



# F-8F BEARCAT

## Assembly Manual

### 1/6 F8F BEARCAT



**No. 4578**  
**Specifications:**  
Wing Span: 63" (1600mm)  
Length: 49 1/4" (1250mm)  
Weight: 4500g (9.9 lbs.)  
Engine: .90 2C, 1.20 4C req'd  
Radio: 6~8ch 8 Servos req'd

***Unlimited Pylon Racer***

### Warranty

This kit is guaranteed to be free from defects in material and workmanship at the date of purchase. It does not cover any damage caused by use or modification. The warranty does not extend beyond the product itself and is limited only to the original cost of the kit. By the act of building this user-assembled kit, the user accepts all resulting in liability for damage caused by the final product. If the buyer is not prepared to accept this liability, it can be returned new and unused to the place of purchase for a refund. Neither your dealer nor Thunder Tiger distributors can accept kits for return if construction has begun.

### Notice: Adult Super Vision Required

This is not a toy. Assembly and flying of this product requires adult super vision. Read through this book completely and become familiar with the assembly and flight of this airplane. Inspect all parts for completeness and damage. If you encounter any problems, call us for help.



INTRODUCTION

Congratulations on the purchase of one of our finest Premium Scale Series. The F-8F is a famous WWII fighter of Cat family, it was one of the fastest piston-engine aircraft at that time and it utilizes the same engine as the Hellcat and Tigercat. The F-8F Bearcat had excellent maneuver ability and good low-level performance but it arrived too late in the war to see any action. Due to its great performance, the F-8F Bearcat has become a favorite of air racers and warbird collectors. Thunder Tiger replicates this cat to all the R/C hobbyist alike worldwide! It has stayed true to the "Bear" in its purest form that you can experience this WWII bird in flying field.

PRE-ASSEMBLY NOTES

The Bearcat is designed for *advanced pilots and it requires advanced assembling and flying skill*. Before you begin, check the entire contents of your kit against the parts drawing and photos to make sure that no parts are missing or damaged. This will also help you to become familiar with each component of your plane. If you find that any of the parts are either missing or damaged, please contact Thunder Tiger Distributors for Customer Service.

Before beginning the assembly read the instructions thoroughly to give an understanding of the sequence of steps and a general awareness of the recommended assembly procedures.

Trial fit each part before gluing it in place. Make sure you are using the correct part and that it fits well before assembling. No amount of glue can make up for a poor-fitting part. Always apply Loctite (not furnished) to all screws and nuts to prevent them from loosening.

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No. 4571

1/6 RARE BEAR ARF



**Specification:**  
Wingspan: 63" (1600mm)  
Length: 55.5" (1410mm)  
Weight: 10.5~11 lbs (4800~5000g)  
Engine: .60~.90 2C .91~1.20 4C  
Radio: 5CH  
Servo: 5 servos plus 1 retract servo

Unlimited Pylon Racer

Fly low, go fast and turn left

John Penney piloted the popular Rare Bear and got first place in Unlimited Class qualify at 495.039 mph of the 10th National Championships Air Race & Air Show, which was held in Reno Stead Field. Thunder Tiger as official sponsor is licensed to produce this 1/6 Rare Bear. Pre-painted fiberglass fuselage and cowl, scale details like panel line, aluminum spinner, and retract wells with gear door...etc. Now you can pilot this Rare Bear 1/6 scale replica, the most popular unlimited pylon-racing machine from Thunder Tiger. Fly it low and fast to experience the thrill and excitement of pylon racing. Go Bear !

No. 4573

1/7 SEPT. FURY ARF



**Specifications:**  
Wing Span: 67 3/4" (1720mm)  
Length: 60" ( 1525mm)  
Weight: 5500g ( 12 lbs.)  
Engine: .90 2C, 1.20 4C req'd  
Radio: 5~8ch 6~8 servos req'd

Unlimited Pylon Racer

World's Fastest Sea Fury!

The highly modified aircraft number 232 September Fury, owned and piloted by Mike Brown, qualified at a blistering 468.266mph to take the third position at the 2002 National Championship Air Races(NCAR) and established itself as the fastest Sea Fury in history. Thunder Tiger is very proud to present the legendary Sept. Fury with its great speed to all R/C hobbyists alike worldwide. Fly it now! Experience the unlimited pylon racer of this fastest Sea Fury!



## Locate A Good Flying Site

Generally, the best place to fly your model is at an AMA (Academy of Model Aeronautics) chartered club field. Your local hobby dealer can tell you if there is such a club in your area or write the AMA for information. It is also a good idea to join this organization before flying your model since they offer liability insurance that can protect you if your model causes damage or injury to others.

Academy of Model Aeronautics

5151 East Memorial DR

Muncie, IN 47302-9252

www.modelaircraft.org

If there is not a chartered club field in your community, you will need to find a large area free of obstructions, and has a smooth grass or asphalt surface to be used as a runway. For safety's sake, it should be located well away from houses, buildings, schools, power lines and airports. If you will be flying within 6 miles of an airport, you should check with the airport manager before flying your model.

## A Note On Batteries

The batteries are the heart of your radio system. Make sure you have fully charged batteries! With recharge-able batteries, follow the manufacturers instructions to make sure the batteries are fully charged, especial the first time the radio is used. We would recommend you use larger capacity (1000mAh) if you use high performance servos as they will draw more current than ordinary servos.

## Congratulations

Now that you have completed the assembly of your F8F Bearcat we feel that you have a very capable and good looking sports scale plane. We hope that you will enjoy this model and get many hours of flying pleasure from its use. Thank you for purchasing this F8F Bearcat from Thunder Tiger and we look forward to providing you with other great R/C products in the future.



## RECOMMENDED TOOLS & MATERIALS

### Adhesives:

Instant setting Cyanoacrylate adhesive (thin CA)  
Slow setting Cyanoacrylate adhesive (thick CA)  
5-10 Minute Epoxy (fast)  
20-30 Minute Epoxy (slow)

### Tools:

Model knife, T-Pins, MASK tape  
Small screwdrivers, medium screwdrivers  
Scissors  
Steel straight edge  
Long nose pliers and diagonal cutting pliers  
Drill and drill bits (1/16", 3/32", 3.4mm)  
M4x0.7 Tap  
Sanding block  
Fine felt tip pen and soft lead pencil  
Straight building board

### R/C System:

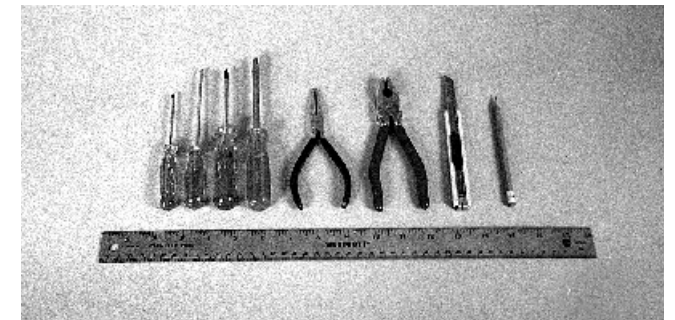
6 Channel radio with 7 servos plus one retract servo  
Five 12" extension wires.  
one Y cords

### Engine:

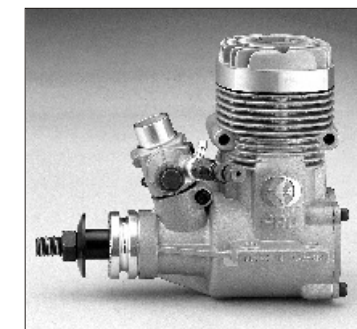
2 cycle:91~1.08  
4 cycle:1.2~1.5

### Propeller:

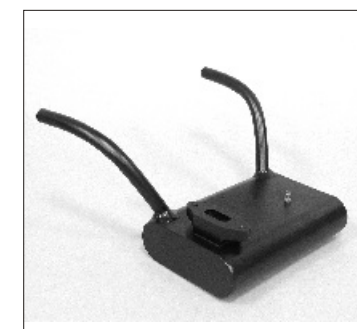
Appropriate for engine type and preferred performance



Tools - Model assembly can be much easier if the proper tools are used. Therefore, we have included in our checklist to the left, a complete listing of all the tools we used to assemble our prototype models. As you will notice, many household tools can be utilized during construction.



**Engine-**The Thunder Tiger PRO-91 is the ideal engines for this airplane. This quiet-running engine is easy to start, requires no special break-in periods, easy to maintain and will last for years.



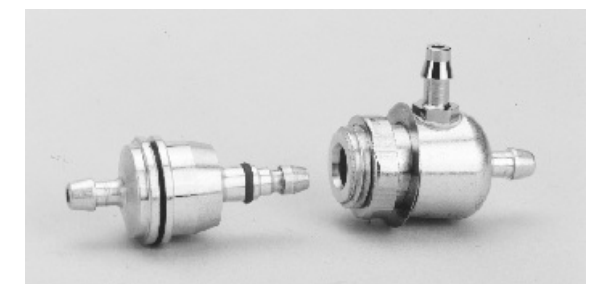
### Muffler (P/N TTR9794)

Most Pitts style mufflers will fit this Bearcat F-8F. However, we recommend the use of Thunder Tiger custom-made Bearcat F-8F muffler with two exhaust pipes that divert the smoke in to the two concavities of the fuselage to obtain a more scale-like appearance. This muffler fits TT and OS .60~.90 engines.



**Adhesives** - You will need two types of adhesives for the Sept.Fury - Epoxy and Instant (cyanoacrylate) adhesives. We recommend that you purchase both 5-minute and 30-minute epoxy to cut down on assembly time, but you can get by with only 30-minute epoxy if time is not important. You will also need a small bottle of both "Thick" and "Thin" instant CA adhesive.

