ARF® MODEL

61in SLICK540 70 Electric

Electric Extreme Series

Instruction Manual

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Dear Customer,

Thanks for purchasing this newly designed 61in SLICK540 70E aerobatic RC airplane. With an approximate flying weight of 5.5 Lbs., the new 61in SLICK was designed for IMAC and free style flying. It was developed with unique appearance and extreme flight performance in mind. The new 61in SLICK was covered with genuine Monocote film, and equipped with good quality accessories, including carbon fiber wing tube, carbon fiber landing gear.Also including KUZA Alloy Backplate Hollowed-out Electric Spinner We hope you enjoy this plane as much as we do.

SAFETY ISSUES OF RADIO CONTROL FLYING MODELS

With radio control aircraft, like any hobby or sport, there are certain risks. The operator of these models is responsible for these risks. If misused or abused, you may cause serious bodily injury and/or damage to property. With this in mind, you will want to be certain that you build your model carefully and correctly. If you are not an experienced flier, have your work checked and ask for help in learning to fly safely. This model aircraft is NOT a toy and must be operated and flown in a safe manner at all times. Always perform a pre-flight check of the model including all control surfaces, proper function of the radio gear, structure, radio range, and any other area relating to the safe operation of this aircraft.

Models are not insurable but operators are. You can obtain coverage through membership in the Academy of Model Aeronautics (AMA). For an AMA information package call 1-800-435-9262, ext. 292 or visit the AMA website at "www.modelaircraft.org"

By the act of using the final assembled model, the purchaser/operator accepts all resulting liability

ARF MODELS WARRANTY AND RETURN POLICY

We guarantee that the plane is in perfect condition at purchase. The warranty will be voided after modifications and usages. If you have any questions or find any issues, please contact the distributors in your area.

Specifications and Recommended Power Setup

- Wingspan: 61"(1550mm)

- Length: 59"(1500mm)

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- Wing Area: 749sq in (48.3sq dm)
- Flying Weight: 5-6.2 lbs. (2300-2800g)

Electric Power Setup：

- KUZA EXM4120 KV750 4S 3700-4400mAh, 15x8prop
- KUZA EXM4120 KV500 6S 3300-3700mAh, 15x8prop
- DUSKY XM5050EA-9 6S 3300-3700mAh, 15x8prop
  or other 1100-1300 watt, 300g class electric motors
- ESC：70-100A
- 4 Mini size high torque servos, Hitec HS5245 or 7245 recommended
- Aircraft radio and receive of your choice, 4 channels minimum

Features and Photo Gallery

Larger aileron and elevator design. Up to 60 degrees of throw on all control surfaces for excellent

   3D aerobatic flying

High performance cap head screws

Honeycomb Board carton packing for safer transportation

The air exit for the electric set up still needs to be inside the fuselage behind the rudder tray.

Larger carbon fiber wing tube diameter.

Improved new stainless steel Axles
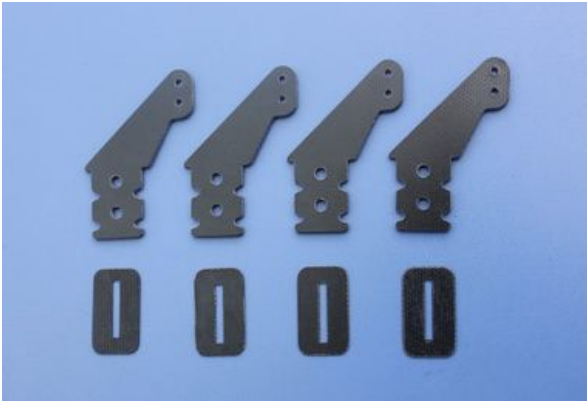

Side Force Generators

Quick release canopy latch

Canopy extended into cowl

New Extra strength fiberglass horn assembly

One piece air foiled carbon fiber landing gear

New Light Electric C.F.Tail wheel assembly

Strengthened fuselage by carbon fiber board and rods

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KUZA Alloy Backplate Hollowed-out Electric Spinner included

Scheme A   Yellow /white/ /black

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Scheme C   White /blue /yellow

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Scheme D   White/red /blue

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Items Required to Complete This Model

