Specifications

Wingspan: 48”/1,214mm
Length: 44.3”/1,1126mm
Wing area: 487 sq.in
Flight weight (exc battery): ~34.5oz /980 grams

At Precision Aerobatics, we developed the Extra 260RR to deliver an aircraft unlike any other. Using advanced production techniques, including our revolutionary PA FiberFusion® construction, we created an airframe that is exceptionally light yet extremely strong. Strategic carbon fiber reinforcement and meticulous weight reduction make the Extra 260RR one of the lightest in its class, with very low wing loading and outstanding flying characteristics.

Through extensive flight testing, we evaluated numerous equipment combinations and identified a direct link between the drive system and overall performance. To ensure the aircraft flies exactly as intended by our designer and test pilots, we developed our Integrated Performance Airframe-Drive Systems® (iPAs®).

iPAs Set up
when performance matter!

Each iPAs component has been selected based on extensive flight testing to ensure optimum performance, reliability, and handling, with many parts designed or modified specifically for the Extra 260RR.

All demonstration videos found on our site feature aircraft equipped with an iPAs® setup.

Deviating from these recommendations may result in reduced performance and altered flight characteristics.

The Extra 260RR is designed to deliver maximum performance without oversized, expensive power systems. Our recommended iPAs setup gives you strong, efficient power, long flight duration, and a perfectly balanced feel. It’s lighter, more responsive, and easier on batteries and electronics than typical setups in this class. If you want the aircraft to fly exactly as intended — this is the system to run.

visit PrecisionAerobatics.com for more information

Motor	**PA Thrust 45 Revo,** 24-pole Outrunner with Rotorkool® Technology | 127g brushless motor PA Item #AC-1888 with Carbon Fiber X mount. *Using a motor larger or more powerful than specified may damage the motor box or result in airframe failure.*
ESC	**PA Quantum 45A Evo** ESC PA Item #AC-2189Evo
Battery	**PA Gen2 LiPo 3S pack** 11.1 2200mAh 30-60C PA Item #AC-1992 or **PA Gen2 LiPo 4S pack** 14.8v 2600 mAh 30-60C PA Item #AC-2221
Servos	**4 of Nexatec NXT 70HV** servo PA Item #AC-2333-4
Propeller for 4s Set up	**Vox 12×8 Propeller** PA Item #AC-2104 Our first choice for the Extra 260 when using the optional Vortex Generators (VGs). This prop is specifically tuned for high-energy XA and extreme 3D flying. The higher pitch provides excellent airspeed for aggressive maneuvers such as crankshafts and pop-tops, while still maintaining strong slow-speed control for rolling harriers and high-alpha knife edge. **Vox 13×6.5 Propeller** PA Item #AC-2107 Slightly slower in flight speed than the 12×8, but with increased thrust and pull-out authority in hovers and vertical maneuvers. The added prop wash improves slow 3D stability and control, while still performing very well in high-energy aerobatics. A must-have option for XA / 3D focused pilots.
Propeller for 3s Set up	**Vox 14×8 Propeller** PA Item #AC-2111 Our first choice for 3S setups with the Extra 260. Optimized for slower, more graceful 3D flight, this prop provides excellent thrust and prop wash for slow harriers, slow knife edge, and high-AOA maneuvers. Offers strong punch for recovery out of hovers and torque rolls, while allowing moderate-speed maneuvers with a smooth, “giant-scale-like” overall appearance. **Vox 13×8 Propeller** PA Item #AC-2109 A well-balanced propeller for sport aerobatics and precision flying. It delivers higher flight speed than the 14×8 with slightly reduced pull-out power, making it an excellent choice for pilots focused on smooth, precise aerobatics and pattern-style flying.
Radio	A minimum 6 channel lightweight receiver

iPAs Integrated Performance Airframe-Drive System

Congratulations on your purchase of Precision Aerobatics

EXTRA 260RR

Warning – This is not a toy!

Be sure you have read and understood this entire manual before you assemble this model

Do not overlook the warnings and instructions enclosed herewith or those provided by other manufacturers, and the official AMA (Academy of Model Aeronautics) Safety Code (see at the end of this manual). They were designed to assist you in preventing damage or injury.

The instructions below are our suggestions only on how to assemble this model. There are other ways and methods to do so.

Precision Aerobatics has no control over the final assembly, the materials and accessories you use when assembling this kit or the manner in which the assembled model and the installed radio system and electronic parts, are used and maintained. Thus, no liability is assumed or accepted for any damage resulting from the use of the assembled model aircraft or from this instruction manual including but not limited to direct, indirect, incidental, special, and consequential damages. In no event shall Precision Aerobatics' liability exceed the original purchase price of this kit.

BY THE ACT OF ASSEMBLING AND OPERATING THE ASSEMBLED MODEL YOU ASSUME AND ACCEPT FULL LIABILITY FOR YOUR ACTIONS.

Radio controlled model aircraft that are not properly assembled, operated and maintained can cause serious damage to body and property. If you are not an experienced pilot and airplane modeller you must use the help of an experienced pilot or preferably an authorized flight instructor who will assist you with the assembly and flying of this model.

SAFETY NOTES:

1. Before assembling and flying this model read carefully any instructions and warnings of other manufacturers for all the products you installed or used on your model (especially radio equipment and power source).
2. Check thoroughly before every flight that the airplanes components are in good shape and function correctly. If you find a fault do not fly the model until you have corrected it.
3. Radio interference caused by unknown sources can occur at any time without notice. In such a case, your model will be uncontrollable and completely unpredictable. Make sure to perform a range check before every flight. If you detect a control problem or interference during a flight, immediately land the model to prevent a potential accident
4. Youngsters should only be allowed to assemble and fly these models under the instruction and supervision of an experienced adult.
5. Do not operate this model in a confined area.
6. Do not stand in line with, or in front of a spinning propeller and never touch it with any object.

Precision Aerobatics quality control team checks each plane before it leaves the factory to ensure that each kit is in fine condition. We have no bearing on the condition of any component parts damaged by use, modification or assembly of this model. Inspect the components of this kit upon receipt. If you find any parts damaged or missing, contact the hobby shop who supplied this kit immediately. All warranty claims to be submitted within 30 days of purchase and include the original dated receipt. This warranty is extended to the original purchaser only. We do not accept the return or replacement of parts on which assembly work has already begun. Precision Aerobatics reserves the right to change this warranty at anytime without notice.

NOTE:
Although we have done most of the work for you and not much assembling work left in completing the model and getting it ready to fly **we urge you to read the manual thoroughly.**
We have spent weeks in preparing the manual making it as detailed as possible, and you will find in it many tips and suggestions that will help you get the most out of your plane, in the safest way possible.
We hope you'll find the manual helpful and that you'll enjoy your new model.

Precision Aerobatics Team

Equipment selection

At Precision Aerobatics we have gone to great lengths developing the EXTRA 260RR in order to provide you with an aircraft like no other. We have used many unique production techniques including our revolutionary PA FiberFusion® to create the lightest, strongest aircraft possible. The extensive engineering and usage of carbon fiber along with our never ending quest to reduce weight ensures the EXTRA 260RR is one of the lightest aircraft in its class, with an incredibly low wing loading. These factors contribute to the outstanding flying characteristics of the EXTRA 260RR.

Throughout our extensive flight testing program we have trialed many different combinations of equipment in order to obtain the best possible performance from the airframe. We noticed a direct relationship between the drive system chosen and the aircraft performance and handling characteristics. It is our desire that your EXTRA 260RR should have the same amazing capabilities as our designer envisioned and test pilots experienced. For this reason we have developed a number of our own **Integrated Performance Airframe-Drive Systems®** or **iPAs®**.
Note: All the flying videos available on our website use, exclusively, the iPAs recommended gear which can give you a good idea on the high performance you can achieve.

The EXTRA 260RR was designed around the following gear. Please be aware that any deviations from these recommendations may result in degraded flight characteristics.

- **Motor** - PA Thrust 45 Revo with Rotorkool® technology (PA Item #AC-1888) 127gr, 780kv brushless motor. Using a motor that is larger or more powerful than that specified can result in damage to the motor box or failure of the airframe.
- **ESC** - PA Quantum 45 Evo Programmable Brushless ESC with built in Switching BEC (PA Item # AC-2189Evo).
- **Propeller adapter** – 6.0mm CNC machined precision prop adapter for the rear mounted Thrust 45 Revo (PA Item #AC-2360). Use only a good quality prop adapter that spins perfectly true otherwise thrust and efficiency will be lost and vibrations may damage the motor box. This adapter is supplied with the Thrust 45 Revo motor.
- **Propeller For Thrust 45 Revo / 4S 14.8V battery set up:**
  Vox 12×8 wooden propeller (PA item # AC-2104)
  Our first choice for the Extra 260 when using the optional Vortex Generators (VGs). This prop is specifically tuned for high-energy XA and extreme 3D flying. The higher pitch provides excellent airspeed for aggressive maneuvers such as crankshafts and pop-tops, while still maintaining strong slow-speed control for rolling harriers and high-alpha knife edge.
  Vox 13×6.5 wooden propeller (PA item # AC-2107)
  Slightly slower in flight speed than the 12×8, but with increased thrust and pull-out authority in hovers and vertical maneuvers. The added prop wash improves slow 3D stability and control, while still performing very well in high-energy aerobatics. A must-have option for XA / 3D focused pilots.
- **Propeller For Thrust 45 Revo / 3S 11.1V battery set up:**
  Vox 14×8 wooden propeller (PA item # AC-2111)
  Our first choice for 3S setups with the Extra 260. Optimized for slower, more graceful 3D flight, this prop provides excellent thrust and prop wash for slow harriers, slow knife edge, and high-AOA maneuvers. Offers strong punch for recovery out of hovers and torque rolls, while allowing moderate-speed maneuvers with a smooth, "giant-scale-like" overall appearance.
  Vox 13×8 wooden propeller (PA item # AC-2109)
  A well-balanced propeller for sport aerobatics and precision flying. It delivers higher flight speed than the 14×8 with slightly reduced pull-out power, making it an excellent choice for pilots focused on smooth, precise aerobatics and pattern-style flying.

NOTE: Adequate airflow for motor and ESC cooling is mandatory. Proper throttle management is required.

Warning: Plastic APC "E" props of equivalent size are not recommended for PA models due to imbalance-induced vibrations, increased flex, and higher current draw compared to Vox propellers. Using them instead of the recommended Vox props may lead to motor box failure**.**

Note: Vox propellers are factory-balanced. If using a different brand - it is important to accurately balance your propeller prior to installation as poorly balanced propellers are inefficient and cause vibrations which are detrimental to your model and motor. A video showing how to check and balance your prop is available on our website. Use only propellers that are adequately sized to be within the specified limits of your motor.

