

RCCD CLUB PROJECT 2011

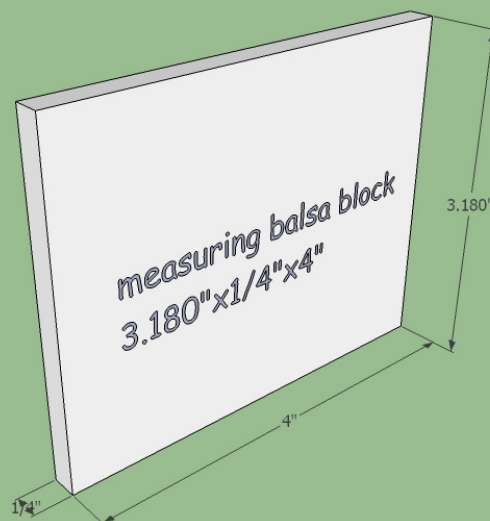
Fastening the Wing to the Fuselage

When the sheeted wing and the fuselage assemblies are complete, the next step is to marry or fasten the wing to the fuselage. The method that will be described is just one of many that may be used to accomplish this step.

**All the landing gear should be removed clearing the bottom of the fuselage. Place the bottom of the fuselage assembly flat on the building board. The bottom of the horizontal stab should also lay flat on the building board.*

**Place the wing assembly on the wing saddle area of the fuselage. The leading edge of the wing should nest against the front edge of the saddle and along the rear face of former F2. The wing should be centered on the saddle by measuring from the outside of the last outboard wing rib to the fuselage. The measurement should be the same on the right and the left side. Pencil mark the fuselage location on the wing as an aid for relocating the wing while working on the fit to the saddle. Clear away any interfering areas by carefully sanding the saddle and/or the wing. This touch-up may be needed in just small local areas or spots.*

**Make two set-up or measuring blocks the height from the table to the lowest part of the fuselage wing saddle (3.180").*



**Once the wing fits the saddle and is centered on the fuselage, use the set-up blocks to measure the lower outboard portion of the wing surface to the table. The outboard measurement should be the same as the wing saddle measurement. If not, carefully sand the saddle to adjust the measurement. Be careful, a little sanding on the saddle makes a big difference on the lower outboard surface measurement. The removal of .003" (the thickness of a human hair), from the surface of the saddle will move the out board end of the wing up or down .045", almost 3/64").*

**When the wing is resting properly on the saddle of the fuselage, measurements should be taken from the rear corner of the wing tip back to a point on the centerline of the fuselage near the rear of the fin. Adjust the outboard rear corner of the wing fore or aft so the measurement is the same on both sides of the plane.*

**This total procedure should be re-checked and repeated until the alignment is correct. When satisfied with the position of wing to the fuselage, drill small locating holes (the diameter of a "T" pin) through the trailing edge into the fuselage and through the front leading edge into the fuselage. Temporarily run a tight fit "T" pin into the holes to maintain the location of the wing to the fuselage.*

**Now that the wing is held in position, carefully drill two 1/4" dia. Locating / mounting holes through the front of former F2 using the existing laser cut holes for the location. These holes should be drilled in line through the F2 former and in through the leading edge and the reinforcement behind the leading edge of the wing using an extended length drill. Upon completion of all the wing mounting procedures, remove the wing from the fuselage and glue two 1/4" dia. X 1 1/2" long wood dowels in the wing, leaving the dowels to protrude 3/8" forward into the F2 former. The front edge dia. of the wood locating/mounting dowels should have a slight lead-in taper to aid in the easy installation and removal of the wing to the fuselage and still maintain the location.*

**The wing rear mounting holes should be drilled 90 degrees to the top rear surface of the wing and in line through the wing and through the $\frac{1}{4}$ " thick plywood wing attachment cross member in the fuselage. Starting with a $\frac{1}{8}$ " dia. drill stepping up to a drill the size of the outside diameter of the barrel of a 1/4-20 "T" nut. Upon completion of the wing mounting procedures, install the two "T" nuts through the bottom side of the $\frac{1}{4}$ " thick plywood wing attachment cross member. Two 1/4-20 x 2" nylon screws will be used to fasten the wing to the fuselage. (see the sketch below for the rear mounting hole locations)*



**The fastening of the wing to the fuselage is now complete.*

**The plane construction should continue by installing the servos, the control push rods, radio gear, engine or motor, fuel tank or batteries, etc. Complete the forward top hatch on the fuselage and final glue the Top Back Fuselage Panel in place.*

**Final sand the total plane and ready it for the covering of your choice. Follow the covering manufacturer's instruction.*

**Reinstall the landing gear, install the control surfaces and final trim your plane.*

Final balance the C G of your plane. The starting "Balance Point" is ~~11.20"~~ **back from the firewall 25% - 30% of the total wing chord (measured from wing leading edge to aileron trailing edge).*

**Congratulation, Your plane is now complete!*

Now comes the real joy of this project. "The actual flying of the aircraft that you so proudly built". You will experience the thrill of flying an aircraft that was built with your two hands and in accordance to your modifications in design and not just opening a box and sticking something together.

***Remember to fly safely
&
most of all, have fun !!!***

*Compliments of
"The Radio Control Club of Detroit"*

"The Quad Squad"

Dick B. "Warlord", George D. "Snap Shot", Joe S. "Jester", Pete M. "Rattlesnake"

Digitized & Cad Drawn by

Pete M. "Rattlesnake"

N/C Laser Cut by

Peter Van. "Maverick"

Wire Extension Tube Contribution by

Jim McCoul

Wire Extensions Discount Contribution by

Keith Jones