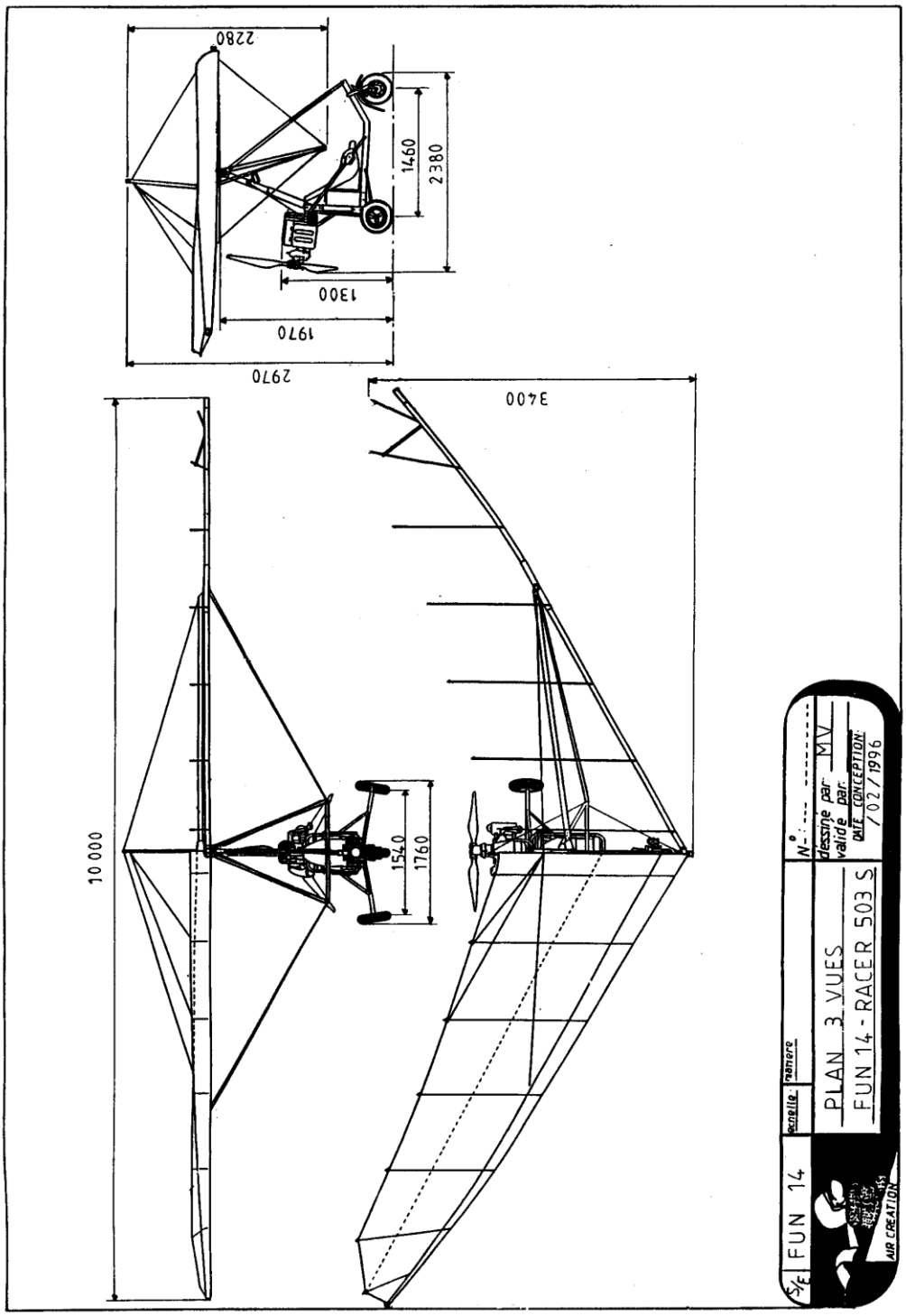
II) Technical specifications - Performances

III) Instructions for use

IV) Maintenance

AIR CREATION Aérodrome de Lanas - 07200 AUBENAS - France
Tél.: 33 (0) 4 75 93 66 66 - Fax: 33 (0) 4 75 35 04 03 - Internet: www.aircreation.fr

