



# ZERO-A6M3

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# WARNING!

 **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 and NOT a toy. 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 other property. This product is not intended for use by children without direct adult supervision.

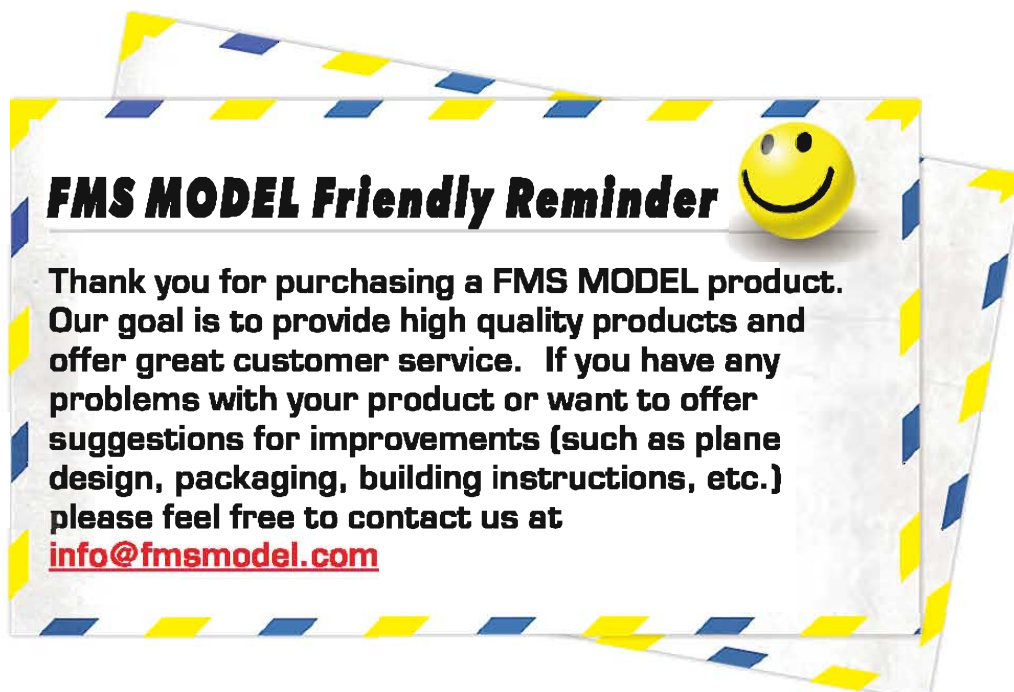
This manual contains instructions for safety, operation and maintenance. It is essential to read and follow all the instructions and warnings in this manual prior to assembly, setup, or use, in order to operate correctly and avoid damage or serious injury.

## 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. This model is controlled by a radio signal subject to interference from many sources outside your control. This interference can cause momentary loss of control so it is advisable to always keep a safe distance in all directions around your model, as this margin will help avoid collisions or injury.

Age Recommendation: Not for children under 14 years. This is not a toy.

- Never operate your model with low transmitter batteries.
- Always operate your model in an open area away from cars, traffic or people.
- Avoid operating your model in the street where injury or damage can occur.
- Never operate the model in the street or in populated areas for any reason.
- Carefully follow the directions and warnings for this and any optional support equipment (chargers, rechargeable battery packs, etc.) you use.
- Keep all chemicals, small parts and anything electrical out of the reach of children.
- Moisture causes damage to electronics. Avoid water exposure to all equipment not specifically designed and protected for this purpose.
- Never lick or place any portion of your model in your mouth as it could cause serious injury or even death.



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## Kit contents



### Kit contents

1. The fuselage assembly (With the motor, the canopy, the electronic parts, ESC)
2. Rudder ( With hinges installed)
3. Horizontal stabilizer
4. Landing gear set
5. Propeller and spinner
6. Spare parts bag
7. Main wing tube

## Specification

Wingspan	: 1400mm /55.1 in
Length	: 1085mm /42.7 in
Weight	: 1880g /66.3 oz
CG Position	: 80-85mm
Battery	: 14.8V 2600mAh Li-Po Battery
ESC	: 65A with 5A SBEC
Motor	: Outrunner Brushless Motor
Wing Area	: 30.1dm <sup>2</sup>
Wing Load	: 62.4g/dm <sup>2</sup>
RC System	: 6 Channel, 6 Servos And 1 Brushless ESC

## *The spare parts list*

Replacement parts for the **ZERO-A6M3** are available using the order numbers in the Spare parts list that follows. The fastest, most economical service can be provided by your hobby dealer or mail-order company.

### **Spare parts list content**

MJ101-GRN Fuselage  
MJ102-GRN Main wing set  
MJ103-GRN Horizontal Stabilizer  
MJ104-GRN Vertical Stabilizer  
MJ105-GRN External Tank  
MJ106-GRN Canopy one plastic canopy  
MJ107-GRN Canopy one foam canopy  
MJ202 Linkage Rod  
MJ301 Screw Set  
MJ302-GRN Stickers  
MJ303 Spinner  
MJ304-GRN Propeller  
MJ305-GRN Front Landing gear  
MJ306-GRN Rear Landing gear  
MJ307-GRN Oil-cooler Vent  
MJ308 Gun Barrel  
MJ309 Airspeed Head  
MJ310 Motor Amout  
MJ311-GRN Cowl  
MJ312 Motor Board  
MJ313-GRN Front Landing Gear Cover Set  
MJ314 Motor Shaft  
FMS-Motor-4250 Kv580 Brushless Motor  
FMS-Servo-9g digital-Positive(300mm length cable) 9g Servo  
FMS-Servo-17g 17g Servo  
FMS-Servo-9g-Positive 9g Servo  
MJ207 elretract  
FMS-ESC-65A5A SBEC Brushless ESC  
FMS-Battery-14.8V 2600mah 25C Battery



MJ101-GRN



MJ102-GRN



MJ103-GRN



MJ104-GRN



MJ105-GRN



MJ106-GRN



MJ107-GRN



MJ202

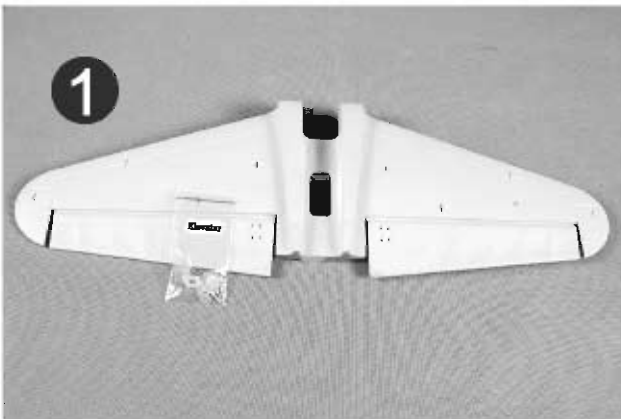




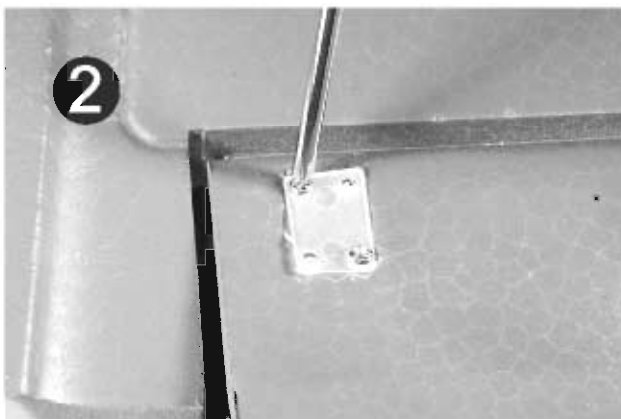
## ***Assemble the plane***

### **The control horn installation**

- 1. The control surface horns for the rudder and elevator are stapled to the bags containing the rudder and elevator, do not accidentally discard them.**



