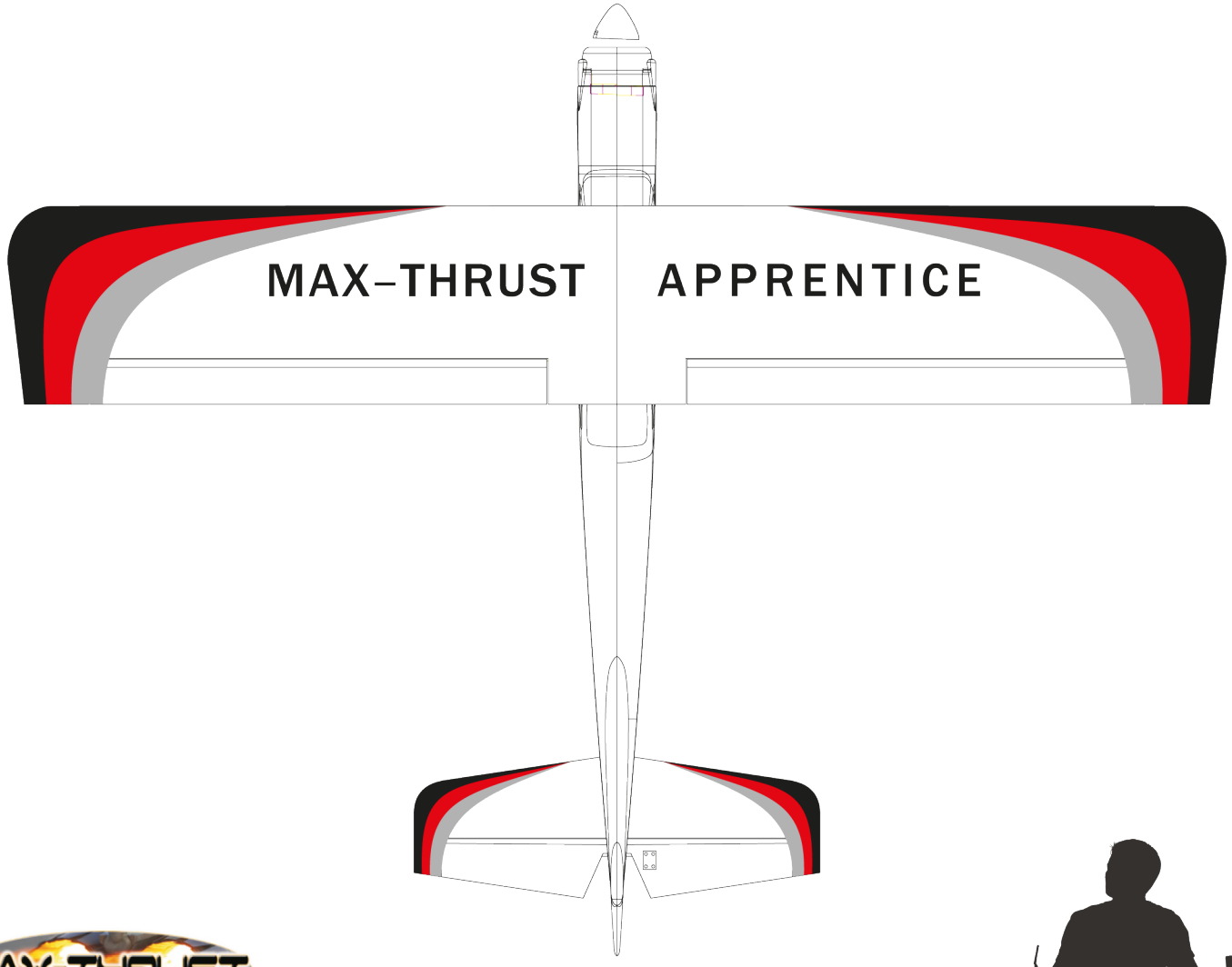
MAX THRUST

# THE APPRENTICE

## Instruction Manual




Distributed by Century UK Ltd

# Specification

| | |
|---|---|
| Wingspan: | 810mm / 31.9 “ |
| Length: | 640mm / 25.2” |
| Prop: | 6x6 2 blades |
| Motor: | BL2222, 2200 KV |
| ESC: | 15 Amp Brushless ESC |
| Servos: | 3 pcs 8g |
| Battery Type: | 800mAh 7.4V 2 Cell 30c Li-Po |
| Radio System: | 4Channel 2.4GHz |

**NOTICE**

All instructions, warranties and specifications are subject to change at the sole discretion of Century UK Ltd. For up to date product information go to www.centuryuk.com

**Meaning of Special Language:**

The following terms are used throughout the product literature to indicate various levels of potential harm when operating this product.