- **Spinner** – 1.8" lightweight pre-cut PA Carbon Fiber spinner (PA code # AC-2048). Perfectly matches the Extra 260RR cowl shape, retain optimum CG and avoid unnecessary weight.
- **Battery** – PA Gen 2 4s (14.8V) 2600mAh 30-60c (PA code # AC-2221) or PA Gen 2 3s (11.1V) 2,200mAh 30-60c (PA Code AC-1992)
  Note: different batteries will vary the motor's power output and amp drawn and might be under power or push the motor beyond its limits. If using none-PA packs use a watt meter to verify that the output power and amp drawn

are within the Thrust 45 Revo range with the specified propeller. Please refer to the Thrust 45 Revo data sheet available on www.Thrustmotors.com

- **Servos** – 4 x Nexatec NXT 70HV micro servos (PA item # AC-2333) or similar quality micro Servos.
- **Extension lead** - thin gauge flexible extension lead for EP models 2M/6.5ft (PA item # AC-1713).
- **Receiver** +6 Channel full range 2.4Ghz

DISCLAIMER - AIRFRAME LIMITATION

The EXTRA 260RR is designed for extreme aerobatics and 3D maneuvers and has robust construction that was thoroughly tested. However due to the extreme thrust produced by the Thrust 45 Revo, the low flight weight of the model and its large control surfaces, it is vital for the user to exercise discretion while executing high stress maneuvers so as to avoid over loading the airframe.

EVERY airframe may it be an RC model or a full scale aircraft has its maximum limits. Your Extra 260RR is not an exception. The Extra 260RR is also specifically designed to operate using the recommended gear described above. Keeping within the design limitations greatly depends on your flying style and IS YOUR RESPONSIBILITY. Please read the Official Academy of Model Aeronautics National Model Aircraft **Safety Code** at the end of this book.

Pre-Assembly

Before you commence assembling, please inspect the contents of the kit for any damage that may have occurred during transport or any suspected manufacturing defect. If you suspect any component is damaged, please contact the shop from which you purchased the model immediately. Do not commence the assembling of this kit.

We go to great lengths to ensure all components are manufactured free of warp or twist; however, due to high temperatures during the long journey in a container and changes in humidity, it is possible for small amounts of warp or twist to develop. It is important at this stage to inspect for warp. Start by taping the ailerons in the neutral position at the wing root and look down the length of the ailerons to ensure they are perfectly straight. The ailerons should be neutral at the wing tip (profile view), as they are at the wing root. If the aileron appears to be either deflected up or down at the tip (known as wash-out or wash-in), it must be corrected by gradually twisting in the opposite direction and carefully applying heat to the wrinkles in the covering film (ideally with a hobby iron). Start at a very low temperature and gradually increase it until the wrinkles begin to shrink. Different films respond to heat in different ways, and excessive heat will damage the covering. Repeat this process until the aileron is perfectly straight with no twist visible. Do NOT use a heat gun, as it affects a much greater area, which may cause unwanted warp in other areas and burn the covering.

Inspect all sharp edges of the covering trims to verify they are sealed down. If there are loose edges that peel off, use an iron to lightly seal them down, especially paying attention to the wing and elevator tips (trailing edge & leading edge).

Ensure the elevator is not twisted by checking that both elevator counterbalances line up perfectly with the stabilizer leading edge. If one counterbalance is slightly deflected up or down while the other side is neutral, the slight twist can be removed in the same manner as the ailerons by gently twisting in the opposite direction and applying heat to the film where it wrinkles. It is important to ensure that this step is completed prior to installing the stabilizer/elevator on the model.

Any small bubbles or wrinkles in the covering film can also be removed with a small hobby iron; **however, extreme care must be taken, as it is possible to introduce warp to an otherwise straight part while removing wrinkles.** Start at a low temperature and gradually increase it. Use the iron **front tip** and **only** over the wrinkles to avoid warping other areas! Avoid using a heat gun, as it spreads the heat over a large area and can easily cause twists and warps.

Tip: As most parts of the Extra 260RR will be assembled using epoxy, it is recommended to have some denatured alcohol and paper towels handy for occasional quick cleanups during the build.

Avoid keeping the hatch off the fuselage for long periods of time, as it may develop some warp due to its length and climate changes. Do not leave the hatch/canopy in the sun, as it may warp as well.

Note: Through the manual - all left/right/rear indications are from pilot view

You may also watch "PA Build" videos available on our website, however, don't miss reading this instruction manual.

Making the Openings

Start by ironing around the edges of all the openings to be made to ensure the covering does not peel back later. Next make the following openings in the covering film, as shown in the photos- aileron servo cables, elevator servo (cutout one side only), rudder servo (cutout one side only) and stabilizer slot.

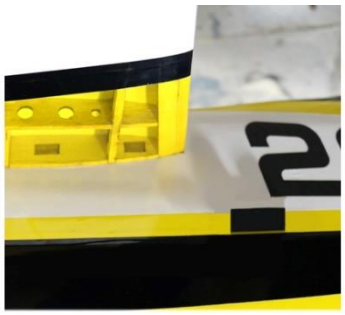
Tip: To prevent making accidental mistakes in the openings, use a pin or blade to pierce a hole in the opaque covering from the inside to mark the location of the openings before cutting from the outside.

Note: There are two identical sets of servo openings on each side of the fuselage. Choose the side per your preference. Elevator servo should be mounted on one side of the fuselage (upper opening) while the rudder servo is on the opposite side (bottom opening). Make sure to cut the rudder and elevator control horn slots in the correct side of your servos final position.

The easiest way to make the openings is by 'cutting' the film with the heated end of a paperclip (to heat use a cigarette lighter or a candle) or with a very sharp modeling knife.

Fuselage openings

Stabilizer slot and Elevator Servo Opening

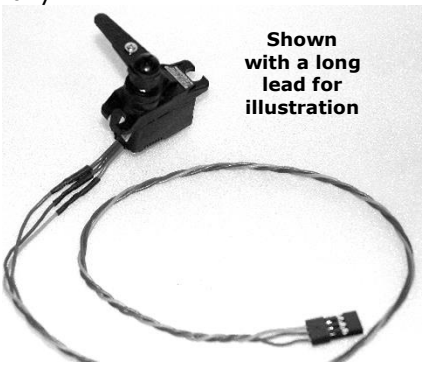


Rudder Servo Opening

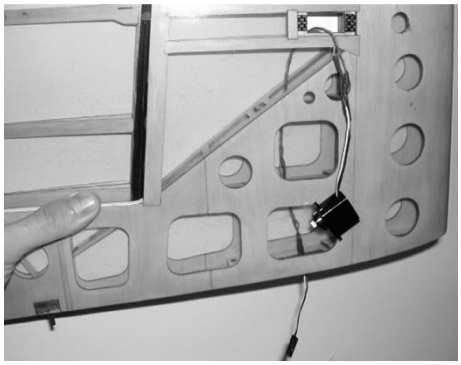
Aileron servo installation

The aileron servos require a pair of 178mm/7" extension leads. We recommend extending the leads using a good quality lightweight servo extension to save on weight, avoid RF noises and voltage drop (PA Item Code AC-1713 is low resistance flexible Extension Lead and is included in the iPAs Pro package).
Cut the servo lead close to the servo case. Expose each cable end, then solder each to the extension lead according to the colors. Insolate the cables with a shrinking tube over **each** of the soldered cables.
Feed the cable through the inside of the wing out through the opening on the wing root rib. Insert the aileron servos with the output shaft closest to the aileron. In case of tight fit don't force the servo in, instead use a fine file to slightly enlarge the opening. Mark the center of the mounting tab hole to drill.

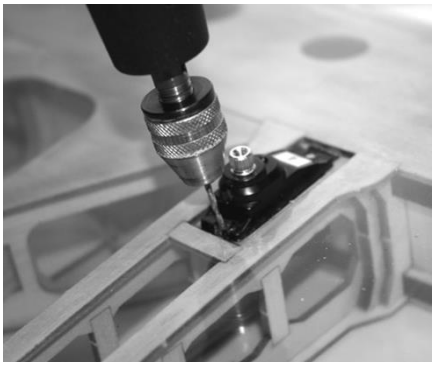
Drill mounting holes as required for the screws supplied with your servos using a sharp 1.5mm (1/16") drill bit. Ensure that the screw holes are exactly centered.
Do not use excessive force as this may damage the servo tray. Screw and unscrew the mounting screws and then apply a drop of thin CA into each of the holes to set the thread. Once the CA has cured install the servo.
Tip: Carefully "tap" the screws in by making a full turn in and then backing out by ¼ turn and repeat until the screw sits fully in.



PA Lightweight servo extension



Feed the extension lead through



Drill the mounting holes with care

Warning – we recommend **not using** the rubber grommets and eyelets supplied with some servos, as this mounting method introduces excessive flex in the servo case under flight loads and can cause a loss of control resolution ("blowback" of the control surface). The preferred method is to hard-mount the servos (tail and aileron servos) using aftermarket screws without grommets or eyelets.

Alternatively if you would like an easier removal of the wings you may choose to use two extra short harnesses plugged constantly to the RX.

Aileron control linkages

First, select the two identical CF pushrods (74mm/2.9") and the control horns from your hardware pack to begin preparing them for installation. Note that the aileron control horns are the identical pair from the hardware pack of four CF control horns.

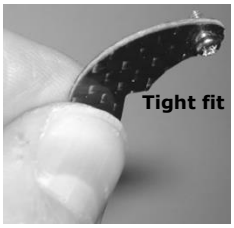
Lightly sand the base of the CF control horns to allow better gluing surface. Next slit the opening for the CF horns on the Aileron. Test fit the CF horn. If the fit is too tight; do not force the horn in. Instead, use a blade to carefully enlarge the opening until a perfect fit is achieved. Do not epoxy the CF horn at this stage.

Locate the metal clevis from the hardware pack and use a paper rag soaked in denatured alcohol to thoroughly clean the inside of the hole where the CF rod inserts. Install the metal clevis to the aileron horn. The aileron's horn hole is slightly undersized. Use a fine needle file carefully to **slightly** enlarge the hole to get a precise slop-free fit. Test fit the mounting bolt a few times during the process. **Take your time** to do so because oversized hole would cause undesired slop. Later, do the same with the CF servo arms' mounting hole.

Install clevis

Secure the bolt with Loctite

File mounting hole



Test fit bolt

Ailerons Rudder Elevator

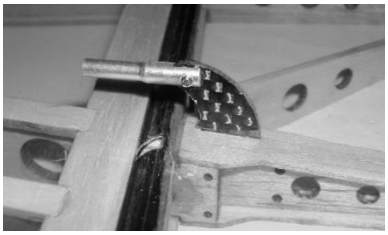
Slightly **widen clevis fork** with a small flat screwdriver then screw the clevis bolt and test for a smooth bind free movement. Do not over tighten to avoid "clamping" the fork of the clevis on the CF control horn. Once satisfied, apply permanent (red color) Loctite. You may also install the metal clevis for both the rudder and elevator at this stage.

Next, use epoxy over the control horn base and inside the aileron slot to glue the CF horn in and ensure that the horn was inserted **all the way in** and is perfectly 90 degrees perpendicular to the control surface. There will be a bit of epoxy excess once the control horn is slid into the slot. Do not wipe it off as it will create a solid base to the horn. Use a piece of masking tape to hold the CF horn in position until the glue sets. Ensure adequate epoxy is applied to fill up the holes at the base of the horn (once dry it acts as fixation pins).
Note: epoxy allows time for adjustment after the horn has been inserted while CA is prone to set too rapidly and may also cause stains to the covering film.

With the servos centered in neutral, temporarily install the plastic servo arm (pointed towards the wing root). Find the best position of the servo arm which yields 90 degrees to the servo case. That ensures linear and symmetrical throws in both directions without the need of excessive TX sub-trims and servo travel adjustments to one direction. Once satisfied, cut off the other three unused arms using a nail clipper.

