

Please read carefully before use

Ally Cat EDF Version

ELECTRIC R/C MODEL Jet



Specifications

Length.....	767mm ²
Wing Span.....	650mm
Wing Area.....	10.66dm
Height.....	130mm
Flying Weight.....	430g approx
Radio Required.....	4 channel

PRODUCT MANUAL

Safety Precautions

- *This electric R/C model plane is not a toy.
- *Skill level is designed for the intermediate to advanced pilots. It is not intended for beginner. It is not a trainer!
- *Children less than 12 years old must use it accompanied by an adult
- *Please choose an open place to fly away from buildings and electronic lines.
- *Please take enough safety precautions prior to operating this model.

Safety Guides

Please Read and understand these warnings

General Warnings

- Do not fly your aircraft if another model is on the same frequency as you.
- Never fly your aircraft from the street or at night. Always fly in an open area free of obstructions.
- When flying, make sure any spectators are behind you.
- Always be conscious of the spinning propeller/motor. Be careful not to allow loose clothing to be drawn into the propeller/motor.
- Because your aircraft is operated by radio control, it is important to make sure you are always using fresh and/or fully charged batteries. Never allow the batteries to run low or you could lose control of the model.
- Never attempt to disassemble any of the aircraft's components especially the electronics.
- Do not allow any of the electrical components to get wet or electrical damage may occur.
- You should complete a successful range check of your radio equipment prior to each new day of flying, or prior to the first flight of a new or repaired aircraft.
- If your aircraft gets dirty, do not use any solvents to clean it. Solvents will damage the foam and plastic. Use a dry cloth to clean any dirt from the outside of the aircraft.

Radio System Warnings

- Always turn on your transmitter before turning on the aircraft and always turn off the aircraft before turning off your transmitter.
- Always unplug the battery when not flying the model.
- Never cut the receiver aerial shorter or you could lose control of the model during flight.
- When flying the aircraft, make sure your transmitter aerial is completely extended.
- Never attempt to disassemble or modify any of the radio system components.

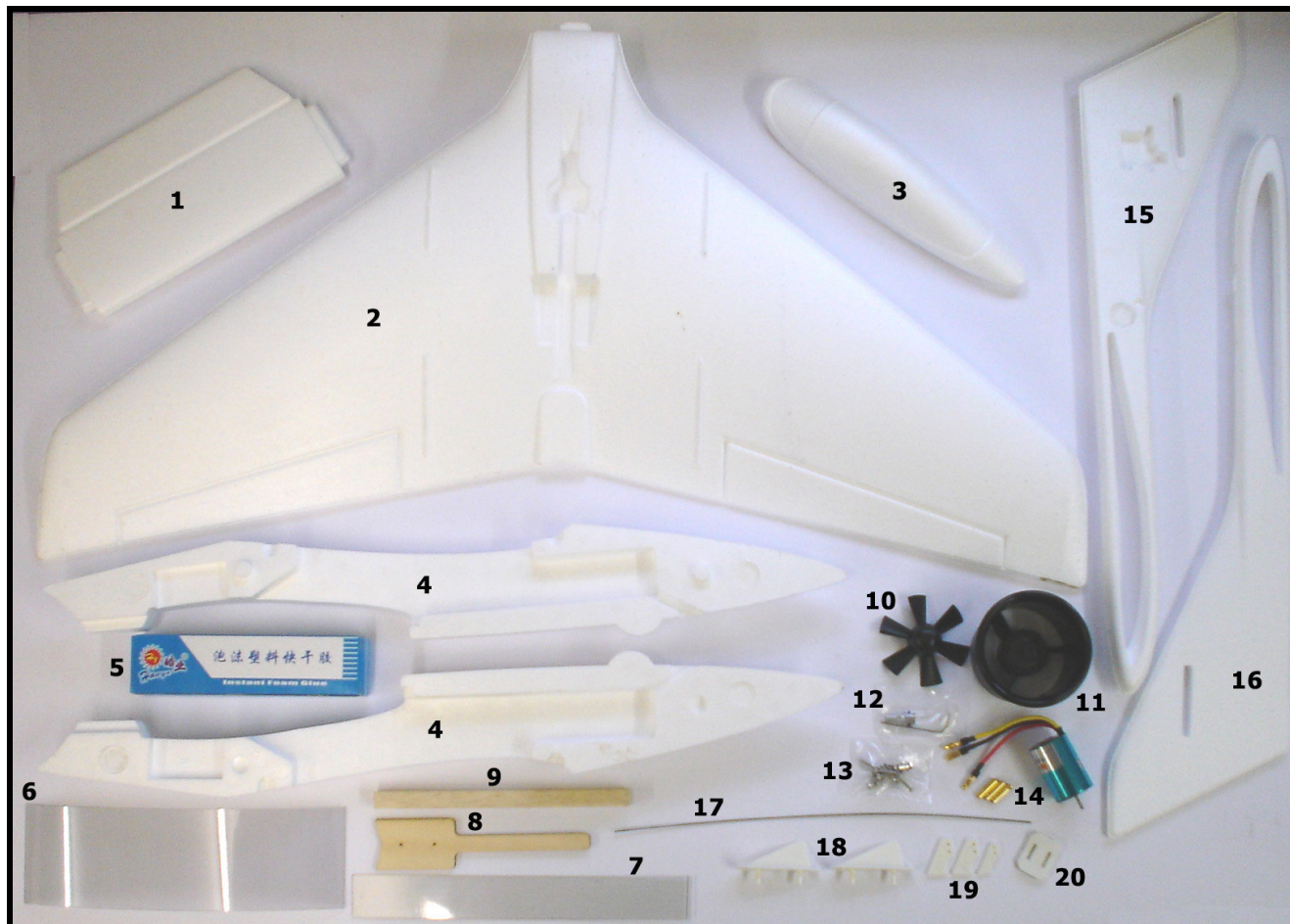
Lithium Polymer Battery Warning.