## ITEMS YOU MAY NEED



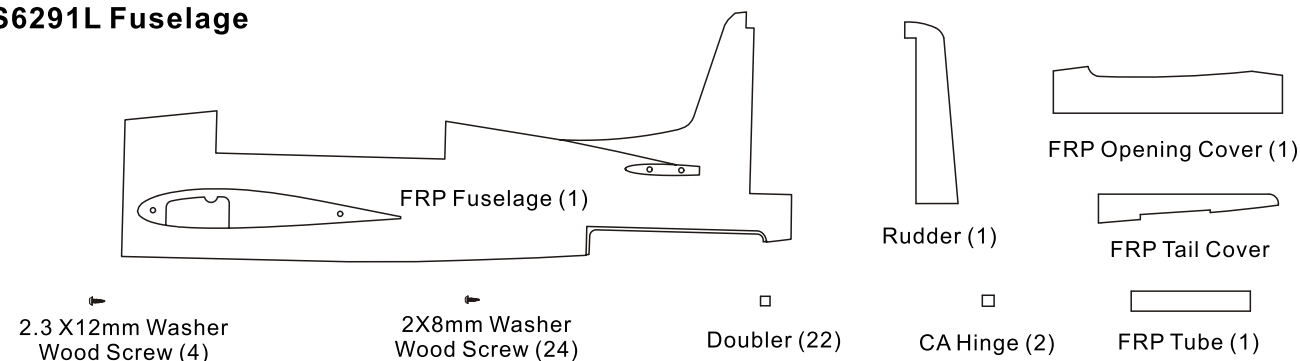
TTR1115 - Precision Fueler Valve



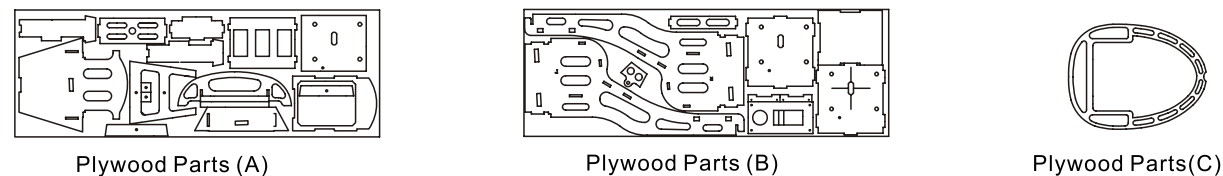
# PARTS DRAWINGS

## F-8F BEARCAT

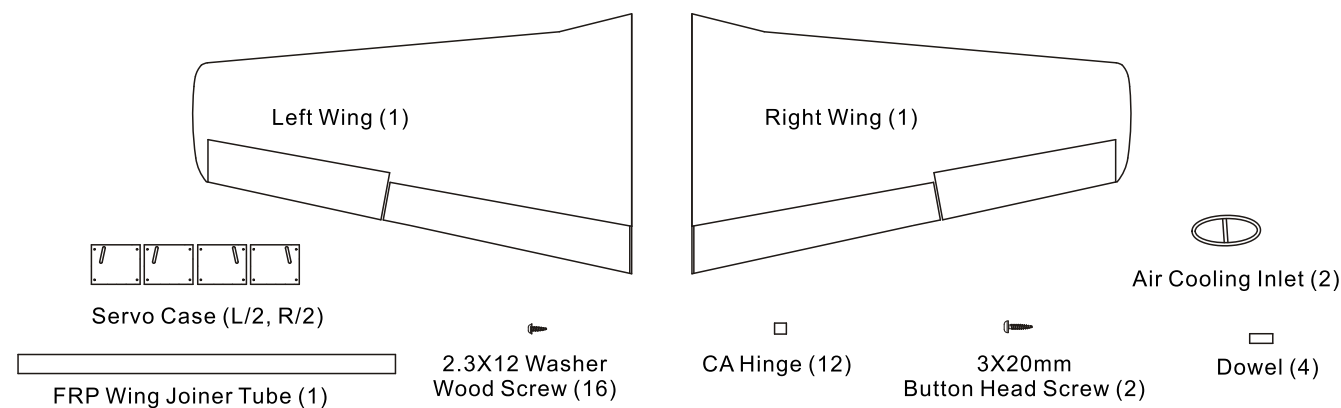
### AS6291L Fuselage



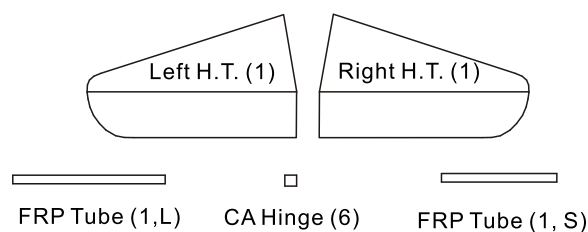
### AS6302 Plywood Parts



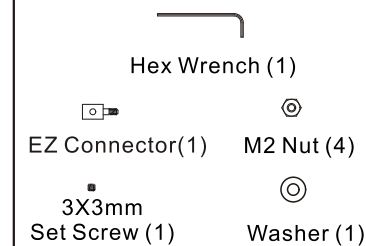
### AS6292L Main Wing



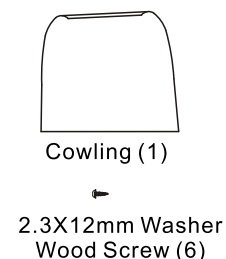
### AS6293L Horizontal Tail



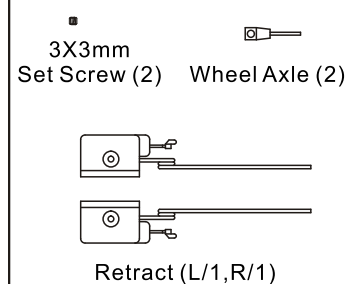
### PE0009 EZ Connector



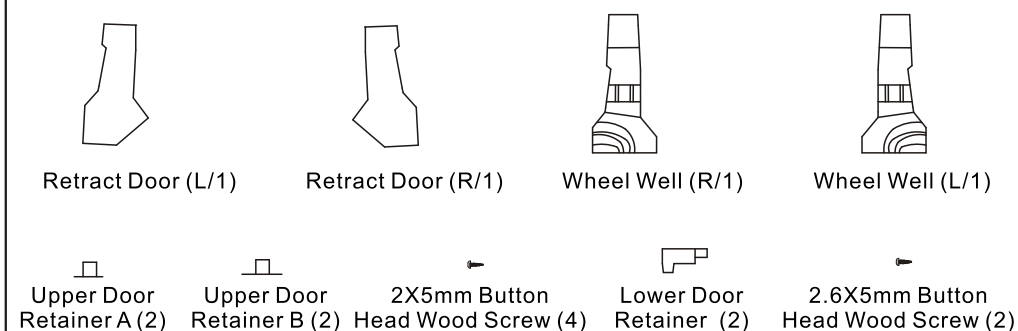
### AS6421 Cowling



### No. 3009 Super lite Retract



### AS6295L Retract Decoration



# BALANCE



82. Refer to the box label then apply all decals.

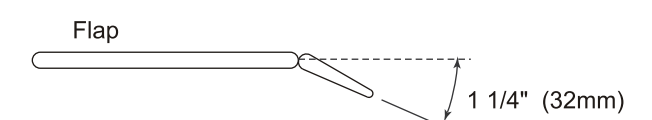
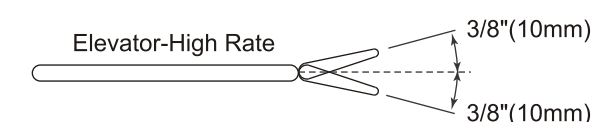
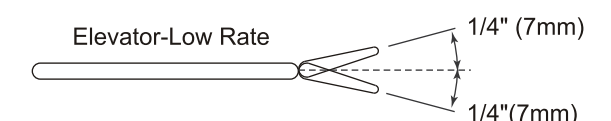
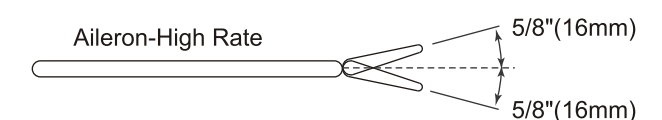
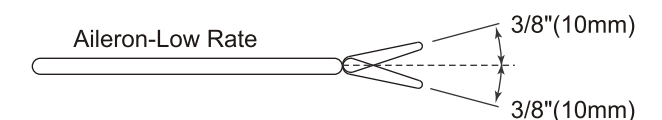
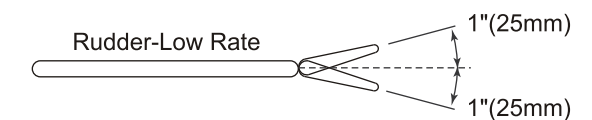


Your Bearcat is now ready to fly, carefully set up the control throws and balance your plane well before your first flight. Always examine everything before each and every flight; never take chances or rush fly your Bearcat.



### Control Throws

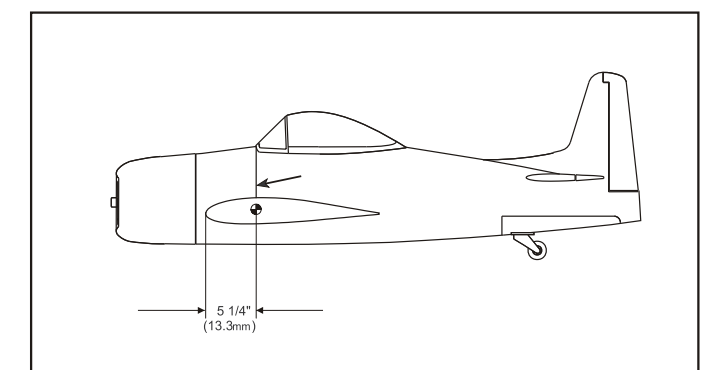
Set the control throws as followings for a starting point. After you familiar with its flying characteristics then these control throw can be tailored to fit your flying style.



### Center of Gravity

IMPORTANT - Do not attempt to fly your model before completing this very important section. A model that is not properly balanced will be unstable and could cause serious damage and/or injury. Adjust the battery location or add weight as needed to achieve level balance.

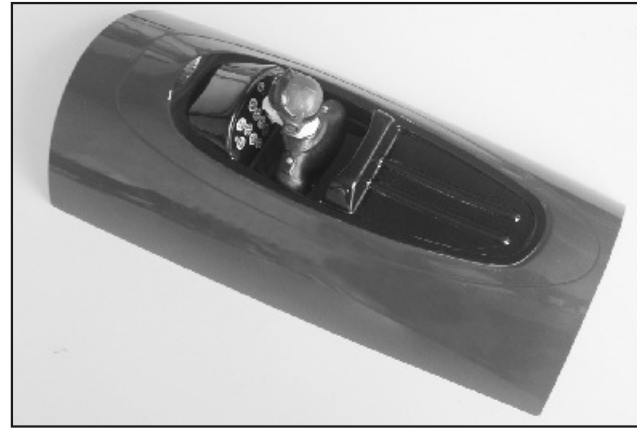
Measure the C.G. while plane is dry. The balance point is about 5 1/4 inch (13.3mm) behind the leading edge where there is a panel line on fuselage.





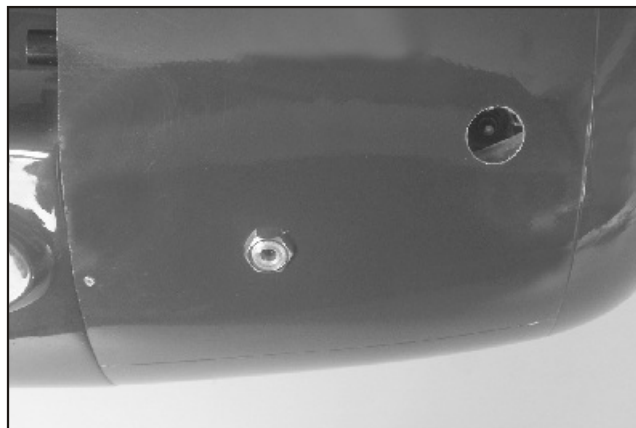


76. Install the switch harness as shown.

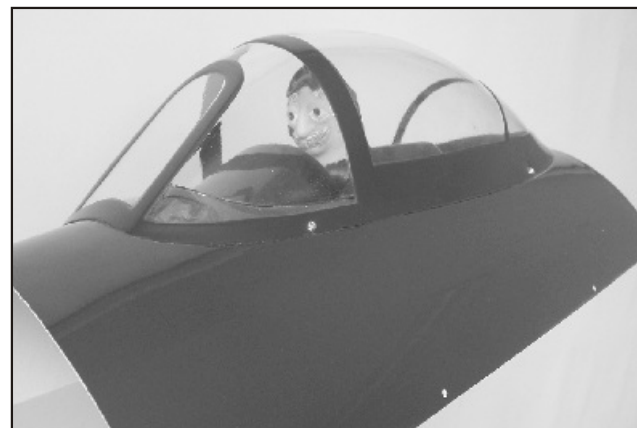


79. Apply instrument panel decal on the cockpit as shown. Trim the cockpit and glue it on upper fuselage cover. Cut the cockpit floor and install the pilot from the bottom.

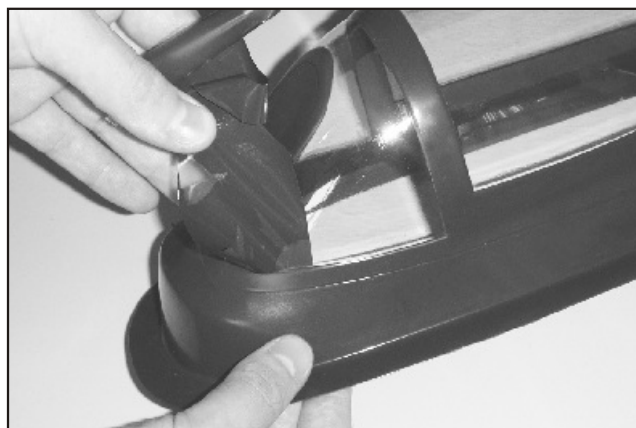
### Cowling & Canopy



77. Trial fit the cowl in place and temporarily secure it with mask tape. Drill 1/16" (1.5mm) at the place where doublers are. Drill needle valve extension wire exit hole and glow plug ignition hole.. You may install precision Fueler (TTR1115) for easy fueling.



80. Trial fit the canopy on the cover. Glue the canopy in place also secure the canopy with four 2x5mm wood screws.

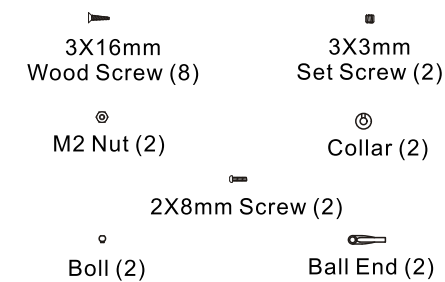


78. Peel away the covering from canopy and trim the canopy along the molded lines.

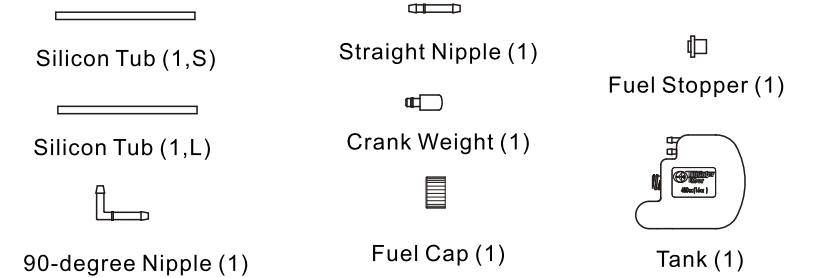


81. Trial fit the upper fuselage cover in place, drill eight 1/16" (1.5mm) holes and glue small plywood doublers inside the fuselage at the holes area. Drill the doublers again and secure the upper cover in place with 2x8mm washer wood screws.

