



1.2m Sbach 342

By RC Factory



Specifications

Wing span – 48" / length – 48" / AUV 24oz
250 - 450w outrunner motor (70g – 100g)
30 - 45 amp ESC / 3s 1600 – 2500mAh battery
4 ch radio / 4x Metal Gear 14g – 18g servos
11 x 4.7 – 12 x 5 prop

USA Distributor

Twisted Hobbys

www.twistedhobbys.com



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TWISTED HOBBYS

Website: www.twistedhobbys.com – email: sales@twistedhobbys.com

Thank you for your purchasing a Twisted Hobbys' model. Please read through the entire manual before beginning to build this model. If you have any questions please contact us at the above indicated email address.

WARNING INFORMATION

This R/C Aircraft is not a toy! Read and understand the entire manual before assembly. If misused, it can cause serious bodily harm and property damage. Fly only in open areas, and AMA (*Academy of Model Aeronautics*) approved flying sites. Do not overlook the warnings and instructions enclosed or those provided by other manufactures' products. If you are not an experienced pilot and airplane modeler you must use the help of an experienced pilot or an authorized flight instructor for the building and flying of this model aircraft.

These instructions are suggestions only on how to assemble this model. There are other ways and methods to do so. Twisted Hobbys has no control over the final assembly, the materials and accessories used when assembling this kit, or the manner in which the assembled model, installed radio gear 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. By the act of using this user-assembled product, the user accepts all resulting liability. In no event shall Twisted Hobbys' liability exceed the original purchase price of the kit.

SHIPPING DAMAGE

Twisted Hobbys checks each plane before shipping 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 the model. Inspect the components of this kit upon receipt. If you find any parts damaged or missing, contact Twisted Hobbys immediately. We will not accept the return or replacement of parts on which assembly work has already begun. Twisted Hobbys reserves the right to change this warranty at anytime without notice.

OUR MISSION

To provide the best products and service to our customers at the lowest prices possible. We take great pride in our company, our commitment to customer service and in the products we sell. Our online store is designed to provide you with a safe and secure environment to browse our product catalog.

Thank you for shopping with Twisted Hobbys!

SAFETY NOTES

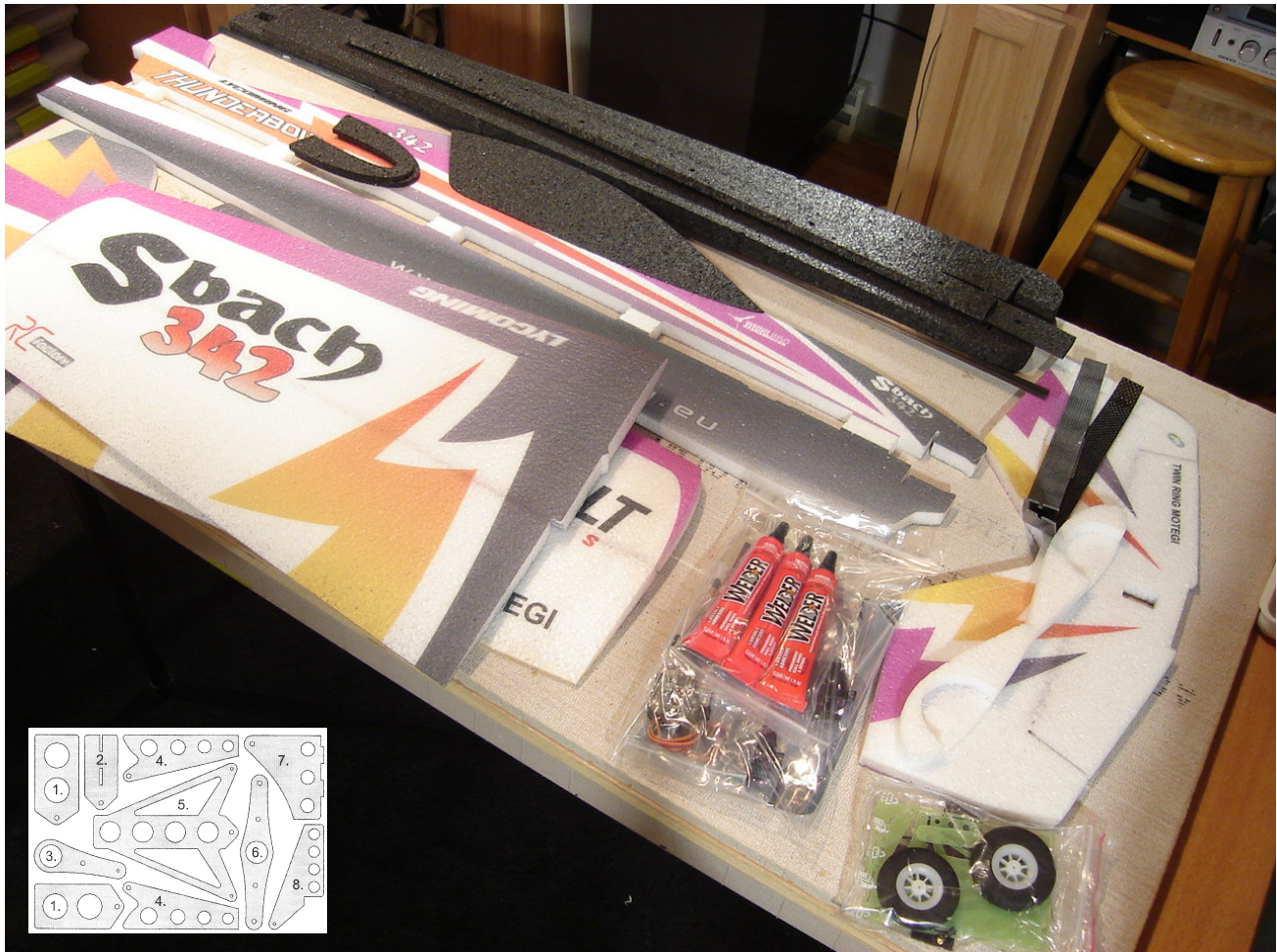
- ✓ Before assembling and flying this model, read carefully any instructions and warnings of other manufacturers for all the products you installed or used on your model, especially radio equipment and power source.
- ✓ Check thoroughly before ever flight that the airplanes' components are in good shape and functioning properly. If you find a fault do not fly the model until you have corrected the problem.
- ✓ 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.
- ✓ Youngsters should only be allowed to assemble and fly these models under the instruction and supervision of an experienced adult.
- ✓ Do not operate this model in a confined area.
- ✓ Do not stand in line with, or in front of a spinning propeller and never touch it with any object.

IMPORTANT: PRIOR TO ANY ASSEMBLY

Please Note: after removing kit from shipping box, lay each piece flat on a hard surface, this will allow the airframe to straighten out if lightly bent from shipping. Do not worry since EPP is very pliable and can be bent back if out of shape.

