



## MACFLY MINITRIKE User manual



Congratulations on the purchase of your MINITRIKE MACFLY.

This Trike is the result of 25 years of experience in the paramotor discipline, both in national and international competition, as well as on the field in school training with students of all sizes and all experiences.

Our frames and Trikes are constantly evolving to provide the best equipment nowadays.

It is very important that you read this manual before using your Minitrike for the first time. The manual will help you get the most out of your equipment, it will give you information on its design as well as advice and tips on how to use it and keep it in good condition for as long as possible.

We hope you will find the same pleasure in flying with our machines, that we have had to experience them during these years

Good flights!

The MACFLY team



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## 1 – Caution / Regulations 1/2

The training curriculum is quite flexible in most countries, and the ways of teaching the quite different disciplines from one training center to another.

The specific regulations in each country must be carefully studied before flying, it is for this reason that the company Macfly does not engage its responsibility in the event of an accident on a bad use of the Paramotor, and we strongly advise you to follow the recommendations of this manual.

**WARNING :** MACFLY recognizes that there are risks associated with handling and flying a paramotor.

By purchasing and using this product, the user acknowledges, accepts, and assumes all risks associated with its use.

This Minitrike has been designed for MACFLY paramotors, foot take-off. Associated with the Trike it allows a take-off in trolley in solo.

Flight and ground tests have been carried out during years with this Trike and the MACFLY paramotor, It has not been designed for use with another brand of frame not suitable for the Trike which can be dangerous depending on the configuration,

Improper use and/or poor maintenance of your equipment increases these risks.

Macfly paramotors are suitable for qualified pilots as well as in training. Under no circumstances can the manufacturer, importer or sellers be held responsible about the use of this product.

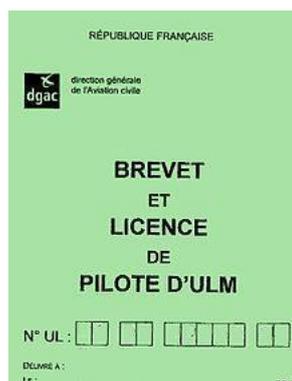
We advise you to do your training in competent schools

Continue to train regularly to follow the evolution of our sport, driving techniques and equipment

Your equipment must not have been modified in any way and must be in good condition and regularly reviewed A pre-flight inspection of all your equipment - and this before each flight - is essential. Never try to fly with equipment that is damaged or not suitable for your experience.

Always fly equipped with a helmet, suitable shoes and gloves

Absolutely avoid flying in rain, snow, in strong winds, in turbulent conditions and in clouds.



## 1 – Caution / Regulations 2/2

### **1.1 Licence certificate and insurances**

Depending on the country and state, the paramotor may or may not be subject to specific regulations. The passage of a patent, or a license specific to each country must be obtained before flying with your paramotor. Similarly, some countries require compulsory insurance.

All pilots must demonstrate that they have the required level of training and experience and must - depending on the country - have taken out at least civil liability insurance.

### **1.2 Identification/ registration**

In some countries or states, the paramotor is considered as a means of transport, or even a vehicle, and it requires an identification or a specific registration.

Get some information at your ministry or federation before flying with your paramotor

### **1.3 Wing connection**

There are different types of wings more or less adapted to the practice of paramotoring.

Some haven't been designed specifically for this sport but rather for paragliding.

Ask for the manufacturer's advice before trying a non-validated assembly.

Check the compatibility with powered paragliding in the user manual.

### **1.4 Specificities of use**

The Minitrike must be used with a motorization and a wing of the paragliding type and of design for the paramotor. Sufficiently sized to support the weight of the Total Flying Weight assembly = Equipped Pilot + Minitrike + Paramotor + weight of the wing if this is the case.

**WARNING :** For the safety of the pilot, the Trike should not be used for traveling and power taxiing at high speeds over ground without being connected to a wing, as the speeds of evolution have not been tested for this.

It is imperative to associate the Trike with the wing, because this allows the weight of the Trike, the engine, and the pilot to be taken care of from 15-20 km/h.



## 2 - Technical characteristics of the Minitrike MACFLY

### Dimensions

#### **Sports wheels 300mm x 65mm :**

- Standard version: length 157 cm x width 161 cm
- Sports version: length 153 cm x width 141 cm

#### **Comfort wheels 400 mm / 95-100 mm :**

- Standard version: length 168 cm x width 164 cm
- Sports version: length 164 cm x width 145 cm

#### **Disassembled :**

75 cm X 62 cm X 50 cm

### Frame

Manufactured in titanium tubes of different sections, microblasted finish. The round tube was chosen for its aesthetics and aerodynamics.

The suspension is made of very resistant titanium round VT22

### Wheels

Stainless steel bearing, aluminum rims 3 spokes

### Weight

With Sport wheels : 11 Kg

With Comfort wheels : 12,5 Kg

### Frame fixing

3 Peguet pins for fixing the wheels

2 stainless steel screws with fluted knobs + spacer for the lower fixing of the chassis to the trike

1 screw with locking nut for the frame rear stop

### Fixing of the wing

2 Lines supports for cage

### Possible options

Minitrike seat

Cage reinforcement bar

Choice of wheel type

**3 - Minitrike assembly 1/5**

The assembly of the Minitrike is easy and fast, its disassembly also. We advise for its storage, and if there is the possibility, to disassemble it as little as possible so that the next reuse can have the least maneuver to perform.

