

# TIGER 2 ARF



## INSTRUCTIONS

Ideal as a first low-wing trainer and as a terrific everyday sport plane, the Tiger 2 ARF combines docile flight characteristics with the aptitude for super-smooth, exciting aerobatics. This ARF has been designed to keep building time to a minimum; it's 90% pre-built, with a pre-assembled elevator and installed pushrod and wing guide tubes, and it features top-quality American hardware and premium covering. And if you choose, the pre-mounted gear blocks make for easy conversion to the optional tail-dragger configuration. So read through these instructions, follow them carefully, and you'll soon be flying a tiger that "growls as you grow." The better you get the more fun it gives you!

### 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 ([www.modelaircraft.org](http://www.modelaircraft.org)). 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 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](http://www.carlgoldbergproducts.com)

## ITEMS NEEDED TO COMPLETE THIS AIRCRAFT

- 1 RADIO GUIDANCE SYSTEM (4 CHANNEL MINIMUM REQUIRED)
- 2 6" AILERON SERVO EXTENSION WIRES
- 1 Y-HARNESS
- 1 ENGINE .40-.46 2-CYCLE OR .48 4-CYCLE, AND MUFFLER
- 1 CA ACCELERATOR
- 1 2 OZ. BOTTLE CA GLUE
- 1 1/2 OZ. BOTTLE CA GLUE
- 1 EPOXY
- 1 1/2" FOAM RUBBER
- 1 SWITCH MOUNT

### OPTIONAL

- 1 TAIL DRAGGER LANDING GEAR KIT (CGP ITEM #5749)

**NOTE: The TIGER 2 ARF colors match Cub Yellow (#884) and White (#870) UltraCote®.**

## TOOLS AND SUPPLIES FOR ASSEMBLY.

- MODELING OR UTILITY KNIFE
- WORK SURFACE (24" X70")
- ELECTRIC DRILL
- 1/16", 3/32", 1/8", 5/32", 1/4" DRILL BITS
- SMALL STANDARD & PHILLIPS SCREW-DRIVERS
- MASKING TAPE
- NEEDLE NOSE PLIERS
- 36" RULER OR TAPE MEASURE
- FLEXIBLE STRAIGHT-EDGE
- T-SQUARE
- 30-60-90° x 6" TRIANGLE
- SOFT PENCIL
- A FEW STRAIGHT OR "T" PINS
- ADJUSTABLE WRENCH
- WIRE CUTTER
- OPTIONAL HEAT GUN/COVERING IRON
- ACID BRUSH

# INTRODUCTION

## USING THIS INSTRUCTION MANUAL

Before you begin assembling your **TIGER 2 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. via e-mail ([questions@carlgoldbergproducts.com](mailto:questions@carlgoldbergproducts.com)) or 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, whenever 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 TIGER 2 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.

## RADIO EQUIPMENT & CARE

There are many fine radio systems on the market. Your local hobby dealer and club members are good sources of information on equipment and its suitability for various projects. It is recommended that you speak to them before making a final choice.

Today's RC systems are very well engineered and constructed.

However, they will remain only as good as the way in which they are USED. Always follow the rules of proper usage and all manufacturer's instructions for your particular piece of equipment.



**TRANSMITTERS:** Keep your transmitter clean and free from fuel residue and dirt. Battery condition and RF output should be monitored, and the system should be aligned and tuned annually. Do not transport under vibration (such as on the floor of a car) without cushioning.

**RECEIVERS:** Receivers must be vibration free. When installing in the aircraft, wrap them in a minimum of ¼" soft foam rubber (not plastic foam). Keep well clear of all cables and batteries. Tune annually (or as recommended by the manufacturer), as indicated below under "Check-Ups."

**SERVOS:** Servos are vibration prone. Be sure to mount them with grommet shock mounts in servo trays which are also shock mounted. Also be sure to keep them clean. If the neutral position "drifts," this is a sign of change which should not be ignored; find out WHY before flying again.

**BATTERIES:** Nicads also can suffer from vibration, so they too should be wrapped in soft foam rubber before installing. Check their condition periodically by measuring the voltage with a volt meter or battery tester. Charge the batteries before EVERY flying session. When not used for a period of time (such as during the winter months) the batteries should be charged every 30 days. Never store batteries in a discharged condition.

**PUSHRODS:** Obviously, pushrods should be installed to operate freely, so that they place no load on the servo. Using a servo's power to move a tight rod or heavy surface by force increases the battery drain, shortens the electronic life, and can cause neutralizing problems. In addition, it is important the pushrods do not flex or vibrate. Any vibration is transferred directly to the servo, and its gear, motor, and pot. To avoid flexing and vibration, use guides and fairleads on the rods.

**CONNECTORS:** In using connectors, never pull on the wires to disconnect; grasp the plugs instead. Clean them by dunking in a solvent, such as dope thinner. Tape the connectors together when installing and make sure there is no strain on the cables.

**CHECK-UPS:** A full check-up by the factory or an authorized service center should be done AT LEAST ONCE A YEAR, as well as any time something unusual occurs during usage. A malfunction or "glitch" is the first sign of an impending failure; it should not be ignored. The checkup should include tuning and alignment of the system, as well as battery testing.

## ENGINE & PROPELLER SELECTION

When selecting an engine, it is important to stay within the manufacturer's recommended range, as failure to do so is likely to lead to less than satisfactory performance and may well lead to failure of the aircraft. Remember, that manufacturers design and test their models for specific engine sizes. Therefore, the aircraft is unlikely to withstand the stresses created above this range. Many a modeler has watched all his hours of work and many dollars worth of hardware head earthward because he did not heed this warning: **DO NOT OVER-POWER YOUR MODEL!** Doing so will automatically void the manufacturer's warranty.

Typically, size recommendations are for both a 2-cycle or a 4-cycle engine. A 2-cycle engine has more raw power because it has faster RPMs on the propeller. A 4-cycle engine swings a bigger prop and therefore creates more pull. It is also quieter. 4-cycle engines are generally preferred for high performance, more aerobatic planes. However, if flying a tri-gear plane, a 2-cycle should be used. The expense of an engine is usually related to its efficiency. Some engines of similar cubic inch displacements are more powerful than others. Check with a dealer or an experienced flyer to learn about the specific attributes of the engine you are considering.

If selecting a more sophisticated engine, you may go with the lower recommended range. However, if purchasing a more basic engine, it is probably best to select something in the higher recommended range. If you are a relatively new RC pilot, it's probably a good idea to select an engine that is popular at the flying field, so that if you have any engine problems, other modelers will be familiar with the engine and be able to help. **REMEMBER: DON'T OVER-POWER THE AIRCRAFT!**

The propeller size must be matched to the engine. For example, a .35 may use a 9" diameter prop while a .45 can use a 10" prop. Refer to the information that is sup-

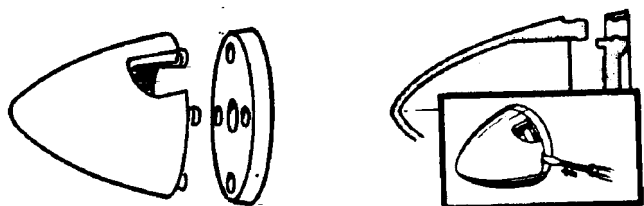


plied with your engine for recommended propeller sizes. It's wise to buy a few spare props, as everyone breaks them occasionally, and particularly often when learning to fly.

Balancing your propeller helps to protect your radio from the damaging effects of vibration. There are good, easy to use prop balancers on the market. Follow the instructions that are supplied with the prop balancer. Never

carve or cut a prop near the hub for any reason (such as to fit a spinner).

A 2-1/4" CGP 4-Pin Snap-On Spinner is included in the TIGER 2 ARF. It is a rugged precision molded spinner that does not require any special mounting nuts or screws. Carefully read the spinner instructions and warnings included in this book. Although a spinner helps reduce the chance of injury from a rotating prop, extreme caution always must be used when the engine is running.



As with other precision equipment, a new engine should be "broken-in" to enhance performance and extend its life. Breaking-in usually consists of running the engine with a "rich" fuel mixture and at lower RPMs until all the moving parts get to "know each other better." This can be done with the engine mounted in the model or securely clamped into a engine test stand or similar device. Refer to your engine's operating manual for the recommended break-in procedure and follow it carefully.

## FIELD EQUIPMENT

The following equipment will be needed at the flying field to start your engine, make adjustments, and clean your model after flying.

**FLIGHT BOX:** Something sturdy in which to carry your equipment. CGP's quick-building MiniTote carries the basics: fuel, starter and battery, and a few essential tools. The larger CGP SUPERTOTE or MONSTER TOTE are both economical, easy to build, and pack lots of utility into little space. They hold fuel, transmitter, starter & battery, as well as many tools, in a balanced load that is easy to carry.



**STARTING BATTERY AND GLO-PLUG CLIP:** A 1-1/2 volt battery is required to heat your engine's glo-plug for starting. Wires connect the glo-plug clip to the battery. Because engine starting draws a lot of electric power from the battery, rechargeable ni-cad batteries are recommended. Although they cost more initially, they are more economical in the long run than frequently replacing dry-cell batteries.

**FUEL:** For best engine performance, use the fuel recommended by your engine's manufacturer. 2 and 4-cycle engines require different fuel blends. Ask your dealer to recommend a good quality fuel.

**FUEL PUMP:** Needed to transfer fuel from the fuel can to the model's fuel tank. A simple squeeze-type bulb will do for small tanks, whereas manual crank or electric pumps fill larger tanks more quickly.

**FUEL LINE:** Have about 3 feet of silicone fuel line to make connections between the fuel pump, the fuel can, and the model's fuel tank.

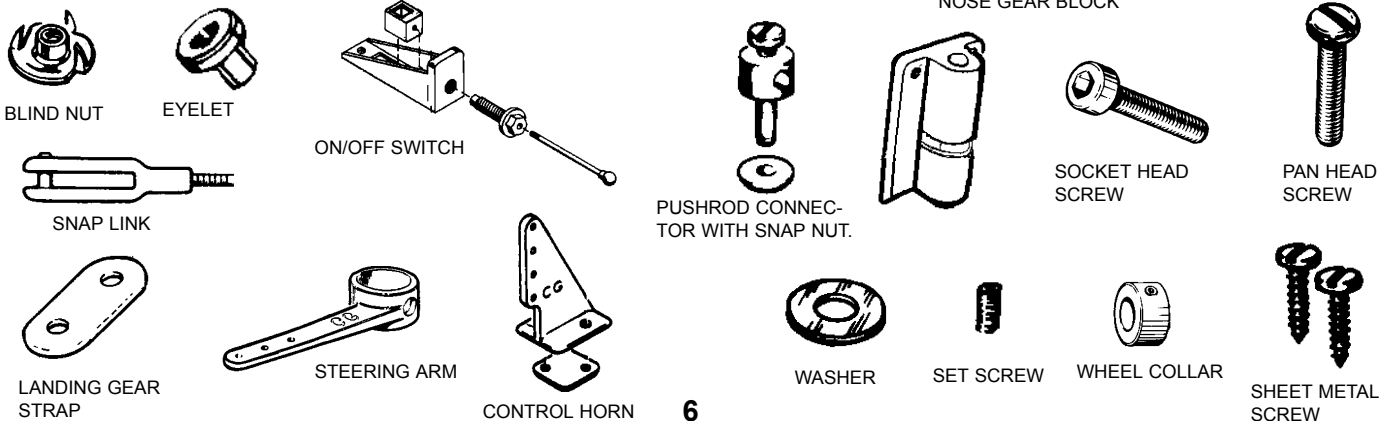
**EXTRA PROPS:** Experts always have a few spares on hand, so flying doesn't have to stop due to a broken propeller.