KIT CONTENTS

some items shown are optional



RC Factory 1.2m Sbach

standard parts list:

- 1x - fuselage
- 1x - canopy
- 1x - backbone
- 1x - elevator and rudder
- 2x - side force generators
- 1x - each left & right wing w/aileron
- 1x - each left & right landing gear strut
- 2x - wheel pants
- 2x - fuselage stiffening truss
- 2x - 1x3x1000 fuselage carbon strip
- 2x - 1x5x1000 wing carbon strip
- 1x - elevator control rod support tube
- 1x - 1x5x245 elevator carbon strip
- 1x - 1x3x245 elevator carbon strip

hardware packet:



OPTIONAL PARTS



Power Combo Kit

(Matched by Twisted Hobbys)

includes:

- 1x – 78-100g 1000-1100kv Outrunner Motor
- 1x – ESC 45A Twisted Hobbys' Series
- 4x – Metal gear MG65 14g Servos
- 1x – thin electric prop 11x5.5 (similar to APC)



Micro Receiver

Max Recommended Weight: 9.8g

Minimum of 4 channels required

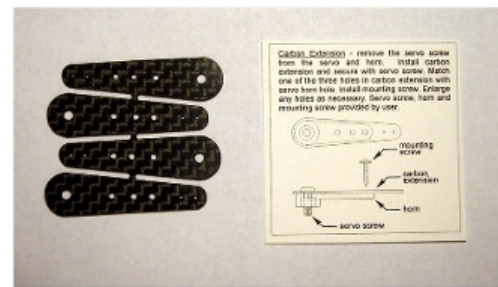


Perfect choice for building and repairing your Twisted Hobbys EPP planes! This is the only adhesive you will ever need. Welder virtually bonds anything to anything! Clear, heavy-duty, flexible and water-proof when dry. Use indoors or out. (1) 1 oz tube



CA and Kicker

Various thickness CA glues and Activator available from Twisted Hobbys'

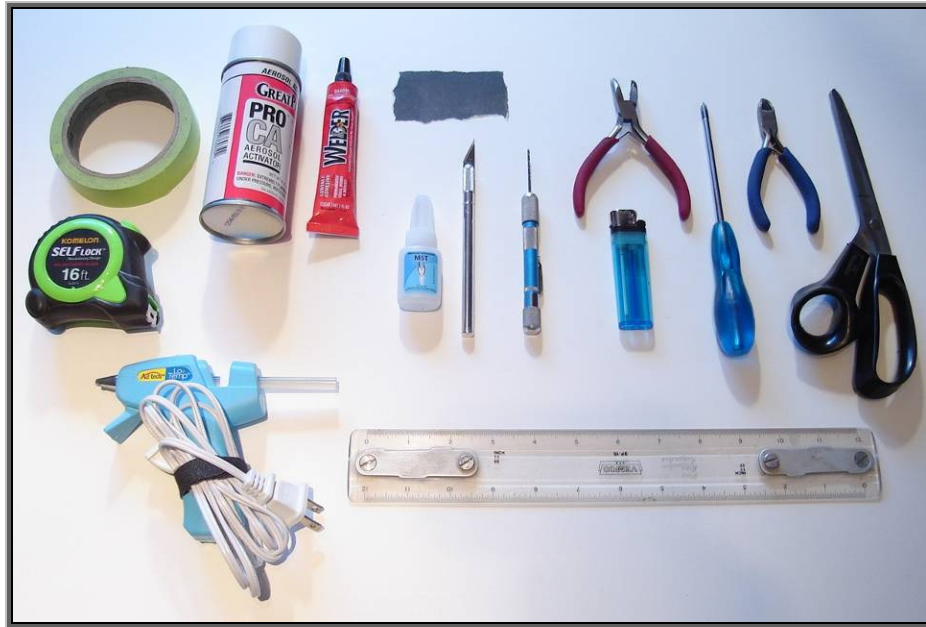


Carbon Fiber Extension Arm Kit

High-Strength Light Weight Rigid Carbon Fiber Extension Arm Kit. Excellent tensile strength and rigidity properties you can count on. Perfect choice for maximizing control surfaces deflection with out the added weight and looking good while doing so. Easy to install, each horn matches perfectly with Twisted Hobbys and TowerPro servo arms.

Note: many of these "optional parts" shown or similar items, may be available from the Twisted Hobbys' web store.

TOOLS & ADHESIVES NEEDED



- Tape Measure and Ruler
- Lighter
- Small drill bits
- Welders Glue
- Hobby Knife w/new Blade
- Needle Nose Pliers
- Wire Cutters
- Low Temp Hot Glue Gun
- Course Sand Paper
- Scissors
- Small Phillips Screw Driver
- CA and Activator

THE BUILD

CONSTRUCTION METHODS:

Building surface should be at least 2ft x 4ft and flat. Weights or some small heavy objects will be handy for holding things in place during the time glue is setting.

Three types of glue are used for the build, Welders glue is use for most areas, Hot Glue for the electronics and CA in the construction of the control rods and stiffners. **When using the Welders glue, apply a thin film to each surface, allow to sit for approx five minutes and then assemble.** Note that this method will create a nearly instant bond, so locate carefully when bringing the two pieces together. If alignment is necessary while gluing the two pieces together, do not allow the glue to tack up, simple apply and join immediately, you will have several minutes to locate the two parts before the glue sets up. In most cases the parts being glued can be handled with care in 30 minutes, full cure is approx 24 hours.

Any Carbon to Foam parts should be gluded with CA. Carbon parts should be sanded and wiped clean prior to gluing. Welders is best for Foam to Foam joints.



STEP – A –

Locate the fuselage and the two carbon strips that are 3x1x1000. Lightly sand and wipe clean.



STEP – B –

Insert the strips into the pre-cut slots. Make sure they are flush with the outer surface and extend a little beyond the nose and tail sections of the fuselage. Once satisfied with the location and fit, and while the carbon is in position apply CA to the area so that it wicks in and bonds the fuselage to the carbon strip. Use Activator if necessary.



STEP - C -

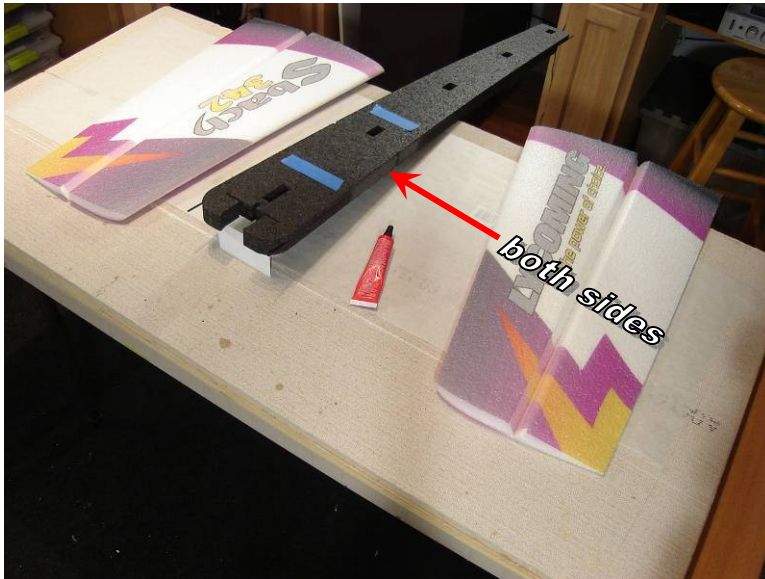
Locate the wing the wing halves and the fuselage backbone. Note that there are little tabs that help to position the wing halves correctly. You should be looking at the bottom of the wings, and the cutout for the elevator should be facing down, **this orientation is paramount**, double check to make sure you have the items located properly.



Make a reference mark as shown at the center of the inside root of the wing. This in conjunction with the tip of the leading edge will be used to line up with the carbon strip in the fuselage backbone to aid in aligning the two pieces for 0 degrees of incidence.