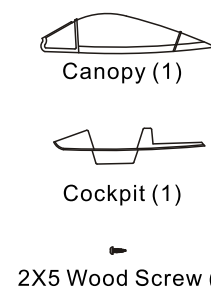
#### AS6440 Hardware Set



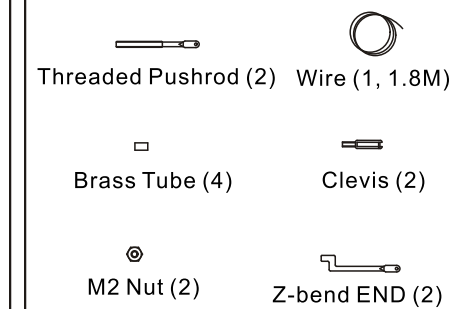
#### No.3024 Fuel Tank



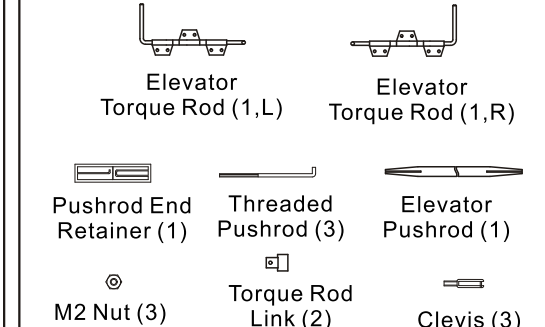
#### AS6419 Canopy & Cockpit



#### AS6422 Pull-Pull System



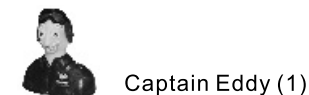
#### AS6297 Elevator Linkage Set



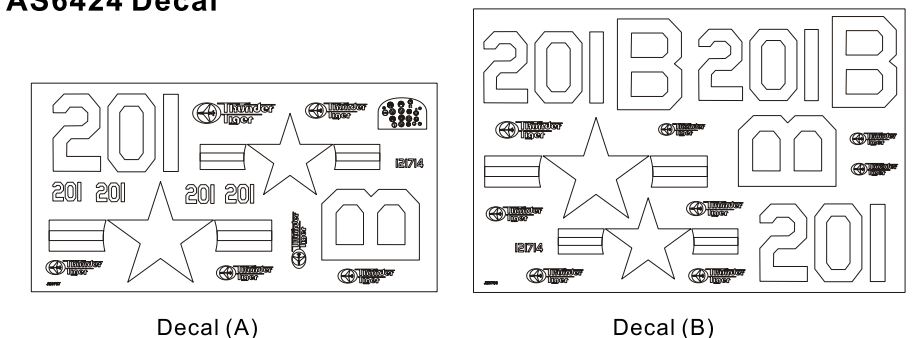
#### No. 3299 Wheel



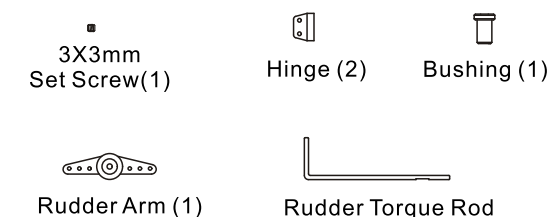
#### No.3019 Captain Eddy



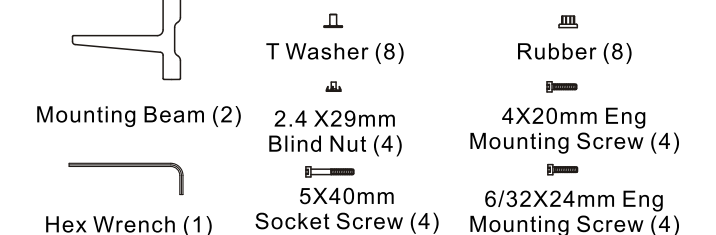
#### AS6424 Decal



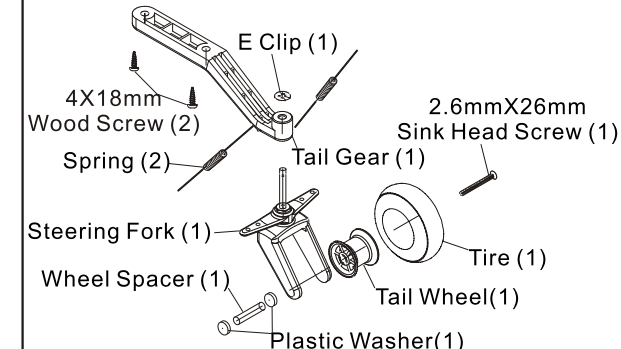
#### AS6443 Rudder Linkage Set



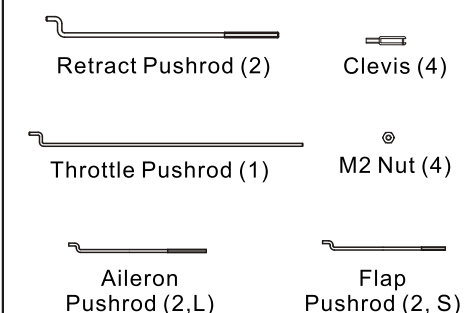
#### No.3012 Anti Vibration Engine Mount



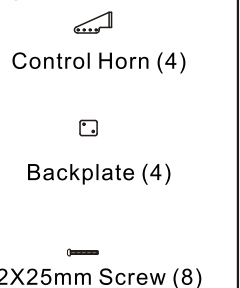
#### AS6427 Scale Tail Gear



#### AS6423 Threaded Pushrod Set



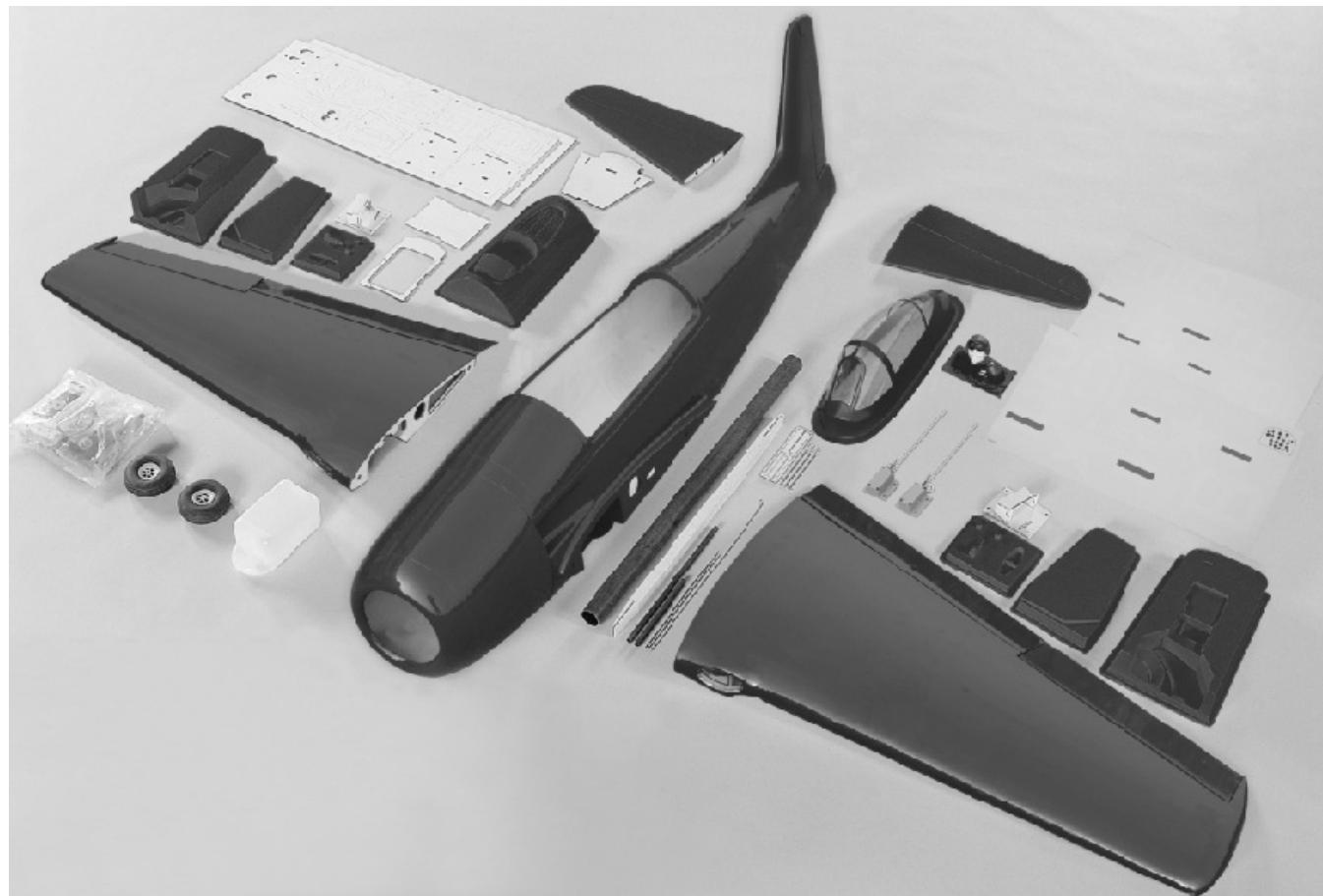
#### AS6442 Control Horn





# PARTS CHECK LIST

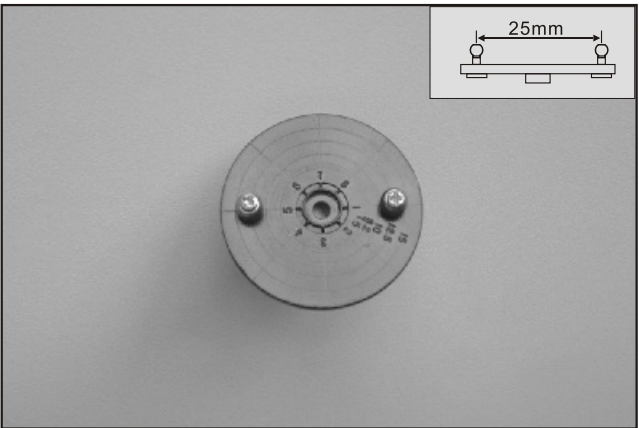
## F-8F BEARCAT



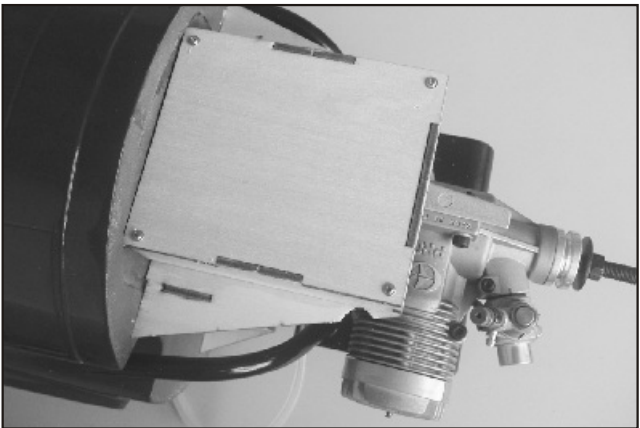
Kit Contents:		
FRP Fuselage (1)	Torque Rod Link (2)	Canopy (1)
FRP Opening Cover (1)	M2 Nut (11)	Cockpit (1)
FRP Tail Cover (1)	Clevis (9)	Retract Door (L/1, R/1)
FRP Cowling (1)	Collar (2)	Wheel Well (L/1, R/1)
FRP Wing Joiner Tube (L/1)	Ball End (2)	Upper Retainer A (2)
FRP Tube (S/1)	Ball (2)	Upper Retainer B (2)
FRP Tail Joiner Tube(L/1,S/1)		Lower Retainer (2)
Left Wing (1)	Engine Mounting Beam (2)	Air Cooling Inlet(2)
Right Wing (1)	T Washer (8)	Pilot (1)
Rudder (1)	Rubber (8)	
Horizontal Tail (L/1,R/1)	Blind Nut (4)	
Elevator (L/1, R/1)	Socket Cap Screw 5mm x 40 (4)	Retract (L/1, R/1)
Servo Case (L/2, R/2)	Hex Wrench (1)	Wheel Axle (2)
Plywood Parts(A)	Socket Cap Screw 6/32 x 20mm (4)	Wheel (2)
Plywood Parts(B)	Socket Cap Screw 4x20mm (4)	
Plywood Parts(C)		
Doubler(22)		
Dowel (4)		
Joiner Wire (2)	Tank (1)	Brass Tube (4)
Joiner Tube (2)	Silicone Tube (1)	Straight Threaded End (4)
Rubber Band (2)	Straight Nipple (1)	Z Bend Threaded End (2)
CA Hinge(20)	90-degree Nipple (1)	Wire (1)
2x5mm Wood Screw(4)	Crank Weight (1)	Hinge(2)
2.6x 5mm Wood Screw (2)	Fuel Stopper (1)	Bushing(1)
2x8mm Washer Wood Screw(22)	Fuel Cap (1)	Rudder Torque Rod(1)
2.3x12mm Washer Wood Screw (26)		Tail Gear (1)
3x20mm Wood Screw (2)	Throttle Pushrod (1)	Tail Wheel Fork (1)
2x8mm Machine Screw (24)	Retract Pushrod (2)	Wheel Spacer (1)
2x25mm Machine Screw (8)	Flap Pushrod (2)	Steering Arm (1)
3x16mm Sink Head Screw (8)	Aileron Pushrod (2)	Tail Wheel (1)
4x18mm Wood Screw (2)	Cable (1)	E Clip(1)
3x3mm Setscrew (4)		2.6X26mm Sink Head Screw (1)
		Plastic Washer(2)
		Spring(2)
		Decal A (1)
		Decal B (1)
	Elevator Torque Rod(L/1, R/1)	
	Elevator Wood Push Rod (1)	
	Elevator Pushrod Retainer (1)	
	Threaded Pushrod(3)	
	Control Horn (4)	
	Backplate (4)	



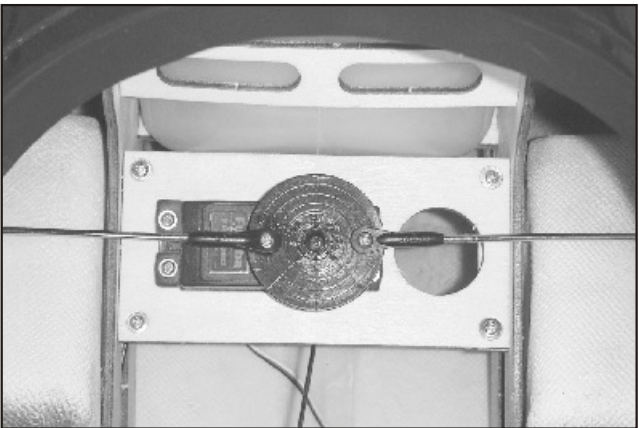
# BATTERY & RX



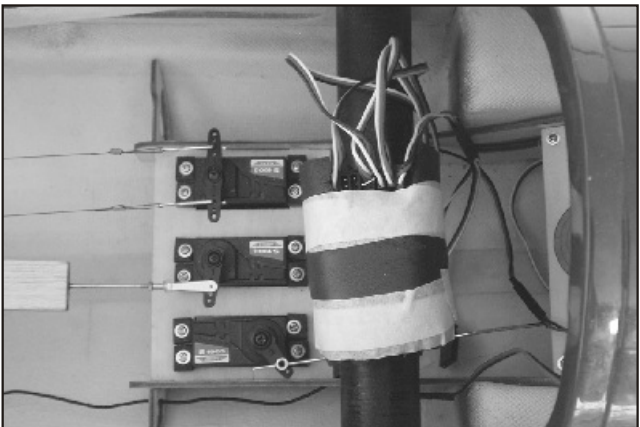
70. Install two steel balls on the servo wheel with 2x8mm machines screws and M2 nuts. The distance between two balls is 25mm.