NOTICE: Procedures, which if not properly followed create a possibility of physical property damage AND little or not possibility of harm.

CAUTION: Procedures, which if not properly followed create the probability of physical property damage AND a possibility of serious harm.

WARNING: Procedures, which if not properly followed create the probability of property damage, collateral damage, serious injury OR create a high probability of injury.

⚠ WARNING: Read the entire instruction manual to become familiar with the features of the product before operating. Failure to operate the product correctly can result in damage to the product, personal property and cause serious injury.
This is a sophisticated hobby product. It must be operated with caution and common sense and requires some basic mechanical ability. Failure to operate this product in a safe and responsible manner could result in injury or damage to the product or property. This product is not intended for use by children without direct adult supervision. Do not attempt disassembly, use with incompatible components or augment product in any way without the approval of Century UK LTD. This manual contains instructions for safety, operation and maintenance. It is essential to read and follow all the instructions and warnings in the manual prior to assembly, setup or use in order to operate correctly and avoid damage or serious injury.

Age recommendation: Not for children under the age of 14 unless supervised by an adult. This is not a Toy.

### Safety Precautions and Warnings

As the user of this product you are solely responsible for operating in a manner that does not endanger yourself and others or result in damage to the product or the property of others.

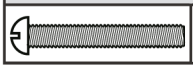
- Always keep a safe distance in all direction around your model to avoid collisions or injury. This model is controlled by a radio signal subject to interference from many sources outside your control. Interference can cause momentary loss of control.
- Always operate your model in open spaces away from traffic, people and full size aircraft.
- Always carefully follow the directions and warnings for this and any optional support equipment (chargers, rechargeable battery packs, etc)
- Always keep all chemicals, small parts and anything electrical out of the reach of children
- Always avoid water exposure to all equipment not specifically designed and protected for this purpose. Moisture causes damage to electronics.
- Never place any portion of the model in your mouth as it could cause serious injury.
- Never operate your model with low transmitter batteries.
- Always keep aircraft in sight and under control.
- Always use fully charged batteries.
- Always keep transmitter powered on whilst the aircraft is powered
- Always remove batteries before disassembly of model.
- Always keep moving parts clean
- Always keep parts dry.
- Always let parts cool after use before touching.
- Always remove batteries after each flight and before charging.
- Never operate model with damaged wiring.
- Never touch moving parts.

