SUKHOI *ARF*

Aerobatic flying just doesn't get any better than this Sukhoi ARF. Its clean lines, long tail moment, and superb wing design will reward you with the maneuvers you love - knife edge, split S, lumcevac, torque rolls, snaps, and ground-hugging inverted flight. What's more, we've engineered this ARF to get you into the air with a minimum of fuss. So take a few minutes to carefully read the introductory material and then get to work. You'll soon be out at the field with a classic aerobatic champion!

WARNING

A radio-controlled model is not a toy and is not intended for persons under 16 years old. Keep this kit out of the reach of younger children, as it contains parts that could be dangerous. A radio-controlled model is capable of causing serious bodily injury and property damage. It is the buyer's responsibility to assemble this aircraft correctly and to properly install the motor, radio, and all other equipment. Test and fly the finished model only in the presence and with the assistance of another experienced R/C flyer. The model must always be operated and flown using great care and common sense, as well as in accordance with the Safety Code of the Academy of Model Aeronautics (5151 Memorial Drive, Muncie, IN 47302, 1-800-435-9262). We suggest you join the AMA and become properly insured prior to flying this model. Also, consult with the AMA or your local hobby dealer to find an experienced instructor in your area. Per the Federal Communications Commission, you are required to use only those radio frequencies specified "for Model Aircraft."

LIMITED WARRANTY

Carl Goldberg Products, Ltd. has inspected and certified the components of this aircraft. The company urges the buyer to perform his own inspection, prior to assembly, and to immediately request a replacement of any parts he believes to be defective for their intended use. The company warrants replacement of any such components, provided the buyer requests such replacement within a period of 90 days from the date of purchase and provided the defective part is returned, if so requested by the company.

No other warranty, expressed or implied, is made by the company with respect to this kit. The buyer acknowledges and understands that it is his responsibility to carefully assemble the finished flying model airplane and to fly it safely. The buyer hereby assumes full responsibility for the risk and all liability for personal or property damage or injury arising out of the buyer's use of the components of this kit.

CARL GOLDBERG PRODUCTS, LTD.

P.O. Box 88 Oakwood GA 30566 Phone #678-450-0085 Fax # 770-53-63 www.carlgoldbergproducts.com

INTRODUCTION

USING THIS INSTRUCTION MANUAL

Before you begin assembling your **SUKHOI ARF**, take some time to read through this entire instruction book. It is designed to take you step-by-step through the process and to give you added information on engine and radio selection and set-up, balancing your aircraft, and flying your model. The time you spend will speed the assembly process and help you avoid problems.

PREPARING FOR ASSEMBLY

You will need a work area of approximately 24 x 70" which has been covered to protect it from adhesive, as well as cuts and other damage. Many people cover their work area with a sheet of dry wall (sheet rock) and/or waxed paper to prevent CA Glue and Epoxy from ruining the work surface.

CONSTRUCTION TIPS

IMPORTANT: ALWAYS READ A FEW STEPS AHEAD. This will alert you to coming instructions and will help you plan accordingly.

Using the Parts Identification section, familiarize yourself with the various items included in your kit box.

As you work, CHECK OFF EACH STEP in the box provided, so that you are sure you do not forget anything.

Do not hesitate to ask questions. Your local hobby dealer and area flyers will most likely be happy to help, as they want you to have a successful flying experience. You may also receive technical assistance from Carl Goldberg Products, Ltd. by telephone 1-678-450-0085.

ADHESIVES & GLUING TECHNIQUES

CA adhesives are specially formulated to firmly glue the plywood, hardwood, and balsa used in your model and to withstand the vibration and stresses of high performance flight. However, there are times, such as when you are installing the stabilizer and fin on the fuselage and want more set-up time for careful alignment and positioning, then you should use epoxy.. Occasionally, you also will want to use thin CA, which "wicks" into the surrounding areas. Aliphatic resin glue or similar water-based glues can also be used, but they will add to the assembly time because they dry so much more slowly than CA glue. Remember, when ever using any CA, you must be careful to read instructions thoroughly, as you will have only seconds for positioning of parts. Be sure to trial fit parts together before gluing. Also, never use watery THIN type CA glue for gluing plywood and hardwood parts. Thin CA's do not adequately bond these areas.

CAUTION

Some people may experience an allergic reaction when exposed to fumes from CA glue or epoxy. As with paints, thinners, and solvents, it is always important to use glues only where there is adequate ventilation to carry fumes away. A fan is recommended. Also, special care must be taken when using CA, as it will bond skin as well as other surfaces. Before using any CA, carefully read all label precautions. When using CA, protective eye-wear and care in keeping the glue away from the face is highly recommended. If CA does happen to get into the eye, hold lid open and flush with water only. Seek immediate medical attention.

COVERING

The SUKHOI ARF is covered in a premium polyester film chosen by many of the world's top flyers for its beauty, toughness, and ease of application and repair. It is not uncommon for ARF's to develop a few wrinkles in transit. If this is true of your model, the situation is easily corrected. Before you begin putting the pieces together, run over the surface of each section with an iron (either specially designed for airplane use or the more cumbersome household iron) or use a modeling heat gun. Apply the heat (set at about 350° F), following along with a soft cloth and pressing down on the covering as you go around. This will more firmly set the covering adhesive into the wood and keep your aircraft covering tight and smooth in the future.

One of the great advantages of polyester film is that it can be applied over itself without causing gas bubbles. This allows you to repair your aircraft, as well as to customize it in a number of ways. If, due to a flight mishap, you get a hole or similar covering damage, simply trim away the ragged edges and then apply a patch, following the directions that come with your covering , which is available at your hobby dealer.

Important Information

Covering coming loose is not COVERED UNDER WARRANTY. Due to temperature changes the plane may develop some wrinkles in the covering that you will need to remove with an iron. Be sure to seal the edges down first so that you do not cause the covering to shrink and leave exposed areas of wood. Please inspect the plane before beginning to assemble to make sure you are happy with it. After assembly has begun you cannot return the kit. If you find a problem before beginning to assemble the plane you must contact us, please do not return it to the dealer.

ITEMS NEEDED TO COMPLETE THIS AIRCRAFT

- ☐ 1 RADIO GUIDANCE SYSTEM (6 CHANNEL MINIMUM REQUIRED WITH 6 SERVOS)
- ☐ 2 12” AILERON SERVO EXTENSION WIRES
- ☐ 2 24” ELEVATOR SERVO EXTENSION WIRES
- ☐ 2 Y-HARNESS (1 with reversing)
- ☐ 1 ENGINE .61-.108 2-STROKE, .91- 1.20 4-STROKE AND MUFFLER
- ☐ 1 CA ACCELERATOR
- ☐ 1 2 OZ. BOTTLE CA MEDIUM GLUE
- ☐ 1 1/2 OZ. BOTTLE CA THIN GLUE
- ☐ 1 20 MINUET EPOXY
- ☐ 1 1/4” FOAM RUBBER

OPTIONAL:

- ☐ 1 1/5 PILOT FIGURE

NOTE: The SUKHOI ARF covering matches Cub Yellow(#884), Deep Blue(#873) and True Red (#877) Oracover.

TOOLS AND SUPPLIES FOR ASSEMBLY.

- ☐ MODELING OR UTILITY KNIFE
- ☐ WORK SURFACE (24" X70")
- ☐ ELECTRIC DRILL
- ☐ 1/16”, 3/32”,1/8", 3/16”, 5/32”, 1/4”, 5/64” 7/32” DRILL BITS
- ☐ SMALL STANDARD & PHILLIPS SCREW-DRIVERS
- ☐ MASKING TAPE
- ☐ NEEDLE NOSE PLIERS
- ☐ MOTO TOOL
- ☐ 24” RULER
- ☐ FLEXIBLE STRAIGHT-EDGE
- ☐ 30-60-90° x 6" TRIANGLE
- ☐ SOFT PENCIL
- ☐ A FEW STRAIGHT OR "T" PINS
- ☐ ADJUSTABLE WRENCH
- ☐ WIRE CUTTER (DYKES)
- ☐ OPTIONAL HEAT GUN/COVERING IRON
- ☐ ACID BRUSH
- ☐ ELECTRICAL TAPE
- ☐ PIECE OF MEDIUM SANDPAPER
- ☐ 5 FT. LENGTH OF STRING

Caution:

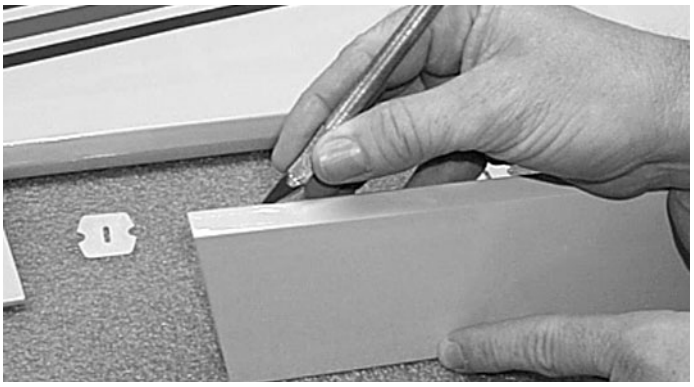
Before starting, carefully go over all high stress areas with an epoxy or wood glue to confirm all areas are well glued.

WING ASSEMBLY

AILERON INSTALLATION

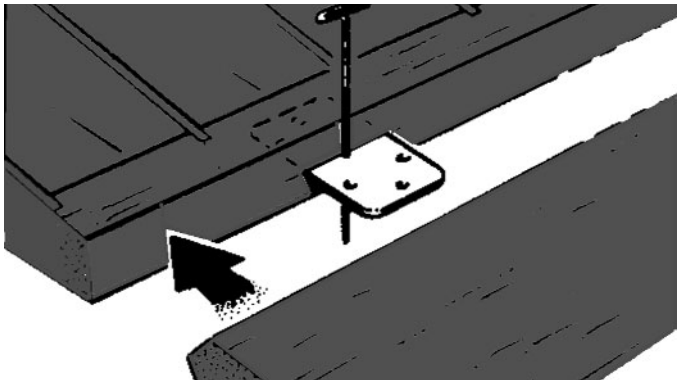
1. ☐ Collect the following parts:

(1) Left wing
(1) Right wing
(1) Left aileron
(1) Right aileron
(10) CA hinges



2. ☐ Locate the pre-cut aileron hinge slots in both wing halves. Using a hobby knife (#11 blade), slide the blade into each slot to make sure it is cleanly cut.