In order to achieve maximum control throws for 3D and to ensure proper linkage geometry we recommend using PA Carbon Fiber servo arms (PA Item Code AC-1918). Note that these are not included with the kit. If you have them, install them now. You may wish to do so for the elevator and rudder servos at this point too.
The CF servo arm's hole is also slightly smaller to achieve a tight slop-free fit. You may need to enlarge the hole a bit to fit the ball link M2x8mm bolt in a similar way as you did with the aileron control horn.
Locate the plastic ball link and install it onto the CF servo arm with the ball on the **bottom side** of the servo arm. Install the aileron ball link in the servo arm **inner** mounting hole.
The order of assembly is M2x8mm bolt/ball link/CF arm/nut. Apply red permanent Loctite to secure the nut.

Note: some Loctite may run over the horn preventing the clevis from swiveling freely. Swivel the clevis rapidly a few times to get rid of any excess Loctite and if needed use a modeling knife to clean the horn surface.



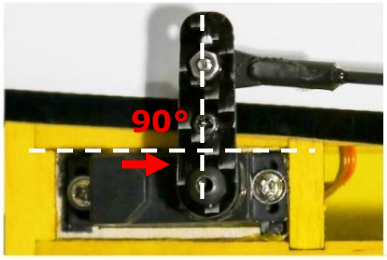
Test fit control horn

Notch pushrod end

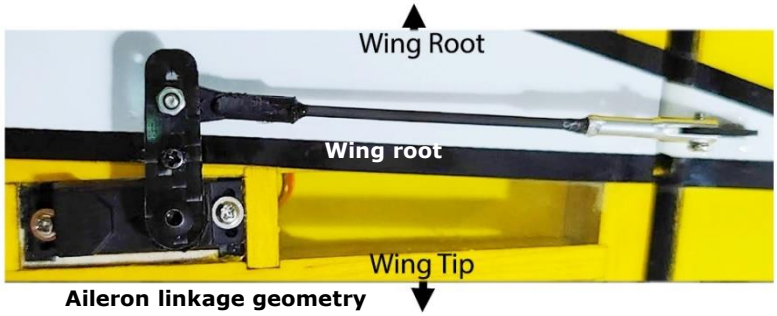
Secure the bolt with Loctite

Lightly sand, roughen and notch the ends (12mm, 1/2”) of the two CF pushrods using a small triangle file/Dremel tool to ensure a secure glue bond. With the servo arm installed and centered in neutral (90 degrees to the servo case) and the aileron taped and held in the neutral position, temporarily insert the CF pushrod into the clevis and line the other end up with the ball link. Cut short the CF pushrod to fit into the ball link, careful not to over shorten the rod! You may sand/file the tip to obtain an accurate fit. If done properly, you have completed a perfect linkage geometry set-up and will therefore need very minimal sub-trim adjustment when you set up your radio later. **Tip:** CF rod best cut off with a sharp modeling knife.

Once satisfied with the precise pushrod length and with the aileron already taped in the neutral position, apply 30 minute epoxy to one end of the pushrod and insert it into the clevis. Do the same with the ball link. Note that the pushrod should be pushed fully in and the ball link positioned **horizontally** to the clevis. Finally verify that the servo arm is also in the neutral (90°) position BEFORE the epoxy sets.
Do the same with the other wing panel.



Inner mounting hole



Aileron linkage geometry

Aileron control horn

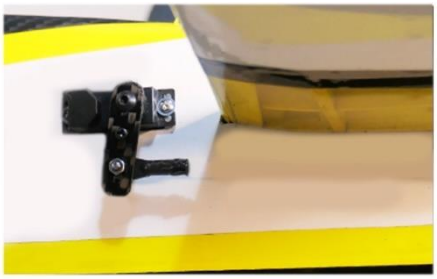
NOTE: In order to get good servo centering and precise control, linkages should operate smoothly with minimum friction (linkages and control surfaces will also get smoother over time). Now, with the linkages fully installed, would be a good time to test them. Detach the servo arm and actuate manually the control surface by the linkage making sure it deflects freely. If overly tight, inspect the entire linkage and control surface where it binds. If it is the control surface that binds, inspect the aileron hinges closely and find the binding spot. With a sharp modeling knife, "shave" off a bit of balsa from the small rib through the hinge slot. You may use a small file to slightly widen or lengthen the slot.

Tail section

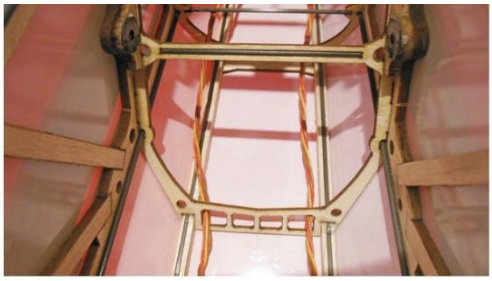
Elevator & Rudder servos

Prior to installing the servo, solder the servo lead extension (as described with the aileron servos). You will require a 331mm/13" long extension (if NXT 70HV is used). Install the elevator servo at the rear of the fuselage in the opening you previously cut in the covering film with the servo output shaft closer to the control surface as per the photo.

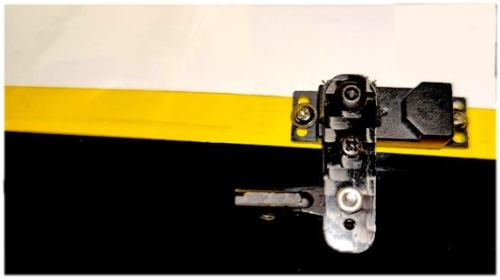
Carefully drill using a 1.5mm (1/16”) drill bit and self tap holes as required for the servo mounting screws. The servo mounts have ply doublers glued on the inside of the fuselage; therefore applying a drop of CA into each hole is not actually required (however this can be done should the screws become loose). Run the servo leads along the bottom of the fuselage and through the bulkhead as shown in the photo.



Elevator servo



Tail extension leads



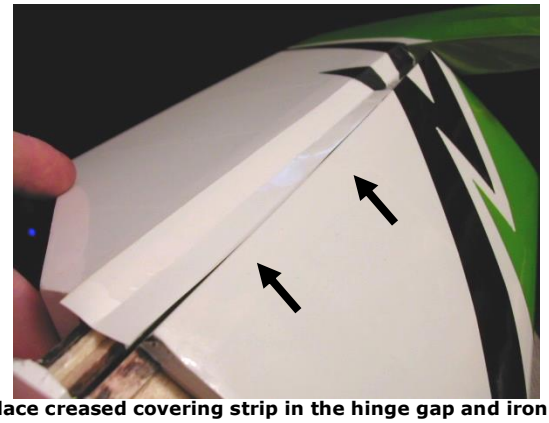
Rudder servo

Elevator & Horizontal Stabilizer

The stabilizer and elevator are pre-hinged and sealed in the factory.
Verify the integrity of the hinges gluing by fully deflecting the elevator up and down and then try to pull the elevator out of the stabilizer. If required, apply a few drops of CA over the specific hinge through the unsealed side.

Tip: It's recommended to apply thin CA to the hinges with a pipette tip applicator supplied with your CA bottle to avoid "fogging" the covering. If fogging occurs, it can be easily removed by wiping off with a paper towel dipped in with acetone or nail polish remover.

Hinge gap was pre-sealed in the factory with clear tape (bottom side), therefore, it's totally unnecessary for you to seal it from the top side with the supplied covering strips, however if you choose to do so, only from cosmetic reasons, you may apply it now. Take the supplied matched covering strip (according to your E260RR color scheme) and crease them into a "V" shape. Trim the creased covering to the length of one-half of the elevator. Align it along the hinge line (top side of the elevator). Hold it in place and starting at one end, iron it down along the length of the stabilizer (do not iron to the elevator at this stage). Deflect the control surface to maximum and iron the film into the hinge gap using the point of the iron. Now iron the strip along the elevator while fully deflected to maximum. This method ensures the gap is completely sealed while still allowing full deflection of the control surface. Do the same with the other elevator panel using the matched strips.



Place creased covering strip in the hinge gap and iron

Note: If the film doesn't adhere to surface, peel off the protection backing of the strips before using them.

Iron in the covering strip

Small imperfections can be fixed using a black marker

The stabilizer inserts into the fuselage slot from the rear which requires the removal of the balsa at the rear of the slot. This is best done with a sharp hobby knife or a fine hobby saw. Use a ruler to draw a line extending from the slot to the rear to mark the area to be cut off.

Iron down the covering at the area to be cut and with a sharp blade or fine saw, carefully cut the balsa out. Insert the stabilizer all the way into its slot, until the elevator leading edge hits the rear of the fuselage. while elevator is in neutral position you can easily mark the final lines to cut in order to allow the elevator to fit through.
If the fit at the newly cut slot is tight do not use force. Merely widen the slot evenly using a file until the stabilizer slides through. Proceed to slide the stabilizer until it reaches the stop at the front end of the stabilizer slot in the fuselage.

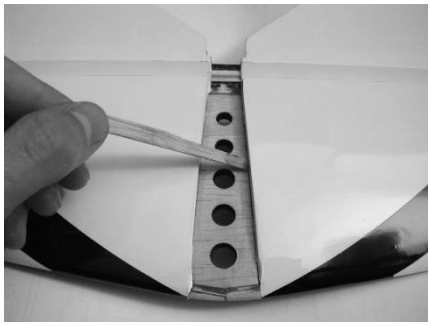
Next, you will need to align the stabilizer. Temporarily insert the wing tube to the fuselage. Looking from the rear check that the stabilizer is parallel to the wing tube (tape the elevator in the neutral position).
If the stabilizer is not parallel to the wing tube, remove the stabilizer and lightly file the fuselage slot to achieve perfect alignment. The stabilizer, after filing, must sit parallel to the wing tube.
Tip: If you have difficulty to visually check the stabilizer alignment with the wing tube, temporarily install the wings (with the ailerons taped in the neutral position) to make the visual reference.

At this stage fully deflect the elevator UP and DOWN to verify there is no obstruction; If any, slightly file the fuselage opening (ONLY as needed) to allow the full deflection.

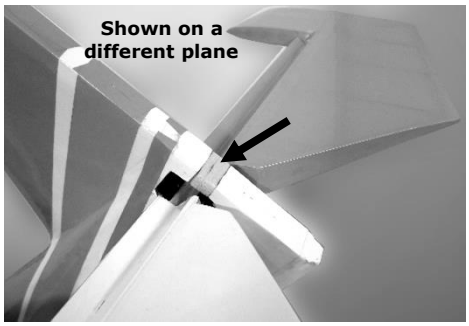
Once the stabilizer is in perfect alignment, remove it and apply a thin layer of 30 minute epoxy or wood glue to the exposed balsa in the center of the stabilizer (both sides) and on the side of the stabilizer roots (Note: CA is not recommended here as it causes discoloration of the covering film and set too fast). Insert the stabilizer ensuring it is pushed fully forward into its slot and make a final check from all angles that the stabilizer is correctly aligned. If there is any gap between the stabilizer roots and fuselage make sure to keep an even gap on both sides before letting it cure. Use masking tape to hold the stabilizer parallel to the wing tube until the epoxy sets. Check and double check to ensure the stabilizer is absolutely parallel to the wing tube. Use a paper towel soaked in denatured alcohol to wipe off epoxy excess. Stabilizer root ribs will keep the correct position of the stabilizer so no alignment measurements are needed to be done.

