EP FALCON™ ARF

CARL GOLDBERG CLASSICS by Great Planes®

INSTRUCTION MANUAL

SPECIFICATIONS

Wingspan:	37 in [940 mm]	**Weight:**	8.5–10 oz [240–285 g]	**Length:**	30 in [760 mm]
				Radio:	4-channel, 3 micro servos
Wing Area:	286 in² [18.4 dm²]	**Wing Loading:**	4.3–5.0 oz/ft² [13–15 g/dm²]	**Motor:**	RimFire™ 250 outrunner brushless motor

WARRANTY

Great Planes® Model Manufacturing Co. guarantees this kit to be free from defects in both material and workmanship at the date of purchase. This warranty does not cover any component parts damaged by use or modification. **In no case shall Great Planes' liability exceed the original cost of the purchased kit.** Further, Great Planes reserves the right to change or modify this warranty without notice.

In that Great Planes has no control over the final assembly or material used for final assembly, no liability shall be assumed nor accepted for any damage resulting from the use by the user of the final user-assembled product. By the act of using the user-assembled product, the user accepts all resulting liability.

If the buyer is not prepared to accept the liability associated with the use of this product, the buyer is advised to return this kit immediately in new and unused condition to the place of purchase.

To make a warranty claim send the defective part or item to Hobby Services at the address below:

Hobby Services
3002 N. Apollo Dr. Suite 1
Champaign IL 61822 USA

Include a letter stating your name, return shipping address, as much contact information as possible (daytime telephone number, fax number, e-mail address), a detailed description of the problem and a photocopy of the purchase receipt. Upon receipt of the package the problem will be evaluated as quickly as possible.

READ THROUGH THIS MANUAL BEFORE STARTING CONSTRUCTION. IT CONTAINS IMPORTANT INSTRUCTIONS AND WARNINGS CONCERNING THE ASSEMBLY AND USE OF THIS MODEL.

GREAT PLANES®
MODEL MANUFACTURING COMPANY

Champaign, Illinois
(217) 398-8970, Ext 5
airsupport@greatplanes.com
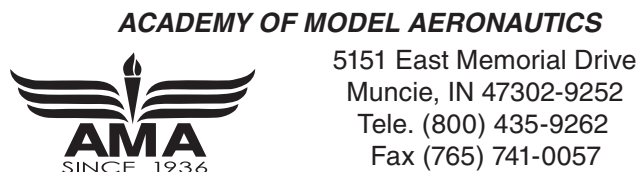
INTRODUCTION

INTRODUCTION

Thank you for purchasing the Carl Goldberg Classics EP Falcon ARF. Anyone who remembers the Carl Goldberg line will have fond memories of the Falcon series—many of you have probably built a Falcon as a young modeler. For those of you who do not know of the Falcon, hopefully you will experience the same enjoyment as many others before you. Even without the nostalgia the Falcon stands on its own! Interestingly, this new EP Falcon is basically the same size as the original JR. Falcon.

The EP Falcon was originally intended for indoor flight, but we found that in the right conditions (low winds) the Falcon is just as much fun outdoors! And the steerable nose wheel adds even more to the fun and practicality.

For the latest technical updates or manual corrections to the EP Falcon visit the Great Planes web site at ***www.greatplanes. com***. Open the "Airplanes" link, then select the Carl Goldberg Classics EP Falcon. If there is new technical information or changes to this model a "tech notice" box will appear in the upper left corner of the page.

AMA

If you are not already a member of the AMA, please join! The AMA is the governing body of model aviation and membership provides liability insurance coverage, protects modelers' rights and interests and is required to fly at most R/C sites.

ACADEMY OF MODEL AERONAUTICS

5151 East Memorial Drive
Muncie, IN 47302-9252
Tele. (800) 435-9262
Fax (765) 741-0057

Or via the Internet at:
http://www.modelaircraft.org
http://www.modelaircraft.org/parkflyer.aspx

IMPORTANT!!! Two of the most important things you can do to preserve the radio controlled aircraft hobby are to avoid flying near full-scale aircraft and avoid flying near or over groups of people.

SAFETY PRECAUTIONS

**Protect Your Model, Yourself & Others …
Follow These Important Safety Precautions**

1. Your EP Falcon should not be considered a toy, but rather a sophisticated, working model that functions very much like a full-size airplane. Because of its performance capabilities, the Falcon, if not assembled and operated correctly, could possibly cause injury to yourself or spectators and damage to property.

2. You must assemble the model **according to the instructions**. Do not alter or modify the model, as doing so may result in an unsafe or unflyable model. In a few cases the instructions may differ slightly from the photos. In those instances the written instructions should be considered as correct.

3. You must take time to **build straight, true** and **strong**.

4. You must use an R/C radio system that is in good condition, a correctly sized engine, and other components as specified in this instruction manual. All components must be correctly installed so that the model operates correctly on the ground and in the air. You must check the operation of the model and all components before **every** flight.

5. If you are not an experienced pilot or have not flown this type of model before, we recommend that you get the assistance of an experienced pilot in your R/C club for your first flights. If you're not a member of a club, your local hobby shop has information about clubs in your area whose membership includes experienced pilots.

6. While this kit has been flight tested to exceed normal use, if the plane will be used for extremely high stress flying, such as aggressive aerobatics, or if a motor larger than one in the recommended range is used, the modeler is responsible for taking steps to reinforce the high stress points and/or substituting hardware more suitable for the increased stress.

We, as the kit manufacturer, provide you with a top quality, thoroughly tested kit and instructions, but ultimately the quality and flyability of your finished model depends on how you build it; therefore, we cannot in any way guarantee the performance of your completed model, and no representations are expressed or implied as to the performance or safety of your completed model.

Remember: Take your time and follow the instructions to end up with a well-built model that is straight and true.

ADDITIONAL ITEMS REQUIRED

This is a partial list of items required to finish the EP Falcon that are illustrated in the instruction manual. Order numbers are provided in parentheses.

Radio Equipment

❍ 4-channel radio control system
❍ Three micro servos such as ElectriFly® ES40 Pico servos (GPMM1200)
❍ Mini/micro receiver (Futaba® R6004FF – FUTL7624)
❍ Futaba AEC-27 J-series servo extension (for aileron servo—FUTM3909)

Motor, Battery, ESC

❍ Great Planes RimFire™ 250 Outrunner motor (GPMG4502)
❍ Great Planes ElectriFly 2S (7.4V) 300mAh 20C Competition BP LiPo battery (GPMP0700)
❍ Great Planes ElectriFly SS-8 8 Amp Brushless ESC (electronic speed control) (GPMM1800)
❍ APC 8 x 3.8 Slo-Flyer electric propeller (APCQ5000) (At least one spare propeller in your flight box is also recommended.)

It is also highly recommended that you stock up on spare propeller saver O-rings (GPMG1405).

Battery Charging Equipment

A LiPo-capable battery charger and a power source for the battery charger is required. Virtually all suitable battery chargers can be powered by a 12V battery, but it is more convenient to use a charger that can be connected *either* to a 12V battery (for charging at the flying field) *or* to a 110V wall outlet (for charging at home). One suitable LiPo charger is the Great Planes ElectriFly Triton EQ™ AC/DC Charger (GPMM3155). And in addition to its LiPo capability, the Triton EQ also features one more critical component, which is a built-in LiPo cell balancer. For the best LiPo performance, longevity and safety, a LiPo cell balancer **must** be used so each individual cell in the LiPo battery can be charged evenly.

Another suitable LiPo battery charger is the Great Planes PolyCharge4™ DC LiPo charger (GPMM3015). The advantage of the PolyCharge4 is that it can charge up to four LiPo batteries at the same time. But unlike the Triton EQ, the PolyCharge4 *does not* have an internal LiPo cell balancer, so for each LiPo battery you wish to charge simultaneously (up to 4), one Great Planes Equinox™ LiPo Cell Balancer (GPMM3160) will be required. Finally, the PolyCharge4 does not have AC capability, so if wall-charging from home is a priority a separate A/C 12-Volt power source must be purchased separately. A suitable power supply then for the PolyCharge4 is the Great Planes 12V 12A DC power supply (GPMP0901).

Adhesives and Building Supplies

Other than common hobby tools, this is the list of Adhesives and Building Supplies that were used to finish the EP Falcon.