73. Secure battery box cover with four 2x8mm washer wood screws.

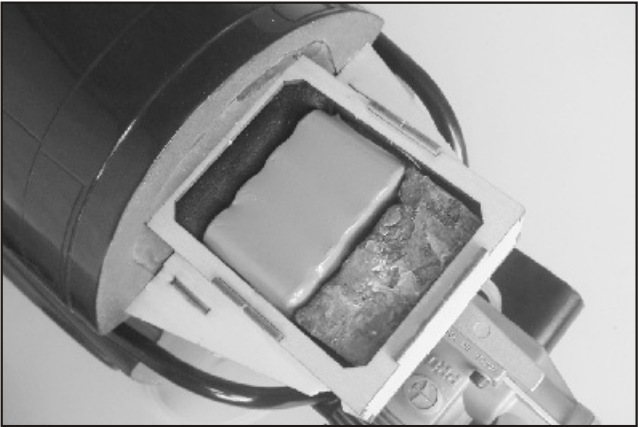


71. Fine adjust the retract pushrod. Try switching on the retract gear to make sure the retract gear works fine.



74. Connect all servo wires to the receiver; wrap the receiver with foam to fully protect the receiver. Secure the receiver in the fuselage on the fiberglass tube with tape or use Zip Tie to fix it in place.

## Battery & RX

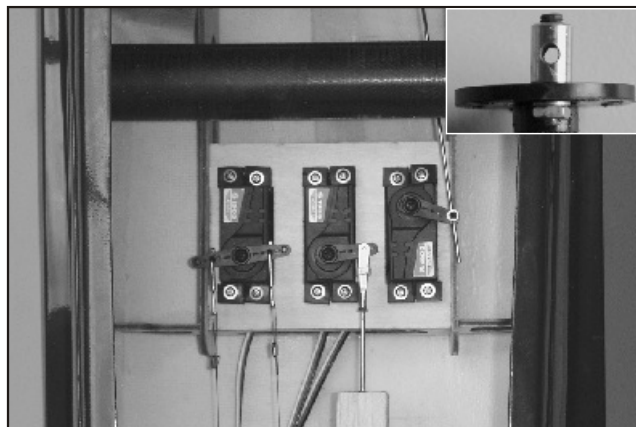


72. Place a battery in the battery case; use double side tape to secure it in the front of battery case. You can use the excess plywood to make a block to hold battery in place. Approximately 800g of weight will be added in the front of the battery case. See balance section in page 21 and add proper weights to get right CG.

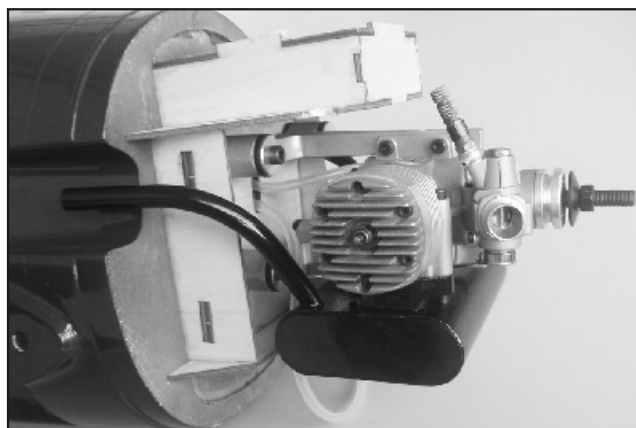


75. Route the antenna along the fuselage and exit at the tail gear opening. Use Scotch Tape to tape it as shown.





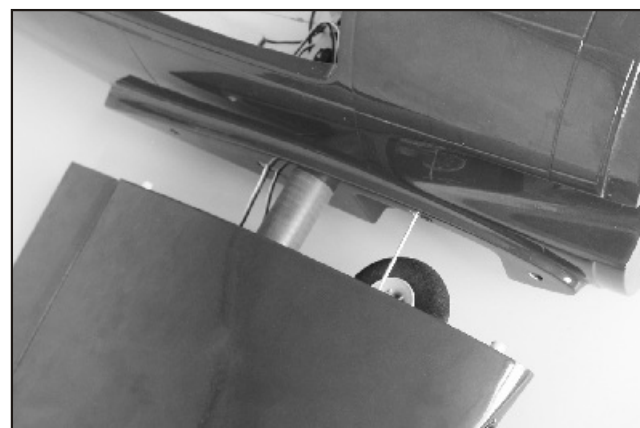
64. Install the EZ connector on the throttle servo horn with M2 washer and M2 nut. Afterwards, thread the throttle pushrod through the EZ connect and secure the servo horn on the servo. Adjust the servo with the radio on, once satisfied with the result, proceed to secure the throttle pushrod with a 3x3mm setscrew.



65. Install the Bearcat custom made muffler (TTR9794), which contains 2 angled exhaust pipes and aim to the concavity of the fuselage for true scale looking

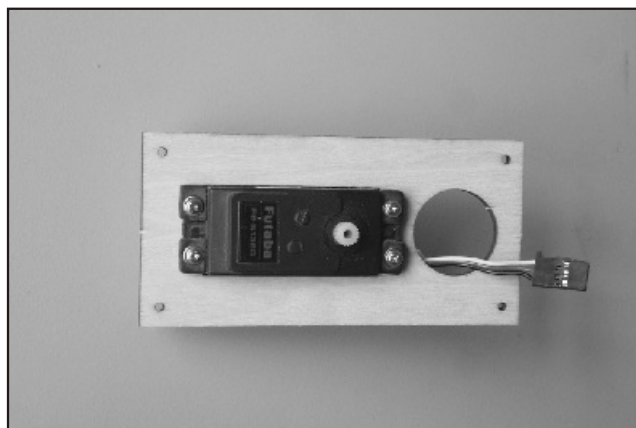


67. Secure the retract servo tray in place with four 2.3x8 mm washer wood screws.

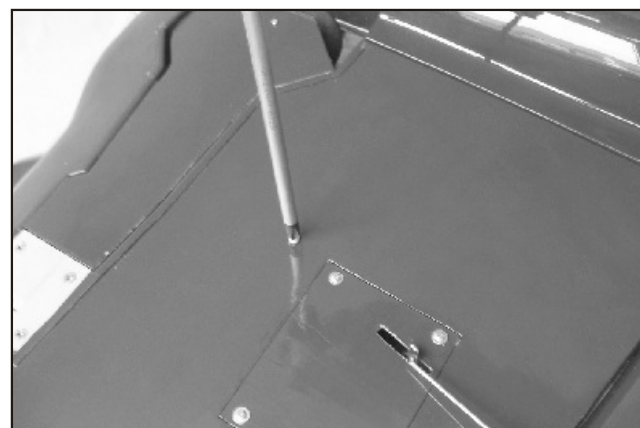


68. Insert the fiberglass tube into the fuselage, center it, then thread the retract gear pushrod and servo wires to go through the fuselage which are pre-drill in factory (you may need to enlarge the hole for ball end easy access) and slowly join the wing halves until it contacts the fuselage. Never push too hard as it may damage the tube-stop rib inside the wing panel.

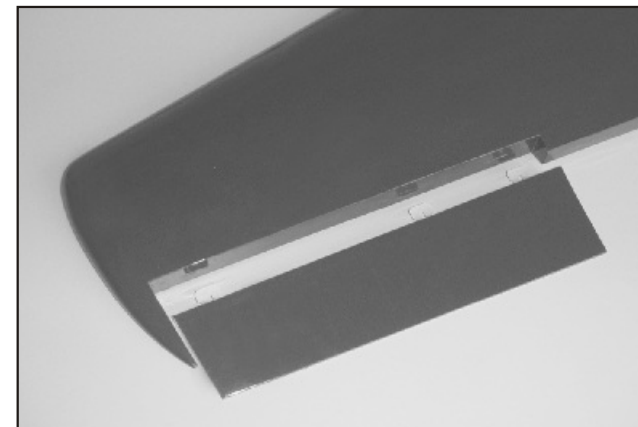
## Retract Servo Installation



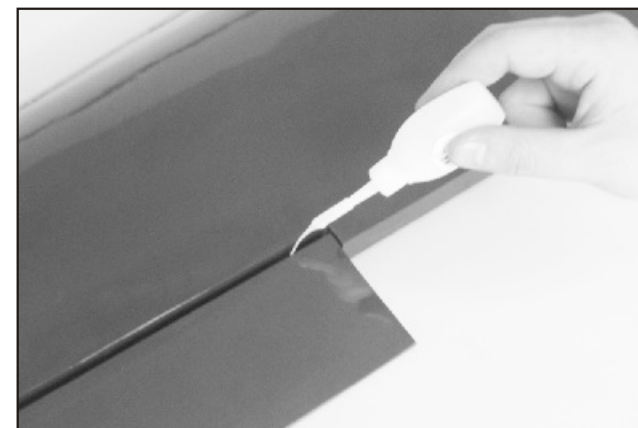
66. Locate the retract servo tray then install the servo on the tray with the screws come with the servo.



69. Locate the hole which is located at the bottom wing just right above the fiberglass tube about 4 1/2" (11.3cm) away from the wing root. Drill a 5/64" (2mm) hole through the fiberglass tube of the main wing halves, and make sure they are firmly close to the fuselage then secure 3x20mm wood screws.



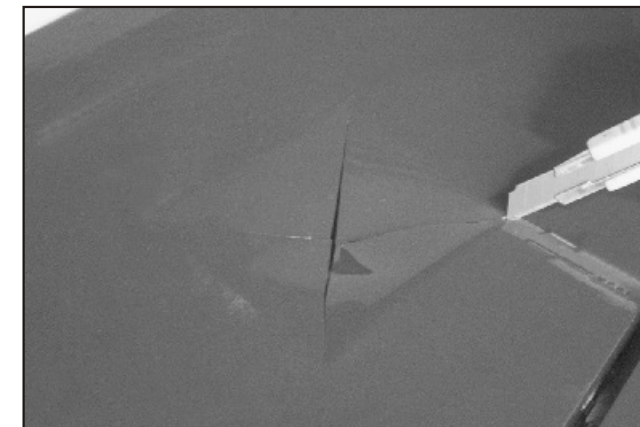
1. Locate the left aileron then CA the hinges in place.



2. Next attach the aileron to the trailing edge then apply CA on both sides. Make sure aileron is firmly glued and moves freely.



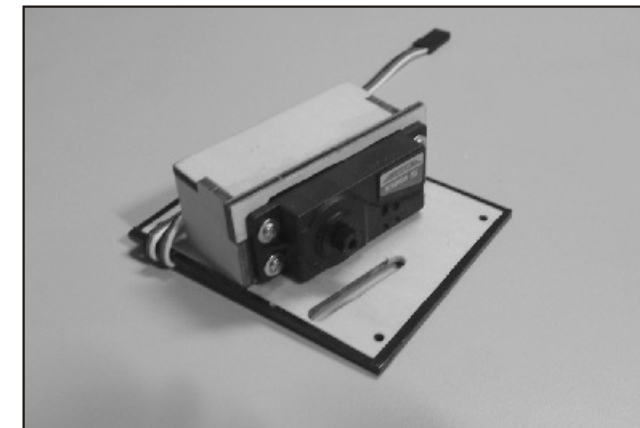
3. Do the same procedure on the left flap. Note there will be 1/32" (0.8mm) clearance to the wing root so it will not contact the fuselage when you join the wing half.