I) Drawings



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II) Technical Specifications - Performance

a) Technical Specifications

Area	13 sq m (140 sq ft)
Airfoil type	40% double surface
Span	8.8 m (29 ft)
Nose angle	122°
Aspect ratio	6
Empty weight	31 kg (68 lbs)
Ultimate load factors At max weight of	+6g / -3g 250 kg (551 lbs)
Limit load factors	+ 4g / -0g (-2g under gust)

b) Maximum added load

The maximum load which may be added under the wing is 219 kg (482 lbs). The following chart defines the useful load of our different trike models.

	Pixel 200	Pixel 250
MTOW	200 kg (440 lbs)	230 kg (507 lbs)
Maximum useful load	115 kg (253 lbs)	140 kg (308 lbs)

Any trike, built by an amateur or in series production, of a total maximum weight under **219 kg (482 lbs) may be fixed under the wing. The necessary engine power for a safe flight should be at least 25 hp. Check when fitting whether the trike propeller stays clear** of the lower rear longitudinal cables and the keel. A minimum clearance of 10 cm (4 in) should be respected since the hang point is set to the front position and the wing is fully nose up and banked all the way on one side.

c) Performance with maximum weight

Metric Units

TRIKE	Pixel 200		Pixel 250	
Weight	180 kg	Max: 200 kg	180 kg	Max: 230 kg
Stall speed	41 km/h	42 km/h	41 km/h	44 km/h
Take-off run	45 m	55 m	40 m	55 m
15 m (49 ft) clearing distance	100 m	110 m	90 m	110 m
Climb rate	3.5 m/s	3.2 m/s	4 m/s	3.2 m/s
Landing distance from 15 m (49 ft) height	135 m	140 m	135 m	145 m
Side wind limits	25 km/h	25 km/h	25 km/h	25 km/h
V.N.E. (speed never to be exceeded)	120 km/h	120 km/h	120 km/h	120 km/h
V.max (never to be exceeded in very turbulent air)	82 km/h	84 k/h	82 km/h	88 km/h

Imperial Units

TRIKE	Pixel 200		Pixel 250	
Weight	396 lbs	Max: 440 lbs	396 lbs	Max: 507 lbs
Stall speed	25 mph	26 mph	25 mph	27 mph
Take-off run	147 ft	180 ft	131 ft	180 ft
15 m (49 ft) clearing distance	328 ft	360 ft	90 m	360 ft
Climb rate	688 ft/m	629 ft/m	787 ft/m	629 ft/m
Landing distance from 15 m (49 ft) height	442 ft	459 ft	442 ft	475 ft
Side wind limits	15 mph	15 mph	15 mph	15 mph
V.N.E. (speed never to be exceeded)	74 mph	74 mph	74 mph	74 mph
V.max (never to be exceeded in very turbulent air)	50 mph	52 mph	50 mph	54 mph

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III) Instruction for use

a) Assembling - Dismantling

- Open the wing bag, make sure that the A-frame is on top, and remove fastenings.
- Assemble the A-frame with the push-pin. Cables must not pass through the inside.
- Turn the wing over and open the two half wings to their maximum extent.
- Slip the tensioning handle behind the foot of the king post taking care not to twist the cables.
- Fit the king post to the lug at the top of the keel between the two tensioning cables.
- Carefully slide the upper sail bent battens in their respective pockets and tension the sail by fastening the Easyfit tighteners.
- Pull the cross tube swan catch tensioner towards the trailing edge, then hook it to the rail screw at the keel tip. To ease the operation, carefully center the A-frame, ensure that the tabs and heat shrink coverings of the lower lateral cables do not get stuck in the sail opening at the cross tube/leading edge connections.
- Pull down the swan catch tension lever and fix it in the rail with the pushpin.
- Install the tip struts in the appropriate places on the leading edge. Insert them all the way into their housings and rotate them. Check that they are blocked by pulling them towards the rear. Raise the sail for ease of access.
- Place the two straight battens of the wing tips on the plastic lug attached to the tube of the leading edge, and tighten the upper surface with the clasps.
- Close the fabric closures at the tips by means of their velcros.
- When connecting the trike, slip the security fastening cable through the loop in the security strap aligned with the front of the kingpost, behind the kingpost, through the loop again, and then fix it to the beam of the trike. The security cable should pass under the tensioning cables. This operation secures the trike as well as fastening the crossbar tensioning system.