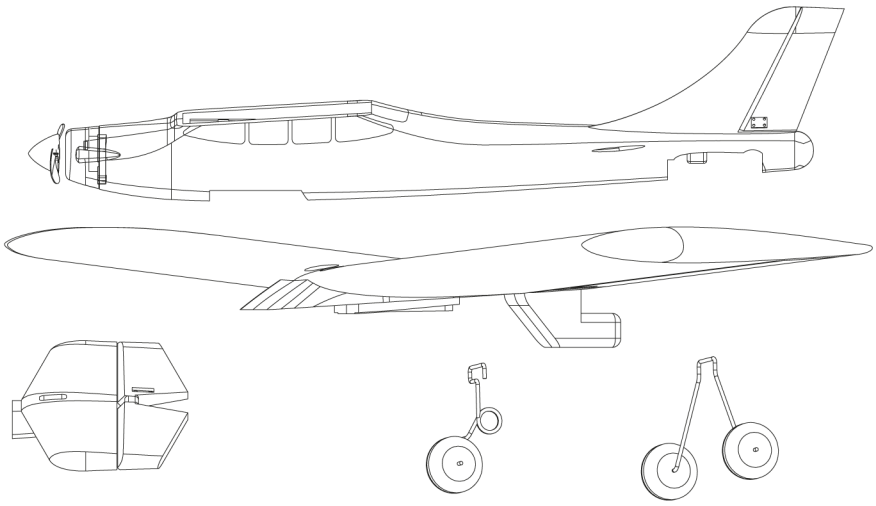
## Introduction

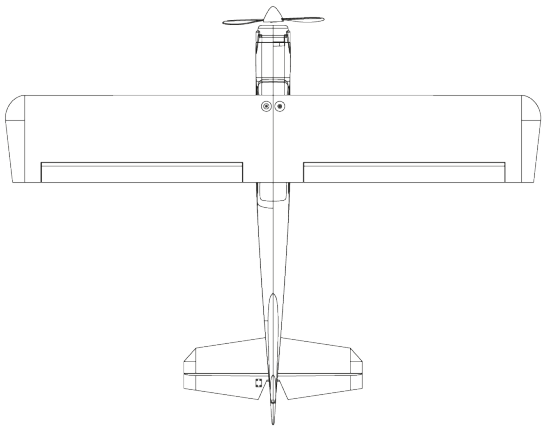
Thank you for purchasing this model. You are about to learn to fly with one of the best trainer models ever designed. The Apprentice is the ideal plane for the beginner. Before you take to the sky though you must read this instruction manual fully. If you have any questions or do not understand any part then please contact your place of purchase or Century UK who will be pleased to assist.

## Box Contents

**Included Screws and Fasteners**

| | Size | Qty |
|---|---|---|
|  | PM 3*35 | 2 |





Weight: ( RTF with landing gear ) 350g
* Weight is with 800 mAh 2- cell Lipo

**Installed**

**Motor**: BL2222 , 2200 KV

**ESC**: 15-Amp Brushless ESC

**Servos**: 3pcs 8g

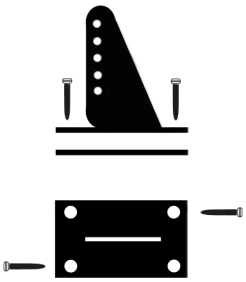
Battery type: 800mAh 7.4V 2 -cell 30C Li-Po

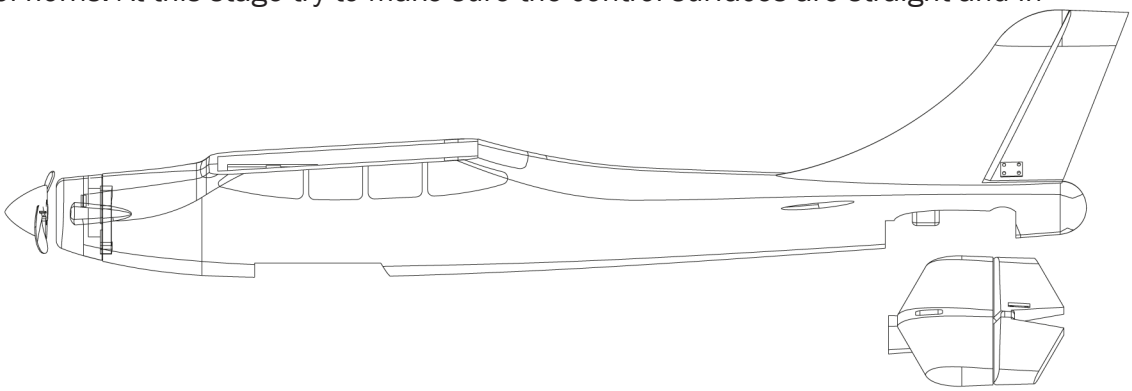
# Assembling the Apprentice

1. Please install the tail plane as shown in the diagram below using an appropriate glue. Try not to use too much glue as this can effect the balance of the model. (UHU Por, 2 Part Epoxy or Cyno)

2. Install the plastic control horns to the control surface using the supplied screws. You will need to use 2 screws per control horn. The screws are put through the horn from the connector side. There are four holes in each horn, be sure to put one screw at the front and the other at the back diagonally as per the picture below.