❍ Thin, foam-safe CA (HOTR1040)
❍ CA applicator tips (GPMR6033)
❍ CA accelerator (GPMR6035)
❍ Great Planes Pro™ Threadlocker (GPMR6060)
❍ **Optional:** Clear or white RTV silicone adhesive or J&Z R/C 56 Canopy Glue (JOZR5007)

KIT INSPECTION

Carefully remove the major parts from the kit. Take an inventory to make sure it is complete, and inspect the parts to make sure they are of acceptable quality. If any parts are damaged or missing or are not of acceptable quality, or if you need assistance with assembly, contact **Product Support**. When reporting defective or missing parts, use the part names exactly as they are written in the Kit Contents list.
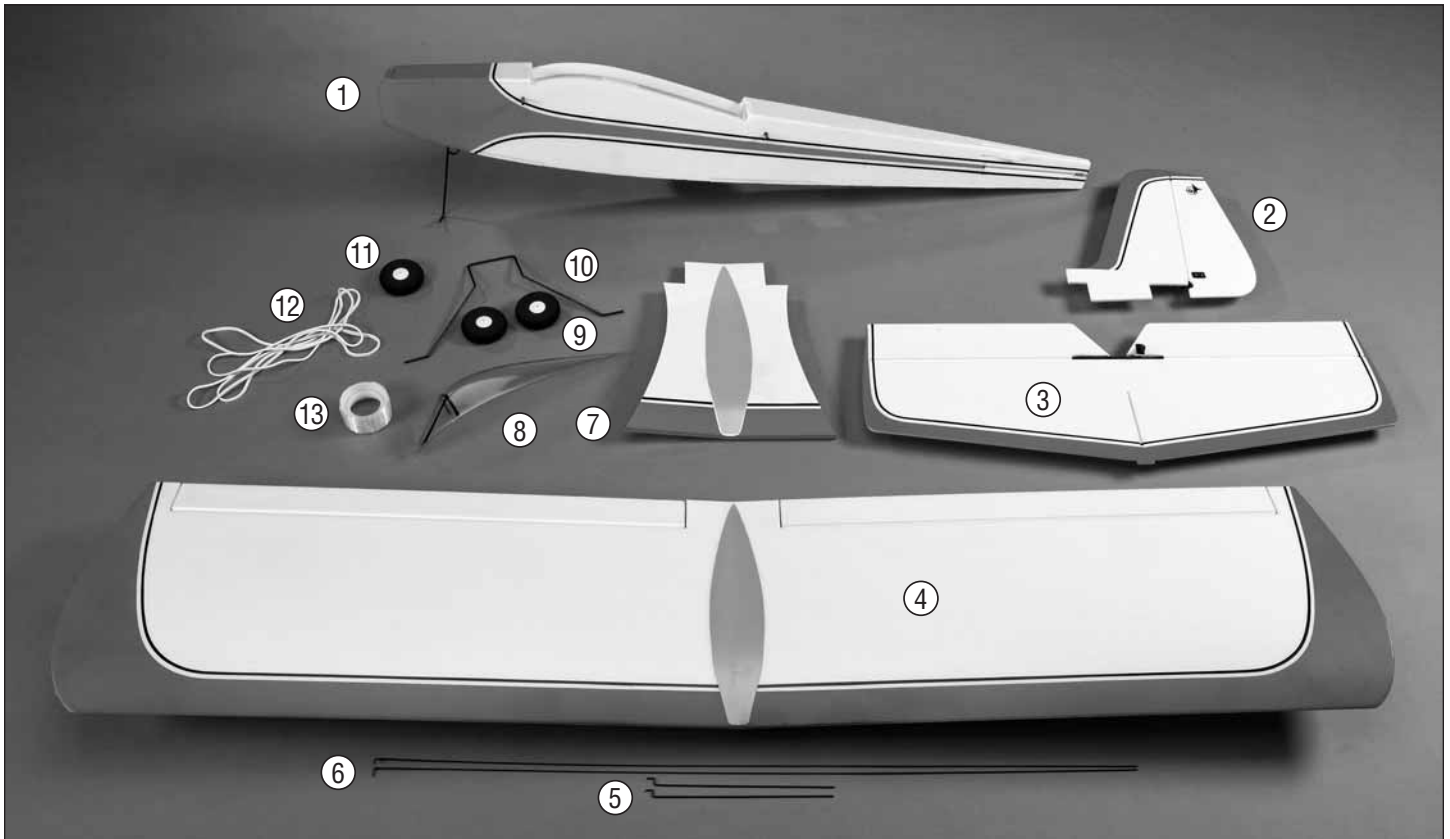
Great Planes Product Support
3002 N Apollo Drive, Suite 1
Champaign, IL 61822

Ph: (217) 398-8970, ext. 5
Fax: (217) 398-7721
E-mail: airsupport@greatplanes.com

1. Fuselage
2. Vertical Stabilizer
3. Horizontal Stabilizer
4. Wing
5. Aileron Pushrods
6. Rudder/Elevator Pushrods
7. Wing Center Doubler

8. Canopy
9. Main Wheels
10. Main Landing Gear
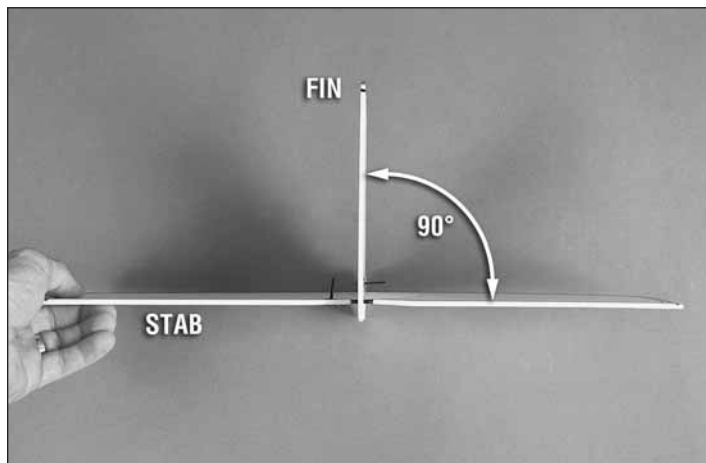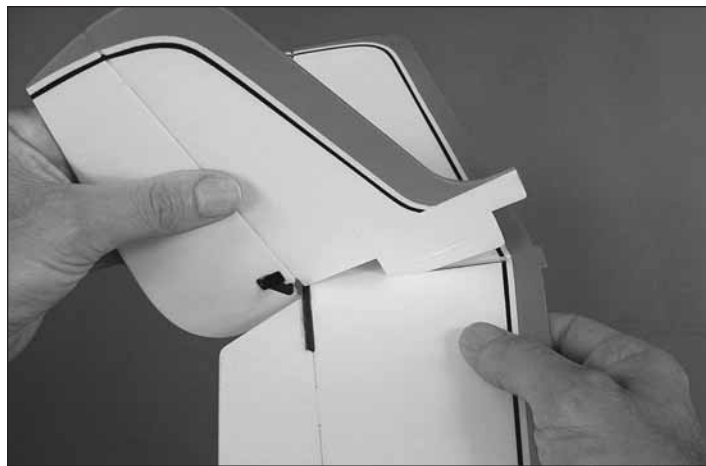11. Nose Wheel
12. Rubber Bands
13. Fiber Reinforcement Tape

Install the Horizontal and Vertical Stabilizer

❏ 1. Carefully flex the elevator up and down several times to loosen the hinge.

CUT OUT
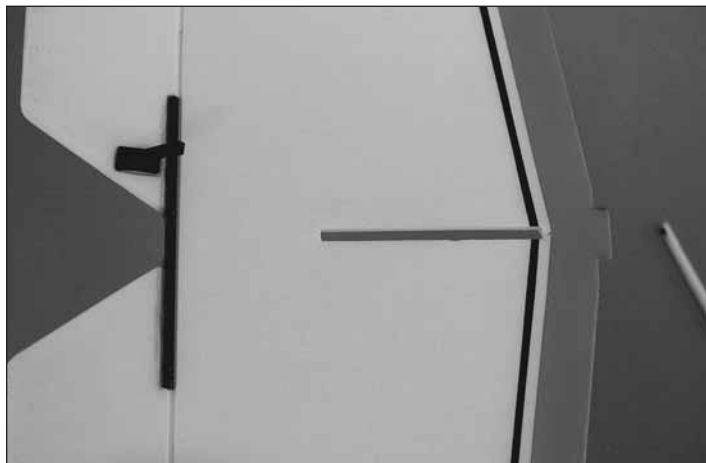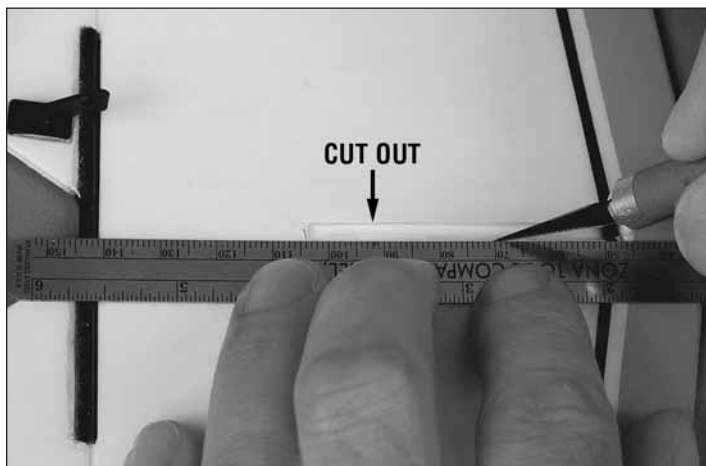
❏ 2. Use a straightedge and a hobby blade to finish cuttting out the slot in the horizontal stabilizer (stab) for the vertical stabilizer (fin).