Note: While gluing the horizontal stab, it is extremely important not to place any pressure on the fuselage. Doing so can result in the fuselage being glued with a permanent twist impairing the flight performance.

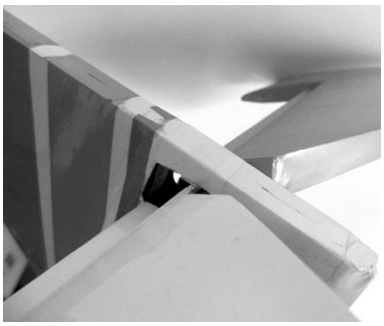
Once the glue sets, remove the masking tape and slide the supplied balsa wedge into the gap you previously cut at the rear of the fuselage. Being oversize, you need to lightly sand the balsa wedge (all around) until it fits flush with the fuselage. Do not attempt to force the wedge in as this could risk inducing a permanent twist in the fuselage (as with the stabilizer). Once satisfied, glue the wedge in with CA. You may use scraps of covering material previously cut to cover the balsa wedge.



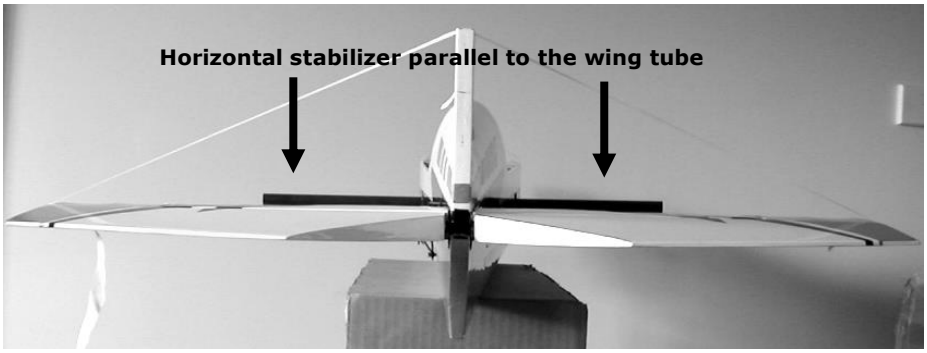
Apply epoxy to the stab center



Glue in the balsa wedge



apply covering over

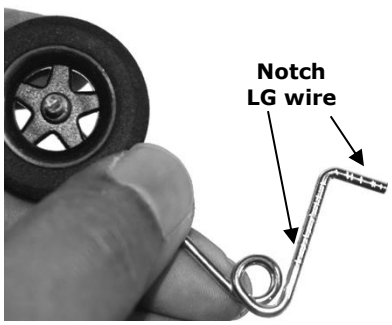


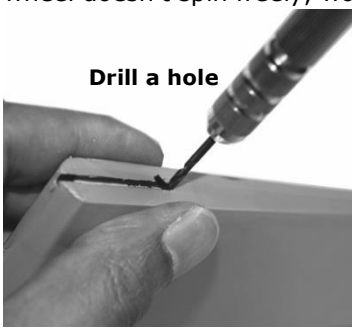
Rudder and Tail Landing Gear (LG)

Locate the groove at the bottom of the rudder closer to the hinge line. Using a sharp blade, remove the covering to expose the groove. Test fit the tail LG in the groove, and mark the position of the hole to drill for the wire to fit in.
Drill a hole in the marked position using a 1.5mm (1/16") drill bit. If tail LG strut doesn't fit into the groove use a fine file to correct. With the LG in place verify its alignment with the rudder and if needed correct it by bending the strut with pliers before glued in.

Create indentations in the surface of the LG wire using a file/Dremel tool. The indentations provide better surface for the glue to bond.

Flood the groove with 30 minutes epoxy and install the LG into the slot. Apply another thick layer of epoxy over the LG wire. You may lay a small piece of fiberglass cloth or scotch tape over for additional reinforcement. Leave the assembly aside until the epoxy sets. Note: if the wheel doesn't spin freely, wobble it a bit until it spins freely.





The rudder is pre-hinged in the factory and fuselage/fin hinge slots were pre-cut. Align the rudder to the fuselage to estimate the slots position and expose them using a sharp modeling knife.
Test fit the rudder into the fuselage all the way in, align the rudder counter balance with the fin leaving a small gap to allow the rudder to deflect freely, then place the fuselage on its side and fully deflect the rudder until it hits the elevator (elevator must be in neutral position. If needed use sticky tape to hold it in neutral), then apply a few drops of thin CA to both sides of the hinges to fix them permanently in place.
If the hinges don't fit in easily use a sharp modeling knife to CAREFULY re-cut the hinge slots (avoid widening them as that can cause them to detach in flight if thin CA is used to glue them).

Note: Try to pull the rudder out of the fuselage/fin to verify the integrity of the hinges gluing. Properly glued hinges will not allow the rudder to detach.

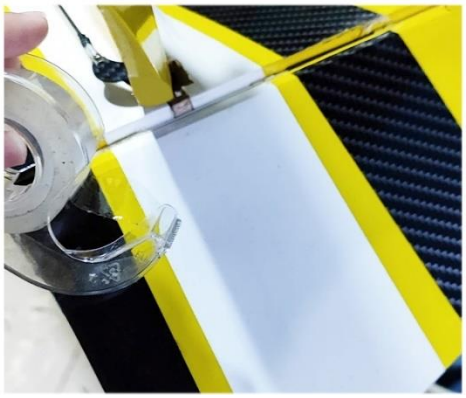
Next, seal the hinge gap on one side only using thin clear sticky tape. it's totally unnecessary for you to seal it with the supplied covering strips, however if you choose to do so, only from cosmetic reasons, you may apply it now as described in the elevator section above.
Sealing the hinge gap is extremely important for the flight performance so do not skip this step.

Once the rudder is installed, it must be checked for warp.

Note: although we fix warps on all parts after the covering process, due to the lightweight construction of the rudder it is normal for it to have some small amount of warp that occurred during the long journey in the container and to your doorstep. There is no need for concern as this can be easily removed.
Note that to guarantee a warp-free rudder would have meant deliberately beefing up the internal structure of the rudder which would then result in an unacceptable control surface weight penalty.

Tape the rudder in the neutral position and look from the rear to verify that the trailing edge of the rudder is perfectly vertical. If it twists to one side, carefully counter twist it in the other direction and apply heat where it wrinkles using an iron as you did with the ailerons and elevator. Continue until the trailing edge of the rudder forms a perfectly centered vertical line.

Deflect rudder to maximum before gluing the hinges

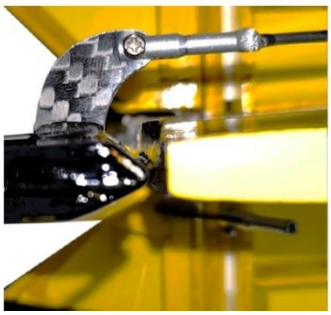


Place creased tape strips in the hinge gap

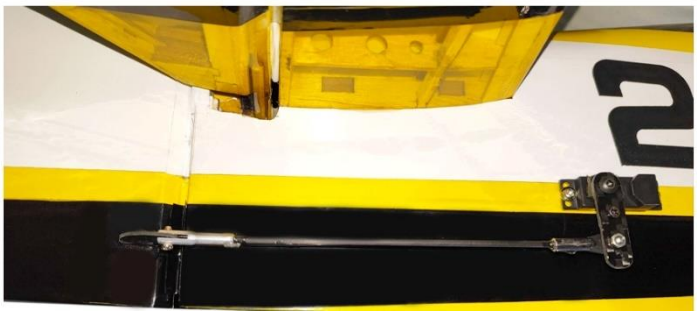
Seal the entire hinge gap while rudder is fully deflected

Take the remaining two CF pushrods (87.5mm/3.45" for the elevator and 113mm/4.45" for the rudder) and the control horns from your hardware pack to begin preparing them for installation as per what was previously done for the ailerons. Next expose the slots for the elevator and rudder control horns.

Test fit the CF elevator and rudder control horns. If the fit is too tight do not force the horns in. Instead, use a modeling knife to carefully enlarge the slots until a perfect fit is achieved. Use epoxy to glue the CF horns all the way in and ensure the horns are perfectly 90 degrees perpendicular to the control surfaces.
Proceed to install the metal clevises, plastic ball links and CF push rods in the same manner as the ailerons.
For correct linkage geometry use the PA CF servo arms and install the **elevator** and **rudder** ball links in the **inner** mounting hole of the arm. Ball links must be installed on the bottom side of the servo arm



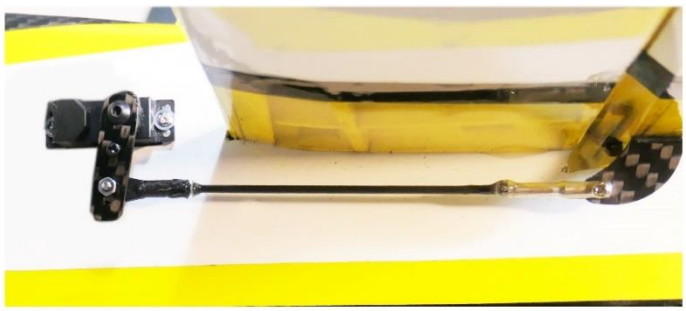
CF rudder control horn



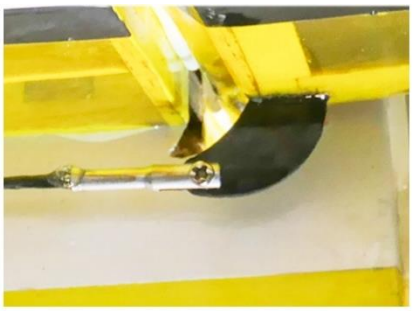
Rudder linkage geometry

CF CNC machined rudder servo arm

CF CNC machined elevator servo arm



Elevator linkage geometry



CF elevator control horn and clevis

Motor Box

When assembling your E260RR or replacing your motor box after a crash, please follow these few precaution steps to verify your motor box will withstand the high torque of the Thrust 45 Revo setup.

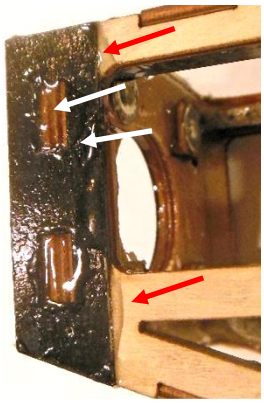
The Extra 260RR motor box is designed as a separate, replaceable part. Even though it comes pre-installed, it can be easily replaced after a crash, saving the cost of replacing the entire fuselage.

The motor box comes pre-glued, with the correct motor thrust angle built into the pre-drilled firewall.
CAUTION- The motor box has been designed, tested and drilled for the Thrust 45 Revo motor. Using a larger motor or using an improper propeller size or a prop adaptor which is out of true can lead to a motor box failure which will cause damage to your E260RR. For technical data on the Thrust 45 Revo please visit **www.thrustmotors.com** and download the data sheet.