- 1000-1200 Watt, 300g class electric motor
- 70-100A ESC
- 4 or 5 mini size high torque servos (Hitec HS5245 or HS 7245)

  *1 or 2 servos for elevators
- Appropriate servo arms
- Servo wire extensions. two 6", two 24"

Recommend KUZA Twisted 28 AWG Lightweight Servo Extensions (Not included)

Two 6"(155mm) No. KAG002511   Two 24"(610mm) No. KAG002514

- Appropriate Lipo batteries (6S 2600-3300mah)
- Receiver of your choice (minimum 4 channels)
- RC radio of your choice

Shop Supplies/Tools

- Covering Iron and heat gun
- Hobby tools such as screwdrivers, hobby knife, drill and drill bits, piers, etc.
- Thick and Thin CA adhesives
- 30 minute Epoxy
- Isopropyl alcohol
- Ruler or tape measure
- Blue thread-lock or equivalent
- Adhesive backed Velcro and Velcro strap for battery retention

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Note: please read all the instructions before you begin construction. Handle the parts of this kit with care so you do not damage any of the structure or covering. Inspect all the parts for any shipping damage and report any issues to as soon as you can. Make sure you have a flat and sturdy workbench and follow all safety advice for the tools and adhesives you plan to use.

Aircraft Covering

Varying temperatures and storage delays can cause covering material to loosen over time and transportation. **We recommend lightly going over all the covering with a covering iron set at medium temperatures**. Be sure to use a soft cover over your iron so you do not scratch the covering surface. Be sure you go over all seams and edges of the covering to assure it is secure to the airframe and other covering. Be careful not to apply too much heat or you may cause bubbles or damage to the covering. **A heat gun may also be used along with a soft cotton cloth to shrink and adhere the covering**. Again, be extremely careful when using a heat gun.

Some modellers prefer to seal the hinge gaps using strips of appropriate covering or clear trim tape. We have found this to be helpful with models intended for higher speed flight or models with unusually large hinge gaps. Aircrafts that utilize a very tight double beveled hinge line and do not normally require this step. **Sealing the hinge gaps is therefore left as an option formodellers**.

Please verify the accessories before assemble:
- 4 fiber glass servo horns(Bag No. KA07NA1A): 2 horns for ailerons, 1 for elevator, and 1 for rudder.

*There is a layer of protection film on the horns. Please remove the film before installation.

- Pushrods kits: Four 2x65mm pushrods for ailerons & elevator & rudder.

- Ball links (Bag No. KAG0011): 8 PCS

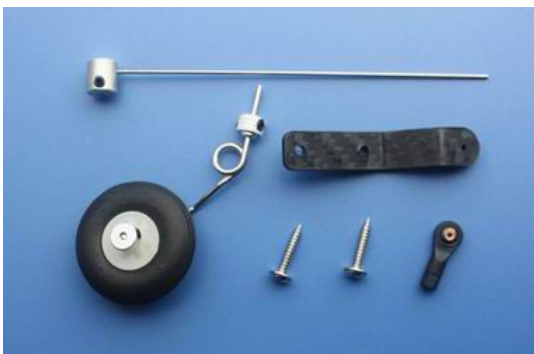- 4 Servo extension safety connector clips(Bag No. KAG0019)

- Main rubber wheels（Bag No. KAG0146）：2 Pcs

- Stainless steel Axle kits (Bag No. KA07NH)

- New C.F Tail wheel assembly (Bag No. KAG0101)

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- Side force generators (mounted with four M3X18 hand bolts and 2 wood sheets)

- 2.25"(57mm) CNC Alloy Backplate Hollowed-out Spinner (Bag No. KAG0202)

- 4 (3x16mm) hex-head bolts & Washers for landing gear mounting

- Screews & Washers for cowl: 4(2.5x12mm) Hexagon socket screws & 4 PTFE Washers

- Motor mounting hardware set

- 3 Hex keys

Construction

1. Wing Assembly

1.1 Locate two wing panels with ailerons, and two set of control horns and base plates.

1.2 Locate the slot for control horn on aileron, remove the covering over the slot with heated soldering iron or sharp hobby knife, and make sure you do it on the bottom side of the aileron.