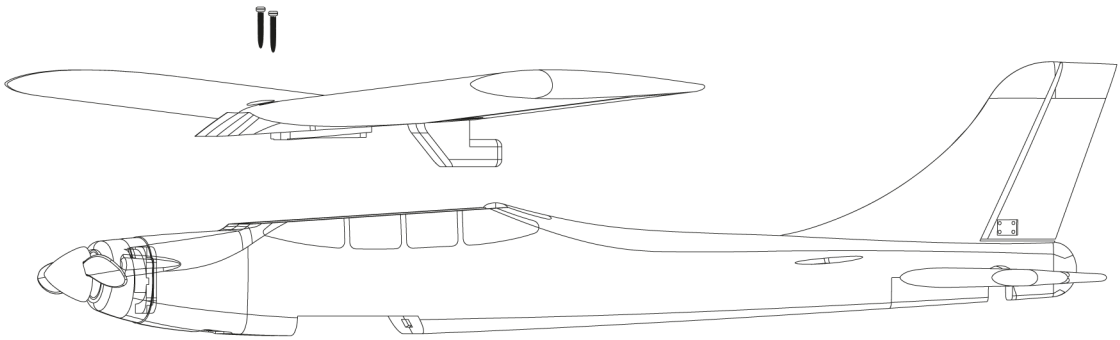
3. The plastic snap connectors on the end of the control rods can now be adjusted for length and connected to the control horns. At this stage try to make sure the control surfaces are straight and in alignment.





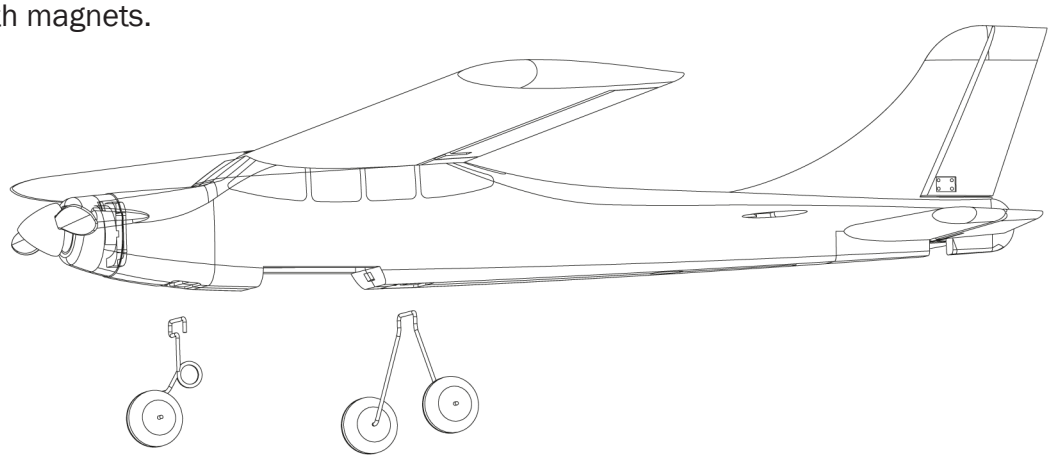
4. The wing has the aileron servo pre installed, you will need to connect the aileron servos wire to the receiver in the fuselage. Please make sure that the plug is inserted in the correct way, the colours should line up with the other leads already installed.

5. Place the wing on to the fuselage slightly forward of its final position and then slide it backwards into position, when aligned you can hold it in place with the 2 supplied wing bolts.