FIN

90°

STAB

❏ 3. Test fit the fin into the stab. **Lightly** spray the parts where they fit together with a mist of CA accelerator and allow to dry for about 30 seconds to a minute. This "priming" procedure will allow the CA to harden quickly when gluing the parts together. Using a builder's square to make sure the fin and stab are perpendicular, use a **small amount** of thin, foam-safe CA to glue them together—do not saturate the foam or build up large fillets of glue—this could damage the foam and will add unnecessary weight!

CUT

CUT

❏ 4. Cut the *spacers* from the slot on both sides and on the top of the fuselage for the fin and stab.
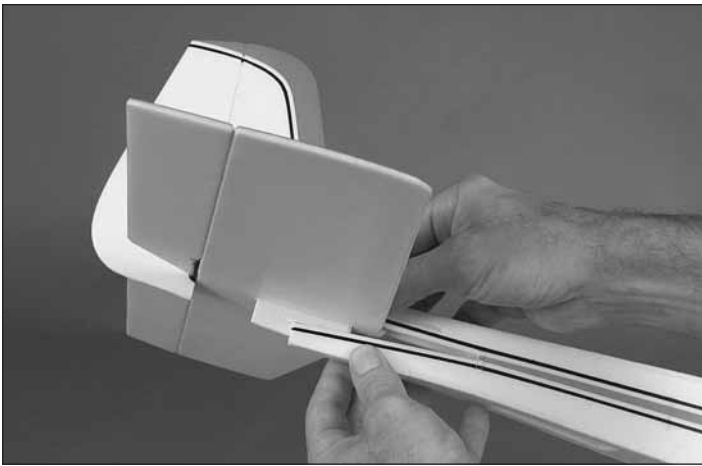
❏ 5. Carfully fit the stab/fin into the fuselage. Make sure the bottom of the fin is fully keyed into the slot in the bottom of the fuselage and that the tab in the front of the stab is keyed into the slot in the former.
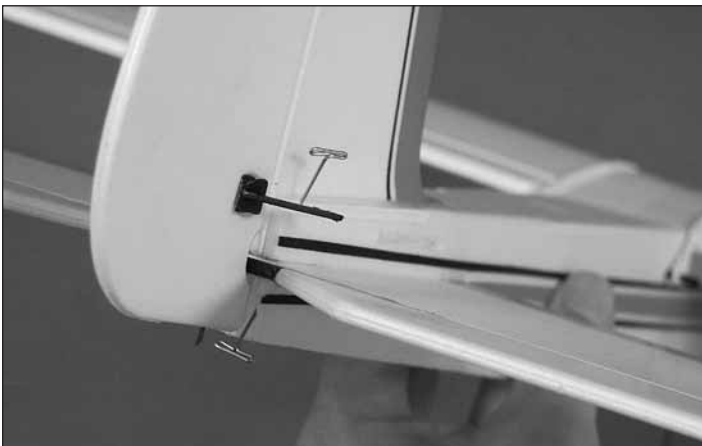

❏ 6. Use small pins to hold the fuselage sides to the fin and stab.
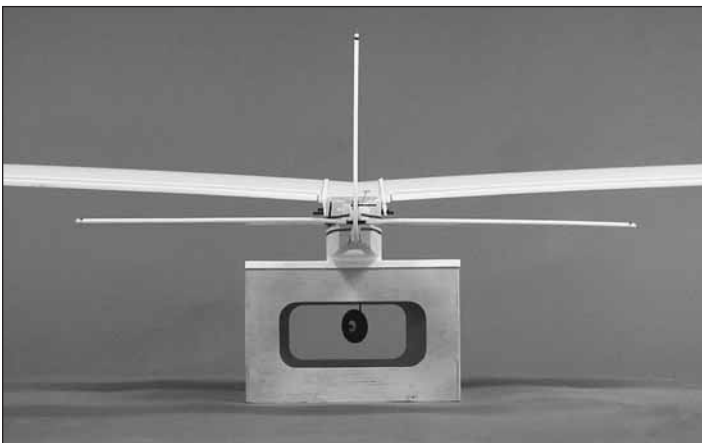
❏ 7. Temporarily mount the wing to the fuselage with a couple of rubber bands. View the plane from behind to make sure the stab is level with the wing. If necessary, add a small amount of weight (1/4 – 1/2 oz.) to the "high side" of the stab to get the alignment.

❏ 8. Using the pins and your fingers to hold the fuselage to the fin and stab, permanently glue the stab/fin into position with thin, foam-safe CA—again, use only a small amount of glue, allowing it to "wick" into the foam along the seam. Remove the pins.
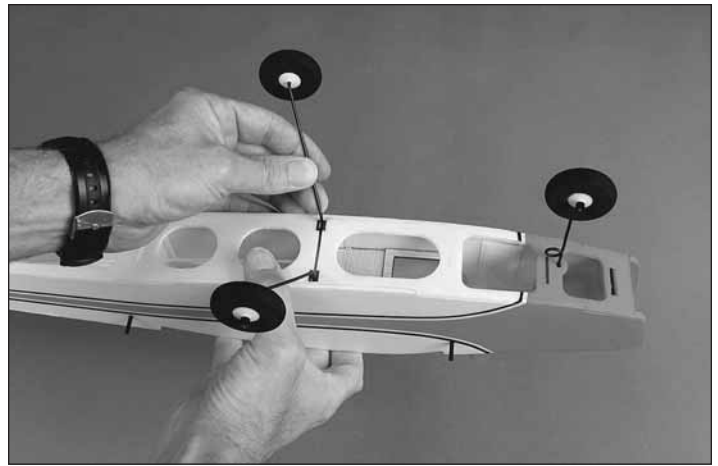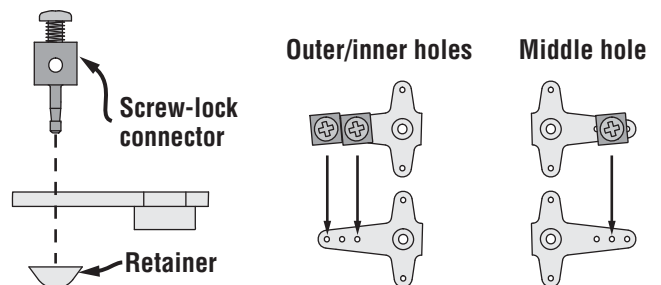

❏ 9. Carefully insert the main landing gear into the fuselage—note that the legs sweep aft.

## Install the Elevator & Rudder Servos

ES40 Pico Servos

Cut
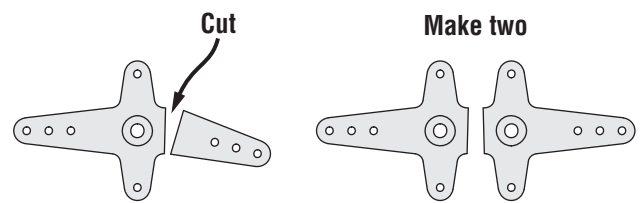
Make two

❏ 1. Make two single-arm servo arms by cutting off one of the longer arms.

Screw-lock connector

Retainer

Outer/inner holes

Middle hole

❏ 2. If necessary, use a #55 (.052" [1.2mm]) drill or a #11 blade to enlarge the holes in the servo arms so the screw-lock connectors will fit. Mount a screw-lock connector to the **outer** and **inner** holes of one servo arm and to the **middle** hole of the other servo arm.

*It will be easier to mount the servo arms to the servos now, before installing the servos in the fuselage.*

❏ 3. Temporarily connect the elevator and rudder servos and your ESC to your receiver. Turn on your transmitter. While the transmitter is on, go ahead and take a second to **reverse** the aileron, elevator and throttle channels.