Insert control horn into base plate then into the slot, trace the edge of base plate with hobby knife then remove the underlying covering.

1.3 Use some fine sandpaper to roughen up the root of control horn where will be glued into the slot.


1.4 Fill the slot and coat the root of control horn and the bottom of base plate with 30 minute epoxy, insert the horn into the slot, press it down firmly. Wipe off excessive epoxy with alcohol wipes. Set aside until cured.


1.5 The slots for CA hinges are pre-cut. Insert CA hinges half way into the hinge slots on aileron, apply a drop of thin CA to secure the hinges. Then insert all hinges into slots on the wing at once, align aileron with the wing, move the aileron up and down a few times to reach the

minimal hinge gap while still allowing full deflection of the aileron. When satisfied, apply more think CA on both top and bottom sides of each hinges.
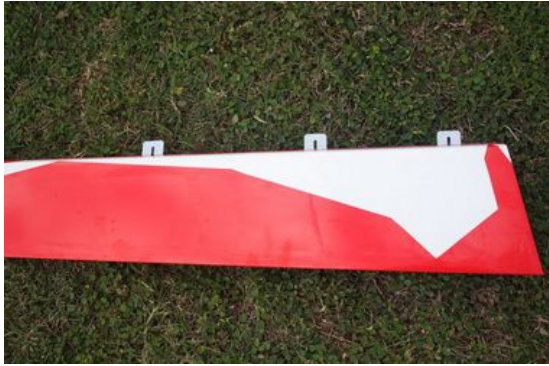
1.6 Cut the covering from the aileron servo slots from corner to corner and iron down inside the openings. Connect servo wire extensions to your servos and secure the connections with the supplied clips. Feed the servo wires into the wing and out the root. The screw holes for servo mounting are laser pre-drilled, it is advisable to apply some thin CA to strengthen them, Install the servos and screw firmly in place.
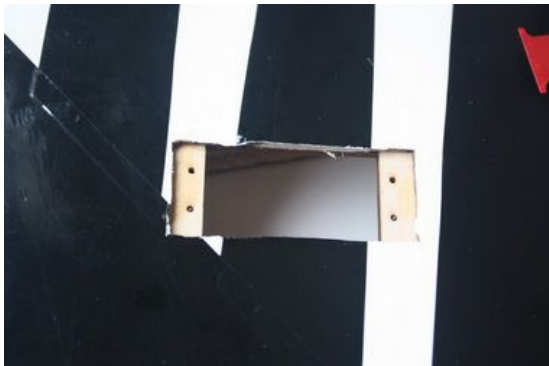
1.7 Use your radio to set the centers of each servo and then assemble and adjust the length of each control rod, KUZA 1" aluminium CNC servo arm is recommended for aileron control (sold separately). The servo arm should be as close to perpendicular to the control rod as possible while the aileron is at neutral. Double check all screws, bolts and nuts to assure proper installation and operation without binding.Once satisfied, permanently attach the ball links to the servo arms and horns with the supplied screw and nut.

1.8 Check the final radio operation of the ailerons and make sure there is no binding or servo
    fighting of each other. Also check to make sure all linkage bolts and nuts are secure.

1.9 Repeat this process for the other wing half.

2. Landing Gear Installation

2.1   Locate the landing gear set

2.2 Bolt the main gear to the bottom of the fuselage using the supplied bolts

2.3 Install the wheel axles to the landing gear and tighten the nylon-insert lock nut. Install one wheel collar onto the axle. Use a second wheel collar as a guide to leave a gap on the inboard of the axle. Use a small drop of thread-lock and tighten in place. Slide the wheel onto the axle and install a second wheel collar also using thread-lock on the set screw.

2.4 Fit the wheel pant in place and install using the 2mm hex-head bolts & Washers. Use thread-lock to secure the screws in place. Repeat the above steps for the other main gear.

3. Elevators Assembly

3.1   Find the control horn slots on bottom side the elevators, use the method described in 1.2-1.4 to install control horns for elevators.