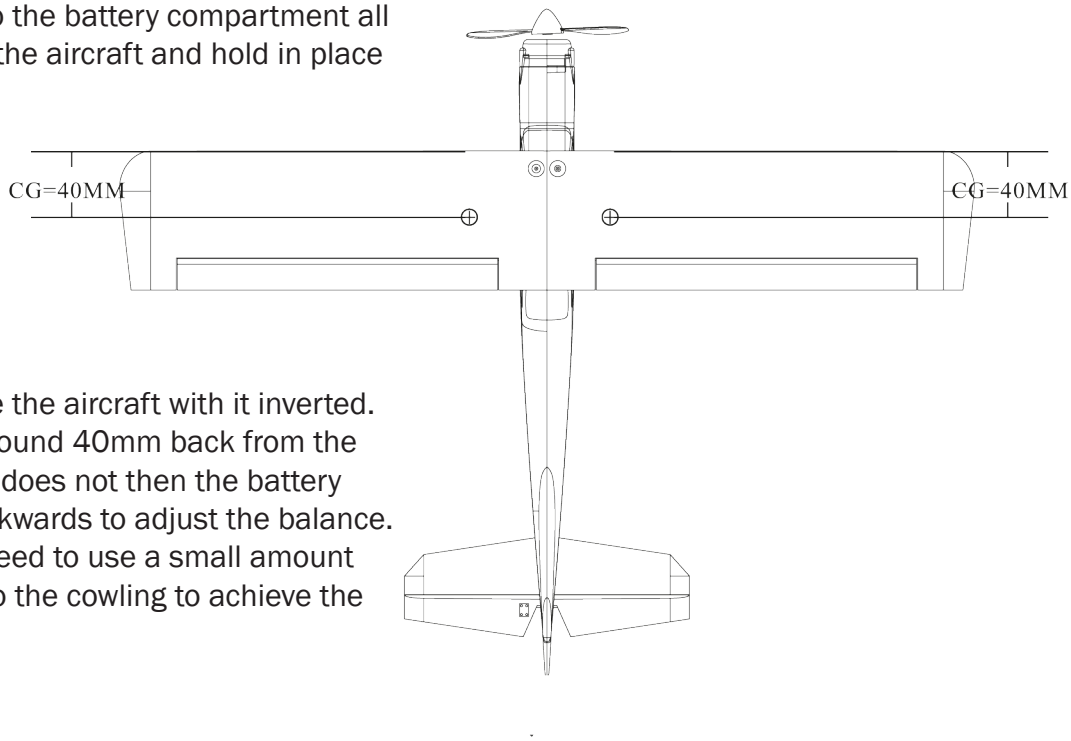


6. The tricycle undercarriage pushes in to place as per the diagram below. Please be sure to install the front wheel the correct way.

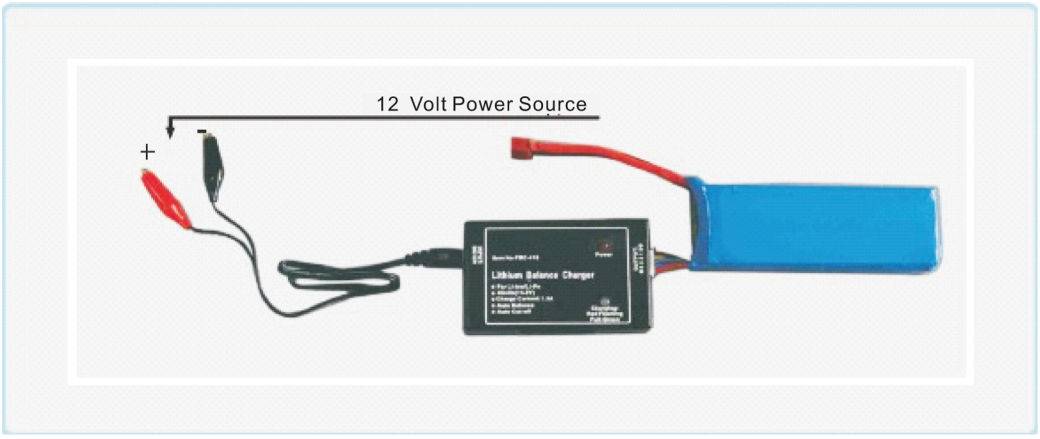
7. It is a good idea at this stage to remove the battery hatch which is located between the wheels and held in place with magnets.



8. Install the battery in to the battery compartment all the way towards the front on the aircraft and hold in place using the Velcro straps.




9. It is easiest to balance the aircraft with it inverted. The model should balance around 40mm back from the leading edge of the wing. If it does not then the battery can be moved forward or backwards to adjust the balance. In some instances you may need to use a small amount of additional weight fixed in to the cowling to achieve the correct C of G.




10. Battery Charging.

a. Connect the charger to a 12 volt power source.
b. Connect the battery to the charger using the short lead. Insure this is connected the correct way around.
c. The light on the charger will flash red whilst the battery is charging and then change to a solid light when the battery is fully charged.
d. The charge time will vary dependant on the amount of charge left in the battery but will not exceed 2 hours.