# GLOSSARY OF MODELING TERMS

**ARF:** Almost Ready to Fly  
**AILERON:** the control surface on the wing that rolls the plane  
**AIRFOIL:** the shape of the wing as seen from the end  
**ANGLE OF ATTACK:** the angle at which the wing meets the air flow  
**BEVEL:** to sand to an angle shape  
**BURR:** the rough edges on a piece of wood or metal after it is cut  
**CAP STRIP:** a thin strip glued to the edges of the ribs to shape the wing  
**CONTROL HORN:** a device attached to each control surface to provide an attachment point for the pushrod  
**COWL (COWLING):** the nose section of the fuselage that encloses the engine  
**DECALAGE:** the difference between the incidence of the wing and stabilizer  
**DIHEDRAL:** the upward angle of the wings, as seen from the front  
**ELEVATOR:** the moveable part of the horizontal tail, which controls pitch  
**EMPENNAGE:** the tail of the plan  
**FIN:** the fixed vertical part of the tail  
**FIREWALL:** the hard wooden former at the front of the fuselage, to which the engine is mounted  
**FORMER:** a piece which shapes the fuselage; and to which the sides of the fuselage are attached.  
**GUSSET:** a small triangular piece glued into a corner to strengthen it  
**INCIDENCE:** the angle of the wing or the tail in relation to the thrustline  
**LAMINATE:** to glue two thin sheets of material together to form a thick sheet  
**LEADING EDGE (L.E.):** the edge of the wing that first meets the airflow  
**LONGERON:** a stringer that runs the length of the fuselage  
**OUTPUT ARM:** the piece that attaches to the servo and connects it to the pushrod  
**PITCH:** an up and down movement of the nose of the plane, which is controlled by the elevator  
**PROTOTYPE:** the full scale airplane from which the model design was taken  
**PUSHROD:** the long, stiff dowel, plastic or wire piece that connects the servo with the control horn

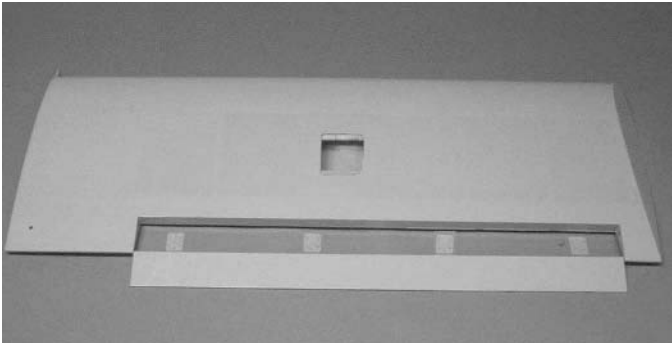
**RTF:** Ready to Fly  
**RIB:** the airfoil-shaped piece that connects the leading edge, spars and trailing edge of the wing together and holds them in shape  
**RETRACTS:** devices for extending and retracting the wheels on command  
**ROLL:** tilting of the plane as viewed from the front, controlled by the ailerons  
**RUDDER:** the moveable vertical tail of the plane, which controls yaw  
**SERVO:** the part of the airborne radio system that moves the control surfaces  
**SHEAR WEB:** wood sheeting that connects the top and bottom spars to stiffen the wing  
**SHIM:** a thin piece of wood inserted between two other pieces to improve their fit  
**SPAR:** a wooden stick running lengthwise through the wing that serves as its backbone  
**SPINNER:** the rounded cone that fits over the propeller hub  
**STABILIZER (STAB):** the fixed horizontal part of the tail  
**STALL:** a situation in which the plane is flying too slowly to move sufficient air across the wing to produce lift  
**STRINGER:** a long piece of wood attached to the formers to shape the fuselage  
**THRUSTLINE:** a line drawn from the center of the propeller hub straight through the airplane  
**TORQUE:** a rolling tendency caused by the spinning propeller  
**TRAILING EDGE (T.E.):** the edge of the wing that faces the rear of the plane  
**TRIM:** small adjustments made to the control surfaces to cause the plane to fly straight and level by itself  
**WASHIN:** a twist in the wing that makes the trailing edge lower than normal  
**WASHOUT:** a twist in the wing that makes the trailing edge higher than normal  
**WING SADDLE:** the shaped part of the fuselage in which the wing rests  
**WHEEL COLLAR:** a metal ring that holds the wheel on the axle  
**YAW:** a right-to-left movement of the nose, controlled by the rudder

## HARDWARE IDENTIFICATION



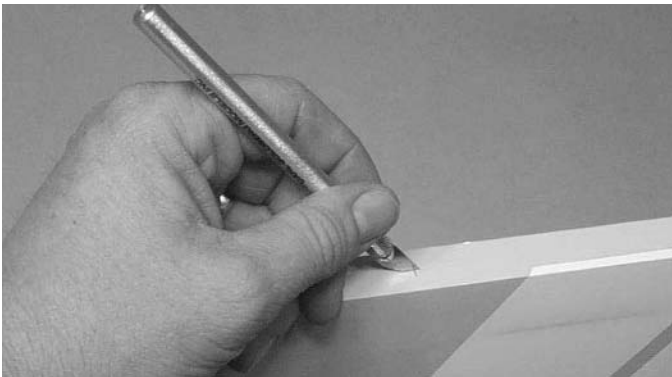
# WING ASSEMBLY & INSTALLATION

## AILERON INSTALLATION

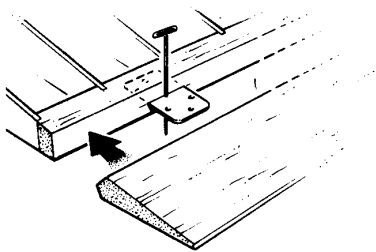


1.  Collect the following parts:

- (1) Left wing
- (1) Right wing
- (1) Left aileron
- (1) Right aileron
- (8) Jet hinge

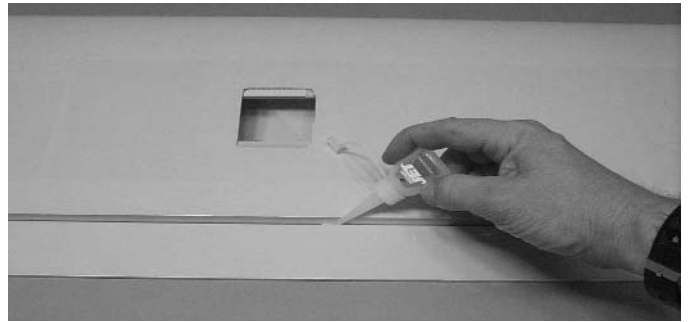


2.  Locate the pre-cut aileron hinge slots in both wing halves. Using a hobby knife (#11 blade), slide the blade into each slot to make sure it is cleanly cut.
- Repeat this process with the ailerons, making sure all hinge slots are clean.



3.  Place a straight pin into the center of each of the four JET™ hinges.
- Slide each hinge into the hinge slots on one of the wing halves. The pin will prevent the hinges from going in 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.

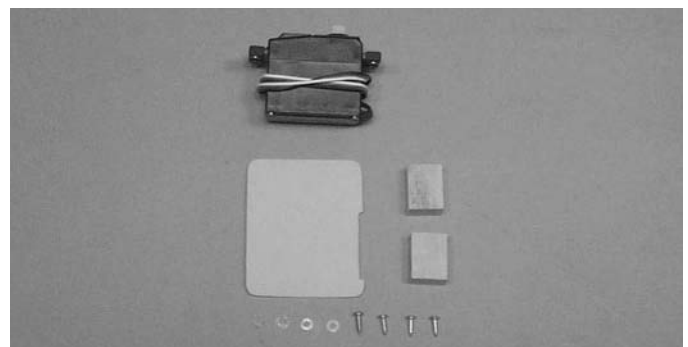
- Slide the aileron toward the wing until no gap remains between the aileron and the wing.
5.  Carefully check the alignment of the aileron. There should be about 1/32" on both ends.
- When satisfied with the alignment, remove the straight pins, being sure to keep the aileron tight to the wing. You may wish to apply a few pieces of masking tape to keep the pieces in place.



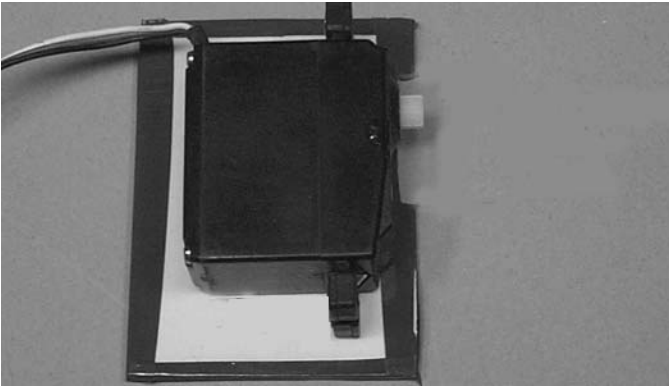
6.  Keeping the aileron and wing in position, apply 3 or 4 drops of Instant Jet™ to the small exposed area of each hinge.
- Turn the assembly over and again apply 3 or 4 drops of Jet™ to the exposed hinge surfaces.
- Allow to dry for 10 minutes before flexing the aileron.
7.  Repeat the above steps for the other half of the wing.

## AILERON SERVO INSTALLATION

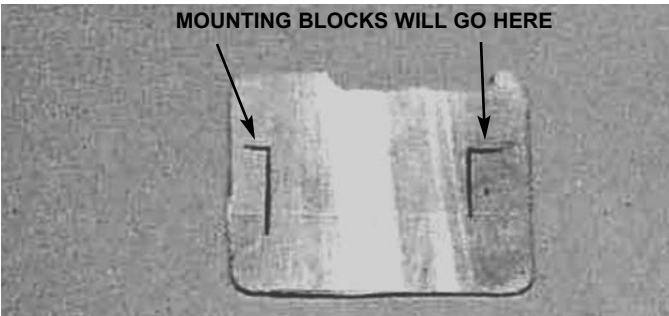
The following pictures may not exactly match the hardware you are using. Always check the radio manufacturer's instructions when installing radio equipment.



1.  Collect the following items:
- (1) Aileron servo door
  - (2) 3/8 x 3/4" square Servo Mounting Block
  - (4) Servo Mounting Screw (supplied with radio)
  - (4) #2 Washer
  - (4) #2 x 3/8" Screw
  - (1) Servo with rubber grommet



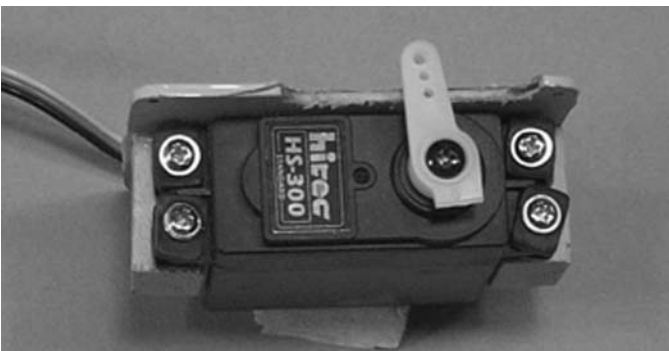
2.  With the servo door upside down on the work surface, place the servo on top of the door with the servo arm post centered vertically and horizontally with the servo door notch.



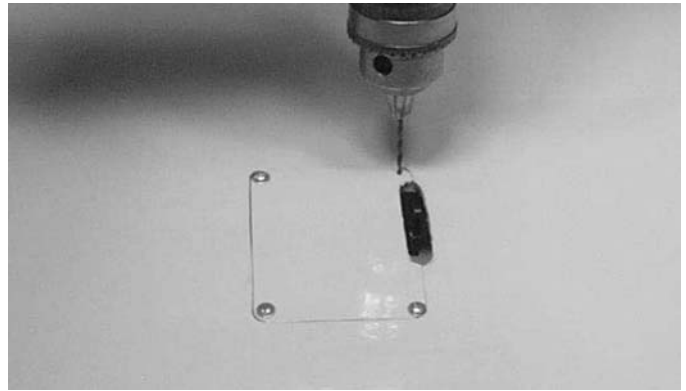
- Mark the location of the servo, as shown.



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.

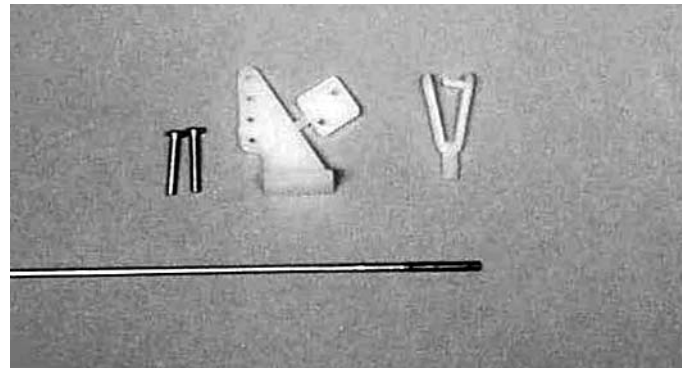


- When the epoxy is dry, drill 1/16" holes into the servo blocks and, using the screws supplied with the radio, mount the servo onto the blocks.

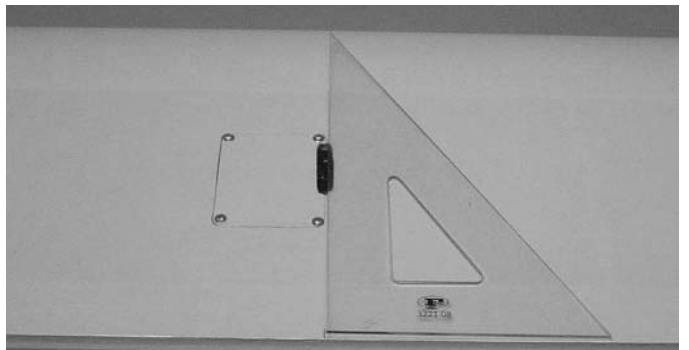


4.  Place the servo door on the wing and drill a 1/16" hole on each corner.
- Using the #2 x 3/8" screw and #2 washer-supplied with this kit, screw the door to the mounting plate.
5.  Repeat the above steps for the second aileron servo.

### AILERON CONTROL HORN INSTALLATION

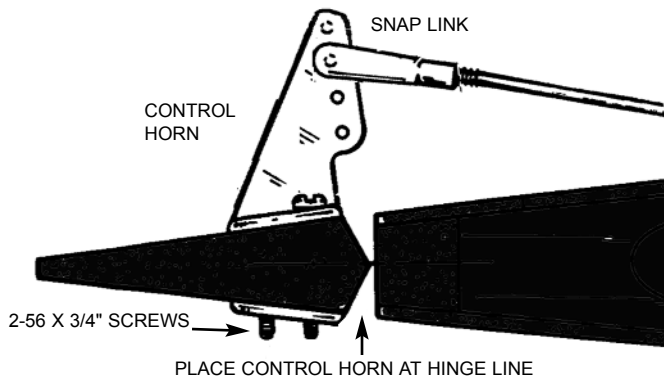


1.  Collect the following items
  - (2) Large control horn with back plate
  - (4) 2-56 x 3/4" screw
  - (2) 1/16 x 7" threaded wire
  - (2) Snap link
  - (2) Nylon snap nut (molded 6-up)

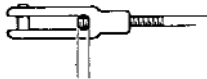


2.  With the aileron servo door in place, make a mark at a 90° degree angle to the trailing edge and in line with the servo arm.