3.2 Elevator horn slot is located on the left side of elevator. Remove covering over the hole for horizontal stabilizer on fuselage. Removing covering on the central part of horizontal stabilizer is recommended for better glue bonding. Insert the horizontal stabilizer into fuselage, make sure it's centered. Apply thin and gap-filling medium CA to glue it in place.
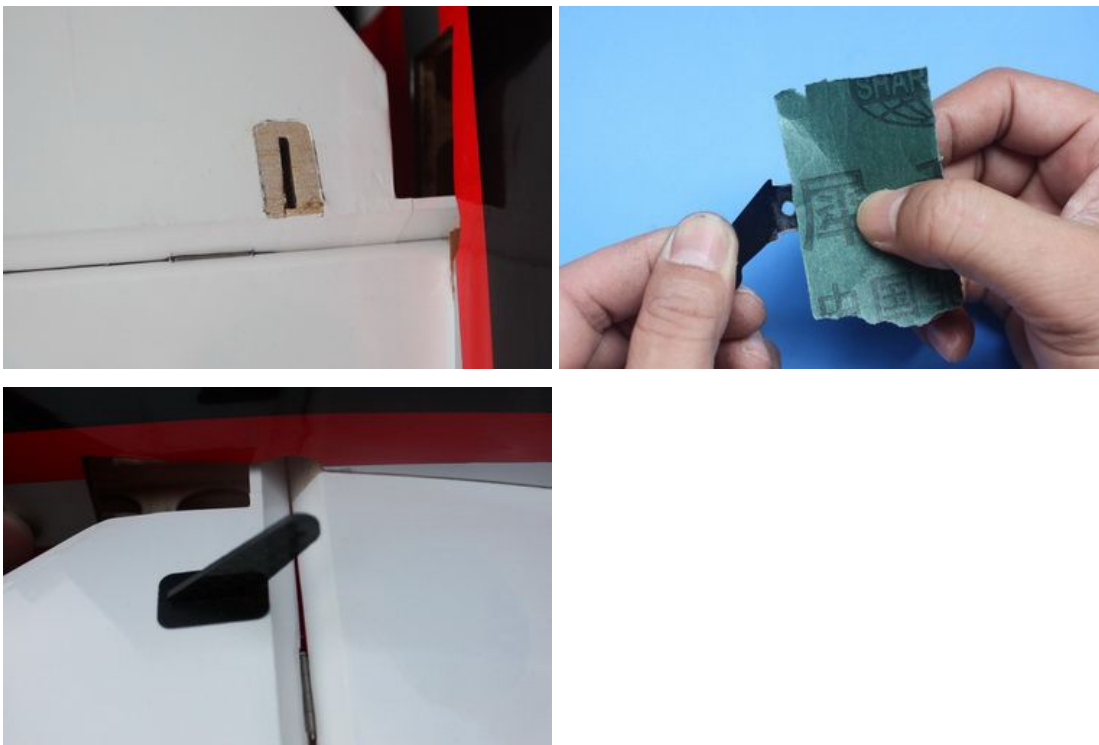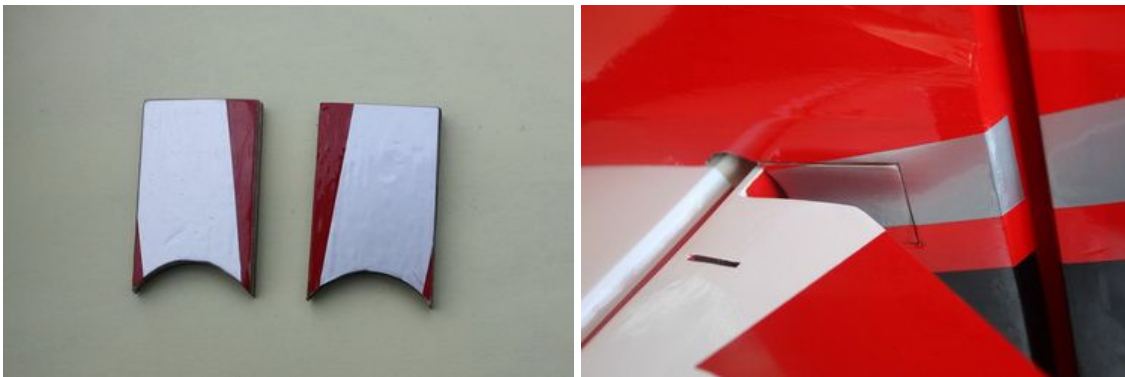

3.3 Glue the hinges for the elevator with CA glue.

3.4 After installing the elevator, use supplied balsa pieces to fill gap behind the elevator as shown below

3.5 Locate the slots for elevator servo, remove covering. Connect wire extension to your servos before feeding the wire into fuselage. Install servo with screws supplied by servo manufacturer.