- 2. Secure the backplate horns on the top of the elevator surface with the screws provided in the small plastic bag. Make sure the control surface horns are facing into the right direction before installing.**



- 3. Always make sure that the screws are grabbing into the back plates of the control horns. It is very important that these parts are holding tight during flight.**

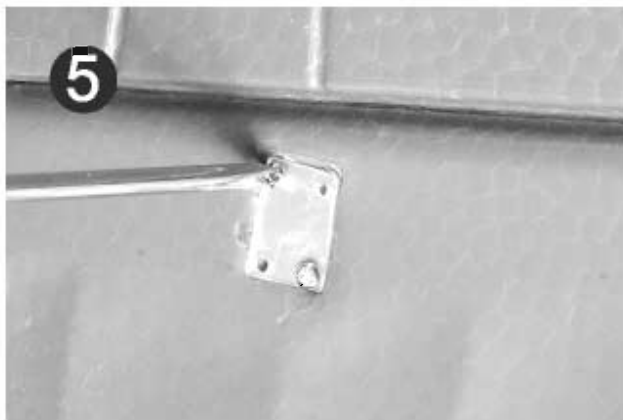


- 4. Secure the horn from the back plate side using the provided screws.**

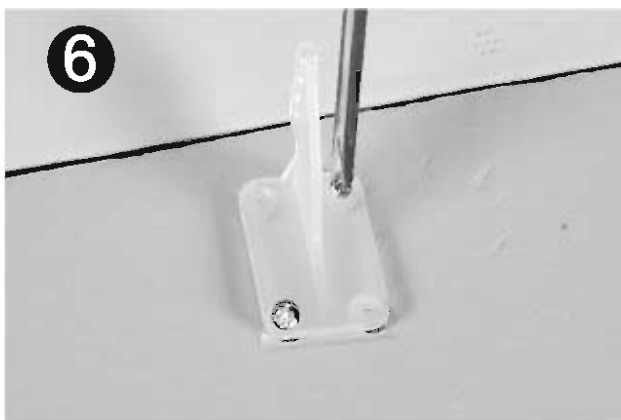


## The control horn installation

5. Now attach the aileron surface control horns to the bottom of the lower main wing and secure the backplate horns on the top of the main wing surface with the screws. Make sure the control surface horns are facing into the right direction before installing.

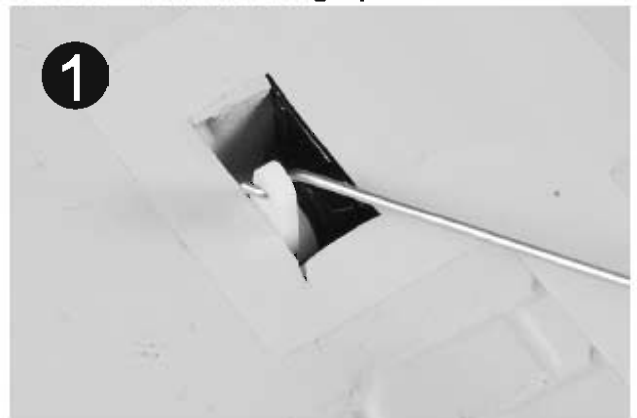


6. Install the flaps control surface horns on the bottom of the flap surface with the screws.



## The control rod linking

1. Put the Z-bend end of the linkage into the desired servo control horn hole of the main-wing. It is a tight fit and should allow the linkage to move just slightly within the hole to avoid binding up.



2. Slap the clevis into the surface control horn.



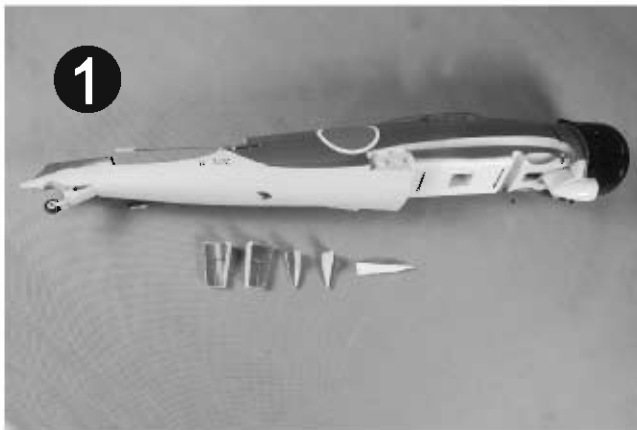
3. The provided piece of fuel tubing keeps the clevis closed during flight. Do all the linkages the same way in the model building process.





## Mount the main wing

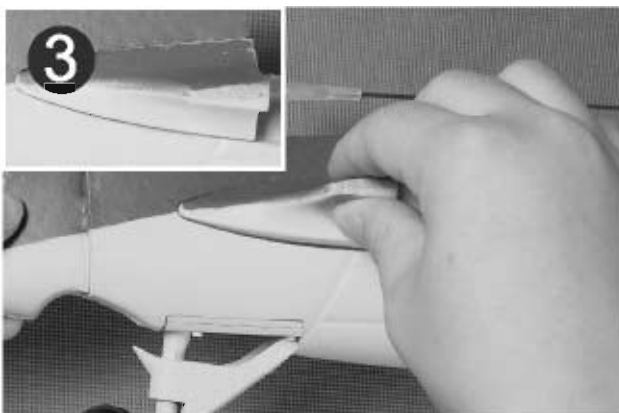
### 1. The left and right wing filler.