Do not leave the battery unattended at any time when charging, we recommend using a Li-Po safe bag whilst charging as charging a battery incorrectly or charging a damaged battery can cause it to explode or catch fire.

**NEVER LEAVE THE BATTERY CHARGING FOR MORE THAN TWO HOURS.**

Keep the battery and charger out of the reach of children.
Only charge the battery with the supplied charger.
Do not charge the battery if there is any noticeable swelling of the battery or the battery is hot to touch.
Do not damage or dismantle the battery.
Do not short circuit the battery.
Do not put the battery into water.
Improper use of the battery may cause fire or an explosion!
Always put the battery in a fire proof container or charge bag when it is being charged or not in use.

## Control Direction Test

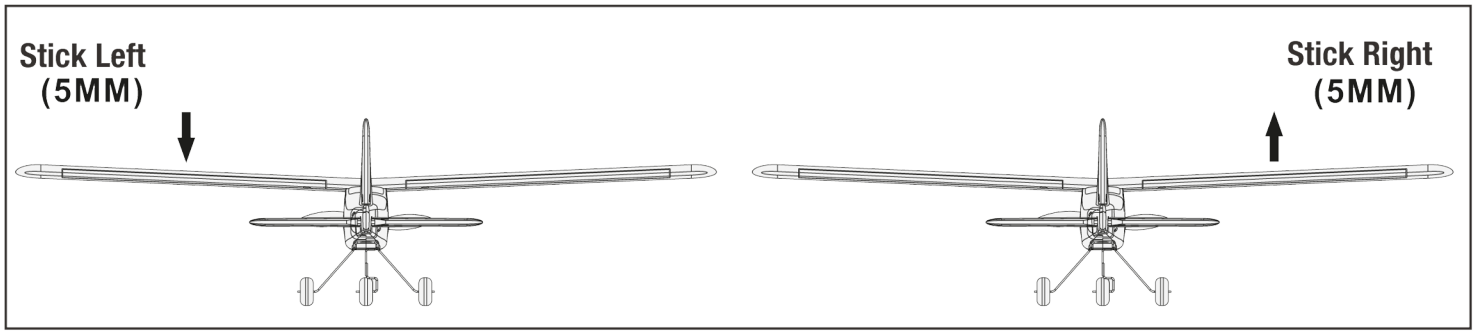
Your model comes pre bound and tested but it is very important for you to check the controls move in the correct direction, if you are at all uncertain please contact your place of purchase or Century UK before flying your model. If the control surface goes in the wrong direction in relation to the input from the transmitter you can reverse the channel using the switches on the front of the handset.

Century UK highly recommend that you seek advice and assistance when learning to fly. Most shops and clubs offer this service. To find a local club in the UK log onto www.bmfa.org where you will find information about clubs local to you.

### Aileron

These are the control surfaces attached to the main wing. They are operated when the right hand stick on the transmitter is moved from side to side. When the right hand stick is moved to the right the right hand aileron moves up and the left down, this makes the model roll to the right and is known as “banking the model”. Moving the right hand stick to the left will create the opposite effect.