Example of a Minitrike, comfort wheels option, completely disassembled



- Begin assembly by checking the tire pressure. There are 2 types of wheels: The Sport or Comfort version.

**Comfort wheels** are fitted with an air chamber whose pressure must be between 1.2 and 1.5 bar. We recommend a rather soft inflation for bumpy terrain (1.2 bar) and a little more inflated for terrain without too much deformation (1.5 bar)

**Sport wheels** are fitted with an inner tube whose pressure must be between 1 and 1.3 bar.

The wheel sets, whether Sport or Comfort, are the same and do not make sense.

**CONFORT WHEELS**

**SPORT WHEELS**



- Then fit the front wheel, putting the spacers on one side and the other



**3 - Minitrike assembly 2/5**

- Fit the rear wheels into their axles, pay attention to the presence and correct tightening of the studs which secure the wheel axles.  
(Studs already glued with loctite, do not try to loosen them. It is possible to check that they do not move with the appropriate tool, and the pressure of two fingers only)



A mark is noted on the axis of the undercarriage leg to show the top, as well as the Left or Right position. These markers may fade over time. We recommend keeping them visible so as not to be mistaken. If the assembly is upside down, the fitting of the clip pin for the tube will not be done correctly

**Undercarriage leg with  
Left (G) / Right (D) landmarks**



- Fit and lock the clip pin in the vertical direction, from top to bottom, paying attention to the Left / Right direction of the undercarriage legs



Your wheels are ready to be assembled to the trike

### 3 - Minitrike assembly 3/5

Now take the seat support, which is sold as an option.

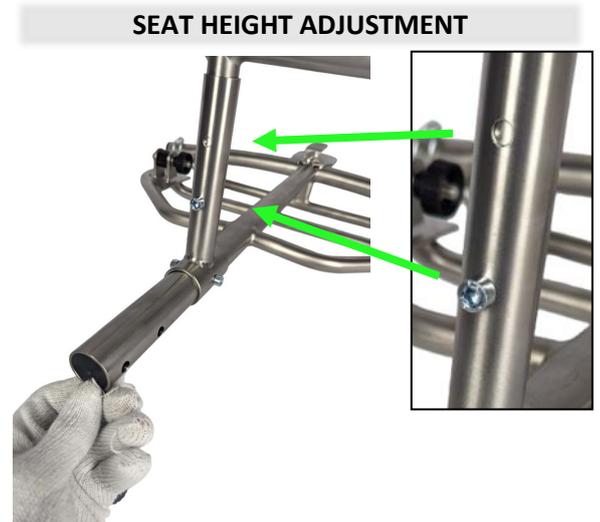
#### ADJUSTMENT:

The seat has several height adjustments, for 138 cm frames, provide the lowest height, for 150 cm frames choose a higher setting.

- Fit the seat support in the central part on the trolley, fix it with the screw.

To validate the position, hang from a gantry and check its flight position:

The underside of the harness must not be in contact with the seat support in flight.



- Then fit the front fork in the central part of the trike, 2 positions are again possible, short legs or long legs.



**3 - Minitrike assembly 4/5****ADJUSTMENT:**

The pilot must determine the most comfortable of the two positions thanks to the following checks:

- Sit down and place your feet on the toe clips. Swivel the front wheel to the left and to the right to ensure that the length adjustment of the trolley allows the necessary clearance for the front wheel without the feet coming out of the toe clips.
- Check on the gantry that it is easy to remove and quickly put your feet back on the toe clips.



← Short legs adjustment

Long legs adjustments →



- Once the setting has been chosen, position the screws with fluted buttons. The split washers must be positioned on the side of the fluted buttons.

**ADJUSTMENT:**

It is also possible to adjust the height of the toe clips



### 3 - Minitrike assembly 5/5

- Now insert the undercarriage legs to the central part of the carriage, insert and lock the tube clips on each side, in the direction from top to bottom, and from front to back as in the photo

#### ADJUSTMENT:

Different settings are possible for the impasto of the wheels. The wider setting provides better stability for take-offs and landings. This is the setting to use for learning the trike flights, and leisure flights

The narrowest setting (as pictured) will make the cart more maneuverable and cause less drag in flight. This one is reserved for experienced pilots on the practice of the trike.

Note that the middle hole is useless, the pin does not pass



The trike is ready to receive the Paramotor

**4 - Minitribe / Frame assembly**

- Now assemble the Paramotor to the Minitribe



- Now position the clips to lock the bottom of the frame to the trike thanks to the screws with grooved buttons provided for this purpose.

## 5 - Setting up the rescue / Storage

### Rescue installation

Refer to the MACFLY user manual for the installation of the rescue parachute :

[https://www.macflyparamotors.com/wa\\_files/manuel%20macfly%20en.pdf](https://www.macflyparamotors.com/wa_files/manuel%20macfly%20en.pdf)



### Storage

Avoid running the engine on blended gasoline that is more than one month old.