4. Locate the aileron servo well then use a hobby knife to cut an "X".

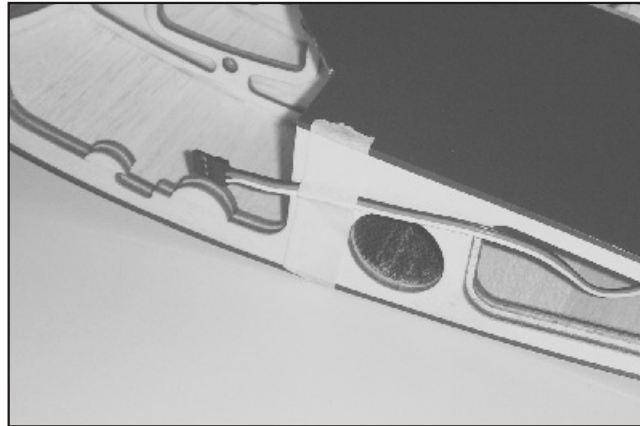


5. Use a sealing iron to track down the covering inside the servo as well. Trim the excess covering away.

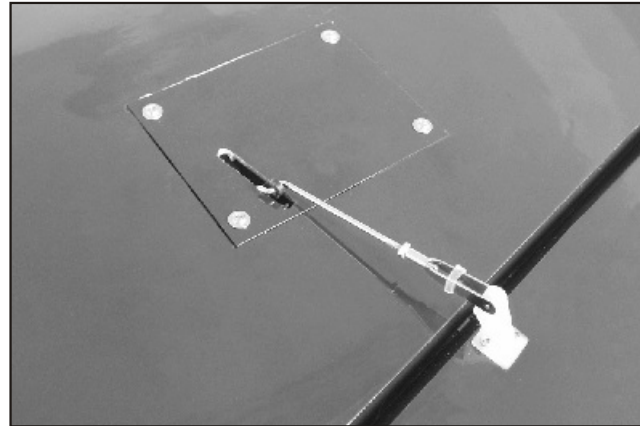


6. Locate the left wing servo case / hatch cover; secure the aileron servo as shown. Note the orientation of the servo case.

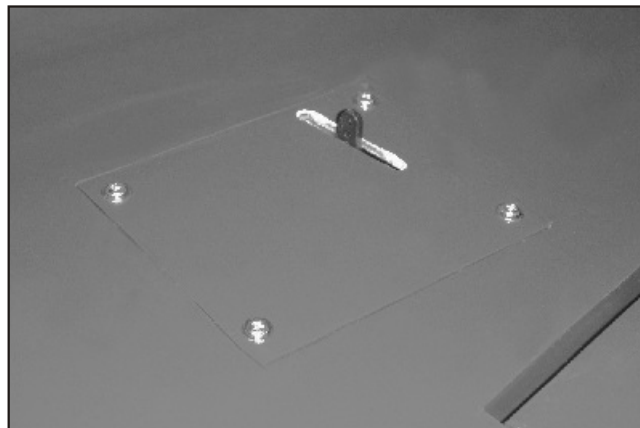




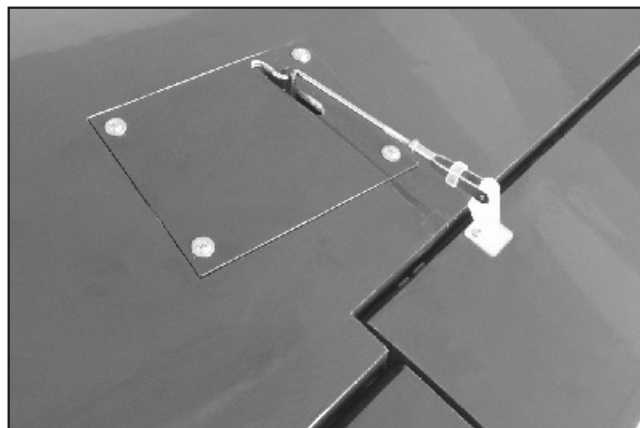
7. Connect a 12"(30mm) long extension wire to the servo wire the thread the wire through the wing panel then apply a mask tape from loosening.



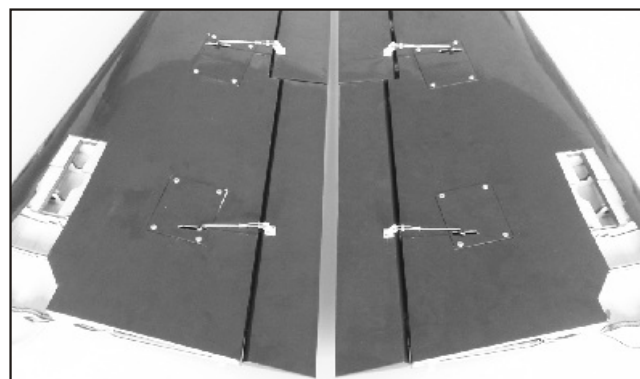
10. Similar procedure on the Flap servo case/hatch cover as well as the control horn installation.



8. Install the straight servo horn, next plug the servo wire to CH1, turn on the transmitter and receiver. Set the servo arm in the center neutral position and make sure the direction is correct. Next secure the servo case in place with four 2.3x12mm Washer Wood Screws at four corners where already has holes. Make sure servo case is secured firmly and correctly.



9. Please note that the aileron is thick; carefully drill the 5/64"(2mm)holes and make sure the backplate is flush with the hinge line at the other side of Aileron. Secure the control horn in place with 2x25mm machine screws. Install the pushrod with metal clevis, M2 nut and thread on a piece of silicon tube as shown.



11. Repeat the same procedure on the right wing. Link two aileron servo wires with Y cord and plug to CH1 on receiver. Plug the left flap to Ch6 and right flap to Ch7. Refer to your radio manual and set up Flap.

Here is the set up procedure if using FF9 :



- 1.Reset first.
- 2.Flapp ATV 140% 50%
- 3.AUX1 ATV 140% 140%
- 4.Airbrake on Flap 100%
- 5.PMIX7 AUX1-AUX1
  - Position 1: 0%
  - Position 2: 0%
  - Position 3: 0%
  - Position 4: 45%
  - Position 5: 90%
6. Trim the two flaps at same throws by adjusting the trim knob and pushrod if necessary.



58. Install the tail gear spring, link one end to the threaded rod and link the other end to the steering arm of the tail gear. You may adjust the two-spring tension by threading the threaded rod or clevis and making sure the tail gear is in line with Rudder. Adjust the threaded end at the servo end to make sure both rudder and tail gear are straight and get better tension of the wires.

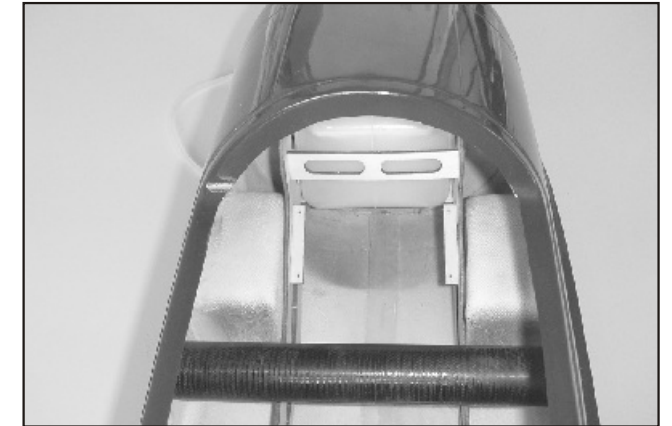


59. Locate the bottom tail cover, position it in place then drill six 1/16"(1.5mm) holes. Remove the cover, get six small plywood doublers and glue them inside the fuselage at the holes area. It might need to sand the doubler to adapt to the curve surface. Drill the holes on doublers then secure the bottom tail cover with 2x8mm washer wood screws. Be careful when drilling the hole if you use finger to hold the doubler.

### Fuel Tank

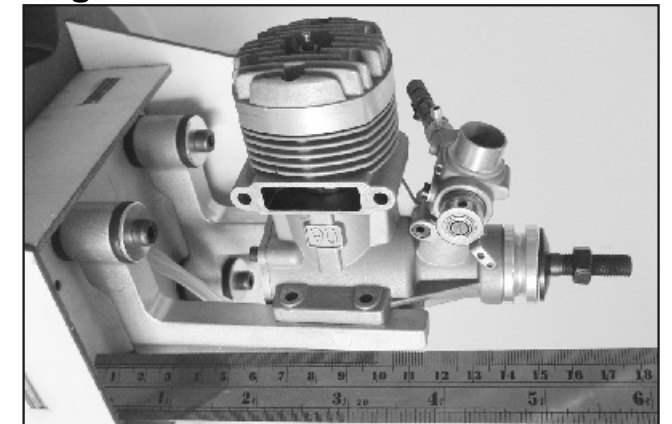


60. Locate the fuel tank and its accessories. Assemble the tank as shown.

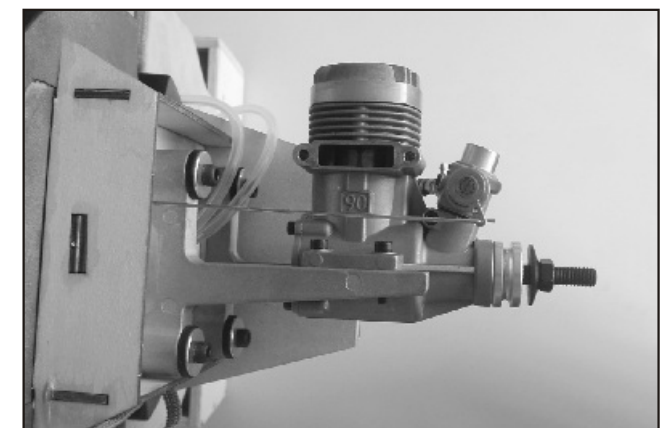


61. Install the fuel tank in place, connect the fuel lines and exit from the firewall for enough length to carb and muffler. Glue a piece of plywood to keep fuel tank in place as well as the retract servo mount stripes and FRP tube in the fuselage.

### Engine Installation



62. Install the anti-vibration engine mount with 5x40 mm socket screws. Place the Engine (Thunder Tiger PRO-91 Shown) in the Engine Mount then proceed to make mount hole marks on the engine mount where drive washer is 6"(15.2mm) to the firewall.



63. Remove the engine and engine mount. Drill the 3.2mm holes on those marks then tap the hole with M4x0.7 thread tap. Re-install the engine mount and use M4x20mm socket screws to secure the engine in place. Locate the z-bent throttle pushrod, and install it onto the throttle lever.

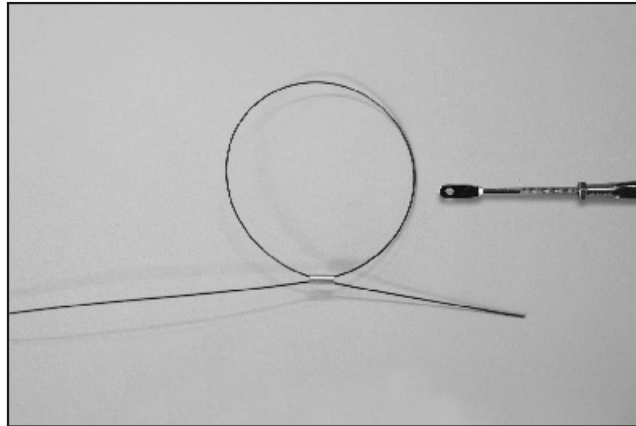


## TAIL GEAR

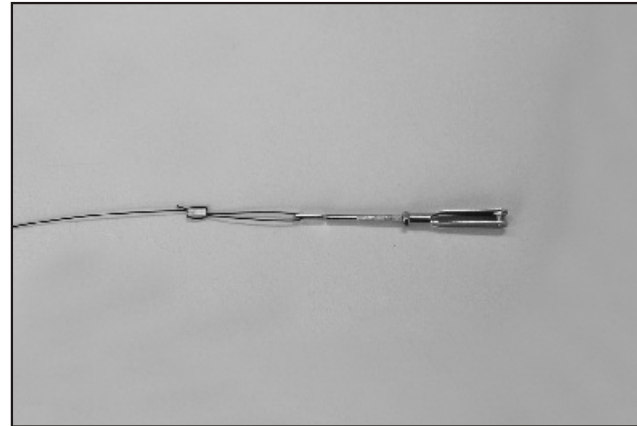
## F-8F BEARCAT



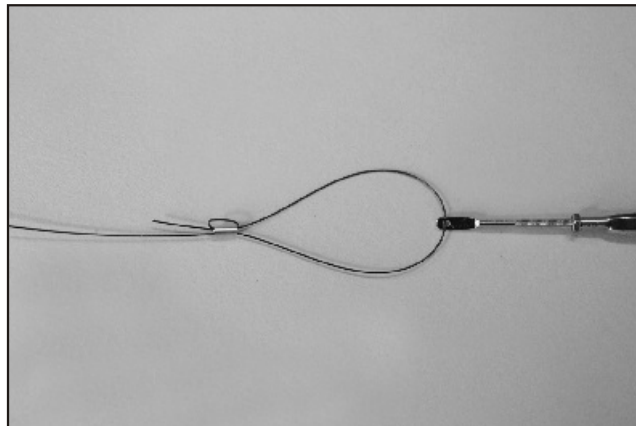
## LANDING GEAR



52. Locate the straight threaded end, brass tube, M2 nuts, clevises and cable. Cut wire in length 90cm. First thread the M2 nut and clevis then secure the M2 nut on clevis. Then route the cable through the tube and make it a circle.