☐ Repeat this process with the ailerons, making sure all hinge slots are clean.



3. ☐ Place a straight pin into the center of each of the four CA hinges.

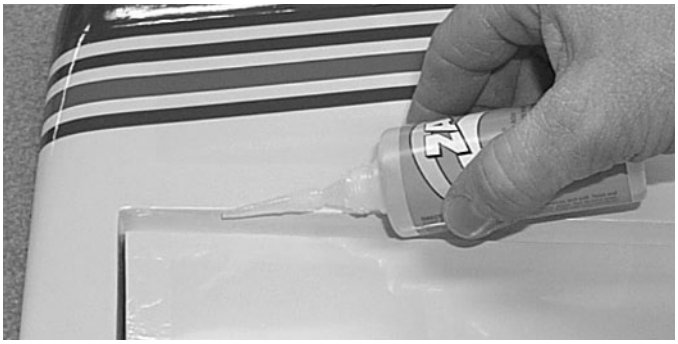
☐ Slide each hinge into the hinge slots on one of the wing halves. The pin will prevent the hinges from going further than halfway into the wing.

4. ☐ Select the aileron for the wing on which you are working and insert the exposed half of each hinge into the aileron slots.

☐ Slide the aileron toward the wing until no gap remains between the aileron and the wing.

5. ☐ Carefully check the alignment of the aileron. It should be centered, with about 1/32" on either end.

☐ When satisfied with the alignment, remove the straight pins, being sure to keep the aileron tight to the wing. You may wish to apply a few pieces of masking tape to keep the pieces in place.



6. ☐ Keeping the aileron and wing in position, apply 3 or 4 drops of CA glue to the small exposed area of each hinge.

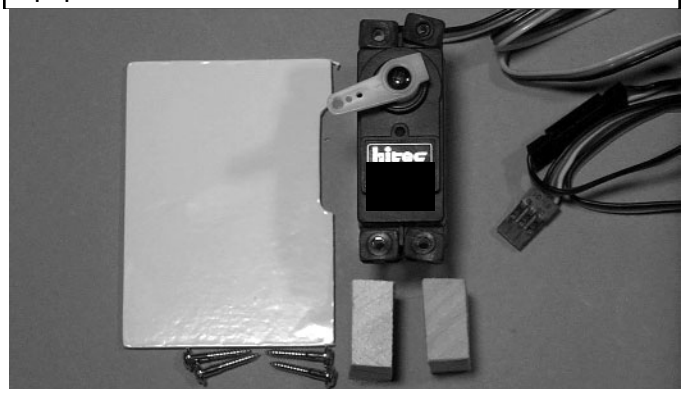
☐ Turn the assembly over and again apply 3 or 4 drops of CA glue to the exposed hinge surfaces.

☐ Allow to dry for 10 minutes before flexing the aileron.

7. ☐ Repeat the above steps for the other half of the wing.

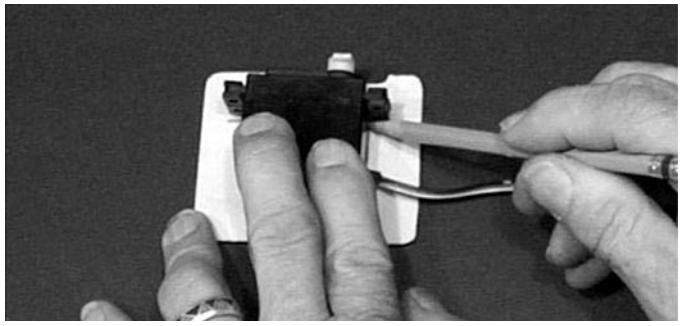
AILERON SERVO INSTALLATION

Note: The following pictures may not exactly match the hardware you are using. Always check the radio manufacturer's instructions when installing radio equipment.



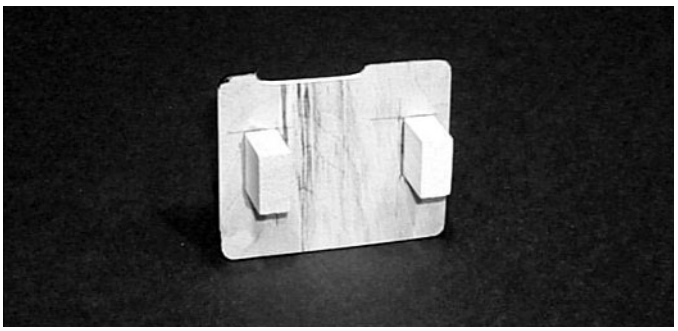
1. ☐ Collect the following items:

(1) Aileron servo door
(2) 3/8 x 3/4" Servo mounting block
(4) Servo mounting screw (supplied with radio)
(4) #4 Washer
(4) #4 x 1/2" Screw
(1) Servo with rubber grommet (supplied with radio)



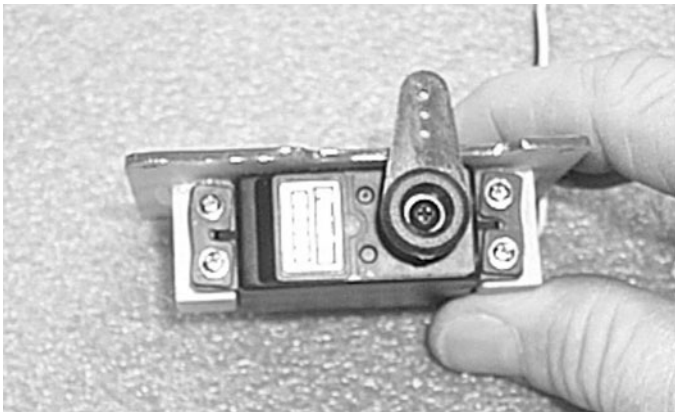
2. ☐ With the servo door upside down on the work surface, place the servo on top of the door with the servo arm post centered vertically and horizontally with the servo door notch.

☐ Mark the location of the servo, as shown.

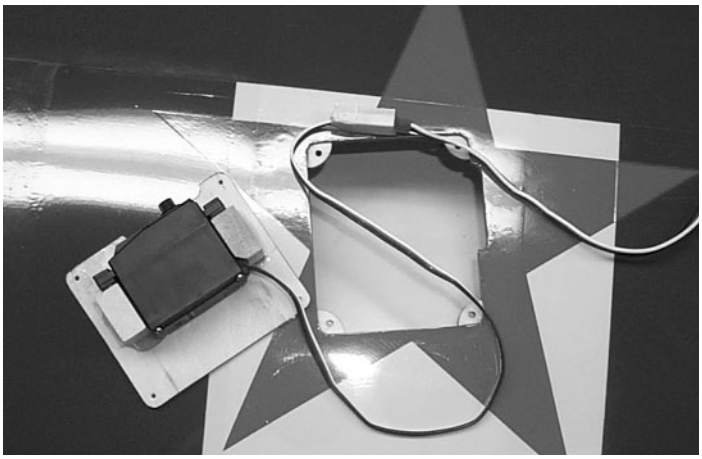


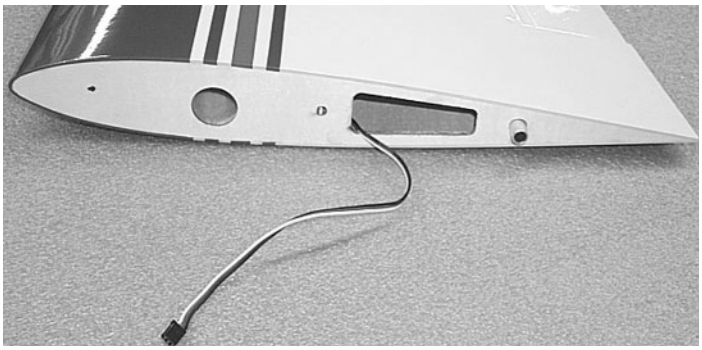
3. ☐ Remove the servo from the door.

☐ Spread epoxy on the servo mounting blocks and, making sure the wood grain on both mounting blocks runs vertically, glue the blocks in place along the marks just made.



☐ When the epoxy is dry, drill 1/16" holes into the servo blocks and, using the screws supplied with the radio, mount the servo onto the blocks.





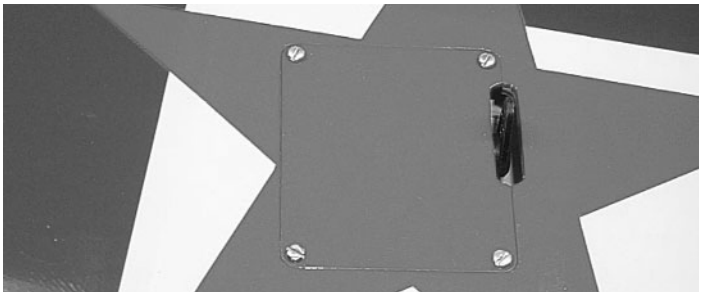
IMPORTANT! To ensure that any connections located inside the wing will not come loose, either when the wires are pulled, or during flying, **always tape them securely together with electrical tape.**

4. ☐ Making sure to use the correct servo for the opening, attach the servo wire to the12" extension and securely tape the connection.

☐ Push the extension wire into the wing until it comes out the hole near the center of the wing.

5. ☐ Grasping the extension in the hole, **SLOWLY** pull until the end of the 12" extension comes out of the hole.