3.6   Use your radio to set the servo center position and install the large control horn onto the servo. Assemble the control rod and ball links and adjust the control linkage for proper geometry. When satisfied, screw the ball link to the servo arm and control horn. KUZA 1.25" aluminium CNC servo arm is recommended for elevator control, the servo arm should be as close to perpendicular to the control rod as possible while the elevator is at neutral. Double check all screws, bolts and nuts to assure proper installation and operation without binding.
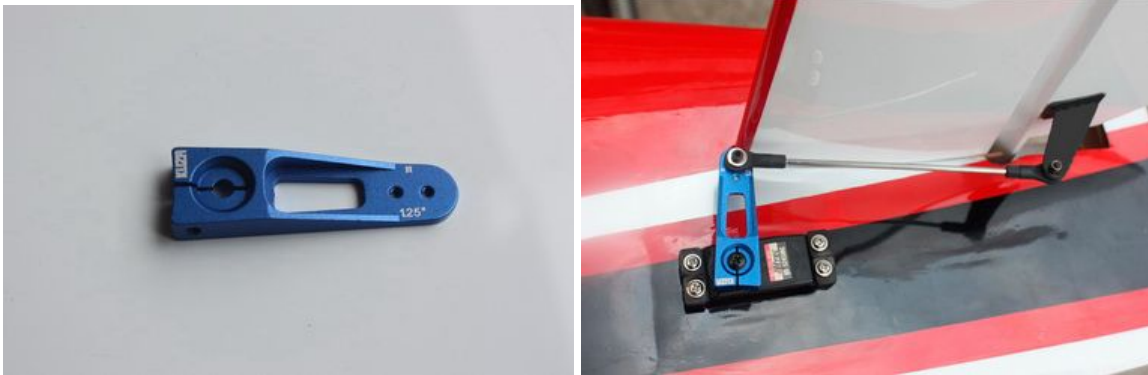

4. Rudder Assembly

4.1 Locate rudder, a control horn and base plate. Rudder is driven by push-rod, servo bay is on the right side of the fuselage.

4.2 Locate the slot for control horn on rudder, remove the covering over the slot with heated soldering iron or sharp hobby knife, and make sure you do it on the right side of the aileron. Insert control horn into base plate then into the slot, trace the edge of base plate with hobby knife then remove the underlying covering.
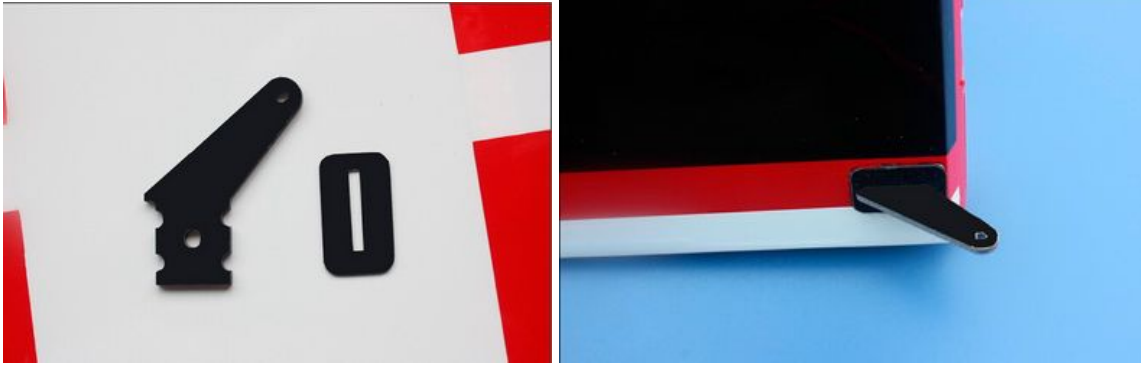
4.3   Use some fine sandpaper to roughen up the root of control horn where will be glued into the slot.