Dismantling is carried out in reverse order of the assembling operations. Begin by removing the tip struts at the wingtips.
Before folding the 2 half wings, check that the lever of the tensioning cables does not get stuck in the opening of the upper surface, remove the king post, then slide it front as far as possible.

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b) Preflight-check

A preflight-check is essential before hooking the wing on the trike. To that effect lift the nose of the wing shoulder high.

- Check the camber of the two leading edges.
- Check the thimbles of the front lower longitudinal cables and the correct fastening of the tensioning device and the push-pin. Set the wing on its nose. Slide your hand along the leading edges to check for possible defects.
- Check the cross-bar/leading edges link by unzipping the lower surface access. Check the fastening of the lateral cables is correct and the sail is not snagged on a metal part. Close the lower surface access.
- Check the fastening of the sail at the wing tips, as well as the blockage positioning of the two rotating sleeves by means of the Parker screw and the correct positioning of the tip struts. (Check by pulling the tip struts towards the rear.)
- Check whether the battens are securely positioned and the closure of the tensioners on the trailing edge.
- Check the condition of the pitch lines and their fastening to the sail.
- Check whether any of the upper cables is circled around the king post and that the pitch lines are well placed in the grooves of the king post pulleys.
- Check the thimbles and Nicopress of the rear lower cables at the keel end.
- Slide your hand along all the lower cables to detect signs of wear.
- Check the proper passage of the tensioning cables on each side of the king post. Inspect the tensioning system at the end of the keel, the nuts and bolts, the position of the safety push-pins.
- Check the fastening of the lower cables of the A frame, the nuts and bolts, the condition of the cables and of the Nicropress, the push-pin of the control bar. All of the cables should be free to pivot in the direction of tension forces.
- Check the assembly of the crossbar central junctions, the nuts and bolts, the leather protection, the retaining straps on the keel, and the fastening of the tensioning cables.
- Check the condition (possible twists, cracks) and the free movement of the hang point bracket.
- Check that all zippers are closed, all Velcro fastened at the ends of the wing.

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c) Flight specifications

WARNING:

This wing is not designed for aerobatics.

Respect of the flight envelope is imperative.

- Pitch attitude is limited to + or - 30°
- Roll banking limited to 60°
- Acrobatics and inverted flight are forbidden
- V.N.E. (never to be exceeded): 120 km/h (74 mph)
- Maximum load at takeoff 200 kg (440 lbs) for the Pixel 200 and 230 kg (507 lbs) for the Pixel 250
- Limit load factors + 4g / 0g (- 2g under gust)
- Stalls authorized only in glide path with a progressive speed reduction and throttle to idle position.

Beyond these limits, some stability or control loss, structural failure or irreversible "tumbling" motions may occur.

Better handling will only be reached after about 10 flying hours and control during roll will be more difficult during the first flights.

d) Controls

– **Control bar:**
Pushing the bar forward causes the wing to pitch its nose up, which increases its angle of attack and decreases its speed. If you pull the bar towards you, you decrease the angle of attack and increase speed.
Roll control is effected from lateral movement of the control frame, and thus the center of gravity of the aircraft, and follows weight shift convention, i.e. bar left, center of gravity moves to the right, aircraft rolls to the left.
A separate yaw control is not provided. Like other weight shift aircraft, yaw is provided from the secondary effect of banking.

e) Flight Technique

Taxiing

Avoid turning sharply as this generates large amounts of torque and hence wear, transmitted to the pylon, hang point and keel. Always try to keep the wing aligned with the trike when turning by bracing the control bar. Turning circle on the ground is very small, but beware – wing tips stick out and can move around their arc very fast!