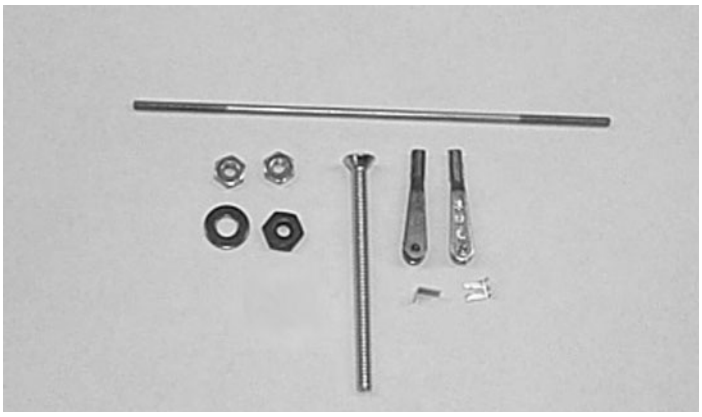
☐ Tape the extension securely to the wing, so that it will not slide back in while you are working.



6. ☐ Using the #4 x 1/2" screw supplied with this kit, screw the door to the mounting plate.

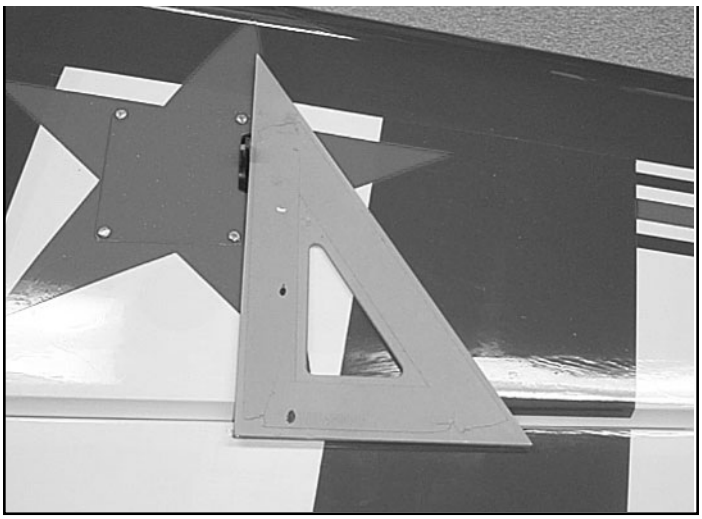
☐ Repeat the above steps for the second aileron servo.

AILERON CONTROL HORN INSTALLATION

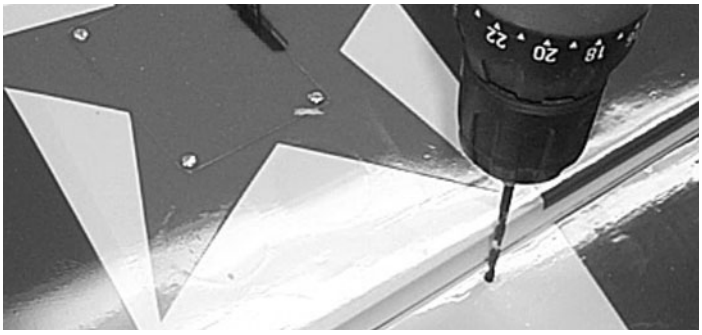


1. ☐ Collect the following items

(2) 4-40 Golden Clevis
(2) Clevis Clips
(2) 4-40 Hex Nut
(1) 4-40 x 4" Double threaded wire
(1) 6-32 x 2” Bolt
(1) 6-32 Hex nut
(1) #6 Washer
(1) 6-32 Black Horn Bracket



2. ☐ With the aileron servo door in place, make a mark at a 90º degree angle to the trailing edge and in line with the servo arm.



3. ☐ Position the control horn bolt so that it is 3/4” back from the hinge line on the mark that you jut made.

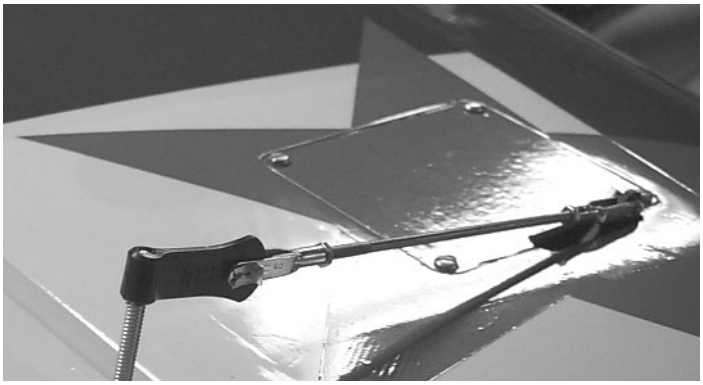
4. ☐ Using a 9/64" drill bit, make a hole in the aileron through to the top side.

HINT: Drill the hole from the bottom half way. Then measure and mark the top of the aileron and drill down to the hole from the top of the aileron.

5. ☐ Insert the 6-32 x 2” screw from the top through the aileron.

☐ Place the #6 washer and the 6-32 hex nut on the bolt and tighten. Make sure that you use thread lock on the bolt and nut.

☐ Screw the black adjustable horn bracket on the bolt.



6. ☐ Thread on to each end of a 4-40 x 4” pushrod a nut and Golden Clevis.

☐ Mount the pushrod onto the servo and the horn bracket.

☐ Slide the clevis clip on to each of the Golden Clevis pins.

☐ Repeat the above steps for the second aileron.

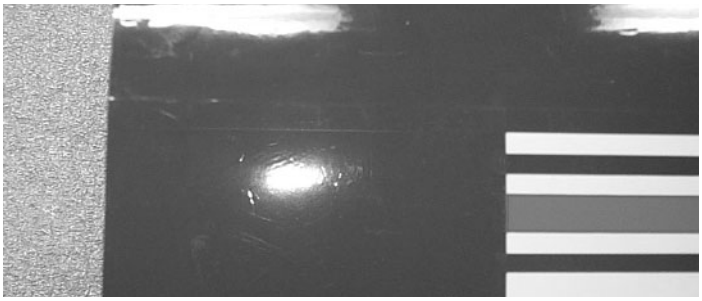
TAIL CONSTRUCTION

STAB INSTALLATION

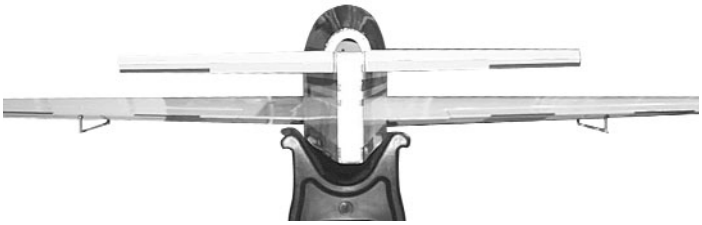
☐ Collect the following items

(2) Right & left Stab

(1) Small stabilizer tube



1. ☐ Slide the small stabilizer tube into one side of the stab. Then slide the assembly into the hole in the fuselage till the stab is flush against the fuse. (The side of the stab with the hole is the bottom of the stabilizer). Slide the second stab onto the tube sticking out the other side of the fuselage. Squeeze both stab pieces together firmly on to the fuselage.

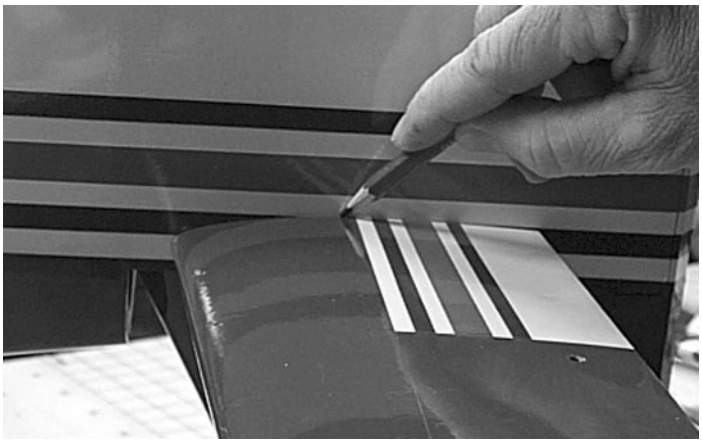


☐ Check that the stabilizer is level with the wing. Shim the tube in the fuselage up or down if necessary. Do not go any farther till the stab is level to the wing.

The Stabilizer can be mounted to the fuselage two ways:

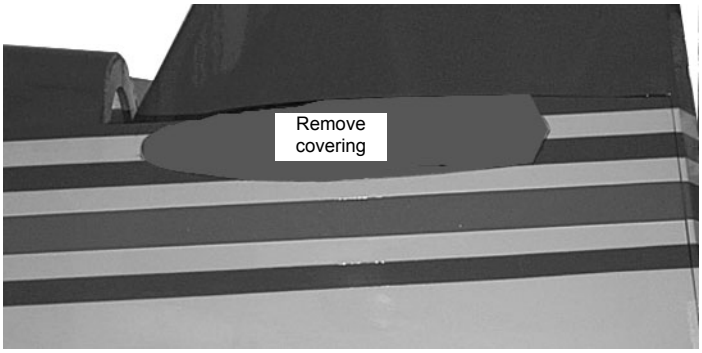
One way

1. ☐ Using 4-40 bolt, drill and tap the stabilizer tube at the hole location. This method will allow you to remove the stab as needed. **CAUTION**:You must watch the bolt holes for fatigue and drill another hole by rotating the tube when this happens.



Second way (Suggested)

1. ☐ Draw a outline where both stabilizers meets the fuselage side.



2. ☐ Remove the covering with out cutting into the wood below.

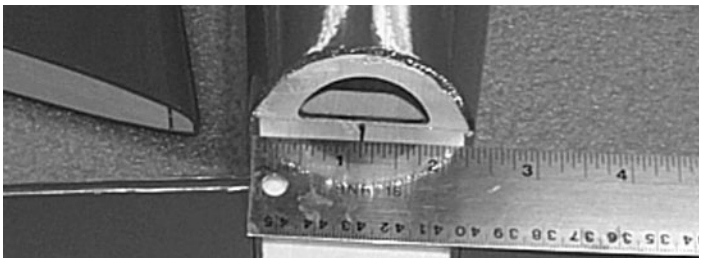
☐ Make a mixture of epoxy and glue both the tube into the stabilizers and the stabilizers to the fuselage sides. Do this on both sides of the fuselage where the stabs touch.