CAUTION- The motor box is extremely robust, however, following any crash, propeller ground strike or hard landing it is essential that the cowl be removed and all joints inspected for cracks and repaired as required. **Do NOT use any imbalanced, oversized, chipped propellers or with an off-centered hub hole as excessive vibrations can lead to premature motor box failure.**

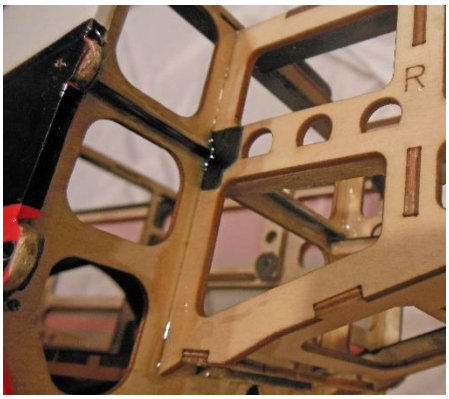
If your motor box broke due to a crash we recommend that you don't attempt to repair it as it may fail in flight. Replacement motor box is available (see replacement parts list at the end of this manual). Instructions and video on how to replace it are available on our website.

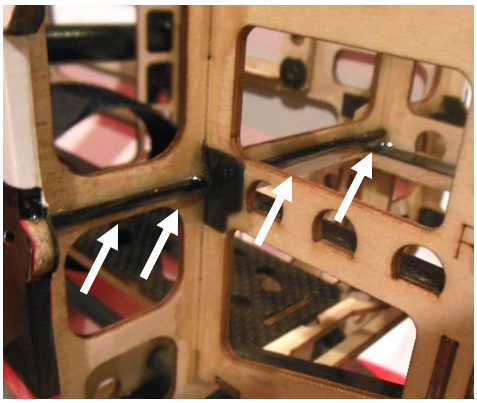
Prior to installation, inspect all pre-glued joints. If any gaps or weak bonding are found, reinforce only those areas with a small amount of quality wood glue (e.g., Gorilla/Titebond) or epoxy to ensure they can withstand the torque of the Thrust 45 Revo motor.



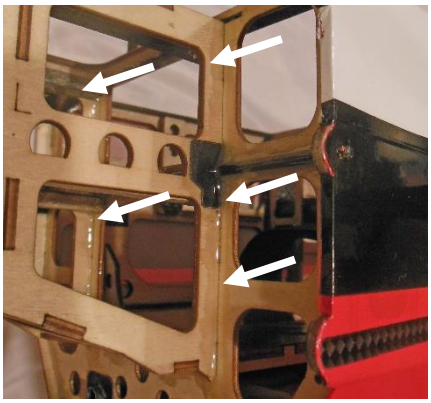
Go thoroughly over the entire motor box and verify that there are no cracks. If there is any, it must be fixed properly with epoxy.
NOTE- **DO NOT** modify the motor box or firewall. Any modification may lead to a motor box failure and will void warranty.

The fuselage front bulkhead has a CF rod reinforcement to prevent excessive flex under load. Verify it's fully covered with glue. If needed, apply additional glue preferably epoxy.





The entire CF rod should be covered with glue

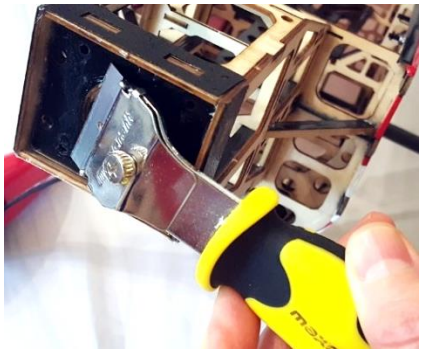


Glue along motorbox and bulkhead seams

-Images showing a different plane-

Motor and ESC Installation

Install the Thrust 45 Revo motor in front of the firewall using the supplied hardware. **DO NOT under any circumstances enlarge/modify the motor box opening or mounting holes of the motor mount**. The motorbox is pre-drilled to accommodate the Thrust 45 Revo motor, therefore, the installation is easy.



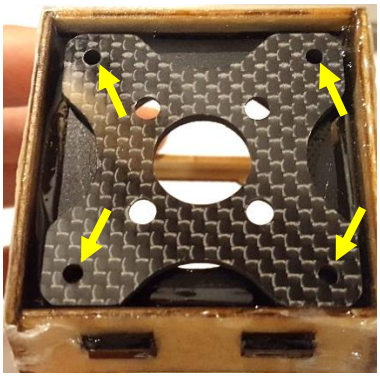
Scrape off any epoxy

Note: if there is any epoxy over the mounting plate that may prevent the X mount from sitting flush, scrape it off with a sharp blade as it may result in an incorrect motor thrust angle.

Ensure the supplied 14 mm X-mount bolts fully engage the blind nuts. Due to the thick laminated E260RR mounting plate, shorter engagement may strip the threads and lead to motor box failure under extreme thrust. We strongly advice to use temporary (blue color) Loctite on all mounting bolts. Our new and powerful T45 Revo is supplied with a CNC machined solid CF X mount for extra rigidity and weight saving.

Start by unfastening the shaft's retaining bolt, apply Loctite and refasten it firmly.
Do NOT over fasten as you may shear the bolt's head! Always use correctly sized quality tools so you don't strip the bolts.

Test fit the M3 mounting bolts into the laminated firewall to clear any debris. If the fit is excessively tight, do not use force. Use a 1/8" (3mm) drill bit to clear the holes in the firewall. **DO NOT** drill into the blind nut itself.



Now, you can test fit the same bolts in the CF X mount. If tight, use the same 1/8" (3mm) drill bit or a round file to slightly enlarge the holes.

Next, test fit the counter sink motor bolts into the X mount. The bolt heads should be level or better, slightly below the X mount surface. They must **NOT** protrude above the X mount surface. If they do, they will obstruct the X mount from a flush fit on the firewall, altering the thrust angle. Incorrect thrust angle will impair the E260RR flight performance, therefore, if needed, use a 5/16" (8mm) drill bit to slightly enlarge the pre-drilled angle. Test fit during the process.

NOTE: X mount MUST sit flush with the firewall. **Do not** attempt to use washers between the X mount and the firewall as it can lead to a failure. Apply a bit of Loctite to all the bolts and install the motor onto the motorbox.

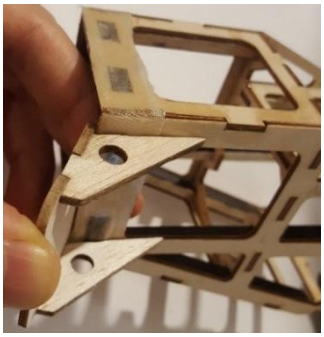
Caution: Over tightening the four motor mounting bolts may run a risk of crushing or cracking the motor mount plywood thereby weakening it. This increases the likelihood of an in-flight failure. Apply temporary Loctite to the bolts and fasten them to a point where the motor sits firmly on the motor mount. Then add a quarter turn clockwise on the bolts to secure them.

Warning: Quantum 45 EVO ESC has a selectable SBEC voltage output. It is factory set to 7.4V to fit the NXT-70HV.
If using different brand servos **verify** that the voltage is set to fit your servo brand and specs! Use the ESC instruction manual to program it.

To achieve the correct Center of Gravity, the ESC should be mounted as forwards as possible underneath the motor and in front of the cowl air cooling intake. In order to do so an extension lead must be used on the ESC Rx cable. Properly solder a short extension lead to the existing cable as you previously did with the servos, or use a pre-made extension lead. Stick a thick foamed double sided sticky tape (a few layers) underneath the ESC to soft mount, then attach it **lightly** to the motor box using zip ties with the heatsink facing downward and into the airflow (see photos). NOTE: Do not over tighten the zip ties as it will increase vibrations to the ESC

Verify the correct motor rotation direction (should spin clockwise from pilot view). If it doesn't, power down the ESC and swap the positions of any two motor cables or reprogram your Quantum ESC for reversed rotation. We recommend removing the propeller as a safety precaution before powering up the ESC.

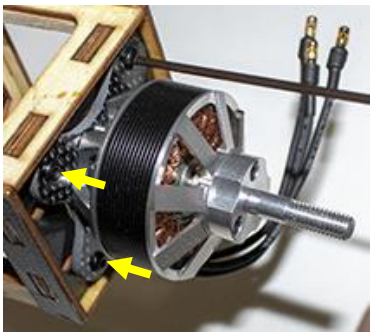
Using CA, assemble the supplied balsa air baffles and glue them to the sides of the motor box to improve airflow to cool the motor/ESC/battery.



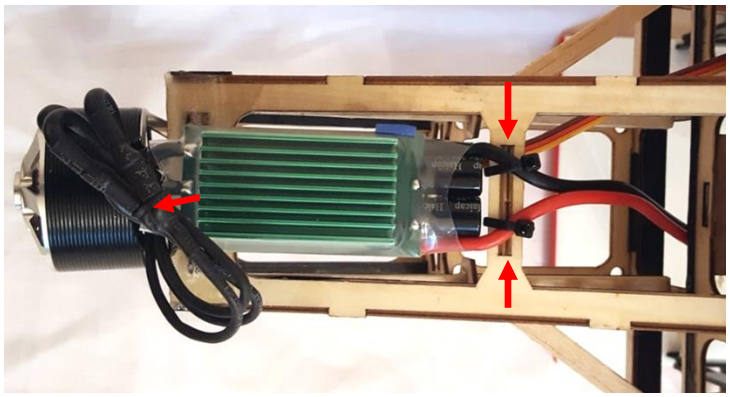
Install air baffles

Apply Loctite to the retaining bolt

Bolts head must NOT protrude



X mount bolts



ESC installation (zip ties)

NOTE: Install the motor with the cables positioned downwards

Receiver and battery Placement

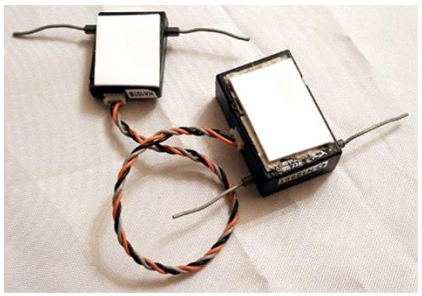
Use the installed Velcro or foamed double sided sticky tape to secure the RX on its tray. If you are using a 2.4GHz RX with twin receivers, mount the second RX away from the main RX at the inner side of the fuselage using rubberized or foam double sided sticky tape. Secure RX plugs well to avoid 2.4GHz reboots.
Note: Use only a high-quality reliable receiver.

The battery is held in place on the battery tray using the supplied Velcro strap (there are small protrusions on the underside of the battery tray to prevent the Velcro from sliding back and forward).To prevent the battery from sliding on the CF tray you can stick a small piece of foamed double sided sticky tape underneath the battery and place a piece of rubber foam on top of the battery, then wrap and fix it with the Velcro. To avoid the battery from sticking to the CF tray, "weaken" the adhesive by sticking some dust to it.

Another two ways to prevent the battery from sliding would be: A. cut two pieces of Velcro (only from the plastic hook type) and stick one underneath the pack and one on the tray itself. Then wrap and strap it down with the Velcro and foam as above. B. wrap a thick rubber band over your battery and continue as the above. You may wish to trim the battery wires to reduce weight.

