



***Assembly Manual For  
53" electric sbach 342***



**[www.pilot-rc.com](http://www.pilot-rc.com)**



***Thank you for purchasing our new 53" electric sbach 342. we strive to achieve the real Quick Built and ARF aircraf .***

***It just requires the least amount of assembly of any kit that almost finished in factory.To obtain the perfect performance,both the design and manufacturing have been taken care with the highest quality from any hardware,covering ,wood and glue in the construction as well.By optimal weight and reliable construction,you will find this plane is really ideal for 3D - Freestyle and aerobicic.***

***So we hope every effort and service we offer will make you feel easy and have a wonderful time in the pleasure of flying in***

***3D space***  
More information on website

***[www.pilot-rc.com](http://www.pilot-rc.com)***

All Pilot-RC products are guaranteed against defects for 30 days of receiving your airplane. This warranty is limited to construction or production defects in both material and workmanship, doesn't cover any component parts damaged by use or modification.

The manufacturer can't supervise the assembly, operation and maintenance, and can't ensure your radio system is in good condition. **Therefore, we are not responsible for any damage occurring during the use of a radio controlled model.** It is impossible to determine for certain whether crash damage was the result of a radio system failure or pilot error even improper installation of our products. Model airplane owner is using it on his own responsibility.

In no event should Pilot-RC accept the liability exceeds the original cost of the airframe (not include motor and radio system).

No matter what reason you wish to return this airplane, all shipping cost will be paid by customer. If some parts require replacement from us, the original parts' return is at customer's expense.

**You should not regard this plane as toy!**

To ensure safety, please read the instruction manual thoroughly before assembly .

Building and operating model plane require diligent practicing and correct guidance. Any neglect, carelessness and missing experience can cause serious bodily harm and property damage.

Seek the assistant of a experienced person or airplane model clubs in assembly ,operation and maintenance to ensure quick and successful learning

**Fly only in proven model airfield** that AMA (Academy of Model Aeronautics) approved

**Pilot-RC has the right to change to this plane ,instruction and limited warranty without notice. If you have any problems and questions ,please contact Pilot –RC**

Web: [www.pilot-rc.com](http://www.pilot-rc.com)

Email: [pilot-rc@139.com](mailto:pilot-rc@139.com) , [pilot-rc@hotmail.com](mailto:pilot-rc@hotmail.com)

Cellphone: +86 760 88781293

FAX: +86 760 88780293

Address: No.34, Chengnan Er Road , Zhongshan city, 528400, Guangdong Province, China