FIN INSTALLATION

☐ Collect the following items:

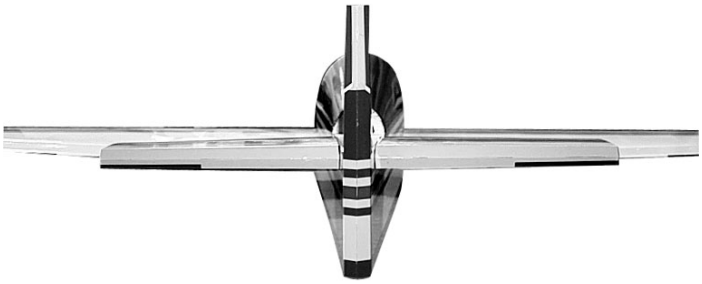
(1) Fin

(1) Plastic Tail Fairing



1. ☐ Find the center of the fuselage at the front of the fin platform.

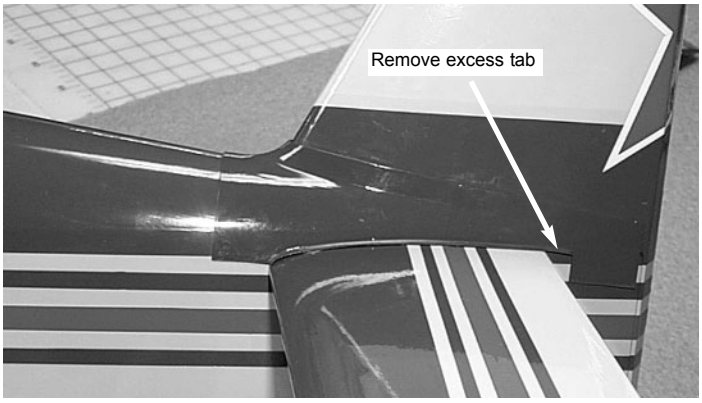
RUDDER AND ELEVATOR INSTALLATION



2. ☐ Align the rear of the fin with the rear of the fuselage.

☐ Make sure that the fin is perpendicular to the stab and fit flat on the fin platform.

☐ Make a mixture of epoxy and epoxy the fin onto the fin platform Again, make sure the the fin is once again straight to the fuse and perpendicular to the stab.



3. ☐ Fit the plastic tail fairing over the stab and around the fin.

☐ 6. Press the fairing down onto the fuselage and check for fit. Adjust the fit if necessary. Mark where the fairing tab extends past the elevator bevel and remove. This excess will interfere with the elevator movement.

6. ☐ Once satisfied with the fit then glue in place using CA glue.

CAUTION: Use glue sparingly.

HINGING THE ELEVATORS

☐ Collect the following items:

(2) Elevators

(6) Hinges

1. ☐ Take three hinges and, as with the aileron hinge installation, insert the hinge into the elevator, using straight pins to ensure the hinge stays centered between the stabilizer and the elevator.

☐ Slide the exposed side of the hinge into the slots in the stab until the pins touch both the stab and the elevator.

2. ☐ Remove the pins in each hinge and, keeping the elevator/stab assembly in position, apply 3 or 4 drops of thin CA to each hinge, on both the top and bottom sides of the stab.

☐ Allow ten minutes for the CA to cure before flexing the elevator. Then install the second elevator.

INSTALLING THE ELEVATOR SERVOS

☐ Collect the following items:

(2) servos and mounting hardware

(6) 24” servo extensions

(2) 4-40 x 3-1/2” double threaded rod

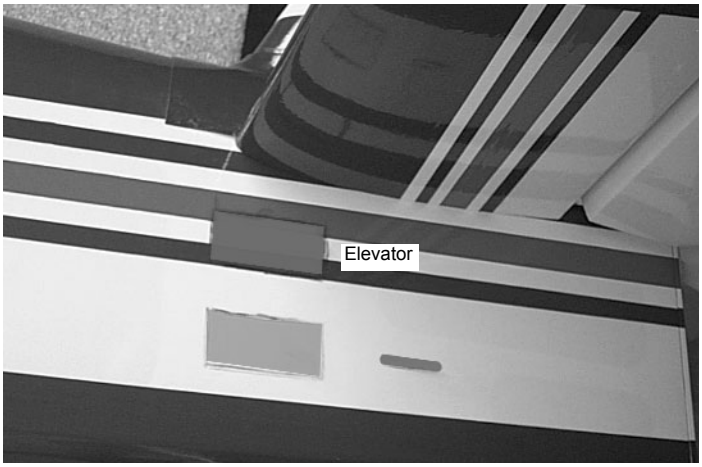
(4) 4-40 Hex Nut

(4) 4-40 Golden Clevis

(2) 6-32 x 2” Flat Head Screws

(2) 6-32 Hex Nut

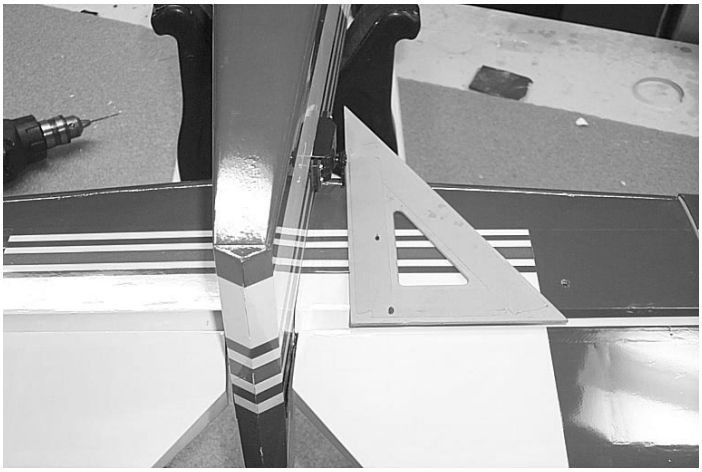
(2) #6 Flat Washer



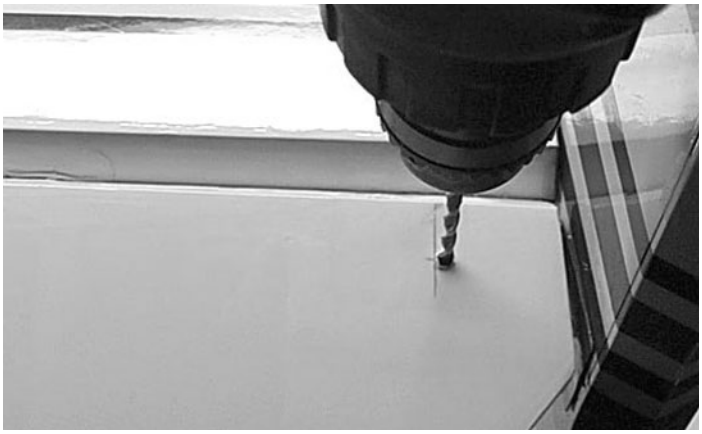
At the rear of the fuselage just below the front of the stabilizer you will find the servo cut outs on both sides of the fuselage. The top cut out is for the elevator servos. The Bottom cut out is for the optional rudder servo.

Note: Adding a rudder servo at the back may cause the plane to be tail heavy.

1. ☐ Remove the covering over top of the elevator servo hole and mount your elevator following your radio instructions. Place the out put shaft towards the rear of the fuselage.



2. ☐ With the servo in place, make a mark at a 90º degree angle to the elevator hinge line and in line with the servo arm.



3. ☐ Position the control horn bolt so that it is 3/4” back from hinge line on the mark that you jut made.

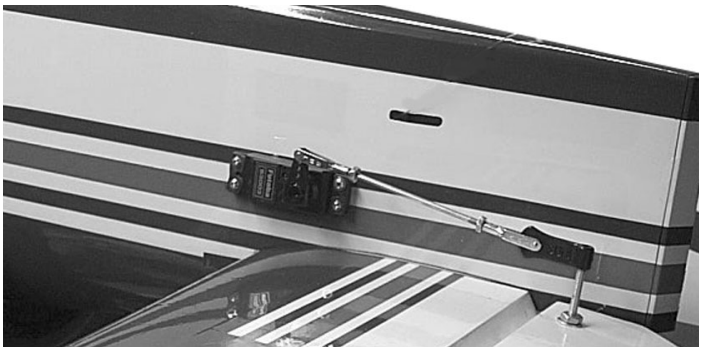
4. ☐ Using a 9/64" drill bit, make a hole in the elevator through to the top side.

HINT: Drill the hole from the bottom half way. Then measure and mark the top of the elevator and drill down to the hole from the top of the aileron.

5. ☐ Insert the 6-32 x 2” screw from the top through the elevator.

☐ Place the #6 washer and the 6-32 hex nut on the bolt and tighten. Make sure that you use thread lock on the bolt and nut.

☐ Screw the black adjustable horn bracket on the bolt.



6. ☐ Thread on to each end of a 4-40 x 3-1/2” pushrod a nut and Golden Clevis.

☐ Mount the pushrod onto the servo and the horn bracket.

☐ Slide a clevis clip on to each of the Golden Clevis pins.

☐ Repeat the above steps for the second elevator.