Mark with tape or a marker the area of the fuselage backbone that will come into contact with the wing roots. Also at this time check that when fully seated against each other that the wing halves are located symmetrical in relationship to the fuselage backbone.



STEP - C - (con't)

Apply welder glue to the wing root and mating area of the fuselage backbone. Spread the bead of glue to create a nice even coat. Use an old credit card or business card to prevent your fingers from becoming full of glue. Let the parts stand for approx 5 to 10 minutes to allow the glue to tack up.



Carefully bring the parts together, making sure that the center of the wing lines up with the center of the fuselage backbone. Use the carbon strip in the backbone and the marks you made on the wing for reference. This is very important for a true flying aircraft.



STEP - D -

Locate the 1x5x1000 carbon strips, sand with medium grit sand paper and wipe clean. Cut a slit in the wing deep enough to accommodate the carbon strip, perpendicular to the fuselage backbone and approx 100mm back from the wing's leading edge where it meets the fuselage backbone. Note you should consider at this time where you want to locate your aileron servos so that the spar does not interfere.



STEP - D - (con't)

Press the spar into the slit you just cut insuring that it is fully contained. Make sure the wing is perfectly flat on the workbench by slightly pressing down on everything. Apply thin CA over the carbon strips, using enough so that it wicks in. Apply Accelerator if necessary



Repeat the process for the top side carbon spar.



STEP - E -

Locate the Elevator and the carbon strips use for stiffening. There should be one piece of 1x3x245, one piece of 1x5x245 and two pieces of 1x3x100. Sand them with medium sand paper and wipe clean



STEP - E - (con't)

From the underside of the Elevator install the 1x5x245 strip into the precut slot of the fixed part of the elevator so the spar will be flush with the surface. Repeat with the 1x3x245 spar on the moveable part of the Elevator. Make sure the Elevator is flat and apply CA to spars, letting it wick into and around the spars and the groove that it is in. Hit with Accelerator.



Flip the Elevator over to the top side and install the 1x3x100 strips as above, into their respective pre-cut slots.



STEP - F -

Locate the Fuselage and Canopy parts, lay down a bead of Welders onto both mating surfaces, spread thin and allow to tack up.

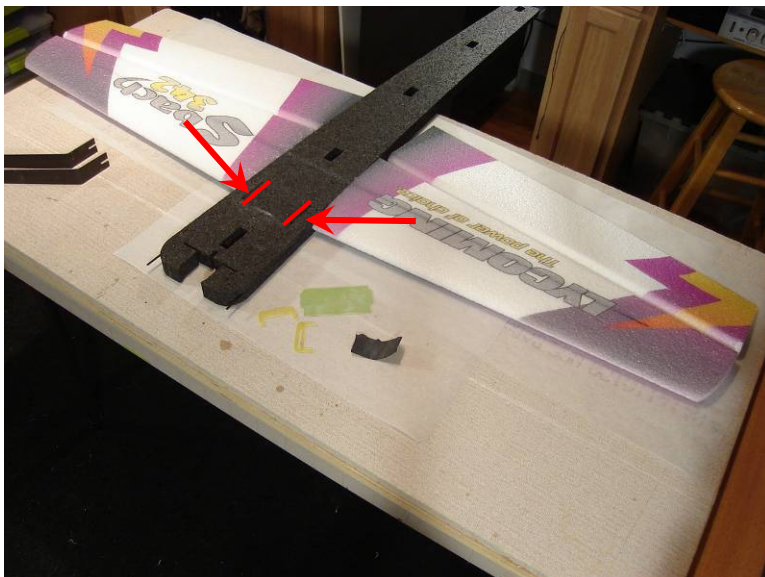


STEP – F – (con't)

Once the Welders has tacked up, lay both pieces on a piece of either wax or parchment paper, and slide the two pieces together. Use the extreme front and rear of the Canopy corners as a guide to line up the corners of the cut outs in the Fuselage.

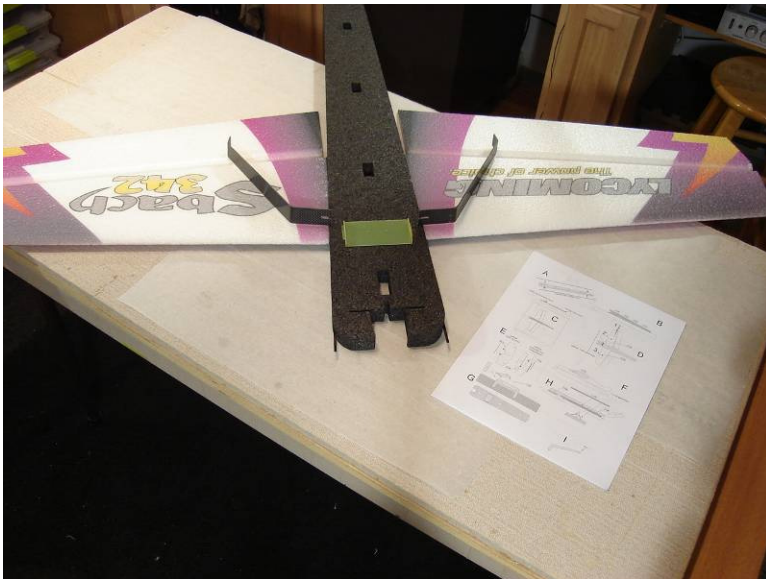


Use a sharp hobby knife to separate the Fuselage upper and lower parts, cutting through the center of the tabs.



STEP – G –

Position the airframe belly side up. Locate the Landing Gear Plate the and Stirrups. Notice that there are two pre-existing holes for the legs of the Stirrups (in the area of the red arrows). With a straight edge and sharp hobby knife, create a cut between them as indicated by the red lines to the left, these will allow the Stirrups to set flush when gluing.



STEP – G – (con't)

Notice that the Stirrups are keyed to the plate and all three parts should fit nicely into the existing holes and slot you just made. Also notice that the slot in the Stirrup should be toward the rear of the plane. Slot in the Stirrup may need to be enlarged to allow passage of the LG Strut, once satisfied with the fit, make a mental note of all the areas that will be glued, roughen them up with medium grit sand paper and wipe clean.



Glue the LG Plate and Stirrups to the bottom of the airframe as shown.



It is important for this assembly to have a minimal amount of slop. In order to get the proper depth of the Stirrups, use the LG and some clamps to hold everything accurately in place while the glue dries. The LG needs to be removeable, so make sure that there is no glue that squishes out and creates a bond to the LG Plate or Stirrups. Do not over tighten the clamps.



STEP – H –

Locate the lower part of the Fuselage and test fit into the slots of the belly side of the backbone.



Apply a thin layer of Welders to the contact areas of both pieces, and smooth to a thin layer and allow to tack up. Do not put any glue on the sides of the tabs at this time, as those areas will need to “slide” together, glue will be added to this area just before assembling the lower Fuselage to the Backbone.



Once the glue on flat surfaces has tacked up, apply Welders to the sides of the tabs and assembly. Check for squareness and tweek from side to side if necessary.



STEP - H - (con't)

With the belly of the plane facing up, test fit the Elevator. Check with a tape measure that when all butted up flush that the tips of the Elevator from both sides are the same distance to the wing tips. Also, if you have not already done so, now is a good time to trim off and sand smooth the ends of the carbon strips that were glued into the Backbone.



Apply Welders to the contact areas, spread smooth and allow to tack up.