**Introduction** ..... 1  
**Warranty** ..... 2  
**Attention** ..... 3



**Rudder Assembly** ..... 6

**Landing Gear Assembly** ..... 8

**Wing Servo Assembly** ..... 11



**Horizontal tail Assembly** ..... 13

**Elevator Servo Assembly** ..... 14



**Rudder Servo Assembly** ..... 15

**Motor Assembly** ..... 16



**Cowl Assembly** ..... 17

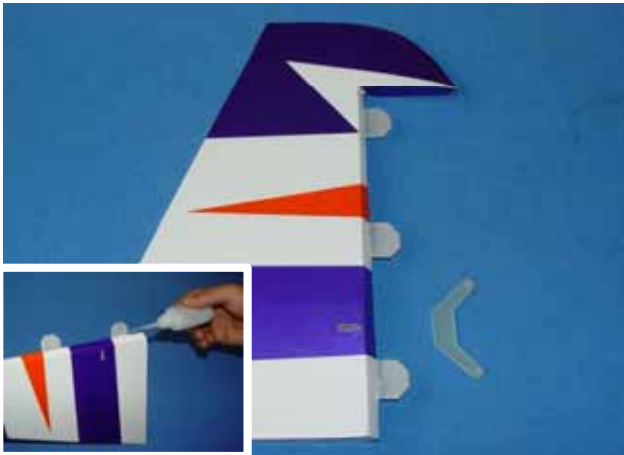
**CG And Control Throws** ..... 19

**Flight Preparation** ..... 22

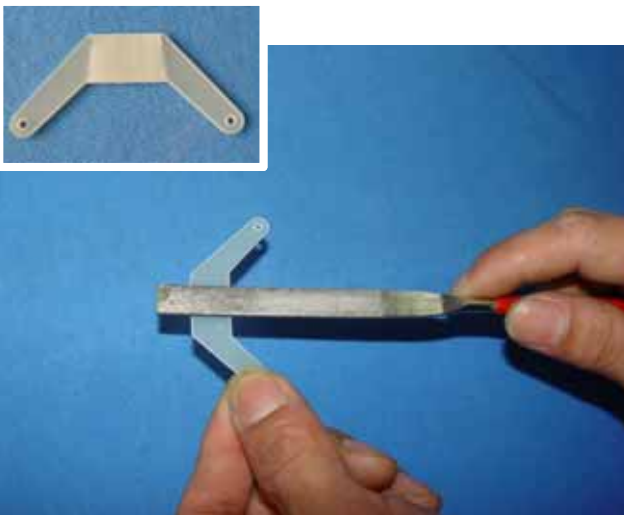
**Items needed for completion**

- masking tape
- Thin and medium CA.
- 30 minute epoxy.
- Electric drill with an assortment of small drill bits.
- Small flat head and head screw drivers.
- Standard and needle nose pliers.
- 4 sub micro metal geared servos.
- Brushless Outrunner motor
  - Setup 1: Hacker A30-12XL Motor : <http://www.hacker-motor-shop.com>
  - Setup 2: Dualsky XM4260CA-6 Motor : <http://www.dualsky.com>
- 60 Amp ESC.
- 4S 2200 - 4000mAh or 5S 2200- 3800mAh LiPo battery
- 15x8 wood prop for electric motor .

## Rudder Control Horn



1. Scuff the middle of horn for good glue bond. Then clean up the surface



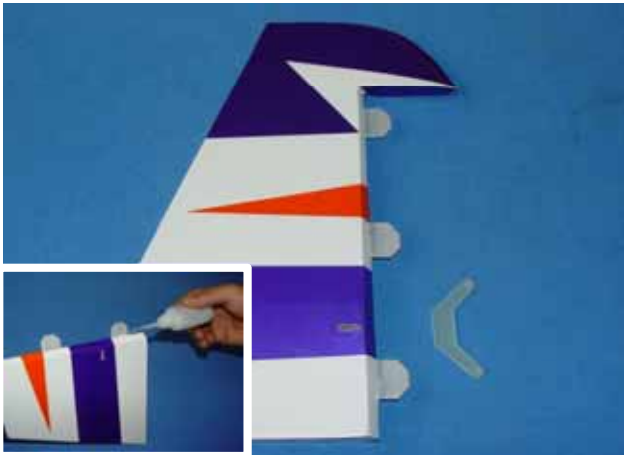
2. Apply the 30 minutes epoxy inside the pre-cut slot, and coat the horn with epoxy as shown



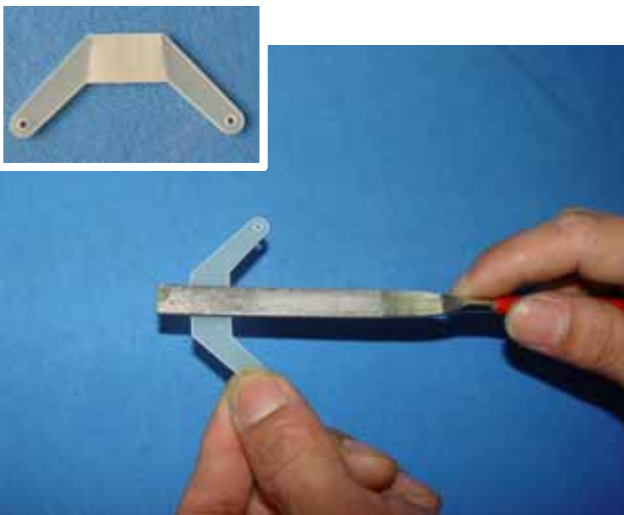
3. Slid the horns into slots slightly. Align the both side before epoxy has cured. Wipe away excess glue with rubbing alcohol



## Rudder Control Horn



1. Scuff the middle of horn for good glue bond. Then clean up the surface



2. Apply the 30 minutes epoxy inside the pre-cut slot, and coat the horn with epoxy as shown



3. Slid the horns into slots slightly. Align the both side before epoxy has cured. Wipe away excess glue with rubbing alcohol