RUDDER AND RUDDER CABLES

☐ Collect the following items:

(1) 6-32 x 3” All threaded rod

(1) Black Adjustable Horn Bracket

(1) Small White Adjustable Horn

(2) 6-32 Hex Nut

(2) #6 Flat Washer

(1) Rudder

(4) Hinges

(1) Cable

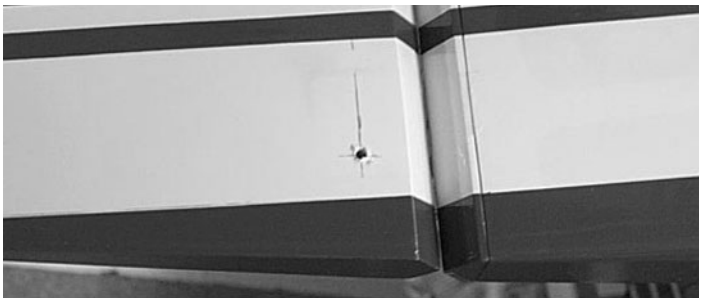
(2) Brass Tubes 1/16 OD x 1/4”

(2) 2-56 Threaded Rods with holes

(2) 2-56 Golden Clevis

(2) 2-25 Hex Nut

1. ☐ Install the hinges into the rudder and glue the rudder in place using the same hinging method used for the elevator and ailerons.

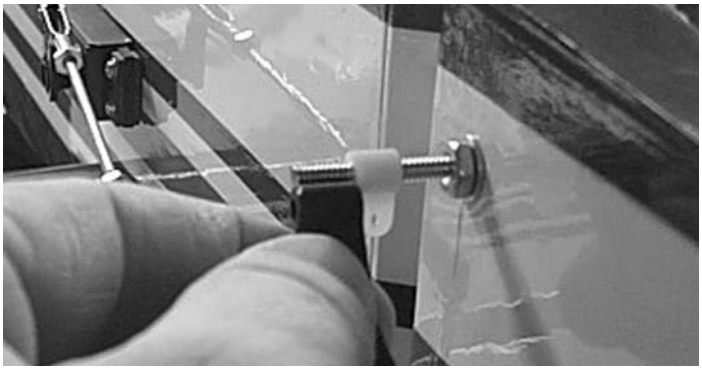


☐ Position the control horn bolt so that it is 3/4” back from hinge line and 1” up from the bottom of the rudder.

☐ Using a 9/64" drill bit, make a hole in the rudder.

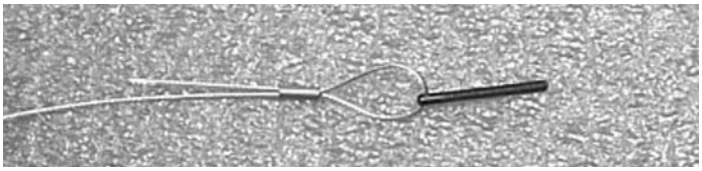
2. ☐ Center the 6-32 x 3” threaded rod in the hole.

☐ Using thread lock place first the #6 washer then the 6-32 Hex nut on each side of the rudder.



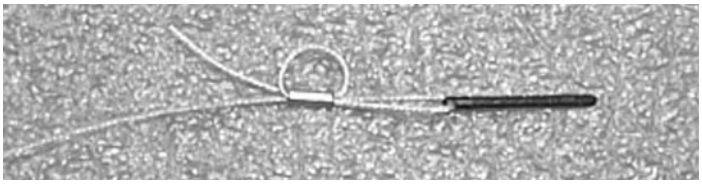
3. ☐ Thread the white adjustable horn on the rod first. Insert the horn bracket far enough so that the black horn will fit on the rod completely.

☐ Do this for both sides of the rudder.



☐ Insert the cable through the 1/16 OD x 1/4" brass tubing.

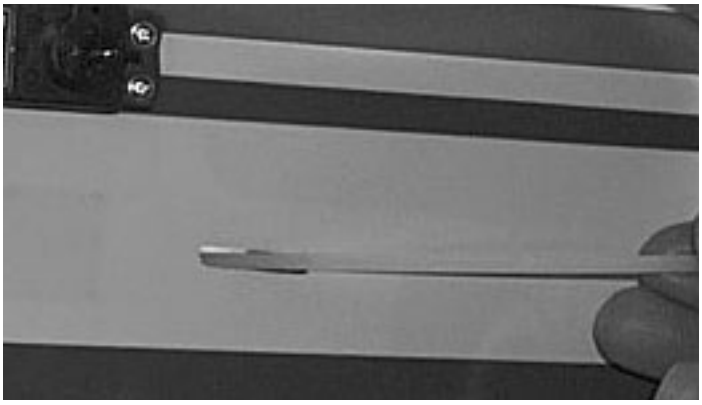
☐ Next thread the cable though the hole at the end of the 2-56 threaded rods and loop it back through the brass tube.



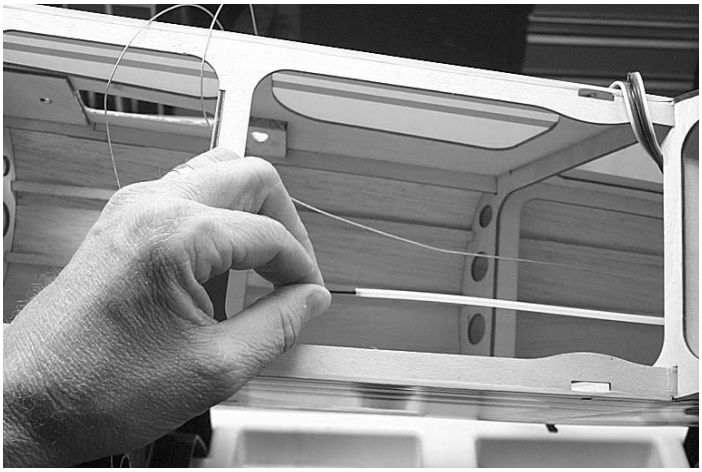
4. ☐ Loop the end of the cable back though the brass tube.

☐ Next thread the cable though the hole at the end of the 2-56 threaded rods and loop it back through the brass tube.

☐ Repeat steps 7 thru 10 for the other end of the cable.

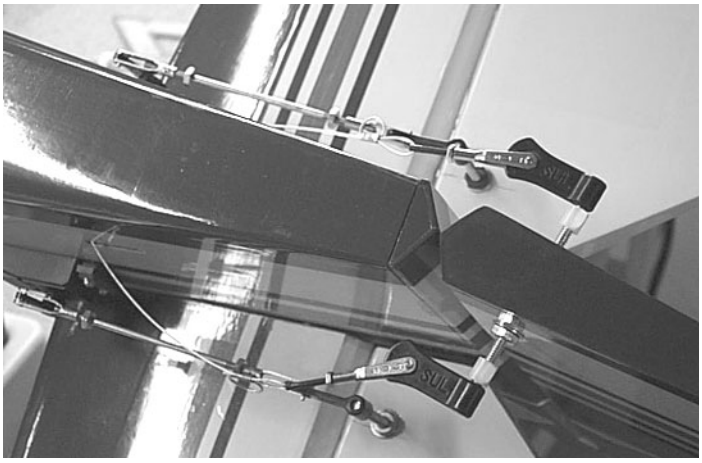


☐ Insert the 1/8" tubing into the rear cable exit hole. Push the tubing while guiding it through the fuselage.



5. ☐ Thread the 2-56 end of the cable into the tubing and pull the tubing out the rear cable exit. .

☐ Repeat steps 12 and 13 for the other end of the cable.



☐ Thread one 2-56 nut then a 2-56 golden clevis onto the each end of the cable.

☐ Connect the golden clevis to the black horn bracket. Remember to insert the clevis clip on each of the clips.

The other end of the cables will be finished when the rudder servo is installed.

MOUNTING TAILWHEEL

☐ Collect the following items:

(1) 6-32 x 3" All threaded rod

(2) Small White Adjustable Horn

(1) Tailwheel Bracket

(2) 4-40 x 1/2" Socket Head Bolt

(2) #4 Flat Washer

(2) Tailwheel Springs

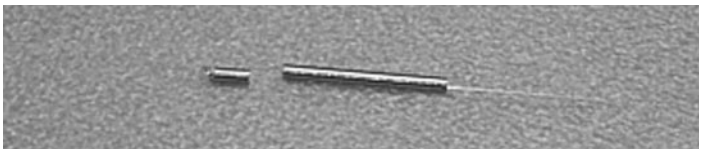
1. ☐ Thread the 6-32 x 3” rod into brass nob that is on top of the axle on the tailwheel bracket.

☐ Place on the each end of the threaded rod a white horn bracket.

☐ Next find the two hole on the bottom of the fuselage where the tailwheel get mounted.

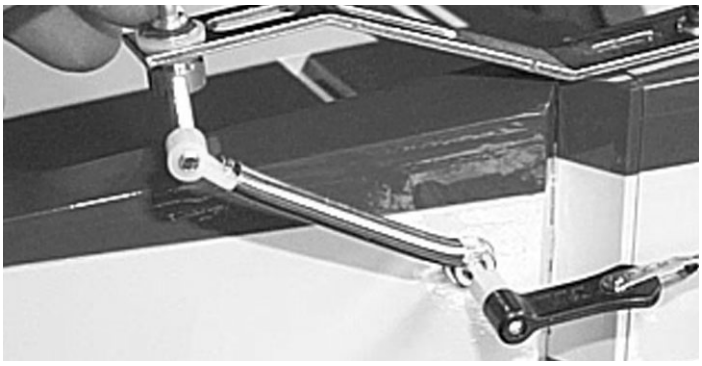
☐ Mount the tailwheel bracket using the 4-40 x 1/2” screws with the #4 washers.

NOTE: Use thread lock on the bolts.

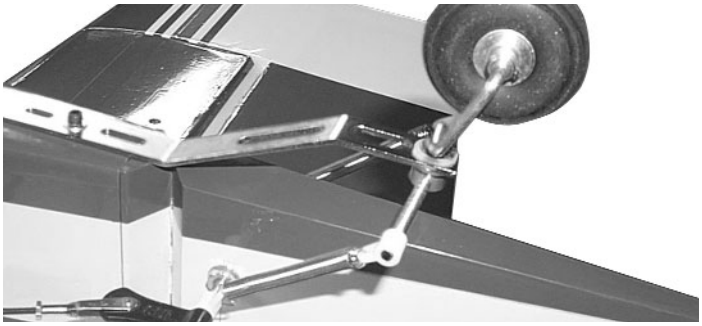


2. ☐ Remove from the tailwheel springs approximately 1/2” from the other side of the long wire.