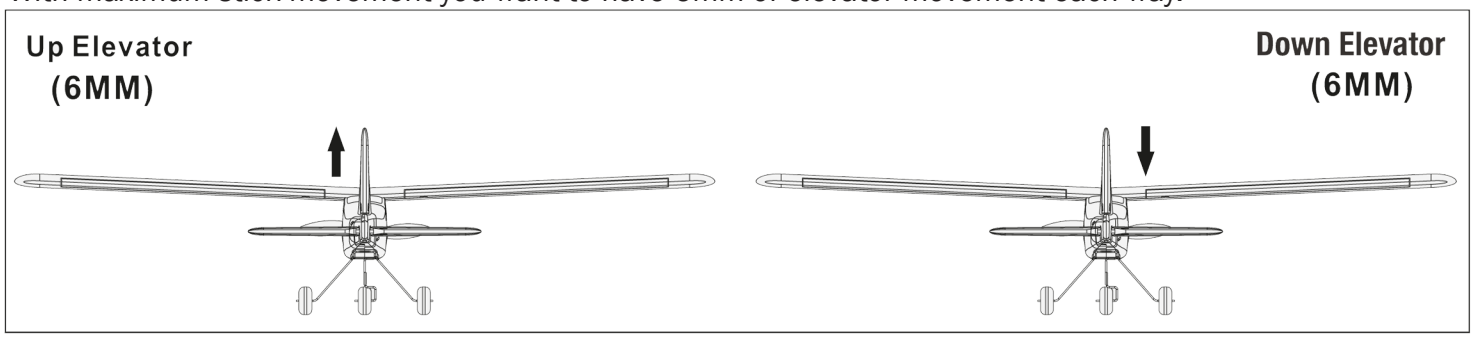
With maximum stick movement you want to have 5mm of aileron movement. The movement can be increased of decreased by moving the snap connector on the control horn. If you move the snap connector to a hole nearer the surface it will increase the amount of surface movement.




### Elevator

This is the horizontal control surface that is attached to the tail plane. This is operated by moving the right hand stick forwards and backwards. When you pull the stick towards you the back edge of the elevator will move upwards, this action raises the nose of the model to gain height and is known as “pulling the nose up”. In flight too much prolonged pulling up of the nose will slow the aircraft and induce a stall so be careful. Pushing the right hand stick forward has the opposite effect and will push the nose of the aircraft down which increases the air speed and induces a dive.

With maximum stick movement you want to have 6mm of elevator movement each way.

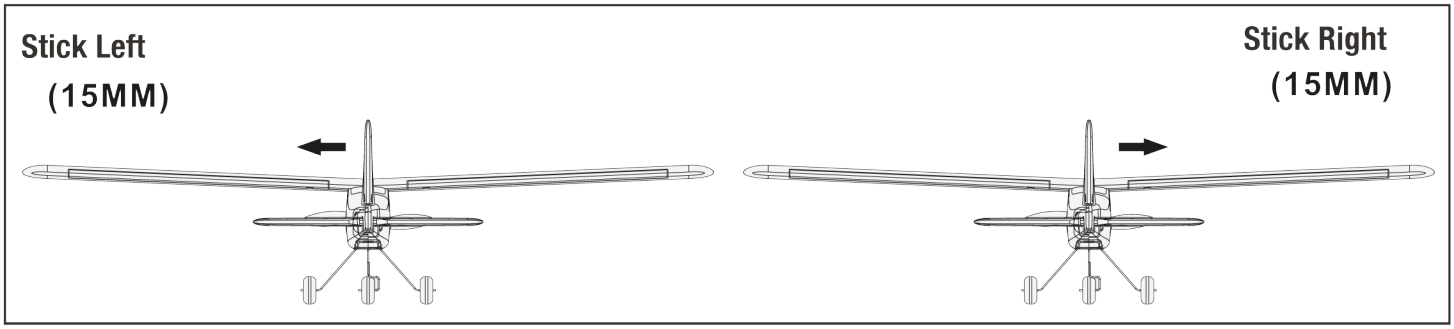


## Rudder

The rudder is the vertical control surface on the tail fin and is mostly used on take-off or landing as it works very well at low speed. The control surface is activated using the left hand stick on the transmitter side ways. In flight when you push the stick to the right it will cause the model to yaw to the right rather than rolling. Pushing the stick to the left will create the opposite effect.

On the ground use of the rudder will help to keep the model travelling in a straight line. If you push the stick to the right it will cause the nose of the model to turn to the right.

With maximum stick movement you want to have 15mm of rudder movement each way.




## Throttle

This is the control for the amount of power available from the motor. Pushing the left hand stick forward will increase the power and pulling the stick back will reduce the power. The stick is on a ratchet so you can set a cruise power and the motor will stay at this setting. Be very careful of rotating parts as they can be very dangerous, electric models make very little noise so the effect of the propeller catching something is often more damaging than expected.

Throttle control in flight is very important and often ignored. The altitude (height) of the aircraft is controlled as much with the throttle as it is with the elevator. By increasing the throttle the model will climb and gain altitude, by decreasing the throttle the model will descend. With experiment and practice you will be able to set the throttle stick at a position that will give you a straight and level flight.