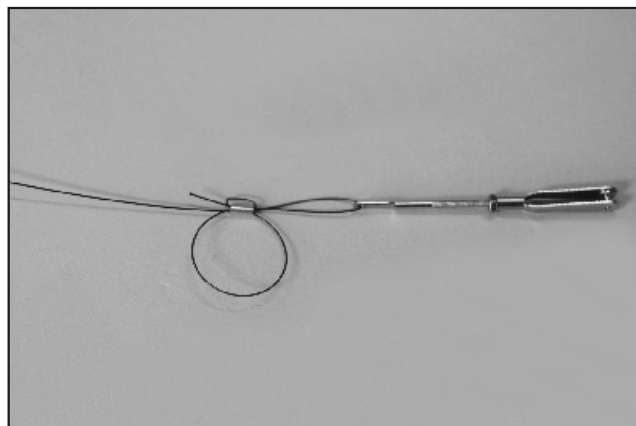
55. Adjust the cable to make the circle as small as possible then use the pliers to crimp the cable firmly. Adjust two cables 28"(712mm) in length.



53. Next slide the cable through the threaded end then slide to the tube again.



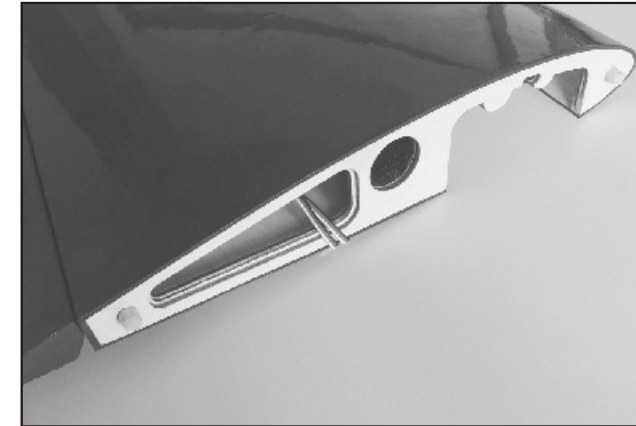
56. Snap two clevises on steering arm then thread the cables through fuselage then tape the cables on servo tray temporarily. Secure the steering arm on rudder torque rod.



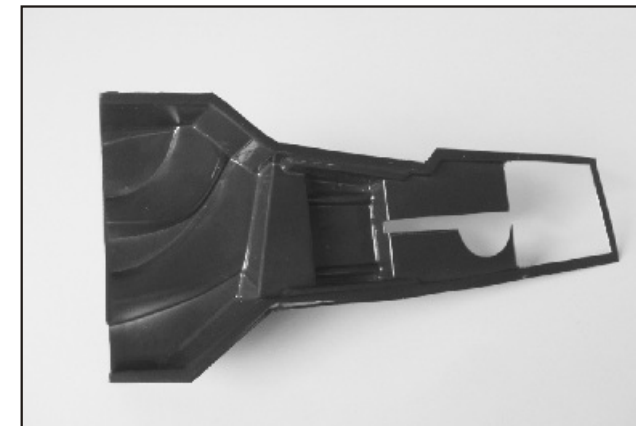
54. Make the other circle as shown.



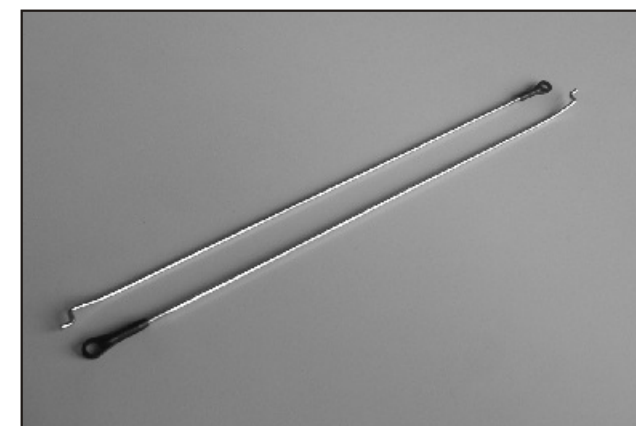
57. Install the rudder servo then attach the Z-bend ends of Pull-Pull Wire in place.



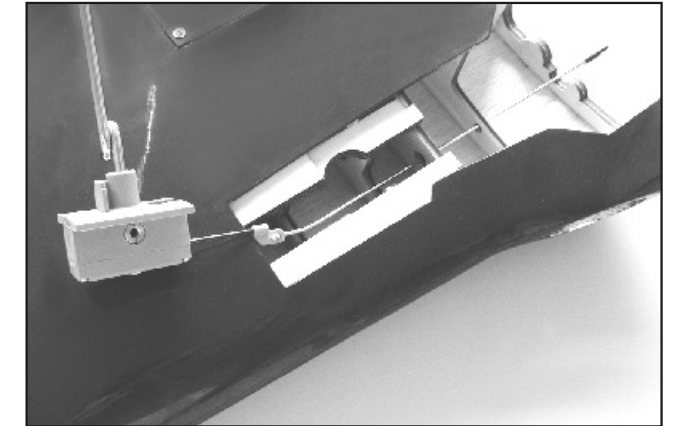
12. Epoxy the dowel at wing root in place as shown. It might need to sand the edge of dowels to achieve a snug fit to fuselage.



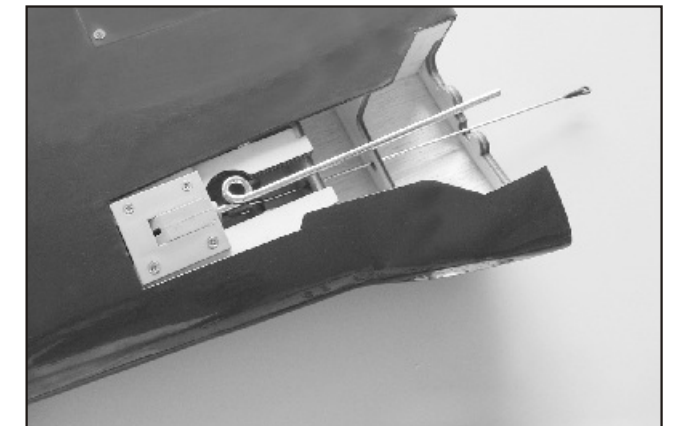
13. Locate the plastic retract well; trim along with the molded line first and trial fit it in place.



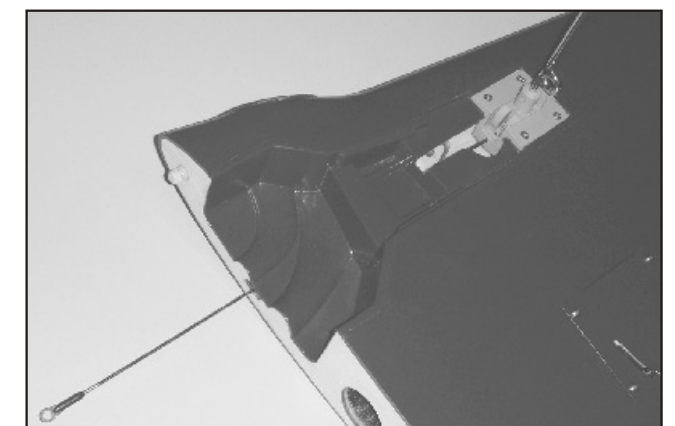
14. Locate the retract pushrod and ball end, thread the ball end as shown. The Z-bent end to the center of ball end is about 11"(280mm). Bend the Z-bent end as shown for smooth control.



15. Insert the pushrod from wing root then connect to retract. Note the ball end with "Tiger" side should face upside of the wing.



16. Drill 5/64"(2mm) holes on the retract mount. Next secure the retract in place with four 3x16mm Flat Head Wood Screw.



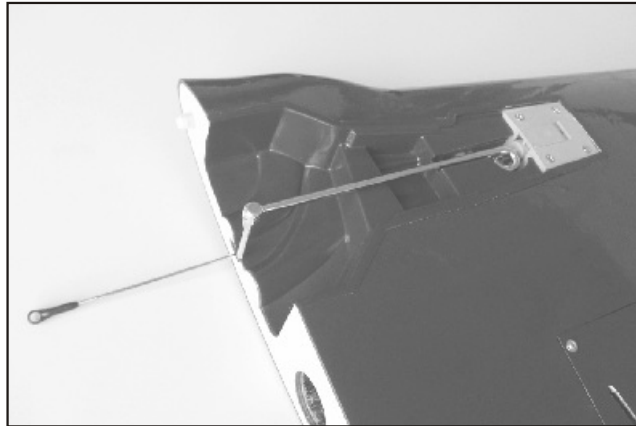
17. Glue the plastic retract well in place with CA, trim the plastic well at the wing root so the plastic well is leveled with the root surface.

## LANDING GEAR

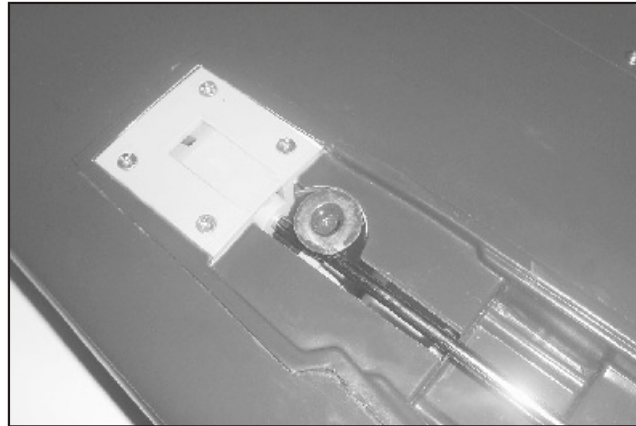
## F-8F BEARCAT



## TAIL GEAR



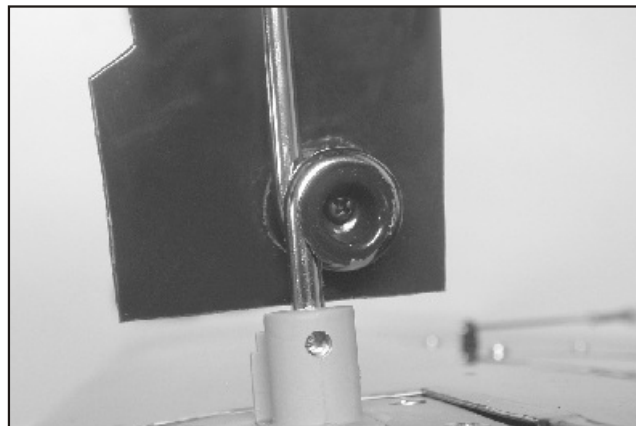
18. Install the wheel axle and secure it with 3x3mm set screw. Make sure the position and angle are just right. Trim the retract gear door and fit the retract well accordingly. Flats should be ground on the landing gear legs for the setscrew to prevent the wheel axle from rotating under load.



21. Sand the upper retainer B and place it in the strut coil then apply CA on retainer. Next place the wheel door on the strut then the retainer will be glued on wheel door precisely.



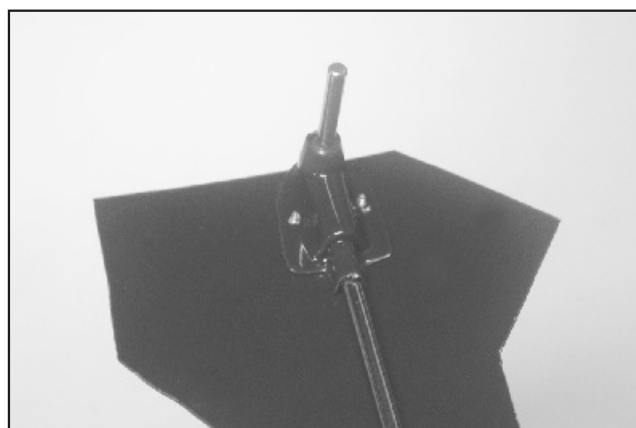
19. Locate and trim the wheel door retainers as well as the air cooling inlet.



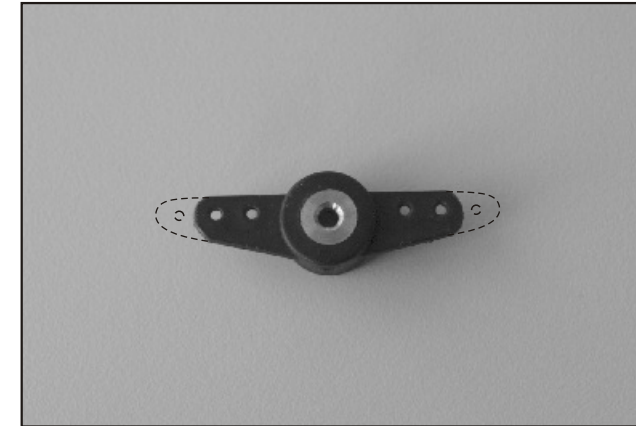
22. Secure the retract door with the retainers (A,B) at the strut coil with 2.6 x 5mm wood screw.



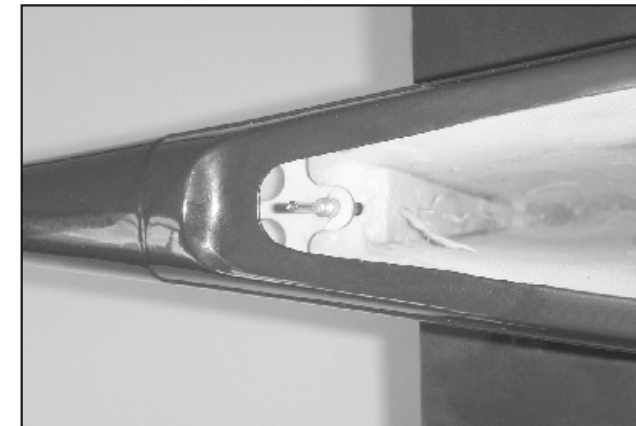
20. Trim the retract door to fit the retract well.