Carefully attach the Elevator so that it is square and true, apply a little weight and allow the glue a little time to fully set up.

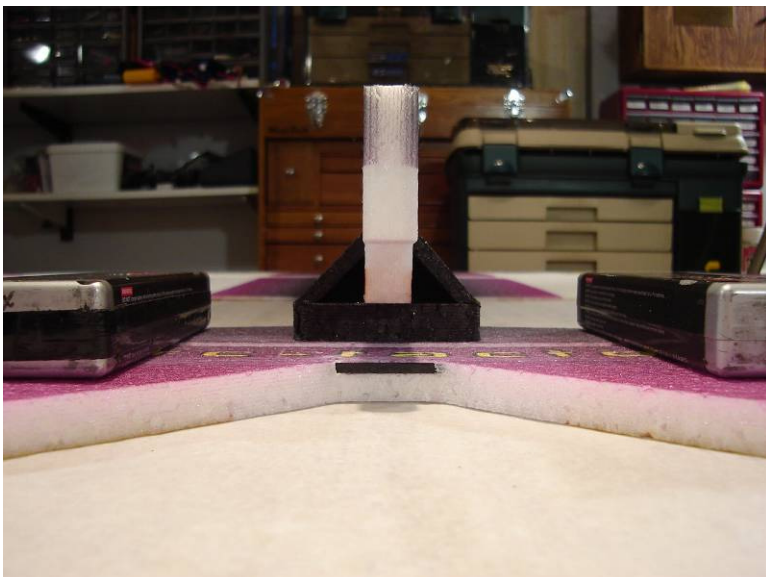


STEP - H - (con't)

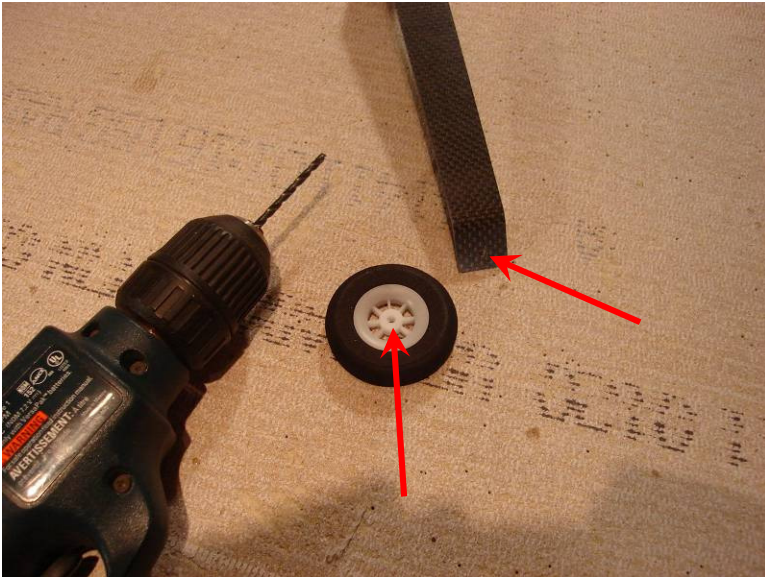
Locate the Anti-Torsional strips. For a more streamlined look you can trim and bevel one end of each strip as shown.



Tack gluing method will be used to attach the Strips, but in order to get the glue in the right spots, do the following; Lay down a medium bead of Welders on the beveled area of the Strip. Carefully and Gently lower the Strip into position, trying to get the exact postion, allowing both parts to come into contact with each other, thus transfering some of the glue to the Fuselage. Separate the two, and allow the glue to tack up. No glue near the nose of the plane will allow you to hide some wires when installing the radio gear.



Strips should form a 45 degree angle between the Backbone and lower Fuselage. Confirm at this time that every thing is square.



STEP - I -

Drill a 3mm hole in the end of each Landing Gear Strut for the wheel axle. Also enlarge the hole in the wheel.

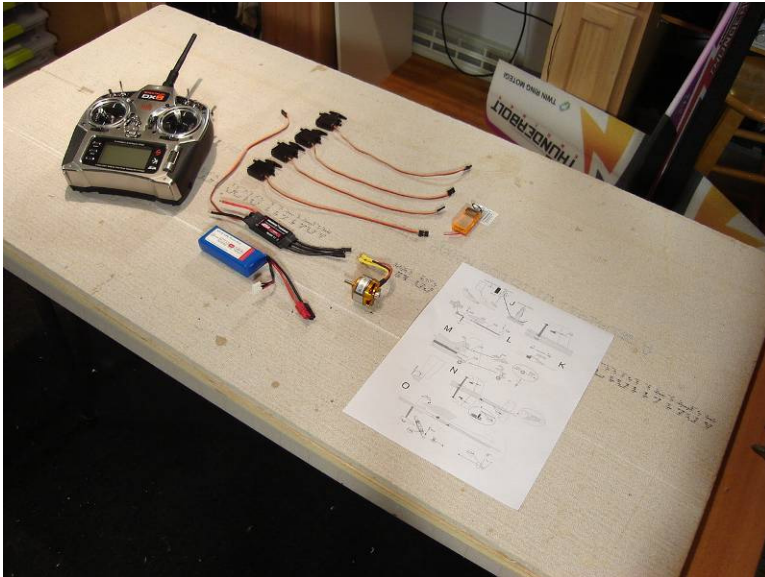


STEP - J -

Assemble in the following order - the M3x15 landing gear shaft, wheel, M3 nut, flat washer, wheel pan tab, landing gear strut, washer and M3 Acron nut. Tighten up the nuts as required in such a way that the wheel still spins freely. Hold the screw and tighten the nut to avoid the whole assembly from tightening up and preventing the wheel from spinning

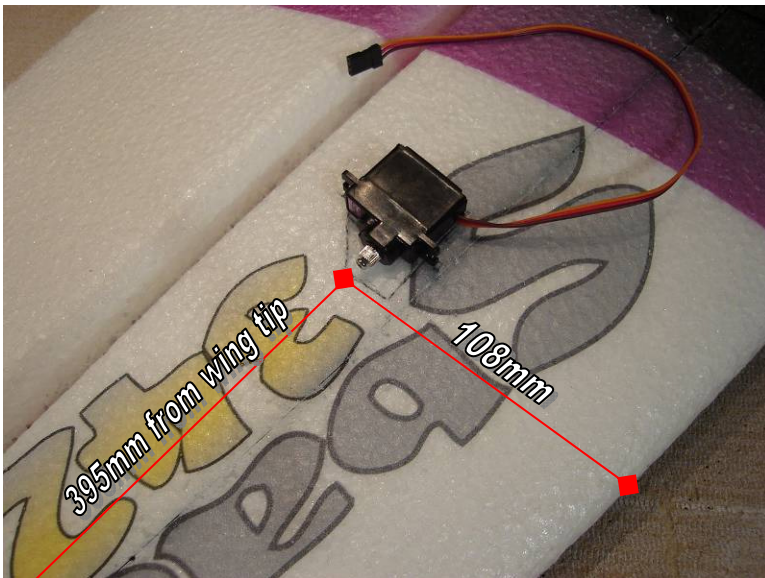


Locate and glue the Wheel Pants to the Wheel pan tabs. The included 2.9x6mm wood screws are used to attach the strut assemblies to the Fuselage. Landing Gear can be installed or removed easily by simply loosening and/or tightening. **MAKE SURE WHEN GLUING ON THE WHEEL PANTS THAT YOU MAKE A LEFT AND RIGHT ASSEMBLY.**