### 2. Apply glue on the combined side of the tail.

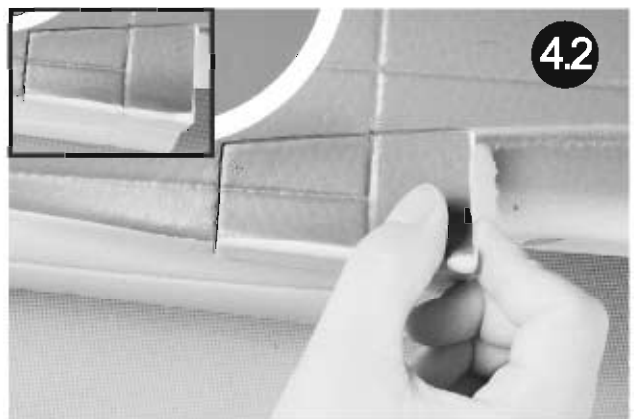
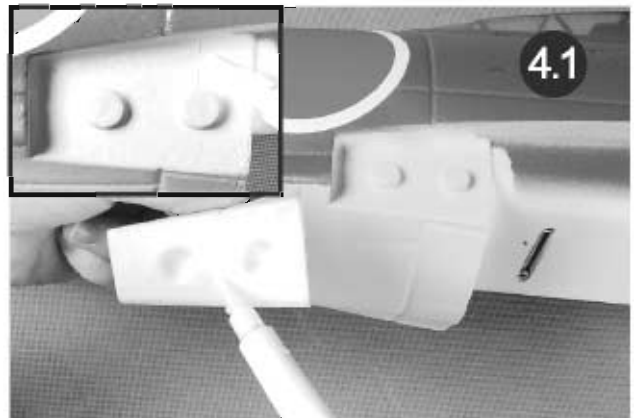


### 3. Install the foam part.



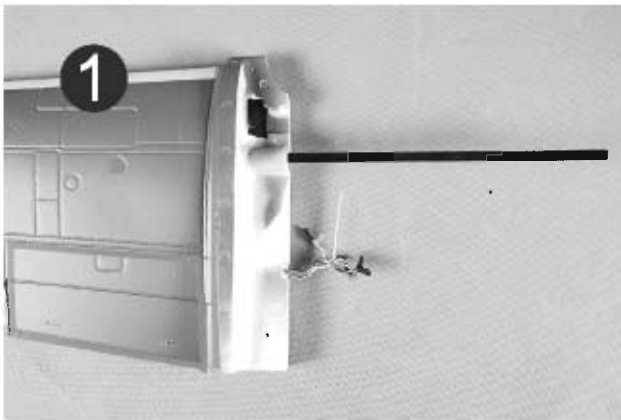
### 4. Take the filler out and glue it back where you fitted it.

**Note:** Apply glue on where the filler and the fuselage fitted together. Seat it into place as soon as the glue apply completed since the resistance will increase badly when the glue getting dry. Repeat the same step for the other filler install.



## Installing the main wing

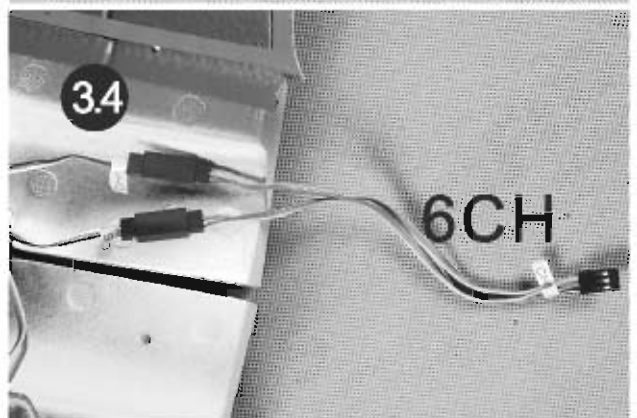
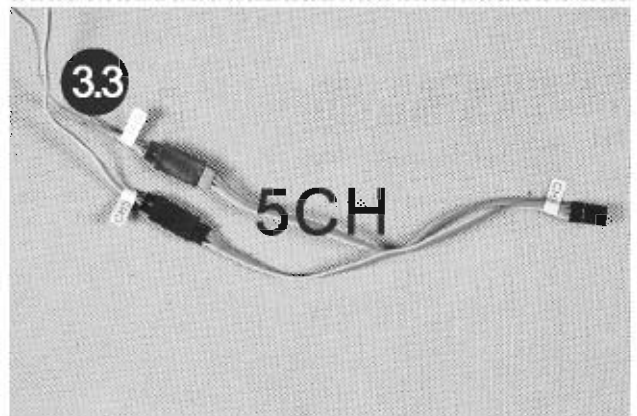
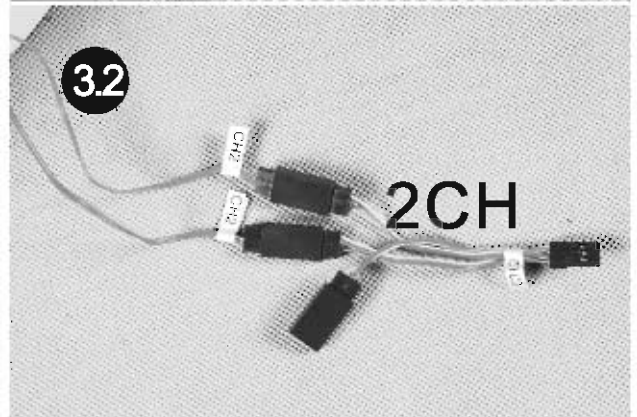
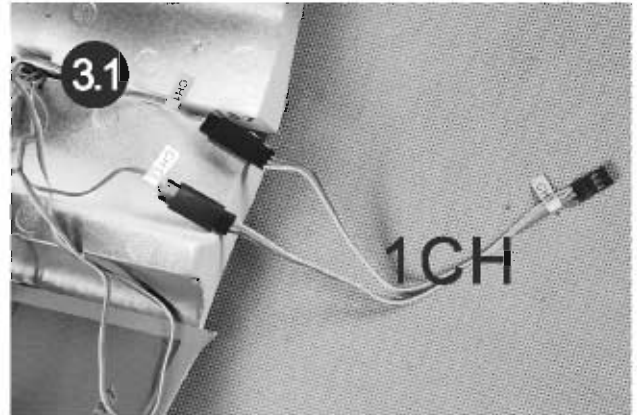
1. Insert the in stored fiberglass tube into the main wing trailing edge side socket. **Note:** When sliding the tubes into the wings, they should go in easily. Do not push them farther than they will go with little resistance. That would push the wing tubes into the foam of the wing and prevent them from fully inserting into the opposite wing half. Insert the connecting tube till the white mark the factory pre spackled.

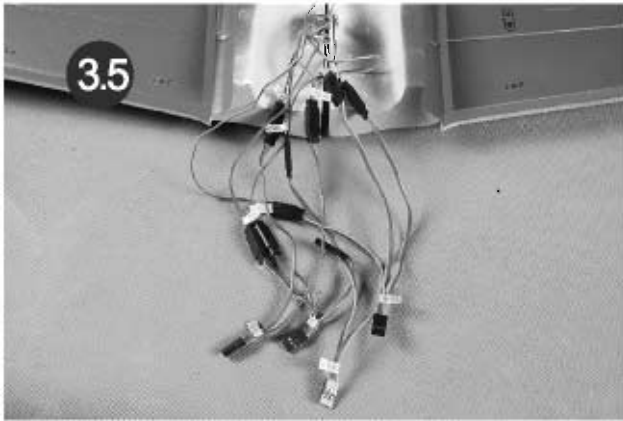


2. Connect the rest half wing to the rods, slide it in slightly. Make sure there is no slot between this two main wing panels. If not, you have to check the obstruction out.