Please read before charging your battery

Please carefully read, understand and follow the manufacturers guidelines and instructions regarding the usage of Lithium Polymer batteries. Failure to do so could result in injury or fire.

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Contents



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| 1: Tail Plane and Elevator | 11: Ducted Fan Shroud |
| 2: Main Wing | 12: Fan Blade Adaptor |
| 3: Canopy | 13: Nuts, Bolts, Screws, Canopy Magnet |
| 4: Left and Right Fuselage | 14: Brushless Motor and Connectors |
| 5: Foam Glue | 15: Left Boom |
| 6: Ducted Fan Part #2 (wide) | 16: Right Boom |
| 7: Ducted Fan Part #1 (narrow) | 17: Pushrod |
| 8: Motor Mount Part #1 (Laser Cut Ply) | 18: Wing Skids |
| 9: Motor Mount Part #2 (Balsa Wood) | 19: Horns |
| 10: Fan Blades | 20: Hinges |

Other items required

- 9g servos (x3)
- 30 AMP ESC (x1)
- 4 Channel micro receiver (x1)
- Y-Lead (x1)
- 30cm Extension lead (x1)
- Lithium-Polymer Battery [1500 – 2200 mAh 11.1v] (x1)

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Assembly Instructions

Carefully sand all surfaces using fine grit sandpaper. Fill in any indentations with lite model filler and sand level when dry.