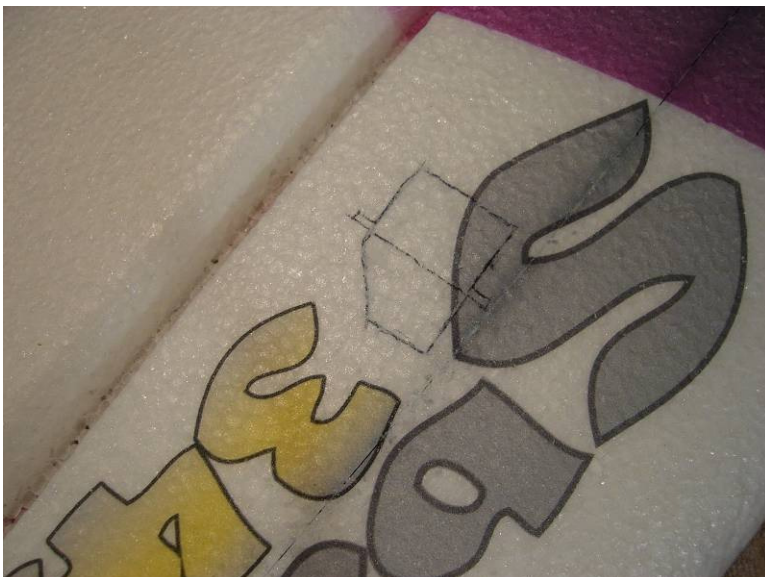
RADIO GEAR

In the next step you will start installing the radio gear, it is strongly suggested that before doing so that all the electronics are hooked up and tested. Start with a fresh Model Program on your Transmitter if appropriate, make sure all the trims and sub trims are zero, and that all the travels are `100%. Mark the servos with their assigned channel and note their neutral positions. Program the ESC per MFG if necessary.

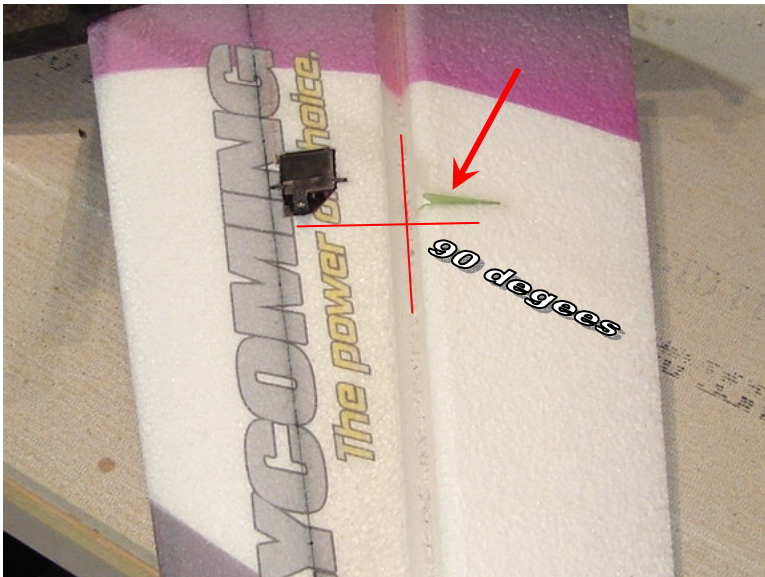


STEP – K –

Install the Aileron Servos. They can be installed flat or upright. Locate them close enough to the Fuselage so that the wires will reach the Receiver location. Use caution to not locate the Servo in such a position that it interferes with the Wing Spars. Use shown dimensions for location reference.

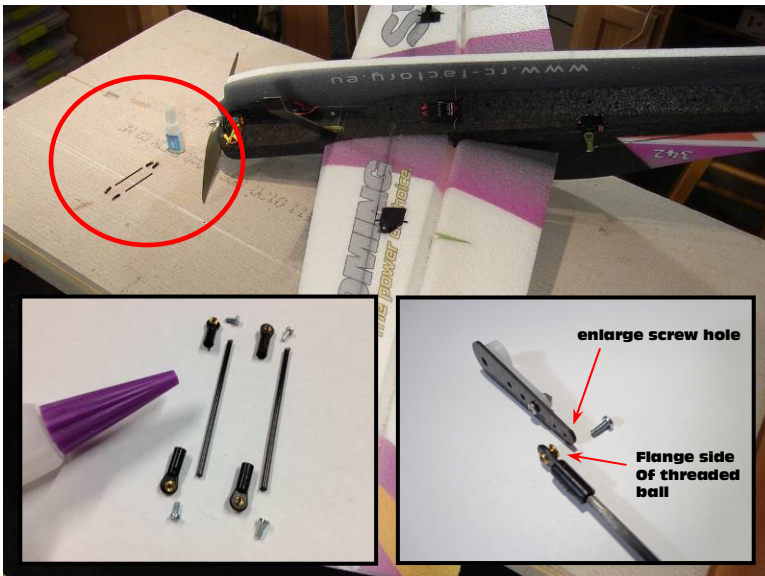


Mark and remove the necessary foam needed to mount the servo. Make the recess slightly smaller than the Servo so that it is a snug fit, but is still allowed to sit flush. Standing the servo up is an option if wanted.

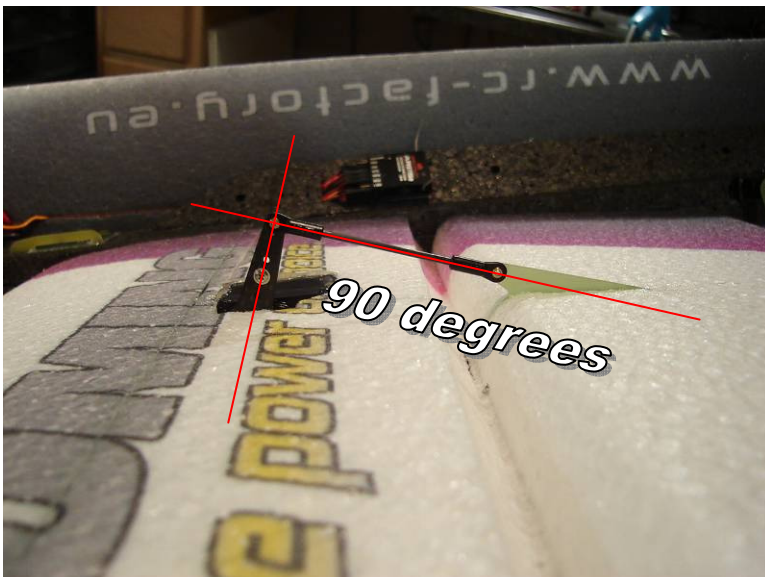


STEP - K - (con't)

Locate the Aileron Control Horn so that it lines up with the Servo horn and forms a 90 degree angle when compared to the hinge line as shown to the left. Locate the horn, from front to back, by matching up the profile of the recessed part of the horn with the profile of the relief cut in the wing for the hinge.



Locate the ball links, associated ball link hardware and screws. In order to get a satisfactory amount of aileron throw, you will need to have a servo arm that is approx 1" long from the center to where the link attaches. If your servo horn is not that long there is an **OPTIONAL** part available from Twisted Hobbys made specifically for the servos in the power sets. Center the Servo and the Aileron. Aileron center will be when the trailing edge lines up with the carbon strip in the backbone.