**1** 15mm

**2** Reinforce block 15mm

**3** Slide the steel wire into hole and glue in the slot

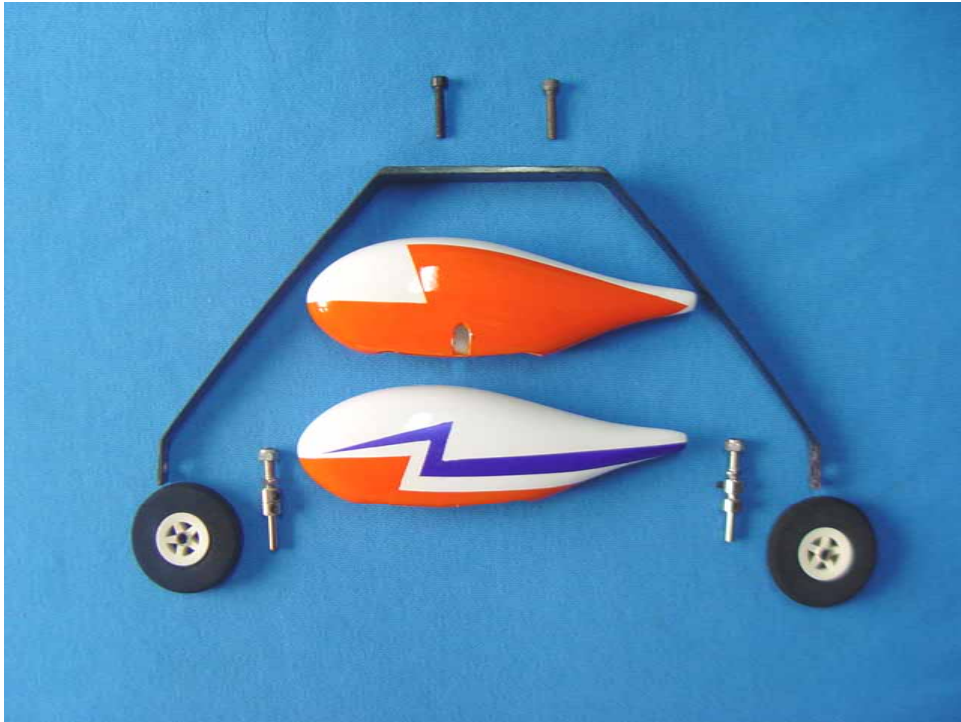
**4** Slide the hinge into pre-cut holes on fuselage