No   *Yes*
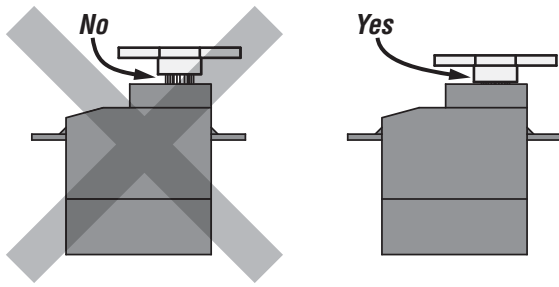
Pressed all the way down
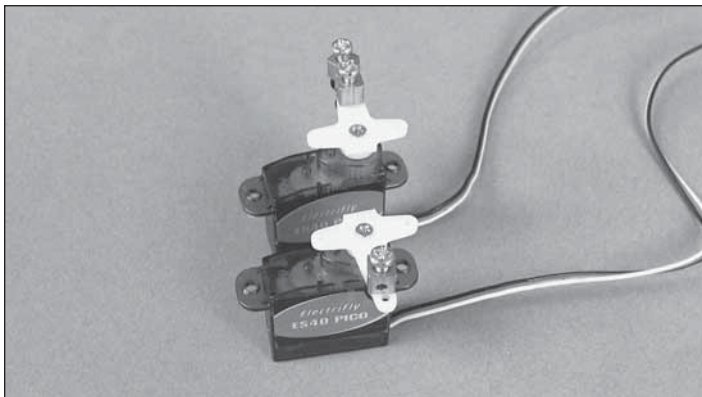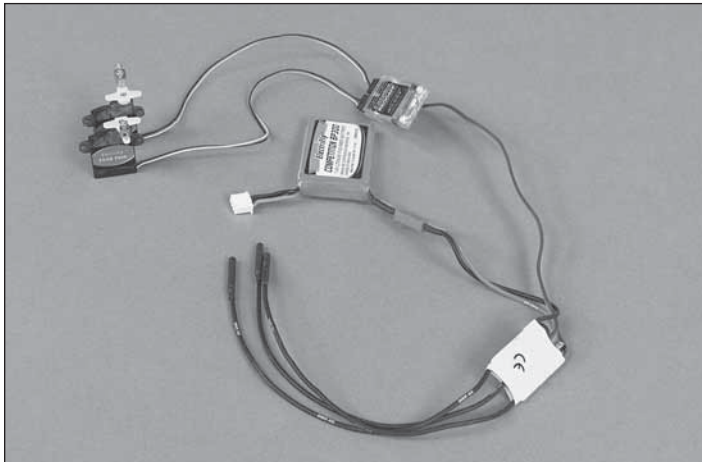
❏ 4. Center the trims and connect a battery to the ESC to power the system up. Mount the servo arms 90°—or as close to 90° as you can get—to the servos and install the servo screws. Be certain the servo arms are all the way down on the toothed output shafts before installing the screws.
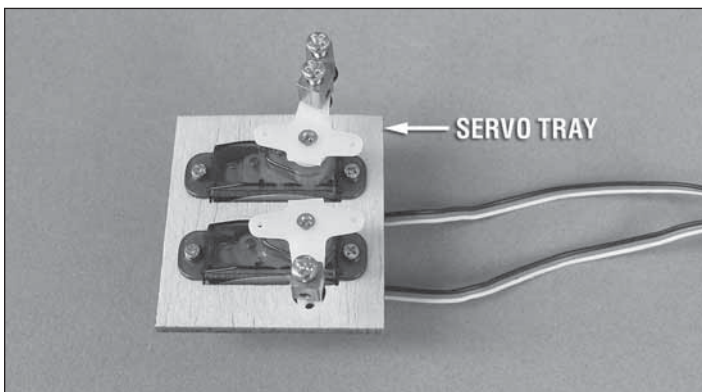
← SERVO TRAY

❏ 5. Disconnect the servos and the ESC from the receiver. Use the tiny wood screws included with this kit or the screws included with your servos to mount the servos to whichever

of the two balsa servo trays fits your servos. Add a small drop of CA to the tips of the screws where they come through the bottom of the servo tray.
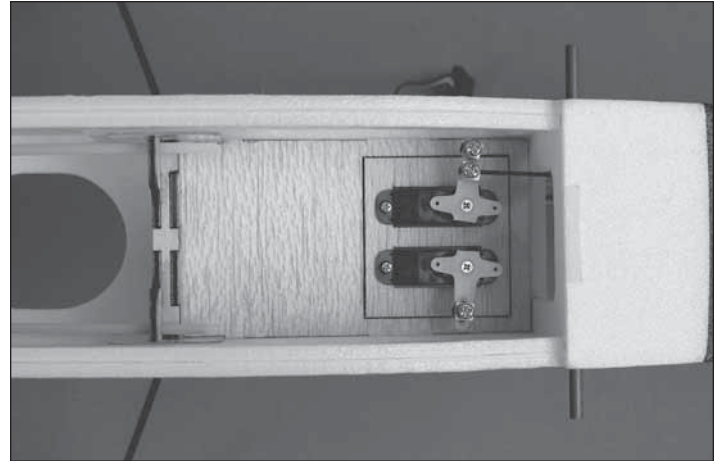
❏ 6. Fit, then glue the servo tray into position—although the parts you are gluing here are balsa and regular CA could be used, foam-safe CA is still recommended.

Mount the Motor

NO!

← Gap

YES!

← No gap
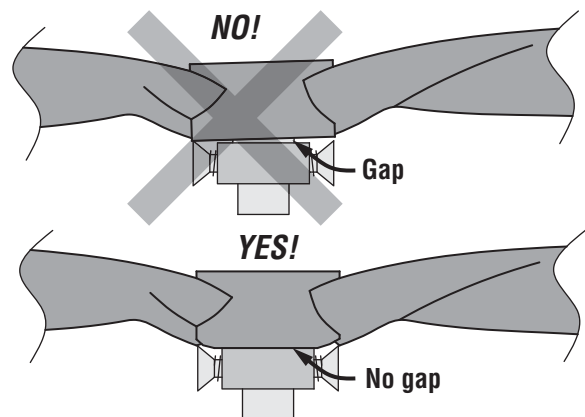
❏ 1. If using the recommended APC 8 x 3.8 Slow-Flyer propeller, install the larger I.D. spacer ring that came with the propeller into the back of the propeller hub. Reinstall the propeller adapter on the RimFire 250 motor so the propeller will mount on the large end of the adapter—don't forget to use a tiny drop of threadlocker on the threads of the adapter screws. **Note:** If the heads of the adapter screws interfere with the base of the propeller hub not allowing the hub to lie flat and square, carefully chamfer the base of the hub just enough to clear the screws.
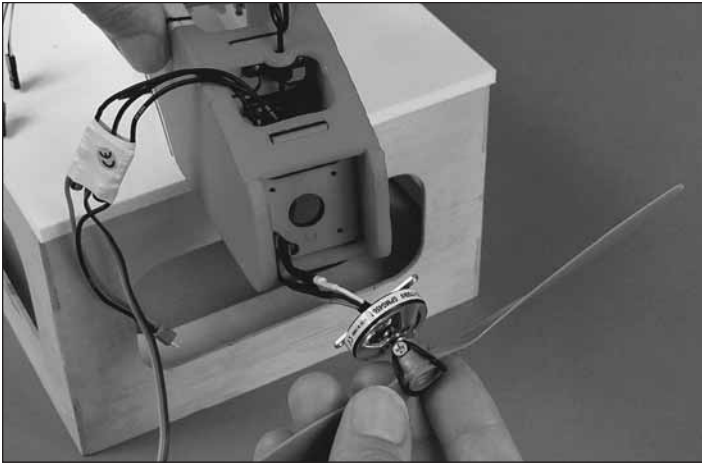
Refer to this photo for the following three steps.

❏ 2. With the ESC connected to the receiver, guide the three motor wires from the ESC down through the fuselage and through the curved slot for the wires in the back of the firewall. Connect the wires to the motor.

❏ 3. Before mounting the propeller, connect the motor and a battery to the ESC. Make sure the throttle channel is reversed, then use the radio to run the motor to make sure it is turning in the correct direction (counter-clockwise when viewed from the front). If the motor is **not** turning the correct direction, swap any of the two motor/ESC wires with each other to make the motor turn the right way.

❏ 4. The propeller may be mounted to the motor later, but it is easier to do now, before the motor has been mounted to the fuselage. If you mount the propeller now, first balance it as instructed on page 12.

❏ 5. Mount the motor to the firewall with the three 2mm x 8mm washer-head Phillips screws.