Take-off and landing techniques

Take-off is conventional. Keep the aircraft straight using the nose wheel steering. Allow the bar to float in the neutral position in pitch and keep the wings level. Let the control bar move forwards to obtain takeoff rotation. As the aircraft rotates, allow the control bar to move back smoothly and allow airspeed to build.

If taking off in calm conditions or from a soft field or from a field with long grass, the minimum take-off roll distance is reached by increasing rpm to full power with brake, then releasing the brake and pushing the control bar fully forward. The control bar should be brought backwards immediately once the wheels are in the air to obtain a climbing speed ranging from 55 km/h (34 mph). If a performance take-off is not required then once the aircraft has rotated allow the bar to move back smoothly, adopt a shallow climb attitude and allow the airspeed to build to a safer low-level climbing speed of around 60 km/h (37 mph).

The landing is conventional. Maintain the approach speed until 8-10 foot height, then flare out to make a smooth touchdown. Braking may be used once all wheels are on the ground. A short landing requires a slow approach speed in the range of 60 km/h (37 mph to 50 mph) and a flare out a few feet above ground. Brake and pull the control bar to the maximum in order to obtain more aerodynamic braking once the rear wheels have touched ground. If conditions are gusty or a strong wind gradient is suspected, use a higher approach speed value.

Turning

The iFun wing is very well-balanced in the turn and is capable of high rates of roll with modest control forces. Roll rate is proportional to both airspeed and wing loading. Fastest roll rates will be achieved at light weights and high airspeed. Conversely when flying at high weight and low speed, maneuverability is reduced. Ensure that the runway is long enough for take-off and that no sudden maneuvering is required to avoid obstacles early in the climb, when speed may be low.

Turns at bank angles up to 60 degrees are permitted. To balance the turn at this bank angle, forward bar movement is necessary to generate the required lift for level flight and increased power is required to overcome drag and maintain airspeed. Under these conditions substantial wake turbulence is produced. For turns of over 45 degrees of bank it is recommended that a heading change of no greater than 270 degrees is used, in order to avoid entry into the wake turbulence and a possible excursion outside the permitted flight envelope. The iFun has neutral spiral stability at high cruise speed and thus will remain balanced in a turn without any roll control pressure required. With a high loading and low cruise speed adjustment, it may be necessary to increase the speed before the wing is put into banking to avoid stalling the lower wing. An increase in engine power is also advised to maintain the flight level during the turn.

Stalling

The stalling point is reached more easily with a backward hang point position. Once the stall angle of attack is reached, the control bar starts pushing back forcefully and some pre-stall buffet may be felt in the form of pressure bumps. Avoiding any resistance to this tendency for a short while allows the wing to return to correct speed. In that case, the loss of altitude will be less than 10 m. (33 ft). If the control bar remains extended despite the warning signs, the wing will stall and the loss of altitude may reach 30 m (100 ft). An asymmetrical start on one wing is possible, particularly during the running in of the sail (first 50 flying hours).

Nose high pitch attitudes generated prior to the stall break will lead to high nose down rotation rates. In common with all flexwing aircraft, extreme examples of this can result in tumbling motions, loss of control and massive structural failure.

⚠ To avoid risk of tumbling, stalling exercises must imperatively be carried out with the engine at idle, with a very slow decrease in speed (less than 1kt/sec) obtained by progressively pushing the control bar out.

Pilots should also be aware that as with all aircraft, overloading with baggage/heavy occupants will increase stalling speed, as well as the usual drawbacks of reduced performance, maneuverability and structural safety margins.

Behavior in strong wind:

Once grounded and motionless

Park the aircraft perpendicular to the direction of the wind, with its windward wing lowered and the tip of the leading edge rests on the ground, block the A frame on the front tube of the trike (using for example the Velcro used for packing the battens of the sail), block the park brake and put chocks under all three wheels. Take the wing off the trike and put it flat on the ground windward, if the aircraft is not going to be used immediately.

Ground-runs

Keep the sail flat into a headwind. Push the control bar against the trike front strut with a tailwind. This will avoid flipping. With a side wind, be careful to always tilt the wing so that the windward edge is slightly lower than the rest of the wing. It may be difficult to hold the A-frame in its position. Never let the wind lift the wing up.