☐ On the side of the spring that you just cut off, bend 2 or 3 coils of the spring out so that they can hook through the horn bracket.



3. ☐ Twist the end of the spring on to the horn bracket. Insert the long wire end around the second horn bracket. Twist the wire so that it will stay hooked to the bracket.



4. ☐ Repeat steps 2 & 3.

Note: The springs should be tight enough so that when you move the tailwheel it will move the rudder.

☐ Install the tailwheel using the 1/8” wheel collars and set screws.

INSTALLING THE LANDING GEAR

☐ Collect the following items:

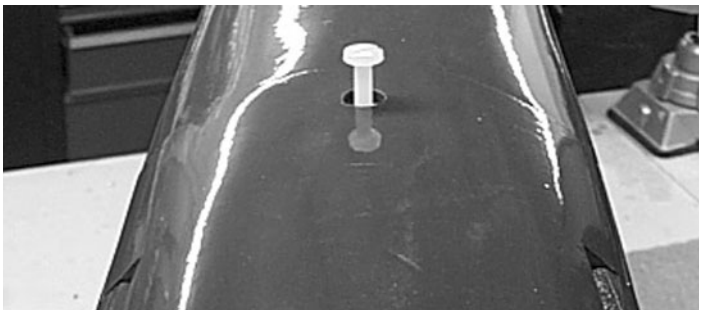
(2) 8-32 x 1” Pan Head Bolts

(1) Landing Gear

(2) Axles with Nuts

(2) wheels

(2) 5/32 Wheel collars with Set Screws



1. ☐ Remove nylon screw from the bottom hatch.

2. ☐ Screw the landing gear down onto the fuselage. Place the gear taper going towards the front of the plane. Use thread lock on the bolts.

☐ Reinstall the bottom hatch.

☐ Install the axles and the wheels along with the 5/32 wheel collars.

INSTALLING THE RUDDER SERVO

☐ Collect the following items:

(2) Servo with mounting hardware

(2) Brass Tubes 1/16 OD x 1/4”

(2) 2-56 Threaded Rods with holes

(2) 2-56 Golden Clevis

(2) 2-25 Hex Nut

1. ☐ Find the center of the servo tray that is in front of the wing tube in the fuselage.

☐ For now insert the elevator servo you will be using.

2. ☐ Determine were your throttle servo needs to be and inert you throttle servo.

☐ Make sure that the movement from your rudder servo will not interfere with the movement of the throttle servo.

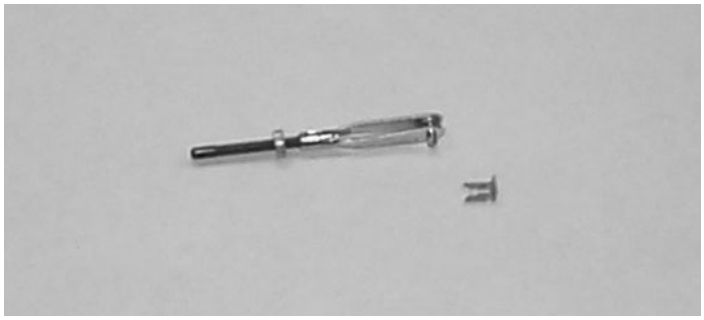
☐ Make a mark were the both the servos will mount then remove the throttle servo.

☐ Screw your rudder servo on the marks you just made.

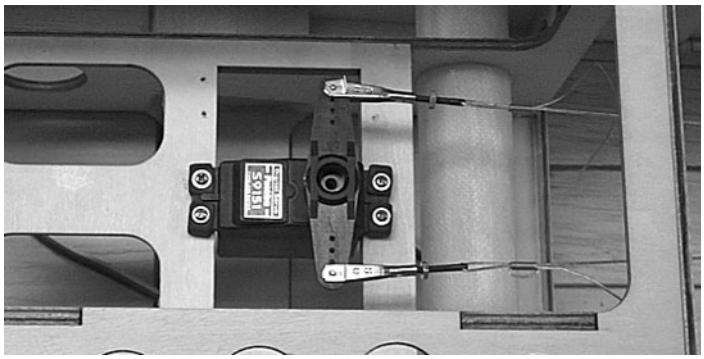
3. ☐ Finish pulling the rudder cables through the fuselage.

☐ Make sure that the cables are running between the openings in the formers.

☐ Stretch the cables past the rudder servo by 3” to 4” then cut off excess cable.



4. ☐ Assemble the 2-56 cable end same as shown above.



☐ Place the cable ends on you servo arm and mount the servo arm on the rudder servo.

☐ Tape your rudder with masking tape so that it will remain straight.

5. ☐ Place the brass tube on the cable then pull the cables through the holes in the threaded rod.

☐ Pulling the cable tight, finish assembling the cable just like you did before.

☐ Do the same to the other cable.

☐ You can tighten or loosen the finished cable by twisting the golden clevis.

INSTALLING THE ENGINE

☐ Collect the following items:

(1) Motor Mount

(1) Engine

(4) #10 x 3/4” sheet metal screw

(4) 8-32 x 1” Socket Head Screw

(4) #8 Washer

(4) 8-32 Blindnuts

(1) 1/8 x 24” Tubing

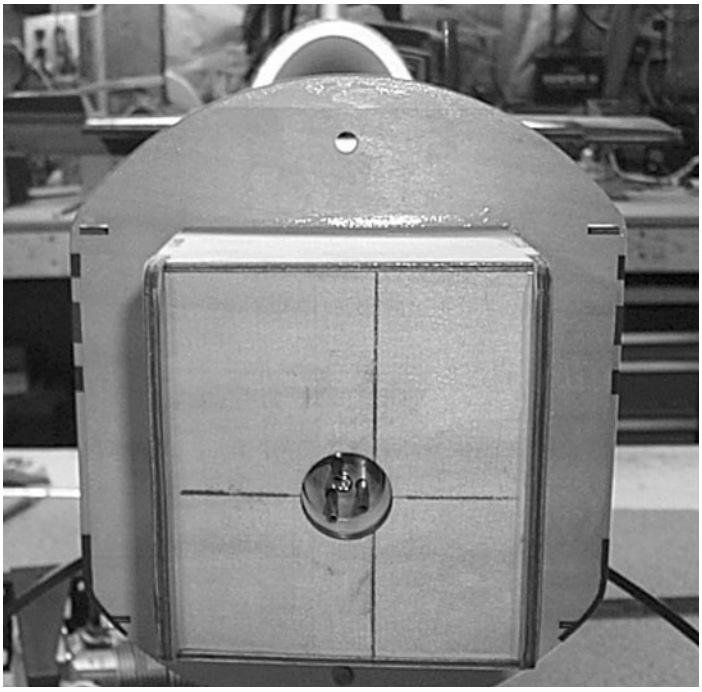
(1) .072 x 19” wire

(1) Snap-r-Keeper

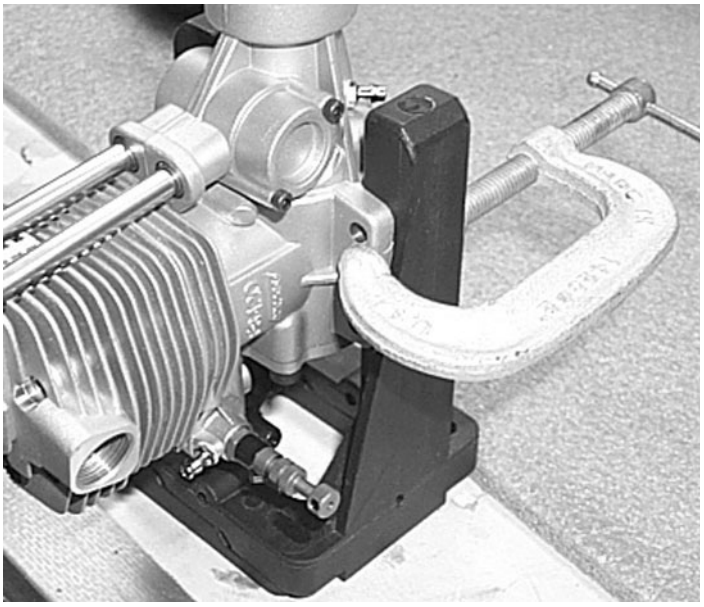
(1) Pushrod Connector

(1) Snap Nut

(1) 4-40 x 1/8 Socket Head Screw



1. □ Extend the lines on the firewall as shown above.



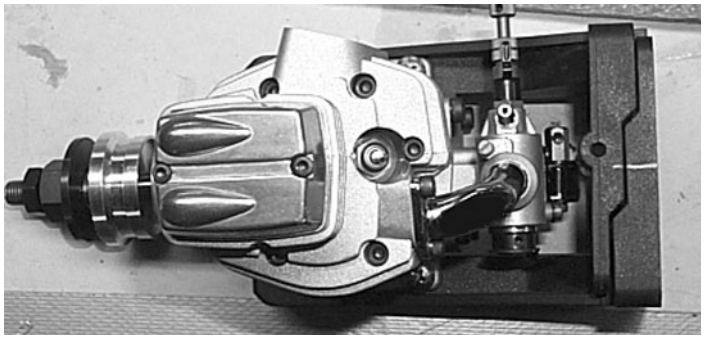
2. □ Place you engine in the mounts and adjust till the prop drive washer is 6-1/4” from the back of the motor mounts. Clamp the engine in place on one beam and mark the location of the mounting holes.

□ Drill using a 1/8” bit.