drops of fast glue on hinges

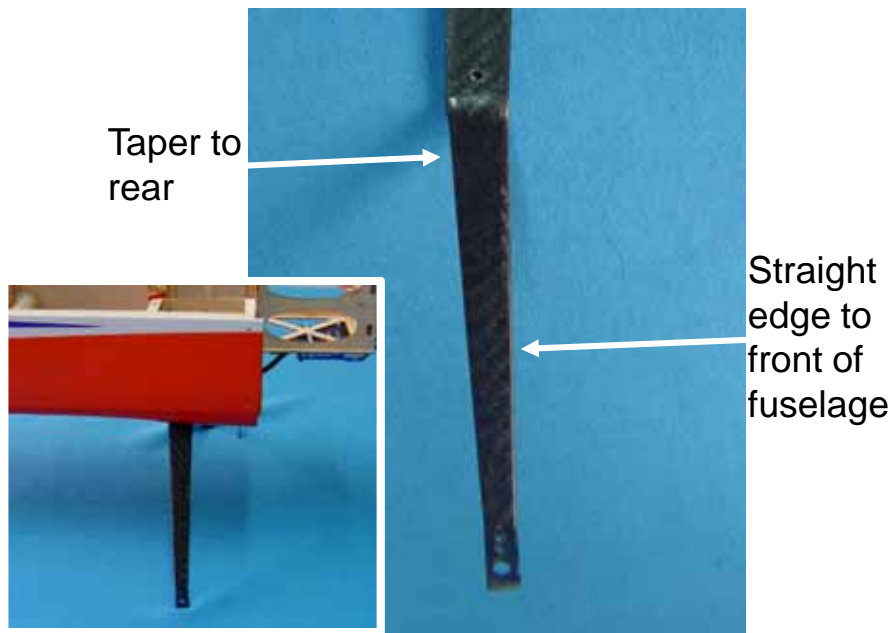
self-tapping screw

**5** Tighten the set screw with 1.5mm Hex Wrench

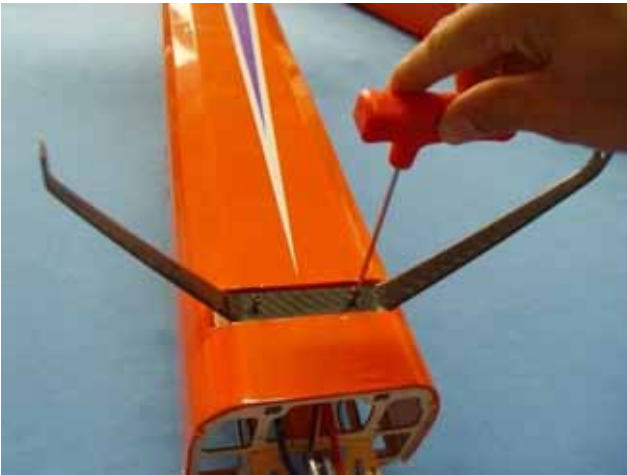
**Main Landing Gear Installation**



**NOTE:** the correct edge in mounting



1. Install the landing gear with the bolts. Don't over tighten and crack the carbon fiber



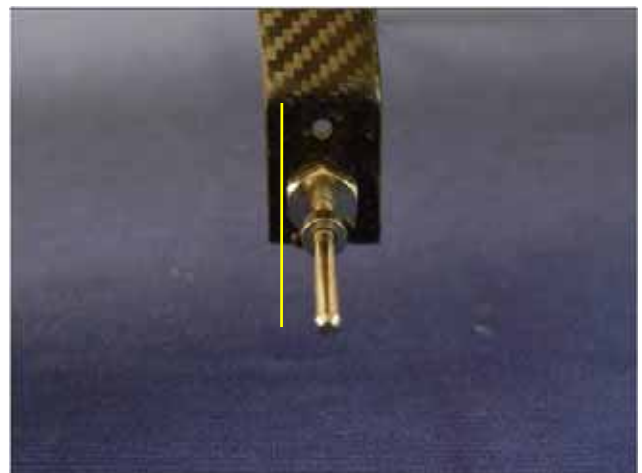
2. Install the landing gear axles with lock nut, but do not tighten



3. Lift the rear of fuse to line it up with ground as shown



4. Make the flat sides of the axle bolt vertical with ground. Then tighten the lock nut against the landing gear strut



5. Install the collars and wheel in order with a **drop of Blue Loctite** on the collar set screw and ensure the wheel is free to rotate.



### Pants Installation

1. Hold the rear of fuse up. Slipping the wheel pants over the axles and support the rear of them to line up with the ground



2. Drill the holes for the installing the self-tapping screw



3. Finish the wheel pants mounting with the self-tapping screw



1. Scuff the horns for good glue bond. Then clean up the surface



2. Cut out the cover for horns location carefully. Apply the 30 minutes epoxy inside the pre-cut slot, and coat the horn with epoxy



3. Slide the horns into slot slightly and wipe away excess epoxy with rubbing alcohol



4. Lock the connector with the provided safety clip against vibration and loosened tension as shown



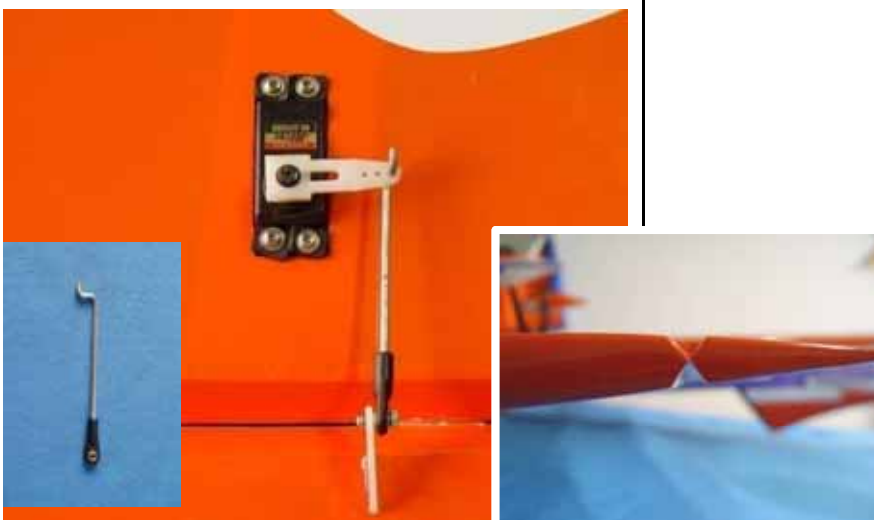
5. Cut out the cover for servo location carefully. Install servo with mounting screws. Use 1mm bit to drill the mounting holes



