

MIM PARAMODELS **RC PARAMOTOR KIT**



HANDBOOK - USE AND **MAINTAINANCE**

Congratulations on buying a remote control paraglider form MIM Paramodels. The product in front of you is the result of years of research and passion, and it was manufactured with the outmost precision, allowing you to experience basic paraglider flight and many advanced aerobatic maneuvers.

This kit includes a wing, a remote control model pilot, and a harness exclusively designed by MIM Paramodels.

MIM paramodels ® is the first Italian company specialized exclusively in the study, design and construction of scaled remote controlled paragliders.

With MIM ® paramodels many people around the world have found the right way to approach the rc paragliding world.

"A radio-controlled glider, as I conceived, is a faithful reproduction of a true paragliding.

It is a tool that will allow you to try the thrill of flying a glider and perform all the maneuvers exactly as in reality.

I Will continue to develop this project driven by passion with the aim of bringing on a small scale experience accumulated over 20 years of practice of this sport at a professional level. "

Ivan Appoloni

***DEDICATED TO THOSE WHO HAVE ALWAYS
SUPPORTED ME, MY FATHER MARIANO, ` THAT I
WILL CARRY FOREVER FOREVER IN MY HEART AND
MY MOTHER" MARIKA "THAT CONTINUES TO GIVE
ME AN ESSENTIAL SUPPORT FOR THE DEVELOPMENT
OF THESE PROJECTS . . .***

**DOCUMENT ANNEX TO THE PRODUCT:
PRECAUTIONS FOR USE, GENERAL TERMS OF SALE AND WARRANTY**

REQUIRED READING: This document contains notices essential for the assembly and the proper use of the product kit paramotor MIM Paramodels. The reading of this document is a necessary requirement to allow assembly and safe use of the product.

(The definition of "product" often cited below has generic meaning and could mean one or more components manufactured and / or supplied by MIM paramodels, whether complete kits ready to fly or just individual components - such as sails - which the user decides to connect other components.)

The end user is required and read and follow the instructions in this handbook. The end user is also responsible for verifying the correct assembly and maintenance of the conditions of efficiency and safety of the product over time and assumes all responsibility for possible damages to persons and or (even same user) arising from the use of product.

MIM paramodels and it's legal representative Mr. Ivan appoloni – street: Martiri della Libertà 50 ZIP 36030 Caltrano (VI) can not be held in any way responsible for any damage to property and / or persons caused by the use of the product even if it were demonstrated that all the basic rules of safety have been met.

The use by the end user involves the automatic acceptance of the above conditions.

Otherwise, the user may exercise the right of withdrawal to be exercised within a maximum of 3 days of receipt of product. The right of withdrawal may be exercised after sending a written for withdrawal via email to the address (rcdream697@gmail.com), required to be followed by sending the purchased product/s to the manufacturer MIM paramodels. Shipping charges will not be refunded

The refund will be the paid amount minus shipping and packaging costs incurred by the producer MIM paramodels . Money will be refunded within a maximum of 15 days from receipt of the model, and after verifying the integrity of the model.

IMPORTANT upon receipt of the model by the manufacturer, and in the case where the conditions of integrity of the product were clearly not equivalent to those supply these will be quantified as damage.

Any possible damage caused by the user will be evaluated by MIM paramodels and subtracted from total amount of money (minus shipping freight) to be refunded. - a figure that will be paid by bank transfer within the terms stated above. The deadline for repayment starts from the moment in which there will be a written confirmation for the reached agreement between the parties on the amount to be refunded.

1. The product is a radio-controlled model that requires responsible use and is therefore SPECIFICALLY DEDICATED FOR USE BY ADULTS, AGE 'SUPERIOR TO 18 YEARS or under the supervision of an experienced adult when driven by minors. The product must be used in compliance with all the rules that regulate the activity aeromodellistica force at the place of use, including any rules requiring compulsory insurance for third party damage or things.
2. The manufacturer and / or dealer shall not be liable, under any circumstances, use of the product and of the consequences of the use of the product may be caused to the customer or third parties. The use of the product depends solely on the will, controls, and controls (including pre-flight) of the user. Therefore, the user of the product assumes all liability in civil, administrative and criminal liability arising from the use of the product.
3. Before the 'use, the product must be inspected and tested by the user in order to verify proper operation on the ground, including the response to commands given by radio. Each protection (excluding fixed) or warning with which the product is supplied must be removed before use: the presence of the same could affect the proper functioning of the device.
4. The product can be used only in specific areas used for the practice of RC models and, in any case, the product should never be used in close proximity to people, crowded areas, animals, parties, public parks, concerts, shows, urban areas, lines electric, telephone lines, repeaters, antennas, housing, facilities, airports, aviation areas, airfields VDS, hospitals and / or in any other area not intended for practical dell'aeromodellismo. The model must not be turned on if you are close to `children at an early age even if the custody of their parents. All persons and spectators must be driven at a safe distance and alerted when you decide to turn it on and put in the flight model. The assessment of such risks and precautions to be used to ensure the `safety` their own and others are total responsibility from the user.

5. The product should be used only in suitable weather, with light winds and excellent visibility, in the absence of storms and / or in any other condition that causes loss of sight and control of the product. The product should not be used at night and in any case after the ephemeris.
6. The calibration of radio controls before use is an operation that competes only to the user, who must take care under sole responsibility that the product to work correctly and at the same time that it is not any interference or hindrance to 'utilization. Therefore, no damage or consequence resulting from improper calibration of the device's controls may be charged to the producer, as such any circumstance beyond the control of the manufacturer.
7. When using the features of the device, the user must ensure compliance with all applicable laws, and the rights of others.
8. The paraglider is a flexible wing very sensitive to turbulence. Its own Shape and then the normal and correct flight envelope is guaranteed by the internal pressure of the wing that gives to the wing a form with certain aerodynamic characteristics allowing it to fly and to respond in a logical manner and correctly according to the input generated by the pilot. The use of this in extreme weather conditions and / or pilot errors can lead to loss of control and deflation of the wing (called " collapses "). These situations may result in a partial and / or total loss of control of your model and a considerable increase in the descent rate . The user is aware of this fact and accept the consequences. The deflation of the wing and loss of control that it can follow this situation is an event to be considered and a possibility well `known to all the people who decide to practice real and also rc paragliding.` For the possible occurrence of such a situation and for damage to property and / or persons that may result from it the manufacturer does not assume any responsibility.
9. The rotating propeller represents a serious danger for users and for the people who are in proximity of the `model, whether it be in flight or on the ground. The user acknowledges that it can not exist, state of the art, effective protection that does not compromise the product the ability to fly . Therefore accept the consequences pledging to use the product with the utmost care. The user must use all the necessary precautions to avoid injury with particular regard to the fingers, which must never be placed in the area of activity and rotation of the blades of the propeller `either during the preparatory phase nor during launch and flight. Any pre-flight preparation phase is carried out exactly as shown on our video tutorial. The model is equipped with a protection that reduces but does not eliminate, however, the possibility of coming in touch with the `propeller, so extreme caution is required and` risk acceptance said about the possibility of injury.
10. The product is not suitable for professional use. The product is not suitable for the use of aeronautics character and when special certifications are required . In this case, the user is responsible for obtaining, at its own expense, the necessary authorizations and certifications, and the manufacturer / dealer is not liable for the failure to obtain required certifications
11. It is absolutely forbidden to use the device for purposes other than those for which it was built, as inferred from the contents of the user manual.
12. The user is solely responsible for the proper use of products sold by the producer: he must always ensure that it functions, the construction, the correct relation with the additional equipment needed (eg batteries and radio controls) and the absence of any imperfection that may affect the safety of his own and that of others, taking all necessary measures to avoid the occurrence of damage.
13. Before using the product the user, must make sure that its national legislation does not prevent the use or possession of this kind of models. If any kind of certification, registration or approval of the product is required by the national legislation , the user will be responsible , at its own expense to obtain the required documentation.
14. Maintenance of the product and accessories (remote control, battery, batteries for wireless operation) must always be performed by the user. The product must be preserved with the utmost care, stored indoors in suitable places free from moisture, dirt, weathering, heat and cool and protected from shocks or possible mechanical strain and traumatic events. Environmental conditions or unsuitable storage may affect the efficiency of the product. In this case the manufacturer is not liable for malfunctions, even as security.
15. It is the duty and responsibility `of end user to check that all the parts necessary for the operation are properly connected and secured in a safe as well as` free of defects and / or cracks that may cause failure and / or malfunction in flight, and / or on the ground before each launch.
16. The manufacturer assumes no responsibility for the use, charging, efficiency, security, battery life or anything regards to the battery. Every problem, fault, vice, no compliance, damage, or other event happens because the battery is the sole responsibility of the producer component, which is considered always and in every case a separate accessory and sold separately from the product, as a component individually separate and distinct from the product itself. For the care, maintenance and battery charge, no liability is accepted by inviting to read carefully the instructions of the manufacturer of the battery and charger required (subject to verification of compatibility).
17. In the event of a malfunction or defect in the product should be stopped immediately use. The product can be used only after it has been identified the cause of the malfunction and after the same has been properly repaired.
18. The manufacturer warrants the product against defects in conformity only for defects resulting from faulty design or assembly flaw made directly from the manufacturer. The warranty period starts from the

date of delivery of the product that must be proved by the buyer with appropriate documentation. The warranty is void if:

- the product has been modified, repaired or disassembled by a person other than the manufacturer or by a person authorized by it;
 - were not complied with these instructions and those prescribed by the manufacturer as described in the user manual or communicated through the website of the manufacturer;
 - the user has continued to use the product in the presence of faults and does not immediately release the defect;
 - the user has taken steps to repair the product by himself;
 - the product has not been stored with care, as previously defined;
 - the product has been used for purposes other than those for which it was designed, was the subject of a claim falls, blows, or other traumatic events caused during use, storage and transport;
 - The product has suffered injuries from falls, collisions, injury or damage caused due to an error in the use or accidents, whether caused by you or any third party.
19. The guarantee is applicable only in the case where the user has immediately informed of the existence of the defect in the product and do not have continued to use in case of malfunction or lack of conformity. The guarantee does not apply if there has been an attempted repair by the user or anyone other than the manufacturer or by a person authorized by the same.
20. In any case, the user is required to ensure compliance with legislation and regulations in the areas in which the device is operating and is not responsible for any consequences arising from non-compliance with laws and regulations.
21. The manufacturer reserves the right to change, without notice, the device or the device specifications outlined in the manual.
22. The information contained in the user manual for information purposes only, they are subject to change without notice and can not be construed as a commitment by the Manufacturer. The manufacturer assumes no responsibility for any errors or inconsistencies that may be contained in the manual.

THE SEPARATION OF THIS HANDBOOK FROM THE PRODUCT INDICATES THE READING AND FULL APPROVAL BY THE USER OF ALL INDICATED RULES AND RECOMMENDATIONS . THE CHOICE TO USE OUR PRODUCTS IS A USER'S FREE CHOICE AND IT INVOLVES THE FULL ACCEPTANCE OF WHAT'S INDICATES IN THIS HANDBOOK

PLEASE PROMPTLY REPORT ERRORS AND DISCREPANCIES THAT MAY BE FOUND IN THE MANUAL s DIRECTLY TO MIM paramodels rcdream697@gmail.com

FOR FURTHER DOUBTS AND / OR QUESTIONS RELATING TO THE USE OF OUR MODELS DO NOT HESITATE TO CONTACT U.S. TO E-MAIL ADDRESS ABOVE OR DIRECTLY TO THE NUMBER + 39 340 8047 972

Ivan Appoloni

A due clarification to avoid possible misinterpretations about the performance, reactions and maneuvers performed with the models we produce.

We emphasize that these are in line with those of a true basic paraglider wing.

Paragliding is a flying craft made of fabric to create a flexible wing.

The pilot technique is in many cases different or even opposite to the vast majority of other flying machines with or without a motor as gliders, airplanes, helicopters etc..

The performance of a glider and the conditions under which it can fly safely are different and in some cases limited by the narrow speed range compared to other aircrafts such as a sail planes , hanggliders or others just as happens in reality.

REV. NUMBER 01/01/2016

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REVISION HISTORY :

2015.03.27 *first official emission*

2016.01.01

pag 21 corrected risers adjustment for motor 0 to -0.5 (it was 0 to -1)

pag 22 corrected brakes adjutment , new pictures (2 and 3) added for correct mark position

1 : KIT COMPONENTS , ASSEMBLY INSTRUCTIONS, KIT MAINTENANCE

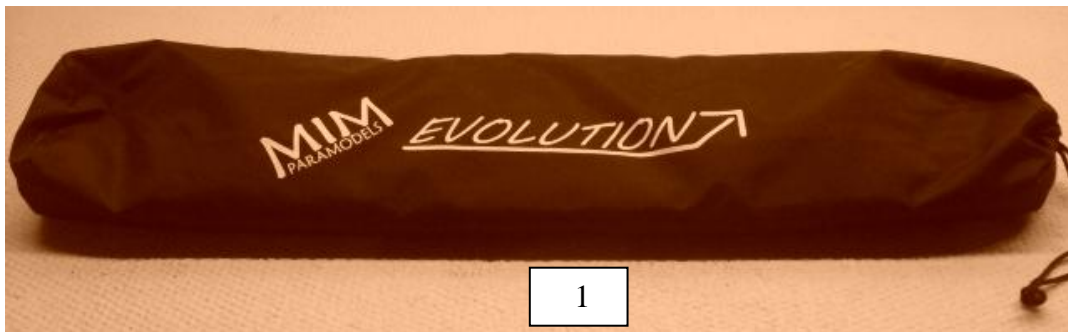
1.1: PARAMOTOR KIT COMPONENTS

1. WING AND BAG
2. MOTOR FRAME+CARABINERS+SPACER
3. PILOT HARNESS
4. PILOT BODY+SUIT+CNC CUTTED ARMS
5. METAL GEAR 10 Kg x cm SERVOS **(NOT INCLUDED)**
6. MOTORE BRUSHLESS OUTFRUNNER + PROPELLER **(NOT INCLUDED)**
7. ESC (VOLTAGE REGULATOR) + BRUSHLESS MOTORE
8. SCREWS
9. LIPO BATTERY 3-4 CELLS **(NOT INCLUDED)**
10. TRASMITTER + RECEIVER **(NOT INCLUDED)**
11. SPARE LINES

WING :

The wing you just purchased is manufactured under license for MIM paramodels by real paraglider manufacturers with manufacturing process and materials identical to reality .