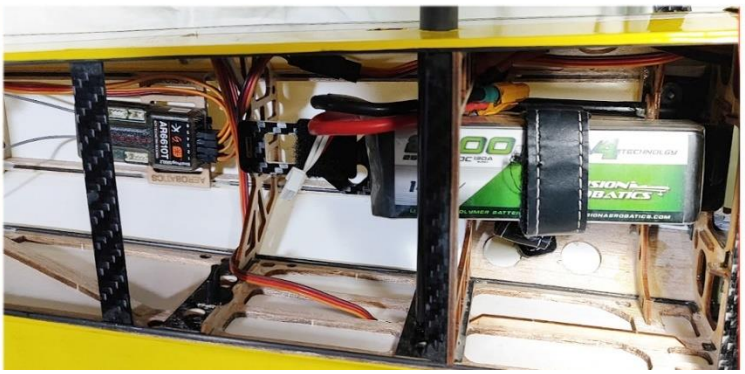
Tip: Once you set up the exact CG per the manual, use a piece of sticky tape or a marker to mark the position of the battery (rear end) as a reference point when swapping packs between flights.

Batteries can be mounted flat or upright



Thick double sided Sticky tape

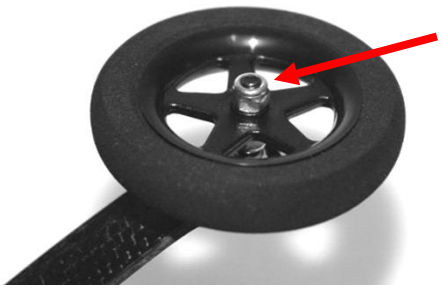
Spektrum 2.4GHz receiver installation



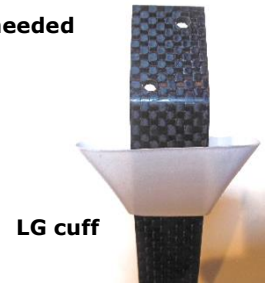
Battery pack

Landing Gear struts (LG)

Before installing the wheels, fit the LG cuffs onto the struts and leave them loose for now (they will be installed at a later step).
Install each wheel onto the CF landing gear strut using the black M3x20mm bolt/axle in the pre-drilled hole. The order of hardware is: Bolt/ Black Washer/CF gear strut/ Two lock nuts /Wheel /Lock Nut.
The wheel should be captured between the two lock nuts tight enough to still allow free rotation of the wheel. If the nuts are too loose the wheel is likely to wobble and is more prone to damage or scuff the wheel pants and if too tight there will be excessive loads on the LG during landings. Verify that the tires are firmly glued to their rims. Apply a little bit of thin CA around the perimeter of the rims if required to keep them firmly in place. You may use temporary Loctite on the outer nut to avoid it from fastening or loosening after time.



Loctite if needed



LG cuff

Wheel Pants

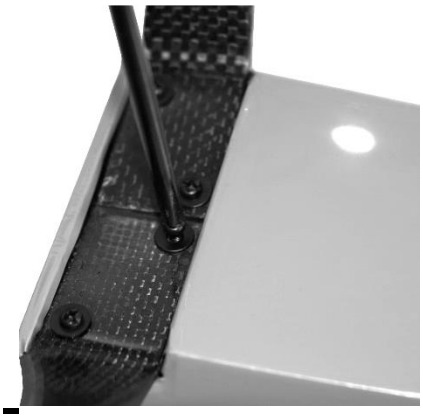
First, differentiate between the left and right hand side of the LG struts by placing them on the fuselage LG plate mounting holes. Position the fiberglass wheel pants over the wheel at the height you desire. If flying off grass, mount the pants higher leaving more wheel exposed and if flying on a sealed surface, the wheel pants can sit lower. Once satisfied with the position, mark the location for the self-tapping retention screw (2.3x10mm screw with soldered washer) of the wheel pant and drill, using a 1.5mm (1/16") bit. Attach the wheel pant to the landing gear strut using the self-tapping screw but DO NOT apply excessive force while doing so as this risks shearing the screw's head off. Rather "tap" the screw in gradually, if it becomes too tight remove it and enlarge the hole slightly. Take care that the wheel pants are both mounted at the same angle and height; we made a perfect recess to make it extremely easy for you.
Note: if the LG strut doesn't fit into the recess on the wheel pant then light filing of the strut sharp edges may needed.



Installing the Landing Gear

Install the LG onto the fuselage using M3x10mm black bolts and washers. You may apply temporary Loctite to the bolts.
Note: if the LG struts hit the balsa on the sides of the fuselage, use a sharp modeling knife to trim the balsa keeping the gap with the LG to minimum.

M3x10mm Mounting bolts



Mount the LG

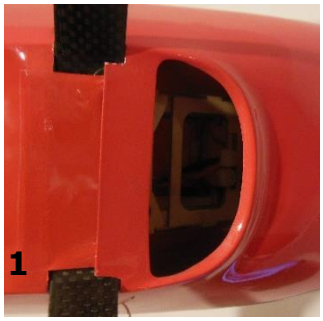
Cowling Attachment

The fiberglass cowl is attached using four self-tapping screws (2.3x10mm with soldered washer) screwed into the carbon fiber mounting lugs. Fit the cowl with a small overlap past the fuselage front bulkhead (over the hatch) and reasonable gap with the spinner's backplate so it won't rub against the cowl front ring. The bottom side of the cowl requires two notches to be filed in to clear the landing gear struts.

Start by temporarily fitting the cowl in and mark the locations of the landing gear struts where they obstruct the fit. Remove the cowl and carefully file or grind the notches until the struts no longer obstruct the fitting of the cowl. Prior to fitting the cowl it is required to install the motor, prop adapter and to have the hatch fitted to the fuselage. Once cowl is fitted, install the spinner backplate and align it perfectly with the cowl front ring (photo #4). This ensures that the location of the cowl could be adjusted for a precise fit.
Mark the center of the mounting tabs onto pieces of masking tape as shown in photo #2, peel the tape partially back and fit the cowl.

The cowl must be fitted so that when looking from the front, the motor shaft will protrude through the cowl exactly at the center of the opening with a slight friction free gap between the spinner backplate and the front of the cowl.
Press down on the top rear section of the cowl to minimize the gap between the hatch and the cowl. Align the painted cowl with the fuselage color scheme on both sides. When you are happy with the fit, hold the cowl firmly in place using tape and lay the pieces of tape you marked previously back onto the cowl. These markings identify the location of the mounting lugs underneath the cowl, allowing you to drill, using a 1.5mm (1/16") drill bit, through the cowl and into the mounting lugs.
After drilling, remove the cowl and screw the four 2.3X10mm self-tapping screws into the drilled holes in the same manner you did with the wheel pants. You may remove the screws and apply a drop of thin CA into each of the holes to set the thread. Once the CA cured reinstall the cowl.

Tip: If the cowling fits too tight, inspect the inner lip of the cowl for any bulging epoxy and sand it down.
It is easier to fit the cowl first with the hatch off, then fit the hatch under the cowl overlap, adjust and continue the procedure of final installation of the cowl.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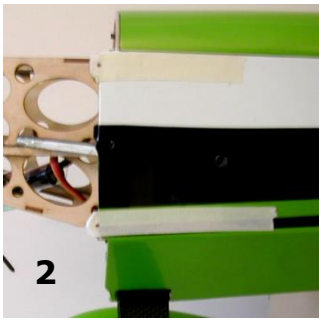
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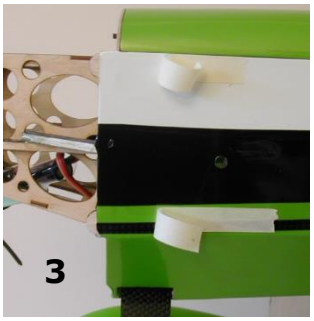
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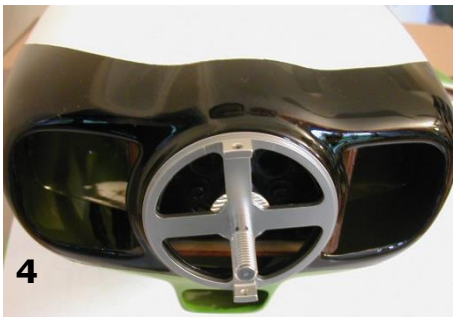
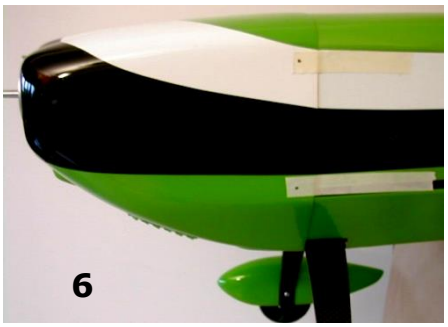

4

Note: With the air baffles glued in place, you would need to tilt the cowl on its side in order for it to fit.
Then fit the top side of the cowl over the hatch first by tilting the hatch downward under the cowl overlap then straighten it.

Now, guide the bottom of the cowl with your finger (through the bottom vent opening) over the bulkhead.


5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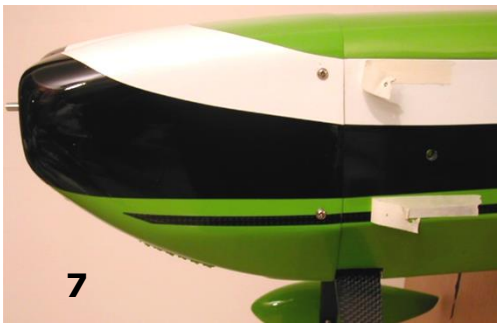
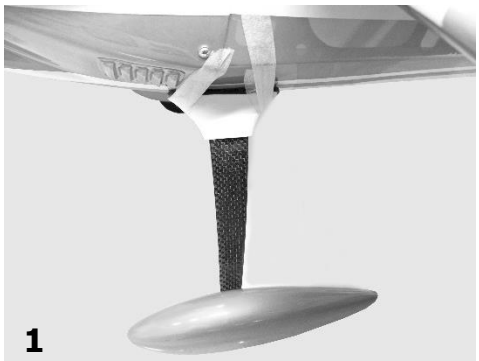

7

Apply the supplied decal strips on both sides of the cowling to match the fuselage trim.