❏ 6. Coil up the rest of the motor wires and place the ESC and the wire in the fuselage behind the firewall. Hold it to the inside of the fuselage with Velcro® or double-sided foam mounting tape.
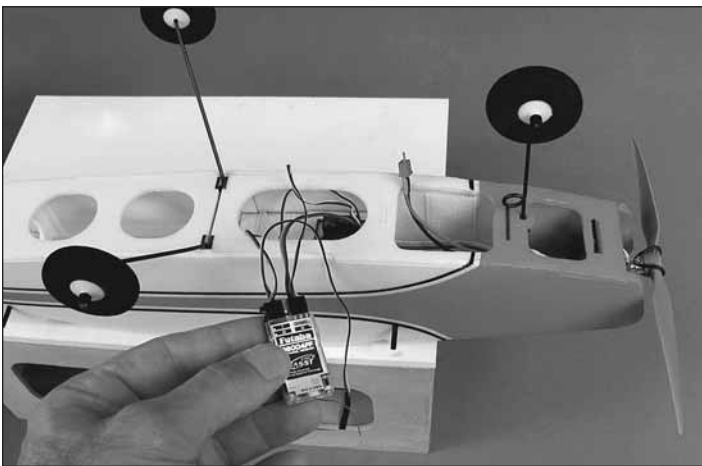
❏ 7. Guide the servo and ESC wires out through the lightening hole in the bottom of the fuselage just ahead of the landing gear. Then, connect the wires to the receiver. Also connect a 6" [150mm] servo extension wire to the aileron channel in the receiver.


❏ 8. Mount the receiver to the bottom of the servo tray with Velcro or double-sided foam adhesive tape.

❏ 9. Apply a 1/4" [6mm] strip of the softer "loop" side of the adhesive-backed Velcro material to your battery and mount it to the "hook" side of the Velcro already in the nose of the fuselage.

Hook Up the Elevator and Rudder

❏ 1. Guide the **elevator** and **rudder pushrods** up through the guide tubes in the fuselage. Connect the pushrods to the **middle** holes in the rudder and elevator horns with the 90-degree pushrod connectors. (It may be necessary to slightly enlarge the holes in the horns with a hobby knife to get the pushrods to fit—but be careful—don't oversize the holes. Just a few twists of the blade should do it.)
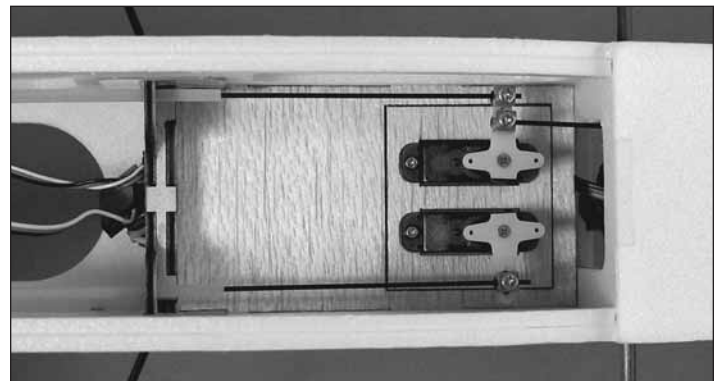
❏ 2. With the radio on and the trims centered, lock the elevator, rudder and nose-steering pushrods into the screw-lock connectors by tightening the screws—don't forget to use a **small** drop of threadlocker on the threads of the screws and make sure each control is centered when tightening the screws.

❏ 3. With the radio on, roll the fuselage along the floor to see if it goes straight. If necessary, adjust the nose-steering pushrod in the screw-lock connector to get the model to roll straight.

ASSEMBLE THE WING

Hook Up the Ailerons

Servo arm that came with servo

1.0mm screws
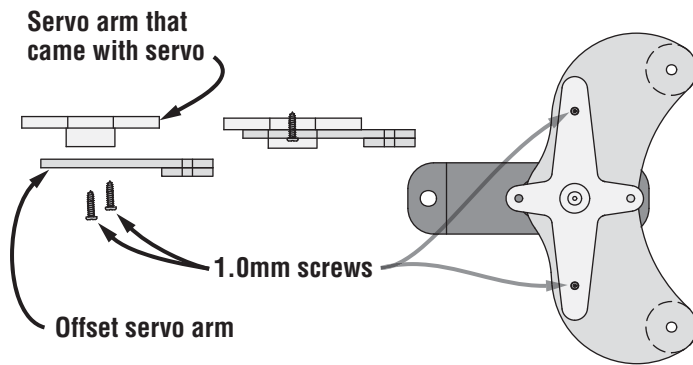
Offset servo arm

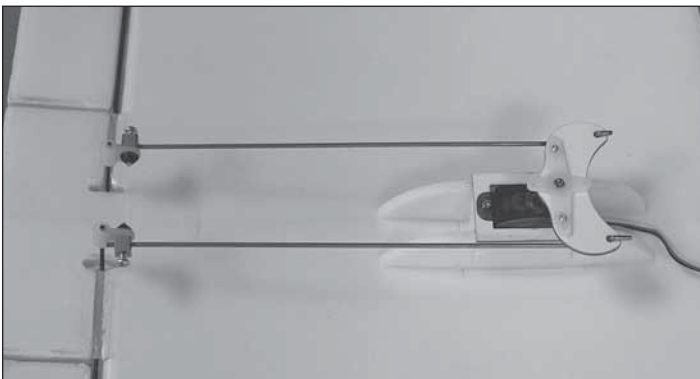❏ 1. Use two of the tiny wood screws included with this kit to mount the **offset aileron servo arm** to the bottom of the aileron servo arm that came with your servo. Also add a few drops of thin CA around the edges of the servo arm to securely glue the two arms together.
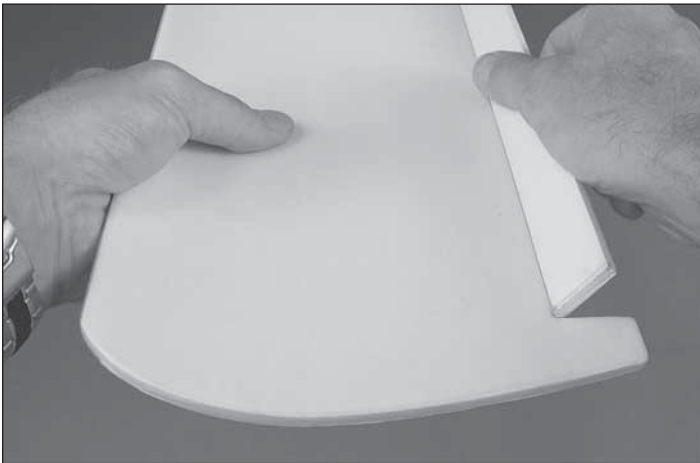
❏ 2. Flex the ailerons up and down several times to break them in so they will be easier to move with the servo.

Refer to this photo for the rest of the steps to hook up the ailerons.

❏ 3. Mount the aileron servo in the wing using the screws included with this kit or the screws that came with the servo.

❏ 4. Same as was done for the elevator and rudder, temporarily connect the aileron servo to the receiver and power up the system so you can center the servo. Slip the aileron pushrods

up through the holes in the offset servo arm. Mount it to the servo with the servo arm screw.

❏ 5. Insert the pushrods into the screw-lock connectors on the aileron horns. With the radio on and the servo centered, center each aileron and tighten the screw in the screw-lock connector to lock the pushrods down—don't forget to add a small drop of threadlocker on the threads of the screws.

Finish the Wing

The wing may be finished in either of two configurations: one for indoor flying and another for outdoor flying. Of course, if you prep the wing for outdoor flight it may still be flown indoors, but the Falcon will be slightly heavier and may not allow you to take full advantage of its absolute slowest flight possibilities. The "indoor" wing may also be flown outdoors, but care should be taken not to overstress the wing by performing aggressive aerobatics or flying on windy days.

Perform steps 1, 2 and 3 only if building the *outdoor* wing.
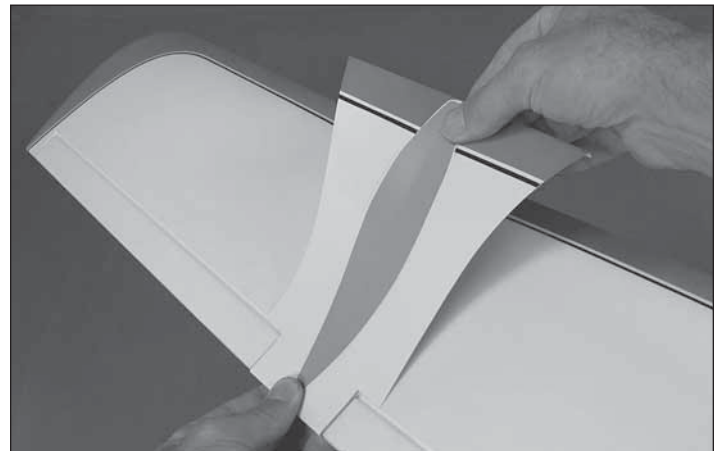
❏ 1. If building the outdoor wing, test-fit the plastic **wing center doubler** to the top of the wing just to see how it fits **before** removing the protective backing from the adhesive tape on the bottom—the best way to fit the doubler is first to center the "lip" on the back over the trailing edge of the wing between the ailerons, then "roll" and press the doubler forward.