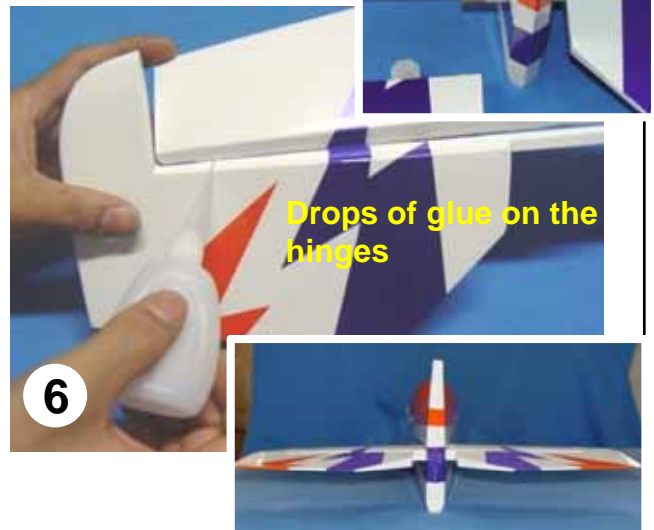
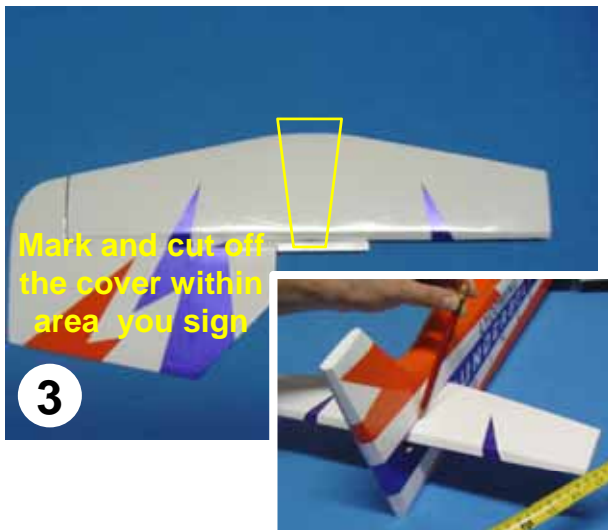
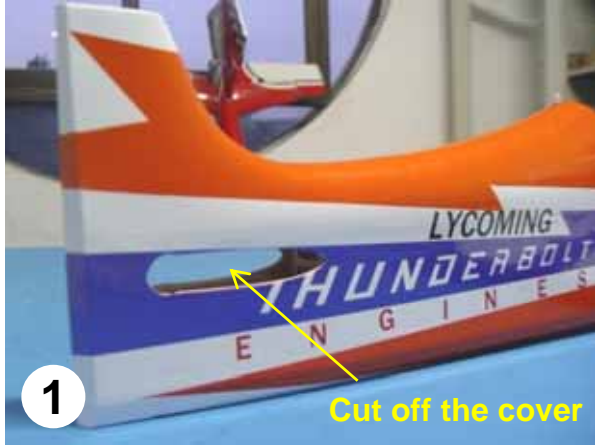
7. Repeat all the step above for the other wing

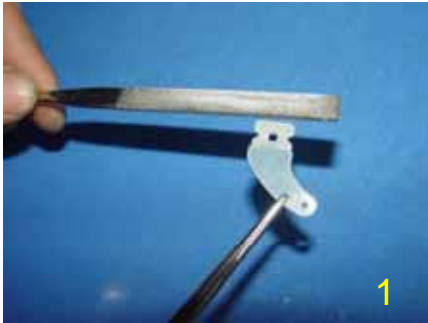
The carbon tube and wing bolts use to be mounted in the final assembly

6. Install the servo arms facing toward the wing tip. Measure and cut the extra wire. Then bend to a sharp of "z" as shown .Keep the aileron panel on the neutral position



## Horizontal tail Assembly





*For the detailed introduction about control horn please refer to the wing servo assembly*

Install servos with mounting screws. Face the brand toward the rear of fuse. Use 1mm bit to drill the mounting holes



Install the servo arms and measure and cut the extra wire. Then bend to a sharp of “z” as shown. Keep the elevator panel on the neutral position