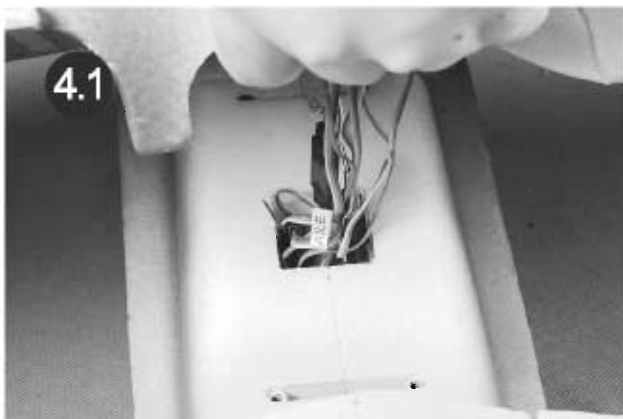


3. Connect the Y-wires to the wires of main wing as the photos show.

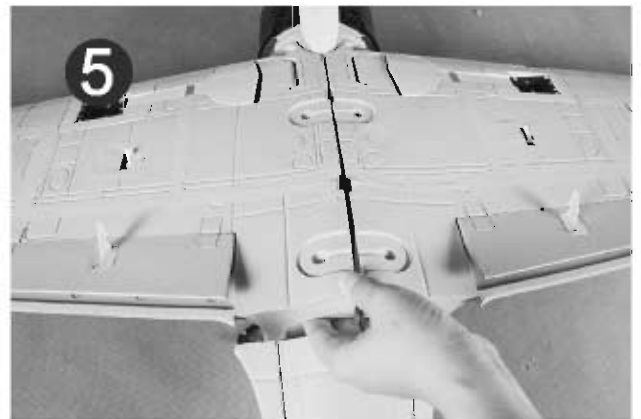




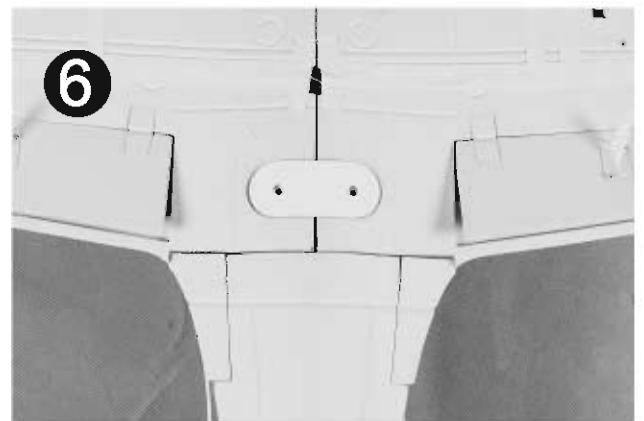
- 4.** Guide the cables from the wing panels through the hole in the bottom of the fuselage wing bay. Put the wing into place and gently pull the cables from inside of the canopy simultaneously to avoid any tangling of the cables.



- 5.** Install the main wing



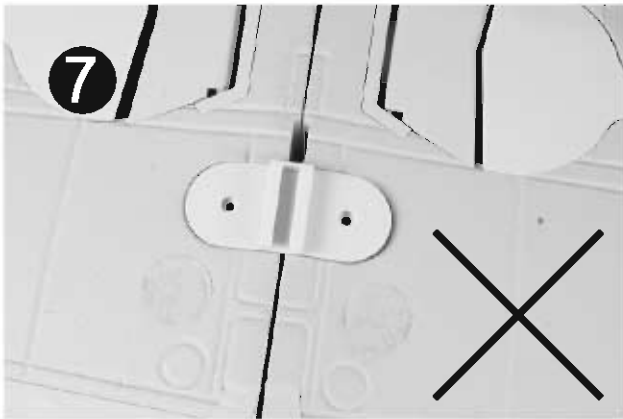
- 6.** Make sure that you place the plate into the notch correctly. The plate only fits right in one direction.



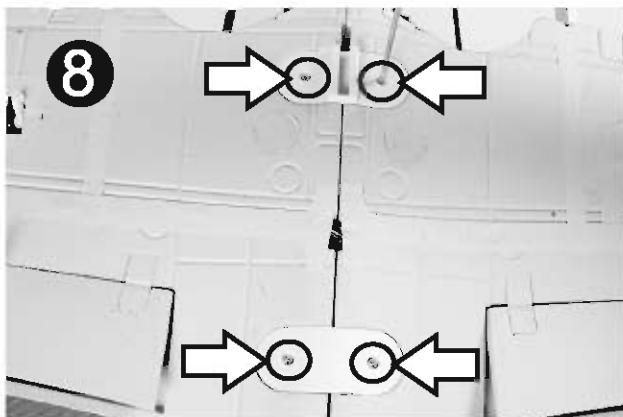
- 7.** Repeat the step 6 for the front bolt plate installation. The plate only fits right in one direction. Refer to pictures 6 for the right placement. Plate mounted the wrong way round. The plate will not fit into the notch if you try to mount it as shown in the picture.



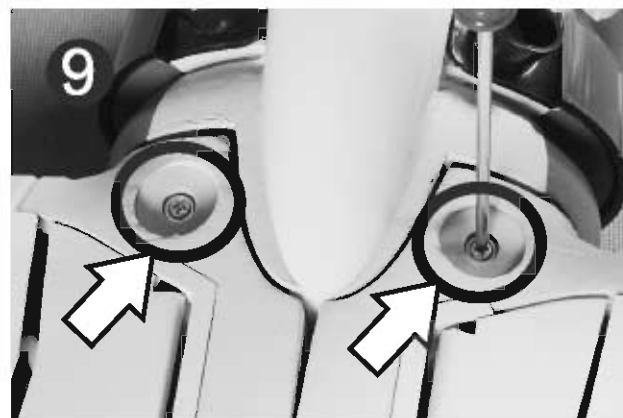
## Install the stabilizer



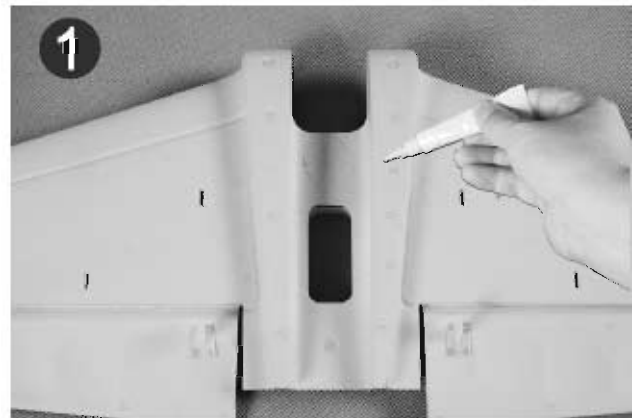
8. Secure the rear main wing bolt plate using the provided machine screws. (PM3.0\*50 4PCS)



9. Secure the front main wing bolt plate using the provided machine screws. (PWM3.0\*40 2PCS)



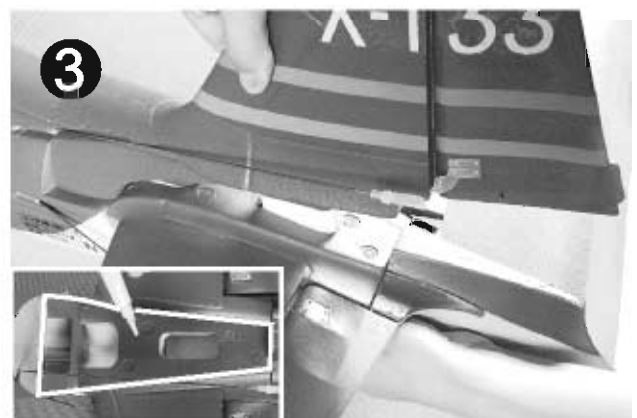
1. Apply glue on the combined side of the elevator.