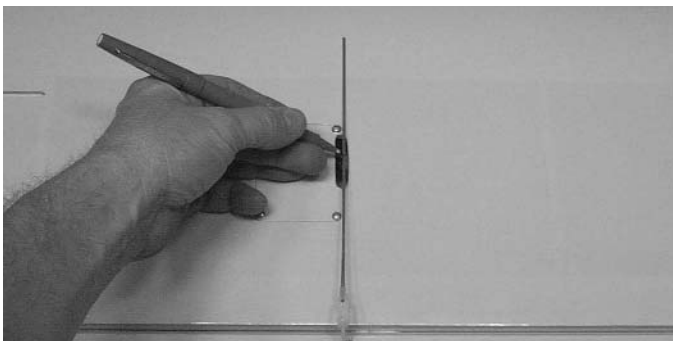




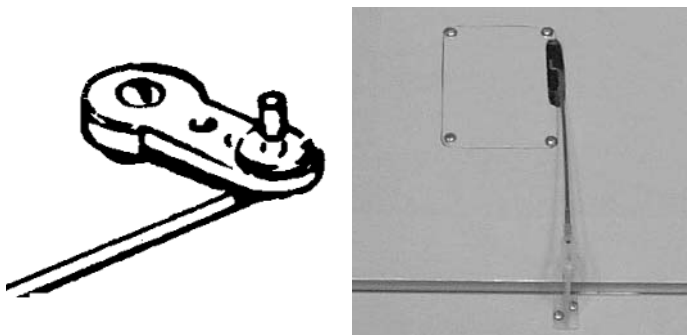
3.  Position the control horn so that the snap link holes are right next to the hinge line, as shown.
4.  Using a 3/32" drill bit, make a pilot hole in each screw location.
  - Mount the control horn with the 2-56 x 3/4" screws.



5.  Thread the 1/16 x 7" rod onto the snap link. Make sure the rod shows in the center of the snap link.
  - Place the snap link in the second hole from the top on the control horn.

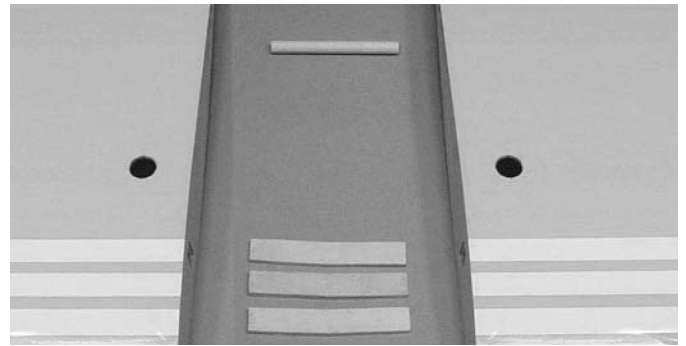


6.  Make sure the aileron is in neutral (level) position, mark where the wire meets the hole on the servo arm.
  - Remove the wire and cut it about 1/2" beyond the mark.



- Make a 90° bend (or a "z" bend, if preferred) in the wire and insert the wire in the servo arm.
- Secure the wire with a snap nut and then put a drop of Super Jet™ on the snap nut to make sure it stays in place.

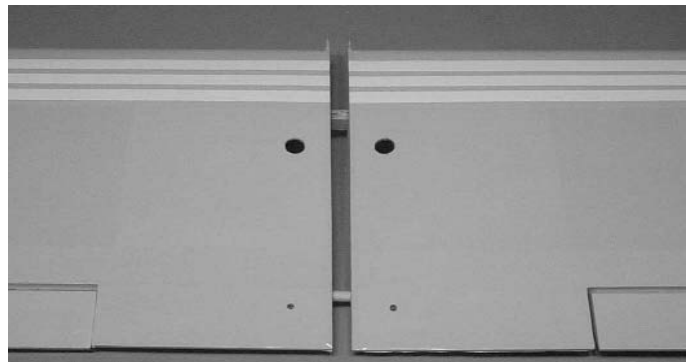
## JOINING THE WING



1.  Collect the following items:
  - (1) Right wing
  - (2) Left wing
  - (3) Wing joiners
    - (1) 5/16 x 3" dowel
 A book or block of wood

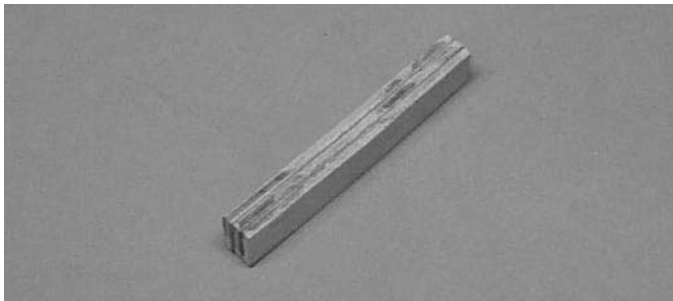
NOTE: If the covering on your wing has loosened in transit, refer to the covering section of the INTRODUCTION before continuing.

Remove the servo door and control horn from one wing panel, to allow the wing to lay flat on the table top.

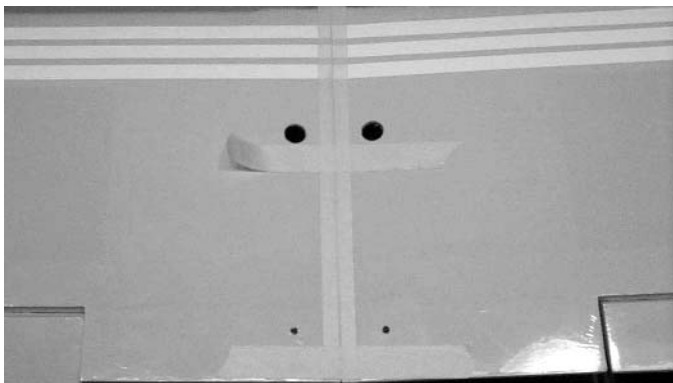


2.  Holding the three wing joiner pieces together with the angle cut facing up, insert them into the joiner pockets in both wing halves. The joiners should fit easily in the pockets and the wing halves should meet in the middle, with the wing dihedral forming a broad "V".

- Trial fit the wing dowel in the hole, as shown above. When satisfied with the fit of the dowel and the joiners, remove them from the wing pockets.
- 3.  Working on a protected surface, and with a paper towel handy for cleaning fingers, **THOROUGHLY** mix 1-2 large (soup) spoons each from bottle A and bottle B of **Jet™ Epoxy**. (Use equal amount of each part and mix with a stick in a plastic or paper cup, or on a sheet of waxed paper.)



- Spread epoxy on the three joiners strips and laminate them to form a single piece.
- Put additional epoxy in the joiner pockets and in the dowel hole and spread a thin layer of epoxy along one side of the entire center joint area. **Immediately proceed to the next step.**
- 4.  Working rapidly, so that the epoxy does not set before you are finished, slide the laminated wing joiner into one wing pocket.
- Slide the dowel into the dowel hole. Then slide the wing halves together until they are touching.

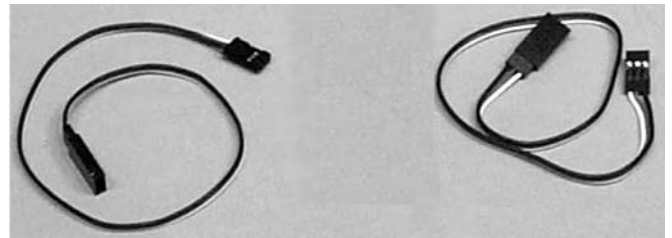


- 5.  With masking tape, tape the wing halves together at the trailing edge and close to the leading edge, as shown. This will help keep the wing from twisting.
- Place additional tape at several locations across the center seam of the wing, so that the halves stay firmly together while the epoxy sets.

**NOTE:** When one wing half is flat on the table, the wing dihedral will force the other side of the wing up about 2-1/4" off the table. Place a book under the high side to support the wing and keep the halves in proper position. **Caution: Do not distort the wing**

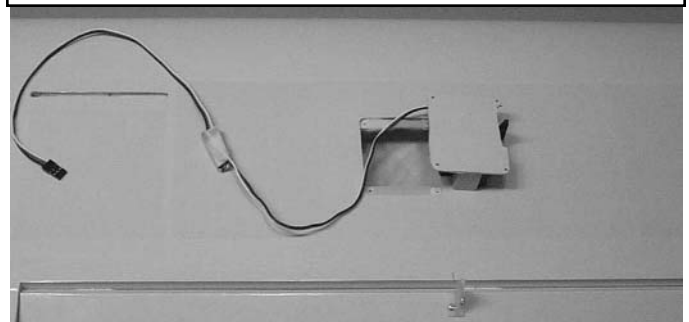
**by blocking it too high or too low, and do not touch the assembly until the epoxy dries.**

## SERVO EXTENSION INSTALLATION

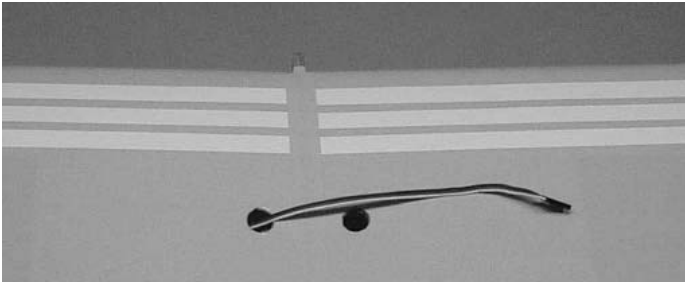


1.  Gather the following items:
  - (2) 6" Extension wires
  - (1) Wing
2.  Remove the servo door and plug one 6" extension wire into the servo.
  - If the extension is not long enough to reach to the center of the wing, add an additional extension to each extension wire for correct length.

**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.

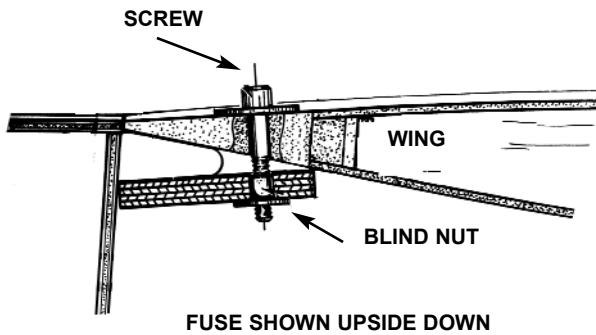


3.  Making sure to use the correct servo for the opening, attach the servo wire to the 6" extension and securely tape the connection.
  - Push the extension wire into the tube in the wing until it comes out hole near the center of the wing.
4.  Grasping the extension in the hole, **SLOWLY** pull until the end of the 6" 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.
  - Screw the servo door into the wing.

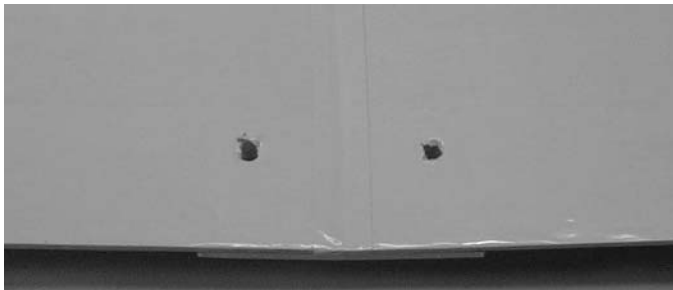


5.  Repeat these steps for the other half of the wing, so that both servo extensions are exiting the holes in the center of the wing.

## WING INSTALLATION ON FUSELAGE

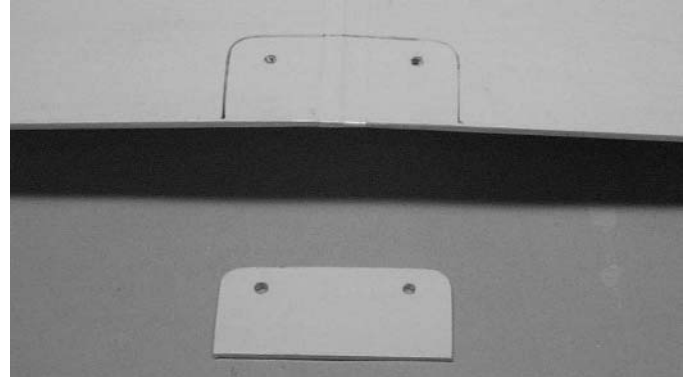


1.  Working with the fuselage upside down, insert a 6-32 blind nut into each hole in the wing mounting blocks, with the teeth pointing upward into the blocks.
  - Temporarily insert a 6-32 x 1" screw into each hole on the other side of the mounting block and draw the blind nut teeth down into the wood.
  - When the blind nuts are firmly seated in the wing mount blocks, remove the screws.