❏ 2. Now that you have practiced installing the doubler, remove the backing from the tape on the bottom and carefully apply the doubler to the wing.
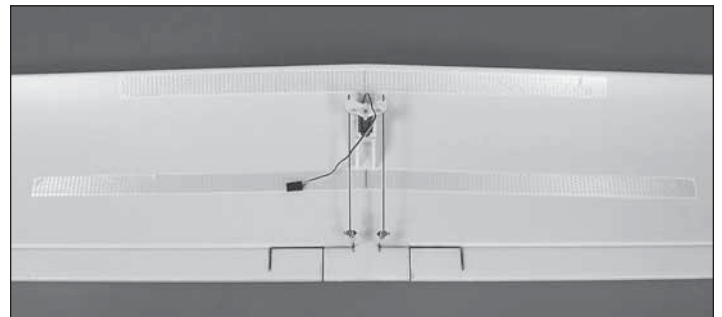
❏ 3. Cut the included fiber-reinforced tape into one 24" [610mm] piece and into one 18" [460mm] piece. Attach the strips to the bottom of the wing where shown.

PROTECTORS
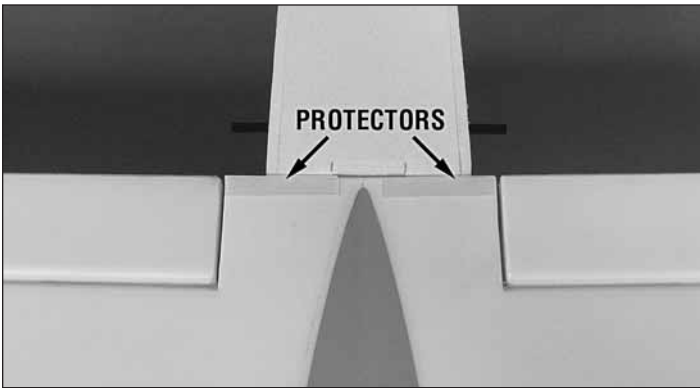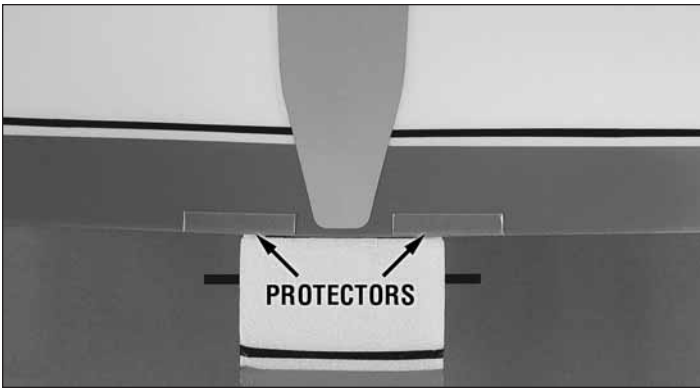
PROTECTORS

❏ 4. If building the indoor wing, simply stick the plastic **rubber band protectors** to the top of the wing at the leading and trailing edges where shown.

3.0" [76mm]
2-5/8" [67mm]
2-1/4" [57mm]

Aft C.G.
mmended C.G.
ward C.G.

Align with leading edge of wing
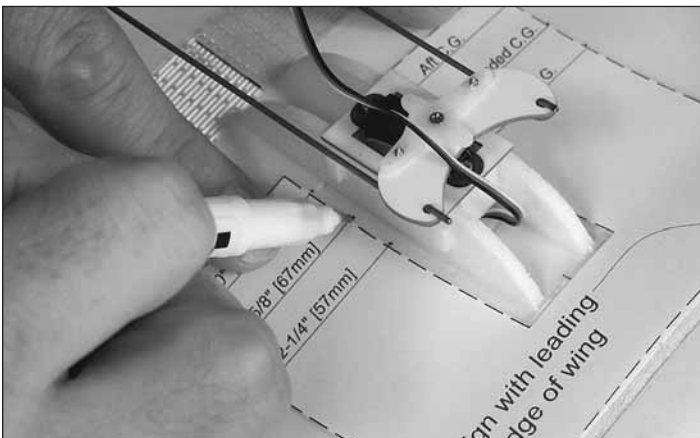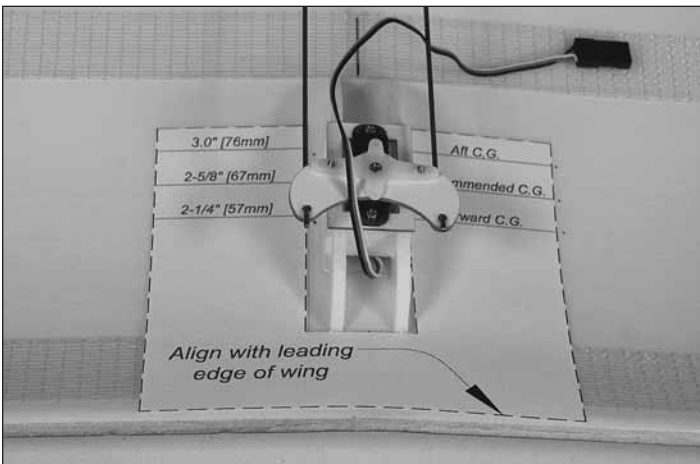
❏ 5. Cut the **C.G. Marking Template** from the back of the manual and place it on the bottom of the wing, aligning the

front of the template with the leading edge. Use a fine-point felt-tip pen to mark the ends of the C.G. lines on the template onto the wing.
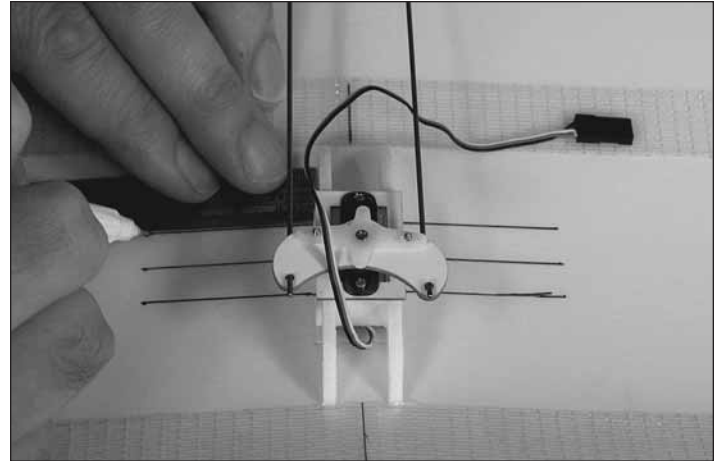
❏ 6. Use a straightedge to draw lines connecting the dots depicting the recommended balance range.
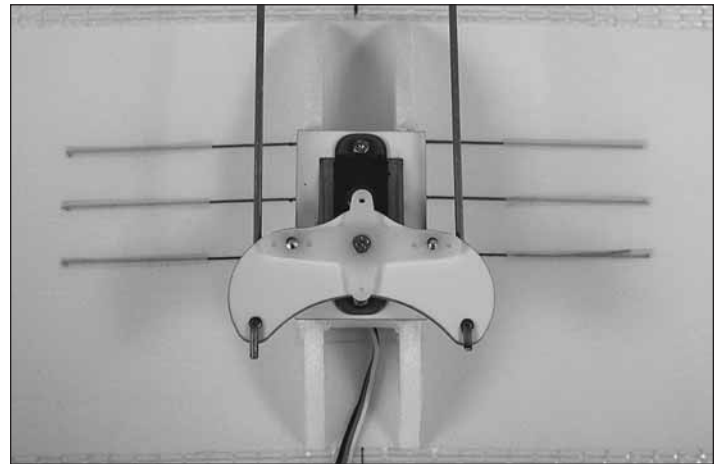
❏ 7. Finally, apply narrow strips of tape over the lines so you will be able to feel them with your fingers when balancing the model later.