Take-off and landing

As ground run distances are considerably reduced by strong wind, try to face the wind. Perform take-off and landing maneuvers at greater speed than you would normally do, in order to diminish the drift angle and counter the effects of the gradient.

Crosswind Take-off

Start the take-off run with the windward wing very slightly lowered. Hold the aircraft on the ground by holding the bar slightly back from the neutral position. Keep to the axis of the runway with the front wheel control without considering efforts on the sail. Allow airspeed to build to a higher-than-normal value then rotate positively into a shallow climb attitude. Keep the wings level and allow the trike to yaw into the relative wind. At this point adjust the drift angle if required to maintain runway centerline, and proceed as normal.

Crosswind Landing

Crosswind landing limits are largely dictated by the skill of the pilot. Make sure that you have lots of experience before attempting crosswind landings with components in excess of 8kt.
General technique should be to fly the approach maintaining the runway centerline by setting up a steady drift angle. During the final stages of the approach use a higher-than-normal approach speed to minimize the drift angle. Round out slightly lower than normal and aim for a short hold off, so that the aircraft lands smoothly, back wheels first with the control bar at or only slightly forward of the neutral position. The contact between the back wheels and the ground will then yaw the trike unit towards the runway centerline at which point the nose wheel can be gently lowered to the ground. Once all wheels are down the windward wing can be lowered slightly. To ensure maximum directional control during rollout from a crosswind landing the recommended technique is to move the bar back after landing and apply light to moderate braking. This eliminates any tendency to bounce and ensures good contact pressure between tire and runway surface. This technique of applying aerodynamic loading to increase ground pressure and hence braking efficiency during landing roll is also appropriate for short field landing.
Remember that crosswind landings on grass are considerably easier than on hard surfaces. During crosswind landings a lot of torque is carried through the structure which results in excessive wear to the hang point and attached structure. Always try to land into the wind if possible. If crosswind components are in excess of 15 knots then only a small windward distance will be required for landing – across a large runway for example.

Flight in Turbulence

Compared to other flexwing microlights, the iFun handles turbulence very well. However in common with all microlight aircraft, care must be taken in turbulent conditions, particularly when close to the ground. As previously stated high airspeed will enhance maneuverability in these situations. However if conditions become severely turbulent with hard jolts being transmitted through the aircraft, it is recommended that you do not exceed the maneuvering speed Vman. VNE should only be reached in smooth conditions.

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In strong wind conditions, avoid flying on the downwind side of large hills or other obstructions. When landing in strong crosswind conditions, remember that low-level turbulence will be produced by obstructions on the upwind side of the runway. Always try to assess areas of possible lift, sink or turbulence from some distance away so that you can be fully prepared for their effects.
At high altitude the best way to minimize pilot workload and physical fatigue is to fly the aircraft while trying to let the control bar float through turbulence. Use your arms as dampers and try not to rigidly fight the movement. Close to the ground, where accurate control is required, the displacement of the aircraft in turbulence can be reduced by bracing the control bar relative to the structure of the trike unit. This then transmits to the wing the pendulum stability of the trike mass. However the pilot must be ready to make any necessary corrective control inputs.
Smooth flight in turbulence in a flexwing aircraft is a skill that is learned with time and experience.
Please remember the old adage: "It is better to be on the ground wishing that you were in the air, than in the air wishing that you were on the ground!"

Rain, ice and snow

⚠ *Any form of wing surface contamination such as ice or snow will result in increased stalling speeds and reduction in overall aircraft performance, sometimes to a drastic extent. Never take off with such contamination present. If these conditions are encountered during flight, attempt to leave these conditions as quickly as possible. If this is not possible the aircraft should make a precautionary landing as soon as it is safe to do so. During this process avoid flight at low speed and expect poor aircraft performance.*

f) Adjustments

In General:

Your wing was delivered with the optimum settings.
If you feel that the wing requires adjustment to trim in the roll or the pitch axis you should check that the problem is not caused by something asymmetrical in the frame or the battens. In order of priority check the following:

- Check that the rotating sleeves at the tips are correctly positioned and blocked by means of the self-taping screws.
- Ensure that the wires, especially the reflex bridles are correctly routed.
- Check the battens profile.
- Check that the leading edges are straight and that the rear parts are located correctly.
- Check that the keel is straight.