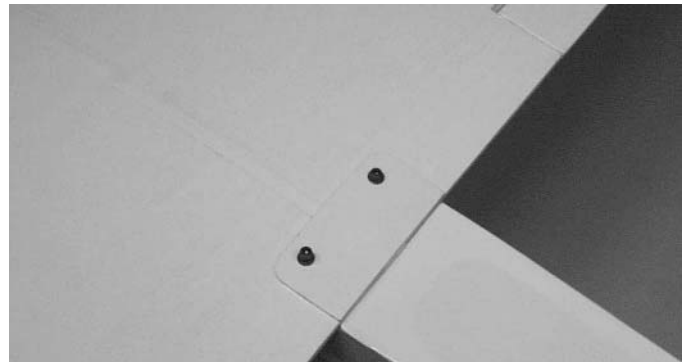


2.  Gently prodding the covering, locate the two holes in the center of the of the wing, close to the trailing edge.
  - Carefully remove the covering **OVER THE HOLES** in the wing bolt plate on both the top and the bottom of the wing.

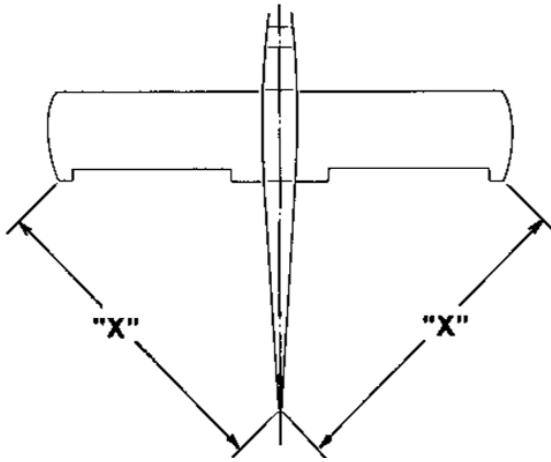
3.  Next, locate the holes in the wing bolt plate and again, remove the covering **over the holes**.



3.  Align the holes between the wing and the plate and trace an outline of the plate on the bottom of the wing.
  - Taking care to work 1/4" inside the outline, remove the covering on the wing in the area where the plate will rest.



4.  Insert the wing into the wing saddle of the fuselage by sliding the tab on the front of the wing into the slot in the former just forward of the wing saddle.
  - Align the holes in the wing bolt plate over the holes in the wing.
  - Insert two #6-32 x 1" socket head screws and the #6 x 3/4" washers through the bolt plate and the wing and then begin to screw into the blind nut in the fuselage. Screw down until the screws are just touching the wing, but are not tight.



5.  Making sure the wing is centered on the fuselage, measure the distance from each wing tip to the aft end of the fuselage.

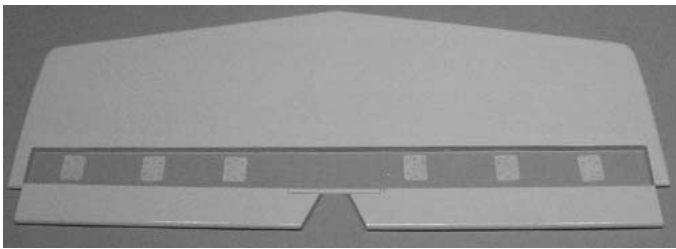
- If the distances are not equal and some adjustment is needed, remove the wing and enlarge the bolt holes **IN THE WING** until the wing can be made perpendicular and correctly aligned.

**CAUTION: Do not enlarge the holes in the wing bolt plate.**

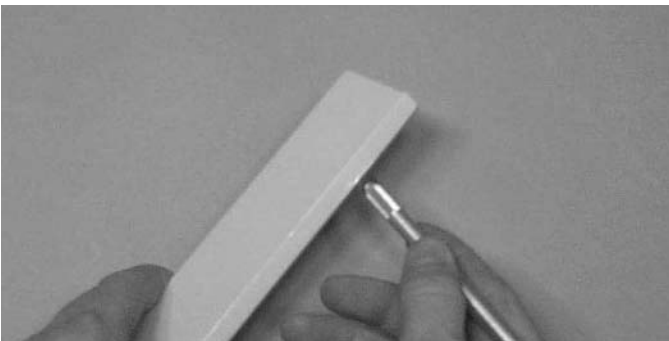
- When the wing is properly aligned, tape it securely, so that it cannot be moved.
6.  Loosen the bolts and, taking care not to get glue on the wing bolts, squeeze a small amount of Super Jet™ under the wing bolt plate. Then tighten the bolts down.

## TAIL ASSEMBLY & INSTALLATION

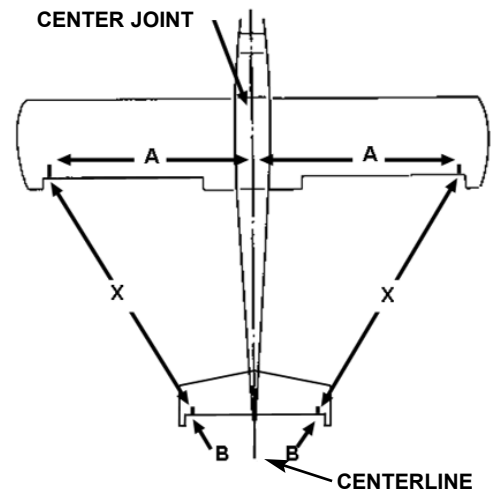
### STAB & ELEVATOR INSTALLATION



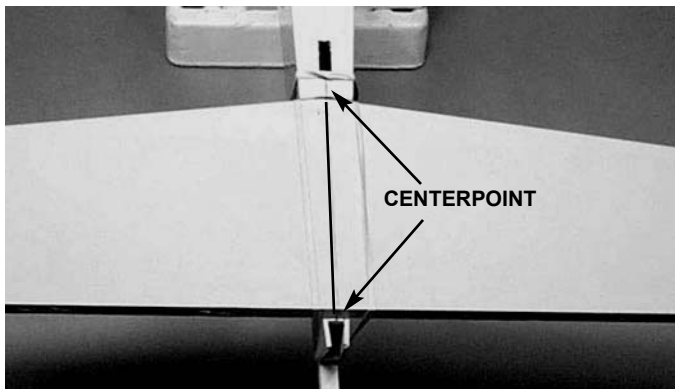
1.  Collect the following parts:
  - (1) Stabilizer
  - (1) Elevator
  - (1) Wing/fuse assembly
  - (6) Jet hinges



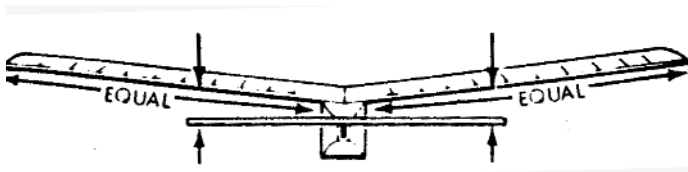
2.  As with the wing and ailerons, use a modeling knife to make sure the hinge slots are cleanly cut.



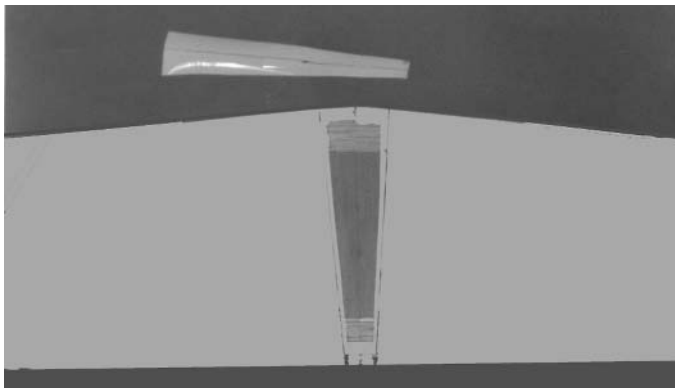
3.  Place a piece of masking tape on each wing tip, just above the aileron hinge line.
  - Measure 29" out from the center joint of the wing and mark the spot on the tape, on both the left and the right side of the wing
4.  Place two strips of masking tape along the edge of the stab, next to the outer stab tips and above the hinge line.
  - Using a T-square, draw a line from the front centerpoint of the stab to the rear hinge line.
  - Measure 10" out ("B") from the centerline and make a mark on the masking tape.
5.  Place masking tape on the top of the fuse, just in front of the stab.
  - Measure and mark the centerpoint on the tape.



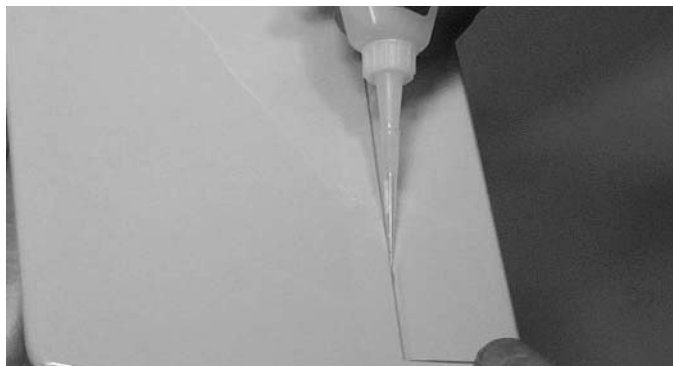
6.  Place the stab on the platform with the center of the stab lined up with the centerpoint on the fuse.
- Measuring from the mark on each wing tip to the mark on the stab tip, make sure the distance "X" on the right side and left side of the plane are equal.



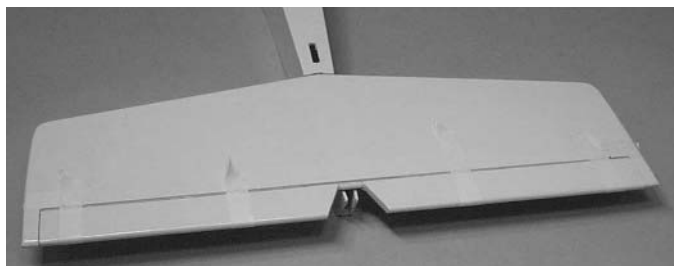
7.  Make sure the stab is level (parallel) with the wing and insert paper strip shims, if necessary.



8.  When satisfied with the alignment of the stab, temporarily tape securely in place.
- Turn over the plane and mark the area on the bottom of the stab where it rests on the fuse.
- Remove the stab from the fuse and, working 1/4" inside the drawn lines, carefully remove the covering from the bottom of the stab. **BE CAREFUL TO AVOID CUTTING THE WOOD**
9.  Spread epoxy on both the bottom of the stab and the stab platform of the fuse.
- Replace the stab on the platform and, after again checking the alignment of the stab to the wing, allow the epoxy to dry thoroughly.



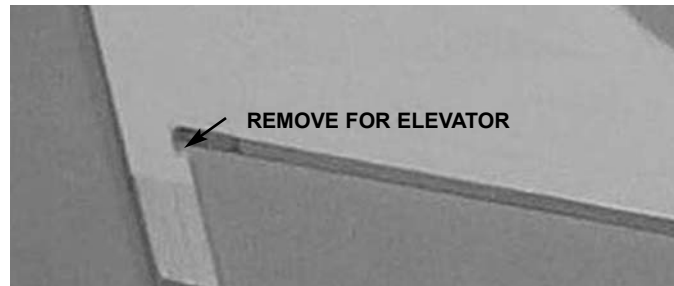
10.  As with the installation of the ailerons, insert a straight pin in the center of each jet hinge.
- Slide the hinges halfway into the elevator and then slide the entire assembly into the hinge slots in the stabilizer.
- Make sure the elevator is centered between the stab tips. If desired, tape the elevator to the stab to keep the pieces together.
11.  Keeping the stab and elevator in position, remove the pins and apply 3 or 4 drops of Instant Jet™ to each hinge location.



- Allow the elevator/stab assembly to dry for at least 10 minutes before flexing the elevator.