4.4 Fill the slot and coat the root of control horn and the bottom of base plate with 30 minute epoxy, insert the horn into the slot, press it down firmly. Wipe off excessive epoxy with alcohol wipes. Set aside until cured.

4.5 Use CA glue to connect hinges for rudder.

4.6 Cut the covering from the rudder servo slots from corner to corner and iron down inside the openings. Connect servo wire extensions to your servos and secure the connections with the supplied clips. Feed the servo wires into the fuselage. The screw holes for servo mounting are

laser pre-drilled, it is advisable to apply some thin CA to strengthen them, Install the servos and screw firmly in place.

4.7   Use your radio to set the center of servo and then assemble and adjust the length of the control rod. The servo arm should be as close to perpendicular to the control rod as possible while the aileron is at neutral. Double check all screws, bolts and nuts to assure proper installation and operation without binding. Once satisfied, permanently attach the ball links to the servo arms and horns with the supplied screw and nut.
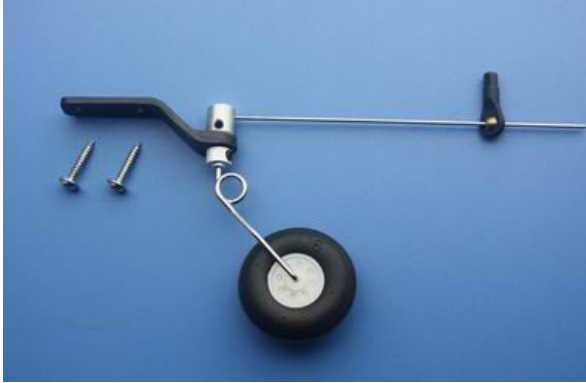

4.8 We recommend using KUZA 1.25" aluminium CNC servo arm (sold separately) for rudder control.

5   Tail Wheel Installation

5.1 Tail wheel assembly for electric airplanes.

5.2 Tail wheel kit is almost pre-assembled in factory, for safety, please remove all screws and then re-assemble with thread locker.
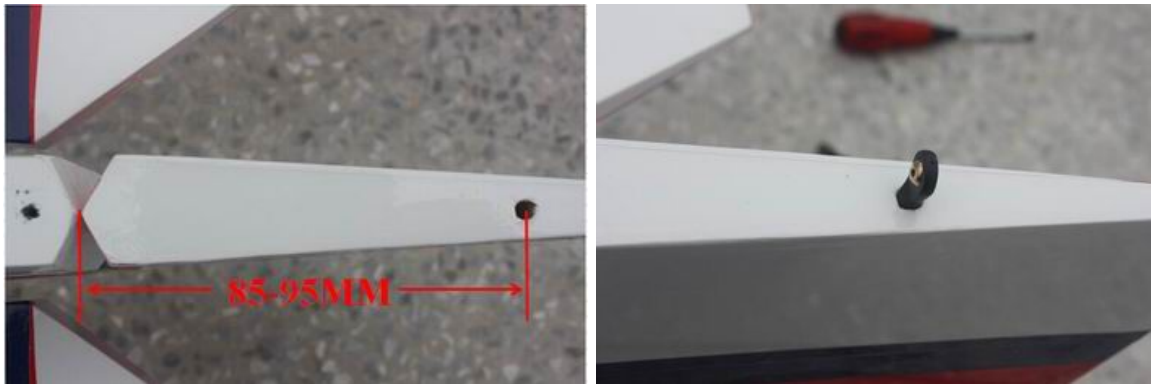

5.3 Drill 2 mm holes on the bottom rear of the fuselage, secure the tailwheel bracket with the provided screws. For best results, the pivot point of the assembly should be over the hinge line of the rudder.

5.4 Drill a 4mm hole on the bottom of rudder, 85-95mm away for the hinge line. Fill the hole and ball link with 30 minute epoxy.