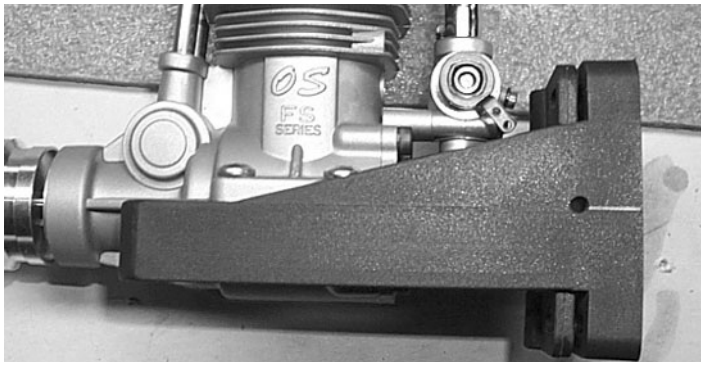
□ Screw the engine to motor mounts using the #10 x 3/4” sheet metal screws.

Note: Make sure you keep the engine centered on the motor mount.

3. □ Keeping the engine perpendicular to the table top, clamp the other motor mount to the engine. Mark and drill the second motor mount then screw the mount to the engine.

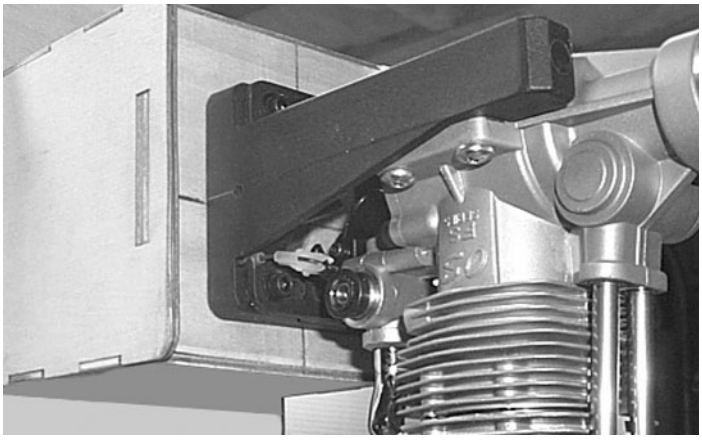


4. □ Measure across the top of the motor mount and find the center. Place a mark at that point.



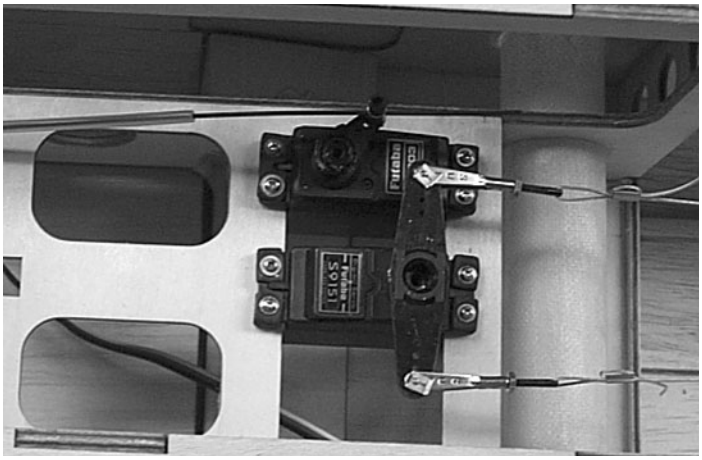
5. □ Place a mark where the top of the motor mount beam is located. As shown above.

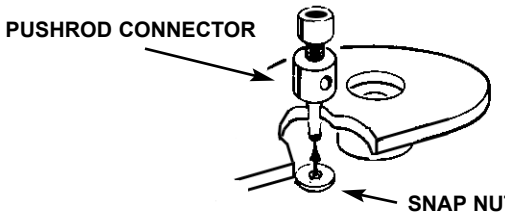
□ Mark all four sides of the motor mount.



6. □ Align the motor on the firewall. Center the engine on the off center line and the horizontal line. Drill holes on the marks using a 7/32” drill. Insert blind nut into the rear of the fire wall and tighten using washers and lock washer (use thread lock).

□ Drill a 1/8” hole in the firewall in position with the throttle arm. Insert the 1/8” x 24” nylon tubing in the hole.





7. □ Mount throttle servo in tray on the marks you made earlier

Note: Your installation may vary depending on the engine used.

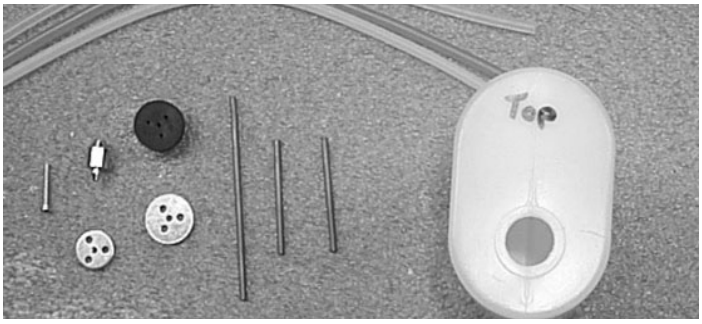
□ Install pushrod connector on your servo arm and attach to the throttle pushrod.

8. □ Insert the .072 x 19” wire through the pushrod tubing and into the pushrod connector on the servo arm.

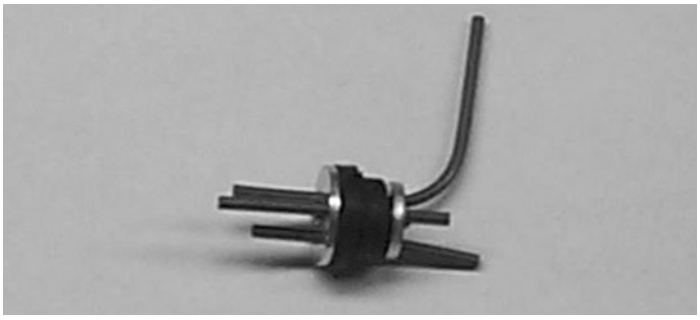
□ Make a 90 degree bend so that the wire fits into the throttle arm on the engine. Install the snap-r-keeper on the end of the wire.

□ Locate the proper positioning of the throttle servo arm. Then cut off the excess wire, keeping some wire for future adjustments.

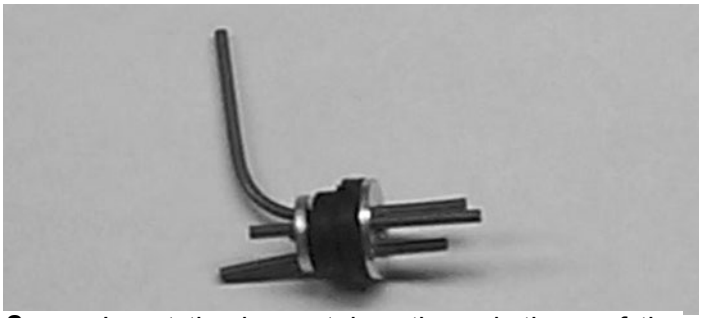
FUEL TANK ASSEMBLY



☐ Gather the following items
(1) fuel tank
(1) rubber tank stopper
(1) clunk
(1) 3mm x 25mm screw
(1) cap washer large
(1) cap washer small
(2) 3mm x 40mm brass tube
(1) 3mm x 60mm brass tube
(1) silicone tube 4mm x 80mm
(3) silicone tube 5mm x 165mm

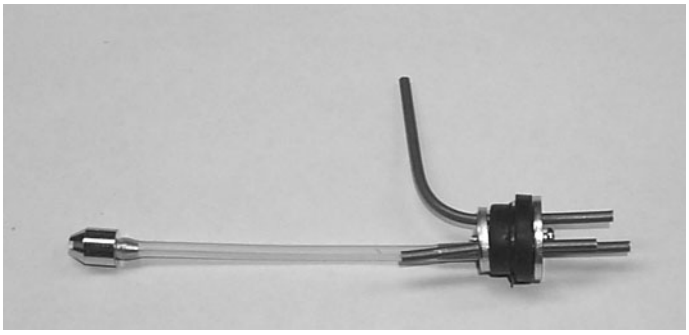


1. □ Insert the 3mm screw through the center hole in the large washer, through the center hole in the rubber washer against the large side, and screw the small washer on the back side.

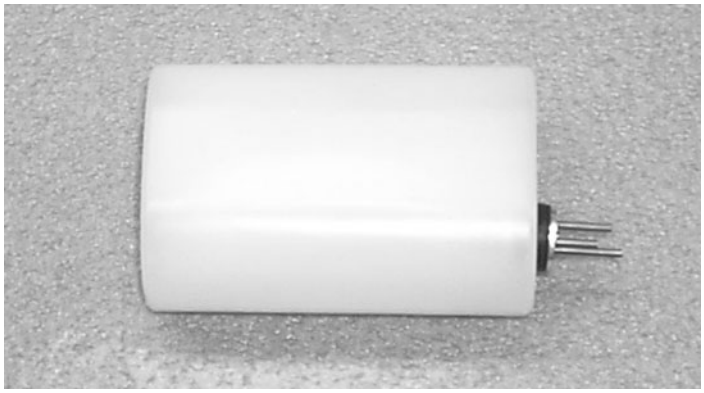


2. □ Insert the brass tubes through three of the holes. They should be arranged so as the long one will be on the right side of the plane and the short one on the left side.

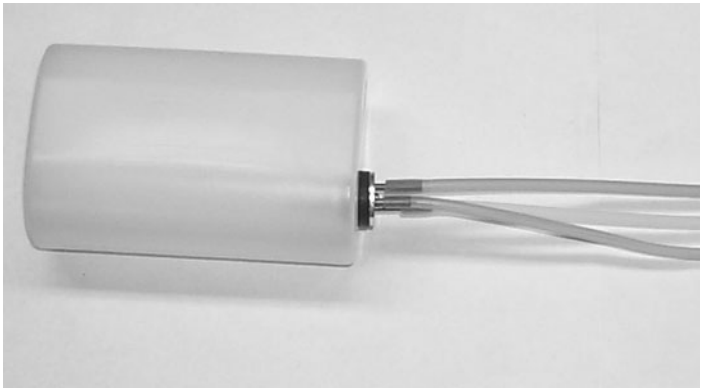
□ The tubes should extend out the front of the cap 5/8”. Bend the long tube up at about a 20 degree angle. This should be adjusted so the end of the tube almost touches the top of the tank when installed.