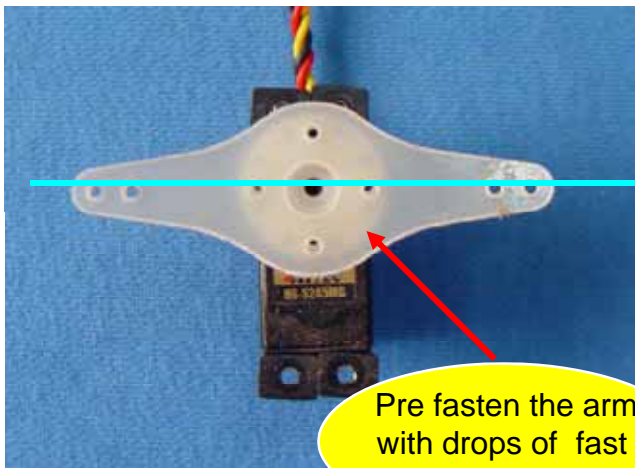


### Servo Tray Installation

1. Turn on your transmitter and plug the servo into receiver. Ensure every channel is neutral



2. Keep the tray holes on center and the arm aligned with brand as shown

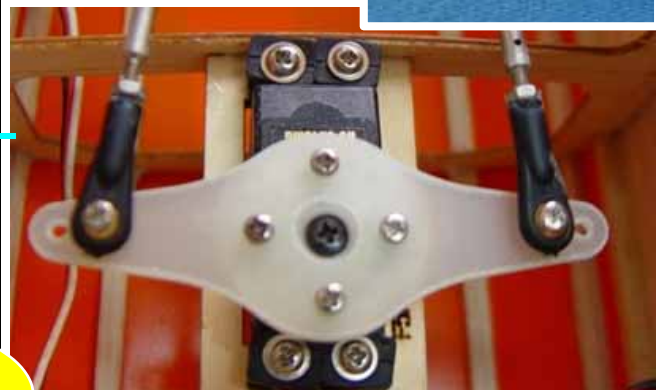
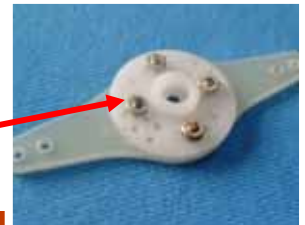


3. Drill holes with 2mm bit

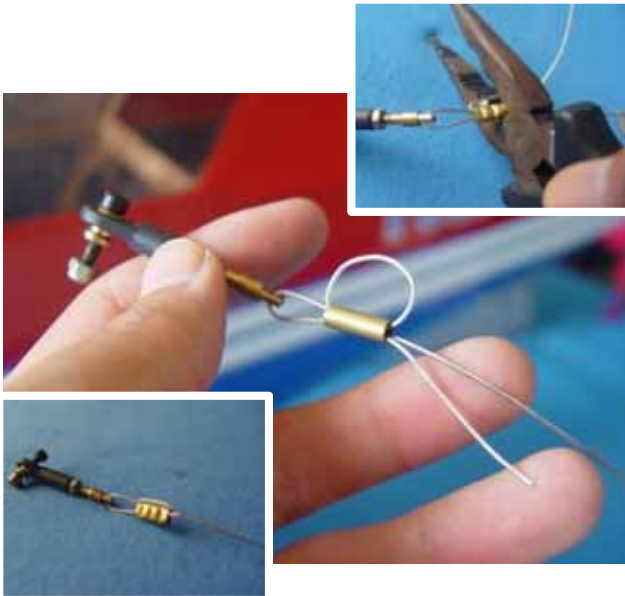


4. Mounting screws and nuts

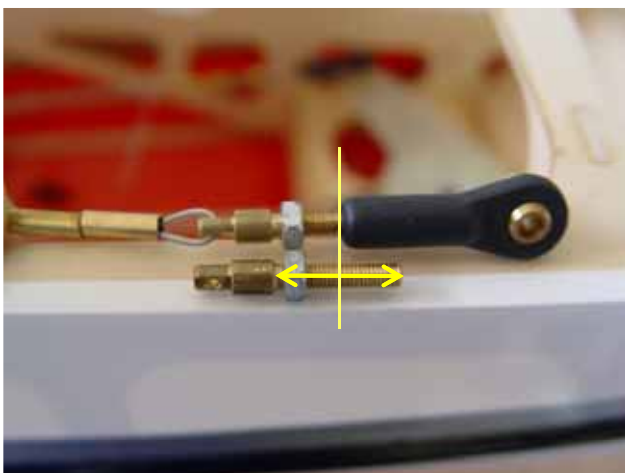
A drop of fast cured gule here



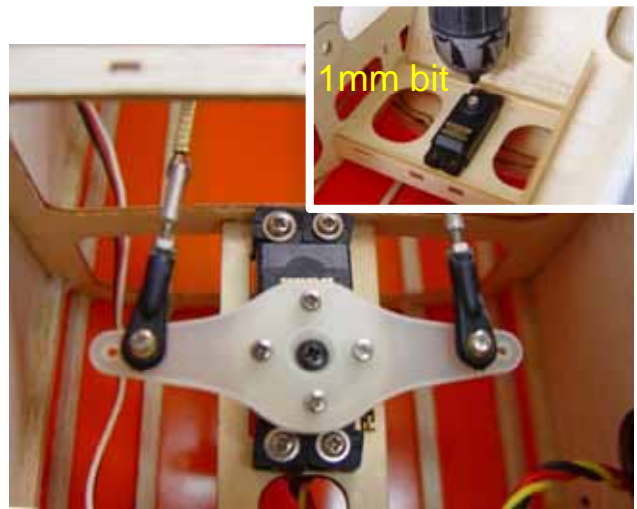
1. Thread cable and crimp the brass tube in place with crimping pliers