5.5 The following is a picture of correctly installed tail wheel assembly.
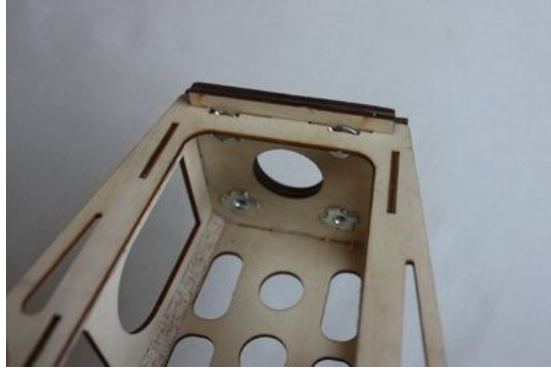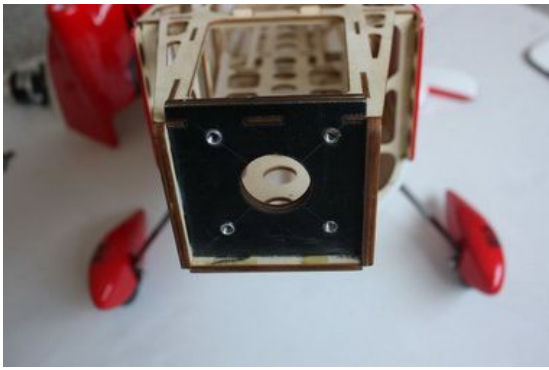

6 Motor Mounting

6.1 Find the hardware set for motor installation in the hardware package.

6.2 Blind nuts are pre-installed behind the firewall.

6.3 Since the position of cowl is fixed and length of motors vary, you may need to use provided washers and wood crosses to position you motor properly.
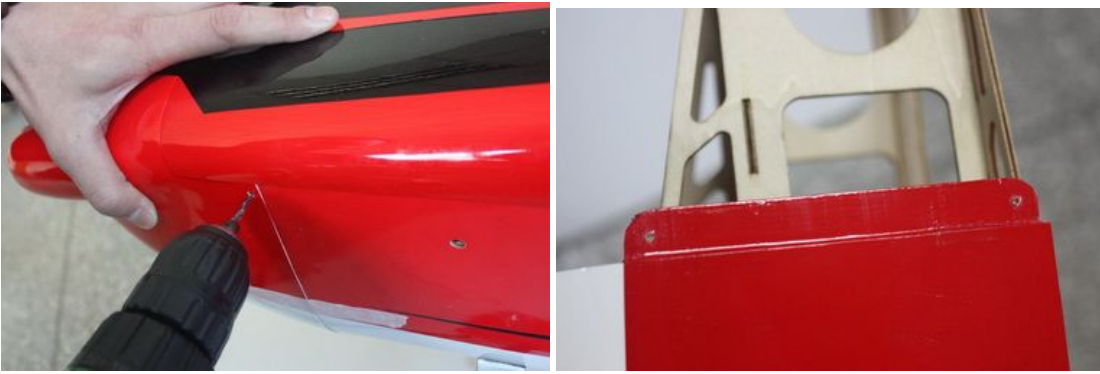

7 Cowl Installation

7.1 Test fit the cowl first, make sure it fits well with canopy and fuselage.

7.2 Drill 2mm holes on cowl and fuselage.

7.3 Enlarge the holes on cowl with 2.5mm drill bit.

7.4 Secure the cowl with 2.5X12mm self-threading screws and PTFE washers.

8   Final Radio System Installlation

8.1 Whether you 72 MHz systems or the newer 2.4 GHz systems, proper radio installation and care is vital to the safe and reliable operation of your aircraft. Follow the manufacturer's instruction for installation guidance of receivers and batteries paying attention to factors such as vibration isolation, adequate cooling, and clearances.

8.2 Mount your reciever(s) securely in a location which provides a clean and maintenance free solution to your setup. All servo wires should be neatly routed and secured in place so they will not come loose or flop around during flight.

8.3 The fuselage ply sides provide space to mount your switches just below the canopy. Mount your switches according to the manufacturer's instructions and route your wires safely and securely as above.