These sails are designed to supply good performance and to last a long time . The product should be intended as a model for recreational use ito be used in absence of wind or in any case in low wind conditions.



OTHER COMPONENTS : 2 / 3 / 4 / 5 / 6 / 7 / 9 / 10



2 FRAME



2 SPACER



3 HARNESS



4-A PILOT BODY



4-B PILOT SUIT



4-C CNC ARMS



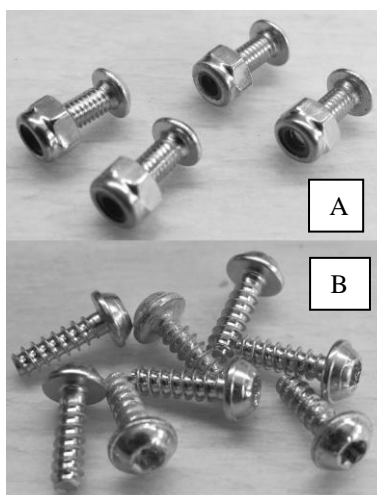
5 METAL GEAR SERVOS



6 BRUSHLESS MOTOR



7 VOLTAGE CONTROLLER



8 SCREWS



10 TRASMITTER+ RECEIVER

1.2 SUGGESTED ELECTRONIC COMPONENTS :

Kit paramotor MIM paramodels does not include any of the electronic components necessary for use.

The necessary components are readily available at a common hobby store and can be chosen according to the following rules:

A - SUGGESTED SPEED CONTROLLER :

- ESC 40-A TO 60-A
- MINIMUM SERVOS POWER 3AMP. 5 VOLTS (SUGGESTED 4 AMP – 5.5 VOLTS)
- ESC SUITABLE FOR 3S and 4S (ACRO) BATTERIES

B – SUGGESTED BRUSHLESS MOTOR:

- OUTRUNNER BRUSHLESS 1250 – 1500 KV FOR 1.5 – 2 KG MODELS

C – SUGGESTED PROPELLER

- SLOW FLYER OR “E” TYPE PROPELLER
- MIN 9 INCHES MAX DIAMETER 10 INCHES
- PITCH MIN 4.5 INCHES MAX 6 INCHES

D – SUGGESTED TRANSMITTER

SUGGESTED; 2.4 GHz TRANSMITTER WITH SHORT ANTENNA –
NECESSARY FEATURE : PROGRAMMABLE RADIO WITH ELEVEN MIX
MODE AVAILABLE

E – SUGGESTED BATTERIES

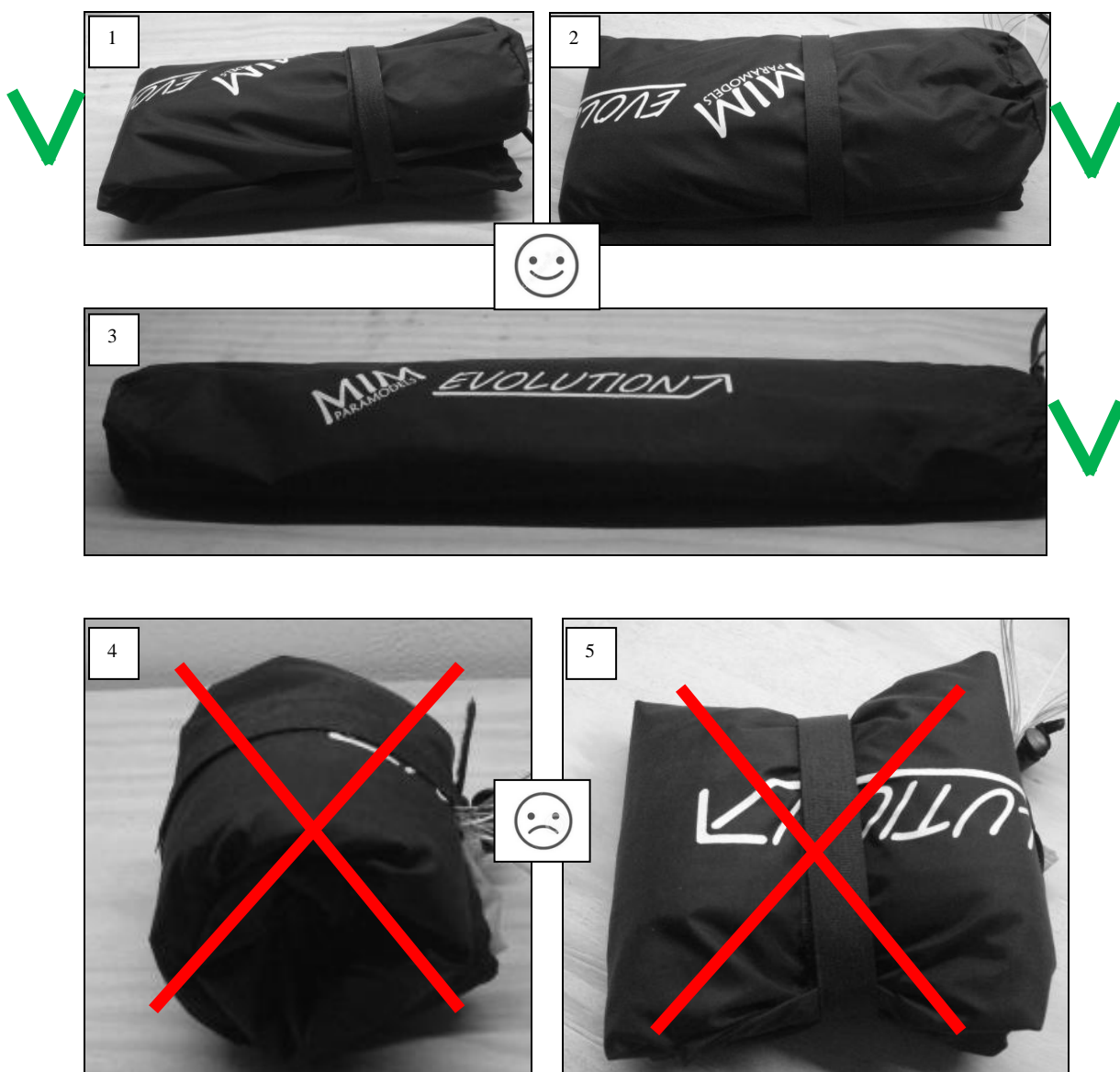
- FLATLAND AND SLOPE SOARING : LIPO 3S 2200 Mah 30C
- FLATLAND DURATION FLIGHT : LIPO 3S 3800-4000 mAh 30-40 C
- AEROBATICS : LIPO 4S DA 2200 Mah 30C MASSIMO 4000 mAh 40 C
- BATTERY'S MAXIMUM DIMENSIONS 130 x 40 x 30 mm

1.3 BASIC RULES FOR MAINTENANCE

- A. Do not leave the wing exposed under UV light when not in use.
- B. Avoid storing the sail when wet (let it dry in a shaded-ventilated room).
- C. Do not fly in the rain, this could damage the sail and the electronic components mounted inside the body of the pilot and the harness.
- D. Do not drag the glider on the ground.
- E. Do not leave the model inside the car during hot days and for long period of time
- F. In the event that it is necessary to clean the sail only use a wet cloth, do not apply too much friction on the sail cloth, do not use any solvent.
- G. Avoid contact with sand and salt if you fly on sea areas.

H. Fold carefully and avoid leaving the sail folded compressed , if necessary do not leave it like that for long periods.

CORRECT WING STORAGE :



**IMPORTANTE : MAI RIPORRE LA VELA ECCESSIVAMENTE COMPRESSA O MAL
PIEGATA !!!**

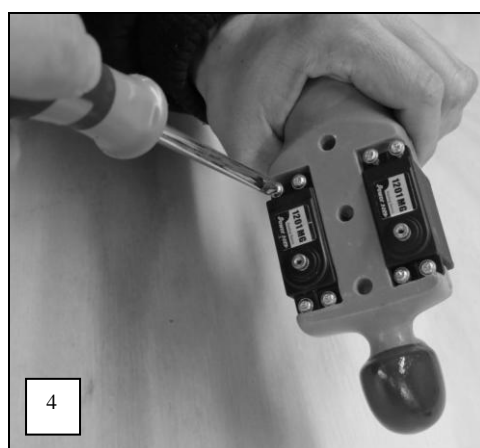
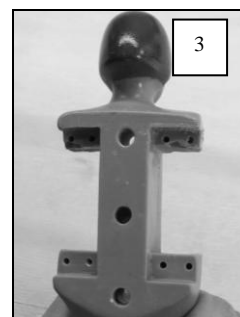
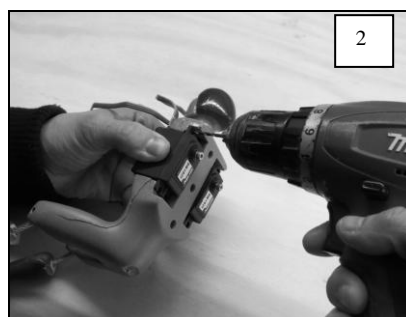
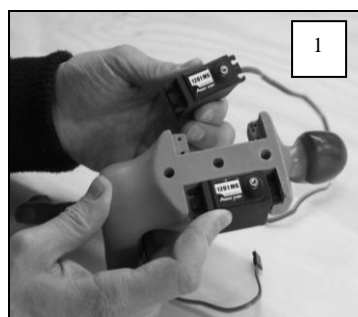
**PRIMA DI OGNI VOLO FARE ALCUNI GONFIAGGI ENERGETICI PER STENDERE
IL TESSUTO !!!**

1,2,3 RIPIEGAMENTO CORRETTO , MAI LASCIARE LA VELA COMPRESSA PER LUNGHI PERIODI

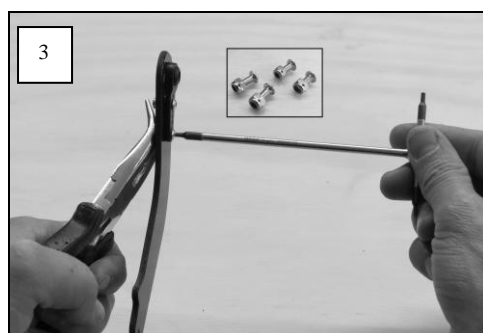
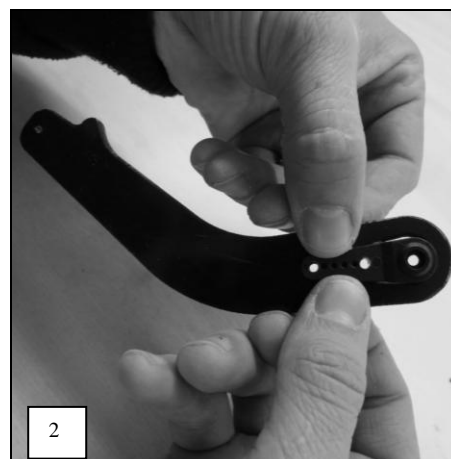
4,5 ESEMPI DI STOCCAGGIO ERRATO. RIPORRE LA VELA COSI' COMPRESSA PER LUNGHI PERIODO
POTREBBE ROVINARE IL PRODOTTO GENERANDO GRINZE E PIEGHE PERMANENTI SULLA CALOTTA DEL
PARAPENDIO

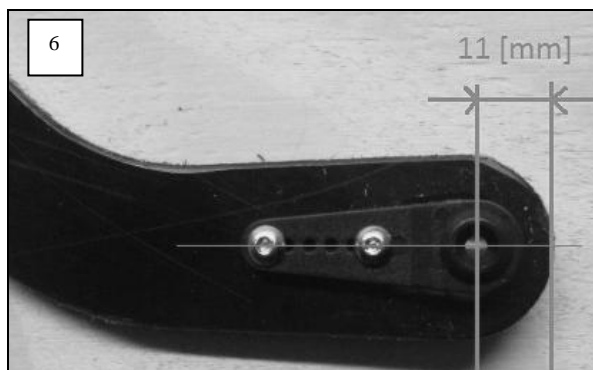
1.4 PARAMOTOR KIT ASSEMBLY

A- SERVO'S ASSEMBLY (COMPONENTS 4-A ; 5 ; 8C)