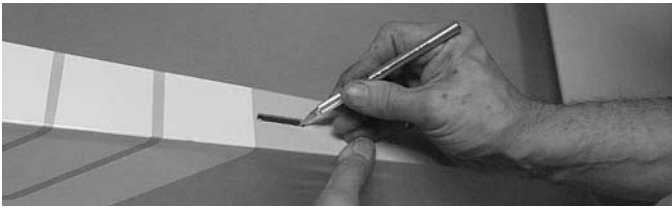
## FIN INSTALLATION

1.  Collect the following items:
  - (1) Fin
  - (1) Control horn
  - (2) #2-56 x 1/2" screw

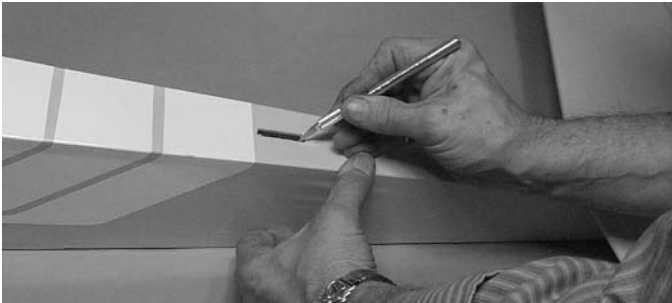


2.  Slide the fin mounting posts into the top of the fuselage.
- Check the fit. The fin should fit easily into each slot and should stand upright by itself. Enlarge the holes, if necessary.
3.  As shown above, remove enough wood on

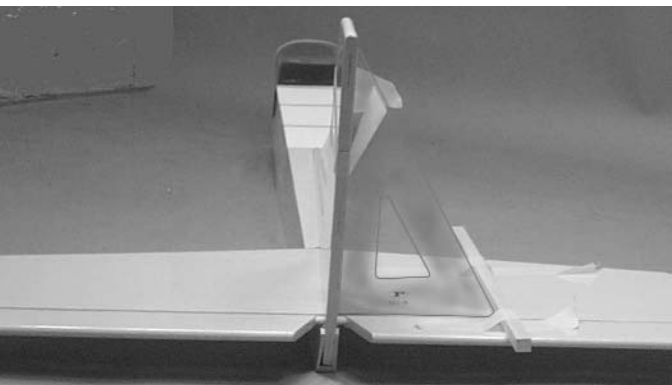
the fin post to allow for the elevator dowel clearance. **Do not remove more than needed for elevator movement, as taking too much will weaken the structure.**



4.  When satisfied with the fit, draw lines on the fuse and stab, on both sides of the fin, showing its location.



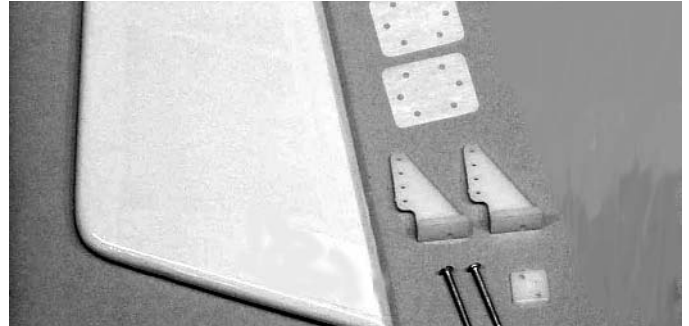
- TAKING CARE NOT TO CUT INTO THE WOOD STRUCTURE UNDERNEATH**, and working inside the drawn lines, carefully remove the covering where the fin mounts on the fuse and stab.



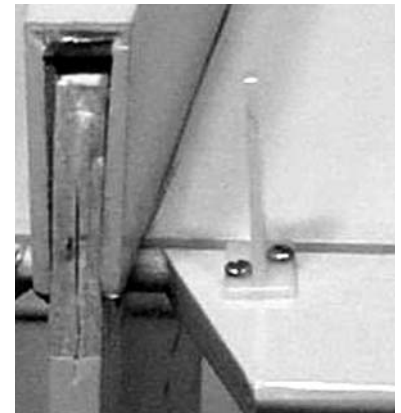
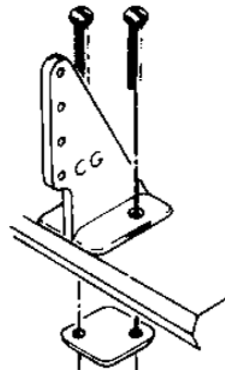
5.  Remount the fin on the fuse and, using a 90° triangle, make sure the fin is perpendicular to the stab.
- When satisfied with the fit, remove fin and mix up a couple of spoonfuls of epoxy.
- Apply a **THIN**, even coat of epoxy on the bottom of the fin and along both sides of the fin mounting posts. Avoid too much glue, which will squeeze out from underneath the fin.
- Mount the fin on the fuse and place the triangle against the fin to make sure it is perpendicular.
- Use masking tape to secure the fin and triangle in position until the epoxy is thoroughly dry. Make sure not to glue the triangle!

## RUDDER & ELEVATOR CONTROL HORN INSTALLATION

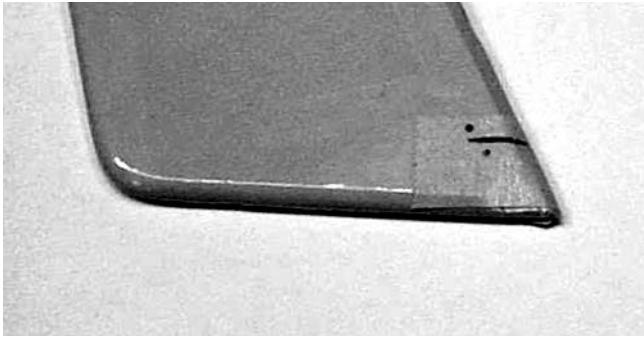
**NOTE:** If you wish to fly your Tiger in the tail-dragger configuration, do not install the rudder control horn according to the directions in this section. Refer to the Tail-Dragger Option section toward the end of the book.



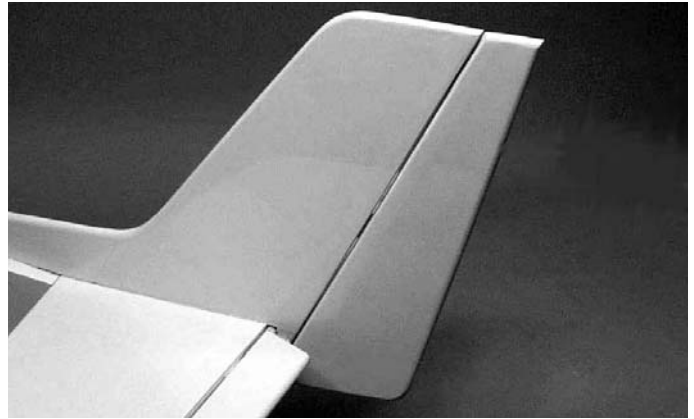
1.  Collect the following items:
- (1) Rudder
  - (1) Elevator
  - (3) Jet hinge
  - (2) Control horn
  - (4) 2-56 x 3/4" machine screw
2.  Measuring from the fuselage side, make a mark on the elevator hinge line 3/4" from the fuse.



3.  Place the center of the control horn on the hinge line and mark the location of the screw holes on the elevator.
- Using a 5/64" drill bit, drill the holes through the elevator.
- Using two 2-56 x 3/4" screws, screw the control horn and the backplate tightly to the elevator.



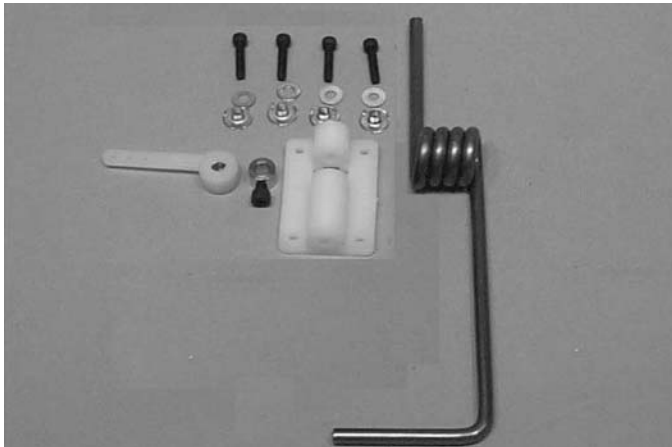
4.  With the rudder sitting on the table top, as shown, mark 5/8" up from the bottom of the rudder.
- As with the elevator, position the control horn and mark the holes.
- Drill the holes for the control horn.
- Again using two machine screws, secure the control horn to the rudder.



5.  Using the three Jet™ hinges, mount the rudder to the fin, just as was done for the elevator and the ailerons.

## OUTFITTING THE FUSELAGE

### NOSE GEAR INSTALLATION

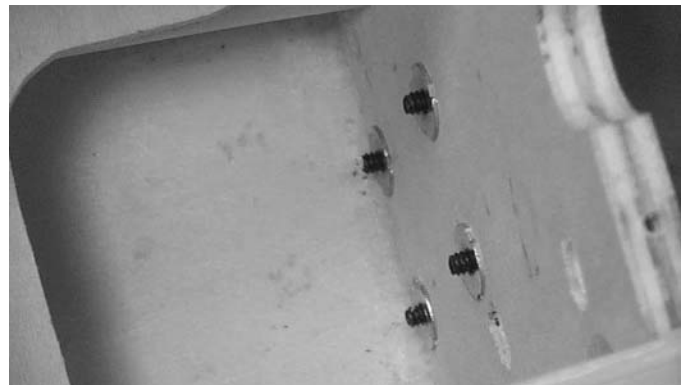


1.  Gather the following items:
  - (4) 4-40 x 1/2" socket head screw
  - (4) #4 washer
  - (4) 4-40 blind nut
  - (1) Nylon nosegear bearing
  - (1) 5/32" wheel collar
  - (1) Nylon steering arm
  - (1) 6-32 x 3/16" socket head screw
  - (1) .062 x 19" wire

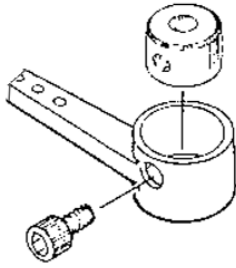
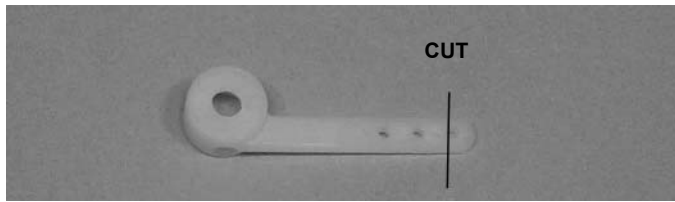
NOTE: The nosegear bearing shown might be different than the one you receive in the kit. You might have to drill new top holes to fit the nose gear block.



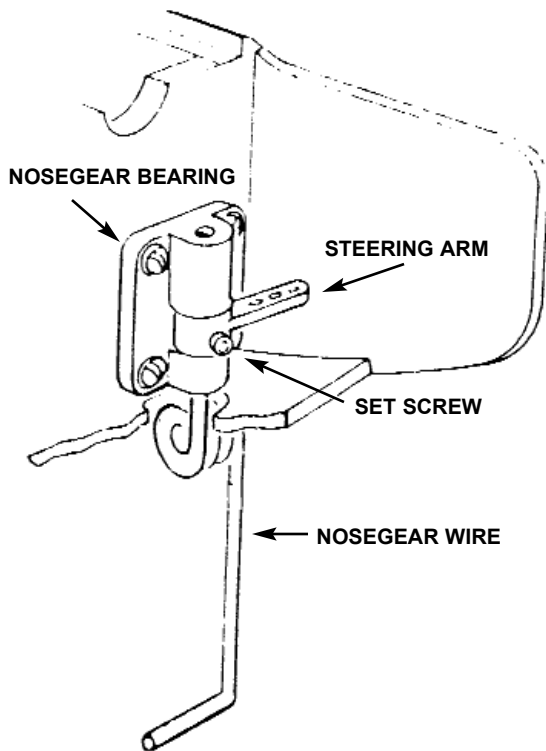
2.  Referring to the above photo, and using the allen wrench supplied with this kit, screw the nosegear bearing to the firewall with the 4-40 x 1/2" screws and the #4 washers. Screw the bolts part way until the ends are just coming through the back side of the firewall.



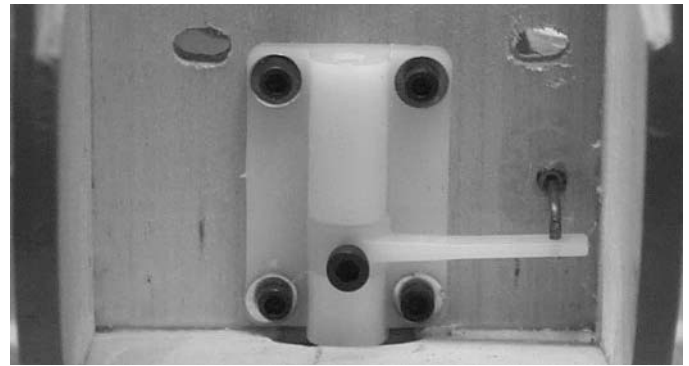
3.  Place the 4-40 blind nuts, with the teeth pointed toward the firewall, on the ends of the screws. Tighten until the blind nut teeth are firmly seated into the wood.



4.  Taking the steering arm, cut off the end of the arm in the middle of the first hole.
  - After making sure the holes are aligned, press the steel collar into the pocket in the steering arm.
  - Thread the 6-32 x 3/16" socket head screw in a few turns until it starts to thread into the steel collar.
5.  Make a 90° bend 1/4" from the end of the .062 x 19" wire.



6.  Place the bent end of the wire onto the outer hole of the steering arm.

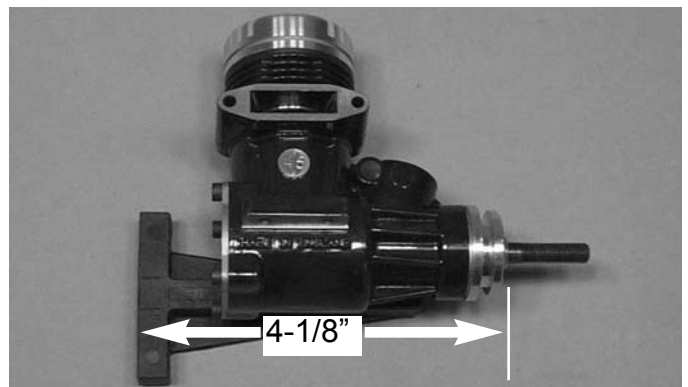


7.  Insert the wire into the hole next to the nosegear bearing, as shown.
  - Slide the nosegear wire up into the nosegear bearing until the spring coil clears the bottom of the fuselage when turning.
  - Tighten the steering arm set screw onto the nosegear wire. This will be adjusted later, when the radio is installed.