8.4 Your receiver battery(s) can be mounted in a variety of locations depending on your balance needs. Regardless of where you mount your batteries it is vital that they are very secure with no possibility of coming loose. Use double sided velcro to hold the batteries from sliding around and then use zip ties or velcro straps to secure them tightly in place.

8.5 Servo and battery leads are the life blood of your aircraft. Make sure all wires are top quality and connectors are tight and display no loose pins or frayed wires. Servo clips are provided in the kit for your convenience. These servo clips can even be glued to the wood structure using CA if desired.

8.6 Check all radio programming and control surface operations thouroughly before your initial flight. Check your radio range according to the radio manufacturer's instructions both with the engine off and running.

9   Balancing and Pre-Flight

Most state of the art aerobatic aircraft allow for a wide margin for balancing depending on what level of precision or freestyle the pilot prefers. To perform properly without being too pitch sensitive, you must not go too aft on the CG. We recommends an initial CG setting of **101-123mm(4.0-4.8inches)** behind the leading edge of the wing at the root. More experienced pilots may want to set the CG further aft for more 3D capability. Varying weights of motor and radio gear will dictate how you should install each.

 Note: The best way to check your balance is to trim for level flight at about 1/2 to 3/4 throttle and then roll inverted. The aircraft should maintain level flight with very little to no down elevator input. If the aircraft climbs when inverted then you've probably got your CG too far aft. If the nose drops more than slightly, then you are most likely nose heavy.

Recommended control surface deflections:

|	**Low Rate**	**High Rate**
Elevator	15 degrees	45-50 degrees
Rudder	25 degrees	40-45 degrees
Ailerons	25 degrees	35-40 degrees

10.Final Assembly and Pre-Flight Inspections

10.1 Before arriving at your flying field, be sure all your batteries are properly charged and all radio systems are in proper working order.

10.2 Install the wings onto the fuselage being careful to align the wing tube with the wings and not force it. The wing tube may be initially tight but will loosen some with use. Guide your servo wires into the fuselage openings and connect to the proper aileron channels. Servo clips are recommended. Once you have the wings fully seated in the fuselage tighten the wing bolts inside the fuselage.

10.3 Cut the wing film needed to be install the SFG. Fixed the SFG Use M3X18 hand bolts and wood sheets. Installation of the SFG is optional.
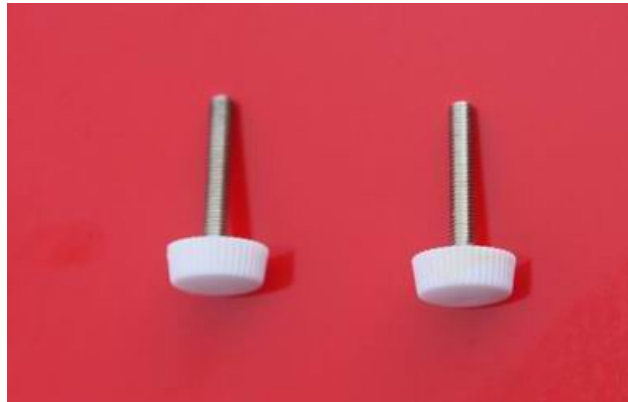
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10.4 Check all control surfaces for secure hinges by performed a slight tug on the control surfaces and observing if there is any give in the hinges. Check all control rods, ball links, servo screws, etc. for proper operation and installation.

10.5 Check your batteries and perform a proper range check once again with the engine off and running. Be sure all surfaces are moving in the correct direction and the proper amount for your flying setup.

Recommend Accessories（Not included）

*KUZA Twisted 28 AWG Lightweight Servo Extensions

Two 6"(155mm) No. KAG002511   Two 24"(610mm) No. KAG002514

*KUZA Heavy duty aluminum Servo Arm (Not included)

FUTABA servo arms   HITEC servo arms

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JR servo arms

26mm/1in for aileron   No. KAG0S70F/KAG0S70H/KAG0S70J

32mm/1.25in for elevator & rudder No. KAG0S71F/KAG0S71H/KAG0S71J

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* KUZA new Wingbag for 70E   Two color to choose: orange/ silver, blue / silver   No. KAG0091