B- SERVOS BRACKETS ASSEMBLY (COMPONENTS : 4-A ; 4-C)





C : RADIO SETUP MODE 1 Vs MODE4



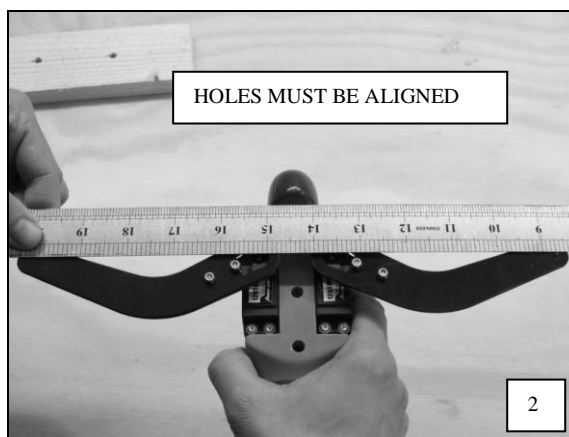
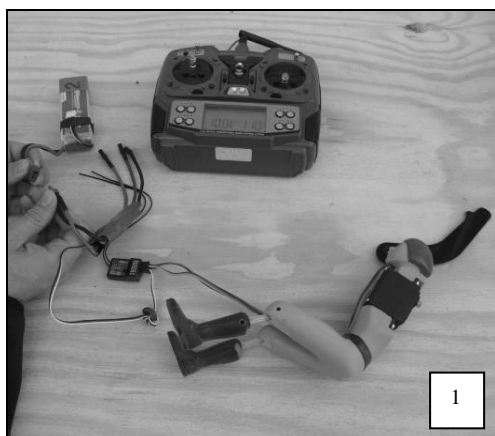
MODE 1

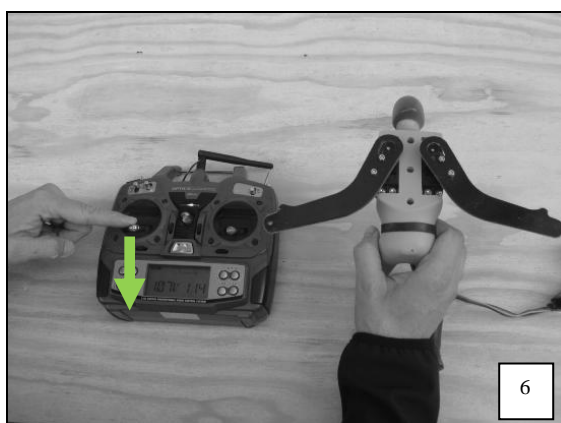
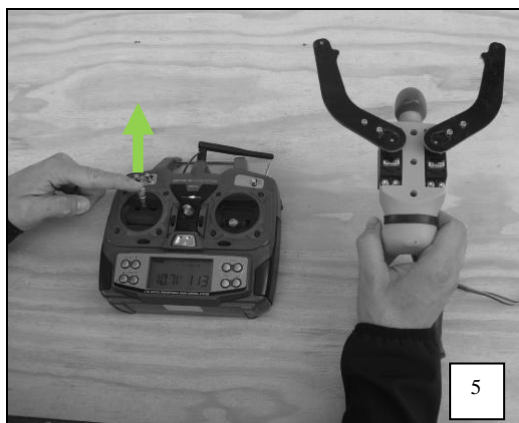
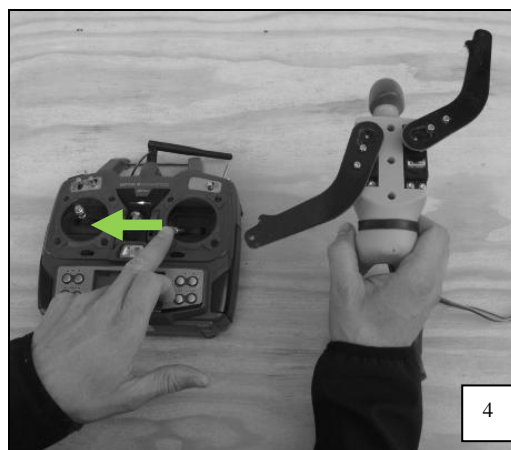
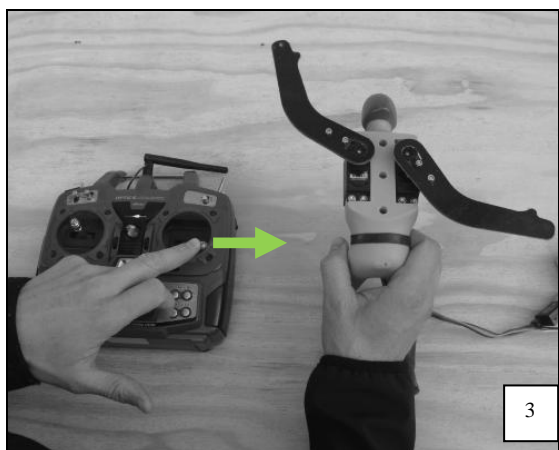


MODE 2

D REGOLAZIONE ALTEZZA BRACCIA+SETTAGGIO RADIO (COMPONENTI : OMETTO CON SERVI ; 4-C)

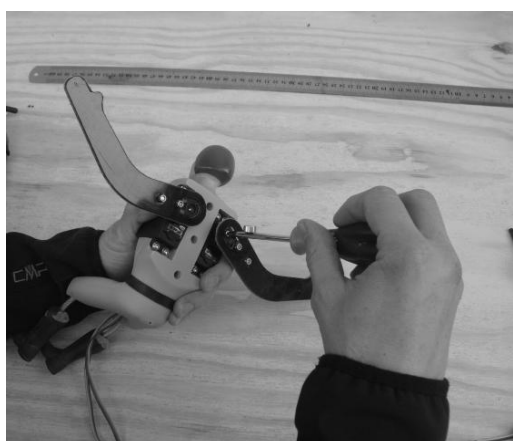
(CASO RADIO MODE 1 – VEDERE PAGINA SEGUENTE PER DETTAGLI SU MODE 1E MODE 2)





CORRECT RADIO SETUP *MODE 1 CASE*

2. *ARMS POSITION WITH STICK IN THE MIDDLE (NO ACTION ON THE RADIO)*
3. *RIGHT STICK TO THE LEFT – LEFT ARM GOES DOWN WHILE OPPOSITE GOES UP*
4. *RIGHT STICK TO THE RIGHT – RIGHT ARM GOES DOWN WHILE OPPOSITE GOES UP*
5. *LEFT STICK GOES UP – BOTH ARMS GOES UP (MAXIMUN SPEED)*
6. *LEFT STICK GOES DOWN – BOTH ARMS GOES DOWN (STALL)*

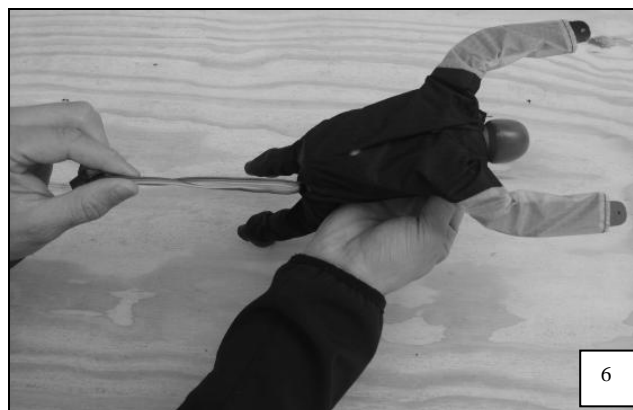
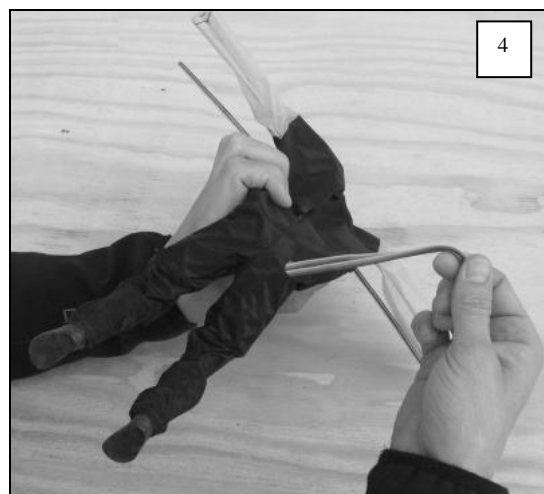
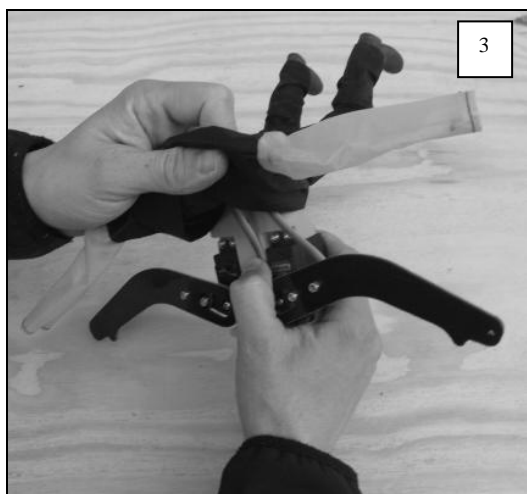


!!! IMPORTANT !!! ONCE ARMS HEIGHT IS ADJUSTED REMEMBER TO MOUNT THE SCREWS SUPPLIED WITH THE SERVOS

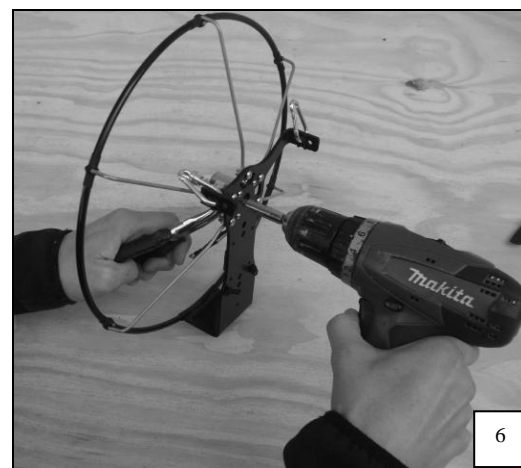
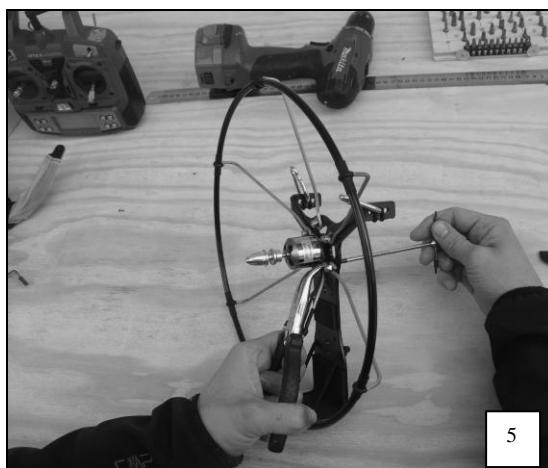
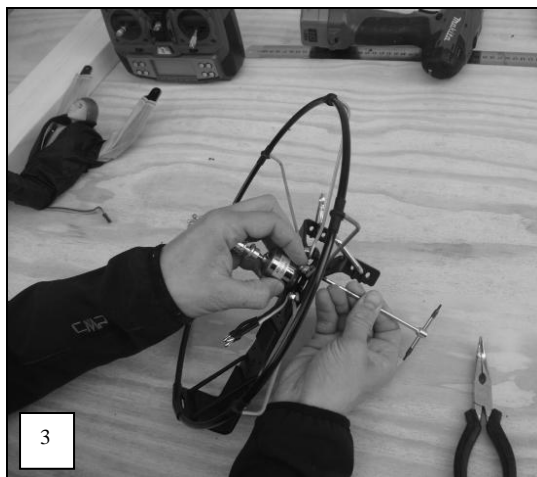
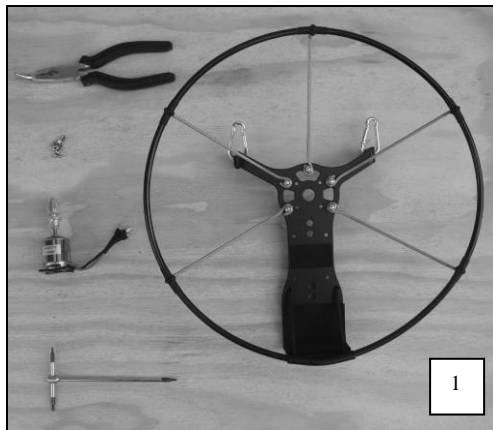
SERVOS MOVEMENT RANGE : Most modern radios allows users to increase the servos movement range so called EPA to 120% and in some cases even up to 150%. This feature can be very useful when a wide range movement is required (i.e. aerobatic flight) . The recommended values for EPA are indicatively:

- BEGINNERS 80 % (Low range)
- INTERMEDIATE PILOT EPA = 100% - 110% (medium response)
- EXPERT (AEROBATIC FLIGHT-EPA 125% -130% - very sensitive wing)