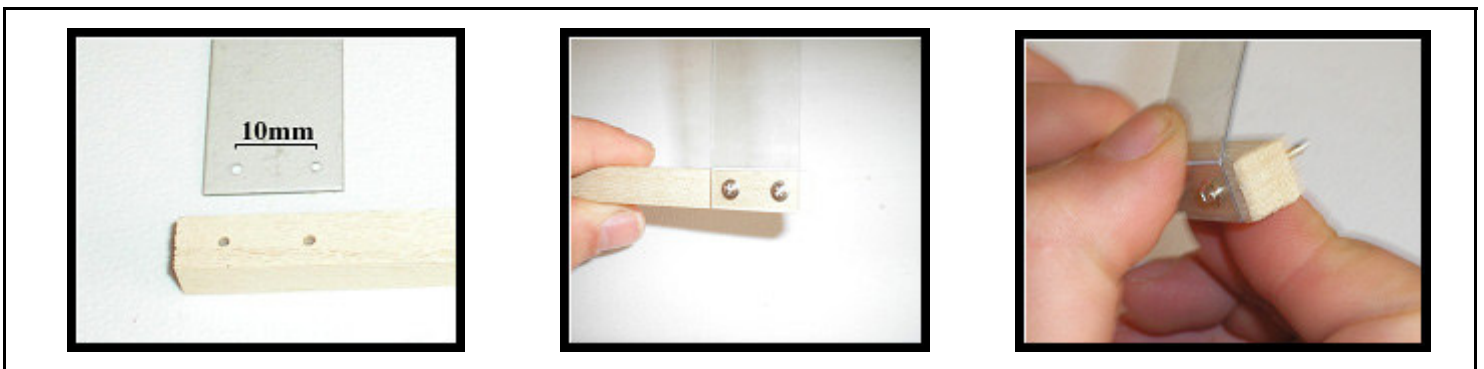
EDF Assembly



Begin by inserting the prop adaptor into the fan. Take care not to damage the blades when fitting the adaptor as this can be a tight fit. Make sure the adaptor is pushed right up the splines, and line up the two grub screws with the cut outs in the fan.

Position the brushless motor in the fan unit and secure using the two screws supplied. Use thread lock on the screws to ensure the motor cannot vibrate loose.

Loosen the grub screws on the prop adaptor and position the fan onto the motor shaft. Use the supplied Allen key to tighten the grub screws through the hole in the fan shroud.



Position the 25mm Wide strip of Plastic at one end of the Square balsa mount, Drill two 2mm holes spaced 10mm apart.

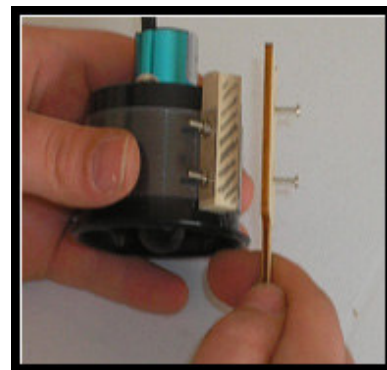
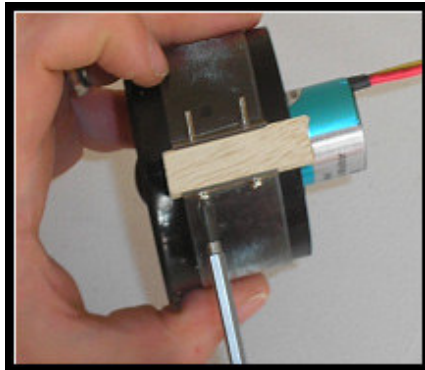
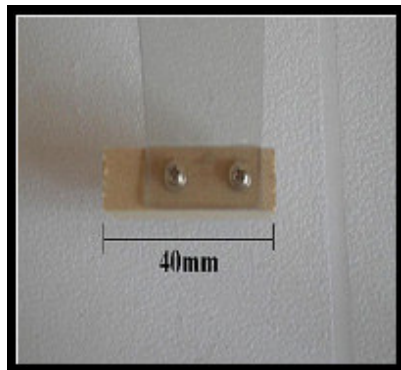
Secure the plastic to the mount using the two screws supplied.

Hold the mount between your thumb and fore finger; gently bend the plastic along the top edge of the wood to create a hinge.

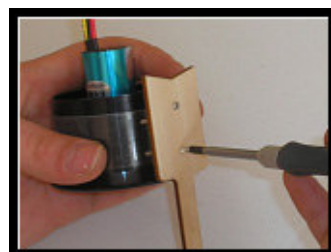
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Assembly Instructions

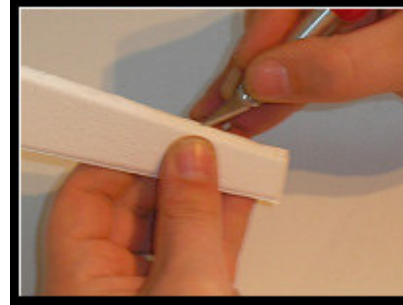
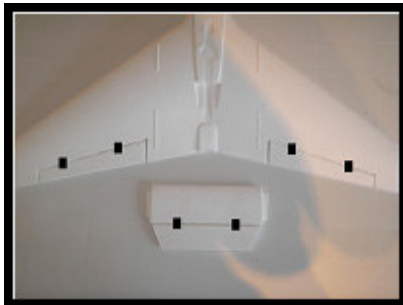
EDF Assembly cont'd