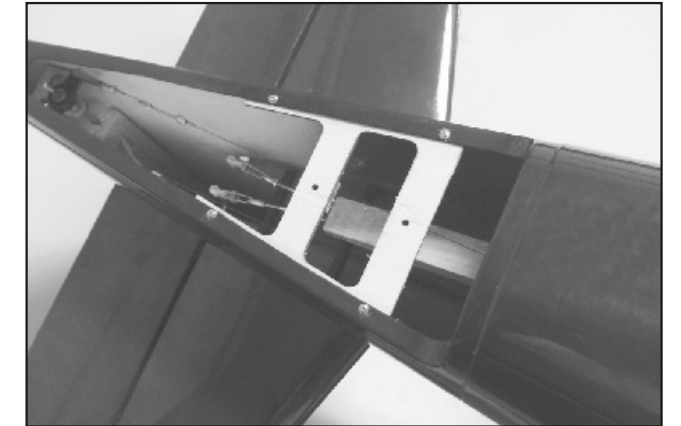
23. Secure the lower retainer on wheel door with two 2x5mm wood screws.



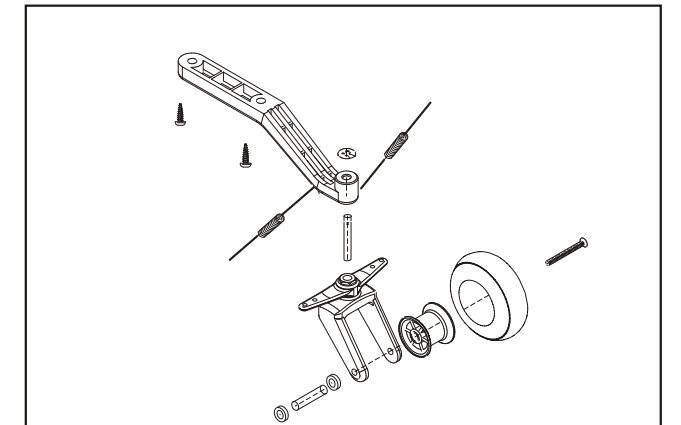
47. Locate the steering arm, trim the outer hole away as it is too long to install in the tail.



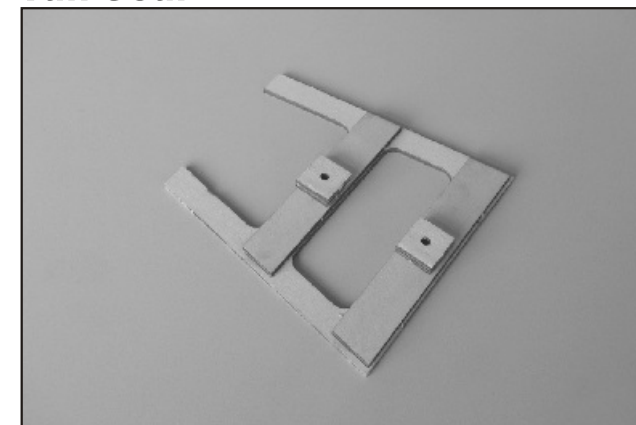
48. Locate the bushing and press it into the torque rod retaining plywood. Epoxy this plywood piece in the tail under the flat of the rudder torque rod.



50. Glue the tail gear mount in place and secure with four 2x8 washer wood screws.



### Tail Gear

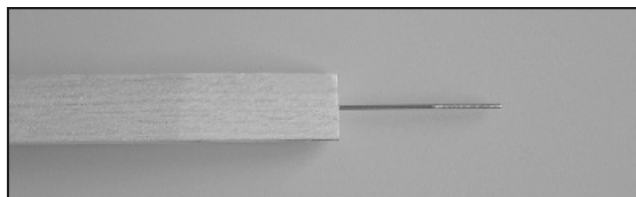
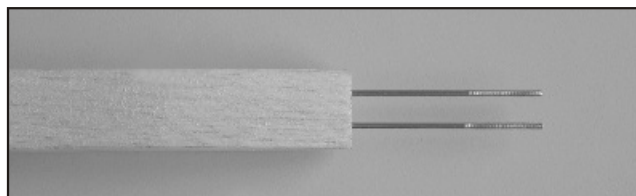
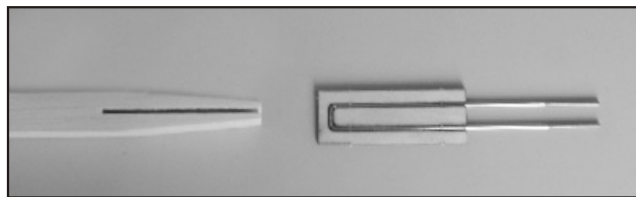
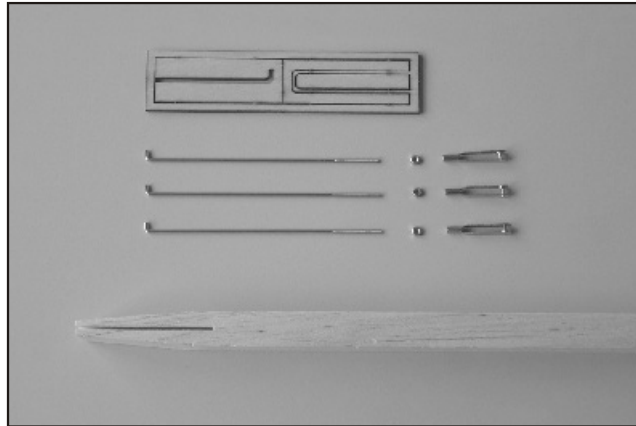


49. Glue the plywood pieces on the tail gear mount.

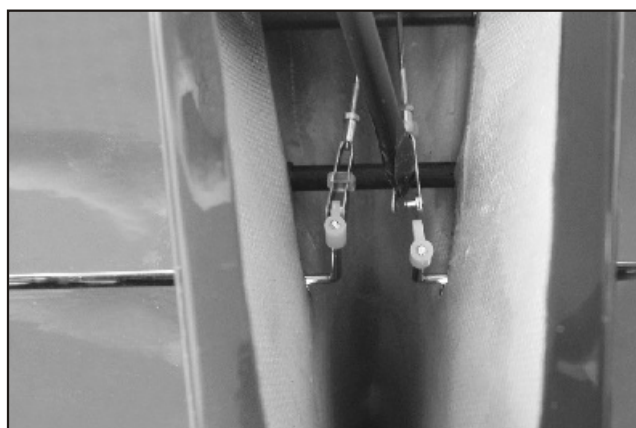


51. Locate the tail gear bag, assemble the tail gear as shown. Next secure the tail gear assembly on the tail gear mount with 4x18mm Flat Head Wood Screws.

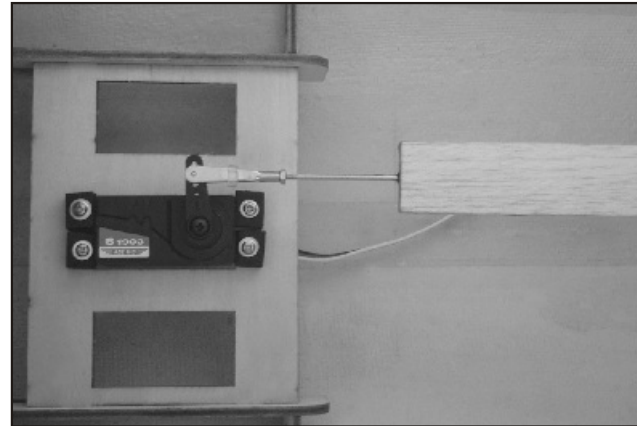




42. Locate the elevator pushrod parts as shown, epoxy the plywood inside the wood rod at two ends with wires. Thread the M2 nuts and clevises and make sure the whole elevator pushrod has no free play.

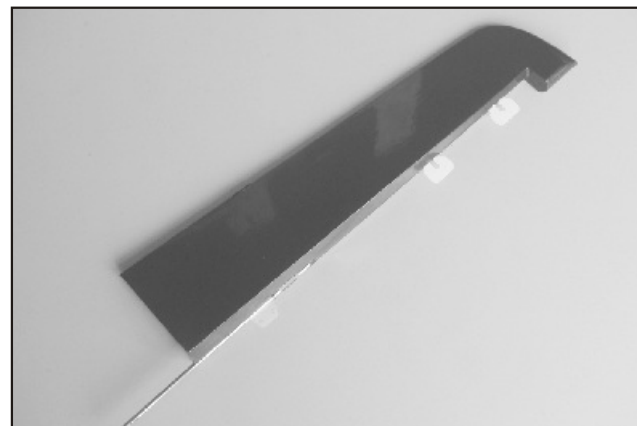


43. Apply a small tube onto the clevis then connect the elevator pushrod to the elevator torque rod links. A flat head screwdriver will help snapping the clevises onto the torque rod link.



44. Install elevator servo, note the servo orientation. Then adjust the clevises to make sure elevators are level when servo is in neutral position. When satisfied, remove the elevator pushrod temporarily and secure all M2 Nut and Clevises firmly.

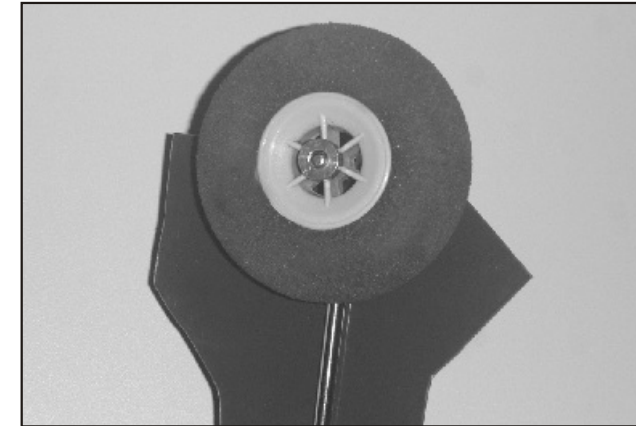
## Rudder Installation



45. Install the rudder torque rod and glue the hinges in place as shown.



46. CA the rudder on the vertical fin. Pull rudder to Make sure it is firmly secured in place.

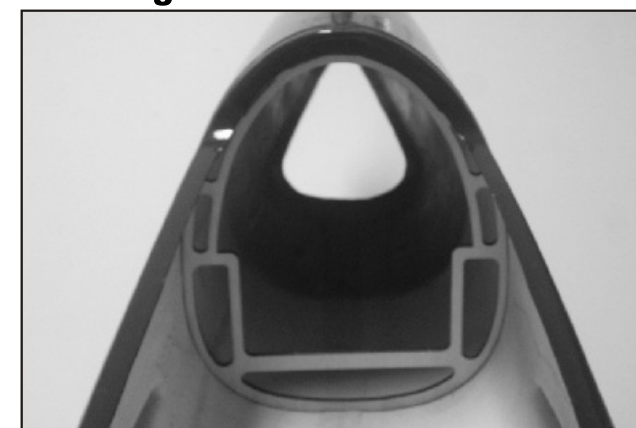


24. Install the wheel and secure collar with 3x3mm setscrew. Make sure the wheel rotates freely.

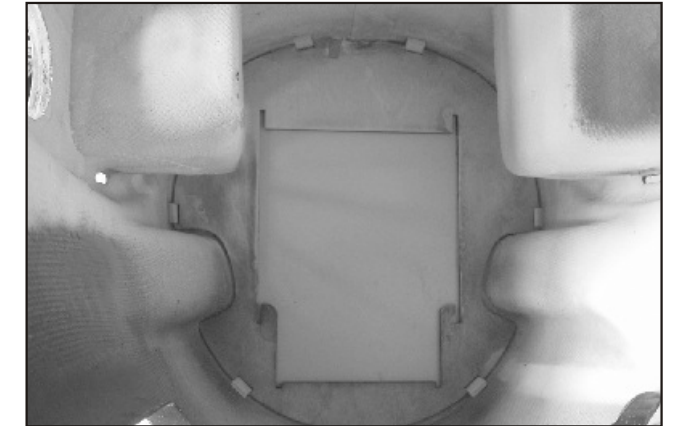


25. Glue the air cooling inlet in place. Repeat the same procedures on the other wing half.

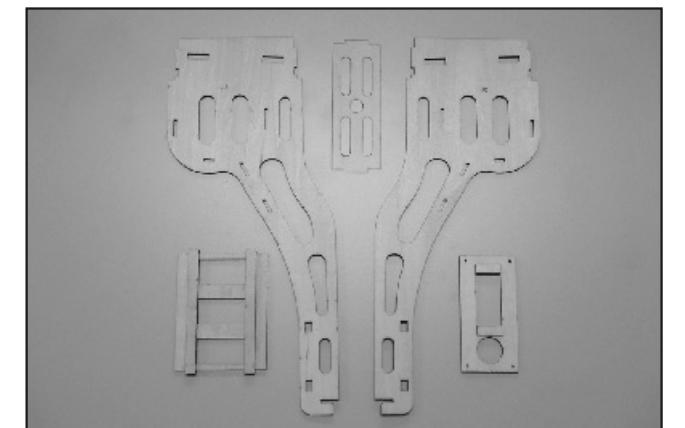
## Fuselage



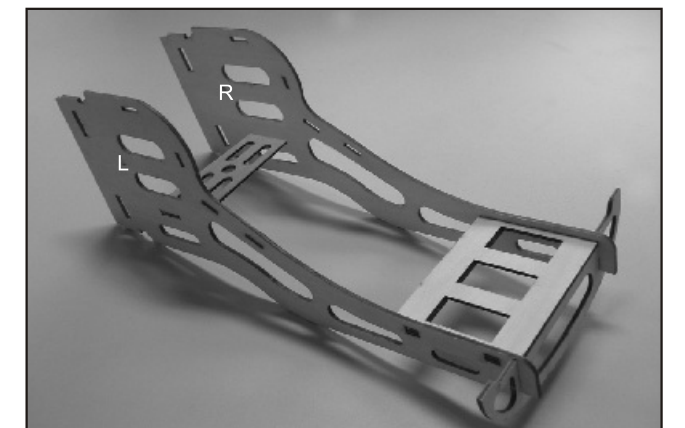
26. Place center bulkhead in the fuselage. It will be better to lightly sand the glue area. Epoxy or use thick CA to glue it in place.