After checking as outlined at the beginning of this section an adjustment can be performed by the following methods:

⚠ *Never change the length of the reflex lines.*

Never alter batten shape except to match the batten profile drawing.

The reflex lines are designed never to be adjusted, and their primary effect is for stability **outside the normal flight envelope**, so adjustment for flight within the envelope is pointless anyway.
The batten shape is intrinsic to stability, stall behavior and handling. Some aircraft require batten shape adjustment to correct for turns. This is not necessary for Air Creation wings.

The tuning of a flexwing requires special training and regular practice. We offer hereunder global effect of the main means of tuning, but their application is delicate. We therefore recommend that you solicit the expertise of an Air Création Technical Station or the factory itself if you wish to modify the tuning of your wing!

Hang point position

Centering adjustment is done by moving the hang point on the keel. The nylon locking rings of this part should be positioned according to the desired centering (3 positions). The cruising speed at natural trim increased by about 5 km/h (3 mph) if the hang point is moved forward and vice versa. Each position may be used, the only effect is alteration of the cruising speed once control has been released, without any repercussions on stability and performance.
For the first flights the hang point should be left in its original position, intended for ease of handling.

Warning: Any alteration of centering means a variation of the A frame tilt and therefore modification of the lower longitudinal cables' tension. There are various adjustment holes in the cables fixation rail at the nose of the wing, so as to allow them to keep a correct tension whichever the adopted position of the hang point may be. When the position is in the middle, the blocking screws of the tensioning handle of the cables should be in the 2nd hole from the back of the rail. The first hole should be used when the position is in front, and the 3rd hole when in rear.

Tension of the sail on the last battens of the wing tips.

It is easy to adjust the symmetry of the wing by differentially adjusting the tension of the sail on the last batten wing tips (those that rest upon the plastic lugs on the leading edge). To do this, simply rotate the plastic tip of the batten which is fitted with a thread. Increased tension raises the trailing edge of the wing tip under consideration and reduces its lift. Decreased tension has the opposite effect. Action should be taken in small corrections (1 turn on the tip batten) and simultaneously applied in opposite directions on each side (+1 turn right, -1 turn left, for example). Check the results and increase the adjustment if necessary.

Symmetric tuning of the tension of the sail on the last wing tip batten leads to a change in hands-off cruising speed. Increasing tension leads to a slowdown, reducing it leads to a speedup. The maximum tension allowed is obtained with 6 turns of tension on the batten tip, the minimum is 0 turns, standard setting is 3.

Position of the tip adjusters at the leading edges tips

The pivoting sleeves have been set during factory flight testing, depending on the engine group, and they are blocked in position by a screw. This position is adjustable by means of the position on the sleeve, which corresponds to a mark (0, +2.5, +5, -2.5, -5) on the scale glued to the tube of the leading edge. Their differential rotation may be used for correcting a tendency to turn on one side during hands-off straight, level flight. They work in the same sense as ailerons on a conventional aircraft – rotate the trailing edge down and more lift will be produced and vice versa.
If the wing pulls to the left, disassemble the last battens on the right wing tip, open the velcros holding the lowersurface to the uppersurface and unscrew the blocking screw on the inside of the leading edge. Turn each wing sleeve clockwise in order to attain the following level (+2.5 right, -2.5 left), pulling the fabric. Reposition the screw, the battens, and the Velcro. If the correction is insufficient for perfect trimming of the wing, repeat the operation until it is achieved (maximum authorized 10mm of difference right/left). Always use the same value on each side of the wing. Do not modify the tension of the last battens for the efficiency of this operation.
For a wing pulling to the right, turn the left sleeve 2.5mm counterclockwise (towards +), and the right sleeve counterclockwise using the same value (towards -).
Rotating the sleeves can also be done to fine-tune the cruising speed. A coupled rotation of both sleeves 2.5mm up (+) slows the wing down by 5km/h, and conversely for a rotation down (-). A maximum of +2.5mm or -2.5 is suitable. Beyond that point the stability and pitch of the wing may be affected and unseemly wrinkles appear in the wing fabric.