Press the cuff against the fuselage minimizing the gap and mark the lower end of the cuff on the LG strut with a small piece of sticky tape. Then stick a thick foamed double sided sticky tape from your mark up and press the cuff against it while minimizing any gap between the cuff and fuselage. Do the same with the other cuff. If needed, you may trim the cuffs with scissors to a perfect fit with the fuselage.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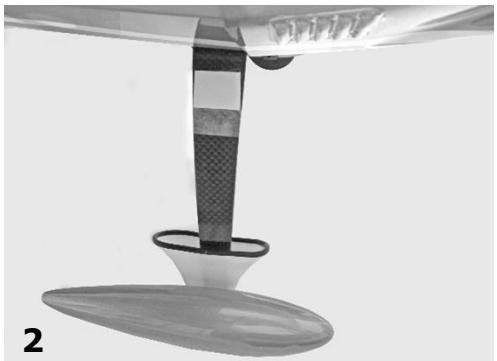
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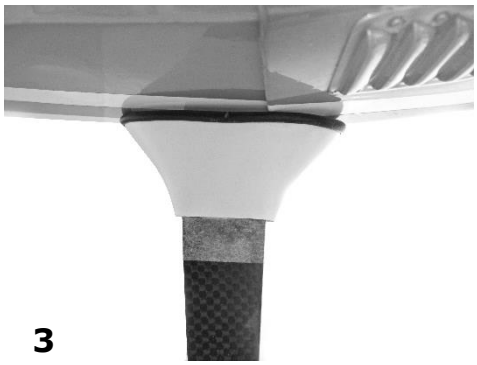

3

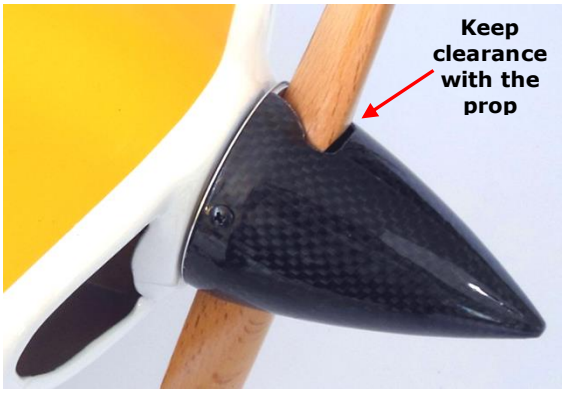
Note – E260RR is not supplied with the black rubber tube

Propeller, spinner and prop adapter installation

At this stage mount the propeller and if you are using a spinner, mount the cone as well. We recommend using the pre-cut 1.8" lightweight PA Carbon Fiber spinner (PA code # AC-2048) that perfectly matches the E260RR cowl shape, to retain optimum CG and avoid carrying unnecessary weight. It's recommended to use temporary Loctite on the propeller adaptor mounting bolts.

Note: While fastening the propeller nut, hold the prop and spinner backplate firmly by hand to prevent it from slipping. Don't use tools as you might deform it.
Caution-Wood propellers require that the nut be re-tightened after the first few flights.
Failing to do so may result in loss of propeller during flight.

Note: Vox propellers are factory-balanced and do not require any balancing. If using a different brand propeller it is important to accurately balance your propeller prior to installation as poorly balanced propellers are inefficient and cause vibrations which are detrimental to your model and motor. Use only propellers that are adequately sized to be within the specified limits of your motor.



If your Vox prop fits tight (we keep a tight tolerance for accuracy) use a fine round file (smaller diameter than the hub center hole) to very slightly file it all around and test fit it. It should fit snug.

APC propellers are not recommended for the E260RR due to the higher amps drawn and vibration which can lead to a motorbox failure or damage to your gear.

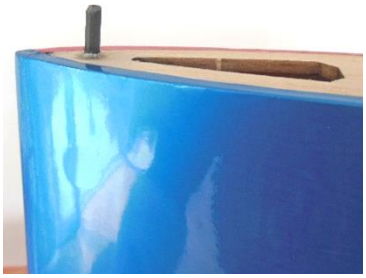
If your CF spinner cone wobbles while spinning, it is more likely that the cone is not sitting flush with the backplate. There are a few potential causes for this:

1. The mounting bolts compromise the flush fit. In this case, use a fine rounded file to slightly file the holes in an oval shape towards the front of the cone. Filing towards the rear will weaken the cone.
2. The prop blade openings are undersized and make contact with the propeller. Enlarge the openings with a file to allow an even gap around the propeller. **Caution:** Thrust 45 Revo is extremely powerful, therefore larger clearance is required between the cone and the propeller blades which will be under high flight loads. Failing to do so will result in a cone popping off during flight.
3. Bulging epoxy on the inner lip which should be sanded down

If the above were done and the cone still wobbles, unfasten the bolts and rotate the cone 180 degrees and re-fasten it. for a fine adjustment you may unfasten one bolt, counter adjust the cone and re-fasten.
NOTE: fasten the mounting bolts firmly with Loctite.

Wing Attachment

Note: Due to the manufacturing tolerance of the CF wing tube and sleeves, you may experience a tight fit with difficulty sliding the wing onto the wing tube. Tight fit may create a bit of a gap between the wing root and the fuselage. In a case of a tight fit slightly sand the CF wing tube with fine sandpaper, wipe off the carbon dust using a wet paper towel and test fit again. Repeat this process until you obtain a perfect fit.
Do not attempt to force the wings onto the wing tube as this may cause damage.



The wings must initially be installed in this sequence: First insert the CF wing tube all the way into the sleeve of one wing panel until it reaches the stopper. Next fit the wing to the fuselage, taking care to align the CF anti-rotation pins when about to insert them into the fuselage.
If resistance is felt, do not attempt to force the pins in. Instead, remove the wing and lightly sand the ends of the anti-rotation pins (taper them). Avoid enlarging the receptacle holes in the fuselage as loose fit may result in incorrect wing incidence.

Due to the large size of the wing roots you may need to wobble the wing panel, in order to fit the two anti rotation pins into the fuselage. If after you fit one wing panel the anti rotation pins of the other panel would not align easily, remove the wing panel and install the other wing panel first.

Prior to installing the nylon wing bolt, dip the tip of the bolt into some silicone grease to add lubrication (otherwise the bolt may have tight fit and could sheer off if excessive force is exerted). If, for any reason the bolt still feels tight to fit, do not

force as there could be dirt or corrosion build up on the threads of the blind nut. Instead, remove the bolt and insert a 4.0mm metal bolt to "clear" the blind nut threads. Secure the wing in place with the nylon wing bolt but don't over tighten the bolt and take care not to cross thread the bolt.

Next install the other wing panel onto the CF wing tube. If for the reasons below (*) there is a gap between the wing and the fuselage, remove the wing and carefully sand short one end of the CF tube slightly and refit the wing. Do not attempt to force the wing onto the wing tube. Secure the wing in place with the other nylon wing bolt.
Note: If the wing panels have a tight fit over the wing tube then chances are high for a gap between the wing roots and the fuselage. If so lightly sand down the wing tube to allow an easy fit which will correct it.

(*) A few factors need to be taken into account when inspecting a gap at the wing root. Firstly, weather-related-shrinkage of the wood and the covering may cause a gap that is unavoidable. Secondly the Extra 260RR has a very long wing root, and as such production tolerance allows for some gap to be present.
If a gap is present simply follow the step above and sand down the wing tube to improve the fitting.

You may notice a small gap between one wing panel and the fuselage, while the other side fits snugly. This is typically due to normal manufacturing tolerances in the wing tube length and is within acceptable limits. To correct this, simply trim a small amount from one end of the tube using a Dremel cut-off disk or a file until both panels fit evenly and snugly.

Center of Gravity (CG)

The E260RR was designed with a very narrow CG range to attain the best flight performance. Using the iPAs® setup we have listed; you should end up with a center of gravity very close to the ideal position. Fine adjustments should be made by sliding the battery fore or aft on the battery tray and into the cowl. It is **very important**, regardless of chosen setup, to check your model's center of gravity (on the bench) as accurately as possible as any small deviation will dramatically affect the flight performance. Setting the CG precisely is one of the crucial points to have a good flying plane. Take your time to set it right. **NOTE**: While setting up the CG, the plane should be placed upright with **ALL** the gear installed including wheel pants, hatch, prop and spinner.

The E260RR is an excellent precision aerobatics sport flyer and an amazing slow 3D performer; therefore, in order to achieve the best of both worlds we spent many hours testing the CG to find the "sweet spot" that offers a peak in overall performance. We found the "sweet spot" CG with the optional Vortex Generators installed (item code #AC-2194) to be the fine line which allows a good blend of both precision and 3D. With this CG the plane is neutral and axial with no KE coupling.

If you find the plane too neutral for you or it's a windy day, you may choose to set it **slightly** forward (96mm) as it offers a better wind penetration in windier condition and will feel like it "flies on rails". Once you get used to the plane try the "sweet spot" to get better overall performance.

The CG "sweet spot" is 103mm measured aft from the leading edge at the wing root.

Tip: CG machine such as the Multiplex CG gauge is highly recommended to obtain an accurate set-up. The fingers method is far from being precise. Place your plane on the CG machine and hold a micro spirit level above the stabilizer while supporting the tail from underneath with your hand. Do not rest the spirit level on the stabilizer, use it only as a guide. Remove the spirit level and slowly move away your hand while observing the tail.

If it drops/lifts it means the tail was not leveled. Adjust the battery position on the tray until the tail remains still when you take your hand away. Adjust the battery position on the CF tray and into the cowl until you reach the desired 103mm CG.

104.5mm CG was great for 3D but with more sensitive pitch, therefore, better used in a calm and stable weather.
E260RR CG range: 96-104.5mm

Level the tail with a micro spirit level

Remove the spirit level and watch the tail

Transmitter Setup

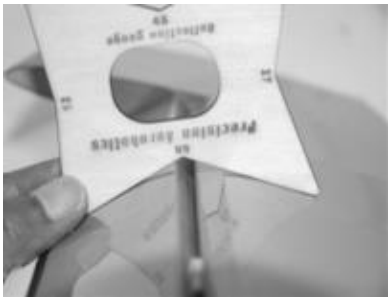
As precaution, remove **all servo arms and propeller prior to initially powering up your radio system.** This prevents servos that may be initially reversed or off center to rotate beyond the control surface's deflection angles and motor to accidentally start up. Once powered up reset servos to neutral and reinstall the servo arms. Move TX sticks to verify that the control surfaces are moving in the intended directions and if not reverse rotation via the TX.

With all the channels verified, adjust the sub-trim to obtain the neutral position for all control surfaces. If you have followed the control linkage set up in the earlier sections, the sub-trims will be very minimal. Adjust the servos travel to ensure none of the servos are over traveling causing binding in the linkages.
Note that binding linkages will overload the servos which will overheat the BEC and risk a possible shutdown.

Control Setup

Using the supplied deflection gauge, we suggest setting up your control surfaces deflection in accordance with the following table. Use these as a starting point and adjust them to suit your personal flying preferences.

All the figures in this table are approximated		
Control surface	**High rates**	**Low rates**
Ailerons	Approx 45° Up and Down Expo: 70%	12° Up and Down Expo: 30%
Rudder	Left and Right (maximum) Expo: 70%	25° Left and Right Expo: 35%
Elevator	approx 50°-55° Up and Down Expo: 70%	12° Up and Down Expo: 35%



Optional Spoilerons: Set 10°-12° of UP and Down ailerons deflection on a 3 position switch such as F. Mode switch. The center position of the switch is where the ailerons are neutral/0°. Upward deflection of the ailerons, in accordance to the plane's position, (i.e. Spoilerons) will allow faster descending "Elevators", spins and slower high AOA harriers. Spoilerons were great for elevators and harriers since they allowed higher propeller rpm which kept the plane more flat (during the elevator) and made high AOA harriers slower and more stable.