Cut the wood mount down to 40mm long.
Position the fan unit onto the wood mount. Wrap the plastic around the fan ensuring a tight fit. Mark the point on the plastic where the fan meets the wood mount. Bend a second hinge in the plastic and drill two more 2mm holes 10mm apart. Replace the fan unit on the wood mount and secure using the two screws.
Be sure to use a thread lock on the two nuts securing the plastic.
It is essential to secure the fan unit securely however ensure its not so tight as to deform the fan shroud as this will cause the fan to rub on the inside of the shroud.
Apply glue the underside of the balsa mount. Attach this to the ply motor mount, ensuring it is central and square.
Use two self tapping screws to secure the two mounts together.



Aileron/Elevator



Use a sharp knife to cut out the aileron and elevator surfaces along the pre marked lines. Use a soft sand paper to gently remove any remaining foam.

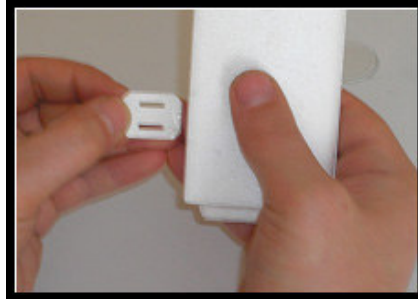
Position the control surfaces in place and mark the hinge positions to be cut.

Use a sharp knife to cut slots in both the control surface and wing/elevator. Ensure the slots are cut central on the surface and wing/elevator and deep enough to house half the hinge.

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Assembly Instructions

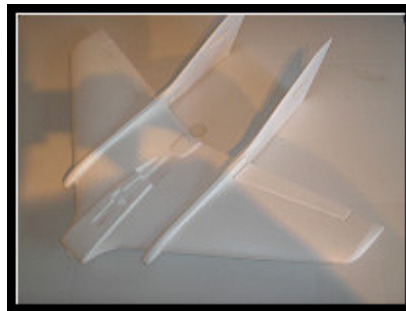
Aileron/Elevator cont'd



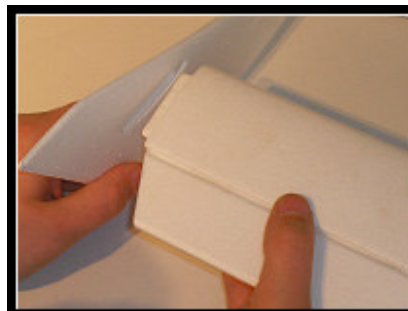
Apply Foam safe super glue to both sides of one half of the hinge. Insert the hinges halfway into the control surface and allow to dry. Repeat this stage for all six hinges, gluing them into each control surface. Now apply foam safe glue to both hinges in one control surface. Push the hinge as far in as possible. Deflect the surface 10mm up and down which will allow space for the hinges to deflect. Repeat this for all three control surfaces.



Tail and Boom Assembly



Slide the tail boom over the wing up to the pre-marked foam tabs to check correct fit. Slide the boom slightly back and apply foam safe superglue to the wing where the tail boom sits. Repeat this for both tail booms (ensure the pre-cut slot for the servo is on the inside of the tail boom). Take the elevator surface; apply foam safe superglue to the foam tabs on both ends. Push the tab of the elevator into the pre-cut slot of the tail boom on both sides.



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Assembly Instructions

Control Horn Installation



Position the control horn onto the elevator surface. Ensure the holes on the horn line up with the hinge line, and also that the horn is level with the top of the elevator cut out in the wing.