2-1/8"
[54mm]
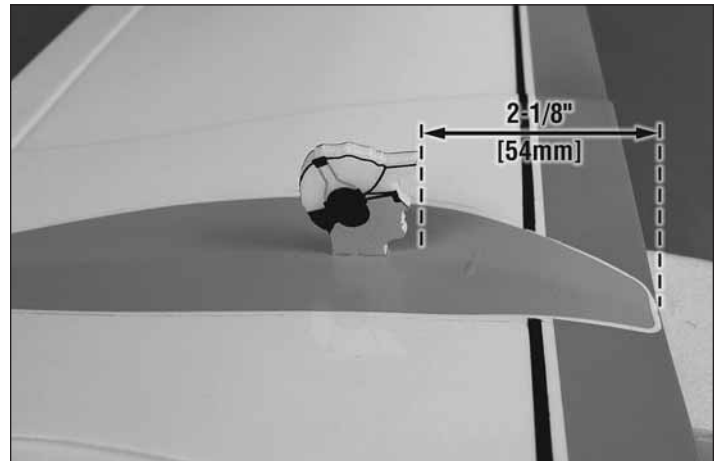
❏ 8. Use a dab of RTV silicone or white glue to glue the pilot into position directly on top of the wing or to the doubler (if building the outdoor wing) 2-1/8" [54mm] from the leading edge.

10

❏ 9. Use a few dabs of clear RTV silicone, R/C 56 canopy glue or double-sided adhesive tape to hold the canopy to the top of the wing or to the doubler. **Note:** Non-permanent glue is recommended to allow for easy removal of the canopy in the future.

GET THE MODEL READY TO FLY

Check the Control Throws

If the pushrods were connected to the servo arms as previously illustrated, then the control throws should already be correct, or very nearly correct. However, it is still a good idea to check the throws since they have such a great effect on how the model flies.

❏ 1. **Make sure the throttle stick is all the way down** so you do not accidentally arm or start the motor. Turn on your transmitter and connect a battery to the ESC.

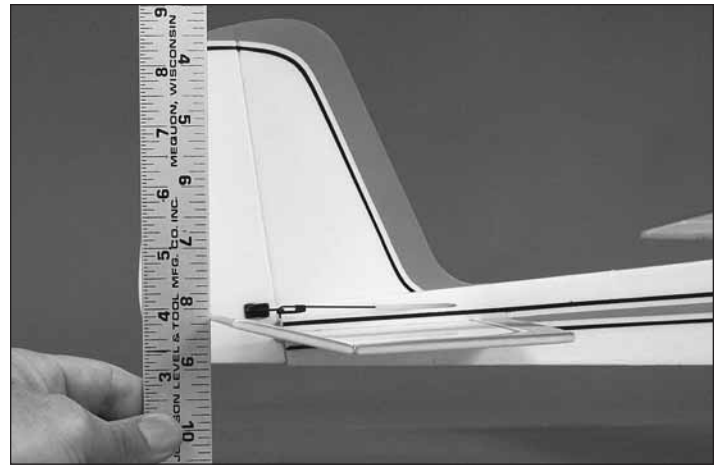❏ 2. Make sure the ailerons, elevator and rudder are centered. If necessary, adjust the pushrods in the screw-lock connectors to center the controls and re-tighten the screws in the screw-locks.

Measure the elevator throw first…

❏ 3. Hold a ruler to the trailing edge of the elevator. Note the measurement.

❏ 4. Use the transmitter to move the elevator to full "up" and note how far the elevator moved. This is the "up" elevator throw.
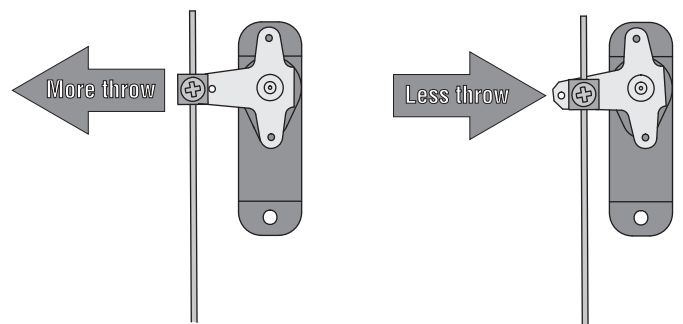
On the servo, move the pushrod *out* to increase throw, or *in* to decrease throw.
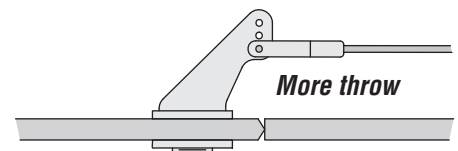
More throw

On the control surface, move the pushrod *in* to increase throw, or *out* to decrease throw.

Less throw
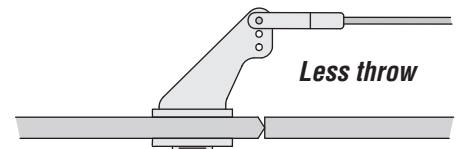
❏ 5. Make sure the up elevator throw you measured is the same as the throw specified on the following page. Measure the down elevator throw and the rudder and aileron throw the same way for both the high and low rates. If the throws on your plane are within 1/8" [3mm] of the specified throws, go ahead and fine-tune the throws using the End Point adjustments in your transmitter. If the throws are too far off, change the throws by relocating the pushrods on the servo arms and/or control horns on the surfaces. Moving the pushrods inward on the servos or outward on the control surfaces will provide less throw and moving the pushrods outward on the servos or inward on the control surfaces will provide more throw.

These are the recommended control surface throws:				
	HIGH RATE ▼		**LOW RATE** ▼	
ELEVATOR	Up	Down	Up	Down
	3/4" [19mm] 28°	5/8" [16mm] 23°	1/2" [13mm] 13°	3/8" [10mm] 14°
RUDDER	Right	Left	Right	Left
	1-1/2" [38mm] 35°	1-1/2" [38mm] 35°	1" [25mm] 23°	1" [25mm] 23°
AILERONS	Up	Down	Up	Down
	1/2" [13mm] 24°	3/8" [10mm] 17°	3/8" [10mm] 17°	1/4" [6mm] 12°

Balance the Propeller
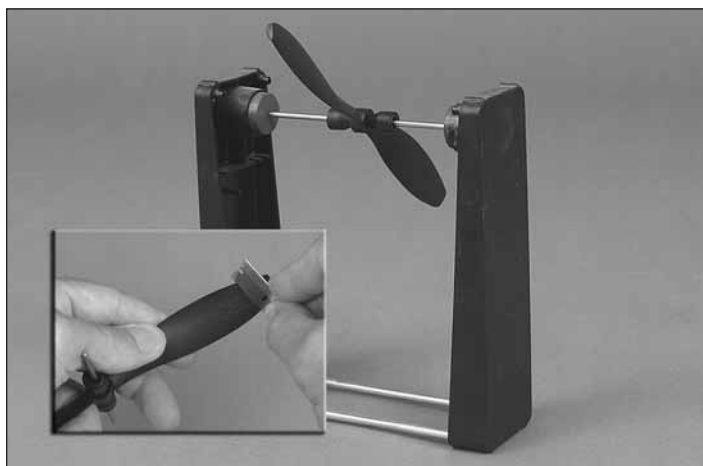
Take a few minutes to balance your propeller and a spare propeller before you fly. A balanced propeller will help the motor run smoothly and efficiently. A severely unbalanced propeller can cause enough vibration to stress glue joints and cause screws to loosen.

If the propeller is unbalanced, use a single-edge razor blade or a hobby knife to scrape material off the heavy blade until you can get the propeller to balance.

Balance the Model (C.G.)

More than any other factor, the C.G. (center of gravity/balance point) can have the greatest effect on how a model flies. If you value your model and wish to enjoy it for many flights, DO NOT OVERLOOK THIS IMPORTANT PROCEDURE. A model that is not properly balanced may be unstable and possibly unflyable.

At this stage the model should be in ready-to-fly condition with all of the systems in place including the motor, complete radio system, ESC, propeller and **battery**.

❏ 1. With the wings held to the fuselage with a couple of rubber bands, lift the model by your fingers placed on the middle lines on the bottom of the wing marking the recommended starting balance point.

❏ 2. This is where your Falcon should balance for the first flights. Later, you may experiment by shifting the C.G. 3/8" [10mm] forward or 3/8" [10mm] back to change the flying characteristics. Moving the C.G. forward will improve the smoothness and stability and allow the Falcon to perform tighter turns, but the model will fly slightly faster. A slightly more-forward C.G. is also usually desirable for flying outdoors where higher throttle settings are normally used. Moving the C.G. aft allows the Falcon to fly more slowly, but will require slightly more pilot control in tightly-banked turns. A slightly more-aft C.G. is usually desirable for indoor flying for slower speed. In any case, start at the recommended balance point and do not at any time balance the model outside the specified range.