Attach the horn in such a way that it forms a 90 deg angle with the control rod as shown to the left. With the Servo and Aileron at their neutral positions, attach the ball links with the included hardware, and cut the rods to the required length. Sand the ends of the rod so that they will slide freely into the links, wipe clean, apply a drop of thin CA and assemble. The closer to the right length the better, small adjustments can be made with subtrim if necessary.



STEP - L -

In this step we will glue the firewall and upper Fuselage to the wing and backbone assembly. Cutting the holes for the Rudder Servo at this time will make installing the servo in Step O easier. Arrows and Red boxes to the left indicate the areas that need material removed for the servo. Insert picture uses an INCH scale to help with location - measurement is from the nose of the aircraft.



Glue the Firewall to the lower assembly as shown, make sure to glue in all areas of contact.



Apply a thin layer of Welders to the contact areas of both pieces, and smooth to a thin layer and allow to tack up. Do not put any glue on the sides of the tabs at this time, as those areas will need to "slide" together, glue will be added to this area just before assembling the upper Fuselage to the Backbone.



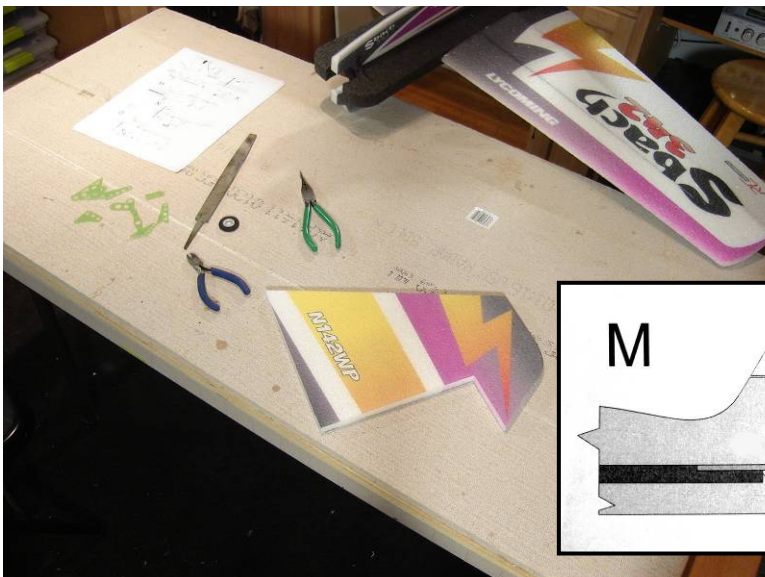
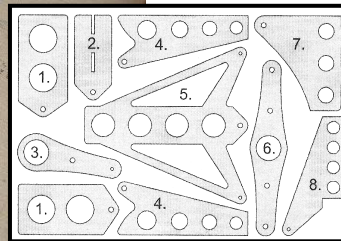
STEP - L - (con't)

Once the glue on flat surfaces has tacked up, apply Welders to the sides of the tabs and the motor mount than assemble. Check for squareness and tweek from side to side if necessary.

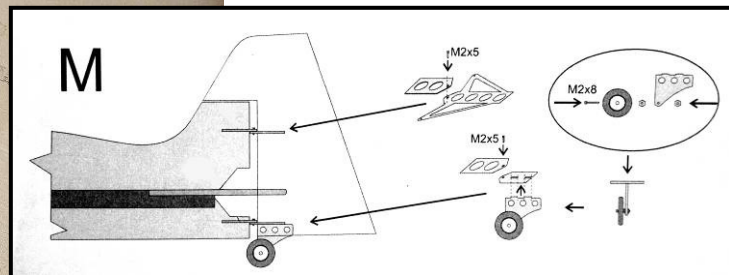


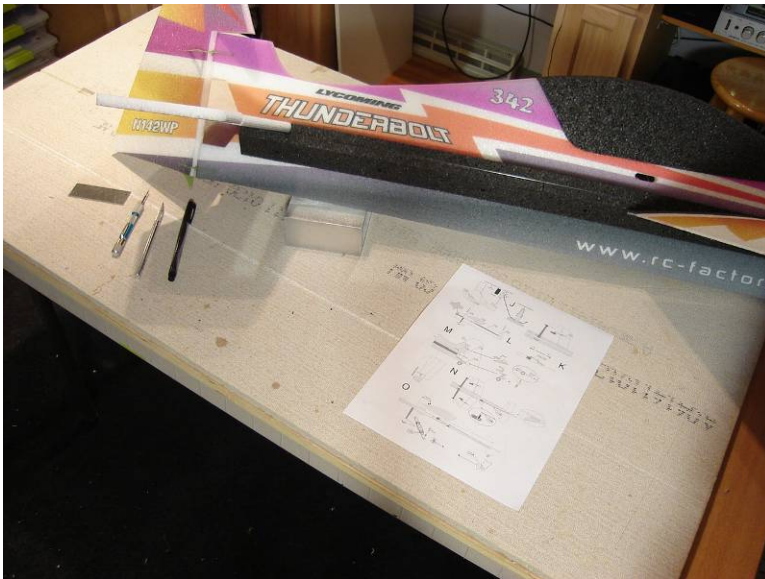
STEP - M -

Next up is the Rudder Assembly, this includes the hinges and tail wheel sub assembly. Locate the fiberglass parts, two M2x5 screws, one M2x8 screw, and four M2 nuts.



Sand all the hinge parts with medium sand paper and wipe clean. Glue item 2 in the tree to item 7, CA or Epoxy can be used for this, make sure that the two pieces are perpendicular to each other.





STEP – M – (con't)

Cut horizontal and vertical slits into the bottom of the Rudder control surface to accommodate the tail wheel holder and the bottom rudder hinge. Make sure that there will be enough room for the tail wheel to clear the bottom of the rudder control surface. Locate and make another slit for the Rudder control horn. Locate it approx half way between the top of the fixed part of the rudder and the cutout for the elevator.



Locate the fuselage side of the rudder hinge (item 1- 2x), pin together with the M2 screws and cut matching slots in the fuselase. Care should be taken so that the rudder control surface lines up with the bottom of the fuselage and that there is some clearance between the rudder control surface counter balance and the top of the fix part of the rudder on the fuselage.



Move the Rudder back and forth to approx 45 degrees and note how much clearance is needed between the rudder and the fuselage, make a small mark on the hinge pieces, so that once this is dis-assembled for gluing purposes you can accurately re-locate the hinge pieces.



STEP – M – (con't)

Remove the Rudder from the fuselage and glue the hinge pieces into their respective places being mindful of their locations as noted in the previous step. Pressure on the glue joints can be maintained with some high tack masking tape. Allow to dry thoroughly.