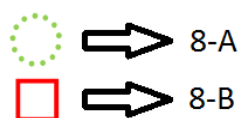
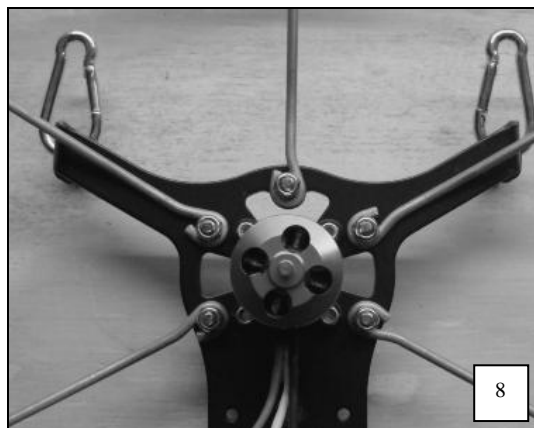
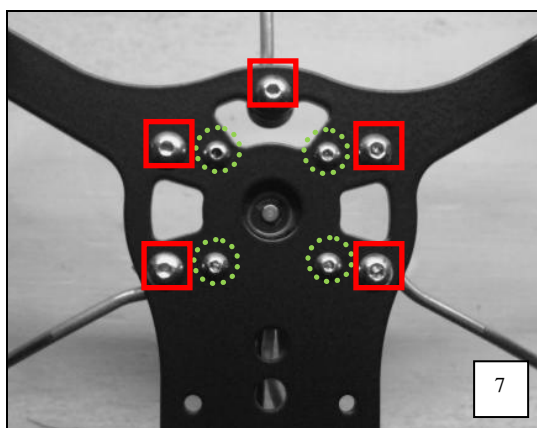
E : INSERTING PILOT SUIT (COMPONENTS : PREASSEMBLED DUMMY ; 4-B)



F : BRUSHLESS MOTOR ASSEMBLY (COMPONENTS : 2 , 6 , 8-A)



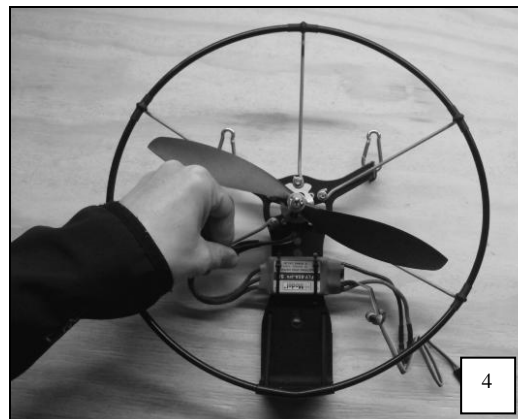
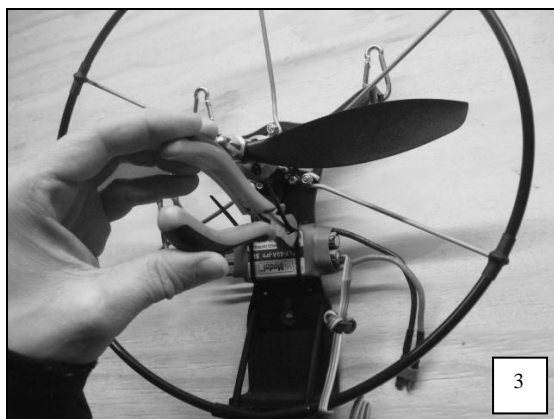
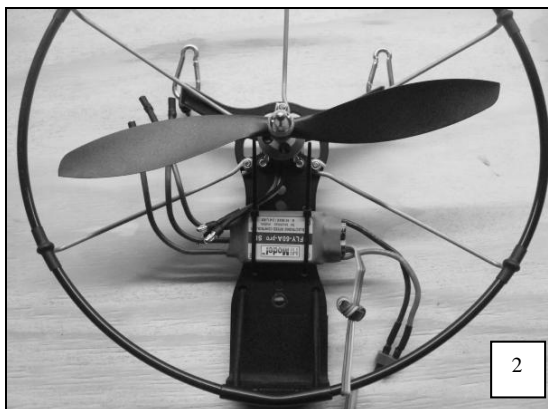
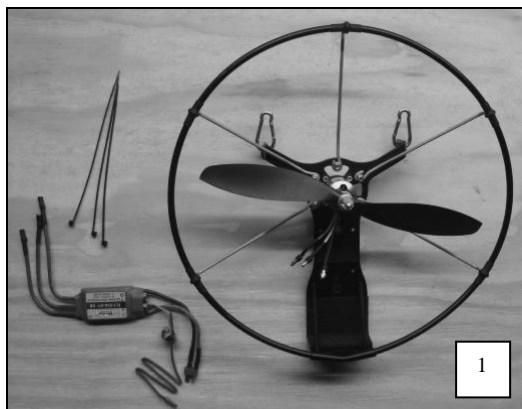
3. PLACE MOTOR AS SHOWN
4. INSERT AND PREASSEMBLE THE M3 BOLTS AND NUTS (8-A)
5. TIGHT THE SCREW AT POINT 4
6. ONLY NOW YOU CAN TIGHT THE M4 SCREW NECESSARY TO FIX THE PROTECTION CAGE (**VERY IMPORTANT : REMEMBER TO TIGHTEN THE M4 BOLTS-NUTS ONLY AFTER MOTOR SCREWS HAS BEEN TIGHTENED**)



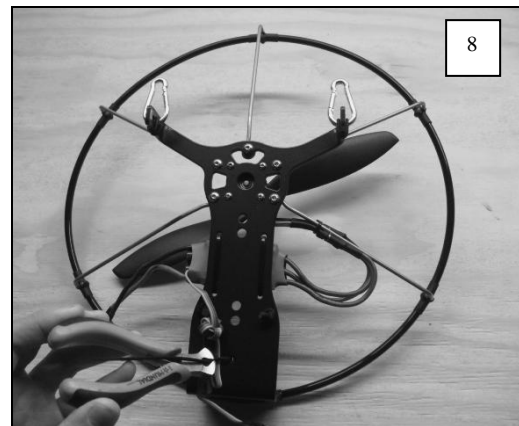
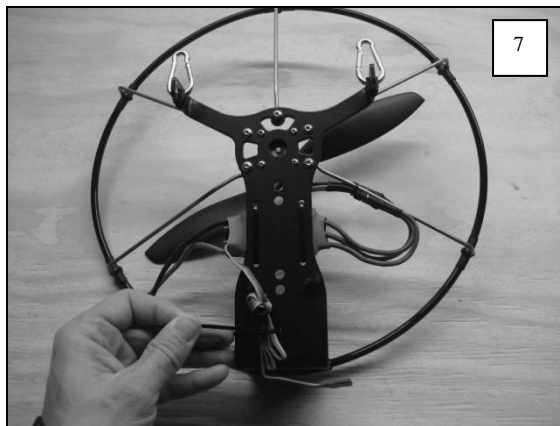
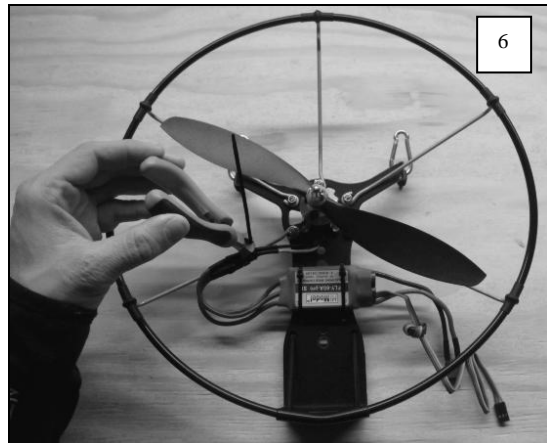
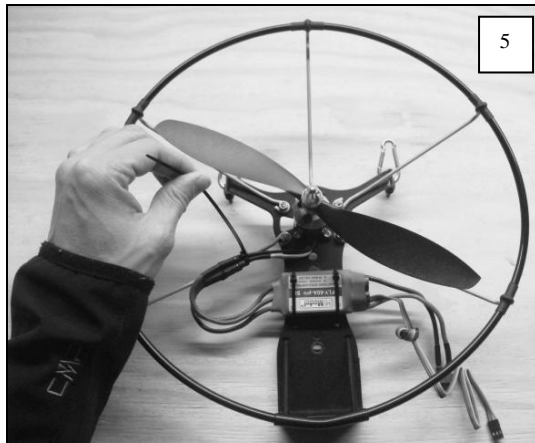
7. FRONT VIEW – CORRECT ASSEMBLY
8. BACK VIEW – CORRECT ASSEMBLY

(IMPORTANT : MAKE SURE TO USE PROPER TORQUE FOR BOLTS FIXATION – NOT TOO HIGH !!!)

G : SPEED CONTROLLER ASSEMBLY

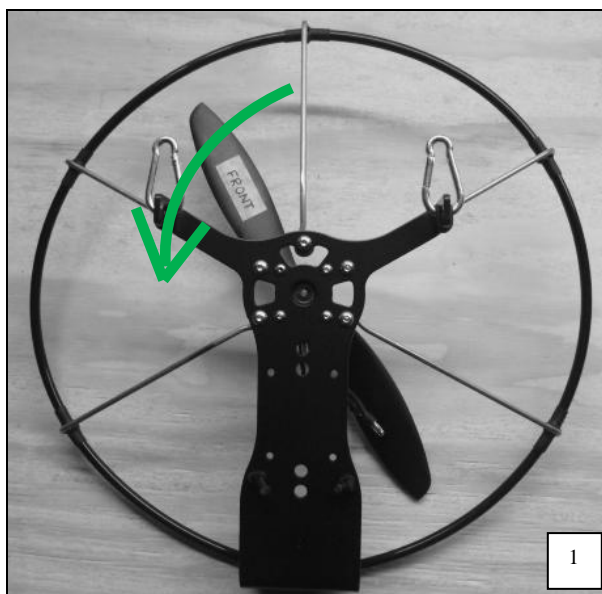


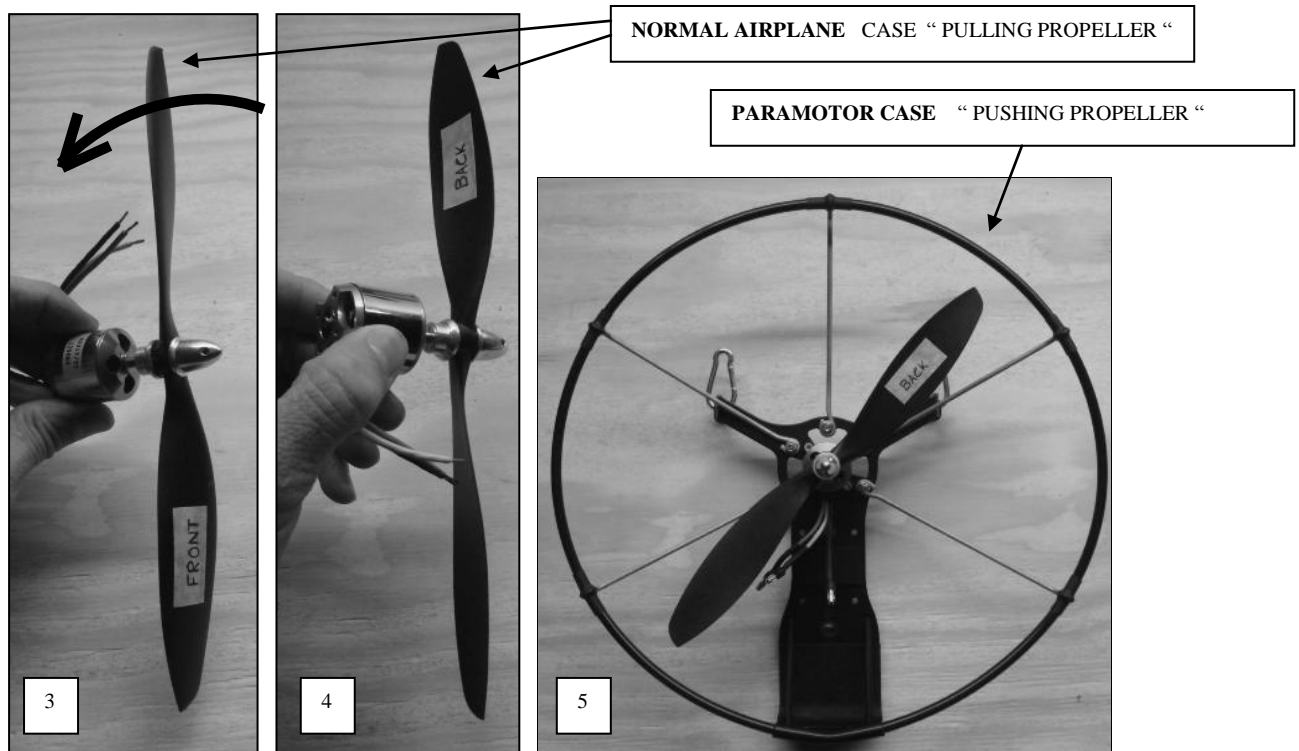
- 1- FRAME + SPEED CONTROLLER + ELECTRICAL CABLE TIES
2- ASSURE THE SPEED CONTROLLER BY WRAPPING IT USING THE SUPPLIED E.C.T. AS SHOWN
3- CUT THE THE EXTRA PART E.C.T.
4- CONNECT THE 3 MOTOR CABLES , CONNECT RECEIVER AND BATTERY AND CHECK IF THE ENGINE ROTATING AS SHOWN BY THE ARROW , IF NECESSARY SWITCH 2 OF THE 3 CABLE TO INVERT ROTATION