2. Install the elevator.

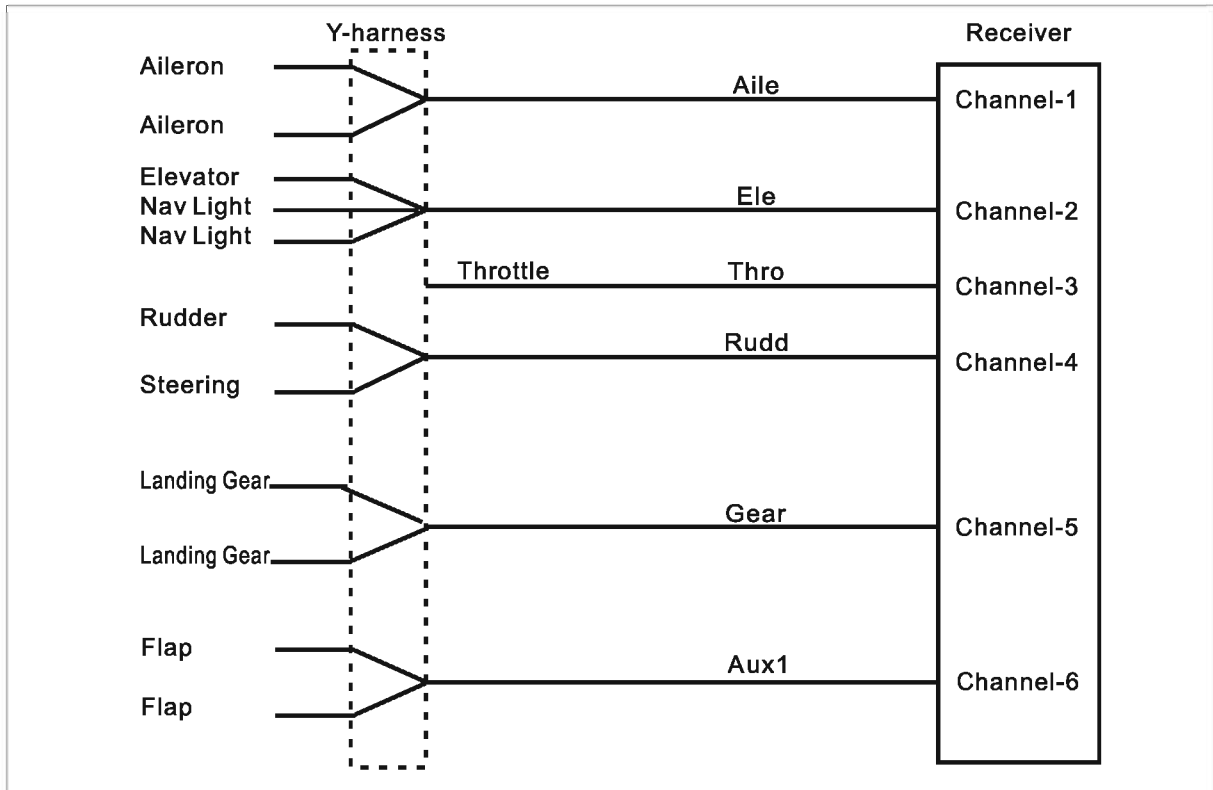


3. Apply glue on the combined side of rudder and install it.



#### 4. Receiver connection diagram.

**Note:** All servo and retract leads have been specifically labeled for your convenience. Use the provided Y-harness for situations where two or three servos are controlled by one channel; for example ailerons, landing gear, and flaps. Refer to the diagram below for recommended connections.





## Control surface testing and setting

1. The battery hatch locates in front of the canopy bay.



2. Before getting started, bind your receiver with your transmitter.  
Please refer to your Transmitter Manual for proper operation.  
**CAUTION:** To prevent personal injury, DO NOT install the propeller assembly onto the motor shaft while testing the control surfaces.  
Make sure all control sticks on your radio are in the neutral position (rudder, elevator, ailerons) and the throttle is in the OFF position.  
All servos have been factory set to the neutral position. Thread the clevis on the linkage rods for each aileron and adjust the clevis so that the control surface aligns with the trailing edge of the wing tip.  
**Note:** Please secure the clevis to the control horn when the adjustment is complete.



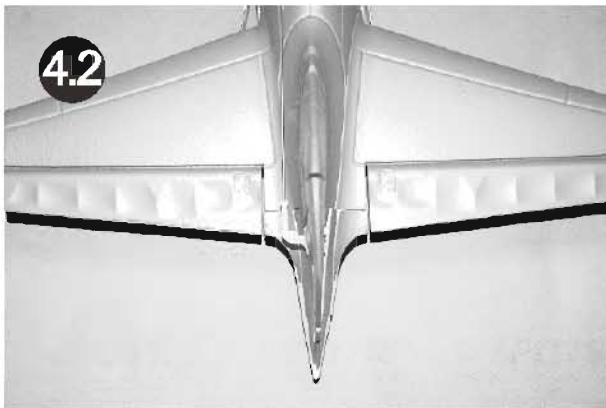
3. Adjust the clevis to make the ailerons align with the trailing edge of the flap.



4. Set the rear landing gear neutral position by loosening the screw on control connector and moving the linkage rod. Be sure to tighten the screw when the adjustment is complete.

**Note:** There will be no rudder trim used in this step.

It will keep the uniform of direction of the tail wheel and rudder.



5. Adjust the elevator linkage rod the same with rudder.



6. Cycle the retractable main landing gears several times to ensure proper function.

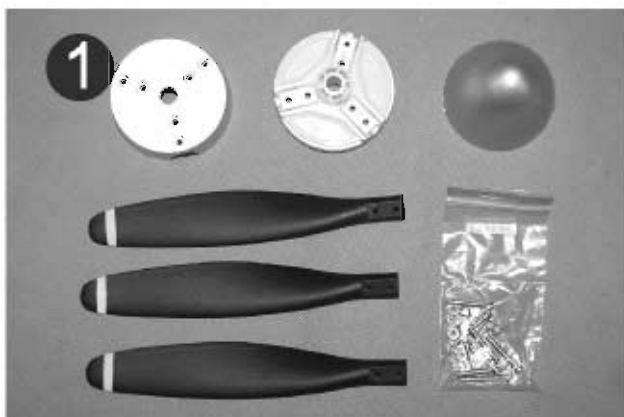


7. Test the motor make sure it is responsive to the throttle input and rotate the clock wise from the tail view, or you have to reset the throttle.



## Install the propeller

### 1. The propeller and the spinner kit.



### 2. Put three propeller blades rightly onto the back plate. Make sure the letter with "FMS 13X9" on the propeller face up.