## ENGINE INSTALLATION



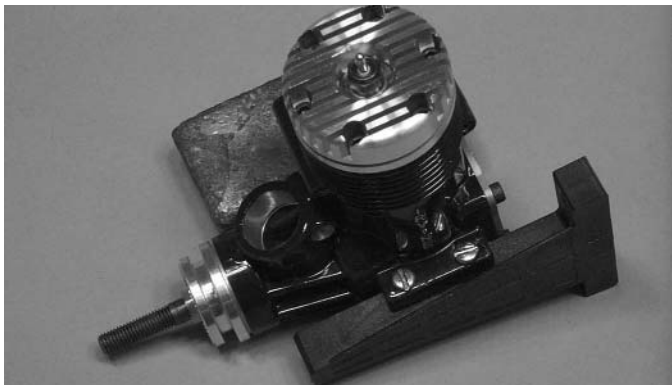
1.  In addition to the engine (Irvine .46 is shown), collect the following items:
  - (2) Motor mount
  - (4) 6-32 blind nut
  - (4) 6-32 x 3/4" socket head bolt
  - (4) #6 x 3/4" sheet metal screw
  - (4) #6 washer



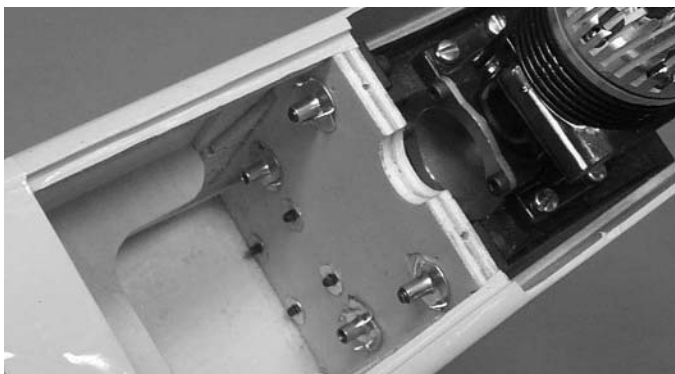
2.  Place the engine on the motor mount, making sure that the propeller drive plate is 4-1/8" away from the firewall.



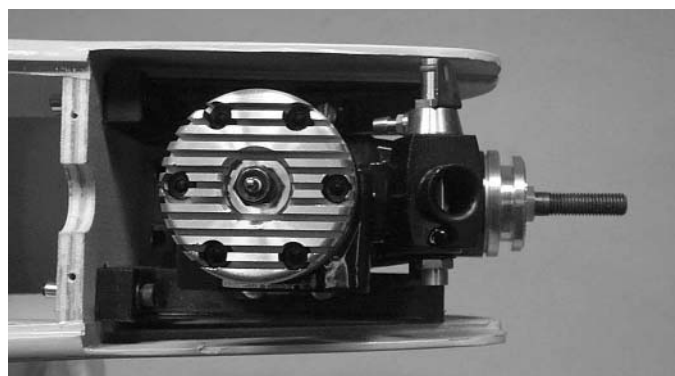
- Drill a 1/8" hole for two #6 x 3/4" sheet metal screws.
- Screw the engine to the motor mount.



- 3.  With the blind nut seated backward (teeth pointing to rear of fuse), bolt the second motor mount to the firewall opposite the side of the mount that is screwed to the engine.



- Again with the blind nut teeth facing the rear, bolt the motor mount and engine to the firewall.



- 4.  Slide the motor mounts around until they are centered on the firewall and are tight to the engine.
- Mark the screw locations for the loose motor mount and drill pilot holes for mounting.
- Use the remaining #6 x 3/4" screws to complete the mounting of the engine to the motor mount

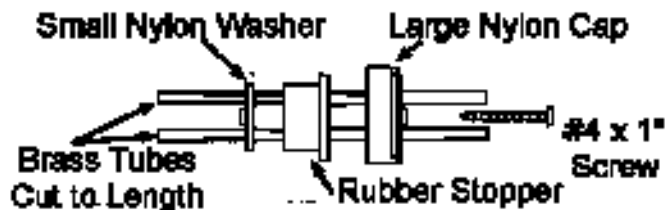
- 5.  Unscrewing one firewall bolt at a time, turn the blind nut around, so that the teeth will stick into the firewall, and retighten the screw until the blind nuts are firmly seated.

## Fuel Tank Installation

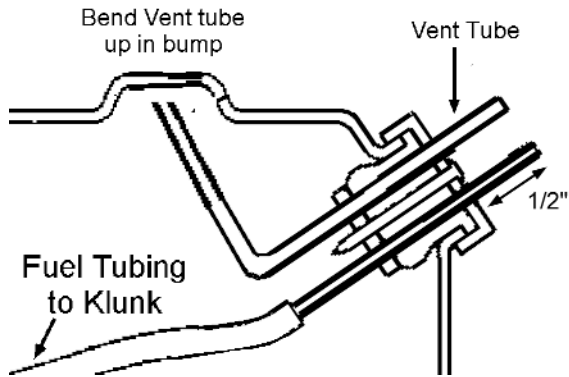


- 1.  Collect the following items:
  - (1) Fuel tank
  - (2) Brass tube
  - (1) Large nylon cap
  - (1) Small nylon washer
  - (1) Rubber stopper
  - (1) #4 x 1" screw
  - (1) Fuel tank klunk
  - (1) 6" length of white fuel tubing

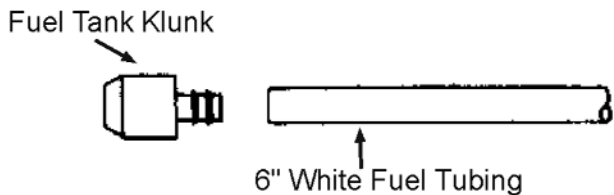
**CAUTION!** The white neprene stopper and the fuel tubing provided with this kit are **FOR GLOW FUEL ONLY**; DO NOT USE THESE PARTS FOR GASOLINE.



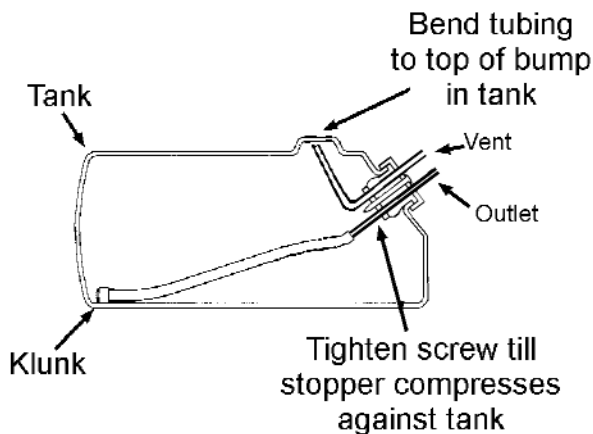
- 2.  Insert both brass tubes through the wide end of the rubber stopper. Leave 1/2" extending out the front of the tank.
- Place the small nylon washer on both tubes, as shown, making sure that one of the tubes extends 1" past the washer. This tube will be for the klunk pickup.
- Cut tube as necessary.



3.  Bend the other tube, at the angle shown, until it nearly reaches to the fuel tank wall. This is the vent/overflow tube.
4.  Insert the stopper assembly into the fuel tank until the vent tube is up inside the "bubble" in the fuel tank wall. Remove the assembly and trim the vent tube, if necessary.



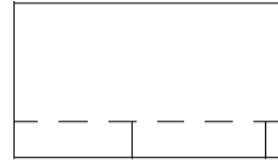
5.  Install the klunk on the white fuel tubing.
- Mount the other end of the fuel tubing onto the brass outlet tube in the stopper.



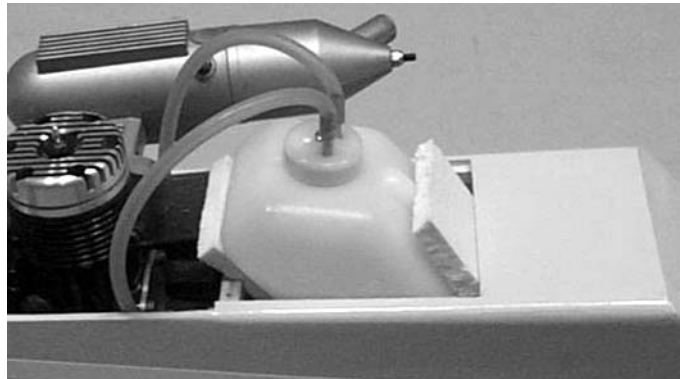
6.  Again place the stopper assembly into the fuel tank. If the klunk is touching the back wall of the tank, trim it as needed.
7.  Place the large nylon cap onto the two brass tubes.
- When satisfied with the fit of the entire stopper assembly, tighten the #4 x 1" screw into the center of the stopper. Take care to not over-tighten the screw.

## FUEL TANK INSTALLATION

1.  Collect the following items:
  - (1) 1/2 x 8 x 12" piece of foam rubber(not included)
  - (1) Assembled fuel tank
  - (1) 12" length of fuel tubing

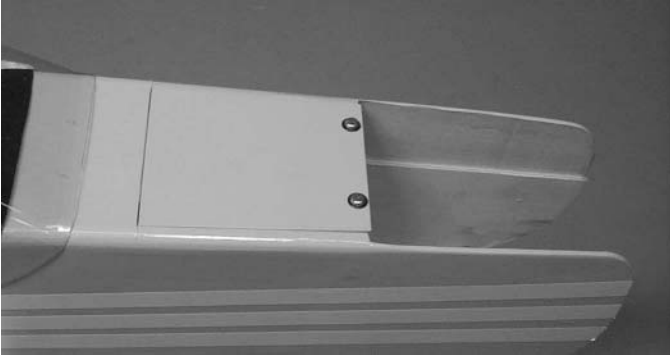


2.  Cut two 3-1/2 x 1-1/2" pieces from the piece of foam rubber.
- From the leftover piece, cut a 2" wide strip.



3.  Put one of the 1-1/2" wide foam pieces in the bottom of the fuel tank compartment in the fuselage.
4.  Taking note of which is the vent side of the tank, attach one end of the 12" length of fuel tubing to the vent outlet.
- Loop the remainder of the fuel tubing into the engine compartment, resting on the half-circle cut-out in the former, and attach the remaining end of the tubing to the other fuel tank outlet.
5.  Place the fuel tank down inside the tank compartment and place the second 1-1/2" piece of foam on top of the tank.
6.  Cut the fuel tubing to reach the engine carburetor and muffler and attach these cut ends to the carb and muffler.

## HATCH INSTALLATION



- Slide the hatch tab into the fuse and over the fuel tank compartment and drill two holes 1/8" back from the edge, as shown.
  - Using the #4 x 3/8" screws and the #4 washers, screw the hatch in place.

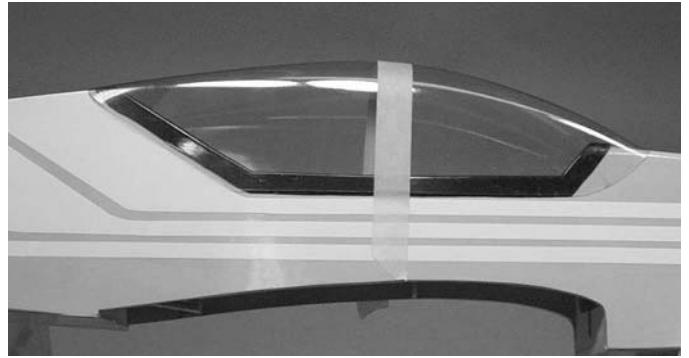
## CANOPY INSTALLATION

- Collect the following items:
  - (1) Cockpit insert
  - (1) Canopy
  - (6) #2 x 3/8" screw
  - (6) #2 washer



- Place the cockpit insert into the cut-out in the fuselage, as shown.
- Install the cockpit decal on the insert before proceeding. Refer to the Decal Installation section later in this book.

**NOTE:** The following pictures show both the cockpit insert and the canopy screwed in place. However, many people prefer securing these items with a canopy glue. Just be sure to select glue which will not cloud the plastic.



- Place the canopy on top of the cockpit insert and tape in place.



- Drill three holes on each side of the the canopy/cockpit insert assembly.
  - Insert a #2 x 3/8" screw with a #2 washer in each hole and secure the canopy and cockpit insert in place.

## PROPELLER & SPINNER INSTALLATION

The propeller size must be matched to the engine. For example, a .35 may use a 9" diameter prop while a .45 can use a 10" prop. Follow the engine manufacturer's recommendation for correct propeller sizes or speak to a knowledgeable dealer. It's wise to buy a few spare props, as everyone breaks them occasionally, and particularly often when learning to fly.

Balancing your propeller helps to protect your radio from the damaging effects of vibration. There are good, easy to use prop balancers on the market. We recommend sanding the heavy blade on the curved face, out near the tip, rather than on the flat face. Try to maintain the normal airfoil curvature. Avoid scratches which may cause the prop to break. **Never carve or cut a prop near the hub for any reason** (such as to fit a spinner).

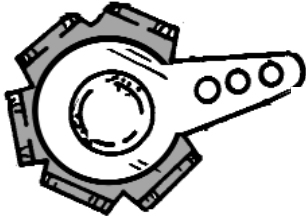
It is equally important to use a correctly sized spinner. The CGM 4-pin spinner supplied with your Tiger 2 ARF is a rugged precision-molded spinner which does not require any special mounting nuts or screws. **CAREFULLY READ THE SPINNER INSTRUCTIONS AND WARNINGS INCLUDED WITH THE SPINNER.** And remember, although a spinner helps reduce the chance of injury from a rotating prop, extreme caution always must be used when the engine is running.