The throttle stick should always be in the fully closed position before plugging the battery in.

Never leave the model unattended when the battery is plugged in.

# FIRST FLIGHT;

## Pre flight;

1. Make sure your flight battery is fully charged and your transmitter batteries are also in a good state of charge.

2. Make sure your control surfaces move the correct amount and in the correct direction.

3. Do a ground range check. Your model should work at least 300 metres from the transmitter. If not do not fly. The range is increased whilst the model is airborne.

4. Check the wind speed, for learning the less wind the better and under 5mph is best. To gauge the wind throw some grass in the air and watch is fall, if under 45 degrees from you this is under 5mph.

5. Make sure there is plenty of room for take-off and landing. We recommend and area at least the size of a football pitch for your flying area.

6. Get someone experienced to help teach you if possible.

## Ready to take to the air;

1. Position the model into wind either on the ground or for a hand launch. Hand launching is the best way for a beginner to get into the air. The model will only take off from very short grass or hard surfaces.

2. Have someone hold the model by the rear of the fuselage whilst you open the throttle to full power.

3. When you are ready get your helper to release the model, it will accelerate away from you and when travelling at around 15mph apply a small amount of up elevator to help the model lift off. If you are hand launching the model ask you assistant to throw the model with enough force to simulate the 15mph speed and with the nose pointing slightly up.

4. Once the model is airborne it is important to pick up the flying speed so the model will not stall so do not try to climb to fast.

5. The first turn is always the hardest so be careful, many people find it easier to flick the right hand stick in the direction they want to go rather than holding the command on.

6. When you have gained enough height you can relax a little as height is your friend whilst learning.

7. Try to keep the model upwind, this make getting the model back to you much easier and also the flight controls remain consistent, Flying directly towards yourself is much harder than flying away or past yourself.

8. Practice turning the model and making circuits in the air as you will need this practice so that you can land.

9. If the model will not fly straight and level with a medium amount of throttle you will need to trim the model using the trims tabs on the transmitter.

# Landing the aircraft:

1. Getting the aircraft down to earth is easy, landing it safely where you want it is a little harder so pre plan you landing.

2. Most people want to land where they took-off from so practice a circuit that flys straight over your take-off area.

3. Gradually lower the height of the circuit as you become more confident.

4. Make sure the approach and landing area are safe to land in.

5. Commit to landing, lower the throttle to virtually no power and the aircraft will become a glider (remember you have power if you need it)

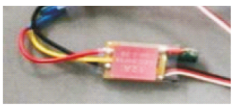
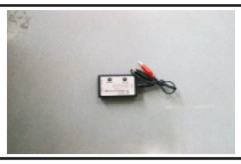
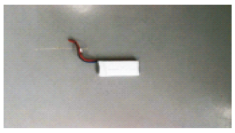
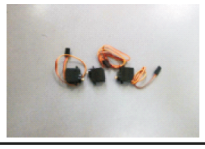
6. Keep the model straight and level and allow the model to glide towards the landing area gradually losing height.

7. At around one metre you can start to apply up elevator which will slow the decent and slow the model down even more. This is known as the flair.

8. Let the model gradually slow and descend until it touches the floor as slow as possible avoiding the stall. A big mistake is to force the model down, you do not normally need down elevator to land.

9. Breathe a sigh of relief as you have just flown a model aircraft and successfully landed it. From now on practice will get you better and better, ready for the next Max-Thrust model.

# SPARE PARTS LIST

| ITEM NO. | Description | Pictures |
|---|---|---|
| TP-0101 | Fuselage |  |
| TP-0102 | Main Wing |  |
| TP-0103 | Tail Plane |  |
| TP-0104 | Properller |  |
| TP-0105 | Transmitter and reciever |  |
| TP-0106 | Landing Set |  |
| TP-0107 | Brushless motor |  |
| TP-0108 | ESC |  |
| TP-0109 | Charger |  |
| PT-B-3308002S | Li-Po Battery |  |
| TP-0111 | Servo |  |
| TP-0112 | Decals |  |