5-6- ENSURE THE MOTOR PHASES TO THE FRAME THROUGH A E.C.T.AS SHOWN AND CUT EXTRA PLASTIC
 7-ENSURE THE RECEIVER CABLE BY MEANS OF A E.C.T. AS SHOWN
 8-CUT EXTRA PLASTIC

H : CORRECT PROPELLER INSTALLATION “ VERY IMPORTANT “





1 -2 PARAMOTOR ASSEMBLY – COUNTER CLOCK WISE PROPELLER CCW- NOTE USING A CLOCK WISE PROPELLER WILL INVERT ALL OF THE RULES

3- CCW PROPELLER ASSEMBLED IN A AIRPLANE CASE (PULLING PROPELLER)

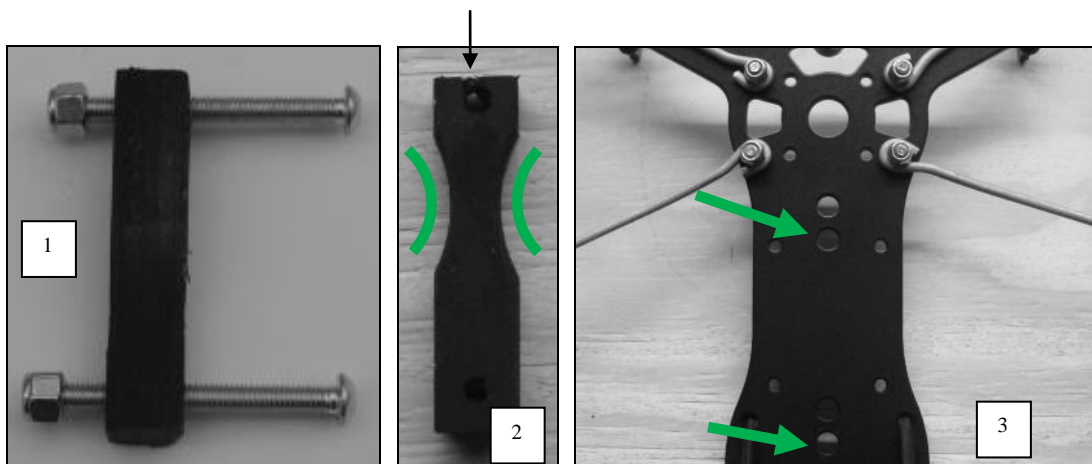
4 -5- SAME CCW PROPELLER AS ABOVE ASSEMBLED IN A PARAMOTOR CASE (PUSHING PROPELLER)

!!! VERY IMPORTANT – YOU HAVE TO REFER TO PIC NR.4 FOR THE MIM paramodels KIT !!!

I : CONNECTING PILOT BODY TO PARAMOTOR FRAME

(**COMPONENTS** : PRE ASSEMBLED FRAME , 2 , PREASSEMBLED PILOT UNIT)

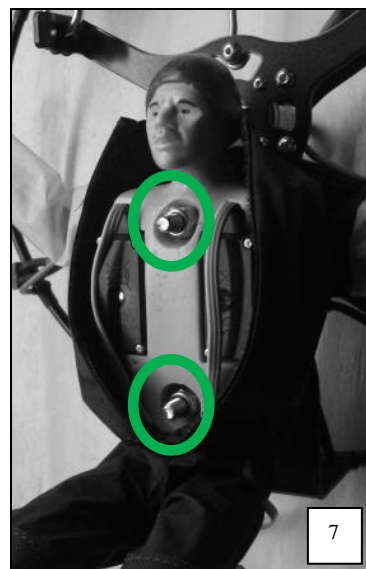
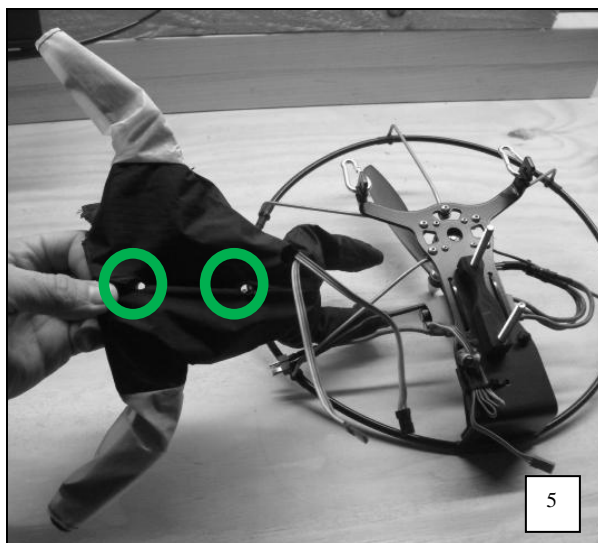
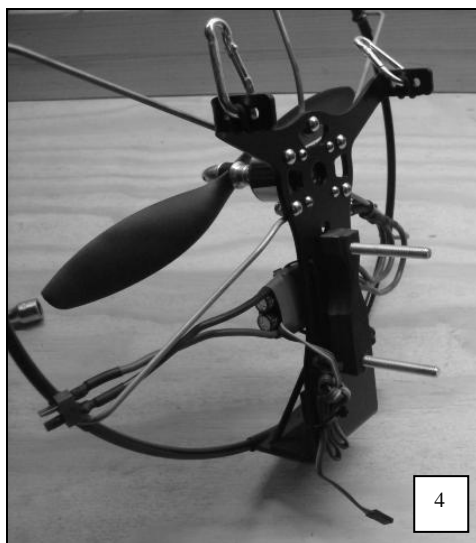
) (THIS SIDE UP



1- SPACER + SCREWS

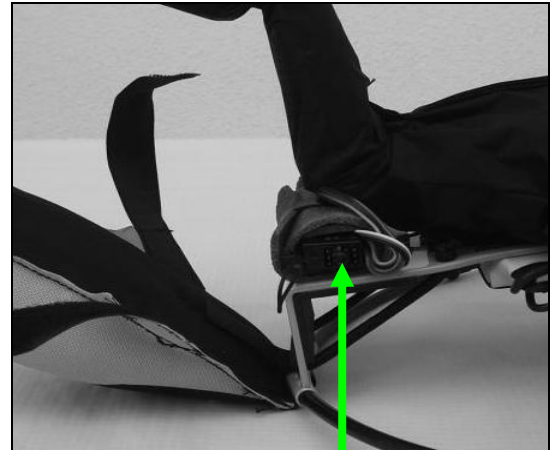
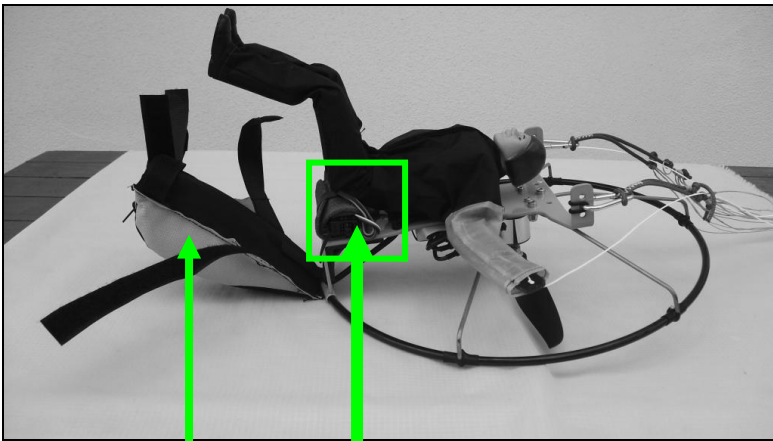
2- TAKE OFF SCREWS

3- HOLES TO BE USED FOR PILOT FIXATION



- 4- CONNECT SPACER TO THE FRAME AS SHOWN (NOTE BRACKET TOWARD THE UP SIDE)
- 5- SETUP THE SUIT IN ORDER TO GET SUIT'S HOLES TO MATCH FRAME'S HOLES
- 6- INSTALL THE BODY ON THE FRAME AND SCREW THE M6 NUT
- 7- TIGHT THE NUT ON THE SCREW
- 8- CLOSE THE FRONT VELCRO

J : RECEIVER ASSEMBLY PHASE 1 :connect the harness only by using rear velcro , connect the receiver to the electronic components , wrap the receiver in to the protection foam supplied with the kit and tight it using a rubber band.
Then place the receiver in one of the 2 positions shown below.
Position 1 is commonly used when removing the receiver is a frequently made action
Position 2 is usually chosen when there's no need to remove the receiver on a regular basis



POSITION NR. 1 – IN TO THE GAP BETWEEN FRAME AND PILOT

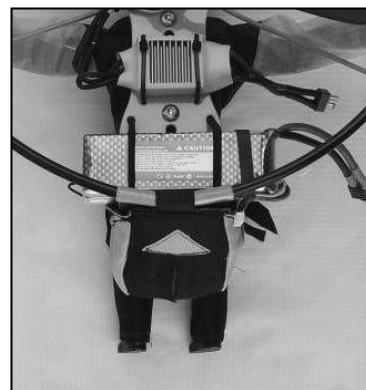
POSITION NR. 2 – INSIDE THE HARNESS) - (GOOD ALTERNATIVE IN CASE YOU ARE USING LARGE RECEIVERS)

1 (**COMPONENTS** : assembled model ACCORDING TO POINT "I", 3)

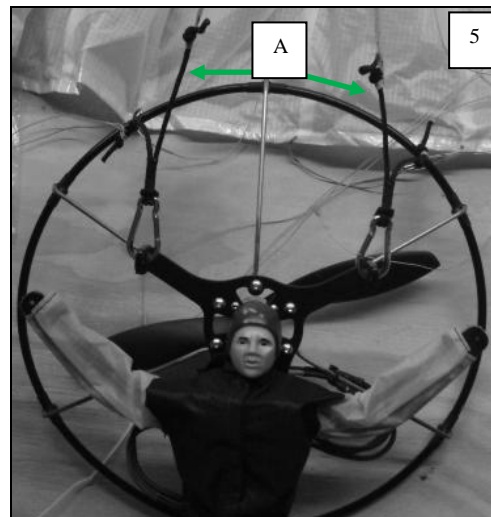
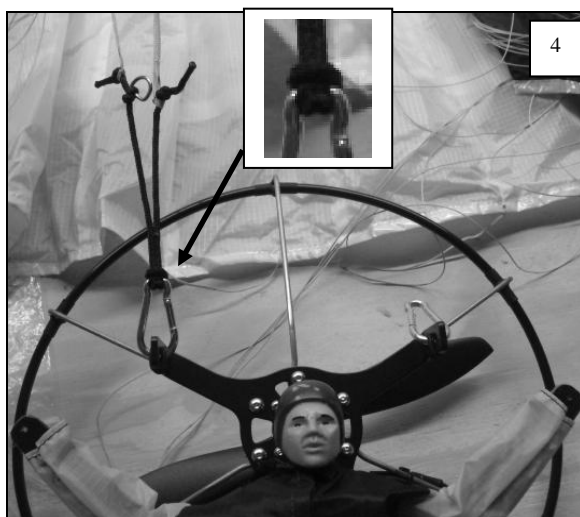
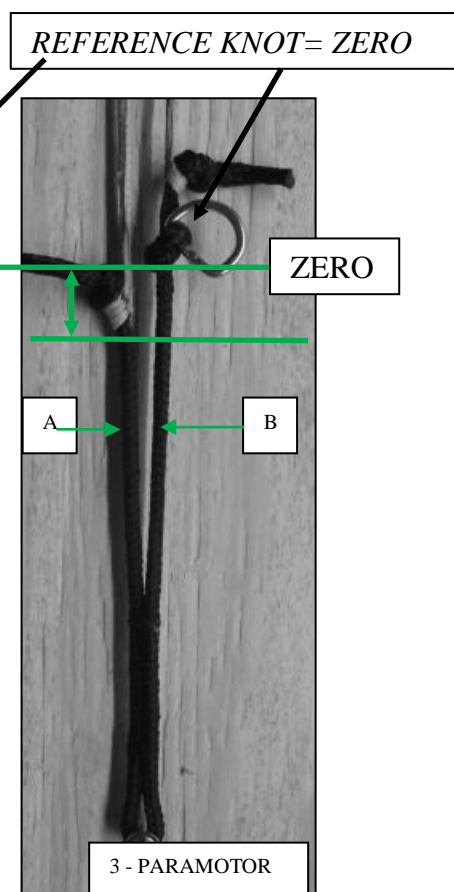
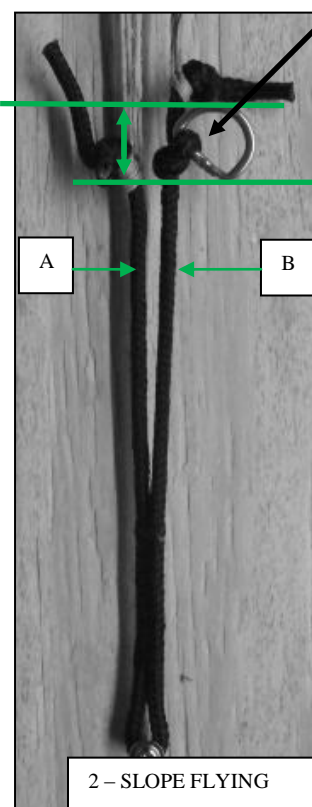
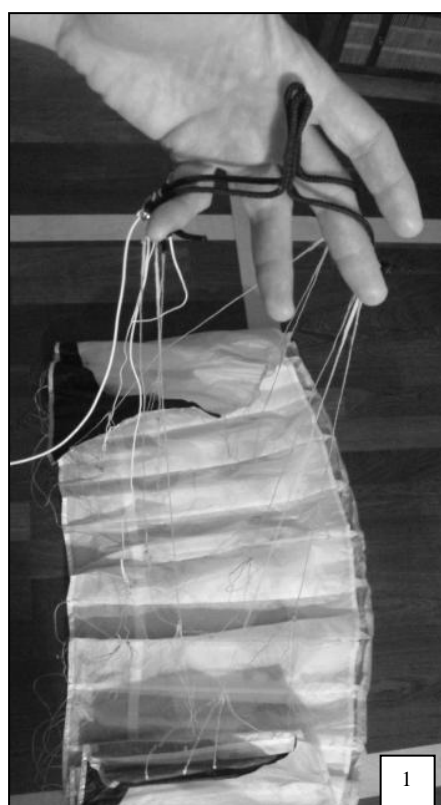