### 3. Cover the spinner middle part on the propeller. Make sure the propeller is fully inside the cover so the hole of cover and propeller can fully match. Place the nylon insert lock nuts rightly into the hex notch on bottom of the spinner back plate Note: Always hold the nuts into place in the process of the blades mounting. The round side of the nuts should be at outboard of the hex notch and facing up.

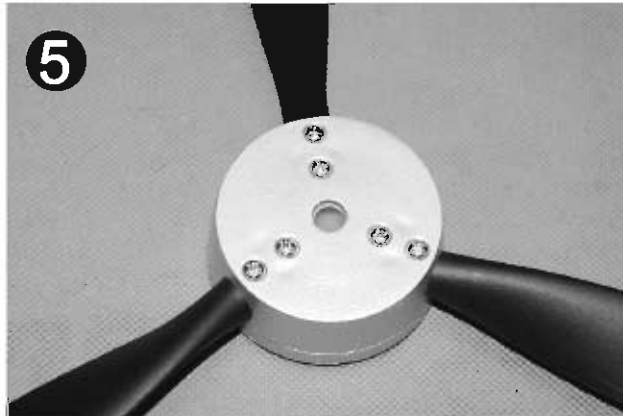


### 4. Secure it using the provided screws in spinner package (PM2.3\*22 6pcs)



## Install the propeller

5. Verify the status of the propeller installation completed.



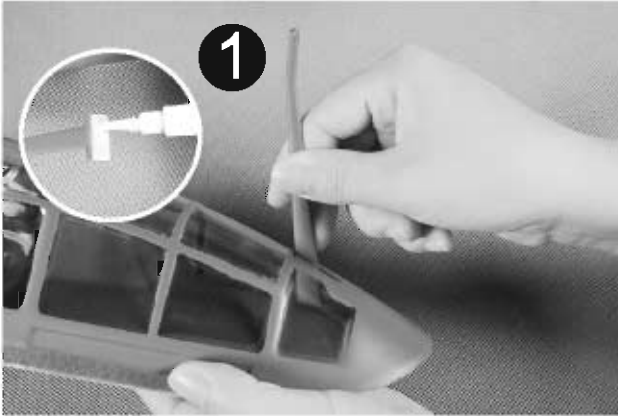
6. **CAUTION:** Disconnect the battery from the ESC before installing the propeller. Keyed the propeller assembly onto the hex nut of the motor shaft properly. Hand tighten the spinner and make sure it is tight enough.





## Install the accessory parts of the plane

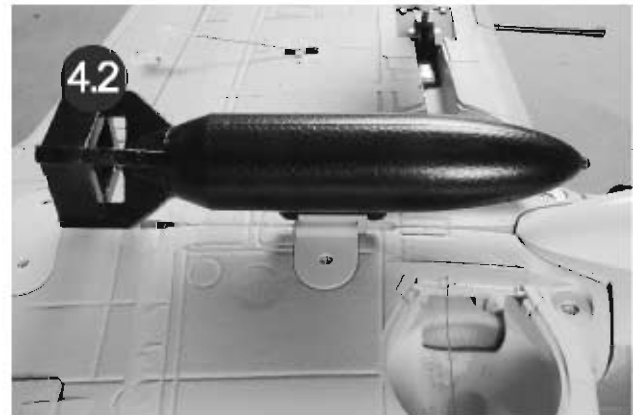
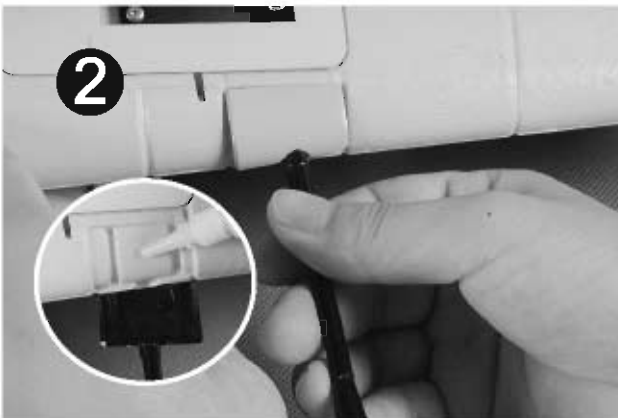
1. Glue the antenna mast into place as the picture shows.



4. Install the bomb as picture shows.



2. Install the gun barrel.



3. Install the airspeed head.





## Get your model ready to fly







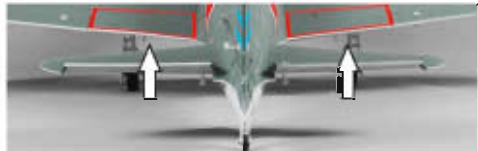
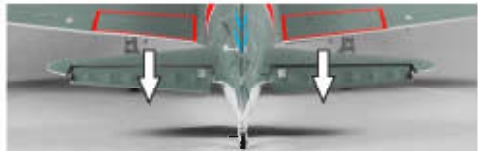


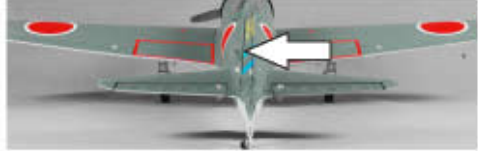
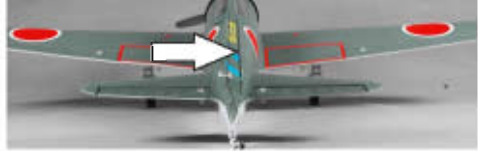
### The transmitter and model setup

Before getting started, bind your receiver with your transmitter. Please refer to your **Transmitter Manual** for proper operation.

**CAUTION:** To prevent personal injury, DO NOT install the propeller assembly onto the motor shaft while testing the control surfaces. DO NOT arm the ESC and do not turn on the transmitter until the **Transmitter Manual** instructs you to do so.

**Tips:** Make sure all control sticks on your radio are in the neutral position (rudder, elevator, ailerons) and the throttle in the OFF position. Make sure both ailerons move up and down (travel) the same amount. This model tracks well when the left and right ailerons travel the same amount in response to the control stick.

1. Move the controls on the transmitter to make sure aircraft control surface move correctly. See diagrams below. If controls respond in the opposite direction reverse the direction for operation of flight controls. Refer to your transmitter's instructions for changing direction of transmitter flight controls.