# RADIO INSTALLATION

## SERVO & PUSHROD INSTALLATION

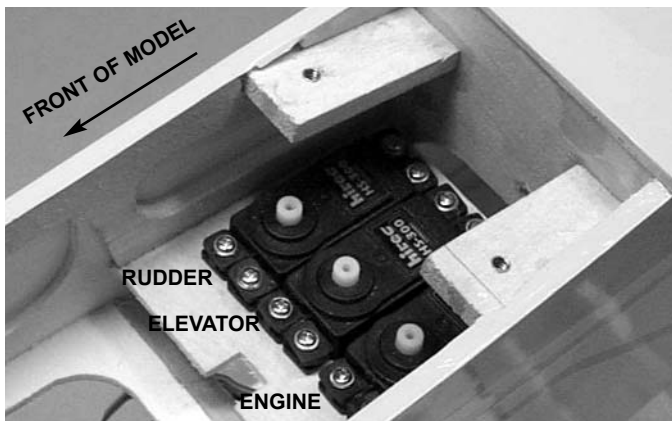
1.  Collect the following items:

- (2) .072 x 28" threaded wire
- (1) .062 x 19" wire
- (2) Pushrod connector body
- (6) Snap nut
- (2) Snap-r-keeper
- (3) Radio servo with mounting hardware
- (2) Snap link
- (2) 4-40 x 1/4" socket head screw

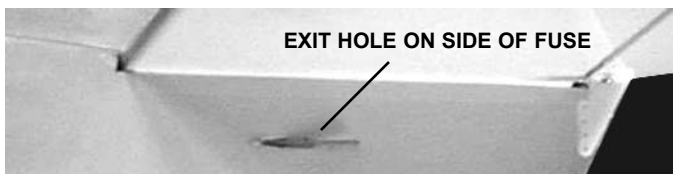


Remove all of the gray colored areas

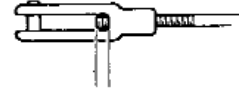
2.  Remove all but one of the servo arms, so that they look like the above drawing. You will need three of these.



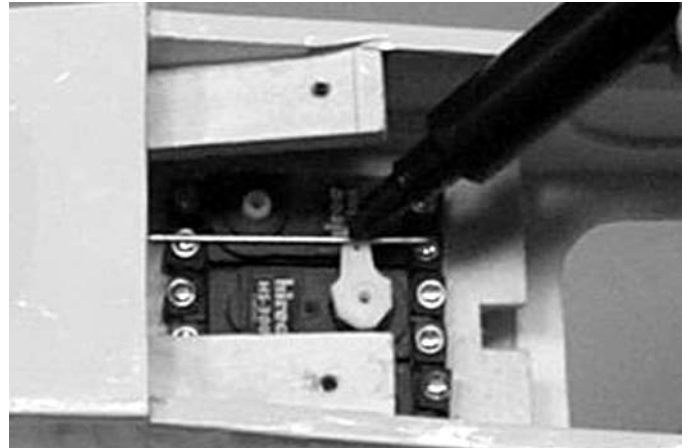
3.  Using the screws that came with the radio, install the three servos, as shown. The elevator servo goes in the middle.
4.  Insert the threaded end of one of the 28" wires into the hole in former just behind the center servo.



- Locate the exit hole on the rear fuselage side and remove the covering from over the hole.
- Push the wire through the fuse until it exits at the rear hole.



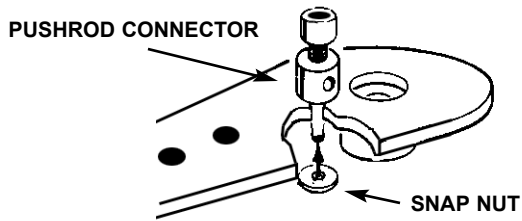
5.  Thread a snap link onto the threaded end of the wire exiting the rear of the model, as shown above.
- Attach the snap link to the elevator control horn. Then tape the elevator so that it is in the neutral (level) position.



6.  Place the servo arm onto the center servo, so that the arm is perpendicular to the centerline of the servo and the elevator pushrod wire passes over the top of the servo arm.
- Mark where the wire crosses over the outer hole in the servo arm.
  - Using a long-nose pliers, make a 90° bend upward at the mark.



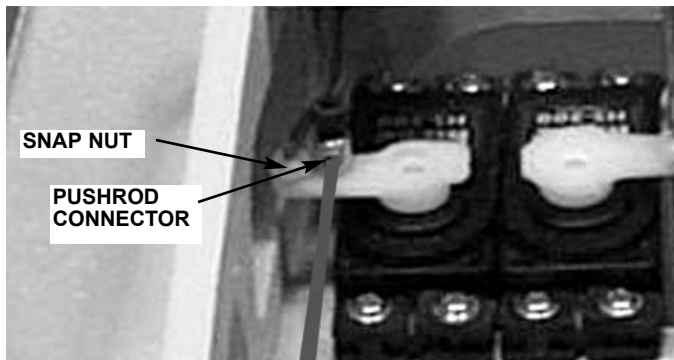
- Insert the wire through the outer servo arm hole and install a snap-r-keeper on the wire.
7.  Insert the threaded end of the second 28" wire into the former hole just behind the rudder servo.
- Again remove the covering over the exit hole, so that the wire exits the fuse.
  - As with the elevator servo pushrod, thread a snap link onto the end of the wire and then attach the snap link to the rudder control horn.
  - With the rudder in neutral position, tape the rudder to the fin.



8.  With the servo arm NOT ATTACHED to the servo, mount a pushrod connector to the hole closest to the center screw hole on the servo arm.

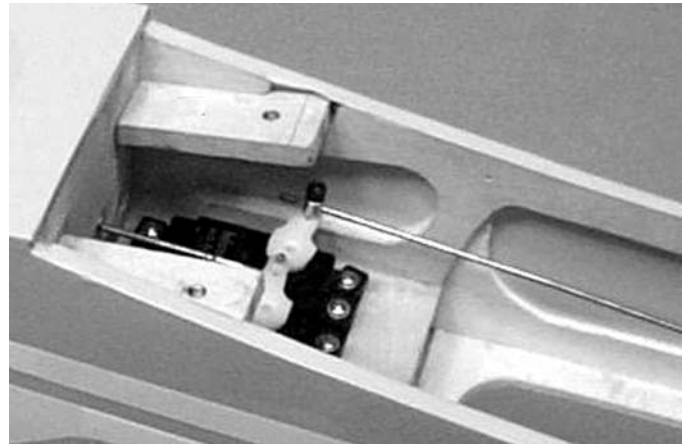


- Insert the nosegear pushrod into the pushrod connector on the rudder servo arm.
  - Place the servo arm onto the rudder servo, with the rudder pushrod passing over the top of the arm.
9.  Making sure the arm is perpendicular to the centerline of the servo, mark where the wire crosses over the outer hole in the servo arm.
- Make a 90° upward bend at the mark in the wire.



- Remove the servo arm and insert the rudder pushrod into the outer hole in servo arm while keeping the nosegear pushrod in the pushrod connector.
10.  Place a snap nut onto the top of the rudder wire and push it down until it touches the servo arm.
11.  Remount the servo arm on the servo, again positioned so it is perpendicular to the servo centerline.

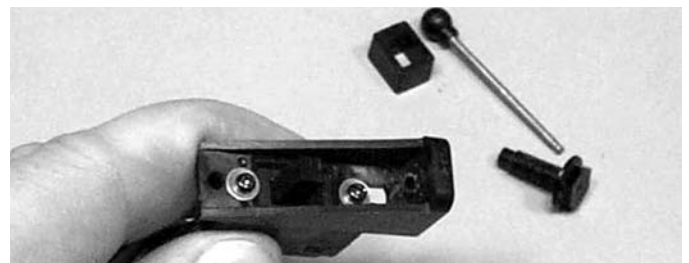
- Making sure that the rudder is in the neutral position and the nose gear is pointing straight ahead, tighten the setscrew on top of the pushrod connector.



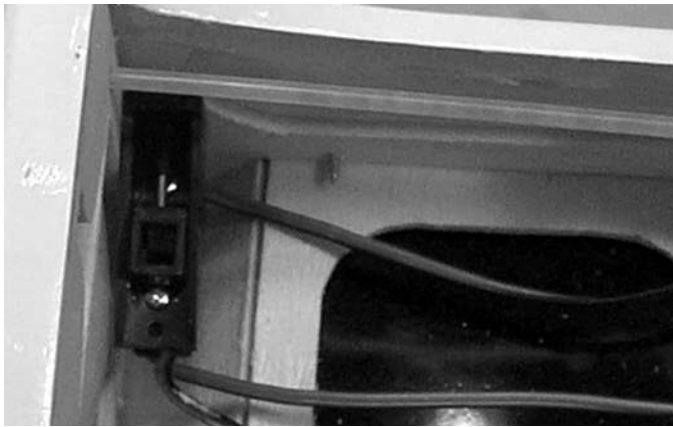
12.  On the 19" wire, make a mark 1/4" from one end.
- Make a 90° bend at the mark.
13.  Insert the wire into the tube that is in front of the firewall and right behind the engine throttle arm.
- Slide the wire into the tube until the bent end can be placed onto the engine throttle arm. Secure the wire with a snap-r-keeper.
14.  Install a pushrod connector on the third servo arm. Insert the throttle wire into the pushrod connector and place the arm on the throttle servo.
- The throttle servo movement will be adjusted after the receiver and battery pack are installed.

## RADIO SWITCH INSTALLATION

Note: The following steps show a optional switch mount system that you can purchase at your local hobby shop. You can also mount the switch though the side of the fuselage.



2.  If your radio has a switch cover, remove both the screw and the cover from the top of the switch.
- Using the screw just removed, as well as the #2 washer, assemble the switch mount as shown.



3.  The switch mount has one slotted hole on one side and two holes on the other side. Mount the switch so that it will move back and forth. It will be possible to feel and hear the click.
- Locate the switch on the left side of the fuse, about 3-3/16" up from the bottom of the fuse and 9-5/16" from the nose of the fuse.

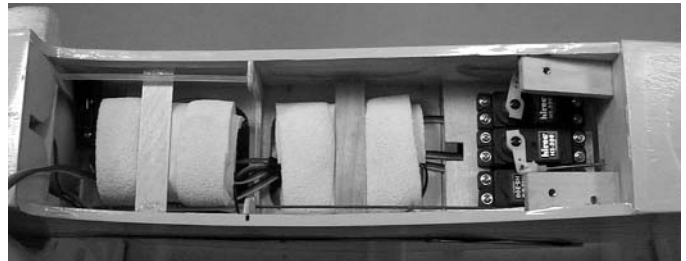


4.  Drill a 1/4" hole and insert the switch mount bolt through the hole.
- Screw it into the switch mount. Then, insert the push-pull and screw it into the switch cap.

## RECEIVER AND BATTERY INSTALLATION



1.  Insert the Y-harness into the the aileron plug in the receiver and then wrap both the receiver and the battery in the 1/2" foam (not included)

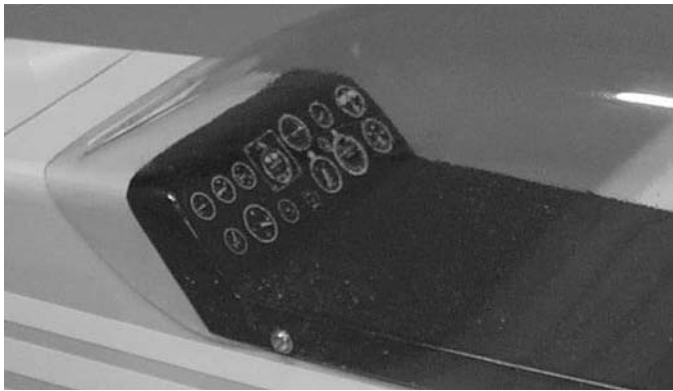


2.  Place the receiver just behind the radio switch and the battery in front of the servos. Plug in all of the servos, keeping both the aileron and the charge cord accessible.
- Glue the two scrap wood pieces to the fuse sides, as shown, to keep the receiver and battery from shifting.

## DECAL APPLICATION



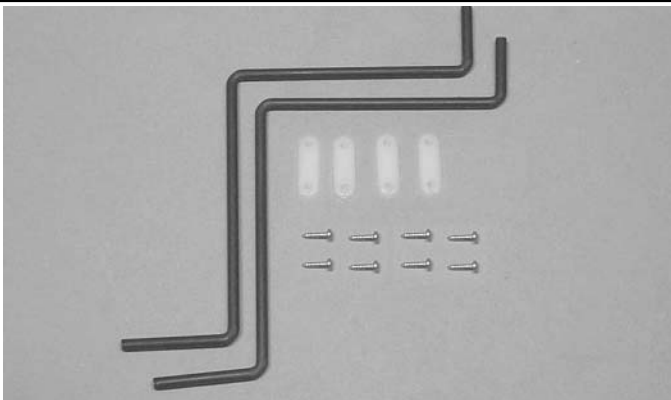
1.  Using glass cleaner and a soft cloth, clean the model surface thoroughly before applying decals.
2.  Cut the decal sheets apart in sections, as needed.
- Fold the decal in half, front to rear. Open at the fold and place the decal on a flat surface. The protective backing will bubble away from the decal at the fold.