If this is the case, empty the old mixture and replace it with recent fuel.

We advise you to disconnect the battery from the paramotor if you have one, as well as the spark plug suppressor when you move or store the paramotor.



## 6 – Adjustments

### Inclinaison du pilote :

The movable arms are delivered with the manufacturer's standard adjustment.

The attachment point of the left and right ring is slightly different (difference between 1 and 2 cm). This setting adjusts the effects of engine torque

You may have to change this adjustment slightly for different reasons such as comfort, pilot's weight, tandem flight or trike installation, which could slightly change your flight position or also to adjust your engine torque.

To do this, proceed as indicated in the MACFLY User Manual, page 8 :

[https://www.macflyparamotors.com/wa\\_files/manuel%20macfly%20en.pdf](https://www.macflyparamotors.com/wa_files/manuel%20macfly%20en.pdf)

And more details to refine this setting:

[https://www.macflyparamotors.com/wa\\_files/service%20bulletin%20ring%20settings%20en.pdf](https://www.macflyparamotors.com/wa_files/service%20bulletin%20ring%20settings%20en.pdf)



## 7 – Pre-flight checks 1/2

ATTENTION : Nous recommandons vivement d'effectuer une pré-vol attentive et approfondie avant chaque vol. En cas de suspicion d'anomalie, aussi petite soit-elle, NE PAS VOLER AVEC, contacter votre revendeur.

Chaque moteur est différent d'utilisation et d'entretien. Suivre les recommandations des constructeurs motoristes concernant les parties mécaniques (manuels disponibles et actualisés sur les sites internet de chaque motoriste)

### Harness

- Closed pockets (pilot pockets also)
- Condition of the straps
- High harness/lower harness bindings
- Closure of the rescue container and passage of the straps, fixing
- Verification and control of the planchette

### Frame

- Not deformed, sufficient propeller passage between the cage and the propeller ends
- Check the tightness of the arms
- Interlocking of the cages
- Velcro fasteners
- State and tension of the net
- Shackle and starter pulley check
- Fixation of engine silent blocks

### Trike

- Not distorted
- Interlocking and fixing of the pins in place and secured with the stretch covers and Velcro strips
- Master carabiners in place
- Pilot harness well fixed
- Free front wheel travel
- Verification of the fixing of the frame to the trike



See videos on the website : [https://www.macflyparamotors.com/trikes\\_en.html#w-anch-top](https://www.macflyparamotors.com/trikes_en.html#w-anch-top)

## 7 – Pre-flight checks 2/2

### Engine

(follow the fuel circuit)

- Set the electric starter to OFF if the engine is fitted with one
- Check the fuel level, add more if necessary
- Check the general condition of the tank
- Check the attachment of the tank to the frame
- Tighten the tank cap sufficiently to prevent possible leaks.
- Condition of the hoses, no leaks, away from hot parts
- Carburetor and air box well fixed, unobstructed, secure and condition of the rubber flanges not cracked
- Well fitted interference suppressor, screwed spark plug
- Verification of the ignition coil attachment + condition of the electrical terminals
- Verification that there are no leaks in the engine block (no traces of oil seepage)
- Engine cover fixing
- Exhaust and silencer, no cracks, no leaks, spring tension, silent blocks in good condition
- Reducer check: No play in the screws, no excessive seepage at the decompression valve
- Propeller, axe screw, no play or suspicious noise on its shafts, general condition and in particular of the leading edge
- Check the gas control: maximum travel, and which returns well and frankly to the initial position
- Check the fixing of the pulley and the condition of the starter rope. Without pulling on it so as not to start involuntarily



## 8 – Starting the engine

When cold, turn choke to "ON" position (depending on engine model)

Place the left hand as shown in the photo holding vertical and the gas grip as noted.

No gas power on the first attempts to start.

**WARNING: Do not fire the starter unless the gas handle is in the correct position, with the stop button clearly and immediately accessible.**



Once the engine has started, you can turn the choke to the "OFF" position after a few seconds.

**Do not take off with the choke in the "ON" position!**

The thumb should not be stuck by the handle strap.

Do not shoot the starter without having the handle in the right position, with the stop button clearly and immediately accessible.

**WARNING :** never to raise it in RPM without a propeller, this would damage the engine.

It is not necessary to carry out a full gas heating, in order to minimize the risks of accident as much as possible.

The purpose of this manipulation is to identify any engine anomalies (noise, vibration).

Each engine has its "little character", learn to tame it to start it at best.

**9 – Check list / Vital actions**

**You are ready to take off, a last check is necessary to not forget anything :**

Windssock visible from the place of inflation

Check wing, risers, lines.

Engine start after environment check

- Legs, ventral, pectoral and helmet attached
- Main links closed
- Front risers in hand, no twists
- Hand brakes, no knots and direct passage through the pulley
- Radio, volume and frequency set
- Last engine warm-up avoiding blowing the sail or sucking up a line
- Current weather and aerology, wind strength and direction
- Clearance of airspace in front and behind
- Inflation with engine between 30 and 40% gaz power to mount the wing

**GOOD FLIGHTS!**