If the model is balanced properly it should rest level when viewed from the side. If the tail is down the model is "tail-heavy" and nose weight will be required. If the nose drops the model is "nose-heavy" and tail weight will be required. (It is typical to require approximately 1/4 oz. [7g] of nose ballast to achieve a good starting C.G.)

LEAD WEIGHT

❏ 3. If any weight is required to get your Falcon to balance, determine how much by placing segments of Great Planes "stick on" lead (GPMQ4485) over the location on the fuselage where it will be attached inside and rechecking the balance. The best place to attach nose-weight is to the inside of the fuselage side just behind the firewall. A good place to attach tail weight is to one side of the fuselage under the stab. **Hint:** rather than using the adhesive foam tape on the back of the ballast, remove the tape and use Velcro to attach weight. Place the opposite strip of Velcro in the fuselage for the weight. Then, it will be easier to add or remove weight for experimenting in the future.

❏ 4. Once you know how much weight is required, attach it in the fuselage. Then, recheck the balance.

Charge the Batteries

Follow the battery charging instructions that came with your radio control system to charge the transmitter batteries. You should always charge your transmitter the night before flying, and at other times as recommended by the radio manufacturer.

CAUTION: Unless the instructions that came with your radio system state differently, the initial charge on new transmitter and receiver batteries should be done for 15 hours using the slow-charger that came with the radio system. This will "condition" the batteries so that the next charge may be done using the fast-charger of your choice. If the initial charge is done with a fast-charger the batteries may not reach their full capacity and you may be flying with batteries that are only partially charged.

MOTOR SAFETY PRECAUTIONS

Failure to follow these safety precautions may result in severe injury to yourself and others.

- Use safety glasses when starting or running motors.

- Do not run the motor in an area of loose gravel or sand; the propeller may throw such material in your face or eyes.

- Keep your face and body as well as all spectators away from the plane of rotation of the propeller as you start and run the motor.

- Keep loose clothing, shirt sleeves, ties, scarfs, long hair or loose objects such as pencils or screwdrivers that may fall out of shirt or jacket pockets away from the prop.

FLYING

Mount the Wing

Mount the wing to the fuselage with a couple of rubber bands— for indoor flying only two rubber bands (one per side) are required. For outdoor flying, four rubber bands (two per side) should be used. **Note:** Store your wing rubber bands in a container or box that will not let in any light—UV light quickly deteriorates the rubber bands. Also inspect the rubber bands for cracks or any other signs of damage before every flight. Never use damaged rubber bands.

Ground Check and Range Check

When you get to your flying site follow the manufacturer's instructions that came with your radio to ground check the operational range of your radio. This should be done both with the motor off and with the motor running at various speeds. If the motor or control surfaces do not respond correctly or move erratically without command, do not fly! Find and correct the problem first. Look for loose servo connections, broken or loose motor or battery wires or the receiver antenna positioned too close to wires or pushrods.

Flight

With a steerable nose wheel the Falcon is easy to taxi, take off and land, but if no smooth surface is available the Falcon may easily be hand-launched as well.

No matter where you fly, the first thing you should do before every flight is check the controls after turning on the transmitter and connecting the battery. Make sure the controls respond and in the correct direction.

Set a flight timer to remind you when it's time to land. With the recommended propeller and battery, the Falcon will fly approximately twelve to fourteen minutes indoors (where lower throttle settings are normally used) and four to six minutes outdoors (where higher throttle settings are normally used).

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To takeoff from the ground, simply set the model down facing directly into any prevailing breeze. Smoothly, but rapidly advance the throttle all the way using the rudder to steer the Falcon straight until it lifts into the air.

Fly the Falcon gently at reduced throttle settings until you get it trimmed for straight-and-level flight. Once you get the Falcon trimmed, note how it reacts to sudden bursts of full power. If the Falcon climbs too much a small amount of down elevator trim or a slight amount of additional nose weight may be required.

Continue to fly the Falcon around getting used to how it reacts. Make mental notes about any adjustments to the control throws or any handling characteristics that may be required to suit your taste. When the timer sounds, land the Falcon into the wind (if flying outdoors).
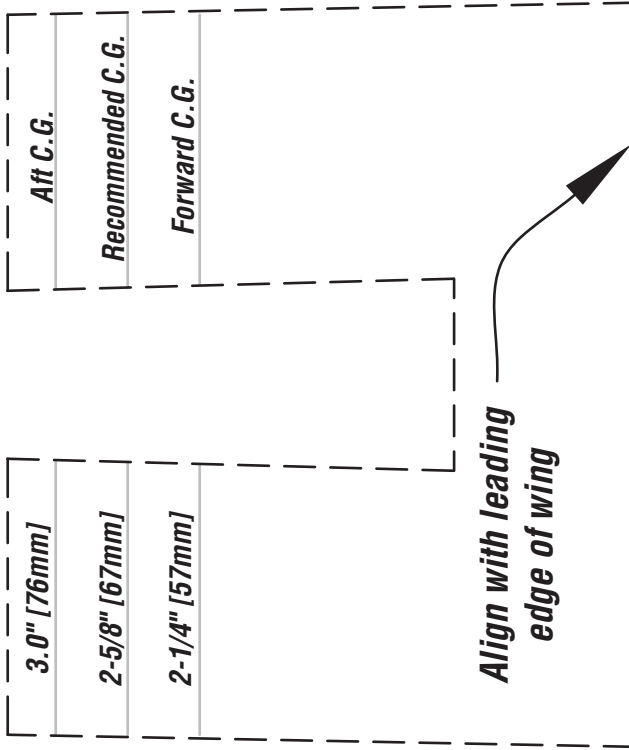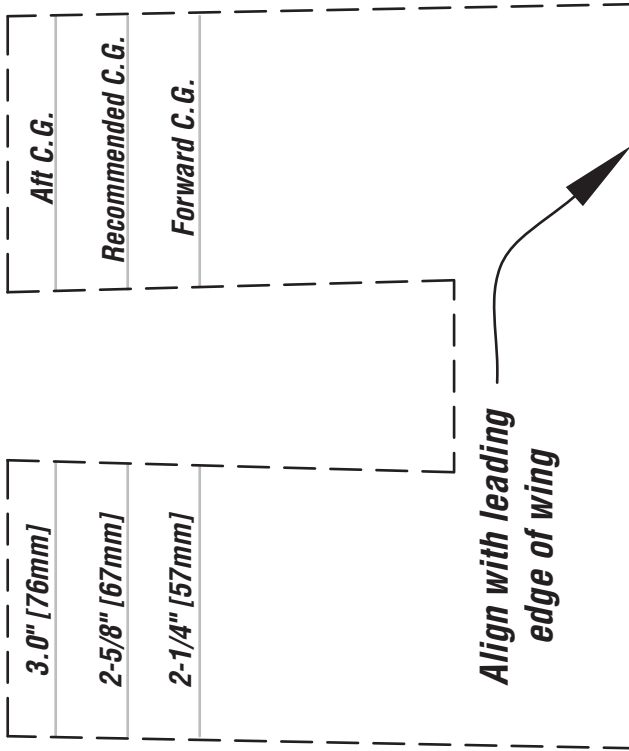
Note that the Falcon can perform barrel rolls and fly inverted, but the roll rate is rather slow, so prepare for this with plenty of altitude until you get a feel for how it responds. The rudder and elevator are more responsive.

One final note about flying your model; have a goal or flight plan in mind for each flight. This can be learning a new maneuver, improving a maneuver you already know, or experimenting with different setups (C.G., throws, etc.). The main reason for this isn't necessarily to improve your skills (though it is never a bad idea!), but more importantly so you do not surprise yourself by impulsively attempting a maneuver and suddenly finding that you've run out of time, altitude or airspeed because you didn't think ahead. Every maneuver should be planned and deliberate—not impulsive. For example, even for something simple as a loop, mind your altitude and wind direction and make sure you're on the desired control rates (high, low) before impulsively yanking back on the stick! A flight plan greatly reduces the chances of crashing your model just because of poor planning and impulsive moves. Remember to think!

Have a ball!
But always stay in control and fly in a safe manner.

GOOD LUCK AND GREAT FLYING!

Spare C.G. Marking Template

Aft C.G.

Recommended C.G.

Forward C.G.

3.0" [76mm]

2-5/8" [67mm]

2-1/4" [57mm]

Align with leading edge of wing

C.G. Marking Template

Aft C.G.

Recommended C.G.

Forward C.G.

3.0" [76mm]

2-5/8" [67mm]

2-1/4" [57mm]

Align with leading edge of wing

This model belongs to:

_____
Name

_____
Address

_____
City, State, Zip

_____
Phone Number

_____
AMA Number