H : BATTERY INSTALLATION – IMPORTANT

Always use a rubber band in order to hold the balance cable and avoid it to hit the spinning propeller



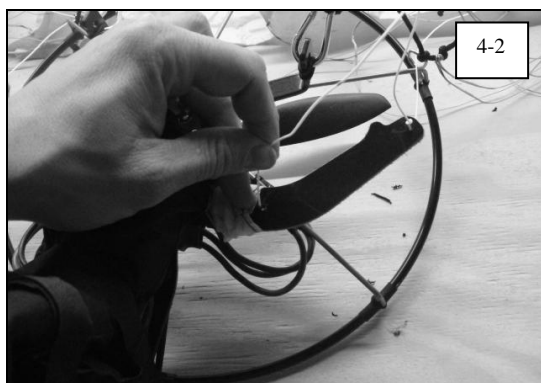
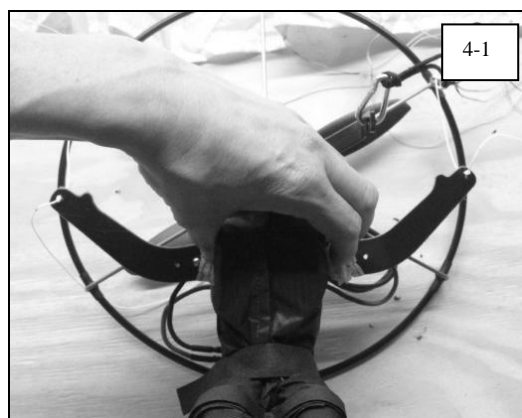
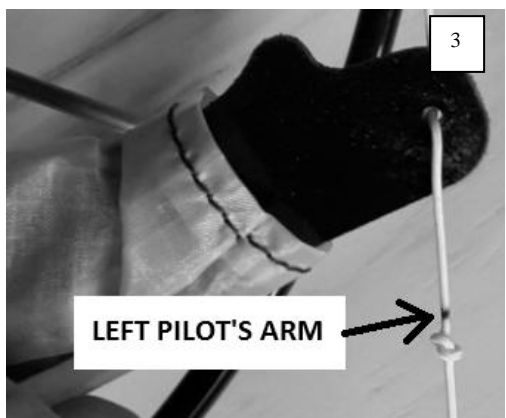
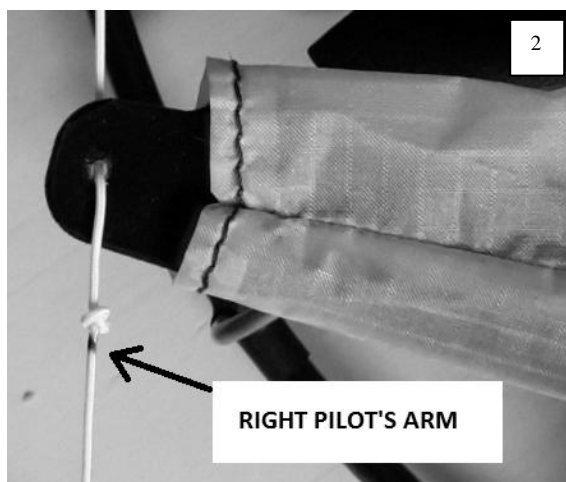
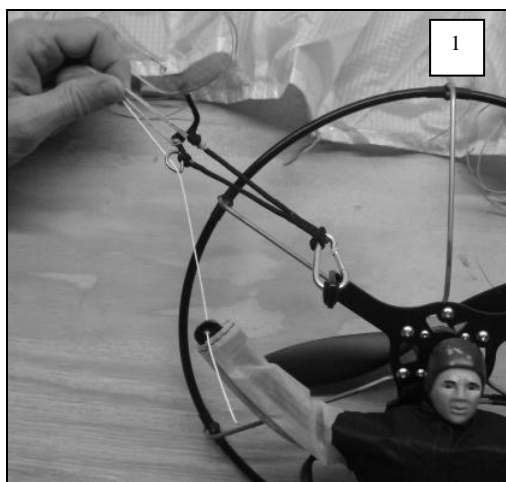
K : RAISERS ADJUSTMENT



1. ENSURE THAT LINES AND RISERS TO BE CLEAR FROM KNOTS
2. "A" RISERS + "B" RISERS – SETUP RANGE "A" POSITION FOR SLOPE FLYING NO MOTOR
3. "A" RISERS + "B" RISERS – SETUP RANGE "A" POSITION FOR PARAMOTOR FLYING
4. CORRECT ASSEMBLY FOR RISERS
5. GLOBAL FEW OF CORRECTLY ASSEMBLED RISERS

A RISER : THE ONE WITH 1 KNOT – THIS THE ONE TO BE MODIFIED TO CHANGE A₀A
B RISER : THE ONE WITH 2 KNOTS – NEVER MOVE THE KNOTS IN THIS RISER !!!

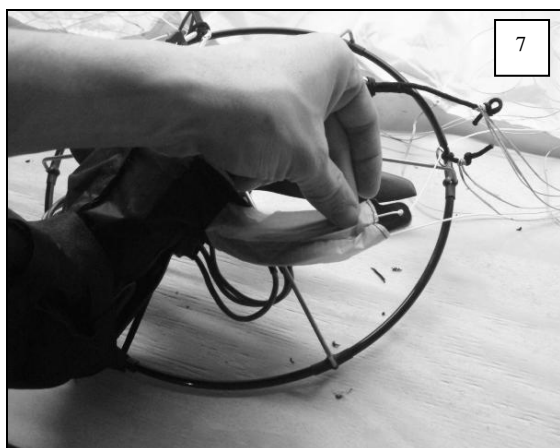
- **SLOPE FLYING : "A" from 0 to +0.5 cm**
- **PARAMOTOR : "A" from 0 TO -0.5 CM**



1. BRAKE CABLE MUST GOES TROUGH HAND'S HOLES
2. MAKE A KNOT APROXIMATELY AS SHOWN (RIGHT ARM) - VERY IMPORTANT TO COUNTER MOTOR TORQUE THE RIGHT BRAKE SHOULD BE ABOUT 1.5 CM SHOTER THAN THE LEFT BRAKE
3. LEFT BRAKE SETUP (IMPORTANT : REFER TO PICTURE8 PAG 19 FOR CORRECT DEFINITION OF WHICH ARE THE LEFT AND RIGHT ARM
4. TAKE EXTRA CABLE AND STICK IT TROUGH THE HOLES
5. PULL THE EXTRA CABLE COMPLETELY

IMPORTANT NOTICE FOR PROPER BRAKES ADJUSTMENT: THE BACK MARKS MADE ON BRAKE CABLES MAY BE INCORRECT , THE CORRECT BRAKES ADJUSTMENT MUST BE CHECKED ON THE FIELD WITH THE inflating (WITH RADIO ON) THIS TEST IS MANDATORY BEFORE MAIDEN FLIGHT.

IMPORTANT : IN ORDER TO EASE BRAKES ADJUSTMENT PLEASE REFER TO THE RULES LISTED ON CHAPTER "I"

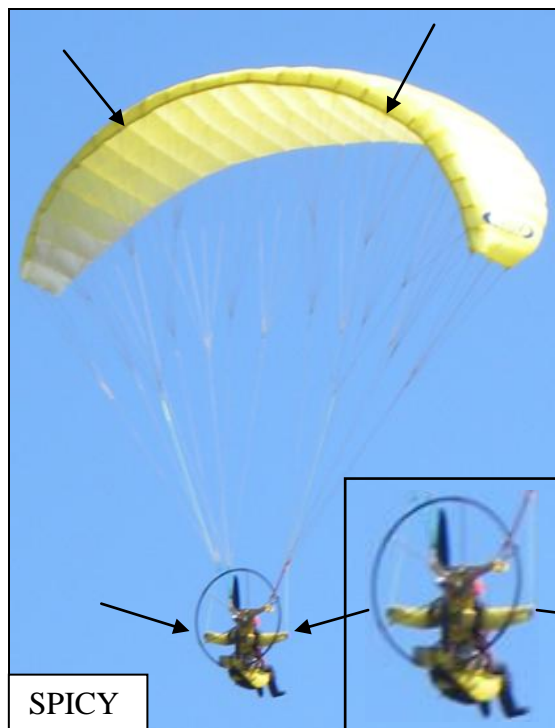


7. LOWER THE SLEEVES

8. FOLLOW SAME PROCEDURE ON LEFT BRAKE – PAY SPECIAL DEAL OF ATTENTION TO PINT 2

L : GENERAL RULES FOR PROPER BRAKES ADJUSTMENT

1. Even with both arms all the way up you must always have a light traction on the brakes (1 to 2 cm).
2. When pUlling arms all the way down (EPA \geq 100%) the wing should reach the stall position within a few seconds, if it doesn't it means that brakes are too long
3. If the wing is too sensitive and it reaches stall very easily then brakes are to short
4. If the wing is constantly turning to one side the brake line on that side is too short, let it go by 0.5 cm at the time until the wing flies straight
5. Adjustment process is a step by step process, the length should be chance with steps of about 0.5 at the time

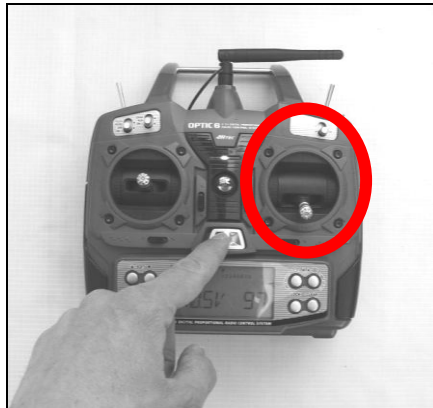


This i show correctly adjusted brakes should looks like whit arm placed in the middle position

2 USING THE MODEL IN FLIGHT

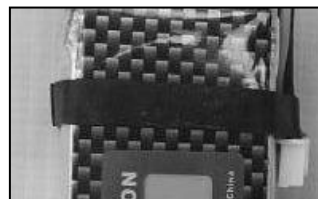
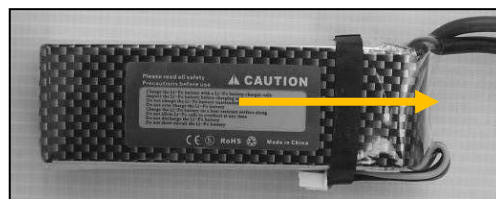
2.1 : PREFLIGHT CHECK :

PHASE 1 : Turn on the transmitter

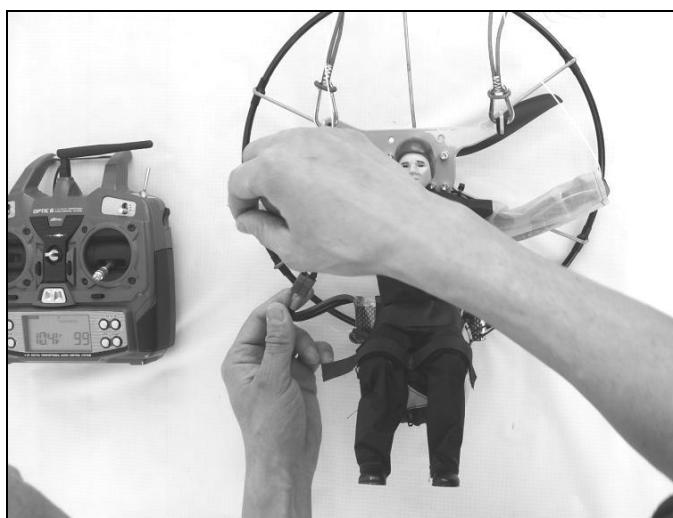


VERY IMPORTANT : MAKE SURE THROTTLE IS PLACED AT 0% BEFORE YOU TURN ON THE PILOT UNIT

PHASE 2 : Make sure the Lipo battery balance cable to be properly wrapped to the battery by mean of a rubber band and place it in a centered position. Important: Make sure the battery is retained by elastics safely and that there is no risk of contact with the propeller.