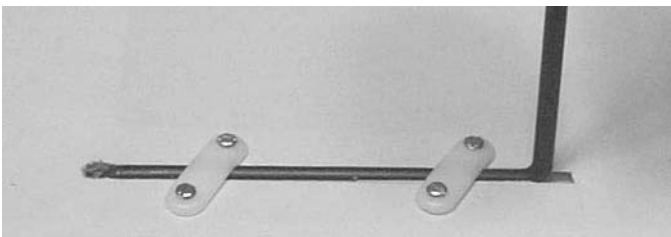
- Using a scissors, cut the backing along the bubble, removing a strip of backing about 1" wide.
- Carefully position the decal on the model and, working from the center, rub the decal down while peeling back the remainder of the backing.

### MAIN GEAR & WHEEL INSTALLATION

**NOTE:** If you desire the taildragger configuration, go to the Landing Gear Installation in the Taildragger Option section.

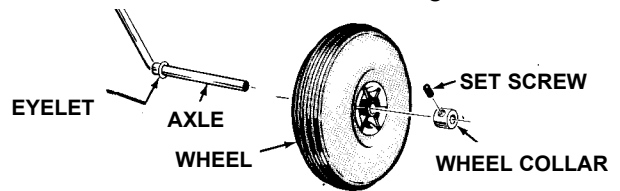


1.  Collect the following items:
  - (2) Landing gear wire
  - (8) 2 x 5/16" screw
  - (4) Landing gear strap
  - (3) 2-1/2" wheel
  - (3) 5/32 wheel collar
  - (3) 6-32 x 1/8" Allen head set screw
  - (3) 5/32 eyelet
  - (1) .050 Allen wrench



2.  Locate the landing gear slots in the bottom of the wing and remove the covering material.

- Insert the shorter end of the gear into the hole in the bottom of the slot, so that it points toward the center of the wing.
3.  Use two nylon straps and four screws on each side to secure the wire gear.

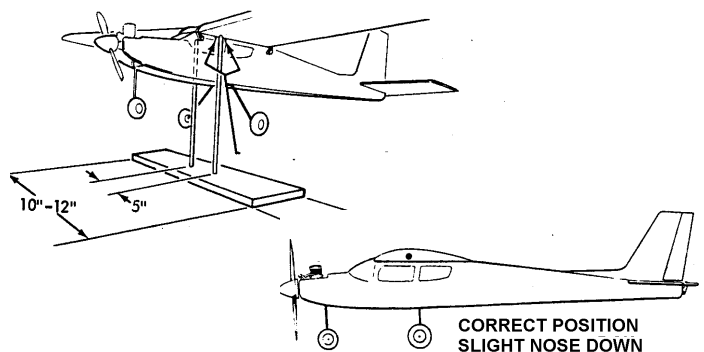


4.  Install the wheels on the axles, as shown. The eyelet goes on first, followed by the wheel, the wheel collar, and the set screw.
  - Glue the eyelet in place with a drop of Super Jet™.
5.  At this time, also install the nosegear wheel.

### BALANCING THE MODEL

**IMPORTANT: NEVER NEGLECT THIS STEP WITH ANY AIRPLANE.** If you try to fly a plane with the balance point behind the recommended range, you run the risk of having an unstable aircraft and the strong likelihood of a crash. **TAKE THE TIME TO PROPERLY BALANCE YOUR MODEL!**

To determine the Center of Gravity, measure back on the fuselage 3-7/8" from the leading edge of the wing. The C.G. range for this aircraft is 3-1/2 to 4-3/8".



Place the fully assembled aircraft on a model balancing stand, as shown above. You can make this simple set-up with a couple of 1/4" dowels with rounded tops, spaced 5" apart. Alternatively, lift the model under the wing near the fuse by your finger tips. (You may wish to get help from a friend if using the latter method.) Referring to the recommended balance range for your model, move the position of the plane on the balance stand until the model is level or the nose slightly down. If the is tail heavy, shift the R/C equipment away from the heavy end of the model and recheck until the model will balance within the acceptable range. If shifting the R/C gear still doesn't balance the model, add weight to the far end of the nose or tail, respectively, until the model is correctly balanced. The least weight is needed when added as far back or forward as possible. Fasten the weight permanently in place.



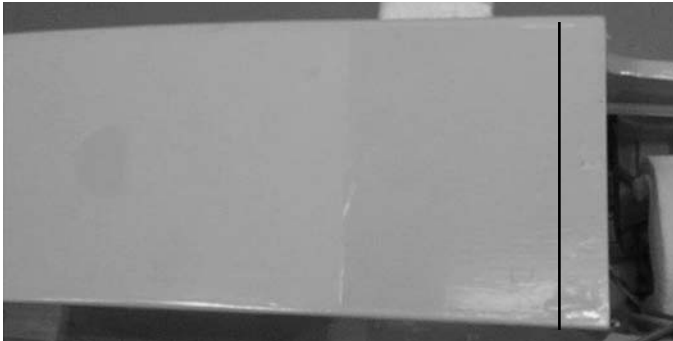
# TAIL-DRAGGER OPTION

**NOTE:** The tail-dragger option is not recommended for novice pilots. It is best to get plenty of practice with a tri-gear before converting your Tiger 2 ARF into a tail-dragger.

## LANDING GEAR INSTALLATION

These items are not included in this kit.

- To configure your Tiger 2 as a tail-dragger, you will need to purchase the following tail dragger conversion kit #5749 from Carl Goldberg Products, Ltd. (1-678-450-0085)
  - (1) main landing gear
  - (4) 6-32 x 1/2" socket head screw
  - (4) #6 washer
  - (4) 6-32 blind nut
  - (1) tailwheel with horn
  - (2) Axle with nut



- Measure 1/2" forward from the radio compartment and draw a line across the fuse.

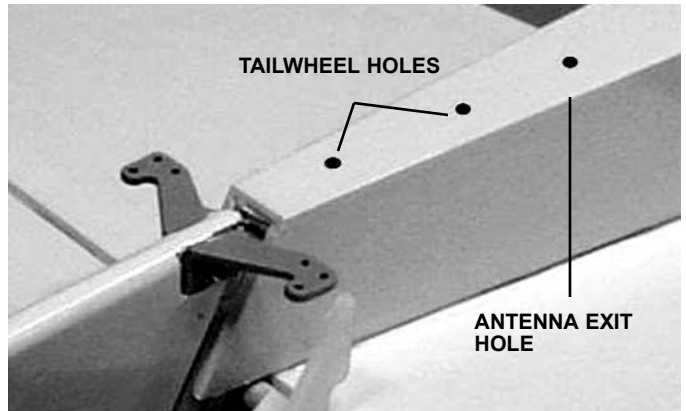


- Center the gear on the fuse, just in front of the drawn line.
  - Mark the location of the mounting holes on the fuse.
  - Using a 5/32" drill bit, drill holes through the fuse at each mark.
- Reach inside the fuse and press a 6-32 blind nut into the landing gear mounting block at each hole location.
  - Insert the 6-32 socket head screws and #6 washers into each hole and tighten down until the blind nuts are firmly seated in the mounting block.

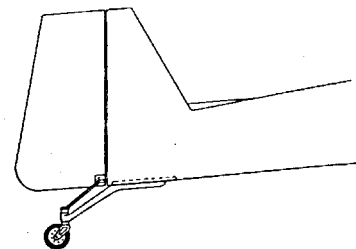


- Temporarily remove the screws and washers and reposition the landing gear on the fuse.
  - Screw the landing gear in place.
- Return to the Main Landing Gear installation earlier in this book and install the wheels.

## TAILWHEEL INSTALLATION



- Install the dual rudder control horn furnished with the tailwheel, as shown. This control horn may be installed either before or after the rudder is mounted on the fin.
- Locate the holes on the bottom rear of the fuse and cut away the covering.



- 4-40 blind nuts have been pre-installed at the factory.
  - Using the 4-40 x 1/2" phillips head screws (supplied with the tailwheel), mount the tailwheel onto the fuselage.
- Install the springs with enough tension to allow the tailwheel to be turned without moving the servo.



# FLYING YOUR TIGER 2 ARF

## GETTING READY TO FLY

Taking time here really pays off later. Rushing the set-up and testing frequently results in a model that never performs up to its full potential and may even lead to a crash.

**CONTROL SURFACE SETTINGS.** For the first few flights, even if you are an experienced flier, it is best to set the control surfaces at the GENTLE (LOW) settings. You can then work your way up to the higher settings. The settings for the Tiger 2 ARF are:

	LOW	HIGH
AILERONS	1/4"	3/8"
ELEVATOR	3/16"	5/16"
RUDDER	9/16"	same

**RADIO CHECK.** Many an experienced flier has rued the day he neglected to check EVERYTHING! After fully charging the batteries, turn on the receiver and transmitter and actuate all controls many times to make sure all responses are correct. Standing behind the model, the right aileron should go up when the stick is moved to the right. Moving the transmitter stick down should move the elevator up, and vice versa. Also check the wheel movement, which should move right with the right rudder movement. Check that the throttle opens to permit full power when the stick is moved up. Practice steering the model on the ground, with the throttle set at minimum, to keep model moving at a walking pace. **Before and after all tests**, make sure all gear is neatly and firmly in place - engine and servos fastened down, receiver and battery wrapped in foam and secured against shifting, propeller tight, and antenna extended.

Prior to the beginning of each day's flying, make a range check of your equipment in accordance with the manufacturer's instructions. With transmitter antenna collapsed to 6-8", you should have at least 100 feet range on the ground. Check this by turning on both the receiver and transmitter and with the model heading away from you, walk away while transmitting signals. Watch to see that no signals are missed until you are at least 100 feet away. **Remember not to use your transmitter when someone else is flying or testing on the same frequency. DO NOT ATTEMPT FLIGHTS UNLESS ALL THE EQUIPMENT WORKS PERFECTLY.**

After everything checks out, check it again! When you are satisfied with the performance of all equipment functions, point your **TIGER'S** nose into the wind and, gradually increasing to full power, take off for a short (2 to 3-minute) first flight.

Before the second flight, take off the wing and check all screws, radio equipment, engine mounting, muffler, etc. to make sure that nothing has come loose.

Spend the following flights getting familiar with your model and making sure it is properly trimmed for straight and level flight. When you feel comfortable with your model, it's time to try aerobatics.

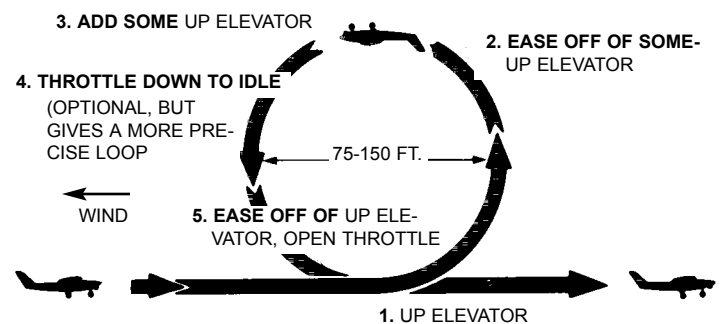
## BEGINNING AEROBATICS

Almost all maneuvers are a combination of loops and rolls, so if you can do these two things, you're off to a good start! We highly recommend the book **Flight Training Course, Volume II**, published by **R/C Modeler Magazine**. Some of the following is taken from this manual, with the gracious permission of the magazine.

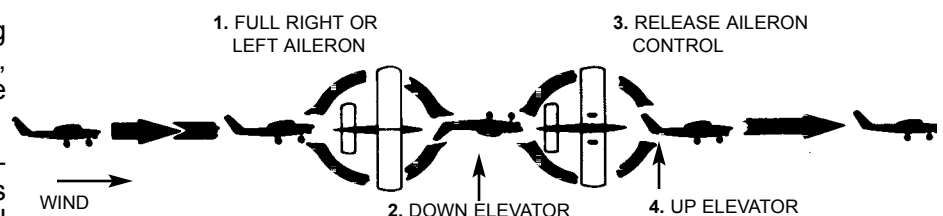
Above all, remember that top gun aerobatics are the result of practice. The crisp, graceful movements come from the pilot's willingness to do and do it again. Don't give up; practice really does make perfect!

*Which side is up?* Learning to recognize which side is up may sound foolish, but many a plane has bitten the dust because the pilot lost track of the plane's position. Other than learning to recognize the plane's silhouette at different angles and attitudes, the best insurance is to force yourself to concentrate on each thing that you do, i.e. making a left turn. If your mind strays and you forget what you're doing, coming back to it can cause a few new grey hairs!

**THE LOOP.** This is a good first stunt. The model starts flying straight and level into the wind, then pulls up into a smooth, round loop. The up and down portion should be straight, without the plane falling off to the right or left, and the speed should be constant. As the plane finishes the loop, it pulls out straight and level, at the same heading and altitude as when it entered the maneuver.



**THE HORIZONTAL ROLL.** *Important! Always remember that, when the plane is inverted, the elevator works backwards.* Therefore, when the plane is inverted, you give **down elevator**. Also, be sure to fly high enough to give a good margin for error, as your early attempts will probably end up in a 30° dive. We also recommend you practice with the plane in front of you, rather than overhead.



Good luck and happy flying!