**NOTICE:** The coupler is best to thread half way into ball link for further tightening next



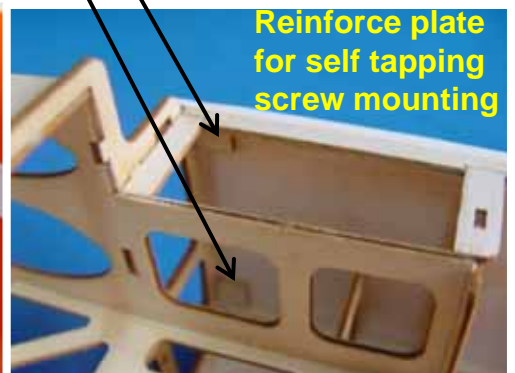
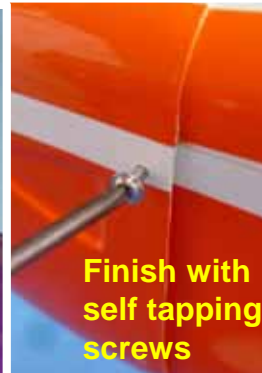
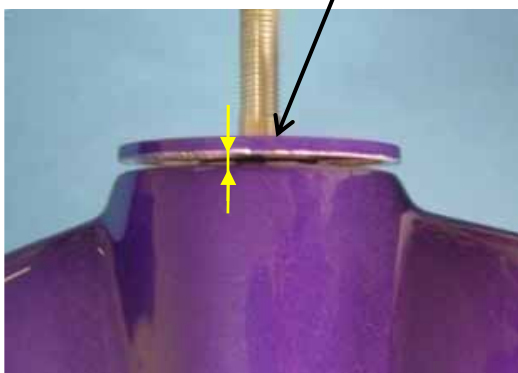
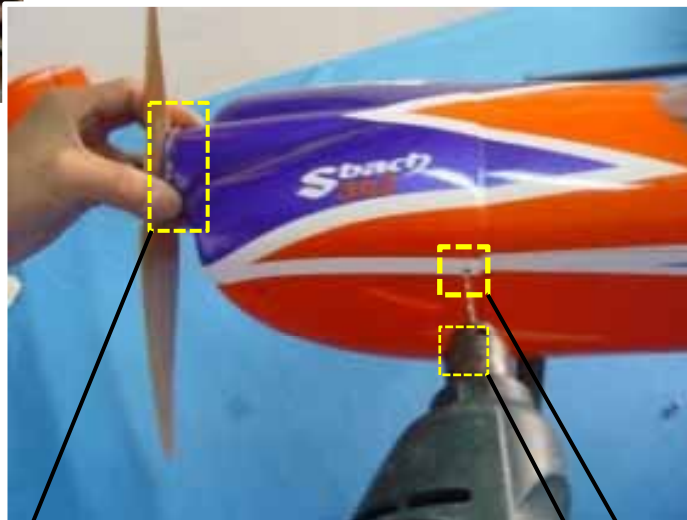
2. Mount servo with mounting screws and face the brand toward the rudder. Install the servo arm ball links with bolts and nuts.



3. The cables are crossover in fuse and threaded out through the rudder horns. **Ensure the same length of cables and tension (Don't pull strongly to hurt the rudder)**