PHASE 3 : Turn the pilot unit face up and place it on the ground, not you are ready to connect the Lipo battery. Form now on pay maximum attention to the propeller, there's tension now on the motor !!!



DANGER – THE PROPELLER IS NOW READY TO GO

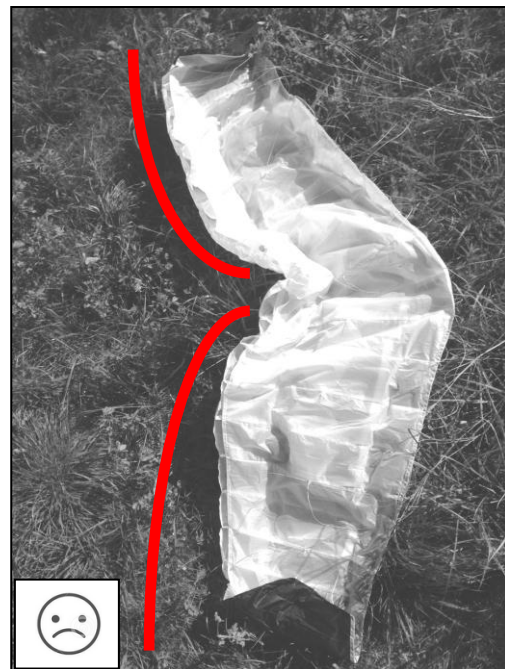


2.2 : SAIL DISPOSAL ON THE GROUND

The MIM paramodels paramotor kits are suitable for use in low wind conditions and a low turbulent. The model can be used both in the flatlands and slope as long as the place is suitable for flying. The first flight **MUST** be done under conditions of almost no wind, little thermal activity, away from trees, electricity pylons, houses, objects and / or people.

WING SETUP

1. Lay the wing on the ground as shown on left picture, the wing should describe an horse shoe shape
2. Make sure you are inflating and launching exactly in to the wind, make a complete radio check, only now you can go.



2.3 : INFLATION AND LAUNCH :

Wait for a light consistano front wind, check the window, airspace must be clear , if everything is OK apply a quick and precise pull and launch the model as show on the pictures (1,2,3,4,5,6)





LAUNCH : TECHNIQUE NR.1 – EXPERT PILOTS : throw the model forward of you exactly in to the wind, push must be directed forward and slightly toward the ground (pictures 6,7,8)



Right after trowing the model (only now) you can turn on th motor (pictures 7-8).

TECHNIQUE NR.2 – BEGINNERS :

1. Setup the model as previously shown
2. Inflate the wing as shown on on pictures 1 trough 6
3. Accompany the model with a gentle pull while applying some motor
4. Keep power on at about 20-30% of the power and let go the model
5. Only now increase the amount of power

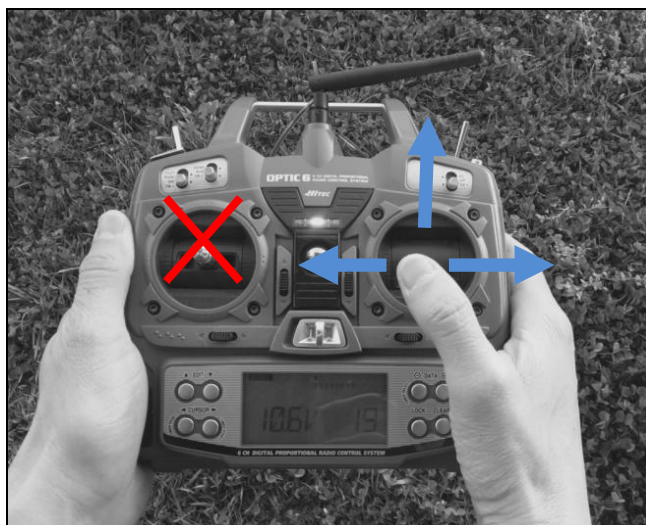
VERY IMPORTANT , IN CASE OF PROBLEM REMEMBER TO TURN OFF THE ENGINE IMMEDIATELY , THIS WILL AVOID YOU TO GET INJURED AND WILL AVOID ANY DAMAGE TO THE MODEL

2.4 : RADIO USE FOR BEGINNERS TO EXPERT

RADIO USE FOR EARLIEST FLIGHTS: During the earliest flights we suggest to use only throttle and roll stick, this means that no matter if you are using mode 1 or 4 , you will end controlling the model just by using 1 stick , pitch command will never be used unless you are landing , only in this moment pitch will be allowed and it'll help reducing the speed by stalling the wing. This simple suggestion will make things easier and will avoid user to accidentally stalling or overcontrolling the wing.

EXAMPLE : MODE 1 RADIO , REFER TO PAGE 13 FOR CORRECT SETUP

NOTE 1 : THIS TIP IS NOT ONLY USEFUL FOR BEGINNERS WITH NO EXPERIENCE THE PILOT ON RADIO-CONTROLLED MODELS BUT CAN' BE VERY USEFUL FOR EVEN EXPERIENCED PILOTS WITH NO EXPERIENCE IN PARAGLIDING



NOTE 2 : THE USE OF PITCH COMMAND IS ALLOWED ONLY TO STALL THE WING WHEN LANDING

BEGINNERS

RADIO USE FOR EXPERIENCED PILOTS : once the necessary experience is made you can start using the pitch command , this will open a new world of possibilities by allowing incredible tricks and much better control and increased handling

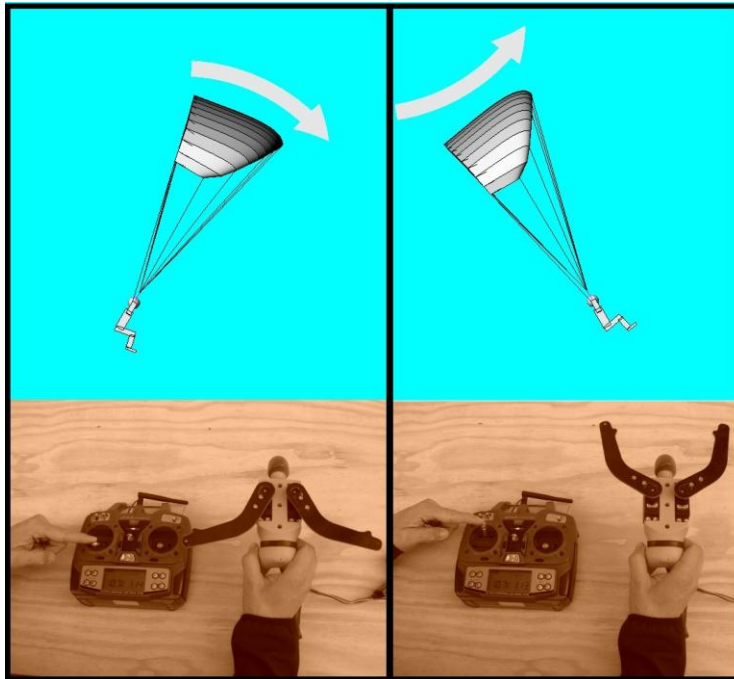


EXPERT PILOTS

3 : USING OF THE MODE IN THE AIR

3.1 WORKING PRINCIPLES , RULES AND TIPS

In case of loss of control around pitch axle a very simple rule can be used to gain stable flight again, this can be achieved by simply lifting both arms and turning off the motor, this is a simple and effective rule for beginners, anyway a more active procedure can be used as shown on pictures below :



PITCH CONTROL :

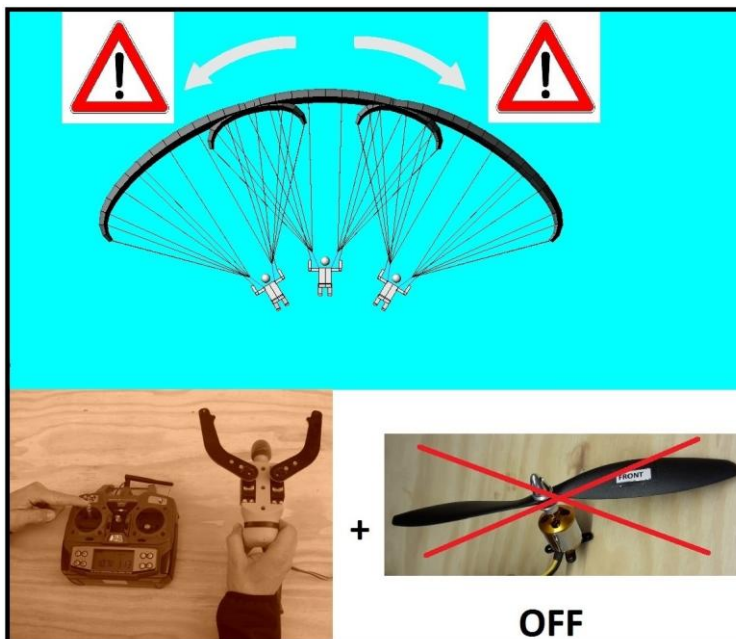
1-When wing over shoot the pilot apply both brakes to slow down the wing

2-When the wing is behind the pilot put both arms up to allow it coming back over pilot's head

IMPORTANT , IN CASE OF STALL (WING FLIES BACKWARD) WAIT A FEW SECONDS (UNTIL THE WING IS OVER PILOT'S HEAD AGAIN) BEFORE PROMPTLY LETTING TO BOTH BRAKES .

3.2 ROLL CONTROL :

in case of uncontrolled oscillations around roll axes the same "old" rule can be used to easily achieved stability , just turn off motor and place both arms up

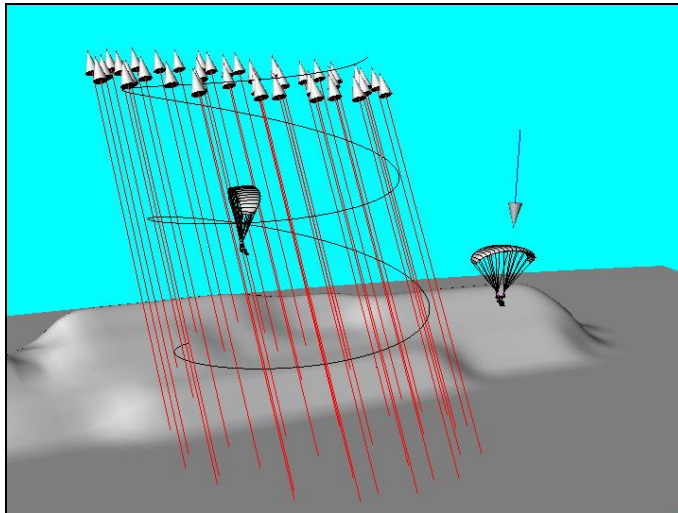


3.3 INTRODUCTION TO THERMAL FLIGHT :

A thermal is a column of hot air that rises at a certain speed. The rate of a thermal is measured in meters / sec or ft / sec. In order to gain altitude with engine off the thermal must have a climb rate higher than the sink rate of your wing IN ORDER TO GAIN ALTITUDE AS FAST AND AS MUCH AS POSSIBLE IT IS MANDATORY TO CENTER THE THERMAL BY FLYING IN TO THE CORE

THIS CAN BE ACHIEVED BY MAKING CIRCULAR TURNS (360 °) OR "8" TURNS IF YOU TOO CLOSE TO THE SLOPE FOR A SAFE 360°.

There are no written rules, each thermals has got its own shape, only practice will allow you to taking full advantage of each thermal by adjusting the turn radius and the trajectory depending on the thermal's shape.



Example of Thermal triggered away from the slope.- when the thermal is not too close to the slope it is usually possible to perform 360° turns in order to climb.

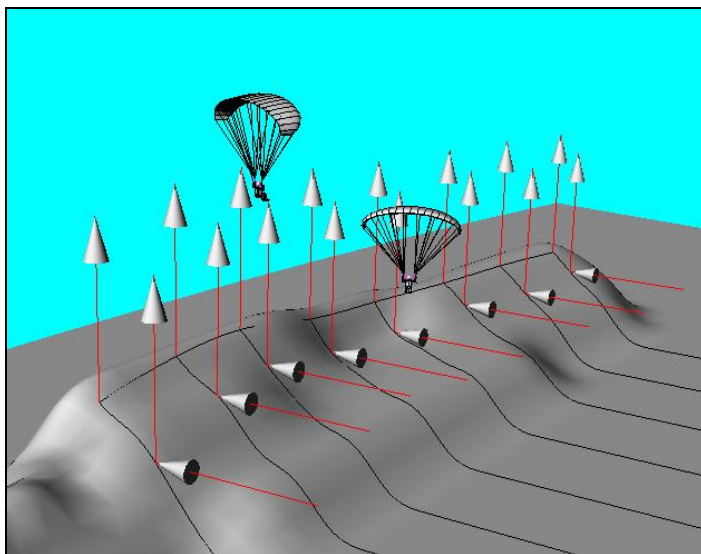
When windy the thermal will move within the wind.

As show pilot on the right side is outside the thermal and it's sinking.

At the same time the pilot on the left side is performing a 360° turn inside to remain inside the thermal and he is climbing.