Once the glue has died, re-assemble the rudder to the fuselage with the M2 screws and nuts



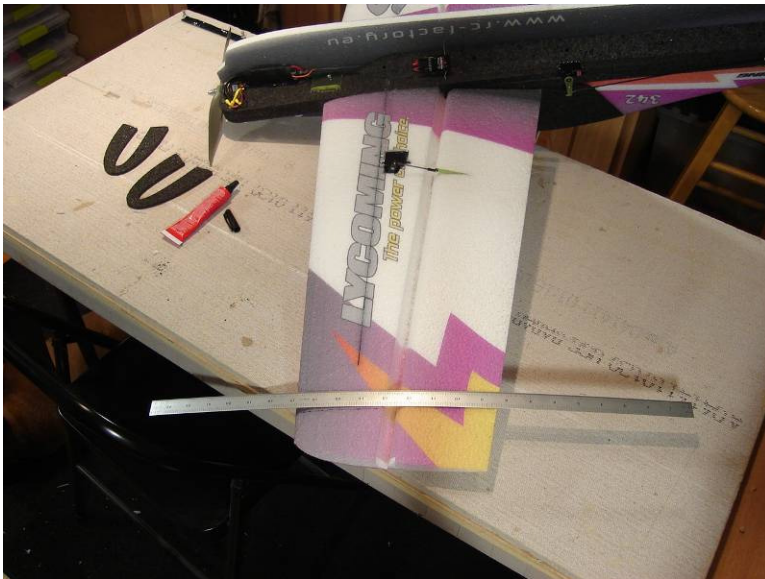
If needed scrape away any glue that might have gotten on the pivot point areas of the hinge pieces. Use a small needle nose plier and little screw driver for assembly. Do not over tighten the screws, the Rudder should move freely back and forth without binding or excess slop. Put a small dab of Welders on the Nut once the everything is set.

Tail wheel can be attached now or later with the M2 screw and two nuts.



STEP – N –

Attach the Side Force Generators. It should be noted that they are NOT symmetrical, the shorter side goes to the bottom. Measure approx 1 inch in from the straight part of tip of the leading edge.

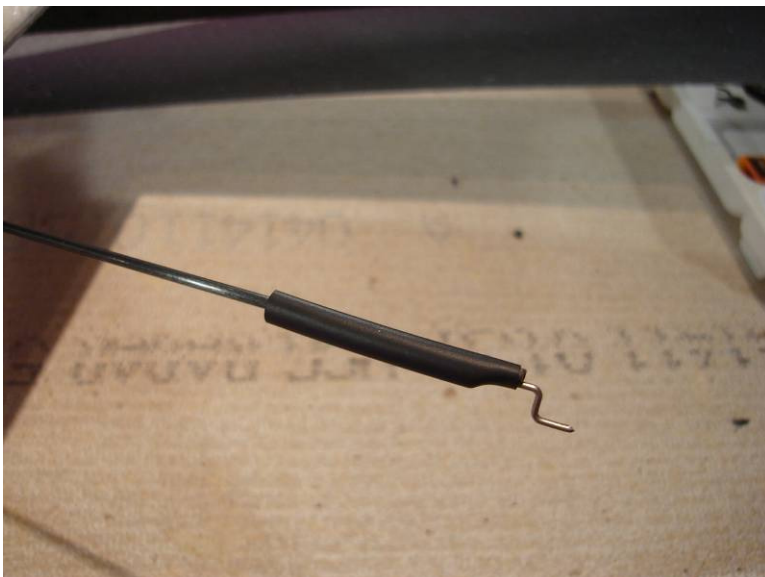


STEP – N – (con't)

Make a reference line on the wing, parallel to the centerline of the fuselage.



Lay down a thin bead of Welders on the top and bottom of the wing along the reference line, and on the inside of the SFG, spread smooth and allow to tack up. Once tacked up spread the SFG and carefully position it parallel to the line you made a press together to create the glue joint.



Build the Elevator Push Rod. Sand the end of the carbon rod and metal z-bend with medium sand paper and wipe clean. Install the shrink tube over the carbon rod and insert the z-bend, shrink only the end as shown. Hold in a vertical position with the z-bend pointing down and allow a drop of thin CA to run down the rod and into the open end of the shrink tube. Finish heat shrinking, use caution as the CA will catch on fire, if it does, remove the flame and blow out right away.



STEP – N – (con't)

Install the Elevator horn and control rod with z-bend as shown to the left.



Make a cut out as shown approx 1 inch behind the aileron for the servo, center electronically, attach the horn (item 3), center the Elevator, now cut any extra from the length of the carbon rod. Slide on the small push rod guide, then the shrink tubing and z-bend as shown. Shrink a little spot at the end as shown, carefully remove the control horn and rod from the servo (so as to not change it's over all length) and than run a drop of CA down the rod and under the shrink tube. Finish shrinking and re-install.

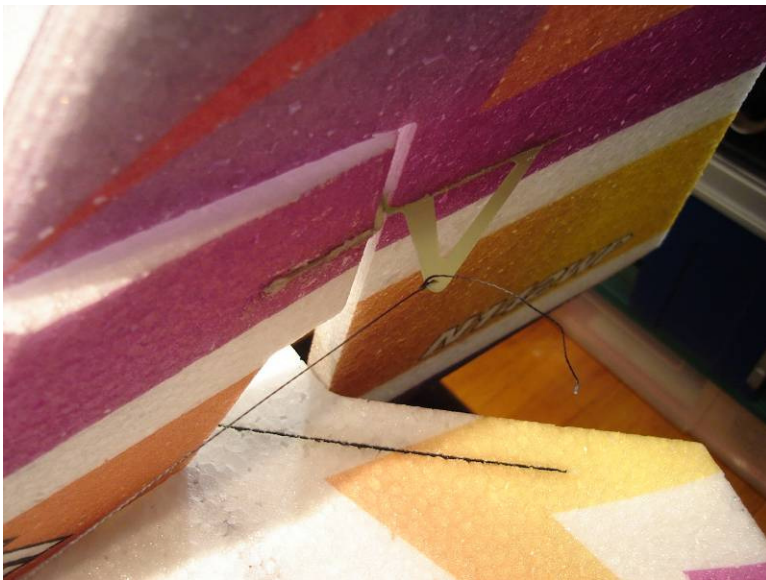


Glue the Push Rod Guide approx as shown with a spot of low temp hot glue.

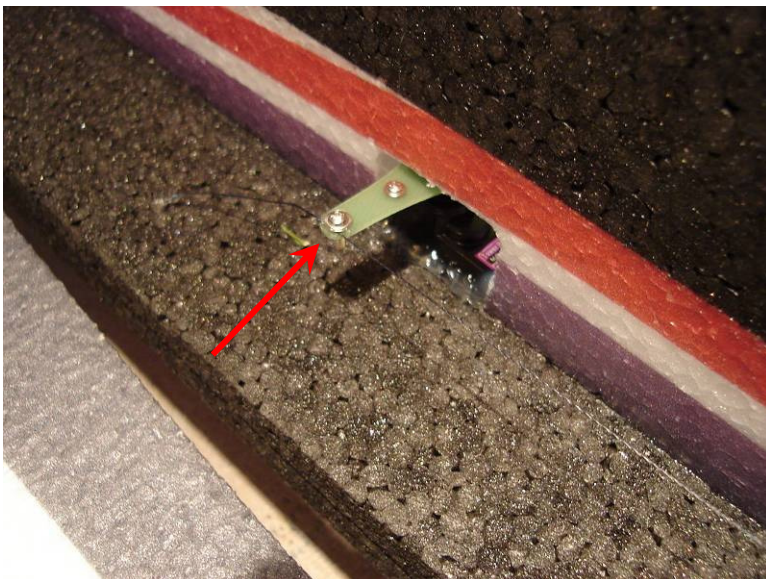


STEP - O -

Install the Rudder Servo. Make a cut out now, if not done earlier, in the area of the existing slot. Make sure the servo is electronically centered, attach the horn (item 6) and install the servo.