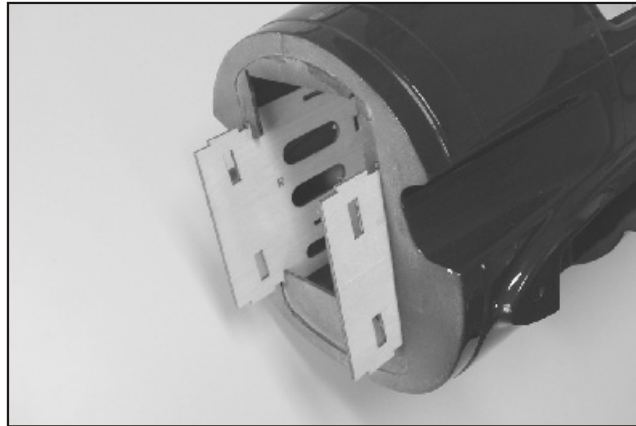
27. Locate the plywood doublers and glue these doublers at the back side of firewall where notches are located.



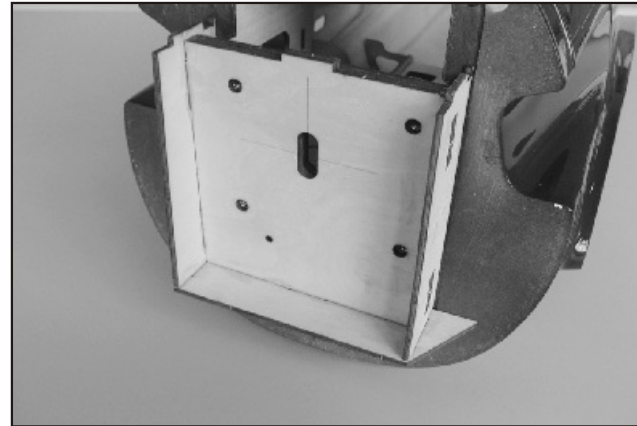
28. Locate the two side-frames, servo trays, servo tray doubler, retract servo tray, doubler and fuel tank support. Glue them with Epoxy or thick CA as shown in the photo.



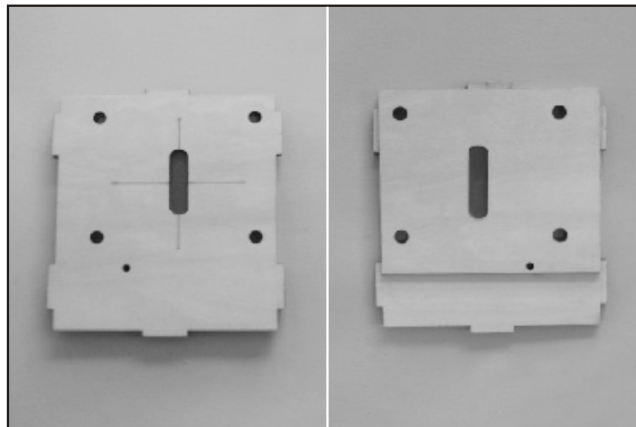
29. Glue the servo tray, and bulkhead on side frames as shown. The retract servo tray will be installed later. Make sure again the L and R side frames are positioned correctly as this will relate to the Right/Down thrust angle.



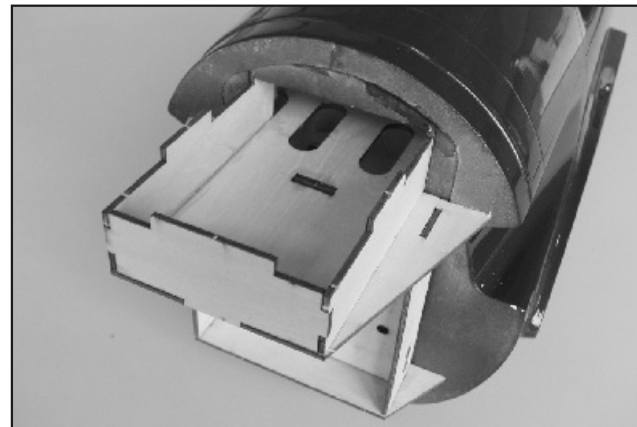
30. Place the side frame assembly into the fuselage. Finally slide the side frame assembly through the front bulkhead as shown. Make sure the notch is just right out of the firewall.



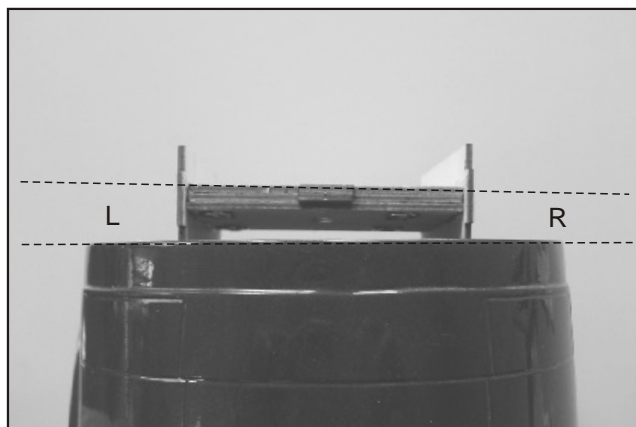
33. Epoxy the firewall brace at the bottom as shown.



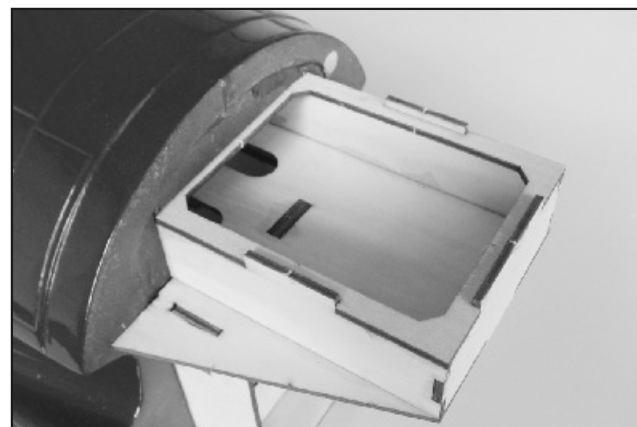
31. Sandwich the three firewalls together; note the cross laser cut mark should be on the top and smallest one at the bottom.



34. Glue the bottom of the box first then the two sides and front. Note the two box sides should reach the very front end of the box.

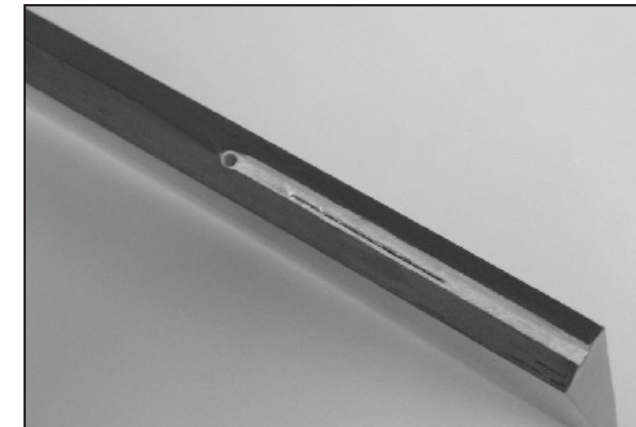


32. Install blind nuts on firewall then epoxy the firewall in place. You may insert the firewall to R side frame then push in the other side. Make sure the firewall with right thrust angle and the throttle pushrod hole is at the bottom.

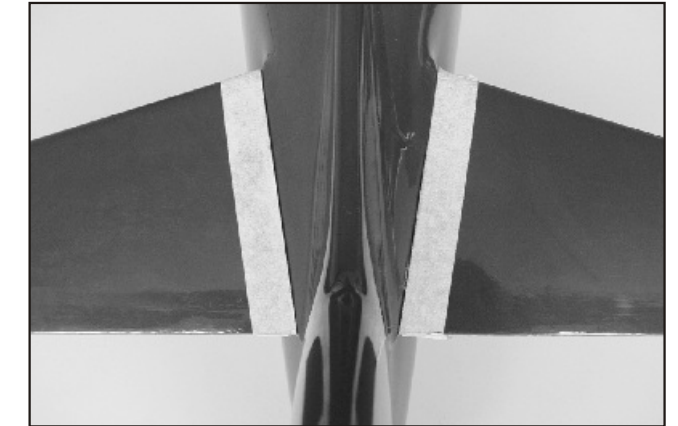


35. Next glue the top the box. Lightly apply epoxy on all firewalls area as well as the battery box so the plywood could be fuel-proof. Just mix the epoxy with some alcohol no more than 50% then brush on firewall.

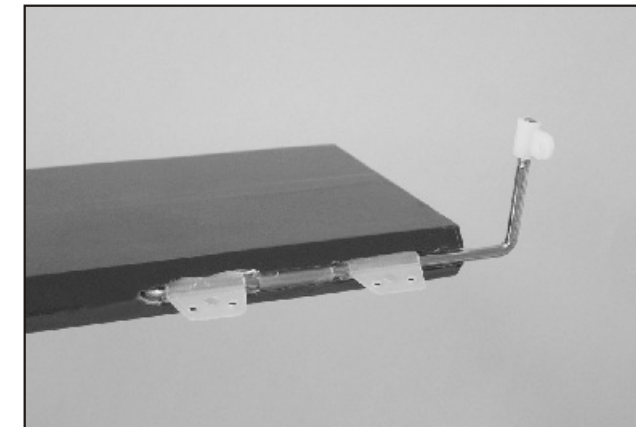
## Tail Assembly



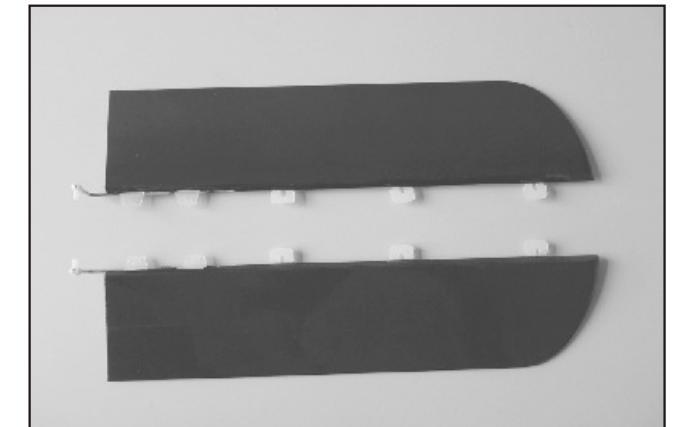
36. Remove the elevator from the horizontal tail; carefully use hobby knife to cut away the covering as shown.



39. Next mask-tape of the horizontal tail halves then epoxy the horizontal tail halves in place as shown. Make sure the horizontal tail is perpendicular to the vertical tail.



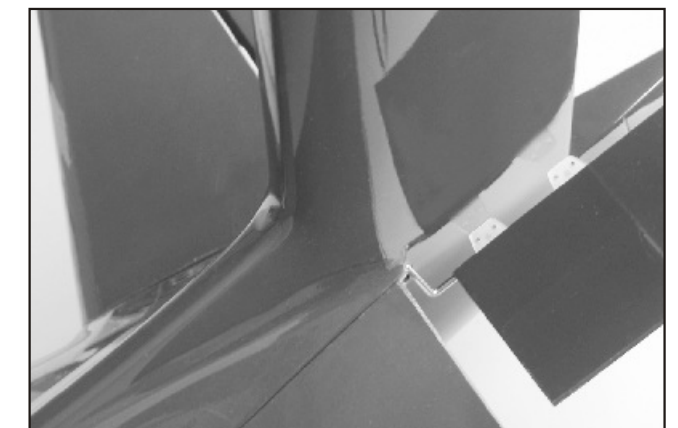
37. Locate the elevator torque rod; add lubricant oil to the first and third hinge between the hinge and torque shaft. the oil will go in. Cut away the covering of trailing edge at the horizontal tail root where the torque rod and hinges are going to be installed. Thread the torque link on the torque rod.



40. CA the hinges onto two elevators as shown.



38. Sand the glue area of the fuselage to increase the roughness.



41. Install the two elevators; the torque rod goes in the fuselage first then insert all hinges in place then apply CA glue when satisfied. Try to pull the elevators to make sure two elevators are firmly secured.