 <p>Bank Left</p>  <p>Bank Right</p>	 	<p><b>Aileron</b></p>
 <p>Climb</p>  <p>Descend</p>	 	<p><b>Elevator</b></p>
 <p>Yaw Left</p>  <p>Yaw Right</p>	 	<p><b>Rudder Steering</b></p>

## Check the C.G. (Center of Gravity)

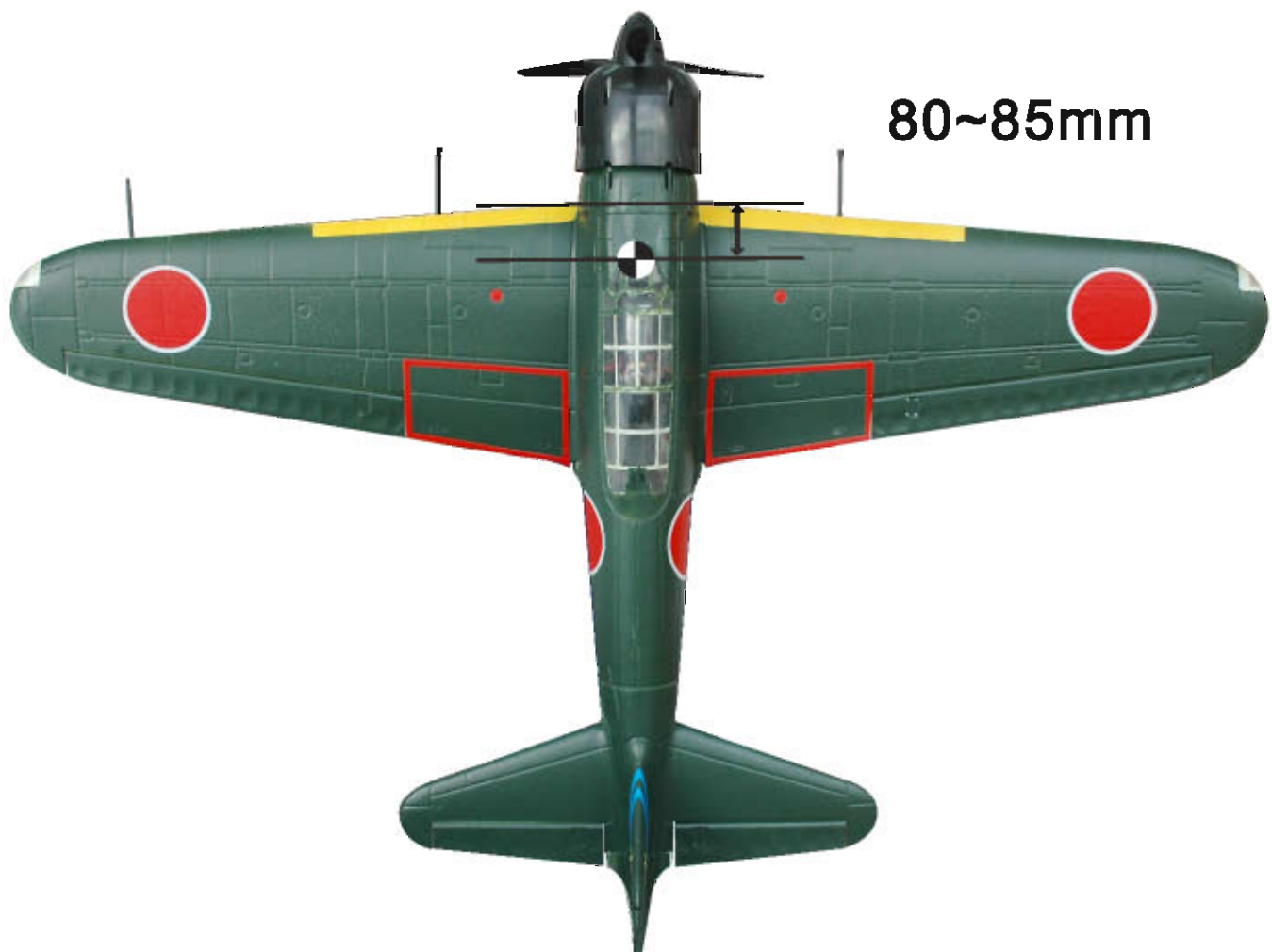
### Center of Gravity

When balancing your model, adjust the motor battery as necessary so the model is level or slightly nose down. This is the correct balance point for your model. After the first flights, the **CG** position can be adjusted for your personal preference.

1. The recommended Center of Gravity (**CG**) location for your model is **(80~85mm/4.8in)** forward from the leading edge of the main wing (as shown) with the battery pack installed. Mark the location of the **CG** on top of the wing.

2. When balancing your model, support the plane at the marks made on the bottom of the main wing with your fingers or a commercially available balancing stand. This is the correct balance point for your model. Make sure the model is assembled and ready for flight before balancing.

**Caution:** Do not connect the battery to the ESC while balancing the plane.



## *Before the model flying*

### **Find a suitable flying site**

Find a flying site clear of buildings, trees, power lines and other obstructions. Until you know how much area will be required and have mastered flying your plane in confined spaces, choose a site which is at least the size of two to three football fields – a flying field specifically for R/C planes is best. Never fly near people– especially children who can wander unpredictably.

### **Perform the range check of your plane**

As a precaution, an operational ground range test should be performed before the first flight each time you go out. Performing a range test is a good way to detect problems that could cause loss of control such as low batteries, defective or damaged radio components, or radio interference. This usually requires an assistant and should be done at the actual flying site you will be using.

First turn on the transmitter, then install a fully-charged battery into the fuselage. Connect the battery and install the hatch.

Remember, use care not to bump the throttle stick, otherwise, the propeller / fan will turn and possibly cause damage or injury.

**Note:** Please refer to your **Transmitter Manual** that came with your radio control system to perform a ground range check. If the controls are not working correctly or if anything seems wrong, do not fly the model until you correct the problem. Make certain all the servo wires are securely connected to the receiver and the transmitter batteries have a good connection.

### **Monitor your flight time**

Monitor and limit your flight time using a timer (such as one on a wrist watch or in your transmitter if available). When the batteries are getting low you will usually notice a performance drop before the ESC cuts off motor power, so when the plane starts flying slower you should land. Often (but not always) power can be briefly restored after the motor cuts off by holding the throttle stick all the way down for a few seconds.

To avoid an unexpected dead-stick landing on your first flight, set your timer to a conservative 4 minutes. When your alarm sounds you should land right away.

## *Flying course*

### **Take off**

While applying power slowly steer to keep the model straight, the model should accelerate quickly. As the model gains flight speed, you will want to climb at a steady and even rate. The **ZERO-A6M3** will climb out at a nice angle of attack (AOA).

### **Flying**

Always choose a wide-open space for flying your plane. It is ideal for you to fly at a sanctioned flying field. If you are not flying at an approved site, always avoid flying near houses, trees, wires and buildings. You should also be careful to avoid flying in areas where there are many people, such as busy parks, schoolyards, or soccer fields. Consult laws and ordinances before choosing a location to fly your aircraft. After takeoff, gain some altitude. Climb to a safe altitude and begin to trim the model till it's tracks well through all aspects of flight, including high speed passes, inverted flight, loops, and point rolls.

### **Landing**

Land the model when you hear the motor pulsing (LVC) or if you notice a reduction in power. If using a transmitter with a timer, set the timer so you have enough flight time to make several landing approaches.

Recharge the battery and repair the model as needed. The model's three point landing gear allows the model to land on hard surfaces. Align model directly into the wind and fly down to the ground. Fly the airplane down to the ground using 1/4-1/3 throttle to keep enough energy for proper flare. Before the model touches down, always fully decrease the throttle to avoid damaging the propeller or other components. The key to a great landing is to manage the power and elevator all the way to the ground and set down lightly on the main landing gear. After a few flights you will find the model can be set down lightly on the mains and you can hold the nose wheel off balancing the model on the mains till it slows and gently settles the nose.