Sail tension

The sail tension at the wing tip may be altered to to make up for wear of the sails, and improve its performance. This action should not be considered before a minimum of 300 hours of flight.
To perform this adjustment, remove the protecting cap from the wing tips and rotate the bolt placed at its end with a number 10 spanner. Put the cap back and readjust if necessary the tension of the small ropes or rubbers of the bottom and upper surface of the last wing tip batten, because of the modifications of the sail position on the leading edges tubes (same value of increase in the length of the batten as increase in tension on the leading edge). Tension maximum 5 turns (5mm) and make a flight test. The cruising speed will be increased by approximately 3km/h for 5mm of additional tension but maneuverability in roll will be slightly diminished. The maximum authorized total tension is 35 turns (35mm). The factory standard tension of a new wing is 20 turns (20mm). The minimum authorized tension is 15 turns (15mm) of total tension.

Tension of the sail on the removable battens of the upper surface

The tension of the sail on the upper surface battens may be modified to counteract the effects of aging on the sail, and improve its performance. This action is not to be considered before a minimum of 300 hours of flight. To adjust the tension, simply rotate counterclockwise the plastic tips of each batten. A retensioning of 2 turns generally provides the desired effect. The cruising speed will be increased by about 1 km/h per tensioning turn but handling in roll will be slightly reduced.

Tension of the crossbar cables

The tension of the crossbar tensioning cables may be modified to counteract the effects of aging on the sail, and improve its performance. This action is not to be considered before a minimum of 300 hours of flight. To do this, just move the screw that positions the tensioning swan catch back one hole on the rail at the end of the keel.
The cruising speeds will not change, but handling in roll will be slightly reduced, while aerodynamic performance will be improved.

IV) MAINTENANCE

Rigging the wing when folded in 4 m:

In certain cases of shipment, the wing is folded to a length of 4 m (13 ft) at delivery, thanks to the rear parts of the leading edge and the disassembly of the control bar.
The following procedure should be followed for assembling the wing.

- Remove the ends of the sail.
- Slide the rear leading edge through the opening of the wing tips and fit them in the front part of the leading edge.

  WARNING: The 2 trailing edges are different. You will find a mark on the tube which will tell you if it is the right part (D) or the left one (G).
- Make sure you do not reverse them, it may have dangerous results because it would modify the tip struts angle entailing positive twist of the wing tips and an important pitch instability.
- Finish fitting the rear leading edges. Turn slightly and push in order to line up the tube cut and the horizontal bolt "connecting" the crossbars on the front part of the leading edge. Make sure that the plastic lugs at the rear of the tubes are face-to-face. An inverse position would prevent the assembly of the tip struts.
- Fix the sail onto the leading edges with the 2 FHC bolts and the nylstop nuts. For this, the bolt corresponding to the grommet and the drilling of the wing tip sleeve. Make sure that the aluminum guide retainer, which adjusts the tensioning, faces the slot of the sleeve, at the tip of the leading edge.
- Moderately tighten the nylstop nuts. Follow this procedure for the other leading edge.
- Tension the sail on the leading edges, by means of the screw at the end of the sleeve, under the protective cap. The standard tension is 20 turns (20mm). If another setting has been applied, a mark on the sleeve will indicate the correct position of the sail when stretched. Reposition the protective cap.
- Install the control bar on the revolving base fixed to the left A-frame strut with the CHC bolt of 6 mm, washers and nystop nut.
- Assemble the wing following the usual procedure, checking the fixation of the sail at the wing tip, the position of the rotating sleeves at the wing tip, the tension of the sail, the positive twist of the tip struts, the securing of the control bar.