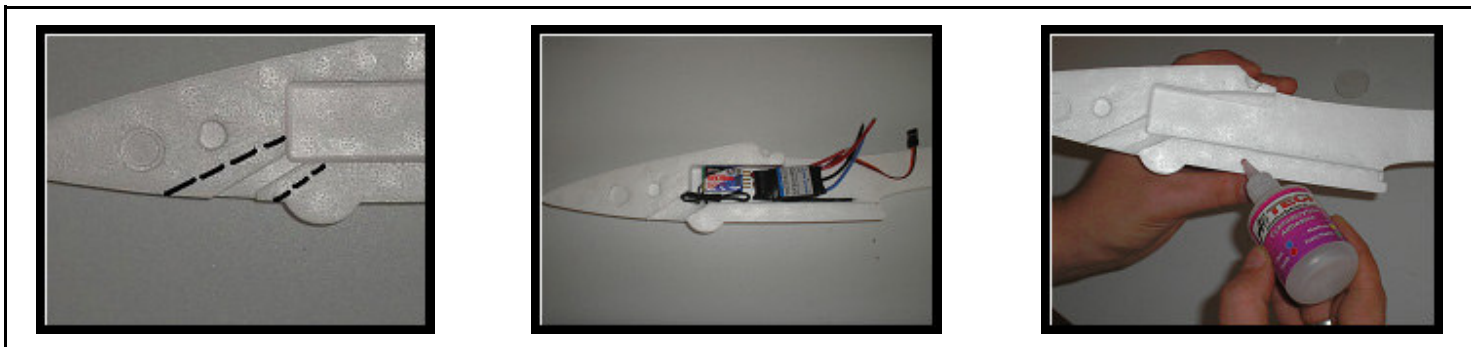
Gently press the horn into the foam to mark its position.

Use a sharp knife to cut out a 3mm slot to allow a tight fit of the control horn.

Apply a generous amount of foam safe superglue to the slot in the surface. Mount the control horn and hold in position until glue sets (use a foam safe kicker to set the glue faster).

Repeat this for both ailerons and elevator surface. Ensure all horns are mounted straight and in line with servo arm position. Allow the glue of the control horns to set fully before moving the surface.

Fuselage Construction



In order to aid cooling, it is recommended to slightly increase the cooling duct in the nose of the fuselage. Cut along the dotted line on both sides of the fuselage using a sharp knife.

It is recommended to test the fit of your radio gear before closing the two halves. Lay in your receiver and speed controller to ensure good fit. If needed, small amounts of foam can be removed to accommodate your chosen equipment.

Apply foam safe superglue to one half of the fuselage and foam safe kicker to the other. Bring the two halves together, lining up the foam lugs on one half to the holes on the other. Allow to dry fully.



Remove the two bolts from the motor mount to remove the fan unit. This will aid in installation of the remaining radio gear.

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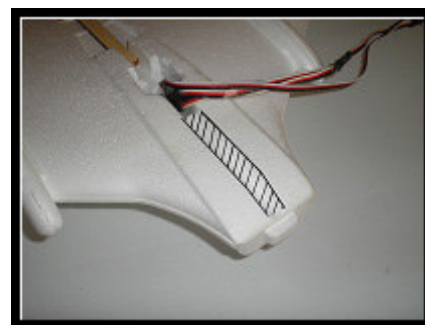
Assembly Instructions

Servo Installation



Place the two aileron servos into the moulded slots, Note do not secure the servos at this stage. Run the servo wire along the pre cut slots to bury it in the wing. At the fuselage end of the slot cut a small rectangle just big enough to pass the servo plug through to the top of the wing. Use a y-junction lead to connect the both servo plugs.

Install the elevator servo, again do not secure at this stage. Use hinge tape or a small drop of foam safe super glue to secure the servo wire neatly to the inside of the tail boom.



Connect the elevator servo to an extension lead, run the extension along the bottom inside of the tail boom, follow the aileron wire to the fuselage and pass the extension to the top of the wing. Cut a small slot in the top of the wing to allow the wiring to sit flush in the wing.



Offer up the front fuselage the wing. Ensure the wing and fuselage fit smoothly. It may be required to lightly sand the top wing of trim the locating lug on the leading edge of the wing. Once a good fit has been achieved, apply foam safe super glue to the wing and fuselage and glue in place.