### **Maintenance**

Repairs to the foam should be made with foam safe adhesives such as hot glue, foam safe CA, and 5 min epoxy. When parts are not repairable, see the **Spare Parts List** for ordering by item number.

Always check to make sure all screws on the aircraft are tightened. Pay special attention to make sure the bullet of the rotor adaptor is firmly in place before every flight.

## Troubleshooting

<b>Problem</b>	<b>Possible Cause</b>	<b>Solution</b>
Aircraft will not respond to the throttle but responds to other controls.	<ul style="list-style-type: none"> <li>- ESC is not armed.</li> <li>- Throttle channel is reversed.</li> </ul>	<ul style="list-style-type: none"> <li>- Lower throttle stick and throttle trim to lowest settings.</li> <li>- Reverse throttle channel on transmitter.</li> </ul>
Extra propeller noise or extra Vibration.	<ul style="list-style-type: none"> <li>- Damaged spinner, propeller, motor, or motor mount.</li> <li>- Loose propeller and spinner parts.</li> <li>- Propellor installed backwards.</li> </ul>	<ul style="list-style-type: none"> <li>- Replace damaged parts.</li> <li>- Tighten parts for propeller adapter, propeller and spinner.</li> </ul>
Reduced flight time or aircraft underpowered.	<ul style="list-style-type: none"> <li>- Flight battery charge is low.</li> <li>- Propeller installed backward.</li> <li>- Flight battery damaged.</li> </ul>	<ul style="list-style-type: none"> <li>- Remove and install propeller correctly.</li> <li>- Completely recharge flight battery.</li> <li>- Replace flight battery and obey flight battery instructions.</li> </ul>
Control surface does not move, or is slow to respond to control inputs.	<ul style="list-style-type: none"> <li>- Control surface, control horn, linkage or servo damage.</li> <li>- Wire damaged or connections loose.</li> </ul>	<ul style="list-style-type: none"> <li>- Replace or repair damaged parts and adjust controls.</li> <li>- Do a check of connections for loose wiring.</li> </ul>
Controls reversed.	Channels are reversed in the transmitter.	Do the Control Direction Test and adjust controls for aircraft and transmitter.
<ul style="list-style-type: none"> <li>- Motor loses power.</li> <li>- Motor power pulses then motor loses power.</li> </ul>	<ul style="list-style-type: none"> <li>- Damage to motor, or battery.</li> <li>- Loss of power to aircraft.</li> <li>- ESC uses default soft Low Voltage Cutoff(LVC).</li> </ul>	<ul style="list-style-type: none"> <li>- Do a check of batteries, transmitter, receiver, ESC, motor and wiring for damage (replace as needed).</li> <li>- Land aircraft immediately and Recharge flight battery.</li> </ul>
LED on receiver flashes slowly.	Power loss to receiver.	<ul style="list-style-type: none"> <li>- Check connection from ESC to receiver.</li> <li>- Check servos for damage.</li> <li>- Check linkages for binding.</li> </ul>



# AMA

If you are not already a member of the AMA, please join, The AMA is the governing body of model aviation and membership provided liability insurance coverage, protects modelers' rights and interests and is required to fly at most R/C sites.

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## **Academy of Model Aeronautics National Model Aircraft Safety Code Effective January 1, 2011**

- A. GENERAL:** A model aircraft is a non-human-carrying aircraft capable of sustained flight in the atmosphere. It may not exceed limitations of this code and is intended exclusively for sport, recreation and/or competition.  
All model flights must be conducted in accordance with this safety code and any additional rules specific to the flying site.
1. Model aircraft will not be flown:
    - (a) In a careless or reckless manner.
    - (b) At a location where model aircraft activities are prohibited.
  2. Model aircraft pilots will:
    - (a) Yield the right of way to all man carrying aircraft.
    - (b) See and avoid all aircraft and a spotter must be used when appropriate.  
(AMA Document #540-D-See and Avoid Guidance.)
    - (c) Not fly higher than approximately 400 feet above ground level within three (3) miles of an airport, without notifying the airport operator.
    - (d) Not interfere with operations and traffic patterns at any airport, heliport or seaplane base except where there is a mixed use agreement.
    - (e) Ensure the aircraft is identified with the name and address or AMA number of the owner on the inside or affixed to the outside of the model aircraft.  
(This does not apply to model aircraft flown indoors).
    - (f) Not operate aircraft with metal-blade propellers or with gaseous boosts except for helicopters operated under the provisions of AMA Document #555.
    - (g) Not operate model aircraft while under the influence of alcohol or while using any drug which could adversely affect the pilot's ability to safely control the model.
    - (h) Not operate model aircraft carrying pyrotechnic devices which explode or burn, or any device which propels a projectile or drops any object that creates a hazard to persons or property.

**Exceptions:**

- ◆ Free Flight fuses or devices that burn producing smoke and are securely attached to the model aircraft during flight.
- ◆ Officially designated AMA Air Show Teams (AST) are authorized to use devices and practices as defined within the Team AMA Program Document (AMA Document #718).
- 3. Model aircraft will not be flown in AMA sanctioned events, air shows or model demonstrations unless:
  - (a) The aircraft, control system and pilot skills have successfully demonstrated all maneuvers intended or anticipated prior to the specific event.
  - (b) An inexperienced pilot is assisted by an experienced pilot.
- 4. When and where required by rule, helmets must be properly worn and fastened. They must be OSHA, DOT, ANSI, SNELL or NOCSAE approved or comply with comparable standards.

**B. RADIO CONTROL (RC)**

1. All pilots shall avoid flying directly over unprotected people, vessels, vehicles or structures and shall avoid endangerment of life and property of others.
2. A successful radio equipment ground-range check in accordance with manufacturer's recommendations will be completed before the first flight of a new or repaired model aircraft.
3. RC model aircraft must use the radio-control frequencies currently allowed by the Federal Communications Commission (FCC). Only individuals properly licensed by the FCC are authorized to operate equipment on Amateur Band frequencies.
4. RC model aircraft will not operate within three (3) miles of any pre-existing flying site without a frequency-management agreement (AMA Documents #922-Testing for RF Interference; #923- Frequency Management Agreement)
5. With the exception of events flown under official AMA Competition Regulations, excluding takeoff and landing, no powered model may be flown outdoors closer than 25 feet to any individual, except for the pilot and the pilot's helper(s) located at the flight line.
6. Under no circumstances may a pilot or other person touch a model aircraft in flight while it is still under power, except to divert it from striking an individual. This does not apply to model aircraft flown indoors.
7. RC night flying requires a lighting system providing the pilot with a clear view of the model's attitude and orientation at all times.
8. The pilot of a RC model aircraft shall:
  - (a) Maintain control during the entire flight, maintaining visual contact without enhancement other than by corrective lenses prescribed for the pilot.
  - (b) Fly using the assistance of a camera or First-Person View (FPV) only in accordance with the procedures outlined in AMA Document #550.

**C. FREE FLIGHT**

1. Must be at least 100 feet downwind of spectators and automobile parking when the model aircraft is launched.
2. Launch area must be clear of all individuals except mechanics, officials, and other fliers.
3. An effective device will be used to extinguish any fuse on the model aircraft after the fuse has completed its function.



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**MADE IN CHINA**