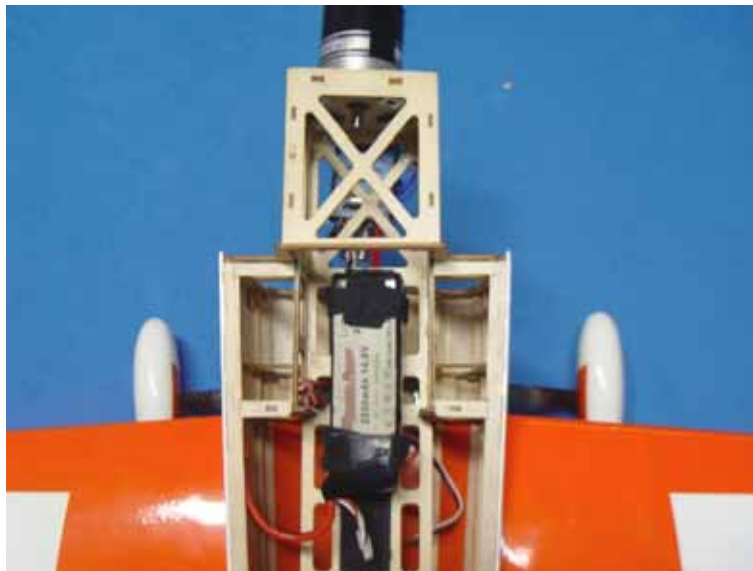


## Center Of Gravity

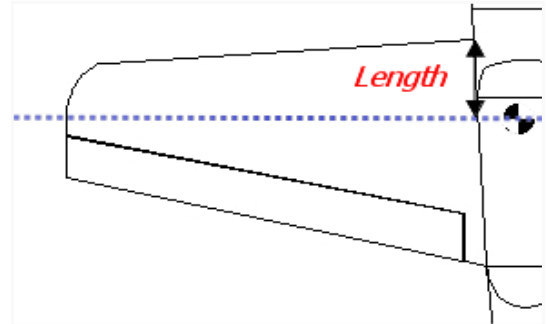
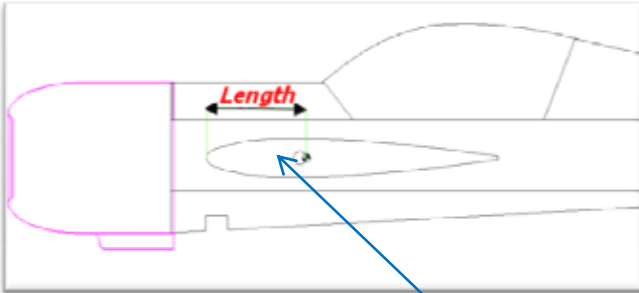
The center of gravity is on the center line of the wing tube .For more plane please refer to the CG list



Your balance at the CG will determine batteries final mounting location .Mount batteries and secure with Nylon ties



## The CG list of Pilot-RC products



This recommendation balance point is for your first flight. The CG can be moved around to fit your personal taste.

| PLANE                | CG location          |
|----------------------|----------------------|
| YAK-54 73"           | 156 mm/6.1inch       |
| YAK-54 87"           | 183 mm/7.2inch       |
| YAK-54 107"          | 225 mm/8.9inch       |
| YAK-54 121"          | 266 mm/10.5inch      |
| YAK-54 129"          | 273 mm/10.7inch      |
| YAK-54 148"          | 314 mm/12.4inch      |
| YAK-54 180"          | 401 mm/15.8inch      |
| EXTRA-300 73"        | 131mm/5.2inch        |
| EXTRA-300 88"        | 170mm/6.7inch        |
| EXTRA-300 107"       | 211mm/8.3inch        |
| EXTRA-300 122"       | 244mm/9.6inch        |
| <b>Sbach 342 53"</b> | <b>132mm/5.2inch</b> |
| Sbach 342 73"        | 145mm/5.7inch        |
| Sbach 342 87"        | 173mm/6.8inch        |
| Sbach 342 107"       | 234mm/9.2inch        |
| Sbach 342 122"       | 269mm/10.6inch       |
| Sbach 342 148"       | 309mm/12.1inch       |

|                |               |
|----------------|---------------|
| Edge-540 87"   | 175mm/6.9inch |
| Edge-540 107"  | 141mm/5.6inch |
| Edge-540 122"  | 166mm/6.5inch |
| EXTRA-260 73"  | 144mm/5.7inch |
| EXTRA-260 87"  | 172mm/6.8inch |
| EXTRA-260 106" | 209mm/8.2inch |
| EXTRA-260 122" | 248mm/9.8inch |

## The First Flight set up

Throttle: Adjust idle –full

Elevator: 40 Degrees on High rate  
15 Degrees on Low rate  
30-50% Exponential

Aileron: 30 Degrees on High rate  
15 Degrees on Low rate  
30-50% Exponential

Rudder: 45 Degrees on High rate  
40 Degrees on Low rate

After you set the given control throws up and have a few flights under you belt, you can change the amounts as well as moving the CG back at 1/4" intervals

Learn to use exponential of about 40 percent on your elevator to make great landings and not over control a highly aerobatic airplane. Use 70 percent exponential on High Rate!

Make sure you have the right model programmed into your transmitter

Check the direction of each surface not and also right before you take off .

Rememver nothing wrong on the ground ever improves in the air

Check the air plane with the engine running and do a range check with

your body between you and the plane at 100 feet.

Check your battery voltage after each flight in case one servo is draining your battery

Recheck all screws ,horns and linkages for slop after your maiden fight and check for damage if you made a bad landing you first time

Have an experienced pilot fly it for you the first time if you have any doubts in your mind about the maiden flight

Take a break after you first flight and let the adrenaline burned off by bragging to your fellow members how good it flies.

Fly low and at a medium speed on your first few flight

Listen to your engine run and have an observer with you to remember what you talked about during the flight or if you ger into trouble . Always balance your props, vibration is a killer.

Remember nose heavy airplanes fly all the time, tail heavy airplanes fly only once. Be on the CG!

Fly 3D two mistakes high in the beginning and not close to people, planes or runways. Being a center of the runway hog does not endear you to many modelers.