Attach the Kevlar cable to the Rudder control horn as shown, tie a knot and set with a dab of thin CA. Repeat for the other side of the horn.



Position the Rudder and the Rudder Servo in their neutral positions. Pull the cable tight, wrap two complete loop around the head of the screw starting from the outside and tighten down. Repeat for the other side. If the cable become slack over time, crack the screw loose pull tight and re-tighten the screw. There are other methods of attaching the cable and keeping it tight, this method however is simple, effective and easy to maintain.



MOTOR & ESC

Attach the "X" mount to your motor. Make sure the screws are flush and use thread locker. If the screws are not flush, counter sink the holes a little deeper with a 90 deg. Counter sink.



Locate your ESC as desired, usually some were near the front of the aircraft on the underside of the backbone is a good spot. Attach with low temp hot glue, or other method of your choosing.

NOTE - IF USING THE TWISTED HOBBYS' POWER COMBO ESC, IT WILL NEED TO BE PROGRAMED PER THE ESC INSTRUCTIONS OR ONLINE VIDEO. THIS MUST BE DONE PROIR TO USE. ESC WILL NOT WORK IF NOT INITIALIZED!



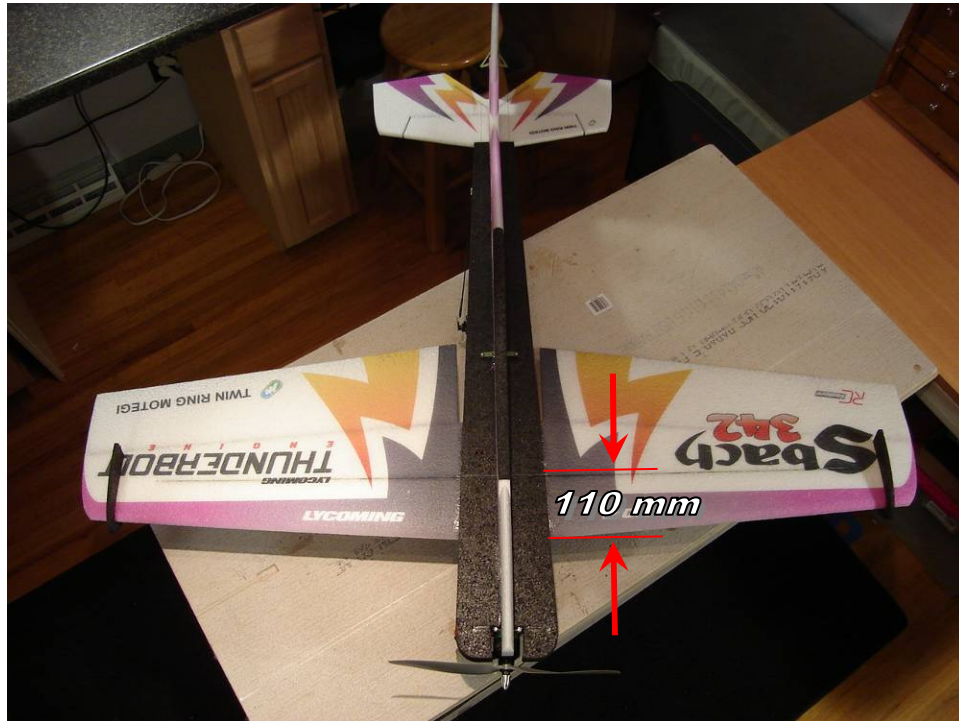
RECEIVER

Locate the Receiver so that all the servo wires will reach. Many of the wires can be routed under the torsional stiffener. Once all the wires are routed, glue the the end down that was left open earlier in the build. Small slits can be made in the foam to hide servo wires as well. Make sure the Receiver is accessible for binding or re-binding if necessary

CENTER OF GRAVITY

110mm back from Leading Edge
of the Wing at the Fuselage

Locate the battery last, and use it to establish the proper Center of Gravity. Starting CG point is 110mm back from the leading edge of the wing at the fuselage, If wanting to experiment with the CG point, locate the battery with **Velcro**, so that it can be moved around during the process of determining the desired spot.



CONTROL THROWS

3D Flight:

35 to 45 degrees all surfaces

60 to 75% expo

Sport:

20 to 30 degrees all surfaces

30 to 45% expo

For 3D flight, set all the control throw up at 35 to 45 degrees. This airframe is very equally balanced and designed to like similar throw movements.

Experiment with Expo and Dual Rates to suit your own flying style.

PRE-FLIGHT & TESTING

Preflight Checks

Motor: Should run smoothly at all stick positions, and transition smoothly from low to high RPM. If the motor is turning backwards, reverse two of the three wires between the motor and ESC. Check that the screws holding the motor to the airframe are tight and secure.

Flight Controls: Should be centered with sticks in the neutral positions. Ensure that all controls and linkages move freely. Double check that all hinged areas are free from rips or tears. Verify proper control surface directions. Right Roll is – right aileron up, left aileron down, Left Roll is left aileron up and right aileron down.

Batteries: Should be fully charged prior to each flight. Watch transmitter battery level and follow manufactures recommendations. Motor battery should not be drained any further than recommended by the manufacture, use a timer to prevent an over discharged condition.

Radio: All trims should be set to neutral and throttle in the low position. Check that rate switches and mixes are set properly.

Range Check: With and without the motor running per radio manufactures instructions. If there is insufficient range or significant reduction with the motor running, resolve and re-test before flying.

Flight Testing

The first flights should be done with the CG at the recommended position, and reduced control rates until comfortable with your handling of the aircraft. As your experience with the aircraft grows experiment with different CG points and control rates. After all flights, check the aircraft over for damage and/or other items that may adversely effect flight performance.

This airframe is full 3D capable EPP plane and will take anything you throw at it, including the occasional crash. If, as the result of a crash, the foam tears, simple glue with Welders or CA. Many pilots prefer Welders because it remains flexible after drying. CA however, is more suited for the “quick” repair.

This aircraft should be flown outdoors. It is the perfect size for the neighbor park or smaller flying field, allowing for plenty of opportunity to fly and learn new maneuvers. It is a great stand alone plane, or training aid to perfect routines to be done with larger aircraft.

Storage

This EPP plane should be hung from it's prop when not in use, doing otherwise could cause the airframe to twist. Storage in a hot car could also cause damage.

Be safe and enjoy, thank you again for purchasing a Twisted Hobbys' Product!

NOTES & S/U SHEET

Setup Sheet

Transmitter -

Receiver -

Model

Weight - g oz

CG Point - mm from wing leading edge

timer - min

Travels and Exponential

	low rate	high / 3D
right aileron up -	<input type="text"/>	<input type="text"/>
right aileron down -	<input type="text"/>	<input type="text"/>
left aileron up -	<input type="text"/>	<input type="text"/>
left aileron down -	<input type="text"/>	<input type="text"/>
aileron expo -	<input type="text"/>	<input type="text"/>
rudder right -	<input type="text"/>	<input type="text"/>
rudder left -	<input type="text"/>	<input type="text"/>
rudder expo -	<input type="text"/>	<input type="text"/>
elevator up -	<input type="text"/>	<input type="text"/>
elevator down -	<input type="text"/>	<input type="text"/>
elevator expo -	<input type="text"/>	<input type="text"/>

Electronic Components

Aileron Servo -

Rudder Servo -

Elevator Servo -

Battery -

motor -

ESC -

Propeller -