Transport:

Bumpy and long drives might damage the wing unless it is properly loaded onto the vehicle. Transporting the wing and the trike by road requires that the wing, in particular, is properly braced, cannot shake about and is generally very carefully tied down, so that no hard points can damage tubes and sail. Carry the wing carefully on a ladder covered with foam rubber to avoid precarious overhanging. Avoid bumps and swings.

Storage:

Keep the wing in a dry place.
Clean it with fresh water after it has been exposed to sea air. Any grass stain should be washed out with water and household soap. Open the cover to allow the sail and the structure to dry after transport or use in the rain.

Overhauling:

IMPORTANT

IN REGULAR CONDITIONS OF USE* A COMPLETE OVERHAUL OF THE WING IS ESSENTIAL EVERY 300 FLYING HOURS AND AFTER ANY HEAVY LANDING. THIS OVERHAUL INCLUDING COMPLETE SAIL AND STRUCTURE DISMANTLING, REPLACEMENT OF ALL SCREWS AND NUTS AND A SYSTEMATIC CONTROL, MUST BE CARRIED OUT IN OUR WORKSHOPS OR IN AN AUTHORIZED TECHNICAL STATION***. IT IS NECESSARY FOR SAFETY.**

* A particular use (mountain, tropics, sea environments and rough fields) requires a superior frequency, i.e. every year and every 100 hours.

** Or at least every three years if the wing flies less than 300 hours.

*** Whose operators follow a specific technical training in our workshops. An updated list is available on demand.

Ageing of the fabric and seams of the sails may cause an important loss of the wing resistance. The degradation is principally caused through exposure to ultraviolet rays emitted by the sun and the moon. In order to slow down the process, the sail should be stored folded in its cover, or if it stays rigged, in covered premises. Always put it in a sheltered place, shielded from the rays of the sun, even between flights. These measures help to lengthen/sail life.

A strip of identical fabric as the one used for the top sail is stitched to it in the middle and over the keel pocket. The strip is made from two pieces stitched together. During each periodical overhaul, a strip must be cut off, and submitted to a test of wear and tear in the Air Creation factory. The result of the test determine the moment when replacement of the sail becomes essential for reasons of safety.

Every 50 flying hours, check:

- whether all screw are correctly tightened and that they have not worked loose.
- the condition of the cables
- stitching in the upper surface, in the keel pocket, in the eye holes of the sail on the keel and on the leading edge.
- possible tears in the sail.
- the protective pocket of the central crossbar link and its safety straps on the keel.
- the fastening bolts:
  - of the cables at the bottom of the A frame.
  - of the A frame knuckle joints to the control bar
  - of the crossbar leading edges link
  - of the crossbar tension device on the keel
  - of the hang point system

  Change them if there is any trace of wear or rust.
- the hang point for all defects or cracks of the plates.

In the event of heavy landing, check:

- the straightness of the leading edges **(disassembly required)**
- the straightness of the keel.
- the nose plates and their nuts
- the hang point (defects or cracks)
- the seams of the keel pocket on the sail
- the cross-bars and their link with the leading edges
- the lower cables
- the screws, the A frame uprights
- the crossbar tensioning device at the rear of the keel
- the battens (symmetry of profiles)
- the securing of the luff lines to the sail.

WARNING:

Every "nylstop" screw must be replaced after each dismantling and always tightened with a glue of the "LOCTITE" type.

All repair work should be carried out in our workshops or at an authorized technical station*

* Whose operators follow yearly a specific technical training in our workshops. An updated list is available on demand.

AIR CREATION Aérodrome de Lanas - 07200 AUBENAS - France
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PERIODICAL OVERHAULS BOARD

Serial number: .....

Date	Hours flown	Company which has carried out the overhaul Address and stamp

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Notes

WING – QUALITY FORM

Anxious to ensure the perfection of our products, we have set a sequence of controls covering all the steps of production. We are working continuously on their improvement and we are in need of your help.
Please return this reply form accurately filled if you find any mistake or problem concerning your trike, which could affect its quality or finish, even if it is a minor one.

Your name, address and telephone number:

.....

.....

Type: .....

Delivery date: .....

Wing serial number: .....

Colors of wing: .....

Distributor: .....

Hours flown: .....

Problems noticed: (explanations and / or drawing)