Initial Flight timer settings

Unlike older lithium polymer (LiPo) packs where a drop of performance is usually noticed at the last quarter of the flight warning the modeler to land, PA newer high discharge lithium polymer packs have the ability to sustain a higher and constant voltage which results in consistent performance throughout the flight until LVC (Low Voltage Cutoff) is being activated. As such there may be instances that a modeler may accidentally prolong the landing and experience an unwanted LVC or in the long term, encounter battery damage due to over discharging, therefore, we recommend setting the flight timer as a matter of good practice. As flying style affects current consumption and flight duration may vary from one modeler to another, we suggest to initially set your flight timer at a very conservative setting. Then gradually adjust the flight duration after analyzing the battery capacity consumption over the next few consecutive flights. The mAh consumption can be observed via your fast digital charger.

If using our recommended iPAs® setup you may start by setting up your TX timer to 5:30 minutes and adjust it as explained above. Typically, you can expect anywhere between 6-8 minutes of flight duration.

THE Maiden flight! It is vital that you choose a proper day for the maiden flight. The combination being nervous flying a new plane along with the fact you are not familiar with the plane can lead to mishaps. Choose a good calm non-gusty day (about 0-8 knots wind). It may be early morning or late evening. It is vital to do some good bench tests (outdoor) pointing the propeller away from you or anybody around and yank the throttle from min to max power a few times. That is a harsh test that will apply a lot of loads but will verify the prop adaptor is firmly installed (otherwise it may fly off) and that the gear is working properly and propeller is balanced (no vibrations!!).

Check servos and linkages for proper movement before takeoff.

Flight Trimming

On takeoffs the Extra 260RR will be airborne after a very short run, therefore, let it gain some air speed to allow airflow over the wings before trimming. After a few seconds of straight and level flight, on **¾ throttle**, it will balance itself and then you may adjust the TX trims. CG is a critical factor, therefore, make sure to set it up **exactly** as stated on this manual, otherwise the plane will not fly true.
NOTE: If you find yourself constantly trimming the plane during first flights and your CG was set correctly and the weather is calm (no wind gusts) you should check the control surfaces centering on the bench using the TX. If a control surface overshoots the center, you should inspect the linkage to be bind free. Detach the servo arm and operate the control surface manually. If it slightly binds, it is most likely that the clevis fork is clamped over the control horn. To rectify, unfasten the bolt, slightly widen the clevis fork with a flat screwdriver and refasten the bolt lightly with Loctite. Also, make sure the ball link is installed on the **bottom** side of the servo arm.

Applying the Decals

As a final touch, decorate your Extra 260RR using the supplied PA decals.

Carbon Fiber Vortex Generators installation

If you purchased the optional CF Vortex Generators (PA Item code # AC-2194) designed for the Extra 260RR, now you can install them. The CNC machined CF Vortex Generators will enhance your Extra 260RR flight characteristics in slow high AOA flight, 3D and Knife Edge tracking and will add the funky look to your plane. We highly recommend them to complete the aerodynamic design of the Extra 260RR in order the get the best performance. More info about the VGs can be found on www.PrecisionAerobatics.com

The installation of the Vortex Generators (VGs) is very simple since the slots are pre cut. However, since the top side covering is solid it requires a certain technique as follows:

1- Start by placing the wing up side down (translucent covering facing up) on a flat protected surface to avoid scratches to the covering.
2- Using a heated paperclip or a sharp modelling knife reveal the pre cut slots on the bottom side of the wing (translucent covering).
A powerful flashlight is very helpful locating the slots through the opaque covering.
3- Use a sharp long pin or a sharpened paper clip to pierce the upper slots through the bottom side slots that you just revealed. Pierce three to four holes through the entire length of each slot. Since this is done through the translucent covering it is very easy to pierce at the correct location of the slots without causing any cosmetic damage. Flip the wing to its other side (solid covering facing up). Now looking at the pin holes you've pierced you can see the exact locations of the slots. Reveal the slots completely using a heated paperclip or a modelling knife.
4- Roughen the gluing tabs of all the VGs using a fine file or sand paper similar to what you've done previously with the control horns.
5- Perform a dry test fit of the VGs into the slots and if you find a very tight fit DO NOT force them in as you may damage the balsa sheeting. Instead, do one of the two things: 1 – you may slightly sand down the tabs to be thinner or 2- use a sharp modelling knife to slightly enlarge the slots. Do this with great care not to damage.
6- Once you are satisfied with the fit remove them and apply a layer of 30 minutes epoxy over the tabs (both sides) and inside each slot. Make sure the entire base of the VGs is covered with epoxy and once fitted in leave a bit of epoxy excess which will create a solid base and seal the gap with the wing skin. Make sure to push them all the way in so no gap is present.
7- Now verify from the front of the leading edge that each VG is perfectly perpendicular to the wing surface (90 degrees) and if not use a sticky tape (preferable paper-sticky tape) to correct the angle into a perfect 90 degrees and let it set before removing the tape.

DO NOT use CA as it is not forgiving and will not allow you enough time to fit the VGs properly and verify their angle. CA may set before the VGs are fitted all the way in which means a permanent damage. It will also not seal the gap and may cause some stains in the covering surface.

Following the steps in this sequence is a guaranteed method to success!

Note: Keep plane under cover and away from direct sunlight when not flown. That is to avoid the covering from fading, damage to canopy, wrinkles and warp of parts. Do not keep it in the car or garage as temperature rises affect the plane.

Extra 260RR Replacement parts list

We believe that you will enjoy your Extra 260RR for a very long time. In the event of inevitable mishaps and broken parts, all you need to do is to order replacement spare parts to restore your Extra 260RR and be back in the air.

AC-2014	EXTRA 260RR CF main landing gear	AC-2008RR	EXTRA 260RR fuselage
AC-2019	EXTRA 260RR Tail wheel assembly	AC-2015RR	EXTRA 260RR Tail Feathers
AC-2016RR	EXTRA 260RR canopy/hatch	AC-2366	Solid bright yellow covering 60x200cm roll
AC-2013RR	EXTRA 260RR Fiberglass cowl	AC-2024	Solid red covering 60x200cm roll
AC-2058	EXTRA 260RR fiberglass wheel pants set	AC-1651	Red translucent covering 60x200cm roll
AC-2048	EXTRA 260RR carbon fiber spinner 1.8”	AC-1652	Yellow translucent covering 60x200cm roll
AC-2028RR	EXTRA 260RR carbon fiber wing tube	AC-1654	Solid white covering 60x200cm roll
AC-2017	EXTRA 260RR Pair of wheels w/ axles	AC-2021	Solid black covering 60x200cm roll
AC-2018RR	EXTRA 260RR Motor mount	AC-2342	Thrust 45 Revo motor shaft
AC-2029RR	EXTRA 260RR CF control horns	AC-2360	Thrust 45 Revo propeller adapter
AC-2194	EXTRA 260RR vortex generators set	AC-1888	Thrust 45 Revo outrunner brushless motor
AC-2253	PA Premium Oversized Wing Bags	AC-2189EVO	Quantum Evo 45A ESC
AC-2320RR	EXTRA 260RR balsa air baffles set	AC-2395	EXTRA 260RR iPAs Drive
AC-2011R	EXTRA 260RR right wing (pilot view)	AC-2396	EXTRA 260RR iPAs Pro
AC-2009RR	EXTRA 260RR left wing (pilot view)	AC-2397	EXTRA 260RR iPAs Xtreme
AC-2012RR	EXTRA 260RR wings set	AC-2035-M	EXTRA 260RR iPAs Pro Minus airframe

Official Academy of Model Aeronautics National Model Aircraft Safety Code

1. A model aircraft shall be defined as a non-human-carrying device capable of sustained flight in the atmosphere. It shall not exceed limitations established in this code and is intended to be used exclusively for recreational or competition activity.
2. The maximum takeoff weight of a model aircraft, including fuel, is 55 pounds, except for those flown under the AMA Experimental Aircraft Rules.
3. I will abide by this Safety Code and all rules established for the flying site use. I will not willfully fly my model aircraft in a reckless and/or dangerous manner.
4. I will not fly my model aircraft in sanctioned events, air shows, or model demonstrations until it has been proven airworthy.
5. I will not fly my model aircraft higher than approximately 400 feet above ground level, when within three (3) miles of an airport without notifying the airport operator. I will yield the right-of-way and avoid flying in the proximity of full-scale aircraft, utilizing a spotter when appropriate.
6. I will not fly my model aircraft unless it is identified with my name and address, or AMA number, inside or affixed to the outside of the model aircraft. This does not apply to model aircraft flown indoors.
7. I will not operate model aircraft with metal-blade propellers or with gaseous boosts (other than air), nor will I operate model aircraft with fuels containing tetranitromethane or hydrazine.
8. I will not operate model aircraft carrying pyrotechnic devices which explode burn, or propel a projectile of any kind. Exceptions include Free Flight fuses or devices that burn producing smoke and are securely attached to the model aircraft during flight. Rocket motors up to a G-series size may be used, provided they remain firmly attached to the model aircraft during flight. Model rockets may be flown in accordance with the National Model Rocketry Safety Code; however, they may not be launched from model aircraft. Officially designated AMA Air Show Teams (AST) are authorized to use devices and practices as defined within the Air Show Advisory Committee Document.
9. I will not operate my model aircraft while under the influence of alcohol or within eight (8) hours of having consumed alcohol.
10. I will not operate my model aircraft while using any drug which could adversely affect my ability to safely control my model aircraft.
11. Children under six (6) years old are only allowed on a flightline or in a flight area as a pilot or while under flight instruction.
12. I will have completed a successful radio equipment ground-range check before the first flight of a new or repaired model aircraft.
13. I will not fly my model aircraft in the presence of spectators until I become a proficient flier, unless assisted by an experienced pilot. At all flying sites a line must be established, in front of which all flying takes place.
14. Only personnel associated with flying the model aircraft are allowed at or in front of the line. In the case of airshows demonstrations straight line must be established. An area away from the line must be maintained for spectators. Intentional flying behind the line is prohibited.
15. I will operate my model aircraft using only radio-control frequencies currently allowed by the Federal Communications Commission (FCC). Only individuals properly licensed by the FCC are authorized to operate equipment on Amateur Band frequencies.
16. I will not knowingly operate my model aircraft within three (3) miles of any preexisting flying site with out a frequency-management agreement. A frequency-management agreement may be an allocation of frequencies for each site, a day-use agreement between sites, or testing which determines that no interference exists. A frequency-management agreement may exist between two or more AMA chartered clubs, AMA clubs and individual AMA members, or individual AMA members. Frequency-management agreements, including an interference test report if the agreement indicates no interference exists, will be signed by all parties and copies provided to AMA Headquarters.
17. With the exception of events flown under official AMA rules, no powered model may be flown outdoors closer than 25 feet to any individual, except for the pilot and located at the flightline.
18. Under no circumstances may a pilot or other person touch a model aircraft in flight while it is still under power, except to divert it from striking an individual.
19. Radio-controlled night flying is limited to low-performance model aircraft (less than 100 mph). The model aircraft must be equipped with a lighting system which clearly defines the aircraft's attitude and direction at all times.
20. The operator of a radio-controlled model aircraft shall control it during the entire flight, maintaining visual contact without enhancement other than by corrective lenses that are prescribed for the pilot. No model aircraft shall be equipped with devices which allow it to be flown to a selected location which is beyond the visual range of the pilot or any device.
21. All model flying shall be conducted in a manner to avoid over flight of unprotected people. safety or lines excluding takeoff and landing, the pilot's helper(s)