3. ☐ Install the 4mm silicone tube to the short brass tube and install the clunk to the other end of the silicone tube. This is the fuel pick-up and must be free to “flop” around in the tank so it can pick up fuel in any attitude.



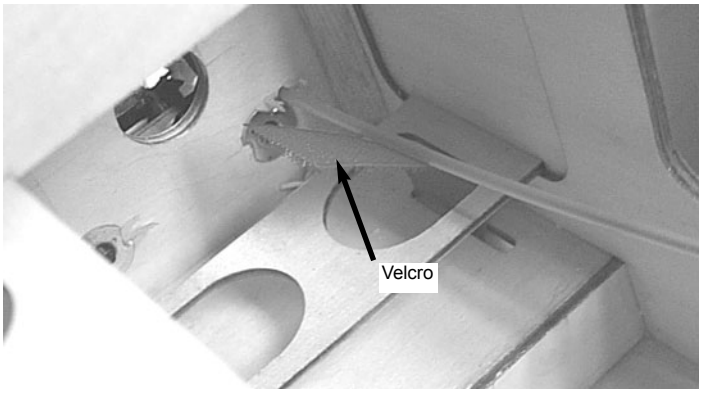
4. ☐ Install the assembly into the tank so the vent tube is turned up to the top of the tank and is positioned on the right side of the tank. Tighten the screw to expand the rubber cap. Don’t over tighten or you could split the tank.



5. ☐ Attach the three pieces of 5mm tubing to the three tank outlets. They are different colors so you can tell which are the two vents and which is the fuel pickup after the tank is installed. Make a note of which color you attach to which tube. The short brass with the clunk is the fuel pickup and must go to the carburetor. One of the long brass tubes is the vent and should go to the pressure outlet on the muffler. The second vent can be used for filling the fuel tank but will have to be plugged with a screw (Not Included) so that the fuel will not run out.

INSTALLING FUEL TANK

☐ Gather the following items
(1) Velcro Hook & Loop
(1) Foam Rubber (Not Included)



1. ☐ Take about 2” of both side of the velcro and hook them together so that it makes one long piece.

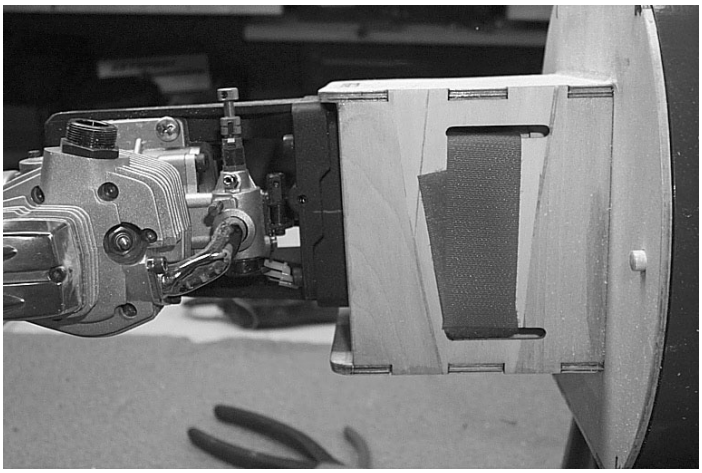
☐ Feed the velcro up through the bottom of the fuselage just behind the firewall.

Note: Keep the velcro to the inside of the throttle tubing as shown.

☐ Pull the velcro over half way into the fuselage.

☐ Insert the end of the velcro into the slot on the other side of the fuselage and pull it back out the bottom of the fuselage.

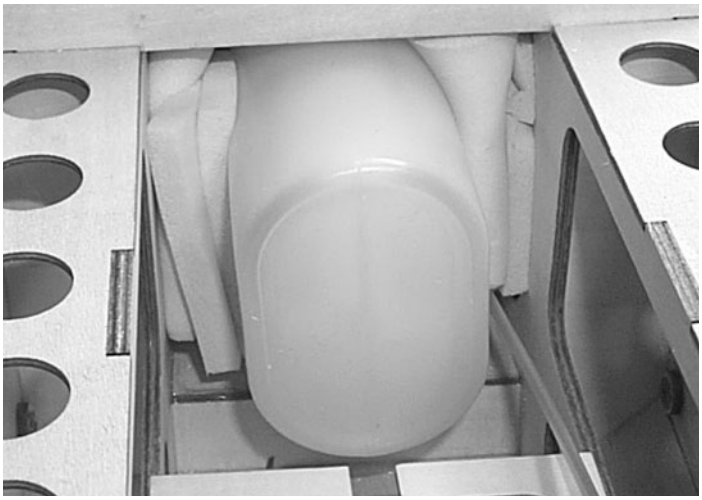
☐ Keep the velcro strip loop you just made inside the fuselage big enough to fit around the fuel tank.



2. ☐ Insert the fuel tank into the velcro loop and push the tank forward till the end comes out the firewall.

☐ Pull on both end of the velcro till tight. Then press the two ends of the velcro together.

Note: To keep the velcro tight you might want to place a screw into the velcro on the bottom of the fuselage. (Not Included)

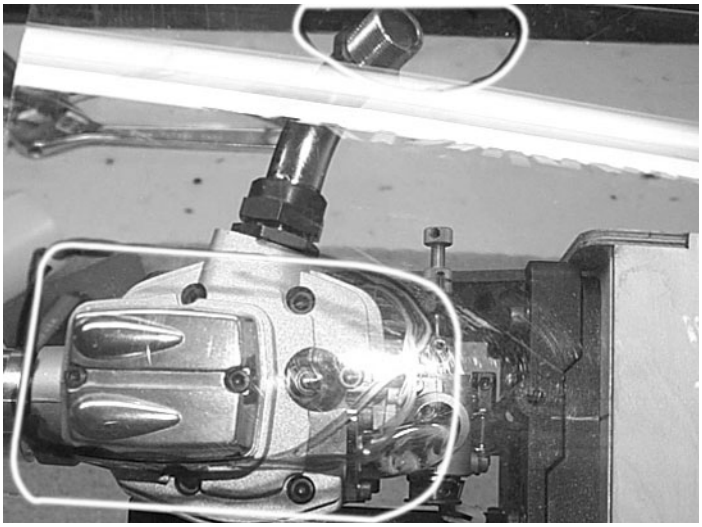


3. ☐ Insert foam on both sides of the fuel tank.

Note: This is also a good place for the radio battery if needed.

MOUNTING THE COWL

☐ Gather the following items
(1) Cowl
(4) 4-40 x 1/2 Socket Head Bolt
(4) #4 Washer
(1) 4” x 12” Clear Plastic



1. ☐ Place the 4” x 12” plastic strip so that it is sitting on top on the engine just past the cylinder head.

☐ Tape the plastic to the fuselage at the very end with masking tape.

☐ Mark a outline around the cyclinder head and you exhust pipe.

☐ Make a mark where the back of the plastic is sitting on the fuselage.

☐ Un-tape the plastic sheet from the fuselage and cut out the plastic where you marked for the engine.

2. ☐ Unscrew the engine from the motor mounts.

☐ Place the cowl on the fuselage and fasten using the 4-40 x 1/2” bolts and washers.

☐ Re-tape the clear plastic sheet on the marks that you made on the fuselage.

☐ Make a mark where the cut out is on the cowl.

☐ remove the cowl and cut out the openings.

NOTE: Start with small openings then slowly increase the size till the cowl fits.

RECEIVER, BATTERY & SWITCH

We placed our receiver behind the rudder servo and our battery in front of the throttle servo. The location of these items will vary with each planes set up.

☐ Install your radio switch.

☐ Install your receiver and battery pack according to your radio instructions.

☐ The Sukhoi has lots of room to move the battery around to help with the CG. Do not make a final place till you have balanced the plane.

HATCH AND CANOPY

☐ Gather the following items
(1) Hatch
(4) 4-40 x 1/2 Socket Head Bolt
(4) #4 Washer
(1) Cockpit insert
(1) Canopy

☐ Fit the hatch under the cowl (tight fit) and slide it forward till the front dowel slides into the hole in the front former. If the dowel seems tight then drill the hole in the former out bigger.

☐ Using the 4-40 x 1/2” bolts and washers, mount the hatch to the top of the fuselage. Use thread lock.

☐ Place the cockpit insert over the hatch check for fit and glue in place.

☐ Put in place the canopy over the fuselage hatch.

☐ Glue in place.

BOLTING ON THE WING

☐ Gather the following items
(1) Right & Left Wing Panels
(2) 1/4-20 x 2” Nylon Bolt
(1) Wing Tube

☐ Slide the wing tube into one of the wing halves.

☐ Slide the tube thru the fuselage.

☐ Slide the second wing half onto the wing tube comming out of the fuselage side.

☐ Push the two wing halves together till they ar tight against the fuselage side.

☐ Bolt the wing to the fuselage using a 1/4-20 nylon bolt.

BALANCING AND CONTROL THROWS

Throws

We have provided two sets of throws. Use the lower throws on the first flights then work your way up to the higher throws. Do not use the higer throws till you are ready.

	LOW	HIGH
Elevator 1” UP& Down		All you can get
Ailerons 1/2” Up & Down		All you can get
Rudder 1-1/2” Right & Left		All you can get

When you have gotten comfortable flying the Sukhoi slowly increase the throws while still staying within your flying ability.

The Sukhoi was designed around a 1.20 four-cycle engine or a .90 two-cycle engine both of these engines will give you excellent performance. Remember, a bigger engine is not always better. Using a 15-8 to a 16-8 prop works well on these engines.

CG Balancing

Balancing the Sukhoi is very important, you might need to use weight depending on the servos and engine that you use. Start out with the balance point at 5”. This balance point is a safe place for you to fly the Sukhoi at. As you get comfortable you can move the CG back further. The further you move the CG the more wild the aerobatics will become, **BUT** the more unstable the Sukhoi will become.