3.4 INTRODUCTION TO RIDGE SOARING :

The other kind of lift commonly used by free flyers is generated by the mechanical action tall objects(hills, mountains , buildings and so on) hit by breezes and winds with proper speed and orientation. This phenomenon generates a lift close to the object that allows flyers to stay in the air for ours and to gain altitude way above the object that generates the lift band



Example :

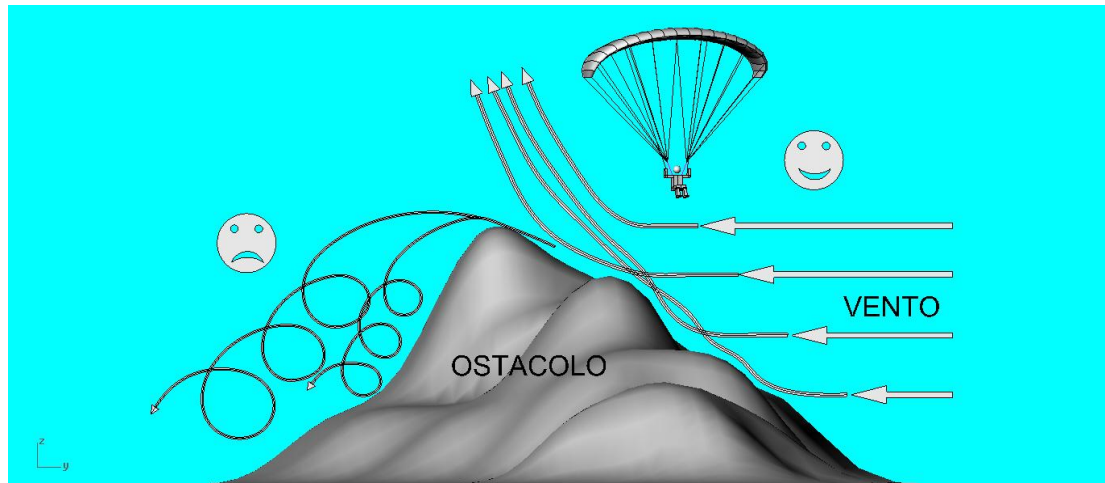
NECESSARY CONDITIONS FOR LIFT BAND GENERATION :

Wind 15-20 Km/h

1. Wing perpendicular to the slope
2. Slope inclination (minimum 30°)
3. Absence of high obstacles (trees , buildings and so on) placed in front of the trigger object – any kind of object placed in front will generates turbulent wind that will reduce or esare the lift band.

3.5 DOWNWIND TURBULENCE – VERY IMPORTANT :

One of the biggest enemies for free flyers all over the world is given by the turbulent air generated on the downwind side of anykind of object hit by a breeze.



Example of Objects (Obstacles) able to generate turrulence :

- Buildings
- Tall tress and trees lines
- Other pilots in the air close or in front of us

IMPORTANT – COMMON MISTAKES :

The stronger the wind the better it flies : **FALSE !!!!** (Ideal wind is 0 to 10 Km/h)

If the wind is to strong I can fly where the wind is quiter i.e. on the downside of building or trees line where the wind is usually quiter than the upwind side : **TOTALLY FALSE – AND VERY DANGEROUS !!!!**

The essential condition for lift band generation is to get a strong wind : **FALSE !!!!**
Wind is one of the necessary ingredients but it's not the only one, wind must also be perpendicular to the slope , any variation form ideal (90°) direction will determine

- A REDUCTION OF THE LIFT BAND WIDTH AND POWER
- INCREASE OF TURBULENCE GENERATED BY OBSTACLES PLACED ON THE UPWIND SIDE RELATIVELY TO THE TAKE OFF AREA

3.6 SUGGESTED WEIGHTS TABLE:

Level of experience	Wind speed	Indicative total weight (no wing)
Beginner	5-10 km/h	1000/1200 gr
Beginner/intermediate	10 -18 km/h	1300/1400 gr
Expert	18 - 25 km/h	1500/1600 gr

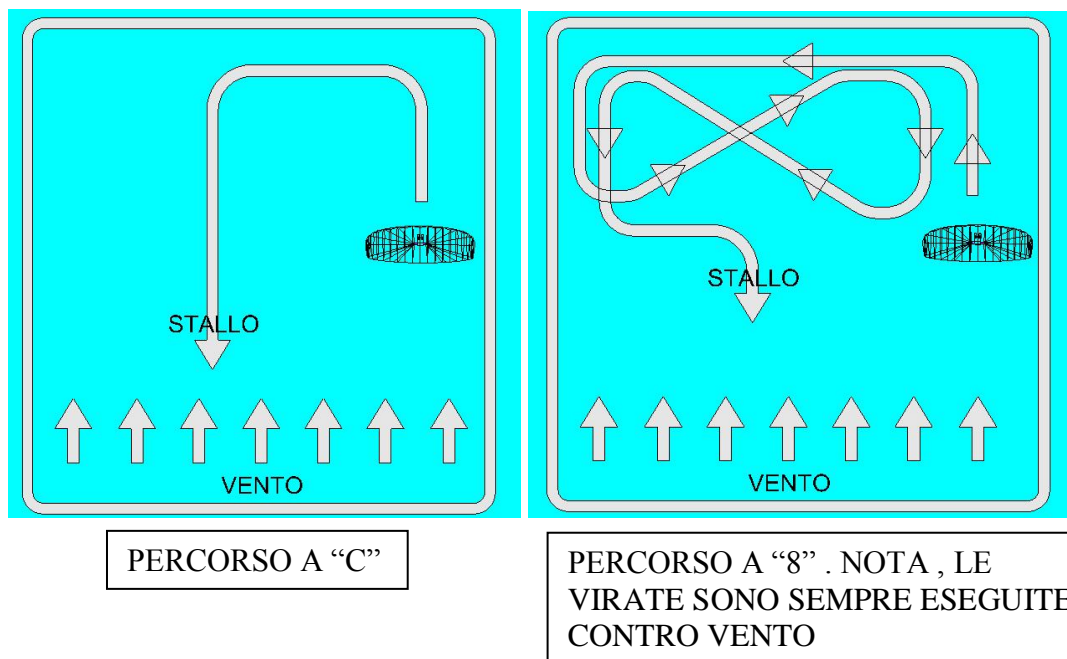
IMPORTANT : ABOVE WIND TABLE MUST NOT BE TAKEN AS A RULE, IT IS JUST A INDICATIVE TABLE GIVEN TO THE USER. MIM paramodels will not anyhow be responsible for any damage inputable to wrong interpretations and/or evaluations made by the final users

3.7 LANDING TECHNIQUE AND “TOP LANDING “

MAIN TASKS FOR A CORRECT LANDING :

- 1) Reach proper height for final approach, height in excess should be lost by making a “C” figured “8” approach **with turns always in to the wind.**
- 2) loose final height always by flying straight in to the wind
- 3) When you are about 1 mt of the ground start to slow down the wing by progressively pulling the brakes all the way down , don't let them go now , hold the pull and stall the wing - SEE NEXT PAGE'S PICTURE FOR CORRECT FLAIR

PERCORSI DI AVVICINAMENTO CORRETTI :



TOP LANDING (LANDING ON TAKE OFF AREA) pay attention , top landing is usually more complicated than a landing on flatlands due to usual presence of lift and close to the slope, this may required several attempts in order to understand the correct height for final approach

“HERE IS A CORRECT FINAL FLAIR “



4. RAPID DESCEND TECHNIQUES

4.1 When you will need them

When losing height safely and quickly is a necessary thing RDT (rapid descend techniques can be used). Many of the real RDT manoeuvres such as spirals and wingovers are possible as long as they rely solely on brake control. The MIM kit cannot perform maneuvers such as big ears, B-line stalls and others that require use of lines besides the brakes.

All the available maneuvers require a thorough understanding of the execution and of techniques of recovery (see 3.1 and 3.2). It's a good idea to learn from more experienced pilots or from paragliding instructors. You should not perform such maneuvers in close proximity of the terrain and NEVER in the vicinity of bystanders or other pilots in flight.

If you need to descend quickly but do not have the skill to perform the more advanced maneuvers below, simply stall the wing by pulling both brakes all the way, as described in Sect. 4.3 and below.

4.2 Spiral

This is the fastest and most efficient way to lose altitude.

You should enter the spiral from straight and level flight: starting with 50% brake on both sides (normal flight position), simultaneously pull one brake farther, on the "inside" (the direction in which you want to spiral) and at the same time release the opposite ("outside") brake. All brake actions should be smooth and progressive. The rate and bank angle of the turn should progressively increase until the Spicy is spiraling rapidly towards the ground.

Once you have entered the spiral, return the controls to the normal flight position with 50% of each brake pulled. The Spicy should lock in a stable spiral and descend rapidly.

To exit the spiral, start pulling the outside brake, taking care to apply brake pressure slowly and evenly. The wing should resume straight flight within one rotation.

If well executed, the exit should not cause excessive rolling or pitching. However, if the exit is executed too suddenly, you might "loop" the wing and likely lose control. Oops!

Again, when the wing is behind the RC pilot, release the brakes, and when the wing dives in front, apply the appropriate amount of brake to keep the wing over the model pilot's head.

Just like with a full-scale paraglider ☺.

If you overcorrect and lose control of the model, let the model pilot's arms up and try to regain control of the flight path. If you are close to the ground, stall the wing and maintain the stall until the impact with the ground.

4.3 Wing Over

A “wing over” is caused by a series of reversing left and right brake pulls, resulting in an increasingly banked series of pendular rotations. Timing is the basic feature of this maneuver.

A well-executed wing over combines the right brake / left brake action with a symmetric component in the pitch that requires accurate timing with respect to the pendular motion. It is difficult to describe the exact details of this maneuver, and the only effective way to learn the correct timing is through practice.

4.3 Controlled stall

The controlled stall is less efficient than a spiral or wingovers for losing altitude, but is spectacular and sometimes useful to recover control of the wing (for example after a ‘cravatte’ – wherein the wingtip becomes tangled in the lines resulting in an uncontrollable spiral or spin).

To correctly execute a stall, start from a straight and level flight, with the model pilot’s hands “all up”, and pull both brakes energetically and symmetrically all the way down.

It is absolutely necessary that the brakes be pulled symmetrically. If the stall is not reached in 3-4 seconds from the moment that the model pilot’s arms are pulled all the way down, then the brakes need to be shortened. Also the radio controls should be set so that the servos range is at least 120%.

Maintain the stall, and the wing will reduce speed, stop flying, and will fall behind the model pilot.

Now the wing is stalled: DO NOT RELEASE THE BRAKES!!! Otherwise the wing will resume flying too fast and likely dive in front of the model pilot, and the model pilot will likely end up falling inside the wing.

Maintain the stall for at least 3-4 seconds until the wing is stable above the model pilot’s head. Release the brakes to 50% brake pressure. The wing will then start re-inflating, at which point you should release the brakes completely (arms all up).

The wing will tend to dive rather violently as the Spicy recovers from the stall, possibly resulting in a frontal collapse (folding of the front edge of the wing). Do not attempt to control this phase, but rather keep the model pilot’s hands up. The wing should resume straight and level flight very shortly.

If this doesn’t happen, then use the brakes to resume complete control of the wing or return to the stall position (hands all the way down) to provide for a soft landing.

4.4 Other maneuvers

The Spicy is suitable for other maneuvers, but their description is beyond the scope of this instruction manual.

If you want to experiment you can try the following:

1. The Helicopter
2. Dynamic stall
3. SAT
4. Looping or Roll Over
5. Mc Twist
6. Tumbling

You cannot execute maneuvers that depend on actions on the A and B risers such as:

1. B-stall
2. Big Ears
3. Asymmetric collapse
4. Frontal collapse

Actually asymmetric and frontal collapses are somewhat inducible by deliberately forcing rolling, but both precision and reproducibility are questionable.

5 . HILLSIDE FLIGHT

5.1 Basic rules

Hillside flight is very exciting. The Spicy, thanks to its good performance and inherent stability will allow you to exploit to the maximum the characteristic of the slope you choose for your flight.

You will need to follow some basic rules to make your life easier and avoid long walks to retrieve your RC model.

- 1) If you are not an experienced pilot, talk to the local experts, to make sure that the hillside you choose can actually generate lift.
- 2) Make sure that on any given day to choose to fly, the conditions are favorable and you can find lift. Even the best pilot can't fly without thermals.
- 3) Calibrate the wing load on the weather conditions. If you are not sure, it is best to start heavy and lighten up later, rather than loose your RC model
- 4) Practice to achieve efficient turns which, just like on a full-size paraglider, are essential to minimize altitude losses.
An efficient turn is the result of asymmetric brake control and a flat asset, and should always be in your complete control.

On the other hand, an uncoordinated, angled turn with excessive rolling will cause you to loose precious meters and waste most of the energy provided by the thermal lift.

Don't fly with too much brakes, you risk to stall the inside wing and cause a negative spin. The correct reaction to this occurrence is to let the brakes "all up" so that the wing will regain some speed.

Should you find yourself in a dynamic stall (the wing stops flying and falls behind the RC pilot's body), wait until the stall is stabilized (deflated wing over the pilot's head) before releasing the brakes.

If you enter a parachutal stall (the wing stops flying but stays inflated and loses altitude) then release the brakes immediately.

THANK YOU FOR YOUR KIND ATTENTION, IF YOU HAVE ANY FURTHER
QUESTION DO NOT HESITATE TO CONTACT US

FLY SAFE

MIM paramodels Team

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