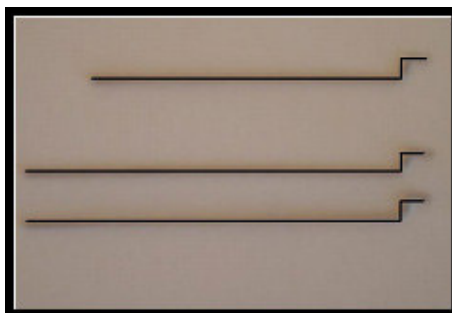
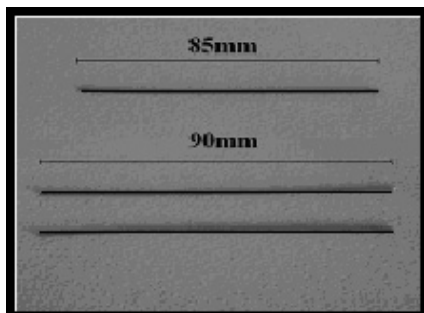
Gently press the wing skid onto the wing to mark its position. Use a sharp knife to cut a small cross where the wing skid has marked, this will stop the foam compressing and tearing a hole in the wing. Glue the two wings skits in place using foam safe super glue.

Optional: If the model has a fast set up and intended to be flown hard, it is possible to glue in a carbon spar. Use foam safe super glue to attaché the spar, run the glue along the pre-cut slot just in front of the servo wire. Slide the spar underneath the tail boom and into position.

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Assembly Instructions

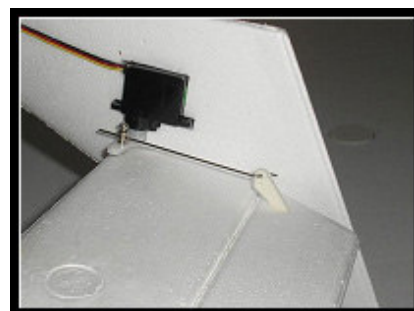
Control Rods



Cut the supplied control rod into three sections, two at 90mm and one at 85mm.

Bend a small Z-bend to one end of each rod.

Gently lift the servos from the slots and remove the servo arms. Install one Quick connector to each arm. It may be required to drill out the holes on the servo arm to allow the Quick connector to turn freely. When securing the nut to the connector, it is recommended to use thread locker to secure the nut.



Install the control rod into the control horn, loosen the screw on the top of the Quick connector and pass the control rod through the hole in the connector. Attach the servo arm back onto the servo. (Ensure the servo has been centred prior to fixing the servo arm).

Centre the control surface, once in position tighten up the screw on the Quick connector to tightly hold the control rod in position. Repeat this for all three servos, ensuring the servo arm is centred, at 90 degrees to the wing and the control surface is in the neutral position.

Now the servos can be secured using servo tape or foam safe super glue.

Canopy Installation



Use foam safe super glue to glue the two supplied magnets into the fuselage. Using two self tapping screws, install into the two locating lugs on the canopy.

Assembly Instructions

Radio Installation

Connect the servos and speed controller to your receiver, please consult your transmitter manual for correct channel assignments.

Secure any excess wire by gathering it up and tying using a tie wrap.

Feed the aerial wire of the receiver out the cooling hole in the nose of the fuselage. Install the receiver into the nose of the fuselage followed by the speed controller. Secure using a double sided tape.

Re-install the fan unit to the model. Feed the wires of the motor into the rear of the fuselage and connect to the speed controller. (Ensure the motor polarity is correct to ensure the motor runs in the right direction.

C of G and Control Throws

C of G is worked out by extending the leading edge of the wing on both sides and where it crosses on the fuselage, measure back 90mm for forward C of G to 135mm for rearward C of G

We suggest that you set up the control throws 7mm up and 7mm down, although you may want to experiment with your own settings to suit your type of flying.

Flying Information

Please note that after extensive flight testing, we have found that the elevator control authority is considerably increased when airflow from the fan unit is maintained.

This becomes most apparent when landing the aircraft.

If reduced elevator authority is experienced, we suggest that you input a small amount of power to the fan unit, and the subsequent airflow over the elevators will considerably increase the response.

Decals

Two sets of decals are supplied so the choice is up to you. Use the picture on the box as a guide. You could also paint the model using acrylic paint.

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Choose a fairly calm day for your first flight.
Always disconnect your battery when not in use

We hope you have enjoyed assembling this model.

Happy Flying!